Alexandria Antiqua

A Topographical Catalogue and Reconstruction



Amr Abdo

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Archaeopress Archaeology



Archaeopress Publishing Ltd
Summertown Pavilion
18-24 Middle Way
Summertown
Oxford OX2 7LG

www.archaeopress.com

ISBN 978-1-78969-943-2
ISBN 978-1-78969-944-9 (e-Pdf)

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Cover:

Front cover illustration
Background: Alexandria in a 5th-century AD mosaic from Σέπφωρις (Sepphoris, Galilee)
Insets: AutoCAD extracts
Strabo (1st century BC)
Gratien Le Père (1769-1826)
Mahmoud el-Falaki (1815-85)

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He (Ptolemy Lagides) made his residence, 'the Fortress of the King of Upper and Lower Egypt, [Meri-Amun, Setep-en-Re]: Beloved of the Ka-Spirit of Amun, Chosen of Re, Son of Re, Alexandros' – a priestly epithet for the city of Alexandria – on the shore of the great green sea of the Hau-Nebu (the Mediterranean); (it was) formerly called Râ-Kedet (Rhakotis).

Excerpt from the Satrap Stela (311 BC)

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Preface

Amr Abdo, the author of this book, represents a new generation of Egyptian scholars blooming in the context of the revived interest in Alexandria's ancient heritage. The period between 1990 and 2010 witnessed impressive archaeological discoveries, both terrestrial and underwater, contemporary with the re-establishment of the Library of Alexandria in its home city. Stimulated by such an enthusiastic atmosphere, Abdo would find his way to Alexandria upon the completion of his undergraduate 'journey' in the Mediterranean. Hence, in 2013, he attended the postgraduate programme in the Alexandria Centre for Hellenistic Studies, an academic research unit of the revived Bibliotheca Alexandrina. Since then, the topography of ancient Alexandria has been the course of study that apparently stroke the attention of Abdo, who, as many before him, found inspiration in the cultural eclecticism intrinsic to the Alexandrian cosmopolis in antiquity, where the millenary urban fabric bears traces of coexistence and interplay between various traditions and their demographic representatives, mainly Greeks and Egyptians. He would be further intrigued by the fact that this Graeco-Egyptian model of cultural symbiosis expands beyond antiquity. Indeed, in the first half of the 19th century, Mohamed Ali Pasha, the Ottoman *wāli* of Egypt, would create the right conditions for the Greeks to return by thousands to the city founded by their ancestors and to subsequently contribute to the transfiguration of Alexandria into a modern metropolis.

The revival of Alexandria, however, would ironically signify the gradual burial of her ancient remnants under the concrete foundations of the modern city. Archaeological investigation and documentation in the past couple of centuries had thus taken place under the most adverse conditions with the continuous growth of an ever-developing town. In a context as such, a topographic reconstruction of the ancient city has become a foremost challenge confronting those studying Alexandrian urbanism in antiquity. As a matter of fact, it could have been a nearly lost case by the time the local archaeological institutions were established, in the 1890s, had it not been for the critical works of two forerunners of Alexandrian studies, namely the Egyptian civil engineer Mahmoud el-Falaki (1815-85) and the Greek physician and epigraphist Tassos Demetrios Neroutsos (1826-92). Mahmoud el-Falaki provided the first reliable reconstruction of the grid plan of ancient Alexandria. Whereas Tassos Neroutsos, the father of modern Alexandrian scholarship, led the systematic documentation and publication of antiquities that were still visible in his time, providing a critical supplement to el-Falaki's cartographic repertoire. The significance of their contribution to the field of Alexandrian studies is emphasized by the fact that almost all subsequent research were to be based on the work of these two pioneering figures.

As a classical archaeologist, Amr Abdo may well have drawn inspiration from earlier scholars such as el-Falaki and Neroutsos, following their paradigm in the course of his doctoral research at the Universitat Autònoma de Barcelona (Catalonia). This monograph comprises the outstanding outcome of a backbreaking scholarly inquiry into the topography of ancient Alexandria, aiming at tackling the ever-growing need for an exhaustive, up-to-date catalogue of the city's archaeological heritage, complemented with a reconstruction of its topographical constituents through a millenary range of occupation. Not many would have had the courage, the persistence, and the knowledge, after all, to materialize such a demanding project, tracing evidence spanning over 220 years of continuous archaeological discoveries. Amr Abdo approached this multifaceted task through a thorough investigation not only of what is still visible but also of what is not discernible anymore and survives merely in archaeological reports, publications, and other references scattered in the 'ocean' of Alexandrian bibliography.

There is no doubt to my mind that the new topographical catalogue and reconstruction of ancient Alexandria, presented here by Amr Abdo, will accompany all current and future readers of Alexandrian archaeology – including his once tutor – providing a comprehensive, accurate, and most reliable resource.

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March 2021

Introduction

I. Theoretical Framework

The Hellenistic period is marked by a shift in urban culture away from the Classical ideals of the Greek city-states (πόλεις). Certain uniform institutions and infrastructural norms are attested throughout the annexed lands of the Hellenised East. Concurrent changes in the urban landscape seem to have been fostered by the socio-political developments occurring in the course of the second half of the 4th century BC (Owens 1992: 74). At the time, scores of new cities were founded or remodelled on the orthogonal pattern in consequence of a rapid expansion of Macedonian colonialism eastwards, from Asia Minor to the trans-Tigris regions of Media and Bactria, through the Levantine coast, Egypt, and Mesopotamia (Chamoux 2002: 12-30). Besides their principal role as focal points for international trade and metropolitan disseminators of the Hellenic culture, the founded cosmopoleis served as administrative centres in securing the political unity of the newly established kingdoms of the Διάδοχοι, i.e. the rival successors of Alexander the Great (Wycherley 1951: 178). The physical and cultural sophistication of urban development within the Hellenistic inhabited world (οἰκουμένη) thus hints at far more intricate intercity-mercantile relations between increasingly globalized societies. A cosmopolitan commercialism as such is well manifested in the eventual dominance of a Hellenistic common dialect (κοινή) over local (Ionic, Aeolic, Doric, etc.) dialect forms of the 5th-century BC Classical πόλεις (Billows 2005: 196). In this context, the capital of Graeco-Roman Egypt, Alexandria, exemplifies one such prototype of a series of Hellenised urban hubs established across the Macedonian-controlled Afro-Asiatic East.

American geographer Carl Ortwin Sauer (1889-1975) maintains: 'the works of man express themselves in the cultural landscape. There may be a succession of these landscapes with a succession of cultures. They are derived in each case from the natural landscape, man expressing his place in nature as a distinct agent of modification. Of especial significance is that climax of culture which we call civilization' (Sauer 1925: 307). Accordingly, cultural landscapes are subject to change either by the development of a culture or by a replacement of cultures. In studying such interrelationship between natural landscapes and cultural groups, the grandiose cosmopolis of Graeco-Roman Egypt offers a case in point of the ways in which the topographical components of alien (foreign or colonial) civic life, religious practices, and funerary rites are on display in concurrence with the indigenous tradition, hence the attempt to piece together the fragmentary material evidence towards a clearer view of the city in antiquity.

II. History of Research

a) Earlier Maps of the Renaissance

One of the Renaissance earlier surviving scenes of Alexandria is the 15th-century 'Veduta d'Alessandria' by French copyist Hugues Commineau de Mézières aka Ugo Comminelli de Maceriis (Figure 1) (Bibliotheca Apostolica Vaticana, Codice Urbinate Latino 277: 'Cosmografia di Claudio Tolomeo' – date of issue: January 5th, 1472). A c. 16th-century derivative of Commineau's 'Veduta d'Alessandria', drafted before 1605 by Álvaro de Bazán, Marqués de Santa Cruz, is deposited today at the Archivo General de Simancas in Valladolid, Spain (Figure 2) (Machinek 2018: 9, Footnote 80; Tzalas 2000: 27-28, Figure 5; 2018: 27, Figure 22). Back in 1493, a picturesque view of the late mediaeval town appeared in *Liber Chronicarum*, a book edited by German physician and historian Hartmann Schedel (Figure 3) (Schedel 1493: LXXVIII). In 1521, following the Ottoman conquest of Egypt (1516-17), the cartographic catalogue of the geographer and navigator Ahmet Muhittin Piri aka Piri Reis, *Kitāb-ı Baḥrīye*, featured a portolan chart showing the Mediterranean port of the recently annexed *eyālet*: Egypt as an Ottoman governorate (Figures 4-5) (Bacqué-Grammont and Tuchscherer 2013: 45, Figure 1; Piri 1525: 295). During his voyages to the Orient (1546-49), in 1548, French traveller and naturalist Pierre Belon du Mans produced a 'Vray Portraict de la Ville d'Alexandrie en Egypte', which was published in *Les Observations de Plusieurs Singularitez et Choses Mémorables Trouvées en Grèce, Asie, Judée, Égypte, Arabie et Autres Pays Estranges* (Figure 6) (Belon 1553: 206). At least three derivatives of Belon's *carte* were released subsequently: (i) *Civitates Orbis Terrarum*, an illustrative volume edited by Georg Braun and lavishly engraved by Frans Hogenberg (Figure 7) (Braun and Hogenberg 1575: 56); (ii) Johann Helffrich's travelogue *Kurtzer & Warhafftiger Bericht von der Reis Aus Venedig Nach Hierusalem, von Dannen in Aegypten, Auff den Berg Sinai, und Folgends Widerumb Gen Venedig* (Figure 8) (visit to Alexandria: c. 1565-66; Helffrich 1582); (iii) *Naukeurige Beschrijvinge der Afrikaensche*

Gewesten, an ethnographic survey of Africa compiled by Dutch physician and historian Olfert Dapper (Figure 9) (Dapper 1668: 74-75). Preceding the Belon derivatives, in 1570, Flemish geographer and cartographer Abraham Ortelius included 'Aegyptus Antiqua', with an inset map of Alexandria, in *Theatrum Orbis Terrarum* (Figure 10) (Ortelius 1587: 107). Later, towards the end of the 17th century, four *cartes* were made for King Louis XIV: first by Étienne Gravier (Marquis d'Ortières; Gravier 1685-87) and Joseph Razaud (Ingénieur du Roy – 1687; Jondet 1921: Planche VIII), then by Christian Melchien (Pilotte Entretenu de Sa Majesté à Toulon – 1699; Jondet 1921: Planche IX) and Antoine Massy (Pilotte des Galères de Sa Majesté – 1699; Jondet 1921: Planche X) (Figures 11-14).

b) The Eighteenth Century

Early in the 18th century, another French *carte* was issued by Marquese de la Garde in 1713 (Figure 15) (Jondet 1921: Planche XI). An earlier attempt to illustrate the ancient city was made by Pierre-Nicolas Bonamy, the prominent French historian (1694-1770), as part of his 'Description de la Ville d'Alexandrie, Telle Qu'elle Estoit du Temps de Strabon': an article written around 1731 and published later in Tome IX of *Histoire de l'Academie des Inscriptions et Belles-Lettres* (Figure 16) (Bonamy 1736: 416-431). In 1755, the Royal Danish Academy of Sciences and Letters, by order of King Frederick V of Denmark, released a first edition of Frederick Ludwig Norden's *Voyage d'Égypte et de Nubie*, with two maps of the city in attachment. Both maps were republished in Tome Première of the Nouvelle Édition of 1795 (Figures 17-18) (visit to Alexandria: June 1737; Norden 1795: Planches I-II). The latter is preceded by Richard Pococke's anthropological account *A Description of the East, and Some Other Countries* of which volume I (Observations on Egypt) features a plan of the city (Figure 19) (visit to Alexandria: September-October 1737; Pocock 1743: Plate II). A derivative of the Gravier-Razaud maps along with another showing Alexandria's environs (the coastline, lakes Edku, el-Maadiya, and Mareotis, Abu Qir Bay, and the Rosetta Nilotic outlet) complement Jacques-Nicolas Bellin's Tome III of *Le Petit Atlas Maritime: Recueil de Cartes et Plans des Quatre Parties du Monde* (Figures 20-21) (Bellin 1764: Planches 85-86). In the same year, 1764, Joseph Roux (Hidrographe du Roy à Marseille) released the so-called 'Alexandrie Barbarie' together with an atlas of 121 harbour plans published under the title *Recueil des Principaux Plans des Ports et Rades de la Mer Mediterrane* (Figure 22) (an extended edition with 163 harbour plans dates to 1804; Roux 1804: Planche 65). Another French cartographer, Jean-Baptiste Bourguignon d'Anville, was, in turn, influenced by the Gravier-Razaud maps, as evident in his version of Alexandria in *Mémoires Sur l'Égypte Ancienne et Moderne* (Figure 23) (Bourguignon d'Anville 1766: 53). In 1785, the landscape-painter Louis-François Cassas created a view of the city during his visit to Egypt. It was published later in volume III of *Voyage Pittoresque de la Syrie, de la Phénicie, de la Palestine, et de la Basse Égypte* (Figure 24) (Cassas 1799: Planche 47).

c) Bonaparte and Mohamed Ali

As the case with the Italian Renaissance in Europe, the landing of the French expeditionary forces in Egypt on July 1st, 1798, marks another turning point in mapping the city of Alexandria. Three *cartes* were produced by the engineers accompanying Bonaparte's Armée d'Orient: (a) 'Alexandrie', a regional view of the city and its environs (Figure 25) (*Description de l'Égypte*. Imperial Edition 1809-22. Carte Topographique de l'Égypt, 1818: Flle 37), (b) 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie' (Figure 26) (*Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31), and (c) 'Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes' (Figure 27) (*Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84). The three maps are published in the 19th-century enterprise entitled *Description de l'Égypte* (Imperial Edition: 1809-22; Panckoucke Edition: 1821-29), where they are listed as 'Flle 37' (Carte Topographique de l'Égypt, 1818), 'Planche 31' (Antiquities V, Planches, 1822), and 'Planche 84' (Etat Moderne II, Planches, 1817) respectively. At the time of the expedition, wide-scale scientific studies of the ancient and modern city were undertaken by Gratien Le Père (Ingénieur en Chef au Corps Royal des Ponts et Chaussées; 'Mémoire Sur la Ville d'Alexandrie', 1813, Etat Moderne II, IIe Partie) and Alexandre de Saint-Genis (Ingénieur en Chef des Ponts et Chaussées; 'Description des Antiquités d'Alexandrie et de Ses Environs', 1818, Antiquités II, Descriptions). Shortly after, in 1802, Pierre-Jean-Baptiste aka Publicola Chaussard's Tome Première of *Histoire des Expéditions d'Alexandre, par Flave Arrien de Nicomédie* featured a 'Plan Comparative d'Alexandrie Ancienne, Moderne et du Temps des Arabes' (Figure 28) (Chaussard 1802: Planche VI).

Following the British victory in the Battle of Alexandria (1801), a map was published with supplementary narratives by Captain Thomas Walsh in the *Journal of the Late Campaign in Egypt* (Figure 29) (Walsh 1803: Plate 24). Henry Salt, the British Consul General in Alexandria, then carried out a geometric survey of the city around 1806. The results were plotted and later released in volume III of George Viscount Valentia's *Voyages and Travels to India, Ceylon, the Red Sea, Abyssinia, and Egypt, in the Years 1802-1806* (Figure 30) (Valentia 1809: Plate III).

In consequence of a rapid urban and demographic growth towards the end of Mohamed Ali's lengthy rule as *wāli* (Ottoman governor: 1805-48), several contemporary maps began to display the expansion of

the Ottoman village, built earlier in the 16th century on a silted-up isthmus, back into the enclosure of the mediaeval town. The Arab walls were erected in the 9th century (267 Hijri, AD 881) by order of Ahmed ibn Tulun – restoration works: the Fatimid caliph el-Mustansir Billah (11th century); the Burji Mamluk el-Sultan el-Ashraf Qaitbay (15th century); Caffarelli du Falga, L'Expédition Française d'Égypte (1798-1801); Barthélémy Gallice (19th century) (De Vaujany 1888: 79-80). An urban expansion southwards is, therefore, seen in the charts of (1) Captain William Henry Smyth, R.N. (the Hydrographical Office of the Admiralty – 1825, 1833; Jondet 1921: Planche XXXI; Wilkinson 1843: 120), (2) Le Saulnier de Vauhello (1834; Jondet 1916: Planche I), (3) Lieutenant-Colonel E. Napier, R.N. (1841; Jondet 1921: Planche XXXIII), (4) Barthélémy Gallice (1845; Bibliothèque Nationale de France – Gallica), and (5) Charles Müller (1855 – issued under *Wāli* Saīd Pasha; Jondet 1921: Planche XXXV) (Figures 31-36).

d) The Maps of el-Falaki

Our knowledge of the topography of ancient Alexandria owes a great deal to the pioneer work of Mahmoud Pasha el-Falaki, whose recordings back in the 19th century had saved the last chance for attaining a rather coherent understanding of the city's ancient layout, which would have otherwise vanished in such oblivion of modern urbanization. His cartographic repertoire provides the basis upon which archaeological investigation strives today to piece together the fragmentary material evidence towards a relatively clear picture of Alexandria in antiquity. Perhaps Napoleon III (presidency: 1848-52, reign: 1852-70) should be as much credited (Kiepert 1872: 338-339). Indeed, el-Falaki's investigations were instigated by the literary ambitions of the French emperor in writing a biography of Julius Caesar: *Histoire de Jules César* (Tome Première: 1865, Tome Deuxième: 1866).

Hence, in need of a map displaying the urban layout of ancient Alexandria, Napoleon III turned to his friend Ismaīl Pasha, then Khedive (Ottoman viceroy) of Egypt (1863-79). In turn, the task was given to the khedivial court-astronomer Mahmoud Bey Hamdy, known by the title 'el-Falaki', which literary means 'the astronomer' in Arabic. Mahmoud Pasha el-Falaki (1815-85) was, in fact, a local engineer who held the traditional epithet for a scientist/technician operating in a 19th-century Ottoman court. The French-educated cartographer, an *alumnus* of Ecole des Artes et Metries in Paris, carried out a strenuous survey work around 1863-66. The outcome is a corpus of three maps published with supplementary text in *Mémoire Sur l'Antique Alexandrie: Ses Faubourgs et Environs Découverts, par les Fouilles, Sondages, Nivellements et Autres Recherches* (Mahmoud-Bey 1872). In addition to his 'Carte de l'Antique Alexandrie et des Ses Faubourgs' (1866) (Figure 37), there is one of the 19th-century contemporary town, 'Carte d'Alexandrie en 1865' (1871) (Figure 38), and another of its environs, 'Carte des Environs d'Alexandrie' (1866) (Figure 39). Relevant to the current topographical study would be the first *carte*: a contour map showing the circuit walls and street grid of ancient Alexandria along with some of its principal edifices as known primarily from classical literary sources. In 1872, German cartographer Heinrich Kiepert reproduced el-Falaki's map of the ancient city, under the title 'Plan der Alten Stadt Alexandria', to be published in volume VII of *Zeitschrift der Gesellschaft für Erdkunde zu Berlin*, which includes a concise contribution by Kiepert entitled 'Zur Topographie des Alten Alexandria. Nach Mahmud Beg's Entdeckungen' (Figure 40) (Kiepert 1872: Tafel V).

e) The Late Nineteenth Century

Urban expansion towards the south is on display in the maps of J. Millie (1867-68) (Jondet 1921: Planche XXXIX) and Commander A.L. Mansell, R.N. (1869) (De Bellefonds 1872-73: Planche VIII[b]), where modern constructions cover progressively the Tulunid enclosure of the mediaeval town (Figures 41-42). The British bombardment of the city on July 11th, 1882, is documented in Tome XX of *Revue d'Artillerie Française* (Figure 43) (Jondet 1921: Planche XLIV). In *Military History of the Campaign of 1882 in Egypt*, Major-General Sir John Frederick Maurice (British Royal Artillery) provides a state-of-the-art map showing the fortified position occupied by British troops on July 23rd, 1882, at el-Ramleh (Figure 44) (Maurice 1887: Map Number 3). Another panoramic view of Alexandria and its harbours dates to the 1880s. It was published in Paris as part of an *Atlas des Ports Étrangers* (Figure 45) (Direction des Cartes, Plans et Archives, et de la Statistique Graphique, Ministére des Travaux Publics: Planche XVII). A 'Plan Comparatif d'Alexandrie Ancienne et Moderne', with el-Falaki's orthogonal grid superimposed in red, is published in Henry de Vaujany's guidebook *Alexandrie et la Basse-Égypte* (Figure 46) (De Vaujany 1885: 27). In 1887, an official map of the city was issued by the 'Inspection de l'Ouest', which operated at the time under the 'Direction Générale du Tanzim' (Figure 47) (Jondet 1921: Planche XLVII). The influence of Strabo's descriptive narrative on ancient Alexandria (*Γεωγραφικά: Geōgraphiká*, c. the late 1st century BC) is evident in De Vaujany's plan of the Royal Quarter, supplementing his *Recherches Sur les Anciens Monuments Situe Sur le Grand-Port d'Alexandrie* (Figure 48) (De Vaujany 1888).

One major attempt to mapping the ancient city and its suburbs is that of Greek physician and epigraphist Tassos Demetrios Neroutsos. His map, based largely on Kiepert's 1872 reproduction of el-Falaki's *carte*, forms part of the monograph *L'Ancienne Alexandrie: Étude Archéologique et Topographique* (Figure 49) (Neroutsos

1888). A 'Plan de la Ville d'Alexandrie et du Marché de Minet-el-Bassal' was then drafted by Carlo Marchettini in 1890 (Figure 50) (Bibliothèque Nationale de France – Gallica). In 1894-95, British archaeologist David George Hogarth, renowned for excavating at Naukratis (section 1.1), investigated the city with the prime aim of assessing its archaeological potential (Figure 51) (Hogarth and Benson 1894-95). While finding very little of what was recorded earlier by el-Falaki (1872), Tassos Neroutsos (1875; 1888), and Henry de Vaujany (1885; 1888), Hogarth questioned the relevance of a 'future British expedition' in his *Report on Prospects of Research in Alexandria*. He even undermined any potential for Kom el-Dikka after excavating a few trenches there, a judgment proven wrong with the successive discoveries made in the central district since the early 1960s by the Polish Centre of Mediterranean Archaeology (PCMA, University of Warsaw; *Alexandrie I-VIII*, 1976-2010).

In 1897, the Italian founder and first director of the city's Graeco-Roman Museum, Giuseppe Botti (1892-1903; founded the museum on October 17th, 1892), published Georges Marichal's map of the Egyptian borough of ancient Alexandria, Rhakotis, in the Roman period: *Plan du Quartier 'Rhakotis' dans l'Alexandrie Romaine* (Figure 52) (Botti 1897c). In the following year, Botti attempted a reconstruction of the Ptolemaic city in *Plan de la Ville d'Alexandrie a l'Époque Ptolémaique; etc.* (Figure 53) (Botti 1898c). The century ends with a five-month excavation campaign (October 1898 – March 1899) directed by German archaeologist Ferdinand Noack. Its results were published in 'Neue Untersuchungen in Alexandrien' (Figure 54) (Noack 1900: Tafel IX). On the centenary of the Napoleonic campaign, German industrialist Ernst von Sieglin financed an archaeological expedition to Alexandria (1898-1902). Its members include Theodor Schreiber, Friedrich W.F. von Bissing, Ferdinand Noack, Ernst R. Fiechter, Siegfried Loeschcke, Rudolf Pagenstecher, Joseph Vogt, Carl Watzinger, Alfred Schiff, Victor E. Gardthausen, Jean-Paul Richter, August Thiersch, Hermann Thiersch, and Giuseppe Botti. The outcome was three volumes released under the title *Expedition Ernst Sieglin: Ausgrabungen in Alexandria* – band I: Schreiber *et al.* 1908a-b, *Die Nekropole von Kom-Esch-Schukafa*; band II: miscellaneous 1913-27, *Die Griechisch-Ägyptische Sammlung Ernst von Sieglin*; band III: unpublished, *Ausgrabungen im Königsviertel und im Sarapeion von Alexandria* (Figure 55) (Schreiber *et al.* 1908b: 1, Abbildung 1). Earlier, Ernst's brother, historian Wilhelm Sieglin, produced two maps of ancient Alexandria at different epochs in Karl Baedeker's *vierte auflage* of *Aegypten: Handbuch für Reisende* (Figures 56-57) (Baedeker 1897: Pläne IV-V).

f) The Twentieth Century and Recent Research

An ever-expanding metropolis is clearly depicted in the charts of the early 20th century. A case in point would be the one issued by the technical services of the Municipality of Alexandria (1902) (Jondet 1921: Planche L), and that of Rear-Admiral Sir Richard Massie Blomfield (1905) (Breccia 1907b: 3) (Figures 58-59). The next cartographic attempt pertains to Mariano Bartocci, the draughtsman of the Graeco-Roman Museum. His map supplements *Alexandrea ad Aegyptum: Guide de la Ville Ancienne et Moderne et du Musée Gréco-Romain*, the guidebook written by the second, Italian director of the museum, Evaristo Breccia (1904-16, 1918-31; Swiss orientalist Étienne Combe replaced Breccia as director of the museum in 1916-18) (Figure 60) (Breccia 1914a). In 1912, Gaston Jondet, then Chief Engineer of the Department of Ports and Lighthouses of Egypt, published a 'Carte de la Rade d'Alexandrie' on the occasion of the harbour works carried out in Alexandria from 1911 to 1915 (Figure 61) (Jondet 1916: Planche III). Another map of the city and its harbour infrastructure was issued by the Survey Department in 1917 (Figure 62) (Jondet 1921: Planche LIII).

Two maps of the ancient and modern city are featured in Edward Morgan Forster's iconic guidebook *Alexandria: A History and a Guide* (Figure 63) (Forster 1922: 84-85). About a decade later, the first cataloguing attempt was made by the third, Italian director of the Graeco-Roman Museum, Achille Adriani (1932-40, 1949-52; British archaeologist Alan Rowe took over the directorship of the museum in 1940-49). Adriani produced a map of the ancient Royal Quarter, including the archaeological sites registered to date, in his 'Saggio di una Pianta Archeologica di Alessandria': an appendix to the 1934 *Annuario del Museo Greco-Romano (1932-33)* (Figure 64) (Adriani 1934). The latter formed the nucleus of an exhaustive topographical catalogue of ancient Alexandria published under the title *Repertorio d'Arte dell'Egitto Greco-Romano* (Figures 65-66) (Adriani 1966a: 269, Tavola di Aggettivo A; 1966b: Catalogue Number 1, Tavola 1, Figure 1). The reference work of Adriani is followed by another monumental *opus* in three volumes: Peter Marshall Fraser's *Ptolemaic Alexandria* of which Chapter 1 (Foundation and Topography) features an outline map of the city with an informative legend (Figure 67) (Fraser 1972).

In 1993, Polish archaeologist Barbara Tkaczow created a repertoire of four maps, three displaying the configuration at different epochs, along with a fourth, collective one, in *The Topography of Ancient Alexandria: An Archaeological Map* (Figures 68-70) (Tkaczow 1993: maps A-D). A year later, German scholars Wolfram Hoepfner and Ernst-Ludwig Schwandner published their version in the second edition of an extensive study of classical urbanism entitled *Haus und Stadt im Klassischen Griechenland* (Figures 71-73) (Hoepfner and Schwandner 1994). The political and social developments of late antique Alexandria were then discussed by Christopher Haas,

relative to contemporary urban milieus, in *Alexandria in Late Antiquity: Topography and Social Conflict* (Haas 1997). At the turn of the century, Marjorie Susan Venit adopted a chronological-thematic approach to cataloguing the funerary remnants of antiquity in her thorough inquiry into the *Monumental Tombs of Ancient Alexandria: The Theater of the Dead* (Venit 2002: appendix A, 191-200). In 2007, Judith McKenzie released various plans of the ancient city in a topographic prelude to *The Architecture of Alexandria and Egypt, 300 BC-AD 700* (Figures 74-75) (McKenzie 2007: 21, 26, 38, 175).

Topographical studies of ancient Alexandria took a great leap forward with the publication of results from (i) the geophysical (bathymetric and magnetic) surveys and underwater excavations of the Institut Européen d'Archéologie Sous-Marine (IEASM; section 2.3.3) (Figure 76), (ii) the salvage excavations (both underwater and terrestrial) of the Centre d'Études Alexandrines (CEAlex; sites 43, 47j-k, 52, 54c, 74b, 95, 99-100, 103, 114, 118, 121, 122c, 149c, 166), (iii) the resistivity geophysical surveys conducted by the Centre de Recherche Géophysiques (CRG, France), Universités Paris VI and VII, the Centre d'Études Alexandrines, and the National Research Institute of Astronomy and Geophysics (NRIAG, Egypt; section 2.3.2), and (iv) the underwater archaeological surveys carried out to the east of the Silsileh headland by the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS; sites 142, 151, 163). Archaeological investigation yet continues in the compact city of today, whether by the Egyptian Supreme Council of Antiquities (SCA, Ministry of Tourism and Antiquities), or by foreign research institutions working under license from the government.

III. Objectives and Structure

The current study takes the previous scholarship (Introduction II. History of Research) into account jointly with a corpus of relevant chronicles from classical and late antiquity and the Renaissance in order to produce a comprehensive, up-to-date topographical catalogue and reconstruction of Alexandria in antiquity, from the time of the city's foundation in the 4th century BC to the Arab conquest of Egypt in the 7th century AD: a millenary range of occupation. To this end, the main line of research shall encompass:

(a) Setting the historical context of the Graeco-Macedonian foundation: geomorphology, location, orientation, and governance (Chapter 1).
(b) Tracing the urban layout: circuit walls (lines of defence), grid plan, waterways, and harbour infrastructure (Chapter 2).
(c) Contextualizing the principal civil, religious, and funerary edifices within predetermined urban and suburban sectors (Chapter 3). Chapter 3 is subdivided into (i) physical remnants corresponding to known historical narratives, (ii) physical remnants without known historical reference, and (iii) literary accounts pending physical evidence.
(d) Cataloguing the archaeological sites in Alexandria, from the recordings of the Napoleonic expedition at the end of the 18th century to the recent discoveries of the 21st century (chapters 2 and 3).
(e_1) Inferring the urban plan of the Graeco-Macedonian founders and the successive adjustments made through the course of classical and late antiquity, from the historical foundation of the city (331 BC) to the Arab conquest of Egypt (AD 641-42) (Chapter 2: Conclusion I).
(e_2) Identifying the distributional patterns of edifices across the Alexandrian metropolis to gain a deeper insight into the topographical configuration of the cityscape in the Hellenistic, Roman, and Byzantine periods (Chapter 3: Conclusion II).

Theoretical analysis of the topography of ancient Alexandria is constantly informed through a critical study of relevant literary sources from antiquity, where the historical record is calibrated to the results of archaeological investigation. This is approached by integrating the historical narratives with a full repertoire of material culture, including architecture, sculpture, mosaics, iconography, ceramics, inscriptions, and coinage. Text is supported with 346 illustrations. Whereas the featured maps (Figures 77-81) intend to serve as digital models of reconstruction and are drawn up using a conceptualization application software (AutoCAD) as a tool for visualizing topographic data. Five maps (V1-V5) are generated: four of the city, the adjacent Pharos Island, and the western suburbs (Ptolemaic: late 4th to 2nd century BC – Figure 77; late Ptolemaic-Roman: 1st century BC to 3rd century AD – Figure 78; late antique: 4th to 7th century AD – Figure 79; collective: late 4th century BC to 7th century AD – Figure 80) and one of the eastern suburbs (Figure 81). The study follows basically two interrelated approaches, descriptive and analytical, with the latter being dependent on the former. The descriptive discourse covers introductory sections on the historical foundation (Chapter 1), previous archaeological investigation (2.1.1, 2.1.2.1, 2.1.3.1, 2.1.4.1, 2.2.1, 2.3.3.1), and urban and suburban division (3.1.1-8). Analyses and proposals are either in separate sections (2.1.2.2, 2.1.3.2, 2.1.4.2, 2.2.3, 2.3.1-2), following prerequisite descriptive accounts, or together with the data in the same section (2.2.2, 2.3.3.2-6, 2.3.4-5) or site (3.2-9). All the hypotheses introduced here (urban layout: objectives b and e_1; cityscape: objectives c and e_2) are based on archaeological and/or historical evidence from the catalogue (objective d). The latter includes

168 archaeological sites structured in accordance with predetermined geographical and typological categories. Finally, the conclusion provides an integrated summary of all proposals, with the evidence shown between brackets as a reference number corresponding to the relevant site(s) from the catalogue. The three constituents of this study (text: part 1; illustrations: part 2; AutoCAD maps in digital format: an annex hosted online) should be considered together, as one unit, in order to attain an understanding of the content.

Chapter 1
Context of Foundation

1.1) Geomorphological Setting

35,000 yrs. BP, carbonate-rich sands began accumulating in the northwestern sector of the Nile Delta region of Egypt in response to relative sea-level change during the Late Pleistocene. A series of coastal ridges, formed of cemented calcareous sandstone known as kurkar, were subsequently deposited near the seashore. At the time of ridge formation, back-barrier lagoons (the future lakes of Mareotis, el-Maadiya, and Idku) were developing within depressions on the landward side of the beach ridge complex (Warne and Stanley 1993: 57-58). Petrologic and radiocarbon data from the region indicate an elongate, partially enclosed embayment formed at the lee of an oblong island (Pharos) and a natural headland (Lochias) on the Pleistocene ridge of Mareotis and flooded with seawater during a marine transgression at 8,000 yrs. BP (Stanley and Bernasconi 2006: 283).

Around 4,000-3,000 yrs. BP, tectonic subsidence and concomitant rise in relative sea levels led to (a) the expansion of Lake Mareotis in a southerly direction and (b) a migration of the Nile's Canopic branch westwards, to reach almost the eastern perimeter of Abu Qir aka el-Maadiya Lagoon. During the 1st millennium BC, Lake Mareotis was constantly supplied with fresh water through several Canopic arteries, including the one that provided direct access to the Greek emporion of Naukratis (the present-day site of Kom Geif, el-Beheira, the western Nile Delta). The inflow of fresh water from these channels had diluted the salt in the lake, making its brackish water rather suitable for subsistence agriculture (Rodziewicz 1983a: 204). Meanwhile, with successive formation of urban settlements, which relied chiefly on the cultivation of grain, vine, and olive, the developed economy of the Mareotic region would have been central to prompting the foundation of a metropolitan hub for commercial activities on the Mediterranean coast of Egypt: *Alexandrea ad Aegyptum*.

Prior to such transformations wrought by the construction of an embankment-dam at Aswan, Egypt's Mediterranean coast had a different geomorphological configuration that offered, apart from a few dock-landing points at the Pelusiac and Canopic outlets, no suitable anchorage to mooring ships (el-Abbadi 2000: 17; Goddio and Bernard 2004: 114). One of the few havens to be found, in antiquity, alongside the seashore, from Peloúsion (Tel el-Farama, Port-Saīd), in the east, to Paraitónion (Marsa Matrouh), in the west, was associated with the coastal lee of Pharos. The advantages of the sheltered anchorage, situated opposite an oblong island, must have been acknowledged by archaic Greeks as early as the 8th-7th century BC, the time by which the maritime activities of the Hellenes had reached new horizons (Reed 2003: 71-72). With the influx of Greek mercenaries in service of the Saītic kings (Matthews and Römer 2003: 12), and merchants who became residents of Naukratis (Hornblower *et al*. 2014: 797), from various Greek city-states (πόλεις), through the course of the 7th and 6th centuries BC, the coastal site, marked by the island of Pharos, about forty miles northwest of the Naukratite emporion (trading post), became renowned as an opportune transit-point before reaching the Nile's Canopic mouth at the customs port of Thonis-Herakleion and thence to inland Egypt.

1.2) Location and Urban Planning

The Greek perception of the site as a landing stage for international navigation is documented in Book IV of Homer's *Odyssey*:

> *Now in the surging sea an island lies – Pharos they call it – distant as far from the Egyptian stream (Canopic mouth) as a hollow ship runs in a day when a whistling wind blows after. By it there lies a bay with a good anchorage, from which they send the trim ships off to sea after supplying them with black water.*
>
> (Homer, Odyssey: IV. 351-381)

In his biography of Alexander, Plutarch yet affirms the Homeric view of the Pharos site and its harbour amenities. In *Life of Alexander* (*Parallel Lives*), the Greek biographer relates:

> *He (Alexander the Great) saw a wonderful vision. A man with very hoary locks, and of a venerable aspect, appeared to stand by his side, and recite these verses:*
> *Now, there is an island in the much-dashing sea, in front of Egypt; Pharos is what men call it.*
> *Accordingly, he rose up at once and went to Pharos, which at that time was still an island, a little above the Canopic mouth of the Nile, but now it has been joined to*

> *the mainland by a causeway (Plutarch is writing in the 1st-2nd century AD). And when he saw a site of surpassing natural advantages (for it is a strip of land like enough to a broad isthmus, extending between a great lagoon and a stretch of sea which terminates in a large harbour), he said he saw now that Homer was not only admirable in other ways, but also a very wise architect, and ordered the plan of the city to be drawn in conformity with this site (terrain).*
>
> (Plutarch, Lives, Alexander: XXVI. 3-4)

A sober account of the historical foundation of Tybi 25th (January 20th or April 7th), 331 BC (Bagnall 1979: 48), is given in Arrian's *Anabasis Alexandri*:

> *When he (Alexander) had reached Canopus, and sailed round Lake Mareotis, he came ashore, just where is now the city of Alexandria, named after Alexander (Arrian is writing in the 2nd century AD). It struck him that the position was admirable for founding a city there, and that such a city was bound to be prosperous. He was, therefore, filled with eagerness to get to work, and himself marked out the ground plan of the city, both where the marketplace (agora) was to be laid out, how many temples were to be built, and in honour of what gods, some of these Greek, and Isis, the Egyptian; and where the wall was to be built round it. In view of all this, he offered sacrifice, and the sacrifice proved favourable.*
>
> (Arrian, Anabasis Alexandri: III. 1.5)

The historical narratives show that Alexandria was founded in winter/spring 331 BC on a narrow limestone ridge separating the Mediterranean from the now largely desiccated Lake Mareotis, to the west of the Egyptian Nile Delta (Figure 82). In antiquity, the site was protected from sea winds and swell waves by clusters of huddled reefs, two natural headlands, and an oblong-shaped island. The newly founded city, being conveniently situated 'between a great marsh (Lake Mareotis) and the (Mediterranean) sea, affords by land only two approaches, both narrow and very easily blocked' (Diodorus, Bibliotheca Historica: XVII. 52.1). A strategic site as such was shielded all around by successive natural barriers. Josephus maintains:

> *(Alexandria) is also walled round on all sides, either by almost impassable deserts, or seas that have no havens, or by rivers, or by lakes.*
>
> (Josephus, Bellum Iudaicum: II. 16.4)

It may be proposed, therefore, that certain geomorphological features and systematic artificial development of the coastal areas (section 2.3.1-5) were central to the foundation and retaining of Alexandria as the 'first city of the civilized world', for it was 'certainly far ahead of all the rest in elegance and extent and riches and luxury' (Diodorus, Bibliotheca Historica: XVII. 52.5).

1.3) Orientation and Climate Conditions

Alexander's allocation of urban areas and edifices for specific purposes in advance of their actual establishment reflects a great deal of Hellenic influence in planning the original layout of the Hellenistic city. Whereas the use of barely to mark the urban peripheries, as mentioned by Plutarch, Arrian, and Strabo before them, seems to signal a Macedonian form of blessing. Perhaps the three might have been reiterating earlier narratives as that of Diodorus Siculus (c. 60-55 BC):

> *He (Alexander) decided to found a great city in Egypt, and gave orders to the men left behind with this mission, to build the city between the marsh and the sea. He laid out the site, and traced the streets skillfully, and ordered that the city should be called after him Alexandria.*
>
> (Diodorus, Bibliotheca Historica: XVII. 52.1)

The Macedonian king was advised on the details of the city's Hippodamian layout by Dinokrates (Rhodian engineer), Kleomenes of Naukratis (section 1.4), Krateron of Olynthus, and Eroa (Libyan stonemason) and his brother, Hiponemos. According to tradition (pseudo-Kallisthenes, Alexander Romance: 80-82), the latter designed a water-supply system that became known as *hiponoses*: an archaeologically attested intricate network of subterranean aqueduct tunnels and conduits accessible by means of vertical wells and inspection shafts. The orthogonal grid was planned in accordance with the local climate conditions. In fact, 'by selecting the right-angle of the streets, Alexander made the city breathe with the Etesian (meaning annual or periodic) winds so that as these blow across a great expanse of sea, they cool the air of the town, and so he provided its inhabitants with a moderate climate and good health' (Diodorus, Bibliotheca Historica: XVII. 52.2).

The coastline configuration of the calcareous Mareotic ridge meant that the dominant north-westerly winds were to hit land at right-angles and, accordingly, the streets of the Hippodamian grid deliberately follow a secondary intercardinal orientation (NNW-SSE) for the city to receive the prevailing Etesian winds 'so that the Alexandrians would pass their time most pleasantly in summer' (Strabo, Geōgraphiká: XVII. 1.7). The orthogonal grid of ancient Alexandria has its origin in the Classical urban designs of the rebuilt 5th-century BC city-states (πόλεις) of mainland Greece, the Aegean archipelago, and the western coast of Asia Minor (present-day Turkey) (Shipley and Hansen 2006: 55). Indeed, similar grid patterns are met at Greek cities and islands such as Piraeus (Attica), Olynthus (Chalkidiki), Priene (Ionia), Knidos (Caria), and Rhodes (the Dodecanese) (Ward-Perkins 1974: 14-16).

1.4) Ptolemy in Charge: The Political Aspect

Upon his departure to Syria, Alexander made Kleomenes receiver of the tribute from all Egypt and accountable of its financial administration (Fraser 1972: 6-7). Kleomenes hence became in charge of developing the newly founded coastal city into a major municipal and commercial centre. The Naukratite financier, largely in control of the grain trade, had managed to amass a fortune of 8,000 talents in the state treasury (Parsons 1952: 55). Around 323 BC, following the death of Alexander the Great in Babylon, Kleomenes, in allegiance with the regent Perdiccas, was first demoted to *hyparchos* before getting eliminated by suspicious Ptolemy, the son of Lagos (Bingen and Bagnall 2007: 23). The latter is one of Alexander's senior military associates, who took charge of Egypt, as satrap (governor), under the co-sovereignty of Philip III Arrhiddaeus (323-317 BC) and Alexander IV (323-309 BC). Eventually, the Macedonian general assumed the title of 'king' c. 306 BC not long before he had been proclaimed, yet with the aid of the local priestly elite, pharaoh c. 304 BC (Ellis 2005: 77; Hölbl 2001: 318-323; Worthington 2016: 3).

Contemporary with Ptolemy's governorship is the so-called Satrap Stela, which provides the earliest known hieroglyphic reference to Alexandria: c. November 311 BC (Egyptian Museum in Cairo, Inventory Number CG.22182) (Diodorus, Bibliotheca Historica: XIX. 81, 82-85; Mueller 2006: 18-21; Pfeiffer 2005: 19-20). The decree was commissioned to record 'the restoration of the Land of Uto to the Temple of Buto' in Lower Egypt: the present-day site of Tell el-Farraīn (Kafr el-Sheikh, the Nile Delta). It states that Ptolemy Lagides, referred to with the epithet 'great chief', has restored the ownership of the land to the temple after being proclaimed by Xerxes a Persian estate. The upper part of the *stela* thus shows the return of the divine statuaries and sacred scrolls looted by the Persians to the local deities of Buto (Figure 83). In this context, the victories of Ptolemy over Demetrios I Poliorketes at the Battle of Gaza (312 BC) are mentioned along with an extended list of Ptolemy's virtues as governor and soldier. Important to the current study though is the *stela's* record of the satrapal residence at the time of issuance:

> *He (Ptolemy Lagides as satrap) made his residence, 'the Fortress of the King of Upper and Lower Egypt, [Meri-Amun, Setep-en-Re]: Beloved of the Ka-Spirit of Amun, Chosen of the Sun (of Re), Son of the Sun (of Re), Alexandros (III)' – a priestly epithet for the city of Alexandria – on the shore of the great green sea of the Hau-Nebu (of the Ionians, i.e. of the Hellenes: the Mediterranean); (it was) formerly called Râ-Kedet (Rhakotis).*

The text alludes to a priestly adaptation of the Greek toponym 'Αλεξάνδρεια' – 'the Fortress of the (dual) King of Upper and Lower Egypt, *Meri-Amun*, *Setep-en-Re* (the Egyptian royal titulary of Alexander the Great), Son of Re, Alexandros': 'the Fortress of Son of Re, Alexander'. It was founded 'on the shore of the great green sea of the Hau-Nebu (the Mediterranean)', at the site of the village of 'Râ-Kedet' (Hellenised form: Rhakotis). Besides the descriptive accounts of the ancient sources (Strabo, Geōgraphiká: XVII. 1.6), the presence of 'Râ-Kedet' is backed by material evidence for on-site habitation antedating the Macedonian conquest of 332 BC (sections 2.3.3.5.1, 2.3.4). However, with the arrival of the Graeco-Macedonian settlers, the coastal lee of Pharos, and the Mareotic νομός as a whole, would have reached a new stage of development subsequent to the foundation of *Alexandrea ad Aegyptum*. If the historical narratives credit Alexander and his technical associates for deciding on the location, orientation, and layout of the city (sections 1.2-3), archaeological investigation shows that its main development during the course of the 3rd century BC into a grandiose metropolis with public infrastructure and extravagant edifices was, for the most part, the work of the first generation of successive Ptolemaic kings – Soter (c. 306-285/2 BC), Philadelphos (c. 285/2-246 BC), Euergetes I (c. 246-221 BC), and Philopator (c. 221-204/3 BC) – as further discussed in chapters 2 and 3.

Chapter 2
Urban Layout

2.1) Circuit Walls

2.1.1) Miscellaneous Measurements

(see section 2.2.1 for the inter-axial spacing of the grid)

According to the survey work, and limited excavations where possible, carried out by Mahmoud el-Falaki in 1863-66, the standard of the Alexandrian *stadion* is 165 m: 27.50 *plethra*: 0.275-m foot: approximately, half the Egyptian cubit of c. 0.525 – 0.55 m. In *Geōgraphiká*, Strabo uses the Attic *stadion* of 185 m: 30.83 *plethra*: 0.3083-m foot. An alternative to the latter is the Ionian *stadion* of 210 m: 35 *plethra*: 0.35-m foot: 2/3 the Egyptian royal or Samian cubit of 0.525 m. The urban circuit at its maximum extent measured about 15.80 – 16.40 km in total (c. 95.75 – 99.39 *stadia*). The city reached nearly 5.09 km in length (c. 30.84 *stadia*). Its width varies – the extremities: 1.15 km at Nekropolis (c. 6.96 *stadia*) and 1.40 km at the Canopic gate (c. 8.48 *stadia*); the interior: 1.56 km at the Heptastadion (c. 9.45 *stadia*) and 2.25 km at Cape Lochias (c. 13.63 *stadia*); the centre: 1.70 km (c. 10.30 *stadia*) (Mahmoud-Bey 1872: 15). Perhaps apart from Diodorus Siculus and Pliny the Elder, both of whom must have included the necropolitan suburbs in their estimates, the figures from el-Falaki's surveys seem to tally with those of the ancient authorities (an Attic *stadion* of 185 m is used in the recordings of the 1st century BC-1st century AD):

- Diodorus Siculus – length: 40 *stadia* (c. 7.40 km).
  (Bibliotheca Historica: XVII. 52 – c. 60-55 BC)

- Strabo – length: 30 *stadia* (c. 5.55 km); width: 7-8 *stadia* (c. 1.295 – 1.48 km).
  (Geōgraphiká: XVII. 1.8 – c. 25 BC)

- Philo – width: 10 *stadia* (c. 1.85 km).
  (In Flaccum: XI. 92 – c. AD 42)

- Quintus Curtius Rufus – circuit: 80 *stadia* (c. 14.80 km).
  (Historiae Alexandri Magni: IV. 8.31 – c. AD 50)

- Josephus – length: 30 *stadia* (c. 5.55 km); width: 10 *stadia* (c. 1.85 km).
  (Bellum Iudaicum: II. 16.4 – c. AD 75)

- Pliny the Elder – circuit: 15 Roman miles (c. 22.185 km; Roman mile: c. 1.479 km).
  (Natural History: V. 11.62 – c. AD 77)

2.1.2) The Eastern Defences

2.1.2.1) el-Falaki's Excavations

Remnants of massive foundations were traced by Mahmoud el-Falaki, almost at sea level, to the east of the headland known today as el-Silsileh (Mahmoud-Bey 1872: 12-13). The recorded vestiges, partially preserved to 5 m in width, would have belonged to a defensive construction of stonework in mortar composed of lime and crushed brick. el-Falaki followed this segment of the fortifications over 300 m, between two points marked (A) and (B) in his 'Carte de l'Antique Alexandrie et des Ses Faubourgs' (1866). Further excavations eastwards revealed more remnants of the same construction, extending over 2 km to the southeast and reaching at point (C). Along the (B-C) segment, the preserved (lower) sections were found buried at 3 to 4 m beneath accumulated debris. According to oral testimonies, el-Falaki noted that the missing (upper) parts were regularly plundered by stone robbers in search of building material at times the developing town of the 19th century was undergoing major reconstruction.

At point (C), the terrain started to slope down, reaching 5 m above sea level. Groundwater was met at just 2 m below the surface level; further digging was thus not possible beyond that point. A phenomenon as such is evident elsewhere in a city that has subsided by 5.875 – 7.05 m since the time of its Macedonian foundation in the 4th century BC (section 2.3.1). This would explain why most Ptolemaic (sub)structures from previous excavations were found already partially drenched, with their footings descending below the levels of the rising water table. Indeed, high influx rates from strong aquifers are not uncommon in present-day Alexandria. A case in point would be the flooded hypogea of the Hellenistic necropolis at el-Chatby (site 145) and the large foundation walls encountered at groundwater level during construction works carried out in 1980 at the premises of the former Cricket Playground (site 122b; see also site 137a: the recently excavated monumental foundations at el-Shallalat Park).

Mahmoud el-Falaki, in keeping with oral testimonies, conjectured a continuation of the eastern periphery over 700 m: segment (C-D) in his *carte*. As said by residents of the areas under investigation, at el-Ibrahimiya Qibly, remains of the same defensive construction were accidently unearthed during the

digging of foundations for dwellings and a mosque on a height marked (D). Accordingly, a hypothetical dashed contour was extrapolated between points (C) and (D) as a possible extension of the parts determined earlier by actual excavation. el-Falaki, convinced by the local testimonies, found no reason that would have forced the Rhodian engineer Dinokrates to deflect the line of defences at this point. Beyond point (D), excavations became increasingly impractical, given the buildings and groves occupying the areas of interest. Another extrapolation was, therefore, made between point (D) and the easternmost of his encounters in the south, point (E).

2.1.2.2) Inferring the Peripheries

2.1.2.2.1) The Defences of the Roman Principate: to c. the 3rd century AD

Mahmoud el-Falaki described the remains revealed through five trenches sunk at the southern periphery as being 'grands blocs de maçonnerie de 5 mètres de largeur, faites en moellons plus ou moins gros et où la composition du mortier diffère un peu de celui de la partie découverte en premier lieu' (Mahmoud-Bey 1872: 14). Although el-Falaki does not mention the type of mortar used in the construction of the southern defences, the fact it was of a slightly different composition from that of 'la partie découverte en premier lieu' (i.e. from the mortar used in segments A-B and B-C) is key to understanding the multi-phase evolution of the urban enclosure in antiquity. At the beginning of Chapitre Premier, el-Falaki records that he found 'des fondations larges de 5 mètres et construites en moellons et mortiers composés de chaux et de briques pilées. Les restes de ce mur se voient encore aujourd'hui, aux bords de la mer, dans une étendue de 300 mètres de A jusqu'à B sur la carte du plan de la ville' (Mahmoud-Bey 1872: 12). He adds, 'les fouilles ont été continuées dans les décombres; et les restes du même mur paraissaient toujours de même construction et de même largeur, 3 ou 4 mètres au dessous des décombres, dans l'étendue de deux kilomètres environ; c'est-à-dire de B juspu'à C sur la carte' (Mahmoud-Bey 1872: 12-13). It seems that the mortar used in the construction of the defences unearthed by el-Falaki over 2.30 km at the northeastern and eastern segments of the urban circuit was composed of lime and crushed brick. In *De Architectura* (the 1st century BC), Vitruvius refers, in detail, to this form of construction where *pozzolana* is mixed with lime and rubble.

The use of crushed brick and gravel in lime mortar became predominant in the construction of masonry walls, especially in coastal areas of humid weather, in the 1st century BC and through the 1st century AD (Sear 1983: 73-77). At the time, the Romans developed a technique by which a reddish volcanic dust known as *pozzolana*, for being first encountered in the town of Pozzuoli in Campania, was applied to a fine hard cement in order to withstand damp conditions. On lime-*pozzolana*, Vitruvius relates:

> *This substance (pozzolana), when mixed with lime and rubble, not only lends strength to buildings of other kinds, but even when piers of it are constructed in the sea, they set hard under water. The reason for this seems to be that the soil on the slopes of the mountains in these neighbourhoods (of Baiae and in the country belonging to the towns round about Mt. Vesuvius) is hot and full of hot springs. This would not be so unless the mountains had beneath them huge fires of burning sulphur or alum or asphalt. So the fire and the heat of the flames, coming up hot from far within through the fissures, make the soil there light, and the tufa found there is spongy and free from moisture. Hence, when the three substances, all formed on a similar principle by the force of fire, are mixed together, the water suddenly taken in makes them cohere, and the moisture quickly hardens them so that they set into a mass which neither the waves nor the force of the water can dissolve.*
>
> (Vitruvius, De Architectura: II. 6.1)

In Alexandria, *opus caementicium* is likely to have been employed during the opening decades of the Augustan Principate in constructing the new line of defence which ran to the east of its Ptolemaic predecessor to accommodate a metropolis-in-continuous-expansion. el-Falaki's narrative of 'des fondations larges de 5 mètres et construites en moellons et mortiers composés de chaux et de briques pilées' seems to reinforce such a notion. In fact, the course of the presumed defences was traced and intermittently excavated by el-Falaki to the east of el-Silsileh (beyond ancient Cape Lochias) over an approximate distance of 2.30 km – segments (A-B: 0.30 km) and (B-C: 2 km). In Kiepert's reproduced version, 'Plan der Alten Stadt Alexandria' (1872), which reveals the general layout of the terrain at the time of el-Falaki's investigation, a series of hills is seen stretching NNW-SSE, almost in alignment with the orthogonal grid, at a maximum height of approximately 20 – 30 m. The recorded vestiges of el-Falaki's defences appear to have followed the tight contours of the mounds known today as el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly as they slope down towards the eastern suburbs. This tendency to exploit the terrain heights in determining the course of the urban defences is not restricted to the eastern periphery, as evident on the inferred course of the southern periphery, which follows the series of hills extending ENE-WSW, from el-Hadra Qibly towards Kom el-Shuqafa (section 2.1.3). A phenomenon as such is intrinsic to the urban enclosure of ancient Alexandria and seems to have been dictated, as discussed hereafter, by (a) demographic growth and living-space economy in the east and (b) the defensible layout of the Graeco-Roman metropolis in the south.

The line of defence would have diverted towards the interior before the eastern end of street L4 to reach at el-Falaki's fortification-point (E), hence bypassing the depression of el-Ibrahimiya Qibly where the conjectured segment of the circuit runs. This path, favoured by the terrain, is backed by the fact that el-Falaki was unable to carry out excavations in the subsided zone extending over 700 m through which a hypothetical periphery (C-D) was proposed by him on the grounds of local testimonies. The authority of el-Falaki's conjecture of the urban defences between the eastern end of street L4 and fortification-point (E) is to be reconsidered accordingly. It is doubtful that the vestiges at the eastern end of L4 had continued for yet another 1,650 m to reach that further point marked (D), about 620 m from the eastern end of street L'2: the area beyond el-Falaki's point (C), whence 'la continuation des fouilles était impossible' across el-Ibrahimiya Qibly: a depression suitable for the construction of a hippodrome below the steep slopes of the eastern mounds (section 3.9.3.1, J).

The English anthropologist and traveller Richard Pococke, who visited the city in June 1737, relates:

> *The racing place, called the Hippodromus, without (outside) the gate of Canopus, was probably in the plain towards the canal, beyond the high ground, where I suppose that gate was ... At the first entrance on the height from the plain, I observed they had been digging out stones, which, as they said, were foundations of a wall.*
>
> (Pococke 1743: 10-11)

On the course of the ancient walls in the east, Pococke adds:

> *The old walls of the city seem to have been built on the height, which extends from Cape Lochias towards the east, the remains of a grand gateway (Canopic gate: point M in Pococke's map) being to be seen in the road to Rosetto at this high ground; and the foundations of the walls may from thence be traced to the canal.*
>
> (Pococke 1743: 3)

Accordingly, a hypothetical contour (C4) or (A-E) is rendered in the featured AutoCAD maps (V2) and (V4). It represents the northeastern and eastern frontiers of the ancient city at its maximum extent c. the 1st-3rd century AD. This section of the urban circuit would have been altered following the Crisis of the Third Century (AD 235-84). In AD 272, the eastern defences were destroyed and the Broucheion (the northeastern district, including the annexed, deptolemised Royal Quarter) was laid waste during Aurelian's campaign in the Roman East to recover the city from the Palmyrenes (Capponi 2011: 60). The turbulent events are recorded by the 4th-century historian Ammianus Marcellinus:

> *But Alexandria herself, not gradually (like other cities), but at her very origin, attained her wide extent; and for a long time she was greviously troubled by internal dissensions, until at last, many years later under the rule of Aurelian (AD 270-75), the quarrels of the citizens turned into deadly strife; then her walls were destroyed and she lost the greater part of the district called Broucheion, which had long been the abode of distinguished men.*
>
> (Ammian. Marcellin., Res Gestae: XXII. 16.15)

Marcellinus, however, neither specifies which sections of the fortifications had been destroyed nor the extent of destruction wrought by Aurelian's offensive. Meanwhile, conditions within the once prosperous Broucheion must have continued to deteriorate in the aftermath of Diocletian's sack of the city c. AD 297 and the destructive earthquake and mega-tsunami of AD 365, as affirmed by Epiphanius of Salamis in his 4th-century treatise on weights and measures:

> *He (Ptolemy II Philadelphos) established a library in the same city of Alexander, in the (part) called the Broucheion; this is a quarter of the city today (i.e. in the 4th century AD) lying waste.*
>
> (Epiphanius, On Weights and Measures: 9.52b)

2.1.2.2.2) The Defences of the Macedonian Foundation: to c. the 1st century BC

The Hellenistic origin of el-Falaki's conjectured circuit in the east is in dispute, for it contained within its premises, in contrast to universal Greek practice, the earlier *necropoleis* at present-day el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly. The possibility of a defensive antecedent to the west should therefore be examined. No archaeological evidence for a defensive construction as such has been discovered to date; although the absence of evidence is not necessarily an evidence of absence. Hence, the notion of two successive lines of defence in the east is assessed hereafter.

2.1.2.2.2.1) Historical Evidence

The presumed circuit walls of the Macedonian foundation are recorded by Diodorus Siculus in *Bibliotheca Historica* (the 1st century BC):

> *Alexander also laid out the (defensive) walls (of the city) so that they were at once exceedingly large and marvellously strong.*
>
> (Diodorus, Bibliotheca Historica: XVII. 52.3)

Diodorus, who visited the city c. 60-59 BC, records an Alexandrian population of over 300,000 free residents (Diodorus, Bibliotheca Historica: XVII. 52.6). This estimate would reach around 400,000 when slaves are added in. Thus, already by the 1st century BC, the capital of the Ptolemaic kingdom seems to have been

experiencing high population growth rates. Judging by the relatively low-density housing gleaned from the archaeological record for the Hellenistic period, the populace could barely be accommodated within a contracted area of el-Falaki's enclosure (section 2.1.1). It is natural under such circumstances to find the overpopulated city spreading out in search of new *lebensraum*, or living space, for its residents. Given the geographical extent of the necropolitan suburbs in the west (sites 46-49), and the geomorphological setting of the Mareotic ridge (section 1.1), urban expansion would have been possible only in one direction, that leading to Nikopolis: eastwards.

As the name implies, the coastal town of Nikopolis was developed by a triumphant Augustus at c. 30 *stadia* to the east of Alexandria. Its establishment under the Roman Principate is likely to have been matched with accelerated urban development at the nearby capital. Indeed, expansion beyond the Ptolemaic enclosure already by the time of Strabo may be glimpsed from his descriptive account on the eastern suburbs:

> *The broad street (L1) that runs lengthwise extends from Nekropolis (western extremity) past the Gymnasium (city centre) to the Canobic gate (eastern extremity); and then one comes to the Hippodrome, as it is called, and to the other (settlements and/or thoroughfares?) that lie parallel, extending (southwards) as far as the Canobic canal. Having passed through the Hippodrome, one comes to Nicopolis, which has a settlement on the sea no smaller than a city. It is thirty stadia distant from Alexandria.*
>
> (Strabo, Geōgraphiká: XVII. 1.10)

Hence, at the advent of Imperial rule, athletic edifices, such as a *hippodromos*, and dwellings, which had developed in Roman times into *villae (sub)urbanae*, were already extending to the east of the Ptolemaic periphery. It would be reasonable, therefore, to find the estimate figure recorded by el-Falaki for the length of the city at its maximum extent (5.09 km: c. 30.848 Alexandrian *stadia*) almost tallies with that of Strabo and Flavius Josephus (30 Attic *stadia*: c. 5.55 km). The correlation between both figures may justify Strabo's silence on the sepulchral nature of the eastern suburbs (the present-day districts of el-Chatby and el-Hadra) at the very same time he firmly labelled the western suburbs 'Nekropolis' (sites 46-49), a city of the dead, with embalming workshops, funerary groves, and innumerable tombs (Strabo, Geōgraphiká: XVII. 1.10).

For the first generations of Alexandrian settlers, the mounds (maximum height: 20-30 m; now levelled) extending to the east of the newly established city, from c. the late 4th to the 2nd century BC, would have been most suitable to receive interments. This is evident in the predominant Graeco-Macedonian character of the earlier *necropoleis* at el-Chatby and el-Hadra (sites 145-147). It may be assumed that the earlier settlers would have interred their dead in funerary structures reminiscent of those in the homeland. However, when Strabo had visited the city c. 25 BC, the eastern *necropoleis* were already being transformed steadily into areas of residential habitation. This is backed by the stratigraphic sequence recorded at several sites in el-Chatby and el-Hadra, where the upper, Roman *strata* reveal signs of continuous occupation in the form of domestic architecture (dwellings with floor-mosaics) and limited sections of hardstone pavement representing vestiges of transversal street R2^{bis} and other longitudinal ones (sites 2-3, 32a-c, 144, 148-149a). Stratigraphy here conforms with Philo's 1st-century account on the Alexandrian riots of AD 38; in particular, his treatise against Aulus Avilius Flaccus (*praefectus Aegypti* c. AD 32-38):

> *They (a hostile Alexandrian population unleashed by Flaccus' license) drove the Jews entirely out of four quarters and crammed them all into a very small portion of one; and by reason of their numbers, they were dispersed over the seashore and desert places and among the tombs, being deprived of all their property.*
>
> (Philo, In Flaccum: VIII. 55-56)

Philo's localisation of the Jewish Quarter (Δ) is affirmed by Flavius Josephus, who, in turn, relates:

> *It was Alexander himself that gave them (the Jews) that place (a peripheral part towards the east) for their habitation, when they obtained equal privileges there with the Macedonians ... Nor can I devise what Apion would have said had their habitation been at Nekropolis (the western suburbs) and not been fixed hard by the royal palace (in proximity to the Royal Quarter), as it is.*
>
> (Josephus, Contra Apionem: II. 4)

The respective testaments of both Philo Judaeus (c. 25 BC-AD 50) and Flavius Josephus (c. AD 37-100) suggest that the Jewish Quarter (Δ) might have extended, under imperial rule, in an easterly direction, south-southeast of the promontory of Lochias, between the coastal plateau and the abandoned eastern *necropoleis*, whence the pursued Jews of the 1st century AD had fled in search of safe refuge, into the eastern suburbs (i.e. Philo's 'desert places'). An eastward expansion as such would not have been possible unless the dead were no longer interred into the necropolitan mounds, where the developed areas of habitation, reflected in the archaeological record, had to be finally contained within the enclosure of the Augustan Principate, hence el-Falaki's encounters in *opus caementicium* (section 2.1.2.1).

2.1.2.2.2) Archaeological Evidence

A possible course for the defensive line in question is inferable by examining:

a) Remnants of defensive constructions between street R1 and the eastern mounds.
b) Remnants of Ptolemaic waterfront constructions east of Cape Lochias or el-Silsileh.
c) Distributional patterns of Ptolemaic civic constructions antedating 100 BC, east of R1.
d) Relative location of (a), (b), and (c) to the Hellenistic *necropoleis* at el-Chatby and el-Hadra.

Site 1: *Insula* L1-L2-R1-R2^{bis} (CDist.)

Maps: V1; V4

Fortification-point (α): el-Shallalat Park [criterion (a): ancient (?); Arab]

A defensive construction yet stands *in situ* at el-Shallalat Park. The three-storey structure integrates a semicircular tower that formed the northeastern corner of the Arab circuit (Figure 84) (Adriani 1966a: 68, Catalogue Number 16; 1966b: Tavola 9, Figures 22-28). Unlike most parts of the mediaeval remnant, the preserved fragment of the façade is built of massive rectangular blocks of nummulithic limestone measuring over one metre in width. Crammed with shell fossils, these isodomic blocks are quite distinct as they bear a band of drafting around their edges (Figures 85-86).

The surviving vestige at el-Shallalat suggests that parts of the Arab fortifications might have incorporated remnants of pre-existing defences, which were possibly (re)utilized by the Tulunid stonemasons in the 9th century while constructing their enclosure walls around a tapered area of the Graeco-Roman city. The reuse of ancient (structural and/or decorative) elements in the buildings of the Arab town is not uncommon in Alexandria, as documented in the chronicles of the Middle Ages, and later, by the aquatints of the 17th and 18th centuries. As regard to the latter, a case in point would be the one by the Italian-German painter Luigi Mayer, showing a mosque, near the Rosetta Gate (Bab Sharq aka Bab Rashid), with an antique fragment of a Corinthian column of pink granite, as well as another of the gateway itself (datable c. 1792, published 1801-04).

On the reuse of ancient remnants in the constructions of the Arab town, Richard Pococke relates in June 1737:

> *The outer walls round the old city are very beautifully built of hewn stone, and seem to be ancient; all the arches being true, and the workmanship very good. They are defended by semicircular towers, twenty feet diameter, and about one hundred and thirty feet apart ... The inner walls of the old city, which seem to be of the middle ages, are much stronger and higher than the others, and defended by large high towers.*
>
> (Pococke 1743: 3-4)

Perhaps the outer façade of nummulithic limestone blocks at el-Shallalat had formed part of an earlier line of defence (C1 in the featured AutoCAD maps V1 and V4), which, presumably, would have extended to the east of the main transversal thoroughfare (street R1), towards the western belt of the Hellenistic necropolises at el-Chatby and el-Hadra; and although the notion of vestiges of Ptolemaic defences on the Tulunid circuit cannot be verified without carrying out stratigraphic excavations within the areas of interest, the possibilities could still be examined theoretically.

The basic layout of the Graeco-Roman city seems to have been preserved to the 9th century, for the Tulunid fortifications have followed, where possible, the orientation of the ancient circuit walls. It would have been reasonable, therefore, for the Arabs to make use of surviving vestiges of ancient defences in the northwest (site 4), the north-northeast (sites 5-6), and the east (site 1) where the mediaeval circuit retraces, in part, its Graeco-Roman forerunner. The Arab town contained a contracted area of the ancient metropolis, which had shrunk greatly in the south following the declining status of the once thriving Mareotic harbours (section 2.3.5). Whereas a practical readjustment to the Hellenistic frontiers in the east is likely to have taken place at an earlier date, c. the 4th-5th century AD, in the aftermath of the stormy campaigns of Aurelian (AD 272) and Diocletian (AD 297) and the destructive earthquake and mega-tsunami of AD 365 (section 2.1.2.2.1).

An eastward arm, which gives the Arab town its distinct layout, seems to have been a deliberate Tulunid extension to hold the line of defences at a certain point (α) beyond transversal street R1. The narrowness of the circuit towards the east is seen along either side of the ancient πλατεία (L1), where the mediaeval walls run in alignment with longitudinal streets L2 (approximately, el-Sultan Hussein/Salah Mustapha) and L'2 (approximately, Abd el-Moneim/Ismaīl Mahanna), only to reach out for the Rosetta Gate to the east of transversal street R1. An eastern entrance to the Ptolemaic city, on the L1 alignment, is inferable, accordingly, to the southeast of el-Shallalat Park, not far from the Arab gateway. The strategic importance of this site, i.e. the vicinity of present-day Saet el-Zohour Square, may be glimpsed in the maps of the 17th and 18th centuries, where habitation within the abandoned Arab enclosure is restricted to the area around Bab Sharq. In this context, the Tulunid reutilization of ancient vestiges of massive nummulithic limestone while constructing the new urban fortifications in the 9th century should not come as a surprise: a notion strengthened by a slight deviation at that segment of the Arab circuit walls to the east of transversal street R1, one dictated by the location of pre-existing remnants of defences (C1: α) at el-Shallalat Park (Figure 87).

Site 2: Intersection of R2^{bis} with L5 (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of street L5 [Roman]
(ii) Brick masonry and conduits: *thermae* [Roman]
(iii) Fortification-point (ε): foundations of a defensive construction [criterion (b): Ptolemaic]

In 1798-99, during the Napoleonic expedition, geologist Déodat Gratet de Dolomieu recorded the remains of brick walls coated with stucco and extending along the seashore to the east of el-Silsileh: a point on the Corniche, opposite the present-day site of the Alexandria University administration building (Lacroix and Daressy 1922: 37-38). Dolomieu noted several rock-cut channels leading down into the sea. On an upper level, about 10 feet (3 m) above the brick ruins, a section of a pavement of polygonal basalt blocks was found upon a debris *stratum*. In 1841, British Egyptologist Sir John Gardner Wilkinson identified both, the 'arched brick-work' and the 'water channels', as the remnants of what seems to have been an ancient bathing establishment. Wilkinson recorded as well 'some black stones apparently making the existence of a street or causeway'. The basalt pavement first mentioned by Dolomieu then Wilkinson would be that of longitudinal street L5 uncovered in 1898-99 by Ferdinand Noack and added by him to el-Falaki's orthogonal grid (section 2.2.2). Wilkinson yet maintains that 'below, upon the beach, are masses of an old wall' (Wilkinson 1843: 157). It appears that the latter was perhaps the only remnant to survive the construction of the Corniche (the city's coast road; section 2.3.1), as noted at the time the site was reinvestigated by Achille Adriani, the third director of the Graeco-Roman Museum, over a century later.

In 1950, Achille Adriani recognized, almost at water level, remnants of defences of massive blocks of nummulithic limestone jutting out into the sea, to the east of el-Silsileh (Figures 88-89) (Adriani 1966a: 82, Catalogue Number 43; 1966b: Tavola 21, Figures 75-76). Stonework and building technique together date the submerged construction to the Ptolemaic period. Considering its proximity to Cape Lochias, this segment of the urban circuit, which could have formed part of the fortifications of the Royal Quarter, owes its survival to land subsidence. In antiquity, it would have run adjacent to the subsided southeastern sector of *akra* Lochias, as shown during the IEASM geophysical surveys in the 1990s (section 2.3.3.1). The defences, oriented off-grid, cut through the transversal course of street R2^{bis} when extended and, in turn, the (A-B) segment of defences traced by el-Falaki in the 1860s and built in *opus caementicium* (section 2.1.2.1). Adriani's recordings are key to inferring the possible geographical extent of Ptolemaic waterfront constructions to the east of el-Silsileh. It shows that the Lagid royal residences, and yet other luxurious edifices of the (military?) elite, had extended beyond the promontory of Lochias to reach almost the future site of transversal street R2^{bis}, which correlates approximately with the Suez Canal Road at an angle, as indicated by a nearby discovery.

Site 3: Section of R2^{bis}, between L3 and Lα (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of street R2^{bis}; sewers [Roman]
(ii) Building complex with floor-mosaics [criterion (c): Ptolemaic]

In July 1921, ancient remains were accidentally discovered during construction works at the Royal Institute of Hydrobiology, the present-day site of the Association of Muslim Youths in el-Chatby (Figure 90) (Breccia 1923a: 158-165; 1923b: 3-10). A salvage excavation was subsequently carried out on site under the supervision of the GRM director Evaristo Breccia. Sections of a pavement of polygonal basalt blocks were found at one metre below the levelled ground. In 1863-66, a few metres towards the south, el-Falaki uncovered sections of transversal street R2^{bis} immediately to the east of the junction of the Suez Canal Road with Alexander the Great (Omar Lotfy: el-Tram). Breccia's thoroughfare, which extends on a NNW-SSE axis, correlates with el-Falaki's transversal street R2^{bis}. It measured c. 6 m in width: not constructed on virgin soil, but upon a thick levelling *stratum*. At the middle of the street, c. 2.50 m below its stone pavement, a sewer (1.20 x 1.20 m) ran on the same axis. It was built of large, finely-hewn limestone blocks in mortar. A view of the sewer was obtainable by means of an access-shaft encountered towards the northern end of the excavation profile.

To the east of the street pavement, at 3 m below its level, vestiges of a figural floor-mosaic (3.35 x 4.60 m, frame: 1.40 m wide) were encountered within the main trench measuring 180 m^2. Unearthed 1.30 m to the south were the vestiges of a second floor-mosaic (3.60 x 6.60 m) composed of pebbles and grey pieces of stone and marble (size: 3-5 cm). On the eastern side, about 1.50 m to the north, a third floor-mosaic (3.50 x 3.90 m) was met at a level 0.30 m higher than the other two. Excavated on one side of the pebbled floor-mosaic was a fragment of a wall plastered in stucco. About 2 m to the north of the figural mosaic, another shaft (2.50 m deep, 0.54 m wide), coated with a thick layer of reddish cement, was found leading into a sewer, which, after a few metres, had diverted towards that underneath the

excavated street pavement. In the opposite direction, the shaft led into a vast low basin irregularly cut into the rock. Several test-pits sunk at various points within the areas of interest had reached virgin soil by cutting through *strata* of accumulated debris.

Stratigraphy signals at least two phases of construction on site separated by successive layers of debris. Transversal street R2^{bis}, the most recent within the sequence, was probably constructed a considerable time after the abandonment of the building complex with floor-mosaics. The edifice in question seems to have been plundered and destroyed to ground already in antiquity. Violence is recorded through a debris *stratum* subsequent to an utter destruction of all walls but a stuccoed fragment. Although a reconstruction of the ground plan would be impossible, the character of the devastated complex is inferable from the partially preserved floor-mosaics displaying conventional Macedonian iconography. Foremost of the latter is the panel of an emblematic Macedonian hunt-scene involving three winged Erotes engaged with a stag (Graeco-Roman Museum, Inventory Number 21643). The *emblema* is framed by an ivy-scroll surrounded from all four sides by a rectangular band that features wild (mythological and real) creatures in a recurring sequence. In terms of style and technique, the panel is significant for art historians as to archaeologists. 'Erotes hunting a stag' is actually made of a combination of coloured *tesserae* (small, hewn cubes) with a few pebbles filled in: an exemplification of the way tessellated mosaics had evolved from their pebbled antecedents in Pella, the second capital of ancient Macedon (Daszewski 1985a: 103-111, Catalogue Number 2; Guimier-Sorbets 2004b: 68). The mosaic is likely to have been decorating a spacious banqueting room, as suggested by an off-centre panel marking the threshold of an entrance. For archaeologists, the building complex would be datable, accordingly, c. 290-250 BC. It shows that habitation to the east of Cape Lochias can be traced back to the reigns of Ptolemy I Soter and his successor, Ptolemy II Philadelphos, c. the first half of the 3rd century BC, the time by which sumptuous edifices, with floor-mosaics and stuccoed walls, were being constructed on Cape Lochias and its southern belt (sites 12, 138-141).

Hence, by considering the relative location of the excavated vestiges from sites (1), (2), and (3) (see *supra*, criteria a-d), a hypothetical contour representing the Hellenistic frontiers c. the late 4th to the 2nd century BC is labelled (C3) in the featured AutoCAD maps (V1) and (V4). It extends NNW-SSE, between transversal streets R2^{bis} (the Suez Canal Road) and R3^{bis} (Aflaton/ Selim Hassan Street), in alignment with the urban grid: from the western slopes of el-Hadra Qibly (site 146; southern end), to join the defences of the Royal Quarter (C1) at the C1-L1 junction to the north of Wabour el-Meyah (centre: approximate site of the eastern gateway to the Ptolemaic city: a point on the slopes of el-Hadra el-Bahareiya), before reaching the (C2) line of defence at c. 250 – 300 m to the west of el-Chatby necropolis (site 145; northern end: the C2-L1 junction).

2.1.3) The Southern and Western Defences

2.1.3.1) el-Falaki's Excavations

Investigating the course of the southern defences, Mahmoud el-Falaki searched for foundations by seeking their respective intersections with the roads connecting the 19th-century town to el-Mahmoudiya Canal (Mahmoud-Bey 1872: 13-14). Eight trenches were sunk at discrete points, alongside the roads. Five of them (E, F, G, H, and I) had revealed the remains of large blocks of masonry partially preserved to 5 m in width and made of hewn stone of varied sizes bound in mortar of a slightly different composition to that of the defences unearthed at the northeastern segment of the urban circuit. As is the case in the east, the remnants here were met at 3 to 4 m below the surface level. The remaining stretches of the hypothetical periphery were then interpolated between the findspots. el-Falaki's proposal is strengthened by the distributional patterns of vestiges recorded on either side of his hypothetical contour. These patterns, according to the surveyor himself, hint towards a physical boundary of some sort that had riven an area cluttered with ancient remains, to the north, from another, to the south, displaying almost no signs of communal habitation between the conjectured line of defences and el-Mahmoudiya Canal.

Excavations were rendered impractical in the west, between the so-called Karmouz acropolis (the site of the Sarapeion: 52) and the western port (Mahmoud-Bey 1872: 14-15). A hypothetical contour for the urban periphery was, therefore, proposed by assessing the general layout of the terrain. After all, el-Falaki seems to adapt to Strabo's 1st-century BC narrative on the western fringe of the ancient metropolis:

> *Now outside (west of) the (Mareotis-Eunostos navigable) canal there is still left only a small part of the city.*
> (Strabo, Geōgraphiká: XVII. 1.10)

2.1.3.2) Inferring the Peripheries

2.1.3.2.1) The Southern Defences

According to Mahmoud el-Falaki, the traceable remnants of urban defences along the (A-B) segment beyond (to the east of) el-Silsileh were 'en moellons et mortiers composés de chaux et de briques pilées' (Mahmoud-Bey 1872: 12-13). On the other hand, the excavated blocks of stonemasonry in the south were 'faites en moellons plus ou moins gros et où la composition du mortier diffère un peu de celui de

la partie découverte en premier lieu' (Mahmoud-Bey 1872: 14). The variation in stone proportion within the same construction would suggest a line of defence undergoing several phases of Roman and/or late antique restoration work. Various signs of stone vicissitude, with a change in mortar composition, signal the process carried out by the Romans in fortifying the city: (a) the restoration of pre-existing defences in the south (points: G, H, I) and (b) the establishment of new lines of defence further east (northeast: segment A-B; east: segment B-E; southeast: segment E-F). If that were the case, the vestiges excavated by el-Falaki at three of the five recorded encounters would be datable, in origin, to the Ptolemaic period.

The geomorphological setting of the Mareotic ridge (section 1.1) must have dictated the vertical extent of the urban enclosure as early as the Macedonian foundation. Indeed, in a city built on a narrow strip of land, between the Mediterranean and Lake Mareotis, it would have been a necessity of defence to extend the urban enclosure to the entire width of the ridge on which it is situated. A defensible layout as such restricts possible attacks to a single front, either east or west, thus preventing an encirclement of the city. The Hellenistic origin of el-Falaki's periphery is further backed considering the stretch of terrain heights in the south. From a defensive perspective, it is imperative to contain the series of mounds stretching ENE-WSW, to the south of the mediaeval circuit. Their strategic significance was acknowledged yet in the 19th century, as shown by the set of defences organized at the time by French civil engineer Barthélémy Gallice, Mohamed Ali's director of fortifications (De Vaujany 1888: 80).

Further west, where trial pitting was not possible beyond el-Falaki's point (I), the course of the southern defences is inferable from the topographical features situated on the urban fringe: the Sarapeion (site 52) and the *hippodromos-circus* (site 51). Their relative proximity to one another suggests two contextually associated edifices. An initial phase of construction for the Roman-developed *circus* is datable, accordingly, to the Ptolemaic period, c. the 3rd century BC, the time when the structure was dug into the northern sector of Kom el-Shuqafa, hence yielding the semicylindrical shape of the rocky plateau. As a norm of urban planning in Hellenistic times, hippodromes were conventionally constructed in proximity to the urban enclosure, adjacent to the circuit walls, which would have run, in Alexandria, alongside the Rhakotite *hippodromos-circus*, before turning northwards, in the direction of Minet el-Bassal. In this context, the late utilization of Kom el-Shuqafa to receive interments, c. the turn to the 1st century AD (site 53b), seems indicative of a strategic peripheral mound under Lagid rule, intended exclusively for defensive purposes.

2.1.3.2.2) The Western Defences

Inferring the course of the urban defences in the west is carried out by studying (a) the course of the Mareotis-Eunostos navigable canal in antiquity, (b) the location of the canal's Mediterranean outlet (the Kibotos) relative to the mediaeval circuit, and (c) the approximate geographical extent and chronology of use of Minet el-Bassal necropolis (site 46).

In the 1866 *carte* of Mahmoud el-Falaki (Introduction II.d), the ancient stream is seen cutting through the urban enclosure at its westernmost sector. A layout as such would have had a direct effect on the southwestern defences, now breached by the navigable waterway. Archaeological investigation shows that the water-supply system of ancient Alexandria, basically an underground intricate network of aqueduct tunnels and conduits (*hiponoses*) accessible by means of vertical wells, was fed through the Canopic-supplied freshwater artery which flowed to the south of the urban enclosure. It would have been rather unnecessary, therefore, for a navigable canal to breach the lines of defence, into the city. The validity of el-Falaki's hypothetical periphery in the west should be questioned accordingly, as it seems misled, as discussed hereafter, by the 1st-century BC Strabonic account on the western fringe (section 2.1.3.1), and by the post-mediaeval Ottoman-modified canal system cartographically on display since the earlier geometric maps of Alexandria were issued in the 1680s (Introduction II.a).

Some of the earlier maps of the Renaissance, namely Pierre Belon's 'Vray Portraict de la Ville d'Alexandrie en Egypte' (drafted 1548, published 1553) and its contemporary derivatives (Introduction II.a), show the fresh water from the Nile as being constantly supplied to the coastal town via several channels branching off the late mediaeval Mamluk-developed artery running to the south. At the time, a number of bird's-eye views, such as Braun-Hogenberg (1575), Helffrich (drafted c. 1565-66, published 1582), and Dapper (1668) (Introduction II.a), were reproducing Belon's mediaeval-inspired abstract representation of the way the river-fed artery, or perhaps the 'river' itself in this case, gushes through Alexandria. In reality, the branching-off channels would have run underground, as evident in the late Mamluk and early Ottoman maps preceding Belon's 'Vray Portraict', namely Commineau's 'Veduta d'Alessandria' (1472) and Piri's portolan chart of *Kitāb-ı Baḥrīye* (drafted 1521, published 1525) (Introduction II.a), and in those postdating its derivatives, namely Gravier-Razaud (1685-87) and Melchien-Massy (1699) (Introduction II.a). The Ottoman-developed canal system first appears in the latter set of the 1680s-90s and is maintained in the maps of the 18th century, such as those of Norden (drafted 1737, published 1755, 1795) and Pococke (drafted 1737, published 1743)

(Introduction II.b), before reappearing, in detail, in the meticulous 'Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes' of *Description de l'Égypte* (drafted 1798-99, published 1817) (Introduction II.c), where a westward extension of the late mediaeval freshwater artery is shown changing course at Minet el-Bassal, southwest of the Arab town. It diverts eastwards, before heading north, in the direction of the Tulunid circuit wall, at the section of it between Qalaet el-Rukn (Fort Triangulaire) and the southern gate known as Bab Sidra (Porte de la Colonne). The canal, however, does not penetrate the enclosure of the Arabs. Instead, it connects with the mediaeval town by means of subterranean aqueducts, as is the case in 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie' of *Description de l'Égypte* (drafted 1798-99, published 1822) (Introduction II.c). A correlation between the westernmost segment of the depicted canal, including its subterranean extension labelled '1er aqueduc souterraine' in el-Falaki's 1866 *carte*, and Strabo's 'navigable waterway beyond which remains only a small part of the city' would justify el-Falaki's conjectural course of the urban defences in the west. This, however, ignores the fact that the plotted canal system reflects the developments of the late and post mediaeval periods, not antiquity (section 2.3.5).

The course of the Mareotis-Eunostos navigable canal in the west may be glimpsed from the location of its Mediterranean outlet (the Kibotos). In 1798-99, Saint-Genis identified a natural, round-shaped depression, with a narrow opening on the side of the coast, as a possible site for the Kibotos of ancient Alexandria: the northern belt of present-day Minet el-Bassal (Saint-Genis 1818a: 16-17, 76-79). His identification is backed by the morphology of the coastal terrain and the inward deviation of the Tulunid circuit walls in the west. The deviated segment here must have been dictated by the relative location of the mediaeval defences to the depression itself, as is the case, in the east, with the inward deviation inferable before the plains of el-Ibrahimiya Qibly and Sporting (section 2.1.2.2.1). Thus, in theory, the ancient circuit, at its northwestern segment, would have run, approximately, along the course of its mediaeval successor, especially when the recorded positions of fortification-points (γ) and (P) are taken into consideration (site 4). Whereas, in the west, access between either bank, urban and necropolitan, being separated by the navigable waterway, was facilitated by a crossover bridge, the debris accumulation from its lateral abutments had created two miniature *koms* (mounds) where the post-mediaeval westward extension of the canal had been diverted, c. the 16th-17th century, towards the amenities of the Ottoman-controlled western port. A shift-in-course as such has yielded, eventually, the crescent-shaped curve of today's el-Mahmoudiya Canal: Mohamed Ali's revival of the ancient stream. The curve was actually formed in the second decade of the 19th century (1817-19) when the revived canal readjusted to the initial path of antiquity, one favoured by the terrain, after having been diverted eastwards by the Ottomans to serve the *eyālet's* main port on the Mediterranean: *kadırğa/Islam limânı* (western port of the galleys/Muslims – reserved for Ottoman navigation) as opposed to *galyôn/kefere limânı* (eastern port of the galleons/infidels – reserved for European, mainly French navigation).

Unlike the case in the east and the south, the terrain heights in the west, those at Minet el-Bassal and Gabbari, seem to have not been part of the urban defences in antiquity. The presence of a water-barrier as a first line of defence (i.e. a ditch) before the circuit walls would have altered the use of the peripheral mounds for other purposes: a notion strengthened by the accidental discovery, in 1950, of Minet el-Bassal necropolis, adjacent to the crescent-shaped segment of present-day el-Mahmoudiya Canal (site 46). Three sections of rock-cut hypogea were excavated by Adriani immediately to the west of el-Hawīs Street. The earliest, Sezione (A), is datable c. the 3rd-2nd century BC (Adriani 1956a: 17-33; 1966a: 157-159, Catalogue Numbers 110-112; 1966b: Tavola 81, Figures 265-266, 268-270, Tavola 82, Figures 271-275, Tavola 83, Figure 276, Tavola 101, Figure 341). These salvaged vestiges, which form only a confined section of a vast necropolis underlying the cotton presses in the area, show that the nearest of the western mounds, as in the east (el-Chatby and el-Hadra: sites 145-146), were utilized by the Graeco-Macedonian settlers to receive interments as early as the reigns of the first Ptolemies. Expectedly, therefore, the funerary architecture of Minet el-Bassal's Sezione (A) strongly echoes that met in the eastern *necropoleis* of the Ptolemaic city, particularly at Sidi Gaber and Mustapha Pasha (sites 156, 160).

Mahmoud el-Falaki, as many after him, seems to have been influenced by Strabo's description of the western fringe of the Alexandrian metropolis. The narrative of Strabo, as is argued hitherto, not only contradicts the conventions of urban defence in antiquity, but also does not conform with the topographic relief of the designated areas. Perhaps the Greek geographer was denoting, while describing the city as viewed from the sea, the ship sheds of the Kibotos basin, which could have extended beyond, i.e. west of, his 'navigable canal', where the boundary between 'urban' and 'necropolitan', unlike the situation within the interior, would have blurred for those approaching from the harbour:

> *Next, after the Heptastadium, one comes to the (western) Harbour of Eunostos, and above this, to the artificial harbour (outlet), which is also called Cibotus; it too has ship-houses (νεώρια). Farther in there is a navigable canal, which extends to Lake Mareotis.*
>
> (Strabo, Geōgraphiká: XVII. 1.10)

2.1.4) Waterfront Constructions

2.1.4.1) el-Falaki's Observations

Submerged foundations pertaining to waterfront constructions were met intermittently, from the base of el-Silsileh to the approximate site of the Caesareum (Hotel Le Métropole; sites 93-100). The remains were traced by Mahmoud el-Falaki, on a clear day, at 2 to 3 m below the water surface (Mahmoud-Bey 1872: 15). Exact findspots are marked (b), (c), (d), (e), (f), (g), (h), (i), (k) and (l) in his 1866 *carte*. According to the surveyor, most of the vestiges were denoting a certain form of construction that would be interpreted as ancient quays jutting out into the eastern harbour (section 2.3.3). Further inspection, beyond point (l), across the area of the silted-up isthmus, was challenging in such a populous district as el-Mansheiya. However, a westward continuation of quay-like structures, between points (l) and (P), is conjectured by the aid of knowledge gained from random discoveries, i.e. points (m) and (n), made during earlier digging of foundations for modern houses in the District of the Franks. Both sites, (m) and (n), are located at the northeastern and southeastern ends of the Square of the Consuls (the later 'Mohamed Ali' or el-Mansheiya Square). Overall, el-Falaki's hypothetical periphery in the north is in dispute with archaeological investigation at the coastal zone and across the silted-up isthmus.

2.1.4.2) Inferring the Periphery

2.1.4.2.1) Archaeological Evidence

Site 4: NW. corner of the Arab enclosure (WDist.)

Maps: V1; V2; V3; V4

Fortification-point (γ): Minet el-Bassal [ancient (?); Arab]

In 1975, during the digging of foundations for a new building at Minet el-Bassal, remnants of a defensive construction were accidently discovered. The director of the Graeco-Roman Museum, Youssef el-Gheriani, initiated a subsequent salvage excavation on site. The aim was 'le dégagement d'une des portes d'Alexandrie, située dans la partie ouest de la cité, près de Miniet el-Bassal' (Leclant 1979: 343). It is not clear which of the mediaeval gateways is meant here. Nearby possibilities would be Bab Gharb and Bab el-Akhdar: the western and northwestern gates to the Arab town, both of which cannot be located at the reported findspot; yet, the same applies to other defensive constructions in the vicinity, such as Kom el-Nadura, the site of Fort Caffarelli. The GRM scope at the time might have been to investigate the northwestern corner of the Tulunid enclosure, to the south of el-Falaki's submerged fortification-point (P), for a possible defensive complement to the mediaeval Qalaet el-Rukn (Fort Triangulaire). After all, the site seems to correlate with the western entrance to the Graeco-Roman city, known from classical literary sources as the 'Moon Gate' (Achilles Tatius, τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα: V. 1.1-4).

As the case at el-Shallalat Park (site 1), the outer façade of the excavated structure was built of large, hewn blocks of limestone. It is rather slightly oblique towards the edges and ends with a projecting cornice at the top (Figures 91-93). The wall formed part of a watch-tower construction with an arcaded passage and a flight of steps. Another equally massive wall joined the latter at an angle. Architecture and building technique suggest that fragments of a defensive enclosure, most likely of an ancient origin, were included in the fortifications of the Arab town. The structural design strongly recalls Pococke's 1737 descriptive narrative on the urban defences:

> *They (the outer walls) are defended by semicircular towers, twenty feet diameter, and about one hundred and thirty feet apart; at each of them are stairs to ascend up to the battlements, there being a walk round on the top of the walls built on arches.*
>
> (Pococke 1743: 3)

The frequent recovery of this form of defensive constructions on the course of the Tulunid circuit backs a probable correlation, at least in part, between the mediaeval and ancient lines of defence at the northwestern segment of the urban enclosure, which would subsequently propose an Arab reutilization of pre-existing vestiges of ancient defences where possible.

Site 5: North of the L2-R7 junction (NDist.)

Maps: V1; V2; V3; V4

Fortifications: el-Mansheiya [ancient (?); Arab]

In 1841, during his second visit to Alexandria, Sir John Gardner Wilkinson described one of the northern entrances to the Arab town, Bab el-Bahr, as a 'gateway flanked by two large towers': points (A) and (B) (Figures 94-95). Wilkinson noted several Doric triglyphs and some ornamented soffits on the massive blocks that formed part of its walls. At either side of the gate, a large granite architrave was placed upright before the jambs (Wilkinson 1843: 165-166). The curtains between both towers were built of smaller blocks, as was the case with the 'Saracenic' tower (B) at the extreme end of the wall towards the sea. In summer 1842, the whole complex was taken down in order to create room for the Frankish Quarter's southward expansion back into the enclosure of the less inhabited, rather partially

abandoned mediaeval town: a development clearly illustrated in contemporary maps such as that of Charles Müller (1855; Introduction II.c).

Wilkinson's observations designate two distinct forms of construction at Bab el-Bahr: one signalled by the 'Saracenic' towers and those curtains joining them, the other by the large blocks of the gate walls and the (re) used elements of architecture which must have been retained from a dismantled building. The continuation of such a form of defensive constructions into the area of the silted-up isthmus is significant, for it shows that the utilization of ancient remnants by the Arabs had well extended along the waterfront of the ancient city. In fact, the defences at Bab el-Bahr stood near the silted-up shores of the Great Harbour (Μέγας Λιμήν; section 2.3.3), below the coastal belt to the Heptastadion, where Strabo had precisely sited the city's Mediterranean trading post (ἐμπόριον), the warehouses (αποστάσεις), and the ship sheds (νεώρια) respectively. Perhaps the frequent Arab reuse of building material retained from dismantled waterfront constructions at the silted-up district of el-Mansheiya may justify the course of the Tulunid circuit in cutting through the foot of the isthmus than containing the marshy ground on which the Ottoman village had later developed. If that were the case, the Arabs in the 9th century could have been retracing the ruined waterfront constructions of the ancient city, from the Minet el-Bassal defences (fortification-point γ: site 4), south of el-Falaki's submerged fortification-point (P), to the so-called 'Tower of the Romans' (fortification-point β: site 6) at el-Ramleh. This is backed by the relative location of el-Falaki's points (m) and (n) on the approximate course of the Tulunid circuit, at the section of it towards the northeastern and southeastern ends of the Square of the Consuls (the later 'Mohamed Ali' or el-Mansheiya Square).

Site 6: Section of L3, between R4 and R5 (NDist.)

Maps: V1; V2; V3; V4

Fortification-point (β): el-Ramleh [ancient (?); Arab]

In 1818, on the grounds of observations made previously during the Napoleonic expedition of 1798-99, Saint-Genis provided a detailed description of a fortified complex situated northeast of the Heliopolis obelisks aka 'Cleopatra's Needles' (site 93): the present-day site of the Italian Consulate. The structure in question was demolished around 1905 following the construction of the Corniche (Adriani 1966a: 66-68, Catalogue Number 15; 1966b: Tavola 7, Figures 17-18, Tavola 8, Figures 19-21). Indeed, its frequent appearance in the aquatints of the 17th and 18th centuries (Cornelis de Bruijn 1681, published 1698; Louis-François Cassas 1785, published 1799; Luigi Mayer c. 1792, published 1801-04), and in some earlier photographs of the 19th century, seems related to its proximity to the renowned obelisks (Figures 96-98).

The three-storeyed complex, labelled 'tour dite des Romaines' at the time of the Napoleonic expedition, stood on a protruding tip, upon the old seashore, as seen in Planche 32 of *Description de l'Égypte* (Imperial Edition 1809-22. Antiquités V, Planches, 1822). According to Saint-Genis, the tower is 'parfaitement circulaire, et paroît peu engagée par sa base dans les fondemens de l'ancien système de fortifications, sur une partie desquels s'élèvent les murailles Arabes qui aboutissent à ce point' (Saint-Genis 1818a: 43). On the southwest, it joined another structure, not as ancient, yet predates the Arab defensive walls: probably, a Roman or late antique supplement. To the east, a defensive wall, about 3.45 m thick, ran over 10.50 m along the shore. It was built of isodomic blocks (c. 0.82 x 1.90 m) similar to those of the tower to which it is attached (De Vaujany 1888: 88-89). In structural design, the complex seemed different from other towers met along the Arab circuit, as evident in its stonework, niches, and cornices. It even had one engaged Doric column crowned with an assemblage of mouldings: a reused vestige that most likely was retained from a nearby dismantled edifice; a possible candidate would be the Caesareum (sites 93-100).

The 'Tower of the Romans' (height: 15 m, diameter: 14.10 m) must have undergone several phases of restoration and/or renovation work, as indicated by the use of fired brick in the vaulted structure, which seems in a clear contrast with the large nummulithic limestone blocks that form up the façade and part of the interior (De Vaujany 1888: 85-87). These isodomic blocks (average width: 0.80 m, maximum length: 1.90 m), with bands of drafting around the edges, strongly recall the ones forming up the façade of the Shallalat defences (site 1). Saint-Genis' remarks on construction technique are key to understanding the chronology of the architectural fragments of nummulithic limestone. He maintains that 'les blocs sont retenus les uns aux autres au moyen d'ancres de fer' (Saint-Genis 1818a: 43). This seems to be a reference to the Hellenistic 'hook clamps': a simple iron bar with both ends bent down, forming the shape of an anchor. In this mode of construction, the limestone blocks, having been laid dry, without mortar, were fastened to those below them (vertically) and connected in the same course (horizontally) by means of iron dowels and clamps as ponding agents. They were then sealed in molten lead to minimize corrosion by preventing air and moisture from rusting and expanding the metal (Camp II and Dinsmoor Jr. 1984: 13-14; Dinsmoor 1950: 174-175). Given the fact that at the time of the Augustan conquest, c. 30 BC, *opus caementicium* was already in use by the Romans, the surviving vestiges of nummulithic limestone (dry masonry) are thus likely to be of Ptolemaic origin.

Site 7: Northern sector of *insula* R2-R3-L3-Lα (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) (a) Fortifications: Tabiat el-Menchérieh [Arab]
(ii) (a) Brick masonry: *thermae* [Roman]
(iii) (a-d) Waterfront and monumental constructions [Ptolemaic]

(a) In 1798-99, while inspecting the section of the shore between the 'Tower of the Romans' and el-Silsileh, at a point NE. of the present-day Mohamed Abdel-Wahab Theatre, Saint-Genis observed foundations of limestone blocks laid upon the bedrock and covered with an *opus incertum stratum*: irregularly-hewn small stone inserted into a core of *opus caementicium*. On top was a whole mass of brick masonry in *pozzolana* lime mortar. Saint-Genis identified these remnants with 'un établissement thermal' (Saint-Genis 1818a: 47-48). At the lower part of the main complex were small, vaulted structures communicating with one another and within which the fire circulated to heat the water of the baths. Above the vaults, circular furnaces of four or five feet (1.20 – 1.50 m) in diameter were found covered with brick, the surface of which was vitrified in places. The reported remains of the *thermae* facility were encountered at the headland marked 'palais ruiné' in Planche 84 of *Description de l'Égypte* (Figure 99) (Imperial Edition 1809-22. Etat Moderne II, Planches, 1817). It was 15 m wide and extended over 29 m into the sea (De Vaujany 1888: 18-19). Using the rocky platform as a quarry, the Arabs had built a defensive tower known as Tabiat el-Menchérieh, a stronghold that formed part of their fortifications along the coastal zone. The mediaeval fort, demolished around the early 1890s, appears in the photographs of the 19th century, where it stands on a protruding tip, to the east of the 'Tower of the Romans' (site 6) (Figure 100).

In 1892, Giuseppe Botti maintained that the Roman *thermae* would have been built upon the ruins of an earlier construction datable to the Ptolemaic period, judging by building material and technique (Botti and Simond 1899: 62). The substructures were of massive blocks of nummulithic limestone, with some bearing traces of stonecutters' marks from the Greek alphabet:

a) 0.56 x 0.56 x 0.50 m (letter Ω).
b) 1.95 x 0.92 x 0.82 m.
c) 0.75 x 0.53 x 0.38 m.
d) 1.90 x 0.82 x 0.72 m.

Besides the stonework, Botti recorded some surviving fragments of architecture, mainly 'un petit tronc de colonne dorique (engaged?)' standing the rough waves *in situ*, and a huge granite block forming the half of a lintel of a monumental gateway (Botti 1898b: 82). Botti's observations are on display in Luigi Mayer's Plate XVII of *Views in Egypt* (c. 1792, published 1801-04), where fragments of an enclosure wall of large nummulithic blocks of limestone are visible at the headland so-called 'palais ruiné'. Limited sections of the massive construction had even survived the dismantling of the Arab fortification towards the end of the 19th century.

Stratigraphy, therefore, shows Roman *thermae* being built upon the foundations of an earlier monumental construction of hewn blocks of nummulithic limestone, integrating a giant gateway. Stonework, architectural material, and context of recovery, all suggest a continuation of a certain form of waterfront constructions along the shores of the eastern harbour. **(b)** In 1898-99, Ferdinand Noack encountered 'Griechisches quaderwerk ohne verband' in his (K4) trench dug immediately to the south of the recorded foundations at 'palais ruiné' (Figure 101) (Adriani 1934: 66, Catalogue Number 28; Noack 1900: 225). Noack's encounter would bring forth the possibility of waterfront constructions adjoining a larger complex of monumental buildings. This seems the case, considering the massive foundations revealed by two other trenches sunk nearby: on the northern (K3) and eastern (L) limits of *insula* R2-R3-L3-Lα. **(c)** In Noack's trench (L), adjacent to transversal street R2, large foundations and the stylobate of a monumental Doric colonnade of limestone, with a possible connection to the vestiges excavated at (K4) and (K3), were met at the groundwater level as they extended up through the lowermost *strata*, from +0.87 to +2.27 m above sea level (Adriani 1934: 63, Catalogue Number 23; Noack 1900: 260-261). **(d)** Towards the seashore, about 150 m to the east of 'palais ruiné', within a third trench, labelled (K3), Noack unearthed a section of another enclosing structure, 'dessen fortseizung sich bei ruhiger see weithin unter dem wasser verfolgen lässt'. Contextual finds of limestone include several fragments of column bases and an Ionic capital (Adriani 1934: 63, Catalogue Number 22; Noack 1900: 224, 262).

Site 8: West of the L4-R2 junction (NDist.)

Maps: V1; V2; V4

Waterfront constructions: el-Mazarita [Ptolemaic; Roman]

In 1798-99, about 350 m to the east of 'palais ruiné', at approximately the present-day parking area west of the Bibliotheca Alexandrina, Saint-Genis recorded another headland, marked 'mole ruiné' in Planche 84 of *Description de l'Égypte* (Figure 102) (Imperial Edition 1809-22. Etat Moderne II, Planches, 1817). It was identified by him as the western pier of Strabo's 'closed harbour dug by the hand of man'. In fact, it is the midst

of the inner ports revealed by the IEASM geophysical surveys in the 1990s (section 2.3.3.2): inner port (Y) in the featured AutoCAD maps. Saint-Genis located what he thought to be the 'eastern extremity of Port Creusé' at c. 200 m further east, below the promontory known today as el-Silsileh (Saint-Genis 1818a: 50). In turn, Gratien Le Père described the mole in question as constructed 'en pierres de taille de fortes dimensions' (Le Père 1813: 319-320, Number 101). The headland so-called 'mole ruiné' provides further evidence for the continuation of waterfront constructions of massive blocks of nummulithic limestone, from the 'Tower of the Romans' or fortification-point (β) (the present-day Italian Consulate, el-Ramleh: site 6) to Cape Lochias (el-Silsileh, el-Chatby: site 9): the areas partially concealed beneath the pseudo-coastal belt of the Corniche, beyond which extend the submerged substructures of the Great Harbour of ancient Alexandria (Μέγας Λιμήν; sections 2.3.1, 2.3.3).

Site 9: el-Silsileh (NDist.)

Maps: V1; V2; V4

Fortifications: el-Chatby [ancient (?); Arab]

In 1887-88, on the occasion of his 'recherches sur les anciens monuments situé sur le Grand-Port d'Alexandrie', Henry de Vaujany investigated the mediaeval fortification upon the extremity of el-Silsileh (De Vaujany 1888: 36, 41). At the time, the quadrangular fort, already detached from the partially submerged isthmus that connected it to the promontory, had formed an islet amid the huddled reefs (Figure 103). Vestiges of fragmentary architecture were found everywhere, especially in a debris at the foot of the fortification (basically, fragments of granite columns) and as reused building material employed by the Arabs in the Middle Ages. Some of the surviving sections of the so-called Pharillon, an eastern complement to Fort Qaitbay, were constructed using brick of varied sizes inserted into a core of concrete (*opus incertum*), suggesting a possible Roman restoration of an earlier (Ptolemaic?) structure (Adriani 1966a: 81-82, Catalogue Number 42; 1966b: Tavola 21, Figures 73-74). The defensive construction in question was found coated with a massive curtain of isodomic limestone blocks as the one reported at 'palais ruiné' (site 7), hence bringing forth the possibility of a reused segment of ancient fortifications on Cape Lochias.

2.2) Grid Plan

2.2.1) el-Falaki's Excavations

In 1863-66, Mahmoud el-Falaki managed to trace the remains of eighteen paved streets by means of actual excavation: eleven transversal and seven longitudinal. In his 'Carte de l'Antique Alexandrie et des Ses Faubourgs' (1866), the transversal ones are labelled R1, R2, R3, R4, R5, R6, R7, R8, R2^{bis}, R3^{bis}, and R4^{bis} – the longitudinals: L1, L2, L3, L4, L'2, L'3, and L'4 (Mahmoud-Bey 1872: 18-28). These labels are standardised in the study of the topography of ancient Alexandria. Of the eighteen streets there were five not well preserved: R4, R8, R4^{bis}, L4, and L'3. Whereas limited sections of hardstone pavement had been identified intermittently over the courses of the other streets. It is remarkable to find the Hippodamian grid plan being retained where some of the modern streets correlate with ancient ones – L1: Tariq Bab Sharq aka Tariq Rashid: Fouad I: el-Horreya; L1 to the east of R1: Abu Qir; L2: Barthélémy Gallice Bey: Rue des Allemands: el-Sultan Hussein Kamel: el-Shaheed Salah Mustapha; westward extension of L2: Greek Hospital: Istanbul; L3: Alexander the Great: Omar Lotfy aka el-Tram; L'2: el-Amir Abd el-Moneim: Ismaïl Mahanna; eastward extension of L'2: el-Amir Abd el-Qader: Suleïman Yousri; L'3: el-Khedeiwi el-Auwal; R2: el-Batalsa; R3: el-Mathaf el-Yunani el-Romani; R4: Pereira: Mohamed Rafat; R5: el-Nebi Daniel; R6: Ibn Khaldoun; R7: Abu el-Dardaa; R8: el-Genneina; R9: el-Taufiqeia; R2^{bis}: the Suez Canal Road, at an angle; R3^{bis}: Aflaton: Selim Hassan; R4^{bis}: Trajan: Ahmed Lotfy el-Sayed.

All longitudinal streets were regulated at a standard inter-axial spacing of 278 m (c. 1.68 *stadion*: c. 10.10 *plethra*). Three exceptions would be (i) streets L1-L2 and (ii) L1-L'2, separated by 294 m (c. 1.78 *stadion*: c. 10.69 *plethra*), and (iii) streets L'3-L'4, separated by 177 m (c. 1.07 *stadion*: c. 6.43 *plethra*). About 100 m to the south of street L'4, el-Falaki inferred the route of another longitudinal thoroughfare, labelled L'5. It is rendered in his 1866 *carte* as a dashed line for only two pits were sunk on its course. Streets L'3 and L'5 accord with the standard spacing of 278 m, suggesting that L'4 was perhaps an intermediate pathway. Another hypothetical street, labelled L'6, was proposed to the south of L'5 without excavation and thus rendered as a dashed line between transversal street R1 and the western periphery. As the case with the longitudinal ones, all transversal streets were regulated at a standard inter-axial spacing, which was a bit wider: 330 m (c. 2 *stadia*: c. 12 *plethra*). The westernmost street, labelled R9, was conjectured without excavation. It is rendered yet as a solid line in the featured AutoCAD maps, for a team of geophysicists has shown the Heptastadion as a northward/Pharian extension of street R9 (section 2.3.2). The most significant of el-Falaki's streets would be L1 and R1, with their preserved pavement exceptionally measuring some 14 m in width: less than half the distance recorded by Strabo c. 25 BC for the main arteries of the city (πλατείες: over a *plethron*: +30.83 m). The measurements of el-Falaki pertain, however, to the late Roman grid than to the late Hellenistic/early Roman one. All other streets measured 3.50 – 9.50 m in

average: almost half the recorded width of the πλατείες. Besides the main ones, archaeological investigation provides evidence for internal street division: intermediate thoroughfares (alleys and lanes) within the urban *insulae* (Kom el-Dikka: sites 18-19, 69-70; Latin Quarter: site 29; el-Ramleh: site 114; el-Mazarita: sites 122c, 127; elsewhere: section 2.2.2.13).

2.2.2) Archaeological Evidence

2.2.2.1) Traces of R1

Site 10: Section of R1, between L'6 and L5 (SDist.; CDist.; NDist.)

Maps: V2; V3; V4

Pavement of street R1: Moharram Bey; Latin Quarter; el-Mazarita [Roman; Late Antique]

According to el-Falaki, street R1 comprised three lanes laid on the same level. The one to the east is 'paved with slabs', the other is a 'sort of masonry composed of lime, earth, small pebbles, and rubble' (Adriani 1934: 95-96, Catalogue Numbers 118-121; Mahmoud-Bey 1872: 23-24, 49). Both lanes equally measured 6.50 m in width. Between them, along the axis of the street, was an earthen border one-metre wide. Fragmentary architecture excavated on either side of the street includes basically column shafts and capitals, which, given their findspot, would have belonged to the R1 colonnade. The exact findspots of el-Falaki's encounters, either pavements or columns, are marked in the 1872 reproduced plan of Heinrich Kiepert (Introduction II.d). Running NNW-SSE, along the eastern side of the street, was a major subterranean aqueduct branching off the freshwater artery south of the city; a sewer had been installed on the opposite side for draining wastewater. Street R1 was traced by el-Falaki farther south, towards the urban defences, at trench (G). In his 1866 *carte*, a conjectural segment of it, shown as a dashed line, is seen extending southwards, beyond point (G), to reach the canal's '3rd pont'. The latter is a crossover bridge, the ruins of which are located c. 130 m from the city walls, as in Planche 31 (Imperial Edition 1809-22. Antiquities V, Planches, 1822) and Planche 84 (Imperial Edition 1809-22. Etat Moderne II, Planches, 1817) of *Description de l'Égypte*.

Site 11: Section of R1, north of the junction with Lα (NDist.)

Maps: V2; V4

Pavement of street R1: el-Mazarita [Roman]

In 1898-99, Ferdinand Noack uncovered sections of stone pavement on the transversal course of el-Falaki's street R1 (Adriani 1934: 60, Catalogue Number 12; Noack 1900: 226, 233-239, Figures 2-3). Noack's 22 m trench (N5), sunk at +5 m above sea level, c. 2.40 m below the surface level, is located north of the R1 intersection with Lα in el-Mazarita (near the present-day site of the Faculty of Commerce). Excavations revealed three lanes bedded almost on the same level and preserved over their entire width (Figure 104). The surface was divided, however, quite differently from what had been recorded earlier by el-Falaki. In fact, there was a middle roadway paved with polygonal blocks and bordered on either side by gravelled lanes (L_w: 5.75 m + side platforms: 1.05 m – total: 6.80 m; L_e: 7.25 + side platforms: 1.10 – total: 8.35 m). Both side lanes were constructed on a relatively higher ground (+5.38 m above sea level) to the stone paved street (+5.18 m above sea level) and were separated from it by kerbs of small limestone blocks (width: 0.50 – 0.55 m, preserved height: 0.30 – 0.35 m). The paved section itself is 4.70 – 5.75 m wide (maximum value includes the half-a-metre-wide kerbs). Hence, the entire width of the thoroughfare measured about 19.85 m. Judging by the overlay of the excavated surfaces, three pathways seem inferable: a hardstone pavement facilitating the mobility of carriages, while a pair of gravelled sidewalks served pedestrian traffic. A pattern as such is characteristic of the Roman *viae munitae*, which were often flanked by raised footpaths (section 2.2.3).

Site 12: Section of R1 (?), at the junction with L4 (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) Pavement of street R1 or L4 (?); mosaics [Roman]
(ii) Foundations; mosaic pavements [Ptolemaic]

In 1929, while excavating the area presently occupied by the faculties of humanities and social sciences, Evaristo Breccia recorded the remains of a thoroughfare at right-angle with the Lα section uncovered to the southwest (site 28). Breccia did not describe the excavated vestiges in *Le Musée Gréco-Romain (1925-31)*, where they are just marked 'route-mosaïque' in Planche LXII (Figure 105) (Adriani 1934: 60, Catalogue Number 15; 1966a: 80-81, Catalogue Number 40; 1966b: Tavola 20, Figure 71; Breccia 1932: Planche LXII). Given the recorded findspot (approximately, towards the present-day entrance to the Faculty of Commerce), the excavated pavement might have belonged to street R1 or, otherwise, L4. The former seems likely on the grounds of Breccia's account of 'ces routes (probably Lα and R1?) se croisaient à angle droit, selon la direction des points cardinaux' (Breccia 1932: 53). The course of the street in question yet remains unclear, provided the

limited section of exposed stone pavement shown in Breccia's excavation map.

Encountered at +5.27 m above sea level, Breccia's 'route' would be datable, in general, to the Roman period. A possible correlation with el-Falaki's street R1 is significant, for it shows the main transversal avenue, at least in imperial times, extending north towards Cape Lochias. This is backed by the fact that in 1863-66, el-Falaki uncovered sections of R1 to the north of its junction with L4 (site 10). More sections of R1 towards the promontory were also excavated by Ferdinand Noack (sites 11, 140c). Breccia's label would put forth the assumption that his 'mosaïque' was encountered on the same stratigraphic level and, accordingly, pertains to a structure contemporary with the street.

A few metres to the north, crossing Port-Saïd Street into the plaza of the present-day Bibliotheca Alexandrina (just to the east of the old Lazzaretto), is the site where Ferdinand Noack had sunk his (N1), (N2), (N3), and (N4) trenches in 1898-99 (Adriani 1934: 59, Catalogue Numbers 8-11; Noack 1900: 226). (N1), west of street R1, yielded 'spärliche mauerreste' (Ptolemaic? possible associates: sites 28, 139). (N2) and (N4), east of R1, revealed no finds. In (N3), still east of R1, other vestiges of a floor-mosaic were excavated at +4.12 m above sea level, a few metres northeast of Breccia's 1929 'mosaïque'. In May-December 1992, during the digging of foundations for the new Bibliotheca Alexandrina, two mosaics were accidently unearthed along with remnants of massive foundations and a gate (site 139). The latter finds strengthen the notion of an elite-inhabited area of monumental constructions with sumptuous mosaic pavements, extending between the Suez Canal Road and Champollion Street and yet reaching westwards to el-Khaledin Park and Safia Zaghloul (el-Messallah) Street.

2.2.2.2) Traces of R3

Site 13: Section of R3, between L1 and L2 (CDist.)

Maps: V2; V3; V4

Pavement of street R3: el-Messallah Sharq [Roman; Late Antique]

In 1907, while installing a sewerage system near the premises of the Graeco-Roman Museum, two sections of street pavement were accidently discovered at either end of the main edifice (Adriani 1934: 82, Catalogue Numbers 64-65; Breccia 1907a: 108). The encounters recorded by the museum's director, Evaristo Breccia, were constructed of polygonal blocks of limestone and black basalt. According to el-Falaki's orthogonal grid, the uncovered surface, which measured 6 m in width, would pertain to transversal street R3, hence datable, by analogy with hardstone pavement elsewhere, to the (late) Roman period.

Site 14: Chantier Djanikian (GHH): section of R3, SW. of the junction with L3 (NDist.)

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita

(i) Pavement of street R3 [Roman; Late Antique]
(ii) Foundations; conduit [Ptolemaic]

In October 1932, remnants of a monumental construction were accidently unearthed during the digging of foundations at the Djanikian property: a site located to the northeast of the former British Consulate, on the slopes of the Government Hospital Hill (GHH): approximately, at the R3-L3 junction (Adriani 1934: 11-18, 73, Catalogue Number 38). Salvage excavations carried out on site by the Graeco-Roman Museum revealed the remains of two foundation walls of large, hewn limestone blocks held without mortar (dry masonry) (Figures 106-107). The walls, oriented NNW-SSE, follow the secondary intercardinal orientation of the orthogonal grid. One wall, labelled '*muro* (A)', measured 4.80 m in thickness and was traced over a distance of 20.60 m. The other, labelled '*muro* (B)', was 4.10 m wide and extended over 17.38 m. They were built upon the bedrock, at +5.80 m above sea level. The pitted terrain exposed between either wall reflects the extensive quarrying activities taking place on site. On some of the blocks with a smooth surface, the wedge-shaped cutting signs usually left by the 'swallow-tail' clamps were noticed by the GRM director Achille Adriani, who recorded the distinct mark in *Annuario del Museo Greco-Romano (1932-33)* without emphasizing its chronological significance (Adriani 1934: 12). Incised stonecutters' marks left by stonemasons on the blocks of *muri* (A) and (B) are indicators of using such clamps in the construction of a monumental building. The swallow-tail fasteners were employed in dry masonry as early as the mid-6th century BC, as evident in an Archaic temple dedicated to Apollo at Corinth in the Peloponnese (Dinsmoor 1950: 175; Pfaff 2003: 104). Recent studies have shown that they continued to be used in the joints of early Hellenistic mortar-free constructions of the late 4th and 3rd centuries BC, as exemplified by the renowned Delian temple to Apollo (the Cyclades) and the Artemision of Sardis (Asia Minor) (Cooper 1996: 172-173; Martin 1965: 254-255). The use of these clamps in joining together the large nummulithic limestone blocks of the excavated walls should, therefore, date the structure in question to the reigns of the first four Ptolemies. Building technique here recalls that met at the so-called 'Tower of the Romans' (the present-day site of the Italian Consulate, not far from Chantier Djanikian), where traces of the

later 'hook' clamp were recorded by Saint-Genis, c. 1798-99, on some of the structure's nummulithic limestone blocks (site 6). To the west of the excavated foundations at Djanikian, a rock-cut canal coated with waterproof plaster was found already partially collapsed. It probably belonged to the water-supply and drainage system of a large urban complex of which the adjacent walls would have formed part (associates on the GHH: sites 129, 131-134).

On an upper level, sections of a street pavement of black basalt were uncovered. Considering the recorded findspot, these vestiges would pertain to transversal street R3. As the case with street R4 at Cinema Amir (site 17), the excavated stone pavement at Djanikian had overrun the above-mentioned Hellenistic construction dismantled in the 1st century BC. In fact, it ran over the course of one of the foundation walls encountered at a lower level, namely Adriani's '*muro* (B)', hence suggesting a late Ptolemaic to early Roman date (c. the 1st century BC-1st century AD) for construction phase (2) of the developed orthogonal grid (see *infra*, section 2.2.3), with subsequent adjustments occurring intermittently in response to Roman and late antique urban encroachments upon the *viae* of the annexed Royal Quarter.

Site 15: Section of R3, on either side of the junction with L2 (CDist.; NDist.)

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita

15a) South of the R3-L2 junction

(i) Fragmentary architecture [Arab reuse]
(ii) Foundations [b: Ptolemaic]

15b) North of the R3-L2 junction

(i) Foundations; conduit (ε); pavement of street R3 [d: Late Antique]
(ii) Foundations; pavement of street R3 (δ) [c: Late Ptolemaic; Roman]
(iii) Foundations; conduit (γ) [b: Ptolemaic]
(iv) Foundations [a: Early Ptolemaic]

(a) In 1897, accidental discoveries of architectural remains were made during the demolition of the segment of the Arab fortifications near el-Sultan Hussein Street, on the slopes of the Government Hospital Hill: a point south of the R3-L2 junction (Adriani 1934: 85-86, Catalogue Number 89; Botti 1898a: 56-58). Salvage excavations carried out on site under the supervision of Johannes Schiess Pasha, then director of the Government Hospital, revealed various elements of fragmentary architecture: mainly trunks of pink and grey granite columns often found (re)employed by the Arabs in their defensive walls. Encountered at 9 m below the level of Gallice Bey (el-Sultan Hussein) Street were remnants of a monumental construction of limestone blocks, 'décore de colonnes en calcaire compact', to quote Botti: associated perhaps with nearby contemporary constructions such as those of Noack's phase (b) to the north of the R3-L2 junction (site 15b), and Adriani's *muri* (A) and (B) at Chantier Djanikian (the R3-L3 junction: site 14). Other fragmentary architecture retained on site includes two polychrome Corinthian capitals of the Alexandrian type (i.e. decorated with floral volutes and helices) (Graeco-Roman Museum, Inventory Numbers 3860-3861). The recovered fragmentary architecture was transferred to the premises of the Government Hospital and later donated by Schiess Pasha to the recently inaugurated Graeco-Roman Museum. The unearthed foundations remained *in situ* at least until February 1898, as last recorded by Wilhelm Dörpfeld, before they were dismantled shortly after (Noack 1900: 219). When Ferdinand Noack began his excavations in October of the same year, there was nothing left of what had been reported earlier by Giuseppe Botti in the first bulletin of the Archaeological Society of Alexandria. At the time, Noack opened another trench, labelled (G), reaching down to 8 m below the street level. Yet at this point it was not possible to locate any remnant of Botti's 'monumental building' (Adriani 1934: 76-77, Catalogue Number 50; Noack 1900: 223, 251-252). Instead, the remains of a foundation wall built of small, finely-hewn blocks of limestone were found at +5.50 to +6.90 m above sea level. Its mode of construction resembles that of the foundations of construction phase (b) within Noack's trench (B1) to the north of the R3-L2 junction (site 15b), as they also recall the 'murs formes de petits moellons de calcaire en assises régulières', which were recorded on site and described by Botti as being vestiges of a 'Byzantine edifice' overbuilt with 'Arab walls of large, finely-hewn limestone blocks': in fact, these are Ptolemaic vestiges pertaining to Noack's construction phase (b-b'), as shown during successive excavations carried out to the north of the R3-L2 junction (site 15b).

(b) Two trenches, labelled (B1) and (B2), were excavated by Noack north of the R3-L2 junction, where four chronological phases are identifiable (Figures 108-109) (Adriani 1934: 77-78, Catalogue Numbers 51-52; Noack 1900: 239-252, Figure 4, Tafel XI, Figure 2). A section of stone pavement of el-Falaki's transversal street R3 was uncovered on the eastern extent of the (B1) profile which measured 28 m. Successive *strata* of architectural remains were met on the western side of the street. The earliest is represented by massive, roughly-hewn foundations laid directly upon the bedrock. The extant parts include a wall of limestone held without mortar (dry masonry), stretching over a distance of 11.50 m: Noack's phase (a). Partially superimposed on the latter

were foundations of relatively small, finely-hewn blocks bound in clay mortar: phase (b) (the use of clay mortar in Hellenistic constructions: sites 116, 121, 122b). These were apparently worked out to receive mortar-free walls of large, finely-hewn limestone blocks: phase (b'). As the case with the preceding phase (a), the remnants of this phase were oriented NNW-SSE. Their surfaces had been coated with a fine layer of plaster without traces of brick dust. Several vestiges from phase (b-b') extended substantially across the excavation profile, while showing clear signs of successive repair and renovation (indication of extended use). When much of the constructions of phase (b-b') had been dismantled, new constructions of hewn blocks, less regular compared to earlier masonry work on site, seem to have utilized, where possible, some of the demolished structures as ready foundations: phase (c). In parts where the constructions of phase (c) did not appear resting upon pre-existing foundations of phase (b-b'), various elements of fragmentary architecture, such as column drums and pillars, were in use as *spolia*. Some of these had been covered with a successive layer of stucco painted white, red, yellow, and black, with one reused column found bearing a graffiti datable c. the 1st century AD, thus providing a *terminus ante quem* for construction phase (c). Traces of yet a fourth phase of construction, labelled (d), were recognizable, especially within the westernmost section of the main trench (B1). Its walls were built using a firm layer of mortar, as they ran in alignment with transversal street R3. The presence of two fragments of column drums and pillars coated with a successive layer of painted stucco emphasizes the continuous use of *spolia* in this late phase of construction. Unlike (a), (b), and (c), however, construction phase (d) seems to mark a break (both stratigraphic and architectural/technical) from earlier foundations on site.

A canal (γ), discovered alongside the western edge of transversal street R3, was partially rock-cut, with sections built of limestone slabs. Its double, flat and gable, slab cover seems to indicate successive phases of (re)use. West of the canal, an access-shaft (η), built partially of small reddish limestone (plastered), was traced down to the groundwater (cut). Its uppermost part was on the level of construction phase (d): +11.79 m above sea level. Three wells, marked (ζ), sunk on the western side of the street, communicated with the underlying canal. Encountered within the same trench, at 2 m below the level of the hardstone pavement, was a confined section of an earlier gravel pavement (δ), with an extant line of limestone blocks (kerb) defining its western limit. Judging by the recorded stratigraphic level, this earlier phase of transversal street R3 seems contemporary with construction phase (c). Within trench (B2), sunk 20 m to the north of (B1), the hardstone pavement of street R3 was uncovered over its entire width of 5.55 – 6.65 m (maximum value includes the one-metre-wide side platforms: c. 0.55 m each). Remnants of various structures lining street R3 were unearthed on either side. On the western side, the excavated masonry belonged primarily to construction phase (c). On the eastern side were earlier massive foundations pertaining to phase (b'), and a late canal (ε) built of fired brick, most probably of phase (d).

Stratigraphy and building technique suggest that the foundations of construction phases (a) and (b) at trenches (B1) and (B2) are datable, in general, to the Ptolemaic period. They might be associated, therefore, with some of the architectural remains excavated on the opposite side of the R3-L2 junction, where a southward continuation of construction phase (b-b') is attested, considering the vestiges erroneously labelled 'Byzantine' (phase b) and 'Arab' (phase b') by Botti: those (re)excavated within Noack's trench (G) (site 15a). Meanwhile, epigraphic evidence in the form of a graffiti shows the constructions of phase (c) as early Roman at the latest, if not already late Ptolemaic, as is the case with the earlier gravel pavement (δ) of street R3. Whereas, by analogy with other thoroughfares elsewhere, the successive phase of hardstone pavement is basically (late) Roman: Noack's phase (d).

2.2.2.3) Traces of R4

Site 16: Section of R4, at the junction with L'3 (SDist.)

Maps: V2; V3; V4

Miscellaneous: Moharram Bey

(i) Pavement of street R4 [Roman; Late Antique]
(ii) Foundations; mosaic pavements [Roman]

In 1892, Giuseppe Botti investigated the sporadic remains accidently discovered on the northern belt of Moharram Bey subsequent to the demolition of the Arab defensive walls along the course of Abd el-Moneim Street, which correlates approximately with longitudinal street L'2, and on the occasion of the construction works carried out shortly after, in 1897, by the Administration of the Railways 'sur la voie du Caire' (site 59) (Botti 1893: 16; 1898c: 62-63). 'Fuori di Moharem Bey, sulla sinistra', Botti recorded 'avanzi di un arco trionfale romano (interpreted by him as a 'Trajanic triumphal arc' on the grounds of an inscription): nei fossati delle fortificazioni a Kom el-Demas, oltre a poche rovine granitiche di un tempio (columns?), verificammo il tracciato di altra via romana perpendicolare al corso canopico (L1)'. Given the context of recovery, Botti's 'via Romana' would be transversal street R4. Its stone pavement was excavated by el-Falaki in the 1860s at several sections between longitudinal streets L'2 and L'4 (maps V2 and V4). 'E, sulla destra', Botti thought to have found 'le rovine di

una antica abitazione con diversi pavimenti in mosaico a due colori'. Apart from Botti's quoted statement, no details were provided to enable a precise determination of the location, chronology, or nature of such vestiges.

Site 17: Cinema Amir: section of R4, south of the junction with L1 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Pavement of street R4; cistern [Roman; Late Antique]
(ii) Foundations; gravel pavement; conduit; well [Ptolemaic; Roman]
(iii) Foundations; conduits; well (associates: sites 63-64a, 76a, 77) [Ptolemaic]

Between the end of 1950 and the beginning of 1951, the vestiges of ancient constructions were accidently discovered while demolishing a domestic building constructed in the 19th century on the southern side of Fouad Street and the subsequent digging of foundations for a replacement: Cinema Amir aka Twentieth Century Fox (Adriani 1956a: 1-10; 1966a: 87-88, Catalogue Number 48; 1966b: Tavola 26, Figures 93-95, Tavola 27, Figures 96-101). A salvage excavation was then carried out on site by the Graeco-Roman Museum, where at least three principal phases of construction are recorded within the foundation trenches (Figure 110).

The earlier vestiges on site were massive foundations of roughly-hewn, mortar-free limestone blocks (dry masonry). Detected within pits sunk deep by the modern developers to receive concrete reinforcements, the foundations were traceable down to the groundwater level. Twelve rows of limestone blocks were met at a depth of 5.25 m while excavating the main pit (No. 11). One preserved section ran ENE-WSW, over 14.50 m, parallel with Fouad Street, the other, NNW-SSE, over 12.50 m, perpendicular to it. Above the third row of blocks, a buffer layer of earth and rubble would signal two possible phases of construction for the enormous foundations. The interruption confined to this stratigraphic column, with no correspondence elsewhere within the sequence, is rather indicative of the presence of a primary fill. Stonecutters' marks in the form of letters from the Greek alphabet (e.g. Θ, Γ, Ο) were found engraved on some of the blocks. Two subterranean conduits served the whole complex at either end, where they ran parallel with one another and with Fouad Street (the ancient longitudinal πλατεία: L1). The larger of both, partially exposed along the northern profile, was built of rows of small, overlapping stone blocks sealed up with a conical slab cover. Towards the south, a segment of the other conduit was revealed. Relatively small compared to the first, it was formed of stone blocks arranged with great regularity and sealed up by means of a closing slab placed upon an inverted cone. A grotesque figurehead of glazed terracotta was found in pit (No. 1), at 5 m below the street level. Its Hellenistic character is ascertained (Graeco-Roman Museum, Inventory Number 26291).

A successive phase of construction is represented on site by confined sections of a battered surface tamped with pebbles. The latter seems contemporary with a third conduit running NNW-SSE, perpendicular to Fouad Street. Excavated within the same unit was a small circular well marked (x), the lowermost section of which suggests a possible connection with some of the underlying vestiges of construction phase (I). The limestone foundations pertaining to construction phase (II) are characterised by the coarseness of their masonry and the occasional employment of *spolia*. Recognizable through their relatively modest proportions, they were met, in part, resting upon earlier foundations, yet elsewhere, separated by debris *strata* of earth and rubble.

A late phase of construction includes sections of a pavement of polygonal blocks of limestone and black basalt encountered intermittently over a distance of 52 m. The pavement is laid upon an infill layer of earth and rubble serving as a buffer debris between the street itself and the underlying remains of earlier structures. At the same level of the stone pavement, towards the centre of the site, a rectangular cistern of plastered fired brick (waterproofing) was found with a semicircular apse built into its northern wall. The stone pavement, which belongs to transversal street R4, partially overrun the easternmost side of the preceding gravel pavement and, in turn, the Hellenistic complex underneath. A continuation of this street was uncovered further to the south, within the Polish concession, two decades after the GRM salvage excavations at Cinema Amir (site 18: sector W_1N).

Site 18: Section of R4, between L1 and L'2 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Habitation; refuse dumps; interments [Arab]
(ii) Complex of workshops and dwellings; sewers; intermediate alley [Late Antique]
(iii) Pavement of street R4 [Roman; Late Antique]
(iv) Dwellings with floor-mosaics; sewers; intermediate alley [Roman]
(v) Foundations; sewers [Ptolemaic]

In 1970, the accidental discovery of ancient vestiges during the construction of an air-raid shelter at the Kom el-Dikka archaeological park (Figures 111-112)

had instigated investigation of the (W_1N) sector of the Polish concession, adjacent to Safia Zaghloul (el-Messallah) Street. At least four phases of construction were identifiable within the excavated trenches.

The uppermost levels signal the eastern extremity of the so-called Upper Necropolis (datable c. the 12th-13th century), as shown by a sharp hypothetical boundary beyond which no graves were found (Tkaczow 2000: 141-143). The Arab burials seem to have spread over the transversal course of street R4, westwards and southwards, where the succession of layers led eventually to the formation of an artificial *kom*: an accumulation of Arab habitation refuse and interment followed by late mediaeval (Mamluk) artisanal waste, upon which stood Fort de l'Observatoire (aka Fort Crétin) at the time of the Napoleonic expedition (1798-1801). The Lower Necropolis (datable c. the 8th-9th century) is not represented on site, for its eastern limits correlate with the western border of street R4. On the latter's eastern side, early Arab habitation, of c. the 7th-8th century, is attested in the form of dwellings with several enclosures for domesticated animals. In terms of plan and architecture, these structures are of a distinctly different character to the preceding houses and workshops of late antiquity.

The next phase within the sequence is represented by a group of houses and workshops that developed along the eastern side of transversal street R4 around the 4th-7th century. The remains of the densely built urban complex were met above a levelling *stratum* of ashes and fragmentary architecture, marking the resume of habitation on site following a brief pause. Abandonment and reoccupation are suggested by remnants of foundation walls with no direct access to earlier substructures (Majcherek 1991: 19-21). The buildings of the residential complex were constructed of small limestone blocks in a layer of mortar. They were designed, originally, as typical domestic dwellings before adjusting to serve the needs of workshops. The construction of buildings (E), (G), and (H) is datable to the 4th century, whereas buildings (A), (B), (C), (D), and (F) reflect later developments of the 5th century. Perhaps with exception to (A), (B), and (F), all houses extended up to street R4, whence they were accessible. The continuous encroachments of building activities, carried out from c. the 1st century BC to the 6th-7th century AD, had constantly narrowed the width of the adjacent thoroughfare, R4, as indicated by a further investigation of the habitation quarter.

Excavations below and northeast the one-storeyed houses (A) and (B) revealed the ruins of an earlier residential complex of Roman houses with floor-mosaics, datable c. the 1st-3rd century AD. The unearthed fragments include monochrome and polychrome geometric panels, ornamental designs in *opus sectile*, and figural representations of birds and flowers. Judging by the extent of destruction, as reflected on the walls of the largely devastated complex, the sumptuous houses (labelled *alpha*, *beta*, *gamma*, and *delta*) are likely to have been abandoned in the second half of the 3rd century in consequence of contemporary repressions: the Palmyrene invasion of Zenobia (AD 269-70) and the violent campaigns of Aurelian (AD 272) and Diocletian (AD 297). Habitation predating the 1st century AD is signalled by negatives of walls underlying the mosaic pavements. The detected negatives pertain to dismantled sections of late Ptolemaic buildings preceding the Roman houses. A continuation of such an earlier phase of construction was detected elsewhere within the residential complex (see *infra*).

Proceeding northwards, within sector (W_1N), an early Roman phase for building (H) was identified (Majcherek 1995b: 135-140). Two urban units built in *opus quadratum* (*opus isodomum* for the exterior walls), c. the early 1st century AD, were excavated below the late Roman levels: one, of a commercial character, adjacent to street R4, the other, living quarters and workshops, towards the interior. Building (H) was accessible from street R4 by means of a πρόθυρον: a projecting entrance with a porch and pillars. The early Roman structures were built upon deeply entrenched late Ptolemaic foundations excavated within room (H-1), with preserved sections of walls of large, hewn limestone blocks (1.10 m in length). Contextual finds from the corresponding layers (ceramics: black tableware, late Hellenistic lamps, and Graeco-Italic *amphorae*) date the (H-1) vestiges to c. the 1st century BC. The late Ptolemaic structures, reaching a depth of 4.50 m below the street level, were built, in turn, upon a 0.70 m clay *stratum* separating them from the underlying foundations which constitute the earliest detectable dwellings on site (Majcherek 1991: 23-24).

A section of a pavement of roughly-hewn dolomitic limestone slabs was cleared alongside the façade of building (H). It became evident that the width of the street had been reduced from 9.50 m in the early Roman period to 3.50 m c. the 6th-7th century, whereas signs of extensive wear are indicative of a thoroughfare in constant use over a considerable period of time. At 0.30 m below the dolomitic limestone level, the remains of an earlier pavement of R4 were found to have been constructed in the same technique (Majcherek 1990: 79). A sewerage system was excavated with conduits running alongside the façade of the adjacent buildings. One conduit (width: 0.40 m) ran NNW-SSE, under the R4 pavement, terminating in a rectangular sewerage tank. The bottom of the drain reached 3.70 m below the surface level. Another conduit was met at a depth of 4.80 m below the R4 street level. Given the recorded level relative to the excavated Roman and late antique vestiges, the latter conduit might have formed part

of the underlying late Ptolemaic sewerage system. Its proximity to quarter (W_1N) strengthens the notion of continuous occupation at Kom el-Dikka: late Ptolemaic (c. the 1st century BC) to early Arab (c. the 7th-8th century AD); not excluding the possibility of Hellenistic habitation on site antedating the 1st century BC. The stratigraphy of the excavated foundations, their contextual ceramic finds, and the adjacent sewerage system, all hint towards a thoroughfare constructed in the Roman period on the line of a Hellenistic forerunner, with an original width shrinking intermittently in response to continuous urban encroachments of Roman and late antique building activities, as further shown on the western side of transversal street R4 (sites 19-20).

Site 19: Section of R4, between L1 and L'2 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments [Arab]
(ii) Cisterns; intermediate alley [Late Antique]
(iii) Dwelling; intermediate alley [Roman]
(iv) Foundations [Ptolemaic]

In 1962-63, while excavating the dense clusters of Arab interments of the Middle and Upper Necropolis (datable c. the 10th-13th century), within sector (L) of the Polish concession at Kom el-Dikka, vestiges of two water tanks were identified to the west of transversal street R4 (Tkaczow 2000: 132, 135, 137-138). The earlier, constructed c. the late 3rd/early 4th century AD, is a rectangular-shaped cistern (14 x 28 m) built of fired brick. It might have suffered extensive damage during the mega-tsunami of AD 365, for it was replaced with a larger one c. the late 4th/early 5th century. The latter (36 x 40 m, height: 10 m) is built of fired brick and limestone blocks and had an aqueduct that ran to the east, adjacent to transversal street R4. The aqueduct itself would have extended southwards, along the western edge of R4, possibly reaching at longitudinal street L'2. It adjoins the cistern wall by means of a wooden roof, hence creating an enclosed hall (width: 6.50 m, height: 4.50 m) found filled up with accumulated debris of earth and rubble, perhaps to serve as one large buttress complementing those built into the walls to the south and west of the structure. The adjoining constructions, added to the east of the cistern in the course of the 5th century, were gradually encroaching upon the western side of street R4.

On the occasion of an extended restoration programme carried out in the 1990s, two trenches were excavated around the ruined structure (Majcherek 1992: 5-7; 1993: 11-14; 1996: 20-22; 1998: 23-25, 30-34). The first was dug at the northeastern corner where the cistern foundations reached a depth of +8.40 m above sea level. The destroyed substructures comprised two large basins (reservoirs) built of fired brick, the inner surface of which had been plastered (waterproofing). At a subsequent phase of construction, c. the 5th century, the out-of-use basins were tightly filled with rubble in order to serve as solid substructures for the buttresses of the great cistern. These basins seem to have formed part of an earlier reservoir complex that most likely antedates the AD 365 tsunami, as it is built directly upon remnants of early Roman structures. Within a later extension of the same trench eastwards, a façade belonging to an early Roman house, labelled (FD), was unearthed at that segment between the cistern complex and the aqueduct-wall adjoining street R4, suggesting that the area was occupied by early Roman residential buildings before the cisterns were built. In fact, below one corner of the great cistern, a πρόθυρον entrance with a flight of steps was found. The stratigraphic level of the longitudinal alley or inner lane whence house (FD) is accessible corresponds to that of an eastern extension uncovered on the opposite side of transversal street R4, at sector (W_1N) (site 18). Contextual ceramics suggest an early Roman building constructed c. the end of the 1st century BC or the beginning of the 1st century AD at the latest. The proposed range strengthens the notion of urban encroachments on either side of street R4 datable as early as the 1st century BC. In turn, early Roman house (FD) has overbuilt the remains of late Ptolemaic structures probably of a similar domestic character, as indicated by the stratigraphic sequence of the adjacent habitation quarter at sector (W_1N). Likewise, continuous occupation is confirmed within sector (L), where remnants of a late Ptolemaic foundation wall in *opus isodomum* were excavated beneath the façade of the early Roman house. Whereas the alley itself (5 m wide), a continuation of that met at sector (W_1N), is a westward extension of Breccia's intermediate street labelled L'α, which was partially excavated in the 1920s at the Latin Quarter (site 29).

A second trench, opened to the south, revealed a limited section of a pavement met below a 2-3 m debris *stratum* of broken potsherds (imported late Roman *amphorae* of type 1 and 4 and Egyptian late Roman *amphorae* of class 7) and ashes from the nearby bath complex (site 20). At the southernmost buttress, the cistern foundations were excavated at +5.25 m above sea level. The difference in the recorded levels at either end of the hydraulic structure confirms its construction upon earlier vestiges that served as subfoundations (see *supra*). The preserved section of a pavement was encountered at +9.60 m above sea level. It seems a continuation of the same pavement uncovered intermittently at several spots within the enclosed hall extending between the eastern façade of the cistern and the aqueduct-wall running alongside transversal street R4. Considering their recorded widths and relative location to street R4,

this hall and the adjacent aqueduct, as encroachments themselves, would bring forth the possibility of a rather wider late Hellenistic/early Roman thoroughfare reaching up to c. 9-10 m in width.

Site 20: Section of R4, between L1 and L'2 (CDist.)

Maps: V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments [Arab]
(ii) Baths; latrines; *auditoria* [Late Antique]
(iii) Pavement of street R4 [Roman; Late Antique]
(iv) Dwelling(s) with private *thermae* [Roman]

In 1960-69, the remnants of a bath complex were excavated in the northeastern sector (A) of the Polish concession at Kom el-Dikka (Tkaczow 2000: 132-133, 135, 137-138, 140, 142). The partially preserved complex (3000 m^2; datable c. the late 4th/5th-7th century) is accessible from transversal street R4 by means of a vestibule with a flight of steps (2.65 m above the street level) and a geometric black-and-white floor-mosaic displaying a welcoming pattern. An *apodyterium* (undressing room) and a *frigidarium* (cold pool) formed part of the main entrance, which led into the central bath chambers comprising a *caldarium* (hot steamy bath), *tepidarium* (warm bath), *sudatorium* (sweating room), and *destrictarium* (an area for smearing the body with oil). Another characteristic feature would be the wood-burning furnaces added, conventionally, beyond the *caldarium*. The bath complex is delimited from the north and south by two porticoes formed of granite columns (height: 5 m, diameter: 0.60 – 0.80 m), whereas a large wall defines its western limit. The ruined structure was exploited as a stone quarry since the early Arab period, for only confined sections of the floor have survived continuous mediaeval pillaging. The preserved fragments above ground, built mostly of fired brick, were constructed upon a subterranean vaulted structure of limestone blocks. The latter might have belonged to an earlier building, the vestiges of which were utilized as ready foundations for the late bath complex. A *terminus ante quem* c. the 2nd century AD is provided for the presumed predecessor on the grounds of an inscribed pedestal found reused in the western corridor of the underground service area.

The nature of the substructures is inferable from the discovery of the remains of a building adjacent to the western wall of the late antique baths. Its rooms were identified as a *tepidarium*, *caldarium*, and *frigidarium*, suggesting the presence of a private property with a luxurious bathing facility that includes also a *hypocaustum* (underground heating) and *tubuli* (heating tubes built into the walls). The excavated building, with extensions reaching under the neighbouring bath complex, is datable c. the 1st-2nd century AD, considering its contextual finds: a figural mosaic depicting a Dionysiac scene in glass *tesserae* and a fragmentary statue of marble. A Roman cluster of residential buildings, some with private *thermae*, seems to have been overbuilt with the late antique bath complex and its associates on site: public latrines and *auditoria* of c. the 4th-6th century. During the 7th century, the whole complex suffered serious damages, and towards the end of the 8th century, the graves of the Lower Necropolis began to be dug into the pavement of its colonnaded porticoes and *frigidarium*. Continuous Arab interment in the area of the bath complex is attested by the dense concentration of the 10th-13th-century graves of the Middle and Upper Necropolis.

Further evidence of continuous habitation on site is found to the east and south of the bath complex, where the pavement of the *frigidarium*, *apodyterium*, and southern portico seems to contain reused material (basically, decorative nummulithic slabs) retained from earlier structures. Furthermore, near the entrance to the *frigidarium*, sections of a pavement of limestone blocks were excavated. The uncovered pavement measured 4.40 m, which is only a fragment of the original width of transversal street R4, as shown further west by a constricted portion of battered earth (probably, a bedding or sidewalks) of the same consistency as the pavement itself (Rodziewicz 1984a: 19-23). The street pavement at this point must have extended to the adjacent wall to measure approximately 6.75 m: a figure still to change when considering the annexes to the *frigidarium* and *apodyterium* of the late antique bath complex.

2.2.2.4) Traces of R5

Site 21: Section of R5, north of the junction with L'2 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments; cistern [Arab]
(ii) Colonnade and structures lining street R5 (associates: site 63) [Late Antique]
(iii) Pavement of street R5 [Roman; Late Antique]
(iv) Conduit [Ptolemaic; Roman]

In 1929, excavations were carried out by the Graeco-Roman Museum on the western side of el-Nebi Daniel Street, at the junction with the alley of Sidi el-Bardissi, where Breccia's main trench, labelled (D), has yielded a granite column (height: 5.85 m, circumference: 2.34 m) standing *in situ* upon an Ionic base of white marble (height: 0.35 m), at a distance of 18 m from the sidewalk of el-Nebi Daniel (Breccia 1932: 50-52) (Figures

113-115). The column rests upon a construction of a pyramidal form: tapering upwards, from a width of c. 4 m at the base, to c. 1.20 m at the topmost section, with a preserved height measuring 5.60 m. Its roughly-hewn limestone blocks (0.25 – 0.40 m x 0.30 – 0.35 m) are joined with a firm layer of mortar. The upper part of the wall apparently served as a pseudo-stylobate (height: 1.45 m, width: 1.35) for a colonnade, labelled (A), that extends on a NNW-SSE axis. Not far from the excavated masonry, a marble Corinthian capital of considerable size has been found. The colonnade (A) seems to have been assembled of reused material, as indicated by the nonmatching diameters of the granite column and the marble base upon which it stands. The latter was coated with a fine layer of stucco, most probably at the time it had been (re)employed in the colonnade. Partially uncovered at the foot of the stylobate, on the eastern side of the colonnade, was a surviving section of a battered pavement tiled with shards of marble slabs (α). It might have belonged to a portico running between the eastern colonnade of transversal street R5 and the structures lining it. Some of these structures, which probably extended eastwards, to the modern street of el-Nebi Daniel, are represented by a remnant of a wall (C) running at 11.50 m to the east, parallel with the colonnade. Towards the north, at an interval of 5 m, an Ionic column base of white marble has been found just under the staircase giving access to the adjacent Sidi Abd el-Razzak el-Wafai Mosque. Breccia had to subsequently bypass the latter, into the neighbouring alley, which carries the same name as the mosque itself, where two trenches, labelled (E) and (F), revealed no columns or bases, but a continuation of the pseudo-stylobate uncovered to the south, at Sidi el-Bardissi: it actually ran underneath the mosque. At the upper layers of earth and rubble, 3.50 m below the level of el-Nebi Daniel Street, the excavated vestiges of a cistern and early Arab burials of the Lower Necropolis are datable to the 9th century (246 Hijri, AD 860) on the grounds of two fragments of funerary inscriptions engraved onto marble slabs.

The museum resumed its salvage excavations on site between March and September 1933 on the occasion of reinforcements commissioned at the mosque (Adriani 1934: 19-27). Breccia's main trench of 1929 (D) was extended westwards, where Adriani had encountered the construction labelled (B). The latter comprises remnants of four walls: (1) and (3) running north-south, almost parallel to one another (in fact, at a slight angle); between them extends wall (2), from east-west, with a narrower extension (4) that continues westwards, beyond wall (3), in the direction of the adjacent mosque. Underneath wall (4), an earlier canal of hewn limestone blocks ran northwards, parallel with wall (3). Polygonal blocks of black basalt and white limestone formed the pavement (γ) between walls (1) and (3). The remains of a later pavement (δ) of white limestone slabs were found restricted to one corner and separated from (γ) by a 0.70 m debris *stratum*.

Stratigraphy and building technique (basically, stonework and mortar composition) show that constructions (A) and (B) are contemporary. Furthermore, foundation wall (1) of construction (B) had the same pyramidal form as that supporting the colonnade (A), with their footings reaching down to the groundwater level: cuts for receiving tapering reinforcements (analogies: foundation wall 'No. 2' at site 31; the Menasce foundations at site 63; the '23' segment of wall at Chantier Politi/site 117). It seems that construction (B) at Sidi el-Bardissi is a late encroachment upon the transversal course of street R5, narrowing its width to c. 6.50 m. This would explain the reason why the excavated section of pavement marked (β) remains exposed, being yet in use, unlike its western extension (γ), which was overbuilt with pavement (δ) at the time the floor between walls (1) and (3) had been refurbished to suit the new building's domestic or, perhaps, commercial character. Prior to the latter annexes, datable to a late phase of construction on site, street R5 would have originally exceeded 10 m in width. This range is backed, at the western end of the excavation profile, by the relative location of the earlier conduit which probably ran along the western edge of a wider R5 in the Ptolemaic and early Roman periods. Whereas the fact that construction (B) is slightly deviated off-grid may be explained in the context of unskilled planning evident in the misalignment of its own walls and the coarseness of the masonry work.

2.2.2.5) Traces of R2^{bis}

Site 3 (section 2.1.2.2.2.2): section of R2^{bis}, between L3 and Lα (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of street R2^{bis}; sewers [Roman]
(ii) Building complex with floor-mosaics [Ptolemaic]

2.2.2.6) Traces of L1

Site 22: Colonnade of L1, between R5 and R7 (CDist.)

Maps: V2; V3; V4

Columns: el-Attarine [Roman; Late Antique]

Vestiges of the L1 colonnade are featured frequently in the 17th-19th-century descriptions and paintings of renowned European travellers. In June-July 1681, the Dutch artist and explorer Cornelis de Bruijn visited

the city during his extended journeys (1674-93) to southeastern Europe and the Near East (Bruijn 1698). Accounts from his periegetic surveys were published, in 1698, as *Reizen van Cornelis de Bruyn: Door de Vermaardste Deelen van Klein Asia, de Eylanden Scio, Rhodus, Cyprus, Metelino, Stanchio, &c. Mitsgaders de Voornaamste Steden van Aegypten, Syrien, en Palestina*. One of Bruijn's notable scenes shows the Rosetta Road with two columns lining its edge. In the background is a panoramic view of the eastern harbour and various waterfront constructions in ruins: fortifications, buildings, the standing Heliopolis obelisk, and the 'Tower of the Romans', which was known then among European voyagers as 'Cleopatra's palace'. In October 1737 (published 1743), Richard Pococke took note of two columns opposite el-Attarine or 'St. Athanasius' Mosque marked (c) in his map. To the east, four others were lined up at the site he labelled 'the Gymnasium' (Y) (Introduction II.b). In 1785 (published 1799), Louis-François Cassas made a view of the Rosetta Road with six columns lined up on its southern edge: three opposite el-Attarine Mosque, the others at a short distance to the east (Introduction II.b). Around 1792 (published 1801-04), Luigi Mayer created reverse views of the Rosetta Road and el-Attarine Mosque with six columns standing and two overturned. Only three of Mayer's were recorded in 1798-99, during the Napoleonic expedition, as seen in *Description de l'Égypte* (Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 35, Figure 1) (Figure 116). In 1841 (published 1843), the columns were shown in the map accompanying Sir John Gardner Wilkinson's volume I of *Modern Egypt and Thebes* (originally from the surveys of Captain William Henry Smith, R.N.), where they are represented by three points, marked (G), opposite the 'Mosk of St. Athanasius' (F). By the 1860s, the time during which el-Falaki had excavated parts of the ancient colonnades (site 23), the columns at this section of the Rosetta Road became just two (Figure 117). Other vestiges of the L1 colonnade were, however, visible elsewhere, alongside the town's principal thoroughfare known as Tariq Bab Sharq or Tariq Rashid.

Site 23: Colonnade of L1, between R1 and R5 (CDist.)

Maps: V2; V3; V4

Columns: Latin Quarter; el-Messallah Sharq; el-Messallah Gharb; Kom el-Dikka [Roman; Late Antique]

In 1863-66, Mahmoud el-Falaki recorded numerous overturned columns, being encountered regularly during the digging of foundations for houses on either side of the Rosetta Road (Tariq Bab Sharq aka Tariq Rashid), at the segment of it between transversal streets R1 and R2: a section of Fouad between Adolfo Capua (Sidi el-Motayem) and el-Batalsa; as well as at several other sites along the road's longitudinal course: (a) opposite el-Attarine Mosque (the historical site of the Church of Saint Athanasius: site 22); (b) on the extension of the street vis-à-vis the village of Charakoué, not far from the Rosetta Gate (Bab Sharq); (c) in the garden of Gibara opposite Kom el-Dikka (el-Falaki's account here is based on oral testimony). Some were discovered, however, by means of actual excavation carried out by el-Falaki, whose finds are marked in Kiepert's version of 1872 (Adriani 1934: 87, Catalogue Number 95; Kiepert 1872: 'Plan der Alten Stadt Alexandria'; Mahmoud-Bey 1872: 20, 56-57). In 1885, Henry de Vaujany maintained that the vestiges were recognizable over c. 150 m along a hypothetical line perpendicular to the Arab circuit walls (De Vaujany 1885: 80-81): on either side of Fouad Street? Whether perpendicular to L'2 (Abd el-Moneim) and/or L2 (el-Sultan Hussein) is neither specified by el-Falaki nor De Vaujany.

In 1888, Tassos Neroutsos reported 'des fûts et des chapiteaux de colonnes en granit du style grec le plus pur et de dimensions colossales'. These were accidently discovered (in 1876?) during construction works carried out on the northern side of Fouad Street, at the section of it between Goussio (Noah Effendi) and el-Batalsa: a point opposite the Spanish Consulate: the site marked 'Palestre' in Neroutsos' map entitled 'Alexandrie Ancienne' (Adriani 1934: 84, Catalogue Number 79; Neroutsos 1888: 72). By 1898, given Giuseppe Botti's commentary in *Monuments et Localités de l'Ancienne Alexandrie d'Apres les Écrivain et les Fouilles*, the last surviving vestiges of the L1 colonnade were no longer in place (Botti 1898c: 92).

2.2.2.7) Traces of L2

Site 24: Section of L2, on either side of the junction with R2 (NDist.)

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita

(i) Foundations; conduits (λ) and (ϰ); pavement of street L2 [d: Late Antique]
(ii) Foundations; pavement of street L2 (i) [c: Late Ptolemaic; Roman]
(iii) Foundations; conduit (θ) [b: Ptolemaic]
(iv) Rock-cut conduit with inner clay pipes (μ) [a: Early Ptolemaic]

In 1898-99, Ferdinand Noack excavated two trenches, labelled (J) and (M), at Nubar Pasha Park, to the east of el-Khartoum Square (the former Saīd Square, el-Mazarita), between the course of the demolished Arab fortifications and the junction of the streets of el-Batalsa with el-Sultan Hussein (Figures 118-119) (Adriani 1934: 80-81, Catalogue Numbers 60-61; Noack 1900: 224-225, 252-259, Figure 8, Tafel XI, Figure 1). On

the western side of the park, trench (J) yielded sections of polygonal stone pavement extending ENE-WSW at +9.04 m above sea level. About 50 m to the east, within trench (M), the same pavement was encountered at +8.35 m above sea level. In (J), the street was unearthed over its entire width, which measured 7 m including the side platforms of small limestone blocks. According to el-Falaki's grid, the excavated pavement correlates with longitudinal street L2. Partially uncovered at 2 m below the hardstone pavement were the remains of a gravel pavement, marked (i), that signals an earlier phase of street L2 contemporary with Noack's construction phase (c).

A canal (θ) of large limestone slabs, bedded directly upon the bedrock, ran south of the street at +3.97 m above sea level. Next to it, 0.90 m to the south, were the foundations of a building datable to construction phase (b). A surviving remnant of its collapsed walls, built on virgin soil, was traced over a distance of 6 m, with a preserved height measuring 1.70 m. After the dismantling of its upper parts, at +5 m above sea level, rubble fill was deposited in preparation for the foundations of a new building pertaining to phase (c). The latter, met at +6.65 m above sea level, is represented by a remnant of a wall, 0.55 m thick, of hewn limestone blocks and fired brick. It was preserved over 6 m of its original length. The inner surface of the wall was coated with a layer of painted plaster. On the northern side of the street, at the foot of the Arab fortifications, a canal (λ) with a conical slab cover was constructed at a later date, perhaps not earlier than construction phase (d), as is the case with canal (ϰ), the uppermost parts of which, to quote Noack, 'liegen bereits über dem niveau der strasse (i)'. Proceeding towards the northern profile, below the Arab defensive walls, a 'grossen felskanal', labelled (μ) (0.47 – 0.50 m x 1.65 m), extended over a distance of 27 m and beyond, at +1.40 m (bottom) to +2.52 m (top) above sea level. A Ptolemaic origin is ascertained given its inner clay pipes (length: 0.51 – 0.52 m, diameter: 0.26 m): fitted into one another and covered with a fine layer of plaster (waterproofing). Canal (μ) was accessible by means of six inspection shafts opened at irregular intervals along the exposed section of it. The westernmost ones, labelled (1) and (2), were cylindrical. Shaft (3) was rectangular as was (4), which had a 1.50 m square cover. Shaft (5) was square, with four small holes on either side of the inner walls. Connection between the latter shaft and the canal itself was established through a 1.15 m opening. Whereas the easternmost shaft (6), which was rectangular, differed from the others in that its lateral walls were lined with small stone cubes. This type of subterranean conduits is found in contemporary Hellenistic cities such as Pergamon and Laodicea in Asia Minor, but also echoes earlier models like the Eupalinian aqueduct of Samos.

2.2.2.8) Traces of L3

Site 25: Section of L3, between R4 and R5 (NDist.)

Maps: V2; V3; V4

Pavement of street L3: el-Ramleh [Roman; Late Antique]

In 1798-99, Saint-Genis recorded sections of a stone pavement in black basalt at a point to the east of the 'Tower of the Romans': approximately, the present-day site of Patisserie Athineos (Adriani 1934: 93, Catalogue Number 114; Saint-Genis 1818a: 44-45). The vestiges were encountered 'sur le rivage de la mer et à très-peu de hauteur au-dessus de l'eau'. Sections of the hardstone pavement were found upon a debris *stratum*, or 'sol de ruines', to quote Saint-Genis, suggesting they were constructed upon the ruins of demolished structures. Both, the basalt overlay and the underlying layer of rubble, date the street to the (late) Roman period. According to el-Falaki's grid, the pavement would belong to longitudinal street L3.

Site 26: Section of L3, east of the junction with R4 (NDist.)

Maps: V2; V3; V4

Baths; pavement of street L3: el-Ramleh [Roman; Late Antique]

In 1897, Giuseppe Botti recorded the faint traces of 'une route byzantine aboutissent à la Tour Romaine' at a point between the junction of the streets of Pereira (Mohamed Rafat) and Amin Pasha Fikri with Alexander the Great (Omar Lotfy: el-Tram) (Adriani 1934: 93, Catalogue Number 113; Botti 1897b: 5-6). Botti provides no details about his 'route' in Fascicule I of *La Côte Alexandrine dans l'Antiquit* (1897), where it is reported in the context of a brief account on vestiges of ancient constructions recognizable on a clam day below the water surface, alongside the shores of the eastern harbour. These vestiges were evident around 'des bains Zouro' (near the present-day site of Patisserie Athineos), which was built, at the time, on a platform protruding out into the sea prior to the construction of the Corniche and the subsequent formation of a pseudo-coastal belt between el-Silsileh and Saad Zaghloul Square. Botti might have meant the bathing brick structures recorded during the Napoleonic expedition by Le Père, Saint-Genis, and De Dolomieu: datable, in general, to the (late) Roman period and traceable alongside the seashore, from the 'Tower of the Romans' to the headland of el-Silsileh and beyond. Within this range, bathing facilities of stuccoed brick were found to have been built often upon earlier remains of Ptolemaic waterfront constructions (sites 2, 7a, 112b-113, 138-139). Botti's 'route byzantine', a

possible continuation of the L3 section reported earlier by Saint-Genis further to the west (site 25), would be contemporary with some of the coastal *thermae* of the Roman setting.

2.2.2.9) Traces of Lα

Site 27: Section of Lα, between R2 and R3 (NDist.)

Maps: V2; V4

Pavement of street Lα: el-Mazarita [Roman]

In 1898-99, Ferdinand Noack added a longitudinal street, labelled Lα, between L3 and L4, to el-Falaki's grid plan. He maintained that Lα was identified 'aufgrund unserer beobachtungen' (Adriani 1934: 63, Catalogue Numbers 24-25; 1966a: 73-74, Catalogue Number 28; 1966b: Tavola 13, Figure 43A; Noack 1900: 224, 232, 260-262). Sections of stone pavement were recorded at two points: (1) approximately, the present-day site of Mabarret el-Asafra Lab, north of the junction of Champollion with Abd el-Hameed Badawi; (2) about 100 m to the east of (1), towards the junction of Marmeruon with Abd el-Hameed Sayed. The excavated remnants of Lα were met at +6.27 m above sea level. Judging by the difference in the level of the street bedding to neighbouring sites with earlier (Ptolemaic) vestiges, particularly those encountered within Noack's trenches (K4), (K3), and (L) (site 7b-d), street Lα seems to have been constructed at a late date. In fact, its westward extension cuts through the 'längeres fundamentmauerwerk' excavated by Noack himself at trench (K3) (site 7d).

Site 28: Section of Lα, between R1 and R2 (NDist.)

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) Pavement of street Lα [Roman]
(ii) Foundations [Ptolemaic]

In 1929, on the occasion of construction works commissioned by the Municipality of Alexandria within the urban unit occupied by the faculties of humanities and social sciences, at a point to the east of Ptolemy Soter (present-day Ali Mustapha Musharrafa) Street, an architrave of Aswan granite was unearthed. Securing a budget of 300 EGP, Evaristo Breccia, then director of the Graeco-Roman Museum, was able to move in and excavate a vast trench around the accidental find: approximately, the present-day site of the Faculty of Law (Figure 120) (Adriani 1934: 60, Catalogue Numbers 13-14; 1966a: 80-81, Catalogue Number 40; 1966b: Tavola 20, Figure 71; Breccia 1932: 52-53). Although he was unable to put the architrave in a context, other trenches were excavated nearby, reaching down to the groundwater level at +1.485 m above sea level. Encountered almost at the same level, +1.50 m (Faculty of Law) and +1.58 m (Faculty of Commerce), beneath a debris *stratum* of earth and rubble, were 'fondations ... construites avec de beaux blocs en calcaire de dimensions considérables'. At a much higher level, +5.05 m, a section of a pavement of polygonal basalt blocks was uncovered on an ENE-WSW axis, approximately, at the present-day site of the Faculty of Commerce. The pavement was on the longitudinal course of those fragments recorded earlier, in 1898-99, by Ferdinand Noack at Champollion Street (site 27) and thus considered a continuation of street Lα (actually, an eastward extension of it). The sequence here backs the chronology established at site 27: a street added a considerable time after the demolition of earlier monumental buildings of large, hewn limestone blocks and the subsequent levelling of the terrain in preparation for new constructions. Whereas to attain a better understanding of the nature of Breccia's 'massive foundations' met just above the level of the water table, it is key to place the excavated vestiges into a wider context that includes the nearby building complex with sumptuous floor-mosaics (site 3) and other analogous architectural forms unearthed along the southern belt of el-Silsileh (sites 7-8, 12, 138-141).

2.2.2.10) Traces of L'α

Site 29: Section of L'α, between R1 and R2 (CDist.)

Maps: V2; V3; V4

Pavement of street L'α: Latin Quarter [Roman; Late Antique]

In 1929, the second director of the Graeco-Roman Museum, Evaristo Breccia, attempted a reconstruction of the ancient city in volume I of *Enciclopedia Italiana*. In his map published under the title 'Alessandria', a longitudinal street is added to el-Falaki's grid, between L1 and L'2. Sections of stone pavement pertaining to this street, labelled L'α, were excavated earlier, within *insula* L1-L'2-R1-R2, at a point near the present-day site of the Turkish Consulate (Adriani 1966a: 63, Catalogue Number 11; 1966b: Tavola 5, Figure 12). Further west, L'α is evident as an intermediate lane within *insulae* L1-L'2-R3-R5 (i.e. on either side of transversal street R4), where an extension of it has been excavated by the Polish mission at Kom el-Dikka (sites 18-19). It is datable, by analogy with similar paved surfaces elsewhere, to the (late) Roman period.

2.2.2.11) Traces of L5

Site 30: Section of L5, west of the junction with R4^{bis} (EDist.)

Maps: V2; V4

Pavement of street L5: el-Chatby [Roman]

In 1892, while investigating remnants of the eastern *necropoleis* at el-Chatby, Giuseppe Botti, then director of the Graeco-Roman Museum, maintained that 'un tratto della via romana al mare fu distrutto dai soliti anonimi' (Botti 1893: 14). Given Botti's context of recovery, the reported 'via romana' would belong to longitudinal street L5, which was partially uncovered further west by Ferdinand Noack in 1898-99, a few metres to the headland of el-Silsileh (site 2).

Site 2 (section 2.1.2.2.2.2): Intersection of R2^{bis} with L5 (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Pavement of street L5 [Roman]
(ii) Brick masonry and conduits: *thermae* [Roman]
(iii) Fortification-point (ε): foundations of a defensive construction [Ptolemaic]

In 1898-99, Ferdinand Noack uncovered sections of stone pavement within his (K1) trench sunk to the east of el-Silsileh: the site where traces of an ancient street had been recorded earlier, first by Déodat Gratet de Dolomieu (1798-99), then by Sir John Gardner Wilkinson (1841): a point on the Corniche, opposite the present-day site of the Alexandria University administration building (Adriani 1934: 60, Catalogue Number 16; Noack 1900: 224, 232-233). The vestiges were encountered at +5.50 m above sea level and hence a longitudinal street, labelled L5, was added accordingly to el-Falaki's grid.

2.2.2.12) Traces of L'2

Site 31: Section of L'2, east of the junction with R5 (CDist.)

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Dwelling; refuse; interments [Arab]
(ii) Double-vault structure; cistern [Arab]
(iii) Foundations; hydraulic installations [Late Antique]
(iv) Pavement of street L'2 [Roman; Late Antique]
(v) Foundations; conduit [Ptolemaic; Roman]

From October 1933 to August 1934, the Graeco-Roman Museum carried out a series of surveys in the central district of Kom el-Dikka, with the prime aim of studying the stratification of its *kom* (Adriani 1940a: 55-63). Archaeological investigation took place on site prior to levelling works commissioned by the Municipality of Alexandria in preparation for the construction of an extension of el-Amir Abd el-Moneim (Ismaīl Mahanna) Street at the foot of the mound. The excavated areas of interest include a section of Abd el-Moneim east of the junction with el-Nebi Daniel (Figures 121-122).

A large number of Arab potsherds were encountered through the *kom's* upper *strata*, towards the level of present-day el-Nebi Daniel. Whereas a little below the street level, at a distance of 18.50 m from its eastern edge, were the remains of collapsed walls pertaining to an early Arab building of a domestic character, which features a mosaic pavement in one of its chambers. Other vestiges revealed through the opened trenches include a double-vault structure, a large cistern, and Arab sepulchres of very coarse masonry.

On a lower level, at +5.67 m above sea level, sections of a pavement of black basalt and limestone blocks were found preserved in some pits, but partially destroyed in others, suggesting that street L'2 was probably long abandoned and partially dismantled before the recorded phase of Arab habitation, as shown by the absence of stone pavement in some of the intermediate pits. In fact, the widest preserved section measured just 3 m. Given the limited exposure of Adriani's trenches, the northern edge of street L'2 was not reachable to calculate its entire width. Nonetheless, a couple of overturned granite columns encountered on the northern profile would seem indicative of the proximity of the opposite colonnade. The street itself (No. 1), extending ENE-WSW, was delimited from the south by a staircase of four steps. Most of the latter's varied-size blocks were of nummulithic limestone, yet with few of marble. These were roughly placed side by side with no signs of mortar in the joints, as they seem to have been retained from earlier dismantled buildings to be (re) employed hastily in the staircase. Further south, on the side of a platform (No. 3) of a double row of limestone blocks of varied sizes held with a firm layer of mortar, a large void was found marking the line of a collapsed row of pink granite columns (the southern colonnade of street L'2). The blocks of this pseudo-stylobate, and the column bases themselves, were apparently plundered to be reused as *spolia* in this late phase of construction. One remnant of wall (No. 2), built of limestone blocks in mortar, was met towards the northwestern extremity of the staircase, next to a rectangular basin coated with a layer of plaster (waterproofing). The wall had a distinct pyramidal form as it reached down to the level of the rising water table: a cut for receiving a tapering reinforcement (pyramidal form constructions: sites 21, 63, 117).

The main platform was built upon a thick layer of earth and rubble, the upper part of which is formed by large quantities of carbonized substances: a clear indication of fire. At a lower level, sections of two walls

of limestone blocks joined together without mortar (dry masonry) were of a different orientation to the vestiges of the upper complex (staircase; colonnade; platform) and the adjacent street itself. The off-grid walls belonged to the same construction, for one had joined the other at right-angles. The better-preserved of the two, labelled (No. 4), had obvious signs of fire at its topmost. Its footing, as was the case with the less-preserved wall (No. 5), stood on a slightly wider platform that reached down to the level of the rising water table. Building technique here recalls that met at Chantier Moustaki (northern district: site 116) and the necropolis of Mustapha Pasha (eastern suburbs: site 160). Following this wall over about 3.50 m had led to likewise off-grid subfoundations of large limestone blocks. Unfortunately, the GRM excavations had to be terminated at this point for safety reasons. At the southern end of the excavation profile, two similarly off-grid walls, labelled (No. 7) and (No. 9), emerged slightly above the level of the rising water table. Already partially drenched, they cannot be identified on solid grounds as contemporary with walls Nos. (4 and 5) and the underlying inaccessible subfoundations.

Hydraulic installations on site include two reservoirs of fired brick and limestone blocks found coated with a firm layer of reddish stucco (waterproofing). A conduit built of limestone blocks and covered with terracotta tiles (roofing) poured into the first reservoir. The conduit and both reservoirs were off-grid, for they succeeded a much earlier wall with a substantially different orientation. At the time the reservoirs were added, the earlier conduit (most likely representing an intermediate phase of construction) was coated with a similar layer of reddish stucco and covered with roofing tiles. The reservoirs, and subsequently the conduit itself, were used to serve a late structure contemporary with the main platform (No. 3), as suggested by a surviving section of a wall (No. 6) with three preserved rows of roughly-hewn limestone blocks held with a firm layer of mortar composed of lime, sand, and crushed brick. Wall (No. 6), as is the case with other vestiges of late constructions (see *supra*), was built upon a debris *stratum*, the upper part of which contained carbonized substances. At the southeastern end of the excavation profile, a partially collapsed well is represented by a remnant of a wall (No. 8) built of fired brick and small blocks of limestone.

2.2.2.13) Intermediate Streets

Site 32: Traces within *insulae* L1-L2-R2^{bis}-R4^{bis} (EDist.)

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) (a; d) Pavement of a longitudinal street [Roman]

(ii) (a; b; c) Dwellings with floor-mosaics [Roman]
(iii) (d) Necropolis [Ptolemaic]

(a) In 1930, during construction works to widen Abu Qir Road and those minor streets perpendicular to it, sections of stone pavement were accidently excavated to the north, within the urban unit delimited by the European cemeteries (west) and el-Ibrahimiya (east) (Breccia 1932: 27). The uncovered pavement of polygonal blocks of limestone and black basalt was traceable over a distance of 50 m. Breccia has not provided sufficient information to enable a precise determination of its course: possibly, an intermediate thoroughfare added somewhere within *insulae* L1-L2-R2^{bis}-R4^{bis}. In 1931, fragments of Roman mosaic pavements with geometric patterns were encountered further east of the designated area, alongside Diocletian Street (present-day Ahmed Kamha?) (Breccia 1933: 20-21). The panels, datable c. the 2nd-3rd century AD, would have decorated the floors of one of the residential houses on either side of transversal street R4^{bis}, as shown during Adriani's excavations in the areas of interest (site 32b-d).

(b) In January 1932, a surviving fragment of a black-and-white tessellated floor-mosaic (5 x 1.10 m), with yellow and red cubes in places, was accidently discovered during levelling works to the north of Abu Qir Road, between the streets of Trajan (Ahmed Lotfy el-Sayed: approximately, R4^{bis}) and Octavianus Augustus (Ahmed Hassanein Pasha: the present-day University Stadium) (Adriani 1934: 35-36). The panel, recorded at 2.50 m below the level of Abu Qir Road, is formed of a pattern of large white diamonds set within broad black bands. At the centre of each of the diamonds were decorative motifs that vary from one row to another. In the middle row, a Greek inscription reads 'ΕΠΑΓΑΘΩ' (to the good): a textual motif often found on Roman mosaic pavements in Alexandria. On the surviving side is a kind of a short stretch of border formed by a series of small rhombi. In January 1934, another fragment of the same pavement was unearthed to the north of the latter. It measured 1.50 x 1.30 m and comprised one full frame and yet a small section of another, with lozenge patterns decorating both panels. Borders of guilloches surrounded these recurring frames from all four sides. The excavated fragments of the tessellated floor-mosaic followed the orientation of Abu Qir Road, suggesting the presence of Roman urban structures along the northern side of street L1, at the section of it to the east of street R3^{bis}. A contextual relation seems inferable with the vestiges excavated in 1930-31 somewhere to the north of Adriani's finds and briefly reported back then by Evaristo Breccia (site 32a).

(c) In December 1936, the remains of a large mosaic pavement were accidently discovered while digging foundations for the English Girls' College (the present-

day el-Nasr Girls' College) in el-Chatby (Adriani 1940a: 149-150; 1966a: 82-83, Catalogue Number 44; 1966b: Tavola 14, Figures 46-47). The site is delimited on either side by the streets of Trajan (Ahmed Lotfy el-Sayed: approximately, R4^{bis}) and Octavianus Augustus (Ahmed Hassanein Pasha: the present-day University Stadium). Whereas, from the north, Mohamed Fouad Helmy (approximately, on the line of street L2) separates the urban block from the Alexandria University Stadium. About 200 m to the south extends Abu Qir Road as an extension of street L1 to the east of R1. Achille Adriani, then director of the Graeco-Roman Museum, decided to step in and inspect the partially preserved panel, which exhibits various geometric motifs around a central *emblema* with fish rendered on a greenish-blue background in allusion to the sea. The mosaic fragment (Graeco-Roman Museum, Inventory Number 25093) features the Greek inscription 'ΕΠΑΓΑΘΩ' (to the good), on the grounds of which a 2nd-3rd-century AD date is proposed. In search of a Roman *villa (sub)urbana*, several test-pits were sunk within the vicinity of the accidental find. No remnants of walls were found. Encountered instead, at 3 m to the north, was a large octagonal pool coated with a layer of plaster (waterproofing). Each of its 2.50 m long sides had a small spherical cavity, suggesting a fishpond with eight cavities cut to serve as nests. Overall, the finds seem contextually associated as they probably belonged to the same estate.

(d) At 8 m south of the fish mosaic, sections of a pavement of polygonal blocks of limestone and black basalt were uncovered over a distance of 250 m. The street, which ran ENE-WSW, measured 7 m in width and was added in the Roman period between longitudinal streets L1 and L2 (in some maps the intermediate street in question is rendered between longitudinal streets L2 and L3, where the English Girls' College is confused with Lycée el-Horreya located further north). Given the recoded findspot, a possible correlation would be proposed with the thoroughfare excavated by Breccia in 1930 (site 32a). Its construction exemplifies the Roman urbanization of the areas to the east of transversal street R3^{bis} (approximately, the present-day Aflaton/Selim Hassan) at times the deceased were no longer interred into the eastern mounds. This is backed by the stratigraphy of the site under investigation and elsewhere between transversal street R2^{bis} (the Suez Canal Road) and the hypothesized Augustan periphery to the east of Trajan/Ahmed Lotfy el-Sayed (R4^{bis}): along the western belt of Camp Caesar, el-Ibrahimiya, and el-Ibrahimiya Qibly. In fact, several of the test-pits sunk by Adriani within this range had revealed the remains of isolated burials at considerably lower levels to that of the above-mentioned Roman vestiges. Besides confirming the sepulchral character of the region in Hellenistic times, these tombs shed light on the geographical extent of the eastern *necropoleis*, which are often divided in the modern scholarly mind into two delimited sectors: north (el-Chatby) and south (el-Hadra el-Bahareiya and el-Hadra Qibly) of Abu Qir Road (sites 145-146).

Site 33: Traces within *insula* L1-L2-R1-R2 (CDist.)

Maps: V2; V3; V4

Colonnade and pavement of a transversal street: Latin Quarter [Roman; Late Antique]

In March 1934, sections of stone pavement were accidently discovered during the installation of a sewerage system along the southern edge of el-Sultan Hussein Street (approximately, on the line of street L2), southeast of the junction with Goussio (the present-day Noah Effendi): a few metres to the Irish Consulate (Adriani 1934: 87, Catalogue Number 94). Polygonal basalt blocks were found in a backfill, suggesting a street already dismantled. In 1863-66, near this point, within *insula* L1-L2-R1-R2, el-Falaki excavated sections of the colonnade of an intermediate street that was added by him between R1 and R2 (maps V2, V3, V4). The polygonal basalt blocks reported by Adriani at the junction of Noah Effendi with el-Sultan Hussein would have belonged to the stone pavement of el-Falaki's transversal street.

Site 34: Traces within *insula* L2-L3-R4-R5 (NDist.)

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) Habitation; fortifications [Arab]
(ii) Pavement of a transversal street (site 69a: a northward extension of the *odeum's* portico at Kom el-Dikka?) [Late Antique]
(iii) Foundations (sites 93-100: extension of the Caesareum?) [Ptolemaic; Roman]

In 1892, during the demolishing of the Arab fortifications at el-Ramleh, the remains of 'un grande edifizio a grossi blocchi' were discovered in the vicinity of the Ramleh Central Station, south of the Italian Consulate (Adriani 1934: 92, Catalogue Number 111; Botti 1893: 15). Botti's 'grande edifizio' is delimited from the east by a transversal thoroughfare with a pavement of polygonal basalt blocks. It was detectable from the site of the 'Tower of the Romans' as it ran perpendicular to the longitudinal course of Tariq Bab Sharq (Fouad Street: the L1 πλατεία). Botti's 'via' seems an intermediate one added between transversal streets R4 and R5. Judging by its transversal course, cutting through the areas occupied by the historical Caesareum (sites 93-100), the street would have been constructed at times the temple had ceased to function: datable to late antiquity. A late Ptolemaic to early Roman date may be proposed for

Botti's 'grande edifizio' as a possible eastward extension of the temple's τέμενος, as suggested by the array of ruins stretching in the direction of the Government Hospital Street (the present-day Faculty of Medicine Street). The fragmentary architecture encountered on site includes column drums in breccia marble and Aswan granite, capitals engraved with letters from the Greek alphabet, vestiges of floor-mosaics, the lower part of a damsel statuette (votive offering?), a Greek votive inscription datable to the Roman period, and an Arab portico built mostly of reused material such as a marble pedestal bearing a dedicatory inscription. The recorded encounters are among other remnants from the designated area, mainly fortifications and civil constructions, which show the frequent (re)use of the ruined temple complex as an accessible quarry of building material already in late antiquity and later by the Arabs.

Site 35: Traces within *insula* L2-L3-R4-R5 (NDist.)

Maps: V3; V4

Miscellaneous: el-Ramleh

(i) Habitation; cisterns [Arab]
(ii) Interments (?) (nearby funerary vestiges: sites 94, 100, 114) [Late Antique]
(iii) Pavement of a transversal street (site 69a: a northward extension of the *odeum's* portico at Kom el-Dikka?) [Late Antique]
(iv) Foundations; sewer [Late Antique]

In 1893, Giuseppe Botti excavated three trenches at 61 m, 40 m, and 21 m from the Ramleh Boulevard (the present-day Saad Zaghloul Street) as part of a GRM survey carried out near the Ramleh Central Station, within the area traditionally identified with the site of the historical Caesareum (Adriani 1934: 91, Catalogue Number 107; Botti 1894: 3-4; 1898c: 66-69). At 61 m from the main street, the layers were completely disturbed with no traces of architecture. The second trench revealed 'des restes de constructions de très basse epoque Byzantine'. In the third were 'des cisternes Arabes ecroulees, fondees sur des tombes Byzantines et sur un egout Byzantine'. Botti recorded two levels for a thoroughfare detectable within the second trench: first, at 4 m below the surface level, a section of a stone pavement was constructed above the ruins of earlier structures; then, at 5.50 m, a second surface appeared to be 'pavé en mortier compose de chaux et de briques pilées' (bedding?). The intermediate street in question would be a possible continuation of the one reported earlier by him further north, next to the Ramleh Central Station (site 34). A fourth trench was dug at the junction of the Government Hospital Street (the present-day Faculty of Medicine Street) with el-Messallah (the present-day Safia Zaghloul), where vestiges of an Arab settlement were found together with an assortment of reused architecture. Perhaps apart from Botti's own interpretation of the excavated material, the finds seem to reflect the developments occurring on site through late antiquity and the Arab period: (i) the termination of the monumental temple, (ii) subsequent urban adjustments taking place within *insula* L2-L3-R4-R5, and eventually, (iii) the Byzantine and Arab (re)utilization of the dismantled complex as an accessible source of building material (structural and decorative) for reuse in civil and/or defensive constructions.

Site 36: Traces within *insula* L2-L3-R3-R4 (NDist.)

Maps: V2; V3; V4

Sewers; a conjectural transversal street (possible associates: the inner lane at site 122c): el-Ramleh [Roman; Late Antique]

In 1907, ancient sewers were accidently discovered during construction works carried out at the Victoria House in el-Ramleh: a point southeast of the junction of Amin Pasha Fikry with the Government Hospital Street (the present-day Faculty of Medicine Street) (Adriani 1934: 76, Catalogue Number 46; Breccia 1907a: 107). The rock-cut conduits, coated with a layer of reddish plaster (waterproofing), were on the course of el-Falaki's intermediate street which was added by him between R3 and R4 (maps V2, V3, V4). No traces of stone pavement were, however, recorded in 1863-66 along the course of the conjectural thoroughfare. Perhaps a transversal street was proposed by el-Falaki on the grounds of the same sewers that were reported later by Evaristo Breccia in the ninth bulletin of the Archaeological Society of Alexandria.

2.2.2.14) Suburban Roads

Site 37: (ESubs.)

Maps: V2; V4; V5

Miscellaneous: Camp Caesar; el-Ibrahimiya

(i) Suburban thoroughfare [Roman]
(ii) Fragmentary architecture [n.d.]

In 1892, on the coastal plateau which separates el-Ibrahimiya from the seashore, Giuseppe Botti encountered column shafts 'that would have certainly belonged to an important monument'. At first, he thought of the historical 'Heroon of Stratonike' (the mistress of Ptolemy II Philadelphos; site 161), but the rosettes engraved on contextual fragmentary architecture recovered on site had led him to conclude that the remains might have belonged to a 'Roman

triumphal arc'. Botti maintained to have observed 'de faibles restes a gauche de la gare de l'Ibrahimiya, sur l'ancienne route militaire conduisant d'Alexandrie a l'oppidum Romanorum' (Botti 1898b: 109; 1898c: 62). He even associated the ruins with an Alexandrian version of the triumphal arc commemorating the victories of Titus over the Judeans. Whereas his 'l'ancienne route militaire' would have connected the city of Alexandria to the *oppidum Romanorum* or the town of the Romans, Nikopolis (section 2.1.2.2.2.1).

Site 38: (ESubs.)

Map V5; Figure 285

Miscellaneous: Sidi Gaber

(i) Suburban thoroughfare [Roman]
(ii) Foundations; fragmentary architecture [n.d.]

In the 1870s-80s, during an earlier investigation of the sepulchres cast in the necropolitan east (sites 145-146), Tassos Neroutsos recorded foundations and fragmentary architecture (mainly, overturned and broken granite columns) at Sidi Gaber Mosque: a point between el-Tram and Port-Saīd Street (Neroutsos 1888: 86). He identified the ruins with an 'ancient temple', upon the foundations of which the mosque has been built. In his map entitled 'Alexandrie Ancienne', the findspot is marked 'Ruines de Temple'. Neroutsos' encounters at the time seem to have triggered further investigation of the designated area by Ferdinand Noack in 1898-99. A trench sunk on site revealed sections of a street pavement of polygonal basalt blocks. The pavement was constructed upon vestiges of stonemasonry, or 'felsenharten wand', to quote Noack, through one metre below which were accumulated layers with embedded potsherds (Noack 1900: 228-229). Noack's sequence bears signs of continuous habitation, hence the presence of suburban settlements in the east. Probably, after the Augustan conquest in 30 BC, and the subsequent development of Nikopolis, the eastern suburbs would have undergone an extended process of infrastructure renovation, including the construction of roadways (site 37) connecting Alexandria to the *oppidum* commemorating the military victories of the new rulers.

2.2.3) A Multi-Phase Grid Plan

In Alexandria, archaeological excavations show the hardstone street pavements as often laid upon a debris *stratum*, thus indicating the levelling of an earlier relief. A sequence as such would have been necessitated by the construction process associated with the typical Roman *viae munitae*: public roadways of gravelled subsurface with hardstone pavement on top. The *viae munitae* were constructed by carefully levelling the substrate and, if necessary, the earthen surface was rammed tight. This was followed by filling the ditch, a few metres in depth, with rubble or concrete of crushed brick and lime (*statumen* and *audits*). As the fill came within about one metre from the ground level, a fine layer of cement of pounded potsherds and lime (the nucleus) was then added to serve as a bedding for the elliptical overlay of basalt blocks and/or dolomitic limestone (*dorsum* or *agger viae*). The pavement itself was flanked on either side by stone kerbs (*umbones*) and raised footpaths of gravelled surface (*crepido*, *margo*, or *semita*) to serve pedestrian traffic (Allen 2014: 64, Figure 3.5). The construction of this type of thoroughfares in Alexandria seems contemporary with Noack's phases (c) and (d). Indeed, the vestiges of street pavement excavated by el-Falaki, Noack, and others after them (section 2.2.2; chapter 3) suggest an early Roman to late antique date for the hardstone *viae* shown in 'Carte de l'Antique Alexandrie et des Ses Faubourgs' (1866). At few sites, scant remains of earlier streets were encountered below the level of the hardstone pavement (sites 15b, 17, 24, 114, 122c-123, 134). These were basically battered surfaces tamped with stone shards and pebbles, recalling those streets with gravel pavement known in antiquity as *viae glareatae*. Titus Livius relates in Book XLI of *Ab Urbe Condita* (Quilici 2008: 562-564, 567-568):

> *The censors (c. 194-174 BC) first made contracts for paving the streets of the city (of Rome) with flints, and the roads outside with gravel, and footpaths raised at the sides (site 11), and also for the construction of bridges at various points.*
>
> (Livius, Ab Urbe Condita: XLI. 27.5)

Where visible, the earlier *viae* of battered earth and gravel extend almost on the alignment of the successive hardstone paved ones. The latter were in use from c. the 1st to the 7th century AD, while being constantly narrowed by urban encroachments of archaeologically attested Roman and late antique constructions (sites 18-21, 24, 31). This alignment puts forth three broad phases of construction and use for a developed orthogonal grid – (phase 1) c. the 3rd-1st century BC (Noack's phase b-b'): a predominant use of battered earth and gravel in street construction; (phase 2) c. the 1st century BC to the 1st century AD (Noack's phase c): a gradual shift to hardstone pavements, possibly initiated by Cleopatra VII and sponsored under the early imperial dynasties, with the rather durable hardstone pavements becoming predominant in the course of the Principate to the 3rd century AD (Noack's phase c'); (phase 3) c. the 4th-6th century AD (Noack's phase d): the restoration and maintenance of the post-tsunami late antique grid of hardstone pavements. On the street pavements excavated in the 1860s, el-Falaki himself maintains:

> *Les pavés de toutes les rues de la ville ne sont pas rigoureusement parlant, posés sur le terrain primitif: celui-ci se trouve, généralement, d'un mètre ou même plus, au-dessous du pavage; il est même à plus d'un mètre et demi, au-dessous dans la petite vallée et ses environs, ce qui prouve: 1. Que le pavage n'a été fait que quelques siècles après la fondation de la ville, c'est-à-dire, dans l'époque Romaine.*
>
> (Mahmoud-Bey 1872: 27)

It would be natural, therefore, to find the streets and buildings from the Roman and late antique grid running above the levels of some of the earlier Hellenistic constructions antedating the 1st century BC, the time through which a rigid orthogonal grid was eventually dominating the urban enclosure, including the annexed Royal Quarter (sites 2-3, 14-15b, 17, 24-28, 31, 34-35, 134, 139). This change in urban fabric, although accelerated with the demise of Lagid sovereignty, was by no means an Augustan enterprise. The archaeological record in Alexandria seems to indicate an extended process of transformation in contemporary urban trends, perhaps best exemplified by the successive construction phases of Noack's excavations during Expedition Ernst Sieglin (sites 15b, 24). Of a particular interest is phase (b), as it signals a shift in building techniques at the time three major public edifices of cultic nature had been constructed, under royal patronage, in alignment with the orthogonal grid (sites 52, 90, 92). A development as such, evident within the trenches, especially those excavated by Noack and Adriani, is significant, for it shows that an earlier, rather less rigid version of the Roman grid was fostered towards the second half of the 3rd century BC, apparently under Ptolemy III Euergetes I and Ptolemy IV Philopator, and during the course of the following couple of centuries, its *viae* were progressively replacing dismantled constructions of which some, not all, were off-grid. The latter, basically remnants of the pre-Euergetean city and its Royal Quarter, had ceased to exist by the 1st century BC. Some pockets survived, however, in preserved ground plans, mainly within the central district (sites 31, 69c, 78), until the turbulent 3rd and 4th centuries AD. Most of the excavated Ptolemaic vestiges, including those contemporary with construction phases (a) and (b), were, nevertheless, on the alignment of the canonical grid (sites 7a-d, 14-15, 17, 24, 52.II, 77, 92, 115-123, 131): a phenomenon as such is key to understanding the multi-phase evolution of the grid plan discussed hereafter.

During his visit to Alexandria, c. 25 BC, Strabo maintains that 'the city as a whole is intersected by streets practicable for horse-riding and chariot-driving' (Strabo, Geōgraphiká: XVII. 1.8). This phrase conforms with the orthogonal pattern of the urban plan as plotted by Mahmoud el-Falaki in the 19th century. In the same context, historical narratives on the foundation myth (sections 1.2-3) claim, in turn, that the city of Alexandria was founded in 331 BC on the Hippodamian principles of town planning. An orthogonal grid plan would have existed, accordingly, from the very beginning. And since most, not all, of the excavated foundations antedating the 1st century BC, including the earliest (those contemporary with Noack's construction phase a), were found to follow the canonical secondary intercardinal orientation of the grid plan, the longitudinal axis of the Macedonian foundation (street L1) seems to have been retained through antiquity and yet the Middle Ages (Tariq Bab Sharq aka Tariq Rashid). In fact, four thoroughfares from el-Falaki's Roman grid their origin is traceable back to the Hellenistic period: (1 and 2) the πλατείες or streets L1 and R1, (3) street R9, and (4) street R8. L1 or the Via Canopica, to start with, is the principal artery of the city to the east, thence inland Egypt. It was retained through the centuries, carrying names of various cultural and political domains. R1 led to the Royal Quarter, conveying fresh water to the northeastern district via a contiguous aqueduct. R9, as a western counterpart, had served almost the same function as R1: a causeway to the adjacent island of Pharos and a water supplier to its inhabitants. Whereas R8 was added following the construction of the Ptolemaic Sarapeion atop the Rhakotis acropolis as early as the 3rd century BC: probably, in association with the Euergetean phase of construction (site 52.II). The street itself is often designated 'the δρόμος of the great god Sarapis', for it ran in a perfect alignment with the eastern perimeter of the sacred τέμενος whence the sanctuary had been accessible (McKenzie 2007: 39). A possible processional route during the Dionysiac festivals of Ptolemy II Philadelphos, R8 would have been rather 'cross-cultural' in Hellenistic times: a pathway through the city's Egyptian borough, Rhakotis, which the Graeco-Macedonian settlers had to pass to reach for the sanctuary of the syncretic deity. When the Ptolemaic τέμενος was expanded under the Augustan Principate, the earlier walkway is likely to have become less functional, with two intermediate thoroughfares, shown in el-Falaki's 1866 *carte*, running on either side of the wider Roman precinct (Figure 123).

The initial basic grid plan of the foundation seems to have comprised a principal longitudinal pathway (L1), with two main transversal ones running at either end of the urban enclosure (R1 and R9). This configuration tallies with the proposed course of the Ptolemaic circuit relative to transversal streets R1 and R9 (sections 2.1.2.2.2, 2.1.3.2.2). Under Roman dominion, the scene changes with the abandonment of the eastern cemeteries and the subsequent urbanization of the necropolitan areas of el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly, between transversal street R2^{bis} (the Suez Canal Road, at an angle) and the western belt of Camp Caesar, el-Ibrahimiya, and el-Ibrahimiya Qibly (sites 2-3, 32a-c, 144, 148-149a). The Ptolemaic city would have had secondary streets as those traced by

el-Falaki and attributed by him to the Roman period. Remnants of these earlier enigmatic streets yet barely appear in the archaeological record, unlike their hardstone paved successors. Perhaps they had the ordinary surface of battered earth known in antiquity as *viae terrenae*: 'a mere track worn by the feet of men and beasts and the wheels of waggons across the fields' (Graham 1902: 66; Smith 1859: 1192). In the absence of basalt, limestone, or gravel, with no bedding, the primitive streets of battered earth disappear as the terrain is levelled in preparation for new constructions, thus become unrecognizable within the sequence. Archaeological excavations show the *viae terrenae* as possibly wider than the detectable hardstone *viae* of the Roman grid. A case in point would be Noack's trenches (B1) and (B2) on the course of transversal street R3, and (J) on the course of longitudinal street L2. In (B1) and (B2), sunk on the northern side of el-Sultan Hussein Street (site 15b), the earliest constructions of phases (a) and (b) were met at either end of the excavation profile, indicating a maximum width of c. 15 m for a possible Ptolemaic thoroughfare (Hoepfner and Schwandner 1994: 238-239). In (J), sunk to the east of el-Khartoum square (site 24), almost the same width is deducible given the relative location of the early Hellenistic 'grossen felskanal' (μ) to the vestiges of construction phase (b) and conduit (θ). Accordingly, the maximum width of the excavated *viae munitae* (recorded range: 3.50 – 9.50 m) is nearly 2/3 the benchmark measurement for the maximum width of the inferable Hellenistic *viae*. In turn, the πλατείες of the Ptolemaic city would have reached up to 30 m in total (including sidewalks and colonnades), hence exceeding the measurements reported for the (late) Roman phase of street R1 (14 – 19.85 m) (sites 10-11). These figures tally with Strabo's record of 'over a *plethron* in breadth' for the πλατείες (streets L1 and R1) as taken at the advent of Augustan dominion:

> *The city as a whole is intersected by streets practicable for horse-riding and chariot-driving, and by two that are very broad, extending to more than a plethrum in breadth (+30.83 m: including the side platforms and colonnades), which cut one another into two sections and at right-angles.*
>
> (Strabo, Geōgraphiká: XVII. 1.8)

The hypothesized multi-phase evolution of the orthogonal grid plan of ancient Alexandria coincides with contemporary historical events which were central to triggering urban adjustment throughout the centuries. In this context, most, not all, of the Hellenistic constructions of the 3rd-2nd century BC were found to follow the canonical secondary intercardinal orientation of the urban grid. Archaeological investigation, however, provides evidence for exceptions to the norm: vestiges that follow the cardinal directions, excavated primarily within the Ptolemaic Royal Quarter (sites 2, 131.2b, 134, 138-140a, 147), but also at other sites elsewhere (sites 31, 52.I, 69c, 78, 114). By c. the 1st century BC-1st century AD, hardstone pavements began to gradually replace the earlier *viae* of battered earth and gravel: a shift in urban trends that had probably taken place as part of the rebuilding programme initiated by Cleopatra VII and developed under successive imperial dynasties, considering the damage inflicted upon the civic infrastructure and main public edifices in the aftermath of the Alexandrian War (48-47 BC) and the Augustan conquest (30 BC) (Roller 2010: 108-111). Whereas a restoration phase pertaining to the (late) Roman *viae* of hardstone pavement is datable c. the 4th-6th century: a transition through which the city was recovering from the percussions of the second half of the 3rd century AD, namely the Palmyrene invasion of Zenobia (AD 270) and the retributions of Aurelian (AD 272) and Diocletian (AD 297), and eventually, from the earthquakes and tsunamic shockwaves of the EBTP (AD 365 and 551; section 2.3.1) (Milne 2013: 223-224; Southern 2015: 234; Watson 2003: 62-63, 221-224; Watts 2006: 150-152). In archaeological terms, urban adjustment at the time is attested by contemporary constructions excavated within the central district (sites 18-21, 26, 31, 67, 69-71). The material and historical evidence thus seem to back the hypothesis of a multi-phase orthogonal grid plan: the urban layout allegedly designed by Alexander's technical associates in accordance with the Hippodamian principles of town planning (sections 1.2-3) and constantly adjusted to the provincial and regional developments of antiquity. In theory, after all, it would have been unlikely for different grid patterns to be imposed upon a constricted metropolis with continuous occupation through a period of almost a millennium, from the time of its Macedonian foundation (331 BC) to the Arab conquest of Egypt (AD 641-42).

2.3) Waterways and Harbour Infrastructure

2.3.1) Tracing the Ancient Coastline

The southern coastline of the Eastern Mediterranean is subject to variable tectonic movements due to the subduction of the African Plate beneath the Anatolian Plate. An average subsidence rate during the past 7,500 years is recorded at c. 0.5 ± 1 mm per year in the western sector of the Egyptian Nile Delta (Goiran *et al.* 2000: 83). In Alexandria, long-term subsidence over the previous 2,000 years has reached 5 to 6 m (2.5 to 3 mm per annum) and sea level has risen by 1 to 1.5 m (5 to 7.5 cm per century) (De Graauw 1998: 58). Steadily accelerating subsidence in antiquity was partially instigated by the increasing weight of accumulated sediment brought down by the presently desiccated Canopic branch of the Nile (Fraser 1972: 8). Another contributing factor to geological subsidence was a series of earthquakes and subsequent swell waves

that occurred intermittently c. 1,700 yrs. BP, between the mid-4th and the mid-6th century of the Common Era. The destructive events of late antiquity, occurring within the Eastern Mediterranean Basin, are commonly known today as the Early Byzantine Tectonic Paroxysm (EBTP) (McCalpin and Nelson 2009: 4-5; Pirazzoli 1991: 97).

Five major earthquakes triggering tsunamic shockwaves in the 1st millennium of the Common Era (365, 551, 796/7, 881, 955/6) had caused rapid littoral erosion with concomitant marine ingression along the coastal margin of the Mareotic ridge where the operational facilities of the city's Great Harbour (section 2.3.3: Μέγας Λιμήν) were being constantly inundated by tectonic subsidence and sea-level rise, leading up eventually to broad changes in local topography (Nur 2010: 134-135). In reaction to the EBTP in Alexandria (AD 365 and 551), a recovery of beach progradation was generated through the mobilization of substantial sediment stocks (Goiran *et al.* 2005: 61-64). Around the 8th to the 10th century (under Abbasid, Tulunid, and Ikhshidid rule), a sharp rise in relative sea level had led to marine transgression followed by a subsequent adjustment of the waterfront to higher ground. Coastal progradation then resumed during the late Arab (Fatimid and Ayyubid) and early Mamluk periods to the 1303 Crete earthquake that brought severe destruction to several other port cities within the Eastern Mediterranean.

In the 1990s, the IEASM geophysical surveys (section 2.3.3.1) detected submerged *in-situ* substructures pertaining to ancient harbour installations at a maximum depth of 6.8 m (Goddio and Darwish 1998: 12). Considering a likely minimum height of c. 2 m above sea level for these constructions in antiquity, and a recorded relative sea-level rise of 1 to 1.5 m, an average substrate subsidence of 7.3 to 7.8 m can be deduced accordingly. Considerable submergence of land by seawater and/or burial by accumulated sediment along the shores of the Mareotic ridge seems a function of the tectonically associated catastrophic events of late antiquity and the Middle Ages, which led to concurrent rise in relative sea level (Stanley 2005: 71-72). Despite the constant encroachments of the sea, the submerged waterfront of ancient Alexandria was partially mapped during the IEASM surveys. The detected sections of it extend from about the base of the present-day headland of el-Silsileh, towards the southwest, past the submerged remnants of Poseidion and Antirrhodos, reaching the middle of the eastern harbour at the Ramleh Central Station (Saad Zaghloul Square), whence they disappear under the modern embankment of the Corniche and the silted-up isthmus of el-Mansheiya (Figures 124-125).

The modern undertakings that yielded a built-up pseudo-coastal belt date mainly to the late 19th (post 1882) and early 20th centuries, the time through which urban developments had encroached upon more than c. 50 to 250 m of the sea: an extent that can be best noted in 19th-century photographs showing the position of the erect Heliopolis obelisk and the 'Tower of the Romans' as they stood next to the seashore, at the present-day sites of Hotel Le Métropole and the Italian Consulate respectively (Figure 126; see *supra* Figures 97-98). Both buildings, as reference points, are seen today at c. 90 to 150 m from the waterfront of the current built-up belt. Beyond that point, from the present-day site of Hotel Cecil westwards (approximately, from el-Falaki's point k), the ancient coastline is concealed beneath accumulated sediment that has been deposited annually since classical antiquity alongside the Heptastadion, thus forming the silted-up grounds of the modern district of el-Mansheiya, the Arabic toponym of which is derived from the Coptic *mànsheei*, meaning 'pool' or 'marshy ground' (Wilkinson 1843: 166).

2.3.2) Heptastadion

The ancient Heptastadion was a man-made embankment that formed a causeway connecting mainland Alexandria to the island of Pharos (Millet and Goiran 2007: 167; Strabo, Geōgraphiká: XVII. 1.6). It was built upon the summit of a tombolo that began accreting between the coastline and the adjacent island as early as the 4th millennium BC (Goiran *et al.* 2005: 61). Its construction had created a dual-harbour complex, with the principal aim of maximizing the use of the coastal zone on two fronts. The western bay, subject to dominant north-westerly winds, is relatively large compared to its eastern counterpart. The initial construction of the mole might have commenced towards the end of the reign of Ptolemy I Soter as part of the major harbour works carried out c. 285-270 BC, hence initiated probably under the Soter-Philadelphos coregency, c. 285-282 BC. Epigram 115 AB of Posidippos (site 43) shows a causeway already in place and functioning by the time of Ptolemy II Philadelphos. As the name itself implies, the total length of the Heptastadion measured seven *stadia* (c. 1,155 – 1,295 m). It served not only as a bridge connecting the mainland to the offshore island, constantly supplying its Pharian inhabitants with fresh water by means of an aqueduct, but also as a breakwater that provided a year-round protection to the Great Harbour, now in shelter from the influence of the prevailing north-westerly currents, while a rapid sediment infilling of the harbour floor could be avoided (Hesse 1998: 21; Millet and Goiran 2007: 174-175).

Sediments on the beaches of Alexandria are made of sand with a granular size of 0.2 – 0.5 mm. Movements of sands in either direction, alongside the seashore, are estimated at 100,000 cu. m. per annum (De Graauw 1998: 58). The construction of the Heptastadion as an

obstruction that runs perpendicular to the coastline has led to an annual deposition of 100,000 cu. m. of sand on either of its flanks. Rapid silting up within the harbour basins and concomitant littoral progradation were subsequent to the development of mud-rich deposits from 200 BC to AD 200 (Goiran *et al*. 2005: 61; Stanley and Bernasconi 2006: 283). The accumulated layers of sedimentary deposits, basically a mixture of sand and clay, began to gradually transform the man-made structure into a broad, flat isthmus. On that silted-up belt, between both harbours, Ottoman Alexandria developed on virgin soil from the 16th century onwards. The Ottoman village had spread away from its mediaeval Arab predecessor situated on the mainland within a tapered area of the ancient metropolis. This shift northwards is on display given the 17th-century view of Joseph Razaud (Introduction II.a), where just few houses are plotted yet standing within the Arab enclosure. Many of these buildings were cluttered around Bab Sharq (the eastern entrance to the Arab town: Rosetta Gate). Almost all other buildings featured in the Razaud map of 1687 have covered the alluvial embankment that has been silting up since antiquity on either side of the Heptastadion (section 2.3.1).

Transhipment between both harbours, Megas Limen to the east and Eunostos to the west, was carried out possibly by means of a slipway for ships as is the case with the Δίολκος of Corinth. The latter was constructed across an isthmus to transport commercial vessels and cargo between the Corinthian and Saronic gulfs (Dixon 2014: 48; Fraser 1961: 134-138; Hesse *et al*. 2002: 195; Strabo, Geōgraphiká: VIII. 6.22). The hypothesis of 'a Δίολκος in Alexandria' is triggered by two fragments preserved by Oribasius, the personal physician of the Roman emperor Julian the Apostate (c. AD 361-63), in his *Ἰατρικαὶ Συναγωγαί* (aka *Collectiones Medicae*). Both passages (II. 58.54-55, II. 58.129) are often attributed to the 1st-century AD Greek physician Xenocrates of Aphrodisias:

> γίνονται δέ καὶ γένη πελωρίδων τε καὶ χημῶν διάφοροι δὲ ποικίλαι καὶ στρογγύλαι ὡς αἱ ἐν Δικαιαρχία ἐν τῷ Λουκρίνῳ λάκκῳ καὶ ἐν τῷ ἐν Ἀλεξανδρείᾳ λιμένι γλυκεῖαι γὰρ καὶ εὔχυλοι. αἱ δ ὑπὲρ Φάρον καὶ τὸν Δίολκον τήν τε γέφυραν καὶ τὴν νῆσον ἐπιμὴκεις, τραχεῖαι, βαλάνοις ἐοικυῖαι δρυίναις, ἐμφερῶς φηγοῖς τὸν ἐχῖνον φερόμεναι.
>
> (Oribasius, Ἰατρικαὶ Συναγωγαί: II. 58.54-55)

> αἱ δὲ γλυκυμαρίδες χαριέστεραι τῶν λειοστράκων κογχῶν, ἧττους δὲ πελωρίδων. διαλλάττουσι δὲ κατὰ τόπους τοῖς εἴδεσι, ὡς πελωρίδες καὶ χημαί, ποικλίᾳ καὶ σχηματισμῷ αἱ μὲν γὰρ ἐν τῷ ἐν Ἀλεξανδρείᾳ λιμένι ἄρισται, αἱ δέ περὶ τὸν Δίολκον καὶ Φάρον καὶ γέφυραν ἐπιμήκεις καὶ τραχεῖαι.
>
> (Oribasius, Ἰατρικαὶ Συναγωγαί: II. 58.129)

In describing the different species of mussels and cockles, Xenocrates specifies a group in 'Ἀλεξανδρείᾳ λιμένι (the harbour of Alexandria)' as opposed to another beyond 'Φάρον (the lighthouse) καὶ τὸν Δίολκον (and the slipway) τήν τε γέφυραν (and the bridge) καὶ τὴν νῆσον (and the island)'. When referring to 'the slipway' in conjunction with 'the lighthouse and the bridge and the island', as he distinguishes two different species of mussels and clams, Xenocrates makes it clear that the Δίολκος was central to bypassing the physical barrier between both basins. A possible path seems inferable towards the southernmost extremity of the Pharos Island, next to the dockyards (νεώρια) partially mapped during the 1860s coastal surveys of Mahmoud el-Falaki, and quite recently, during the IEASM geophysical prospections in the 1990s (section 2.3.3.6). In a setting as such, a bridge-over passageway would have been required on exiting the mole for crossing the Δίολκος into the adjacent island. In the Letter of pseudo-Aristeas, allegedly written c. the mid-2nd century BC, the topography of the area is described in the context of the formulation of the Septuagint: a 3rd-century BC Alexandrian translation of the Hebrew Scriptures into κοινή Greek by order of Ptolemy II Philadelphos:

> *Now after three days, Demetrios (Phalereus) took them (the Judean translators) and passed the dyke, seven stadia long in the sea, towards the island (of Pharos); then he crossed over the bridge and proceeded into the northern (Pharian) districts.*
>
> (pseudo-Aristeas, Letter: X. 301)

The writer uses the noun 'ἀνάχωμα' (embankment) to denote the Heptastadion, and 'γέφυρα' in referring to the bridge which Demetrios Phalereus and the Judean translators had to cross over to get into the island. The pseudo-Aristeas sequence of narration and the use of the singular form 'γέφυρα', not 'γέφυρες', seem to hint at a certain crossover on the southernmost tip of the island rather than two offshore bridged-over passageways built into the mole itself. Xenocrates, who uses 'γέφυρα', not 'ἀνάχωμα', always in conjunction with 'Φάρος', 'Δίολκος', and 'νῆσος', apparently distinguishes the species of mussels and clams 'in the Great Harbour' from those 'around the island of Pharos and its amenities: the lighthouse, the slipway, and the bridge'. Strabo, however, who provides a detailed account of the Corinthian Δίολκος in Book VIII of *Geōgraphiká*, would not have ignored a counterpart in Alexandria. Perhaps the 'Δίολκος' of Xenocrates was no longer in use at the time Strabo visited the city c. 25 BC. It is possible, therefore, that Xenocrates of Aphrodisias, whose narratives postdate Strabo, had been deriving his information on the 'provenance of muscles and cockles in Alexandria' from earlier, c. 3rd-century BC Hellenistic sources: a phenomenon not uncommon in the medical *compendia* of the Roman Principate. After all, it is not clear whether Xenocrates, whom Oribasius

has copied, had ever visited the city of Alexandria to provide a treatise based on direct observation.

An alternative to an 'earlier Δίολκος' was already functioning in the 1st century BC. Strabo relates:

> *The embankment forms a bridge extending from the mainland to the western portion of the island, and leaves open only two passages into the harbour of Eunostus, which are bridged over.*
>
> (Strabo, Geōgraphiká: XVII. 1.6)

It is unlikely that Strabo was describing an installation postdating the Alexandrian War, for part of Caesar's battle against the Alexandrians had taken place 'on the mole' where both sides struggled to gain control of its strategic arched passages:

> *Caesar praeda militibus concessa aedificia diripi iussit castellumque ad pontem, qui propior erat Pharo, communivit atque ibi praesidium posuit. Hunc fuga Pharitae reliquerant; artiorem illum propioremque oppido Alexandrini tuebantur.*
>
> (Caesar, Alexandrian War: 19)

Hence, the bridged-over passageways were most probably added as an ease-of-access at a much earlier date, perhaps as early as the 3rd century BC, at times the hauling channel of Pharos was no longer suitable for regulating high commercial traffic flows towards Alexandria's thriving emporion (section 3.7.3.1, G).

Recent surveys jointly conducted in the 1990s by a team of geophysicists from the Centre de Recherche Géophysiques (CRG, France), Universités Paris VI and VII, Centre d'Études Alexandrines (CEAlex), and the National Research Institute of Astronomy and Geophysics (NRIAG, Egypt) have shown the ancient mole as a northward extension of transversal street R9, thus confirming its alignment with the orthogonal grid plan (Hesse 1998: 21-33; Hesse *et al*. 2002: 191-273). On the grounds of results obtained by a systematic application of electromagnetic and electrostatic methods in resistivity surveying, a rectilinear causeway measuring c. seven *stadia* was proposed, launching at the junction of the πλατεία (L1) with street R9, towards the southwestern tip of the Pharos Island. Its point of departure on the mainland is marked by a triangular promontory, at the end of which a subterranean aqueduct would have joined the artificial mole. The CRG electrostatic maps show a man-made bridge constructed in two rectilinear segments approaching one another at a rock-feature situated midway between the mainland and the Pharos Island. Yet at some point two bridged-over passageways were installed at either side of the islet, perhaps as an alternative to an earlier Δίολκος. This development is represented on the CRG electrostatic charts by intervals of low resistivity within a restricted area of land.

The identification of the course of the Heptastadion has changed earlier perceptions involving an oblique off-grid orientation for the ancient mole. More importantly though, it has shed further light on the shape of the Great Harbour in antiquity, where the southwestern sector of it would have formed a well-protected inner basin, especially when considering its relative location to Antirrhodos (section 2.3.3.5) and the dockyards installed to the southeast of the Pharos Island (section 2.3.3.6) (Figure 127).

2.3.3) The Great Harbour (Μέγας Λιμήν)

2.3.3.1) The IEASM Project

Geophysical surveys and limited underwater excavations were carried out within the present-day eastern harbour (the Great Harbour of ancient Alexandria: Μέγας Λιμήν: c. 500 hectares: 0.50 km^2) by the Institut Europeen d'Archeologie Sous-Marine (IEASM, France), in cooperation with the Central Department of Underwater Antiquities (CDUA) of the Supreme Council of Antiquities (SCA, Egypt) (Goddio 2011; Goddio and Darwish 1998). The project, led by the IEASM, had the principal objective of 'establishing the topography of the submerged regions and substructures, and to draw up a map corresponding as closely as possible to the region as it appeared in antiquity' (Goddio and Bernard 2004: 174). Geophysical (bathymetric and magnetic) surveys commenced in 1992. The results revealed remarkable anomalies at the eastern sector of the Great Harbour, while triggering two seasons of archaeological investigation (1996-97) during which constricted areas of harbour infrastructure were regularly surveyed and recorded. Following the five-year project, a cartographic programme was launched to visualize the topography of submerged land, various remains of harbour installations, and *in-situ* positions of discovered material (Figure 128).

2.3.3.2) Cape Lochias and the Inner Ports (X, Y, Z)

The present-day headland known as el-Silsileh forms part of the ancient *akra* of Lochias, which was, however, much wider. It extended over a distance of some 450 m to the north-northwest, narrowing, together with the northeastern extremity of the Pharos Island, the main entrance to Μέγας Λιμήν (P1 in the featured AutoCAD maps). In *Geōgraphiká*, Strabo relates:

> *Of the extremities of Pharos, the eastern one lies closer to the mainland and to the promontory (of Lochias) opposite it, and thus makes the (Great: eastern) harbour narrow at the mouth.*
>
> (Strabo, Geōgraphiká: XVII. 1.6)

In 1863-66, Mahmoud el-Falaki traced the foundations of a dyke extending in a north-westerly direction,

off the northern extremity of el-Silsileh, beyond the approximate site of the mediaeval Fort Pharillon, over a distance of c. 200 m. The breakwater structure, marked (DA2) in the featured AutoCAD maps, was visible, in calm conditions, at 3 or 4 m below the water surface (Mahmoud-Bey 1872: 42). The submerged foundations of el-Falaki's ancient bulwark, basically formed of massive blocks of eroded limestone, were redetected during the construction of the 800 m long concrete dyke (DM2) to the northwest of el-Silsileh (Fabre and Goddio 2010: 55). In antiquity, the installation of such a bulwark at the northern extremity of Cape Lochias must have been necessitated by the need to minimize the impact of offshore swell on the promontory itself and on the harbour's inner ports (X, Y, Z).

Geophysical measurement techniques, followed by limited underwater excavations, revealed small submerged basins within the eastern sector of Μέγας Λιμήν, created, in part, by man-made jetties and piers constructed of large stone blocks cast in mortar and reinforced using traditional timber (wooden) frames. These havens were integrated into two natural headlands (Lochias and Poseidion) and a T-shaped islet known as Antirrhodos (sections 2.3.3.4-5). The coastline configuration as revealed by the IEASM surveys seems quite different compared to Strabo's descriptive narrative in *Geōgraphiká*, which yielded two centuries of invalid cartographies for the eastern harbour:

> *The shore of the mainland forms a bay, since it thrusts two promontories into the open sea, and between these is situated the island (of Antirrhodos), which closes the bay, for it lies lengthwise parallel to the shore [the validity of Strabo's account is yet retained when considering the configuration of inner port (X): delimited from either side by the headland of Poseidion (east) and grand mole (J11) (west), and closed off lengthwise by Antirrhodos Island, which extends parallel to the shore].*
>
> (Strabo, Geōgraphiká: XVII. 1.6)

The inner port (Z), to start with, also known as the Royal Port of the Galleys, covers an area of c. 7 hectares (Goddio and Darwish 1998: 18). It is formed by a large man-made dyke (J2) (240 m long, 15 m wide). At the latter's end, a small, perpendicular jetty (J3) ran over 80 m to the south. A third mole (J4) (110 m long, 20 m wide) divided the port into two sub basins. The western entrance is narrowed by an L-shaped jetty (J5). In antiquity, the well-protected anchorage must have been approached with great caution by negotiating an intricate set of treacherous reefs (section 2.3.3.3).

A second inner port (Y) (500 m long, 300 m wide) was built between the headland of Poseidion and the large man-made dyke (J2) of inner port (Z). It covers an area of c. 15 hectares (Goddio and Darwish 1998: 27). Its northwestern entrance is well protected, as is the case with inner port (Z), by the central reefs. Providing further protection against sea swell and tidal waves is a large breakwater extension (J6) installed at the northern end of the neighbouring peninsula (Poseidion). At least four jetties had served the docking ships on entering the inner basin: two (J8 and J9) on the eastern side of Poseidion, one (J3) towards the northern end of (J2), and yet another (J1) jutting out from Cape Lochias into the port itself.

The third inner port (X), which takes the shape of a parallelogram and covers an area of c. 16 hectares (Goddio and Darwish 1998: 51), is likely to have been foremost of ports (Y) and (Z), given the extent of its size (capacity: 320 m long, 500 m wide), operational facilities (1,250 m of quays), and strategic (i.e. defensible) location. It is accessible via two passages: (E1), to the north (80 m wide: flanked by B1-J7), and (E2), which forms a western exit (40 m wide: flanked by B2-J11). The well-protected basin is sheltered all around from the north-westerly winds and sea swell, being surrounded, from all four sides, by the mainland (shoreline), artificial mole (J11), the T-shaped islet of Antirrhodos, and the Poseidion peninsula (see *supra*, Strabo, Geōgraphiká: XVII. 1.6).

At several points in the mapped area, artificial moles are seen jutting out at various distances into the sea. The longest on shore (J11: 130 m long, 30 m wide) was paved with limestone slabs. At its end, an elbow (J12), parallel with (J10) of Antirrhodos, extends to the northeast, hence forming the western entrance (E2) to inner port (X). Yet to the east of (J11), another relatively small jetty (J13: 80 m long, 15 m wide) runs in a north-westerly direction. Judging by its relative location to all other docking installations within inner port (X), particularly moles (J11) and (J12), mole (J13) would have been added to create the safe haven marked (H2) in the featured AutoCAD maps.

2.3.3.3) Reefs and Rock-Features

Reefs in the eastern harbour could be categorized into two sets: with and without erosion lines. Those bearing signs of corrosion must have broken the water surface in antiquity; otherwise, the reefs would have been under water. The latter includes four clusters marked (F1), (F2), (F4), and (F5) in the featured AutoCAD maps. Whereas (F3) and (F6) are ancient breakwaters with erosion lines recorded at a spot height of c. 6.80 m and 6.70 m respectively. As for the localisation of the huddled reefs, (F1), near Djaref el-Wasat (K5), lies at the eastern end of the modern dyke (DM1) constructed to the east of Fort Qaitbay. (F2) and (F3) form together a recognizable shoal that extends lengthwise parallel with the limestone bulwark (DA2) traced by el-Falaki, in the 1860s, beyond the extremity of el-Silsileh: the site where the modern dyke (DM2) is constructed. Other reefs, such as (F4), (F5), and (F6), are found cluttered

to the south of the modern dyke (DM2), with some reaching almost at the centre of the harbour. The consecutive lines of protection, natural and man-made, seem justified by the topography of the eastern sector of the Great Harbour: Cape Lochias and the inner ports (X, Y, Z) (section 2.3.3.2).

A descriptive testament to the reefs identified during the IEASM surveys, the hidden ones and those breaking the water surface, is provided by Strabo in *Geōgraphiká*:

> *In addition to the narrowness of the intervening passage (of the Great Harbour: P1 and P2), there are also rocks (reefs), some under the water, and others projecting out of it, which at all hours roughen the waves that strike them from the open sea.*
>
> (Strabo, Geōgraphiká: XVII. 1.6)

Navigating the Great Harbour into the city at the time of Strabo was not a straightforward process for approaching sailors. The submerged reefs would have been the most treacherous in antiquity. Their patterns of distribution across the eastern harbour recall Pliny's 1st-century AD account of 'the three channels of the sea, Steganus, Posideum, and Taurus, only through which the city could be reached':

> *Namque fallacibus vadis Alexandria tribus omnino aditur alveis maris, Stegano, Posideo, Tauro.*
>
> (Pliny, Natural History: V. 34.128)

The widest of Pliny's navigable routes correlates with that marked (P1) in the featured AutoCAD maps, between (F1-K5), to the west, and (F2-F3), to the east. Its width measures about 300 m, hence it is likely to have functioned in antiquity as the principal fairway into the Great Harbour. The inner, much-narrower channels running between the central reefs (F4, F5, F6) would have been navigable by maneuvering oared ships and must have led into the royal residences on Lochias, Poseidion, Antirrhodos, and their inner ports (X, Y, Z). Judging by the width of (P1), Pliny's other passageways would have been secondary. One (P2) seems inferable to the northeast of Fort Qaitbay, between (K3-K4), to the west, and (F1-K5), to the east. (K4), aka the Diamond Islet, is a rock-feature met today at c. 3 m below the water surface (Frost 2000: 64). The third of Pliny's passageways (P3), that leading to Eunostos or the western harbour, is rather risky. It was navigable at the western extremity of the Pharos Island by negotiating an array of treacherous reefs huddled around the rock-feature of Abu Bakar (K1).

2.3.3.4) Poseidion

Site 39: Eastern harbour (NDist.)

Maps: V2; V4

Esplanade (T1) (Timoneion?): Megas Limen [Ptolemaic; Roman]

To the southwest of Cape Lochias lies the submerged natural headland of Poseidion (350 m long, 100 m wide). Its name is derived from a temple to Poseidon historically held to have been built on its premises (Strabo, Geōgraphiká: XVII. 1.9). The remnants of two jetties were recorded during the IEASM surveys on the eastern shoreline of the headland: (J8) (40 m long, 6 m wide) is closer to the mainland; (J9) (50 m long, 7 m wide), with a 12 m extension towards the southeast, extends further north (Goddio and Darwish 1998: 22). At the northern end of the headland, an artificial mole, (J6) (180 m long, 18 m wide), would have served to offset sea swell coming through the harbour's fairways (P1) and (P2). Projecting in a south-westerly direction is another large mole, (J7) (90 m long, 25 m wide), found paved with limestone slabs. Its extremity is formed by an esplanade, (T1) (50 x 22 m), built of large blocks in mortar and extends to the southeast.

The relative location of the esplanade and its contextual associates (large limestone blocks, column shafts of red granite, and fragmentary pieces of marble) seem to recall Strabo's narrative on the royal lodge known as Timoneion, after Timon the Athenian: an exemplification of misanthropy in classical antiquity. Allegedly, it was built by Markus Antonius following a decisive defeat at the naval Battle of Actium (31 BC), on the extremity of a man-mad pier that projected into a private (royal) haven (Strabo, Geōgraphiká: XVII. 1.9). The identification of the (T1) esplanade as the site of the historical Timoneion is proposed by the IEASM on the grounds of results obtained from Carbon dating and dendrochronological analysis of wooden substructures: piles and sheet-pile walls reinforcing foundations in mortar. These vestiges date the construction in question to c. 25 BC ± 45 yrs. (Goddio and Bernard 2004: 140-141).

Site 40: Eastern harbour (NDist.)

Maps: V1; V2; V4

Temple to Poseidon (?): Megas Limen [Ptolemaic; Roman]

Identifiable remains of a temple were traced at the base of the headland, where, at least, two concentrations of archaeological material are detected:

(a) Scattered fragmentary architecture, including column shafts (diameter: 90 – 100 cm), bases, and capitals, all of Aswan granite, has been found cluttered within a constricted area paved with limestone slabs, towards the southern belt of the peninsula itself (Goddio and Darwish 1998: 24).

(b) A cluster of fragmentary architecture, including column shafts of red granite (diameter: 45 – 90 cm), bases, capitals, blocks of red granite and quartzite, and other items of marble, has covered a vast rectangular area paved with limestone slabs, southeast of the submerged headland (Goddio and Darwish 1998: 24-25). The recognizable rectangular shape of a temple precinct is outlined by large limestone blocks. Wooden piles, spaced c. 30 cm apart, were used to reinforce the mortared foundations of the monumental building (Goddio and Bernard 2004: 144-145). The rows of wooden reinforcements, datable by radiocarbon to the Antonine Dynasty (AD 138-92), signal what seems to be a 2nd-century AD restoration/renovation work of an earlier structure: perhaps the historical temple to Poseidon recorded by Strabo c. 25 BC. The coherent patterns of fragmentary architecture encountered *in situ* suggest a constricted building that collapsed abruptly in the aftermath of a natural disaster: a possible effect of the tsunamic shockwave of AD 365 that led eventually to the abandonment of the Royal Quarter's devastated coastal zone, i.e. the areas extending today from the headland of el-Silsileh (el-Chatby) to Saad Zaghloul Square (el-Ramleh).

2.3.3.5) Antirrhodos

Site 41: Eastern harbour (NDist.)

Maps: V1; V2; V4

Royal palace (?) and harbour (H1): Megas Limen [Ptolemaic; Roman]

The submerged rival island of Rhodes, Antirrhodos (350 m long, 70 m wide), is formed of three branches: (B1), (B2), and (B3). (B1), the largest of the three, is oriented ENE-WSW, thus aligned, at a slight angle though, with mole (J7) of Poseidion (section 2.3.3.4). At the centre of (B1), the remains of a much wider esplanade (6,000 m^2) were recorded (Goddio and Bernard 2004: 88-91). Given its central location, being constructed on the widest of the island's branches, and the dense concentration of fragmentary architecture found scattered on its limestone pavement (column shafts of red granite and blocks of Aswan granite, limestone, quartzite, and black basalt), the esplanade in question might be associated with the site of the royal palace mentioned by Strabo c. 25 BC (Strabo, Geōgraphiká: XVII. 1.9).

In archaeological terms, the identification of the (B1) esplanade with the site of Strabo's 'royal palace on Antirrhodos' is suggested by the IEASM encounters to the southwest, where a wooden formwork has been found resting upon the bedrock, beneath a bulk of masonry of alternating layers of limestone and mortar. The wooden structure is made of pine and must have served to shutter the mortar poured into the masonry. Carbon 14 analysis of the shuttering has provided a conventional date at 250 BC ± 45 yrs. and a calibrated one at 390 cal. BC – 170/130 cal. BC (Goddio and Darwish 1998: 32-37). The C14 dates indicate a c. 3rd-century BC building undergoing successive phases of renovation over a long period of time. This seems to be the case when considering the eight Greek dedicatory inscriptions recovered on site. One, carved onto a marble slab, is datable to the reign of Commodus (c. AD 180-92), while seven were cartouche-engraved onto column shafts under Caracalla (c. AD 211-17).

The island's minor branches, (B2) and (B3), give Antirrhodos its T-shape. (B2) (340 m long, 30 m wide), deviating slightly off (B3), is oriented NW-SE. At the end of it, a small jetty (J10) runs parallel with (J12) of the adjacent (J11) elbow. Both jetties, (J10) and (J12), extend lengthwise parallel with the seashore, in a north-easterly direction. The (B1-J7) and (B2-J11) alignments yield two minor passages to inner port (X): (E1) and (E2). Whereas the oblique orientation of (B1), (B2), and (J10) has created a safe haven (H1) that recalls Strabo's account of a 'small royal harbour at Antirrhodos'.

Site 42: Eastern harbour (NDist.)

Maps: V1; V2; V4

Temple to Isis (?): Megas Limen [Ptolemaic; Roman]

The IEASM underwater excavations at the island's (B2) branch revealed the remnants of a partially collapsed esplanade paved with limestone slabs (40 x 40 cm) and flagstones (120 x 55 cm). Various pieces of fragmentary architecture were found on site, including column shafts of red granite (diameter: 95 – 110 cm) and large blocks of red and grey granite, black basalt, quartzite, and limestone (Goddio and Bernard 2004: 96-101; Goddio and Darwish 1998: 39-41). Prominent among the finds were two sphinxes: one, of grey granite, as Ptolemy XII Auletes (80-51 BC) and another, of diorite, of a late Ptolemy. Their state of preservation, almost intact, with no signs of hammering, suggests they were deliberately dumped into the water, possibly at times the city's public edifices were deptolemised under the Principate. The esplanade itself seems to have collapsed in place, suffering the effects of a catastrophic event, which could not have occurred before the 3rd-4th century AD at the earliest, given the chronology of the recovered potsherds. The structure in question for which the esplanade was presumably built is identifiable with an Isiac temple on the grounds of a grey granite statue of a priest of Isis carrying a Canopic jar with the head of Osiris emerging from it (the so-called Osiris-*hydreios* form).

2.3.3.5.1) Evidence of Earlier Habitation

Among the submerged material encountered at Antirrhodos, the wooden vestiges are of utmost importance for the chronological data they provide to archaeologists. Wooden fragments were found below a debris of rubble at the eastern extremity of the island's main branch (B1), as one of the rare cases in Alexandria where organic material is detectable in the archaeological record. These remnants, probably of wooden quay structures, comprise two rows of stakes of elm with an average spacing of c. 1.50 – 1.80 m. Dating analysis using Carbon 14 has yielded the following figures – (i) conventional C14: 410 BC ± 40 yrs.; (ii) calibrated C14: 760 cal. BC – 360 cal. BC (Goddio and Darwish 1998: 29-31).

The C14 dates from Antirrhodos accord with the Homeric narrative in suggesting earlier harbour installations antedating the Macedonian conquest of 332 BC (section 1.2). Human activity on site is rather confirmed by archaeological, stratigraphical, petrological, and geochemical components recorded in radiocarbon-dated sediment cores from the eastern harbour: (a) ceramic ware, (b) allochthonous rock fragments from Middle and Upper Egypt, (c) sediments with a markedly increased lead concentration, (d) heavy minerals, and (e) organic matter (Stanley and Landau 2010: 38-46; Stanley *et al.* 2007: 4-9). The markers, mainly potsherds and lithic fragments from the eastern sector of the eastern harbour, increase substantially in the upper part of the Middle Sand (III) unit of ± 3000 yrs. BP; calibrated C14 range: 940 cal. BC – 420 cal. BC. They signal a depositional phase that corresponds to a Third Intermediate to Late Dynastic habitation datable as early as six centuries before the arrival of Alexander the Great and the foundation of Alexandria. Studies of sediment cores seem to justify Strabo's account of the garrison stationed at the coastal lee of Pharos, the site known among the natives as 'Râ-Kedet' (Hellenised into Rhakotis): the fortress village that had later formed 'the part of the city of the Alexandrians which lies above the ship sheds', i.e. the western district, for Strabo has described the city as it would appear when approached by sea (Strabo, Geōgraphiká: XVII. 1.6).

2.3.3.6) Dockyards at Pharos

Geophysical prospection and limited underwater excavation in the western sector of the eastern harbour, at a point southeast of the ancient island of Pharos, revealed the remnants of a vast harbour construction branching off the coastal platform of the Sea Scout Club, to the southeast of Abu el-Abbas el-Morsi Mosque (Goddio and Bernard 2004: 156-164). The submerged vestiges formed a fan-like peninsula connected at its northwestern extremity to the island: a point marked on el-Falaki's 1866 *carte*. Jutting out from the central dock were long, narrow quays and breakwaters constructed of large limestone blocks and paved with limestone slabs. A pattern as such seems to have been purposely designed to create a safe haven (H3) protected towards the north by means of a joined pair of partially flagged natural islets. Considering their artificial jetties, these islets could have functioned as docks necessitated by the neighbouring port itself. The scattered remains of mortared foundations, stone pavement, and fragmentary architecture (columns of red granite) suggest a collapsed structure that once stood on the central mole. Judging by its relative location to the Heptastadion, the port in question might have operated as a dockyard for mooring vessels on the way across the causeway into Eunostos and the Kibotos inlet. Besides its main function as an anchorage and a transit-point, the entire installation could have served as a breakwater in sheltering the man-made mole from sea swell and tidal waves coming through the harbour's fairways (P1) and (P2).

Port structures were encountered on the southern side of the silted-up pier that connected the Pharos Island to the (K3) rock-feature in antiquity: the present-day sites of the Yacht Club of Egypt and the Greek Marine Club. Fragmentary architecture recorded on site include blocks of limestone, quartzite, and pink granite and column bases and drums of fluted shafts. Construction technique here recalls that met at Antirrhodos: four rows of tightly-spaced wooden piles and oak planks, spaced c. 50 cm apart, supporting the mortared limestone foundations of quays and docks. C14 analysis of the wooden reinforcements has yielded the following figures – piles: (i) conventional C14: 1840 ± 40 yrs. BP and (ii) calibrated C14: AD 80 cal. – AD 315 cal.; planks: (i) conventional C14: 1920 ± 40 yrs. BP and (ii) calibrated C14: 20 cal. BC – AD 215 cal. (Fabre and Goddio 2010: 61-62, 68). The submerged foundations run parallel with the narrow isthmus connecting Fort Qaitbay, on the rock-feature marked (K3), to the mainland (i.e. to the Pharos Island in antiquity).

A few metres to the east, at a point marked on el-Falaki's 1866 *carte* (the so-called 'Ball Trap': approximately, the site of the Skeet Shooting Club), large, mortared limestone foundations were found reinforced within a wooden formwork of oak piles and pine planks. Wooden samples taken close to the seashore, at 3.50 m below the water surface, were Carbon dated – piles: (i) conventional C14: 1730 ± 40 yrs. BP and (ii) calibrated C14: AD 225 cal. – AD 415 cal.; planks: (i) conventional C14: 1795 ± 50 yrs. BP and (ii) calibrated C14: AD 80 cal. – AD 345 cal. Other samples taken near the extremity of the submerged docks, at 5.75 m below the water surface, were Carbon dated – piles: (i) conventional C14: 1835 ± 40 yrs. BP and (ii) calibrated C14: AD 80 cal. – AD 320 cal.; planks: (i) conventional C14: 1880 ± 40 yrs. BP

and (ii) calibrated C14: AD 30 cal. – AD 230 cal. (Fabre and Goddio 2010: 61-62, 68).

The Carbon dates pertaining to the submerged port structures at the island of Pharos provide evidence for the renovation works carried out by the Romans in the Great Harbour between c. the 1st and the 4th century AD. Optimisation of the Ptolemaic port infrastructure under imperial rule was necessitated by the need to facilitate the commercial traffic flows of *Provincia Aegypti* as a principal grain supplier to Rome and a central hub on the trade routes connecting the satellite markets of the exotic Orient with the Roman-dominated Mediterranean.

2.3.4) The Western Harbour (Εὔνοστος)

In 1911-15, during the construction of breakwater and harbour facilities at the western port, French engineer Gaston Jondet investigated the region to the south, west, and northwest of Ras el-Tin (the Cape of Fig: the western extremity of the Pharos Island in antiquity) (Jondet 1916: 39). The outcome of his topographical surveys has been published in *Les Ports Submergés de L'Ancienne Île de Pharos* (1916). Recorded in detail were 'les restes submerges de travaux maritimes grandioses qui prouvent d'une maniere incontestable l'existence de ports antiques' (Figures 129-130) (Jondet 1916: 2). The grandiose harbour works were met about 600 m from the mainland. They extend parallel to a 19th-century dyke constructed in 1870-74, under Khedive Ismaīl, between Ras el-Tin lighthouse and the westernmost rock-feature of Abu Bakar (K1). Judging by their relative location to one another, and their approximate geographical extent, the massive foundations must have been necessitated by the need to minimize the impact of the prevailing north-westerly currents and offshore swell, which would have otherwise hindered safe navigation into the city's western harbour known in antiquity as Εὔνοστος (the port of safe return). In theory, therefore, the construction date of the seven-*stadion* mole that created a dual-harbour complex (section 2.3.2) would provide a *terminus post quem* c. the early 3rd century BC for port installations as such. Nevertheless, the identification of the foundations in question as submerged vestiges of a Hellenistic anchorage should not eliminate the notion of a safe haven at Pharos antedating the Macedonian conquest of 332 BC. The latter is rather backed – (i) ancient literary sources: the Homeric perception of the coastal amenities of the Pharos site as documented in the *Odyssey* (section 1.2), and Strabo's account of 'Râ-Kedet' in *Geōgraphiká* (section 2.3.3.5.1); (ii) archaeological evidence: remains of wooden quay structures at the islet of Antirrhodos (section 2.3.3.5.1); (iii) sedimentological analysis of core samples taken at the eastern harbour: evidence of Third Intermediate and Late Dynastic habitation (section 2.3.3.5.1).

The detected foundations comprise three consecutive lines of massive limestone blocks, with segments separated at intervals to prevent siltation. The foremost extends lengthwise over 2.36 km (Jondet 1916: 14). It is likely to have been deliberately built, as is the case with the inner ones, to complement the adjacent clusters of barrier reefs and shoals. Reefs, which lie today at 4-8 m below the water surface, are found huddled along the western-northwestern shores of Ras el-Tin, reaching as far as the westernmost rock-feature of Abu Bakar (K1). The latter might have served in antiquity as a cornerstone for the entire network of natural and man-made bulwarks. Before the construction of the Heptastadion, both harbours, Megas Limen and Eunostos, communicated freely and formed together the natural anchorage of Rhakotis: a vast basin completely protected by the line of shoals extending east-west, over nearly 13 km, from Cape Lochias (el-Silsileh) to the headland of el-Agami (Figure 131). Optimization of the natural environment seems on display. Port installations were added to the west and northwest of the ancient island to enable the anchoring of vessels within an immense basin sheltered all around from tidal waves. An artificial development as such may shed some light on the scale of human impact on the Pharos site in pre-Hellenistic times. In this context, the island and its coastal lee would have been suitable for the construction of mooring infrastructure as transit-points on the navigable trade routes towards Egypt's customs port at Thonis-Herakleion (section 1.1).

2.3.5) Lake Mareotis and the Canopic Canals

The Mareotic region reached a new stage of development with the Macedonian conquest of 332 BC and the subsequent foundation of a major commercial hub on Egypt's Mediterranean coast: *Alexandrea ad Aegyptum* (De Cosson 1935: 37-38). Urban and economic growth within the coastal nome is manifested through the establishment of villages and rural estates that relied basically on vine, grain, and olive cultivation (Blue 2010: 28-33; Ptolemy, Geōgraphikȅ Hyphḗgēsis: IV. 5; Strabo, Geōgraphiká: XVII. 1.14). Lake Mareotis, as a principal medium of transportation, had been vital in connecting the hinterland of presses, mills, and vineyards with the Alexandrian market and its Canopic trading post at Σχεδία (Schedia: the present-day site of Kom el-Giza, Kom el-Hamam, and Kom el-Nashwa, el-Beheira, the western Nile Delta), and thence to the commercial centres of the Mediterranean and the Orient (Bergmann, Heinzelmann, and Martin 2010: 107). Besides the city's main lake-port, the significance of which is emphasized by Strabo in *Geōgraphiká* (see *infra*), other harbour installations were added around the thriving shores of Mareotis.

Archaeological investigation at the yet accessible westward arm of the lake revealed port structures

contextually associated with wine-production centres (the wineries of the renowned *mareōticum vīnum*) and pottery workshops and kilns (*Amphore Égyptienne*: AE1-5) (Babraj and Szymańska 2010: 82-83; Dzierzbicka 2010: 127-130; el-Fakharani 1983: 182-184; Empereur and Picon 1998: 75-84; Hopkinson 2010: 43-44; Rodziewicz 2010: 71-72). Foremost of the discovered rural estates are Marea/Philoxenité (located c. 45 km to the west of Alexandria) and Taposiris Magna (Abu Sir: north of the present-day district of Borg el-Arab). In fact, both sites exemplify two of three known forms of port structure within Mareotis: (a) closed anchorage surrounded with a long dyke and accessible via restricted entries or the so-called 'bridges' (Taposiris Magna), (b) anchorage with half-open basins formed by several quays jutting out into the lake (Marea/Philoxenité), and (c) relatively small-structured anchorage with a single pier (Boussac and el-Amouri 2010: 87-90; Rodziewicz 1983a: 200; 2002: 4). As regard to the present-day largely desiccated main basin (area: c. 90 km^2), the prime source of information, apart from Strabo's narrative, would be 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie' of *Description de l'Égypte* (Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31), where the label 'Moles' marks the sites of two headlands (Figure 132). The first, situated immediately to the south of the city, is in proximity to the navigable canal mentioned by Strabo in *Geōgraphiká*; the one connecting Lake Mareotis to the western harbour in antiquity (Figure 133). Accordingly, a possible correlation may be drawn between this site and the lake-port of ancient Alexandria. The second promontory is located farther west, south of the suburban district of el-Max (approximately, towards the present-day roadway of Mehwar el-Tamir), where harbour installations seem complementary to an 'Ancien Canal' that might have served as a secondary passageway between Lake Mareotis and the Mediterranean (Figure 134).

In antiquity, Lake Mareotis extended southwards, reaching almost at the town of Ψενέμφαια (Psenemphaia: the present-day site of Kom Truga, el-Beheira, the western Nile Delta), and westwards, to the fortress village of Cheimo aka Chimo (the present-day el-Bordan, northwest of el-Hammam). In the first half of the 7th century, a period of provincial turmoil and disorder (Phocas-Heraclius civil war: AD 608-10; Sasanian Persian invasion: AD 618-19; Byzantine restoration: AD 628-29; Arab conquest: AD 641-42), the destructive tactics employed around the Canopic waterways, southeast of Mareotis, had contributed greatly to the reduction of the water intake into the lake (De Cosson 1935: 53-58; Rodziewicz 1998: 103). The situation only worsened later under Arab rule, with the lack of regular maintenance of the silting channels during the 8th to the 10th century. At the time, the Canopic distributary ceased to be navigable, which justifies the course of the Tulunid circuit walls (267 Hijri, AD 881) away from the abandoned shores of Lake Mareotis. By the 12th century, the Mareotic depression, out of water supply from the Nile's defunct Canopic arteries, had dried out, leading eventually to the economic decay of the once prosperous wine and oil production centres of the coastal nome.

In 1801, the British, seeking to isolate the French troops stationed in the city, had inundated the ancient lake to sea level by destroying the dyke that separated Abu Qir aka el-Maadiya Lagoon from the desiccated lakebed of the Maryut Depression (Figure 135) (De Cosson 1935: 88-93). Hence, by doing so, the British had cut off the freshwater supply brought to Alexandria by means of a canal that ran along the penetrated strip of land between el-Maadiya and Mareotis, i.e. on the approximate path of the waterway in antiquity. At Schedia, the ancient canal branched off the westernmost, Canopic arm of the Nile, which flowed downstream, about 20-25 km to the east-northeast of Alexandria (Goiran *et al.* 2000: 83). Running lengthwise parallel with the Mareotic shores, the canal constantly brought fresh water into the city through an underground intricate network of aqueduct tunnels and conduits (*hiponoses*):

> *Practically the whole of Alexandria is undermined with subterranean conduits running from the Nile, by which water is conducted into private houses; which water in the course of time gradually settles down and becomes clear. This is what is normally used by the owners of mansions and their households; for what the Nile brings down is so turbid that it gives rise to many different diseases: yet the rank and file of the common sort are perforce content with the latter, inasmuch as there is not one natural spring in the whole city.*
>
> (Caesar, Alexandrian War: 5)

In the same context, the Alexandrian metropolis was joined with its immediate hinterland (χώρα) and inland Egypt by means of a relatively short, navigable canal that connected Lake Mareotis to the western harbour (Eunostos) and, in turn, the Mediterranean (Strabo, Geōgraphiká: XVII. 1.10). Together with the Canopic-supplied freshwater canal, the Mareotis-Eunostos navigable counterpart in the west had functioned as a principal artery of commercial activities, conveying products coming from as far away as the Indian Ocean, through the Red Sea ports of Berenike and Myos Hormos (Quseir el-Qadim), via Coptos (by means of caravan routes across the Eastern Desert), down the Nile, reaching the Canopic channels into Lake Mareotis, and thence through the navigable canal, towards the Kibotos outlet to the Mediterranean. On such a route, the Canopic town of Schedia and the Mareotic lake-port(s) would have been of utmost importance for mooring vessels. It is natural, therefore, to find the location of a lake-port candidate in Le Père's 1822 *carte*

of *Description de l'Égypte* (see *supra*) not far from the course of Strabo's 'navigable canal':

> *Next, after the Heptastadium, one comes to the (western) Harbour of Eunostus, and above this, to the artificial harbour, which is also called Cibotus; it too has ship-houses. Farther in there is a navigable canal, which extends to Lake Mareotis ... this (Lake Mareotis) is filled by many canals from the (Canopic arm of the) Nile, both from above (from the south) and on the sides (from the east), and through these canals the imports are much larger than those from the sea, so that the harbour on the lake was in fact richer than that on the sea.*
>
> (Strabo, Geōgraphiká: XVII. 1.7, 10)

The prolongation of the late mediaeval Mamluk-developed freshwater artery towards the amenities of the Ottoman-controlled western port first appears in the Gravier-Razaud maps (1685-87). Unlike the inferred course of antiquity, the canal does not seem to pass through a crossover bridge, towards a Mediterranean outlet. Instead, it diverts eastwards, at the foot of two *koms* (debris accumulation from the lateral abutments of the ancient ruined bridge), to head north, in the direction of the Tulunid circuit wall, at the section of it between Qalaet el-Rukn and Bab Sidra (Figure 136). When el-Mahmoudiya Canal was commissioned in 1817-19 to serve the purpose of its ancient forerunner, the Ottoman extension readjusted to the initial path of antiquity, creating the crescent-shaped curve seen in the maps of the modern city (Figure 137). A change-of-course as such must have been dictated by the coastal terrain, where a depression identified by Saint-Genis, in 1798-99, as a possible site for the Kibotos basin of ancient Alexandria (section 2.1.3.2.2) would have been most suitable for receiving the canal's outlet to the present-day western port: the northern sector of Minet el-Bassal (Figures 138-140). Likewise, the approximate course of the Mareotis-Eunostos navigable canal in antiquity could not have been much different from Mohamed Ali's revival, judging by the morphology of the coastal terrain in the west.

The Gravier-Razaud maps provide a *terminus ante quem* for the development of the canal system of post-mediaeval Alexandria, a process postdating Pierre Belon's 'Vray Portraict de la Ville d'Alexandrie en Egypte', hence inferable c. 1548-1685. Within this range, and more precisely around the second half of the 16th century, the Ottomans altered the main freshwater supply seen flowing somewhere to the east of Diocletian's Column in the late Mamluk and early Ottoman portolans of the Bibliotheca Apostolica Vaticana (1472) and Piri Reis (1521), and in Belon's 'Vray Portraict' itself, regardless of how it illustrates the way the stream gushes into the city. The developed setting involves three subterranean aqueducts branching off a revival of the Canopic-supplied freshwater artery of ancient Alexandria, which was yet prolonged westwards, to reach at Minet el-Bassal. However, as it heads northwards, the Ottoman revival does not seek a Mediterranean outlet as its ancient forerunner. Instead, navigation terminates before the Tulunid circuit wall, where a fourth subterranean aqueduct serves as a water supplier to the port zone (*kadırğa/Islam limânı*). This setting, suffering from siltation already by the 18th century, was modified in the second decade of the 19th century to yield the present-day el-Mahmoudiya Canal. Establishing a chronology for the city's canal system as depicted on post-mediaeval and modern maps shows, therefore, that contemporary reconstructions of the course of the Mareotis-Eunostos navigable canal and, subsequently, the western periphery of the Alexandrian metropolis in antiquity have been rather misled by the 1st-century BC Strabonic narrative of 'an urban fringe extending beyond (west of) the waterway', which seems to have provided the basis for confusing the course of the ancient canal with that of the westernmost segment of the post-mediaeval extension cartographically on display since the 1680s. In fact, the latter was developed c. the 16th-17th century, at times through which the late mediaeval canal system of the Mamluks was being profoundly modified by the Ottomans to facilitate traffic flow towards the *eyālet's* main port on the Mediterranean, perhaps as early as two and a half centuries prior to Mohamed Ali's grand enterprise.

Chapter 3
Cityscape

3.1) Segmenting the Cityscape

In this chapter, the principal civic (secular and religious) edifices and funerary structures of the ancient city are contextualized in accordance with predetermined urban and suburban sectors (Figure 141).

3.1.1) Pharos and the Heptastadion (PH.)

At present, the urban areas corresponding roughly to the ancient island of Pharos, now joined to the mainland through a silted-up isthmus, encompass the districts of el-Anfushy (eastern and central sectors) and Ras el-Tin (westernmost sector). Clusters of subterranean rock-cut sepulchres (hypogea), datable c. the 2nd century BC to the 1st century AD, were excavated near el-Anfushy Bay (site 44) and further west, at the premises of Ras el-Tin Palace (site 45). On the northeastern extremity of el-Anfushy, the largely restored Mamluk fort of Sultan Qaitbay (15th century) is built on a rocky spot marked (K3) in the featured AutoCAD maps (V1-V4), where the historical lighthouse of Pharos (site 43) is traditionally held to have once stood. In antiquity, (K3), originally an islet, was connected to the island of Pharos through a man-made embankment (DA1) that has silted up over the centuries into a narrow tombolo. A protruding rock-feature (K2) on the northeastern coastline of el-Anfushy, to the west of the Mamluk fort, is the site of Barthélémy Gallice's 19th-century Fort Adda. It was absorbed eventually into the current littoral in response to beach progradation. Whereas, to the south, the alluvial embankment that has been silting up since antiquity on either side of the Heptastadion correlates, for the most part, with the populous district of el-Mansheiya (sections 2.3.1-2).

3.1.2) Western Suburbs (WSubs.)

The western suburbs correspond roughly to five suburban districts situated east-west: Minet el-Bassal (in part), el-Gabbari, el-Mafrouza, el-Wardian, and el-Max. The farthest point is about 4-5 km from the proposed urban periphery in the west (section 2.1.3.2.2). The region, known for its sepulchral character, formed the greater part of the city's necropolitan suburbs in antiquity, hence the label 'Nekropolis' in classical literary sources. Its remnants are reflected in the archaeological record through dense clusters of excavated hypogea (sites 46-49).

3.1.3) Western District (WDist.)

This sector of the city extends east-west, from transversal street R7 (correlates approximately with the present-day Abu el-Dardaa Street) to the proposed urban periphery in the west. It corresponds roughly to the modern districts of Minet el-Bassal (in part), el-Gomruk, and el-Labbane. In the south lies the district of Karmouz, which encompasses a number of well-known archaeological sites: the Sarapeion, situated upon the so-called Rhakotis/Karmouz acropolis (a sanctuary to the syncretic Graeco-Egyptian deity of ancient Alexandria, Sarapis: site 52), a *hippodromos-circus* excavated into Kom el-Shuqafa, thus yielding the semicylindrical shape of the rocky plateau (site 51), and a funerary complex of hypogea datable c. the 1st to the 5th-6th century AD (site 53). The western district of the ancient city correlates, accordingly, with the premises of the Egyptian borough, Rhakotis, which could have extended north-south, from the L1 πλατεία to the proposed southwestern periphery. Almost midway, Karmouz is separated from el-Labbane, to the north, by a narrow strip of land partially occupied by a Muslim cemetery and known today as Bab Sidra (after the nearby southern gate of the Arab town).

3.1.4) Southern District (SDist.)

The southern district, which yields the least amount of material culture compared to the other districts, covers the urban areas restricted to the south of longitudinal street L'2 (correlates approximately with the present-day el-Amir Abd el-Moneim/Ismaīl Mahanna Street and its eastward extension, el-Amir Abd el-Qader/Suleīman Yousri). It is delimited at either end by transversal streets R2^{bis} (the Suez Canal Road, at an angle – east) and R7 (Abu el-Dardaa Street – west), thus corresponds, for the most part, to the modern district of Moharram Bey.

3.1.5) Central District (CDist.)

The central district covers the region contained within longitudinal streets L2-L'2 and transversal streets R7-R2^{bis}: *insulae* L2-L'2-R7-R2^{bis}. It corresponds roughly to the modern districts of el-Attarine, Kom el-Dikka, el-Messallah Gharb, el-Messallah Sharq, the Latin Quarter, and el-Shallalat Park. This sector encompasses the only archaeological park in present-day Alexandria

(located within *insulae* L1-L'2-R3-R5) where systematic excavation is being carried out since the 1960s by the Polish Centre of Mediterranean Archaeology (PCMA, University of Warsaw).

3.1.6) Northern District (NDist.)

The coastal region restricted to the north of longitudinal street L2 (correlates approximately with the present-day el-Sultan Hussein/Salah Mustapha Street and its westward extension, the Greek Hospital/Istanbul). It is delimited at either end by transversal streets R2^{bis} (the Suez Canal Road, at an angle – east) and R7 (Abu el-Dardaa Street – west), thus corresponds roughly to the modern districts of el-Chatby (in part), el-Mazarita, el-Ramleh, and el-Mansheiya (in part). The monumental foundations excavated particularly within el-Mazarita and el-Chatby (east: the Suez Canal Road; west: el-Khaledin Park; south: el-Sultan Hussein Street) seem to echo the 1st-century BC Strabonic narrative on the extravagant buildings of the Ptolemaic Royal Quarter (βασίλεια) (Strabo, Geōgraphiká: XVII. 1.8-9). Resistivity geophysical surveys and limited underwater excavations, carried out by the IEASM in the 1990s, have led to the mapping of the subsided coastline of the ancient Great Harbour (Μέγας Λιμήν), now partially concealed beneath a pseudo-coastal belt of modern urbanization and the Corniche (sections 2.3.1, 2.3.3).

3.1.7) Eastern District (EDist.)

The eastern district of the Roman city extends between transversal street R2^{bis} (the Suez Canal Road, at an angle) and the proposed Augustan periphery (section 2.1.2.2.1). It correlates roughly with the modern districts of el-Chatby (in part), Wabour el-Meyah (in part), el-Hadra el-Bahareiya, and el-Hadra Qibly. From c. the late 4th to the 2nd century BC, this region, as was Nekropolis in the west, had formed part of the necropolitan suburbs of the Ptolemaic city. Archaeological investigation within the designated areas shows the terrain heights extending NNW-SSE as being utilized by the earlier settlers to receive interments. The situation seems to have changed in the course of the last century of Lagid rule due to living-space economy leading eventually to urban expansion in an easterly direction: a phenomenon that further develops under the Principate, as suggested by the excavated vestiges of contemporary dwellings and thoroughfares.

3.1.8) Eastern Suburbs (ESubs.)

The eastern suburbs correspond mostly to the region extending well beyond the proposed Augustan periphery, from Camp Caesar and el-Ibrahimiya to Stanley, past the modern districts of Sporting, Cleopatra, Sidi Gaber, and Mustapha Pasha (aka Mustapha Kamel) respectively. It encompasses a group of subterranean sepulchres dispersed alongside the shoreline, indicating the utilization of the coastal plateau, as is the case in the west, in interring the dead. Nevertheless, a new stage of development within the suburban areas seems subsequent to the Augustan conquest of 30 BC and the establishment of Nikopolis at 30 *stadia* to the east of Alexandria (section 2.1.2.2.2.1; sites 37-38, 165, 167).

3.2) Pharos and the Heptastadion (PH.)

3.2.1) Physical Remnants Corresponding to Known Historical Narratives

3.2.1.1) Civil Edifices

Site 43: Submerged archaeological material off Qaitbay

Maps: V1; V2; V3; V4

Miscellaneous: el-Anfushy

(i) Fort Qaitbay [Mamluk: 15th century, c. 1477-79]
(ii) Submerged vestiges: out of context and dumped [miscellaneous, including dynastic material relocated to Alexandria]
(iii) Submerged vestiges of the Pharos Lighthouse (?): collapsed in place [miscellaneous]

The Lighthouse of Pharos (Figure 142), an emblem of the ancient city, is traditionally held to have been commissioned by a certain courtier (an architect? a representative/chief of a union of merchants?), namely Sostratos, son of Dexiphanes, from the Carian city of Knidos, and dedicated to 'the Saviours' (οἱ Σωτῆρες), in allusion to the saviour attributes of some of the Olympian deities of the Greek pantheon, particularly those of Zeus Soter, as attested by an epitaph allegedly carved onto its base:

> Σώστρατος Κνίδιος Δεξιφάνους θεοῖς ὑπὲρ τῶν πλωϊζονμένων.
>
> *Sostratus of Knidos, son of Dexiphanes, to the Divine Saviours,*
> *for the sake of them who sail at sea.*
> (Lucian, Πῶς δεῖ Ἱστορίαν συγγράφειν: 62)

Construction might have commenced towards the end of the reign of Ptolemy I Soter (c. 306-285/2 BC), who, at least, took the initiative for such an elaborate building c. the opening decades of the 3rd century BC. The Lighthouse, however, was completed and already functioning early in the reign of his successor, Ptolemy II Philadelphos (c. 285/2-246 BC), as shown in a Greek epigram commonly attributed to the contemporary court-epigrammatist Posidippos of Pella:

> Ἑλλήνων σωτῆρα, φάρου σκοπόν, ὦ ἄνα Πρωτεῦ,
> Σώστρατος ἔστησεν Δεξιφάνους Κνίδιος·

Οὐ γὰρ ἐν Αἰγύπτῳ σκπαὶ οὐ ῥίον, οἱ ἐπὶ νήσων,
ἀλλὰ χαμαὶ χηλὴ ναύλοχος ἐκτέταται.
Τοῦ χάριν εὐθείαν τε καὶ ὄρθιον αἰθέρα τέμνων
πύργος ὅδ΄ ἁπλάτων φαίνετ΄ ἀπό σταδίων
ἤματι· παννύχιος δὲ θέων σὺν κύμματι ναύτης
ὄψεται ἐκ κορυφῆς πῦρ μέγα καιόμενον,
καὶ κεν ἐπ' αὐτὸ δράμοι, Ταύρου Κέρας οὐδ'
ἄν ἁμάρτοι Σωτῆρος, Πρωτεῦ, Ζηνὸς ὁ τῇδε πλέων.

As a saviour of the Greeks, this watchman of Pharos, O lord Proteus (the Pharian sea-deity featured in Homer's Odyssey), was set up by Sostratos, son of Dexiphanes, from Knidos. For in Egypt, there are no look-out posts on a mountain, as in the (Greek) islands, but low lies the breakwater (the Heptastadion: section 2.3.2) where ships take harbour. Therefore, this tower, in a straight and upright line, appears to cleave the sky from countless furlongs away, during the day, but throughout the night, quickly, a sailor on the waves will see a great fire blazing from its summit. And he may even run to the Bull's Horn (section 2.3.3.3) and not miss Zeus the Saviour, O Proteus, whoever sails this way.

(Posidippos: Epigram 115 AB)

Epigram 115 AB of Posidippos, which later writers such as Lucian of Samosata (active in the 2nd century AD) might have been copying along other contemporary sources, reveals the intended function of the Pharos Lighthouse in rendering guidance to sailors approaching the city by sea. Indeed, rough seas, swell waves, and perhaps above all, shoals and huddled reefs around the navigable fairways into the Great Harbour (Μέγας Λιμήν; section 2.3.3.3) would have all necessitated a construction as such in a port city renowned as a centre of maritime trade in the Eastern Mediterranean. This seems to have been the case, especially when considering the increasing Ptolemaic interest in the Aegean markets of Rhodes, Delos, and Knidos, as testify, for instance, the large number of Rhodian-stamped *amphorae* found in Alexandria, and a dedicatory inscription commissioned on the Cycladic island of Delos by 'the Chiefs of the Union of Alexandrian Merchants' (el-Abbadi 2000: 18; Walbank 1986: 101).

According to Strabo, the tower became known by the name of the island on which it stood: Pharos. It was built of 'white stone' (perhaps due to the marble in use with limestone) and comprised several stories. The colossal structure, featured on Roman coinage and a late antique mosaic from Leptis Magna (present-day Labda el-Kobra, Libya), and frequently described in the chronicles of various travellers, many of whom were Arab (c. the 7th-15th century), seems to have been a polygonal building about 100 m in height, consisting of three tapering tiers: square, octagonal, and cylindrical (Thiersch 1909: 7-13). It often appears having two vertical rows of apertures cut into its walls. Openings as such were purposely designed for the tower to withstand the blowing winds. The building was approachable via a flight of steps leading up to a giant doorway. A figural statue, identifiable with Zeus Soter, is depicted standing at the summit of the beacon, with tritons of bronze occasionally seen holding trumpets on a lower level. The Alexandrian accomplishment of such a *colossus* is best illustrated through the words of Edward Morgan Forster:

The Pharos (as it was called) was the greatest practical achievement of the Alexandrian mind and the outward expression of the mathematical studies carried on in the Mouseion (section 3.7.3.1, E).

(Forster 1922: 26)

In structural design, the Pharos Lighthouse in Alexandria recalls another stone tower near the site of Taposiris Magna (present-day Abu Sir) on the Taenia, the calcareous ridge extending to the west of Alexandria. The largely restored beacon at Taposiris Magna, datable c. the 2nd-1st century BC and accepted as a funerary monument, is about 20 m in height (Adriani 1952: 137-139; Fraser 1972: 18). It reflects the possible design of the Pharos Lighthouse, yet on a rather small scale. In late antiquity, the *colossus* in Alexandria would have undergone several phases of restoration c. the 4th to the 6th century in consequence of the Early Byzantine Tectonic Paroxysm (section 2.3.1, EBTP in Alexandria: AD 365, 551). Whereas at least three successive phases of restoration and rebuilding are testified in the Arab period (Thiersch 1909: 37-64), first under the Tulunids in the 9th century (recorded by el-Yaqubi), then under the Abbasids in the 10th century (recorded by el-Masudi) and the Fatimids c. the late 10th/11th century (recorded by Nasir Khusraw, el-Idrisi, el-Balawi, Yaqut el-Hamawi, and el-Qazwini). Eventually, the structurally modified mediaeval beacon was severely devastated by the Crete earthquake that had hit the Eastern Mediterranean on August 8th, 1303 (recorded by Ibn Battuta and el-Maqrisi).

In June 1477, during a visit to Alexandria, the Burji Mamluk el-Sultan el-Ashraf Qaitbay decided to build a fortress upon the ruins of the lighthouse (recorded by el-Suyuti and Ibn Iyas; Fior *et al.* 2008: 315; Machinek 2014). The 15th-century Mamluk stronghold, constructed on a rock-feature labelled (K3) (sec. 3.1.1, AutoCAD maps V1-V4), in proximity to the Diamond Islet (K4), is documented in Planches 85 and 87.1-5 of *Description de l'Égypte* (Imperial Edition 1809-22. Etat Moderne II, Planches, 1817) (Figure 143). During the British bombardment of the city, in July 1882, the greater part of the structure collapsed along with its Islamic minaret. This was followed by successive phases of restoration and rebuilding which yielded the fort in its present-day form. Systematic archaeological investigation is being carried out on site since the 1990s following a much-debated project for the construction

of a submerged breakwater to protect the worn base of the fort from coastal erosion. The long-anticipated salvage inspection has turned opportune to resume the earlier enthusiastic work of a local diver and an underwater archaeologist from London, namely Kamel Abul-Saadat and Honor Frost.

One of the submerged sites explored by Abul-Saadat in the eastern port (Figure 144) was that identified towards the foot of Fort Qaitbay, where, in May 1961, he encountered, along with other miscellaneous objects (two headless sphinxes and fragmentary columns), a colossal female statue broken in two (length: 8 m, weight: 22 tonnes, material: pink granite) (Halim 2000: 47-48). After a few attempts, it was finally raised by frogmen from the Egyptian Navy in October 1963, yet left on the docks for a year until a decision was made to put it on display at the Karmouz site of Amud el-Sawari, and eventually, at the premises of the Maritime Museum in Stanley, where it lies today. On discovery, the statue was misinterpreted to have belonged to the temple of Isis Pharia, which appears on Roman coinage and is known from classical literary sources to have been built at the northeastern extremity of the Pharos Island, thus not far from the lighthouse. Other contextual finds on site (see *infra*) would, however, provide an alternative identification of the depicted figure. Abul-Saadat's encounters off Qaitbay led to the UNESCO-funded mission which investigated the site in October-November 1968. It included two members, Honor Frost (underwater archaeologist) and Vladimir Nesteroff (geologist), who were soon joined by Abul-Saadat. The survey covered an area of c. 180 m^2 northeast of the citadel, where submerged fragmentary material has been found scattered on the seabed, between the rock-feature marked (K3) and the Diamond Islet (K4) (Frost 1975: 126-130). A list of finds was made by Frost to be reported to UNESCO in 1969, in an attempt to raise international support for a future aided excavation on site. Nonetheless, since Egypt was in a state of war and, accordingly, the coastal area had become a closed military zone, the project was to be put on hold, and it remained as such, until the 1990s, when a wide-scale exploration of the submerged vestiges of interest has finally taken place.

In 1993, the rather misguided placing of approximately 180 concrete blocks (average weight: 7-20 tonnes) on top of the submerged material identified by Abul-Saadat and Frost, at c. 30 m off the eroded base of the Mamluk fort, has led the Egyptian Supreme Council of Antiquities (SCA), in autumn 1994, to request the Centre d'Études Alexandrines to carry out a salvage excavation on site. The purpose of the campaign was 'de prendre la mesure de ce site et d'en entreprendre un relevé topographique et photographique, avant de mettre à terre quelques-unes des pièces choisies par les autorités égyptiennes' (Empereur 1995: 756-760; Morcos 2003: 16). The underwater archaeological site almost covers an estimated area of c. 1.60 hectares within which thousands of pieces of stone blocks (some weighting up to 75 tonnes), fragmentary architecture, and statuary were identified at about 6-8 m below the water surface: mostly of granite, but few of sandstone, and less of limestone and marble. Fragmentary elements of architecture include column shafts, bases (Ionic), capitals (Corinthian of the Alexandrian type with floral volutes and helices), cornices, architraves, thresholds, lintels, and jambs. Architectural styles were mainly classical (i.e. in traditional Greek orders), yet with some pharaonic-style encounters such as papyriform columns, broken obelisks, sphinxes, and monolithic ναΐσκοι.

Statuary includes a trunk of a standing male figure, measuring c. 4.55 m from the neck to the knees. It was salvaged in October 1995, the head, in April 1996. A re-joined product stands today at the plaza of the Bibliotheca Alexandrina. The *colossus* represents a Ptolemaic king in pharaonic guise, recalling the female figure discovered by Abul-Saadat back in 1961. Both statues seem to represent a Ptolemaic royal couple portrayed by a sculptor heavily influenced by the millennia-long canons of Egyptian dynastic art: the king as pharaoh, the queen as Isis. A contextual relation is rather strengthened by the almost identical dimensions of the recovered fragments, the commonly adopted pharaonic idiom, and the identification of their respective bases next to one another (height: c. 2.30 m). This couple is likely to have been accompanied by other *colossi* in pairs, as indicated by a recovered repertoire of fragmentary statues: (i) two heads wearing a *nemes* (striped headcloth traditionally worn by local pharaohs), (ii) the bust of a female figure, and (iii) the bases of at least four *colossi* (Empereur 2000b: 57). The local element is further evident in the salvaged crown of Isis-Hathor, identified and reported by Frost in 1968-69, and by a group of sphinxes brought to surface. The majority of the salvaged objects were relocated to the archaeological park at Kom el-Dikka, where they are on display within an open-air museum.

The archaeological material off Qaitbay (Figure 145), an estimate of over 3,500 pieces of stonework, can be categorized into two sets: (1) contextually associated vestiges that probably belonged to collapsed structures not far from the reported findspot and (2) unrelated vestiges, neither chronologically nor stylistically, thus seem out of context (i.e. relocated to the findspot and deliberately dumped).

Group (1) includes the non-granite material, which is less likely to have been relocated to the findspot and dumped as a bulwark at times of marine transgression. The possible reutilization of limestone, either as a building material or in lime kilns, and its durability

in permanent exposure to seawater relative to granite would seem to reinforce such a notion. The same applies for precious marble of which a fragmentary piece has been found carved with the faint traces of four Greek letters in bronze: ΑΡΙΣ (c. 0.45 m). This may justify the paucity of non-granite material among the submerged vestiges off the (K3) rock-feature. Although the main structure of the historical lighthouse would have been built with available nearby material, i.e. limestone from the local quarries, as is the case elsewhere in the city, other secondary material could have been employed, as suggested, for instance, by fragments of door jambs and lintels of granite forming, when reconstructed, a giant gateway into a monumental construction. Judging by the recorded dimension (measuring up to 11.50 m in length) and architectural order (Doric, recalling the southern entrance to Adriani's reconstructed Alabaster tomb: site 147), the granite gateway off Qaitbay could be possibly associated with the historical lighthouse on Pharos (Empereur 1995: 757; 1996: 967; Hairy 2007: 69-71, 82), which, according to ancient and mediaeval testaments, stood not far from the submerged site. Other candidates of granite would be the Ptolemaic *colossi* in pharaonic guise, which might have stood in pairs before the lighthouse, at the main entrance to the Great Harbour: an explicit exemplification of royal publicity. Comparable forms of exposure would be the placement of a *colossus* of Ferdinand de Lesseps at the entrance to the Suez Canal. In Alexandria, however, the imposing question would still be, to which construction phase(s) of the historical lighthouse do these candidates belong? Parts of the Sostratos lighthouse, recorded by contemporary Posidippos (see *supra*, epigram 115 AB), had collapsed already in the Alexandrian War of 48-47 BC, considering the intensity of the battle of the mole between Caesar's forces and the Alexandrians (Caesar, Alexandrian War: 17-22). The extensiveness of the damage inflicted on the Pharian district and its mole at the time may justify Ammianus Marcellinus' late Roman (4th century AD) account of 'Cleopatra (VII) being responsible for (re)building the Pharos Lighthouse and the Heptastadion' (Ammian. Marcellin., Res Gestae: XXII. 16.9-10). Likewise, Cleopatra's 'rebuilt structure' would have suffered the same faith in the aftermath of the catastrophic events of late antiquity, namely the earthquakes and mega-tsunamis of AD 365 and 551 (the EBTP: section 2.3.1), which were more likely to have necessitated successive phases of restoration and/or rebuilding of the damaged tower under Byzantine rule, as was the case with the historically testified structural modifications that took place later under Arab (Tulunid, Abbasid, and Fatimid) rule in consequence of contemporary catastrophic events (AD 796/7, 881, 955/6). Eventually, the 15th-century Mamluk fort itself was partially built upon vestiges of the mediaeval beacon of the Fatimids, which had earlier suffered extensive damage during the 1303 Crete earthquake, let alone the fact that the present-day fort is basically a modern unfaithful replica of its Mamluk predecessor bombarded in summer 1882.

The contextually unrelated material from group (2) would form part of the granite repertoire of massive stone blocks and fragmentary architecture, including various dynastic pieces relocated to Alexandria, mainly, not exclusively, under Roman rule, to be reemployed in civic constructions (see *infra*). These could have been deliberately dumped off (K3) at a point in time not earlier than the partial collapse of the 'rebuilt structure' of Cleopatra VII in late antiquity. A possible date for the event(s) is inferable at times of marine transgression, c. the 4th-6th and 8th-10th centuries, during which a sharp rise in relative sea levels, subsequent to tsunamic shockwaves, had caused the waterfront to adjust to higher ground. Consequently, a bulwark would have been most needed to protect the severely affected structure of the lighthouse situated on the flooded islet (K3): a phenomenon that seems to justify the consecutive phases of Arab renovation and structural modification carried out first under the Tulunids and the Abbasids, then by the Fatimids. It is likely that the submerged material from group (2) was retained at the time from the dismantled vestiges of the ancient city, which were constantly exploited by the Arabs as a quarry of building material, as did the Roman prefects with some of the dynastic remnants at Heliopolis. Hence, as was the case in 1993, a much earlier, though likewise controversial attempt to protect late constructions on the (K3) islet, this time the structurally modified mediaeval beacon, has led the quarried remains of the Graeco-Roman city to end up partially buried on the seabed.

Some of the identified material off Qaitbay were brought by the *praefecti Alexandreae et Aegypti* to Alexandria to be reused within the city, having been taken out of their original context in Heliopolis, as shown by hieroglyphic inscriptions on the recovered pieces of obelisks and sphinxes. They record votive offerings made to the local divinities at Heliopolis, where pharaonic sanctuaries had served as quarries of structural and/or decorative material. Perhaps foremost among the latter is a pair of obelisks known among the public as 'Cleopatra's Needles' (sites 6, 93). The recovery of a relocated corpus of dynastic material, often termed *Aegyptiaca* or *Pharaonica*, sheds some light on the constituent visual components of the Alexandrian cityscape in the late Ptolemaic and early Roman periods, at times classical architectural settings were being readily complemented with Egyptian and Egyptianizing elements of decoration archaeologically attested at contemporary funerary structures within the Pharian district (present-day el-Anfushy and Ras el-Tin) (sites 44-45), and shortly after, at the necropolitan suburbs of the mainland (sites 48d, 53, 153).

3.2.1.2) Funerary Structures

Site 44: el-Anfushy Bay

Maps: V1; V2; V4

Necropolis: el-Anfushy [Ptolemaic; Roman]

In 1798-99, during the Napoleonic expedition, Saint-Genis and Dolomieu recorded vestiges of rock-cut hypogea, which extend 'plus dans l'intérieur de l'île (i.e. de Pharos), et notamment vers cette large saillie qu'elle forme directement au nord-ouest, au milieu environ de sa longueur': approximately, west-southwest of el-Anfushy Bay and at Ras el-Tin (site 45) (Lacroix and Daressy 1922: 11; Saint-Genis 1829a: 215; 1829b: 391, Number 22). The walls and ceilings of the funerary structures were found covered with a coating plaster exhibiting fresco paintings. Besides the stuccoed fragments, the faint traces of festooned garlands and Greek inscriptions painted in ochre were encountered.

In 1901, two hypogea, labelled (I) and (II), were accidently discovered while clearing a property of Prince Omar Toussoun southwest of el-Anfushy Bay. They were initially inspected by Giuseppe Botti (Botti 1902a: 13-15; 1902b: 16-36), before they were later revisited by Evaristo Breccia in 1912 and 1919-20, when both structures were found to form part of a larger funerary complex comprising four other hypogea (III-VI) (Figure 146) (Breccia 1913: 13; 1914a: 115-120; 1921: 55-69; 1922: 329-334). By the time Achille Adriani provided a detailed description of the necropolis in 1952, Hypogeum (VI) (Figure 147), recorded by Breccia at forty metres to the northwest of the main complex, i.e. outside the current enclosure, had already disappeared beneath the public park bordering the site. The current complex of five extant hypogea covers an area of 60 m^2 (Adriani 1952: 55-97, 98-128; 1966a: 191-197, Catalogue Numbers 141-146; 1966b: Tavola 106, Figure 363, Tavola 107, Figures 365-366, Tavola 108, Figures 369-374, Tavola 109, Figures 375-377, Tavola 110, Figures 378-381, Tavola 111, Figures 382-386, Tavola 112, Figures 387-391, Tavola 113, Figures 392-396).

Hypogeum (I) (Figure 148), datable c. the second half of the 2nd century BC, has an L-shaped staircase that leads into an open court (irregular quadrilateral: 5.30 x 3.75 m, height: 4.50 m), which gives access to a pair of burial-suites, with each encompassing two chambers. Suit (I): antechamber (No. 1) (6.70 x 3.55 m, height: 3.20 m) and burial-chamber (No. 2) (2.80 x 2.45 m, height: 1.80 m). Suit (II): antechamber (No. 3) (4 x 3.80 m, height: 2.50 m) and burial-chamber (No. 4) (3.15 x 4.40 m, height: 2.50 m). Complements within the court include reservoir (No. 5) (2.70 x 2.75 m, height: 2 m), *loculus* (No. 6), and well (No. 7).

Hypogeum (II) bears analogies with (I) (Figure 149). Its staircase leads into an open court (4.20 x 5.50 m, height: 4.65 m), which gives access to a pair of burial-suits. Suit (I): antechamber (No. 1) (2.40 x 5.95 m, height: 3.10 m) and burial-chamber (No. 2) (2.10 x 2.10 m, height: 2.20 m). Suit (II): antechamber (No. 3) (3.40 x 6.25 m, height: 3 m) and burial-chamber (No. 4) (2.80 x 3.35 m). Complements within the court include well (No. 5).

Unlike (I) and (II), the staircase of Hypogeum (III) (Figure 150) leads into a narrow portico, which opens onto a central court (6.50 x 5.70 m). The latter gives access to three burial-suits. Suit (I): vestibule (No. 1) (6 x 3.40 m) and burial-chamber (No. 2) (2.40 x 6.40 m). Suit (II): burial-chamber (No. 3) (3 x 7 m). Suit (III): hall (No. 4) (7 x 3.10 m), burial-chamber (No. 5) (8 x 3.15 m), and annex (No. 6) (1.55 x 1.30 m). Complements within the court include a small basin coated with reddish plaster (waterproofing), beyond which a rectangular cavity is irregularly cut into the natural rock.

Of all five hypogea, Hypogeum (IV) is the most deteriorated (Figure 151). Its plan departs from the conventions seen elsewhere at the Anfushy complex. In the absence of a staircase, the hypogeum is accessible via a slope excavated into the embankment that separates it from Hypogeum (III). The court, already in ruins, opens onto two burial-suits accessible via partially collapsed doorways. Suit (I) (6 x 3.80 m): burial-chamber (No. 1) and reservoir (No. 2). Suit (II) (11.10 x 3.50 m): antechamber (No. 3) and burial-chamber (No. 4), both of which open onto burial-chambers (No. 5) (7.10 x 3 m) and (No. 6) (4.70 x 2.40 m) respectively. The latter pair postdate the initial construction and seem to have been necessitated by burial-space economy, as suggested by the number of *loculi* cut into their walls.

Hypogeum (V) (Figure 152) was found in a relatively fair state of preservation when first excavated. Its staircase leads into a central court (3 x 3.20 m, height: 6 m), which gives access to three burial-suits. Suit (I): vestibule (No. 1) (4.80 x 2.40 m) and burial-chamber (No. 2) (2.40 x 1.50 m, height: 1.60 m). Suit (II): burial-chamber (No. 3) (3.20 x 6.30 m). Suit (III): vestibule (No. 4) (4.20 x 2.80 m, height: 2 m) and burial-chamber (No. 5) (2.20 x 1.80 m, height: 2.10 m). Complements within the court include chamberette (No. 6) (2.10 x 1.65 m).

Architectural decoration and wall painting at the Anfushy funerary complex serve as an explicit testament to Graeco-Egyptian eclecticism: an aesthetic cultural trend intrinsic to late Hellenistic and early Roman funerary contexts in Alexandria (from c. the 2nd-1st century BC to the 3rd century AD). Examples include – but not limited to – (1) Hypogeum (II), contemporary with Hypogeum (I): antechamber (No. 1): an Egyptianizing phase of the doorway leading into burial-chamber (No. 2), where two miniature sphinxes, with

their heads slightly turned towards those approaching the inner chamber, are seen on either side of the entrance, upon upright pedestals stuccoed to simulate alabaster; broken lintels are attached to the side pillars of the doorframe, which are crowned with papyriform capitals supporting an architrave below a segmental pediment with a central solar disc. (2) Hypogeum (II): burial-chamber (No. 2): an Egyptian-style ναΐσκος, or *aedicula*, coated with a layer of white plaster and represented as if on a wooden base projecting out from the back wall. (3) Hypogeum (II): a wall painting facing the first ramp of the access-staircase, where four Egyptian figures are rendered against the plain white background: the deceased, head-covered and dressed in a long white tunic, is standing at the centre of the sepulchral scene, between Horus, on the left, and Osiris, on the right. (4) Hypogeum (V), datable c. the second half of the 1st century BC: vestibule (No. 4): a *loculus*-framing in the form of an Egyptian-style ναΐσκος, with two papyriform pillars added next to the painted plaster imitation. This readiness to integrate Egyptian and Egyptianizing schemes into the funerary architecture of late Hellenistic and early Roman Alexandria is exposed further west within the Pharian district, particularly at Ras el-Tin (site 45).

Site 45: Ras el-Tin Palace

Maps: V1; V2; V4

Necropolis: Ras el-Tin [Ptolemaic; Roman]

In 1913, at the premises of Ras el-Tin Royal Palace, a site towards the western extremity of the ancient island of Pharos, Evaristo Breccia excavated a hypogeum comprising three irregularly-cut galleries with finely-cut *loculi* arranged into three regular rows. In there were 'hundreds of mummified corpses' (Breccia 1914b: 9). Breccia's hypogeum (labelled XI, see *infra*) was no longer in place when the area was reinvestigated by Achille Adriani in 1939-40. At the time, a salvage excavation was carried out by the Graeco-Roman Museum on behalf of the Administration of the Royal Palaces at the western-northwestern sector of the palace gardens where vestiges of a funerary complex had been discovered. The complex comprised eleven hypogea categorized into four sets, all severely affected by weathering damage and violent plundering (Adriani 1952: 47-54, 98-128; 1966a: 188-191, Catalogue Numbers 134-140; 1966b: Tavola 105, Figures 356-359, Tavola 106, Figures 361-362, 364, Tavola 107, Figures 367-368).

Set (1) includes hypogea (I), (II), and (III) (Figure 153). Hypogeum (I) is accessible via a staircase leading into a court (4.90 x 4.50 m), which opens onto two burial-suits. Suit (I): a chamber (No. 1) (6.60 x 3.30 m) with two niches cut into either side wall to receive votive offerings; an irregularly-cut square annex (No. 3) (1.80 x 2 m) at the beginning of the main chamber's right wall; a chamberette (No. 2) (2.20 x 2.45 m) cut into the main chamber's back wall. Suit (II): a chamber (No. 4) (5.50 x 2.75 m) with an irregularly-cut chamberette (No. 5) (2 x 2.10 m) at the end of the left wall. Complements within the court are basically a *loculus* (No. 6) and a reservoir (No. 7) (2.95 x 2.60 m).

Hypogeum (II) is reachable through a long access-corridor that leads into a largely destroyed courtyard of which only the southern side had survived. The latter opens onto a burial-suit: an antechamber (No. 8) (6.50 x 3.40 m) with five *loculi* (Nos. 10-14) cut into the side walls and one chamberette (No. 9) (2.75 x 3.40 m) into the back wall. The pair of *loculi* cut into the southern wall (Nos. 13-14) were dug partially underneath the pavement of the neighbouring Hypogeum (III), which was excavated at a level higher than that of hypogea (I) and (II). The access-corridor to Hypogeum (II) leads at first to a largely deteriorated chamber, the state of preservation of which made an investigation into its nature rather dangerous, then to a reservoir (No. 15) (2.50 x 3.95 m) that had walls coated with plaster and two support pillars at the centre.

Hypogeum (III), the richest in terms of fresco painting, is accessible via a corridor (No. 16). On its left wall (in fact, the only preserved one) is a rock-cut niche, and immediately next to it, the mouth of a well that postdates the hypogeum's initial phase of construction. The corridor then leads into a chamber (No. 17) (3.80 x 6.75 m) with two niches cut into the left wall to receive votive offerings, two *loculi* (Nos. 19-20) cut into the right wall, and a chamberette (No. 18) (2.90 x 2.60 m) accessible through the back wall of the main chamber. Traceable among the fading frescoes of chamber (No. 17) were the painted scenes of the façade, involving patterns of garlands and ribbons, floral motifs, and representations of human figures. Perhaps the most prominent would be the one of a pot with a bushy plant atop which a bird poses; above the latter is a nude figure of Herakles, the mythological divine hero of the Hellenes.

Set (II) includes hypogea (IV), (V), and (VI) (Figure 154). Hypogeum (IV), the better-preserved, is accessible via a staircase (length: 4 m, width: 1 m) leading into a central court (3.20 x 3.60 m), which opens onto two burial-suits. Suit (I): a chamber (No. 1) (4.90 x 3.20 m) with two niches cut into either side wall to receive votive offerings, and a *loculus* at the end of the right wall; a chamberette (No. 2) (2 x 2 m) accessible from the main chamber's back wall. Suit (II): a chamber (No. 3) (3.40 x 6.50 m) with two niches cut into either side wall to receive votive offerings, and four *loculi* into all three walls; one *loculus* cut at the beginning of the left wall is exceptionally large, almost like a chamberette (No. 4) (2 x 2.20 m). Complements within the court include

a chamberette (No. 5) (1.60 x 1.60 m) and a plastered basin next to the passage to chamber (No. 1).

The surviving sections of Hypogeum (V) include one burial-suit reachable by means of a largely violated court and contains a chamber (No. 6) (6.25 x 3.40 m) with a niche and a *loculus* cut into the right wall, a chamberette (No. 8) (2 x 2 m) cut into the opposite wall, and a trapezoidal chamber (No. 7) (2.80 x 2 m) with a large niche cut into the back wall to receive a sarcophagus. The back wall of the niche itself had collapsed, allowing communication with the neighbouring Hypogeum (IV) through an annex cut at the northwestern corner of the courtyard (tomb robbing). Of the partially excavated Hypogeum (VI) survives only one section of a burial-chamber (No. 9) with at least five rock-cut *loculi*.

Set (III) includes hypogea (VII) and (VIII). The only surviving part of Hypogeum (VII) is basically a burial-chamber with nine *loculi*: three cut into each of its walls (Figure 155). Likewise, Hypogeum (VIII) is represented by a single rectangular and elongated chamber (2.35 x 3.30 m) (Figure 156). A form of a *triclinium* with a narrow central passage is created by a U-shaped bench alongside all three walls. A chamberette-like *loculus* (2.25 x 1.80 m) is opened on the lateral wall. At the back wall is a κλίνη-alcove (*klinē*: funerary couch) with a *loculus* violating its left wall. The architectural façade of the alcove features a pair of half-columns attached to two supporting pillars, thus yielding three passageways: a wider one at the centre, flanked by two narrow ones to allow a full view of the κλίνη-sarcophagus. The two engaged columns, stuccoed and painted alternating red and white bands, are crowned with capitals of the composite Corinthio-Egyptian type (i.e. decorated with papyrus and lotus buds). The upper part of the façade is formed of an architrave and a projecting cornice added beneath a segmental pediment. Within the alcove itself, a funerary κλίνη, with a mattress and cushions, is carved out of the rock. Below, a framed *tapis* covers the rectangular façade of the κλίνη. It exhibits two large birds flanking a central floral motif, with stylized volutes decorating either side of the painted scene.

Set (IV) includes hypogea (IX), (X), and (XI). They were excavated by Breccia in 1913 (XI) and 1914 (IX-X) but published by Adriani in 1952 with ground plans drawn by Mariano Bartocci. The surviving section of Hypogeum (IX) (Figure 157) consists of a burial-chamber (3.20 x 1.50 m) with four *loculi*: one cut into the back wall and three into the lateral walls. Hypogeum (X) (Figure 158) is represented by a slightly longer chamber (4 x 1.50 m), which, besides the four *loculi* cut into its side walls, had a large niche into the back wall, recalling that of burial-chamber (No. 2) in Hypogeum (I). Hypogeum (XI) (Figure 159), excavated in 1913 and briefly reported by Breccia in the following year (see *supra*), was, to a certain extent, structurally different from the other hypogea encountered at Ras el-Tin and el-Anfushy (site 44). Its exceptional T-shaped plan comprises three irregularly-cut galleries, with each having tens of rock-cut *loculi* regularly arranged into three rows and containing 'hundreds of mummified corpses' mostly in a poor state of preservation.

The excavated hypogea at Ras el-Tin, datable c. the 1st century BC to the 1st century AD, bear analogies (with exception to Hypogeum XI), both topographical (clustering and geographical proximity) as well as typological (ground plans, architectural decoration, and wall painting), with contemporary ones southwest of el-Anfushy Bay, hence suggesting the presence of a necropolis towards the westernmost sector of the ancient island: a Pharian Nekropolis, one extending through Ras el-Tin or the Cape of Fig and of which three confined sections had been inspected, first by Saint-Genis and Dolomieu in 1798-99 (site 44), then by the directors of the Graeco-Roman Museum, intermittently, in the first half of the 20th century. As the case at el-Anfushy (site 44), a Graeco-Egyptian eclectic trend seems on display at Ras el-Tin – (1) Hypogeum (III): burial-chamber (No. 17): local motifs, such as the painted figure of an Apis bull, the Memphite deity, with the *emblema* of the sacred solar disc of Hathor on its forehead, are met within the same context of the nude Herakles. (2) Hypogeum (VIII): the main burial-chamber: the architectural façade of the κλίνη-alcove, where a bicultural trend is exemplified by two composite Corinthio-Egyptian capitals and an Egyptian-style segmental pediment. Eclectic patterns as such, from late Hellenistic and early Roman funerary contexts, become rather explicit in imperial times within the hypogea of the Alexandrian mainland as evident, for instance, at Kom el-Shuqafa and Tigrane Pasha (sites 53, 153).

3.3) Western Suburbs (WSubs.)

3.3.1) Physical Remnants Corresponding to Known Historical Narratives

3.3.1.1) Funerary Structures

Site 46: Nekropolis: Phase (I) – west of el-Mahmoudiya Canal

Maps: V1; V2; V3; V4

Necropolis: Minet el-Bassal [Ptolemaic; Roman; Late Antique]

Between the end of 1950 and the beginning of 1951, the vestiges of an ancient necropolis were accidently discovered during construction works by the Société Générale de Pressage et de Dépôts in Minet el-Bassal (the Port of Onion). Achille Adriani, then director of the

Graeco-Roman Museum, located the site 'in un terreno situato, subito dopo il ponte sul canale Mahmudieh, a NE. della via el-Tarikh e delimitato ad oriente dalla via el-Hawīs' (Adriani 1956a: 17-33; 1966a: 157-159, Catalogue Numbers 110-112; 1966b: Tavola 81, Figures 265-266, 268-270, Tavola 82, Figures 271-275, Tavola 83, Figure 276, Tavola 101, Figure 341). The dense clusters of detected hypogea were partially accessible through pits sunk deep by the modern developers for the casting of concrete reinforcements. The excavated sections of the once vast necropolis seem to have been abandoned and severely devastated already in antiquity, before the foundations of the demolished building and its replacement had disturbed the remains. The extent of violation within the industrial area occupied by the cotton presses is attested in Adriani's narrative at the time: 'senza tener conto di numerose altre tracce di ipogei ridotti in uno stato irriconoscibile, possiamo distinguere tre diverse sezioni della necropoli'. Of the three yet traceable sections, only one was thoroughly studied and reported: Sezione (A).

Sezione (A) includes three hypogea (Figure 160). Hypogeum (I) consists of an access-staircase, a vestibule (No. 1) (2.45 x 1.35 m) flanked by two sarcophagus-alcoves, and a *loculus*-chamber (No. 2) (7.50 x 3 m). Of the alcoves flanking the vestibule, the one on the left had a fairly preserved architectural façade that features protruding pillars. The interior is occupied by a rock-cut sarcophagus with a sloping lid. The alcove on the opposite side contains a κλίνη-sarcophagus carved out of the rock, with a mattress, a pair of cushions at either end, and turned legs. The façade was stuccoed and painted motifs that were no longer visible on discovery. Hypogeum (II), the least-preserved, is accessible via a staircase with a side entrance to chamber (No. 7). The latter is occupied on all three sides by three or four rows of rock-cut *loculi*.

'Più vasto, più complesso, più intéressante', to quote Adriani, seems to have been Hypogeum (III). It extends to the south, west, and northwest, through the excavation profile, with an extension to the southwest, where digging was 'not possible'. The accessible sections include a quadrangular partially collapsed court (No. 3) with two *loculi* cut into its southern wall. From the east, a wide entrance led into a quadrangular compartment (3.50 x 3.10 m) that gave access to chamber (No. 6) (3.50 x 7 m). On the opposite side, the partially excavated chamber (No. 4) (maximum reached: 2.75 x 3.25 m) formed a southern extension of *loculus*-chamber (No. 5) (2.35 x 6 m). Best preserved among the remnants, perhaps the most significant as well, is the alcove carved out of the court's northern wall. It had a wide entrance flanked on either side by Ionic half-columns supported by a pair of pillars. The architrave was decorated with garland patterns above which ran a band of Ionic *kyma* surmounted by a projecting cornice. Inside the alcove were the remains of a funerary κλίνη found completely destroyed. It was recognizable through the faint traces of a pair of cushions carved out at either end of a rock-cut mattress. At the centre of the alcove's back wall, above the κλίνη itself, was a rectangular rock-cut niche with a stuccoed frame. On discovery, traces of funerary paintings were still visible on either side of the central niche: one traceable to the right, whereas on the left a fading scene was already violated by a deep groove intended to create room for a trapezoidal *loculus* that connects with the neighbouring *loculus*-chamber (No. 5). Analogies between the κλίνη-alcoves at Minet el-Bassal and other funerary architecture within the eastern *necropoleis*, in particular Hypogeum (II) at Mustapha Pasha and that inspected by Hermann Thiersch at Sidi Gaber (sites 156, 160), would date Sezione (A) c. the mid-late 3rd to the mid-2nd century BC: a chronological range of use backed by the sporadic fragments of Hadra *hydriai* recovered on site.

Sezione (B) includes a *loculus*-chamber that would have formed part of one of the destroyed hypogea on site. It is a perfectly square chamber (3 x 3 m) with regularly arranged rows of *loculi* cut into its walls (Figure 161). An unusual encounter is a *loculus* cut into the eastern wall, retaining its stuccoed closing slab: a richly decorated architectural frame with Doric and Lesbian leaf patterns and Ionic egg-and-dart ornament, enclosing a figurative scene flanked by two supporting pillars, where a male figure is depicted standing in the nude, with his right hand outstretched and the left bent upwards to his chest; a relatively small, dressed female figure is seen towards the upper-left corner of the panel. The compositional scheme of such a type of painted architectural frames, which recalls similar patterns of Pompeian painting in the third and fourth style, suggests a possible range of use from c. the mid-late 1st century BC to the 1st century AD.

As the case with (B), Sezione (C) is represented by an extant *loculus*-chamber (3 x 4.50 m) (Figure 162). It features: a wide entrance hall; four *loculi* irregularly cut into the left wall; nine regularly arranged *loculi* cut into the back wall; an alcove cut into the right wall. Two limestone sarcophagi were found within the chamber: a plain one, without ornamentation, alongside the back wall and another occupying the alcove into the side wall. The latter (length: 2 m, width: 0.93 m, height: 0.87 m, 0.71 m without the lid) was transferred to the premises of the Graeco-Roman Museum (Inventory Number 25879). Its ornamentation is carved out in relief: a couple of ἀγαθοδαίμονες (serpents as the spirit of vineyards) and festooned garlands with hanging bunches of grapes, rendered within three Βουκράνια (ox heads). The Greek funerary inscriptions on the lid read: (a) ΑΧΙΛΛΕΥC ΕΥΨΥΧΕΙ; (b) ΑΧΙΛΛΑ ΕΥΨΥΧΕΙ: be of good cheer (be cheerful) Achilleus/Achilla (the

deceased). Judging by the featured ornamentation and epitaphs, a successive phase of use would be datable c. the 1st-2nd century AD.

The chronology of the largely devastated necropolis at Minet el-Bassal is inferable considering its architectural decoration, wall paintings, and contextual finds: from c. the mid-3rd century BC, and possibly earlier, to the 1st-2nd century AD: an extended range of use for clusters of funerary structures of which the earliest were constructed by the first generations of Graeco-Macedonian settlers immediately to the west of the Mareotis-Eunostos navigable canal. It constitutes a first phase of the historically and archaeologically attested Nekropolis, which yields contemporary and successive phases of funerary practices manifested by arrays of sepulchres stretching westwards, from Gabbari to el-Wardian (sites 47-49). Interments at Minet el-Bassal seem to halt around the 1st-2nd century AD, possibly in consequence of burial-space economy within its accessible hypogea situated relatively close to the urban periphery. This is the time Kom el-Shuqafa, a plateau extending at the southwestern fringe, had been utilized to receive collective interment on a rather large scale (site 53f-g).

In the 1880s, during the levelling of the terrain at the Village of Tartoûchy, not far from Pont Neuf of el-Mahmoudiya Canal (see *supra*, Adriani's localisation of Minet el-Bassal necropolis), 'des hypogées chrétiens et des sépultures entassées jusqu'à la surface supérieure de collines'. The accidental encounters were reported in detail by Tassos Neroutsos:

> *Un peu plus loin, derrière la Bourse de Minet-el-Bassal; sur l'emplacement du mur d'enceinte arabe (the Tulunid circuit wall) et après la porte occidentale ou de Qabbàry d'autrefois (Bab Gharb), entre celle-ci et la mer, en creusant pour jeter les fondations d'une usine à pressage mécanique de coton, on a trouvé des sépultures chrétiennes souterraines, tout un quartier de catacombes creusées dans le roc, avec des loculi et des inscriptions écrites en ocre rouge sur les parois extérieures indiquant les noms de personnes d'ordre religieux. On trouva même quelques tablettes en marbre (loculus-closing slabs) ayant servi à fermer les ouvertures d'autres loculi, qui portaient des inscriptions de l'époque constantinienne.*
>
> (Neroutsos 1888: 61)

The recordings of Neroutsos in the 1880s shed further light on the geographical extent of this first phase of Nekropolis along the west bank of the Mareotis-Eunostos navigable canal, and yet, on the extent of violation caused already by the early 1950s within the modern industrial area, especially at the premises of the cotton presses. Whereas his 'chrétien' label, if valid, would emphasize the Christian (re)utilization of abandoned funerary structures c. the 4th-7th century: a phenomenon archaeologically attested westwards, at Gabbari and el-Mafrouza (sites 47-48), but also southwards, at Kom el-Shuqafa (site 53).

Site 47: Nekropolis: Eastern Sector

Maps: V1; V2; V3; V4

Necropolis: Gabbari [Ptolemaic; Roman; Late Antique]

47.a) Initial Investigation: H.C. Agnew and Tassos Neroutsos

In December 1836, British Egyptologist H.C. Agnew inspected a hypogeum 'exactly upon the summit of a hill of soft stone, in which have been cut numerous catacombs'. It is located 'within twenty minutes walk of the western gate of Alexandria, between the great canal Mahmoudieh on the east, Lake Mareotis on the south, the new palace and gardens of Ibrahim Pasha on the west (site 50), and a small canal on the north': towards the southern belt of Gabbari: the area of Gebel el-Zeitoun marked 'Catacombes' in either *carte* of les Ingénieurs de l'Armée d'Orient (1798-99, published 1817, 1822; Introduction II.c) (Figure 163), and in Tassos Neroutsos' 1888 map (Introduction II.e), where Agnew's 'hill' might have been that marked with the label 'Hypogée'. Agnew reported his observations, written in January 1838, in a letter sent to Sir Henry Ellis, the K.H., F.R.S., Secretary, on November 19th, 1838. It was read on February 7th, 1839, to be published in 1840 as part of volume XXVIII of *Archaeologia* (Agnew 1840: 152-170; Adriani 1966a: 186-187, Catalogue Number 132; 1966b: Tavola 104, Figure 355).

The hypogeum (Figure 164) consists of an access-staircase leading into a short vestibule that gave access to a quadrangular court (1) (3.96 x 3.96 m) with two pillars flanking the main entrance and eight planned *loculi* traceable in two rows on the back wall, of which only three of those of the lower row were actually cut into the rock. *Loculus*-chamber (2) (3.96 x 3.96 m) opened on the left wall of the court, with six rock-cut *loculi* arranged into two rows on each of its walls. Antechamber (3) (2.75 x 2.90 m) is accessible from the opposite side of the court. Its western wall features a pair of Doric half-columns supporting a pseudo-architrave below a moulded cornice. Rectangular recess (7), pertaining to a successive phase of use, is cut deep into the wall, possibly to receive a sarcophagus (as in alcove 6). On the eastern wall, two pillars were found supporting an architrave below a dentilled cornice. The antechamber led into intermediate room (4) with sarcophagus-alcove (6) cut deep into the lateral wall. Burial-chamberette (5), apparently the nucleus of the initial setting, is cut at the northern end of the main structure to contain a limestone

sarcophagus with a shallow curved lid. The Ptolemaic origin of the hypogeum seems inferable, considering the antechamber's architectural decoration (Doric half-columns) and wall painting in the first Pompeian style (simulated stone blocks). Successive phases of use are signalled, for instance, by violating *loculi* and sarcophagus-alcoves in the central court (1) and chambers (2-4), successive layers of plaster coating the walls of *loculus*-chamber (2), and funerary inscriptions painted in red ochre and datable c. the Antonine period (the 2nd century AD).

As is the case elsewhere in Alexandria, progressive urbanisation in the 19th century had a direct effect on the extant remains of ancient Nekropolis. Continuous vandalism at the time may be glimpsed from the narrative of Tassos Neroutsos:

> *Des hypogées qui donnent sur le rivage de la mer, une partie, est usée par les courants intérieurs de la rade; une autre partie, plus en dedans, et creusée vers le village de Méks, est écroulée et comblée, ou a été détruite par la Compagnie anglaise des jetées et docks du port d'Alexandrie, pour en extraire les matériaux nécessaires à ses travaux hydrauliques.*
> *Les fouilles qu'on fait de nos jours dans cet endroit (Gabbari), ne sont point exécutées à un point de vue archéologique; l'objet de ces fouilles est, comme ailleurs, l'exploitation des matériaux de construction, sous la surveillance de marchands de pierres et de chaufourniers, qui prennent peu d'intérêt aux restes vénérables de l'antiquité, et qui jugent de la valeur intrinsèque des anciens monuments par leur contenu en matériaux solides, pesés au quintal ou mesurés au mètre cube.*
> (Neroutsos 1888: 74-75)

While surveying the necropolitan areas in the west, Neroutsos encountered miscellaneous artefacts pertaining mostly to the Ptolemaic period, such as terracotta figurines of the Tanagra type, statuettes of Dionysos holding a bunch of grapes, another of Hypnos next to a poppy stem, and a variety of cinerary urns of the Hadra type. Later hypogea of c. the 2nd-3rd century AD yielded funerary *stelae* and inscriptions painted in ochre, indicating the presence of both pagan and early Christian interments. Of the latter, one hypogeum was discovered in August 1876, on the seaside, northwest of Gabbari (Neroutsos 1888: 76-79). It had a quadrangular vault chamber (3.24 x 3.24 x 4.46 m). On entering, in the middle of the structure, was an altar of bluish marble, circular in shape at the base and irregularly cut at the top. It would have served among the earlier Christians, as it appears, to lay down the Eucharistic loaves offered in funeral feasts. The altar was 0.89 m high. Its diameter measured c. 0.73 m at the base. The left wall was smooth and intact. The right wall featured a painted escutcheon enormous in profile, greenish in colour. Its upper quarter bears the Greek acronyms 'XP' and 'XT': Χριστοῦ Χάριτι: 'by the grace of Christ'. Whereas on the lower quarter were three branches of an olive tree.

Neroutsos' encounters at Gabbari, briefly reported in 1888, attest the wide chronological range of use pertaining to this zone of ancient Nekropolis, spanning the 3rd century BC to the 6th-7th century AD. The millennium-long range of burial practices within necropolitan Gabbari is confirmed yet by a series of excavation work carried out intermittently for over a century, from Giuseppe Botti's investigations in the 1890s to the salvage interventions of the Centre d'Études Alexandrines in the 1990s (site 47b-k).

47.b) Miscellaneous Finds: Giuseppe Botti

In 1892, while investigating the finds reported earlier by Neroutsos at Gabbari, Giuseppe Botti encountered 'tombe di buona conservazione e l'ingresso di altre che sembrano inesplorate' (Botti 1893: 18). Botti's surveys took place in 1892-96; the results were briefly reported in 1897:

> *Gabbari: hypogées d'époque ptolémaïque et romaine, chapelles funéraires chrétiennes.*
> (Botti 1897b: 27)

Botti then gave a Strabonic account of 'the region in antiquity':

> *C'etaient d'abord des jardins et des plantations pour fournir les couronnes de fleurs devant orner les tombeaux et les plantes destinees a l'embellissement des enclos funeraires: des poupees en ivoire, des figurines en terre cuite du Fayoum, des steles en calcaire sculptees et auxquelles il ne manquait que la legende indiquant le nom du mort, son pere et son age; des cartonnages de momies, des cercueils peints, des jarres et des cruches, des fioles a parfums, des autels d'offrandes.*
> *Il y avait sans doute des ateliers de sculpture et de peinture, des entrepreneurs de monuments funeraires, des embaumeurs, des croque-morts, des pretres de l'ordre inferieur, des jardiniers qui se chargeaient d'entretenir les monuments sepulcraux.*
> (Botti 1898c: 54-55)

In 1898-99, the construction of a roadway connecting the city of Alexandria to the suburban district of el-Max, commissioned at the time by the Administration of Railways, brought to surface various accidental finds (Botti 1899b: 37-56). Known among the sporadic encounters are the remnants of a large hypogeum to the west of Fort Saleh (Tabbyet Saleh), in proximity to the seashore. In September 1898, having thirty workers under command, Botti decided to excavate the severely devastated structure, which was constantly quarried for the construction of a new quay at the western port. Accessible via a staircase that led down

into a square vestibule, the hypogeum was found to have been decorated with an Ionic colonnade – central intercolumniation: 1.50 m, lateral intercolumniations: 1.27 m; width of side pillars: 0.23 m; diameter of columns: 0.46 m, height of columns: 4.15 m; façade: 5.42 m.

The funerary vestiges of ancient Nekropolis, which were being encountered at the time by the Administration of Railways while working in progress on the roadway to el-Max, had raised an interest during Expedition Ernst Sieglin to investigate the necropolitan areas to the west of Minet el-Bassal.

47.c) Zwei Gräber: Hermann Thiersch – Expedition Ernst Sieglin

In July 1899, the remains of two hypogea of the Roman period were accidently unearthed by the Administration of the Railways while mining on the southern slopes of the Gabbari plateau. Five months later, in December, the Archaeological Society of Alexandria requested the German archaeologist Hermann Thiersch to carry out a salvage excavation on site (Thiersch 1900: 7-40).

Hypogeum (I) is accessible via a staircase that leads into an antechamber (1) of 4 m^2 (Figure 165). On either side wall are two rows of three rock-cut *loculi*. At one corner, to the left, is a deep well the fresh water it supplied was poured into a nearby reservoir. At the midst of the chamber stands an altar for the enactment of sacrificial rituals. The antechamber, partially built of stonemasonry, opens onto an inner one (2) of a similar construction (material employed: Max limestone from the local quarries). It had a vault ceiling, whereas the level of its floor is lower by two steps to that of the antechamber. An extant fragment of a floor-mosaic in various colours was uncovered at the centre of the inner chamber. Rows of *loculi* are cut into the walls, where at the middle of the back wall's upper row, into the bottom wall of the central *loculus*, an infant's sarcophagus of lead was found, in front of which a large wooden one is placed. Above the *loculus* cut immediately to the right of the latter, two funerary epitaphs painted in red and black ochre read: (1) ΓΑΙΟΥ ΙΟΥΛΙΟΥ ΕΠΙΜΕΛΟΥC: 'Gaius Iulius Epimeles' (the deceased); (2) ΜΑΡΓΑΡΙ ΚΥΡΙΑ ΕΥΨΥΧΙ L ΚΘ ΜΗ Δ ΗΜΕΡωΝ ΙΙΙ: 'the lady Margaris died at the age of 28 years, 3 months, and 3 days'. In all, within the hypogeum, there were twenty-eight *loculi* containing the skeletal remains of about sixty corpses.

Hypogeum (II) is reachable via a staircase that leads into burial-chamber (1) (area: 4 m^2, height: 3.50 m) (Figure 166). In the middle, a square pillar supports a horizontal ceiling. Four columns segment the left wall into which a large *loculus*-recess is cut. The back wall had two regularly arranged rows of four rock-cut *loculi* divided vertically by standing pillars surmounted by plain capitals. A rectangular entrance to a secondary, relatively small chamber opens at the middle of the right wall. It had a quite unusual stuccoed segmental pediment, for in between the metopes, instead of the conventional triglyphs, there were Egyptian motifs: three *uraeus* serpents crowned with solar discs. The inner chamber (2) had ten irregularly arranged *loculi* cut into its walls. In all, the hypogeum had about forty-one *loculi* of which a few contained funerary objects.

47.d) Fort Saleh Hypogeum: Evaristo Breccia

In 1930, vestiges of funerary monuments were accidently discovered during the construction of two thoroughfares to el-Mafrouza, with one almost parallel with the modern quay of the western port, near the area formerly occupied by the demolished Fort Saleh (Breccia 1932: 36-37). They were built of large blocks of limestone forming up a rectangular base upon which two or three relatively small cubic blocks elevate: stepped pedestals. On top was either a *stela* painted or carved in low relief, or pillars set up as grave posts. Analogies with other funerary monuments excavated at the eastern *necropoleis*, and more particularly at el-Chatby (site 145), together with the contextual finds (a fragmentary limestone altar; pottery; oil lamps; terracotta figurines; cinerary urns), would date the Fort Saleh vestiges to the Ptolemaic period, c. the 3rd century BC.

Perhaps the most significant among Breccia's encounters at the time was a large hypogeum accessible via a staircase leading into several chambers and galleries of rock-cut *loculi*. Accidently discovered about 50 m to the northwest of the junction of both streets under construction, the funerary structure was partially excavated, given the limited budget assigned to the project. One chamber is of a particular interest, for it had a burial alcove cut into the back wall. The Egyptianizing façade of the alcove is flanked by columns crowned with capitals of the composite Corinthio-Egyptian type. The Egyptianizing effect is reinforced by the broken lintels attached to either column. A rock-cut κλίνη-sarcophagus with a total length of 3.05 m occupied the lower section of the alcove. Its rectangular *châssis*, 2.95 m long, is held by four colonnettes, each measuring 1 m in length. Two *fulcra* are fixed to hold firmly the pair of cushions placed at either end of the mattress. A rich polychrome painting covered the mattress itself and its *châssis* as it descends almost to the ground. Entry into the κλίνη-sarcophagus, which had an irremovable lid, was carried out from the rear, through the alcove's short side. The walls of the alcove had almost nothing left but faint traces of a painted decoration upon a fine layer of stucco coating. Three shallow niches are cut into the back wall, above the κλίνη-sarcophagus. The rectangular niche at the centre touches down the mattress. The other two, relatively

short, are on the level of the side cushions. The central niche exhibits a painted figure of Osiris standing below a frieze of *uraeus* serpents. He is armed with a whip and a *lituus*. The paintings within the external niches are violently damaged by a hammer; yet below, two serpents in an attacking pose are traceable. Within the space between the external niches and the lateral walls of the alcove were vestiges of paintings. On the right: a seated female deity (Isis). On the left: a Thoth or a Horus rendered in right profile. Two figures of a mummified Osiris were barely visible on the lateral walls. The ceiling is decorated in such a way as to simulate a drapery or a *baldacchino*. Architectural decoration and wall painting date the hypogeum to the late Ptolemaic/ early Roman period, c. the 1st century BC. Breccia, unable to excavate the other chambers, maintained: 'J'ai pu assurer la conservation de ce souterrain. Peut-être pourra-t-on l'explorer plus à fond dans l'avenir' (see *infra*, site 47i).

47.e) Two Contiguous Hypogea: Banoub Habachi

In February 1935, two contiguous hypogea of the Roman period were accidently discovered during the digging of foundations for new constructions by the Administration of Railways within the vicinity of the Gabbari Goods Station (Habachi 1937: 270-285). The funerary structures (Figure 167) were inspected by Banoub Habachi from the Graeco-Roman Museum.

Hypogeum (A) is accessible via a U-shaped staircase leading into a court (1) (3.50 x 3 m, preserved height of walls: 3.70 m). At the centre of the court is a sacrificial altar of stonemasonry (0.50 x 0.50 m, maximum height: 0.25 m). A violating trapezoidal *loculus* is cut at one corner. The court had an alcove (2.20 x 2.15 m, height: 2 m) cut into the left wall. It is occupied by a rock-cut sarcophagus flanked by engaged pillars. A set of figurative Egyptianizing scenes seem recognizable on the façade of the sarcophagus, the back and side walls of the alcove, and the lateral faces of the doorjambs. Various motifs decorate the celling. The poorly preserved polychrome painting is of a lesser quality. The panels on the façade of the sarcophagus and the back wall of the alcove had a common mortuary theme: a mummified figure laid down on a lion-bed set upon low pedestals and flanked by local deities. Accessible from the court is a *loculus*-chamber (2) (3.30 x 3.20 m, height: 2.50 m) with two rows of *loculi* cut into all three walls. On the right, a *loculus*-chamber (4) (3.20 x 3.15 m, height: 2.50 m) is accessible through an intermediate chamberette (3) (2.15 x 1.75 m, height: 2.50 m) that had two rock-cut niches into the side walls.

Hypogeum (B), already largely destroyed on discovery, had an extant quadrangular chamber (1) (3 x 3 m) with a vault ceiling and regularly arranged rows of *loculi* cut into the walls. Chamber (1) opens onto *loculus*-chamber (2). Among several rock-cut *loculi*, almost all sunk and violated, a distinguishable one was found enclosed by a painted slab exhibiting figurative motifs of an eclectic Graeco-Egyptianizing style. Signs of reinforcements and renovation are attested at the main entrance, where the original rock-cut flat lintel of the doorway had been replaced with a segmental pediment of limestone.

47.f) A Soldier's Hypogeum: Victor Ghirghis

On July 27th, 1954, a hypogeum was accidently discovered in Gabbari, at Ard el-Moaiz Street, during the construction of a new depository, a replacement of a demolished one, by the Société Générale de Pressage et de Dépôts. A salvage excavation was carried out on site by the GRM director Victor Ghirghis. The results, supplemented with photographs, were communicated to Achille Adriani, who published them in his 1966 *repertorio* (Adriani 1966a: 160-161, Catalogue Number 116; 1966b: Tavola 84, Figure 282, Tavola 85, Figures 283-284, 286, 288).

The surviving parts of the hypogeum comprise a κλίνη-alcove, two *loculus*-chambers, and a large compartment where excavation was not possible. The Doric doorway of the κλίνη-alcove is flanked by two ἀγαθοδαίμονες carved out in relief. Its ceiling retains a fragment of a stuccoed coating of alabaster imitation. A unique feature of this alcove is indeed the in-relief decoration that covers its long and short walls. At the centre of the back wall, above the funerary κλίνη, there is a *pseudo-porta* simulating a traditional ναΐσκος of an Egyptianizing style. To the left, a *cuirass* (armour) is rendered with a double row of πτέρυγες (*pteryges*: a decorative skirt of leather or fabric strips often worn around the waists of soldiers). To the right, a helmet, with raised cheek-pieces, is seen together with a sword and a pair of greaves. On the short side wall, to the left of the funerary κλίνη, there is a large round shield and two spears. On discovery, it was possible to recognize a bearded herm on the opposite side wall. The overall setting suggests an alcove designed to receive a deceased soldier (site 156). Whereas such a type of featured weaponry, especially the armour, dates the structure to the Ptolemaic period, c. the 2nd-1st century BC.

47.g) A Complex of Hypogea: Henri Riad

In autumn 1965, a funerary complex of at least three hypogea was accidently discovered during construction works to replace the old warehouses in Gabbari, near the demolished Fort Saleh. The excavated vestiges were inspected at the time by the GRM director Henri Riad (Adriani 1966a: 264-265, 154, Figure Zb; Leclant 1966: 128). The funerary structures follow a typical axial plan, with a central court opening onto secondary chambers. One chamber had

an architectural façade that features a Doric doorway flanked by two partially fluted quarter-columns and two pseudo-windows exhibiting a lattice pattern (the one on the left side was found missing). The simulated windows were probably executed separately then inserted into hollow rock-cut niches on either side of the entrance, thus recalling the pseudo-windows of antechamber (d) of Hypogeum (A) at el-Chatby (site 145). Judging by architectural decoration, the funerary complex pertains to the Ptolemaic period.

47.h) A Section of a Hypogeum: Wiktor-Andrzej Daszewski

In the early 1970s, while surveying the areas around the complex inspected by Henri Riad in 1965 (site 47g), Polish archaeologist Wiktor-Andrzej Daszewski (PCMA, University of Warsaw) found the remains of a hypogeum, the greater part of which had already disappeared, having been quarried (Daszewski 2003: 659-670). The surviving part was accidently discovered on the slopes of a mound, within a deep void partially covered with debris (refuse from the neighbouring settlement). It consists of a burial-chamber (4.75 – 5 m x 3.25 – 3.50 m) with a κλίνη-alcove cut into the back wall. As the case today with Hypogeum (A) at el-Chatby (site 145), Daszewski's burial-chamber was found partially drenched. It actually descends c. 30 cm below the groundwater level. The lateral walls are decorated with Corinthian half-columns except for two that formed a quarter of a column at the southeastern corner. On discovery, all columns lacked their respective capitals: probably quarried to be reutilized elsewhere as decorative material. Violation of the initial architectural setting seems to have occurred already at a much earlier date. All three walls of the chamber had been severely damaged by successive adjustments to accommodate as many corpses as possible; subsequently, *loculi* are found cut wherever possible. Along the lateral walls, the intercolumniation is occupied by Doric pseudo-doorways. On the bottom wall of the κλίνη-alcove, above the mattress, between the two carved out pairs of cushions, is a reddish ὀμφαλός (*omphalos*: a Hellenic symbol of world centrality) around which a large ἀγαθοδαίμων is wrapped, with its bearded head and upper part of the body raised upwards, as if being confronted. Overall, the initial architectural setting of the burial-chamber is datable to the 3rd century BC and bears analogies with burial-chamber (g) of Hypogeum (A) at el-Chatby. The painted decoration pertains, however, to a later date, c. the 2nd century BC. Successive modification is represented by the violating rock-cut *loculi*. Eventually, the hypogeum was exploited as a stone quarry. Daszewski revisited the site in 1998, the time when the surviving remnants of once an elaborate hypogeum were found to have been buried beneath accumulated debris, awaiting excavation (see *infra*, site 47k: Gabbari Zone C).

47.i) Gabbari Zone (A): Deutsche Archäologische Institut

In 1975-77, the Deutsche Archäologische Institut (DAI) in Cairo carried out successive excavations, codirected by Günter Grimm and Michael Sabottka, to the south of the demolished Fort Saleh in Gabbari. Besides reinvestigating the earlier encounters of Herman Thiersch and Evaristo Breccia (site 47c-d), the mission discovered a complex of contiguous hypogea (labelled A1-11), including that partially excavated by Breccia in 1930 (Leclant 1976: 277; 1977: 234; 1978: 268; Sabottka 1983: 195-203; 1984-85: 277-285). The excavated funerary structures from Gabbari Zone (A), extending to the west of Heidara Street (the present-day Abd el-Qader Hamza), pertain to a wide chronological range of use, spanning c. the 2nd century BC to the imperial period.

47.j) Gabbari Zone (B): Centre d'Études Alexandrines

Almost a century after the construction of a roadway connecting the city to the suburban district of el-Max had led to the accidental unearthing of various sections of ancient Nekropolis, another public project, this time a bridge or flyover to connect the Cairo-Alexandria desert road to the western port, was put on hold following the discovery of subterranean funerary structures a couple of hundred metres from the flyover's northern end. Two salvage campaigns were subsequently conducted on site by the Department of Antiquities, in summer 1996 and spring 1997. By June 1997, the local department, short of funds towards the end of the Egyptian fiscal year, requested the Centre d'Études Alexandrines to intervene with a rescue excavation (Abd el-Fattah 2001: 25-41; Empereur 1998a: 176-211; 1998c: 155-162; 1998d: 622-630).

Further to the west of the flyover site extend the necropolitan areas around the demolished Fort Saleh, intermittently investigated by Botti, Breccia, and Riad (site 47b, d, g). About 300 m to the southwest, the Stagni complex of three hypogea was accidently discovered in the late 1980s (site 48d). On the opposite side of Heidara (Abd el-Qader Hamza) Street are the clusters of hypogea excavated by the Deutsche Archäologische Institut in the mid-1970s (Gabbari Zone A: site 47i) and the Centre d'Études Alexandrines in the late 1990s (Gabbari Zone C: site 47k) (Figure 168). Westwards, at el-Mafrouza, another funerary complex of four hypogea was accidently discovered in the early 1960s, of which the hypogeum labelled (III) is remarkable for its painted scenes (site 48c). The relative location of the flyover site to earlier encounters at Gabbari and el-Mafrouza thus shows intricate sets of funerary structures which, given the recorded findspots, seem to have formed together a dense zone of ancient Nekropolis.

The area of interest (100 x 30 m) is bordered on the east by a shantytown and on the west by Heidara (Abd el-Qader Hamza) Street. A total of seventeen hypogea were identified during the 1997 first season of excavation. Four of them (B7, B9, B10, B11) were severely damaged by the placement of concrete reinforcements by the modern developers. Some (B4, B6, B12, B13, B14, B15) were inaccessible. While others (B1, B2, B3, B8), especially those of sector (I) (see *infra*), were found in a fairly good state of preservation (Figure 169). The excavated structures seem to have been violated already in antiquity and, with exception to a few pertaining to a single chamber in Hypogeum (B1), all the rock-cut *loculi* were disturbed.

Hypogeum (B1), perhaps the most extensive, is accessible via two flights of a staircase. Branching off the second flight is a miniature staircase leading down into a partially excavated compartment (B1.10). The courtyard (B1.3), reachable through the principal staircase, opens onto *loculus*-chambers (B1.1) and (B1.2) to the north, (B1.4) to the east, and (B1.5) to the south. Five chambers (B1.6-9, 11) are cut on a lower level. Hypogeum (B2), relatively small, comprises a vestibule (B2.1), a *loculus*-chamber (B2.2) accessible via a flight of five steps, and a *loculus*-chamber (B2.3) cut on a slightly higher level to that of (B2.2). Chamber (B2.3) is unique, for it had a rock-cut κλίνη-alcove towards the end of the lateral wall. Hypogeum (B3) consists of a principal access-staircase, a *loculus*-chamber (B3.1), a *loculus*-chamber (B3.3) cut to the south beneath the *loculi* of (B3.2) and the westernmost section of (B2), a chamber (B3.4) cut at the southwestern corner of (B3.1), and a corridor (B3.5) that led into chambers (B3.6) and (B3.7). Hypogeum (B8), located further to the south, had an independent plan of its own: two levels interconnected through an internal staircase, and a cistern (B8.5) constituting the nucleus of the hypogeum, which was apparently cut in one go (Callot and Nenna 2001: B1: 44-74, B2: 75-83, B3: 84-98, B8: 98-104).

The flyover site, situated about 800 m to the west of the proposed urban periphery, is divided into two subterranean zones (Figures 170-171). Zone (I) includes two sectors (I-II), both surveyed and partially excavated in 1997 (see *supra*). A two-month campaign took place in February-March 1998, with the aim to investigate Zone (II), which includes four sectors (III-VI). The area of interest thus extended to reach 250 x 30 m: a narrow strip of land delimited by the halted bridge from the south and the buildings adjacent to the port zone to the north (Empereur 1999a: 29-39; 1999b: 549-559). Besides those previously excavated in the first season, some twenty-five new hypogea were identified during the 1998 campaign, hence a total of forty-two funerary structures (with three additional ones unearthed during future campaigns). In 1999, excavations resumed at (B17), a vast hypogeum pertaining in origin to the Ptolemaic period, yet remained in use to c. the 7th century AD. A new one, labelled (B45), was discovered in sector (III). Complementary digs were being carried out by that time in sectors (IV) and (V) (Empereur 2000a: 604-614). A final two-month campaign took place until the end of February 2000. Eventually, the site, which could not have been preserved, was destroyed shortly after, in the spring of the same year, with the construction of the remaining segment of the bridge reaching to the western port (Empereur 2001a: 686-689; 2003: 3-16).

Architectural setting and contextual finds seem to suggest a dense complex of hypogea that had probably undergone successive phases of renovation and structural modification, reflecting, rather confirming the millennium-long range of sepulchral use at Gabbari as manifested in the archaeological record: from grave goods pertaining to earlier generations of Hellenic settlers and datable c. the 3rd-2nd century BC (Hadra *hydriai*; Hellenistic oil lamps; incense altars; *unguentaria*; terracotta figurines of women, children, and deities; tableware; *loculus*-closing slabs bearing analogies with those at el-Chatby; painted funerary inscriptions) to material culture signalling site (re)occupation by 4th-7th-century Christians (painted crosses on walls and ceilings; funerary inscriptions in red ochre; terracotta lamps adorned with crosses; stuccoed *stelae* bearing miscellaneous Christian motifs; wine *amphorae*; water flasks from the pilgrimage sanctuary of St. Menas located about 50 kilometres southwest of Alexandria).

47.k) Gabbari Zone (C): Centre d'Études Alexandrines

About 250 m to the west-northwest of Zone (B), in the same district of Gabbari, another section of ancient Nekropolis was discovered during a prospection (Rousseau 2003: 671-697). Zone (C) (350 x 100 m), almost entirely occupied by buildings, extends adjacent to the amenities of the western port. It is delimited from the south and the east by settlements and by a football field in the west. The eastern and central sectors of the area under investigation encompass old limestone quarries constantly destroying the underlying funerary structures, as clearly reflected on the pitted terrain. In a setting as such, the sewerage system of the neighbouring settlements is directed towards the excavated pits and, in turn, the quarried hypogea (see *supra*, Daszewski's encounter: site 47h). Excavations within Gabbari Zone (C) revealed analogies, both structural and decorative, with other hypogea unearthed at the nearby zones (A) and (B) (site 47i-j). Those identified have reached twenty (C1-20). They were divided into three groups: eastern sector (C1-2), central sector (C3-14) (Figure 172), and western sector (C15-20). Foremost among the finds would be burial-chamber (C3.1) (7 x 4.50 m), the one visited previously by Daszewski in the early

1970s (site 47h). It had actually formed part of a large hypogeum (C3) that features an access-staircase and at least three burial-chambers (Figure 173).

Site 48: Nekropolis: Eastern Sector

Maps: V1; V2; V3; V4

Necropolis: el-Mafrouza [Ptolemaic; Roman; Late Antique]

48.a) Miscellaneous Finds: Giuseppe Botti

Besides the various encounters in Gabbari (site 47b), vestiges of funerary structures were brought to surface further west, in el-Mafrouza, during the construction of the roadway to el-Max. In 1899, Botti reported some of the hypogea destroyed by mining and quarrying activities in the course of the latter decade of the 19th century (Botti 1899b: 37-56). The situation only worsened following the construction works of the Administration of Railways in winter 1898-99, as illustrated in a photograph published at the time by Botti, showing the state of collapse of one of the violated hypogea. Among the encounters was a large hypogeum already destroyed in 1899. It had an Egyptianizing façade comprising – from top to bottom – a segmental pediment, a denticulated cornice, a frieze with a winged solar disc as a central motif, and an architrave supported by a pair of columns of the composite Corinthio-Egyptian type. Botti's recordings at the turn to the 20th century were followed shortly by another major discovery (site 48b).

48.b) Suq el-Wardian Hypogeum: Evaristo Breccia

In 1905, the levelling of the terrain between the coastline and the tramway to the north of the suburb of Suq el-Wardian, carried out by the Administration of the Ports and Lighthouses, and necessitated by the construction of a large quay at the western port, led to the accidental unearthing, hence partial destruction of another hypogeum (Adriani 1966a: 146-148, Catalogue Number 93; 1966b: Tavola 68, Figures 228, 230-231, Tavola 69, Figures 232-233, Tavola 70, Figure 234, Tavola 71, Figure 236; Breccia 1906: 5-7; 1907c: 63-74; 1912c: 5-11; 1914a: 83-84; 1922: 97-98; 1932: 40).

The hypogeum had an axial plan (Figure 174). It is accessible via a staircase with several ramps. The remaining steps are found at the southeastern corner of the court (4.65 x 4.65 m), which had a single passageway (width: 3 m) flanked by two upright pedestals added perhaps to receive a pair of miniature sphinxes (analogies: sites 44, 160). The passage leads into a vestibule (7.15 x 5.20 m, height: 4.80 m) with long benches (width: 1 m, height: 0.70 m) carved out along the side walls. Towards the back wall of the vestibule, a flight of five steps (height: 0.82 m) leads up to the alcove's doorway (2.55 x 2.15 m) with an architectural frame surmounted by a shallow triangular pediment. A sacrificial altar (base: 0.46 x 0.52 m, height: 0.90 m) is positioned off centre within the vestibule. On discovery, it was found preserving the ashes from the last sacrifice. Six violating *loculi* and a relatively small niche are cut into the vestibule's lateral wall. On the back wall are faint traces of a plaster coating simulating the blocks of an isodomic construction in the First Pompeian style. Above is a representation of a bezel enclosing animal figures and stylized floral motifs, delimited from below by a band in dark red (0.25 m) above a thin white thread (0.01 m). A κλίνη-alcove (3.20 x 3.50 m) is cut into the back wall of the vestibule. It features, besides the funerary sarcophagus itself, in-zone decoration. Lateral walls – from bottom to top – a socle (height: 0.10 m) in blue and dark red colours; orthostats (height: 0.80 m) simulating alabaster; an intermediate band (height: 0.20 m); five rows of pseudo-brick in *opus isodomum* (height: 1.40 m); a narrow band (height: 0.15 m) of alternating lotus buds and palmettes, below an Ionic *kyma*. Back wall – from bottom to top – rows of pseudo-brick in *opus isodomum*; at the centre of the simulated brick, a shallow niche (0.55 x 0.50 m) is cut to receive a painted closing slab or *stela* of limestone or wood; a narrow band of alternating lotus buds and palmettes, below an Ionic *kyma*. On top of the back wall, a segmental frieze shows a pair of griffins flanking a central palmette, with miniature griffins and stylized floral motifs added on either side. The ceiling exhibits a pattern of pseudo-coffers with a rosette towards the centre. A couple of violating *loculi*, originally sealed with painted slabs and surmounted by a projecting cornice, are cut deep into the alcove's lateral walls. Judging by ground plan, architectural decoration, and wall painting, the Suq el-Wardian hypogeum would be datable to the Ptolemaic period, c. the 2nd century BC.

48.c) A Complex of Hypogea (aka the* Saqiya*): Henri Riad

In summer 1960, during the levelling of the terrain formerly occupied by the warehouses of the Shell Company, in preparation for the installation of a floating drydock at the western port, a complex of four hypogea was accidently discovered. The encounters were inspected and subsequently reported by the GRM director Henri Riad (Adriani 1966a: 159, Catalogue Number 112; Riad 1964: 169-172; 1967b: 89-96; Venit 2002: 99-118).

Hypogeum (I) (Figure 175) is accessible via a staircase of nine extant steps, which leads to a lower landing with a small bench carved out towards the northwestern corner. The latter had a stylized paw-like feet. A rectangular court is accessible from the northern wall

by means of a couple of steps. The eastern wall of the court features – from north to south – an entrance to a collapsed compartment, another small bench with a stylized paw-like feet carved out in relief, a half cylindrical rock-cut horned altar, and a sarcophagus flanked with podiums. An antechamber opens on the western wall of the court through a doorway flanked by two columns. On either side wall, rock-cut *loculi* violate the initial setting. A κλίνη-alcove is cut into the back wall of the antechamber. It is accessible through an entrance flanked by two engaged columns. The funerary κλίνη itself occupies most of the space inside the alcove. It had legs decorated with floral motifs carved out in relief. Shallow niches are cut into the bottom wall. One of the side walls is violated by three *loculi* that, as those in the antechamber, belong to a successive phase of use. The featured κλίνη here seems to represent an intermediate phase when compared to other funerary κλίναι such as those encountered within the Thiersch hypogea at Sidi Gaber and Antoniadis (sites 156, 162), hence the proposed date for the initial phase of construction c. the second half of the 2nd century BC.

Hypogeum (II) had an axial plan (Figure 176). It is accessible via a staircase that leads to a court with a sacrificial altar placed at the centre. A quadrangular chamber is reachable through an entrance formed by a couple of rock-cut pillars fixed on the southern side of the court. Two *loculus*-chambers open on the lateral walls of the court. The one to the right was found in ruins, the other, better preserved, had rows of rock-cut *loculi*, a miniature sacrificial altar of limestone, and early Roman oil lamps. The latter find provides a possible range for a successive phase of use from c. the late 1st century BC to the 1st century AD.

Hypogeum (III) (Figure 177) was found largely destroyed on discovery. Its rectangular court (1) gives access to burial-chamberette (7), which bears traces of two κλίνη-sarcophagi carved out of the side walls. Successive phases of use are represented by (i) a *loculus* cut at the southern end of the court's eastern wall, containing skeletal remains, (ii) a channel-like groove extending north-south, through one of the chamberette's lateral walls, towards the *loculus* in the court, (iii) a channel-like groove extending southeast of the court, and (iv) a passage through the bottom wall of the chamberette (probably made by tomb robbers). Other signs of violation are evident in the destroyed northern segment of the court's eastern wall, which justifies the absence of the architectural frame around the entrance to chamberette (7).

The hypogeum is indeed remarkable for its elaborate wall painting. The court's eastern wall (2): a countryside scene involving a *saqiya* (the traditional waterwheel of the Egyptian χώρα) turned by two oxen plodding counterclockwise and surrounded by leafy vine. The *saqiya* itself, fixed to a wooden arbor, is supported by means of two posts erected at either end of the scene and watched by a boy playing the pipes (only the right post has survived). A pond with plants and water birds appears in the foreground. The northern (lateral) side of the projection of the eastern wall (4): a rustic version of a bearded herm (of Pan?) rendered within a precinct. The western (exterior) side of the projection of the eastern wall (5): a herdsman in a short χιτών, tending his flock. The fact he is seen carrying an animal, probably a sheep of which only an upturned hoof survives, suggests a representation of the Hellenic cultic image of the κριοφόρος (*kriophoros*: the ram-bearer; Christianised into the Good Shepherd). The southern (lateral) side of the projection of the eastern wall (6): in-zone decoration – from bottom to top – coarser space indicating the violation of a low bench; a dark-reddish band; wide orthostats painted to simulate alabaster, alternating with narrow orthostats; a white band outlined in black; a band painted yellow and red ochre; an extant fragment of a frieze with alternating black and white squares. The slab (height: 1.90 m) preserving the painted scenes (2, 4, 5, 6) was cut out from the natural rock to be put on display at the premises of the Graeco-Roman Museum (Inventory Number 27029). The western wall of the court: a fragment of a painted slab fitted into a rock-cut niche on the bottom wall of Riad's 'sarcophagus-alcove'. It features an Egyptianizing *ba*-bird in right profile, perched on a lotus bud. A second *ba*-bird would have appeared on the violated side of the fragmentary slab. At the centre, between both birds, an incense altar is represented with two wrapped-around cobras. The bottom wall of chamberette (7): a rather poorly preserved painted slab of a male reclining under a shade tree. He is shown leaning on his left elbow, with the right arm thrown back over his head. Below the latter is a panel painted to simulate alabaster. Various interpretations of such an intricate set of painted scenes is central to widening the chronological range of use assigned to Hypogeum (III). In fact, one spanning c. the 2nd-1st century BC to the 1st-2nd century AD: a Graeco-Egyptianizing setting signalling successive phases of construction and use (i.e. contemporary with hypogea I, II, and IV). A Christian phase of (re)use, datable c. the 3rd-4th century AD, is proposed on the grounds of conjectural biblical scenes: see *supra*, the perception of the featured Hellenic κριοφόρος as a 'Good Shepherd'.

Hypogeum (IV), contiguous with (III) (Figure 178), had two surviving chambers with rows of rock-cut *loculi* and five sarcophagi of which four are in pairs and one occupied an alcove; yet all are carved out of the rock. It seems contemporary with Hypogeum (II), for one of its sarcophagi, decorated in relief, suggests a range of (re)use from c. the end of the 1st century BC to the 1st century AD.

48.d) The Stagni Complex of Hypogea

In May 1989, a funerary complex of three hypogea was accidently discovered during the construction of a warehouse on the piece of land formerly owned by the Italian timber merchant Alfredo Stagni di Giovanni (Abd el-Fattah and Choukri 1998: 35-53; Venit 1999: 641-669; 2002: 159-165). The site is located a few hundred metres to the south of the Shell warehouses, where another complex had been inspected by Henri Riad in 1960 (site 48c). It is about 300 m southwest of Gabbari zones (A) and (B) excavated by the DAI (1975-77) (site 47i) and the CEAlex (1997-2000) (site 47j) respectively. The Stagni complex, violated, flooded by groundwater, and partially destroyed, comprises three hypogea (Figure 179). Given their plans and architectural setting, the initial phase of construction would be datable, in general, to the Ptolemaic period; however, successive (Roman) additions are evident on site. Hypogea (I) and (III), conventional in design, had courtyards that open onto burial-chambers with rock-cut *loculi*. Hypogeum (II), the most extensive within the excavated complex, is accessible via a staircase that leads into a large court through which at least five *loculus*-chambers are reachable. Foremost among the surviving parts of Hypogeum (II) are (1) a funerary κλίνη found in ruins (Ptolemaic) and (2) an alcove cut to receive a sarcophagus (Roman).

The alcove (II.E) is cut into the back wall of one of the burial-chambers accessible from the southwestern corner of the court. On discovery, the level of the rising water table had already reached almost to the top of the sarcophagus. Subsequently, when the structure was cut out from the natural rock during the excavation to be relocated to the archaeological park at Kom el-Shuqafa (site 53), it was possible to salvage only the uppermost part. The Stagni alcove, which was added to the initial Ptolemaic setting in the Roman period, could be divided into (i) the architectural façade and (ii) the interior.

The architectural façade features two pillars flanking the entrance to the alcove. On the exterior face of either pillar, a petal-winged Erotes, painted as if decorating the shaft of a *candelabrum*, appear within a double-frame panel. Other figurative scenes include a guardian Anubis standing frontally on the lateral faces of both pillars and a pair of Horus-falcons with a central κάλαθος on the exterior and lateral faces of the capitals. The entablature is formed of an architrave bearing traces of volutes below a frieze of winged sphinxes, above which a cornice is painted scallop patterns and myrtle leaves. On top, a triangular pediment is surmounted with a disc *acroterion*. The projecting pediment frames a τύμπανον that exhibits a winged solar disc.

The interior of the alcove (2.05 x 1.23 m, preserved height: 1.17 m) has a shallow-vault ceiling. A sarcophagus (1.91 x 1.12 m, preserved height: 22 cm – see *supra*, tomb inundation) occupies most of the inner space. At 12 cm above the topmost salvaged part of the sarcophagus, a violating *loculus* (width: 70 cm, height: 83 cm), framed by two side pillars, is cut into the left lateral wall. A shallow rectangular niche (77 x 84 cm, depth: 15 cm), painted to simulate an *aedicula* (miniature shrine), is cut into the back wall, above the sarcophagus. Below is a stand painted in ochre. An upper, projecting band (12 cm) of the niche itself is treated as to give the impression of a frieze of *uraei*: a representation of the sacred serpents as an emblem of supreme power. The main panel takes the form of an Egyptian-style ναΐσκος within which stands a female deity (Isis-Aphrodite) flanked by two sphinxes upon high pedestals. The architectural and decorative programme at Stagni exemplifies the Graeco-Egyptian(izing) trends often met within the hypogea of Roman Alexandria (sites 53, 153).

Site 49: Nekropolis: Western Sector

Maps: V2; V4

Necropolis: el-Wardian [Ptolemaic; Roman]

49.a) The Grand Catacomb

The so-called Grand Catacomb of el-Bergouin Street had been a place of attraction for notable European travellers as early as the 18th century (Figure 180).

Frederick Ludwig Norden (Danish naval Captain and explorer – visit: June 1737):

> *A trente ou quarante pas du bord de la mer et à l'opposite de la pointe de la presqu'isle qui ferme le port on trouve un monument souterrain auquel on donne communément le nom de Temple. On n'y entre que par une petite ouverture sur la pente de la terre élevée qui borde le port de ce côté-là. Nous y entrâmes munis de flambeaux, et nous fûmes obligés de marcher courbés dans une allée fort basse, qui, au bout d'une vingtaine de pas, nous introduisit dans une salle assez large et quarrée.*
> *On trouve un souterrain de figure ronde dont le haut est taille en forme de voûte: il a quatre portes, l'une à l'opposite de l'autre. Chacune d'elles est ornée d'un architrave, d'une corniche, et d'un fronton surmonté d'un croissant. Une de ces portes sert d'entrée; les autres forment chacune une espece de niche bien plus basse que le souterrain, et qui ne contient qu'une caisse épargnée sur le roc en creusant, et suffisamment grande pour renfermer un corps mort.*
> (Norden 1795: 24)

Richard Pococke (English anthropologist – visit: September 29th – October 24th, 1737):

> *The catacombs extended above a mile to the west, and there are a great number all along by the sea ... I was in some grottos cut out of the rock, in long narrow galleries*

> *running parallel to one another, and some also crossing them at right-angles. These I conjectured, were those magazines in which they embalmed the bodies. The most extraordinary catacombs are towards the further end, and may be reckon'd among the finest that have been discover'd; being beautiful rooms cut out of a rock, and niches in many of them, so as to deposite the bodies in, adorn'd with a sort of Doric pilasters on each side. The round room, and that leading to it, are very beautiful, and so are the four rooms drawn in the plan with niches.*
>
> (Pococke 1743: 9)

In December 1799, during the Napoleonic expedition, the monument had been the subject of an extensive study by Pierre-Dominique Martin, Ingénieur au Corps Royal des Ponts et Chaussées (Martin 1818: 7-12; 1829: 519-530). A detailed descriptive account of the structure is provided by the French engineer, who accurately locates the site (Figure 181):

> *Les accidens du rivage forment, à environ 60 mètres à l'est de ces bains (the so-called Cleopatra's Baths: see infra, site 49d), une petite baie de 26 mètres de largeur, sur 60 mètres de profondeur: l'ouverture en est entièrement fermée par deux gros rochers qui ne laissent qu'une petite passe pour les canots. Au fond de cette baie, le terrain s'élève assez brusquement, et l'on voit au milieu de la pente un petit trou qui forme l'entrée actuelle du monument (the Grand Catacomb), et par lequel on ne descend qu'avec une grande peine.*
>
> (Martin 1818: 8)

Martin's 'petite baie' correlates with the profoundly modified zone of present-day Bab el-Mina, the main entrance to the western port and the coastal outlet of el-Nubareiya Canal to the Mediterranean (Figure 182). The subterranean structure documented in *Description de l'Égypte* is accessible today from the northern end of el-Bergouin Street: a strip of land occupied by clusters of timber warehouses. Its surviving remnants were rediscovered by Achille Adriani during an inspection in 1952, when a narrow passage into the catacomb itself was found buried underneath accumulated debris of earth and rubble (Adriani 1966a: 162-171, Catalogue Number 118; 1966b: Tavole 86-95). The various components of a symmetrically arranged hypogeum can be categorized into four groups: (a) sections rediscovered by Adriani in 1952, labelled (Ax) (x being a variable corresponding to the serial numbers in Adriani's 1966 plan) (Figure 183); (b) sections discovered by Martin in December 1799, labelled (Mx) (Figure 184); (c) sections conjectured from the symmetrical plan of the Grand Catacomb, labelled (Cx) (Figure 185); (d) conjectured sections pertaining to hypogea contiguous with the Grand Catacomb, labelled (Tx) (site 49b) (Figure 186).

The subterranean structure is accessible via a long rectangular vestibule (C1-M1-A7) (width: 2.70 m, preserved length of the A7 segment: 3.05 m). It leads at first into a pair of peristyles of four quadrangular pillars each (M2 and C2). Two symmetrical chambers (M3 and C3) are reachable from the preceding peristyles. Two chamberettes (A6, height: 2.10 m and A8: 2.20 x 1.15 m) are cut at either end of a narrow corridor forming a T-shape with vestibule (C1-M1-A7). (A8) has an alcove (A8a) cut into the side wall. At a point on the slope between (A7) and (A8a), a groove (2.55 x 1.50 m), found already partially drenched, seems to have been a tomb-robbing attempt to break into one of the inaccessible compartments (C3 and C2) of the hypogeum. A peristyle (A1) (16.45 x 16.05 m) of twelve pillars supports the walls of a central square light-shaft cut out of the rock (6.50 x 6.50 m). Two burial-chambers (A2 and A4) have at least three regularly arranged rows of *loculi* cut into their lateral walls. Two chamberettes (A3 and A5) are cut into the back walls of (A2) and (A4) to receive a sarcophagus. Two other chamberettes (A9, height: 2.60 m and A10, partially excavated) are cut at the SE. and SW. corners of the peristyle (A1). A pair of corridors (A12 and A13 to the right; A15 and A16 to the left) form T-shaped side passages. The ceiling of (A16) has a rectangular opening with two light-shafts created by an intermediate pillar carved out of the rock. Two large, symmetrically arranged chambers (A14 and A17) open at either end of the side corridors (A13 and A16). (A17) (6 x 6.05 m) has an opening at the southwestern corner of the ceiling: a light-shaft. Its back wall was found violated, allowing access to an adjacent hypogeum comprising at least seven compartments: (AB/M4); (AC/M5); (AE/M6); (AE/M7); (M8); (M9); (T1). Likewise, (A14) (6 x 6.15 m), which has a large opening at the centre of the ceiling (a light-shaft), would have been cut adjacent to structures pertaining to yet another hypogeum contiguous with the Grand Catacomb: (T2); (T3); (T4); (T5); (T6); (T7); (T8). This conjecture is strengthened by two compartments (AA and AD) discovered by Adriani in 1952 and added by him to Martin's plan of 1799. A grand rectangular hall (A11) (9.10 x 6.70 m) leads into the southernmost compartment of the hypogeum: a domed circular hall (A18: a cupola) opening onto three *triclinium*-like chamberettes (A19, A20, A21).

On the hillside, above the Grand Catacomb, surface constructions of limestone blocks and others carved out of the natural rock were cleared by Adriani in 1952 (Figure 187). The vestiges follow the NW-SE orientation of the subterranean structure. A portico with a destroyed colonnade (No. 6) extends NE-SW. The faintest remains of the interior ambulatory are represented by fragments of a pebbled pavement that seems to have been partially restored at some point, considering the various pieces of stone shards (grey granite; alabaster; porphyry; white veined marble) embedded into a confined, thick layer of concrete. On

discovery, remnants of the stylobate were recognizable along with some scattered remains of engaged columns. A rectangular building (No. 4) had traceable perimeters on all four sides – southeast: the lower parts of a wall; northwest: the portico (No. 6); northeast and southwest: two parallel walls of limestone blocks. Two recesses into the rock are basically the negatives of dismantled walls (No. 5). The one in the northwest would have been structurally associated with building (No. 4). To the east were remnants of three walls representing the lower preserved parts of an unidentified structure. At the other end of the site, a circular construction (No. 1) had probably caused subsequent modification to the adjacent structure (No. 2). It had a half-collapsed rotunda carved out of the rock yet partially constructed of stonemasonry. Whereas the contiguous unidentified structure of three tapering tiers (No. 2) is fully carved out of the rock. Next to it, another unidentified structure (No. 3) is signalled by an extant section of a pavement. Adriani interpreted the aboveground vestiges as to have once belonged to a Greek ἡρῷον (*heroon*), judging by analogies with other ἡρῷα in mainland Greece, such as the one at Calydon (Aetolia): a shrine erected atop a subterranean hypogeum and dedicated to funerary cults practiced chiefly in association with the deceased. Greek ἡρῷα often had a peristyle with branching-off structures as is the case here.

In general, the initial phase of surface construction on site (the portico: No. 6) is contemporary with the underlying hypogeum. The ground plan and architectural setting of the latter, especially the cupola of its circular hall (A18), would suggest a possible date c. the 1st-2nd century AD (analogies at Kom el-Shuqafa: site 53f-g).

49.b) Hypogea Contiguous with the Grand Catacomb

Excavations carried out by Martin and Adriani within the area of Bab el-Mina (site 49a) show the Grand Catacomb as might have formed part of a large subterranean complex of hypogea excavated at the western sector of ancient Nekropolis. In fact, a whole section of what seems to be an adjacent hypogeum was first detected by Martin in 1799, then partially (re) discovered by Adriani in 1952.

The hypogeum in question includes two quadrangular compartments (AE/M6 and AE/M7) interconnected through three passages created by four pillars arranged in such a way as to yield a wide central doorway flanked by narrower ones. Each of the quadrangular compartments opens onto a pair of *triclinium*-like chamberettes – east: (M8) and (M9); west: (AB/M4) and (AC/M5). The latter four, as well as (T1) to the south, recall those (A19, A20, A21) branching off the domed circular hall (A18) of the adjacent Grand Catacomb. Furthermore, Adriani's successful clearing of the corners of two other compartments (northeast: AA and southeast: AD), which are not shown in Martin's 1799 plan, backs the notion of a second contiguous hypogeum following the orientation of the Grand Catacomb (site 49a). A third hypogeum (T2, T3, T4, T5, T6, T7, T8) is conjectured southwest of the Grand Catacomb, given the symmetrical plan adopted throughout the subterranean complex (see *supra*, Figure 186).

49.c) Hypogea Contiguous with the Grand Catacomb (Cont.)

Another section of the vast subterranean complex at el-Bergouin Street was discovered in 1953. The excavation which began after Adriani had left his post as director of the Graeco-Roman Museum was carried out by his deputy, the new director, Victor Ghirghis. Adriani, however, had the finds published later, in 1966 (Adriani 1966a: 172, Catalogue Number 120; 1966b: Tavola 85, Figures 285, 287, 289). Most of the unearthed remains belonged to a largely collapsed hypogeum accessible via a staircase that leads down into an open-air courtyard. The *atrium* opens onto *loculus*-chambers and alcoves cut into the walls to receive sarcophagi of which some had garland decoration in relief. The sarcophagus-alcoves were flanked by columns. Considering the ground plan of the excavated structure, Adriani drew parallels with Scavo (B) and the Nebengrab at Kom el-Shuqafa (site 53c, g).

49.d) The So-Called 'Baths of Cleopatra'

About 60 m to the west-northwest of the funerary complex at the present-day el-Bergouin Street (site 49a-c) were structures cut into the natural rock and known among 18th-century travellers as the 'Baths of Cleopatra' (see *supra*, Figure 181). The vestiges, already destroyed in the 19th century, were described by French geologist Déodat Gratet de Dolomieu during the Napoleonic expedition, c. 1798-99:

> *Ces bains diffèrent par leurs dimension; ils devaient aussi différer par leur magnificence et par quelques commodités particulières; mais ils se ressemblaient par le plan principal. Un grand espace carré divisé en quatre cases également carrées, entourées de banquettes, creusées dans le milieu à la profondeur de 4 pieds (1.22 m), les banquettes couvertes d'un pied ½ (0.15 m) d'eau; la plupart étaient à ciel ouvert. Ils étaient séparés de la mer par le rocher dans lequel un ou plusieurs canaux creusés perpendiculièrement servaient a introduire l'eau directement par devant, pendant que d'autres canaux faisant un contour pour aboutir sur la face opposée, établissaient un courant qui empêchait l'eau d'être stagnante. On descendait de la côte dans ces bains par des escaliers. Des chambres couvertes étaient placées sur les faces latérales du grand carré et recevaient l'eau par différents canaux.*

> *Les mieux conservés de ces bains portent le nom de Cléopâtre. Ils sont placés directement au sud de la pointe de l'île du Phare, auprès d'une petite anse où les bateaux abordent la côte (in proximity to site 49a-c). Trois chambres encore couvertes sont placées sur le flanc ouest du grand carré; au-dessus sont des ruines de briques dans lesquelles on peut remarquer un pavé en mosaïque grossière; auprès sont de grandes catacombes débarassées des sables qui recouvrent leur sol.*
>
> (Lacroix and Daressy 1922: 43)

The nature of the rock-cut structures in question is inferable, given their architectural setting, contextual associates, and relative location to the neighbouring complex of hypogea, and the fact they were cut into the rock at a small cove where the boats approached the coast. On one hand, a sea-bathing facility may be conveniently located in a place frequently visited by sailors, fishermen, and mourners. Alternatively, the contextual associates described by De Dolomieu and shown in *Description de l'Égypte* (the three rock-cut chambers to the west of the structures in question, the brick ruins with traces of a mosaic pavement, and the adjacent cistern) suggest a form of occupation connected with commercial activities. Perhaps a fish farm once existed by the cove, where a cluster of square recesses had been cut into the rock to function as ponds. They seem enclosed within an artificial haven, i.e. Dolomieu's 'grand espace carré', which had narrow channels into the rock for constantly piping in seawater. In a context as such, contiguous rock-cut chambers (for fish processing) and a settlement on the hillside (habitation: dwellings of brick and a cistern) would have been complementary. Nevertheless, the notion of a sea-bathing facility contextually associated with the nearby funerary complex (site 49a-c) should not be eliminated, considering the bath complexes (site 55b) excavated in 1964 by Henri Riad to the south of the main necropolis at Kom el-Shuqafa (site 53).

49.e) Mariano Bartocci Hypogeum

One of the hypogea destroyed early in the 20th century was recorded by Mariano Bartocci from the GRM service (Adriani 1966a: 156, Catalogue Number 105; 1966b: Tavola 79, Figures 259-260) (Figure 188). It had an access-staircase that leads into a vestibule (No. 1). A rectangular light-shaft is cut out of the vestibule's ceiling, where a sacrificial altar of the *taurus* type is placed. Successive phases of use seem signalled by the violating *loculus*-chamber (No. 2) and the sarcophagus-alcove (x) cut into the lateral and front walls of the vestibule respectively. A relatively large alcove (No. 3), cut into the back wall of the vestibule, forms the nucleus of the initial setting. At some point, probably after the cutting of *loculus*-chamber (No. 2), violating *loculi* were cut into the alcove's back and lateral walls. Judging by Bartocci's plan (measurements not given), the hypogeum would be datable to the late Ptolemaic/ early Roman period.

49.f) Two Adjacent Hypogea: Junction of Streets No. 2171 and 2150 (Korret el-Ein)

In December 1932, two adjacent hypogea datable to the Roman period were accidently discovered in el-Wardian while digging foundations for a building at the northwestern corner of the 2171-2150 (Korret el-Ein) crossroads (Adriani 1934: 34; 1966a: 160, Catalogue Number 114; 1966b: Tavola 84, Figure 280) (Figure 189). Hypogeum (A) is accessible via a staircase that leads into a court, a vaulted sarcophagus-alcove with a stuccoed façade featuring traceable paintings, two *loculi* cut into the court's right wall, and a largely collapsed chamber approachable from the court's lateral wall where a rock-cut *loculus* is recognizable. Proceeding westwards, into the partially excavated court of Hypogeum (B), two *loculus*-chambers were found: one had two rows of three *loculi* each, cut into its back and lateral walls, the other had two rows of three *loculi* each, cut into its back wall.

49.g) Youssef Mahmoud Hypogeum

In May 1936, a hypogeum of the Roman period was accidently discovered at a 'property of Joussef effendi Mahmoud': a point not far from the timber warehouses of the Stagni Company (site 48d) (Adriani 1940a: 131-132; 1966a: 160, Catalogue Number 115; 1966b: Tavola 84, Figure 281). Severely inundated and filled with rubble debris, the subterranean structure could not have been fully excavated (Figure 190). In the rock-cut *loculi* marked (Nos. 1-5) in the plan, five sarcophagi were found, of which four have been manufactured using a reddish stone (porphyry?) and one of limestone. Above *loculus* (No. 1), the faint traces of a frieze painted floral motifs with festooned garlands and small medallions were recognizable on discovery.

49.h) Ezbet el-Yousra Hypogeum

In 1983, a rock-cut hypogeum was accidently discovered while digging foundations for a group of dwellings at Ezbet el-Yousra, in proximity to el-Wardian Tramway Station. A salvage excavation from February 25th to March 25th, 1983, was carried out on site by the Egyptian Antiquities Organization (EAO: the present-day SCA) (Choukri 2003: 699-705). An access-staircase of nine steps was exposed within a 4 x 4 m trench dug at the northeastern corner of the plot. It leads into a subterranean structure comprising a vestibule (No. 1) with a shallow-vault ceiling (Figure 191). A planned *loculus* is traceable on the vestibule's lateral wall, above a rectangular niche. *Loculus*-chamber (No. 2) (3.50 x 2.90 m) opens on the vestibule's back wall through a doorway with a segmental arch lintel flanked by two

side pillars carved out of the rock. It had a vault ceiling and two regularly arranged rows of three *loculi* each, cut into the back and lateral walls. The passage between the vestibule and chamber (No. 2) is marked by a single step (0.18 m). A wider doorway cut out of the western wall gives access to *triclinium*-like chamberette (No. 3). The latter, 0.55 m above the level of the vestibule, is reachable via a flight of three steps. It had a vault ceiling and three sarcophagi within rock-cut *arcosolia* (arched recesses). The sarcophagi are decorated with βουκράνια and solar discs carved out in relief. The access-staircase, vestibule (No. 1), and *loculus*-chamber (No.2) follow the axial plan of the initial setting. Whereas chamberette (No. 3), with its rock-cut *arcosolia* and decorated sarcophagi, was apparently added c. the 1st-2nd century AD.

Overall, the archaeological record of sites clustered east-west (46-49), from Minet el-Bassal to el-Wardian, would recall the 1st-century BC Strabonic narrative on Nekropolis, the City of the Dead:

> *And then one comes to the suburb Nekropolis, in which are many gardens and graves and halting-places fitted up for the embalming of corpses.*
>
> (Strabo, Geōgraphiká: XVII. 1.10)

3.3.2) Physical Remnants without Known Historical Reference

3.3.2.1) Civil Edifices

Site 50: Gardens of Saīd Pasha palace

Maps: V2; V4

Mosaic pavement: Southern Gabbari [Ptolemaic; Roman]

In volume III of *Revue Archéologique* (1846), a fragment of a mosaic pavement is reported to have been 'recently discovered at the gardens of Saīd Pasha palace': a point towards Gebel el-Zeitoun, the southern plateau of Gabbari, not far from the Agnew hypogeum (site 47a) (Leroux 1846: 189). The rectangular tessellated panel (8 x 4 m: approximate measurement recorded on discovery) is divided into three sections – *emblema*: the head of a medusa surrounded by serpents within radiating scales; lateral parts: motifs of flowers, fruits, and birds, rendered realistically; borders: simple patterns of bands and meander. It might have decorated a luxurious suburban building, the nature of which is conjectural, given its location within Nekropolis: a *villa suburbana* built by a well-off owner (perhaps a mortician), or a surface construction associated with funerary cults (ἡρῷον or a ground-level shrine). Remnants of surface constructions as such, with vestiges of mosaic pavements, were unearthed in el-Wardian (the Bergouin funerary complex aka the Grand Catacomb: site 49a-c) and Kom el-Shuqafa (Scavo A: site 53b; Hauptgrab and Nebengrab: site 53f-g). By analogy with another medusa floor panel, one excavated in the 1990s by the Centre d'Études Alexandrines at the former Diana Theatre (el-Ramleh: site 114), the Gabbari mosaic would be datable c. the first two centuries AD. Daszewski, however, dates it to the reign of Cleopatra VII (c. 51-30 BC) (Daszewski 1985a: 120-128, Catalogue Number 20).

The site seems to have been a well-known point of attraction for European travellers in the second half of the 19th century:

> *Après avoir été préservée tant de siècles grâce aux décombres qui la recouvraient, celte belle mosaïque ne résistera pas longtemps au soleil d'Egypte, si les Arabes (the locals) continuent, sur la demande de chaque visiteur, d'y verser l'eau à pleine outre pour lui rendre momentanément son éclat primitif.*
>
> (Leroux 1846: 189)

On the panel's state of preservation in the 1890s, Botti relates:

> *Pour l'historique de la conservation de ce monument il faut avouer que, sur les ordres de S. A. Saïd Pacha, M. l'ing. Loucovitch érigea sur la mosaïque un petit temple grec, qui s'est conservé jusqu'à nos jours. D'abord c'est à un gaffir (a local guard) que fut confiée la conservation de ce monument: le Vice-Roi étant décédé, son palais abandonné fut loué à M. le chev. Guarino. Le gafir étant mort, c'est sa femme qui garda l'endroit; des cabanes couvrirent le temple grec; le temple fut réduit en étable.*
>
> (Botti 1900-01: 520-521)

> *La celebre mosaique dite 'de Medusa' se voit encore au Gabbari, vainement abritee par un petit temple moderne imitant les heroa de la bonne epoque. Une pauvre femme indigene est installee depuis longtemps dans ce petit temple et la mosaique est aujourd'hui (towards the end of the 19th century), on ne peut plus meconnaissable.*
>
> (Botti 1898c: 113, XCVII. Mosaïques. 1)

> *Il celebre mosaico di Medusa può dichiararsi perduto per sempre.*
>
> (Botti 1893: 18, Necropoli Occidentale. Gabbari)

Unsurprisingly, therefore, the medusa mosaic pavement, as well as Loucovitch's 'petit temple grec', had severely deteriorated *in situ*, thus the decision taken at the time by the Archaeological Society of Alexandria to transport the extant fragments of the panel to the premises of the Graeco-Roman Museum (Inventory Number 3696) (Breccia 1914a: 211, Sale 14; 1922: 198, Room 14; Schreiber 1908c: 173-174, 176-177, Abbildung 112).

3.4) Western District (WDist.)

3.4.1) Physical Remnants Corresponding to Known Historical Narratives

3.4.1.1) Civil Edifices

Site 51: SW. corner of the ancient enclosure

Maps: V1; V2; V4

***Hippodromos*; *circus*: Karmouz [Ptolemaic; Roman]**

During the Napoleonic expedition, in 1798-99, an oblong depression was recorded along the southern slopes of the Sarapeion hill aka the Rhakotis/Karmouz acropolis (site 52) (Lacroix and Daressy 1922: 30; Saint-Genis 1818a: 72-76; 1818b: 49-51). It was excavated into the northern sector of Kom el-Shuqafa, thus yielding the semicylindrical shape of the rocky plateau (Figures 192-193). The reported vestiges seem to have not survived the nearby construction works of the 19th century (Gallice's Fort Kom el-Hadid aka Borg Abu Hashem), given the accounts and photographs of Giuseppe Botti and Expedition Ernst Sieglin at the turn of the century (Botti 1893: 18; 1897a: 50-54; 1898c: 109; 1898d: 5; Schreiber *et al.* 1908b: Tafel X). Its identification as a *circus* developed for chariot-racing is based on scant remains of the *spina* (median divider between lanes) and *in-situ* seats marked (k) in the *carte* of *Description de l'Egypte* (Figures 194-195). The oblong construction, curved at either end, had an overall length of 615 m, with a 560 m long track (McKenzie, Gibson, and Reyes 2004: 103). The location of the *circus* at the southwestern corner of the ancient enclosure recalls Strabo's 1st-century BC narrative in *Geōgraphiká*:

> *Inside (east of) the (Mareotis-Eunostos navigable) canal, both to the Sarapium and to other sacred precincts of ancient times, which are now almost abandoned on account of the construction of the new buildings at Nicopolis; for instance, there are an amphitheatre and a stadium at Nicopolis, and the quinquennial games are celebrated there; but the ancient buildings (in Alexandria) have fallen into neglect.*
>
> (Strabo, Geōgraphiká: XVII. 1.10)

The Strabonic narrative suggests the presence of a certain athletic edifice in proximity to the Rhakotis Sarapeion, one that has 'fallen into neglect' on account of the new amphitheatre and *stadion* at Nikopolis. More importantly though, datable c. 25 BC, at the advent of Augustan rule, the narrative opens the possibility of a structure, perhaps Ptolemaic in origin (a *hippodromos*), that was remodelled into a *circus* in the Roman period. The relative proximity between the *hippodromos-circus* and the Sarapeion seems indicative of two contextually associated constructions: the racecourse is likely to have served as a suitable venue for the grand processions of Ptolemy II Philadelphos (c. 285/2-246 BC) while passing by the Rhakotite sanctuary of the city's syncretic deity, Sarapis, hence the notion of an athletic edifice contemporary with the Sarapeion's earlier phases of construction in the 3rd century BC. This is backed by the fact that Ptolemy II Philadelphos had instituted in honour of his deceased father, Ptolemy I Soter, the quinquennial Ptolemaieia (c. 280-278 BC): 'a gymnastic, musical, and equestrian contest to be equal in rank with the Olympic Games, preserving his (piety) towards the gods and maintaining his goodwill towards his (ancestors); thus, for this purpose, he is inviting (the Aegean) Islanders and the other Greeks to (vote) that the contest should be equal in rank with the Olympic Games' (Austin 1981: 359-360, Number 218: a decree of the League of Islanders on the acceptance of the Ptolemaieia – date of issue: c. 280 BC; Fraser 1972: 224, 230-231).

At the time, the city of Alexandria must have had a hippodrome for the hosting of its quinquennial athletic games and Dionysiac processions. Athēnaios Naukratitēs relates in *Deipnosophistaí* (written c. the early 3rd century AD):

> *We will proceed to the shows and processions (of Dionysos) exhibited (in Alexandria). For it passed through the stadium which there is in the city.*
>
> (Athēnaios, Deipnosophistaí: V. 27)

Whereas, according to Epiphanius of Salamis, the racecourse in Alexandria was known as the Lageion in memory of Lagos, the father of Ptolemy I Soter. In the late 4th century AD, the bishop adds:

> *The Ptolemies, who were descended from the Rabbit (i.e. from Lagos), for whom the racecourse, when built in Alexandria, was called, only in the same Alexandria, the Rabbity (Lageion).*
>
> (Epiphanius, On Weights and Measures: 12.53d)

It should be mentioned that besides the *hippodromos-circus* at Rhakotis, there were at least two athletic counterparts elsewhere (Aphthonius, Progymnasmata: 12; Maccabees: III. 4.11; Plutarch, Lives, Antonius: LXXIV) – (1) in the city: a *stadion* is recorded by Polybios in the 2nd century BC (Polybios, Histories: XV. 30.1-10; section 3.7.3.1, D); (2) towards the eastern suburbs, approximately at the depression identified with present-day el-Ibrahimiya Qibly and Sporting: a *hippodromos* that Strabo locates outside the urban enclosure (Strabo, Geōgraphiká: XVII. 1.10; sections 2.1.2.2.1, 3.9.3.1, J).

3.4.1.2) Religious Edifices

Site 52: SW. corner of the ancient enclosure

Maps: V1; V2; V4

Sarapeion: Karmouz [Ptolemaic; Roman]

The site of Amud el-Sawari in the modern district of Karmouz is frequently featured in the descriptive memoires of 18th-century European travellers (Pococke 1743; Norden 1755, 1795), who were naturally attracted to a *colossus* granite column, the so-called Pompey's Pillar, which gives the hill-site its Arabic name. In 1798-99, during the Napoleonic expedition, the first scientific study of the column was undertaken by French architect Charles Norry (Figure 196) (Norry 1818: 1-6). The identification of the mound with the Rhakotis acropolis, the historical site of the sanctuary of Sarapis, was then proposed by French orientalist A.I.S. de Sacy in 1810 (Adriani 1966a: 90-100, Catalogue Numbers 54-55, Figure F; 1966b: Tavola 28, Figure 102, Tavola 29, Figures 104-105, Tavola 30, Figures 106-109, Tavola 31, Figures 110-112; De Sacy 1810: 182-183, 230-240; Sabottka 2008: 7, Note 29). In 1863-66, foundations, fragmentary architecture, and votive statuary, excavated *in situ* by el-Falaki, have all confirmed the earlier identification (Mahmoud-Bey 1872: 53-56). In the latter decade of the 19th century (1894-98), Giuseppe Botti investigated the site (Botti 1895; 1897a; 1897c), before successive seasons of excavation were carried out in 1900-01 during Expedition Ernst Sieglin. The results of the campaign were planned for publication in *Ausgrabungen im Königsviertel und im Sarapeion von Alexandria*, the unpublished band (III) of the German enterprise *Expedition Ernst Sieglin: Ausgrabungen in Alexandria* (Introduction II.e). The unpublished material was collected and reedited by Michael Sabottka before its final release in 2008 as volume XV of the IFAO's *Études Alexandrines* (Sabottka 2008). Intermittent investigation in the first quarter of the 20th century (1904-06, 1914-15, and 1919-20) pertains to Evaristo Breccia (Breccia 1906; 1907d; 1916; 1921). Further excavations at the hill were directed by Alan Rowe in 1941-42 (Rowe 1942b; 1946; Rowe and Rees 1957). In 1997-98, accidental discoveries subsequent to maintenance work on site had demanded a co-intervention from the local authorities and the Centre d'Études Alexandrines (Abd el-Fattah 2002: 25-27; Bonifay *et al.* 2002: 39-84; Hairy 2002a: 29-37; 2002b: 85-98).

The localisation of the sanctuary in the western district of the ancient city is based on Strabo's 1st-century BC narrative in *Geōgraphiká* (Strabo, Geōgraphiká: XVII. 1.10). Whereas other ancient authorities account for the origin of the Hellenised cult-image of the Memphite deity Osor-Hapi or the Apis bull amalgamated with Osiris:

> *Ptolemy Soter saw in a dream the colossal statue of Pluto (Hades) in Sinope (a Black Sea town in present-day Turkey), not knowing nor having ever seen how it looked, and in his dream the statue bade him convey it with all speed to Alexandria.*
>
> (Plutarch, Moralia: 28)

On its arrival, two senior priests, Timotheos (Athenian) and Manetho (Egyptian), would convince Ptolemy that it was the statue of none other of the gods but Sarapis. The early-2nd-century AD narrative of Plutarch echoes contemporary Tacitus, who, in turn, relates:

> *A temple, befitting the size of the city (of Alexandria), was erected in the quarter called Rhakotis; there had previously been on that spot an ancient shrine dedicated to Sarapis and Isis.*
>
> (Tacitus, Histories: IV. 48)

The archaeological evidence from previous excavations shows at least three principal phases of construction for the historically attested Rhakotis sanctuary (Figure 197):

Phase I: Ptolemaic: first half of the 3rd century BC

(I) Foundations pertaining to structures on either side of the main temple of Ptolemy III Euergetes I (Figures 198-201). They antedate the Euergetean ναός and were built off-axis at an oblique angle to the urban grid. One chamber excavated immediately to the east of the Euergetean ναός had a pebbled mosaic pavement (4.60 x 5 m; white pebbles of varied sizes: 10 – 40 mm) on which a sacrificial altar (0.65 x 0.84 m; GRM, Inventory Number 56) of two superimposed limestone blocks well-stuccoed and inscribed with the names of Ptolemy II Philadelphos (285/2-246 BC) and his sister-wife, Arsinoe II, was found *in situ* on February 16th, 1901 (Breccia 1911: 3-4, Catalogue Number 6; Daszewski 1985a: 114, Catalogue Number 8; McKenzie 2009: 775; McKenzie, Gibson, and Reyes 2004: 83-84; Sabottka 2008: 43-66, Abbildungen 5-7, Tafeln 7-9, 11-18). The dedicatory inscription on the altar reads:

> βασιλέως Πτολεμαί[ου] ναι [Ἀρσινόης Φιλαδέλφου] Θεῶν [Σωτήρων].
>
> *(Altar of) King Ptolemy and [Queen Arsinoe Philadelphos], (descendants of?) the [Saviour?] Gods.*

This earlier presence of the historically attested Sarapis and Isis cult at the site of the Rhakotis acropolis (see *supra*, Tacitus, Histories: IV. 48) is archaeologically attested by fragments of inscribed pedestals bearing Greek inscriptions that record the dedication of votive statuary to both deities:

GRM – P.8834

A fragmentary pedestal of white marble datable, on palaeographical grounds, c. 300-275 BC.

Ἀσκληπιόδ̣[. .ος Εὔ]-
βουλος] Εὐ[βούλου]
vac. Σαράπ[ει].

Asklepiod[otos] (or Asklepiod[oros]) and [Eu]boulos, son of Eu[boulos (?)], (dedicated this) to Sarapis.

GRM – P.9025

Eleven fragments of a rectangular pedestal of dark grey granite datable, on palaeographical grounds, c. 300-275 BC.

a. Δηλοκ[λῆς (?) ἐπ]οίε̣[ι].
b. Ἀριστόδημος Διοδ[. .]ο̣υ
Ἀθηναῖος Σαράπει καὶ Ἴσιι.

a. Delok[les](?) made (this).
b. Aristodemos, son of Diod[...]os, Athenian, (dedicated this) to Sarapis and Isis.

(I') A contemporary cult in practice is attested elsewhere by two dedicatory inscriptions to Sarapis and Isis datable, on palaeographical grounds, to the reign of Ptolemy I Soter (c. 306-285/2 BC; Muzeum Narodowe w Warszawie, Inventory Number 198762) and to the early years of the reign of Ptolemy II Philadelphos (c. 285/2-279/8 BC; GRM, Inventory Number P.8597) (Fraser 1956: 49-56, Planche I; 1972: 267-271). The latter records a shrine to the deities contemporary with construction phase (I) at Rhakotis. The epigraphs read:

MNW – 198762

Ὑπὲρ βασιλέως Πτολεμαίου
καὶ τῶν τέκνων
Σαράπιδι Ἴσιδι
Νικάνωρ καὶ Νίκανδρος
Νίκωνος Πολυδεύκειοι.

Nikanor and Nikandros, sons of Nikon, of the deme Polydeukeios, (dedicated this) in favour of King Ptolemy and his children, to Sarapis and Isis.

GRM – P.8597

Ὑπὲρ βασιλέως Πτολεμαίου
τοῦ Πτολεμαίου καὶ Βερενίκης
Σωτήρων Ἀρχάγαθος Ἀγαθοκλέυς
ὁ ἐπιστάτης τῆς Λιβύης καὶ ἡ γύνη
Στρατονίκη Σαράπιδι Ἴσιδι τὸ τέμενος.

On behalf of King Ptolemy, the son of Ptolemy and Berenike, the Saviours, Archagathos, the son of Agathokles, the epistates of Libya, and his wife Stratonike, (dedicated) the sacred enclosure to Sarapis and Isis.

Phase II: Ptolemaic: second half of the 3rd century BC

(I-IIa) The so-called T-shaped building enclosing a quadrangular entry to underground rock-cut passages, and the nearby so-called south building. In fact, both structures are connected through an L-shaped secret passageway dug at the former's southern wall to access the latter from its western wall. The misalignment of the Euergetean *oikos* building (construction phase IIb) to the adjacent contemporary ναός is only justified by its relative location to the northern perimeter of the pre-existing T-shaped building. An arrangement as such denotes an intermediate phase of construction (IIa) for the complex of the T-shaped and south buildings, which seems to have been initiated perhaps early in the reign of Ptolemy III Euergetes I. It overbuilds earlier structures of construction phase (I), the off-grid, scant vestiges of which appear in the Expedition Ernst Sieglin map published in 2008 by Michael Sabottka (see *supra*, Figure 198).

(IIb) Epigraphic evidence in the form of two deposits of ten bilingual Greek-hieroglyphic foundation plaques: one each of gold, silver, bronze, faïence, and greenish-turquoise glazed terracotta, and five of glass (Graeco-Roman Museum, Inventory Numbers P.8357-8366 and P.9431-9440). They record a dedication made by Ptolemy III Euergetes I (c. 246-221 BC) to the syncretic deity. The Greek dedicatory reads:

Βασιλεὺς Πτολεμαῖος Πτολεμαίου
καὶ Ἀρσινόης, Θεῶν Ἀδελφῶν
Σαράπει τὸν ναὸν καὶ τὸ τέμενος.

King Ptolemy, son of Ptolemy and Arsinoe, the Sibling Gods (Θεοὶ Ἀδελφοί), (dedicated) to Sarapis (in hieroglyphic: Osor-Hapi) the shrine (ναός) and the sacred enclosure (τέμενος).

In archaeological terms, the Euergetean phase of construction is documented by foundation deposits and rock-cut foundation trenches with ashlar masonry. They represent the colonnaded sacred enclosure (τέμενος), the main temple of Sarapis (ναός), and the adjacent *oikos* building (Figure 202). The acropolis itself was ascended from the eastern slope by means of a monumental rock-cut staircase partially constructed of stonemasonry, at the base of which a Nilometer was installed for measuring the water level of the river's annual flood. Two gateways, integrated into the eastern side of the colonnaded enclosure, provided access to the sacred precinct. The sanctuary was approachable from the northern slope via transversal street R8, which seems to have functioned as a δρόμος (walkway) to the temple (section 2.2.3).

(IIc) Under Ptolemy IV Philopator (c. 221-204/3 BC), a shrine to Harpocrates (8.80 x 5 m) was added to the east of the main temple (ναός), in fact adjoining it. Its construction is recorded by two deposits of ten bilingual Greek-hieroglyphic foundation plaques: one each of gold, silver, bronze, and terracotta, and six of greenish opaque glass and/or faïence (Graeco-Roman Museum, Inventory Numbers P.10026-10035 and P.10037-10046). The Greek dedicatory reads:

> Βασιλεὺς Πτολεμαῖος βασιλέως
> Πτολεμαίου καὶ βασιλίσσης Βερενίκης
> Θεῶν Εὐεργετῶν Ἁρποχράτει κατὰ
> πρόσταγμα Σαράπιδος και Ἴσιδος.
>
> *King Ptolemy, son of King Ptolemy and Queen Berenike, the Beneficent Gods (Θεοί Εὐεργέτης), (dedicated the shrine) to Harpocrates, by order of Sarapis (in hieroglyphic: Osor-Hapi) and Isis.*

The colonnaded Euergetean enclosure (173.7 x 77 m) (Rowe and Rees 1957: 497) is aligned with the canonical secondary intercardinal orientation of the urban grid. Fragmentary architecture, such as Corinthian capitals, a fragment of a Doric triglyph, and an Alexandrian cornice, was recovered in 1900-01 during Expedition Ernst Sieglin and taken to the premises of the Graeco-Roman Museum. Overall, the excavated repertoire of structural and decorative material seems to hint at pharaonic artistic features, chiefly sculptural, prominently sphinxes, constantly, rather willingly employed within a classical architectural setting: an intrinsic trend of Alexandrian Graeco-Egyptian eclecticism.

The Euergetean temple, which appears frequently on Roman coinage dating from the reign of Trajan (c. AD 98-117) to year 16 of Markus Aurelius (c. AD 175/6) (McKenzie, Gibson, and Reyes 2004: 86), may have survived to the 2nd century AD, as indicated by testaments of early Christian theologians, namely Clement of Alexandria and Jerome, before it was burnt c. AD 181:

> *This fire it was that burnt up the temple in Argos together with its priestess Chrysis, and also that of Artemis in Ephesus (the second after the time of the Amazons); and it has often devoured the Capitol at Rome, nor did it spare even the temple of Sarapis in the city of Alexandria.*
>
> (Clement of Alexandria, Προτρεπτικὸς πρὸς Ἕλληνας: IV. 47)

> *(The year) 240th Olympiad (c. AD 181): the Temple of Serapis at Alexandria burned down.*
>
> (Jerome, Chronicon: 240th Olympiad)

The hypothesis of a 'Daughter Library at the Sarapeion' has its origin in early Christian sources. One of them is Tertullianus, a Carthaginian writer, who, in AD 197, records:

> *And in Ptolemy's library near the temple of Sarapis, among other curiosities, are these sacred writings shown to this day.*
>
> (Tertullianus, Apologeticum: XVIII. 57)

Furthermore, in a 4th-century AD treatise on weights and measures, Epiphanius of Salamis relates:

> *The (Hebrew) Scriptures, when they had been transferred to the Greek language, were placed in the first (Royal) library, which was built in the Broucheion ... and there arose in addition to this library, a second up in the Serapeum, called its daughter.*
>
> (Epiphanius, On Weights and Measures: 11.53c)

A possible location for the historically attested so-called 'Daughter Library' within the sanctuary of Sarapis is suggested by the Greek sophist and rhetorician Aphthonius of Antioch, who provides a detailed description of the Alexandrian Sarapeion c. the second half of the 4th century AD:

> *Chambers are built within the colonnades. Some are repositories for the books, open to those who are diligent in philosophy and stirring up the whole city to mastery of wisdom.*
>
> (Aphthonius, Progymnasmata: 12)

The narratives of Aphthonius would recall those chamberette-like structures excavated along the western and southern colonnades of the Rhakotite τέμενος. It may be proposed, therefore, that books were deposited in rooms purposely built into the stoa of the Sarapeion's central courtyard to serve as repositories, which were secondary to those of the Mouseion's library at the Broucheion (section 3.7.3.1, E).

Phase III: Roman: late 2nd to early 3rd century AD

(III) The rebuilding of the sanctuary (c. AD 181 to 215-17) under Roman rule would have commenced under Commodus (c. AD 180-92) and completed by the time of Caracalla (c. AD 211-17), with most of the work being carried out during the lengthy reign of Septimius Severus (c. AD 193-211). By the time Caracalla had visited the city (AD 215) and made sacrifices at its principal sanctuary in Rhakotis, the main temple of Sarapis had been rebuilt on a larger scale and the Euergetean enclosure had extended to the east and north (205.70 x 105.55 m), with a large square pool added within (Figure 203). Whereas Diocletian's Column, aka Pompey's Pillar, was erected later, by AD 298. The occasion and commissioner of such a *colossus*, situated c. 1,500 m to the south of the Tulunid circuit walls, are recorded by a Greek dedicatory inscribed

onto its pedestal (Adriani 1966a: 97, Catalogue Numbers 54-55; Norry 1818: 3):

> τὸ[ν τι]μιώτατον Αὐτοκράτορα,
> τὸ[ν] πολιοῦχον Ἀλεξανδρείας,
> Διο[κλη]τιανὸν τὸν ἀν[ίκη]τον,
> Ποὺπ̣[λιος] ἔπαρχος Αἰγύπτου
> — — — ? — — —
>
> *To the most righteous emperor, the tutelary of Alexandria, Diocletian, the invincible; (this monument is erected by) (Aelius) Publius, praefectus Aegypti.*

The granite *colossus* consists of a pedestal, base, shaft, and capital. A 5th-century AD mosaic from Σέπφωρις (Sepphoris, Galilee) shows a statue of Diocletian atop the structure commemorating the emperor's decisive victory over the rebellious usurper Domitius Domitianus (Capponi 2011: 58-59). The third, Roman phase of construction is represented on site by foundations of relatively small, roughly-hewn blocks of limestone in *opus caementicium*. Recent accidental discoveries near the junction of Amud el-Sawari and Abu Mandur streets, made during maintenance work to install a new gateway at the southeastern entrance to the archaeological park, include several contemporary finds: a cistern, a fragment of a mosaic pavement found *in situ*, and an *anta* of pink granite.

Around AD 391, the emperor Theodosius I (c. AD 379-95) ordered all pagan temples across the empire to be closed. Complying with the imperial decree, Theophilus, then Patriarch of Alexandria, instructed the termination of the Sarapeion. The event is documented through an illustrated fragment from the Alexandrian World Chronicle, a corpus of fragmentary papyri datable to the 5th-6th century AD. It depicts Theophilus as a triumphant bishop holding a gospel in one hand while standing atop the ravaged temple where the cult-statue of the syncretic deity is deliberately portrayed inferior to him.

3.4.1.3) Funerary Structures

Site 53: SW. corner of the ancient enclosure

Maps: V2; V3; V4

Necropolis: Kom el-Shuqafa [Roman; Late Antique]

In the 19th century, sporadic discoveries of funerary structures (site 53a) were made intermittently at a semicylindrical rocky plateau littered with ceramic fragments, known as Kom el-Shuqafa: the Mound of Shards. To the east extends the district of Karmouz; to the north and northeast are two renowned sites: a *hippodromos-circus* (51) and the Sarapeion (52) respectively. In antiquity, the mound (maximum height: 30 m; now levelled) would have marked the southern fringe of the Egyptian borough, Rhakotis: the southwestern corner of the Graeco-Roman city. Its existence has led cartographers, notably Mahmoud el-Falaki and Heinrich Kiepert, and Gratien Le Père before them, to conjecture a trapezoidal projection for that segment of the circuit walls. A setting as such rather tallies with the course of the southwestern defences in the Ptolemaic period. The distributional patterns of funerary structures excavated into the *kom*, and datable c. the 1st to the 5th-6th century AD (Figures 204-205) (site 53b-h), suggest a northward adjustment in the defensive lines, initiated under the Roman Principate. At the time, the urban defences might have run immediately along the perimeter of the developed *circus*. However, the validity of this assumption is only maintained when ruling out the possibility of intramural burials at Kom el-Shuqafa.

Funerary practices at Kom el-Shuqafa seem to have commenced at times during which some of the nearby *necropoleis* located immediately to the west of the Mareotis-Eunostos navigable canal were being abandoned, such as the case with Minet el-Bassal for instance (site 46). The assigned chronology at Kom el-Shuqafa shows that the landmark peripheral mound, situated on the southwestern fringe and conventionally adapted to defensive purposes under the Ptolemies, as in modern times with Barthélémy Gallice's Fort Kom el-Hadid aka Borg Abu Hashem, was apparently utilized in the opening decades of imperial rule to receive interments, perhaps in response to burial-space economy within the earlier hypogea of suburban Nekropolis: a phenomenon justifying the successive phases of tomb exploitation to the west of the canal, archaeologically attested by subterranean galleries and chambers with violating rock-cut *loculi* seeking to accommodate as many corpses as possible (sites 46-49).

53.a) Earlier Encounters: Wescher, Pugioli, and Ruphini

Around 1855, a hypogeum was accidently discovered on the northeastern slopes of the rocky plateau used by the time as a stone quarry providing Barthélémy Gallice with the raw material needed for fortifying this peripheral sector of Mohamed Ali's revived city:

> *Ben prima che l'immortale Mohammed Aly rilevasse Alessandria dalle sue rovine, la necessità delle difese contro l'invadente politica europea aveva consigliato la distruzione di questa parte della necropoli (that of Kom el-Shuqafa), che offriva una cava inesauribile di calcare a buon mercato ed era molto prossima alla città. Di questa distruzione è memoria anche negli annali della grande Spedizione Francese. Fra il 1820 ed il 1830 la distruzione fu spinta alacremente per i bisogni del materiale a nuove costruzioni. Una parte notevole di queste catacombe apparve nel 1820 e, visitata dal Minutoli, fu tosto*

> *ricoperta: il Brocchi, al quale è vergogna che gli italiani d'Egitto non abbiano murata una pietra che lo ricordi a questa generazione floscia ed impotente, altre ne visitò nel 1822 'presso i Granai di recente costrutti dal Bascià' (leggi 'Mohammed Aly').*
> *Altro sepolcreto fu ivi visitato e descritto dall'Agnew nel 1836 (site 47a); un oratorio cristiano (the Wescher hypogeum) singolarissimo vi fu scoperto nel 1858 (c. 1855), e, benché illustrato dal Wescher nel 1865 e poi dal Neroutzos, fu distrutto perchè dei materiali si avantaggiasse il nuovo molo del porto occidentale.*
> (Botti 1893: 19-20)

Two years later, in 1857, German Egyptologist Heinrich-Karl Brugsch had studied the find before reporting it in 1860 (Brugsch 1860: 3). In the winter of the same year, Tassos Neroutsos made a visit. His recordings, however, had not been published until much later (Neroutsos 1875: 29-39; 1888: 41-53). An illustrative account of the hypogeum was given in 1865 by French archaeologist Carle Wescher and Italian archaeologist Giovanni Battista de Rossi following an inspection in the summer of the previous year (Wescher 1864: 190; De Rossi 1864: 88; Wescher and De Rossi 1865: 57-64). By October 1892, when Giuseppe Botti began his surveys at Kom el-Shuqafa, having in mind the earlier discoveries, the hypogeum was no longer in place (Botti 1893: 20).

In design, the hypogeum (often referred to as the 'Wescher tomb') seems to have followed the conventions of Alexandrian funerary architecture, while displaying painted themes that are Christian in essence. It exemplifies, as the case with other hypogea with Christian motifs, the frequent reuse of pagan sepulchres by 4th-7th-century Christians, adopting and adapting Graeco-Roman artistic themes into biblical narratives. The surviving parts of the hypogeum are known primarily from the Wescher-Rossi illustrative accounts, hence the assigned name, and from that of Neroutsos (Figure 206). It is accessible via two staircases of 24 steps each, beneath a vault ceiling. They lead into a quadrangular court (6 x 4 m) with an *exedra* cut into the western wall, featuring a semicircular bench and a half-domed stuccoed seashell (analogies, the *exedrae* of the Hauptgrab: site 53f). A rectangular basin with a cylindrical well is found at the northeastern corner of the court (varies in Wescher's plan from Neroutsos'). A *loculus*-chamber (8 x 2 m) opens on the eastern wall, with twenty-eight *loculi* cut into the lateral walls and four into the back wall. The nucleus of the initial setting is a *triclinium*-like chamberette (4 x 3.50 m) cut into the court's back wall. Wescher recorded two Corinthian capitals coated with a layer of plaster, bearing Christian motifs. Painting decoration: figures of saints, prophets, and angels were found on all four walls of the court, flanking the entrance to the burial-chambers, the *exedra*, and even the space between both staircases. Prominent among the scenes are those of the *exedra* – (1) Saint Mark and Saint John appear on either side of the entrance; (2) inside the *exedra*, above the carved-out bench, is a narrative frieze exhibiting three allegorical scenes: the dogma of the Eucharist and the miracle of the multiplication of the loaves and fish (centre), the marriage at Cana (left), and the sacred *agape* (right) (Adriani 1966a: 185, Catalogue Number 128). Judging by ground plan and architectural setting, the initial phase of construction would be datable to the Roman period, suggesting a hypogeum pagan in origin. A successive phase of (re)use is represented by Christian paintings of c. the 5th-6th century.

Around 1870, a hypogeum (labelled 'Typus ε') was discovered at a site not far from Botti's Scavo (B) (53c). It was inspected by Pietro Pugioli, who later communicated his observations to Theodor Schreiber (Adriani 1966a: 186, Catalogue Number 130; 1966b: Tavola 104, Figure 352; Schreiber 1908c: 167-168, Abbildung 101). It consists of (i) an access-staircase, (ii) an *atrium*, (iii) a vestibule, (iv) a square chamber containing four mobile sarcophagi, and (v) a rectangular *loculus*-chamber with thirty-four rock-cut *loculi* arranged on all three walls (Figure 207). Further to the east of the Wescher hypogeum, 'plus près du village arabe de Karmouz', a funerary structure was unearthed c. 1876 before being destroyed shortly after. It is known primarily from Neroutsos' descriptive account published in 1888 yet without a plan (Adriani 1966a: 186, the latter paragraph of Catalogue Number 128; Neroutsos 1888: 53-54; Schreiber 1908d: 21). The surviving sections follow an axial plan and include a court opening onto a burial-chamber, with both having a vault ceiling. 'L'entrée de la chapelle (hypogeum) présentait la forme d'un édicule grec ou romain, avec ornementations en style égyptien': perhaps, an *aedicula* flanked by pillars with Egyptianizing papyrus and lotus capitals. The presence of the local element is reinforced by a pediment decorated with a winged solar disc carved out in relief between a pair of *uraei* (rearing cobras). Inscriptions in red ochre are painted above each of the side pillars – on the right: ΡΟΥΦΕΙΝΕ ΕΥΨΥΧΕΙ; on the left: ΡΟΥΦΗΝΑ ΕΥΨΥΧΙ: be of good cheer (be cheerful) Roupheine/ Rouphina (the deceased). The hypogeum thus became known as the 'Chapel of Ruphini'. On the grounds of the recorded epitaphs, Neroutsos identified the deceased as 'early Christians from the time of Antoninus Pius'. The burial-chamber (8 x 4.50 m, height: 4 m) had fifty-four rock-cut *loculi* regularly arranged into three rows on all three walls.

53.b) Scavo (A): Giuseppe Botti (1892-93); August Thiersch (1902)

In 1892-93, Giuseppe Botti excavated a complex of at least four hypogea contiguous with one another: Scavo (A) (Figures 208-209). It was revisited by German architect August Thiersch in 1902 (Adriani 1966a: 180-

182, Catalogue Number 124; 1966b: Tavola 102, Figures 343, 345; Botti 1893: 22-25; Schreiber 1908e: 44-56). Each of the hypogea is given a label that corresponds to its constituents. Hypogeum (ABC) is accessible via a staircase (a-a'-a'') that leads into a court (B) (5.65 x 4.15 m, height: 15 m) with a circular well (b) (diameter: 0.75 m) dug near the southwestern corner. Two *loculus*-chambers are reachable from the court: the partially excavated chamber (A) had a vault ceiling and rock-cut *loculi* into the lateral walls; similarly, chamber (C) had rock-cut *loculi* arranged into three regular rows on either lateral wall. Hypogeum (HD), excavated on a level higher than that of (ABC), comprises the partially excavated, rather conjectural square court (H), which opens onto a burial-chamber (D) with thirty-three rock-cut *loculi* arranged into three regular rows. Other inaccessible compartments (marked i, j, and k in Thiersch's plan) appear to open on the largely collapsed walls of court (H). The excavated sections of Hypogeum (EFG) consist of an access-staircase (G), a *triclinium*-like chamberette (E) with three sarcophagi beneath rock-cut *arcosolia*, and a burial-chamber (F) with twenty-four rock-cut *loculi* arranged into three regular rows. Hypogeum (EFG) seems to extend southwards to join (ABC) at *loculus*-chamber (C), thus forming an L-shaped funerary complex (conjectural sections are represented by a dashed line in Thiersch's plan). A surviving section of yet a fourth hypogeum (I) is recorded immediately to the west of the main staircase (G). Towards the southeast, a flight of steps (ee') follows a different orientation to the other structures, hence the possibility of inaccessible compartments pertaining to a funerary complex contiguous with that under investigation. At about 11.40 m above the level of the subterranean complex, the remains of a mosaic pavement were unearthed, indicating the presence of surface constructions on site (analogies: sites 49a-c, 50, 53f-g). The *loculus*-closing slabs found in burial-chamber (D), especially the one with a false door carved out in relief, suggest a possible date for Hypogeum (HD) c. the late 1st century BC-early 1st century AD. Hypogea (ABC) and (EFG) would be slightly later, c. the first half of the 1st century AD.

53.c) Scavo (B): Giuseppe Botti (1892); August Thiersch (1902)

In 1892, a large hypogeum was excavated by Botti at Kom el-Shuqafa, to the north of Scavo (A). Thiersch reinvestigated the find in 1902 and, as the case with Scavo (A), produced a plan which varies partially from that of Ernst Bauer, Botti's draughtsman (Figure 210) (Adriani 1966a: 182-183, Catalogue Number 125; 1966b: Tavola 99, Figure 335, Tavola 102, Figure 346; Botti 1893: 25-27; Schreiber 1908f: 57-63). The hypogeum is basically divided into two sections. Section (I) is accessible via a staircase (ee') that leads into a court (H) (6 x 6 m). The latter opens onto a burial-chamber (B) (21 x 5.25 m) with ten symmetrically arranged sarcophagus-alcoves (2.10 x 1.50 m) cut into the lateral walls. Burial-chamberette (A) opens at the eastern end of (B). At its centre, a sarcophagus of black granite (a) (2.15 x 1.25 m) is placed. Two alcoves (b and c), cut into the side walls of (A), received sarcophagi of marble of which one is decorated with festooned garlands. Towards the innermost part of (A) are three subordinate and irregularly-cut annexes. At one corner of the northern annex, a circular well (p) is dug. Successive modification within section (I) includes a *triclinium*-like chamberette (F) and chamberettes (G) and (E). Section (II) encompasses an intermediate chamber (D) (6.20 x 10 m) accessible through court (H). *Loculus*-chamber (C) (21 x 5.50 m) opens on the eastern wall of (D). It had ninety rock-cut *loculi* arranged into three regular rows. *Loculus*-chamberette (f) opens on the western wall of (D). The compartments of section (II) bear faint traces of Graeco-Egyptianizing motifs. The hypogeum of Scavo (B) would be datable, by analogy with other hypogea (sites 49c, 53g), c. the 1st-2nd century AD.

53.d) Scavo (C): Giuseppe Botti (1892)

In 1892, a hypogeum representing Botti's Scavo (C) was discovered at Kom el-Shuqafa, to the south of Scavo (A) (Adriani 1966a: 183, Catalogue Number 126, Figure Z; 1966b: Tavola 102, Figure 344; Botti 1893: 27; Schreiber 1908g: 64-67). This one, as the complex of Scavo (A), is partially excavated (Figure 211). It had a quadrangular court (D) with walls unusually constructed of stonemasonry (limestone blocks) and coated with a layer of plaster. Three narrow passages (marked e, f, g in Bauer's plan) lead into inaccessible compartments of which a confined section is reachable through (g). The partially excavated chamber seems to have at least two symmetrically arranged sarcophagus-alcoves of limestone blocks coated with a layer of plaster (not in Bauer's plan). Analogies with section (I) of Scavo (B) suggest a gallery of alcoves and/or *loculi* opening on the lateral wall of the chamber in question, to run lengthwise parallel with burial-chamber (B). The latter is accessible from court (D) via an intermediate vestibule (C) that had two recesses cut into the side walls. Burial-chamber (B) had four symmetrically arranged sarcophagus-alcoves cut into either side wall, and three mobile sarcophagi placed towards the entrance to burial-chamber (A). One sarcophagus of nummulithic limestone, decorated with various motifs, including festooned garlands, pendant grapes, genies, and Βουκράνια, was later transferred to the premises of the Graeco-Roman Museum. Funerary epitaphs were found painted in black ochre on the plastered pillars of burial-chamber (B), between the rock-cut alcoves. Analogies with the hypogeum of Scavo (B) (site 53c) indicate a contemporary construction datable c. the 1st-2nd century AD.

53.e) Scavo (D): Giuseppe Botti (1892, 1897); Alan Rowe (1941-42)

Scavo (D), 'cominciato (in 1892) ma smesso per mancanza di mezzi', to quote Giuseppe Botti, resumed in 1897, before it was revisited later by Alan Rowe in 1941-42 (Adriani 1966a: 183-184, Catalogue Number 127, Figure Za; 1966b: Tavola 102, Figure 344; Botti 1893: 27-28; 1898d: 15-24; Rowe 1942a: 6-9, 37-39; Schreiber 1908h: 68-73). It was excavated southwest of the Hauptgrab (site 53f). The hypogeum is accessible via an L-shaped staircase of 50 steps (cc') ending with a wider corridor (C) that leads into the subterranean structure (Figure 212). Immediately to the left of the staircase, before reaching corridor (C), is a vaulted flight of 10 steps (gg') terminating with a relatively large pedestrian staircase of three steps (i) carved out at the entrance to chamber (J) (6 x 8 m). Besides the pair of pillars constructed of masonry at the centre, an L-shaped corridor (K) opens on the lateral wall of chamber (J) to allow communication with neighbouring (inaccessible) compartments. To the left of staircase (gg'), alcove (h) is partially occupied by a rock-cut bench. Near the southeastern corner of corridor (C), ramp (f) appears to lead up to an adjacent hypogeum excavated on a higher level to Scavo (D). A third staircase (dd') descends towards basin (e). The main court (B) communicates with at least three burial-chambers partially excavated by Rowe. The only accessible is a *loculus*-chamber (A) (5 x 8.50 m) with twenty-four *loculi* cut into each of the lateral walls, and a sarcophagus-alcove (G) into the back wall. At the entrance, slightly towards the left, a shaft (F) is dug, yielding four branching-off recesses. Next to it, a large pillar of masonry (E) had been built as a support. Whereas opposite the façade of the sarcophagus-alcove a pedestal of granite (H) was found. Scavo (D) would be datable c. the first half of the 1st century AD: contemporary with the (ABC) and (EFG) hypogea of Scavo (A) (site 53b).

53.f) The Hauptgrab: Giuseppe Botti and Expedition Ernst Sieglin (1900-01)

On September 28th, 1900, a number of local stone quarriers, namely el-Saïed Aly Goubara, Mohamed Chimi, Ahmed Ibrahim, and Suleïman Ahmed, had accidently broken open the vault of a subterranean funerary structure while working at Kom el-Shuqafa. After an initial inspection by Silvio Beghé and Abdou Daoud from the GRM service, Giuseppe Botti, the museum's director, had soon got himself involved on the next day. Salvage excavations were subsequently carried out on site, from October 1900 to June 1901, under the supervision of Botti himself, working with members of Expedition Ernst Sieglin, notably German archaeologist Theodor Schreiber and Swiss architect Ernst R. Fiechter (Adriani 1966a: 173-178, Catalogue Number 122; 1966b: Tavola 97, Figures 328-329, Tavola 98, Figures 330-331, Tavola 99, Figures 332-334, 336, Tavola 100, Figures 337-338, Tavola 101, Figure 340; Botti 1902c: 6-12; 1908: 340-342, 347-362; Pagenstecher 1919: 145-146; Schreiber and Fiechter 1908a: 77-120). Botti's 'Great Catacomb', the Expedition Ernst Sieglin 'Das Hauptgrab', was excavated about 50 m to the west of Gallice's Fort Kom el-Hadid aka Borg Abu Hashem, almost 30 m northeast of Scavo (D) (site 53e; see *supra*, Figure 205).

The initial setting of the Hauptgrab comprises five compartments. (1) A ground-level construction. (2) An access-staircase (spiral and profound). (3) A 1st subterranean level: (3a) a short vestibule with two *exedrae*; (3b) a rotunda; (3c) a *triclinium* chamber; (3d) a monumental staircase. (4) A 2nd subterranean level: (4a) a double vestibule; (4b) a *triclinium*-like burial-chamberette (the nucleus of the initial setting); (4c) a vast U-shaped ambulatory surrounding the main burial-chamberette from three sides. (5) A 3rd subterranean level (flooded with groundwater; see *infra*, Figure 216): initially excavated as a communication gallery between the access-staircase, the rotunda, and the central part of the hypogeum, before it was later reutilized to receive interments. Whereas the various sections of the funerary complex can be categorized into two groups: (A) structures pertaining to an initial phase of construction (c. the 1st century AD) (Figure 213: excluding the successive violations within the ambulatory); (B) structures added during successive phases of construction, thus yielding the current modified setting (c. the 2nd-3rd century AD) (Figures 214-215).

The labels used hereafter correspond to those in Figures 214-215.

Group (A) – A ground-level construction (Figure 216) represented by fragments of a mosaic pavement suggesting the presence of a funerary-cult shrine on site (analogies: sites 49a-c, 50, 53b). (I) An access-staircase consisting of (I.a) a cylindrical light-shaft excavated out of the rock (diameter: 6 m, preserved height: 10 m), (I.b) a spiral flight of steps with a vault ceiling (width: 1.20 m), and (I.c) a construction of hewn blocks interrupted by a series of arched windows as openings, forming the inner façade of the light-shaft (diameter: 3 m, average size of blocks: 0.30 – 0.50 m).

Group (A) – 1st subterranean level – (II) The main entrance: a vaulted passage flanked by *exedrae* with a semicircular rock-cut bench and a seashell each. (III) A rotunda: a vaulted round ambulatory (diameter: 8.50 m) enclosing a θόλος (*tholos*: a circular structure, diameter: 3.15 m) with a flat cap supported by a ring of six pillars. (IV) A *triclinium* chamber: a quadrangular banqueting space (8.50 x 9 m) with a flat ceiling. The benches (width: 2 m) of the *triclinium* itself are carved out within

four large pillars supporting a plain architrave. (XI) A monumental staircase into vestibules (XII-XIII) and funerary-chamberette (XIV), comprising three broad steps (width: 2.20 m; flat ceiling) followed by eleven narrower ones (sloping ceiling). A seashell is engraved at either end of the staircase, which terminates with a short landing to two narrow branches descending into the first vestibule (XII).

Group (A) – 2nd subterranean level – (XII) A first vestibule with two asymmetrical passages (G and H) to ambulatory (XV). (XIII) A second vestibule with a podium-façade approachable via a flight of three steps. The vestibule's façade has two central composite columns of the Corinthio-Egyptian type, creating three passageways, with an Egyptianizing pilaster carved out at either end. The façade's entablature comprises – from bottom to top – a plain architrave, a frieze with an *emblema* of a winged solar disc flanked by Horus-falcons, a dentilled cornice, and a segmental τύμπανον with a central solar disc. The vestibule's lateral walls feature two *aedicula*-like rock-cut niches exhibiting the sculpted figures of a couple in a striding pose – left side: a female, marked (d); right side: a male, marked (e). The vestibule's back wall features a doorway to the main burial-chamberette (XIV), above which extends a frieze with a large *emblema* of a winged solar disc below a cornice of *uraei*. On either side of the entrance is an ἀγαθοδαίμων carved out in relief upon a tapering pedestal, below an *aegis* of a medusa: the guardians of burial-chamberette (XIV), the nucleus of the hypogeum.

Group (A) – 2nd subterranean level – (XIV) The main burial-chamberette: a *triclinium*-like structure (2.50 x 2.50 m) with three rock-cut sarcophagus-alcoves flanked by engaged Egyptianizing pillars. The chamberette's front wall features a jackal-headed Anubis carved out in relief on either side of the entrance: as a Roman legionary (right) and as an anguiped (left). The façade of the central sarcophagus shows a miniature female figure reclining upon a mattress, between an apotropaic gorgon and a satyr rendered hanging from festooned garlands. The façades of the lateral sarcophagi show a pair of medusas carved out within festooned garlands with pendant grapes, between three Βουκράνια. The sarcophagi, sealed with immovable pseudo-lids, are accessible through the short walls on the side of the ambulatory (XV). The funerary paintings of the central alcove – back wall: a mummification scene frequently met in the hypogea of Roman Alexandria, featuring a jackal-headed Anubis (centre), an ibis-headed Thoth (right), and the falcon-headed Horus (left); side walls: a priest facing a male (left wall)/female (right wall) figure across a central altar. The funerary paintings of the lateral alcoves – back wall: an Apis bull upon a battered pedestal, between a winged Isis-Ma'at (rear), a male figure as pharaoh (front), and an altar (front); side walls: two figures facing one another across a central altar – the right wall of the right alcove: a mummiform figure and the baboon-headed son of Horus, Hapi; the left wall of the right alcove: a mummiform figure of Ptah and a male figure as pharaoh; the right wall of the left alcove: a mummiform figure of Osiris and a male figure as pharaoh; the left wall of the left alcove: a mummiform figure and the falcon-headed son of Horus, Qebehsenuef.

Group (A-B) – 2nd subterranean level – (XV) The ambulatory: a vast U-shaped structure delimiting the main burial-chamberette (XIV) from all sides but one. Segment (XVα) – the western wall: two rows of rock-cut *loculi*; the southwestern wall: four rock-cut *loculi* arranged into two regular rows. Segment (XVγ) – the eastern wall: two rows of rock-cut *loculi*; the southeastern wall: four rock-cut *loculi* arranged into two rows, and one sarcophagus-alcove (h). Segment (XVβ) – the northern wall: two rows of rock-cut *loculi* interrupted by a vestibule leading into a *triclinium*-like chamberette (XVI) with three sarcophagus-alcoves (γ', δ', ε'). At either end of the ambulatory's northern wall are two alcoves (β' and η') of which one (η') contains a sarcophagus. A total of 78 *loculi* are cut into the walls of the ambulatory, with shallow recesses (f and g) added towards the southern end of segments (XVα) and (XVγ) for depositing cinerary urns. A long and deep canal (x) (length: 19.50 m, width: 0.57 m, depth: 3.34 m) ran alongside the back and lateral walls of the main burial-chamberette (XIV), where rock-cut narrow passages serve to provide access to its sarcophagus-alcoves (a, b, c).

Group (B) – 1st subterranean level – Burial-chambers (V) and (VI): irregularly-cut structures with rock-cut *loculi* and sarcophagus-alcoves. Burial-chamber (VII) (4 x 2.28 m): irregularly-cut structure accessible from the rotunda (III) through a narrow opening on a block wall (h – i: the southern wall) – the eastern wall: a sarcophagus-alcove (g); the western wall: a sarcophagus-alcove and three arched niches; the northern wall: a sarcophagus-alcove with two rock-cut *loculi* (s and t). A well (u) is dug within an annex cut into the lateral wall of a narrow corridor leading into burial-chamber (VIII). A vertical cut into the ground leads down into an underground gallery (VIIα) occupied by four *loculi* with closing slabs. The gallery extends southwards, underneath the rotunda (III). Burial-chamber (VIII): a *triclinium*-like structure with three sarcophagus-alcoves and rock-cut *loculi* of which two (e and f) open on the southern wall, next to the entrance. Four shallow niches (a, b, c, d) are cut to receive cinerary urns. The ceiling is decorated with a central rosette rendered in red. Burial-chamber (IX): as the case at burial-chamber (VII), the entrance is narrowed by a block wall (k – l: the front wall) – the lateral walls: two sarcophagus-alcoves, a chamberette, and five *loculi*; the back wall: an unfinished niche and three *loculi*. Burial-chamber

(X) – the back wall: a sarcophagus-alcove (o); the lateral wall: a large compartment (P) with two sarcophagi and two *loculi*, and an isolated *loculus*. Burial-chambers (IX) and (X) communicate with one another via a rock-cut passage (m), and with sarcophagus-alcove (e) of the neighbouring Nebengrab (site 53g) via three rock-cut grooves (x1, x2, x3: tomb robbing). A similar groove (x1) is cut into the side wall of burial-chamberette (X), in seeking direct access to the rotunda (III).

Group (B) – 2nd subterranean level – Burial-chamber (XXIV) (6.25 x 6.25 m) is accessible from the principal staircase (I) via an irregularly-cut passage (Q-R). It has a flat ceiling and a central pillar. Judging by the feeding well (S), the remains of hydraulic cement, and the traceable lines marking the water levels on the walls, the chamber seems to have been initially cut to function as a cistern. At a later stage, the cistern was transformed into a burial-chamber – the eastern wall: a sarcophagus-alcove (m) and a *loculus* (t); the southern wall: a double sarcophagus-alcove (r) and two overlapping *loculi* (n); whereas an isolated *loculus* (u) violates the (Q-R) passage itself. A symmetrical compartment of two pairs of burial-chambers (right: XVII-XVIII; left: XIX-XX) is accessible via a long, narrow corridor violating the northwesternmost *loculi* of the ambulatory's (XVα) arm. Each pair of the compartment consists of a burial-chamber with twelve rock-cut *loculi* into the side walls, and a *triclinium*-like chamberette with three sarcophagus-alcoves. Three *loculi* are cut into the back and side walls of two of the three sarcophagus-alcoves of burial-chamber (XX). An irregularly-cut compartment of three burial-chambers (XXI-XXIII) violates the sarcophagus-alcove (l) at the southwestern corner of the ambulatory's (XVα) arm. Burial-chamber (XXI) has two sarcophagus-alcoves cut into the side walls, four *loculi* into the back wall, and a fifth *loculus* above one of the lateral alcoves. At some point, the latter was extended westwards, in seeking access to burial-chamber (XXIII). Burial-chamber (XXII) opens on the lateral wall of burial-chamber (XXI) and comprises an irregularly-cut bench (n) above which three *loculi* are cut. Burial-chamber (XXIII) is an irregularly-cut *triclinium*-like structure with three sarcophagus-alcoves and eight *loculi* into its walls. The narrow passage cut between burial-chambers (XXI) and (XXIII) was found blocked by means of a stone slab (o – p).

53.g) The Nebengrab: Giuseppe Botti (1901); Expedition Ernst Sieglin (1902); Alan Rowe (1941)

Early in 1901, a hypogeum contiguous with the Hauptgrab (site 53f) was excavated by Giuseppe Botti (Hypogée C). It was revisited in 1902 during Expedition Ernst Sieglin (Das Nebengrab), then in 1941 by Alan Rowe (Adriani 1966a: 178-180, Catalogue Number 123; 1966b: Tavola 97, Figure 329, Tavola 101, Figure 342, Tavola 104, Figure 353; Botti 1908: 342, 362-367; Pagenstecher 1919: 149-151; Rowe 1942a: 31-36; Schreiber and Fiechter 1908b: 121-132). As the case with the Hauptgrab, the constituents of the Nebengrab can be categorized into two groups: (A) an initial phase of construction (c. the 2nd century AD) (Figure 217) and (B) successive phases of structural modification (c. the 2nd-3rd century AD) (Figure 218).

Group (A) – The hypogeum, which follows an axial plan, is accessible via a staircase (n') (width: 1.50 m). It leads into a quadrangular court (A) with a cubic sacrificial altar (o) (1.35 x 1.55 m; recess for sacrifices: 1 x 1.10 m, depth: 0.45 m) and a light-shaft (P). An intermediate rectangular hall (B) (11 x 5 m) has six sarcophagus-alcoves cut into the lateral walls. The sarcophagi within the alcoves at the extremities (a, b, c, d) are rock-cut, the one within the central alcove (e) on the left wall is mobile and of dark granite, whereas the central alcove (f) on the right wall had been violated at some point already in antiquity in order to create room for burial-chamber (D) (see *infra*, group B). Alcove (e) communicated with chambers (IX) and (X) of the adjacent Hauptgrab via three grooves (x1, x2, x3) probably dug by tomb robbers. In 1995, the use of ultraviolet-light revealed the details of two registers on the back walls of sarcophagus-alcoves (b) and (d) within hall (B) (Guimier-Sorbets and Seif el-Din 1997: 355-410; Guimier-Sorbets, Pelle, and Seif el-Din 2017). Two mythological scenes of death and resurrection are on display: one intrinsically Egyptian, the other explicitly Hellenic. The upper register: the mummification of Osiris in the presence of Anubis and the winged Isis and Nephthys; at either side, Horus, anthropomorphic and falcon-headed, is seen. The lower register: the abduction of Persephone on the chariot of Hades in the presence of Artemis, Athena, and Aphrodite. The scenes, particularly the Egyptian ones of the upper registers, were first identified by Alan Rowe in 1941 and reported shortly after in volume XXXV of the *BSAA* (see *supra*, references). At the northern end of the hypogeum, burial-chamber (C) is cut, with thirty-nine *loculi* arranged into three regular rows on the back and lateral walls. Of the *loculi* cut into the back wall, two are exceptional: one (g') contains the skeletal remains of two corpses and a cinerary urn, the other (g) was found closed with a slab painted Egyptianizing figurative motifs.

Group (B) – A descending staircase (n'') is dug at the southwestern corner of the court (A). It leads into an irregularly-cut chamber (G). Burial-chamber (E), discovered by Botti on March 31st, 1901, opens on the eastern wall of the court (A). It has two Egyptianizing sarcophagus-alcoves (h and i) cut into the lateral walls. Alcove (h) – side pillars: a lattice pattern covers the lower part, while a striding male figure and a *ba*-bird appear on the front and lateral faces of the upper part.

The triangular pediment features a disc *acroterion* at the peak, half-disc *acroteria* at the corners, and at the centre, a lotus-bud vessel enclosing a solar disc, flanked by two winged sphinxes as Nemesis. Back wall: an Osiris-mummification scene featuring the winged Isis and Nephthys, and two striding male figures holding a sceptre; at the top are pendant festooned garlands. Lateral walls: enthroned figures. The ceiling: a winged-wheel is recognizable at the centre, and the fading remains of two female figures at either side. Alcove (i) preserves the lattice pattern on the side pillars and a solar disc carved out in relief at the centre of the triangular pediment. A violating *loculus* (j) is cut next to sarcophagus-alcove (i). Alcoves (h) and (i) of the Nebengrab belong to a category of Alexandrian sepulchres with Egyptianizing motifs, exemplified by the so-called 'Sieglin tomb': a *triclinium*-like chamberette with three sarcophagus-alcoves. It was discovered at Gabbari in 1900 during Expedition Ernst Sieglin and is known primarily from a sketch by Ernst R. Fiechter – back wall of the central alcove: a standing figure of Osiris, who is flanked by the winged Isis and Nephthys, two figures holding linen bandages for mummification, and a pair of altars; lateral wall: a Horus-falcon; façade: a lintel featuring a large *emblema* of a winged solar disc, and jambs bearing motifs of Apis bulls, winged griffins, and *candelabra*.

Group (B) – Burial-chamber (F) is cut on a lower level to burial-chamber (E). It has three sarcophagus-alcoves cut into the back (k) and either side wall (l and m). The discovery, in 1901, of the remains of human and equine bone has led Botti to imagine the Alexandrian knights reportedly massacred by Caracalla in AD 215 fleeing the nearby *circus* (site 51) and taking refuge in the subterranean Nebengrab. Consequently, the (EF) compartment came to be known as the 'Hall of Caracalla' (the term is often used today to denote the hypogeum as a whole). Burial-chamber (D) (2.60 x 5 m) opens on the back wall of the violated alcove (f) of hall (B). It has three *loculi* cut into the back and right (f'') walls. On the left, a short vestibule (f') leads into a quadrangular chamberette with two alcoves within which sarcophagi of granite were found on discovery.

53.h) Hypogeum NW. of the Hauptgrab: Henri Riad (1959)

In summer 1959, a rock-cut hypogeum was discovered at Kom el-Shuqafa, to the northwest of the Hauptgrab (site 53f) (Leclant 1961: 94). At the time, a salvage excavation was subsequently carried out on site by the GRM director Henri Riad, with plans drawn by Badie Abd el-Malek. The hypogeum is accessible via a staircase leading down into a small court. On its lateral walls, four regular rows of rock-cut arched niches are added for the depositing of cinerary urns. A well (depth: 5.70 m) is dug at one corner of the court. The burial-chamber, reachable from the court, had three regularly arranged rows of *loculi* cut into the back (nine) and lateral (twelve each) walls. One cinerary urn, containing the charred remains of a cremated corpse, was recovered within the violated hypogeum that seems to have been plundered by tomb robbers.

3.4.2) Physical Remnants without Known Historical Reference

3.4.2.1) Civil Edifices

Site 54a: East of the Mosque of Thousand Columns

Maps: V4

Cistern(s) with reused material: el-Labbane [Arab]

During the Napoleonic expedition, in 1798-99, a large cistern was recorded by Saint-Genis to the east of the Mosque of Thousand Columns (site 56), immediately after crossing the first subterranean aqueduct. It had a floor of white marble and forty-seven marble columns supporting the arches. Capitals are shown with crosses in *Description de l'Égypte* (Imperial Edition 1809-22. Antiquités V, Planches, 1822: Planche 36, Figures 5-8), suggesting an Arab use of *spolia* of Byzantine origin (Saint-Genis 1818a: 85-88). Saint-Genis' 'grande citerne' exemplifies similar structures of the late antique and mediaeval cityscape:

> *On en voit de semblables en plusieurs endroits de la ville antique, dans sa partie renfermée par l'enceinte Arabe, dans celle qui se trouve hors de cette enceinte, comme on l'observera ci-après, sur le bord du khalyg (bay) dans la campagne, près de la synagogue des Juifs, de la mosquée dite de Saint-Athanase (el-Attarine Mosque: site 61), du fort Crétin (Kom el-Dikka), & c. On en rencontre d'isolées et d'éparses sur plusieurs points, et enfin presque partout.*
>
> (Saint-Genis 1818a: 85)

Site 54b: Ibn Battuta Street

Maps: V4

Cistern with reused material: el-Labbane [Arab]

In 1922, while installing a sewerage system at Ibn Battuta Street, south of Kom el-Nadura (the site of the former Fort Caffarelli), the vestiges of a cistern were accidently discovered (Breccia 1924: 7). It had twelve granite columns, several capitals of granite and marble, and a vault ceiling. As the case at site (54a), the cistern is datable to the Arab period with an assortment of reused architectural material of Byzantine origin.

Site 54c: Bab el-Akhdar

Maps: V4

Cistern el-Gharaba with reused material: el-Labbane [Arab]

In 2000-01, the Centre d'Études Alexandrines conducted a salvage intervention with the aim of clearing a buried cistern discovered in proximity to Kom el-Nadura (Empereur 2001a: 694-695; 2002b: 624). The multiple-storey structure incorporated an assortment of reused material: basically, supporting columns. A pavement of hewn blocks of limestone and a central well equipped with the machinery of a traditional *saqiya* (waterwheel) were unearthed. A second season of excavation, in 2001, revealed two separate structures with different access-shafts partially visible at the modern street level.

Site 54d: Ragab Street

Maps: V2; V3; V4

Cistern (?): el-Labbane [ancient (?); Arab (?)]

According to *Al-Ahram* release on April 10th, 1980: 'lors de travaux de démolition, rue Ragab, dans le quartier d'el-Labbane, on a mis en évidence un puits d'époque romaine' (Leclant 1982: 51). The 'Roman well', reported in volume 51 of *Orientalia*, could have been associated with a cistern fed via the first and/or second subterranean aqueduct(s) shown in the *cartes* of les Ingénieurs de l'Armée d'Orient (*Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84; Antiquités V, Planches, 1822: Planche 31).

Site 55a: East of the Mosque of Thousand Columns

Maps: V3; V4

Baths: el-Labbane [Late Antique]

The label 'Ruines' is added in Planche 84 of *Description de l'Égypte* to mark a mound situated about 350 m to the east of the Mosque of Thousand Columns (site 56): the hill-site erroneously labelled 'Serapeum' in Planche 31. What seems a common assumption at the time of the Napoleonic expedition, in 1798-99, relates to Gratien Le Père's descriptive account: 'des ruines considérables d'un vaste monument en briques rouges, semblables à celles du palais ruiné, près et à l'est de la mosquée de Saint-Athanase' – similar to the remains southeast of el-Attarine Mosque, within the city centre (see *infra*, site 62a; not to be confused with 'palais ruiné' of site 7 at el-Mazarita) (Le Père 1813: 320, Number 105). Le Père's 'considerable ruins of a vast monument in red brick' would have been the vestiges of a bathing facility datable, in general, to late antiquity (analogies: sites 20, 62a, 79, 127, 149a).

Site 55b: South of Scavo (D)

Maps: V2; V4

Baths: Kom el-Shuqafa [Roman]

In 1964, two associated bath complexes (Figures 219-220) were accidently discovered during the levelling of the terrain heights south-southwest of Scavo (D) (site 53e): a point located a short distance to the west of el-Tawfikeia Street (Riad 1975: 117-122). Complex (A) (23 x 20 m) is built mostly of fired brick. It features well-integrated pool-like structures with plastered walls, and an underground heating system. Complex (B) (20 x 19 m) seems to have encompassed a two-storey structure, judging by the excavated remnants of a staircase. Like complex (A), situated about 11.60 m to the east, it had an underground heating system. Their relative proximity to one another and to the nearby necropolis of Kom el-Shuqafa (site 53) would suggest a contemporary pair of bathing establishments datable c. the 2nd-3rd century AD.

Site 56: Mosque of Thousand Columns

Maps: V4

Mosque with reused material: Minet el-Bassal [Arab]

At the time of the Napoleonic expedition, in 1798-99, Saint-Genis records:

> *Après être entré par la porte moderne dite des Catacombes (western gate: Bab Gharb), on trouve immédiatement à gauche un édifice carré qui est une mosquée qu'on a désignée sous le nom de 'mosquée des mille Colonnes' ou 'des Septante'. Ce plan, par sa beauté, sa grandeur, sa pureté, a tous les caractères de l'antiquité; de plus, la matière de l'édifice, c'est-à-dire, cette belle forêt de colonnes qu'on y remarque et qui domine sur tout le reste de sa composition, est antique. Le minaret et l'enceinte de la mosquée (qu'on n'a même élevés peut-être que sur le plan et les fondations de l'ancien bâtiment) ne forment en quelque sorte que l'encadrement de toutes ces antiquités et sont seuls modernes.*
>
> (Saint-Genis 1818a: 83-84)

According to tradition, the so-called 'Mosque of Thousand Columns' was built upon the vestiges of a Byzantine religious edifice often designated the 'Church of Saint Mark' or the 'Church of Bishop Theonas' (Breccia 1914a: 89; De Vaujany 1885: 104-107; Neroutsos 1888: 62-65). The ground plan, however, as published in *Description de l'Égypte* (Imperial Edition 1809-22. Antiquités V, Planches, 1822: Planche 37, Figures 1-3), indicates a building originally constructed as a mosque. Already partially destroyed in 1798, the extant remains have not survived the urban developments of the 19th century. The mosque received its name from the sheer number of columns (granite, porphyry, marble) that decorated its open-air spacious courtyard. The Arabs seem to have retained such elements from the

dismantled structures of the ancient city to be reused in decorating the interior of the building.

Site 57: Junction of Amud el-Sawari with Ibn Tulun and el-Khedeiwi el-Auwal

Maps: V2; V3; V4

Foundations; fragmentary architecture: Bab Sidra [Roman (?); Late Antique (?)]

In 1907, during construction works at the College of the Salesians (the present-day Instituto Don Bosco Alessandria) and the Monastic House, towards the junction of the streets of Amud el-Sawari with Ibn Tulun and el-Khedeiwi el-Auwal, massive foundations were accidently unearthed. Fragmentary finds on site include column shafts, granite basins, and sarcophagi (reused?) (Breccia 1907a: 109; 1914a: 90; 1922: 104). The vestiges were excavated near the northeastern corner of the Muslim cemetery at Bab Sidra and might have belonged to an ancient edifice built in proximity to the Sarapeion (site 52).

Site 58: Northern belt of Bab Sidra, into el-Labbane

Maps: V2; V3; V4

Miscellaneous: Bab Sidra; el-Labbane

(i) Interments [Arab]
(ii) Fragmentary architecture [Roman (?); Late Antique (?)]

In the 1880s, while describing 'the land extending to the west of Kom el-Dikka', Tassos Neroutsos takes account of some ancient remains:

> *Les ruines de bâtisses antiques qui se trouvent au milieu des jardins situés entre le quartier d'Attarine et celui de Tartoûchy, et où s'élève actuellement l'établissement des pères jésuites et l'orphelinat des soeurs de Saint-Vincent-de-Paul, sont remplis d'hypogées et de sépultures ordinaires, byzantines et même musulmanes avec inscriptions en lettres koufiques de l'époque des kalifs Ommayades et Fatimites.*
>
> (Neroutsos 1888: 60)

Given the recorded areas, being within the enclosure of the ancient city, Neroutsos' 'sépultures ordinaires' could not have been but Arab (analogies at Kom el-Dikka: sites 18-20, 69-71). His identification of some as 'Byzantine' seems due to sporadic encounters of fragmentary architecture found often intermingled through accumulated layers of Arab interments during the digging of foundations for modern buildings at the urban *insulae* delimited by the streets of el-Khedeiwi el-Auwal (south), Ishaq el-Nadeem (north), Abu el-Dardaa (east), and el-Farahda (west) and partially intersected by el-Imam Ali and Sidi el-Wasti. Many of these vestiges were repeatedly reported by Botti and Breccia: debris of columns, a few of granite, others of marble, and to quote Botti, some were 'ornées d'une croix' (Botti 1898c: 82-83, 90; Breccia 1907a: 108). They probably represent a continuation of the fragmentary finds recorded several metres to the south, towards the junction of Amud el-Sawari with Ibn Tulun and el-Khedeiwi el-Auwal (site 57). The building(s) to which these fragments, and possibly the excavated foundations at the College of the Salesians (Instituto Don Bosco), might have belonged, could have formed part of a Roman urban complex associated with the nearby Sarapeion (site 52), or alternatively, of a Byzantine unit pertaining to the modified late antique setting, where *spolia* from the dismantled 'pagan' temple would have been in use (analogies at el-Ramleh: sites 34-35). Whereas Neroutsos' 'hypogées', if valid at all, may be explicable having the Village of Tartoûchy in context (located within the necropolitan area of Minet el-Bassal: site 46).

3.5) Southern District (SDist.)

3.5.1) Physical Remnants without Known Historical Reference

3.5.1.1) Civil Edifices

Site 59: Northern belt of Moharram Bey

Maps: V2; V4

Mosaic pavement: Moharram Bey [Roman]

In 1897, during construction works carried out by the Administration of Railways 'sur la voie du Caire, près de Moharem-Bey' (i.e. along the northern belt of Moharram Bey), a mosaic pavement was accidently unearthed. It is 'en forme de rosace composée de feuilles de lotus', and therefore, it could be the panel with a shield of radiating scales on display at the Graeco-Roman Museum (Salle 11, Inventory Number 3224) (Botti and Nourrison 1899: 20). Breccia relates: 'in the middle of the room (11), a mosaic has been placed, which was discovered in the Moharrem Bey quarter of the town' (Breccia 1914a: 190; 1922: 174; Daszewski 1985a: 63, 127, Note 36).

Site 60: Junction of el-Mohandes Ahmed Ismaīl with el-Fanan Mohamed Hassan

Maps: V3; V4

Miscellaneous: Moharram Bey

(i) Interments [Arab]
(ii) Foundations [Late Antique]

In 1892, during construction works near the Museum of Fine Arts at Menasce Street, south of the railway (in

proximity to the junction of the streets of el-Mohandes Ahmed Ismaīl and el-Fanan Mohamed Hassan), Botti reported some accidental finds: 'tombe d'epoca cristiana, a tetto, con impronte bizantine e latine: ne' dintorni dell'Ospedale Israelitico, in occasione di fognature, apparvero olle ed anfore con marche di Rodi e di Thasos' (Botti 1893: 16). As the case at Bab Sidra and el-Labbane (site 58), the reported vestiges, if sepulchral at all, would be Arab interments rather than Byzantine. In some cases, Arab burials were encountered along with assortments of earlier fragmentary material, which may bear Greek and/or Latin epitaphs and inscribed crosses. The non-funerary nature of the site is backed by another accidental discovery made in 1975: foundation walls of mortared limestone pertaining to a late antique habitation quarter. The contextual associates, particularly the recovered ceramics, date the excavated remains to c. the 6th century AD (Rodziewicz 1984a: 252, Note 16).

3.6) Central District (CDist.)

3.6.1) Physical Remnants without Known Historical Reference

3.6.1.1) Civil Edifices

Site 61: el-Attarine Mosque (a) and Street (b)

Maps: V2; V3; V4

Miscellaneous: el-Attarine

(i) (a) Mosque with reused material [Arab]
(ii) (b) Foundations [Roman; Late Antique]

(a) During the Napoleonic expedition, in 1798-99, Saint-Genis recorded elements of architecture reused within the old Attarine Mosque (a landmark of the Arab town) situated on the northern side of Tariq Bab Sharq (Fouad: el-Horreya) (Adriani 1966a: 69, Catalogue Number 20; 1966b: Tavola 10, Figure 32; De Vaujany 1885: 107-110; Neroutsos 1888: 66-67; Saint-Genis 1818a: 92-95). According to tradition, the old mosque was built at the site of the 4th-century Church of Saint Athanasius (AD 370). The early Arab structure had been restored in 1084, under the Fatimids. Already by 1830, the surviving remnants described by Saint-Genis had disappeared. The present-day replacement dates to the second half of the 19th century. As was the case with the Mosque of Thousand Columns (site 56), the inner colonnade at el-Attarine included reused material: column bases and shafts, and capitals of various orders, some of granite, others of marble. Prominent, however, among the ancient relics is a conglomerate sarcophagus with inscribed hieroglyphs, reused, within the mosque, as a ritual vessel or a bathtub. Today, it is on display at the British Museum in London as 'Sarcophagus of Nectanebo II' (Inventory Number BM. EA10). Another find is a serpentinite block bearing a partially preserved Greek inscription that reads: ... ΛΟ ... ΤΡΑ.

(b) In 1950, during the digging of foundations for a new building replacing a demolished one, ancient vestiges were accidently unearthed at a plot to the left of the Hellenic Community School on el-Attarine Street (Adriani 1956a: 44-45; 1966a: 89, Catalogue Number 52; 1966b: Tavola 23, Figure 84). They belong to a late construction of fired brick bound with a thick layer of lime mortar. Reused material seems retained from an earlier underlying structure of which some remains, basically foundation walls and red granite columns, were identified on discovery. Another column of red granite was found at the alley that separates the Hellenic Community School from the excavated plot to the left.

Site 62: NE. sector of *insula* L1-L'2-R5-R6

Maps: V3; V4

Miscellaneous: el-Attarine

(i) (a) Baths (replacement of the Sarapis-Isis, Lagid-cult temple? site 90) [Late Antique]
(ii) (b) Inscribed pedestal/case (retained from the *auditoria* of Kom el-Dikka? site 20) [Reused]

(a) During the Napoleonic expedition, in 1798-99, Le Père recorded considerable ruins about 160 m southeast of el-Attarine Mosque (site 61a). The enormous constructions in cemented fired brick are labelled 'Palais ruiné' in Planche 84 of *Description de l'Égypte* (Imperial Edition 1809-22. Etat Moderne II, Planches, 1817) (De Vaujany 1885: 108-109; Le Père 1813: 288, Number 27). Vaulted chambers, basins, water reservoirs, plastered walls (waterproofing), and analogies with similar brick structures (site 55a), all suggest a bath complex datable, in general, to late antiquity, with few traces of successive phases of (Byzantine and/or early Arab) renovation. Given its location in the northeastern sector of *insula* L1-L'2-R5-R6, it could be a westward extension of the bath complex excavated in the 1960s by the Polish mission at Kom el-Dikka (site 20) (Figure 221). The Attarine bath complex itself might have been a replacement of the 3rd-century BC temple dedicated to Sarapis and Isis and the reigning Lagids, Ptolemy IV Philopator and Arsinoe III (site 90). Considering the popularity of the Sarapis and Isis cult during the Principate, the temple, deptolemised, is likely to have continued to function in the Roman Period until its possible termination in the 390s, the time around which both of the bath complexes in el-Attarine and Kom el-Dikka were built.

(b) In 1847, a block of granite (0.445 x 0.40 m, height: 0.265 m) was accidently discovered at the garden of the

Consulate General of Prussia: the approximate site of the later Bourse Toussoun (in turn, Club Mohamed Ali: Kasr Thakafit el-Horreya: the present-day Markaz el-Horreya lel-Ibda bel-Askandarreiya: sites 62a, 90) at the junction of Fouad Street with Morsi Badr and Sherif Pasha (present-day Salah Salem) (Adriani 1966a: 211; Botti 1898c: 64-66, XVII. Bibliothèque; Mahmoud-Bey 1872: 53). On one side, it bears a Greek inscription that reads: ΔΙΟΣΚΟΥΡΙΔΗΣ Γ ΤΟΜΟΙ: Dioskourides, III volumes (Kunsthistorisches Museum Wien, Inventory Number III 86 L). On discovery, the inscribed case was identified subsequently with a 'storage unit' of the historically attested Mouseion's library in the Broucheion (section 3.7.3.1, E). Presumably, one that held the works of the Greek botanist Pedanios Dioskourides (active in the 1st century AD). This notion became widely rejected, considering the impracticality of storing the library's hundreds of thousands of papyri in such manner. The context of the granite block cannot be established, and it is likely to have been retained, already in late antiquity, from an earlier dismantled edifice where it served initially as a pedestal, to be reused as a container at the nearby *auditoria* of Kom el-Dikka (site 20), perhaps in storing the works of the renowned botanist from Anazarbus, before it was eventually reutilized by the Arabs as an accessible building material.

Site 63: South of the L1-R5 junction

Maps: V1; V2; V3; V4

Miscellaneous: el-Attarine; Kom el-Dikka

(i) Interments; cisterns [Arab]
(ii) Baths; cisterns [Late Antique]
(iii) Colonnade and structures lining street R5 (associates: site 21) [Late Antique]
(iv) Foundations (associates: sites 17, 64a, 76a, 77) [Ptolemaic; Roman]

In 1874, while digging foundations for two houses of Cattaouy Bey and a third one on the western side of el-Nebi Daniel Street, overturned granite columns 'd'ordre dorique', to quote Neroutsos, were found extending parallel with the modern street, which correlates roughly with transversal street R5 yet at an angle (Neroutsos 1875: 6; 1888: 7-9, 60). A few metres to the west were Corinthian columns of marble and a mosaic pavement. The excavated vestiges were buried beneath a rubble debris, 'qui, de leur côté, contenaient des citernes. A côté de ces citernes, on trouva plusieurs caveaux funéraires, bâtis en brique et en pierres calcaire, et d'autres sépultures construites avec des dalles et de forme prismatiques'. The reported 'caveaux funéraires' of brick and limestone would have been the remains of a late antique bathing facility met on the recorded levels of the cisterns, all buried beneath accumulated layers of Arab interments or Neroutsos' 'autres sépultures construites avec des dalles et de forme prismatiques'. At the lowermost level of the excavation profile were Corinthian columns of marble and a mosaic pavement signalling a demolished Roman structure lining transversal street R5, the colonnade of which was met while excavating the foundations of the Cattaouy houses along the western side of el-Nabi Daniel Street. Whereas the plain granite and limestone columns forming the colonnades of streets, inner alleys, and porticoes within Roman and late antique contexts in Alexandria (sites 21-23, 31, 69) may justify Neroutsos' use of the term 'Doric' to denote 'austerity' or 'simplicity' rather than the Greek order in a strict sense.

In 1888, Henry de Vaujany maintains:

> *Or depuis une trentaine d'années que l'on fouille cette partie (central) de la ville en y creusant les fondements de maisons nouvelles (accidental encounters), les plus beaux morceaux d'antiquité de l'époque gréco-égyptienne ont été découverts lors de la construction du Consulat de France (the present-day Institut Français d'Egypte à Alexandrie), de la Bourse Toussoun (sites 62, 90) et des maisons situées entre ces deux batiments.*
>
> (De Vaujany 1888: 52-53)

The area mentioned by De Vaujany corresponds roughly to the urban blocks delimited by the streets of Abd el-Moneim/Ismaīl Mahanna/L'2 (south), Fouad/el-Horreya/L1 (north), el-Nebi Daniel/R5 (east), and Morsi Badr (west). De Vaujany's account on the stratification of the excavated sites within this zone conforms, for the most part, with that of Neroutsos. De Vaujany, however, adds an intermediate *stratum* of rubble debris, 5 to 6 m deep, mixed with marble flakes, various pottery, fragments of oil lamps, *amphorae*, libation vases, other terracotta utensils (including earthenware of brownish/black clay), and small flasks in greenish/dark blue glass. Neroutsos' 'columns of pink granite' are recorded by De Vaujany amidst another debris where they were found overturned and broken along with 'un magnifique bassin de forme allongée, presque demi-cylindrique, creusé dans un monolithe de granite gris ayant plus de trois mètres et demi de longeur'. Two metres below, near the former consulate, at the northeastern corner of the urban complex, towards the junction of el-Nebi Daniel with Fouad, were the remnant of a three-metre-thick corner-wall of massive blocks of nummulithic limestone, and fragments of a mosaic pavement 'bordé de filets' and constructed upon a thick bedding layer of reddish cement. Granite columns, broken and overturned, were found, with the largest measuring, when reconstructed, 4.50 m in height. De Vaujany does not show the stratigraphic relationship between the massive foundation wall and the other vestiges excavated on site. However, analogies with nearby finds suggest a debris of fragmentary columns and floor-

mosaics representing the R5 colonnade and some of the structures lining its sides: Roman and late antique constructions that overbuilt massive foundations of a Ptolemaic edifice situated immediately on the southern side of the L1 πλατεία. An eastward continuation of the presumed building of the monumental Hellenistic city is met at neighbouring sites (17, 64a, 76a, 77).

More granite columns were recorded by Giuseppe Botti shortly after. They were found broken and overturned during the digging of foundations for the Franciscan Sisters Convent on the eastern side of el-Nebi Daniel Street, opposite the Cattaouy houses (Botti 1898c: 87-88, LIX. Colonnes a la Rue Nebi Daniel). Botti's 'colonnes' may have formed part of yet another segment of the R5 colonnade. A few metres to the north, still on the same side of el-Nebi Daniel, towards the junction with Fouad, the remains of cisterns were accidently discovered while digging foundations for another building at the property of Baron Charles de Menasce (Adriani 1940a: 63-64, Figure 30). Within one of the trenches, a section of a wall was unearthed. It had a pyramidal form as those excavated at the nearby alley of Sidi el-Bardissi and on Abd el-Moneim Street (sites 21, 31). The vestiges on the eastern side of the modern street thus conform with the identified patterns within this zone of el-Attarine and Kom el-Dikka: late antique structures lining the transversal course of street R5 and its colonnade and overbuilding earlier demolished remnants of the Principate and, in turn, the underlying monumental foundations of the Ptolemaic setting.

Site 64: NW. sector of *insula* L1-L'2-R4-R5

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) (a) Marble pavement [Arab]
(ii) (a) Fragmentary architecture; conduit [Roman; Late Antique]
(iii) (b) Inscribed pedestal (associates: sites 93-100) [Roman]
(iv) (a) Foundations (associates: sites 17, 63, 76a, 77) [Ptolemaic]

(a) In 1894-95, David George Hogarth sunk a trench at the northeastern corner of 'a large plot belonging to Prince Toussoun, immediately behind the Tribunal des Indigènes on the north, and the Consulate of France (the present-day Institut Français d'Egypte à Alexandrie) on the east' (Adriani 1934: 89, Catalogue Number 102; Hogarth and Benson 1894-95: 16-17). At just one foot (0.30 m) below the levelled surface (previously buried beneath 3 to 4 m of earth debris), a marble pavement was found upon a thick bedding layer of cement covering most of the northern part of the plot. A debris of fragmentary architecture, including late Roman stucco and a column drum of limestone, extended for 6 feet (1.83 m) below the marble pavement (bedding). At 11 feet (3.35 m), a small conduit ran northeast. At 15.60 feet (4.75 m) was a 1.80-feet-thick (0.55 m) wall the large and hewn limestone blocks forming its single row of elevation were noticeable. One block measured 2.40 feet (0.73 m) in length. The wall was traceable over a distance of 10 feet (3 m) without meeting a return. Towards the east, cutting through a layer of 'concrete much broken' (Roman and late antique strata), the foundation wall in question was found to descend to the groundwater level at 28 feet (8.54 m). The contextual finds within the excavated layers to groundwater were limited to 'indistinctive Roman red'. Stratigraphy indicates a late structure represented by a marble pavement constructed upon an underlying debris of architectural material pertaining to earlier dismantled constructions of Roman and late antique provenance (a westward extension of Kom el-Dikka?). On a lower level, the excavated remnant of a wall, with its footing drenched at the groundwater level, might have belonged to the monumental construction(s) detected at several sites along the southern side of this segment of Fouad Street (17, 63, 76a, 77).

(b) On the eastern side of el-Nebi Daniel, a marble pedestal was accidently unearthed while digging foundations for the Lifonti building (Graeco-Roman Museum, Inventory Number 77) (Adriani 1934: 84, Catalogue Number 80; Breccia 1911: 63, Catalogue Number 92; 1914a: 65; 1922: 75). Upturned, the pedestal was apparently reused, for the Latin inscription is engraved over an earlier one. It records a dedication made by a certain Caius Valerius Eusebius to Valentinianus I (AD 364-75). It might have been retained from the dismantled Caesareum (sites 93-100) to be reused as a building material. The dedicatory reads:

AETERNUM IMPERATOREM
VIRTUTE AC PIETATE
PRAESTANTEM
FL[AVIUM] VALENTINIANUM
PERPETUUM AUGUSTUM
CAIUS VALERIUS EUSEBIUS
V[IR] C[LARISSIMUS] COM[ES] ORD[INIS] PRIMI AC
PER ORIENTEM.

Site 65: el-Nebi Daniel Mosque

Maps: V3; V4

Cistern: Kom el-Dikka [Late Antique; Arab]

In 1958, responding to a 15th-century local tradition that connects the Mosque of el-Nebi Daniel with the tomb of Alexander the Great (section 3.8.3.1, I), Polish archaeologist Kazimierz Michałowski and architect Leszek Dąbrowski investigated the substructure of the

mosque (Adriani 1966a: 84-85, Catalogue Number 45, 242-245; Fraser 1972: 16-17; Tkaczow 1993: 90, Catalogue Number 37). Accessible via a descending groove at the northeastern corner of the mosque, the long-time reported two-storey construction was found to be a cistern built mostly of reused material. The almost square structure (2.42 x 2.63 m, depth: 4.25 m, deepest point: a semicircular well at one corner: +1.23 m above sea level) is built of limestone and fired brick. Its walls are coated with a waterproof plaster. Four pillars and a central column supported the vault of the main level. The one at the centre, with an upturned marble base reused as a capital, is of transparent alabaster, as the other column with a Corinthian capital supporting the collapsed cross-ribbed vault of the upper level. Michałowski proposed a possible date for the initial phase of construction not earlier than the late 4th/ early 5th century AD on the grounds of the reused *spolia*. Arab renovation and maintenance is evident, for instance, in the polygonal pedestal that served as a base for the column standing at the lower level of the cistern.

Site 66: Enclosure of el-Nebi Daniel Mosque

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Habitation refuse [Arab]
(ii) Fragmentary architecture [Roman; Late Antique]
(iii) Foundations [Ptolemaic; Roman]

In 1929, while investigating the areas to the west of Kom el-Dikka, Evaristo Breccia opened three trenches (A, B, C) within the enclosure of el-Nebi Daniel Mosque (Adriani 1966a: 84-85, Catalogue Number 45, Figure E; 1966b: Tavola 22, Figure 77; Breccia 1932: 48-51). The GRM excavations, sponsored at the time by the Municipality of Alexandria, were carried out in response to a local tradition that places the tomb of Alexander the Great at el-Nebi Daniel (site 65). Breccia descended from +17.698 m to the groundwater level at +0.898 m through the opened trenches (A: 35.20 m^2), (B: 16 m^2), and (C: 16.80 m^2) (Figure 222). The main trench (A), dug immediately to the northeast of the mosque, revealed a thick backfill layer of earth and rubble extending down to almost 14 m (+3.698 m) – the yet unlevelled terrain at Kom el-Dikka in 1929 should be considered. The backfill yielded considerable amount of 'de matières organiques, de cailloux, de petits blocs isolés, de pierre calcaire, de nombreux éclats de marbre, de tessons d'époque byzantine et arabe'. Beyond the recorded level, large foundation walls of finely-hewn limestone blocks were met, where they had been cleared and followed over a short distance. Towards the northwestern corner of trench (A), 'parmi des blocs jetés pêle-mêle, on voyait quelques tronçons de colonnes en calcaire, revêtues de stuc, et une dalle de marbre, mais cette dernière porte quelques restes d'une inscription arabe'. Within trench (B), excavated towards the northern limit of the mosque's enclosure, a less disturbed extension of the backfill layer of earth and rubble was found containing fragmentary architecture and mosaics. Like the case at (A), a continuation of the detected limestone foundations was traceable beyond the recorded level of 14 m (+3.698 m). Other finds include small, cemented basins. The third trench (C), sunk between (A) and (B), was not much different: descending from +17.883 m, Breccia encountered, at 12.20 m from the surface level, 'l'embouchure d'un ancien puits', the bottom of which, reached at +0.683 m, was backfilled with ashes and charred remains 'provenant d'un four de verrier' (coming from a glassmaker's oven), to quote Breccia, who dates the sieved glassworks to the 2nd century AD.

Site 67: South of Kom el-Dikka archaeological park

Maps: V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Baths; dwellings [Late Antique]
(ii) Foundations [Roman]

In February 1976, while digging foundations for a new building to the south of the archaeological park at Kom el-Dikka, ancient vestiges were accidently unearthed at a site delimited by the streets of Abd el-Moneim/Ismaīl Mahanna/L'2 (north), Safia Zaghloul (east), Granville/ Ismaīl Fahmy (south), and the Railway Station Square/ Midan Mahattet Masr (west). Salvage excavations were carried out on site by the PCMA: a square trench (490 m^2, depth: 5 – 6 m) with an extension subsequently made in 1978 (Rodziewicz 1979b: 107-138; 1984a: 313-316; Tkaczow 1993: 82-83, Catalogue Number 30). At least two successive phases of construction are identifiable. Phase (I): scant remnants of earlier structures of stonemasonry recorded within the opened trench. Phase II: (1) a habitation quarter represented by dwellings built of limestone blocks in mortar and walls coated with plaster; (2) a bathing facility that includes a *frigidarium* with a pool, a *caldarium* with five small pools, an *Iaconicum* (dry sweating room) with two furnaces for heating, an unidentified structure of four chambers, an underground corridor (service area), and a sewerage system. The contextual associates on site, chiefly pottery and oil lamps, date construction phase (I) c. the 2nd-3rd century and phase (II) c. the 5th-6th century AD.

Site 68: Kom el-Dikka archaeological park

Maps: V1; V2; V4

Foundations; fragmentary architecture: Kom el-Dikka [Ptolemaic; Roman]

During the 1965-66 season of excavation at Kom el-Dikka, the PCMA unearthed the remains of a building already demolished in antiquity, c. 17 m to the southeast of the late antique *odeum* (site 69a): a point on the northern side of Abd el-Moneim/Ismaīl Mahanna/L'2 Street (Kołątaj 1992: 41, Number 27; Kubiak and Makowiecka 1975: 13-15; Rodziewicz 1984a: 53-55; Tkaczow 1993: 85, Catalogue Number 32). The main trench (ME) (10 x 10 m, depth: 4 – 5 m) revealed a remnant of a wall built of limestone blocks in lime mortar, a section of a pavement of limestone slabs, and a debris of fragmentary architecture including a column base and shaft of limestone painted to simulate granite (preserved height: 0.80 m, diameter: 0.70 m). Building technique and the excavated elements of architecture date the structure in question to the late Ptolemaic/early Roman period. Its identification as a dwelling is inferable from the recorded dimensions of the stone blocks. One contextual find on site, a hoard of coins found beneath the limestone pavement, pertains to the Ptolemaic rulers of Cyrenaica.

Site 69: Kom el-Dikka archaeological park

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) (c) Interments [Arab]
(ii) (a; c) *Odeum* and portico [Late Antique]
(iii) (b; d; e) Dwellings; workshops; intermediate alley [Roman]
(iv) (c) Workshops; latrine; off-grid intermediate street [Ptolemaic; Roman]

(a) In summer 1964, while sinking pits for the casting of concrete reinforcements southwest of the archaeological park at Kom-Dikka, the extant remains of a late antique *odeum* were accidently discovered (Kołątaj and Kołątaj 1975: 79-97; Kubiak 1967: 63-70, 77-80; Kubiak and Makowiecka 1975: 7-13, 15-39; Rodziewicz 1969: 133-145; 1984a: 309-312; Tkaczow 1993: 85-87, Catalogue Number 33). In the area of interest, sector (M), annexed to the Polish concession following the discovery, systematic excavation and subsequent reconstruction work were carried out in 1964-68; conservation and restoration resumed in 1985. The *odeum* at Kom el-Dikka is a semicircular structure facing west, with various detectable components: (i) an orchestra, where a debris of brick arches indicates a domed construction that collapsed in place; (ii) seats of marble (most probably retained from an earlier dismantled θέατρον); (iii) niches of which two are reconstructed within the central part of the crown; (iv) a row of reused columns around the crown; (v) an outer wall of limestone blocks; (vi) a tripartite vestibule decorated with black-and-white floor-mosaics and sets of reused columns. The *odeum* itself opens onto a colonnaded portico running NNW-SSE, with a limestone pavement uncovered over a distance of about 45 m. A leveling *stratum* with fragmentary elements of architecture (column shafts and capitals) extends beneath the pavement of the portico. Several vestiges of unidentified structures adjoining the main building were recorded to the north and south. In general, the *odeum* and its colonnaded portico were built, for the most part, of reused material, following the levelling of the terrain within the central *insulae* in preparation for new constructions. Its successive phases of use date from c. the 5th to the 7th century until the building had finally fell into disuse. Accumulated layers of refuse (early Arab habitation of c. the 7th-8th century) and Arab interments of the Lower, Middle, and Upper necropolises (c. the 8th-13th century) had formed the hill-site atop which the French had built their Fort de l'Observatoire (aka Fort Crétin) towards the end of the 18th century.

(b) In 1972-74, the remains of Roman houses, structures (MA) and (MB) (see *infra*, site 69d), were excavated below the pavement of the *odeum's* portico, within trench (MX) (Rodziewicz 1976: 261-263; 1978: 384-385; 1984a: 33-39; Tkaczow 1993: 87-88, Catalogue Numbers 34-34A). The vestiges include various encounters: (i) a vestibule with a black-and-white geometric floor-mosaic framed by an *opus barbaricum*, and partially preserved walls painted in the first Pompeian style; (ii) a chamberette with a second floor-mosaic in *opus barbaricum* and a conduit running underneath; (iii) a pseudo-peristyle hall, partially excavated at the time, extending eastwards, beneath the adjacent *odeum*. Fragmentary architecture found within the fill, such as column drums in fine stucco, dentilled cornices, and a mosaic of irregularly-cut chips pressed into a waterproof plaster, attests the ravaging of the building, as is the case at the nearby houses of sector (W_1N) (those labelled *alpha*, *beta*, *gamma*, and *delta*: site 18). On one side of house (MA), an intermediate alley, running ENE-WSW, was uncovered over a short distance. Its limestone pavement measured 3 m in width. A possible continuation of it was excavated in 1962 by Victor Ghirghis during construction works carried out south of el-Nebi Daniel Mosque (site 65), at a point to the west of the archaeological park. It had almost the same width and limestone pavement as that discovered in the 1970s by the PCMA, and would represent yet another segment of the same intermediate alley running to the south of those unearthed at sectors (W_1N: site 18), (L: site 19), and (U: site 69c) within the Polish concession and at several other sites elsewhere (section 2.2.2.13), such as the case with Breccia's street L'α which was detected in the 1920s at the Latin Quarter (site 29). The latter is in fact an eastward extension of the

intermediate alley excavated by the PCMA at sectors (W_1N) and (L).

(c) In 1980-81, 1990-91, and 2011, at sectors (U) and (US), to the west of the bath complex (site 20), towards the northwestern corner of the Polish concession, a northward continuation of the *odeum's* portico (site 69a) was revealed, as attested by the stylobate and its overturned columns lying *in situ* (Daszewski 1994: 425-429; Majcherek 1992: 7-10; Majcherek and Kucharczyk 2014: 24-37, 44; Rodziewicz 1984b: 241-242; 1991: 84-102). The material (re)used in the construction of the stylobate and its colonnade were fluted limestone column drums (retained probably from a nearby dismantled Doric stoa or portico), marble Corinthian capitals, and granite column shafts. The *spolia* pertain mainly to the western colonnade of the *odeum's* portico. Some vestiges of an unidentified structure, basically limestone blocks, a dentilled cornice, and various other fragmentary elements of decoration, were found at the northeastern corner of this sector. In the northwest, a confined section of an inner street was uncovered. The exposed width of its dolomitic limestone pavement measured 5.70 m. Its sidewalk, originally about 2.70 m, is paved with limestone slabs. Aligned in the cardinal directions, hence constructed at an oblique angle to the urban grid, the street ran parallel with a similarly off-grid complex of separate units and a public latrine datable, on the grounds of contextual ceramic finds, c. the 1st to the late 3rd century AD. The assigned chronological range widens to commence c. the early 1st century BC, and possibly earlier, considering the ceramic ware accompanying the late Ptolemaic foundations excavated immediately to the south of the Roman complex (Figures 223-224). The various remains from within the complex bear traces of destruction by fire, represented on site by a debris *stratum* of earth and ashes separating them from Arab burials of the Lower Necropolis unearthed further to the west.

(d) During the 1993-94 season of excavation, trench (MX) (site 69b) extended to 100 m^2 (Majcherek 1995a: 11-14). The vestiges of the detected dwellings were identifiable on either side of the excavation profile. Domestic structure (A) (aka house MA) occupied the eastern section and had a square *oikos* (originally 6 x 6 m) partially destroyed by the wall of the neighbouring *odeum* (site 69a). It was accessible from the north via a tripartite entrance; inside, a group of half-columns created a pseudo-peristyle arrangement. Polychrome marble tiles forming geometric motifs (squares, triangles, and lozenges) and irregularly-hewn pieces of stone in *opus signinum* were employed in the pavement of the main reception hall. Below the courtyard pavement were remnants of a miniature vaulted cistern of fired brick, towards which ran a feeding conduit. A prominent find on site would be a rectangular pedestal. Its function is conjecturable from several nearby *ex-votos*. The architectural vestiges indicate a house built c. the end of the 1st century BC/the beginning of the 1st century AD, thus contemporary with house (FD) at the northeastern corner of the great cistern (sectors L and F: sites 19, 70). Domestic structure (B) (aka house MB) was partially excavated along the western side of the trench. It had small chamberettes with the largest not exceeding 3.50 x 2.60 m. A staircase excavated at one corner of the latter indicates a multiple-storey building or perhaps the presence of a roof terrace. Parts of structure (B), which extends westwards, beyond the excavation profile, were destroyed by the stylobate of the *odeum's* portico. Ceramics recovered on site show that after a brief pause structure (A) was reoccupied to serve as a workshop towards the end of the 3rd/ the beginning of the 4th century AD, before its final abandonment in the course of the second half of the 4th century and the subsequent levelling of the terrain in preparation for new constructions of the 5th-7th century (the *odeum* and its portico). Wide vertical cracks in the walls of both structures seem to back the hypothesis of a catastrophic event (EBTP candidate: the destructive earthquake and mega-tsunami of AD 365).

(e) During the 1992-93 season of excavation, a trench (MXV) was opened at the *odeum's* outer wall (site 69a). The prime aim was to verify the stratigraphy and chronology of the late structure (Majcherek 1994: 18-20). At 7 m below the surface level, a debris of fragmentary architecture included polychrome cornices, capitals, and a few stuccoed elements of decoration. Immediately underneath were the remains of a relatively well-preserved domestic structure (MC) comprising a 0.45 m wall in *opus quadratum* and two limestone columns standing c. 2.25 m apart as they flanked the entrance to a room signalled by door sockets, doorposts, and a welcoming mosaic panel displaying the Greek epigraph 'ΚΑΛΩCΗΚΕΙC' (καλῶς ἦκεις). Inside the room, a section of a polychrome floor-mosaic was uncovered. The *opus tessellatum* measures 2 x 1.70 m. It has a cruciform *emblema* filled with a band of double guilloche and contained within strictly geometric motifs (squares, lozenges, and trapezes). A band of diagonally arranged squares frames the floor-panel. Other sections of the excavated room and the area opposite its entrance were paved with shards of marble, porphyry, and alabaster. The welcoming inscription on the threshold suggests an *oikos* of a Roman house overbuilt with the late antique *odeum*. Burnt timberwork and a layer of ashes found scattered directly on the mosaic pavement are indicative of violent events. The recovered ceramic ware from destruction layers is datable c. the late 3rd/ early 4th century AD.

Site 70: Kom el-Dikka archaeological park

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments [Arab]
(ii) Basins; sewer; conduit; intermediate alley [Late Antique]
(iii) Dwellings and workshops; intermediate alley [Roman]
(iv) Foundations [Ptolemaic]

The zone between the bath complex (site 20) and the cistern (site 19) was investigated intermittently by the Polish mission in 1962-63, 1968, 1971, 1976-78/9, and 1986. The main trench (F) was opened during the 1962-63 season of excavation, followed by a southward extension in 1968 (Kołątaj 1971: 147-167; Lipińska 1966: 192-199; Lipińska and Riad 1966: 99-108; Rodziewicz 1983b: 249-256; 1984a: 270-278; Tkaczow 1993: 95-97, Catalogue Number 43). Excavations were carried out on the western side of transversal street R4, towards the eastern end of the southern passage of the bath complex, north-northeast of the cistern. Within (F), to the south of an eight-metre-high limestone wall constituting a westward branch of the aqueduct running alongside street R4, at +5.40 m above sea level, two chambers with mosaic pavements were excavated: one panel in *opus barbaricum*, the other a polychrome displaying geometric motifs. Below were traceable foundations signalling earlier constructions on site. Whereas late constructions postdating both chambers, mainly hydraulic installations associated possibly with the service area of the neighbouring bath complex, were met on the same levels as the great cistern and the adjacent aqueduct. As the case at other sites within the archaeological park, the upper *strata* yielded successive phases of Arab interment: a confined section of the mediaeval necropolis overlying remnants of early Arab and preceding Byzantine habitation. In general, stratigraphy at sector (F) shows Roman domestic architecture with floor-mosaics utilizing earlier Ptolemaic vestiges as ready foundations and, in turn, overbuilt with late antique structures of c. the late 4th-7th century.

In 1993-94 and 1996-97, further excavations were carried out at sector (F) (Majcherek 1995a: 14-20; 1996: 13-20; 1997: 19-31; 1998: 25-34). A distinction between the various phases of construction on site is attempted with the unearthing of a complex of Roman houses labelled (FA), (FB), and (FC). This group includes house (FD) that was excavated at the northeastern corner of the great cistern (site 19). The largest within the cluster, labelled (FA), is associated with two broad phases of construction: (I) c. the 1st-3rd century and (II) c. the late 3rd to the mid-late 4th century. Initially, house (FA) had replaced a Ptolemaic building, possibly of a similar domestic nature, represented by a remnant of a limestone wall built in *opus isodomum*. Earlier occupation is backed by the recovery of late Hellenistic ceramic ware beneath the accompanying floor level of tamped earth. The house, which apparently follows the ground plan of the preceding building, had a courtyard with pairs of half-columns projecting at regular intervals along the walls: a pseudo-peristyle arrangement. Two sets of rooms branched off the courtyard: domestic and commercial. An upper floor, perhaps a roof terrace, is indicated by a staircase accessible from the southwestern corner of the court. Immediately to the west of the latter was the main reception hall. Phase (I) ends with the house suffering extensive destruction towards the late 3rd century AD. Considerable changes mark the second phase of construction, with the original walls rebuilt, partition walls added for restructuring, and new techniques employed, such as brick vaulting and domes. The residential character of the building seems to fade away at this stage of use, as suggested by the excavated storerooms of *amphorae*. The pottery from destruction layers dates the abandonment of the building to the mid-late 4th century. Shortly after, a *stratum* of slag and lime-kiln refuse signals the construction of the nearby bathing establishment (site 20). A prominent encounter in house (FA), within a debris forming up the most of a small baulk at the eastern part of the building's courtyard, would be a marble head of Alexander the Great. It is today on display at the Bibliotheca Alexandrina Antiquities Museum (GRM, Inventory Number 4397; BAAM Serial 0223). Meanwhile, another segment of the longitudinal intermediate alley excavated at sectors (W_1N) (site 18) and (L) (site 20), on either side of transversal street R4, was detected at this sector, to the south of house (FB), thus confirming the internal division of the urban *insulae* L1-L'2-R3-R5 into smaller parcels.

Site 71: West of the Fire Department

Maps: V3; V4

Miscellaneous: Kom el-Dikka

(i) Interments [Arab]
(ii) Habitation refuse [Arab]
(iii) Foundations [Late Antique]

In 1944-48, British archaeologist Alan J.B. Wace excavated six trenches on the slopes of Kom el-Dikka. Wace's unpublished report was communicated in 1960 by Polish architect Leszek Dąbrowski in bulletin XIV of the Faculty of Arts, University of Alexandria (Adriani 1966a: 88-89, Catalogue Number 49; 1966b: Tavola 23, Figure 83; Tkaczow 1993: 88-89, Catalogue Number 35). The two trenches (B) and (C) excavated on the western and northern slopes of the *kom* yielded backfill layers of broken ceramics and glass vessels (site 66). In the south, within the area delimited by the *odeum* (site 69a) and the Fire Department, to the north of Abd el-Moneim/Ismaīl Mahanna/L'2 Street, four trenches were opened

– (A): remnants of limestone walls and a fragment of a pavement stuccoed in red and white, all underlying a debris of habitation refuse; (D1) and (D2): Arab interments; (E): a tamped floor on the same level of longitudinal street L'2, walls of roughly-hewn limestone blocks, and a latrine. In general, Wace's excavations seem to conform with the stratification of the *kom* – (i) late Ptolemaic (c. the 2nd-1st century BC): foundations of large, hewn limestone blocks and negatives of walls; (ii) Roman (c. the 1st to the late 3rd-4th century AD): dwellings with floor-mosaics and private *thermae*, workshops, and a public latrine; (iii) late antique (c. the late 4th-7th century): workshops and associated dwellings and public buildings such as a bath complex, cisterns, latrines, *odeum*, and *auditoria*; (iv) early Arab (c. the 7th-8th century): habitation and refuse; (v) Arab (c. the 8th-13th century): successive interment.

Site 72: Alexandria Opera House (a) and west of it (b)

Maps: V1; V2; V3; V4

Miscellaneous: el-Messallah Gharb

(i) (b) Foundations [Roman; Late Antique]
(ii) (a) Statuary (associates: sites 73, 93-100) [Roman]
(iii) (b) Foundations [Ptolemaic]

(a) A statue of Markus Aurelius of white marble was accidently discovered while digging foundations for the Zizinia Theatre (the later Mohamed Ali: Sayed Darwish: Alexandria Opera House) (Graeco-Roman Museum, Inventory Number 3250) (Adriani 1934: 83, Catalogue Number 76; Botti 1898c: 128, Number 33; Breccia 1914a: 65, 82, 207, Figure 16; 1922: 75, 95, 193, Figure 38). The find, donated to the museum by Menandro Zizinia (the owner of the plot), seems to recall a structure with a spacious peristyle and imperial statuary excavated in 1880 a few metres to the north of the theatre, at the Old Greek Hospital (site 73). Both sites lie within *insula* L1-L2-R4-R5: the presumed premises of the Forum Romanum to the south of the Caesareum (sites 93-100) and the emporion (section 3.7.3.1, G).

(b) In 1894-95, David G. Hogarth proceeded with another trench immediately to the west of the Zizinia Theatre, 'upon a plot belonging to Baron J. de Menasce', about 52 m from Fouad Street (Adriani 1934: 83, Catalogue Number 75; Hogarth and Benson 1894-95: 12-13). Several layers were identifiable within the excavated trench (17 x 11.50 feet: 5.18 x 3.50 m). (1) First there was an upper levelling *stratum* of earth mixed with stone and 'rough red pottery' (coarse ware). (2) At 7 feet (2.13 m), a concrete pavement was constructed upon a bedding of crushed brick in lime mortar. At the surface of the 1.80 feet (0.55 m) *stratum* was a circular depression measuring 3 feet (0.90 m) in diameter, interpreted by Hogarth as 'the bed of a column base uprooted and removed'. (3) At 12.50 feet (3.81 m), a section of a wall of small stone in mortar was traceable: 'two courses of elevation 3 feet (0.90 m) thick, and two courses also of a wall returning south, but in this case only 2 feet (0.60 m) thick'. Fragments of stucco in red, yellow, and blue were found in the debris. A drain ran below the level of the lowest elevation course. (4) 'Foundation courses of little better than rubble' were encountered towards the bottom at 17 feet (5.18 m), where Hogarth had cut 6 inches (0.15 m) into 'virgin yellow sand nearly as hard as rock'.

Site 73: Old Greek Hospital

Maps: V2; V4

Structure with a peristyle and statuary (associates: sites 72, 93-100): el-Messallah Gharb [Roman]

In 1880, vestiges of an ancient construction were accidently unearthed while digging foundations for the old Greek Hospital, at a point on the southern side of the street carrying the same name (the present-day Istanbul: a westward extension of el-Sultan Hussein/ Salah Mustapha) (Adriani 1934: 83, Catalogue Number 73; Neroutsos 1888: 21, 96-98). Excavated on site was the pavement of a spacious peristyle with twenty broken columns of porphyry (granite?). Within the colonnade were marble pedestals and fragmentary sculptures of 3rd-century emperors. One pedestal of white marble bears a Greek inscription recording a dedication made by a certain Aurelius Nemesion to Aurelius Sabeinianus (probably a senior financier and government official), suggesting a public edifice of a secular nature. The dedicatory reads:

ΑΥΡ-CABEINIANON
ΤΟΝ ΚΡΑΤΙCΤΟΝ
ΕΠΙΤΩΝ ΚΑΘΟΛΟΥΛΟΓΩΝ
ΑΥΡ-ΝΕΜΕCΙΩΝ
ΕΝΑΡΧ-ΥΠΟΜΝΗΜΑΤΟΓΡΑΦΟC.

Site 74: Greek Orthodox Church of San Saba (a) and south of it (b); junction of Antonius with Gessi Pasha (c)

Maps: V1; V2; V3; V4

Miscellaneous: el-Messallah Gharb; el-Messallah Sharq

(i) (b) Foundations; cistern; conduits [Late Mediaeval: Mamluk]
(ii) (b) Cisterns; conduits; fragmentary mosaics [Roman]
(iii) (a) Statuary [Ptolemaic; Late Antique reuse]
(iv) (c) Inscribed pedestal [Ptolemaic]

(v) (b) Dwellings; workshops [Ptolemaic]

(a) In 1898, Giuseppe Botti maintained that 'l'actuelle Eglise de St. Saba semble avoir succédée à une basilique de l'empire, ornée en statues de calcaire numismale, parmi les quelles une statue de Niobe' (Adriani 1934: 88-89, Catalogue Number 100; Botti 1898c: 116; Savvopoulos and Bianchi 2012: 110-115, Catalogue Number 33). Successive phases of rebuilding the Greek Orthodox Church of San Saba, southeast of the old Greek Hospital (site 73), would suggest a structure overbuilding earlier vestiges of late antiquity, which were practically reutilized as ready foundations for the earliest construction phase of San Saba, including an assortment of reused architectural material (structural and decorative). Adriani thought Botti's 'statue de Niobe' to be the funerary one of nummulithic limestone representing a woman and her child, who are often identified as Berenike II, wife of Ptolemy III Euergetes I (c. 246-221 BC), and her daughter (Graeco-Roman Museum, Inventory Number 14942). Other interpretations, such as that of Botti, have connected it with Niobe. The early Hellenistic statue adheres to the canons of the 4th-century BC Attic funerary painting seen on contemporary grave *stelae*. Therefore, if Botti's claimed provenance is valid, it would have been relocated from its original context to complement the inner decoration of the Christian edifice, where it was, perhaps, assimilated to the 'Virgin and her Child'.

(b) Between 2000 and 2004, the Centre d'Études Alexandrines carried out salvage excavations at a plot located a few metres to the south of the Greek Orthodox Church of San Saba (site 74a): on the northern side of Fouad Street (Empereur 2000a: 615; 2001: 689-690; 2002b: 620-621). An area of 420 m^2 was investigated at the northern sector of the plot (2,500 m^2), where a garage, built in the 1930s, had replaced the old garden of the 19th century. Cutting through the upper layers of modern occupation (the garage and the preceding garden) and Ottoman backfill, vestiges of late mediaeval and ancient hydraulic installations were encountered: three cisterns, one Mamluk and two Roman, with access-shafts connected to underlying feeding conduits. A pavement of reused marble slabs from the Mamluk phase of construction exemplifies the constant recovery of structural and decorative elements of architecture from Roman occupational levels. Pertaining to the latter were a 2nd-century AD mosaic *emblema* of a bird and a fragmentary floor-mosaic with a black-and-white geometric pattern. The various finds within the fill include a fragment of the base of a Hellenistic brazier, a 2nd-century AD oil lamp featuring a wounded Amazon in relief, a 2nd-century AD jasper intaglio, faïence objects, glazed ceramics (mediaeval), and a clay tobacco pipe with ribbed decoration (Ottoman). At the lowermost levels, the relatively less disturbed Hellenistic *strata* revealed the remains of domestic structures occupying the site towards the end of the 4th and throughout the 3rd century BC. A large commercial complex of workshops, with outlets selling worked bone and ivory products, was constructed successively in the 2nd century BC. The complex comprising six units and situated on the northern side of the ancient πλατεία (L1) had its shops accessible from a side street running to the west.

(c) A partially preserved pedestal of Aswan granite was reported in 1905 by Evaristo Breccia, near the Pandelides building at the junction of the streets of Antonius (Fawzi Fahmy) with Gessi Pasha (Aisha el-Taymoureiya) (Adriani 1934: 82, Catalogue Number 70; Breccia 1911: 8-9, Catalogue Number 16; 1914a: 87; 1922: 101). The inscribed pedestal (height: 0.325, width: 0.640 m) (Graeco-Roman Museum, Inventory Number 53) was used repeatedly, judging by the different footprints found on either side. It bears three epigraphs, two hammered out and one partially destroyed. The latter, readable on discovery, is a dedicatory commissioned under Ptolemy III Euergetes I (c. 246-221 BC) in honour of the king's physician. It reads:

[β]α[σιλεὺς Πτολεμαῖος Πτολ]εμαίου
[καὶ Ἀρσι]νό[η]ς [θ]εῶν ἀδελφῶν
Ξ̣[νόφαν]τ̣ο̣ῦ Σωσικράτους Ἡρακλεῖον
τὸν αὑτοῦ ἰατρόν.

Site 75: Southern side of Fouad Street, south of the Alexandria Opera House

Maps: V2; V3; V4

Miscellaneous: Kom el-Dikka

(i) Coarse masonry; artisanal refuse [Late Mediaeval]
(ii) Interments [Arab]
(iii) Foundations [Roman; Late Antique]
(iv) Fragmentary mosaics [Roman]

In 1894-95, David G. Hogarth excavated a trench at a plot owned by the Zogheb family, on the northwestern slopes of Kom el-Dikka: a point 'opposite to but a little west of the Zizinia Theatre (site 72a)', towards the northwestern limit of *insula* L1-L'2-R4-R5 (Adriani 1934: 89, Catalogue Number 101; Hogarth and Benson 1894-95: 14-16). At least six stratigraphic layers were identifiable within the opened trench (31 x 19 feet: 9.45 x 5.80 m). (1) Artisanal refuse of worked bone and below, at 3 feet (0.91 m), a wall of poor quality and traces of vitrified slag. (2) Burials appeared at 6.50 feet (2 m), laid c. 1.80 feet (0.55 m) apart and covered with slabs. (3) A debris of earth and rubble lying loosely and mixed with potsherds. (4) Two parallel walls in mortar, with traces of plaster on their inner faces, were encountered at

14.50 feet (4.42 m). (5) At 20 feet (6.10 m), a fragment of a floor-mosaic (4.80 x 4.80 feet: 1.46 x 1.46 m), decorated with a floral border (1.40 feet: 0.42 m wide), was constructed upon a bed of soft lime mortar mixed with crushed brick. Another fragment of a relatively small panel survived to the north, where Hogarth noted 'a bird's head and two flowers', and nearby, 'fallen blocks' lying on the pavement. A *substratum* of hard sand, ashes, cement, and earth, then followed. (6) Below the level of concrete were potsherds, basically 'plain black glazed mixed among indistinctive red and buff unglazed', yet without 'any structures of good masonry' down to the groundwater level at 30 feet (9.14 m). The succession of layers, as the case elsewhere at Kom el-Dikka, indicates a continuous occupation within the central *insulae*: (1) late mediaeval (Mamluk) habitation represented by modest constructions and artisanal refuse; (2) Arab interments; (3) and (4) destruction layers bearing remnants of foundation walls in mortar, pertaining to Roman and late antique constructions; (5) fragments of Roman mosaic pavements, i.e. Hogarth's 'bird's head and floral motifs', which seem to recall similar patterns of contemporary panels unearthed at sector (W_1N) of the Polish concession (site 18) and south of San Saba (site 74b).

Site 76: Southern side of Fouad Street, SW. of the junction with Safia Zaghloul

Maps: V1; V2; V4

Miscellaneous: Kom el-Dikka

(i) (b) Marble statue [Roman]
(ii) (a) Foundations (associates: sites 17, 63-64a, 77) [Ptolemaic]

(a) In 1898, Giuseppe Botti maintained that 'entre le fort de Kom-el-Dikkeh et l'avenue de Porte Rosette, vis-à-vis du palais de M. le Comte Antoine de Zogheb, à l'occasion du creusement des fondations d'une nouvelle maison on a trouvé des fondations énormes': a point to the west of Cinema Amir (site 17) (Adriani 1934: 88, Catalogue Number 99; Botti 1898a: 55). Of the excavated blocks of limestone some were found bearing stonecutters' marks painted in red. The reported 'enormous foundations' extended eastwards, parallel with Fouad Street (the L1 πλατεία), before it stopped abruptly at the western limit of Botti's so-called 'Dromos Tycheum': approximately, towards the L1-R4 junction. Given such a brief account, the foundations in question may belong to a Ptolemaic monumental edifice associated perhaps with other contemporary vestiges excavated nearby (sites 17, 63-64a, 77).

(b) In 1866, a statue of a seated Herakles carved from white marble was accidently unearthed during the digging of foundations for the Boustros building south of the junction of the streets of Fouad and San Saba: a few metres to the west of site (76a) (Graeco-Roman Museum, Inventory Number 11216) (Adriani 1934: 83, Catalogue Number 77; Botti 1898c: 125, Number 13; Breccia 1914a: 65, 286-287, Figure 17; 1922: 96, 282-283, Figure 39). The partially preserved headless statue representing Herakles Epitrapezios, with a wrapped mantle across the lower back and over the left arm, and a characteristic lion skin draped over the left thigh, is datable c. the end of the 1st century BC.

Site 77: Southern side of Fouad Street, SE. of the junction with Safia Zaghloul

Maps: V1; V4

Stylobate of a Doric colonnade (stoa?) (associates: sites 17, 63-64a, 76a): Kom el-Dikka [Ptolemaic]

In January 1960, during the digging of foundations for the National Insurance Co. of Egypt (the Eastern Cotton Co.), at the southeastern corner of the junction of Fouad with Safia Zaghloul, the vestiges of an exceptional construction of the Ptolemaic city were accidently discovered (Adriani 1966a: 88, Catalogue Number 48; Riad 1967a: 85-88; Tkaczow 1993: 107-108, Catalogue Number 54). The remains encountered at +5.46 m above sea level were largely destroyed already by the foundations of earlier 19th-century buildings erected on site, before further violation had taken place by the bulldozers of the modern developers prior to the GRM salvage intervention in 1960. At the time, the director of the museum, Henri Riad, identified only two extant sections of the stylobate of a monumental Doric colonnade, along with a confined fragment of the accompanying pavement (Figure 225). These were built upon the bedrock, at 7.45 m below the surface level, parallel with one another and perpendicular to Fouad Street (the L1 πλατεία). Large, finely-hewn limestone blocks were employed in the stylobate. The pavement was constructed of rectangular limestone slabs. The extant parts of the stylobate, found c. 6.50 m apart, had a preserved height of 2.50 m. Three columns survived *in situ*: two, spaced c. 2.50 m apart, upon the stylobate closer to transversal street R4 and one upon the stylobate excavated a few metres to the east. The columns of Max limestone (from local quarries), covered with a thick layer of stucco, measured 0.85 m in diameter and had a preserved height of 1.70 m (the tops reached at 3 m below the surface level). The lack of bases and the wide shallow flutings would suggest a construction in the Doric order. Perhaps the columns belonged to the Doric colonnade of a monumental stoa (or portico) datable to the 3rd century BC. Architectural order, structural design, orientation, and the relative location of this public Ptolemaic edifice to the πλατεία, all seem to recall Strabo's narrative on the Gymnasium (section 3.6.2.1, A).

Site 78: North of the junction of Sidi el-Khiashi with Safia Zaghloul

Maps: V3; V4

Complex of workshops and dwellings: Kom el-Dikka [Late Antique]
(Nearby contemporaries: sector W_1N, site 18. Off-grid orientation: sector U-US, site 69c; site 31)

In 1933, on the occasion of digging foundations for a new building of Kelada Antoun (No. 16, Safia Zaghloul Street), between Sidi el-Khiashi Street and the archaeological park at Kom el-Dikka, a fragmentary column of red granite was recorded by Achille Adriani in one of the opened trenches (Adriani 1940a: 63-64). Adriani's find might have belonged to the colonnade of the nearby (late) Roman street R4. In 1976, during the demolition of buildings, hence the subsequent levelling of the terrain, accidental discoveries were made on the site of the adjacent plot (No. 15) (Rodziewicz 1979a: 79-89; 1984a: 252-256; Tkaczow 1993: 111, Catalogue Number 56). The concrete reinforcement trenches of the modern developers, inspected by Mieczysław Rodziewicz from the PCMA, revealed foundations of roughly-hewn limestone blocks in mortar, representing a complex of workshops and houses which cannot be studied in isolation from that unearthed c. 36 m to the west, within sector (W_1N) of the Polish concession (site 18). Unlike the latter, this cluster had an off-grid orientation as is the case at the concession's sector (U-US) (site 69c). The recovered pottery provides an approximate range of use c. the 5th-6th century, thus bringing forth the notion of a late antique cluster of workshops and houses that formed part of a larger urban complex of artisanal and domestic character. The oblique orientation, if unintentional, may be due to unskilled planning met within a contemporary context at Sidi el-Bardissi (site 21). Otherwise, this late cluster, aligned roughly to the cardinal directions, would represent an unusual cardinally-oriented unit/islet surviving within the Byzantine grid, where the exploitation of earlier vestiges as ready foundations had been possible. Consequently, this would question the nature of the presumed preceding cardinally-oriented building marked by a high ground (*kom*) and often labelled 'Copron Berg/Mons' in some of the 19th-century maps of the ancient city (Introduction II.e. Figure 57: Wilhelm Sieglin's map in the 1890s): perhaps, a Ptolemaic public (cultic?) edifice situated in proximity to the nearby Boubasteion (site 92). A possible candidate would be the historically attested Paneion (section 3.6.2.2, B), which might have continued to operate during the Principate until it was eventually dismantled at some point within the 3rd-4th century AD (more likely c. the 390s). Similar off-grid cardinally-oriented pockets (sites 31, 69c) exist within the rigid orthogonal Roman grid that strictly follows the canonical secondary intercardinal orientation (NNW-SSE). Such pockets are found at the central district where architectural continuity is particularly evident in the early Roman *strata* (sites 18-20, 69-70).

Site 79: Southern side of Fouad Street, south of the Alexandria Water Co.

Maps: V3; V4

Dwelling with a bathing facility: Kom el-Dikka [Late Antique]

In 1978, during the digging of foundations for a building on the southern side of Fouad Street, at a point to the south of the Alexandria Water Co., the remains of a structure of domestic nature were accidently unearthed (Rodziewicz 1984a: 252, 317-329; Tkaczow 1993: 111, Catalogue Number 57). The excavated trench, inspected by Mieczysław Rodziewicz from the PCMA, revealed several chambers branching off a bathing facility. The overall architectural setting indicates a private property. Whereas some of the recovered elements of decoration, for instance a fragment of a slab displaying an encircled cross in relief, suggest a possible range of use c. the 5th-7th century.

Site 80: Southern side of Fouad Street, opposite the former Municipality of Alexandria

Maps: V4

Cistern Sarkoug el-Saghir: Kom el-Dikka [Arab]

In 1899, Giuseppe Botti reported a cistern, known as Sarkoug el-Saghir, on the southern side of Fouad Street, opposite the former site of the Municipality of Alexandria (presently a parking area) (Adriani 1934: 88, Catalogue Number 98; Botti 1899a: 23, 4me série, Planche A). The cistern was accessible by means of a 3.40 m shaft, the top of which is met at 2.10 m below the street level. The main structure is, therefore, cut into the bedrock at 5.50 m below the street level. It was probably fed through one of the subterranean aqueducts shown in the *cartes* of les Ingénieurs de l'Armée d'Orient (*Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84; Antiquités V, Planches, 1822: Planche 31).

Site 81: The former Municipality of Alexandria

Maps: V3; V4

Foundations: el-Messallah Sharq [Late Antique]

In 1876, during the digging of foundations for the École-Monument (the future site of the former Municipality of Alexandria: presently a parking area), the remains

of a late antique structure were accidently discovered (Adriani 1934: 83, Catalogue Number 74; Neroutsos 1888: 71-73; Botti 1898c: 92). Neroutsos, who reported the finds, believed the excavated foundations to have belonged to the 'Church of Saint-Michael'. His identification is based on fragments of cruciform ornamentation and 'des hypogées' with almost erased inscriptions in Greek and in Coptic. As the case at other sites with analogous finds reported by Neroutsos and Botti, the vestiges in question would pertain rather to a dismantled Byzantine structure reutilized by the Arabs as a quarry of building material.

Site 82: East of the Graeco-Roman Museum

Maps: V1; V4

Foundations: el-Messallah Sharq [Ptolemaic (?)]

In 1898-99, Ferdinand Noack excavated four trenches (H1, H2, H3, H4) within the urban block delimited by the streets of the Abbasids (north), el-Faraana (south), Cerisy/present-day Hussein Hassab (east), and Gerber/present-day Mahmoud Mokhtar (west) (Adriani 1934: 82, Catalogue Numbers 66-69; Noack 1900: 223-224). Three of the trenches, reaching +10.36 m, +3 m, and +4.20 m above sea level, revealed no finds. In the fourth (H3), at +1 m above sea level, blocks of an unidentified structure were found partially immersed in groundwater. Stratigraphy seems to indicate a Ptolemaic construction. In 1934, however, no finds were reported during the digging of foundations for a property of Abd el-Fattah el-Safuri: the new building that occupied the site at the time it was reinvestigated by the GRM director Achille Adriani.

Site 83: Gerber Street: Villa Menasce (a); the American Cultural Centre (b)

Maps: V2; V4

Miscellaneous: el-Messallah Sharq

(i) (b) Dwelling [Roman]
(ii) (a) Inscribed pedestal [Ptolemaic]

(a) In 1905, Baron Jacques Menasce donated a rectangular statue base of serpentine granite to the Graeco-Roman Museum (GRM, Inventory Number 52) (Adriani 1934: 84-85, Catalogue Number 83; Breccia 1905b: 120-122; 1907e: 7; 1911: 85, Catalogue Number 144). The pedestal, once stood at the entrance to Villa Menasce on Gerber (Mahmoud Mokhtar) Street, bears a Greek inscription that records the commissioning of a statue in honour of a certain court official (*dioiketes*: a chief finance officer), son of Asklepiades, by the members of the cult association (*synodos*) of Aphrodite (L)a(u)mbeous. It is datable, on palaeographical grounds, c. 100-70 BC and reads:

[— — —]ον Ἀσκληπιάδου τὸν συγ[γενῆ]
καὶ διοι̣κητὴν οἱ νέμο̣ντες σὺν αὐτῷ̣
τὴν τῆς Ἀφρο[δίτη]ς .α.μβεους σύνοδο[ν]
ἀρετῆς ἕνεκε[ν καὶ με]γαλομερ̣είας ἧς
vac. ἔχων διατελεῖ πρὸς τ[ὸ] θ̣εῖον.

(b) In 1983, a trench was sunk at the garden of the American Cultural Centre, to the east of the Graeco-Roman Museum (Rodziewicz and Daoud 1991: 151-168; Tkaczow 1993: 113-114, Catalogue Number 61). The excavated remains include stonemasonry and a layer of dark bulbous mud, suggesting a domestic building with a cultivated open-air courtyard. The contextual ceramics date the structure in question to the Principate (nearby contemporaries: sites 18-20, 69b, d-e, 70).

Site 84: East of the former Municipality of Alexandria

Maps: V4

Blocks: el-Messallah Sharq [n.d.]

In 1890, Giuseppe Botti recorded massive blocks of Max limestone to the east of the site of the former Municipality of Alexandria, immediately south of the American Cultural Centre (site 83b): a point on the northern side of Fouad Street. He relates: 'Pietro Makri me parlait en 1892 d'inscriptions en caractères hiéroglyphiques que l'on aurait retrouvées en ce lieu. Mais j'en ignore' (Adriani 1934: 87-88, Catalogue Number 96; Botti 1898c: 92). The reported blocks seem out of context: they were probably retained from a dismantled construction to be (re)utilized as building material. Makri's 'hieroglyphs' do not fit with the reported material being limestone, not granite; however, they hint at a secondary deposit of building material on site, which might have included the rather durable granite.

Site 85: NE. corner of the junction of el-Faraana with the Fatimids

Maps: V1; V2; V4

Miscellaneous: el-Messallah Sharq

(i) Foundations [Roman]
(ii) Foundations; fragmentary mosaic and architecture [Ptolemaic]

In 1899, Giuseppe Botti maintained that 'a discovery of much importance has just been made at a property of Benedetto Tilche': approximately, the northeastern corner of the junction of the streets of el-Faraana and the Fatimids (the present-day Abd el-Moneim Khalil)

(Adriani 1934: 88, Catalogue Number 97; Botti 1900-01: 534; Botti and Simond 1899: 64; Tkaczow 1993: 212, Object Number 60). Botti identified the excavated layers as follows:

> *0 m: niveau de la rue des Fatimites.*
> *5 m: restes de constructions romaines.*
> *7 m: constructions du déclin de l'époque ptolémaïque.*
> *8.50 m: constructions de la première époque ptolémaïque.*
> *(bedrock reached at 9 m)*

Pertaining to the earliest layer was a fragmentary mosaic that had 'une large bordure en blanc uni, d'un travail quelque peu sommaire; mais parallèlement à la pseudo-canopique, dans un rectangle il y eut des figures, dont une seule restait encore. C'était un hermès portant une tête de Vénus ornée de la *stéphane* (Στέφανος: an arc-wreath). Les teintes étaient bien harmonisées et le dessin en était assez correct'. The mosaic extended towards the main street (the Fatimids), where sections of Doric columns, possibly contemporary with the excavated panel, were found. In his *Catalogue des Monuments Exposés au Musée Gréco-Romain d'Alexandrie*, Botti records that item No. 67, a limestone capital decorated with an ivy-scroll motif, on display at the GRM Salle 15 (Graeco-Roman Museum, Inventory Number 3858), has come from the site of the Casa Tilche.

Site 86: Western side of el-Batalsa, between the Abbasids and el-Faraana

Maps: V3; V4

Column debris: el-Messallah Sharq [Late Antique]

In 1914, Evaristo Breccia reported several marble columns of considerable dimensions, bearing Christian symbols (engraved), 'le long de la rue des Ptolémées, en face de la villa Salvago': a point opposite the present-day Russian Cultural Centre (Adriani 1934: 84, Catalogue Number 82; Breccia 1914a: 87; 1922: 101). Given their findspot, the columns might have belonged to a late antique structure lining the western side of transversal street R2, or perhaps less likely given the reported material, to the street colonnade itself (usually of limestone or granite rather than marble).

Site 87: Northern side of Fouad Street, between el-Batalsa and Goussio

Maps: V3; V4

Foundations: Latin Quarter [Late Antique]

In 1894-95, David G. Hogarth maintains, 'by the great kindness of Mons. Pandeli Salvago, I was permitted to dig in the plot which intervenes between his brother's house and the (Rosetta) Boulevard, and which was occupied at the time of my visit, only by a ruined Arab house': a point located at the middle of the urban block delimited by the streets of Fouad (south), Goussio/present-day Noah Effendi (east), el-Faraana (north), and el-Batalsa (west) (Adriani 1934: 82, Catalogue Number 71; Hogarth and Benson 1894-95: 6-8).

At a distance of 125 feet (38 m) from the fence on the northern edge of the Rosetta Boulevard (Fouad Street), Hogarth excavated his first trench. Descending through dry and loose surface debris, 'one course of a wall one-stone thick' was met at 3 feet (0.91 m). The debris extending downwards includes potsherds and fragments of a marble pavement. At 11 feet (3.35 m), Hogarth hit the top of a large wall of small stone held with mortar containing sand and crushed brick. The excavated part of it measured 8.60 feet (2.62 m), with a preserved height of 4 feet (1.22 m). On the southern side of the trench, the wall was uncovered over 17 feet (5.18 m); then after a break, another fragment continued, 'whose western face had been stripped to a depth of 3 feet (0.91 m)'. Meanwhile, 'a much-ruined wall originally at least 6 feet (1.83 m) thick, returned eastwards, starting from the break in the first wall'. It had 'so many of its stones abstracted'. While enlarging the trench, Hogarth cut through two layers of 'very coarse concrete' at 5.50 and 8 feet (1.67 and 2.43 m) below the surface level to encounter 'two rough walls resting on loose earth, running 2 feet (0.60 m) apart, westwards from the line of the big wall'. Outside the latter, to the west, was a coarse layer of concrete, three inches (0.0762 m) thick, below which a deep drain of small stone ran westwards. In it, an unglazed *ampulla* was found bearing the stamp 'ΑΓΙΟΥΜΗΝΑ' round a cross on one side and the figure of Saint Menas standing between two kneeling camels on the other. The contextual finds within the debris towards the wall include 'an egg-shaped bead of speckled diorite, a very coarse lamp, some fragments of bone handles, and a seated statuette in late and coarse blue-glazed ware perished almost beyond recognition'. Hogarth, cutting into the concrete, descended 15 feet (4.60 m) through a debris *stratum* of rough stone and loose earth until groundwater was reached at 30 feet (9.14 m) below the surface level. A second trench was excavated at just 20 feet (6.10 m) from Fouad Street, where traces of the ruined wall were recorded. Both the stratigraphy and the contextual associates of the excavated foundations suggest a late Roman construction on the northern side of the L1 πλατεία. It seems to have been dismantled at some point already in late antiquity, and following the levelling of the terrain, habitation resumed on site c. the 5th-6th century.

Site 88: North of Bab Sharq

Maps: V2; V3; V4

Column debris: colonnade of streets R1 and/or L1: el-Shallalat Park [Roman; Late Antique]

In 1914, Evaristo Breccia maintains: 'tout près de l'ancienne porte Rosette, à une grande profondeur, on a vu quantité de colonnes en granit' (Adriani 1934: 87, Catalogue Number 93; Breccia 1914a: 87; 1922: 102). Given the reported context of recovery, a few metres to the north of Abu Qir Road, at the section of it south of el-Shallalat Park, the finds would have belonged to the colonnades of streets R1 and/or L1: the πλατείες of the ancient city (R1: sites 10-12, 137a, 139, 140c; L1: sites 22-23). Being carved from granite and considering their relative proximity to the Arab circuit walls would seem to suggest a secondary deposit of durable building material (re)utilized in the nearby defences.

Site 89: el-Shallalat fortifications

Maps: V1; V4

Inscribed pedestal: el-Shallalat Park [Ptolemaic]

In 1911, Evaristo Breccia published a Greek inscription carved onto a red granite base of a statue commissioned by two brothers, as military officers and commanders of an elite unit serving with the royal guard, in honour of Ptolemy V Epiphanes (c. 204/3-181 BC) and his deceased predecessors, Ptolemy IV Philopator and Arsinoe III, the Father-Loving Gods (Θεοὶ Φιλοπάτορες) (Graeco-Roman Museum, Inventory Number 54) (Adriani 1934: 86, Catalogue Number 91; Botti 1902d: 94-95; Breccia 1911: 15-16, Catalogue Number 31; 1914a: 87; 1922: 101). Reported earlier, however, by Giuseppe Botti in volume IV of the *Bulletin de la Société Archéologique d'Alexandrie* (1902), the pedestal itself was recovered at the surviving segment of the Shallalat fortifications (site 1). Already partially damaged on the inscribed side, it seems to have served as a building material (reuse) in the construction of the mediaeval circuit walls, especially when considering its relative proximity to fortification-point (α). The inscription reads:

> [Βασιλέα Π]τολεμαῖον Θεὸν Ἐπιφανῆ καὶ Εὐχάριστ[ον]
> [καὶ τοὺ]ς τούτου γονεῖς βασιλέα Πτολεμαῖον καὶ
> [βασίλ]ισσαν Ἀρσινόην, Θεοὺς Φιλοπάτορας,
> [. . .]ώτης Ὥρου καὶ Τεαρόως ἀδελφός λαάρχαι
> καὶ ἡγεμόνες τῶν περὶ αὐ〈λ〉ὴν ἐπιλέκτων
> μαχίμων εὐεργεσίας ἕνεκεν τῆς εἰς αὐτοὺς
> καὶ τοὺς οἰκείους.

3.6.1.2) Religious Edifices

Site 90: Southern side of Fouad, at the junction with Morsi Badr and Sherif Pasha

Maps: V1; V4

Temple to Sarapis and Isis, Θεοὶ Σωτῆρες, and Ptolemy IV Philopator and Arsinoe III, Θεοὶ Φιλοπάτορες: el-Attarine [Ptolemaic]

In 1885, while digging foundations for a new stock exchange within Daïrrette Toussoun Pasha, hence the name Bourse Toussoun (the later Club Mohamed Ali; 1962: Kasr Thakafit el-Horreya; 2001: Markaz el-Horreya lel-Ibda bel-Askandarreiya), the foundations of a 3rd-century BC Ptolemaic temple were accidently discovered on the southern side of Fouad (el-Horreya) Street, at the junction with the streets of Morsi Badr and Sherif Pasha (present-day Salah Salem) (Figures 226-227) (Maspero 1886: 140-141; Neroutsos 1888: 21-22). At the time, Italian archaeologist Giacomo Lumbroso recorded a set of four inscribed plaques of gold, silver, bronze, and greenish glass within a foundation deposit beneath one cornerstone. On the better-preserved gold plaque (currently, unknown custodian; formerly, private collection in Cairo) is a bilingual Greek-hieroglyphic inscription commemorating the dedication of the temple to Sarapis and Isis, as the Saviour Gods (Θεοὶ Σωτῆρες), and to the reigning Lagids, Ptolemy IV Philopator and Arsinoe III, the Father-Loving Gods (Θεοὶ Φιλοπάτορες). Other traces were recognizable on the less-preserved plaques (unknown custodian). The Greek dedicatory reads:

> Σαράπιδος <κ>αὶ Ἴσ<ι>δος Θεῶν Σωτήρων
> καὶ βασιλέως Πτολεμαίου καὶ βασιλίσσης
> Ἀρσινόης Θεῶν Φιλοπατόρων.
>
> *(Of the temple) of Sarapis and Isis, the Saviour Gods (Θεοὶ Σωτῆρες), and of King Ptolemy and Queen Arsinoe, the Father-Loving Gods (Θεοὶ Φιλοπάτορες).*

In 1915, Prince Omar Toussoun donated, along with several other pieces from his private collection, two Corinthian capitals to the Graeco-Roman Museum – (1) Inventory Number 20939; material: nummulithic limestone; order: Corinthian; dimensions: 0.58 m – (2) Inventory Number 20940; material: nummulithic limestone with traces of a polychrome; order: Corinthian; dimensions: 0.56 x 0.55 m (Awad and Escoffey 2008: 71, Catalogue Numbers 460-461; Breccia 1916: 7; Ronczewski 1927: 13-14; Savvopoulos, Bianchi, and Hussein 2013: 198, Catalogue Numbers 406-407). The capitals as accidental encounters were excavated during construction works near Bourse Toussoun. Evaristo Breccia, then director of the museum, thought they might have belonged to the remains of the Ptolemaic temple recorded in 1885 by Giacomo Lumbroso and reported shortly after by Gaston Maspero.

Site 91: Western side of el-Nebi Daniel, between Zangarol and the Greek Hospital

Maps: V2; V4

Temple to Isis Plousia (?): el-Messallah Gharb [Roman]

In 1872, during the digging of foundations for a new house of Joseph de Zogheb, 'les vestiges d'un temple et un fût de colonne tronquée' were noted by Tassos Neroutsos (Adriani 1934: 82, Catalogue Number 72; Breccia 1911: 52, Catalogue Number 71; Neroutsos 1875: 5-6; 1888: 5-6). The site is located on the western side of el-Nebi Daniel Street, at the segment of it between the junctions with the streets of Zangarol (present-day Nazmy Boutros) and the Greek Hospital (present-day Istanbul: a westward extension of el-Sultan Hussein/ Salah Mustapha). The reported 'truncated column shaft' (Graeco-Roman Museum, Inventory Number 158) bears a Greek inscription indicating it might have belonged to the pedestal of a cult-statue dedicated to the 'great goddess Isis of abundance' or 'Θεᾶι Μεγίστηι Ἴσιδι Πλουσίᾳ'. One commissioned on August 26th, AD 158 (the year 21 of the emperor Antoninus Pius), by Tiberius Iulius Alexander, commander of the Cohors I Flavia, who was in charge of the grain supply of Quarter Beta. The epigraph thus hints at the possible location of a temple to the cult of 'Isis Plousia' at the premises of Philo's historically attested 'Quarter Beta' (Philo, In Flaccum: VIII. 55). Nevertheless, the validity of this assumption depends primarily on whether the column in question was found *in situ* or within a secondary deposit of fragmentary elements of architecture intended for reuse. The dedicatory reads:

> Θεᾶι Μεγίστηι Ἴσιδι Πλουσίᾳ | Τιβ[έριος] Ἰούλιος Ἀλέξανδρος | γενάμενος ἔπαρχος σπείρης ᾱ | Φλαουίας τῶν ἠγορανομηκότων || ὁ ἐπὶ τῆς εὐθηνίας τοῦ β γράμματο[ς] τὸν ἀνδριάντα σύν τῆι βάσει ἀνέθηκε | ἔτους κά Αὐτοκράτορος Καίσαρος Τίτου Αἰλίου | Ἁδριανοῦ Ἀντωνείνου Σεβαστοῦ Εὐσεβοῦς | Μεσορὴ ἐπαγομένων γ.

Site 92: SE. of Kom el-Dikka archaeological park

Maps: V1; V2; V3; V4

Miscellaneous: Kom el-Dikka

(ii) Coarse masonry; hydraulic installations [Late Antique]

(i) Temple to Bastet; affiliated workshop (?) [Ptolemaic; Roman]

From November 2009 to January 2010, a salvage excavation was carried out by the Egyptian Supreme Council of Antiquities (SCA) at a plot of the Ministry of Interior (Central Security Barracks) situated between the streets of Suleīman Yousri (formerly, el-Amir Abd el-Qader: an eastward extension of el-Amir Abd el-Moneim/Ismaīl Mahanna) and Ismaīl Fahmy (formerly, Granville): a point southeast of the archaeological park at Kom el-Dikka: within *insula* L'2-L'3-R3-R4 (Figures 228-229) (Abd el-Fattah, Abd el-Maksoud, and Carrez-Maratray 2014: 149-177; Abd el-Maksoud, Abd el-Fattah, and Seif el-Din 2012: 427-446; 2015: 133-153; 2016: 34-37).

The two-month campaign yielded foundations of large, hewn limestone blocks, with contextual associates signalling an edifice dedicated to the cult of the local deity Bast(et), the cat goddess of domesticity in Lower Egypt. Various fragmentary elements of architecture of limestone, granite, and marble were encountered. The contextual finds include five deposits of which one denotes the construction of the building, while the others represent votive offerings (Figure 230). First deposit: more than 400 figurines of cats of terracotta and limestone; a dozen statuettes of children; ceramic ware of vases and plates. Second deposit: more than a hundred limestone statuettes of cats; almost thirty statuettes of children; ceramic ware of locally produced plates; bones of cats and birds. Third deposit: thirteen limestone statuettes of cats; limestone statuettes of children. Fourth deposit: thirty small ceramic vases for perfumed oil near the foundation plaques. Fifth deposit: six foundation plaques (temporary SCA custody, Inventory Numbers E211.1-6) – two of red-alternating-with-green glass (inscribed on one side in Greek), two of bluish-green glass (inscribed on one side in hieroglyphic), one of light blue glass (recto-verso, Greek-hieroglyphic), and one of light blue faïence (bearing faint traces of black ink on one side). They record the dedication of a ναός (shrine), τέμενος (sacred enclosure), and βομος (altar) by Berenike II, wife of Ptolemy III Euergetes I (c. 246-221 BC), to the goddess Boubastis (Hellenised form of Bast):

> Βασίλισσα Βερενίκη ὑπὲρ βασιλέως
> Πτολεμαίου τοῦ αὑτῆς ἀδελφοῦ
> καὶ ἀνδρὸς καὶ τῶν τούτων τέκνων
> τὸν ναὸν καὶ τὸ τέμενος καὶ τὸν βωμὸν
> Βουβάστει.
>
> *Queen Berenike, in favour of King Ptolemy, her own brother and husband, and in favour of their children, (dedicated) the shrine and the sacred enclosure and the altar to Boubastis.*

One of the inscribed cat statuettes exemplifies the *ex-votos* on site – ΦΙΛΙΞΩ ΒΟΥΒΑCΤΙ ΕΥΧΗΝ ΕΠΙΤΥΧΟΥCΑ: 'Philixo dedicates (this statuette) to Boubastis, in thanks for the realization of the wish'. The recovered statuettes, particularly those representing infants, emphasize an intrinsic attribute of such a deity, being a protector of the new-born and women.

The excavated vestiges reflect a wide chronological range of varied use. In the northeastern part of the

plot, at a level above that of the foundations of the temple, a cistern was dug into the natural rock, with communicating channels. Quadrangular in plan, it comprises a storage space and a well connected by means of a corridor. The walls of the tank were covered with a hydraulic coating (waterproofing); those of the well were hollowed with notches to allow access into the interior of the structure. Southwards, closer to the foundations of the above-mentioned temple, was a rectangular well of stonemasonry connecting with one segment of a subterranean conduit. At the southernmost part of the plot, the detected sections of the temple were accidently discovered during the levelling of the terrain. Extending yet southwards, beneath the inaccessible Granville (Ismaīl Fahmy) Street, they were partially excavated. The temple's recorded phase of construction is contemporary with that of the Euergetean Sarapeion (site 52.II), given the bilingual dedicatory of Berenike II within the foundation deposit. At some point already in antiquity, probably around the 3rd-4th century AD, and more likely c. the 390s, the cultic building was destroyed and contextual *ex-votos* were dumped in clusters of which four have been unearthed in 2009-10. The late, coarse foundations excavated on site, overbuilding, in part, earlier remnants of monumental nature, and the associated hydraulic installations, seem to represent the (re)utilization of the urban *insula* in late antiquity, thus should be considered within a wider context of contemporary exploitation of dismantled edifices attested, for instance, at the GRM *chantiers* on Alexander the Great Street (sites 116-120), at el-Shallalat Park (site 137a), the nearby Kom el-Dikka archaeological park (sites 18-20, 67, 69-70), and elsewhere (sites 34-35, 52, 62a, 90).

Two Greek inscriptions serve to shine light on the nature and function of the site in its principal phases of extended use. The first, a dedication by a κοινὸν (an association of soldiers) to a certain courtier with the rank of 'One of the First Friends', is datable to the reign of Ptolemy VI Philometor (c. 180-145 BC) (material: Aswan granite; temporary SCA custody):

> [ἀπ]ὸ τῆς Λιβύης Μάσυλ[ω]ν σὺν αὐτοῖς προσκειμένωξ,
> [καὶ τῶ]ν Περσῶν καὶ Κυρηναί[ω]ν συν<σ>τρατευομένων,
> [α][ρετῆς ἕνεκεν καὶ εὐν[οι]]ας εἰς βασιλέα Πτολεμαῖον
> καὶ βασίλισσαν Ἀρσινόην, Θεοὺς Φιλοπάτορας,
> καὶ τοὺς υἱοὺς αὐτῶν καὶ τοὺς υἱωνοὺς καὶ τὰ
> πράγματα αὐτῶν καὶ τὸ κοινὸν, ἀψεγέως
> καὶ φιλοτιμίαι.
>
> *The association of Thracian Tralleis and the Masyloi who came from Libya and those attached to them, and the Persians and Cypriots who are serving with them, (honour) [- – - the son of (?) – -]ame[des], One of the First Friends, for his excellence and good will towards King Ptolemy and Queen Cleopatra, the Mother-Loving Gods (Θεοὶ Φιλομήτορες), and their sons, and their descendants, and their affairs, and for his disposition and love of honour towards the association.*

The second, less preserved, is a dedication of a statue of Lord Sarapammon, made by an Alexandrian family, in favour of Emperor Antoninus Pius (c. AD 138-61), to Artemis Φωσφόρος, Boubastis (often assimilated to Artemis), and a third, erased deity (material: three contiguous fragments of black basalt; temporary SCA custody):

> [ὑπὲρ αὐ]τοκράτορος Καίσαρος Τίτου
> [Α'Ιλίου] Ἀδριανοῦ Ἀντωνείνου Σεβαστοῦ
> [καὶ το]ῦ σύμπαντος αὐτοῦ οἴκου
> [Ἀρτέμιδι Φ]ωσφόρωι καὶ Βουβάστει καὶ
> [.....Δι]ονύσιος καὶ
> [.....]μείου ΦΙΛΑ...[..].....σὺν τοῖς
> [παῖσι Ἰσ]ιάδι τῆι καὶ Ἀσκληπιαδι, καὶ Δωρίωνι,
> [καὶ ...]ώπωι, καὶ Ἀμμωνίωι, καὶ Δωρίωνι τῶι καὶ
> [....ἀνδρι]άντα τοῦ κυρίου Σαραπάμμωνος σὺν
> [τῆι βάσει καὶ τη]ὶ ψηφίνηι ..... ὑποβάσει ἀνέθηκ[αν]
> [καὶ .....] ...ικος ἔπαρχος σπ[είρης(?)].
>
> *In favour of Emperor Caesar Titus Aelius Hadrianus Antoninus Augustus (Antoninus Pius), and all his family, to Artemis Phosphoros, to Boubastis, and to (.....), (.....) Dionysios, and (.....), daughter of (Hermias? .....), with their children, Isias, also called Asklepias, Dorion, (...)opos, Ammonios, and Dorion, also called (...), have dedicated a statue of Lord Sarapammon, with (his base?) and his mosaic pedestal, as well as (.....)icos, prefect (of cohors?).*

3.6.2) Literary Accounts Pending Physical Evidence

3.6.2.1) Civil Edifices

A) Gymnasium, Dikasterion, and Plateia

The localisation of the Gymnasium and the Dikasterion (Court of Justice) within the central district is based on the 1st-century BC descriptive narratives of Strabo:

> *In short, the city is full of public and sacred structures; but the most beautiful is the Gymnasium, which has porticoes more than a stadium (c. 185 m) in length. And in the middle (of the city) are both the Court of Justice and the groves.*
>
> (Strabo, Geōgraphiká: XVII. 1.10)

The Gymnasium, maintained through royal patronage, was among the principal public edifices of Ptolemaic Alexandria (Burkhalter 1992: 345-373; Fraser 1972: 29-

30; a possible candidate: site 77). It stood adjacent to the main avenue (πλατεία: street L1), which extended lengthwise across the city, from Nekropolis to the Canopic Gate:

> *The broad street that runs lengthwise extends from Necropolis (western suburbs) past the Gymnasium (city centre) to the Canobic (eastern) Gate.*
> (Strabo, Geōgraphiká: XVII. 1.10)

3.6.2.2) Religious Edifices

B) Temple to Pan

In *Geōgraphiká*, Strabo records c. 25 BC:

> *Here too (at the central district) is the Paneium, a height as it were, which was made by the hand of man; it has the shape of a fir-cone, resembles a rocky hill, and is ascended by a spiral road; and from the summit one can see the whole of the city lying below it on all sides.*
> (Strabo, Geōgraphiká: XVII. 1.10)

According to Strabo, the central district encompassed a temple to Pan (Πάν: a Greek deity of nature, the wild, and rustic music). Given its central location, Strabo's 'height' is often identified with Kom el-Dikka, the mound upon which stood the Napoleonic Fort de l'Observatoire (aka Fort Crétin) at a height of about 30 m. However, the latter was formed, for the most part, in mediaeval times by means of accumulated deposits of Arab and Mamluk habitation refuse and interment. The so-called 'Copron Berg/Mons' might be an alternative candidate though (site 78).

Representations of Pan in Alexandria include a torso of a statue of white marble (preserved height: 0.57 m) found c. 1910-11 during the digging of foundations for a new house on Fouad Street (Graeco-Roman Museum, Inventory Number 11917) (Breccia 1912c: 13, Planche VIII, Figure 2; 1914a: 209, Number 4; 1922: 195, Number 4; Savvopoulos and Bianchi 2012: 106, Catalogue Number 31; Tkaczow 1993: 192, Object Number 18). It is datable c. the 2nd-1st century BC. In 1985, a foot of a hoofed creature, perhaps a Faunus (the Roman counterpart of Pan), forming a fragment of a marble statuette, was recovered by the PCMA at Kom el-Dikka archaeological park while excavating the *frigidarium* of the bath complex alongside transversal street R4 (site 20). A marble head of another Faunus was accidently found during construction works carried out in 1905 to the south of the Government Hospital complex in el-Mazarita (site 125a). Although not necessarily indicative of the location of Strabo's 'temple', these accidental encounters attest the popularity of the cult of Pan and the assimilated Faunus among the inhabitants of Graeco-Roman Alexandria.

3.7) Northern District (NDist.)

3.7.1) Physical Remnants Corresponding to Known Historical Narratives

3.7.1.1) Religious Edifices

Site 93: Le Hotel Métropole and west of it

Maps: V2; V4

Obelisks: el-Ramleh [dynastic, relocated to Alexandria]

In Book XXXVI of *Natural History*, Pliny the Elder records:

> *There are two other obelisks (from Heliopolis) which were in Caesar's Temple at Alexandria, near the (Great: eastern) harbour there, forty-two cubits in height, and originally hewn by order of King Mesphres (Tuthmosis III).*
> (Pliny, Natural History: XXXVI. 14.333)

The hieroglyphic inscriptions carved onto Pliny's 'obelisks' show that they were commissioned by Tuthmosis III (c. 1479-1425 BC), with later epigraphs added under Ramses II (c. 1279-1213 BC), as dedicatory to Re and Atum, the sun-gods of Heliopolis, more than fourteen centuries before being relocated to Alexandria. The latter event is recorded by a bilingual Greek-Latin inscription carved onto one of two bronze crabs currently on display at the Metropolitan Museum of Art in New York (Inventory Numbers 81.2.1-2) and which belong originally to a set of four used by the Romans as supporters for the broken corners of the erect obelisk (Neroutsos 1878: 175-180) (Figure 231). The bilingual inscription reads:

> Λ ΙΗ ΚΑΙΣΑΡΟΣ
> ΒΑΡΒΑΡΟΣ ΑΝΕΘΗΚΕ
> ΑΡΧΙΤΕΚΤΟΝ ΟΥΝΤΟΣ
> ΠΟΝΤΙΟΥ.
> .....
> ANNO XVIII CAESARIS
> BARBARVS PRAEF
> AEGYPTI POSVIT
> ARCHITECTANTE PONTIO.
>
> *In the eighteenth year of (Augustus) Caesar (c. 13-12 BC), (Publius Rubrius) Barbarus, praefectus Aegypti, erected (the obelisk); (done by) Pontius, the architect.*

At the advent of Roman dominion, these obelisks were apparently brought from their original context in Heliopolis to be placed on either side of the pylon of Caesar's temple: a façade that could not have been much different from those at the entrance to contemporary Isiac temples on Pharos Island and *akra* Lochias (sites 43, 142) (Figure 232). Both obelisks thus serve as points of reference for the localisation of the historically

attested 'Caesar's temple' (the Caesareum or the later Augustan Sebasteum): a major cultic edifice of the city during the Principate (sites 94-100).

Unlike the temple, the Heliopolis obelisks survived late antiquity and the Middle Ages, into the 19th century: one yet standing (eastern obelisk – relocated to New York), the other overturned and half-buried (western obelisk – relocated to London) (illustrations: site 6, section 2.3.1). They would become widely known among earlier travellers as 'Cleopatra's Needles'. After a first, unsuccessful attempt to remove it as a spoil of war, in 1801, the British had finally gained possession of the prone obelisk, however peacefully, as a 'gift' from Mohamed Ali Pasha, then *Wāli* of Egypt, to the newly crowned King George IV, in 1820. The actual removal took place at a much later date though, in August-September 1877, to be re-erected at Victoria Embankment in London on September 12th, 1878. The other obelisk, still standing at the time, was conceded in 1869 by Ismaïl Pasha, then Khedive of Egypt, to the United States. It was removed between December 1879 and March 1880, to be re-erected at Central Park in New York on January 22nd, 1881 (Gorringe 1885: 1-76, 96-109).

The approximate site of the New York obelisk is inferable from the photograph taken by Lieutenant Commander Henry Honychurch Gorringe, the US naval officer in charge of the removal operation, on December 6th, 1879, where the building under construction seen adjacent to the obelisk, stands today immediately to the west of Le Hotel Métropole (Figure 233). In turn, the prone obelisk is located about 60 m further west, at the present-day site of the building immediately to the west of that shown in Gorringe's photograph. Both obelisks, placed on the same alignment, neither follow the canonical secondary intercardinal orientation (ENE-WSW) of the ancient grid plan nor a cardinal one (E-W). Instead, they indicate an oblique primary intercardinal orientation (NE-SW) for the cultic edifice they decorated. Moreover, the remains of monumental constructions excavated in the 1870s and 1990s (sites 94-95), c. 60 and 80 m respectively to the south of the hypothetical line of the obelisks, had the same primary intercardinal orientation, which is different from that of the urban grid and from other off-grid structures aligned in the cardinal directions (sites 2, 31, 52.I, 69c, 78, 114, 131.2b, 134, 138-140a, 147). Hence, in order to attain a clearer view of the various structural components that might have formed up together the historically attested cultic complex, it may be prerequisite to examine the available archaeological material from within the Caesareum's sacred enclosure (Figure 234) (sites 94-100): approximately, the present-day urban blocks delimited by the streets of Safia Zaghloul (east), the Greek Hospital/Istanbul (south), el-Nebi Daniel (west), and Saad Zaghloul (north).

Site 94: Zahar-Debbane

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (e) Cannonballs [Post Mediaeval]
(ii) (c') Vaults/crypts (funerary?) (nearby funerary vestiges: sites 35, 100, 114) [Late Antique]
(iii) (a') Inscribed tablet [Roman]
(iv) (a) Foundations [Ptolemaic; Roman]

At the end of 1874, during the digging of foundations for the Zahar-Debbane building, situated on the Ramleh Boulevard (Saad Zaghloul Street), between Synagogue Eliyahu Hanavi (site 98) and the London prone obelisk (site 93), the workers accidently unearthed 'd'énormes maçonneries en blocs de pierre calcaire et de grès, et dont quelques-unes étaient marquées d'entailles (stonecutters' marks) formant les figures (m) ou (m^{v})' (Adriani 1934: 89-90, Catalogue Number 104; Neroutsos 1888: 10-14). The reported stonemasonry represents the preserved segments of two foundation walls: one longitudinal (3.50 m), running NE-SW, parallel with Saad Zaghloul Street and the hypothetical line of the Heliopolis obelisks, the other transversal (2.50 m), running NW-SE, from Saad Zaghloul Street, towards Synagogue Eliyahu Hanavi, thus forming a right-angle with the first wall. Together, they form the northwestern corner of a building oriented off-grid. The latter's monumental scale is inferable from the size of the excavated blocks and the thickness of either wall. A prominent find within the debris, near a subterranean conduit that passes next to the foundations of the western wall, is a tablet of white marble bearing a Greek dedicatory that reads:

ΔΕΚΑΝΩΝ ΤΩΝ ΕΝ ΣΤΟΛΩ ΠΡΑΙΤΩΡΙΩ [ΤΟ ΠΡΟΣΚΥΝΗΜΑ]
ΘΕΩΝ ΚΑΙΣΑΡΩΝ ΕΝ ΤΗΔΕ ΤΗ ΣΤΗΛΗ [ΑΝΑΓΕΓΡΑΠΤΑΙ]
ΚΑΙΣΑΡΟΣ Λ · ΑΥΡΗΛΙΟΥ ΟΥΗΡΟΥ ΣΕΒΑΣ
ΤΟΥ ΕΚΤΩ [ΕΤΕΙ].

On behalf of the decuriones (Roman cavalry officers) of the Praetorian Squadron (elite forces), an act of veneration to the divine Caesars is inscribed on this stele; (commissioned) in the sixth year of (the reign of) Caesar Lucius Aurelius Verus Augustus (c. AD 161-69).

The inscription, datable c. AD 166-67, denotes a 2nd-century public edifice associated with an imperial cult. It reflects a successive phase of use, judging by the recorded mode of construction which antedates the Nerva-Antonine dynasty. Given the fact that *opus caementicium* was already in use by the Romans at the time of the Augustan conquest, the recorded construction phase of dry masonry cannot be later than

the 1st century BC. In the upper and uppermost layers, well above the level of the foundations, Neroutsos reports several 'caveaux funéraires', which he associates with 'sépultures chrétiennes', and 'des amas de gros boulets en pierre dure'. The reported 'vaults or crypts' seem to signal successive phases of late antique and mediaeval occupation within this sector of the city, attested already at nearby sites (34-35, 95, 99-100). Whereas the cannonballs are probably leftovers of post-mediaeval bombardments.

Site 95: Cinema Majestic

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (e) Habitation; porcelain; coinage [Modern: 19th century]
(ii) (d) Ceramics; coinage [Late Mediaeval: Mamluk]
(iii) (b-c) Baths; cisterns; coarse masonry; ceramics; coinage [Late Antique]
(iv) (a-a') Foundations; ceramics; coinage [Ptolemaic; Roman]

Salvage excavations were carried out by the Centre d'Études Alexandrines at the site of Cinema Majestic, immediately next to the former Zahar-Debbane property, from September 16th to December 17th, 1992, and from May 20th to June 27th, 1993 (Empereur 2016: 40-41; 2017: 1-11; Empereur, Hesse, and Picard 1994: 504-507, 512-519; Rifa-Abou el-Nil 2017: 15-24). Geophysical resistivity surveying of the plot (60 x 40 m), which was subdivided into three zones, allowed the performing of *sondages* at areas of high anomalies, hence the unearthing of structures pertaining to a wide chronological range of construction and/or occupation.

Zone (I): northern sector

(e) Five successive levels of 19th-century occupation; the earliest is datable to the 1850s on the grounds of monetary finds.
(d) A 14th-century Mamluk debris of glazed pottery.
(d) A thick layer of fill containing a variety of mediaeval (Arab and Mamluk) glazed pottery: an indicator of activities taking place on site to the end of the 14th century. Structural remains were not detected thru.
(c) A Byzantine occupational level of the 7th century, featuring a modest structure with walls built of small stone, a pavement of stone slabs, and a column of Marmara marble.
(a-c) A late Roman *stratum* overlying early Roman vestiges with architectural blocks in place.
(a) A late Ptolemaic-early Roman occupational level of c. the second half of the 1st century BC, containing Eastern Sigillata.
(x) Groundwater level reached at 5.50 m.

Zone (II): central sector: main trench (20 x 10 m)

(b-d) A late Roman bathing facility with remains of the *caldarium* (heater and bathtubs); three cisterns found in association with the baths, filled with a debris of Mamluk glazed pottery (an assemblage datable to the 14th century), must have served as dumps during the late mediaeval period.
(a) Below the late Roman baths, towards the east, were the drenched remnant of a massive wall emerging a few centimetres above the rising water table. Along the southern side of it, extended a thick destruction layer of ashes datable, on the grounds of contextual ceramic and numismatic finds, to the second half of the 4th century AD. In the north, a backfill (US117/119) yielding an abundance of Eastern Sigillata from late Ptolemaic to early Roman occupational levels of c. the second half of the 1st century BC, provides hints on the chronology of the earliest accessible remains on site. The wall, exposed over 2.34 m and labelled (MR34), was oriented around 15° to 20° off the ancient urban grid. The rising water table prevented further excavations from reaching the inundated footing to determine a possible date for the initial phase of construction. Wall (MR34) adjoined a perpendicular and contemporary wall (MR115) at right-angles. A successive phase of construction is signalled with the reinforcement of (MR115) using rubble stone to form wall (MR114), and with an adjacent cistern (CI4) suppressing wall (MR34).

Zone (III): southern sector

(e) 19th-century occupational levels.
(d) A layer of fill pertaining to the mediaeval period.
(c) A thick layer of late antique occupation of c. the 5th-7th century.
(x) Groundwater level reached at 5.50 m.

Four principal phases of construction and/or occupation seem inferable given the stratigraphy of the Cinema Majestic site. (e) A 19th-century occupation intensifying towards the 1840s, thus reflecting the urban developments of Mohamed Ali's revived town. Belonging to this phase is the Zahar-Debbane building itself (site 94). (d) Accumulated fill containing locally produced and imported ware, indicating a minor habitation zone at the NE. corner of the Arab town. This seems the case, judging by the absence of stonemasonry within areas possibly utilized as refuse dumps under Mamluk rule. (b-c) Late Roman and Byzantine occupation of c. the late-4th to the 7th century AD, represented by a bathing facility, associated cisterns, and a building of a coarse masonry bearing analogies with contemporaries at several other sites in the northeastern district (100, 116-117, 119-120, 122a-b, 137a). (a) A late Ptolemaic to early Roman phase commencing c. the second half of the 1st

century BC on the grounds of an excavated repertoire of Eastern Sigillata. (a') This is followed with continuous occupation through the course of the Principate, which terminates with signs of destruction by fire at some point in the second half of the 4th century AD. The recorded range is indicated by a layer of ashes pertaining to a chronologically-established context.

Considering the findspot and the established chronology, the earlier structure(s) on site could be associated with the imperial cultic complex, i.e. the historical Caesareum, which was violently terminated around the 4th century AD and subsequently converted into a Christian edifice. It was initiated under Cleopatra VII (c. 51-30 BC) to commemorate the deification of the deceased Julius Caesar as Divus Iulius, and to honour Markus Antonius and Ptolemy XV Caesarion, before it had served eventually as a hub of imperial cults (Sebasteum) during the Augustan Principate (site 98). The constructions of phase (a-a'), attested by remnants of walls labelled (MR34) and (MR115), were already in place towards the advent of Roman rule. Although the Ptolemaic origin of both walls is nearly ascertained, yet the fact that the bedrock was not reachable during the CEAlex excavations due to the rising water table, develops uncertainties regarding whether the structural constituents of the Caesareum had been founded upon a levelling *stratum* subsequent to the utter demolition of an earlier public edifice probably of a similar cultic nature given the relative proximity of the emporion. Otherwise, in case of an unlevelled terrain, the extant vestiges of the presumed predecessor would have served practically as ready foundations for the new complex. The question of architectural continuity in a context as such is central to understanding the off-grid orientation of the excavated walls (MR34) and (MR114-115). They neither follow the canonical secondary intercardinal orientation (ENE-WSW) of the urban grid nor other structures within the Broucheion aligned in the cardinal directions (E-W). Their proximity to, and association with the foundations excavated at Zahar-Debbane back the validity of Neroutsos' recordings in 1874 (site 94). The cultic complex seems to have encompassed structures that follow a primary intercardinal orientation (NE-SW), thus conforming, as a unit, with the hypothetical line of the obelisks which decorated its façade (site 93). If that were the case, the Cesareum might have been obliquely oriented off-grid, with a façade facing the passageways into the Great Harbour. Whether this has been done deliberately during the (re)building programme of Cleopatra VII (c. 41-31 BC), or earlier, under one of her Lagid predecessors, is open to question.

Site 96: East (b) and SE. (a) of the junction of Safia Zaghloul with Saad Zaghloul

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (a) Cisterns (associates: site 35) [Late Antique; Arab]
(ii) (a) Foundations (associates: site 34) [Ptolemaic; Roman]
(iii) (b) Inscribed pedestal [Ptolemaic]

(a) In 1892, during construction works at the Ramleh Central Station, ancient remains were accidently unearthed and later reported by Giuseppe Botti: column drums of limestone and granite, capitals bearing letters from the Greek alphabet, scant traces of a 'mosaico bianco', cisterns, and 'più sotto, l'angolo di un grande edifizio a grossi blocchi'. According to Botti, the remnants extended southwards, in the direction of the Government Hospital Street (the present-day Faculty of Medicine Street) (Adriani 1934: 74, Catalogue Number 41; Botti 1893: 15; 1898b: 81). Botti's 'fragmentary architecture' seems to be a secondary deposit of reused material, considering its relative proximity to both the quarried Caesareum and the Tulunid circuit walls, which ran immediately to the east. The cisterns, described as 'enormous' and 'imposing', and the 'grande edifizio a grossi blocchi', would recall the late cisterns and the grandiose foundations reported by him further north, to the south of the so-called 'Tower of the Romans' (sites 34-35).

(b) In 1866, a rectangular pedestal of granite was accidently found during construction works at the Ramleh Central Station (Graeco-Roman Museum, Inventory Number 10) (Adriani 1934: 74, Catalogue Number 40; Breccia 1911: 24, Catalogue Number 42; 1914a: 78; 1922: 92). It bears a Greek inscription that records a dedication made on December 28th, 34/33 BC, by a certain Aphrodisios to Markus Antonius. The dedicatory reads:

Ἀντώνιον μέγαν
ἀμίμητον 〈Ἀ〉φροδισίοις
π̣[αρ]άσιτος τὸν ἑαυτοῦ θεὸν
καὶ εὐεργέτην, (ἔτους) ιθ΄ τοῦ καὶ δ΄
Χοῖαχ κθ΄.

Site 97: NW. of the junction of Safia Zaghloul with Hassan Fadali

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) Cistern [Late Antique]
(ii) Structure with baths; fragmentary architecture; pedestal [Roman]

In 1892, Giuseppe Botti recorded a column of white marble, four metres in length, which was found along

with two capitals in the foundations of a new building at the Zouro plot, northwest of the junction of the streets of Safia Zaghloul and Hassan Fadali (Adriani 1934: 92, Catalogue Number 112; Botti 1893: 15-16). A few metres to the east, he encountered the remains of a Byzantine cistern overbuilding an earlier structure. The latter, assigned by him to c. the 2nd-3rd century AD, is represented by remnants of walls bearing traces of Pompeian painting, a peristyle with a fragment of a polychrome mosaic, and recognizable vestiges of a circular *tepidarium* and a *frigidarium*. Architectural elements include capitals, bases, and columns of grey granite. Among the other finds was the lower part of a marble base of a statue commissioned for a certain gymnasiarch and dated by Botti to the 2nd century AD.

Site 98: Synagogue Eliyahu Hanavi

Maps: V2; V4

Inscribed pedestal: el-Ramleh [Roman]

In 1907, an inscribed pedestal was accidently found during the digging of foundations at the premises of Synagogue Eliyahu Hanavi (Graeco-Roman Museum, Inventory Number 234) (Adriani 1934: 89, Catalogue Number 103; Breccia 1911: 33-34, Catalogue Number 50; Fraser 1972: 24). It bears a Greek dedicatory made on February 15th, AD 14, by a certain sailor invoking divine protection on a vessel. Considering that the given findspot is within the τέμενος of the historical Caesareum/Sebasteum, and that the recorded date of issue is in the year 43 of Augustus, the dedicatory might be associated with the cultic complex being a centre for the veneration of Augustus Epibaterios: Augustus, the patron of navigators. The Greek inscription reads:

Λεύκιος Τοννήιος Ἀντέρως
εὐπλοίᾳ ὑπὲρ πλοίου
Νικαστά<ρ>της {vac.}
(ἔτους) μγ΄ Καίσαρος, Μεχὶρ κα΄.

Site 99: Billiard Palace

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (e) Artisanal activity [Modern: 19th century]
(ii) (d) Ceramics [Late Mediaeval: Mamluk]
(iii) (b) Ceramics; coinage [Late Antique]
(iv) (a') Inscriptions: *ex-votos* [Roman]
(v) (a-a') Terraces; foundations; cisterns; ceramics; coinage [Ptolemaic; Roman]

Salvage excavations were carried out by the Centre d'Études Alexandrines at the site of the former Billiard Palace, from September to December 1993 (400 m^2; the excavated section of the plot is situated c. a hundred metres southeast of Cinema Majestic, site 95) (Demougin and Empereur 2002: 149-156; Empereur 2016: 40-41; Empereur, Hesse, and Picard 1994: 508-512, 518-519).

The morphology of the natural rock justifies the terraced layout of the Billiard Palace site. Within a distance of about 25 m north-south, the difference in elevation exceeded seven metres. The lowermost Hellenistic *strata* were just 3 m deep towards the southern end of the plot, compared to a depth of over 11 m at the opposite end. A flanking dune of sandstone on either side (elevation: 10 m) consolidated the development of terraces on site. At the northwestern corner of the excavated terrain, one terrace, cut into the rock at 11 m from the surface level, reached down to the groundwater level. A rock-cut structure partially built of stonemasonry had multiple access-points to the east, including a marble doorway with jambs and engaged pillars. At the northwestern corner of the construction itself, an *arcosolium* yet retained its polychrome. Prominent among the finds from the lower terrace were eight inscriptions of which one records a dedication made in AD 175 to the Procurator of the Caesars, Publius Aelius Panopaeus, while mentioning the 'εικόνες των Σεβαστών': the images of the *imperatores* and that of Faustina the Younger (wife of Markus Aurelius: c. AD 161-75). The empress is designated 'Φαρία σωσίστολος', a title often associated with the attributes of Isis Pharia (of Pharos), Isis Pelagia (of the Sea), and Isis Euploia (of Save Navigation). An assimilation as such is unsurprising, for the Sebasteum was a temple approached chiefly by sailors, as attested, for instance, by the Eliyahu Hanavi dedicatory (site 98). The Greek inscription at the Billiard Palace, carved onto a cylindrical half-column of marble, reads:

Π-ΑΙΛΙΟΝΠΑΝΟΠΕΙΟΝ
ΤΑ
ΕΠΙΤΡΟΠΕΥΣΑΝΤΩΝΚΥΡΙΩΝ
ΣΕΒΑΣΤΩΝ ˜ ΤΗΣΕΙΣΤΟΝΟΙΚΟΝ
ΑΥΤΩΝΕΥΝΟΙΑΣ ~ ΟΙΑΠΟΣΥΣ
ΣΕΙΤΙΟΥΣΕΒΑΣΤΩΝ ~ ΕΙΚΟΝΩΝ
ΚΑΙΦΑΥΣΤΕΙΝΗΣΦΑΡΙΑΣΣΩΣΙΣΤΟΛΟΥ ~
ΝΕΑΣΣΕΒΑΣΤΗΣ
~ ΤΟΝΣΥΣΣΕΙΤΟΝ. *hedera*

Other encounters on site were two rock-cut cisterns. One, datable to the 1st century BC, had an oblong shape (10 x 3 m, height: 2 m, volume: 60 m^3) with two central pillars carved out of the rock. It was accessible by means of a rock-cut shaft (width: 0.60 m). Two metres to the east, a rectangular well descended to the level of the water table. Overall, more than 900 coins were recovered. A few pertain to the reign of Cleopatra VII (c. 51-30 BC), while the majority came from 4th-century AD *strata*, a concentration to be considered in the

context of Diocletian's installation of the Alexandria mint towards the enclosure of the cultic complex.

The stratigraphy of the Billiard Palace site echoes that of Cinema Majestic (site 95). At least four of the five broad phases of construction and/or occupation associated with the urban blocks south of the hypothetical line of the Heliopolis obelisks seem identifiable here (the phases labelled a, b, c, d, and e: sites 94-95, 99-100). (a) Late Ptolemaic to early Roman constructions datable, on the grounds of contextual ceramics and coinage of Cleopatra VII, c. the second half of the 1st century BC. (a') A period of unceasing use during the course of the Augustan Principate, signalled by the absence of fundamental structural modification. (b) This is followed by a profound remodelling phase, datable c. AD 350-450, indicated by a thick layer of backfill with embedded ceramics and over 700 coins. (d) A mediaeval phase without structural remains to the Mamluk period (glazed ceramic ware). Then a total absence of material from the 16th to the 18th century: a phenomenon justified by the fact that the Ottoman village had developed on the silted-up isthmus of the ancient Heptastadion. (e) Finally, a 19th-century resume of site occupation taking place at the time of Mohamed Ali (1805-48).

Site 100: Garage Lux and Cinema Park

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) (e) Artisanal activity [Modern: 19th century]
(ii) (d) Cisterns [Arab]
(iii) (c') Interments (nearby funerary vestiges: sites 35, 94, 114) [Late Antique]
(iv) (c) Adobe masonry [Late Antique]
(v) (b) Cistern [Late Antique]
(vi) (a') Renovation; marble statue [Roman]
(vii) (a) Hypostyle hall [Ptolemaic; Roman]

Between 2000 and 2002, the Centre d'Études Alexandrines carried out salvage excavations at the sites of Garage Lux and Cinema Park, west-northwest of the Billiard Palace (site 99), east of Synagogue Eliyahu Hanavi (site 98), and southeast of Zahar-Debbane and Cinema Majestic (sites 94-95) (Empereur 2001a: 690-693; 2002b: 621-623; 2016: 40-41; Seif el-Din 2009: 119-133).

The disturbed layers of the excavated zone reflect the exploitation of the area under investigation as a quarry of building material as early as late antiquity, yet with the bulldozers of the modern developers destroying almost a quarter of the total surface area (approximately, 650 m^2 of 2,900 m^2) prior to the CEAlex salvage intervention. In the uppermost *strata*, predating the modern garage and cinema, were modest structures of rubble stone, with a rectangular or L-shaped plan. This recent unit seems to denote an artisanal and/or commercial activity, judging by excavated pits with numerous remains of fish bone, scales, and ashes (e). The extensiveness of quarrying on site is attested within the disturbed layers by an assortment of intermingled ceramics of various chronological phases: 19th-century porcelain found together with late mediaeval and even Roman pottery. Cutting through an extended layer of fill, c. three metres deep, a cluster of six cisterns partially preserved and built mostly of reused material was met (d). Further down was a Christian necropolis comprising successive interments – orientation: head to the east, feet to the west (c'). Crosses carved on stone and skeletons carrying iron crosses suggest a c. 7th-century Byzantine intramural cemetery linked possibly to the Christian edifice (*martyrium*?) that replaced the dismantled Caesareum. Contextual finds include worked bone which, if not funerary offerings associated with the contemporary necropolis, may signal the presence of workshops as those excavated at the nearby Diana Theatre (site 114). A late period of occupation is indicated by adobe constructions, with clods of clay of remarkable size (c). The developments of the 4th century AD and the reutilization of the 'pagan' site are shown by an oblong cistern (4 x 0.80 m) with vestiges of noria buckets found in the fill (b).

The destruction layers yielded a large quantity of egg-and-dart stuccoes, as well as floral motifs belonging to the decoration of a coffered ceiling. Prominent among the other finds were fragments of a statue of white marble, depicting a Roman emperor identifiable with Septimius Severus (c. AD 193-211) on the grounds of the featured cuirass (an armour consisting of breastplate and backplate fastened together) and his characteristic forked beard of which traces survive on the neck (a'). The statue of Severus, found partially preserved from the calf to the top of the neck, might have been commissioned on the occasion of the emperor's visit to Alexandria c. AD 199-201. It serves to exemplify the 'εικόνες των Σεβαστών' recorded by the Billiard Palace dedicatory (site 99). Some other encounters from destruction layers pertain to earlier occupation detectable on site, represented by a hypostyle hall with marble pillars and stuccoed decoration. Its initial phase of construction, datable c. the second half of the 1st century BC (a), was followed by renovation work taking place in the course of the Principate, where limestone reinforcements are added (a'). Eventually, the hypostyle hall was transformed into the above-mentioned late Roman oblong cistern of phase (b).

In general, the archaeological record of excavated sites (94-100) south of the hypothetical line of the Heliopolis obelisks (site 93) seems to echo Philo's contemporary account on the constituents and extent of the imperial cultic complex:

For there is no sacred precinct of such magnitude as that which is called the Grove of Augustus, and the temple erected in honour of the disembarkation of Caesar, which is raised to a great height, of great size, and of the most conspicuous beauty, opposite the best harbour (site 95); being such an one as is not to be seen in any other city, and full of offerings (sites 94, 96b-99), in pictures, and statues (site 100); and decorated all around with silver and gold; being a very extensive space, ornamented in the most magnificent and sumptuous manner with porticoes, and libraries, and men's chambers, and groves, and propylaea, and wide open terraces (site 99), and courtyards in the open air, and with everything that could contribute to use or beauty; being a hope and beacon of safety to all who set sail, or who came into harbour.

(Philo, Legatio ad Gaium: XXII. 151)

3.7.2) Physical Remnants without Known Historical Reference

3.7.2.1) Civil Edifices

Site 101: South of Mohamed Ali Square

Maps: V4

Cistern: el-Mansheiya [Arab]

An underground cistern is reported by Richard Pococke at the southwestern tower of the Arab gate known as Bab el-Bahr (aka Porte de la Marine): the point marked (C) on Wilkinson's 1843 map (B: Kom el-Nadura; C-D: Bab el-Bahr: one of the northern gateways into the mediaeval town) (Introduction II.c; site 5) (Pococke 1743: 4; Wilkinson 1843: 165-166). Its location suggests a structure associated with the second subterranean aqueduct running nearby (*Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84; Antiquités V, Planches, 1822: Planche 31).

Site 102: East of Mohamed Ali Square

Maps: V2; V3; V4

Baths: el-Mansheiya [Roman; Late Antique]

In 1841, British Egyptologist Sir John Gardner Wilkinson recorded 'large columns and extensive brick substructions, as well as stone vaults ... about 1,400 feet (c. 427 m) to the east of the Saracenic tower (flanking one end of Bab el-Bahr: points C-D in his map)' (Wilkinson 1843: 156-157). Wilkinson's observations would seem explicable in the context of vestiges of a bathing establishment recognizable towards the mid-19th century within the vicinity of the Square of the Consuls in the District of the Franks: the urban areas corresponding roughly to the ancient coastline of the western sector of the Great Harbour, now concealed beneath the silted-up isthmus of el-Mansheiya (site 5; section 2.3.1).

Site 103: Saint Mark's Coptic Orthodox Cathedral

Maps: V3; V4

Miscellaneous: el-Ramleh

(i) Foundations [Modern: 19th century]
(ii) Ceramics [Late Antique; Mediaeval; Modern]

Between June 21st and July 7th, 1994, the Centre d'Études Alexandrines carried out a salvage excavation at Saint Mark's Coptic Orthodox Cathedral: a point on the western side of el-Nebi Daniel Street, at the segment of it adjacent to Synagogue Eliyahu Hanavi (Empereur 1995: 756). Core tests had shown the natural bedrock at 15 m below the surface level. However, both of the *sondages* performed to the north of the cathedral had reached the groundwater level at +1.80 m above sea level: about 6 m from the surface level. The ancient occupational levels, being immersed, were inaccessible. Cutting through the upper layers revealed the deeply entrenched foundations of 19th-century demolished constructions and an assortment of accompanying modern material intermingled with mediaeval (chiefly Mamluk) and Byzantine ceramics. Stratigraphy bears the effects of the extensive rebuilding programme of Mohamed Ali's revived city and yet the reutilization of this zone as a quarry of building material as early as late antiquity, thus yielding a backfill of at least six metres, let alone the further constraints associated with the rising water table.

Site 104: West of the 'Tower of the Romans'

Maps: V2; V3; V4

Foundations; fragmentary architecture: el-Ramleh [Ptolemaic; Roman; Late Antique]

(a) In 1893, Giuseppe Botti traced a row of large blocks of Aswan granite along the seashore, over c. 24 m, to the west of the 'Tower of the Romans' (Adriani 1934: 91, Catalogue Number 108; Botti 1894: 3-4; 1898c: 66-69). On eighteen of the blocks, he noted hieroglyphic inscriptions and a figure of the local deity Ptah, which made him believe that the temple to Ptah at Tanis (Djanet: the northeastern Nile Delta), associated with Ramses II (c. 1279-1213 BC), had been dismantled, either by Cleopatra VII or the successive *praefecti*, for its components to be reused in the Caesareum (sites 93-100). Botti yet adds, 'entre la rangée granitique et la Tour Romaine nous avons reconnu des ruines fort antiques'. Within a distance of 6.65 m into the sea (35.80 m from the row of granite blocks), the recovered

fragmentary elements of architecture included column drums of limestone, Corinthian capitals, column bases (a few of marble, others of limestone), two Byzantine capitals, and a dedicatory inscription to Caracalla. Considering the relative proximity of the reported vestiges to the Heliopolis obelisks (site 93), hence the historical site of the Caesareum, and the inscriptions associated with some of the finds, Botti might have encountered fragments of architectural material (re) used successively within the imperial cultic complex and in its late antique replacements.

(b) A few metres to the northwest of the 'Tower of the Romans', already into the sea (considering the 19th-century coastline configuration: section 2.3.1), Henry de Vaujany recorded 'les restes de fortes murailles en calcaire et en grès, que nous avons reconnues à une profondeur de trois à quatres mètres sous l'eau' (Adriani 1934: 90, Catalogue Number 105; De Vaujany 1888: 10-13). Other relics were found scattered along the seashore: granite blocks (some bearing hieroglyphic inscriptions); column bases and capitals; intact pedestals; fragments of cornices of white marble. A massive foundation wall measuring 3 m in width, running southeast, was accidently unearthed while digging foundations for a neighboring house. Vestiges of another wall, submerged, were traceable under water, over a distance of 120 m from the old shoreline, at a point near the 'Tower of the Romans'. De Vaujany's observations conform with those reported later, in the 1890s, by Botti (site 104a) and Noack (site 104c).

(c) In 1898-99, Ferdinand Noack recorded massive cornices of nummulithic limestone, column drums, and other architectural remains near the seashore, immediately to the southwest of the 'Tower of the Romans': approximately, at the point where the Heliopolis obelisks once stood (Adriani 1934: 90, Catalogue Number 106; Noack 1900: 217, Footnote 2).

(d) In 1863-66, el-Falaki maintained that at a distance of a hundred metres from the standing Heliopolis obelisk, on the extension of longitudinal street L3 (a point into the sea, to the northwest of the 'Tower of the Romans'), a column was recognizable under water, standing almost in a vertical position (Adriani 1934: 92, Catalogue Number 110; Mahmoud-Bey 1872: 43-44).

The reported vestiges would represent reused (structural and decorative) material employed in the Caesareum, or alternatively, in the adjacent waterfront constructions associated with the Alexandrian emporion. Some of these were reutilized during urban adjustments in late antiquity and the Middle Ages. The findspots, recorded prior to the construction of the modern Corniche, were either 'along the course of the old 19th-century shoreline' or 'into the sea'. Today, these sites are located onshore, at several points on the pseudo-coastal belt of the eastern harbour: (a) and (b) around the Italian Consulate; (c) Hotel Le Métropole at Saad Zaghloul Square; (d) Saad Zaghloul Square and towards the Corniche itself. In antiquity, despite changes in coastline configuration compared to the present-day setting, the sites were as well onshore, on the northern belt of the Caesareum: the subsided shores of the Great Harbour, particularly the littoral segment between grand mole (J11) (east) (section 2.3.3) and Strabo's 'emporion' (west) (section 3.7.3.1, G).

Site 105: East of the 'Tower of the Romans'

Maps: V2; V4

Inscribed pedestal: el-Ramleh [Roman]

Around 1890, a pedestal of marble, with fixing holes on its upper side, was found to the east of the 'Tower of the Romans' and later donated, along with a bust of King Psamtik II of the 26th dynasty (early 6th century BC), by Zouro, the owner of the plot, to the Graeco-Roman Museum (GRM, Inventory Number 5) (Adriani 1934: 91-92, Catalogue Number 109; Botti 1893: 15; Breccia 1911: 72-73, Catalogue Number 117). The pedestal bears a Greek inscription datable to the 3rd century AD, recording a dedication made by a certain Ammonarion, son of Herodes, to θεᾷ καλῇ ἐν Πανδοίτῃ καὶ συννάοις θεοῖς: 'the beautiful goddess in Pandytis and her divine associates'. It reads:

θεᾷ καλῇ ἐν Πανδοίτ[ῃ]
καὶ συννάοις
θεοῖς Ἀμμωνάριν Ἡρώδου ἀστὴ
ἀνέθηκεν.

Site 106: SW. of the junction of Pereira with the Government Hospital Street

Maps: V2; V3; V4

Column debris: colonnade of street R4 (?): el-Ramleh [Roman; Late Antique]

In 1892, during the digging of foundations for a new building at the southwestern corner of the junction of Pereira Street (the present-day Mohamed Rafat) with the Government Hospital Street (the present-day Faculty of Medicine Street), a debris of granite columns was accidently found (Adriani 1934: 74, Catalogue Number 42; Botti 1893: 17). Given the recorded findspot, the fragmentary columns might have belonged to the colonnade of transversal street R4.

Site 107: Southern side of the Government Hospital Street, between Pereira and Amin Fikri

Maps: V2; V3; V4

Fragmentary architecture: el-Ramleh [Ptolemaic; Roman; Late Antique]

In 1907, during construction works on the southern side of the Government Hospital Street (the present-day Faculty of Medicine Street), at the segment of it between the junctions with the streets of Pereira (the present-day Mohamed Rafat) and Amin Pasha Fikri, elements of architecture of limestone, with traceable polychrome, were recorded by Evaristo Breccia near the enclosure of the Coptic Catholic Cathedral (Adriani 1934: 76: Catalogue Number 45; Breccia 1908b: 231). Among the discovered material were fragments of a mosaic and a glass shard inscribed 'ΜΕΝΔΗΣΙΟΝ' (Mendysion). The context of recovery and the nature of the finds suggest a debris of reused material retained from demolished buildings, probably of a late Ptolemaic and/or Roman origin, to be reutilized in nearby late antique constructions (site 108).

Site 108: West of Amin Fikri, between Adham Wali and the Government Hospital Street

Maps: V3; V4

Crypts and cistern; well and pond; fragmentary architecture and mosaics; ceramics; coinage; gemstone: el-Ramleh [Late Antique]

In 1896, ancient remains were accidently discovered while digging foundations for the Coptic Catholic Cathedral on a plot situated to the west of Amin Pasha Fikri Street, at the segment of it delimited by the streets of Adham Wali (south) and the Government Hospital/Faculty of Medicine (north) (Adriani 1934: 74-76, Catalogue Number 44; Kyrillos II 1900: 329-354). The encounters, reported by Patriarch Kyrillos II in a conference held on January 20th, 1900, to the Khedivial Society of Geography, included two crypts cut into the rock. One, accessible via a circular shaft equipped with steps, comprised a corridor (6 x 3 m) and a chamber (8 x 5 m) reachable through an opening opposite the entrance to the crypt. Both access-points were found blocked by means of a massive bulk. The circular shaft was connected to a cistern filled with debris: sand, broken pottery, and stone shards. Three days before the conference, the workmen unearthed a second crypt similarly accessible via a circular shaft. Connected to the first crypt, it was formed of five intercommunicated chambers with the vaults supported by four pillars. Found not far from the circular shafts and crypts were *unguentaria* and funerary lamps bearing 'les marques du christianisme', to quote the Patriarch. A hoard of coins engraved with crosses was also recovered. On the fragmentary architecture recorded on site, Patriarch Kyrillos II relates:

> *C'est tout à fait au-dessus et autour des deux cryptes qu'ont été trouvés ces blocs énormes qu'on voit encore sur le chantier à droite et à gauche des deux souterrains, cette gigantesque colonne, ayant un mètre et quart de diamètre, ce chapiteau d'une grandeur étonnante et du travail le plus exquis, ces superbes colonnes de marbre mesurant près de soixante centimètres de diamètre, cette colonne de granit rose encore couchée à l'entrée de la crypte du nord, et cette autre colonne de granit rose encore debout, juste en face de la seconde crypte, à l'ouest de la propriété enfin cette prodigieuse variété de colonnes en beau marbre et en belle pierre du style ancien le plus élégant.*
>
> (Kyrillos II 1900: 329-354)

Among the other finds were fragments of mosaics of which one was on display at Salle 16 in the Graeco-Roman Museum (0.27 x 0.29 m) (Botti 1900-01: 584, Number 470), and a fragment of an extant *emblema vermiculatum* (0.060 x 0.048 m) assigned by Wiktor-Andrzej Daszewski to 'the middle of the 1st century BC or slightly later' (Graeco-Roman Museum, Inventory Number 8254) (Daszewski 1985a: 129-130, Catalogue Number 22). Furthermore, while stirring the floor of the cathedral's enclosure, the workers found 'un nombre considérable de pierres vertes que les joailliers réputent précieuses'. Excavated as well was 'un puits contenant une eau douce dont les ouvriers ont bu aussitôt après sa découverte'. It was probably used to feed a pond unearthed nearby, one which might have served as a sacred (baptismal?) pool. Four columns, described by Patriarch Kyrillos II as 'encore plantées en terre', running obliquely one after the other, show that the structure in question was oriented NNW-SSE, thus in conformity with the urban grid.

In 1907, blocks of granite and limestone, pieces of marble, and capitals, with some bearing Christian motifs, were accidently found during construction works within that same area (Breccia 1907a: 107). The excavated material, mainly two crypts and a cistern, a well and a pond, fragmentary architecture and mosaics, and other contextual finds (ceramics, coinage, and gemstone), all indicate a late antique edifice, possibly of a religious nature, partially built of reused material retained from earlier dismantled constructions serving as ready foundations either on site (see *supra*, the mosaic fragments) or somewhere in the vicinity (site 107). Its orientation and Christian associates suggest a building datable, in general, c. the 5th-7th century. The construction of an edifice as such in the neighbourhood of the terminated Caesareum sheds further light on the urban adjustments occurring within *insulae* L1-L3-R3-R5 following the imperial decree of Theodosius I c. AD 391 (site 52).

Site 109: West of Amin Fikri, between el-Nahrowani and Adham Wali

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) (b) Fragmentary architecture; ceramics [Late Antique]
(ii) (a) Underground complex; (b) mosaic pavement [Roman]
(iii) (b) Colonnaded hall: a peristyle (?) [Ptolemaic]

(a) In 1917-18, during construction works at the courtyard of the Scottish School (presently, el-Manar School), a site delimited by the streets of Amin Pasha Fikri (east), el-Nahrowani (south), Adham Wali (north), and Pereira/Mohamed Rafat (west), the remains of an underground complex were accidently discovered (Adriani 1934: 76, Catalogue Number 47; Combe 1919: 6-8). Étienne Combe, then acting director of the Graeco-Roman Museum, identified the excavated vestiges as water reservoirs on the grounds of analysis of deposits from within the chambers (labelled I-V in Bartocci's plan) (Figures 235-236). Judging by its structural design, especially the round chamber (V), the complex in question seems datable to the Roman period.

(b) In 1921, a few metres to the southeast of site (109a), on the occasion of levelling works commissioned at the time by the school management, a fragment of a mosaic panel was found at two metres below the surface level (Adriani 1934: 85, Catalogue Number 87; Breccia 1923b: 10-12). It exhibits geometric patterns and was constructed upon a thick layer of rubble fill underneath which, at four metres below the surface level, were the remains of an unidentified structure decorated with double ivy leaf-shaped columns of which a fragment of a fluted shaft had survived *in situ*, marking one corner of what could have possibly been a peristyle. Architectural finds from the upper layers include a fragment of an Ionic capital and a large Corinthian capital of white marble featuring a cross in relief on one side and an eagle on the other.

The stratigraphy of site (109b) shows a Ptolemaic structure with a colonnaded hall (peristyle?) dismantled at some point and overbuilt with a Roman replacement decorated with a geometric mosaic pavement of c. the 2nd-3rd century AD. The latter was constructed upon a buffer *stratum* of debris signalling the levelling of the terrain in preparation for the successive phase of construction. In the upper layers, the recorded architectural finds suggest a late antique rebuilding phase subsequent to the destruction of the preceding structures. Besides the fragmentary pieces of architecture, the latter phase of occupation is attested by a repertoire of ceramics of c. the 5th-6th century. In this context, the underground complex excavated earlier in the vicinity (109a) would pertain to an intermediate phase of construction on site.

Site 110: NE. of the junction of el-Sultan Hussein with Pereira

Maps: V3; V4

Miscellaneous: el-Ramleh

(i) (a) Foundations [n.d.]
(ii) (b) Cisterns [Late Antique]

(a) In 1899, during construction works carried out northeast of the junction of the streets of el-Sultan Hussein (present-day Salah Mustapha) and Pereira (present-day Mohamed Rafat), the foundations of an ancient structure were accidently unearthed at the site of the German School (aka Pelizäus Heim: present-day Safia Zaghloul School) (Adriani 1934: 76, Catalogue Number 48; Noack 1900: 217, Footnote 3). A general plan of the excavated vestiges, drafted on discovery by Henri Bindernagel, a founding member of the Archaeological Society of Alexandria, was lost, thus preventing a further study of the reported encounters.

(b) In 1983, during the digging of foundations at the school's courtyard, the remains of two cisterns set 30 m apart were accidently discovered (Figures 237-238) (Daszewski 1985b: 177-185; Tkaczow 1993: 143-144, Catalogue Number 103A). The larger (5.50 x 4.30 m, height: 6.60 m), vaulted and two-storeyed, was built of small limestone blocks held by a layer of sand in lime mortar. Four columns supported the vaults, two on each level. These were retained from dismantled buildings, considering the use of bases as capitals, with one employed capital bearing signs of wear. It was accessible from the southwestern corner via a semicircular shaft equipped with side steps. An opening cut at the northwestern corner served as a drain. About thirty metres to the west, a smaller cistern (1.80 x 1 m), with two vaulted chamberettes, was built of limestone blocks and had a layer of plaster coating its walls (waterproofing). The reused architecture on site suggests hydraulic installations datable to late antiquity.

Site 111: NW. of the junction of el-Sultan Hussein with Pereira

Maps: V2; V3; V4

Miscellaneous: el-Ramleh

(i) Fragmentary architecture; ceramics [Late Antique]
(ii) Foundations [Roman (?); Late Antique (?)]

In 1899, ancient remains were accidently discovered during the digging of foundations for a new house at the Demotzando property, northwest of the junction

of the streets of el-Sultan Hussein (Salah Mustapha) and Pereira (Mohamed Rafat) (Adriani 1934: 73-74: Catalogue Number 39; Arvanitakis 1899: 11-14). The upper layers yielded many *ampullae* bearing dedicatory inscriptions to St. Menas. At four metres below the surface level, remnants of walls were encountered. They extended, however, beyond the limits of the foundation trenches. Two large columns were recorded on site: one of white marble, the other, of granite, found broken into three pieces. The latter was decorated with a Byzantine cross carved out in relief. Other columns, much smaller though, 'were said to have been recovered as well'. It should be mentioned that G. Arvanitakis, who reported the finds in a letter to the GRM director Giuseppe Botti, to be published in bulletin II of the Archaeological Society of Alexandria, had not come into contact with the excavated material, but were communicated to him, perhaps with exception to the St. Menas *ampullae* of which he himself had 'counted a hundred'. The reported finds from the surface layers would signal a late antique phase of habitation on site. However, a rather precise dating of the excavated foundations is not possible in a context as such.

Site 112: Coastal zone, between Safia Zaghloul and Champollion

Maps: V1; V2; V4

Miscellaneous: el-Ramleh; el-Mazarita

(i) Bathing establishments: group (b) [Roman]
(ii) Waterfront constructions: group (a) [Ptolemaic]

In 1798-99, during the Napoleonic expedition, Saint-Genis maintains:

> *En suivant et examinant en détail le rivage, après le Caesarium (sites 93-100) et la tour dite des Romains (site 6), on trouve d'abord un sol plat, qui n'offre point de masses remarquables de ruines et n'indique l'existence d'aucun édifice antique; mais on rencontre ensuite une première et petite presqu'île que forme la côte en cet endroit. Elle est chargée de ruines, et présente à son extrémité des espèces d'îlots qui annoncent qu'elle a pu se prolonger davantage autrefois, comme nous le verrons tout-à-l'heure.*
>
> (Saint-Genis 1818a: 47)

Saint-Genis' 'petite presqu'île' is located immediately to the north of the present-day el-Khaledin Park, northwest of the WHO building. Prior to the construction of the Corniche, the ruins in question, jutting out into the sea, had formed part of the 19th-century shoreline. Today, they are partially buried beneath the pseudo-coastal belt of the eastern harbour (sections 2.3.1, 2.3.3). The site thus lies within the littoral zone that corresponds to the subsided waterfront of the ancient Great Harbour, particularly the section of it between the streets of Champollion (east) and Safia Zaghloul (west): the silted-up belt flanked on either end by 'mole ruiné' (site 8: the eastern end: approximately, the present-day site of the parking area west of the Bibliotheca Alexandrina) and the 'Tower of the Romans' (site 6: the western end: approximately, the present-day site of the Italian Consulate).

On the topographical configuration of this particular zone, el-Falaki relates in the 1860s:

> *2) Les restes des rochers d'une 'île ayant la forme d'un fer à cheval, distante de trois à quattre cents mètres du port des rois et de deux à trois cents mètres du quai; cette île est de 3 à 4 mètres au dessous des flots; les eaux qui l'environnent ont 6 à 7 mètres de profondeur presque partout. Ce ne peut être que l'île d'Antirrhodus, d'autant plus, qu'il y a les restes des fondations d'une grande construction qui doit marquer la maison royale qu'elle renfermait, au dire de Strabon, et qu'elle forme par ses deux bras, l'emplacement du petit port dont il parle dans un passage que je citerai plus bas.*
> *3) Une éminence, sous les eaux partant du continent à environ 650 mètres du port des rois et rentrant dans le port, comme un bras de 200 mètres de long; elle est encore prolongée, mais en maçonnerie de 300 mètres dans une direction à peu près parallele à l'Hèptastade; elle se termine par un plateau assez large en maçonnerie également; ce plateau se trouve à 550 mètres de distance de l'obélisque (site 93) et dans la direction de la rue transversale R5. L'éminence du bras, la chaussée de prolongation (esplanade), et le plateau sont à 2, 3, ou 4 mètres au dessous de l'eau: ce sont indubitablement, les restes du Posidium, de la chaussé d'Antoine, et de son Timonium.*
>
> (Mahmoud-Bey 1872: 43, Numbers 2-3)

As did Saint-Genis and Gratien Le Père before him, el-Falaki, having the descriptive narratives of Strabo in mind, confused the submerged remnants of Poseidion with those of Antirrhodos. In N° (2), given the recorded distances to his 'port des rois' (a reference point marked at the foot of Cape Lochias in his 1866 *carte*: the eastern side of inner port Y, at the mole labelled J1 in the featured AutoCAD maps), his 'île' and 'grande construction' would correspond to a detected section of the Poseidion headland and its T1 esplanade (section 2.3.3.4; site 39). Likewise, in N° (3), the reported relics are those of the subsided waterfront, moles (J11), (J12), (J13), and perhaps, (J10), and the three contiguous arms (B1, B2, B3) forming the T-shaped Antirrhodos Islet (sections 2.3.3.2, 2.3.3.5).

In 1888, Henry de Vaujany specified two forms of constructions often encountered within this zone: (a) foundation walls of massive blocks of nummulithic limestone and (b) structures in cemented brick:

> *En quittant l'emplacement du Caesareum et en longeant le rivage au pied de la falaise, on trouve encore debout, sur quatre à cinq mètres de hauteur, des massifs de maçonnerie (see infra) en pierres nummulites et briques reliées par un mortier rougeâtre très dur; ce sont des pans de mur enduits d'une forte couche de ciment, paraissant avoir appartenu à des citernes; on y remarque des trous pratiqués dans les parois et disposés en échelons pour permettre de descendre à l'intérieur.*
>
> (De Vaujany 1888: 14)

Pertaining to group (a) are those remains recorded by Saint-Genis at a point to the north of the present-day el-Khaledin Park (see *supra*) and described later, in detail, by De Vaujany: c. 300 m to the east of the Caesareum (sites 93-100), vestiges of massive walls (measuring up to 2.80 m in width) ran about 30 m into the sea; while at 80 m from the shoreline, foundation walls seemed recognizable at 4 to 4.50 m below the water surface, where fragments of two statuettes had been found, one of the lioness deity Pakhet, the other depicted Isis. These were recovered within an architectural debris of granite and marble columns, Corinthian capitals, friezes, and dentilled cornices (De Vaujany 1888: 15-18). Whereas the walls reported jutting out into the sea in the late 18th and 19th centuries were constructed in antiquity on the now subsided waterfront of the Broucheion, which is partially concealed today beneath the pseudo-coastal belt of the modern Corniche (section 2.3.1). Beyond that belt, the substructures at the furthest points on the subsided ancient coastline were detected in the 1990s during the IEASM surveys, together with the submerged remnants of the Poseidion headland, the Antirrhodos Islet, and its presumed Isiac sanctuary to which the 'architectural debris' and 'statuettes' of De Vaujany would have probably belonged (section 2.3.3.5; site 42).

Group (b) is represented, for instance, by the vestiges reported by Giuseppe Botti in 1897 around 'des bains Zouro': a point close to present-day Patisserie Athineos (site 26) (see *supra*, De Vaujany's account of *briques reliées par un mortier rougeâtre très dur*). Further to the east, towards the northern end of Champollion Street, immediately to the south of the present-day Misr Petroleum Station, were vaulted structures of a bath complex, where the masonry is made of fired brick in mortar, the walls coated with a thick layer of waterproof plaster, and the pavement constructed using 'de béton en cailloutis de briques très compact' (De Vaujany 1888: 23-27). These structures intercommunicated through passages of which one had survived to the time of discovery in the 1880s. The lower parts overlooking the sea, which had a few running conduits, did not advance into the water. Instead, they stretched well along the shore, in an easterly direction. Remnants of analogous foundations encountered by De Vaujany at the neighbouring reservoirs of the tanneries testify to the significance and scale of the bathing establishments cluttering the coastal belt of the Broucheion in the Roman period and overbuilding, where necessary, some of the monumental waterfront constructions of the Ptolemaic city (group a).

Site 113: Opposite the Mosque of el-Qaid Ibrahim

Maps: V2; V4

Baths: el-Ramleh; el-Mazarita [Roman]

In 1905, when the modern Corniche was in the course of construction, engineer Camiz from the Italian Almagià Company recorded the ruins of a bathing establishment at 'the small rocky promontory that existed along the shores of the eastern harbour before the construction of the Corniche, almost opposite the new British Consulate and to the west of Victoria College': approximately, a point within the southern sector of the present-day el-Khaledin Park. In 1907, Camiz reported his encounters along the old shoreline in a letter to the GRM director Evaristo Breccia, who published it in bulletin XVIII of the Archaeological Society of Alexandria (Adriani 1934: 70-71, Catalogue Number 34; Breccia 1914a: 50, 77-78; 1922: 60, 91; Camiz 1921: 61-62). These vestiges, occupying a rectangular area measuring c. 150 m^2, and known among 17th-19th-century travellers as 'Cleopatra's Palace or Baths', were built of limestone blocks and fired brick. They comprised two storeys. The lower, cut into the natural rock, had traces of numerous furnaces. On the upper level, the tiled pavement of a basin was met above the furnaces, with several feeding conduits running towards the basin itself. The Almagià recordings should be considered within a wider context of Roman bathing establishments littering the shores of the eastern harbour, from Saad Zaghloul Square to el-Silsileh and beyond (sites 2, 7a, 26, 112b, 138-140).

Site 114: Diana Theatre: NW. of the junction of the Government Hospital Street with Pereira

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Interments (nearby funerary vestiges: sites 35, 94, 100); ceramics [Mediaeval]
(ii) Retained material [Arab]
(iii) Dwellings with water supply; (iii') Craft-activity zone [Late Antique]
(iii-iv) Traces of street R4; intermediate alley [Roman; Late Antique]
(iv-iv') Dwellings with mosaics; wells; drainage system [Roman]
(v-v') Foundations; sewers; off-grid intermediate street [Ptolemaic]

Between 1994 and 1997, the Centre d'Études Alexandrines carried out salvage excavations at the site of the former Diana Theatre, a 450 m^2 plot on the northwestern corner of the junction of the Government Hospital Street (the present-day Faculty of Medicine Street) and Pereira (the present-day Mohamed Rafat) (Dubourg 2016: 26-29; Empereur 1995: 743-747; 1996: 959-963; 1997: 837-838; 1998d: 617-618; Guimier-Sorbets 1998b: 115-139; Rifa-Abou el-Nil 2016: 32-33). At least five broad phases of construction and/or occupation were identifiable within the opened trenches.

(i) Mediaeval interments dug into a layer of fill with embedded Fatimid glazed ceramics, providing a *terminus post quem* c. the 10th-11th century for the cemetery in question. Mixed burials (skeletons oriented east-west) encountered at +9.50 to +8.50 m above sea level, and their funerary associates, indicate successive phases of interment pertaining to a mediaeval Christian community: perhaps a Greek Orthodox or Coptic cemetery. Its relative proximity to the Byzantine cemetery (*martyrium*) at the site of the terminated Caesareum (35, 94, 100) suggests a possible eastward extension/successor. The extramural burials lie just outside the enclosure of the Arab town.

(ii) Intensive recovery of architectural material from earlier constructions at c. the 9th century, a process contemporary with the erection of Ibn Tulun's circuit walls round a tapered area of the ancient metropolis (267 Hijri, AD 881) (Introduction II.c).

(iii) A late antique residential complex is datable c. the 4th-5th century AD, with an elaborate water-supply system maintained until the domestic character of the urban units had faded away towards the end of the 5th century. (iii') By the time, the area seems to have become a craft-activity zone recognizable merely by a defining surface of battered earth. The dismantled walls reflect the constant quarrying taking place on site. Its identification as an artisanal neighbourhood is mainly due to the contextual finds: worked bone; platelets engraved with floral motifs or figurative scenes; decorative coffers; pins and dice; glass beads; coral, amber, and semi-precious gemstone; several settling basins. However, the main chronological indicator would be the Phocaean and Cypriot *sigillata*, specifying the end of these Justinian levels at c. the mid-6th century, probably in consequence of the destructive earthquake of AD 551. After a brief pause, habitation resumes until the site is abandoned in the 7th century. A characteristic feature of this late phase, already attested within contemporary contexts at Kom el-Dikka (sites 18-19, 69-70), is the constant encroachments upon the main and internal thoroughfares. At Diana Theatre, the intermediate alley eventually turns into a narrow lane serving the commercial outlets of workshops.

(iv') A Roman residential complex, datable to the 2nd-3rd century AD, comprised three spacious buildings with walls largely dismantled (see *supra*, phase ii, Tulunid quarrying) and wells sunk at the corners. One sumptuous house (150 m^2), featuring a central courtyard decorated with a small basin, had its *triclinium* (dining room: 25 m^2) paved with various mosaic panels (5.50 x 5.20 m) divided into a U-shaped bichrome (black and white) with a geometric pattern (hexagons and stars) in *opus tessellatum* and an L-shaped composed of four polychrome panels of which three display geometric and floral motifs in *opus tessellatum*, while the fourth features a polychrome shield of radiating scales around a central *emblema* in *opus vermiculatum* exhibiting the head of a medusa; that of the gorgon is datable c. the first half of the 2nd century AD. Abandonment took place towards the end of the 3rd century AD. (iv) A preceding early Roman phase of habitation, datable to the 1st century AD, is represented by similarly well-organized parcels. One house from this phase had small rooms (c. 3-4 m^2) set adjacent to an inner courtyard.

(iv-v) The successive phases of occupation yielded a variety of contextual finds: culinary dishes; fine ceramics; *amphorae*; oil lamps; bone utensils; metal objects; gemstone; statuettes. Some structures included material retained from earlier Ptolemaic buildings (see *infra*, phase v-v'): composite capitals; column drums; bases; cornices; Doric triglyphs; pedestals. A drainage system is represented by sewers corresponding to the Roman phase of transversal street R4, which was partially detected towards the southeastern corner of the plot. Two public sewers are associated with the Hellenistic phases of occupation. One, with a gable roof, was cleared below the course of street R4 to the southeast, the other, vaulted and of a monumental scale, ran lengthwise along the western sector of the Diana terrain. The four parcels of the residential complex developed on either side of an inner alley running ENE-WSW. As the case within the Polish concession at Kom el-Dikka, this secondary pathway sheds further light on the internal division of urban *insulae* through the construction of intermediate thoroughfares (Kom el-Dikka: sites 18-19, 69-70; Latin Quarter: site 29; el-Mazarita: sites 122c, 127; elsewhere: section 2.2.2.13).

(v) The remnants of a massive foundation wall oriented off-grid were met at +2.80 m above sea level. It ran parallel with a contemporary street similarly aligned in the cardinal directions (N-S) (analogies at Kom el-Dikka: site 69c). They constitute the earliest detectable phase of construction on site, datable to the 3rd century BC. (v') The obliquely-oriented inner street and the monumental construction(s) to which the excavated wall would have belonged were succeeded in the 2nd century BC by a residential complex that follows the canonical secondary intercardinal orientation of the

urban grid (NNW-SSE), which seems to prevail, more or less, until the abandonment of the site.

Site 115: Chantier Abd el-Hamid Pasha

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Pavement of street L3 or R4 (?) [Roman; Late Antique]
(ii) Foundations [Ptolemaic]

In May 1935, ancient remains were accidently discovered while digging foundations for a new building of Suleīman Abd el-Hamid Pasha on Alexander the Great Street (Omar Lotfy: el-Tram; plot No. 47) (Adriani 1940a: 37-38; 1966a: 79, Catalogue Number 38, Figure D). Foundations built of large, hewn limestone blocks were identifiable at three different locations within the opened trenches. The longest extant section of wall was met at 4.08 m below the modern street level. It was preserved up to the seventh row of blocks (length: 1.60 m, height: 2.60 m, blocks: 0.80 x 0.45 m). Traces of stonecutters' marks were found on one of the stone blocks. Another section of wall, uncovered over 1.25 m, was encountered not far from the first. It was built upon a layer of limestone flakes as was construction No. (14) at Chantier Finney (site 120). Within the backfill were blocks of black basalt pertaining to a street pavement. Considering the reported findspot, these blocks would have probably belonged to the hardstone pavement of longitudinal street L3 or transversal street R4.

Site 116: Chantier Moustaki

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Coarse masonry [Late Antique]
(ii) Foundations; pillar; well; reservoir; basin; arcade [Ptolemaic; successive occupation]

In 1935, prior to the digging of foundations for a new building near Ismaīl Square (the present-day Ramleh Central Station), the Graeco-Roman Museum carried out an excavation at a property of Armand Moustaki, delimited by the streets of Ali Ibrahim Ramez (east), Alexander the Great/Omar Lotfy/el-Tram (north), and Pereira/Mohamed Rafat (west) (Adriani 1940a: 35-37; 1966a: 79, Catalogue Number 38; 1966b: Tavola 20, Figure 69). Adriani sunk nine trenches in total (Figure 239). Within trench (1), a coarse wall built of roughly-hewn blocks, stone chips, and hardened clay was encountered. It had overbuilt a much earlier construction of large, hewn limestone blocks (1.60 x 0.85 x 0.60 m), which was laid directly upon the bedrock and preserved up to the fourth row of blocks. At the southeastern corner of the opened trench, a circular well of finely-hewn and regularly arranged small blocks of limestone (depth: 6 m, diameter: 0.88 m, size of blocks: 0.22 x 0.28 m) seems contemporary with the initial phase of construction, judging by building technique. Within trench (4), dug to the east of trench (1), were remnants of another wall of construction phase (I), with four preserved rows of blocks (height: 2.40 m), and a quadrangular bulk of two juxtaposed massive blocks of limestone. Analogies with construction No. (16) at Chantier Finney (site 120) show the bulk as an extant section of a large pillar. As the case at trench (1), a coarse construction within trench (4) had partially overbuilt the limestone wall of phase (I). A remnant of a third wall of construction phase (I) was met within trench (5), where it was found preserved up to the third row of blocks (height: 1.80 m). Towards the eastern limits of the plot, within trench (6), a deep rectangular reservoir was found cut into the bedrock. Its walls were coated with a curtain of small blocks of limestone carefully hewn and arranged into regular rows (2.65 x 1.30 m, depth: 7.70 m, variable size of blocks: 0.43 x 0.35 m, 0.22 x 0.35 m, 0.22 x 0.18 m, 0.18 x 0.18 m). The building technique here, where small square blocks alternate with elongated ones, with clay mortar in the masonry, recalls a construction mode pertaining to Noack's phase (b) near el-Sultan Hussein Street (site 15) and to some of the constructed walls of Hypogeum (II) at the funerary complex of Mustapha Pasha (site 160). The constructions of intermediate phase (II), excavated mainly within trench (6), were represented by a basin of stone blocks covered with hydraulic coating, to which an adjacent reinforcement arcade seemed complementary: possibly, constructions forming part of a successive renovation on site. As in other nearby *chantiers* (sites 117, 119-120), coarse constructions of phase III at Moustaki, exemplified by that unearthed within trench No. (9), were found sometimes partially superimposed upon earlier foundations of construction phase (I), as is the case within trenches Nos. (1, 3, 4).

Site 117: Chantier Politi: Cinema Radio

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Coarse masonry [Late Antique]
(ii) Foundations; pillars; well; conduits; fragmentary architecture [Ptolemaic; successive occupation]

At the beginning of 1952, ancient remains were accidently discovered while digging foundations for Cinema Radio of the Politi brothers, at a site delimited by the streets of Amin Pasha Fikri (east), Alexander the Great/Omar Lotfy/el-Tram (north), and Aly

Ibrahim Ramez (west) (Adriani 1956a: 10-16; 1966a: 77, Catalogue Number 33; 1966b: Tavola 15, Figure 50, Tavola 17, Figures 54, 56, Tavola 22, Figures 78-80). The constructions identifiable through the opened trenches on site (Figure 240) are categorized into two groups: (a) large pillars resting directly upon the bedrock and built of roughly-hewn blocks of limestone held without mortar (marked 19, 22, 29, 34, 35, 48, and 87 in the excavation plan); (b) remnants of foundation walls built in a similar technique, but using smaller blocks of unequal sizes irregularly arranged into rows (the smaller blocks were arranged in such a way as to match the height of the larger contiguous ones). Two sections of a wall pertaining to group (b) (marked 23 and SM) were found on the same alignment, and therefore, must have belonged to the same foundation wall. The distinct pyramidal form of the (23) segment of wall, basically an upward tapering reinforcement with the widest, lowermost part resting directly upon the bedrock, is evident at other sites in the central district (21, 31, 63). Two conduits with a covering slab were unearthed over short distances (marked 44 and 55). A circular well built with regularly arranged blocks (marked 48a) recalls those excavated at the adjacent *chantiers* Moustaki and Finney (sites 116, 120). Late walls of coarse masonry were encountered intermittently, either at a level higher than those corresponding to the earlier constructions of group (a) and (b), or otherwise, partially superimposed upon them. Within one pit, a fragment of a polychrome stuccoed cornice (length: 0.335 m) painted Ionic and Lesbian *kyma* was recovered (marked 32). It bears analogies with similar finds at the nearby Chantier Finney (site 120).

Site 118: South of Cinema Radio

Maps: V1; V2; V4

Fragmentary architecture: el-Ramleh [dynastic, relocated to Alexandria]

Between April and July 1994, the Centre d'Études Alexandrines carried out a salvage excavation at a plot located immediately to the south of Cinema Radio (site 117), on the eastern side of Ali Ibrahim Ramez Street (Empereur 1995: 753-756). The reverse stratigraphy of the site seemed subsequent to a cone of depression whereby Hellenistic layers lie above Arab ones. This would justify the four-metre difference with contemporary occupational levels at the nearby Diana Theatre (situated c. 70 m to the west: site 114), thus indicating an ancient terraced layout for the urban blocks extending between the streets of Amin Pasha Fekry and Pereira (present-day Mohamed Rafat). The water table within this zone lies below the natural bedrock, which allowed a thorough investigation of the various stratigraphic phases. Cutting through the fill, the first Hellenistic layer was reachable at 5 m below the surface level. After just 0.70 m, appeared the bedrock at +3.30 m above sea level. Indeed, successive quarrying of building material to be reutilized in later constructions is evident on the pitted bedrock and through the fill where two columns of granite have been recovered along with a lintel bearing a cartouche of Ramses II. The latter would pertain to the *Aegyptiaca* of relocated architecture retained from dismantled pharaonic edifices in the inland, especially from those of cultic nature at Heliopolis (sites 43, 93, 142).

Site 119: Chantier Heikal Pasha

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Coarse masonry [Late Antique]
(ii) Foundations [Ptolemaic; successive occupation]

Between April 24th and June 5th, 1937, the Graeco-Roman Museum carried out excavations prior to and during construction works at a property of Heikal Pasha, southeast of the junction of the streets of Amin Pasha Fikry with Alexander the Great (Omar Lotfy: el-Tram) (Adriani 1940a: 33-35; 1966a: 79-80, Catalogue number 39; 1966b: Tavola 20, Figure 70). The GRM trenches (Figure 241) revealed a remnant of a foundation wall, built upon virgin soil, of large blocks of limestone finely hewn and regularly arranged into rows (marked 1 in the excavation plan). Another section of a wall (marked 2) constructed in the same technique seems to have formed a right-angle with wall (1). A late wall of coarse blocks, stone shards, and hardened clay had overbuilt the earlier remnant of wall (1). Imposing late walls at Heikal included reused material such as a fragment of a Corinthian capital of limestone found bearing traces of a polychrome, as well as various other fragments of fluted limestone columns. Within the foundation trenches, a continuation of the massive constructions of limestone blocks became evident. Towards the eastern limits of the plot, several sections of a third wall (marked 3) were built directly upon the bedrock. In part, they reached up to eleven preserved rows of blocks. Building technique indicates that all the detected sections had presumably belonged to one massive wall extending over a distance of about 23 m. Partially unearthed along the eastern side, the width of wall (3) could not have been determined. Its absence, however, within test-pits sunk 1.50 m to the west suggests a wall not exceeding 1.30 to 1.40 m in width. It had a maximum preserved height of 5-6 m. Towards the northern limits of the excavation profile, alongside the southern edge of Alexander the Great Street (Omar Lotfy: el-Tram), nine trenches were excavated, of which four had revealed the remnants of a wall (marked 4). Whereas within the easternmost trench, a possible junction of this wall with wall (3)

was met, hence exposing the northeastern corner of the building in question. The maximum preserved height of wall (4) reached up to ten rows of blocks: 5 m. One section of it ran perpendicular to the others, thus signalling a possible northward extension. Along the western limits, wall (5) was found preserved up to six rows of blocks: 2.30 m. It might have formed the northwestern corner with wall (4).

Other remnants of walls were excavated at Chantier Heikal – wall (6): ran perpendicular to wall (10) and had two preserved rows of blocks (length: 2.50 m); wall (7): ran parallel with walls (5) and (14) and had three preserved rows of blocks (length: 9.50 m); wall (8): preserved up to nine rows of blocks (length: 2.50 m); wall (9): ran perpendicular to walls (3) and (7) and had four preserved rows of blocks (length: 2 m); wall (10): formed a right-angle with wall (6) near the southeastern corner of the plot and had two preserved rows of blocks (length: 1.50 m); wall (11): preserved up to three rows of blocks (length: 2 m); wall (12): ran perpendicular to wall (11) and had nine preserved rows of blocks (length: 2.60 m); wall (13): ran parallel with wall (12) and had nine preserved rows of blocks (length: 2.50 m); wall (14): ran parallel with walls (5) and (7) and had three preserved rows of blocks (length: 2.65 m). As the case at nearby *chantiers* (sites 116-117, 120), the detected vestiges of an earlier structure(s) at Heikal were reutilized at some point in antiquity as ready foundations for much coarser constructions of rubble in thick layers of hardened clay (not plotted in the GRM excavation plan).

Site 120: Chantier Finney

Maps: V1; V2; V3; V4

Miscellaneous: el-Ramleh

(i) Coarse masonry [Late Antique]
(ii) Foundations; pillars; wells; conduit; fragmentary architecture and mosaics [Ptolemaic; successive occupation]

In summer 1935, the leveling of the terrain at a property of Oswald Finney located towards the southwestern corner of the junction of Alexander the Great Street (Omar Lotfy: el-Tram) with the former British Consulate Street had brought ancient remains to surface. Subsequent salvage excavations were carried out on site by the Graeco-Roman Museum, from the beginning of 1936 to March 1937 (Adriani 1940a: I. Chantier Finney, 24-33, 45-53; 1966a: 75-77, Catalogue Numbers 31-32; 1966b: Tavola 14, Figure 45, Tavola 16, Figure 51, Tavola 17, Figures 52-53, 55, Tavola 18, Figures 57, 59-60, Tavola 19, Figures 62-64). Successive phases of construction (I, III) and structural alteration (II) were identifiable within the main trench. Construction phases (I-II) are represented by foundation walls, pillars, hydraulic installations, and fragmentary architecture and mosaics. Whereas a complex of coarse masonry pertaining to construction phase (III) seems datable to a much later period (Figure 242).

Construction No. (1): large and hewn blocks of limestone of varied sizes arranged into regular rows and preserved up to four rows of blocks (height: 1.50 m, maximum width: 1.10 m). The blocks of the lower rows were coarser compared to those of the upper ones: a variation in stonemasonry noticeable between Noack's construction phases (a) and (b) at el-Sultan Hussein (site 15). Traces of stonecutters' marks were found on the southern face of some of the blocks. Late walls of small, roughly-hewn blocks in a layer of hardened clay had overbuilt construction No. (1).

Construction No. (2): remains of just one preserved row of blocks running perpendicular to construction No. (1).

Construction No. (3): running parallel with construction No. (2). Segment (a) towards construction No. (1) was formed of a single row of large rectangular blocks partially overbuilt with late constructions. Segment (b) to the east of construction No. (6) had four rows of blocks with a maximum preserved height of 1.20 m.

Construction No. (4): a platform of foundations contained within constructions (1), (3), and (5); approximately, 10 – 30 cm from constructions (1) and (5). The largest segments consist of three to four rows; the blocks of a fifth row were found preserved in part. Stuccoed and polished blocks suggest possible renovation: phase (II).

Construction No. (5): a first row of blocks and the remains of a second at the segment opposite construction No. (4); proceeding northwards, five rows of blocks were recorded. At the northern end of the excavation profile, a late construction of large, roughly-hewn blocks, stone shards, and hardened clay had overbuilt this segment of construction No. (5). A late construction, equally rough and irregular, had overbuilt the preserved first row of construction No. (5) to the south of the point where it meets construction No. (1).

Construction No. (6): at the first segment, to the east of construction No. (5), two rows were preserved along with several blocks of the third and fourth rows. At the segment to the west of construction No. (3), two rows of large blocks were overbuilt with a late, much coarser wall of stone shards mixed with roughly-hewn blocks in a layer of hardened clay. At the level of another late wall, perpendicular to the latter, construction No. (6) was found preserved up to the fourth row of blocks and reaching a maximum height of 1.35 m.

Constructions Nos. (7-9): proceeding southwards, an area of ruins was found pertaining almost exclusively to a late period. There were, however, a group of large and hewn blocks towards the eastern limit of the profile, representing the remnants of construction No. (7) on the alignment of a contemporary construction running to the south (see *infra*, No. 11). To the west of the blocks, towards the middle of the profile, were two isolated and hewn blocks of construction No. (8). They might have belonged to a large pillar contemporary with similar constructions met further to the south (see *infra*, No. 16). Northwest of these two blocks were hewn blocks of construction No. (9) found overbuilt with a cluster of late walls.

Constructions Nos. (10-13): construction No. (10) was preserved at several points up to the seventh row of blocks (maximum height: 2.45 m). To the north were coarser blocks of the first two rows, which were arranged differently from those of the upper ones. Construction No. (11) was built of large and hewn blocks. Its irregular course, and the fact it was supressing the western side of construction No. (10), would hint at structural alteration within the same building (phase II). Constructions Nos. (12) and (13), encountered to the southwest of construction No. (10), seem contemporary with construction No. (11), judging by building technique. Construction No. (13), of which a single row had survived *in situ*, was overbuilt with a late wall of small stone blocks and clay. A fragment of a cornice was reused in the first row of the latter wall, towards the eastern end. Immediately to the west of the junction of constructions Nos. (11) and (12), a section of a pavement, constructed chiefly of pebbles pressed into battered earth (α), was uncovered and, in part, overbuilt with late walls.

Construction No. (14): a rectangular chamberette with a threshold of an entrance on the southeast, and the remnants of two parallel walls on the northeast and southwest. A late construction built partially of reused material had overbuilt the chamberette of phase (I). A conduit of stone, approaching from the south, ran alongside the western wall, thus must have headed northwards. The latter wall was constructed upon a fine layer of battered earth containing embedded limestone flakes. It consisted of two preserved blocks at the bottom, two in the second row, and a single block in the third. On the opposite side, the chamberette's eastern wall had only three blocks preserved: two at the bottom and one in the second row. Towards the south, three blocks formed up the first row: one large block in the middle and two small ones on either side. The massive block at the middle signalled the threshold of an entrance. One block from the second row was found towards the junction with the western wall. A few finely-hewn and carefully polished blocks were either littered near the walls or reused in the adjacent late constructions. Originally, they would have belonged to the earlier phase of construction, as indicated by a block encountered near the threshold, marking one corner of the chamberette.

Construction No. (15): a remnant of a wall of large, hewn blocks, located immediately to the north of construction No. (14). Another segment of it, excavated on the same alignment, was found further east to the former. The latter segment had a preserved first row of blocks and just few recorded from the second.

Construction No. (16): a set of five large pillars built of finely-hewn blocks of limestone. Between the fourth and fifth pillar, there was room for another, which had probably been demolished subsequent to the construction of a late wall running between construction No. (17) and a second late wall parallel with it, to the north. Both of the coarse constructions seem contemporary, with one partially overbuilding construction No. (17). The lowest of the five pillars was preserved up to the third row of blocks, the highest, to the seventh (range of recorded heights: 1.30 – 2.40 m). The first rows were formed basically of a pair of blocks placed alternately in two different directions (juxtaposed): a mode of construction met at the nearby Chantier Moustaki (site 116). Whereas, at the upper sections, a large rectangular block was placed lengthwise.

Construction No. (17): a massive wall with the better-preserved segment, towards the west, reaching up to the seventh row of blocks (height: 2.53 m), while elsewhere, remained the first to second rows of blocks. As the case with some of the other wall remnants on site, the roughly-hewn blocks of the coarser lower rows were quite distinct from the larger, finely-hewn ones of the more regular upper courses, thus signalling successive rebuilding (phases I-II). Beyond construction No. (17), further to the south, were fragments of mosaic panels found without a context within a layer of debris. Their random arrangement suggests vestiges of frieze panels of an upper storey, largely violated during the demolishing of the building complex in question. Two recovered pieces show a running centaur and a stag; a third panel displays two rows of geometric ornaments (Graeco-Roman Museum, Inventory Numbers 25659-25660). Wiktor-Andrzej Daszewski assigned these panels to c. 250-225 BC (Daszewski 1985a: 111-114, Catalogue Numbers 5-7).

South of construction No. (17), towards the southwestern limits of the excavation profile, a small circular well had an upper part formed of reused material. Eighteen of such wells were recorded within the main trench. They were partially rock-cut, with a few sections built of stonemasonry. Utilized to draw fresh water from the feeding conduits and aqueduct tunnels of the

underlying *hiponoses*, these vertical wells, maintained over a long period of time, had shown various phases of construction and renovation represented through the range of building techniques attested on site.

Beyond construction No. (17), towards the southern limits of the excavation profile, there were only very coarse constructions pertaining to a late period. The 1940 GRM plan (see *supra*) shows this form to dominate the Finney terrain. They include reused architectural material that seems to have been retained from earlier dismantled constructions on site. For instance, the course vestiges to the south of construction No. (17) were built of small irregular blocks and stone shards held firmly by means of a thick layer of hardened clay. Architectural fragments (*spolia*), such as cornices, capitals, and column drums, were found often embedded within the walls. The nature and chronology of this late phase of construction cannot be inferred in a context as such, especially in the absence of chronological indicators. The recorded mode of construction, however, suggests modest structures overbuilding an urban complex that had undergone successive phases of renovation and rebuilding, already in the Ptolemaic period (analogies: Noack's construction phases a and b), and possibly later, in the course of the Principate (analogies: Noack's construction phase c; the architectural continuity archaeologically attested in the central district, particularly at Kom el-Dikka), before the site was abandoned c. the 3rd-4th century AD. The coarse masonry at Finney, as the case at several other sites with analogous construction modes within the Broucheion (116-117, 119-122, 127, 137a), would pertain to a late phase of habitation on site following the second abandonment of the northern-northeastern district in the aftermath of the destructive earthquake and mega-tsunami of AD 365: a late antique occupation datable c. the 5th-7th century.

Site 121: Garden of the former British Consulate

Maps: V1; V4

Dwellings; wells; conduits: el-Ramleh; el-Mazarita [Ptolemaic]

In 1994 and 1996-97, the Centre d'Études Alexandrines carried out salvage excavations at the garden of the former British Consulate southeast of the GRM *chantiers* on Alexander the Great Street (Omar Lotfy: el-Tram) (sites 115-117, 119-120), 250 m to the east of the former Diana Theatre (site 114), 100 m to the north of the former Cricket Playground (site 122), and a few metres to the northwest of the Government Hospital complex (el-Mustashfa el-Amiri) (sites 14, 128-129, 131-134) (see *supra*, Figure 237; see *infra*, Figure 243) (Dubourg 2016: 26-29; Empereur 1995: 747-750; 1997: 838-841; 1998d: 619; 2002a: 928-930).

Prior to the CEAlex intervention, the bulldozers of the modern developers had destroyed the ancient remnants through the upper levels (disturbance to c. 4-6 m), hence revealing the underlying Hellenistic *strata*. The uncovered earlier vestiges, yet violated by the instalment of concrete pillar reinforcements, represent surviving units or parcels pertaining to a sumptuous, terraced complex with at least three successive phases of habitation. It seems to have occupied an urban *insula* within the Broucheion, one situated on the slopes of the mound (the Government Hospital Hill) overlooking the edifices of the neighbouring Royal Quarter (βασίλεια) and the Great Harbour (Μέγας Λιμήν). The most recent of the identifiable phases is datable towards the end of the 2nd century BC, whereas the earliest, with domestic structures built directly upon the bedrock, is associated with the first generation of Alexandrian settlers: a senior officials and aristocrats late-4th to 2nd-century BC residential district adjacent to the enclosure of the Ptolemaic βασίλεια, in proximity to the southern belt of Cape Lochias. Each of the principal phases incorporates about two or three sub phases of internal modification: addition of partitions; alteration of surface area; partial abandonment. A single orientation in conformity with the canonical urban grid is retained on site throughout the various phases of (re)construction and/or renovation.

The terraced layout of the consulate terrain justifies the division of the *insula* in question into two main sectors, a separation manifested by two contiguous terrace walls oriented east-west. Two houses were identifiable on either side, where successive rebuilding is indicated by the different modes of construction attested on site. The walls of the first installation were built of coarser stone blocks bound by a layer of clay mortar. Subsequent constructions were characterized by their large, finely-hewn limestone masonry. The partition walls had foundations of roughly-hewn stone blocks upon which courses of mudbrick were regularly arranged. Apparently, clay mortar was in frequent use at the time by stonemasons, as the case at neighbouring sites with contemporary constructions: Chantier Moustaki (116) and the Cricket Playground (122). Pavements of battered earth were dominant. In one case, the surface was constructed of tile shards and *tesserae*, measuring about 1 cm, pressed into a bedding layer of mortar. Perhaps the most prominent encounter is an ἀνδρών (a banqueting room reserved for men: 21.8 m^2) featuring a pebbled floor-mosaic datable c. 315-300 BC. The latter, a reminiscent of Pellaean panels in Macedon, has an off-centre lozenge pattern marking the threshold, a central rosette medallion, and a red strip of *tesserae* defining the space preserved for the reclining κλίναι (couches). As its style and mode of construction affirm the Macedonian character of the district, the contextual finds, particularly a hoard of coins within the bedding of the mosaic pavement,

antedating the monetary reforms of Ptolemy's satrapy (introduced c. 315 BC), associate the initial phase of occupation with the earlier settlers of the late 4th century BC.

The domestic nature of the habitat is rather strengthened by the unearthing of ovens of clay and brick: encounters that may be considered in association with the fine ceramics, cooking pots, and dishes recovered on site, besides an informative repertoire of *amphorae* and λάγυνοι of the 3rd and 2nd centuries BC. The houses were connected to an underground hydraulic network by means of vertical wells of stonemasonry intended for drawing fresh water from the underlying conduit tunnels (*hiponoses*). These had probably belonged to the water-supply system partially excavated at other neighbouring sites on the slopes of the Government Hospital Hill (14, 122c, 131). Among the other prominent finds from the consulate site is an inscribed plaque of white marble datable to the 2nd century BC. It records a dedication made by a certain individual, along with his wife and children, to Sarapis, Isis, and Hermes. To the left of the incised epigraph, an Ibis is depicted posing upon a beribboned κηρύκειον (Hermes' staff), thus emphasizing the Graeco-Egyptian assimilation of Hermes to Thoth: Ἑρμῆς ὁ Τρισμέγιστος.

Site 122: Premises of the former Cricket Playground

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita

(i) (a-b) Coarse masonry [Late Antique]
(ii) (b) Rebuilding activity; (c) baths and basins [Roman]
(iii) (c) Traces of a longitudinal street; intermediate alley [Ptolemaic]
(iv) (a-c) Dwellings; workshops; wells; conduits and cisterns; sewers [Ptolemaic]

(a) In 1970-71, excavations directed by Samy Shenouda, from the University of Alexandria, were carried out at the northeastern sector of the former Cricket Playground, to the south of the former British Consulate, within an urban block situated immediately to the west of the Government Hospital complex (el-Mustashfa el-Amiri) (Figure 243; see *supra*, Figure 237) (Shenouda 1973: 193-205). As the case at nearby sites excavated on the slopes of the mound (14, 121, 128-129, 131-133) and at el-Khaledin Park (site 134), the level of the bedrock here was relatively high, with the earlier remains found buried beneath accumulated debris of successive occupation. In the upper *strata* of the overlying debris were vestiges of a coarse structure of fired brick and small stone blocks built upon a thick levelling layer of earth and rubble containing fragmentary elements of architecture such as column drums, capitals, and architraves. Below the buffer debris, remnants of foundation walls were built directly upon the bedrock, at 5 m below the surface level. They pertain to an urban complex corresponding to several phases of construction and renovation (Figure 244). A comparative study of three partially preserved tessellated mosaic pavements from the buildings labelled (A) and (2), in association with other panels from chronologically-established contexts in Alexandria and elsewhere (Delos, Cyrene, Solunt, Pompeii, and Rome), allowed Wiktor-Andrzej Daszewski to propose a possible range of use for the complex in question, from c. the mid-2nd to the 1st century BC. Successive constructions on site can be categorized, accordingly, into four broad phases: (i) a well (perhaps the earliest) and buildings (B), (3), and (1); (ii) building (4); (iii) buildings (2: phase I) and (A); (iv) buildings (2: phase II), (5), and (6) (Daszewski 1983: 55-59; 1985a: 115-118, Catalogue Numbers 12-15 – fragmentary mosaic panels datable c. the late 2nd-early 1st century BC).

Some of the recovered architectural material, such as a fragment of a stuccoed frieze featuring a Lesbian *kyma* analogous to those encountered at the neighbouring Chantier Finney (site 120), antedate Daszewski's proposed range. Coming from the upper debris layers, however, these out-of-context finds might have been retained from preceding undetectable constructions on the cricket site, or from other dismantled buildings at nearby sites. In general, stratigraphy at this sector of the former Cricket Playground recalls the site investigated in 1976 by Wiktor-Andrzej Daszewski and Krzysztof Kamiński (PCMA) on the slopes of the Government Hospital Hill (site 131), where earlier relics of Ptolemaic provenance were concealed beneath an accumulated debris of earth and rubble subsequent to late phases of habitation contemporary with Shenouda's 'structure of fired brick and small stone blocks' and with those structures excavated in the 1940s by Alan Wace on the eastern slopes of the mound (site 127).

(b) In 1980, construction works carried out at the southern sector of the former Cricket Playground had once again brought ancient relics to the surface. The unearthed remains were investigated and recorded by Wiktor-Andrzej Daszewski (archaeologist) and Marek Barański (architect) from the Polish Centre of Mediterranean Archaeology (PCMA, University of Warsaw) (Daszewski 1983: 63-69). Within a rectangular area measuring approximately 74.30 x 25.30 m, fifteen test-pits and two trenches were excavated by the modern developers for a new building of the Faculty of Medicine (Figure 245; see *supra*, Figures 237 and 243).

Surface layers (i.e. prior to the clearing of the terrain by the developers): about 3.50 m from the level of the former Cricket Playground: 4.70 m from the modern street level (Abd el-Wahed el-Wakil):

- A largely destroyed wall of brick, built upon a substructure of small and irregular limestone blocks.
- A large wall built of brick and small limestone blocks held by a thick layer of lime mortar, adjoining a pavement of stone slabs.
- A north-south wall built of limestone blocks, with brick occasionally employed, held by a thick layer of lime mortar.
- Two double walls of limestone blocks, running east-west, parallel with one another.
- A rectangular basin coated with a layer of waterproof plaster.
- Fragmentary architecture: a Corinthian capital of white-greyish marble and a column base.

In total, fifteen test-pits and two trenches descended from the bottommost level of the upper (cleared) *strata*, with nine reaching the groundwater level at 9.80 m from the top of the excavation profile: 13.30 m from the level of the former Cricket Playground: 14.50 m from the modern street level. The listed below depths were recorded following the clearing of the surface layers:

Test-pit (1)
- Southern section:
- 4 m: a large wall of limestone blocks, running north-south.
- 6 m: an occupational level covering a thick layer of loose fill below which virgin soil extended to the groundwater level.

Test-pit (2)
- Northern section:
- Near the surface: a wall of small limestone blocks and fired brick in mortar, adjoined by a canal running east-west.
- 1.80 m: the footing of the wall.
- 2.20 – 2.70 m: two parallel walls of coarse limestone blocks, running north-south.
- Western section:
- 1.30 m: a north-south oriented wall of finely-hewn stone blocks in lime mortar, bearing traces of a reddish plaster.
- Southern section, near the SE. corner:
- 5 m: a north-south foundation wall of limestone blocks.
- 8 m: bedrock: the footing of the wall; a canal with a conical slab cover.
- 9.10 m: groundwater level.
- Southern section, near the SW. corner:
- 4.60 m: three walls built of limestone blocks: two, oriented east-west, adjoined the third from the west. Above the walls, at 4.30 m, extends a 0.30 m thick layer of ashes (an indicator of destruction by fire) upon which successive layers, chiefly of earth, rubble, and lime mortar, signal the levelling of the terrain in preparation for subsequent building activity.

Test-pit (3)
- Southern section:
- 7 m: a rectangular well of finely-hewn limestone blocks, cutting into the bedrock and descending slightly below the groundwater level.
- Successive layers of fill containing rubble, earth, and mortar residues ascend to the surface level.
- NW. corner:
- A cut through the fill was detected.

Test-pit (4)
- Northern section:
- 2.30 m: a wall of limestone blocks.
- 6.50 m: bedrock: the footing of the wall.
- 9.80 m: groundwater level.
- SW. corner:
- A vertical trench, c. 3 m deep, cuts through an earth fill below which extends a levelling layer of earth.
- 4.40 – 8.40 m: a 4 m thick layer of rubble (debris) bearing traces of fire: almost on the same level of the layer of ashes of test-pit (2). Levelling of the terrain is signalled by a one-metre-thick layer of earth. At the upper part of the layer with burnt rubble was a large foundation wall visible through the southern section of the pit.
- 8.40 m: bedrock: burnt stone.

Test-pit (5)
- SE. corner:
- Near the surface: a wall of limestone blocks.
- Debris *strata* extending thru.
- Bedrock: reached below the groundwater level.

Test-pit (6)
- Eastern section:
- 1.10 m: the top of a basin coated with plaster.
- 3 m: the bottom of the basin.
- Western section:
- A foundation layer, of small stone in lime mortar mixed with gravel, seems contemporary with the basin.
- Debris *strata* extending below the groundwater level.
- Bedrock: not detected.

Test-pit (7)
- An uppermost layer, c. 2 m thick, of earth and rubble.
- Successive layers of fill reaching the level of the bedrock at 7 m.

Test-Pit (8)
- Successive layers of fill reaching the bottom of the excavated pit at 5 m.

Test-Pit (9)

- SE. corner:
  - 4.50 m: a north-south oriented wall of finely-hewn limestone blocks, with a footing built upon the bedrock.
  - Bedrock: reached at 6.80 m: 3 m above the groundwater level.
  - 9.80 m: groundwater level.

Test-pit (10)

- Successive layers of fill reaching the groundwater level.

Test-pit (11) – shallow

- Almost at the surface level: c. 0.80 m: a north-south oriented wall of limestone blocks coated with a layer of plaster on the western side and adjoined from the west by two blocks of limestone. Extending to the west was an uncovered section of a pavement in a pinkish mortar.

Test-pit (12) – shallow

- 0.50 m: the lower courses of a wall of limestone blocks.
- 1 m: a circular well of small limestone blocks, encountered immediately to the east of the wall, almost adjoining it.

Test-pit (13)

- 0.30 m: several walls of small limestone blocks in lime mortar, and a large basin.
- 0.80 m: an oblong basin coated with a layer of waterproof plaster, built upon a mosaic pavement composed of chips of various stone (alabaster, granite, and marble) embedded into a layer of lime mortar.
- Finds: fragmentary elements of architecture, and ceramic sherds including the handle of a late Roman *amphora*.
- Immediately below the mosaic pavement were accumulated layers of fill.
- Southern and northern sections:
- 4.20 m: the upper part of a foundation wall.
- 5.90 m: bedrock: the footing of the wall.
- 9.80 m: groundwater level.
- Adjacent to the wall were two layers of whitish mortar: the upper layer was met at 4 m, the lower layer at 4.50 m.
- Above the upper layer of mortar were levelling *strata* of earth fill upon which extends a layer of debris underlying the hydraulic structures with a mosaic pavement (see *supra*).
- Southern and (in part) western sections:
- 0.80 m: a wall of small limestone blocks, reaching to 4.20 m.

Test-pits (14) and (15) and trench (16) – shallow

- A layer of fill reaching to the bottom at 2 m.

Trench (17)

- 4-5 m: below an extended debris *stratum* of earth and rubble, a foundation wall of large, roughly-hewn limestone blocks held without mortar (dry masonry) ran northwards (width: 0.70 m, preserved height: 1.50 m). The uppermost segment of it was met at 4.50 m, whereas the wall itself was exposed down to 6.50 m and yet seemed to descend further, beyond the excavation profile. It was joined at the northern end by another foundation wall running eastwards. On the same level, along the northern profile of the opened trench (No. 17), was a third foundation wall built in the same technique (width: 1.30 m, preserved height: 1 m). Traces of red-brownish markings were recognizable on the faces of two of the blocks pertaining to the excavated walls: stonecutters' marks in ochre. Three massive blocks of limestone (pillars?) were placed at a regular interval of 0.80 m across the excavated foundations. Above the level of the blocks was a 0.20 m thick layer of mortar upon which earth and rubble fill ascended to the surface level.
- NW. corner:
- A well, rectangular in cross section and built of finely-hewn limestone blocks, was partially exposed over a depth of 1.60 m and yet seemed to descend deeper, towards the bottom of the trench.
- The bedrock and the groundwater level were not reachable.

Stratigraphy shows successive phases of construction and/or renovation on site. An earlier phase is represented by structures built upon the bedrock (phase I) (test-pits 1, 2, 4, 9, 13, and trench 17), with some partially drenched below the groundwater level due to land subsidence (section 2.3.1). The recorded levels and modes of construction assign the earlier remnants to the Ptolemaic period, with detectable variations subsequent to successive phases of rebuilding activity. The techniques employed in the foundation walls, conduits, and wells at the Cricket Playground recall those recorded at the GRM *chantiers* on Alexander the Great Street (sites 115-117, 119-120) and at Chantier Djanikian on the slopes of the Government Hospital Hill (site 14). Whereas the use of clay mortar in stone masonry echoes similar modes at Chantier Moustaki (site 116) and the former British Consulate (site 121). The results from test-pit (13) are of a particular interest, for they show several activities of late Ptolemaic and Roman renovation and/or dismantling of earlier constructions, datable c. the 1st century BC to the 3rd century AD (phase II).

Traces of destruction by fire (test-pits 2, 4), and the thick levelling *strata* encountered during the Alexandria University excavations at the northeastern sector of the

former Cricket Playground (site 122a), would explain the absence of direct communication between the constructions of phases (I-II) and (III): no stratigraphic evidence of reutilizing earlier dismantled buildings as ready foundations in the latter phase of occupation. This phenomenon denotes a gap c. the late 3rd-4th century AD, one justified by the abandonment and reoccupation of the Broucheion at the time. Habitation on site seems to have resumed towards the 5th century, as shown by excavated structures of course masonry (phase III: the upper layers of the levelled Cricket Playground and test-pits 2, 5, 6, 11, 12, 13). The 1940s excavations of Alan Wace on the eastern slopes of the Government Hospital Hill (site 127) may shed further light on the nature of such late constructions of small stone and/or fired brick in a layer of lime mortar, and in some cases, of a much coarser masonry of stone shards bound with a thick layer of hardened clay. Pertaining to this latter phase is the late structures excavated at several other sites within the Broucheion: by Shenouda, in the early 1970s, at the northeastern sector of the former Cricket Playground (site 122a), by the GRM, in the 1930s and in 1952, on Alexander the Great Street (sites 116-117, 119-120), and quite recently, by the HRIAC at el-Shallalat Park (site 137a).

(c) In 1994 and 1996-97, the Centre d'Études Alexandrines carried out salvage excavations at the western sector of the former Cricket Playground (see *supra*, Figures 237 and 243) (Dubourg 2016: 26-29; Empereur 1995: 750-753; 1997: 841-842; 1998d: 619-621; Silhouette 2011: 364-377; 2016: 30-31). The absence of post-Roman remains on site is due to the extensive clearing works of the 19th century and yet the disturbance caused by the bulldozers of the modern developers (reaching down to 4 m from the surface level) prior to the CEAlex intervention in the 1990s. Among the few surviving vestiges of the Roman period was a large bathing establishment and associated basins coated with hydraulic cement (waterproofing). Below, at least three phases of Ptolemaic occupation were identifiable within the opened trenches.

Phase (I): late 4th to early 3rd century BC: an earlier habitat represented by foundation walls built directly upon the bedrock, with extant fragments of broken-tile pavements. Phase (II): 3rd century BC: two houses developed along the northern side of a partially uncovered ENE-WSW longitudinal street with a recorded width of over 5.20 m. A third, inner house, relatively large compared to the other two, was accessible via an intermediate transversal alley running perpendicular to the main thoroughfare to the south. Only part of a fourth house was cleared at the northwestern corner of the complex. Sewers installed between the two houses bordering the main street and alongside the inner alley served to drain wastewater. The house to the southwest had a monumental façade built of large rectangular blocks of hewn limestone. The interior walls were coated with a layer of fine white mortar. Pavements varied from sand and battered earth to broken tile pressed into a bed of mortar. One oblong chamber (10.56 x 4.42 m) of the inner house, apparently destroyed by fire, had a quite distinct mosaic pavement painted red and composed of small flakes of white marble pressed into a layer of broken-tile mortar upon a bed of yellowish loam. Towards the northeastern corner of the complex, a staircase was cleared. It signals the terraced layout of the terrain, which had to be accommodated with the construction of terrace walls as the case at the former Billiard Palace (site 99) and the former British Consulate (site 121). In fact, the morphology of the natural rock here indicates a 4 m difference between either end of the excavated plot. Phase (III): mid-3rd to 2nd century BC: a reorganized residential complex of domestic and artisanal character, comprising three houses (raised c. 50 cm). The house to the southeast is now accessible from the principal street via a flight of two steps (slabs). At the back, a set of rooms were arranged around a central courtyard featuring a rectangular basin coated with a layer of broken-tile mortar. An assortment of fragmentary elements of architecture (column bases, fluted shafts, and cornices) seems to have been reused in the constructions of this latter phase. A number of iron and bronze arrowheads, stone balls, and successive ovens, found within the occupational and abandonment levels of the large house (500 m^2) situated immediately to the west of the shops lining the main street, suggest a commercial property associated with arms trade. Of special interest, however, is the group of vertical wells, underlying conduits, and miniature cisterns excavated on site. Their relative proximity to analogous hydraulic installations met at the nearby premises of the former British Consulate (site 121) and on the slopes of the Government Hospital Hill (sites 14-15b, 24, 131) provides further hints on the dynamics of water supply and drainage in the Ptolemaic city, and more particularly, in its Graeco-Macedonian quarter.

Site 123: Around the junction of el-Sultan Hussein with el-Mathaf

Maps: V1; V2; V4

Miscellaneous: el-Mazarita

(i) Foundations; hydraulic installations [Roman]
(ii) Traces of a longitudinal street [Ptolemaic]
(iii) Structure with a peristyle and floor-mosaics [Ptolemaic]

In winter 1992-93, a salvage excavation directed by Mieczysław Rodziewicz (PCMA) was carried out near the junction of the streets of el-Sultan Hussein and el-Mathaf, at a point southeast of the former Cricket Playground (site 122) (Rodziewicz 1995: 229, 232). At

+9.30 m and +10 m above sea level, the remains of two mosaic pavements in *opus tessellatum* were encountered. The panels, originally about six metres wide, with traces of white-pinkish limestone *tesserae* and lead pieces, seem to have been dismantled already at the time the houses they once decorated were abandoned towards the end of the 2nd century BC. Between the pavements a construction-free layer of dark bulbous Nile mud indicates a cultivated area: probably a central open-air courtyard surrounded with porticos, one denoting the presence of a peristyle type of domestic residences on the southern fringe of the Graeco-Macedonian quarter. The building in question might have been contemporary with the residential complex excavated by the CEAlex at the western sector of the former Cricket Playground (site 122c). Likewise, excavations show the building at el-Sultan Hussein to have been bordered by a partially uncovered longitudinal street of battered earth with a recorded width of over 6 m. An overlying thick *stratum* of yellowish loam and grey mud suggests a cultivated zone within which Roman structures of the 2nd century AD are evident. Their vestiges were met at +11.50 m above sea level and comprised hydraulic installations (a basin, cistern, and conduit), a fragment of a walkway paved with marble slabs, and a foundation wall of limestone blocks held firmly in mortar.

Site 124: Around the junction of el-Sultan Hussein with el-Mathaf

Maps: V1; V2; V3; V4

Miscellaneous: el-Mazarita

(i) (a) Large blocks of granite [ancient; Arab reuse]
(ii) (b) Fragmentary architecture [Roman; Late Antique; Arab reuse]

(a) In 1892, on the occasion of demolishing the Arab fortifications, and more particularly, the section to the north of the junction of the streets of el-Sultan Hussein and el-Mathaf (towards the L2-R3 junction) (Adriani 1934: 74, Catalogue Number 43), Giuseppe Botti records:

> *Presso al fossato dell' Ospedale, a poca distanza dalla Scuola Menasce, apparvero grossi blocchi di granito; ma avendo ivi certi operai, per imprevidenza loro, trovato la morte, lo sterratore non profondò più gli sterri, che, com'erano sull'area del Palazzo de' Tolomei, dovevano essere largamente rimuneratori.*
>
> (Botti 1893: 16)

Botti's 'large blocks of granite' are located within an area where the Arab circuit deviates slightly off course (Figure 246). The blocks briefly reported here are to be considered in conjunction with the dense concentration of remains excavated around the L2-R3 junction: on the southern slopes of the Government Hospital Hill (sites 15, 122b-123, 125a). Excavations at these sites suggest Ptolemaic constructions clustered on the southern fringe of the Broucheion. It is possible that the foundations of the southernmost of such a cluster, exploited as a quarry of building material, would have forced the Arab planners in the 9th century to detour the area while proceeding eastwards, to fortification-point (α) at el-Shallalat Park (site 1).

(b) In 1905, Evaristo Breccia maintained that during the digging of foundations for the Casa Rolo, at a point near the southeastern corner of the former Cricket Playground, the workers accidently unearthed a number of ancient relics: two large Byzantine capitals of marble, a marble statuette inscribed with crosses and representing a warrior, and the bottom of a grooved crater made of black granite. Further to the south, at the northwestern corner of the junction of the streets of el-Sultan Hussein and el-Mathaf, fragments of polychrome architecture, including composite Corinthio-Egyptian capitals of Max limestone, were encountered in the foundation trenches of the Levi and Francis house (Adriani 1934: 76, 85, Catalogue Numbers 49, 88; Breccia 1905a: 73). The reported finds pertain mainly to the area above-mentioned (site 124a), where they have been deposited in preparation for reuse in the adjacent Arab fortifications. Their provenance may be associated with nearby sites of late habitation (122a-b, 127).

Site 125: South of the Government Hospital complex

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) (a) Cistern; polychrome architecture; marble head of a Faunus [n.d.]
(ii) (b) Marble seats: κλίμακες [Ptolemaic; Arab reuse]
(iii) (a) Large blocks of foundations [ancient; Arab reuse]

(a) In 1905, during construction works carried out to the south of the Government Hospital complex (Adriani 1934: 79, Catalogue Number 54), ancient remains were accidently unearthed and briefly reported by Evaristo Breccia:

> *Nei lavori per erigere il nuovo muro dell'ospedale indigeno in Via d'Allemagne (the later el-Sultan Hussein Street: the present-day Salah Mustapha) si rinvennero una cisterna, potenti blocchi di fondazioni, resti architettonici policromi, una testa di fauno in marmo.*
>
> (Breccia 1905b: 129)

The reported 'potenti blocchi di fondazioni' might be an eastward continuation of the same monumental

constructions met at several sites around the L2-R3 junction, within an area bypassed by the Arabs in planning the course of their circuit walls (site 124a). Given Breccia's brief note, however, the contextual association between these blocks and the other encounters (the cistern and the polychrome architecture) is not quite clear. One interesting find on site would be the marble head of a Faunus: a bipedal mythological creature having the legs of a goat and the torso of a horned man. The recovery of a fragmentary statuette representing the Roman counterpart of the Greek Pan echoes the historically attested Paneion of the late 1st century BC (Strabo, Geōgraphiká: XVII. 1.10) (section 3.6.2.2, B).

(b) In 1892, during the dismantling of the Arab fortifications, and more particularly, the section to the east of the Government Hospital complex (i.e. on the western side of Champollion Street), Giuseppe Botti records other relics of antiquity:

> *Je me souviens qu'en 1892, à l'occasion de la démolition des fortifications et au lieu que je viens d'indiquer [à la colline de l'Hôpital du Gouvernement (Tabiat el-Yahoudieh aka Batterie des Juifs)] on retrouva des restes d'escaliers en hémicycle taillés en marbre grec et marqués par des lettres d'assemblage. C'étaient les restes des scalae (κλίμακες: seats) d'un cuneus (audience) du théâtre grec. Le théâtre qui servit longtemps aux représentations des chefs-d'oeuvres de Ménandre fut transformé en castrum (camp) et fortifié par César. J'ignore si Cléopâtre VII le releva de ses ruines: sous Caligula il était en bon état. Les juifs du moyen âge en arrachèrent les blocs de fondation qui étaient en calcaire numismale, à fin d'en faire des monuments funéraires (see infra). C'est pourquoi les inscriptions en hebreu du moyen-âge abondent près de l'hôpital du Gouvernement.*
>
> (Botti 1898c: CXL. 136-137)

Two key issues need to be tackled when considering this unique encounter. (1) Botti does not indicate whether the semicircular marble seats, which he associates with those of the historical Dionysiac theatre, had been found *in situ* or within a secondary deposit of reused material. Having in mind Caesar's account of the Alexandrian theatre being dominant over the Great Harbour (Caesar, Civil Wars: III. 112) (section 3.7.3.1, D) would make the hill most convenient for locating the Ptolemaic edifice. The probability, however, of an out of context find should not be excluded, with frequent encounters of fragmentary architecture reused in the adjacent Arab fortifications (sites 124-125a). (2) In 1934, Achille Adriani located Botti's 'seats' on the northern side of el-Sultan Hussein Street, at a point to the south of the present-day Faculty of Pharmacy. His localisation does not tally with Botti's narrative: a section of the Arab fortifications on the hospital hill, at the site of Tabiat el-Yahoudieh (Fort of the Jews: a later complement to the Tulunid circuit, to the south of Tabiat el-Menchereih) (Figure 247). This would place Botti's 'marble κλίμακες' rather to the east of the Government Hospital complex, approximately, near the section of the hill excavated in the 1940s by Alan Wace (site 127). On the uncertainty of locating this particular find, Adriani himself relates: '(the mark in his 1934 *pianta*) indica approssimativamente (mancano anche qui elementi per una precisa e sicura ubicazione) il sito dalla scoperta segnalata dal Botti' (Adriani 1934: 78-79, Catalogue Number 53). Whereas the presence of a mediaeval ghetto within this area, contemporary with the Sephardim diaspora, might justify Botti's account of the Jewish exploitation of foundation blocks of nummulithic limestone while building their funerary monuments down the hill (Figure 248).

Site 126: South of the Government Hospital complex

Maps: V1; V2; V3; V4

Fragmentary architecture: el-Mazarita [ancient; Arab reuse]

In 1888, Henry de Vaujany maintained that within the areas extending to the south of the Government Hospital complex, between the Arab fortifications and the Rosetta Road (Tariq Bab Sharq: the later Fouad: the present-day el-Horreya), at a depth of 4 to 5 m, were found, among other monumental relics of antiquity, overturned columns and Corinthian capitals formed of two perfectly matched pieces superimposed upon one another to form a single monolith (De Vaujany 1888: 30). Four years later, in 1892, Giuseppe Botti encountered one of De Vaujany's monumental columns (height: 10.54 m, diameter: 0.984 – 1.038 m) at a property of Baron Jacques de Menasce, between Casa Olivier and the Israelite School of Menasce: a point to the south of el-Sultan Hussein Street, at the section of it delimited by the streets of Cerisy/Hussein Hassab (east) and Gerber/Mahmoud Mokhtar (west) (Adriani 1934: 81, Catalogue Number 63; Botti 1898c: 87; Botti and Nourrison 1899: 35-36). The column, datable to the Roman period, was donated by Baron Menasce to the Society of Athenaeum. After the foundation of the Graeco-Roman Museum in the autumn of the same year, the committee of the museum, being in possession of the column, had accepted the offer of Johannes Schiess, then director of the Government Hospital, to erect the column at Saīd Square, which was renamed el-Khartoum Square in commemoration of the Sudan Campaign (1896-99). An immense two-piece Corinthian capital, datable to the 3rd century BC, served to crown the monument that was assembled under the supervision of the architect Antonio Lasciac. The capital, recovered from the same site as the column, was donated earlier by Baron Menasce to the Municipality of Alexandria. Both the capital and the column had possibly belonged

to the architectural material recorded in the 1880s by De Vaujany to the south of the Government Hospital complex.

In a monograph published in 1898, Botti adds:

> *La colonne de Trieste, retrouvée près de l'École Menasce, n'était pas seule. On sait que deux autres colonnes, tout à fait semblables à celle qu'on va dresser entre l'Hôpital et la Municipalité, gisent encore in situ.*
>
> (Botti 1898c: 87, LVIII)

Botti's account in the 1890s emphasizes the dense concentration of fragmentary architecture found in clusters to the south of the Government Hospital complex (sites 124-125). Considering the extended chronological range assigned to such a repertoire of miscellaneous encounters, and their monumentality and proximity to the mediaeval circuit walls, these finds seem to have come from secondary deposits of structural and/or decorative material intended for reuse in the fortifications of the Arab town. Excavations within the vicinity of the L2-R3 junction and on the slopes of the neighbouring mound reveal the dismantled buildings of antiquity from which these fragments might have been retained.

Site 127: East of the Government Hospital complex

Maps: V2; V3; V4

Miscellaneous: el-Mazarita

(i) Jewish interments [Late and Post Mediaeval]
(ii) Bath complex; underground tunnels [Late Antique]
(iii) Traces of an intermediate alley (Roman; Late Antique]

In 1944-45, excavations commissioned by the Alexandria University and directed by Alan J.B. Wace were carried out to the east of the Government Hospital complex, at the site of the mediaeval bastion known as Tabiat el-Yahoudieh and north of it (Wace 1949: 151-156). The upper layers yielded remains of Jewish interments datable c. the 15th-16th century (site 126). Wace identified two forms of construction within the opened trenches. (1) An intricate maze of vaulted tunnels largely blocked by accumulated deposits of debris. The points of access were determined at two places where scant traces of hinges had been detected. A few shallow niches into the walls seem purposely cut to receive oil lamps. Retrieved ceramics and coinage indicate a Byzantine phase of (re)use. (2) A brick structure featuring rooms paved with marble tiles and coloured stone flakes pressed into a layer of mortar upon a bed of large limestone slabs. Its identification as a bathing facility is rather strengthened by the unearthing of a couple of brick furnaces. Recovered fragments of worked bone, Egyptian Red Slip (A), early Christian lamps, glass slats, and handles of late Roman *amphorae*, all indicate a likely construction date c. the 5th-6th century. The assigned chronology is backed by the pavement of stone chips into mortar, a technique met in a late Roman hydraulic context at the former Cricket Playground (site 122b: test-pit 13). Within the lower *strata*, towards the groundwater level, Wace encountered imported *terra sigillata*: Samian and Pergamene ware probably of a Ptolemaic date. Contemporary with other *thermae* of late antiquity (sites 20, 55a, 62a, 79, 149a), this bathing facility postdates the mega-tsunami of AD 365, hence represents the resume of site occupation in the Broucheion following the second abandonment of the northeastern district.

On accidental discoveries at this part of the hill, Achille Adriani relates:

> *Sulla collina dell'Ospedale governativo, durante opere di scavo per l'erezione di nuovi padiglioni nel settore orientale, si trovarono vestigia di costruzioni antiche tra cui i poveri resti di un lastricato a blocchi di calcare e di basalto.*
>
> (Adriani 1956a: 46)

Adriani's 'pavement of basalt and limestone blocks' might have belonged to an intermediate alley running within *insula* L2-L3-R2-R3. Evidence of internal thoroughfares dividing the *insulae* of the orthogonal grid into smaller urban units has been recorded at several other parts of the city (Kom el-Dikka: sites 18-19, 69-70; Latin Quarter: site 29; el-Ramleh: site 114; el-Mazarita: site 122c; elsewhere: section 2.2.2.13).

Site 128: East of the Government Hospital complex

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) (a; d) Limestone blocks; (a-f) fragmentary architecture [Ptolemaic]
(ii) (a) Structures with a mosaic pavement [Ptolemaic]

(a) In 1906, ancient remains were accidently unearthed while installing a sewerage system at Youssef Ezzeddine Street and briefly reported shortly after by Evaristo Breccia (Adriani 1934: 69, 80, Catalogue Numbers 30, 59; Breccia 1907e: 6; 1907a: 105-106, Figure 22; 1914a: 77, 284-285; 1922: 90, 281; 1923a: 165; 1923b: 9; Daszewski 1985a: 101-103, Catalogue Number 1). Achille Adriani correlates Youssef Ezzeddine Street with the present-day Champollion Street, which was known, however, as el-Khartoum Street at the time of discovery. Adriani's conjecture may be due to Breccia's narrative on the

localisation of the site: 'tra il giardino dell'ospedale indigeno e il cimitero israelita', backfill layers extending down to five metres from the modern street level included fragments of column drums, marble column bases, and many rectangular finely-hewn blocks of limestone. Meanwhile, 'di fronte alla seconda casa che bordeggia la via', at a point to the northeast of the present-day Faculty of Pharmacy (assuming the validity of Adriani's conjecture), were vestiges of small rooms of masonry, within one of which a unique remnant of the early Ptolemaic city had been discovered.

Excavated in one of the reported chambers was a fragment of a mosaic pavement (2.19 x 1.64 m) made chiefly of pebbles with a few *tesserae* filled in (Graeco-Roman Museum, Inventory Number 11125). Only the left part of the original panel has survived destruction. At some point already in antiquity, *tesserae* were used in repairing and filling in parts of the pavement. The technique employed in this latter phase would recall the mosaics from Shenouda's excavations at the former Cricket Playground (site 122a), thus dating renovation towards the late 2nd-early 1st century BC. Whereas the chronology of the initial phase of construction seems inferable from the intrinsically Macedonian iconography of the original pebbled pavement and its technique which attests an early Alexandrian attempt to reproduce Pellaean panels. The *emblema* shows a nude warrior with a round shield, throwing a lance. Framing the partially preserved hunt-scene on three sides is a wide band of recurring mythological and real creatures, basically griffins and panthers. Considering its composition and technique of execution, the pebbled mosaic, a reminiscent of Pellaean panels, would be datable c. 320-300 BC: among the earliest excavated remnants of the late-4th-century BC city of the Macedonian founders: contemporary with Ptolemy's satrapy (historical context: section 1.4; contemporary mosaic pavement: site 121).

(b) Within the foundation trenches of another building on Youssef Ezzeddine Street, Breccia recorded a large Corinthian capital of nummulithic limestone, datable to the 3rd century BC (Graeco-Roman Museum, Inventory Number 17855) (Adriani 1934: 85, Catalogue Number 85; Breccia 1907e: 6; 1907a: 105-106; 1914a: 76-77; 1922: 89-90).

(c) Northwards, to the northeast of the Champollion-Alexander the Great junction, five pieces of fluted columns of Aswan granite (height: 5-6 m, diameter: 0.60 – 0.80 m) were encountered during the digging of foundations for the Sursock house. A large Corinthian capital of veined marble was recorded on one side of the building, opposite the tramway on Alexander the Great Street (the present-day Omar Lotfy) (Adriani 1934: 63-64, Catalogue Number 26; Breccia 1907e: 6; 1907a: 106; 1914a: 76; 1922: 89).

(d) North of the Sursock building (128c), Breccia recorded the accidental discovery of a large block of serpentine limestone along with two Corinthian capitals of marble (Adriani 1934: 85, Catalogue Number 84; Breccia 1907a: 107; 1914a: 76; 1922: 89).

(e) In 1898-99, at the southwestern corner of the Champollion-Alexander the Great junction, Noack excavated 'zweiseitiger architrav aus blaulichem marmor (0.34 x 2.28 m)' (Adriani 1934: 79, Catalogue Number 57; Noack 1900: 218-219, Footnote 3, 223, trench E).

(f) In 1961, during the digging of foundations for a building to the southeast of the junction of Alexander the Great (Omar Lotfy: el-Tram) with Champollion, a Doric capital of nummulithic limestone, with a fragment of a fluted column shaft, was accidently unearthed (Hoepfner 1971: 59-60, 66, Tafel 17b; Tkaczow 1993: 220, Object Number 89). The fragmentary find (1.10 x 1.10 m, preserved height: 0.50 m) is datable to the 3rd century BC (Graeco-Roman Museum, Inventory Number 27063).

Site 129: North of the Government Hospital complex

Maps: V1; V4

Fragmentary architecture: el-Mazarita [Ptolemaic]

In 1922-23, during construction works on Alexander the Great Street (Omar Lotfy: el-Tram), large blocks of nummulithic limestone, of which three belonged to the cornice of a monumental construction, were accidently unearthed down the slopes of the Government Hospital Hill, a few metres to the east of the massive foundations (*muri* A and B) that were excavated in 1932 by the GRM at Chantier Djanikian (site 14) (Adriani 1934: 72-73, Catalogue Number 36, Figure 21; Breccia 1924: 6, Planche II). The reported blocks of a monumental cornice, which recall the fragmentary architecture recorded in 1905 by Ludwig Borchardt (site 133b) opposite the GRM *chantiers* on Alexander the Great Street (sites 115-117, 119-120), were identified by Achille Adriani with some of the architectural material on display at the premises of the Graeco-Roman Museum (sites 132-133). As the case at the neighbouring Chantier Djanikian, the vestiges here seem to have been overrun at some point in antiquity by longitudinal street L3.

Site 130: North of the Government Hospital complex, or the old shoreline west of el-Silsileh (?)

Maps: V2; V4

Inscribed column: el-Mazarita [Roman]

In 1898, Giuseppe Botti reported a fragmentary column shaft found bearing a Latin inscription commissioned

c. AD 185 in honour of *praefectus Aegypti* Longatus Rufus (Adriani 1934: 93, Catalogue Number 115; Botti 1898b: 80; 1898c: 86; Breccia 1911: 92-93, Catalogue Number 161). The provenance of this find varies in the monographs issued in the same year – 1898b: the column shaft was found by Botti in 1895 on the Alexandria-Ramleh tramway, at the foot of the hill; 1898c: it was Madame Simond Bey who in 1895 had communicated to Botti the column shaft found half-buried between the old Jewish cemetery and the seashore, to the left of (i.e. to the north of) the Alexandria-Ramleh tramway. In 1911, Evaristo Breccia maintained that it was rather Simond Bey himself who had communicated to Botti, however in 1894, a column found buried on the shores of the eastern harbour. Adriani, in keeping with the 1898b version, placed the column on the course of longitudinal street L3, to the east of its junction with transversal street R3. In all cases, the granite column (Graeco-Roman Museum, Inventory Number 17832) pertains to the coastal zone to the north of Alexander the Great Street (Omar Lotfy: el-Tram), within the section of it to the west of el-Silsileh. The inscription reads:

T. LONGATO RVFO
PRAEF. AEG. PRAEF. PRAET.
EMINENTISSIMO. VIRO
T. VOCONIUS. A. F. PRAEF
LEG. II. TR. FORT. G.

Site 131: North of the Government Hospital complex

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) (2) Fragmentary architecture [Late Antique]
(ii) (1) Large blocks; (2a-c) foundations; (2b) conduit [Ptolemaic]

In summer 1976, the remains of ancient constructions were accidently discovered within foundation trenches for new buildings of the Faculty of Medicine on the slopes of the Government Hospital Hill (Daszewski 1979: 92-105). They were investigated and recorded by Wiktor-Andrzej Daszewski (archaeologist) and Krzysztof Kamiński (architect) from the Polish Centre of Mediterranean Archaeology (PCMA, University of Warsaw). Two concentrations of masonry had been encountered on the southern side of Alexander the Great Street (Omar Lotfy: el-Tram), between the former British Consulate (site 121, west) and Champollion Street (east): labelled here the Daszewski-Kamiński plots (1) and (2a-c) (Figure 249).

Plot (1) (40 x 25 m): towards the northeastern corner of the former British Consulate's urban block, at 10 m to the south of Alexander the Great Street, the workers unearthed roughly-hewn blocks of nummulithic limestone while digging reinforcement trenches for the building under construction. One of the large blocks was still in place when Daszewski inspected the site. In size and stone dressing technique, it recalls the coarse blocks of Adriani's '*muro* (A)' that was excavated in 1932 by the GRM at Chantier Djanikian (site 14), a few metres to the east of the Daszewski-Kamiński plot (1).

Plot (2) (70 x 60 m): located approximately 140 m to the east of plot (1): 100 m to the west of Champollion Street. At the southeastern corner of the plot, within the lower layers of a surface debris of about 13 m of refuse and rubble, a fragment of a limestone column (diameter: 0.46 m, height: 1.45 m) was found. It might have belonged to the late antique structures excavated in the 1940s by Alan Wace to the east of the Government Hospital complex (site 127). Whereas, still on the southern side of Alexander the Great Street (Omar Lotfy: el-Tram), three clusters of masonry were identifiable within the opened trenches (2a-c).

Trench (2a): at 19 m to the south of Alexander the Great Street, there was a remnant of a wall of large, finely-hewn limestone blocks (1.45 x 0.60 m, 1.50 x 0.60 m). It measured 3 m in width, with the upper parts reaching almost to the modern street level. The unearthed segment follows a NNW-SSE orientation.

Trench (2b): at 50 m to the south of Alexander the Great Street, within a southward extension trench (diameter: 3.50 m) descending to the groundwater level at 6.80 m, was a massive wall of roughly-hewn limestone blocks, running ENE-WSW. It cuts through one branch of a major canal, indeed the earliest on site. The trench had partially uncovered the canal, revealing two branches joining one another at right-angles: one ran northwards, the other westwards, in alignment to the cardinal directions (Figure 250). It was cut directly into the bedrock, with no masonry employed: an almond-shaped in cross section (width: 1.25 – 1.65 m, height: 1.65 m), coated with two layers of lime plaster (waterproofing). Applied directly on the natural rock was a four-centimetre-thick layer of lime, sand, and a small quantity of crushed brick, yet with a second layer (four-centimetre-thick at the bottom, 0.70 cm at the sides), white-pink-brownish in colour, composed of lime, crushed brick, and a reduced quantity of very fine sand. Immediately after the northward detour, the canal widens, forming a sort of a rectangular pocket with rounded corners (height: 1.65 m, width: 2 m, preserved length: 3 m). At some point, the massive wall had cut through this section of the canal, filling the pocket and the mouth of the northern branch with rubble. In the middle of the pocket, one large pillar (1.35 x 0.83 m, height: 1.65 m) was carved out of the rock to 1.35 m, with its upper part, formed of limestone masonry, supporting the vault. The walls

of the pocket were covered with a waterproof coating of the same type as that of the western branch. During the construction of the wall, the southern corner of the pocket, which must have functioned as a reservoir, and a portion of the western branch were destroyed by the deep trench buttressing the wall itself. The space between the wall, the reservoir, and the rest of the canal was subsequently filled with small limestone rubble. The footing of the wall was detected at 6.50 m below the modern street level: c. 0.30 m above the groundwater level: c. 2 cm above the bottommost part of the canal. At the western section of the wall, where it widens towards the north, forming a projection of c. 0.65 m, the preserved rows of blocks reached 3.55 m in height; to the south, four rows of blocks reached 1.86 m. The topmost of the preserved segment of the wall was recorded at 3 m from the level of Alexander the Great Street, with the upper (missing) parts being dismantled already or quarried. Its width is unknown, given the limited exposure of the excavation profile. In building technique, it recalls analogous constructions excavated in the 1930s by the GRM at Chantier Djanikian (*muri* A and B: site 14) and Chantier Finney (Nos. 1 and 17: site 120).

Trench (2c): at 12 m to the east of trench (2b), there was part of a rectangular structure of limestone blocks (1.10 x 1.22 m) on the alignment of the wall excavated at the nearby trench (2b). It seems to represent an eastern counterpart to the widening at the western section of the wall at trench (2b), suggesting that both segments at trenches (2b) and (2c) might have belonged to the same construction. It should be mentioned that on the western section of the structure at trench (2c), along its upper edge, there was a 5 cm slot forming a degree. Daszewski identified the construction in question as the stylobate of a monumental colonnade.

The above-mentioned canal at trench (2b) antedates the one excavated in 1932 by the GRM at Chantier Djanikian (site 14), a few metres to the west of the Daszewski-Kamiński plot (2). At some point already in the Ptolemaic period, it was partially destroyed by a massive wall running ENE-WSW. The latter had served apparently as a stylobate of a colonnade pertaining to one of the monumental edifices of the Broucheion. About 13 m of accumulated layers of debris, forming a *kom*, contained fragmentary architecture datable, in general, to late antiquity (sites 122a-b, 124b, 127). Other secondary finds from plot (2) were limited to an isolated stone ball (cannonball?) encountered within trench (2a) at 2-3 m below the modern street level.

Site 132: Around the former Coast Guard (a-b) and the former Victoria College (c)

Maps: V1; V4

Foundations; fragmentary architecture: el-Mazarita [Ptolemaic]

(a) In 1905, Evaristo Breccia maintained that the foundations of an ancient edifice, fragmentary architecture (a fragment of a colossal entablature, columns, and marble blocks), and statuary were accidently discovered during construction works close to the barracks of the former Coast Guard: a site to the east of the present-day Mosque of el-Qaid Ibrahim Pasha, south of Mohamed Abdel-Wahab Theatre (Adriani 1934: 69, Catalogue Number 32; Breccia 1905a: 73-74; 1914a: 76, 226-227; 1922: 89, 212-215). The recovered sculpture on site includes four fragmentary pieces of white marble (Graeco-Roman Museum: Inventory Number 3923, height: 0.80 m; Inventory Number 3924, height: 0.90 m; Inventory Number 3925, height: 0.52; Inventory Number 3928, height: 0.75 m).

(b) A few metres to the southeast of site (132a), during the levelling of the terrain to the west of the former Jannakis property on the northern side of Alexander the Great Street (Omar Lotfy: el-Tram), massive foundations of nummulithic limestone blocks were accidently discovered in 1929 and communicated later to Achille Adriani, then director of the Graeco-Roman Museum, by Giovanni Peruto, the GRM inspector who was in charge of site surveillance on discovery (Adriani 1934: 73, Catalogue Number 37). In terms of construction technique, the recorded vestiges seem reminiscent of *muri* (A) and (B) that were excavated in 1932 at the nearby Chantier Djanikian (site 14).

(c) In 1907, ancient remains were accidentally brought to surface during construction works on the Alexandria-Ramleh tramway, south of the former Victoria College, a short distance to the east of site (132b), on the northern side of Alexander the Great Street (Omar Lotfy: el-Tram) (Adriani 1934: 69, Catalogue Number 33; Breccia 1907a: 107). The recorded fragmentary architecture included several blocks of nummulithic limestone that were apparently intended to be part of the entablature of a monumental edifice, and a similarly unfinished Ionic capital of the same material (diameter: 0.84 m). The Ionic capital (Graeco-Roman Museum, Inventory Number G.288) recalls those reported in 1902 by Giuseppe Botti to the south of the present-day WHO building (site 133a).

Site 133: Coastal zone, between Cinema Radio and Champollion

Maps: V1; V4

Foundations; fragmentary architecture: el-Mazarita [Ptolemaic]

(a) In 1902, during the construction of the Corniche, 'à droite des Bains Zouro, et vis-à-vis de la maison des

Gardes-Côtes, des blocs énormes ont été trouvés, jetés pêle-mèle dans le terreau du terre-plein des anciennes fortifications arabes' (Adriani 1934: 67-68, Catalogue Number 29; Botti 1902e: 120-121; Breccia 1924: 6, Planches III-V; Fragaki 2013: 11-22). The remnants reported by Botti are located to the south of the WHO building, at a point northeast of the present-day Mosque of el-Qaid Ibrahim Pasha, southwest of the demolished Arab bastion of Tabiat el-Menchereih (site 7a). Associated with Botti's 'blocs énormes' is a repertoire of fragmentary architecture and other miscellaneous finds: (1) nine Ionic capitals of nummulithic limestone (Graeco-Roman Museum, Inventory Numbers 11221, 11276: G.352, G.287, 11287: G.79, G.80, 11249: G.81, 11274: G.82, 231, 248) (Tkaczow 1993: 218-220, Object Numbers 79-87); (2) 'une quantité de blocs arrachés à la trabéation de l'édifice (measuring 2.75, 1.82, 1.20 m x 0.74, 0.85, 0.60 m)'; (3) 'plusieurs chapiteaux coloriés'; (4) 'la moitié d'un grand cadran solaire'; (5) 'un torse de statue pharaonique'; (6) 'un pied bien travaillé'; (7) 'une tête en marbre d'école alexandrine'; (8) 'une très-belle base de colonne en marbre blanc'; (9) 'quatorze mètres d'un grand entablement dorique (see *infra*, site 133b)'; (10) 'un grand chapiteau corinthien (Graeco-Roman Museum, Inventory Number 17511)' (Tkaczow 1993: 220-221, Object Number 90); (11) a hoard of silver tetradrachms pertaining to the reigns of Ptolemy VIII Euergetes II Tryphon (Physcon) and his successors.

(b) In 1905, German Egyptologist Ludwig Borchardt reported 'gewaltige kalkstein fundamente', which he locates 'am flachen sud-ost ufer des Grossen Hafens langs der letzen strecke der Ramleh Bahn, nordoestlich von bahnhof bis him zu dem neuerbauten Victoria College': accordingly, at the so-called 'palais ruiné' (site 7). Besides the communicated 'enormous limestone foundations', Borchardt also recorded a repertoire of fragmentary architecture that was accidently unearthed c. 1902-04 during the construction works of the Almagià Company opposite the GRM *chantiers* on Alexander the Great Street (Omar Lotfy: el-Tram) (sites 115-117, 119-120) (Adriani 1934: 69, Catalogue Number 31; Borchardt 1905: 1-6, Blätter 1-5, Abbildungen 1-16). The fragmentary material belonged to the unfinished entablature of a monumental edifice: friezes and cornices of nummulithic limestone in the Doric and Ionic orders (Graeco-Roman Museum, Inventory Numbers G.397, G.387, G.380, G.386, G.182, G.787, G.788, G.1568) (Tkaczow 1993: 215-216, Object Number 73). Borchardt noted traces of stonecutters' marks from the Greek alphabet (A, B, Θ, Ψ) on some of the recovered blocks, such as a fragment of a Doric frieze with alternating triglyphs and metopes. In 1924, Evaristo Breccia published photographs of massive foundations of nummulithic limestone and other fragmentary elements of architecture (an Ionic capital and a fragment of a Doric entablature). The vestiges on display were accidently excavated by the Almagià Company a couple of decades earlier, c. 1902-04, during the construction of the Corniche, along the coastal zone extending between Cinema Radio (west) and Champollion Street (east), thus could possibly include some of the encounters communicated at the time, first by Botti in 1902 (site 133a), then by Borchardt in 1905 (site 133b) (Figure 251), and which seem associated with neighbouring constructions of Ptolemaic provenance (sites 7a-d, 14, 115-117, 119-123, 128-129, 131-132a-c, 134).

Site 134: el-Khaledin Park

Maps: V1; V4

Miscellaneous: el-Mazarita

(i) Off-grid thoroughfare [Ptolemaic]
(ii) Fortification-point (δ) (enclosure: a continuation of the waterfront constructions at site 112a?) [Ptolemaic]

In summer 1983, prior to the construction of an underground car park near the Central Station of el-Ramleh, an archaeological prospection took place at el-Khaledin Park: a point opposite Chantier Finney (site 120) and the former British Consulate (site 121), immediately to the west of the WHO building, between Alexander the Great/Omar Lotfy Street (south) and the Corniche (north) (Rodziewicz and Abd el-Fattah 1991: 131-150). Within the opened trenches, the vestiges of three walls (labelled 1, 2, and 3) were encountered below the surface layers (labelled a, b, and c), which extend about 1 to 2 m (Figures 252-254) – (a): a cultivation layer formed of mud, pertaining to the contemporary garden; (b): modern debris subsequent to the construction of the Corniche; (c): a 20 cm layer of earth with embedded potsherds. The upper preserved section of wall (1) was formed of a double row of large, hewn blocks of limestone (1.05 x 0.40 m, 0.60 x 0.40 m), with some bearing stonecutters' marks. The layout of the upper section does not conform with the lower of single blocks, hence the two identifiable modes of construction for wall (1). Wall (2), 1.70 m to the south of wall (1), was built of mudbrick (0.40 x 0.28 x 0.90 m; dry masonry). The largely damaged extant section of it measured c. 0.50 – 0.90 m in width. The fill between walls (1) and (2) was of earth, eroded stone, clay pieces, and Ptolemaic potsherds: cultivation layer (e) and *substratum* (f). The southernmost wall had a lower part of five rows of dry brick (3a) and an upper part formed of two rows of limestone blocks (3). The latter were slightly smaller and less regular than those of wall (1). The space between walls (2) and (3-3a) comprised a surface of battered earth upon a hard-pressed layer of 'earth containing mostly coarse sand (*substratum* g), thin layers of clay (8-10 cm), and a small number of artifacts, mostly pottery sherds

and roof tiles (*substratum* f)': a *via terrena* construction (analogies: Ptolemaic thoroughfares at the former Cricket Playground and el-Sultan Hussein: sites 122c-123). It was bordered on either side by the dry brick walls (2) and (3a) with a preserved height of 0.55 m (probably serving as kerbs). The levelling *substrata* (f and g) beneath the battered earth surface extended southwards, beyond the adjacent wall (3-3a).

The recorded construction phase is one of the earliest and perhaps even contemporary with the foundation. The primitive terrain of pitted bedrock (d) is levelled with hard-pressed layers, the (f-g) backfill, in preparation for new constructions: a battered earth street running parallel to a massive enclosure wall, with both separated by a narrow cultivated lane (*stratum* e). The first two single-block rows of enclosure wall (1) seem to have been a deliberate (sub)reinforcement for the double-row elevation. The ceramics from the overlying levelling *stratum* (c) date the dismantling of these structures to the 1st century BC at the latest. The construction of the Corniche in the early 20th century had eliminated all traces of successive occupation on site, with a violation, signalled by debris (b), reaching the lowermost section of the levelling *stratum* (c) of which only 20 cm remains: a tiny crust covering the earlier remnants of the Ptolemaic city.

The stratigraphy and mode of construction associated with el-Khaledin site at el-Mazarita are of utmost importance in studying the layout of the northeastern district in the Ptolemaic period. The site provides one of the rare cases in Alexandria (114, 122c, 123) where a thoroughfare antedating the 1st century BC seems recognizable within the sequence. The uncovered segment of it between walls (2) and (3-3a) backs the notion of Hellenistic *viae terrenae* in use to c. the late Ptolemaic period (section 2.2.3). Another key feature at el-Khaledin is that all three walls excavated on site were aligned in the cardinal directions, thus not following the dominant secondary intercardinal pattern of the urban grid: a phenomenon met at several other sites in the northeastern district (2, 114, 131.2b, 138-140a), within isolated pockets at the central district (31, 69c, 78), and in the western district (52.I). Overall, the excavated remains at el-Khaledin Park should be considered within a wider context of analogous constructions: on this section of Alexander the Great Street (Omar Lotfy: el-Tram), opposite the Mosque of el-Qaid Ibrahim Pasha (sites 132-133), on the slopes of the Government Hospital Hill (14, 129, 131), eastwards (royal residences: 7, 12, 28, 138-141), and westwards (Broucheion elite quarter: 114-123).

Site 135: NW. of the junction of Dinokrates with Alexander the Great

Maps: V4

Fragmentary architecture: el-Mazarita [n.d.]

In 1934, while digging foundations at a property of K. Orfali, at the northwestern corner of the junction of the streets of Dinokrates and Alexander the Great (Omar Lotfy: el-Tram), three fragments of columns of Aswan granite were recorded at 5 m below the modern street level (Graeco-Roman Museum, Inventory Number 23899; height: 3 m, diameter: 0.70 m). Another find on site was a fragment of an Ionic marble capital belonging to a column of 0.64 m in diameter. No masonry was detectable down to the groundwater level, suggesting the presence of a secondary deposit of architectural material (Adriani 1934: 61, Catalogue Number 19).

Site 136: Nubar Pasha Park

Maps: V4

Cistern el-Nabih: el-Mazarita [Arab]

One of the few preserved of the 308 cisterns recorded during the Napoleonic expedition (1798-99), and of the 700 identified by el-Falaki (1863-66), is that known today as el-Nabih: situated at the southeastern corner of Nubar Pasha Park and delimited by the streets of el-Sultan Hussein (south), Constantin Sinadino/Mohamed Motawae (east), Riad Pasha/Hosni Hammad (north), and Saīd/el-Khartoum Square (west) (Adriani 1934: 81, Catalogue Number 62; Botti 1899a: 19, Number 77; Breccia 1914a: 69; 1922: 81, Figures 28-30). It is a massive (13 x 11.50 x 12 m, volume 1000 m^3) three-storey subterranean structure with numerous columns (reuse) supporting groin and barrel vaults. Stonemasonry is coated with hydraulic plaster (waterproofing). The earliest architectural material employed is a Corinthian capital datable c. the second half of the 6th century AD, suggesting an Arab construction with an assortment of *spolia*. Its proximity to the Tulunid circuit walls, which ran a few metres to the north, puts forth the possibility of a 9th-century construction complementary to the fortifications. The cistern, maintained in mediaeval times, might have been fed through the subterranean aqueduct branching off the canal a short distance to the east of the 3rd *pont* (site 10), as shown in plates 84 (Etat Moderne II) and 31 (Antiquities V) of *Description de l'Égypte*.

Site 137: Northern sector of el-Shallalat Park

Maps: V1; V2; V3; V4

Miscellaneous: el-Shallalat Park

(i) (a) Coarse masonry [Late Antique]
(ii) (a) Pavement of street L2; sewers [Roman; Late Antique]
(iii) (a) Rebuilding activity; (b) statuary [Roman]

(iv) (a) Foundations; conduits; statuary [Ptolemaic]

(a) In 2007-10 and 2015-20, the Hellenic Research Institute of the Alexandrian Civilization (HRIAC) carried out successive excavations at the northwestern sector of el-Shallalat Park (Figures 255-256) (Limneos-Papakosta 2007-2010; 2015-2020). Cutting through 5 to 6 m of modern fill and underlying debris *strata* with an assortment of intermingled ceramics, the vestiges of coarse structures built with small, roughly-hewn limestone blocks in mortar were met at 7 m below the surface level. A thoroughfare paved with polygonal black basalt was partially uncovered over a distance of 24 m. It correlates, according to el-Falaki's orthogonal grid, with longitudinal street L2. An eastward extension of the excavation profile revealed similar blocks, which, given the recorded findspot, would belong to the stone pavement of the junction with transversal street R1. The earliest occupational levels on site (reaching down to 10 m; bedrock: 10.70 m) are represented by enormous limestone slabs (1 x 0.60 x 0.50 m) of a solid pavement, and by remnants of walls of large limestone blocks (1.15 x 0.60 x 0.60 m). They pertain to a monumental construction that was demolished already in antiquity, with some of its dismantled material retained for reuse in successive phases of renovation and/or rebuilding on site, as evident in the masonry of the excavated (late) Roman structures accompanying the detected sections of the street.

In general, the stratigraphy of el-Shallalat site bears analogies with the GRM *chantiers* at el-Ramleh (sites 116-117, 119-120). It shows a Ptolemaic monumental edifice of a public character situated towards the southern fringe of the Royal Quarter, with successive constructions undergoing multiple phases of renovation, dismantling, and rebuilding over a considerable period of time, before the site was eventually occupied with coarse structures of late antiquity. The chronology of the earliest occupational phase is inferable from the repertoire of recovered associates, including an early Hellenistic oil lamp found beneath a section of a massive wall at the southeastern corner of the 2016 trench, stamped handles of *amphorae*, and a variety of ceramics. Prominent among the finds from Hellenistic debris *strata* is a fragmentary marble statue (preserved length: 0.80 m) of a naked youth in *contrapposto*, encountered at 8 m below the surface level. It is currently on display at the National Museum of Alexandria. Judging by its stylistic features and proportions, the statue seems a reminiscent of the Lysippan canon of the 4th century BC. A recent encounter, a marble fist holding the shaft of a lance or perhaps a *thyrsus*, might have formed part of the idealised youth portrayed in the nude: an athlete wearing both the Dionysiac and regal diadems while holding a lance/*thyrsus*, thus mimicking the deity and yet signalling a kingship.

(b) In 1905, during the demolition of a remaining segment of the Arab fortifications at el-Shallalat Park, two statues of marble, representing Dionysos and a satyr, were discovered (Graeco-Roman Museum, Inventory Numbers 10694-10695) (Adriani 1934: 86, Catalogue Number 90; Breccia 1905b: 128; 1914a: 87; 1922: 101; Savvopoulos and Bianchi 2012: 94-95, Catalogue Number 26). The fragmentary pair, datable to the 2nd century AD, seems to have been utilized as buttresses in the construction of the Arab defences, as suggested by their missing heads and limbs.

Site 138: Southern belt of el-Silsileh

Maps: V1; V2; V4

Miscellaneous: el-Mazarita; el-Chatby

(i) Subterranean structures: reservoirs (?) [Roman]
(ii) Dwellings and baths [Roman]
(iii) Waterfront constructions [Ptolemaic]

In 1841, Sir J.G. Wilkinson maintained:

> *And just to the W. (west) of the Port Lochias (el-Silsileh) are ruins at the water's edge; and some way beyond the mouth of the canal (that known as Farkha, which debouched in the 19th century to the west of el-Silsileh) are remains of buildings, reservoirs, solid masonry, and broken granite columns (see infra, De Vaujany's account). It was here that I found the small statue of Harpocrates now in the British Museum.*
>
> (Wilkinson 1843: 157)

In 1888, Henry de Vaujany reported vestiges of brick vaults close to the shore, at the northwestern corner of the old Lazzaretto: approximately, the junction of the streets of Ptolemy Soter (Ali Mustapha Musharrafa) with Port-Saïd (Abd el-Hameed Sayed). A little further were the remains of 'maçonnerie informes' emerging a few metres from the coast and aligned in the cardinal directions. The submerged foundations were traced by De Vaujany over 60 m into the sea. Beyond the northeastern corner of Lazzaretto, at the foot of el-Silsileh, one of the opened trenches revealed sections of walls of brick and roughly-hewn limestone: a point at the plaza of the present-day Bibliotheca Alexandrina (Adriani 1934: 57-58, Catalogue Numbers 5-7; De Vaujany 1888: 35-36). In March 1976, sections of walls of brick and limestone were accidently unearthed during the digging of new foundations opposite el-Silsileh (Rodziewicz 1984a: 31, Note 51). The walls had an average thickness of 0.50 m and were contextually associated with an assortment of Roman ceramics, hence backing the notion of dwellings and bathing facilities of the 1st-3rd/4th century AD replacing some of the monumental waterfront constructions

along the coastal zone of the annexed Royal Quarter (site 112: group a and b). Late antique exploitation of earlier dismantled or abandoned edifices may be glimpsed from De Vaujany's narrative in the 1880s:

> *Depuis les deux bastions (Tabiat el-Menchérieh and Tabiat el-Yahoudieh) reliés par la courtine (to the west of the present-day Champollion Street) dans laquelle est pratiquée la tranchée du chemin de fer (the Alexandria-Ramleh tramway), jusqu'au fossé du village de Chatby, qui marque la partie la plus enfoncée du vallon, on trouve des colonnes, des blocs de granit rectilignes, unis ou à listeaux, des morceaux détachés taillés en forme de vasque ou de piédestal, épars sur le sable ou mêlés aux décombres et aux pierrailles qui recouvrent des restes de sépultures byzantines souterraines (hinting at subterranean structures within the premises of the former βασίλεια: probably reservoirs associated with Roman habitation, misinterpreted then as Byzantine sepulchres; possible associates: structure No. 2 at Chantier el-Silsileh: site 141) qui, après avoir été forcées par les Arabes espérant y découvrir des trésors, ont servi pendant longtemps d'habitations à des familles de pêcheurs et de contrebandiers.*
>
> (De Vaujany 1888: 29-30)

Site 139: Chantier Bibliotheca Alexandrina

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Hydraulic installations: aqueduct (6) and basin (3) [Roman]
(ii) Stonemasonry (4-5); pavement of street R1 [Roman]
(iii) Gateway (1); foundations (2); floor-mosaics and roof tiles [Ptolemaic]
(iv) Foundations (off-grid; not plotted) [Ptolemaic]

In 1992-93, ancient remains were accidently discovered during the digging of foundations for the new Bibliotheca Alexandrina (Guimier-Sorbets 1998a: 263-290; 2004a: 15-34; Rodziewicz 1995: 229-230). The excavated masonry pertains to at least three broad phases of construction. At 80 m to the north of the R1-L4 junction, on the eastern side of street R1, a foundation wall of large, hewn blocks of limestone (No. 2), extending perpendicular to R1, was found on the longitudinal alignment of a monumental gateway (No. 1) (1.90 m wide) installed across the main transversal street (Figure 257). A hundred metres to the north, an extant segment of a massive wall had cut through the transversal course of street R1. Unlike the excavated structures to the south, oriented in conformity with the canonical urban grid, this wall was aligned in the cardinal directions. It pertains to the constructions of phase (I), which were dismantled and overbuilt c. the first half of the 2nd century BC at the latest, judging by successive buildings (phase II) with chronologically-established mosaic pavements in *opus vermiculatum*: one features an *emblema* of a dog seated on its hind legs next to an upturned vessel (ἀσκός or οἰνοχόη) with a wooden handle, the other panel, found partially preserved, involves two interracial nude wrestles in action (Bibliotheca Alexandrina Antiquities Museum, Inventory and Serial Numbers 32044, 0859 and 32045, 0858). Roman occupation on site (phase III) is represented by mortared stonemasonry (Nos. 4-5) and hydraulic installations: an aqueduct (No. 6) running NNW-SSE, bordering street R1, and a basin (No. 3) overlying the negative of one dismantled segment of foundation wall (No. 2).

Chantier Bibliotheca Alexandrina provides another example of constructions aligned in the cardinal directions (sites 2, 31, 52.I, 69c, 78, 114, 131.2b, 134, 138, 140a, 147) (Figure 258), of which a surviving segment of a massive wall, excavated to the north of the giant gateway, antedates construction phase (1) of the developed orthogonal grid (section 2.2.3). Whereas the gateway itself signals an enclosure that apparently served as a physical boundary between Strabo's 'inner palaces' and the neighbouring monumental edifices of the Ptolemaic βασίλεια. The 2nd-century BC floor-mosaics are to be considered in association with those panels excavated earlier by Ferdinand Noack and Evaristo Breccia on either side of the R1-L4 junction (site 12) and at the former Royal Institute of Hydrobiology (site 3). Prominent among the finds on site were roof tiles of locally produced and imported clay, similar to the ones encountered at el-Khaledin Park (site 134), thus denoting Ptolemaic buildings with red steep roofs. The Roman (re)utilization of the southern belt of *akra* Lochias (c. the 1st-3rd/4th century AD) is attested by the R1 pavement (sites 10-12, 137a, 140c) and other contemporary nearby constructions (sites 2, 7a, 26, 112b-113, 138) to which the excavated hydraulic installations (aqueduct No. 6 and basin No. 3) seem complementary.

Site 140: el-Silsileh

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) (c) Pavement of street R1 [Roman]
(ii) (c) Stonemasonry; mosaic pavements [Roman]
(iii) (c) Hydraulic installations: cistern and conduit [Roman]
(iv) (a) Fortification-point (ζ) (enclosure); (b-c) foundations [Ptolemaic]

(a) Remnants of massive blocks of nummulithic limestone jutting out into the sea in a north-south

direction (i.e. aligned in the cardinal directions) were recorded by Le Père, Saint-Genis, Dolomieu, el-Falaki, and De Vaujany at a point to the west of the demolished tower of el-Silsileh (Adriani 1934: 57, Catalogue Number 4; De Vaujany 1888: 37; Lacroix and Daressy 1922: 36-37, Number 8; Le Père 1813: 319, Number 99; Mahmoud-Bey 1872: 43, Number 1; Saint-Genis 1818a: 51-53). They were recognizable in calm conditions, extending towards the northwestern corner of the old Lazaretto. These massive defences were built directly upon the bedrock, with one preserved segment measuring up to 3.40 m in width. According to the recent IEASM geophysical surveys, in antiquity, the partially submerged foundations would have been on land, for they were constructed on the subsided southwestern sector of Cape Lochias, hence might have belonged to the western enclosure of the Lagid royal residences clustered at the foot of the promontory. Stonework and the recorded dimensions here recall the large enclosure wall of nummulithic limestone traced in 1950 by Achille Adriani a short distance to the east of el-Silsileh (site 2: fortification-point ε).

(b) In 1894-95, David G. Hogarth excavated a 'single foundation course of fine masonry let into the rock on the western side of the isthmus (a partially submerged one that connected the Silsileh tower to Fort Pharillon at the time), at about the present mean tide-level' (Adriani 1934: 61, Catalogue Number 18; Hogarth and Benson 1894-95: 4-5). Considering the findspot, building technique, and recorded level, Hogarth's 'foundation wall' would pertain to a Ptolemaic royal residence built within the southern sector of Cape Lochias and its coastal belt: possibly, a northward continuation of the enclosure detected at site 140a.

(c) In 1898-99, Ferdinand Noack sunk four trenches on el-Silsileh (Adriani 1934: 60-61: Catalogue Number 17; Noack 1900: 224). Trench (K2) at a point to the east of the Silsileh tower revealed a section of a pavement signalling a northward extension of transversal street R1 at +5.20 m above sea level; below were remains of a conduit and a cylindrical cistern. Two trenches to the north and west of the tower yielded vestiges of Roman mosaic pavements made using agate and other precious stone at +4.50 and +5 m respectively above sea level. Within a fourth trench, to the southwest of the tower, Ptolemaic foundations (another segment of the enclosure at site 140a?), encountered at sea level, were found overbuilt with mortared masonry of a successive period. Noack's finds at el-Silsileh provide further evidence of Roman structures with mosaic pavements, perhaps a residential cluster of *villae urbanae* with bathing facilities, overbuilding the monumental residences of the former Ptolemaic βασίλεια (section 3.7.3.1, C).

Site 141: Chantier el-Silsileh

Maps: V1; V2; V4

Miscellaneous: el-Chatby

(i) Structure with a reservoir (1) [Arab]
(ii) Hydraulic installation: cistern [Roman]
(iii) Subterranean structure (2) (analogies: site 138i) [Roman]
(iv) Foundations (3); fragmentary architecture [Ptolemaic]

Between January and March 1938, the Graeco-Roman Museum sunk a number of trenches on el-Silsileh (Adriani 1940a: 38, Figure 12; 1966a: 81, Catalogue Number 41; 1966b: Tavola 20, Figure 72). The opened trenches (45 in total) revealed vestiges pertaining to various phases of construction (Figure 259). A foundation wall of large, hewn blocks of limestone (No. 3), found partially drenched in groundwater, ran in an ENE-WSW direction. It conforms, therefore, with the dominant secondary intercardinal pattern of the urban grid. A miniature cistern partially overbuilding the extant segment of the foundation wall (No. 3) is datable to a successive phase of construction on site. Structure No. (1), excavated to the east of the foundation wall, represents a demolished Arab building. At the middle of the chamber facing north was the mouth of a large rectangular reservoir of masonry with a vault roof and five pillars (4 x 7.30 m, height: 3 m). A subterranean structure (No. 2), accessible via a staircase, was unearthed a short distance to the north of constructions Nos. (1) and (3). It comprised (2a) a courtyard with a quadrangular pillar carved out of the natural rock, (2b) a chamberette cut into the back wall of the courtyard, and (2c) an elongated rectangular chamber opening on the western wall of the courtyard. Shallow niches were cut into the latter's side walls: four on the right and one on the left. Chamberette (2b) also had a shallow niche cut into the eastern side wall. Two underground passages, of which one was followed over 36 m, led into the central court. The chambers and passages of the subterranean structure in question were found partially immersed in groundwater. Among the fragmentary architecture recovered on site was a Doric capital of nummulithic limestone, with an attached fragment of a fluted column shaft, datable to the 3rd century BC (Graeco-Roman Museum, Inventory Number 25658) (Adriani 1940a: 53-54, Figure 23; Tkaczow 1993: 213, Object Number 66). Given the reported findspot and architectural order, the fragmentary encounter would have belonged to one of the Ptolemaic royal residences built at the southern sector of Cape Lochias.

Site 142: East of el-Silsileh

Maps: V2; V3; V4

Miscellaneous: el-Chatby

(i) Shipwrecks [Late Antique (el-Hassan 6); Mediaeval (el-Hassan 6)]
(ii) Fragmentary architecture [Ptolemaic-Roman (el-Chatby 1); Late Antique (el-Chatby 2)]

Between 1998 and 2017, the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) carried out a series of underwater archaeological and geophysical surveys within the coastal zone to the east of el-Silsileh, from el-Chatby to el-Mandarah: about 10 km of littoral and up to 900 m off the coast (sites 151, 163) (Tzalas 2015: 347-364; 2018: 23-28, 30). Of the eight registered sites, three (el-Chatby 1 and 2 and el-Hassan 6) are in proximity to the present-day headland of el-Silsileh (Figure 260). The sites labelled el-Chatby 1 and 2 are of a particular interest, for they correlate with the submerged eastern and southeastern sectors of ancient Cape Lochias.

The repertoire of fragmentary material encountered by the HIAMAS on the seabed off el-Silsileh (Figure 261) is divided here into four groups. Group (I): a massive base (height: 2 m; el-Chatby 1: find A); the tower of a monolithic diminutive pylon (weight: 7 tonnes; el-Chatby 1: find B); the jamb or side post of a monumental gateway (weight: 11 tonnes; el-Chatby 1: find C). Group (II): catapult projectiles and several unidentified pieces (el-Chatby 1: concentration D). Group (III): a number of blocks of granite and quartzite slabs, with some bearing hieroglyphic inscriptions (el-Chatby 1: concentration E); a granite ναΐσκος reused as a tannery basin (el-Chatby 1: concentration E); rock-cut stairs of granite (el-Chatby 1: concentration E); a triglyph (el-Chatby 1: concentration E); broken columns and sarcophagi (el-Chatby 1: concentration E). Group (IV): late antique capitals of granite (el-Chatby 2).

In terms of material (the dominance of the durable granite), dimensions and weight (massiveness), typology (structural and decorative), state of preservation (fragmentary), and patterns of concentration (see *supra*, general plan of site), the HIAMAS encounters to the east of el-Silsileh recall those recorded by the CEAlex off Fort Qaitbay (site 43). Analogies as such categorize the archaeological material on site into two groups: (1) vestiges possibly pertaining to collapsed edifices on the subsided sector of Cape Lochias (see *supra*, group I: finds A, B, C) and (2) out of context material retained from dismantled buildings elsewhere and dumped at some point along the eastern subsiding sector of the promontory (see *supra*, group III: concentration E). The latter category would relate to constant attempts since late antiquity, but especially during the Middle Ages, to protect the already partially submerged headland, which serves as the harbour's natural bulwark against sea swell and tidal waves. On the other hand, the identification of the imposing material from group (1) as pertaining to edifices of monumental nature that once stood on Cape Lochias is based on several testaments datable to the Roman Principate, c. the 1st-2nd century AD. In his biography of Markus Antonius, Plutarch, for instance, maintains:

> *Now that she (Cleopatra VII) had a tomb and monument built surpassingly lofty and beautiful, which she had erected near the temple of Isis, (she) collected there the most valuable of the royal treasures, gold, silver, emeralds, pearls, ebony, ivory, and cinnamon; and besides all this, she put there great quantities of torch-wood and tow.*
>
> (Plutarch, Lives, Antonius: LXXIV)

The relative proximity of the 'tomb and monument of Cleopatra VII' to the 'Isiac temple on Lochias', as narrated by Plutarch, echoes the recorded distance of c. 50 m between the encountered *in situ* pylon and jamb. A pylon as such would have belonged to the temple's Egyptian-style façade, as is the case with the entrance to the Caesareum (sites 93-100). Whereas the jamb is likely to have formed part of a monumental gateway of c. 6 m in height, one leading, considering the reported findspot, into a Ptolemaic royal residence. In the Roman period, with the deptolemisation of the annexed Royal Quarter, the *akra* and its southern coastal belt, being a topographic symbol of Lagid rule, would have undergone successive phases of urban change, which seem well reflected in the archaeological record (sites 7-12, 27-28, 112, 138-141). More importantly though is the dominant pharaonic character of the excavated material (whether possibly *in situ* or relocated and dumped): a pylon tower reminiscent of that at Edfu (Upper Egypt), hieroglyphic inscriptions evident on many of the recovered blocks, and representations in relief of pharaohs, all providing hints on the city's architectural fabric in the late Ptolemaic and Roman periods (analogies: the *Aegyptiaca* at sites 43, 93, 118; contemporary sepulchres at sites 44-45, 53, 153).

At about 550 m to the northeast of the tip of el-Silsileh, c. 1,100 m off el-Chatby, lies the now submerged reef known as el-Hassan (6): the topmost of it is presently recorded at 12 m below the water surface. In antiquity, as well as in mediaeval times, it would have been one of the most treacherous shoals for sailors to navigate on their way to the eastern port (section 2.3.3.3). Unsurprisingly perhaps, fragments of *amphorae*, potsherds, anchors, and stone debris, found on the contours of the reef at a depth of 14-17 m, signal the remains of ships that wrecked on site. One iron anchor datable to late antiquity and another of stone pertaining to a mediaeval wreckage emphasize the danger imposed by the cluttered reefs around the

principal fairways into the city's Great (eastern) Harbour.

Site 143: East of the former municipal stables

Maps: V4

Column debris: el-Chatby [n.d.]

In 1914, Evaristo Breccia reported 'l'énorme quantité de troncs de colonnes découverts à l'est des écuries municipales' during levelling works to the southeast of el-Silsileh (Adriani 1934: 84, Catalogue Number 78; Breccia 1914a: 76; 1922: 89). Breccia's 'column debris' was found at the present-day site of el-Chatby University Hospital, immediately to the east of the Bibliotheca Alexandrina. It recalls the narrative of De Vaujany in the 1880s on the fragmentary architecture littered along the coastal zone between the Arab bastions of Tabiat el-Menchérieh and Tabiat el-Yahoudieh, to the west, and the village of el-Chatby, to the east (site 138). The 'enormous quantity' reported here by Breccia would, however, suggest a secondary deposit of architectural material retained from dismantled edifices.

Site 144: Jewish Cemetery: the Menasce monument

Maps: V1; V2; V4

Mosaic pavement: el-Chatby [n.d.]

In 1898, Giuseppe Botti reported:

> *Une mosaïque à figures existe dans le cimetière des Juifs, hors de porte Rosette (outside the Arab enclosure: the cemetery at el-Chatby), au dessous du caveau de la famille des barons de Menasce.*
>
> (Botti 1898c: 113, XCVII. 2)

According to Botti's brief account, the figural mosaic is located in the northern sector of el-Chatby cemeteries, on the southern side of Alexander the Great Street (Omar Lotfy: el-Tram). Its proximity to the building complex with floor-mosaics at the former Royal Institute of Hydrobiology (the present-day site of the Association of Muslim Youths: site 3) may hint at a possible Ptolemaic provenance. A contextual association between either site remains hypothetical in the absence of conclusive evidence. Likewise, the mosaic in question could have pertained to one of the dwellings built during the Principate to the east of transversal street R2^{bis}, which correlates approximately with the Suez Canal Road, as part of the Roman urbanization of the necropolitan areas on the eastern fringe, archaeologically attested at several sites in el-Chatby, el-Hadra el-Bahareiya, and el-Ibrahimiya (2-3, 32a-c, 37, 148-149a, 167).

3.7.3) Literary Accounts Pending Physical Evidence

3.7.3.1) Civil Edifices

C) Royal Residences

The ancient sources document 'a seafront of royal palaces'. Diodorus Siculus, for instance, maintains:

> *Alexander gave orders to build a palace notable for its size and massiveness. And not only Alexander, but those who after him ruled Egypt down to our own time (i.e. in the 1st century BC), with few exceptions, have enlarged this with lavish additions.*
>
> (Diodorus, Bibliotheca Historica: XVII. 52.4)

Strabo, in turn, relates:

> *In the Great Harbour at the entrance, on the right hand, are the island and the tower Pharos, and on the other hand are the reefs and also the promontory Lochias, with a royal palace upon it; and on sailing into the harbour one comes, on the left, to the inner royal palaces, which are continuous with those on Lochias and have groves and numerous lodges painted in various colours.*
>
> (Strabo, Geōgraphiká: XVII. 1.9)

On the extent of the Royal Quarter, the Greek geographer adds:

> *The royal palaces (a term used by Strabo in Geōgraphiká probably to denote the neighbourhood of the Ptolemaic βασίλεια, aka the Royal Quarter, rather than the royal precincts or residences in a strict sense) which constitute one-fourth or even one-third of the whole circuit of the city; for just as each of the kings, from love of splendour, was wont to add some adornment to the public monuments so also he would invest himself at his own expense with a residence, in addition to those already built, so that now, to quote the words of the poet, 'there is building upon building' (a quote from Homer's Odyssey).*
>
> (Strabo, Geōgraphiká: XVII. 1.8)

The 1st-century BC testaments of Diodorus Siculus and Strabo seem archaeologically attested by massive foundations of nummulithic limestone and fragmentary architecture excavated at various sites within an area delimited by the Suez Canal Road (east) and el-Khaledin Park (west). The concentration of vestiges and their distributional patterns across the designated area suggest a number of monumental edifices pertaining to the Ptolemaic Βασίλεια, as has been described repeatedly by several writers of antiquity. In this context, two royal structures illustrated in great detail by Kallixeinos of Rhodes, whose descriptive narrative is preserved in the *Δειπνοσοφισταί* (*Deipnosophistaí*) of Athēnaios Naukratitēs (c. the 2nd-3rd century AD), serve to exemplify the flamboyant constructions of the

Royal Quarter during the reigns of the first Ptolemies: (1) the banqueting tent of Ptolemy II Philadelphos (c. 285/2-246 BC) and (2) the Θαλαμηγός (*thalamegos*) of Ptolemy IV Philopator (c. 221-204/3 BC) (Athēnaios, Deipnosophistaí: V. 25, 38-39). Whereas a 3rd-century BC epigram, documented in a papyrus preserved today at the Egyptian Museum in Cairo (Inventory Number P.Cair. 65445; lines 140-154), records a dedication of a fountain-kiosk to Arsinoe II or III (Fraser 1972: 609-611). The semicircular Ionic structure of Parian white marble and Aswan red granite was decorated with marble statues of Arsinoe and the Nymphs placed around a fountain of running water. Its luxurious character, as a showpiece, echoes historical narratives, such as those of Diodorus Siculus and Strabo, on the extravagancy of the royal constructions along the southern belt of *akra* Lochias.

D) Theatre, Stadion, and Palaestra

The construction of a Dionysiac θέατρον (*théatron*) in Alexandria relates to the prominence of the deity's cult within the Ptolemaic political and cultural milieu of the 3rd century BC. Perhaps the most illustrative account involving some of the public buildings of the Royal Quarter, including the theatre, is that in Book XV of Polybios' *Ἱστορίαι* (*Historíai*), where the 2nd-century BC Greek historian narrates the turbulent events of the revolt against Agathokles, which broke out early in the reign of Ptolemy V Epiphanes, c. 203 BC:

> *The open spaces round the palace, the stadium, and the great square were now filled with a mixed multitude, including all the crowd of supernumerary performers in the theatre of Dionysus; and Agathokles, when he heard what was occurring, aroused himself from his drunken slumber, having broken up the banquet a short time previously, and taking all his relatives except Philo, went to the king. After lamenting his ill-fortune to the boy (i.e. to the king) in a few words, he took him by the hand and went up to the gallery (σύριγξ: a passage) between the maeander and the palaestra, leading to the entrance to the theatre. After this, having made fast the first two doors, he retired to the third, with a few of the bodyguard, the king, and his own relatives. The doors were of pen latticework, and one could see through them, and they were each secured by two bolts.*
>
> (Polybios, Histories: XV. 30.1-10)

Polybios' narrative shows the relative proximity of some of the city's athletic institutions, such as a *stadion* and a *palaestra* (wrestling school), to the Dionysiac theatre and the royal residences, as suggested by the σύριγξ (passage) interconnecting such edifices. The localisation of the theatre on the slopes of the Government Hospital Hill is justified in the final part of Caesar's *Civil Wars* (the 1st century BC):

> *In this region of the town (the Royal Quarter), there was a small part of the palace to which he (Caesar) had been at first conducted for his personal residence, and a theatre was attached to the house, which took the place of a citadel, and had approaches to the (eastern) port and to the other docks. These defences he increased on subsequent days so that they might take the place of a wall as a barrier against the foe, and that he might not be obliged to fight against his will.*
>
> (Caesar, Civil Wars: III. 112)

Two decades later, in *Geōgraphiká*, Strabo maintains:

> *Above the artificial (royal) harbour (i.e. the eastern sector of the Great Harbour: southwest of Cape Lochias) lies the theatre.*
>
> (Strabo, Geōgraphiká: XVII. 1.9)

On the interconnectivity glimpsed from Polybios' narrative, he affirms:

> *All (the public monuments of the former Royal Quarter), however, are connected with one another and the (eastern) harbour, even those that lie outside the harbour.*
>
> (Strabo, Geōgraphiká: XVII. 1.8)

E) Mouseion and Library

The Mouseion of Alexandria (Μουσεῖον τῆς Ἀλεξανδρείας) was a major intellectual institution dedicated to the nine Muses, the stimulus deities of science, literature, and the arts, for providing inspiration to scholars. Its development is usually attributed to Ptolemy II Philadelphos (c. 285/2-246 BC). The initial establishment, however, might have taken place under Ptolemy I Soter (c. 306-285/2 BC) (Bagnall 2002: 349).

On the location and structure of the Mouseion, Strabo relates:

> *The Museum is also a part of the royal palaces (Royal Quarter: βασίλεια); it has a public walk, an exedra (a semicircular recess) with seats, and a large house in which is the common mess-hall of the men of learning who share the Museum. This group of men not only hold property in common, but also have a priest in charge of the Museum, who formerly was appointed by the (Ptolemaic) kings, but is now (c. 25 BC) appointed by (Augustus) Caesar.*
>
> (Strabo, Geōgraphiká: XVII. 1.8)

In structural design, the renowned institution was based on Aristotle's Lyceum in Athens. It encompassed a colonnaded walkway (*peripatos*, after which the peripatetic philosophers were named), enclosed groves, an altar, an *exedra* with seats, and an adjoining domain that contained a banqueting room for scholars. Accordingly, it seems liable to find the peripatetic

affiliation of the Mouseion so evident, for its creation is held to have been inspired by Demetrios of Phaleron, who was one of the first Athenian Peripatetics and a senior member of the Ptolemaic royal court (el-Abbadi 1990: 88-89). His status as adviser to Ptolemy I Soter was key to conferring the Aristotelian tradition from the very beginning on Ptolemaic cultural life.

An institution of intellectual activities would have required the establishment of an integrated library for academic research. The notion of a repository of knowledge thus ensued from the very principal function of the Mouseion as a scholarly institution. Towards the end of the 4th century AD, Epiphanius, the Bishop of Cypriot Salamis, relates:

> *The Ptolemy called Philadelphos, as has already been said, was a lover of the beautiful and a lover of learning. He established a library in the same city of Alexander, in the (royal) district called the Broucheion.*
>
> (Epiphanius, On Weights and Measures: 9.52b)

Royal patronage, especially at the time of the first Ptolemaic kings, in the course of the 3rd century BC, was central to the acquisition of an immense corpus of papyri scrolls to be deposited in the Mouseion's library. Ptolemy II Philadelphos and Ptolemy III Euergetes I are known to have assigned a large sum of money to this end. Both had generously financed, on an unprecedented scale, all possible means for the purchasing and transcription of thousands of papyri illuminating on various fields of study such as geography, mathematics, astronomy, medicine, and philosophy. Epiphanius maintains:

> *He (Ptolemy II Philadelphos) had put in charge of the library a certain Demetrios from Phaleron, commanding him to collect the books that were in every part of the world. And he wrote letters and made request of every king and prince on earth to take the trouble to send those that were in his kingdom or principality.*
>
> (Epiphanius, On Weights and Measures: 9.52b)

F) Ptolemaic Agora and Forum Romanum

The Alexandrian agora, as in other Greek cities, served as a focal point for civic life, as well as being a market centre; though the commercial aspect of the Hellenistic *agores* seems much pervasive compared to those of the Classical city-states (Green 1986: 141). According to tradition, as recorded in Arrian's *Anabasis Alexandri*, it was Alexander himself who supervised its ground plan (section 1.2). Its exact location is in dispute. It would have occupied, however, that same area as its imperial successor, the Forum Romanum. The latter is known primarily from ancient literary sources to have been situated to the south of the Caesareum (sites 93-100): approximately, within *insula* L1-L2-R4-R5 (Pliny, Natural History: XXXVI. 14.13-17). The hypothetical localisation of the preceding Ptolemaic agora is due to the assumption that it would be rather unlikely to relocate the centre of civic life in a constricted metropolis that had experienced continuous habitation through the extended course of classical antiquity.

G) Emporion

The emporion was the commercial marketplace of the ancient city. As a trading hub for imported merchandise, it had direct access to the Great Harbour (section 2.3.3). Its localisation is based on Strabo's 1st-century BC descriptive narrative on the constructions met along the shores of the harbour:

> *Then one comes to the Caesarium and the Emporium and the warehouses; and after these, to the ship-houses, which extend as far as the Heptastadium. So much for the Great Harbour and its surroundings.*
>
> (Strabo, Geōgraphiká: XVII. 1.9)

Strabo's account on 'the greatest emporion in the inhabited world' indicates that it was located to the west of the Caesareum (sites 93-100). Hence, it would have occupied the area to the north of longitudinal street L2, west of transversal street R5. Extending east-west from the trading post (ἐμπόριον) to the Heptastadion (section 2.3.2) were the warehouses (αποστάσεις) and the shipyards (νεώρια) respectively.

3.7.3.2) Religious Edifices

H) Royal-Cult Temples

In Alexandria, the state worship of kings had developed during the lengthy reign of Ptolemy II Philadelphos (c. 285/2-246 BC) (Bevan 1927: 127). Shrines were erected in honour of the deceased Ptolemy I Soter and his wife, Berenike I, both of whom were venerated as the Saviour Gods (Θεοὶ Σωτῆρες). Royal-cult temples to Philadelphos' deified antecedents had sacrificial altars and were presumably filled with incense. Among these was the Berenikeion: a shrine dedicated to the deceased Berenike I, whose ἀποθέωσις is commemorated by the contemporary court-poet Theocritos in *Panegyric of Ptolemy*:

> *O Lady Aphrodite, chiefest beauty of the Goddesses, as 'twas thou that hadst made her to be such, so 'twas of thee that he fair Berenike passed not sad lamentable Acheron, but or e'er she reached the murky ship and that ever-sullen shipman the ferrier of the departed, was rapt away to be a Goddess in a temple, where now participating in thy great prerogatives, with a gentle breath she both inspires all mankind unto soft desires and lightens the cares of him that hath loved and lost.*
>
> (Theocritos, Panegyric of Ptolemy: Idyll XVII. 34)

The state worship of the Θεοὶ Σωτῆρες was complemented through the institution of a penteteric festival, a quinquennial Ptolemaieia held every five years in memory of the divinized royal couple (site 51). In the fourteenth year of Ptolemy II Philadelphos, c. 272-271 BC, shortly before the death of Arsinoe II, the Ptolemaic court introduced a royal decree by which the reigning king and his sister-wife were to be revered in their lifetime (Hölbl 2001: 90-97). A new cult of the living was therefore established. The royal couple were venerated as the Sibling Gods (Θεοὶ Ἀδελφοί) within the τέμενος of a sanctuary recorded in the first mime of Herodas:

> *It is the very home of the goddess; for all that exists and is produced in the world is in Egypt: wealth, wrestling grounds, might, peace, renown, shows, philosophers, money, young men, the domain (sacred enclosure) of the Θεοὶ Ἀδελφοί, the king a good one, the museum, wine, all good things one can desire.*
>
> (Herodas, Mime: I. 26-32)

After the death of Arsinoe II in 270 BC, her ἀποθέωσις was manifested in eponymous street names: the Street of Arsinoe the Consummator; the Street of Arsinoe of Victory; the Street of Arsinoe of the Brazen House; the Street of Arsinoe of Eleusis; the Street of Arsinoe, Our Saviour (Fraser 1972: 35). Furthermore, a major temple known as the Arsinoeion was constructed in her memory. Extravagancy is attested in Pliny's 1st-century AD account on the sacred shrine:

> *The architect Timochares had begun to use lodestone for constructing the vaulting in the Temple of Arsinoe at Alexandria, so that the iron statue contained in it might have the appearance of being suspended in mid-air; but the project was interrupted by his own death and that of King Ptolemy (II Philadelphos), who had ordered the work to be done in honour of his sister.*
>
> (Pliny, Natural History: XXXIV. 42.148)

A hypothetical localisation of the historically attested unfinished structure is inferable from Pliny's reference work on obelisks:

> *Ptolemaeus (II) Philadelphus had one (obelisk) erected at Alexandria, eighty cubits high, which had been prepared by order of King Necthebis (Hellenised form of Nectanebo) ... this obelisk was placed by the king abovementioned in the Arsinoeum, in testimony of his affection for his wife and sister Arsinoe (II). At a later period (c. AD 12-14), as it was found to be an inconvenience to the docks, Maximus, the then praefectus of Egypt, had it transferred to the Forum (Romanum) there, after removing the summit for the purpose of substituting a gilded point; an intention which was ultimately abandoned.*
>
> (Pliny, Natural History: XXXVI. 14.13-17)

Given the recorded height of eighty cubits, c. thirty-six metres (overestimated), the obelisk's standpoint would have been most inconvenient next to the dockyards. Unsurprisingly, therefore, it was later relocated to the Forum Romanum south of the Caesareum (approximately, within *insula* L1-L2-R4-R5) by the *praefectus Alexandrae et Aegypti* Quintus Magnus Maximus c. AD 12-14, towards the end of the lengthy rule of Augustus as *imperator*.

As regard to the chronology and localisation of the Arsinoeion, it may be necessary to consider Callimachos' *Ἐκθέωσις Ἀρσινόης* (*deification of Arsinoe*):

> *Ἀγέτω θεός, οὐ γὰρ ἐγὼ δίχα τῶνδ' ἀείδειν Ἐκ / θέωσις Ἀρσινόης φησὶν δὲ αὐτὴν ἀνηρπάς / θαι ὑπὸ τῶν Διοσκούρων καὶ βωμὸν καὶ τέ/μενος αὐτῆς καθιδρῦσθαι πρὸς τῷ Ἐμπορίῳ.*
>
> (Callimachos, Ἐκθέωσις Ἀρσινόης: fr. 228 Pf)

The main theme here is quite gloomy, as the court-poet relates the abduction of Arsinoe II by the Dioskouroi (Castor and Pollux), her ascension to heaven, and the establishment of a sanctuary in her honour near the emporion of Alexandria (section 3.7.3.1, G). Arsinoe's death on July 9th, 270 BC, provides a *terminus post quem* for Callimachos' poem, and subsequently, for the construction of the Arsinoeion. More importantly is that the text verifies Pliny's narrative on the relative location of the temple to the dockyards and harbour. This would be the case when Strabo's localisation of the docks to the emporion is considered. Pliny's account seems consistent enough to corroborate hypothetical localisations of the royal-cult sanctuary within the vicinity of the trading post. Accordingly, the Arsinoeion might have been situated in proximity to the shores of the eastern harbour, at any point between transversal streets R4 and R8. Nevertheless, a rather precise localisation is conjectural within *insulae* L2-L3-R4-R6, considering a possible association between the emporion of a trade-oriented city and a temple dedicated to the veneration of its rulers, thus justifying the notion of a Caesareum (sites 93-100) initiated under Cleopatra VII as a replacement of a Lagid-cult temple which had earlier succeeded the unfinished Arsinoeion of Ptolemy II Philadelphos.

3.8) Eastern District (EDist.)

3.8.1) Physical Remnants Corresponding to Known Historical Narratives

3.8.1.1) Funerary Structures

Site 145: el-Chatby

Maps: V1; V4

Necropolis: el-Chatby [Ptolemaic]

(a) Earlier Encounters: Tassos Neroutsos (1870s-80s) and Giuseppe Botti (1892-93)

On the sepulchral character of the coastal zone between transversal street R3[bis] (correlates approximately with the present-day Aflaton/Selim Hassan) and the site of the Roman *castrum* at Mustapha Pasha (165), Tassos Neroutsos maintains:

> *Toute la bande étroite de terrain élevé, situé entre le rivage de la mer et les terres basses de l'ancien faubourg d'Éleusis jusqu'à Nicopolis, est criblée d'hypogées et d'autres sépultures, juives, païennes et chrétiennes, appartenant à tous les temps, depuis l'époque macédonienne et romaine, jusqu'à l'époque byzantine.*
> *C'était le lieu où l'on enterrait les morts des quartiers voisins, comme celui des juifs qui était tout près, puis les étrangers civils ou militaires au service des Ptolémées, et enfin, sous les empereurs romains et byzantins, les habitants païens et chrétiens des oppida d'Éleusis et de Nicopolis.*
>
> (Neroutsos 1888: 80)

The narrative of Neroutsos in the 1880s perhaps sums up the approximate geographical extent and chronology of use of the eastern *necropoleis*, and the ethnicities of those interred there. His account seems consequent to the accidental discoveries made during the 1870s-80s at the urban districts of el-Hadra and el-Ibrahimiya (sites 146, 150b-c). Yet, the first phase of interment beyond *akra* Lochias is archaeologically attested immediately to the east of transversal street R3[bis], beyond the proposed periphery of the Ptolemaic city (contour C3 in the featured AutoCAD maps V1 and V4: section 2.1.2.2.2). In this context, the earliest encounters at the urban district known today as el-Chatby date to the 1890s, the time they were intermittently reported by the first GRM director, Giuseppe Botti (Botti 1893: 14; 1898a: 54; 1898b: 95-98; 1898c: 28-30, 75-76; Botti and Nourrison 1899: 43).

In 1892, Alexandre-Max de Zogheb explored the area, and following the unearthing of 'pozzi funerari', Greek paintings seemed recognizable 'sotto l'intonaco di una cella'. Whereas the *loculi* were decorated with festoons and garlands. Other finds include three *ossarii* labelled 'Jewish' by Botti, of which two displayed the inscribed name of the deceased. In 1893, a certain 'Ioannides', in a desperate search for the tomb of Alexander the Great, had instead 'pénétrait dans les hypogées de Chatby'. Botti, who represented the newly established Graeco-Roman Museum on site, had first identified a surface cemetery of *cippi* (inscribed funerary posts) aligned in a certain regularity, and a painted limestone *stela* intended to mark an *aedicula*. Funerary epitaphs recording the name and the homeland of the deceased were either painted or engraved. Inhumation was dominant among such burials: the deceased lies in a rock-cut *fossa*, beneath a layer of very fine sand. Grave goods included terracotta statuettes, vials, plates, vases decorated with black-and-red varnishes, and various pieces in alabaster. Cremation is represented by the remains of a καύστρα (*ustrinum*) and a few prismatic tombs containing cinerary urns. A common feature among the interments is that in most cases the deceased were found to be foreigners. Between the *cippi*, at a regular interval of 6 m, light-shafts were cut out of the rock, signaling the underlying hypogea, which Botti locates within 'cette bande de terrain qui va du santon de Chatby aux lignes françaises': the series of eastern mounds shown extending NNW-SSE in the *cartes* of les Ingénieurs de l'Armée d'Orient (*Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84; Antiquités V, Planches, 1822: Planche 31).

The subterranean structures, Hellenistic in date, were often cut into the natural rock, beneath a surface cluster of intrinsically Macedonian sepulchres: Botti's 'nécropoles en plein air', whence they were accessible via a vertical rock-cut shaft serving as a descending staircase. Violated already in antiquity by Roman urbanization and Jewish interments, c. the first three centuries AD, the extant remnants were destroyed by the French in 1800-01 while setting up their lines of defence on the eastern mounds, with the rest constantly quarried or levelled in the course of the 19th century, the time Mohamed Ali's revived city, as the ancient metropolis during the Augustan Principate, was expanding eastwards. Therefore, when Evaristo Breccia carried out his excavations in the opening decade of the 20th century, a complex of two hypogea and clusters of surface interments were recorded, representing a confined surviving section of the eastern *necropoleis* of Ptolemaic Alexandria.

(b) Main Excavations: Evaristo Breccia (1904-10)

In 1904-10, Evaristo Breccia, the second director of the Graeco-Roman Museum, carried out excavations at the necropolitan areas investigated earlier by Giuseppe Botti (site 145a) (Figures 262-264) (Adriani 1966a: 109-110, Catalogue Number 59, 124-126, Catalogue Number 79, 126-127, Catalogue Number 80; 1966b: Tavola 34, Figure 122, Tavola 43, Figures 164-166, Tavole 44-46, Figures 167-172; Breccia 1912a: Testo: I-LVI, 1-191; 1912b: Tavole: A, I-LXXXII; Schmidt and Rummel 2015: 45-62; Tubby and James 1918: 79-82).

The surface necropolis at el-Chatby comprised several forms of burial. (IN.1-2) Fosse graves with single (IN.1) or double (IN.2) interment: these are basically rectangular and, more often, trapezoidal in shape pits cut directly into the natural rock. (IN.3) Shaft graves:

vertical rock-cut pits enclosed with limestone slabs, as were the much shallower types (IN.1-2). (IN.4-5) Shaft-and-chamber tombs: without (IN.4) and with (IN.5) stonemasonry and a vestibule. Unlike types (IN.1-3), the burial space in type (IN.4) is accessible from the side via a flight of steps leading down into the grave; yet, in some cases (type IN.5), a narrow vestibule served as an intermediary space between the access-staircase and the actual interment. These types (IN.1-5) were reserved mainly for the more dominant form of burial: inhumation. Cremation, however, is represented on site through four types of disposition. (CR.1) The cinerary urn, one or more, is placed, as were other grave goods, next to the inhumated corpse (see *supra*, types IN.1-5). (CR.2-3) Shallow pits dug deliberately to receive a single or multiple cinerary urn(s). (CR.4) Cinerary urns buried in association with funerary monuments of which three types can be identified. (MN.1-2) A stepped pedestal surmounted by a funerary *stela*, or otherwise, by a stone post with a stepped crown atop a moulded cornice (Botti's *cippi*: site 145a). (MN.3) Stepped altars, apparently ceremonial (i.e. not connected with interment), found often centrally positioned upon levelled grounds. Whereas in the absence of funerary monuments of stonemasonry, several burials seem to have been covered with low *tumuli*: miniature mounds of accumulated earth and rubble.

The surface necropolis at el-Chatby, datable c. 325-250 BC, yields, perhaps together with that at el-Hadra (site 146), the earliest known forms of interment in Alexandria. They pertain to the first generation of Graeco-Macedonian settlers, who buried their dead in structures reminiscent of those in the homeland. This notion is evident in Mariano Bartocci's reproduced funerary *stelae*, where the sepulchral scenes on display are intrinsically Macedonian. More importantly though are the encountered forms of above-ground interment. Indeed, if the simple fosse and shaft graves exemplify the types associated with the earliest phase of burial immediately to the east of the proposed Ptolemaic periphery (C3), the shaft-and-chamber tombs signal an intermediate phase of evolution towards the commonly excavated type of funerary structures in the suburbs, the subterranean hypogea.

The subterranean complex, as excavated by the GRM in 1904-10, encompasses two hypogea (Figure 265). Hypogeum (A) (Figure 266), to start with, is accessible via an irregularly-cut opening (Breccia's conjectural staircase a) into a long rectangular vestibule (b-b'). *Loculus*-chamber (c) (2.90 x 5.20 m, maximum height: 2.40 m; vault ceiling) opens on the vestibule's eastern wall. It has seven *loculi*, four cut into one side wall and three into the back wall. The extant southern lateral wall has room to receive a fifth *loculus*, which may justify Breccia's conjecture of five *loculi* in the GRM 1912 plan. The northern lateral wall has collapsed; presumably, it had room to receive five rock-cut *loculi* as is the case with its southern counterpart. The antechamber (d) (8.20 x 2.25 m, height: 3.10 m) features a pseudo-peristyle: Doric colonnades of engaged columns carved out of the rock along the northern and southern walls. One pseudo-colonnade was found already largely destroyed (the southern), the other was partially preserved on discovery (the northern). Within the pseudo-intercolumniation flanking the entrance, the spaces reserved for four false windows are marked by shallow rectangular recesses recalling those met at one of Henri Riad's hypogea discovered in 1965 near the former Fort Saleh in suburban Gabbari (site 47g). The walls were coated with a double layer of plaster and stucco on which scant traces of the original polychrome seemed recognizable on discovery. The antechamber's lateral walls are violated by three *loculi*: two are cut into the eastern wall and one into the western wall (not depicted in the GRM 1912 plan). *Loculus*-chamber (e) (2.12 x 7.25 m, maximum height: 2.15 m; vault ceiling) has eight *loculi* cut into the northern lateral wall, five into the southern lateral wall, and three into the back wall. The *loculi* were closed with slabs exhibiting false doors with illusionistic details characteristic of early sepulchres in Alexandria. One slab, on the right wall, bearing the painted epitaph '...ΦΙΛΟΤΕΚΝΕΧΑΙΡΕ' is among the foremost within Alexandrian funerary contexts. On the back wall, adorning one *loculus*, was an architectural framing of an extant side pillar crowned with a pseudo-Corinthian capital of the Alexandrian type and supporting a Doric entablature with a triangular pediment atop a frieze of alternating triglyphs and metopes (a reused feature). Several layers of plaster coating with faint traces of painted scenes and inscriptions suggest a burial-chamber that had undergone successive phases of renovation. Not much has remained from the open-air *atrium* (f) (6.75 x 8.20 m). The remnants of walls noted on discovery, partially built of stonemasonry, judging by the limestone blocks recorded back then by Breccia, indicate a pseudo-peristyle court in the Doric order, such as the case at Mustapha Pasha hypogea (I-II) (site 160). This assumption is backed by Breccia's record of a large sacrificial round altar on the axis of the entrance to burial-chamber (g). The latter (4.75 x 3.25 m; vault ceiling) has eight *loculi* cut into its side walls that feature pseudo-Ionic porticos, the half-columns of which, already partially drenched in the rising groundwater, seem to have double bases and a smooth lower surface. The back wall served as a façade for burial-chamberette (g'): a pseudo-colonnade surmounted by a triangular pediment, with two false windows worked out on the intercolumnar walls flanking the entrance. The κλίνη-alcove (g') (4.30 x 2.80 m, maximum height: 2.30 m; vault ceiling) is the nucleus of burial-chamber (g). It has two κλίνη-sarcophagi carved out of its back and right walls (2.80 x 1.45 m each; they are divided longitudinally into two compartments). Accessible on the opposite side

of the hypogeum's *atrium* (f) is chamberette (h) (1.80 x 2.70 m, maximum height: 2.20 m). It has eight *loculi* in total, three cut into each of its side walls and two into the back wall (none of those appear in the GRM 1912 plan).

At least four detectable phases of construction seem inferable from the structural design of Hypogeum (A). Phase (I) pertains to an earlier complex following an axial arrangement – from south to north: (1) a conjectural cultic compartment at the southernmost segment of the hypogeum, which might have served as a banqueting-and-repose space as in the case at Mustapha Pasha hypogea (I-III) (site 160) and the Antoniadis hypogeum (site 162), hence the inferable location of a primary access-point at the southeastern or southwestern end of the funerary structure; (2) an *atrium* with a pseudo-peristyle (f); (3) an antechamber with a similarly pseudo-peristyle (d); (4) a conjectural burial alcove opening on the northern wall of the antechamber. In this context, the presumed burial alcove, apparently the nucleus of the hypogeum's initial setting, would have been remodelled during a successive phase of construction into the so-called 'vestibule' (b-b') in an attempt to create room for a *loculus*-chamber at either side of the violated northernmost compartment. No *loculi* were actually cut into the walls of the western extension labelled (b'), given its relative proximity to the *loculi* of the northern lateral wall of the pre-existing *loculus*-chamber (e). This proximity must have dictated the narrowness of the western extension (b') compared to its eastern counterpart. The latter seems to have been deliberately made to allow the cutting of *loculus*-chamber (c). Whereas the irregularly-cut opening at the eastern end of the northern wall of the violated alcove or the so-called 'vestibule' (b), which was interpreted by Breccia as the primary access-point (a), might have been a groove made possibly by tomb robbers in attempting to access the northernmost compartment of Hypogeum (A) from the contiguous, extensively quarried structures extending to the northeast. Construction phase (II) then commences with the opening of burial-chambers (g-g') and (h) on the *atrium*'s lateral walls, thus violating its pseudo-peristyle. When considering the Hadra *hydria* found in a recess cut into one *loculus* of chamberette (h), phase (II) would be datable, accordingly, to the 230s BC. The (g-g') compartment of the hypogeum's construction phase (II) bears clear analogies with Daszewski's 'lost burial-chamber' (C3.1) rediscovered by the CEAlex at Gabbari Zone (C) (site 47h, k). This shows that κλίνη-alcoves, with their pseudo-peristyle antechambers, were in use by the Hellenic settlers, on either necropolitan suburb of the Alexandrian metropolis, as early as the second half of the 3rd century BC. Construction phase (III) relates to successive modifications within the antechamber (d), where the lateral walls are violated with three rock-cut *loculi* and yet the opening of a *loculus*-chamber (e) that respects the adjacent *loculi* of the pre-existing chamberette (h). The latest detectable phase of construction (IV), which seems associated with burial-space economy within Hypogeum (A), pertains mainly to the northernmost compartment of the hypogeum and dates to the first quarter of the 2nd century BC (c. 200-180): the remodelling of the original burial alcove (the nucleus of the initial setting) into the so-called 'vestibule' (b-b') and the cutting of the partially collapsed *loculus*-chamber (c).

Hypogeum (B) (Figure 267) is accessible via a staircase (i) that leads down into an *atrium* (ii) serving as a light-shaft. A *loculus*-chamber (iii) (4.15 x 2.50 m) opens on the western wall of the *atrium*. The *loculi* in this room are arranged into two overlapping rows on either lateral wall and sealed by means of slabs painted false doors. One slab exhibited a conventional Macedonian sepulchral scene: a deceased lying on a funerary κλίνη, while accompanied by a young man. A chamberette (iv), with a low bench carved out of the rock and a well, opens on the eastern wall of the *atrium*. It seems to have been intentionally cut as a banqueting-and-repose space complementary to the *loculus*-chamber (iii) on the opposite side of the *atrium*. A Hadra *hydria* was found *in situ* within each of three shallow recesses intended to receive cinerary urns of cremated remains. The *in-situ* Cretan-produced Hadra *hydriai*, in use within Alexandria between c. 270 and 180 BC, would provide a *terminus ante quem* for the construction of Hypogeum (B) around the opening decades of the 2nd century BC. Nevertheless, an earlier date, within the second half of the 3rd century BC, cannot be excluded. The relative location of this miniature subterranean structure to the neighbouring Hypogeum (A) hints at a construction necessitated by burial-space economy: a contiguous north-westward extension contemporary with phases (II-IV) of the main Hypogeum (A). This chronology applies to the structure as was excavated by the GRM in the early 20th century. However, if the *loculus*-chamber (iii), the banqueting-and-repose alcove (iv), and the *hydria* niches, as possible violations, were to be omitted from the GRM 1912 plan, the *atrium* (ii), in the conjectured initial setting, becomes an intermediary vestibule to a burial alcove violated by successive modification: a developed form of the shaft-and-chamber tomb (see *supra*, type IN.5), with a first phase of construction contemporary with phase (I) of Hypogeum (A), if not earlier. The presumed initial setting of what had later become Hypogeum (B) is attested on site by an unfinished example of the developed form (IN.5) of the shaft-and-chamber tomb with a likewise intermediary vestibule serving as a light-shaft (the so-called Hypogeum C), which survives to date to the southwest of *loculus*-chamber (e) of Hypogeum (A) (see *supra*, Figure 265). Its presence would indicate a cluster of two tombs of type (IN.5) contemporary with or perhaps even preceding the initial setting of

Hypogeum (A). At some point, probably in association with construction phases (II-IV) at Hypogeum (A), the completed and functioning of the excavated pair of type (IN.5) was transformed into a miniature hypogeum (that labelled 'B' by Breccia), with the remodelling of its earlier burial alcove (single interment) into a space for communal gathering that complements a violating *loculus*-chamber (communal interment) on the opposite side of the *atrium*. The unusual off-centre cutting of the succeeding *loculus*-chamber towards the north was dictated on one of two walls (western and northern) where structural modification is possible within the *atrium* of Hypogeum (B), given the relative location of the pre-existing *loculus*-chamber (e) of the adjacent Hypogeum (A). Whereas ceramic material datable c. the late 3rd to the early 2nd century BC, basically cooking ware found along with the remains of a primitive hearth, from a recent excavation of the unfinished southern subterranean structure of type (IN.5) suggests that the so-called Hypogeum (C) could have been alternatively (re)utilized during a successive phase of use in the preparation of meals to be consumed within the banqueting-and-repose compartments of the neighbouring hypogea (A) and (B), which may explain the reason why this particular structure was apparently never completed to function as a sepulchre as was the case with its northern counterpart.

(c) Later Encounters: Achille Adriani (1950); EAO (1981)

In April 1950, during construction works carried out alongside the Corniche, a number of fosse graves were accidently discovered at two sites (Adriani 1956a: 33-36). The first group, about thirty pits, were excavated a few hundred metres to the east of Casino el-Chatby while installing new bathing cabins by the Municipality of Alexandria. Another group was unearthed during the digging of foundations at the so-called 'Cantiere Hamsa', situated 'poco prima dello stabilimento balneare di campo Cesare'. Contextual finds included oil lamps, achromatic jars, Hadra *hydriai*, ceramics with a black varnish, and terracotta figurines of the Tanagra type (Graeco-Roman Museum, Inventory Numbers 25.807-814). The accidental encounters are crucial, for they shed further light on the geographical extent of Breccia's surface necropolis on the eastern side of Aflaton/Selim Hassan Street (site 145b), which, given the recorded findspots in 1950, would have extended in an easterly direction towards Camp Caesar and el-Ibrahimiya (site 150).

In 1981, the Egyptian Antiquities Organization (EAO: the present-day SCA), represented on site by Ahmed Abd el-Fattah, carried out a salvage excavation prior to the construction of a new building between Collège Saint-Marc and the Corniche at el-Chatby. Jean Leclant briefly reports: 'on a exhumé des *loculi*, dont certains, inviolés, ont livré des céramiques et une belle scène peinte' (Leclant 1984: 351, Number 4a). The reported finds are located at a short distance to the east of Breccia's hypogea (A) and (B) (site 145b), which were excavated immediately to the north of the present-day site of Collège Saint-Marc. Accordingly, they would have formed part of a wider complex of funerary structures featuring fosse graves, shaft-and-chamber tombs, subterranean hypogea with κλίνη-alcoves, rock-cut *loculi* with painted closing slabs, and niches containing cinerary urns, all signalling an earlier phase of interment to the east of the proposed Ptolemaic periphery (C3).

Site 146: el-Hadra

Maps: V1; V3; V4

Necropolis: el-Hadra [Ptolemaic; Late Antique]

(a) Earlier Encounters: Tassos Neroutsos (1875; 1883-84); Giuseppe Botti (1893-94)

In 1875, during the construction of the railway to Cairo, the levelling of the terrain heights between Wabour el-Meyah and the village of el-Hadra revealed thick layers of broken pottery of various shapes and colours, interspersed with other deposits of ashes and bone, slag and vitrified material, and debris of rubble. Yet, towards the lowermost *strata*, approaching the bedrock, were found skeletal remains, cinerary urns of various types, fragments of *amphorae*, and large terracotta jugs. Two forms of burial were recorded on site: (a) 'des cercueils en terre cuite, longs d'un mètre et demi à deux mètres, formés de deux jarres ou tonneaux d'argile, qui avaient la forme d'un cône tronqué et aplati, et étaient joints par leurs ouvertures larges, de telle façon que leurs bords s'adaptaient l'un à l'autre, tandis qu'une couche de plâtre couvrait extérieurement la jointure'; (b) 'des caisses mortuaires rectangulaires en terre cuite, fermées par un couvercle plat de la même matière'. In a setting as such, the burials were arranged horizontally, either in a single row or superimposed in multiple rows (orientation: head to the west, feet to the east). Accompanying grave goods included vials and flasks of red-purplish or black-coloured clay, several flasks in green-bluish glass, and contextual coinage of Ptolemaic date. A number of cinerary urns and elongated jugs contained the carbonized remains of cremated corpses. Recovered handles of *amphorae* and various broken vessels carried the stamps and seals of foreign workshops and eponymous magistrates of Rhodes, Knidos, and Thasos, as well as of other cities in mainland Greece, Syria, and Italy. Some vessels were, however, locally produced. These, datable to the Ptolemaic period, would have been used in libation rituals and funerary banquets before being deposited next to the deceased.

The accidental encounters subsequent to the construction of the railway to Cairo were recorded by Tassos Neroutsos (Neroutsos 1875: 17-23; 1888: 26-30, 110-116). They mark the initial stage of an extended investigation into the possible geographical extent of the Ptolemaic eastern *necropoleis* of which one section can be subdivided into two broad zones: (i) el-Hadra el-Bahareiya, between Abu Qir Road and the railway to Cairo (northern sector), and (ii) the village of el-Hadra Qibly, south-southeast of the railway track (southern sector):

> *Sous les monticules isolés du faubourg d'Éleusis proprement dite, situé près du canal Canopique (Strab., XVII, 800), et appelé aujourd'hui Khâdrah; au nord de cette localité et en face du nouveau lac qui couvre une partie de la vallée jadis existant entre Éleusis et Nicopolis, on a mis au jour, en 1883 et 1884, des hypogées anciens du temps des Ptolémées et creusés dans le roc. Qu'on se figure un dédale de chambres souterraines, avec des niches contenant des urnes funéraires et des objets d'art, parmi lesquels un grand nombre de statuettes en terres cuites coloriées, de figurines de petits garçons et de fillettes, d'un air gai et mutin; de statuettes de jeunes femmes pleines d'expression, aux mouvements souples et aux attitudes gracieuses; tel était le spectacle qu'offraient les catacombes nouvellement découvertes.*
>
> (Neroutsos 1888: 81)

In 1893-94, further encounters during the widening of the railway track were briefly reported by Giuseppe Botti (Botti 1898b: 102-104; 1898c: 76-78). At the time, beneath the layers of mediaeval and late antique interments, a funerary structure of at least three chambers and an access-staircase was partially excavated. One vaulted chamber measuring 3 x 2 m had cinerary urns, plates, jars, terracotta vessels of the lacrymatory type (used in funerary rituals), a sparrowhawk of limestone, two sphinxes, and vases painted blackish figures on a red background (labelled 'Seleucid' by Botti). Traces of polychrome decoration on the walls and a few epitaphs were recognizable on discovery. Other accidental finds of funerary structures constantly violated in the course of the construction works reflect the extent of destruction inflicted on this sector of the Ptolemaic eastern *necropoleis*, the archaeological significance of which is emphasized with successive discoveries made by Breccia and Adriani in the first half of the 20th century (site 146c).

(b) Earlier Encounters: E.F. Benson (1894-95); Expedition Ernst Sieglin (1900-01)

In 1894-95, British archaeologist Edward Frederic Benson carried out excavations 'at a convenient spot close to the (railway) station' (Hogarth and Benson 1894-95: 28-30). Encountered at 20 feet (6.10 m) from the surface level were the remains of a vaulted structure (A) built of 'soft white stone thickly mortared between the joints and stuccoed in the same manner over its inner surface' (Figure 268). Two burial-spaces (B) and (C), containing skeletal remains, opened on the eastern and northern walls respectively. One (that labelled 'C': a *loculus*?) was found closed with 'a thin stone slab still *in situ*'. On the western side, ascended three stone steps, which led up into a perpendicular shaft with descending steps cut into either side, whence two spaces for interment were accessible at a depth of 18 feet (5.50 m). They had lead coffins containing skeletal remains, and two earthenware of the *aryballi* type, assigned by Benson to the 1st century BC. A third burial-space was inaccessible, for it almost reached the groundwater level. Other finds include two large *amphorae* towards the mouth of the shaft; both labelled 'Roman' by Benson. On the southern side, a chamber of masonry (D), containing skeletal remains, adjoined the vaulted structure (A) at a slightly higher level. Other funerary structures were encountered at a yet higher level, 12 feet (3.65 m); 'in one of them were found seven Roman or Graeco-Roman jars containing ashes (cinerary urns?)'. Belonging also to the latter were a gilt-bronze chaplet of leaves and berries, and a small gold plaque stamped, in repoussé, 'a horse and horseman carrying an emblem resembling the Sceptre of Bes'. In all, Benson's encounters in the 1890s emphasize the sepulchral character of the area under investigation.

In 1900-01, during Expedition Ernst Sieglin, the first methodical attempt was made to setting up a typology for the excavated funerary structures at el-Hadra, where a rather developed form of the shaft-and-chamber tombs (site 145b) has been labelled 'Typus (*κ*)' by Theodor Schreiber (Figure 269) (Schreiber 1908c: 172-173, Abbildungen 107-108; 1908i: 183-184, Abbildung 116). It comprised an access-staircase leading into an *atrium* serving as a light-shaft (L). On the *atrium's* back wall, the grave alcove of a shaft-and-chamber tomb was violated at some point by a *loculus*-chamber with three *loculi* cut into either side wall. A bench (a), carved out at the back wall of the chamber, is decorated with a curtain of veined marble, and above which two rock-cut *loculi* were closed with slabs painted false windows. The bench, as a possible predecessor of the funerary κλίνη, might have been utilized at this earlier stage as an offering stand and/or a banqueting couch in association with successive phases of *loculus*-interment evident on the back (primary) and lateral (secondary) walls. In this context, Schreiber's Typus (*κ*), and probably Breccia's Hypogeum (B) at el-Chatby (site 145b), would signal a transitional phase from the shaft-and-chamber tombs of types (IN.4-5) towards the hypogea of collective burial, with a κλίνη-alcove as the nucleus of an initial setting, and successive phases of interment represented by rock-cut *loculi* into the walls.

(c) Main Excavations: Miscellaneous (the first half of the 20th century)

During the first half of the 20th century, an extensive programme of excavation was carried out at el-Hadra: Evaristo Breccia (1905-06; 1908; 1912; 1925-26; 1931-32); Despina Sinadino and Michele Salvago (1913-14); Col. A.H. Tubby and Lt. Col. H.E.R. James (1916); Achille Adriani (1932-33; 1933-39; 1940; 1950) (Adriani 1934: 28-32; 1940a: 65-122, 128-130; 1940b: 1-56; 1952: 1-27; 1956a: 35-39; 1966a: 110-112, Catalogue Numbers 60-67, 120-121, Catalogue Numbers 70-72, 122-123, Catalogue Numbers 73A-74, 123-124, Catalogue Numbers 77-78; 1966b: Tavola 34, Figure 123, Tavola 35, Figures 124-127, Tavola 36, Figures 128-130, Tavola 41, Figures 154-156, 158-159, Tavola 42, Figures 161, 163; Breccia 1907a: 100-101; 1909: 278-288; 1913: 15-33; 1914d: 56-58; 1930: 99-132; 1932: 23-27; 1933: 9-21; Tubby and James 1918: 83-90).

Localisation of the excavated sectors (Figures 270-272):

(1) Southern side of Abu Qir Road, between the streets of el-Madafin and Masged el-Mouasat; (2) Kotsika (present-day Gamal Abdel-Nasser) Hospital; (3) Fouad I aka el-Mouasat Hospital; (4-6) Ezbet el-Makhlouf; (7) el-Manara Cemetery; (8) Diaconesses (present-day el-Hadra University) Hospital; (9) Faculty of Engineering.

(1-2) In 1932-33, Achille Adriani carried out excavations on the slopes of a vast plateau extending from Abu Qir Road southwards, in the direction of the railway track: the site of Kotsika (present-day Gamal Abdel-Nasser) Hospital, between the Medical Research Institute (east) and el-Manara Cemetery (west): on the southern side of Abu Qir Road, the segment of it opposite the Faculty of Engineering to the north (sector 9). Excavating through the plateau of el-Hadra el-Bahareiya yielded funerary structures of various types. (1) Fosse graves dug into the rock and covered with limestone slabs (IN.1-3: site 145b). (2) Fosse graves as types (IN.1-3) yet surmounted by funerary monuments recalling those at el-Chatby (MN.1-3: site 145b). (3) *Loculus*-galleries cut into the rock at a certain depth and preceded by a vestibule (light-shaft) rectangular or square in shape. (4) Shaft-and-chamber tombs (IN.4-5: site 145b) accessible by means of a descending staircase; the *loculi* cut into the walls represent successive phases of interment. (5) A variant of Schreiber's Typus (*ν*) (site 146b) and Breccia's Hypogeum (B) (site 145b) (Figure 273): an access-staircase leading down into an intermediary vestibule with a vaulted *loculus* cut almost at the floor level, into either side wall. A quadrangular alcove (2.20 x 2.50 m) opened on the back wall of the vestibule. It was partially occupied by a high bench carved out of the right wall to receive funerary offerings, as suggested by the leftovers found on discovery. The underground structure was surmounted by a surface monument of stonemasonry of which remained only a stepped pedestal of hewn limestone blocks coated with plaster. Around it, on the northern and western sides, were vestiges of a low fence of coarse masonry.

(2-3) In 1925-26 and 1931-32, Evaristo Breccia carried out excavations at the sites of the hospitals of Kotsika (present-day Gamal Abdel-Nasser) and Fouad I aka el-Mouasat, delimited by Abu Qir Road (north), el-Mouasat Mosque and the Medical Research Institute (east), the railway track (south), and el-Manara Cemetery (west). The urban *insula* thus correlates with the mounds of el-Hadra el-Bahareiya. As the case at el-Chatby (site 145), there were clusters of fosse graves (surface interment) found often marked with funerary monuments (see *supra*, sectors 1-2). Other types of excavated structures include shaft-and-chamber tombs preceded by an intermediary vestibule (type IN.5), Schreiber's Typus (*ν*), and *loculus*-galleries. The latter are basically subterranean corridors featuring multiple rows of *loculi* due to space economy. Several limestone blocks signal a vaulted rock-cut structure with plastered walls, partially built of stonemasonry. It echoes that excavated by Benson in the 1890s at a point not far from the area under investigation (site 146b). Inhumation and cremation are both evident on site. The deceased were chiefly Greeks as shown by inscriptions recorded on the *loculus*-closing slabs. Semitic names yet confirm the Jewish presence on site, while a certain Pedios represents a rare Etruscan interment. In general, four broad phases of occupation for sectors (2-3) are inferable from the archaeological record. Phase (I): the late 4th-early 3rd century BC: an initial phase pertaining to the fosse graves and their monumental associates. Phase (II): the 3rd-2nd century BC: the main phase of the Hellenistic necropolis, with developed forms of funerary architecture. Phase (III): the 1st-3rd century AD: Roman habitation attested by the remains of a building with a bathing facility and wells constructed upon the funerary vestiges of the Hellenistic period. Phase (IV): interments then reappear on site from c. the 4th century AD: Christian reutilization of the necropolitan mounds in the east (see *infra*, sectors 8-9).

(4-6) In 1933-39, Achille Adriani carried out excavations at Ezbet el-Makhlouf, to the south of the railway track. Besides the simple fosse graves and several narrow and elongated irregularly-cut *loculus*-galleries with successive rows of *loculi*, there was the less frequent type of rock-cut *loculi* recorded earlier by Breccia in 1931-32 (see *supra*, sectors 2-3), where funerary monuments are erected rather unusually, not upon pit graves, but contiguous with the *loculus* itself. Other excavated hypogea comprised single or multiple burial-chambers, and rock-cut *loculi* of which some were found closed with slabs painted false doors. One hypogeum

discovered in July 1933, to the west of the municipal garages, exemplifies the multiple-chamber type. An access-staircase led into two rock-cut burial-chambers partially built of stonemasonry. The quadrangular nucleus of the initial setting (2.10 x 2.10 m) had three pairs of rectangular *loculi* cut into the side and back walls. A second *loculus*-chamberette was opened, probably at a successive stage, to receive interments. The decorative elements of the nucleus include a finely worked Doric doorframe surmounted by a large crown painted a hanging festoon as if fixed to the wall with four nails. A few traces of a stucco coating in zones were recognizable on discovery: light blue in the plinth; yellow in the orthostats; brownish-black in the intermediate band; white in the uppermost part. Unique among those funerary structures excavated at Ezbet el-Makhlouf were two hypogea with a circular plan. One (Figure 274) contained a short access-staircase, at the end of which an intermediate vestibule opened onto a circular burial-chamber (diameter: 4.50 m; flat ceiling). Six rectangular *loculi* were cut into the walls, following a radial arrangement at a certain level from the floor. Beneath the third *loculi* on the left, another one had been cut: apparently, an addition to the initial setting. A cinerary urn of the Hadra type was found *in situ*, within a shallow pit dug into the ground. A niche irregularly cut into the left wall of the staircase seems to have been added to receive funerary offerings or, perhaps, a cinerary urn. An analogous circular tomb (Figure 275) had a similar plan but was a bit wider (diameter: 5.30 m; flat ceiling). Likewise, eight rectangular *loculi* were cut in a radial arrangement. Variations from the latter, however, include a round bench carved out of the rock along the perimeter of the rotunda. A thin oblique band connected the chamber's flat ceiling to the adjoining walls. Both hypogea represent a circular variant of funerary architecture not commonly encountered in Alexandria. In plan, they recall the mercenaries' *columbarium* of cinerary urns excavated in 1884 at el-Ibrahimiya (site 150b), with which the Ezbet el-Makhlouf circular structures may be contemporary (datable c. the late 3rd century BC), judging by the recovered Hadra *hydriai* and other contextual finds of Ptolemaic provenance within the rock-cut *loculi*.

(7) In spring 1940, Achille Adriani carried out excavations at el-Manara Cemetery, immediately to the west of Kotsika (Gamal Abdel-Nasser) and Fouad I aka el-Mouasat hospitals. Within the surveyed area of interest, four sections were identified (A, B, C, D), yielding six types of funerary architecture (Figures 276-279). (1) Fosse graves dug into the rock and closed by limestone slabs then concealed beneath low *tumuli* (mounds of earth and rubble). (2) Fosse graves dug at greater depths and surmounted by funerary monuments (stepped pedestals built of stonemasonry). (3) Rectangular pit graves of varied depths and widths; a few covered with limestone slabs, others accessible via a staircase: a less developed form of the shaft-and-chamber tombs. (4) Quadrangular chamberettes with their access-staircase and successive *loculi* cut into the walls. (5) *Loculi* cut deep into a rock façade and closed with slabs painted false doors. (6) Burials in terracotta containers (intended for infants). Forms of disposition on site included inhumation (skeletal remains) and cremation (cinerary urns). Circular pits coated with rows of rubble were dug at several spots, apparently for cult purposes. Adriani's 1940 excavations at el-Hadra commenced, as shown in his handwritten records, on March 28th, before halting abruptly on June 5th, for his first term as director of the Graeco-Roman Museum was about to end.

(8) In 1908, Evaristo Breccia investigated a 'Christian' hypogeum at the courtyard of the Diaconesses (present-day el-Hadra University) Hospital, opposite el-Hadra judicial prison, to the south of the railway track (Figure 280). It comprised a large quadrangular courtyard (P) (7.60 x 6.50 m, height: 4 m) with a long flat-roof *loculus*-gallery (labelled A-B; length: 8 m) accessible from one corner of the courtyard (P) by means of a quadrangular entrance (2.30 x 2.30 m). A second *loculus*-gallery (B-C; length: 9.50 m) ran off *loculus*-gallery (A-B) at an acute angle. A third *loculus*-gallery (C-D; width: 3.30 m, length: 10 m), a bit wider than the (A-B) and (B-C) segments, had three branching-off passages: one (E) communicating with the courtyard (P), the other two (F and G) with inaccessible spaces. Along the left wall of all three galleries (A-D) were *loculi* cut, at an almost regular interval, below the floor level, hence accessible via an intermediary pit, one metre in depth, dug in front of each *loculus*. In total, thirty-four of such pits were recorded. A unique feature was an alcove (a) cut above the level of *loculus*-pit (34). It had a rectangular recess (1.80 x 1.17 m, height: 2.30 m), at the bottom of which an arch had been carved out of the rock (18 cm). On discovery, traces of engraved crosses were recognizable on the rock-cut pillars flanking the alcove. Other crosses, inscribed or painted, along with funerary inscriptions, were noted by Breccia at various parts of the hypogeum, attesting the late Roman Christian reutilization of the Hadra plateau, in the course of the 4th-6th century, to receive interments, following a period of Roman urbanization taking place during the Augustan Principate at the southeastern necropolitan suburbs of the Ptolemaic city: the areas extending to the south of Abu Qir Road, on either side of the railway to Cairo: the present-day districts of Wabour el-Meyah (in part), el-Hadra el-Bahareiya, and el-Hadra Qibly.

(9) In 1950, the digging of foundations for a new building of the Faculty of Engineering brought to surface accidental finds which shed further light on either phase of sepulchral use, Hellenistic and late antique, identifiable at the Hadra section of the eastern *necropoleis*. The site is located on the northern side of

Abu Qir Road, opposite the earlier discoveries made south of the main avenue (sectors 1-8). Within the foundation trenches, at a depth of about 10-11 m from the modern street level, Adriani recorded 'un folto gruppo di sepolture a fossa o a piccole camerette con loculi, da assegnare ad età ellenistica assai alta (fine del IV-principio del III sec.)'. The reported finds thus signal an earlier exploitation of the mounds at el-Hadra el-Bahareiya simultaneously with those at el-Chatby (site 145). In the upper layers, prior to encountering the Hellenistic necropolis, a miniature 'Christian' hypogeum was partially excavated (Figure 281). The surviving section of it includes a quadrangular burial-chamber (1.75 x 1.60 m) with four *loculi* cut into either lateral wall (B and D) and one, rather shallow, into the back wall (A). On the latter's lunette, a preserved fragment of a stucco coating displayed a Christian motif: a cross, with the Greek letters (A) and (ω) painted on either side of the vertical arm, accompanied by a pair of palm twigs and enclosed within a laurel wreath flanked by two *candelabra*. A couple of *loculi* into the left wall retained two partially preserved funerary epitaphs with scant traces of floral motifs painted in ochre. One epitaph was surmounted by a cross inscribed within a circle: a motif that indicates, together with the above-mentioned monogram, a Byzantine structure postdating Breccia's 1908 hypogeum (sector 8): a chronology extending the Christian reuse of the Hadra el-Bahareiya plateau well into late antiquity, i.e. c. the 5th-6th century. The better-preserved of both epitaphs reads:

ΕΚΟΙΜΗΘΗΟΜ[ΑΚΑΡΙΟC.....
ΗΦΙCΤΙΩΝ (sic) Α[ΔΕΛΦΟC.....
ΜΝΗCΘΗΤΙΑΥ[ΤΟΥ.....
ΤΗCΑΝ[ΑΠΑΥCΕΩC.....].

(d) Later Encounters: Youssef Shehata and Labib Habachi (1971); Dorreya Saïd (1987)

In 1971, a subterranean hypogeum datable c. the second half of the 2nd century BC was excavated near the Hadra railway station at Ezbet el-Makhlouf (sectors 4-6) during a GRM mission directed by Youssef Hanna Shehata and Labib Habachi (Leclant 1972: 250, Number 1b; 1973: 394, Number 1b). While the hypogeum itself was found in a deteriorating condition, many of its forty-five *loculi* had retained closing slabs painted false doors and inscribed with the names of the deceased. Contextual material included 'trois sarcophages en plomb de forme anthropoïde, plusieurs statuettes de terre cuite (style de Tanagra et grotesques), des urnes cinéraires, des lampes, des vases et plats, deux grandes amphores, quelques amulettes de faïence et de bronze, quatre pièces de monnaies'.

In 1987, the Graeco-Roman Museum, then under the directorship of Dorreya Saïd, carried out excavations at the district of el-Hadra (Leclant and Clerc 1988: 310, Number 5c; 1989: 342, Number 7g). The six-month campaign yielded 'un hypogée collectif était fermé par une pierre tombale de forme triangulaire, gravée d'un relief peint, de style grec, montrant l'image de la défunte assise'. Two cinerary urns for the depositing of cremated remains were recovered on site. Within the niches of another rock-cut hypogeum, the mission recorded a number of funerary offerings: receptacles, Hellenistic oil lamps, a faïence vase, the elements of a necklace, a knife, and a plate of alabaster. Other encounters, particularly 'cinq cercueils du IVe siècle après J.-C.', conform with the inferred phases of sepulchral use at el-Hadra: Hellenistic (c. the late 4th-2nd century BC) and late antique (c. the 4th-6th century AD).

Site 147: Latin Cemetery (Terra Santa)

Maps: V1; V4

Alabaster tomb: el-Chatby [Ptolemaic]

In 1907, during the levelling of the terrain at el-Chatby's Latin Cemetery (aka Terra Santa), 'deux grandes parois en albâtre oriental et le linteau d'une belle porte' were accidently discovered. The finds, encountered towards the northern periphery of Terra Santa, immediately to the south of Minos Alley and the adjacent Greek Orthodox Cemetery, were briefly reported by Evaristo Breccia in 1908 then in 1921 (Breccia 1908a: 7; 1908b: 230; 1921: 70, Tavola XI). On discovery, the blocks were found at one corner of a vast trapezoidal περίβολος partially delimited by remnants of a wall of limestone masonry (enclosure?), which was demolished at the time. In 1936, the Cemetery Administration decided to clear the grounds of the old burials. Consequently, Achille Adriani, then director of the Graeco-Roman Museum, intervened, with six test-pits (C3-8) sunk to the west of the blocks, in an attempt to conjecture the structure(s) to which these monoliths might have belonged (Figure 282). A large rectangular well (B_1), dug into the rock (3 x 3.70 m, depth: 11 m), communicated with a rock-cut conduit (B) running NNW-SSE (width: 0.40 m, height: 0.60 m, length of exposed section: 25 m). The conduit diverted slightly towards the south after feeding a miniature circular well labelled (B_2). A few metres to the west, within *sondages* (C3-8), Adriani reached the bedrock at just 3-4 m from the surface level, having cut through a layer of earth and rubble 'très pauvre en tessons et autres vestiges d'antiquités' (Adriani 1940a: 15-23; 1966a: 140-143, Catalogue Number 89; 1966b: Tavole 61-63, Figures 211-218). Hence, a context for such blocks could not be established, given the outcome of Adriani's excavations restricted back then to the western environs – south: burials; east: a plant nursery; north: Minos Alley and the Greek Orthodox Cemetery.

A reconstruction of the dismantled structure would, however, provide hints about the nature of the edifice of which it once had formed part. At the time of Adriani's investigation, the pavement and the western wall yet stood *in situ*. The large block of the ceiling, already broken into two pieces, had slipped into a cavity to the north. The eastern wall and what remained from the southern wall and its gateway suffered an outward collapse. The various fragments were then (re)assembled: the product is a rectangular chamber opened on the north (2.63 x 3.45 m, height: 2.70 m; flat ceiling). At the centre of the southern wall, a Doric gateway (0.93 x 2.05 m) might have led into the nucleus of a structure comprising at least three spaces arranged on the same axis and oriented north-south: aligned in the cardinal directions. This is backed by marks left on the northern end of the lateral walls, where at the top are two deep square cuts probably intended for the fixing of architectural elements complementary to the reconstructed chamber. Halfway to the top, the visible traces of what seems to be rectangular cleats are evident on either lateral face where they have been fixed approximately at the same level. The joints are indicative of a preceding space (more likely a vestibule) giving access to an intermediary chamber. The pavement is formed by a massive monolithic block of alabaster flanked by two rows of limestone blocks upon which the lateral walls rest – western wall: length: 3.65 m, thickness: 0.70 – 0.87 m; eastern wall: length: 4.25 m, thickness: 0.70 – 0.75 m. The structure is built upon a bed of earth and shards, with an adjoined ceiling made of another monolithic block of alabaster (4.62 x 3 m, thickness: 0.70 m). The back wall features a partially restored Doric gateway (leading into an alcove?) formed by three blocks, one horizontal and two vertical: lintel and jambs.

Construction material (the actual use of alabaster, not simulated) and technique (built, not rock-cut), architectural order (Doric), and design (*oikos* type), all seem to indicate an early Hellenistic funerary structure of which Adriani's reconstructed product would form part: the antechamber to a burial alcove, preceded by a vestibule. Whereas such a striking contrast between the smooth interior and the rough exterior suggests a sepulchre intended to be concealed beneath a *tumulus* of earth and rubble, thus emphasizing the Macedonian character of the conjectured burial complex. Overall, the alabaster tomb bears clear analogies with Manolis Andronikos' 'Royal Tombs' discovered in 1977-78 at Vergina, the site of ancient Αἰγαί, the first capital of the ancient kingdom of Macedon (Andronikos 1984). Its uniqueness among the Alexandrian sepulchres excavated to date maintains the possibility for a royal or elite affiliation. Perhaps a remnant of one surviving section of the historical Soma (Σῶμα: section 3.8.3.1, I), located towards the southern-southeastern fringe of the Ptolemaic Royal Quarter (βασίλεια), yet in proximity to the necropolitan mounds at el-Chatby and el-Hadra el-Bahareiya (sites 145-146), and near the junction of the πλατείες (streets L1 and R1): around that segment of Fouad Street between el-Shallalat and el-Khandak el-Qibly parks, in the vicinity of Saet el-Zohour Square where a statue of the city's historical founder stands today (Figures 283-284).

3.8.2) Physical Remnants without Known Historical Reference

3.8.2.1) Civil Edifices

Site 148: West of Collège Saint-Marc

Maps: V2; V4

Mosaic pavement: el-Chatby [Roman]

In 1893, a mosaic pavement was accidently unearthed between the Jewish Cemetery at el-Chatby and the seashore (Adriani 1966a: 109, Catalogue Number 59; Breccia 1914a: 274-275; 1922: 269-270; 1923b: 11; Daszewski 1985a: 45, Note 124). It is composed of an *emblema* featuring an oversized flower with radiating petals and embedded scrolls of ivy. Convergent volutes and four goblets at each corner occupy the space between the central *emblema* and a black-and-white frame. On either side, the polychrome of black, white, yellow, and reddish-brown *tesserae* is bordered with broad bands displaying a meander pattern (Graeco-Roman Museum, Inventory Number 10200). Judging by construction technique and style, the panel is datable to the Roman period and might have belonged to a *villa urbana* contemporary with analogous buildings beyond transversal street R2^{bis}: approximately, the areas extending to the east of the Suez Canal Road (sites 32a-c, 144, 149a, 167).

Site 149: Latin and Greek Orthodox Cemeteries

Maps: V1; V2; V3; V4

Miscellaneous: el-Chatby [Ptolemaic; Roman; Late Antique]

(a) In 1987, the Graeco-Roman Museum, then under the directorship of Dorreya Saīd, carried out excavations at Anubis Street, which constitutes the western periphery of the Latin and Greek Orthodox cemeteries (Leclant and Clerc 1990: 339, Number 6d; Rodziewicz 1995: 231-232, Note 39). Unearthed on site was a late Roman construction with a public latrine and an intricate sewerage system. Judging by its large scale and relative proximity to longitudinal street L1, the edifice in question, oriented in conformity with the urban grid, is likely to have been a public one contemporary with the baths and cisterns excavated by the PCMA at Kom el-

Dikka. The findspot, recorded on Anubis Street, attests a late Roman habitation to the east of transversal street R2[bis]. Perhaps, as the case at Kom el-Dikka, a c. 4th-5th-century resume of site occupation following brief abandonments.

(b) In 1998-99, a team from the Greek University of Patras conducted a geophysical survey at el-Chatby's Latin and Greek Orthodox cemeteries, in search of the royal burial complex of the Ptolemies known primarily from ancient literary sources (section 3.8.3.1, I) (Papamarinopoulos *et al.* 2003: 193-211). Various scientific methods, basically frequency-domain conductivity, electrical resistivity tomography, ground-penetrating radar, microgravity measurements, and seismic refraction, were applied on an area of 10,000 m^2 flanked by the streets of Anubis (west) and Aflaton (east) and intersected by Minos Alley; a short distance to the south extends Abu Qir Road. Geophysical anomalies relating to subterranean cavities corroborated successive recordings from another geophysical resistivity exploration conducted by a German contractor, hence triggering excavations at three different locations on site (149c).

(c) In Septemebr 2002, the Centre d'Études Alexandrines carried out excavations at the grounds of the Latin Cemetery (Terra Santa No. 2) (Empereur 2002a: 931-933; Grimal and Adly 2004: 7-8, Number 6.a.1.e). Within the enclosure of the tomb itself, the bedrock was reachable, allowing the recovery of several fragments of alabaster that were not included in Adriani's reconstruction in the 1930s (site 147). Other blocks of hewn limestone were encountered a few metres to the east of the structure, where the debris *strata* are rich in late Roman material (site 49a). No stonemasonry had, however, survived the intensive quarrying activities evident on the terrain, as indicated by the marks left on the exposed sections of the pitted bedrock. Further south of the cemetery, on the northern side of Abu Qir Road, a cluster of three circular wells were dug into the rock, of which one was backfilled with ceramics datable to the end of the 4th century BC. The hydraulic installations at Terra Santa, including vertical wells, underlying conduits, a miniature cistern, and a waterwheel (*saqiya*), seem to recall similar structures excavated on site by the GRM in 1936 and 1987 (147, 149a).

3.8.3) Literary Accounts Pending Physical Evidence

3.8.3.1) Funerary Structures

I) The Soma (Σῶμα)

(a) Localisation

In Book XVII of *Geōgraphiká* (the 1st century BC), Strabo, describing the public monuments of the former βασίλεια, mentions a mausoleum for which he gives the term Σῆμα:

> *The Sema also, as it is called, is a part of the royal palaces (quarter). This was the enclosure which contained the burial places of the (Ptolemaic) kings and that of Alexander.*
>
> (Strabo, Geōgraphiká: XVII. 1.8)

The notion of Egypt, and particularly Alexandria, being the resting place of Alexander the Great, variously featured in a few of the historical narratives of the Augustan Principate, seems to have diverged over time from earlier sources, including that of Diodorus Siculus, who, c. 60-55 BC, while benefiting from scholastic patronage under Ptolemy XII Auletes, describes in Book XVIII of *Bibliotheca Historica*, in great detail despite the time gap, 'the transportation of the body of the deceased king and the preparation of the vehicle (catafalque) that was to carry the body to Ammon (Siwa)': a process assigned to Arrhiddaeus (not to be confused with Philip III Arrhiddaeus: section 1.4) (Diodorus, Bibliotheca Historica: XVIII. 3.5, 26-27, 28.1-2). On the journey to the resting place, he adds:

> *When Arrhidaeus had spent nearly two years in making ready this work, he brought the body of the king from Babylon to Egypt. Ptolemy, moreover, doing honour to Alexander, went to meet it with an army as far as Syria and, receiving the body, deemed it worthy of the greatest consideration. He decided for the present not to send it to Ammon (Siwa), but to entomb it in the city that had been founded by Alexander himself, which lacked little of being the most renowned of the cities of the inhabited earth. There he prepared a precinct worthy the glory of Alexander in size and construction. Entombing him in this and honouring him with sacrifices such as are paid to demigods, and with magnificent games, he won fair requital, not only from men, but also from the gods.*
>
> (Diodorus, Bibliotheca Historica: XVIII. 28.2-4)

About three decades later, writing at the advent of Rome's dominion over Egypt, now *Provincia Aegypti*, following the end of Lagid rule, Strabo gives a different version of Diodorus' story:

> *For Ptolemy (I Soter), the son of Lagus, forestalled Perdiccas (the regent of Alexander's kingdom) by taking the body away from him when he was bringing it down from Babylon (to Aἰγαί in Macedon to be interred there) and was turning aside towards Aegypt, moved by greed and a desire to make that country his own ... and the body of Alexander was carried off by Ptolemy and given sepulture in Alexandria, where it still now lies (c. 25 BC) – not, however, in the same sarcophagus as before, for the present one is made of glass, whereas the one wherein Ptolemy laid it was made of gold. The latter was plundered by the Ptolemy nicknamed 'Cocces' and 'Pareisactus', who*

came over from Syria, but was immediately expelled, so that his plunder proved unprofitable to him.

(Strabo, Geōgraphiká: XVII. 1.8)

In Ἑλλάδος Περιήγησις (a periegetic work of the 2nd century AD), Pausanias maintains that Alexander was first interred by Ptolemy I Soter at Memphis, then taken to Alexandria during the reign of Ptolemy II Philadelphos:

After passing into Egypt, he (Ptolemy I Soter) put to death Cleomenes, the satrap of Egypt appointed by Alexander, because he believed him to be favourable to Perdiccas and therefore not faithful to himself. He prevailed on the Macedonians, who were charged with the conveyance of Alexander's body to Aegae, to deliver it to himself, and he buried it in Macedonian fashion, at Memphis.

(Pausanias, Ἑλλάδος Περιήγησις: I. 6.3)

It was Ptolemy (II Philadelphos) who brought down the body of Alexander from Memphis (to the kingdom's capital, Alexandria).

(Pausanias, Ἑλλάδος Περιήγησις: I. 7.1)

Whereas pseudo-Kallisthenes' *Alexander Romance* (datable c. the 3rd-4th century AD) seems to consolidate the earlier narratives into another:

(In consonance with the divine oracle at Babylon), Ptlomeos took him to Egypt and made a leaden slab for him and poured upon him mnesiotas honey and hipatic aloe; and the body was embalmed with incense and oil, and put upon a mule cart, and taken to Egypt. And when they reached Pellas, the Memnians came forth with trumpeters to meet at the altars in their accustomed way. And they took him to Memphis near Sesonchousis, the world-conquering demigod. A voice issued forth saying: 'Take him to his city (Alexandria) which he himself built. For wherever that man's body be, that place shall have no surcease from war and from turmoil, for he is a child of war'.
(Rejected), Ptlomeos made a grave for him in Alexandria, which is still called Alexander's Body (the Σῶμα). And he put him there with splendid honor, since Alexander had requested that this be done. For the city was called by his name and is destined to rule all others.

(pseudo-Kallisthenes, Alexander Romance: 282-284)

Although late and contradictory, the surviving testimonies from classical antiquity point towards Alexandria as the 'final resting place of Alexander the Great'. Nevertheless, it should be taken into consideration the fact that these accounts were written centuries after the events, copying earlier, now surviving in fragments, Hellenistic sources infiltrated with biased 4th-century BC contemporaries of the Macedonian-led Afro-Asiatic campaigns, and with rethought, reshaped histories developing within the milieu of the oral tradition to become entrenched over time in the folk memory, hence the mythical Alexander the Great of Rufus, Plutarch, and Arrian (the 1st-2nd century AD: section 1.2), whose relevance to the historical figure of Alexander III of Macedon would seem debatable. On the other hand, the possibility of Alexander's Σῶμα being in Alexandria is maintained through several testimonies, datable to the Augustan Principate, of Julius Caesar and Roman *imperatores* visiting the mausoleum while in the city – first known: Julius Caesar c. 48-47 BC, recorded by Lucan in *De Bello Civili* (the 1st century AD); last known: Caracalla c. AD 215, recorded by Herodian in *History of the Roman Empire* (the 3rd century AD).

(b) Localisation within Alexandria

In seeking the whereabouts of the Σῶμα in Alexandria, two sources of antiquity are of a particular importance: Strabo's *Geōgraphiká* (the 1st century BC; see *supra*) and Zenobius' *Proverbia* (the 2nd century AD):

Ἔτι δὲ μᾶλλον ἀπὸ Πτολεμαίου τοῦ Φιλοπάτορος τὴν γάρ μητέρα Βερενίκην καθείρξας ἐν μεγάροις, καὶ παραδοὺς Σωσιβίῳ φυλάσσειν, ἡνίκα ἐκείνη οὐ φέρουσα τὴν κόλασιν ἔπιε θανάσιμον βοτάνην καὶ τὸ φάρμαχον πιοῦσα ἀπέθανε, διὰ τὰς ἀπ' αὐτῶν τῶν ὀνείρων ταραχὰς ἐν μέσῃ τῇ πόλει μνῆμα οἰκοδομήσας, ὃ νῦν Σῆμα καλεῖται, πάντας ἐκεῖ τοὺς προπάτορας σὺν αὐτῇ κατέθετο, καὶ Ἀλέξανδρον τὸν Μακεδόνα. Καὶ ἐπὶ τῶν αἰγιαλῶν δὲ ἱερὸν αὐτῇ ἱδρύσαντο, ὃ ἐκάλουν Βερενίκης σωζούσης.

(Zenobius, Proverbia: III. 94.11-20)

The Greek sophist's localisation of the 'μνῆμα' (tomb) 'ἐν μέσῃ τῇ πόλει' (in the middle of the city) was central to the development of a late mediaeval (Mamluk) tradition which connected the cistern underlying el-Nebi Daniel Mosque with the tomb of Alexander the Great (site 65). The site of the mosque, however, almost at the crossroads of the Arab town (the junction of Tariq Bab Sharq/Fouad/el-Horreya with el-Nebi Daniel Street), does not correspond to the centre of the Alexandrian metropolis in the 2nd century AD. At the time of Zenobius, the city had already extended eastwards, reaching as far as the eastern belt of el-Chatby and el-Hadra el-Bahareiya. Zenobius' 'μέσῃ τῇ πόλει' would have been, therefore, around that segment of Fouad Street delimited by el-Shallalat and el-Khandak el-Qibly parks: a localisation supported by the intersection of the πλατείες (streets L1 and R1) of the Roman grid at a point near the National Museum of Alexandria, as shown by the 1860s excavations of Mahmoud el-Falaki (section 2.2.1). For Strabo though, writing much earlier, c. 25 BC, the vicinity of the present-day site of Saet el-Zohour Square would have corresponded to the southern-southeastern fringe of the Ptolemaic Royal Quarter.

(c) Structure

Perhaps one principal source that describes briefly the architecture of the historical Σῶμα is Lucan's anti-Lagid epic poem widely known as *De Bello Civili* or *Pharsalia* (the 1st century AD):

> *Then undaunted, with looks that ever masked his fears, he (Julius Caesar) visited the temples of the gods, and the ancient shrines of divinity which attest the former might of Macedonia. No thing of beauty attracted him, neither the gold and ornaments of the gods, nor the city walls; but in eager haste he went down into the (subterranean) vault hewn out for a tomb. There lies the mad son of Macedonian Philip, that fortunate freebooter, cut off by a death that avenged the world. The limbs that should have been scattered over the whole earth, they laid in a hallowed shrine.*
>
> (Lucan, De Bello Civili: X. 14-23)

> *Last scion of the line of Lagus, doomed and degenerate king; who must surrender your crown to your incestuous sister, though you preserve the Macedonian (Alexander) in consecrated vault and the ashes of the Pharaohs rest beneath a mountain of masonry, though the dead Ptolemies and their unworthy dynasty are covered by pyramids and mausoleums too good for them.*
>
> (Lucan, De Bello Civili: VIII. 692-697)

According to the verses of Lucan, the Σῶμα seems to have been a subterranean funerary complex of a monumental character, concealed beneath a *tumulus*. An affiliation to the 4th-century BC canons of Macedonian sepulchres is therefore evident (analogies: Manolis Andronikos' 'Royal Tombs' at Vergina, northern Greece). One candidate provided by the archaeological record within the vicinity of Saet el-Zohour Square is the Alabaster tomb (site 147). Considering the material and mode of construction, the architectural order, the *oikos* pattern followed in the design, and the striking contrast between the smooth interior and the austere exterior, the reconstructed product of Achille Adriani (hypothesis: Adriani 2000) could have possibly been an antechamber leading into a burial alcove forming the nucleus of one section of a *tumulus* mausoleum: a notion that recalls the vast trapezoidal περίβολος reported by Evaristo Breccia in the earlier *rapports* of the Graeco-Roman Museum. There at one corner, the alabaster blocks were excavated in an area partially delimited by remnants of a wall of stonemasonry. Nonetheless, in the absence of conclusive evidence from a chronologically-established context, the association of these blocks with the historical Σῶμα remains rather hypothetical. Even if proven, the possibility of the section of the mausoleum to which the presumed antechamber belonged being that where Alexander's corpse had been put on display within the collective complex of Ptolemy IV Philopator, cannot be assessed in such a text-and-iconography-free context.

(d) Fate

Towards the end of the 4th century AD, St. John Chrysostom (c. 349-407), the Archbishop of Constantinople, puts forth the rhetorical question:

> *Tell me, where is the tomb of Alexander?*
> *Shew it me, and tell me the day on which he died.*
> *But of the servants of Christ the very tombs are glorious, seeing they have taken possession of the most royal city; and their days are well known, making festivals for the world.*
> *And his tomb (Alexander's) even his own people know not, but this man's (i.e. St. Paul's tomb) the very barbarians know. And the tombs of the servants of the Crucified are more splendid than the palaces of kings; not for the size and beauty of the buildings (yet even in this they surpass them), but, what is far more, in the zeal of those who frequent them.*
>
> (John Chrysostom, Homily XXVI: 5)

The archbishop's rhetorical lays emphasis on the futility of earthly power to the heavenly glory of the Christian martyrs, whose tombs, unlike that of the renowned Macedonian conqueror, are well known and frequently visited. Whereas the site of Alexander's tomb is not known anymore, even to his own people. It seems, therefore, that by the time St. John Chrysostom wrote his *Homilies*, c. AD 398-404, the site of the historical Σῶμα was already lost from the memory of the Alexandrians. However, this was not the case in AD 215, when Caracalla had visited the city:

> *When he entered the city, accompanied by his entire army, Caracalla went first into the temple, where he sacrificed many hecatombs of cattle and heaped the altars with frankincense. Leaving the temple for the tomb of Alexander, he removed there his purple robe, his finger rings set with precious gems, together with his belts and anything else of value on his person, and placed them upon the tomb.*
>
> (Herodian, History of the Roman Empire: IV. 8.9)

Caracalla's visit to the mausoleum, recorded by Herodian, is the last known of an *imperator*, which implies that possible violation would have occurred in the course of the 3rd-4th century AD. The proposed range seems justified by contemporary historical events: (i) the sacking of the city, first by Aurelian (AD 272), then Diocletian (AD 297), (ii) the destructive earthquake and mega-tsunami of AD 365, and (iii) the sectarian violence sparked by the decree of Theodosius I in the 390s. Accordingly, given the tomb's presumed location, and the probability of it not surviving the turbulent transition to late antiquity, the rhetorical question of Constantinople's archbishop may not come as a surprise.

3.9) Eastern Suburbs (ESubs.)

3.9.1) Physical Remnants Corresponding to Known Historical Narratives

3.9.1.1) Funerary Structures

Site 150: Miscellaneous

Maps: V1; V2; V3; V4; V5; Figure 285

Necropolis: Camp Caesar; el-Ibrahimiya [Ptolemaic; Roman; Late Antique]

(a) Sepulchres: Supreme Council of Antiquities (2011-15)

Since 2011, salvage excavations subsequent to accidental discoveries were carried out by the Egyptian Supreme Council of Antiquities (SCA) at Camp Caesar and el-Ibrahimiya, where funerary structures of various epochs were recorded intermittently (Abd el-Maguid 2016: 64-67). (150a.1) Camp Caesar-1 – south of the tramline: vestiges of partially preserved Byzantine sepulchres built of small stone blocks in lime mortar and fired brick, with coated walls bearing Christian funerary epitaphs and motifs (painted crosses). The relative proximity of the finds to the premises of the Faculty of Engineering (c. 800 m to the south-southwest), where Adriani had recorded in 1950 a funerary structure of c. the 5th-6th century (site 146c-9), emphasizes the Christian exploitation of the Hellenistic necropolitan mounds to the east of transversal streets R3^{bis} and R4^{bis} (Aflaton/Selim Hassan and Trajan/Ahmed Lotfy el-Sayed respectively). (150a.2) Tanis (present-day Zakariya Ghonaim) Street: the simple fosse and cist graves, a cinerary urn, and a gilded-wood sarcophagus. (150a.3) el-Abd Theatre: a Hellenistic rock-cut hypogeum of which remained one funerary κλίνη carved out and painted. Next to it was a cist grave (1 x 0.60 m) dug into the rock to receive four cinerary urns. On the eastern side of the plot, *loculus*-chambers, vaulted and rectangular, and partially built of masonry (limestone and fired brick), are datable to the Roman period.

(150a.4) el-Ibrahimiya-1: hypogea representing successive phases of development. The better-preserved, Hellenistic in date, comprised a number of chambers branching off a pseudo-peristyle courtyard with a sacrificial altar at the centre (analogies: Mustapha Pasha hypogea I and II: site 160). One chamber had two niches cut into its *anta*: one received an infant-interment, the other a cinerary urn of the Hadra type. On the closing slab of the latter, the name of the cremated deceased is inscribed: Kleitarchos, son of Timesitheos. Funerary structures excavated south of the hypogeum exemplify the developments of the Roman period. A case in point would be one cuboid tomb with plastered walls, yielding a marble *stela* on which the names of a certain Neola, daughter of Sarapia, and her son, Dioskoros, are inscribed in Greek. These sites (150a.2-4), located about 600 – 1,200 m to the east of Breccia's encounters at el-Chatby (site 145b), seem to expose the geographical extent of the eastern *necropoleis* in Hellenistic times and the Roman retainment of the sepulchral character of the suburban region extending to the east of Trajan/Ahmed Lotfy el-Sayed Street or transversal street R4^{bis} in the ancient setting.

(b) Mercenaries' *Columbarium*: Tassos Neroutsos (1885)

In 1885, a *columbarium* cut into the rock was accidently discovered within the coastal sector of el-Ibrahimiya (Neroutsos 1888: 81-82, 102-110; Botti 1898b: 98-99). About a hundred cuboid *loculi* were cut into the walls of a circular, rather conoidal structure with an ellipsoid-vault ceiling and a light-shaft. The niches were arranged into five superimposed rows parallel with one another. On discovery, some had retained closing slabs painted intrinsically Hellenic sepulchral scenes of which six are today on display at the New York Metropolitan Museum of Art (Inventory Numbers 04.17.1-6). Inside the closed ones were cinerary urns of the Hadra type containing the cremated remains of the deceased. Contextual information recorded on either the terracotta *hydriai* and the limestone *stelae* reveals the chronology of the Ibrahimiya *columbarium* and the identity of those whose ashes are deposited within. Indeed, the funerary epitaphs on site show that the deceased were mercenaries from mainland Greece, the Aegean, Crete, Thrace, Galatia, Asia Minor, and the Levant: Menekles (a Cretan cavalry soldier serving under Ptolemy IV Philopator); Philotas (a cavalry soldier serving under Ptolemy IV Philopator; recorded date: 214 BC); Attalos (an Acheronian cavalry soldier serving under Ptolemy VI Philometor); Archedemos; Telemachos (a Cretan cavalry soldier); Aglokles (a Theban from Boeotia); Aristanor (Hysiae); Sarapon (a Syrian from the Levant); Phykion (Aetolian); Pythostratos; Kallon; Philotas (Asos); Anasson (an Aegean from the Cyclades); Agnas (Thracian); Philista (the wife of a Galatian soldier); Aedearotos; Archagathos. Epigraphy and the recovered Hadra *hydriai* thus date the rock-cut *columbarium* to c. 221-180/145 BC. It was probably a funerary structure intended to receive the cremated remains of foreign, chiefly Hellenic, mercenaries garrisoned to the east of Alexandria, on the coastal plateau, beyond the Ptolemaic Royal Quarter (βασίλεια) and the Jewish Quarter (Δ). Its discovery corroborates the ancient narratives with regard to the well-established tradition of deploying mercenaries by Late Dynastic and Hellenistic rules in Egypt: a phenomenon attested as early as the 7th century BC, the time the Saïtic kings had deployed Hellenic mercenaries from Ionia and

Caria in attempting to counter the Neo-Babylonian threat (Thompson and Buraselis 2013: 3). Polybios, who was appointed envoy to Alexandria around 181 BC, that is contemporary with the *columbarium*, categorizes the inhabitants of the city into three classes of people:

> *First, (the city is inhabited by) the native Egyptians, an acute and civilized race; secondly, by the mercenaries, a numerous rough and uncultivated set (as) it being an ancient practice there (in Egypt) to maintain a foreign armed force which owing to the weakness of the kings had learnt rather to rule than to obey; thirdly, there were the Alexandrians themselves, a people not genuinely civilized for the same reason, but still superior to the mercenaries, for though they are mongrels, they came from a Greek stock and had not forgotten Greek customs.*
>
> (Polybios, Histories: XXXIV. 14.3)

(c) Jewish Interments: Tassos Neroutsos (1870s); Evaristo Breccia (1905-07)

Jewish burials encountered at el-Ibrahimiya in the 1870s were briefly reported at the time by Tassos Neroutsos (Neroutsos 1888: 82-84). They were distinguishable from Greek sepulchres by their austere setting, where there was an almost absolute lack of ornamentation and painting. Intrinsic to Jewish sepulchres at el-Ibrahimiya were two features – (1) the ossuaries: miniature rectangular coffins or funerary boxes of limestone covered with prismatic or semicylindrical lids and placed in relatively shallow niches cut into the tomb's walls; (2) the *menorah* or the biblical seven-*candelabrum* lampstand: a traditional constituent of the Temple in Jerusalem.

In 1905-07, on behalf of Almas Pasha Sabri, Evaristo Breccia carried out excavations 'sulle colline tra i cimiteri europei e il sobborgo de l'Ibrahimieh (the western belt of el-Ibrahimiya) ... un centinaio di metri a mezzogiorno della linea tranviaria Alessandria-Ramle' (Breccia 1907f: 35-86; 1908a: 4-7). Funerary monuments recalling those excavated at the nearby el-Chatby (site 145b) shed further light on the approximate geographical extent of the surface *necropoleis* of the earlier Alexandrian settlers. Besides the latter, narrow *loculus*-galleries were cut directly into the rock. They featured several rows of *loculi* of which a few had retained their painted and/or inscribed limestone *stelae* (closing slabs). Among the predominant Greek ones, Aramaic funerary inscriptions in red ochre were encountered. In one case, a *stela* painted false door surmounted by a pediment had four Semitic signs. On a lower row, an epitaph read: 'Aqabiah son of Elyo'ênaï (written in Greek). The recorded inscriptions thus show a burial complex where Greek and Jewish interments coexisted. In a multi-ethnic context as such, the presence of Hellenised Jews may not come as a surprise: one painted *stela* closing the resting place of a woman displayed, in ochre, a Hellenised Jewish name inscribed next to a Greek proper, Ἰωάννα Εὐφροσύνη. Breccia's encounters at el-Ibrahimiya confirm the presence of the Jewish element within the interments of the eastern *necropoleis*, hence corroborating the 1st-century AD narratives of Philo Judaeus and Flavius Josephus on the localisation of Quarter (Δ) in proximity to Cape Lochias, towards the eastern fringe of the city (section 2.1.2.2.2.1).

Site 151: North of Sporting Club

Map V5; Figure 285

Hypogea; stone quarries: el-Ibrahimiya; Sporting [Ptolemaic; Roman]

Since 1998, the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) has been investigating the coastal zone at el-Ibrahimiya and Sporting (Tzalas 2012: 130-131; 2013: 3-4; 2015: 352-355; 2018: 28-30). At el-Ibrahimiya 4 and Sporting 5, the remains of rock-cut hypogea were identifiable within the shallows, bearing signs of extensive stone-quarrying activities. Both sites have been affected recently by the widening of the Corniche to make room for parking areas. The extant vestiges of large rock-cut structures jutting out into the sea were rather evident at the less-violated Sporting 5. In the maps of Tassos Neroutsos (1888) and Mariano Bartocci (1914) (Introduction II.e-f), the coastal area to the north of the present-day Sporting Club is associated with 'hypogées Ptolémaïques et Romains'. Perhaps the remnants in question represent a continuation of funerary structures cut into the rocky plateau of the suburban coastline extending in an easterly direction towards the *oppidum Romanorum*, Nikopolis (sites 152-161).

Site 152: NE. of Sporting Club

Map V5; Figure 285

Hypogeum: Sporting; Cleopatra [Roman]

In 1914, during the digging of foundations for a new building to the north of the tramway, the section of it between the tram stations of Grand Sporting (aka el-Kobra) and Cleopatra-les-Bains (aka el-Hammamat), the remains of a hypogeum were accidently discovered (Breccia 1914c: 53-55). A surviving part formed a *triclinium*-like chamberette featuring three sarcophagus-alcoves cut into the lateral and back walls, as in the Wardian Grand Catacomb (site 49a) and Kom el-Shuqafa's Hauptgrab (site 53f). Each of the alcoves is flanked by side pillars originally decorated with figural motifs of which faint traces were recorded on discovery, as is the case with the alcoves' lateral and back walls where the chamberette's Graeco-Egyptianizing decoration is on display: sacrificial scenes involving

local (Isis and Osiris) deities; birds and floral motifs; a mummification scene (of Osiris) involving Anubis; other local deities, such as the ibis-headed Thoth and the falcon-headed Horus, are depicted while holding an *ankh*. The sarcophagi had round handles simulated in relief and were painted figural motifs and funerary *stelae*. On discovery, an extant fragment of a Greek epitaph (ΣΑΠΦΩ) was recognizable on the façade of one of the sarcophagi. Considering the structural and decorative analogies with nearby hypogea of the Roman period, the Sporting hypogeum, contiguous with that excavated at Tigrane Pasha Street (site 153), would be datable c. the 1st-2nd century AD. Successive modification is signalled by violating *loculi* cut into the back walls of the chamberette's sarcophagus-alcoves.

Site 153: Tigrane Pasha (Port-Saīd) Street

Map V5; Figure 285

Hypogeum: Cleopatra [Roman]

In March 1952, during the digging of foundations for a new building at Tigrane Pasha (present-day Port-Saīd) Street, a rock-cut hypogeum was accidently discovered (Adriani 1956b: 63-86; 1966a: 145-146, Catalogue Number 91; 1966b: Tavola 66, Figures 223-224, Tavola 67, Figures 226-227, Tavola 72, Figure 239). The GRM excavations were directed by Achille Adriani assisted by Victor Ghirghis (deputy and conservator) and Badie Abd el-Malek (draughtsman). The salvaged section of the hypogeum was partially dismantled to be reconstructed eventually at Kom el-Shuqafa (site 53), for conservation *in situ* was not possible. On discovery, it was accessible via a staircase that led into a narrow vestibule with two burial-spaces opening at either end (Figure 286). On the left, an almost rectangular *loculus*-chamber (3.50 x 2.30 m) had only been partially excavated. At the opposite end, opened a better-preserved *triclinium*-like chamberette (2.20 x 2.25 m). The latter comprised three alcoves cut into the back and side walls. Each of the alcoves had a funerary sarcophagus partially carved out of the rock. A Graeco-Egyptianizing setting is enhanced by the chamberette's illustrative painting programme evidently on display: vegetal motifs; *uraeus* serpents; winged solar discs; sphinxes; local deities (Horus and Anubis); four pilasters with Ionized capitals marking the corners. Mythological scenes on the back wall of all three alcoves exhibit a sequence narrative of the death and mummification, resurrection, and apotheosis of Osiris. The ceiling at Tigrane Pasha features one of the medusas excavated to date in Alexandria (sites 50, 53f, 114). The gorgon appears here within an *emblema* surrounded by intricate sets of volutes branching off four principal stems rendered as if emerging from the Ionized pseudo-pillars at each of the chamberette's corners. Inserted among the entwined volutes are *cervidae*, felines, and eagles, symmetrically arranged. Successive modification is signalled by violating *loculi* cut into the lateral walls of the central sarcophagus-alcove.

The structural design of the Tigrane *triclinium*-like chamberette (analogies: sites 49a, h, 53f, 152, 157b), its sarcophagi of the ληνός type (having the shape of a bathtub: a developed form of the Hellenistic κλίνη-sarcophagus), and the predominant Graeco-Egyptianizing setting suggest a possible construction date c. the first two centuries of the Roman Principate. The GRM salvage campaign in 1952 shows the partially excavated funerary structure to have formed part of a larger subterranean complex of hypogea already violated at the time by the bulldozers of the modern developers. The hypogeum at Tigrane Pasha is to be considered, therefore, within a wider context that includes contemporary encounters on the coastal belt, from Sporting to Sidi Gaber: approximately, the urban zone within the seashore and the tramline (sites 151-152, 154, 157a-b).

Site 154: 'Terrena di Cleopatra'

Map V5; Figure 285

Hypogeum: Cleopatra [Roman]

In 1912, a hypogeum was accidently discovered, along with remnants of other funerary structures pertaining to a largely destroyed complex, at the 'terrena di Cleopatra, fra l'accampamento di Mustafa Pasha (site 165) e il cimitero musulmano di Sidi Gaber' (Adriani 1966a: 146, Catalogue Number 92; 1966b: Tavola 67, Figure 225; Breccia 1912d: 222-228). The reported rock-cut hypogeum (Figure 287), partially built of stonemasonry, included a *loculus*-chamber (1) (4 x 1.90 m, height: 2.70 m; vault ceiling) with the entrance formed by a horizontal architrave (width: 1.50 m) upon two pillars (height: 3.30 m). This main chamber, constructed of hewn blocks of limestone coated with a layer of plaster, had two rows of rock-cut *loculi* on either side wall; those of the lower row were cut in part below the floor level. On discovery, painted decoration, such as Isis next to a mummified body, and festoons, and epitaphs inscribed in Greek and Latin, were recognizable on the *loculus*-closing slabs. A second *loculus*-chamber (2) (4.10 x 1.90, height: 2.10 m; vault ceiling) had three rock-cut *loculi*, two into the back wall and one into the right wall. A largely collapsed compartment (3), accessible through an arched passageway, opened on a wall built entirely of stonemasonry. A multi-storey structure is indicated by the remains of a very steep staircase (1') communicating with underlying compartments (inaccessible). Judging by the recorded mode of construction, epigraphy, and the Egyptianizing features of decoration, this surviving section of a violated complex of hypogea would be datable to the Roman period. Adriani specifies the

2nd century AD as a possible date of construction, laying emphasis on analogies with Hermann Thiersch's Gabbari Grab (I) (site 47c).

Site 155: Casino Maxim, Farouk I Street

Map V5; Figure 285

Hypogea: Cleopatra [Ptolemaic]

In February 1938, during construction works carried out by the technical services of the Municipality of Alexandria, a subterranean complex of at least four hypogea was accidently discovered at the former Casino Maxim on Farouk I Street: a point on the Corniche, for 'Farouk I' was used at the time to denote that segment of the Corniche extending to the east of el-Silsileh, to el-Mandarah; whereas the segment to the west of el-Silsileh, to el-Anfushy, was known initially as 'Abbas Helmi II' then 'Queen Nazli'; the entire seafront is presently designated 'Tariq el-Geish/July 26th' (Adriani 1940a: 124-126; 1966a: 121-122, Catalogue Number 73, 127-128, Catalogue Number 82; 1966b: Tavola 41, Figure 157, Tavola 47, Figure 177). Hypogeum (I), the better-preserved within the largely collapsed complex (Figure 288), was accessible via a staircase that led into a rectangular vestibule (1) with two *loculi* cut into one lateral wall, a shallow niche cut into the back wall, and a bench carved out of the rock. A court (2) was accessible from the vestibule through a wide passageway flanked by two partially preserved Doric half-columns. Two burial-spaces opened on the court's left and back walls respectively: a *loculus*-chamber (3) with nineteen *loculi* cut into the walls and a rock-cut bench as that met in the vestibule; a partially excavated chamber (4) retaining an extant *loculus*. Of Hypogeum (II), only a rectangular *loculus*-chamber had survived. The remaining section of Hypogeum (III) (Figure 289) included a long access-staircase, a vestibule with an apse-like recess cut into the back wall, where the mouth of a small well was found, and a *loculus*-chamber featuring fifteen rock-cut *loculi*. A fourth, conjectural hypogeum is signalled by a row of excavated *loculi* partially immersed in the seawater, next to the vestibule (1) and court (2) of Hypogeum (I).

Contextual associates recovered from several *loculi*, basically Hellenistic oil lamps and terracotta figurines of the Tanagra type, date the collective complex to the Ptolemaic period. The assigned chronology is strengthened by the use of the Doric order in the passageway from the vestibule to the court, and by the axial plan of the original setting of Hypogeum (I), where *loculus*-chamber (3) seems to represent successive modification. It should be mentioned that the funerary complex in question is contiguous with that inspected by Hermann Thiersch at Sidi Gaber during Expedition Ernst Sieglin and reported by him shortly after (site 156), thus suggesting the presence of a cluster of Hellenistic hypogea excavated into the suburban coastal plateau, towards the seashore, at Cleopatra, Sidi Gaber, Mustapha Pasha (site 160), and Stanley (site 161).

Site 156: 'Am meer'

Map V5; Figure 285

Hypogeum: Sidi Gaber [Ptolemaic]

In May 1901, during Expedition Ernst Sieglin, Hermann Thiersch recorded a rock-cut hypogeum 'anderthalb stunden östlich von Alexandria, hart am meer' ... reachable in 20 minutes 'wenn man von Sidi-Gaber, einer der ersten stationen der Ramlehbahn, sich nordwärts wendet (map V5), westlich von der großen, halb verlassenen Kaserne Mustafa (site 165), in einer kleinen bucht, halb versteckt hinter dem hohen ufer' (Adriani 1966a: 138-140, Catalogue Number 88, Figures P, Q, R; 1966b: Tavola 59, Figure 206, Tavola 60, Figures 209-210; Thiersch 1904: 1-6, Tafeln I-III). Already partially submerged at the time of Thiersch's visit, the hypogeum, in fact one last vestige of it, seemed recognizable to Achille Adriani in 1938 (site 155). Its initial setting comprised (Figure 290): three spaces (I, II, III) cut out of the cliff on the same axis, atop which stood 'ein posten der küstenwache'. A poorly preserved open-air *atrium* (I) (5.10 x 6.15 m) led into a rectangular antechamber (II) (3.10 x 5.02 m) via a one-metre-wide passageway. The antechamber (II) had stuccoed low benches carved out of the rock and painted light blue. Its walls were decorated in zones: a pseudo-plinth partially concealed by the rock-cut benches; orthostats simulating alabaster in dark yellow, grey, and green; an intermediate band in black; a wide band in red; a projecting cornice; an upper band in turquoise; a crown of silver-greyish tendrils on a purplish band, below an Ionic *kyma* in black and white. Four niches were cut into the front and lateral walls: two, slightly wider, flanked the entrance, and a tapering one (0.38 m deep) into either side wall. They had frames of purple and white bands, with the interior, apparently featuring figurative motifs, painted Ionic pilasters at the corners. The vault ceiling was painted false drawers in yellow, grey, violet, and reddish-brown. The nucleus (III) of the hypogeum was reachable through a Doric passageway flanked by partially fluted (having a smooth lower surface) engaged columns in stucco. A κλίνη-alcove (III) (1.35 x 3 m) was decorated, as the antechamber, in zones: a white band reaching above the level of the cushions; festooned garlands on a wide turquoise band delimited by Ionic *kymai* and flanked by simulated Ionic pilasters. At the centre, the interior of a rectangular *loculus*-niche was decorated with garlands in *taeniae*. Despite not being reproduced in August Thiersch's 1904 *tafeln* II-III, given their poor state of preservation already by the time of Expedition Ernst Sieglin, a golden shield and a helmet

with a high crest barely traceable on either side of the *loculus*-niche suggest a military affiliated deceased (site 47f). The vault ceiling exhibited a sail represented as if swollen by the wind. On the largely deteriorated façade of the κλίνη, Hermann Thiersch noted the faint traces of a figurative, probably soldierly scene involving anthropomorphic figures and oval shields: warriors and Amazons (Thiersch's conjecture). Giuseppe Botti, who first reported the hypogeum in 1893, following a brief inspection made a year earlier, relates: 'presso il Campo de' Cesari (Sidi Gaber), al mare, e la barbarica distruzione di un dipinto figurante il combattimento delle Amazoni nel fregio del sarcofago della cella principale' (Botti 1893: 14). Overall, the decorative scheme of such a unique κλίνη-alcove seems allusive in essence – the back wall: a balustrade; the ceiling: a *baldacchino*.

Thiersch's hypogeum, not isolated, would have formed part of a larger complex of contiguous rock-cut sepulchres, judging by the extant remains represented in Thiersch's 1904 plan: compartments (VI) and (VII) (the latter label is added by the author). Of a similar axial arrangement is another section (I, IV, V) of the conjectural funerary complex. Structural design thus indicates an initial phase of construction datable c. the late 3rd-early 2nd century BC. The deceased might have been a senior military officer under Ptolemy IV Philopator or Ptolemy V Epiphanes (site 150b: el-Ibrahimiya mercenaries' *columbarium*). Successive modification is attested by violating *loculi* added onto the lateral walls of all four chambers (II, III, IV, V), with one *loculus* violating the in-zone decoration of the κλίνη-alcove's back wall. This group is contextually associated with the funerary complex excavated in 1938 by Achille Adriani at the nearby Casino Maxim (site 155).

Site 157: Sidi Gaber Avenue (a); 'fra Maréchal French e Hatassou' (b)

Map V5; Figure 285

Hypogea: Sidi Gaber [Roman]

(a) In March 1937, while digging foundations for a new building (No. 47) at Sidi Gaber Avenue, the remains of a hypogeum were accidently discovered (Adriani 1940a: 123, Figure 57). It comprised two burial-chambers (2.50 x 3.50 m; 2.50 x 4.50 m) with their walls occupied by rock-cut *loculi* regularly arranged into two rows. Traces of a plaster coating were recognizable on discovery, as well as a richly moulded dentilled cornice worked out in relief. The funerary structure, already largely deteriorated, had one of its chambers completely collapsed. Contextual finds on site, mainly glass vials, clay vases, terracotta lamps and figurines, and three miniature terracotta altars of the horned type, date the hypogeum in question to c. the 1st-2nd century AD.

(b) In 1950, a subterranean complex of hypogea was accidently discovered at Sidi Gaber, 'in un terreno situato fra la Rue du Maréchal French e la Rue Hatassou' (Adriani 1956a: 40-41). Of the much-violated complex, one hypogeum (II) featured a *triclinium*-like chamberette comprising three funerary alcoves. Each of the alcoves was found almost entirely occupied by a sarcophagus of the ληνός type (Figure 291) (*triclinium*-like chamberettes: sites 49a, h, 53f, 152-153; sarcophagi of the ληνός type, having the shape of a bathtub: site 153). The overall architectural setting thus shows a complex of hypogea contemporary with analogous remnants excavated at Sporting (site 152), Cleopatra (sites 153-154), and Sidi Gaber (site 157a).

Site 158: Abu el-Nawatir (a); Sidi Gaber Mosque and el-Sheikh Tram Station (b); Tiba Street (c)

Map V5; Figure 285

Sepulchres: Kafr Abdo (a); Sidi Gaber (b); Cleopatra (c) [Roman]

(a) In the 1920s, a number of sepulchres were accidently unearthed during levelling works carried out at the Peghini property, on the southern slopes of Abu el-Nawatir: the present-day Kafr Abdo, to the south of Abu Qir Road (Breccia 1932: 20-23). The encounters were basically fragments of limestone sarcophagi simulating an *opus isodomum*, and *stelae* bearing funerary epitaphs. Contextual information acquired from the inscriptions (engraved and painted) shows the deceased as indigenous Greeks and Hellenised Jews. The coinage recovered on site along with other terracotta associates (oil lamps and lanterns) dates these interments to c. the 2nd-3rd century AD: contemporary with the reigns of Antoninus Pius, Commodus, and Caracalla. Considering the morphology of the terrain (now levelled), and the proximity of the recorded findspots to Nikopolis, it is possible that the mounds extending to the south of the coastal settlement would have been utilized in imperial times to receive interments (site 158b). Two partially preserved funerary epitaphs displaying the biblical names 'Μαριάμη' and "Ιώσεφος' attest the presence of Hellenised Jews and/or early Christians among the reported burials at Abu el-Nawatir:

ΜΑΡΙΑΜΗ ΙΩCΕΦΕ ΑΩΡΕ
ΧΡΗCΤΗΧΑΙ ΧΑΙΡΕ L I
ΥΑΘVΡ [.] Η.
ΡΕLΛΓΚΙΑΡ
Ω.

During recent salvage excavations carried out by the local department of antiquities, several forms of burial were recorded at Abu el-Nawatir: ossuaries (most probably in association with Jewish interments);

cinerary urns (cremation); tombs built of fired brick, with semicircular vaults. At the site of Khalil el-Khayat, labelled Kafr Abdo 1, the Greek practice of *enchytrismos* is rather evident: the skeletal remains of at least twenty infants were found buried in late Roman Gazan *amphorae* datable to the late 4th-early 5th century AD (Abd el-Maguid 2016: 66; Sabah 2012: 253-274).

(b) A number of Latin epitaphs inscribed on funerary monuments were occasionally recovered at Sidi Gaber, in the vicinity of the mosque and tram station of el-Sheikh, since the 19th century (Botti 1898b: 115-118; Neroutsos 1875: 50-51; 1888: 85-86, 119, Numbers 46-47, 121-122, Number 49). Pertaining to a chronological range spanning the 1st to the 4th century AD, the epitaphs provide evidence for a military cemetery contiguous with the *castrum Romanum* situated before Nikopolis (site 165). The majority of those interred west of the camp were in fact members of the Legio II Traiana Fortis stationed to the east of Alexandria:

(i) A funerary *stela* of white marble, datable c. the 3rd century AD; associated with the Legio II Traiana Fortis, Cohors IIII; discovery date: 1873.

DIS . M . LABERIVS
FORTVNTVS . M.
LEG . II . T . RO . COH IIII
AST . PRI . MIL A . XXIII
EQVINVS POMPEIANVS
OPTIO . SECVNDVS ERES
B E M . M . F . ECI.

(ii) An epitaph painted in red ochre, datable c. the 1st-2nd century AD; context of recovery: within a hypogeum; discovery date: 1880.

Q. VALERIO.
TRIBVNVS MILITVM
VIXIT ANNIS XXXVIII
MILIT . ANN . XVII
FLAVIVS M . DONATVS
POSVIT.

(iii) An inscribed *cippus* datable c. the 4th century AD; context of recovery: within a hypogeum; discovery date: 1880.

C . DAMIANO BAZILIVS ET EREDES PER PROCVRATORES EIVS.

(c) Recently, the salvage excavations of the local department of antiquities at Tiba Street had revealed three forms of burials on site (Abd el-Maguid 2016: 66). Besides the shaft-and-chamber tombs and the cylindrical containers intended to receive infant-interments, there were fosse graves dug into the rock and covered with stone slabs. In one case, a funerary *stela*, reused as a closing slab, had a Roman legionnaire represented in relief while making his libation. The five engraved lines at the base show the depicted figure as a member of the Legio II Traiana Fortis, thus providing further evidence for the existence of a military cemetery at Nikopolis.

Site 159: Rodosli Street, off Sidi Gaber Avenue; east of Sidi Gaber el-Sheikh Tram Station

Map V5; Figure 285

Sarcophagi: Sidi Gaber; Mustapha Pasha [Roman]

In May 1936, during the construction of municipal garages for the Alexandria-Ramleh tramline at Mustapha Pasha, a marble sarcophagus was accidently discovered about 1.50 m below the street level (Adriani 1940a: 127). On the façade, three garlands with pendant grapes are supported by four dancing figures: two *potti* in the middle and two satyrs in a περίζωμα at either end. Within the central garland a gorgon appears; the laterals display a satyr and a maenad in profile. On the short sides are two female heads carved out in profile within garlands supported by semi-Βουκράνια. The posterior was not worked, suggesting a sarcophagus intended to be placed against a wall. No traces of associated constructions of masonry were found on site. The sarcophagus (height: 1.30 m, 0.85 m without the lid, length: 2.22 m, width: 1.05 m) might have been recovered from a dismantled or quarried hypogeum. It is datable, judging by the decorative elements on display, not later than the 2nd century AD. It seems analogous to another sarcophagus of marble with a similar garland decoration pattern (height: 1.80 m, length: 2.21 m, width: 1.07 m; Graeco-Roman Museum, Inventory Number 23897) (Adriani 1934: 33-34). The latter, accidently discovered 500 m to the west, at Rodosli Street, off Sidi Gaber Avenue, while digging foundations for a new building, pertains to the sarcophagi of the Roman period excavated sporadically within Sidi Gaber and Mustapha Pasha.

Site 160: el-Moaskar el-Romani

Map V5; Figure 285

Necropolis: Mustapha Pasha [Ptolemaic]

A Complex of Hypogea: Achille Adriani (1933-35); miscellaneous (1983-85; 1994; 2003)

In 1933, during levelling works in preparation for the construction of a military football field adjacent to the British barracks at Mustapha Pasha, the summit of a Doric architrave was accidently unearthed. In fact, the accidental encounter pertains to the pseudo-

peristyle of what became known as Hypogeum (I) (see *infra*, the GRM hypogea I-VII) (Adriani 1936: hypogea: 11-66, architecture: 67-132, topography: 133-134, finds: 135-168, conclusion: 169-176; 1966a: 128-138, Catalogue Numbers 83-87; 1966b: Tavole 48-59). An extended salvage excavation was subsequently carried out on site under the supervision of Achille Adriani, then director of the Graeco-Roman Museum, assisted by Giovanni Peruto (chief-on-field), Banoub Habachi (museum service), and Orazio Abate (draughtsman): excavation took place from September 1933 to July 1934; restoration continued until May 1935. The outcome was a complex of at least seven partially preserved hypogea along the western side of el-Moaskar el-Romani (the Roman Camp) Street, the section of it immediately to the south of the present-day TOLIP Hotel Alexandria (Figures 292-293). The vertical arm of the L-shaped complex (that containing the hypogea labelled III-VII) was excavated during the construction of a transversal street (the future el-Moaskar el-Romani) to link Lord Kitchener (present-day Ahmed Shawqi-Ahmed Kamal) Street to the Corniche. The vestiges of the seven hypogea investigated at the time by the GRM mission would have formed part of a larger complex extending eastwards to Ruffer (Syria) Street and beyond, towards Ceccaldi's analogous Doric monument at Stanley Bay (site 161). Levelling works carried out to the south of hypogea (I) and (II), down to Lord Kitchener Street, indicate a hypogeum-free area of Roman hydraulic installations probably associated with the *castrum Romanum* situated before Nikopolis (site 165) (Figure 294). The hypogea labelled (I-VII) antedate such installations (Figure 295). They are datable c. 250-180 BC. The assigned range relates to the initial setting, whereas successive use and modification extend possibly to the end of the 2nd century BC – hypogea (I) and (III): c. the second half of the 3rd century BC; Hypogeum (II): c. the first quarter of the 2nd century BC. The Mustapha Pasha hypogea are thus more or less contemporary with the Hermann Thiersch hypogeum at nearby Sidi Gaber (site 156). In all, the distributional patterns of identifiable funerary structures, from Camp Caesar and el-Ibrahimiya to Stanley, past Sporting, Cleopatra, Sidi Gaber, and Mustapha Pasha, emphasize the exploitation of the suburban coastal plateau to the east of the city to receive interments in the Ptolemaic period (sites 150, 155-156, 160-161) and yet during the Principate (sites 150-154, 157-159).

It should be noted that the architectural setting as seen today at Mustapha Pasha funerary complex is, to a large extent, the product of extensive restoration works carried out in 1934-35 under the supervision of Achille Adriani, who decided to give the excavated ruins a rather glamorous appearance:

> *A propos des restaurations exécutées, des explications ne seront pas inutiles pour les amateurs acharnés de ruines qui nous reprocheront, peut-être, d'avoir trop restauré, d'avoir profané l'ancien avec le béton et même avec le béton armé! Voilà donc les deux raisons qui nous ont guidé dans nos travaux de restauration: I) conservation et protection des monuments; II) opportunité de leur rendre, là où les vestiges nous permettaient de le faire sans travailler de fantaisie, leur aspect originaire. Les deux raisons sont si intimement liées entre elles que je voudrais dire que la deuxième est une conséquence nécessaire de la première. Protéger c'est enforcer, c'est remplacer les parties écroulées, c'est couvrir.*
>
> (Adriani 1936: 12)

Hypogeum (I) (Figure 296) encompasses a large courtyard with seven branching-off compartments and an access-staircase of two branches and an intermediate landing (B1: length: 4.50 m, width: 1.59 m; B2: length: 1.46 m, width: 1.05 m; vault ceiling). At the passage to the second staircase branch (B2), a deep incision into the stuccoed wall signals the interlock of a doorframe. The courtyard (1) (6.45 x 7.25 m; preserved height: 5.70 m) is accessible from the NW. corner via the Ionic doorway of the second staircase branch (B2). It features a Doric pseudo-peristyle: a 4 x 4 colonnade of partially fluted engaged columns with a smooth lower surface; the corners are marked by the heart-shaped type. The floor is basically formed by a layer of battered earth (50 cm) laid upon the bedrock. At the centre of the courtyard, a quadrangular sacrificial altar of stonemasonry (0.96 x 1.05 m, height: 0.84 m), with an adjacent footboard, had traces of the last act (ashes and burnt ossicles), as noted on discovery. The courtyard's southern wall features a richly decorated architectural façade in polychrome, comprising three tapering intercolumnar passages. The latter are flanked by side pillars with capitals painted a yellowish oval within a red box, surmounted by a projecting triple-frieze (Doric, Ionic, and Lesbian) cornice. They support a plain architrave upon which rests a supressed Doric frieze of red *taeniae* and blue *guttae*, crowned with a moulded triple-frieze cornice as that of the side pillars. The space between the passages and the flanking engaged Doric columns is painted red. Between the triple-frieze cornices of the side intercolumnar passages and the façade's plain architrave are two rectangular openings on either side of a central frieze atop the main entrance to the vestibule (8). The extant painted fresco of the central frieze recalls in concept and style, but not in subject, the lion-hunt frieze of Manolis Andronikos' Tomb (II) at Vergina. In Mustapha Pasha Hypogeum (I), the theme is sepulchral in essence: three cavalrymen in Macedonian costume are accompanied by two standing women, all turning towards an altar that constitutes, along with the mounted figure at the centre (probably the deceased himself), the focal point of a graceful scene. Above, a Doric entablature comprises – from bottom to top – a plain architrave, a frieze of alternating triglyphs and metopes, and a projecting cornice. Oddly, perhaps



expectedly, instead of the conventional triangular pediment, an Attic wall, partially built of masonry atop the structure, features a set of jutting bands. The local element is present, as attested by the six miniature sphinxes upon upright pedestals on either side of the intercolumnar passages (analogies: site 44: el-Anfushy Hypogeum II). The courtyard's western wall has an Ionic doorway as an access-point and two *loculi* cut at the floor level. Both *loculi* were violated in attempting to access the westernmost part of the contiguous vestibule (8). A footboard precedes the *loculus* on the left. On the opposite side, the eastern wall features three *loculus*-alcoves (5, 6, 7). Whereas the lateral intercolumniations of the northern wall open onto two irregularly-cut chamberettes (2, 4). At the centre, a *loculus*-alcove (3) is preceded by a basin coated with plaster (1.50 x 1.75 m, depth: 0.40 m).

Chamberette (2) (4.80 x 2.16 m, height: 4 m; vault ceiling with a light-shaft: 0.90 x 0.70 m) is accessible via the northwestern intercolumniation, through a passageway flanked by two side pillars. The interior walls are partially decorated in zones: a plinth in red (0.16 m); white orthostats with a yellowish framing (0.96 m); an intermediate band of rectangular false plates in red, delimited by engraved lines (0.22 m); a wide band in white (1 m), bordered by a thin framing; a second band in white (1 m), within which six niches were opened at the same height, above the cornice. The niches include five small ones (0.73 x 0.44 to 0.47 m, depth: 0.25 m) – three cut into the northern wall (Ionic framing) and two into the southern wall (Doric framing) – and a larger one into the western wall (0.95 x 0.66 to 0.68 m, depth: 0.25; Doric framing). On the southern wall, a large bird with spread wings, represented in dark blue, seemed recognizable on discovery. Other faint traces of figurative motifs were recorded within one of the niches. At the innermost part of the chamberette, a low platform is occupied by a deep well dug into the rock (0.90 x 0.80 m, depth: 7 m), with descending recesses into its walls and a plastered parapet of masonry on either side of its mouth (only the one to the left is preserved). Associated with the well is a miniature basin at the end of the northern wall, connected by means of a terracotta conduit to the pair of basins in the neighbouring alcove (3), which communicate, in turn, with that outside at the courtyard. The hydraulic installations pertaining to this section of the hypogeum indicate a cultic function for chamberettes (2), (3), and (4), possibly in association with libation. At some point, three *loculi* were added onto the northern wall of chamberette (2), violating the plaster coating of the initial setting.

Alcove (3) (1.60 x 2.20 m, height: 2.50 m; irregularly-cut flattened ceiling) seems to have been originally analogous to the alcoves of the eastern wall (5, 6, 7), judging by its plan. Modification includes a considerably raised floor: 0.95 m higher than the floor of the courtyard. At the same level are the two above-mentioned basins below which two contiguous niches (depth: 3.02 m) open almost at the level of the floor of the courtyard. These would have served as deposits for objects in the enactment of funerary rituals, as suggested by the recovered terracotta pots with burnt surfaces. On the eastern wall, a painted θόλος represents a surviving vestige of the alcove's figurative decoration. A large rock-cut *loculus* was opened at the centre of the alcove's back wall to receive interments.

Chamberette (4) (3.15 x 2.12 m, height: 3.52 – 4.15 m; irregularly-cut sloping ceiling) is accessible through a passageway opening at the northeastern intercolumniation. The walls are decorated in zones: a red plinth (0.12 m); orthostats in ivory white simulating marble, with a yellowish framing (0.92 m); a black strip (0.16 m); a second band in ivory white (0.73 m); a stuccoed cornice; an upper band in white. Two *loculi* cut into the back wall violate its painting decoration. One of them had retained its closing slab. Richly moulded as a *pseudo-porta* around what was probably a figurative scene, the stuccoed *loculus*-closing slab is an explicit testament of architectural illusionism within Alexandrian sepulchres. On the same wall, above the *loculi*, traces of a head in profile and a sailing boat seemed barely recognizable on discovery, as were other drawings on the eastern wall.

Alcoves (5, 6, 7) (a homogeneous set: 1.30 x 1.45 m) added within the intercolumniation of the courtyard's eastern wall to serve as vestibules to three large *loculi* cut into the back walls. The *loculi* had sloping roofs and rectangular openings closed with tapering false doors. Fine stucco of a richer, rather lively polychrome was applied to decorate the alcoves' walls in zones. Alcove (6): a plinth in purplish-red; orthostats in blue; a bluish-black band; a wide band in dark red speckled to simulate porphyry; a cornice in white; an upper band in white, terminating with a red strip. Alcove (7): a plinth in purplish-red; polychrome orthostats with false slabs in relief, simulating marble; a narrow band in brownish-black; an intermediate band in yellowish-gold; a cornice in white; an upper band in white, terminating with a red strip. At some point, the floor of all three alcoves (5, 6, 7) was slightly raised and covered with a conglomerate pavement.

Vestibule (8) (9.18 x 3.04 m, height: 3.90 m; vault ceiling) is accessible via the intercolumnar passages of the courtyard's southern wall. Its in-zone decoration is almost identical to that of chamberette (2). The architectural framing of the three passageways seems absent on the interior of the vestibule's northern wall. On the opposite side, the southern wall serves as a façade of a κλίνη-alcove (10). The latter is apparently the nucleus of the hypogeum. At either side of the

alcove's entrance, an asymmetrical Doric doorway opens below a miniature window. A number of rock-cut *loculi* were added successively within the vestibule: four into the western wall, three into the eastern wall, and two at the western end of the northern wall. Low benches of masonry were built below the rock-cut *loculi* of the lower row at either end of the vestibule.

Chamberette (9) (2.60 x 3.40 m) was found already largely destroyed on discovery. Traces of a *loculus* are evident on the eastern wall. The hypothetically reconstructed κλίνη-alcove (10) is conjectural from the general plan of the hypogeum. Its remnants include two Corinthian pillars flanking the entrance, a footboard at the threshold, fragments of the western wall with faint traces of painted decoration, and the leftovers of a stucco painted in zones of which only a red plinth, light-green orthostats, and an upper band in yellow were recognizable on discovery. Chamberette (11) (3.05 x 3 m) had *loculi* cut into the southern and western walls. Onto the stuccoed left wall of the entrance, Greek names, listed in two vertical rows, are incised.

Hypogeum (II), of an axial arrangement (Figure 297), is accessible via a staircase (8 x 1.55 m, height: 3.20 m; vault ceiling) leading into a rectangular landing (2.47 x 1.53 m) to a short, westwards branch of three steps, which ends on a Doric doorway. The courtyard (1) (6.25 x 6.70 m) has an architectural façade on the southern side, represented by two Doric columns between a pair of *antae* marking the NE. and NW. corners of an intermediate portico (2). Above the façade, the Doric entablature features – from bottom to top – a plain architrave, a frieze of alternating triglyphs and metopes, and a projecting cornice. It extends along the other sides of the courtyard, below a curtain of stonemasonry. An off-axis sacrificial altar of masonry (1.04 x 0.89 m, height: 1.09) had the remains of the last act (burnt animal bone) yet preserved on discovery. Immediately to the south of the altar is a footboard similarly of masonry (0.68 x 0.48 m, height: 0.50 m).

The intermediate portico (2) (6.25 x 3.20 m, height: 4.50 m; vault ceiling) is formed by two pairs of partially fluted Doric columns with a smooth lower surface (diameter of the northern pair: 0.56 m, the southern pair: 0.66 m, height: 3.59 m; stylobate: 0.10 m). Violating rock-cut *loculi* were added on either side wall of the portico: two into the eastern wall and one into the western wall. The antechamber (3) (5.40 x 5.30 m, height: 5.25 m; vault ceiling) contains two plastered benches (4.70 x 0.97 m, height: 0.44 m) painted polychrome false slabs simulating marble. The benches are fixed alongside the antechamber's lateral walls, where successive rock-cut *loculi* are irregularly arranged into rows: nine into the eastern wall and four, recognizable on discovery among other violated ones, into the western wall. In front of the alcove opening on the antechamber's back wall, a *trapeza* (1.40 x 0.70 m, height: 0.67 m) is built of masonry coated with stucco to simulate alabaster. A largely collapsed κλίνη-alcove (4) (2.50 x 1.30 m, estimated height: 3.50 m; vault ceiling) is accessible via a passageway flanked by two side pillars (height of the better-preserved: 2.73 m) crowned with Corinthian capitals and painted a layer of stucco simulating alabaster. Above, a dentilled cornice extends atop a double lintel. The alcove itself is occupied by a funerary κλίνη of which only the lower fragment survives. On the upper part of the alcove's plastered walls are faint traces of a band painted floral or animal motifs.

Another κλίνη-alcove (5) (3.25 x 2.15 m, height: 2.50 m; vault ceiling), opening at the courtyard's SW. corner, is accessible through a passageway flanked by two side pillars. Inside, a κλίνη-sarcophagus (2.11 x 1.05 m, height: 1.75 m; façade: 2.75 x 1.22 m) is decorated with a mattress and cushions simulated in polychrome, above an intermediate frieze and a lower curtain with recurring images of *erotes* and *psychai*. On the alcove's walls were faint traces of painted stucco. At the NW. corner of the courtyard, a rock-cut annex (6) (1.45 x 1.10 m) encloses the mouth of a well (depth: 5.50 m) dug into the rock. Partially built of masonry, the well is coated with rows of stone blocks. A chamber (7) (5 x 4.15 m), already found largely destroyed on discovery, opens on the courtyard's northern wall. Remnants of two high benches of coarse masonry are on either side of the chamber. Terracotta pots bearing signs of regular exposure to fire, and other charred remains found scattered on one bench, indicate a space intended for ritual ceremonies: the preparation of funerary meals that were apparently consumed at the opposite end, within the antechamber (3) of the main κλίνη-alcove (4), that is within the section of Hypogeum (II) constituting the nucleus of its initial setting.

Hypogeum (III), of an axial arrangement (Figure 298), is accessible via a staircase of ten steps (4.60 x 1.10 m) leading into a landing followed by a shorter branch of four steps, which ends on a passageway. A courtyard (1), larger than usual (9.17 x 9.06 m, maximum preserved height: 3.27 m), has shallow trenches bounded by limestone slabs, hence the possibility of a spacious open-air garden. In the southwest, a low bench is fixed near the main entrance. Miniature staircases, cut at either side, enable communication between the courtyard and the antechamber (6) by means of two L-shaped corridors (5-5'). An arched opening with a parapet gives access to a confined space (1.30 x 0.90 m, height: 1.50) with walls coated with plaster: perhaps, a water reservoir installed at the NW. corner of the courtyard.

A semicircular recess (2-3) opens on the southern wall of the courtyard. It is accessible via two successive passageways already found largely destroyed on

discovery. Of the first remained two pillars painted to simulate alabaster, as they supposedly supported an architrave. The inner pair of pillars in polychrome simulated marble displaying red patterns, above which a plastered lintel in white was decorated with a Doric *kyma* in yellow, red, and blue. Between both passageways, two intermediate annexes cut into the lateral walls were occupied by benches built of masonry, with a pseudo-construction in *opus isodomum* painted on their plastered walls. In the innermost section of the compartment, the curved bench of an *exedra* (height: 0.55 m) is coated to simulate variegated marble of yellow-brownish veins featuring three depicted gazelles. The wall rising above the bench is painted in zones: a plinth in red; orthostats simulating alabaster; an intermediate band in red; an upper band in white. Towards the centre of the apse itself, slightly to the left, two shallow niches had been cut probably to receive *ex-votos*. The one at the centre (1.27 x 0.70 m, depth: 0.75 m) had a frame executed separately of limestone then inserted. Traces of the original paint within that niche were recognizable on discovery. In fact, the ceiling was rendered as a small carpet. Above both niches, a dentilled cornice, of which only a projecting fragment remains, ran along the upper part of the apse wall.

A pair of staircases (0.66 x 3 m, height: 1.65 m) led through narrow corridors (5-5') up to the raised section of the hypogeum: compartments (4), (6), and (7). The largely collapsed architectural façade (4) on the courtyard's northern side (8.80 x 1.90 m, height: 1.50 m) is set upon a podium and represents a pseudo-Doric colonnade with five intercolumnar passageways of which the two at either end are painted false doors. Traces of a polychrome painting were noted on the stuccoed façade, as were geometric motifs on the false doors. All six engaged columns are partially fluted, having a smooth lower surface. The outermost ones are reduced to quarter-columns. Above, a hypothetically reconstructed Doric entablature comprising – from bottom to top – a plain architrave, a frieze of alternating triglyphs and metopes, and a projecting cornice is conjectural. The antechamber (6) (4.25 x 5 m), with a sacrificial altar (1.18 x 1.18 m, height: 0.56 m) and a footboard of masonry, was, as the architectural façade, conjectural from the extant fragments encountered on discovery. Through a wider passage opening on the antechamber's back wall, of which only the side pillars were preserved, an alcove (7) (3.10 x 2 m) is accessible. The latter is occupied by a κλίνη-sarcophagus (3 x 1.16 m, height: 1.25 m) on a low platform preceded by a footboard. On discovery, traces of polychrome painting were recognizable on the alcove's walls, the mattress and cushions of the κλίνη-sarcophagus, and the decorative (floral and figurative) bands extending lengthwise between the worked legs of the sarcophagus.

Hypogeum (IV) (Figure 299), situated immediately to the north of Hypogeum (III), is accessible via a staircase leading into an L-shaped ambulatory (1). A quadrangular Doric peristyle (2) (5.10 x 5.10 m) has four corner pillars and six partially fluted columns with a smooth lower surface (analogies: site 161: a funerary monument located further to the east, at Stanley Bay). Within the intercolumniation were remnants of walls built of roughly-hewn stone in clay mortar. Almost at the centre of the peristyle, a sacrificial altar of masonry (0.90 x 0.90 m, height: 0.70 m) is placed next to a footboard to the south. About two metres to the north is a circular altar of limestone (diameter: 0.41 m, height: 0.48 m). A rock-cut conduit runs from the staircase landing towards the SE. corner of the peristyle. A rectangular *loculus*-chamber (3) (5.80 x 3.10), to the south of the peristyle, features thirteen irregularly arranged *loculi* cut into the walls. Two *fossés* were dug into the floor, of which one contained a cylindrical sarcophagus-jar of terracotta (infant-interment). Another *in-situ* burial is recorded within a pair of sarcophagus-jars deposited in the central *loculus* of the western wall. West of the peristyle are the remains of a quadrangular basin of masonry (4) (1.18 x 0.95 m, height: 0.80 m) added beyond the SW. corner pillar to serve as a drain. At the northern end of the hypogeum, a chamber in ruins (5) (5.90 x 3.10 m) seems to have been built on the axis of the other constituents (the Doric peristyle No. 2 and the *loculus*-chamber No. 3), suggesting an axial plan for the funerary structure. Other hypogea contiguous with the partially excavated Hypogeum (IV) are glimpsed at the NE. corner, where a passageway, probably dug by tomb robbers, leads to an adjacent compartment found already violated (see *infra*, Hypogeum V).

Proceeding northwards, the GRM mission encountered 'un grand fossé rectangulaire' bounded on the north by a large barrier carved out of the rock (preserved height: 5.50 m). At one end, the remnants of a wall of masonry were recorded. Accordingly, a hypogeum, labelled (V), is conjectured immediately to the north of Hypogeum (IV), in an area extensively exploited by stone quarriers, a fact that justifies the reported 'fossé'. At about 7 m to the north of the above-mentioned barrier, a *sondage* revealed scant vestiges of another hypogeum (VI), as attested by (i) the traces of a masonry wall running east-west, with thresholds, (ii) a section of an access-staircase ending with a passage on the alignment of a largely collapsed wall, and (iii) the capital of a stuccoed Doric column analogous to those at the neighbouring hypogea (I-IV). A possible limit for the funerary complex in question is proposed to the north of Hypogeum (VI), given the negative results from *sondage* (α) (see *supra*, general plan of site: Figure 295). Hypogeum (VII), represented basically by the upper (surviving) parts of a rectangular chamber featuring regularly arranged rows of *loculi*, to the west of Hypogeum (III),

remained, for the most part, inaccessible, being within the contiguous enclosure of the former British barracks at Mustapha Pasha.

In 1983, during the construction of a military residential compound to the west of el-Moaskar el-Romani Street, the remains of a hypogeum analogous to those excavated by the GRM in the 1930s were accidently discovered to the southwest of hypogea (I) and (II) (Adriani 2000: Tavole XXV-XXVI.1-2; Bonacasa and Minà 2015: 155-175; Leclant and Clerc 1985: 339, Number 4b; Rodziewicz 1995: 229, 232, Note 33). Excavations were carried out intermittently by the Egyptian Antiquities Organization (EAO, presently the SCA: 1983-85), Mieczysław Rodziewicz (PCMA, University of Warsaw: 1994), and the Italian Archaeological Mission in Alexandria (University of Palermo: 2003). The partially excavated hypogeum comprises a large Doric pseudo-peristyle (a 6 x 6 colonnade; corner pillars in use) around a spacious open-air courtyard of 140 m^2 with branching-off compartments. Its plan, architectural setting, and recorded findspot indicate a Hellenistic hypogeum that forms an integral part of the neighbouring 3rd-2nd-century BC funerary complex (hypogea I-VII), hence the assigned label (VIII): aka the Great Peristyle Tomb for its vast courtyard.

Site 161: Stanley Bay

Map V5; Figure 285

Funerary monument: Stanley [Ptolemaic]

On the eastern environs of Alexandria, French antiquarian Georges-Colonna Ceccaldi reports on August 1st, 1868:

> *En marchant en avant (eastwards), le long de la mer, on atteint bientôt un monticule de terres couvrant probablement aussi des ruines. Ce tertre nous cache l'extrémité d'un cap. Gravissons-le. Nous dominons les restes d'un petit temple dorique, entièrement déblayé et surplombant presque les flots. Il est séparé par une baie d'un autre promontoire (the opposite side of Stanley Bay) où ne se voit aucun vestige de construction et d'où la vue du sacellum (a miniature shrine) qui nous occupe a été prise.*
>
> (Ceccaldi 1869: 268-272)

Ceccaldi's '*sacellum*: un petit temple dorique', which was first reported in 1865 by German antiquarian Julius Friedländer, became associated among 19th-century antiquarians with relevant cultic as well as sepulchral monuments known primarily from ancient literary sources: (1) the promontory of Zephyrium, the site of a shrine to Aphrodite-Arsinoe; (2) the tomb of Stratonike, the mistress of Ptolemy II Philadelphos:

> *After the canal which leads to Schedia, one's next voyage to Canobus is parallel to that part of the coastline which extends from Pharos to the Canobic mouth; for a narrow ribbon-like strip of land extends between the sea and the canal, and on this, after Nicopolis, lies the Little Taposeiris, as also the Zephyrium, a promontory which contains a shrine of Aphrodite-Arsinoe (1).*
>
> (Strabo, Geōgraphiká: XVII. 1.16)

> *And the second king of Egypt, Ptolemy Philadelphus by name, as Ptolemy Euergetes relates in the third book of his Commentaries, had a great many mistresses, namely, Didyma, who was a native of the country, and very beautiful; and Bilisticha; and besides them, Agathoclea, and Stratonice, who had a great monument on the seashore (2) near Eleusis (a suburban settlement: sites 162, 166); and Myrtium, and a great many more; as he was a man excessively addicted to amatory pleasures.*
>
> (Athēnaios, Deipnosophistaí: XIII. 37)

The remnants described by Friedländer and Ceccaldi are basically the leftovers of a Doric peristyle (10.92 x 7.30 m; 6 x 4 columns, height of columns: 5 m, diameter of columns: 0.70 – 0.80 m at the base; intercolumniation of length – six columns: 1.15 m, intercolumniation of width – four columns: 1.17 m) (Figure 300) (Adriani 1936: 68-70; 1966a: 127, Catalogue Number 81; 1966b: Tavola 47, Figures 176, 178-180; Botti 1898c: 74-75; Botti and Simond 1899: 57-60; Mahmoud-Bey 1872: 66-67; Neroutsos 1888: 87-90). Partially fluted, having a smooth lower surface, the columns, except for two lateral ones erected upon a limestone bulk, stood upon a low stylobate about 0.10 m higher than the ground level. Marking the corners were heart-shaped columns. Within the peristyle, Friedländer recognized the remains of a sacrificial altar yet bearing the bones from the last act. Analogies with the nearby funerary complex at Mustapha Pasha (site 160), as regard to the general plan and architectural setting, suggest a Doric peristyle: a central courtyard with branching-off compartments signalled by rock-cut pits partially filled with accumulated earth (vestiges of *loculi*), and by wells of stonemasonry (funerary cult associates) recorded at short distances from the Doric colonnade. Its relative proximity to the Mustapha Pasha complex backs the notion of a contemporary structure datable c. the 3rd-2nd century BC: perhaps, an eastward extension.

Site 162: Antoniadis Park

Map V5; Figure 313

Hypogeum: Smouha [Ptolemaic]

In 1904, Hermann Thiersch reports:

> *Im schönsten Garten Alexandriens, im Park des verstorbenen Sir John Antoniadis (the owner), liegt*

> *ganz hinten, ebenfalls in stiller Verlassenheit ein anderes antikes Grab. Man erreicht es, wenn man den Palmenhain, der weiter zurück hinter der Villa liegt, nach links hin durch wandert und zwischen den Bananen unter der Pergola hinschreitend zu dem Oleandergebüsch gekommen ist, das seine Nähe verbirgt. Denn dies Grab liegt ziemlich tief unter dem Boden, ein schräger Felsentunnel mit vielen Stufen führt hinab zu einem nach oben offenen Mittelraum oder Atrium, um weIches sich wie beim antiken Haus die anderen Säle gruppieren, der prächtigste Raum mit den Hauptgräbern dem Eintretenden gerade gegenüber ... <<Das Grab Adams und Evas>> nennt das Volk heute den düstern Ort in diesem sonst so paradiesischen Garten.*
>
> (Thiersch 1904: 6)

The Antoniadis hypogeum was revisited by Hermann Thiersch during Expedition Ernst Sieglin but discovered a few years earlier, as the case with the Sidi Gaber hypogeum (site 156) (Adriani 1966a: 143-144, Catalogue Number 90; 1966b: Tavole 64-65, Figures 219-222; Thiersch 1904: 6-17). It is accessible via a long staircase of forty-four steps (vault ceiling) ending on a landing (length: 1.82 m) into the courtyard (A) (5.20 x 5.20 m) (Figure 301). The courtyard's eastern and northern sides: an architectural façade with a pair of pillars flanking the central entrance to compartments (B) and (F). The courtyard's western side: a wide rectangular passageway (vault ceiling; moulded jambs) to compartment (D). The courtyard's southern side: three asymmetrically arranged openings onto chamberette (C), the staircase landing, and a vault annex probably cut to enclose a miniature well. At the northwestern corner of the courtyard, vestiges in stucco of a Doric frieze were noted by Thiersch. As in Mustapha Pasha hypogea (I) and (II) (site 160), the upper part of the courtyard's walls seems to feature a Doric frieze of alternating triglyphs and metopes running above a plain architrave. About 30 cm above the Doric frieze, 'die feste felsschicht aufzuhören, und es folgt moderne künstliche aufmauerung': possibly, a curtain of stonemasonry, as in Mustapha Pasha, misinterpreted as 'modern' by Thiersch. *Loculus*-chamber (B) (3.36 x 5.30 m; vault ceiling) is accessible via three intercolumnar passages formed by two smooth pillars, with the central intercolumniation being slightly wider than the laterals. Rock-cut *loculi* are arranged into three rows: besides the regular ones, some *loculi*, with traceable perimeters on the walls, were never cut, while two enlarged ones served as burial-chamberettes. Chamberette (C) (2.25 x 1.92 m; main structure: vault ceiling; passageway and niches: flat ceiling) is accessible through a rectangular entrance with two pairs of pillars marking the corners. It had three rock-cut niches: one into the back wall and two into the side walls. The niches of the chamberette were occupied by low benches carved out of the rock. *Loculus*-chamber (D) (4.17 x 4.60 m; vault ceiling) is analogous to chamber (B). An irregularly-cut *loculus*-chamber (E) (5.50 x 4.40) was added to the north of chamber (D).

A rectangular vestibule (F) (5.40 x 2 m; vault ceiling) is accessible through three intercolumnar passages of a façade analogous to that of chamber (B), yet with a κλίνη-alcove (G) opening on the back wall. The alcove dictates a much wider central intercolumniation for maintaining a full view of its façade, hence the supressed lateral intercolumniations of the vestibule. The vestibule's back wall is a richly decorated architectural façade of a rectangular passage into the alcove, with two smooth side pillars supporting a plain architrave. Between the latter and a projecting cornice extending around the vestibule were traces of holes intended to receive nails for the hanging of festooned garlands. On either side of the entrance to the alcove, a *loculus* with a flat ceiling and a stuccoed cornice is cut at the floor level. Above, a *pseudo-aedicula*, in fact an illusionistic representation in relief, contained a large circular shield. A double pillar at each corner of the vestibule served to support its projecting cornice. Seven violating rock-cut *loculi* were added at some point onto the vestibule's lateral walls. The κλίνη-alcove itself (G) is decorated with double corner pillars supporting an architrave below a dentilled cornice. A funerary κλίνη with a pair of mattresses in polychrome is carved out of the back wall, where a large on-alert ἀγαθοδαίμων is seen upon a cushion painted pink, red, and blue bands. On the curtain between the worked legs of the κλίνη were faint traces in polychrome simulating marble. A motif of a large circular shield, as that within the vestibule's *pseudo-aediculae*, reoccurs here, on the lateral walls of the κλίνη-alcove. As in the vestibule, five rock-cut *loculi*, basically three into the back wall and one into either lateral wall, violate the initial setting of the κλίνη-alcove, the nucleus of the hypogeum.

At least two broad phases of construction are inferable considering the hypogeum's general plan and architectural setting. Phase (I) – initial setting: a descending staircase into a central courtyard (A) with a water well and a banqueting-and-repose space (C) on one side (cultic compartment) and the antechamber (F) of a κλίνη-alcove (G) on the other (burial compartment), all following an axial arrangement. Phase (II) – successive modification: three *loculus*-chambers (B, D, E) are added off-axis to accommodate more corpses, with twelve other *loculi* violating the hypogeum's nucleus (vestibule F and κλίνη-alcove G). Whereas the pair of *loculi* cut below the vestibule's *pseudo-aediculae* would pertain either to the initial setting or to an intermediate phase. A possible date c. the 2nd century BC is proposed for construction phase (I) at Antoniadis. Given the recorded findspot, the funerary structure in question might have been associated with the suburban settlement of Eleusis, which is conventionally located east-southeast of the ancient city (site 166).

Site 163: Bir Masoud; el-Dahab; Gabr el-Khur

Map V5; Figure 302

Hypogea: Sidi Bishr [Roman]

In 2008-10, the Hellenic Institute of Ancient and Mediaeval Alexandrian Studies (HIAMAS) surveyed the promontory known today as Bir Masoud, at Sidi Bishr, and two islets northwest (el-Dahab) and northeast (Gabr el-Khur) of it (Tzalas 2012: 131-143; 2015: 356-360; 2018: 30-34). As the case with the promontory of el-Montazah further to the east (the approximate premises of Taposiris Parva: site 164), this headland has been severely affected since antiquity by natural (coastal erosion and subsidence) and artificial (stone quarrying and breakwaters) phenomena, as evident on the rock morphology within the surveyed zone of interest. The present-day configuration shows the eroded semicircular cliff jutting out into the sea, to the north of Khaled Ibn el-Walid Street. Offshore are two rock-features breaking the water surface (Figure 303). The main promontory takes its name from a rock-cut 'well'. In fact, it is the light-shaft of an intricate set of partially submerged subterranean galleries accessible from an irregularly-cut orifice about 30 m to the north of the fenced 'well'. The galleries would have formed part of rock-cut hypogea, the greater parts of which were being eroded constantly by wave action, with the remnants already quarried, as indicated by the marks left on the cliff, above the orifice, and on the seabed, on the axis of the submerged galleries, for at least 30 m northwards, into the sea. Other vestiges of the hypogea in question were traceable within a cove (80 x 40 m) between Bir Masoud and the neighbouring miniature promontory of the Automobile Club: one gallery with a vault ceiling had lateral cuts signalling the location of *loculi*. Rock cuts extend as well to the Automobile headland, where they are circular and elliptical or forming a staircase of twelve steps.

The reefs and shoals cluttered to the northeast of the main promontory, c. 1.50 m above the water surface, seem to have connected Bir Masoud to the islet of Gabr el-Khur in antiquity. The latter, located about 180 m offshore, is an oblong rock-feature of 220 x 60 m, with a maximum height recorded at five metres (Figures 304-305). During the HIAMAS surveys, rock-cut structures were identified on the islet (Figure 306). The main encounter is a relatively preserved hypogeum (A) comprising two chambers (Figure 307), hence the Arabic name 'Geziret Gabr el-Khur', i.e. the islet of the sepulchre by the cove. The location of the rock-cut hypogeum at the heart of the islet is indeed central to its survival, unlike the case with other peripheral unrecognizable structures that are constantly subjected to waves and currents. Violation on site relates, however, to the reuse of the hypogeum's compartments as lime kilns. The hypogeum is accessible by means of a staircase of nine steps (2.99 x 1.47 m, height: 3.31 m) leading into an irregularly-cut antechamber (northern wall: 4.04 m, southern wall: 3.94 m, eastern wall: 2.22 m, western wall: 3.71 m) with an annex at one corner (1 x 1.30 m, depth: 0.75 m) and two shallow niches into its walls (widths: 0.80 m and 0.30 m, depths: 0.30 m and 0.15 m). An irregularly-cut chamberette (western wall: 1.65 m, eastern wall: 1.88 m, back wall: 1.73 m) opens on the antechamber's lateral wall. It has a *loculus* cut at one corner (0.57 x 1 m, depth: 1.75 m).

Further to the east of Hypogeum (A) is a levelled space (B) measuring 45 x 30 m. It is delimited from the north, east, and south by rock-cut walls varying from 2.50 to 4 m in height. Four couloirs filled with seawater (C1-4) are cut into the natural rock to the north, northeast, and west of Hypogeum (A). Towards the islet's southern shore, a rectangular basin (D) (1.15 x 1.67 – 1.90 m, preserved height: 2.05 – 2.44 m) is cut into the natural rock. Deep, narrow ridges were recorded on the walls of the basin (width: 0.10 – 0.15 m, depth: 0.07 – 0.18 m). Ceramics recovered from the fill within the basin include potsherds, broken glass, and porcelain: these are basically fragments of ancient utensils mixed with mediaeval *amphorae* and modern ware, suggesting an extended range of (re)use for the nearby funerary structure (Hypogeum A).

At 700 m to the west of Bir Masoud, another islet, known today as el-Dahab, breaks the water surface (30 x 100 m, maximum height: 2 m). It lies about 360 m from the nearest point on the littoral. Apart from a deep groove at the northern side of the islet, apparently made by stone quarrying activities, no vestiges were recorded during the surveys.

The subsided zone surveyed by the HIAMAS, including the extensively quarried promontory of Bir Masoud and the offshore islets of Gabr el-Khur and el-Dahab, would have formed a protruding headland of the coastal plateau in antiquity. The rocky cliffs in this region, situated about 10 km to the east of Alexandria, and about 3 km to the west of Taposiris Parva, were probably utilized to receive interments by the inhabitants of the rural estates (site 168) clustered on the narrow calcareous ridge connecting Alexandria to Canopus and delimited on either side by the sea (north) and the now desiccated Abu Qir aka el-Maadiya Lagoon (south: presently, agricultural land).

Site 164: el-Montazah Bay

Map V5; Figure 308

Hypogea: el-Montazah [Ptolemaic]

In 1926, Evaristo Breccia reports:

> *Sulla costa retrostante all'isoletta (the so-called tea islet), presso la sponda occidentale della baia (at el-Montazah), (in 1925) esistono tuttora alcuni ipogei scavati nella roccia, i quali per quanto violati da tempo e spogli d'ogni decorazione e forse in parte rimaneggiati in età posteriore, per la pianta e per il tipo sono varianti degli ipogei d'Anfusci (site 44), di Suk-el-Wardian (site 48b) e di altre simili tombe di età ellenistica.*
>
> (Breccia 1926: 83-84)

The reported hypogea are located at the present-day el-Montazah Bay, which is traditionally identified with ancient Taposiris Parva: a small settlement beyond Nikopolis, on the roadway to Canopus (Figure 309). Given the 1925 plans of the GRM draughtsman Mariano Bartocci (Figures 310-311), the structures seem to follow an axial arrangement: an access-staircase that leads into a rectangular courtyard (5.25 x 3.50 m) with low benches carved out of the rock and an annex opened immediately to the left of the main entrance. In Hypogeum (I), a semicircular niche preceded by a *podiŏlum* is cut into the courtyard's left wall, probably to receive *ex-votos* or cinerary urns. A large apse on a higher level is added onto the back wall, with six *loculi* arranged in a radial pattern. In Hypogeum (II), the *exedra* at Hypogeum (I) is replaced with a rectangular chamber that had rock-cut *loculi* irregularly arranged onto the back and side walls. At one end of the courtyard's lateral wall, a successive chamber violates the initial setting. Analogies with the rock-cut hypogea of the Pharian *necropoleis* (sites 44-45) and that of Suq el-Wardian (site 48b) would suggest a possible date for construction phase (I) around the 2nd-1st century BC.

3.9.1.2) Military Edifices

Site 165: Mustapha Pasha military residential complex

Map V5; Figure 285

***Castrum*: Mustapha Pasha [Roman]**

Remnants of a *castrum Romanum* at present-day Mustapha Pasha were reported by travellers as early as the 18th century. Richard Pococke, for instance, relates in 1737:

> *Towards the sea (within the eastern suburbs), it is an uneven, high ground all the way to Nicopolis, on which there are many ruins (sites 150-161); but about the site of Nicopolis, there are remains of a very extraordinary building, which is commonly called the Theatre (a contemporary tradition), and I imagine to have been something in the nature of a Roman castrum (camp); it was built with an entrance in on every side, and six semicircular towers, and a square one at each corner, according to the plan I have given of it in Plate V (Pococke's Figure E).*
>
> *By the manner in which the ground lies, there seems to have been some buildings within: It is built of small hewn-stone, there being three teers (tiers) of brick at the distance of every four feet and a half (1.371 m); the mortar is very thick, which made me conjecture that it was built towards the time of the lower Empire; the walls are not any where entire, but could not be less than twenty feet (6.096 m) high.*
>
> (Pococke 1743: 11)

In 1798-99, during the Napoleonic expedition, Gratien Le Père records:

> *Parmi les ruines de la côte à l'est, on ne trouve plus que celles d'une vaste enceinte fermée par des murs de 7 à 8 mètres d'élévation; ouverts en quelques parties, les côtés de cette enceinte quadrangulaire, flanquée de tourelles, peuvent avoir 120 à 140 mètres de longueur. Les murailles de ces ruines considérables, qu'on nomme dans le pays Qasr Kyasserah, c'est-à-dire, le château des Césars, sont d'une grande épaisseur; leur construction, en pierre blanchâtre d'espèce calcaire, et en briques rouges de grandes dimensions, présent l'appareil distinct de couches horizontales et séparées, de diverses hauteurs, à la manière des fabriques Romaines. C'est sur les hauteurs qui environnent les ruines de ce château, situé à 4,350 mètres [2231^{t} 5^{d}] au nord-est de la porte de Rosette (Bab Sharq), que se donna la bataille sanglante du 30 ventôse an 9 (of the French First Republic) [21 mars 1801], entre l'armée Française et l'armée Anglo-Turque.*
>
> (Le Père 1813: 292-293, Number 38)

The reported remnants of a *castrum Romanum* before Nikopolis (the 18th-19th-century Qasr el-Kyasserah) had already disappeared by 1871 (Adriani 1966a: 101-102, Figure H). Pocock's 1743 plan shows a quadrangular structure with four corner towers and six smaller ones of three quarters of a circle integrated into each side where a passageway opens at the centre (Figure 312). Within the enclosure were vestiges of mortared masonry of limestone and fired brick. A Dionysiac mosaic featuring the deity's attributes, a *thyrsus* and bunches of grapes, found signed 'ΣΗΜΠΡΟΝΙΟC' by the mosaicist, is one prominent encounter along with the remains of a *praetorium* (headquarters), a bathing facility, statuary such as a dedicatory commissioned in AD 157 by the Legio II Traiana Fortis in honour of Antoninus Pius (Graeco-Roman Museum, Inventory Number 25771), and epitaphs in Greek and Latin inscribed on pedestals (Neroutsos 1888: 118, Number 45, 119-121, Number 48). Considering the epigraphic corpus associated with the *castrum* site, one Latin epitaph records that on October 26th, AD 174, a centurion of the Legio II Traiana Fortis had *praesidium vetustate collapsum* (Breccia 1911: 54, Catalogue Number 73). Perhaps expectedly, immediately to the west of the *castrum*, in present-day Sidi Gaber, a number of funerary inscriptions attest a contemporary Roman

military cemetery. Interred there were members of the above-mentioned legion stationed before the *oppidum Romanorum*, Nikopolis (site 158b-c). Other associates would include the suburban thoroughfares identified by Botti and Noack in the 1890s (sites 37-38). The centurion epitaph reads (Graeco-Roman Museum, Inventory Number 216):

> Imp(eratoris) Caesaris M(arci) Aureli | Antonini Aug(usti) praesidi|um vetustate collapsum, renova|vit sub C(aium) Calvisium Statianum || praef(ectum) Aeg(ypti) per Valerium Maximum (centurio) | Leg(ionis) II Tr(aianae) Fort(is) VII kal(endas) nov(embris) Flacco | et Gallo co(n) s(ulibus) Anno XV.

3.9.1.3) Religious Edifices

Site 166: Between Fawzi Moaz and Tut-Ankh-Amun

Map V5; Figures 285 and 313

Sanctuary: Smouha [Ptolemaic; Roman]

In a letter sent on March 20th, 1843, to the Société de Géographie de Paris, Gauttier d'Arc, the Consul General of France in Egypt, reports:

> *Vous savez qu'il existe à l'est de cette ville, et sur la droite de la route de Rosette, un petit lac (Lake el-Hadra, now desiccated), qui n'est séparé du lac Mariout que par le canal de Mahmoudié. Ses eaux viennent presque baigner l'enceinte de l'ancienne ville. En se retirant dernièrement, elles ont laissé à découvert, tout auprès d'une chaussée antique que vous aurez remarquée, et à 500 mètres environ de la route de Rosette, les vestiges fort apparents d'un temple soutenu par des colonnes de granit et de deux statues colossales de la même matière, dont l'exécution m'a paru fort soignée. C'est à M. le colonel Gallice-Bey (Barthélémy Gallice), directeur général du génie en Égypte, que je dois l'indication de ces restes précieux. Cet officier supérieur, auquel la nature de ses travaux a permis d'étudier plus spécialement les localités, a remarqué que l'emplacement de ce temple correspondait exactement avec l'issue de l'une des larges voies (the longitudinal ones) qui sillonnaient Alexandrie.*
>
> *Ce temple avait 30 mètres de longueur. On retrouve encore sur l'emplacement même les fûts granitiques de 14 colonnes; mais le plus long de ces débris n'a guère que 4 mètres.*
>
> *Les dimensions des statues sont les suivantes: coiffure, 1 mètre 60 centimètres; longueur du visage depuis les sommités frontales jusqu'au menton, 80 centimètres; profondeur de la statue à la poitrine, 1 mètre 20 centimètres. II est à regretter que le monolithe dans lequel elles avaient été taillées soit aujourd'hui brisé en sept ou huit fragments épars.*
>
> (D'Arc 1843: 326-327)

Two years earlier, during his visit to Alexandria in 1841, Sir John Gardner Wilkinson maintains:

> *He (Richard Pococke; visit: autumn 1737) also mentions the ruins of an ancient temple under the water (of Lake el-Hadra), about two miles from Alexandria (c. 3.42 km to the east of Bab Sharq), which he conjectures to have belonged to Zephyrium, or some other place on the road to Nicopolis (hence the localisation within the eastern suburbs). He saw some columns there, 3 ft. (0.914 m) in diameter, three broken sphinxes about 7 ft. (2.133 m) long, of yellow marble, and a female statue of red granite, 12 ft. (3.657 m) in length, with a fragment of the colossus of a man of very large dimensions (those reported by D'Arc). Near this were apparently the remains of a portico, and a little to the south, a number of red granite columns, which from their position seemed to have belonged to a circular temple. They were mostly grooved, 3 ft. 3 in. (one metre) in diameter; and, of course, of Roman or Ptolemaic time. Other remains were also visible, and the rocks below the water's edge were cut into a form at once indicating the site of some very large edifice.*
>
> (Wilkinson 1843: 169)

The remains described by Pococke, Wilkinson, and D'Arc seem to belong to the same edifice, one that appears in both maps of the ancient and modern city issued by el-Falaki in 1866 and 1871 respectively (Figures 314-315) (Introduction II.d). The court-astronomer records:

> *Certains savants croient que cette vallée faisait anciennement partie du lac Maréotis; je le crois aussi; mais ce ne pût être qu'avant la fondation d'Alexandrie ou, au moins, avant le creusement du canal, par les premiers Ptolémées; car, étant complètement séparé par le canal navigable, ce lac aurait été desséché par l'évaporation ou par la main des hommes dans un but sanitaire. Du reste, le grand temple dont on voit encore les restes dans l'eau au fond de la vallée prouve par sa situation qu'il ne devait y avoir là aucune eau stagnante, aucun étang qui pût compromettre la santé des prêtres du temple et répandre l'infection par les miasmes que la chaleur du soleil, en dégagerait en été. Ce temple se trouve à 180 mètres environ au Nord-Ouest du point situé, sur la prolongation de la rue canopique, à 700 mètres hors de la porte (his Canopic gate). Il a quatre plèthres environ de largeur (4 plethra: 110 m) sur un stade de longueur (a stadion: 165 m) parallèlement à la direction des rues longitudinales; on y voit, encore aujourd'hui, une quantité de socles à leur place primitive, de chapiteaux, de tronçons de colonnes brisées et de fûts entiers, le tout en granit rouge. Mais ce qui y attire l'attention des visiteurs ce sont les deux statues colossales dont on reconnait une pour celle de Cléopatre quoique brisée en trois morceaux comme l'autre' qu'on croit celle d'Antoine.*
>
> (Mahmoud-Bey 1872: 66-67)

On the grounds of the above-mentioned testimonies, it seems that the desiccation of Lake el-Hadra in the

course of the 18th and 19th centuries has allowed the identification of the remnants of an ancient edifice of monumental nature located about 3,420 m to the east of el-Shallalat Park and the Rosetta Gate, within an urban block delimited by the streets of Fawzi Moaz and Tut-Ankh-Amun at the modern district of Smouha. The structure in question is likely to have had porticoes, the fragmentary columns of which were repeatedly communicated by the authors, together with fragments of Egyptian-style statuary of Aswan granite. The latter include a group of sphinxes and at least four pieces belonging to the *colossus/i* of royals assimilated to Isis and a pharaoh: (1) the bust of a female figure; (2) two clasped hands; (3) the head and (4) part of the left leg of a male figure. The fragments labelled here (1) and (2), once a property of Baron Raoul Warocqué, are kept at the Musée Royal de Mariemont in Belgium since 1912 (Inventory Numbers B.505.1-2, E.49). The fragments (3) and (4) were transferred to the premises of the Graeco-Roman Museum of Alexandria before 1907 (Inventory Number 11275). When the museum in Alexandria was closed for renovation, the male head was relocated to the archaeological park at Kom el-Shuqafa (site 53), where it remains today. As proposed by el-Falaki, the portrayed royals are widely identified as Cleopatra VII and Markus Antonius or, perhaps more likely, Ptolemy XV Caesarion. They would suggest the presence of a Ptolemaic dynastic-cult temple at Eleusis, the suburban settlement located by Strabo to the east of the ancient city:

> *Eleusis is a settlement near both Alexandria and Nicopolis, is situated on the Canobic canal itself, and has lodging-places and commanding views for those who wish to engage in revelry, both men and women, and is a beginning, as it were, of the 'Canobic' life and the shamelessness there current.*
>
> (Strabo, Geōgraphiká: XVII. 1.16)

Strabo's descriptive narrative seems to hint towards a possible correlation between the ancient Eleusinian settlement and the modern district of Smouha, including the Nozha-Antoniadis Park situated immediately to the north of the Mahmoudiya Canal (Figure 316). In antiquity, Eleusis, where the renowned court-poet Callimachos and the Athenian priest Timotheos lived, was usually associated with a sanctuary of Demeter, the Greek goddess of agriculture and harvest, and her daughter, Kore aka Persephone (Fraser 1972: 200-201, the πανήγυρις of Demeter). The reported vestiges, being in the very same district, would, accordingly, put forth the possibility of an Eleusinian sanctuary where Ptolemaic queens were assimilated to the Greek deity and, in turn, to the Egyptian Isis. Southeast, the remnants of a second temple appear in the 1888 map of Tassos Neroutsos, proposing an alternative site, one much closer to the canal (Figure 317).

In 2008-12, the Musée Royal de Mariemont (Belgium) and the Centre d'Études Alexandrines, in cooperation with the Egyptian Supreme Council of Antiquities, carried out excavations on site with the aim to investigate the nature of the monument in question (Figure 318) (Bruwier 2014: 21-33; 2016: 38-39; Monchamp 2014: 35-97). The recent joint excavations, directed by Francis Choël, revealed the remains of two colonnades running parallel with one another and possibly forming together the portico of a temple. Whereas the recovered fragmentary pieces of ceramics indicate an approximate range of site occupation spanning c. the 2nd century BC to the 6th century AD. Key finds from Roman *strata* include representations of an enthroned Isis suckling Horus, a bust of Sarapis, and a fragment of a lamp bearing the image of Isis-βασίλειον accompanied with wheat ears. The latter encounter sheds new light on the cult practices within an Eleusinian τέμενος in imperial times associated with the veneration of Sarapis and Isis-Demeter.

3.9.2) Physical Remnants without Known Historical Reference

3.9.2.1) Civil Edifices

Site 167: Falanga-Autofage; Sarkissian

Maps: V2; V4; V5

Mosaics: Camp Caesar; el-Ibrahimiya [Roman]

In 1893, Giuseppe Botti briefly reported a 'mosaico romano, bianco e nero, nei terreni Falanga e Autofage' (Botti 1893: 14, Necropoli dell'Est 'a'; 1898c: 113, Number 7). The find was unearthed in 1892 near 'Café de l'Ibrahimieh, sous la villa Autofage'. In 1924, Evaristo Breccia reported polychrome tessellated mosaics displaying geometric motifs, accidently discovered during construction works at the Sarkissian property, next to Casino Esperia, between Camp Caesar and el-Ibrahimiya (Breccia 1924: 6-7, Planche VI; Daszewski 1985a: 44, Note 112, 45, Note 124). Considering the findspots, as recorded by Botti and Breccia, such encounters would have belonged to *villae suburbanae* cluttered along the calcareous ridge extending from Alexandria to the *oppidum Romanorum*, Nikopolis.

3.9.2.2) Religious Edifices

Site 168: Ras el-Soda, relocated to the Latin Cemetery

Map V5; Figure 319

Sanctuary: Sidi Bishr Qibly, relocated to el-Chatby [Roman]

In October 1936, the remains of a sanctuary were accidently discovered within a sand quarry at el-Ras

el-Soda in Sidi Bishr Qibly (Figure 320) (Adriani 1940a: 136-148; 1966a: 100-101, Catalogue Number 56; 1966b: Tavola 32, Figures 113-115). The surviving parts consist of an Ionic tetrastyle temple built on a podium and approached by means of a flight of steps leading up to a colonnade (Figure 321). Placed within the central intercolumniation is a foot carved out of marble and set upon an inscribed pillar (GRM, Inventory Numbers 25788-25789; BAAM Serial T0027): a votive offering bearing a Greek dedicatory commissioned by a certain Isidoros to 'the Saviours' for healing his injured foot after a chariot accident on the road. The epitaph reads:

> Ῥιφθεὶς ἐξ ἵππων ἀπ ὀχήματος ἔνθ Ἰσίδωρος
> σωθεὶς ἀντὶ ποδῶν θῆκεν ἴχνος μάκαρι.

Beyond the colonnaded façade, a πρόναος (1), opened on either side, led through a wide gateway into the ναός (2). The latter features a secondary access on the eastern wall, apparently connected to a partially preserved staircase of which only the first steps were traceable on discovery, immediately to the east of the vestibule. Alongside the back wall of the ναός is a low bench of masonry on which five marble statuaries were found, not on their respective pedestals, but leaning against the wall – from left to right: (i) Isis (GRM, Inventory Number 25783; BAAM Serial T0022); (ii-iii) two figures of Osiris-*hydreios* wearing an *atef* crown and a *nemes* headdress respectively (GRM, Inventory Numbers 25786-25787; BAAM Serial T0020-T0021); (iv) Hermanubis (GRM, Inventory Number 25785; BAAM Serial T0019); (v) Harpocrates (GRM, Inventory Number 25784; BAAM Serial T0018). Opposite the bench a sacrificial altar was carved upon a marble pillar (GRM, Inventory Numbers 25790-25791; BAAM Serial T0023). Other finds include a pair of miniature sphinxes of black granite (lengths: 0.60 m, 0.47 m). On either side of the ναός a marble belt extended lengthwise between the entrance and the low bench. Two largely collapsed chambers (3 and 4) were added on the same axis, yet at a higher level to the πρόναος and the ναός (1 and 2). The floor of chamber (4) was paved with marble splinters pressed into a bed of mortar. Excavated within the same chamber were the remains of a *biclinium* built of stonemasonry. Other vestiges encountered to the east, including hydraulic installations, are considered complementary annexes to the main complex. At about 6.55 m to the south of the staircase to the votive foot, the remnants of an enclosure wall of coarse masonry ran towards the southwest, away from the sanctuary. In 1995, the Egyptian Supreme Council of Antiquities conducted a salvage operation on site, dismantling the Ionic tetrastyle podium to be relocated to el-Chatby's Latin Cemetery on the northern side of Abu Qir Road (Figure 322) (sites 147, 149).

The dedicatory inscription and statuaries recovered on site would suggest an Isiac sanctuary. Perhaps one associated with a *villa rustica*: a property of the salvaged Isidoros, who seems to have been a *venerātus* of the local deity. It is situated in the countryside, on the southern side of the roadway connecting Alexandria and Nikopolis to the urban settlements in the east, such as Taposiris Parva (el-Montazah: site 164) and Canopus (Abu Qir). Contextual finds, mainly the above-mentioned sculptures, rather indicate a range of use within c. the 2nd-3rd century AD. The rural estate of Isidoros, located in the southern part of Strabo's 'narrow ribbon-like strip of land between the sea and the canal to Canopus', closer to the shores of the now desiccated Abu Qir aka el-Maadiya Lagoon (presently, agricultural land), might have belonged to the luxurious country houses of the Canopic region, which were decorated with splendid statuary of marble as those accidently discovered in 1973 at the nearby district of el-Mehammara, to the north of el-Ras el-Soda, including a reclining figure of Nilus (GRM, Inventory Number 29448; BAAM Serial T0002): a personification of the River Nile in association with the prosperity brought by its flood to a leisured community of the countryside.

3.9.3) Literary Accounts Pending Physical Evidence

3.9.3.1) Civil Edifices

J) Hippodrome

One of the ancient literary sources that record a *hippodromos* in Alexandria is the Third Book of Maccabees, where the author, probably an Alexandrian Jew, narrates the prosecution of the Jews under Ptolemy IV Philopator in the years that followed the Battle of Raphia (217 BC):

> *When these men (the Jewish captives) therefore had been carried thus unto the port called Schedia (section 2.3.5), and the journey by water (through the canal) was ended, according to the king's former decree; he gave further orders to put them into the Hippodrome, which was before the city, a place of vast circuit, and very fit for exposing them to the view of all who entered into the city, or who went out thence into the country to sojourn: that they might hold no communication with his forces, nor might have the favour of walls to enclose them.*
>
> (Maccabees: III. 4.11)

The narrative denotes the presence of a hippodrome outside the city walls, yet without indicating its exact location. Having the canopic port of Schedia in context suggests that the Jewish captives would have been transported via the canal either to the Rhakotis hippodrome southwest of the city (site 51) or to the one constructed beyond the eastern periphery. The statement, however, of 'exposing them to the view of all who entered into the city, or who went out thence into the country' hints at a structure on the roadway

to the Eleusinian and Canopic suburbs. Accordingly, the 'hippodrome' mentioned in the Third Book of Maccabees seems to be that of Strabo (the 1st century BC) and Plutarch (the 1st-2nd century AD):

> *And then one comes to the Hippodrome, as it is called, and to the other (settlements and/or thoroughfares?) that lie parallel, extending as far as the Canobic canal.*
>
> (Strabo, Geōgraphiká: XVII. 1.10)

> *But when Caesar (Octavianus) had taken up position near the hippodromos (having advanced with his army westwards, across the Nile Delta, from Peloúsion to the eastern suburbs of Alexandria), Antonius sallied forth against him, and fought brilliantly and routed his cavalry, and pursued them as far as their camp.*
>
> (Plutarch, Lives, Antonius: LXXIV)

Whereas the account of the Greek rhetorician Aphthonius of Antioch in *Progymnasmata*, written c. the 4th century AD, strengthens the notion of two hippodromes in ancient Alexandria:

> *As one comes down from the (Rhakotis) acropolis (the Sarapeion: site 52), here is a flat place resembling a racecourse (the hippodromos-circus: site 51), which is what the place is called; and here (in Alexandria), there is another of similar shape, but not equal in size (an athletic structure on a relatively large scale at the depression of el-Ibrahimiya Qibly and Sporting; morphology of the terrain: section 2.1.2.2.1).*
>
> (Aphthonius, Progymnasmata: 12)

Conclusion

I. Urban Layout: Chapter 2

(a) Circuit Walls

In the current study, six criteria have been employed to infer possible routes for the defensive walls of the ancient city:

(i) Literary sources from antiquity and the Renaissance: terrain morphology.
(ii) The *cartes* of *Description de l'Égypte* (Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84; Antiquities V, Planches, 1822: Planche 31): terrain morphology.
(iii) Excavations of Mahmoud el-Falaki (1863-66): vestiges of ancient defences in the NE. and south.
(iv) Excavations of funerary structures: approximate geographical extent and chronology of use.
(v) Excavations of non-funerary structures on the urban fringe: relative location to (iv).
(vi) The course of the Mareotis-Eunostos canal and the location of its Mediterranean outlet (the Kibotos): relative to the urban periphery in the west.

The Eastern Peripheries

The importance of both maps of les Ingénieurs de l'Armée d'Orient (criterion ii) is utmost in glimpsing the urban and suburban terrain of antiquity, since they provide the first-detailed and last views of Alexandria and its environs prior to such profound changes in local topography, caused by modern urbanization through the 19th and 20th centuries. With exception to the areas within the Arab town and the silted-up isthmus of the Ottoman village, habitation in the Middle Ages and the post-mediaeval period to the time of the Napoleonic expedition would have left minimum impact on the terrain elsewhere. It seems reasonable, therefore, to assume the configuration outside the Tulunid enclosure, as depicted by the French cartographers c. 1798-99, to have not been much different in antiquity: an assumption backed by the fact that almost all funerary structures recorded to the west of the modern districts of Camp Caesar, el-Ibrahimiya, and el-Ibrahimiya Qibly were excavated at the necropolitan mounds shown in the maps of *Description de l'Égypte* and in that of el-Falaki (1866). The distributional patterns and chronology of use of most of these sepulchres, cluttered within the modern districts of el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly (sites 145-146), indicate that the terrain heights in the east were utilized by the Graeco-Macedonian settlers, c. the late 4th-2nd century BC, to receive interments (Figure 323). Accordingly, the eastern defences of the Ptolemaic city would have been fixed, at the time, somewhere between the easternmost contemporary civic edifices and the westernmost funerary structures.

The inferred course of the Ptolemaic periphery in the east (C3) varies from that proposed by el-Falaki for the Alexandrian metropolis during the Principate. An earlier line of defence, datable c. the late 4th-2nd century BC, would have run NNW-SSE, about 500 m to the east of Bab Sharq (the eastern gate of the Arab town): c. 1,400 m to the west of el-Falaki's points (C) and (D) at el-Ibrahimiya Qibly: somewhere between transversal streets R2^{bis} (the Suez Canal Road) and R3^{bis} (Aflaton/ Selim Hassan Street). If two hypothetical contours, marked (C1) and (C2) in the featured AutoCAD maps (V1) and (V4), are extended in an easterly direction, from fortification-points (δ) and (ε), which correspond to the enclosure walls excavated at el-Khaledin Park (site 134) and east of el-Silsileh (site 2) respectively, (C1) shall intersect with the main longitudinal street L1 at the segment of it within *insulae* L2-L'2-R2^{bis}-R3^{bis}. When a third contour (C3), running NNW-SSE, in alignment with the canonical urban grid, is extended from the C1-L1 junction, it joins the defensive line (C2) at c. 250 – 300 m to the west of el-Chatby necropolis, where the earliest known interments of the Ptolemaic city had been encountered (site 145) (Figures 324-325). The cardinally-oriented defences (C1) and (C2) put forth the possibility of a Ptolemaic Royal Quarter rather independent, at least to a certain extent, from the dominant secondary intercardinal orientation of the urban grid to c. the 1st century BC. This notion is strengthened by off-grid vestiges found mainly within el-Mazarita and el-Chatby: the modern districts corresponding roughly to the Royal Quarter of Ptolemaic Alexandria, where cardinal orientation is archaeologically attested (βασίλεια: sites 2, 131.2b, 134, 138-140a, 147). The presence of civic and defensive constructions following the cardinal directions in accordance with Egyptian dynastic tradition, especially at the premises of the Ptolemaic Royal Quarter, may be explained in the light of a priestly adaptation, at Buto, of the Greek toponym 'Αλεξάνδρεια', as recorded on the Satrap Stela in autumn 311 BC (section 1.4): 'the Fortress of the (dual) King of Upper and Lower Egypt, *Meri-Amun*,

Setep-en-Re (the Egyptian royal titulary of Alexander the Great), Son of Re, Alexandros': 'the Fortress of Son of Re, Alexander' (Figure 326). The designation of the historical founder of the city as the son of the local sun god provides a justification for a royal ideology that was central to planning a restricted quarter at Cape Lochias (el-Silsileh) with off-grid constructions in the cardinal alignment. In this context, public (civil and religious) buildings, and thoroughfares, oriented obliquely within the central district, the Broucheion, and Rhakotis, yet aligned with some of the excavated vestiges of the Ptolemaic Royal Quarter (βασίλεια), would have been symbolic in signalling a propagandic royal affiliation for certain edifices within the city proper (central district: Kom el-Dikka: sites 31, 69c, 78; Broucheion: el-Ramleh: site 114; Rhakotis: Karmouz: site 52.I).

Establishing a chronology of use for the eastern necropolises of ancient Alexandria shows that the funerary structures excavated to the west of Camp Caesar, el-Ibrahimiya, and el-Ibrahimiya Qibly (sites 145-146) were abandoned in the course of the 1st century BC. This phenomenon, well reflected in the archaeological record, seems subsequent to living-space economy within the enclosure of the Macedonian founders. It is natural, therefore, to find the populous metropolis of the 1st century BC expanding in the only direction where urban development is possible, that is towards the east (north: the Mediterranean; south: Lake Mareotis; west: Nekropolis). Habitation to the east of transversal street R2^{bis} (correlates with the Suez Canal Road, at an angle) is archaeologically attested for the Roman Principate, c. the 1st-3rd century AD, judging by excavated vestiges of dwellings and thoroughfares (sites 2-3, 32a-c, 144, 148, 149a) almost reaching Ahmed Lotfy el-Sayed Street (approximately, transversal street R4^{bis}). These discoveries suggest that the suburban areas between the Suez Canal Road (west) and Ahmed Lotfy el-Sayed Street (east) were annexed into the city proper around the early Roman period. At the time, the construction of a new line of defence in the east must have become a necessity. In his 1866 *carte*, el-Falaki presents a hypothetical contour for this successive periphery (A-E) on the grounds of surveying and excavation on site (the A-B and B-C segments respectively), with one segment conjectured from local testimonies (C-D), and another extrapolated (D-E) (section 2.1.2.1). Perhaps with exception to the (A-B) littoral segment (300 m), el-Falaki's conjectural line of defence should be reconsidered in accordance with the terrain heights shown in the *cartes* of les Ingénieurs de l'Armée d'Orient. The (B-C) segment, to start with, where remnants of defences had been encountered, yet 'intermittently, over two kilometres', to quote el-Falaki, cannot have reached beyond the eastern end of longitudinal street L4 (beyond c. 1,050 m from point B), for, as is the case at the (C-D) conjectural segment (700 m), excavation in the subsided zone of el-Ibrahimiya Qibly must have been impossible. Instead, an alternative path, one favoured by the terrain, would have followed the steep slopes of the eastern mounds to reach at el-Falaki's fortification-point (E), hence bypassing a peripheral natural depression suitable for the construction of a hippodrome on the urban fringe (section 3.9.3.1, J; site 51): the proposed Augustan periphery represented by contour (C4) or (A-E) in the featured AutoCAD maps (V2) and (V4) (Figures 327-328).

The mode of construction, as recorded by el-Falaki in the 1860s at the northeastern segment of the successive periphery (A-E) denotes the Roman *opus caementicium*: a technique developed in the course of the 1st century BC (Vitruvius' lime-*pozzolana*; section 2.1.2.2.1) to become predominant during the Principate. An initial phase of construction for an urban circuit accommodating the new frontiers would be associated, more likely, with the early imperial dynasties. In his biography of Markus Antonius, Plutarch narrates, in the 1st-2nd century AD, the events taking place during the final days of Lagid sovereignty as the forces of Octavianus (Augustus Caesar) approach the city from the east:

> *At daybreak (August 1st, 30 BC), Antonius in person posted his infantry on the hills in front of the city and watched his ships as they put out and attacked those of the enemy; and as he expected to see something great accomplished by them, he remained quiet ... and after being defeated with his infantry he retired into the city.*
>
> (Plutarch, Lives, Antonius: LXXVI)

Plutarch's account shows that on the eve of the Augustan conquest, the mounds at el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly were yet not contained within the urban enclosure, but 'in front of the city', where Antonius had posted his infantry against Octavianus, who had taken up position near the hippodrome, that is towards the plains of present-day Sporting and el-Ibrahimiya Qibly (section 3.9.3.1, J); being defeated, Antonius 'retired into the city'. The events, as narrated by Plutarch, hint at a successive line of defence constructed along the steep slopes of the eastern mounds around the opening decades of imperial rule (Figure 329). Its destruction may be glimpsed from the late Roman narrative of Ammianus Marcellinus (section 2.1.2.2.1) and is datable, considering the repressions of Aurelian (AD 272) and Diocletian (AD 297), to c. the second half of the 3rd century AD. In the 4th-6th century, the (re)urbanisation instigated by the turbulent transition to late antiquity, exemplified by a contemporary complex of urban units excavated by the Polish mission at the central district of Kom el-Dikka (*insulae* L1-L'2-R3-R5), seems to have readjusted to the Ptolemaic frontiers in the east: a phenomenon justifying the Christian reutilization of the mounds at el-Hadra to receive interments (sites 146c.8-9, d, 150a.1). Contemporary literary sources, such as Marcellinus'

Res Gestae (AD 380s) and Epiphanius' treatise *On Weights and Measures* (compiled c. AD 392), describe Alexandria as having 'lost the greater part of the district called Broucheion (the northeastern district, including the annexed Ptolemaic βασίλεια)', which 'is a quarter of the city today (i.e. in the 4th century AD) lying waste' (Figure 330). It is possible, therefore, that the Arab planners in the 9th century were retracing, in part, the late antique circuit, while omitting the district that provided access to the abandoned shores of Lake Mareotis, hence yielding the eastward arm which gives the mediaeval town its distinct layout.

The Southern Periphery

The development of the Alexandrian metropolis on a calcareous ridge, between Lake Mareotis and the Mediterranean, would have determined and maintained its vertical extent since the time of the Macedonian foundation to the abandonment of the Mareotic shores under Arab rule. In a defensive setting as such, where the circuit wall runs close to the littoral, at either side of the urban enclosure, possible attacks become restricted to a single front, thus preventing an encirclement of the city. The southern defences, partially encountered at five trenches (E, F, G, H, and I) excavated by el-Falaki in the 1860s (section 2.1.3.1), seem to have been constructed along a series of mounds extending ENE-WSW, to the south of the mediaeval gate of Bab Sidra (Figure 331). The advantages of the terrain heights in the south were yet acknowledged in the 19th century, judging by the set of fortifications designed at the time by Barthélémy Gallice. At either end of the southern periphery lie the hills of el-Hadra Qibly (east) and Kom el-Shuqafa (west), hence the projections seen at the SE. and SW. corners of the urban enclosure in the maps of Gratien Le Père (1798-99, published 1822) and el-Falaki (1866) (Introduction II.c-d; Figures 332-333). In the southwest, the late utilization of the *kom* for interment under Roman rule (site 53; c. the 1st century AD: a family complex; the 2nd-3rd century AD: collective use; the 4th-6th century AD: Christian reutilization) suggests a Ptolemaic exploitation of the strategic peripheral mound overlooking the inlet of the Mareotis-Eunostos navigable waterway, exclusively for defensive purposes, as was the case with Gallice's 19th-century Fort Kom el-Hadid aka Borg Abu Hashem. The location of the Roman-developed *circus*, which was probably excavated into the rocky plateau to serve as a hippodrome as early as the 3rd century BC (site 51), relative to Botti's Scavi (A-D) and to the neighbouring Hauptgrab and Nebengrab (site 53b-g), indicates a southwestern segment of defences running immediately along the perimeter of the athletic edifice in imperial times, unless the recorded burials were intramural. At the opposite end, the terrain heights at el-Hadra Qibly seem to have not been utilized in defence until c. the 1st century BC, given their chronology of use by the Graeco-Macedonian settlers as burial places (site 146). However, with the Roman urbanisation of the Hellenistic necropolitan areas in the east, the mounds at el-Hadra Qibly would have formed the southeastern corner of the expanding urban enclosure during the Principate, thus verifying the projection of the contour as plotted in Gratien Le Père's map, in contrary to el-Falaki's conjecture of that segment of the ancient circuit.

The Western Periphery

A determination of the course of the Mareotis-Eunostos navigable canal is indeed prerequisite to inferring a possible route for the urban circuit in the west. In the 1866 *carte* of el-Falaki, the canal is seen breaching the enclosure of the ancient city, at the southwestern segment of it, to head north, towards the Kibotos: an artificial outlet to Eunostos conventionally located, given the 1st-century BC narrative of Strabo, within the urban enclosure, immediately to the west of the Heptastadion. The coastal terrain as it appears in the maps of the 15th-18th century (Commineau 1472; Razaud 1687; Norden 1737; les Ingénieurs de l'Armée d'Orient 1798-99: Introduction II.a-c) had a quite different setting: a depression at the eastern end of the rocky plateau is schematically plotted as if flooded with seawater in the maps of Commineau and Norden. It reappears in the 1817 *carte* of les Ingénieurs de l'Armée d'Orient and is recorded by Saint-Genis in *Description de l'Égypte* (section 2.1.3.2.2). The depression, apparently natural judging by the morphology of the coastal plateau (artificially developed into a basin: an outlet), is situated outside the mediaeval enclosure, next to the northwestern segment of the defences, which deviates towards the interior, between Bab Gharb and Qalaet el-Rukn. The deviation in the Arab circuit is only justified by its relative location to the adjacent depression, as is the case, in the east, with the inward deviation inferable before the plains of el-Ibrahimiya Qibly and Sporting (section 2.1.2.2.1). Considering the Arab retrace of ancient defences where possible, archaeologically attested in the designated area (site 4) and at several other points on the course of the mediaeval circuit (sites 5-7), a deviation as such, dictated by the relief, would date back to antiquity, hence the proposed location of the Kibotos basin beyond the circuit walls, not the Heptastadion: a localisation backed by the conventions of defence in antiquity, where the outlet of a navigable waterway would have been optimally positioned in the range of the urban defences, in fact almost contained within the strongholds at either end of the deviated segment of the circuit, yet without breaching the line of defences, into the city. Therefore, if the Kibotos outlet was situated immediately to the west of the circuit walls, then the course of the Mareotis-Eunostos navigable canal is to be reconsidered accordingly. The hypothetical localisation of the Kibotos is strengthened

by the crescent-shaped segment of the present-day el-Mahmoudiya Canal, which was formed in the second decade of the 19th century (1817-19), at the time the revived waterway of Mohamed Ali had readjusted to the initial path of antiquity after having been diverted under Ottoman rule, c. the 16th-17th century, towards the *eyālet's* main port on the Mediterranean (*kadırğa/ Islam limânı*).

Unlike the mounds at el-Chatby, el-Hadra el-Bahareiya, and el-Hadra Qibly, the terrain heights in the west seem to have not been utilized in defence. The presence of a water-barrier (i.e. a ditch) before the urban enclosure at the less threatened front would have altered the use of the mounds at Minet el-Bassal and Gabbari exclusively to receive interments, thus yielding the dense clusters of rock-cut sepulchres excavated within the eastern sector of Nekropolis (sites 47-48). The latter extends along the west bank of the Mareotis-Eunostos navigable canal, where access between 'urban' and 'necropolitan' had been maintained, in antiquity, by means of a crossover bridge, the ruins of its lateral abutments appear as miniature *koms* in the *cartes* of *Description de l'Égypte*. An earlier phase of the necropolitan sector situated immediately to the west of the present-day el-Mahmoudiya Canal was accidently discovered, in 1950-51, as the construction works of the Société Générale de Pressage et de Dépôts had unearthed the remains of a vast necropolis, the earlier salvaged section of which, labelled Sezione (A) by Achille Adriani, is datable to the 3rd-2nd century BC, with successive interment taking place on site to the 1st-2nd century AD: Sezioni (B) and (C) (site 46). The relative location of Minet el-Bassal necropolis to the urban enclosure, its chronology of use, and approximate geographical extent, all question Strabo's 1st-century BC narrative on the western fringe of the Alexandrian metropolis: 'now outside (west of) the canal there is still left only a small part of the city'. Alternatively, the encounters of Neroutsos (1880s) and Adriani (early 1950s) at Minet el-Bassal accord with the inferred course of the Mareotis-Eunostos navigable canal and its Mediterranean outlet (the Kibotos) as being a first line of defence before the circuit walls, which, subsequently, would have ran lengthways to the east (Figures 334-336).

The Northern Periphery

The coastline configuration in antiquity was central to planning the course of the urban defences to accommodate the sinuosities of the Alexandrian littoral, which can be segmented into two sectors – (a) the eastern sector: from the headland of el-Silsileh to Saad Zaghloul Square, and (b) the western sector: from Hotel Cecil to Minet el-Bassal (Figures 337-339). The subsided eastern sector of the coastal zone was surveyed and mapped by the IEASM in the 1990s (section 2.3.3.1-5). It is, however, partially concealed beneath a pseudo-coastal belt (c. 50 – 250 m) formed early in the 20th century following the construction of the Corniche (the city's coast road; section 2.3.1). Detected remnants of waterfront constructions (sites 7-9, 112) indicate a northeastern coastal fringe extending NE-SW, from Cape Lochias to the western end of the Broucheion, past the submerged headland of Poseidion and Antirrhodos Islet. Beyond Hotel Cecil, the ancient coastline is concealed beneath accumulated sediment that has been deposited annually since classical antiquity on either side of the Heptastadion, thus forming the silted-up grounds of the modern district of el-Mansheiya, the Arabic toponym of which is derived from the Coptic *mànsheei*, meaning 'pool' or 'marshy ground' (sections 2.3.1-2). Whereas a possible course for the northwestern segment of the circuit, along the western sector of the littoral (the coastal zone associated with Strabo's emporion, warehouses, and shipyards, and which extends approximately from el-Ramleh/site 6 to Minet el-Bassal/site 4), is inferable considering the line of mediaeval defences running east-west, across el-Mansheiya, where the archaeologically attested Arab retrace of ancient waterfront constructions through the reutilization of extant vestiges where possible (site 5), serves to justify the exclusion of the silted-up isthmus (the alluvial embankment of the Ottoman village) from the mediaeval enclosure.

(b) Grid Plan

(archaeological evidence for the multi-phase evolution: sections 2.2.2-3)

In the 1866 *carte* of Mahmoud el-Falaki (Introduction II.d), an orthogonal grid of longitudinal and transversal streets, partially reconstructed on the basis of excavation work, is shown (section 2.2.1). Archaeological investigation (section 2.2.2) indicates an early Roman to late antique range of use for the excavated pavements of hardstone (dolomitic limestone and black basalt). On lower levels, most, not all, of the vestiges of the Ptolemaic city were found on the alignment of the canonical urban grid, thus suggesting a possible Hellenistic origin for the developed grid reconstructed by el-Falaki in the 19th century. At least four streets from this grid could be labelled 'Hellenistic': (1 and 2) the πλατείες or streets L1 and R1, (3) street R9, including its Pharian extension, the Heptastadion, and (4) street R8, the δρόμος to the Ptolemaic Sarapeion. Other contemporary streets are inferable from the excavations of Ferdinand Noack during Expedition Ernst Sieglin: north of el-Sultan Hussein Street (trenches B1 and B2: site 15b) and east of el-Khartoum Square (trench J: site 24), where some of the earlier constructions, those of phases (a) and (b), exposed at either end of the excavation profile, seem to hint towards wider Hellenistic thoroughfares, measuring possibly up to c. 15 m, compared to their Roman and late antique successors with a recorded range of 3.50 – 9.50 m. The alignment of the inferable

and detectable *viae* of battered earth and gravel with the successive hardstone pavements backs the Hellenistic origin of the basic orthogonal grid.

The excavated hardstone pavements, recognizable through the sequence unlike their battered earth predecessors, overrun some of the vestiges of the monumental Ptolemaic city. This change in urban fabric, as glimpsed from the archaeological record, is traceable as early as two centuries prior to the Augustan conquest, where certain modes of construction, perhaps best exemplified by Noack's construction phase (b), would seem to signal a shift in contemporary trends. The earliest overbuilt foundations of phase (a), datable from c. the late 4th to the 3rd century BC, provide a *terminus post quem* c. 250-200 BC for a development as such. The proposed range, fixed towards the second half of the 3rd century BC, during the reigns of Ptolemy III Euergetes I and Ptolemy IV Philopator, coincides with the earliest known public and royal-patronized edifices from a chronologically-established context, on the alignment of the canonical grid: the second phase of the Ptolemaic Sarapeion and its Harpocrateion (site 52.II), the Boubasteion (site 92), and the Sarapis-Isis, Lagid-cult temple on the L1 πλατεία (site 90). As a matter of fact, all the latter are dated primarily on the basis of inscribed plaques found *in situ*. This is backed yet by the orientation of remnants from the Sarapeion's first phase of construction in the first half of the 3rd century BC, where the excavated foundations, including a chamber with a pebbled mosaic pavement, had been found off the axes of the Euergetean ναός (site 52.I).

The accidental discovery made in 1960 during construction works carried out at Kom el-Dikka for the National Insurance Co. of Egypt, and reported by the GRM director, Henri Riad, is of a particular importance (site 77). At the time, the remains of the stylobate of a Doric colonnade (perhaps a stoa) were encountered upon the bedrock at 7.45 m below the modern street level, parallel with one another and perpendicular to Fouad Street (construction material: large, finely-hewn blocks of nummulithic limestone). These foundations, among the earliest excavated, are datable, in general, to the 3rd century BC, judging by construction mode, architectural order, and stratigraphic level. They serve as an evidence for the existence of a longitudinal πλατεία (el-Falaki's L1: Tariq Bab Sharq: Fouad: el-Horreya) as early as the reigns of the first Ptolemaic kings. The presence of the L1 πλατεία from the very beginning confirms the orthogonality and orientation (aligned in the secondary intercardinal directions) of the historically attested basic layout of the Macedonian foundation (sections 1.2-3), archaeologically evident in late-4th and 3rd-century BC domestic and artisanal contexts (sites 74b, 121, 122c), and of which, at least, three main arteries, besides other subsidiary ones, seem identifiable: a principal ENE-WSW thoroughfare (L1), with two transversal ones running NNW-SSE at either end of the urban enclosure (R1 and R9). At some point, already in the 3rd century BC, about the second half of it, the basic layout of the foundation developed, under royal patronage, into a grid of battered earth and gravel *viae* progressively overrunning dismantled buildings, where necessary, to the latter decades of Lagid rule. With the advent of Rome's sovereignty, as a rigid grid plan was eventually dominating the urban enclosure, including the annexed, deptolemised Royal Quarter, the rather durable, archaeologically detectable hardstone pavements were constructed on the alignment of their battered earth forerunners and, in turn, restored in the aftermath of the turbulent transition to the post-tsunami setting of late antiquity, c. the 4th-6th century AD.

The secondary intercardinal orientation of the orthogonal grid (ENE-WSW) is archaeologically attested in Alexandria (section 2.2.1-2). Excavations within the modern districts of el-Mazarita and el-Chatby, i.e. the areas corresponding roughly to the Ptolemaic Royal Quarter, yet reveal foundations aligned in the cardinal directions (E-W; Figure 340). The off-grid encounters were recorded at el-Khaledin Park/the WHO building (site 134), the Bibliotheca Alexandrina (site 139), el-Silsileh (sites 138, 140a), the Latin Cemetery (site 147), and west of Casino el-Chatby (site 2). The massive enclosure excavated at el-Khaledin Park, and the *via terrena* running parallel to it, antedate the 1st century BC, with levelling *substrata* signalling a construction phase datable as early as the foundation. A few metres to the west of Casino el-Chatby, in 1950, Adriani recorded foundations of a defensive construction following, as the case at el-Khaledin Park, the cardinal directions. Given the approximate extent of the subsided southeastern belt of Cape Lochias, the construction in question could be associated with the defences of the promontory. Similar off-grid patterns are evident at the royal premises, on the southern belt of el-Silsileh: approximately, the present-day site of the Bibliotheca Alexandrina and its vicinity, which correlates roughly with Strabo's 'inner palaces'. Considering the *akra* itself, the foundation wall excavated by Adriani in 1938, already partially drenched and overbuilt with a miniature cistern, was not oriented towards the cardinal directions, but ran ENE-WSW. Its existence is indicative of Ptolemaic constructions on Cape Lochias that are aligned with the canonical urban grid. A short distance to the south, during the construction of the Bibliotheca Alexandrina, in 1993, a large foundation wall following the cardinal directions (E-W) was found cutting through the transversal course of street R1, c. 180 m to the north of the R1-L4 junction. Two mosaics pertaining to a successive phase of construction on site serve to provide a *terminus ante quem* for the dismantling of the monumental building(s) to which the earlier wall belonged, c. the first half of the 2nd century BC. This is

the time the urban complex at Diana Theatre (site 114) had adjusted to the canonical secondary intercardinal orientation, thus further backing the proposed Euergetean and Philopatorian origin of the developed orthogonal grid.

The off-grid encounters are crucial, for emphasizing the notion of a Royal Quarter independent, at least to a certain extent, from the rigid orthogonality of the urban enclosure to c. the 1st century BC: a setting that conforms with the cardinally-oriented peripheries (C1 and C2) of the Royal Quarter, of which (C1) joins the πλατεία (the C1-L1 junction: the proposed site of the Ptolemaic gate in the east) at c. 160 m south-southeast of the Alabaster tomb (site 147). Overall, the archaeological record of the early Ptolemaic Royal Quarter seems to denote a *βασίλεια ad Alexandrēam*. Nonetheless, *in Alexandrēā*, almost at the centre of the urban grid, at the northwestern sector (U-US) of the Polish concession at Kom el-Dikka, a preserved section of an inner street was found running parallel with late Ptolemaic and Roman structures built at an oblique angle to the secondary intercardinal pattern dominating the contiguous constructions excavated within the concession. The chronological range assigned for the recorded vestiges at sector (U-US) extends from c. the early 1st century BC, if not earlier, to the late 3rd century AD. Besides providing evidence for the presence of off-grid buildings and thoroughfares outside the enclosure of the Royal Quarter, that is within the city proper, where phase (I) of the Ptolemaic Sarapeion at Rhakotis is another case in point (site 52.I), these remains show that architectural continuity as maintained particularly at the central district in the opening decades of the Principate by successive rebuilding, where possible, upon exploited foundations of earlier dismantled constructions, would have preserved, perhaps in part (sites 31, 69c, 78), the Hellenistic ground plan, hence the retaining of cardinally-oriented pockets within the rigid Roman grid (Figure 341) to c. the late 3rd-4th century AD. The latter date corresponds to the transitional period which marks a profound break from previous urban trends, archaeologically evident through the post-tsunami 5th-7th-century cityscape of late antiquity (Figure 342). Whereas the off-grid, late cluster at the so-called 'Copron Berg/Mons' (site 78) might have been, if intentional at all (site 21), among possible cardinally-oriented remnant pockets surviving yet in the Byzantine grid, as suggested by some hydraulic installations excavated further south, at Abd el-Moneim/Ismaīl Mahanna Street (site 31).

(c) Waterways and Harbour Infrastructure

As is the case with the Mareotis-Eunostos navigable canal in the west (sections 2.1.3.2.2, 2.3.5; *see supra*, Conclusion I.a: Western Periphery; Strabo, Geōgraphiká: XVII. 1.10), the other waterways of ancient Alexandria and its environs were described by Strabo c. 25 BC:

> *On the right of the Canobic Gate, as one goes out, one comes to the canal which is connected with the lake (συνάπτουσα τῇ λίμνῃ: connected with the lake rather indirectly) and leads to Canobus; and it is by this canal that one sails, not only to Schedia, that is to the great river (the Nile), but also to Canobus, though first to Eleusis.*
> *On proceeding a slight distance from Eleusis, and on the right, one comes to the canal which leads up (southwards) to Schedia. Schedia is four schoeni (c. 160 stadia; σχοίνος: 40 stadia) distant from Alexandria; it is a settlement of the city, and contains the station of the cabin-boats on which the praefects sail to Upper Aegypt (to the south). And at Schedia is also the station for paying duty on the goods brought down from above it (to Alexandria) and brought up from below it (to inland Egypt); and for this purpose, also, a schedia (σχεδία: a raft or pontoon bridge) has been laid across the river, from which the place has its name (for being a controlled passage off the Canopic arm).*
> (Strabo, Geōgraphiká: XVII. 1.16)

The 1st-century BC narrative of Strabo shows the Alexandrian metropolis as being connected with its hinterland by means of a principal waterway designated 'Κανωβικῆς διώρυγος' (*Kanovikís diórygos*: Canopic canal) by the Greek geographer, and of which three segments seem identifiable (Figure 343) – (i) Schedia-Eleusis: Schedian canal; (ii) Eleusis-Canopus: an eastward branch off segment (i) aka canal to Canopus; (iii) Eleusis-Alexandria: a westward branch off segment (i) aka canal to Alexandria. The latter would have been indirectly accessible, not only from Lake Mareotis and its port, but also from the western harbour, via the Mareotis-Eunostos navigable waterway. A setting as such, of which the post-mediaeval Ottoman-developed canal system seems reminiscent, with exception to the diverted segment at Minet el-Bassal, is necessitated by the need to minimize the inflow of brackish water from the lake into the freshwater stream, while maintaining connectivity between the river, the lake, and the sea, and yet, establishing a trade route connecting inland Egypt to the Mediterranean without necessarily navigating through Lake Mareotis. Enhancing the freshwater intake is another advantage, with the Canopic-supplied artery extending westwards, alongside the urban enclosure, in closer proximity to the underlying *hiponoses*. If that were the case, the local (Egyptian) residents at Rhakotis would have been getting water with higher salinity than that supplied to the eastern (Greek) districts of the city, considering the inflow of brackish water from the Mareotic tributary into the westernmost segment of the freshwater stream running to the south of Kom el-Shuqafa and the Sarapeion acropolis. This tributary proceeds northwards to establish the Mareotis-Eunostos artery: (iv) a navigable canal flowing north-south, connecting the lake to the sea, thus forming a

defensive ditch before the western periphery, and terminating, towards the north, at an artificially developed box-shaped outlet to the Mediterranean (the Kibotos). Through segments (i), (iii), and (iv), the city of Alexandria and its harbour amenities were approachable from the Canopic branch of the Nile, hence the Strabonic assigned labels 'Canopic' and 'navigable'. Given their strategic location on the provincial network of trade, the Canopic town of Schedia and the Mareotic lake-port(s) were of a particular importance, serving as transit-points for mooring vessels and customs-paying hubs for merchandise trade between Alexandria and inland Egypt.

Although the Canopic-supplied canal appears in the historical known record c. the 1st century BC (Caesar, Alexandrian War: 5-6; Strabo, Geōgraphiká: XVII. 1.16), its presence is prerequisite to a metropolitan habitation on the Mareotic ridge. Its establishment, as an artery of life, would be datable, therefore, to the formative years of Lagid rule: perhaps as early as Ptolemy's satrapy (c. 323-306 BC; section 1.4). Besides its principal role in conveying fresh water to the city of Alexandria by means of an underground intricate network of aqueduct tunnels and conduits (*hiponoses*), the historically attested Κανωβικῆς διώρυγος, as that connecting Lake Mareotis to Eunostos in the west, seems to have been navigable already in the years that followed the Augustan conquest, if not earlier:

> *But to balance all this is the crowd of revellers who go down from Alexandria by the canal to the public festivals (in Canopus); for every day and every night (the waterway) is crowded with people on the boats who play the flute and dance without restraint and with extreme licentiousness, both men and women, and also with the people of Canobus itself, who have resorts situated close to the canal and adapted to relaxation and merry-making of this kind.*
>
> (Strabo, Geōgraphiká: XVII. 1.17)

Strabo's narrative suggests that both arteries branching off the Schedian canal were navigable at the advent of Rome's dominion in Egypt. Navigating the Alexandrian hinterland, however, was not all-year-round, which would explain the archaeologically attested maintenance of the waterways under the Julio-Claudians and their Flavian successors in the 1st century AD:

(a) Marble slab bearing bilingual Greek-Latin inscription, discovered outside Bab Sharq c. 1891/92 (Kunsthistorisches Museum Wien, Inventory Number ANSA III 783):

> *The emperor Caesar, son of the divine (Iulius) Caesar, Augustus, Pontifex Maximus, has brought the River Augustus (the canal), from Schedia, to gush all over the city (of Alexandria); (done) under the praefectus Aegypti C. Iulius Aquila; the year XXXX (40) of (Augustus) Caesar (c. AD 10/11).*

(b) Limestone *cippus* bearing bilingual Greek-Latin inscription, discovered at el-Bohtori Street (el-Labbane) c. 1904/05 (Graeco-Roman Museum, Inventory Number 18; text: see *supra*, inscription a).

(c) Limestone *stela* bearing Greek inscription, discovered at Kom el-Giza (the present-day site of ancient Schedia; former collection of Ernst von Sieglin):

> *In the year III (3) (c. AD 80/81) of the emperor Titus Caesar Vespasianus Augustus, when C. Tettius Africanus Cassianus Priscus was praefectus Aegypti, the River Agathosdaimonos (alternative label) was dug from Tria Soldum (the present-day koms of el-Giza, el-Hamam, and el-Nashwa), as far as Petra (the present-day Hagar el-Nawatieh: an eastern suburb of the ancient city), and restored to its previous state; fourteen engraved plaques were placed along either side.*

(d) Limestone *stela* bearing bilingual Greek-Latin inscription, discovered at Kom el-Giza (GRM epigraphic collection):

> *In the year VI (6) (c. AD 86/87) of the emperor Titus Flavius Domitianus Caesar Augustus, when C. Septimius Vegetus was praefectus Aegypti, the River Philagrianos (alternative label) was dug from Tria Soldum, as far as Petra.*

The widening and constant maintenance of the navigable canals during the Principate would have been necessitated by the status of *Provincia Aegypti* as a principal grain supplier to Rome, hence the development of the harbour infrastructure and the construction of the granaries of Neapolis. In this context, the IEASM geophysical surveys in today's eastern harbour, Μέγας Λιμήν of ancient Alexandria, have revealed an extensive programme of renovation work and rebuilding initiated under Roman rule to develop the Ptolemaic port facilities (section 2.3.3). In the Hellenistic period, the eastern sector of the Great Harbour seems to have been reserved for royal use and naval fleet mooring: inner basins (X, Y, Z). Whereas the commercial infrastructure of the western sector is attested in Strabo's 1st-century BC descriptive account on the coastal terrain, from the Caesareum (sites 93-100) westwards, as far as the Heptastadion (section 2.3.2): a trading post (ἐμπόριον) (section 3.7.3.1, G), warehouses (αποστάσεις), and shipyards (νεώρια) respectively. Nevertheless, with the Roman annexation of the Ptolemaic kingdom in 30 BC, and the subsequent establishment of *Provincia Aegypti*, the amenities of the Great Harbour became fully exploited to one end: increasing the overall capacity and ensuring the

regularity of commercial traffic flow in either direction, between the Roman-controlled Mediterranean hubs and the exotic merchandise of the Orient, thus gaining access to Arabian and Indian markets (Figure 344).

II. Cityscape: Chapter 3

When the available archaeological evidence is considered in conjunction with a critical study of the relevant literary sources, urban change becomes justifiable and, accordingly, chronological phases of development seem inferable. In this study, urban transition from one norm to another has allowed the identification of four broad phases of cityscape development: (i) the Macedonian foundation (331 BC) – Caesar's Alexandrian War (48-47 BC); (ii) the reign of Cleopatra VII (51-30 BC) terminating with the Augustan conquest – the repressions of Aurelian and Diocletian (AD 272, 297); (iii) a transitional phase to late antiquity, from the late 3rd through the 4th century AD; (iv) the earthquake and mega-tsunami of AD 365 to Theophilus' sectarian unrest in the 390s – the Byzantine-Sasanian and Arab wars in the 7th century.

Within the modern districts of el-Mazarita and el-Chatby, the archaeological record of excavated remains antedating c. 100 BC backs the notion of a *βασίλεια ad Alexandrēam*: a Royal Quarter northeast of the city proper (Figures 345-346). When a correlation is drawn using the map of the present-day metropolis, the Ptolemaic βασίλεια seems to have extended, approximately, east-west, from the Suez Canal Road to el-Khaledin Park, and north-south, from the southeastern shores of the eastern harbour and the headland of el-Silsileh, to reach the longitudinal πλατεία L1 (Abu Qir Road) at c. 590 m to the east of the R1-L1 junction: a point represented by the C1-L1 junction in the featured AutoCAD maps (V1) and (V4). The distributional patterns of contemporary 3rd-2nd-century BC vestiges recorded within this range show clusters of monumental constructions of luxurious character along the southern belt of el-Silsileh and on the slopes of the Government Hospital Hill (sites 12, 14, 112, 123, 125, 128-129, 131-134, 137-141). These remnants echo ancient literary accounts on the civic constituents of the Ptolemaic Royal Quarter (section 3.7.3.1, C-E). Immediately to the west, at the sites of the former Cricket Playground and the former British Consulate, and in the vicinity of the Ramleh Central Station, the unearthed remains of a residential district on the western fringe of the Ptolemaic βασίλεια indicate an area of elite Graeco-Macedonian habitation in the historical Broucheion (sites 15, 114-123). At the other end of the Royal Quarter, i.e. beyond *akra* Lochias, the likely presence of a garrison before the royal residences, at the most threatened front, would provide a possible context for Breccia's complex on the Suez Canal Road (the site of the former Royal Institute of Hydrobiology: the present-day Association of Muslim Youths), situated c. 240 m to the west of the proposed Ptolemaic periphery (C3), where the unearthing of a mosaic pavement, in 1921, displaying a conventional Macedonian hunt-scene may not come as a surprise (site 3). Given the estimated area of the Royal Quarter, public edifices would have extended southwards, alongside the colonnades of the πλατεία (site 77): a setting glimpsed in contemporary sources such as Book XV of Polybios' 2nd-century BC *Ἱστορίαι* (section 3.7.3.1, D) and the 1st-century BC narrative of Diodorus Siculus: '(the πλατεία) is bordered throughout its length with rich façades of houses and temples (site 90)' (Diodorus, Bibliotheca Historica: XVII. 52.3).

South of Fouad Street, within the archaeological park at Kom el-Dikka, scant vestiges of 2nd-1st-century BC Hellenistic habitation, underlying the Roman and late antique *strata*, shed further light on the origin of the domestic and commercial character of the urban *insulae* to the south of the πλατεία (L1): inhabited by Greek commoners and artisans living and working in the neighbourhood of the recently discovered Boubasteion (site 92). Towards the western periphery, the Egyptian borough, Rhakotis, extended north-south, between the Graeco-Macedonian district (east) and the Mareotis-Eunostos navigable canal (west), where the construction of a Graeco-Egyptian sanctuary to the city's syncretic deity, Sarapis, as early as the first half of the 3rd century BC (site 52.I), and possibly earlier, would have been most convenient on a Rhakotite acropolis. The latter served apparently as a topographic symbol of Graeco-Egyptian symbiosis: a most needed prerequisite for social and political stability within the Macedonian-ruled kingdom. On the other hand, the maritime façade of Ptolemaic Alexandria, as a trade-oriented city, seems to have been the port zone extending west of transversal street R4 to the Heptastadion and beyond, where Strabo, at the advent of Augustan dominion, would still site the city's emporion, warehouses, and ship sheds respectively (Strabo, Geōgraphiká: XVII. 1.9). It is within such coastal range that the royal-cult temples of the Ptolemies (section 3.7.3.2, H) would have been built on the mainland to complement the Lagid iconography explicitly exposed afore the emblematic Lighthouse on the adjacent island of Pharos (site 43): a scenery promoting royal publicity to merchant sailors and official visitors alike. Meanwhile, at the eastern end of the urban enclosure, clusters of ethnic minorities (Jews, Levantines, etc.) had triggered an expansion towards the necropolitan suburbs of present-day el-Chatby and el-Hadra, archaeologically and historically attested c. the 1st century BC (sites 145-146; section 2.1.2.2.2.1). By 47 BC, Julius Caesar's Alexandrian War had caused a major destruction to the civic infrastructure and principal public edifices (sections 2.2.3, 2.3.2, 3.7.3.1, D) and, subsequently, the initiation of an extensive (re)

building programme, c. 41-31 BC, under Cleopatra VII, which yielded the cast-iron bases for moulding the cityscape of the Augustan Principate.

In Book XXII of *Res Gestae*, Ammianus Marcellinus relates in the 4th century AD:

> *Cleopatra devised a lofty-tower in the harbour, which from its situation is called the Pharos and furnishes the means of showing lights to ships by night ... This same queen built the Heptastadium, remarkable alike for its great size and for the incredible speed with which it was constructed, for a well-known and sufficient reason.*
>
> (Ammian. Marcellin., Res Gestae: XXII. 16.9-10)

Controversial as it may seem today, knowing that the initial phase of construction of the Pharos Lighthouse (site 43) and the Heptastadion (section 2.3.2) antedates the reign of Cleopatra VII by over two centuries, Marcellinus' late Roman narrative reveals the 4th-century perception of Cleopatra's (re)building programme, the extensiveness of which, especially at the devastated Pharian district and its mole (Caesar, Alexandrian War: 17-22), became well engraved in the folk memory that by the time Ammianus Marcellinus wrote *Res Gestae*, it was traditionally accepted that both constructions were initiated under the renowned Ptolemaic queen. One characteristic of Cleopatra's 'rebuilt Alexandria', however, is the prominence of the Egyptian element (site 142), although part of the urban fabric already by the 3rd-2nd century BC (civil: site 43, cultic: site 52, funerary: site 160). Integrating the local into a classical setting is intrinsically Alexandrian, as evident at contemporary sepulchres on Pharos Island (sites 44-45): a trend explicitly developed in the mainland during imperial times (sites 48d, 53, 153). Among the edifices of the Augustan cityscape which are late Hellenistic in origin is the Caesareum aka Sebasteum (sites 93-100). Its orientation off the canonical grid plan, and yet not aligned in the cardinal directions, but had oblique axes, with the façade facing the passageways into the Great Harbour, seems justified by the nature of such a cultic complex, being a hope and beacon of safety for sailors invoking divine protection on their mooring vessels (Philo, Legatio ad Gaium: XXII. 151; site 98).

On the subdivision of Alexandria around the opening decades of the Principate, Philo Judaeus relates:

> *There are five districts in the city, named after the first five letters of the written (Greek) alphabet (A: Alpha, B: Beta, Γ: Gamma, Δ: Delta, E: Epsilon).*
>
> (Philo, In Flaccum: VIII. 55)

Quarter (Δ), to start with, correlates with the Jewish district, given Flavius Josephus' 1st-century AD narrative in the *Jewish War*:

> *These soldiers rushed violently into that part of the city that was called Delta, where the Jewish people lived together, and did as they were bidden.*
>
> (Josephus, Bellum Iudaicum: II. 18.8)

The localisation of Quarter (Δ) on the eastern fringe of the city is based on the treatises of Philo Judaeus and Flavius Josephus against Flaccus and Apion respectively (section 2.1.2.2.2.1: *In Flaccum*; *Contra Apionem*). A Ptolemaic papyrus datable c. 221 BC (Fraser 1972: 34) and a dedicatory inscription of AD 158 (site 91) seem to suggest a possible association between the central and northern districts (including the annexed βασίλεια) with Philo's quarters (A) and (B). It would be fairly reasonable, therefore, to associate the Mareotic quarter (southern district) and the Egyptian borough, Rhakotis (western district) with quarters (Γ) and (E).

Under Roman rule, habitation continued at the central district as archaeologically attested by remnants of dwellings with floor-mosaics, workshops, and inner alleys excavated at Kom el-Dikka (sector W_1N: site 18; sector F: sites 19, 70; sector A: site 20; sector MX: site 69b, d; sector U-US: site 69c; sector ME: site 68; sector MXV: site 69e). In the north, bathing establishments associated with a number of urban units seem to have cluttered the coastal areas of the Broucheion and the annexed, deptolemised Royal Quarter, overbuilding some of their monumental waterfront constructions (sites 2, 7a, 26, 112b-113, 138-140). The deptolemisation of the 'former' βασίλεια, as a topographic symbol of Lagid sovereignty, would have involved an adjustment to the orthogonal grid patterns predominant elsewhere within the city proper (section 2.2.3; see *supra*, Conclusion I.b: Grid Plan). This process intensifies under imperial rule with the establishment of the granaries of Neapolis and the consequent shift in use of the inner anchorages of the Great Harbour, from royal fleet mooring to trade-oriented amenities facilitating the flow of Egyptian grain towards the capital of the new rulers (section 2.3.3; see *supra*, Conclusion I.c: Waterways and Harbour Infrastructure). Other vestiges of habitation and thoroughfares reveal an urban expansion towards the abandoned necropolitan suburbs of present-day el-Chatby and el-Hadra (sites 2-3, 32a-c, 144, 148-149a), a development that would have necessitated the construction of a successive line of defence in the east: contour (C4) or (A-E) in the featured AutoCAD maps (V2) and (V4) (section 2.1.2.2.1; see *supra*, Conclusion I.a: Eastern Peripheries). At Rhakotis, on the southwestern fringe, the Graeco-Egyptian sanctuary of Sarapis went through a third phase of construction, from the late 2nd to the early 3rd century AD (site 52.III). Two centuries earlier, interments began at Kom el-Shuqafa (site 53b), perhaps in response to burial-space economy within the densely occupied cemeteries of Nekropolis along the west bank of the Mareotis-Eunostos navigable canal (sites 46-48).



The moulded cityscape of the Principate, as reflected in the archaeological record, is glimpsed in contemporary literary sources such as Book V of Achilles Tatius' *τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα* (datable c. the late 3rd century AD):

> *I entered it (the city of Alexandria) by the Sun Gate, as it is called, and was instantly struck by the splendid beauty of the city, which filled my eyes with delight. From the Sun (eastern) Gate to the Moon (western) Gate – these are the guardian divinities of the entrances – led a straight double row of columns (the colonnades of the πλατεία), about the middle of which lies the open part of the town, and in it so many streets that walking in them you would fancy yourself abroad while still at home. Going a few hundred yards further, I came to the quarter called after Alexander, where I saw a second town; the splendour of this was cut into squares (urban insulae: el-Falaki's orthogonal grid), for there was a row of columns intersected by another as long at right-angles.*
>
> (Achilles Tatius, τὰ κατὰ Λευκίππην καὶ Κλειτοφῶντα: V. 1.1-4)

Stratigraphy at several sites (18-20, 31, 69b-e, 122b) indicates that parts of the central and northeastern districts had been devastated in the second half of the 3rd century AD. Layers of ashes pertaining to contemporary private (domestic) and public (artisanal) buildings signal a possible destruction by fire, which, given the chronological context, is attributed to the violent retributions of Aurelian (AD 272) and Diocletian (AD 297). The 4th century thus seems to mark a period of transition to the cityscape of late antiquity following a partial abandonment of the Broucheion. Two events of the transition may have prompted urban change towards the turn of the century: (i) the destructive earthquake and tsunamic shockwave in AD 365 and (ii) the imperial decree of Theodosius I c. AD 391. The former had led eventually to a consequent abandonment of the coastal areas (section 2.3.1), while the latter had paved the way for Theophilus, then Patriarch of Alexandria, to terminate the major temples and cultic edifices of the pagan city (sites 52, 90-92, 93-100).

Urban change in the cityscape of late antiquity would be best illustrated through the rhetoric of Constantinople's archbishop, c. the turn to the 5th century, on the whereabouts of Alexander's tomb, once a landmark of the city (section 3.8.3.1, I.d). The archaeological record yet provides hints on the urban fabric of the 5th-7th century. At Kom el-Dikka, for instance, the remnants of the Augustan Principate are overbuilt with a number of public edifices (a bath complex, latrines, and cisterns) and clusters of urban units (houses and workshops) (sites 18-21, 26, 31, 69-70). Of the latter constructions, a series of twenty-two *auditoria* excavated within the Polish concession could have formed, most probably together with the adjacent *odeum*, part of an educational establishment at the heart of the Byzantine city: a possible successor of the Mouseion and Library in the Broucheion (section 3.7.3.1, E; site 62b). The prominence of intellectual life in late antique Alexandria is signalled by another recent discovery at el-Sultan Hussein, where cultural continuity is attested by a fragmentary mosaic displaying a mythological scene involving Ἀνδρομέδα and Περσεύς (Rezq 2016: 69). Datable c. the 6th century, it serves to shed light on the decorative schemes employed at the time in Alexandria yet afore two successive invasions of which the latter was meant to last.

Epilogue
A Holistic Approach to Topographic Reconstruction

The history of the city of Alexandria is connected in many ways with two figures, Alexander the Great (356-323 BC) and Mohamed Ali Pasha (1769-1849). The former marched into Egypt, in autumn 332 BC, during the Macedonian-led Afro-Asiatic campaigns of the 4th century BC. A few months later, in winter/spring 331 BC, the city was founded on the Mediterranean coast of Egypt: *Alexandrea ad Aegyptum*. Likewise, from 1805 onwards, the modern city of Alexandria developed throughout the course of the 19th century and into the first half of the 20th under the progressive policies of the Ottoman *wāli* of Egypt, Mohamed Ali Pasha (1805-48), and his Alawite successors who ruled until 1952-53. It is interesting to find that both the founder and reviver of Alexandria have come from northern Greece, one from Pella, the historical capital of the ancient kingdom of Macedon, the other from Kavala. The revival of the Alexandrian metropolis under the Alawite dynasty has led to a disruption in the archaeological record of the ancient city. Traces of Graeco-Roman Alexandria progressively disappeared in the hassle of continuous rebuilding activities and enthusiastic stone pillagers. This would explain the reason why most discoveries are accidental, being subsequent to construction works. In the 1880s, an extensive (re)building programme had been instigated in the aftermath of the British bombardment of the city in July 1882. By the 20th century, a crowded metropolis was already in place. The modern city has spread over the areas of the ancient one, its necropolitan suburbs, the silted-up isthmus of the Heptastadion, and the now joined-to-mainland island of Pharos. In the 19th century, therefore, el-Falaki had the advantage of investigating sufficient areas of the developing town and to carry out limited excavations where possible. A wide-range survey as such has become increasingly impractical over time with continuous urban expansion and demographic growth. The application of geophysical prospecting methods within municipal areas where actual digging is no longer possible may thus be a non-destructive alternative in exploring the past in Alexandria, yet besides the salvage excavations which are carried out, intermittently, in the compact city of today. In this context, a topographic reconstruction of ancient Alexandria is held as one major challenge facing those involved in studying the urban trends of antiquity. Little evidence has, however, survived to verify such laudatory narratives of the ancient authorities, a fact that stresses the importance of archaeological inference in conjunction with a critical study of the relevant literary sources, hence the holistic approach adopted in attempting to solve the jigsaw puzzle of 'Alexandria antiqua'.

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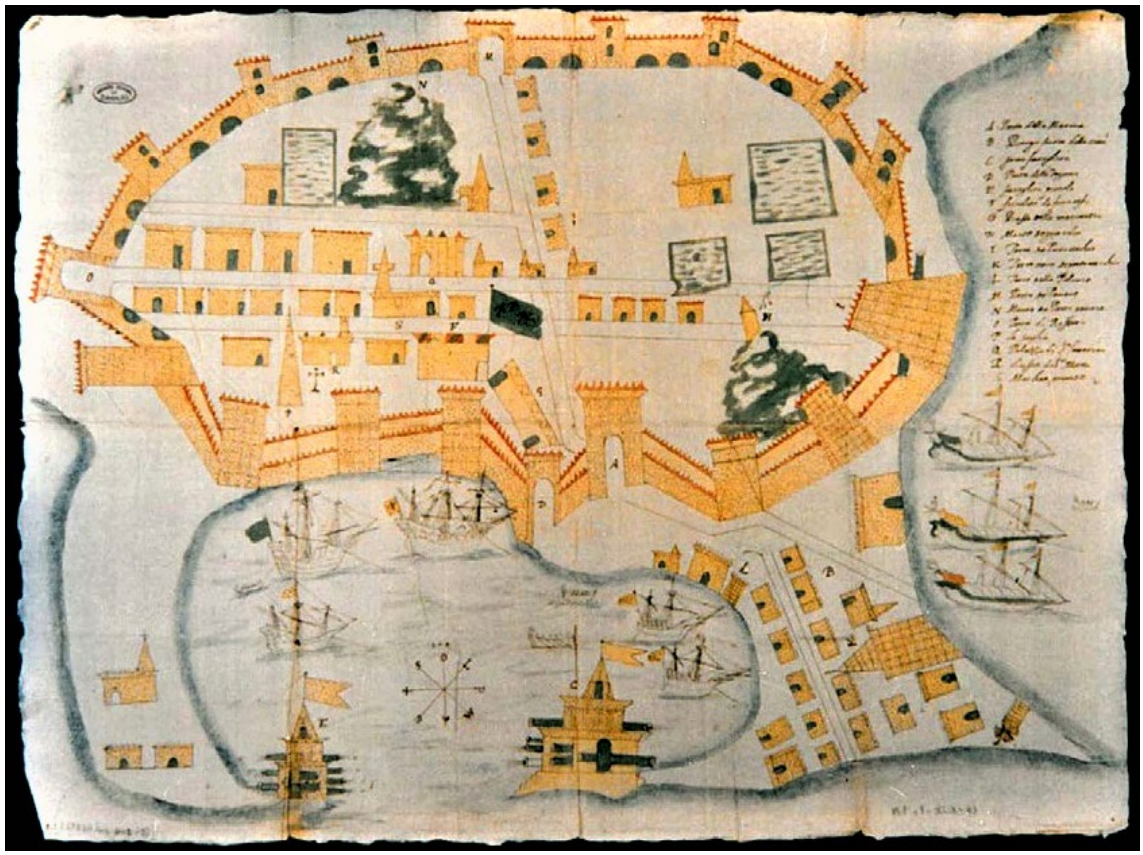


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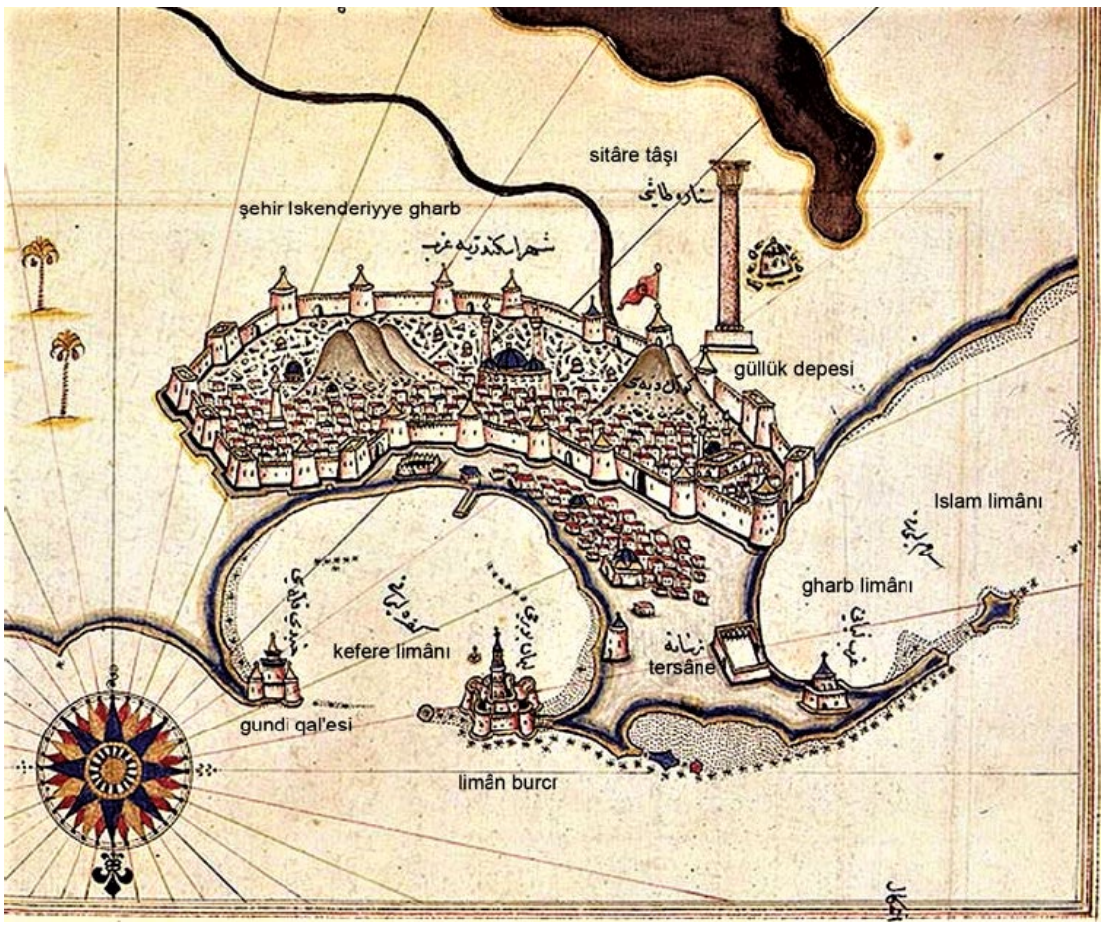


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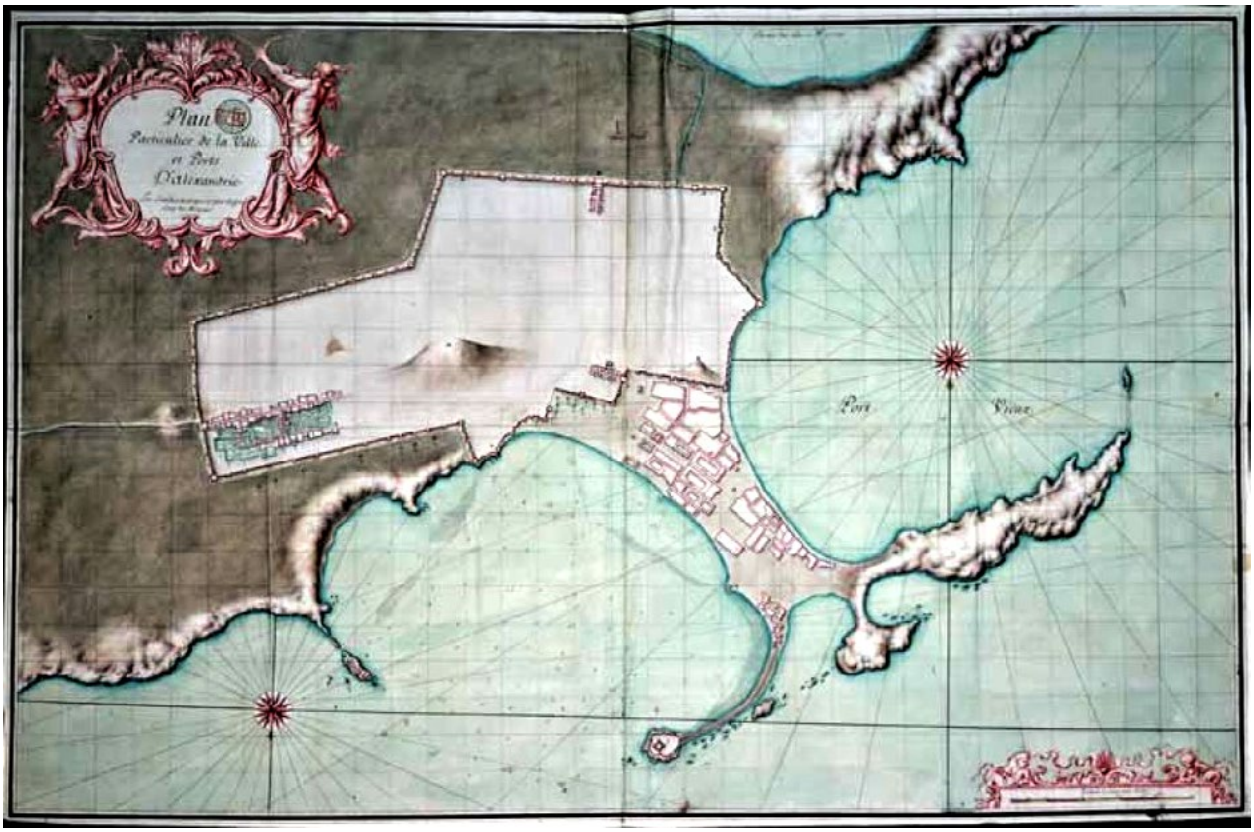


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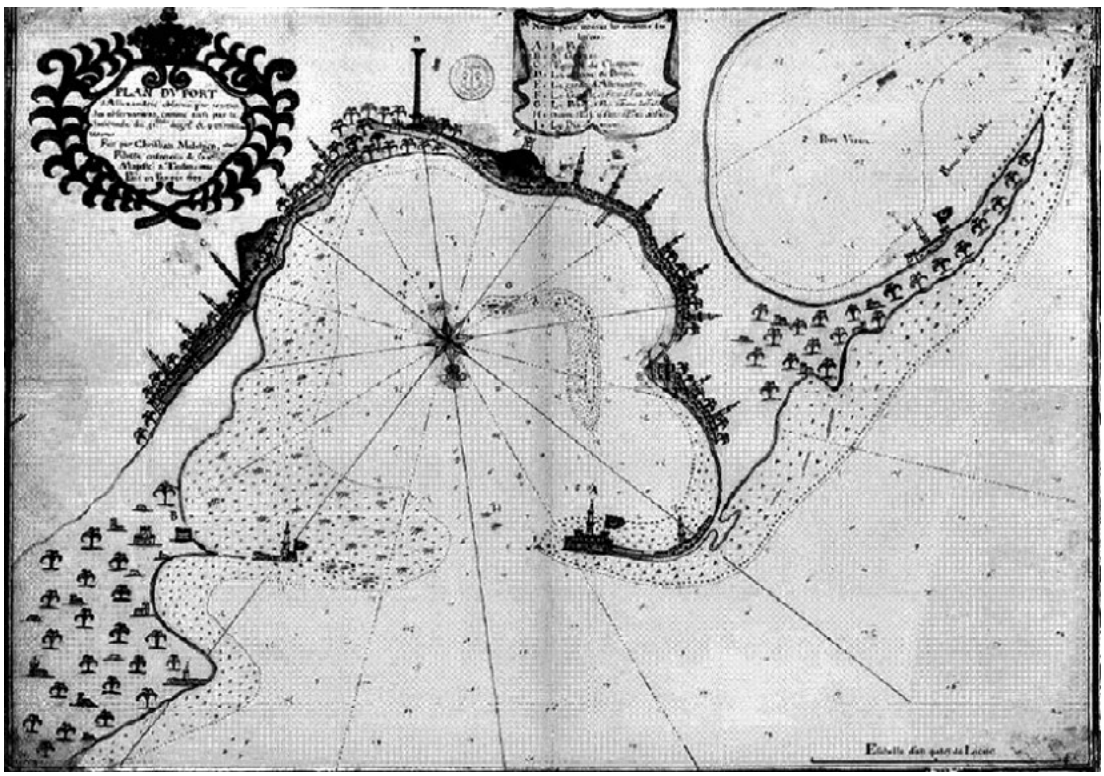


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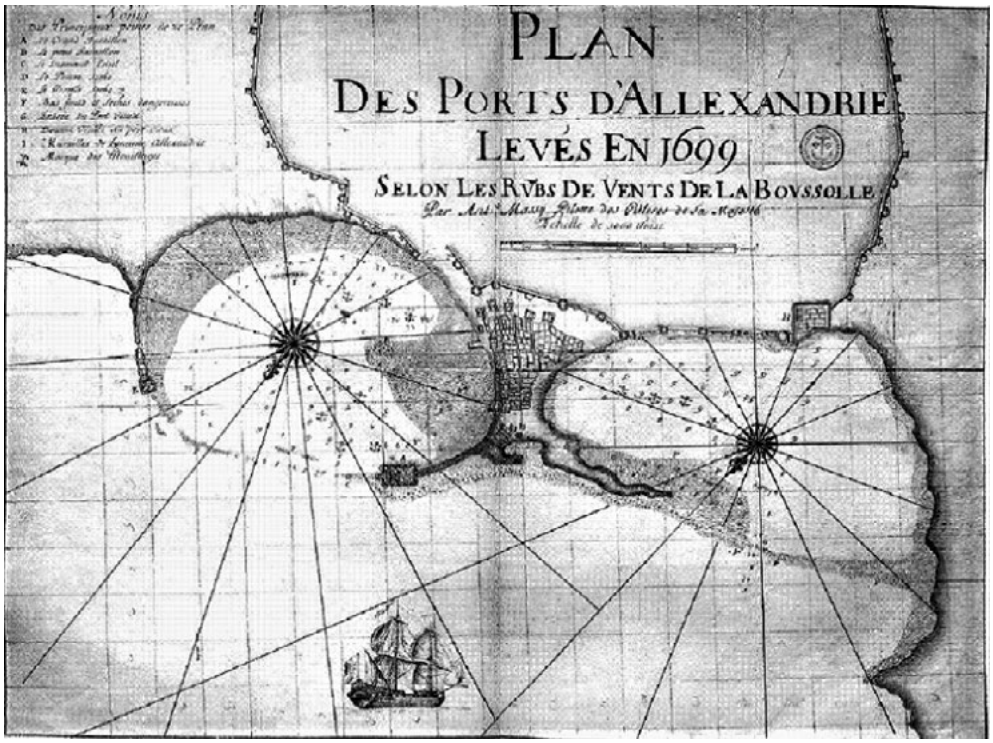


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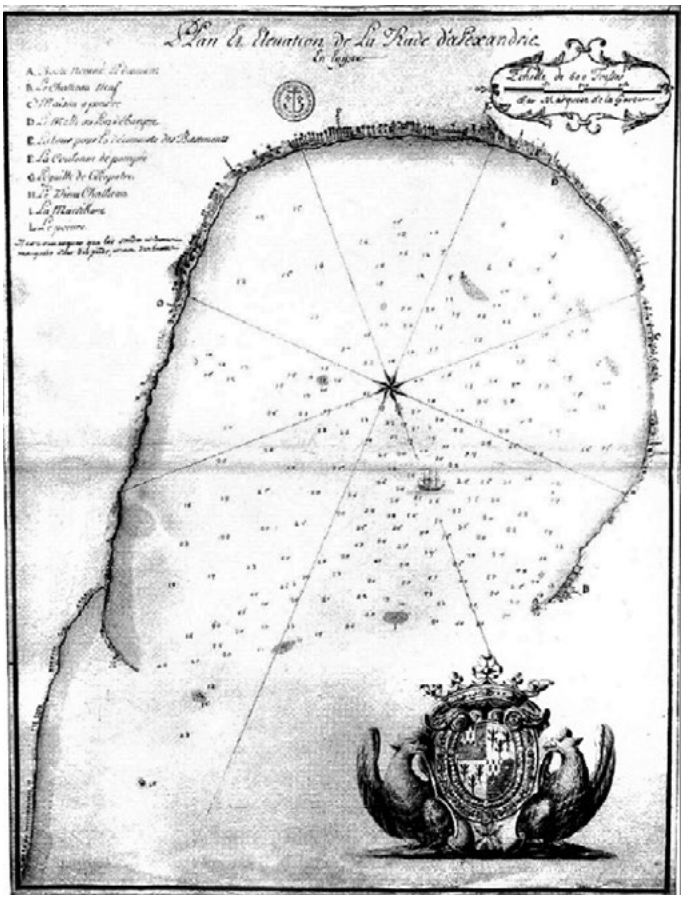


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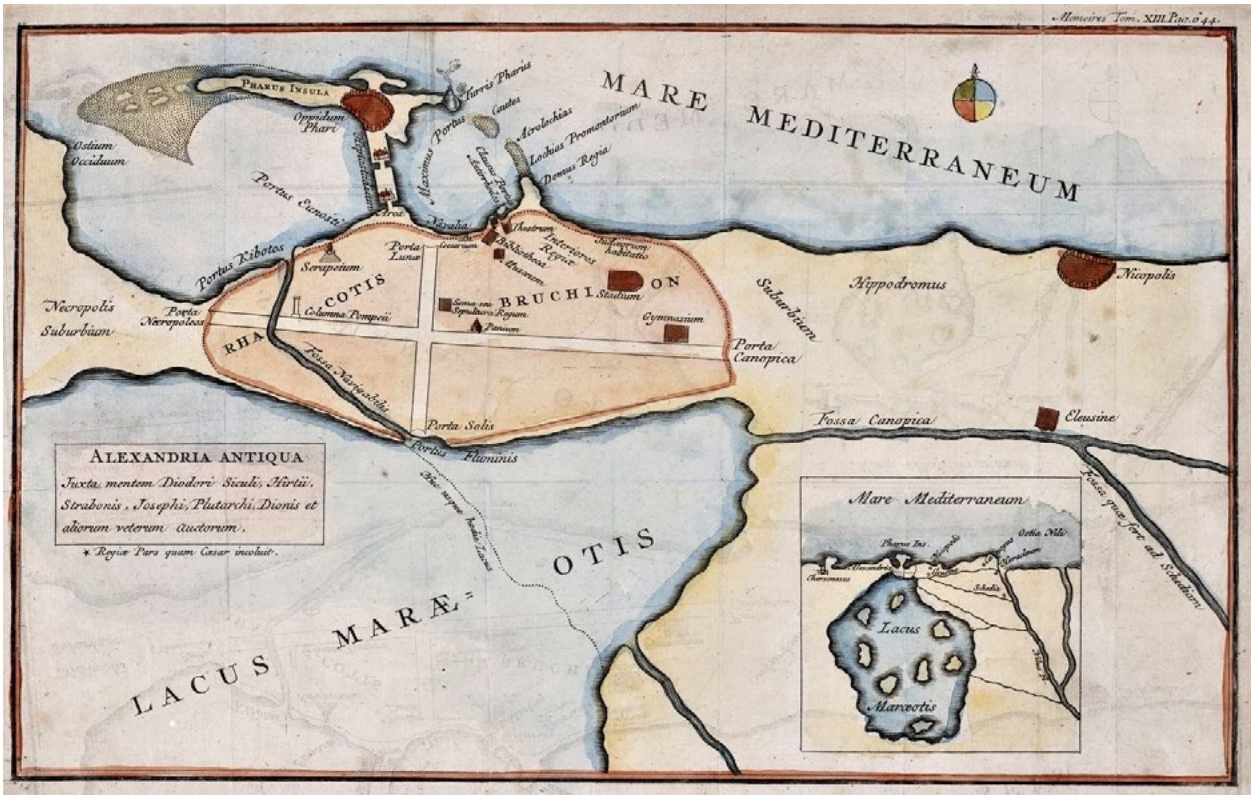


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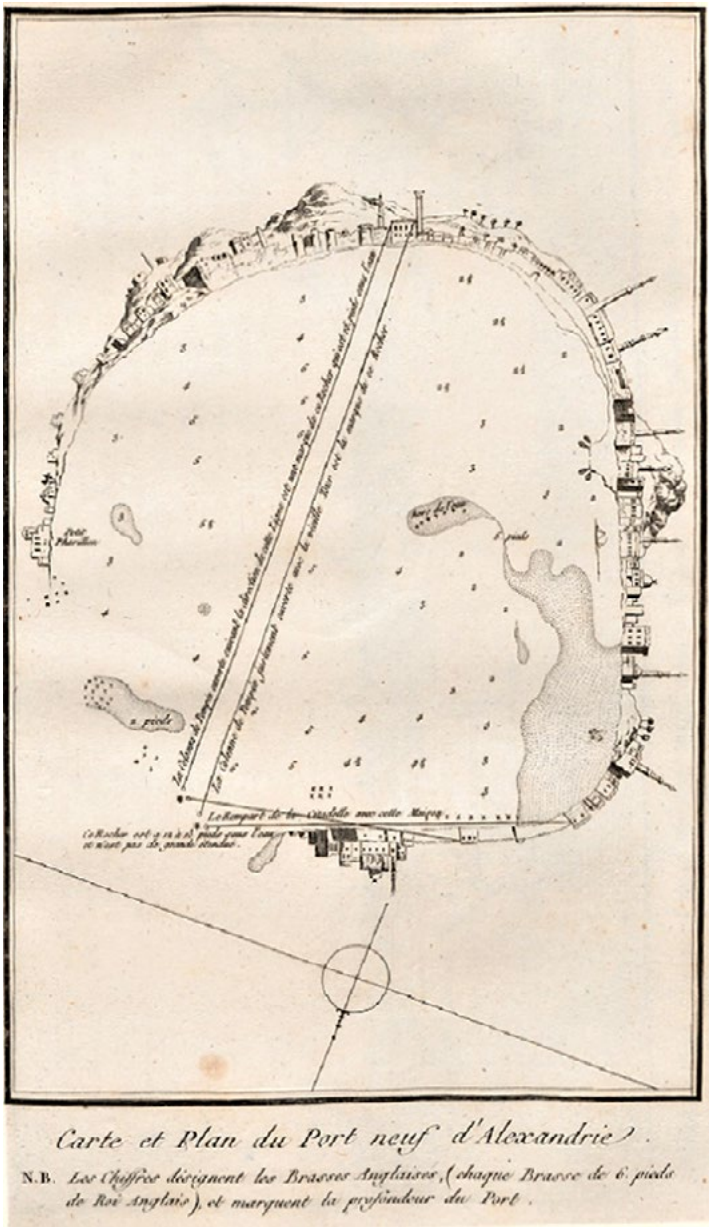


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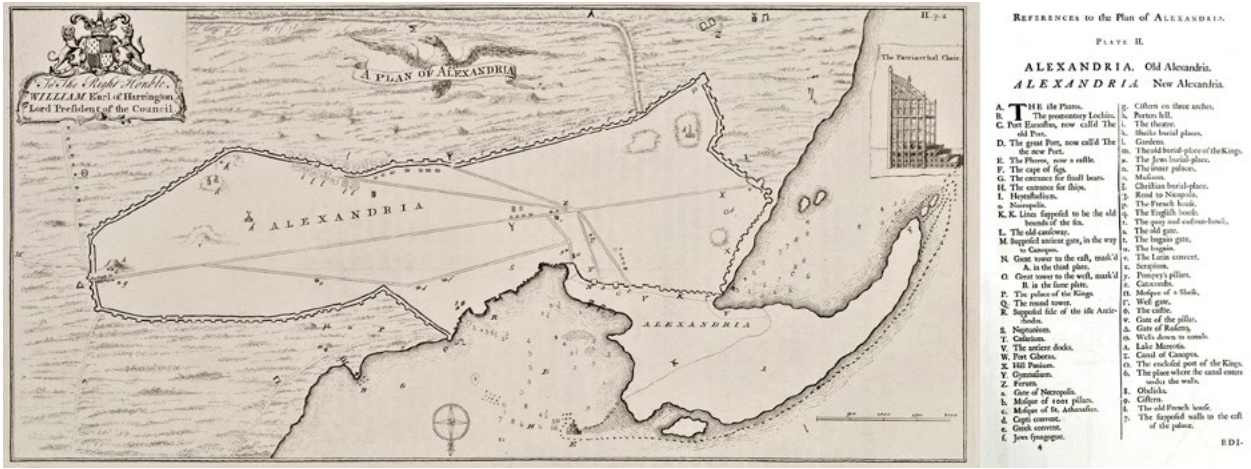


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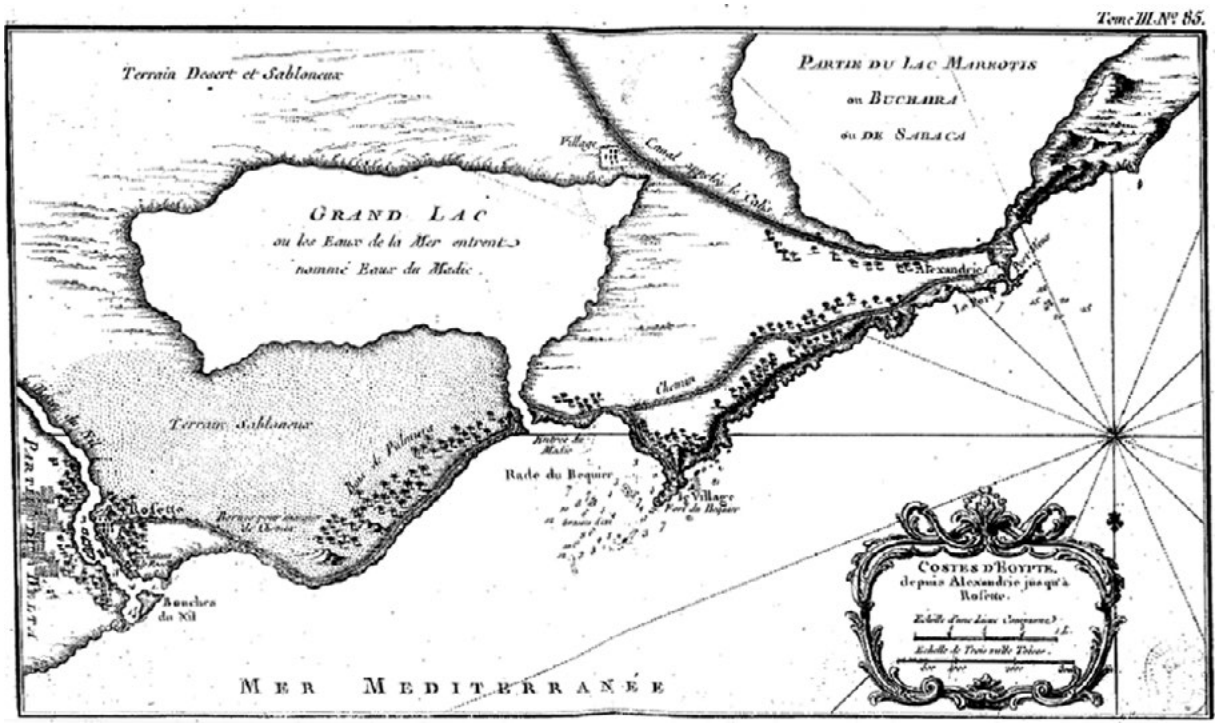


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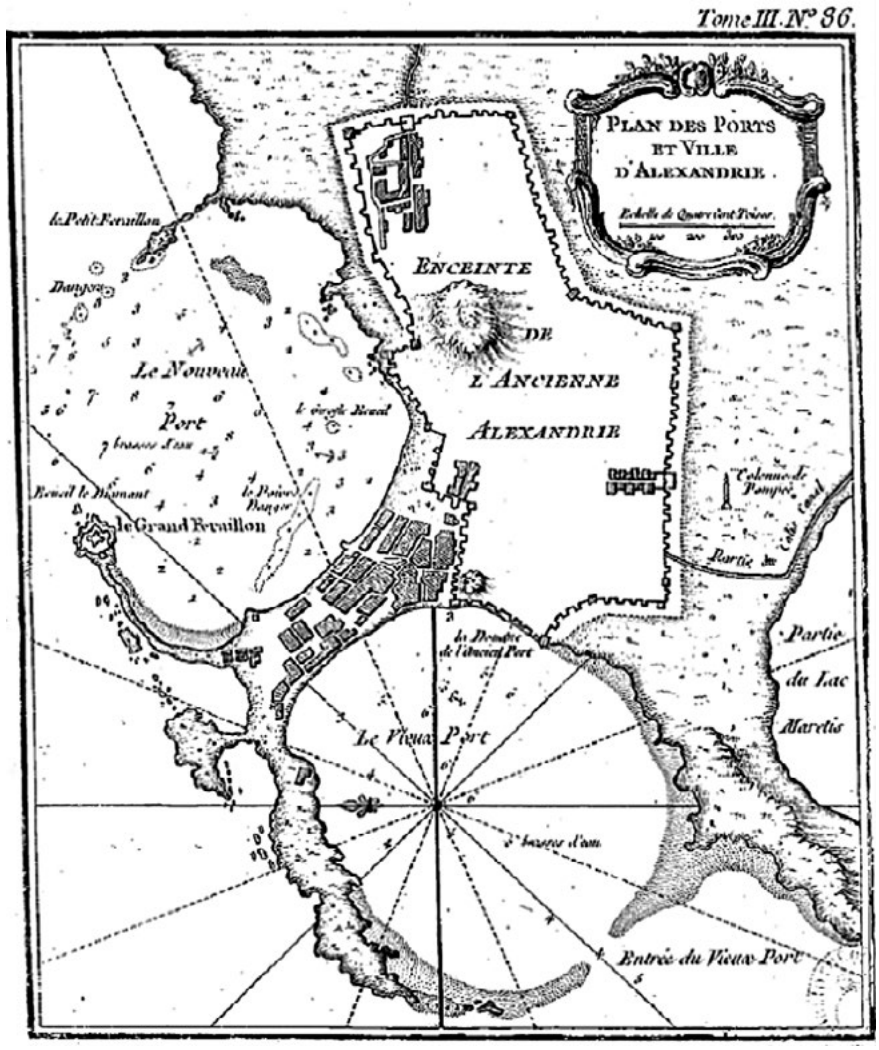


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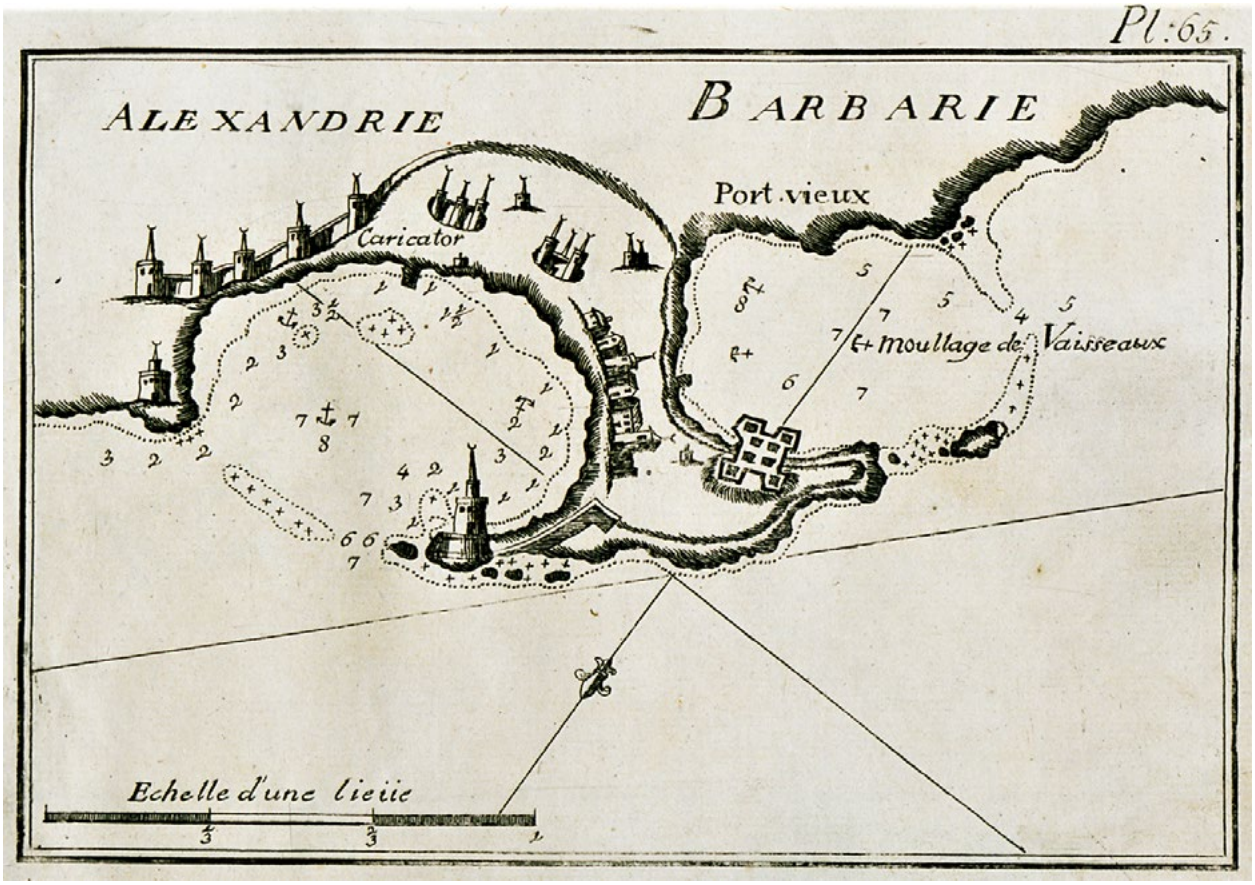


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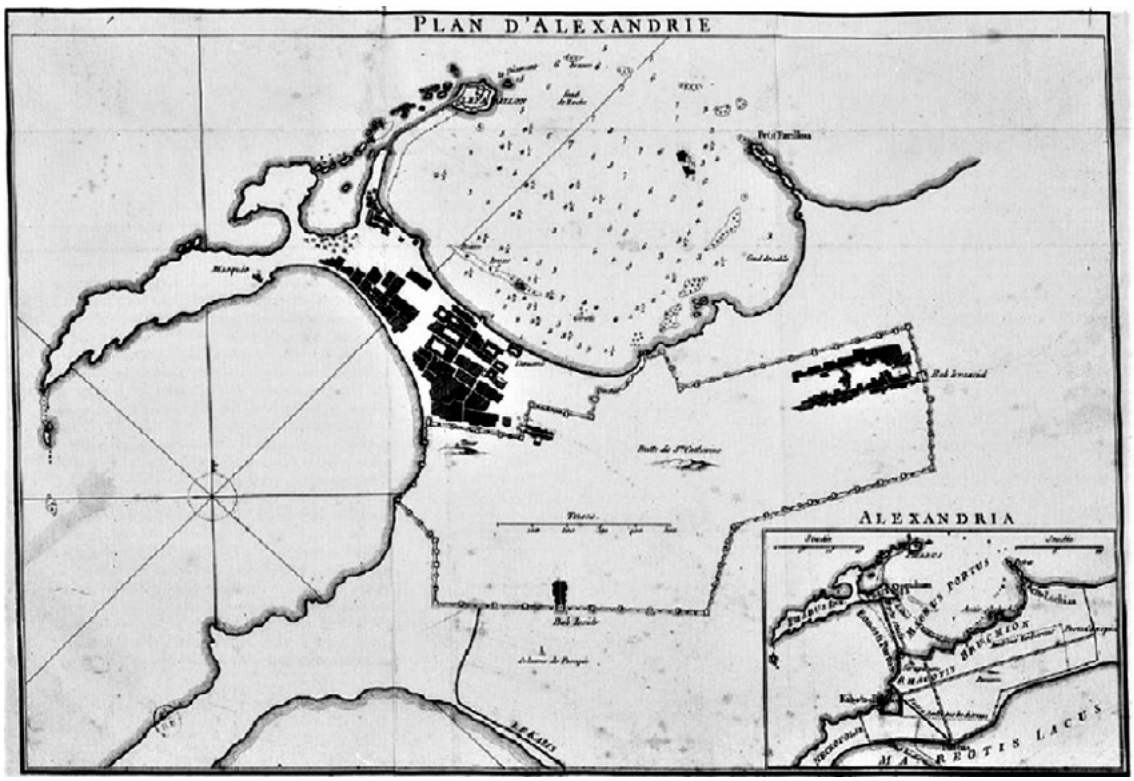


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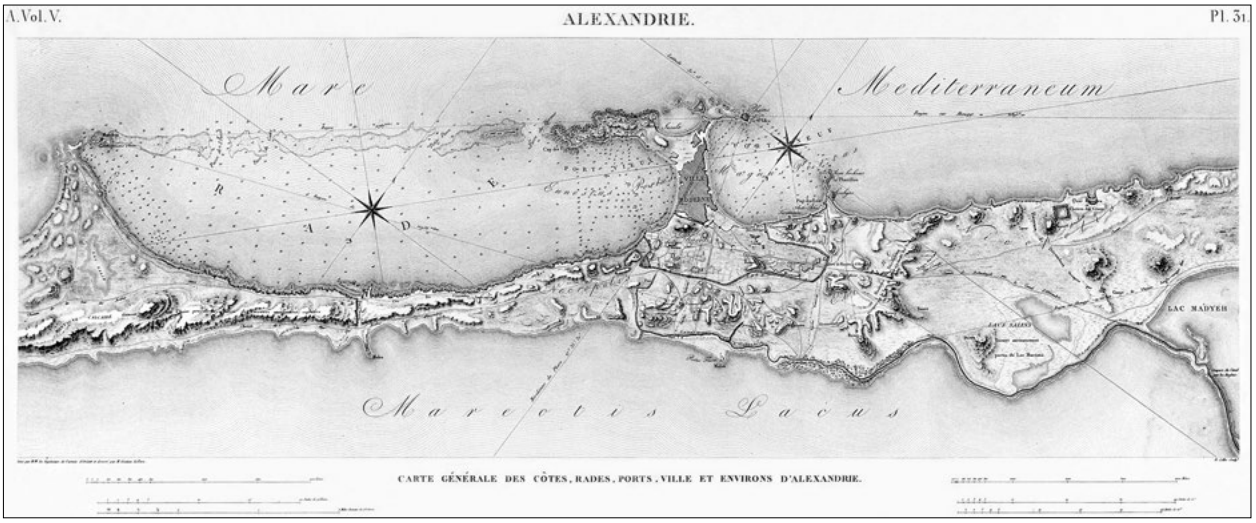


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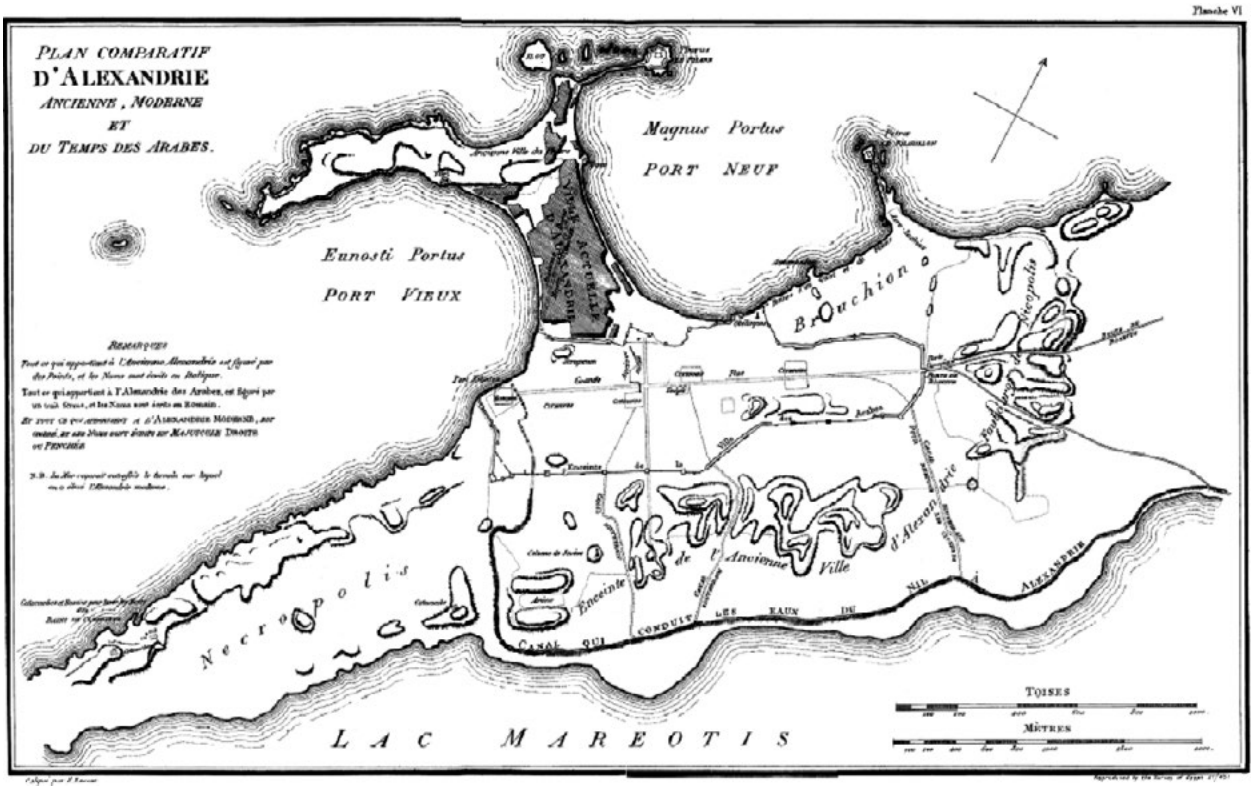


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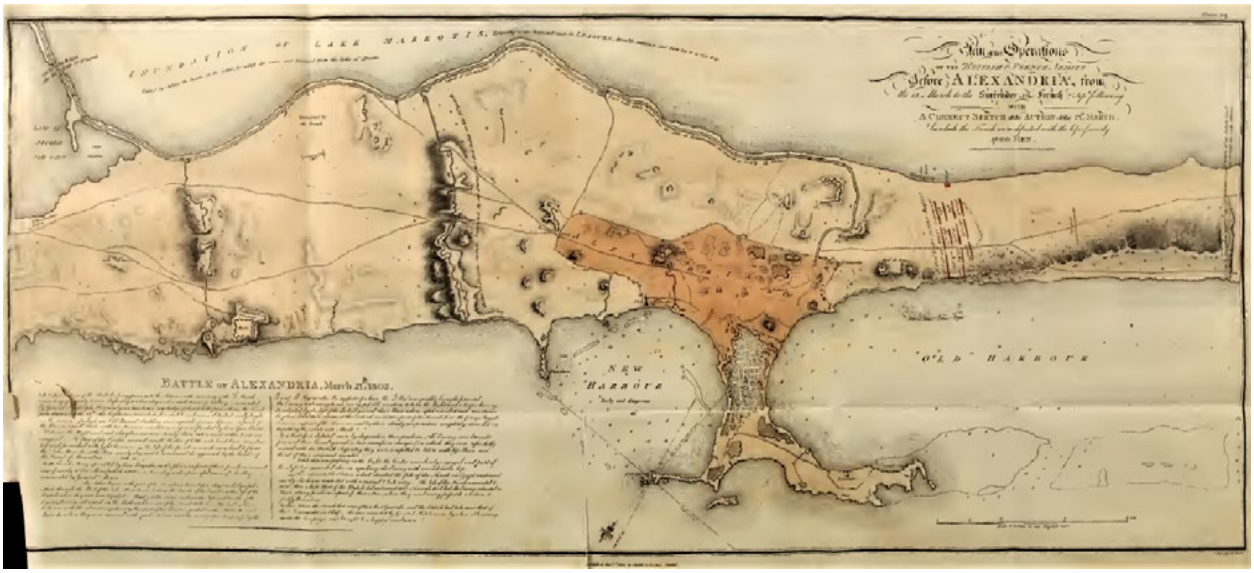


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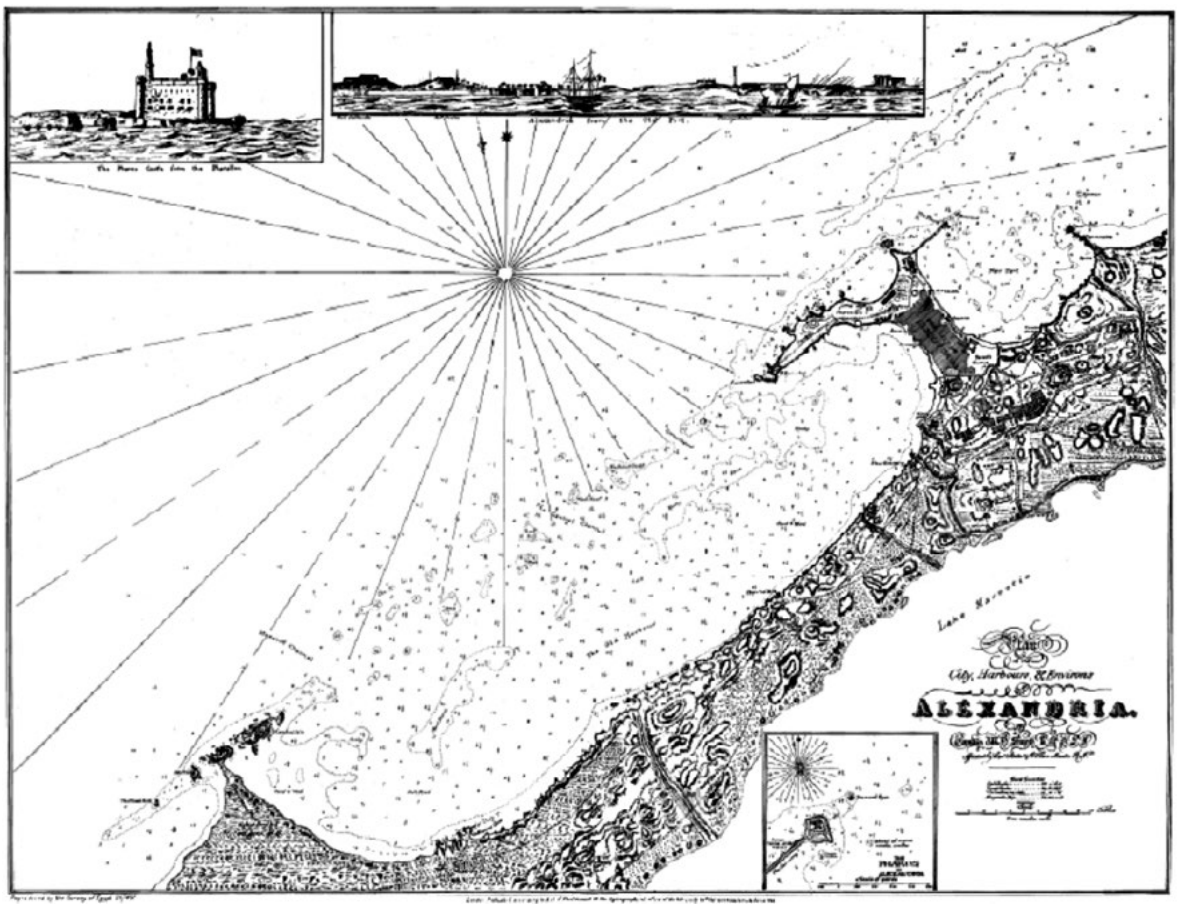


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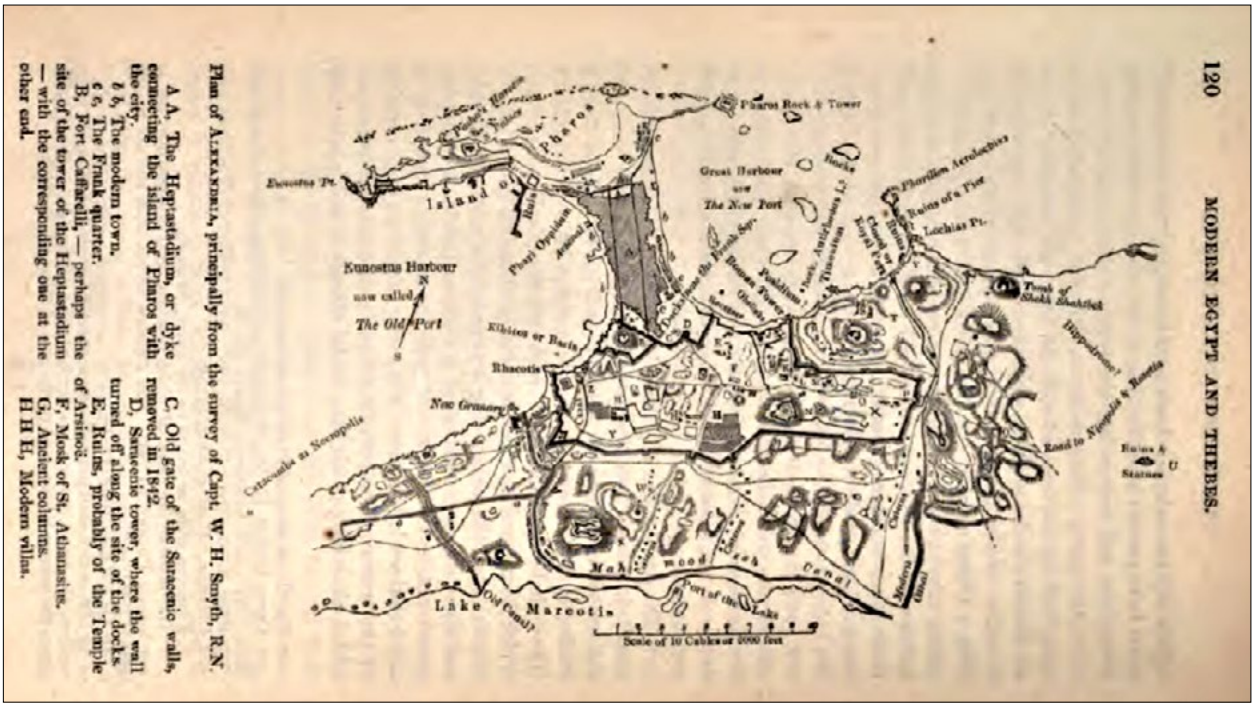


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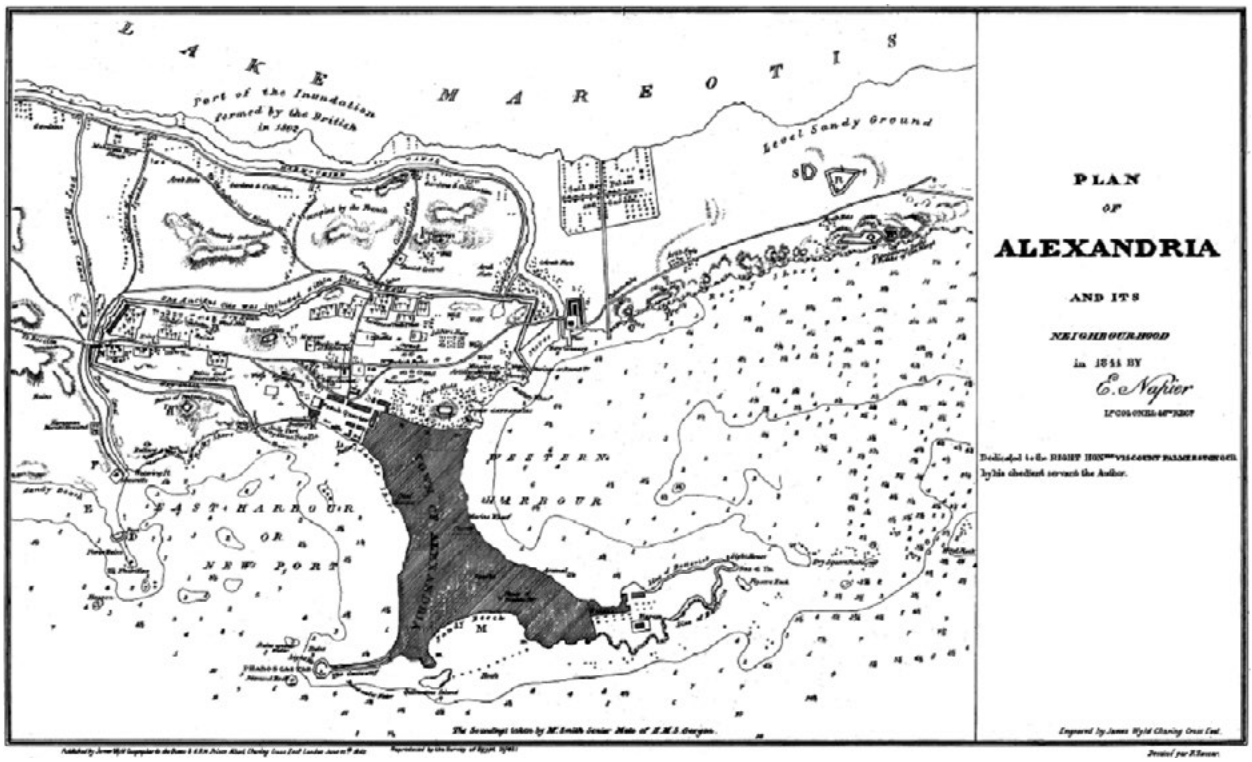


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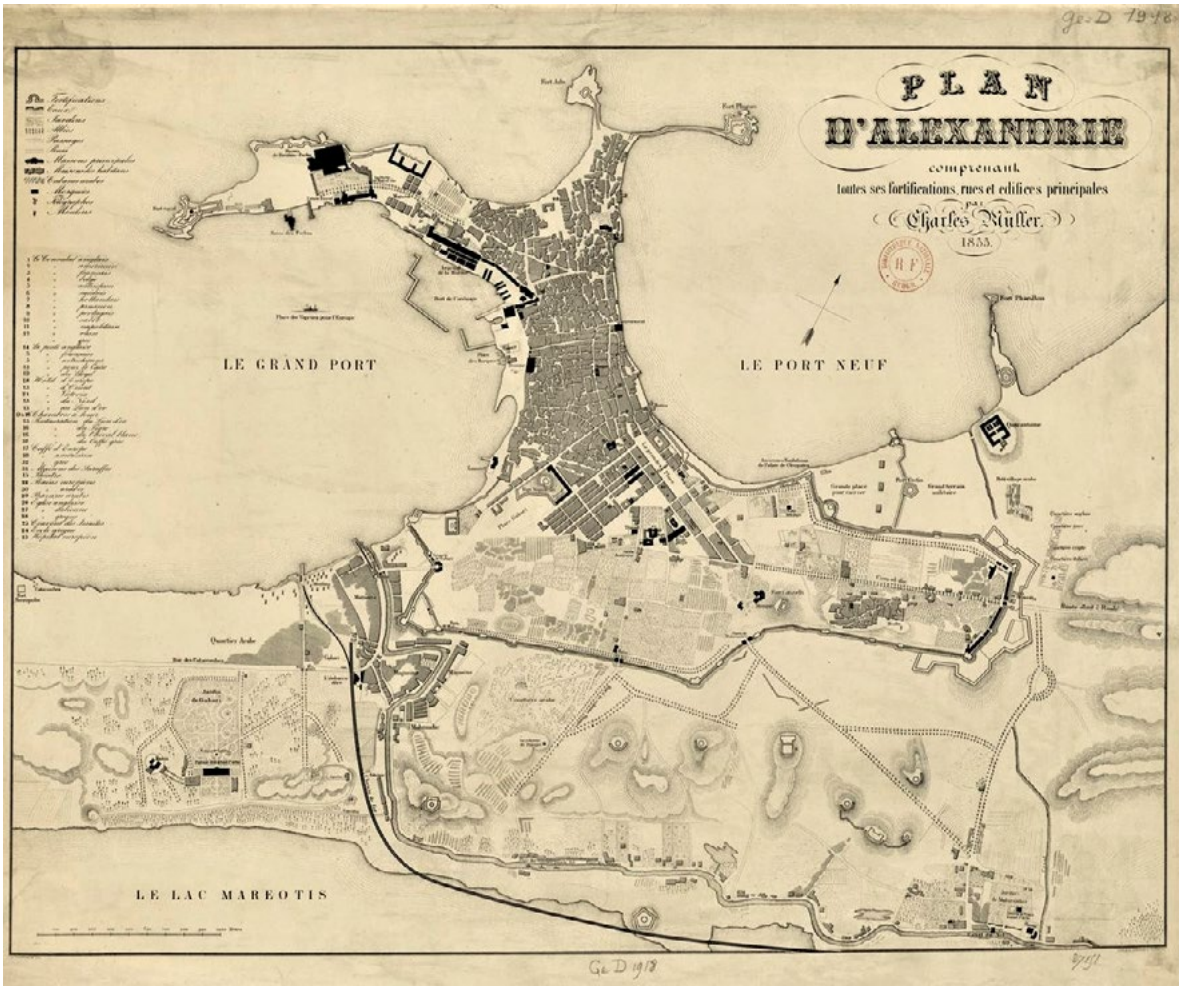


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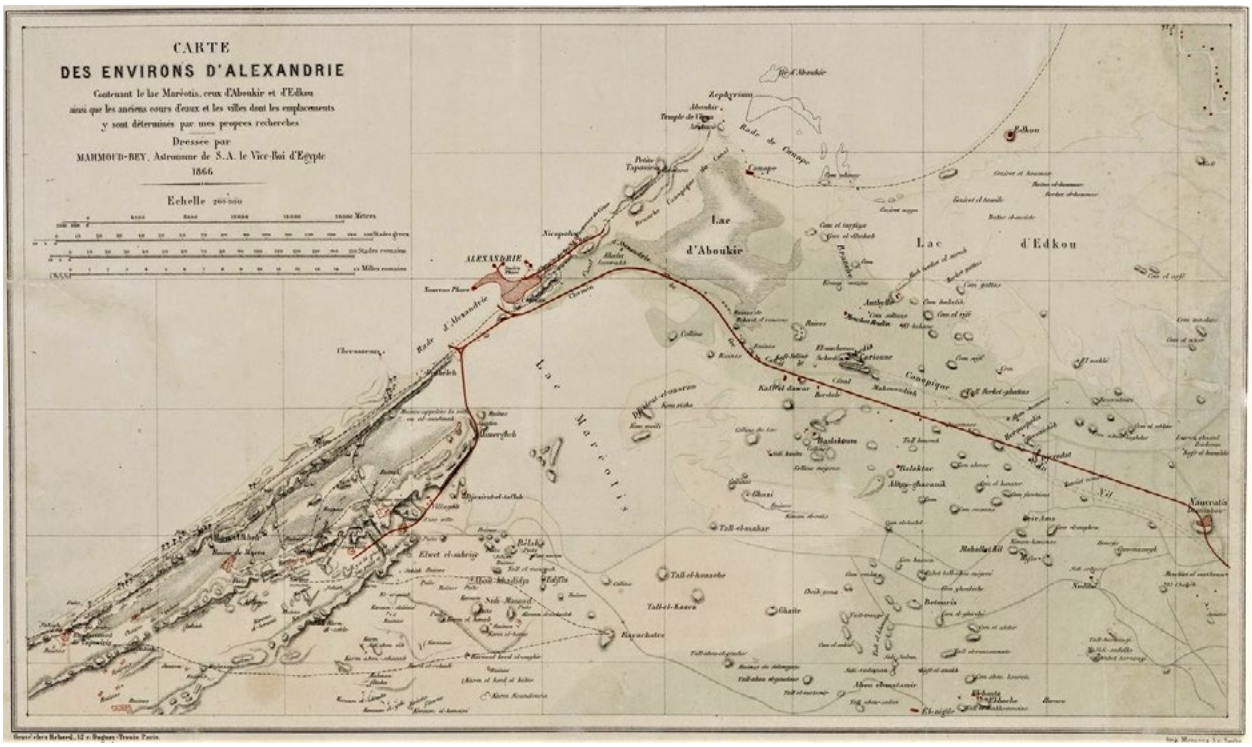


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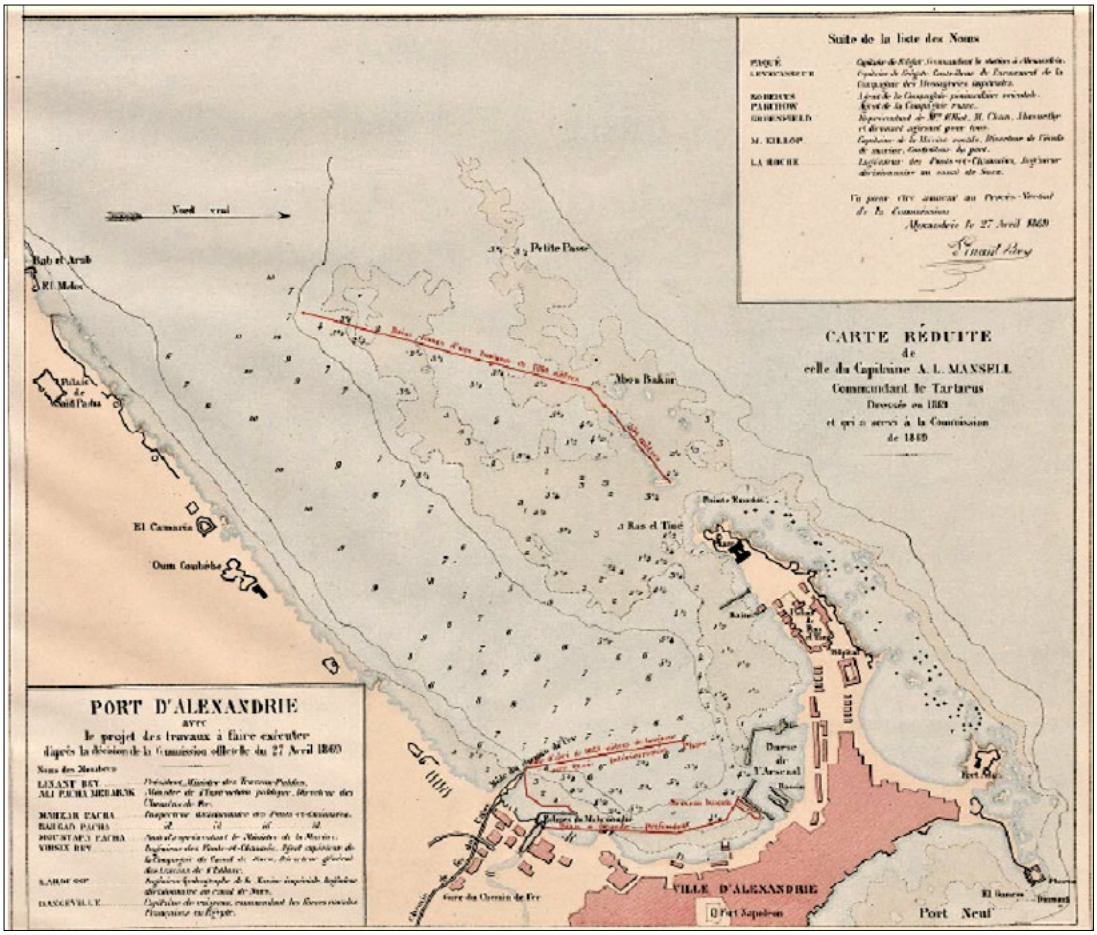


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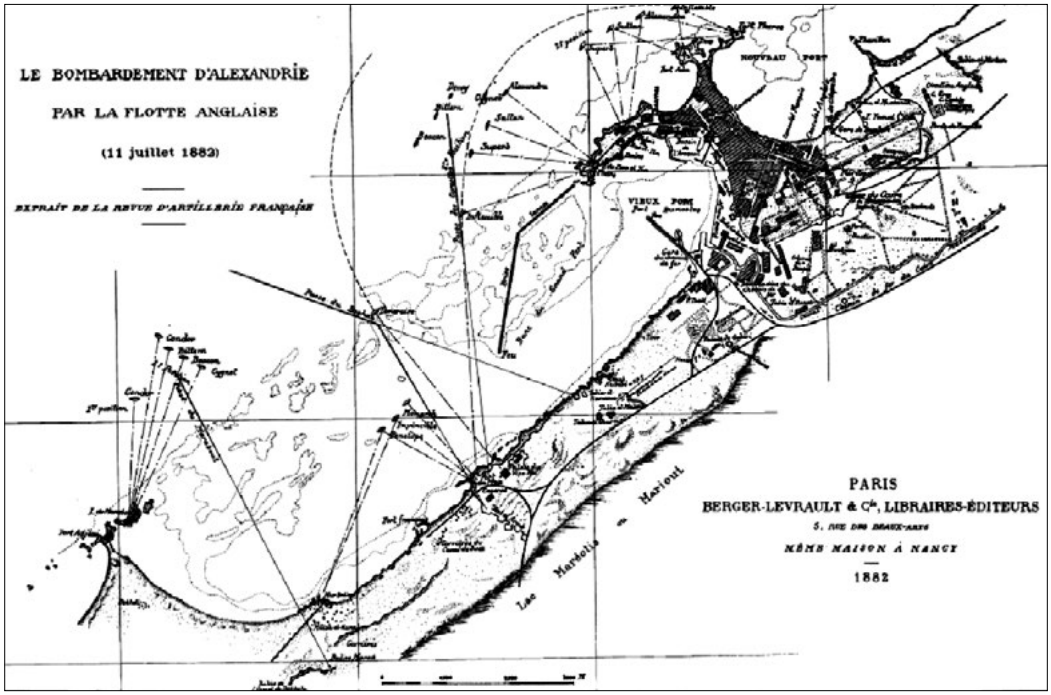


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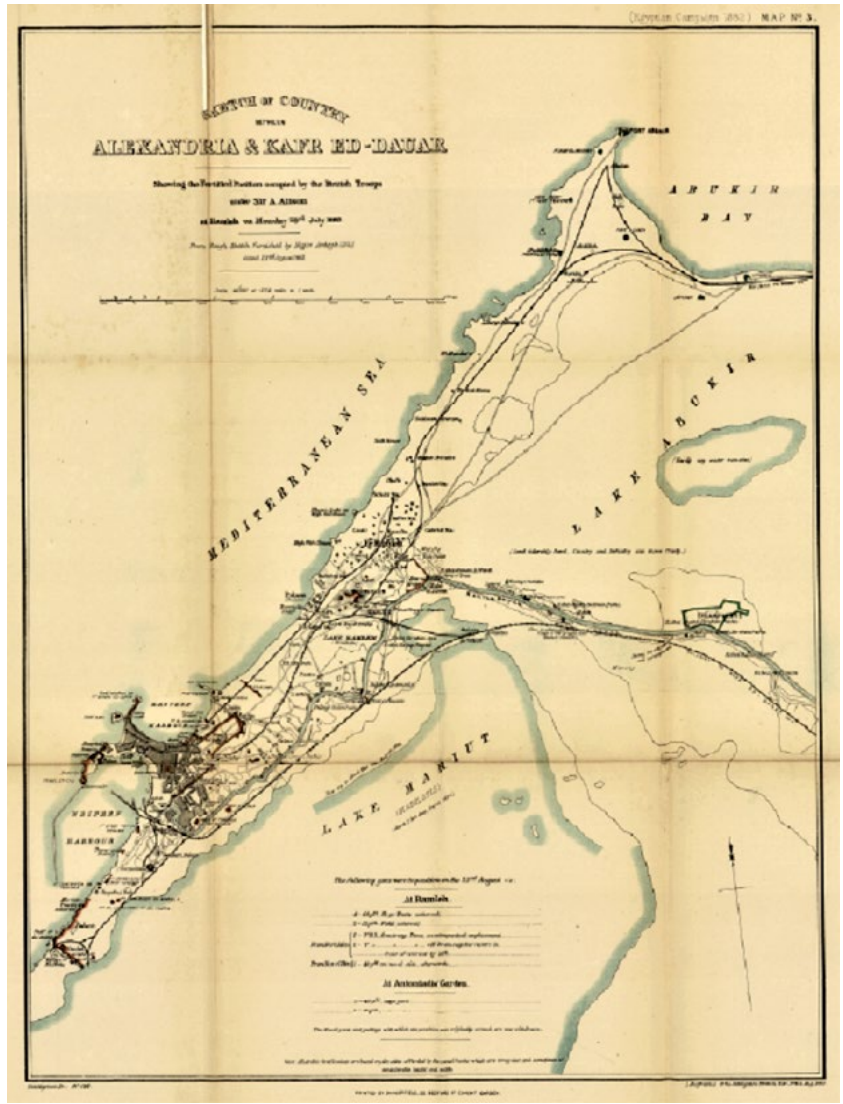


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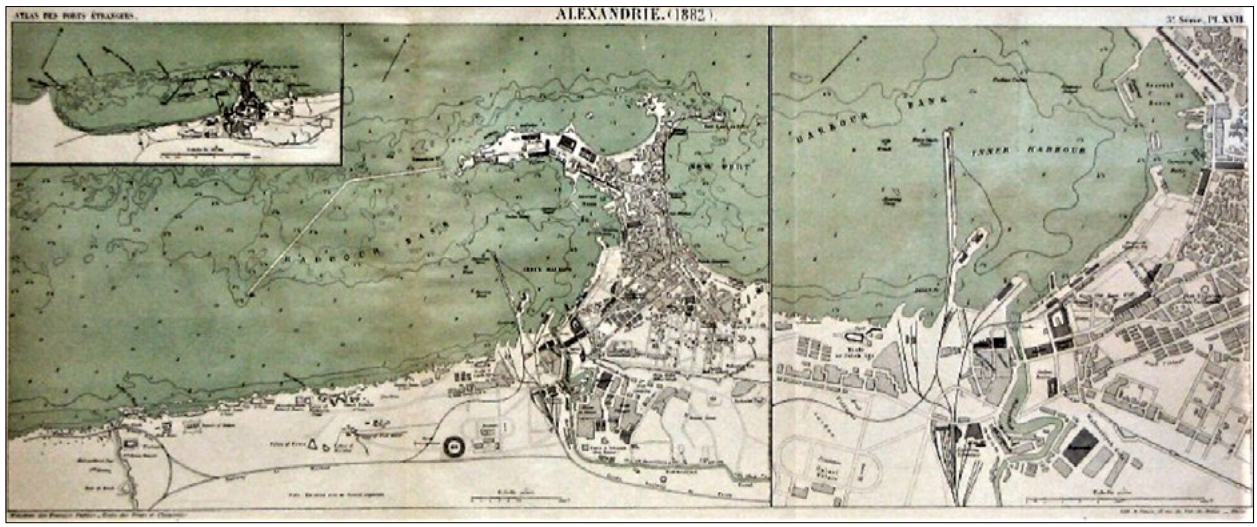


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Plan comparatif
D'ALEXANDRIE
Ancienne et Moderne
NICOPOLIS
Pharillon
Cap Lochias
Pte Adah
PORT NEUF
GRAND PORT
Palais
Hippodrome
Timonium
Bibliothèque
Temple de Neptune
Cæsareum
Gouvernorat
Arsenal
Palais de Raz-el-Tin
Débarcadère
Phare
PORT EUNOSTOS
VIEUX PORT
Rue de Rosette
Ch. de fer du Caire
Rue Mohamed Bey
Rue Abbas
Rue Ibrahim
Rue Attarin
Rue Nebi Daniel
Rue Sidi Metwalli
Rue Chérif
Rue Missalla
Rue Porte de Rosette
Rue Porte de Rosette
Rue Porte de Rosette

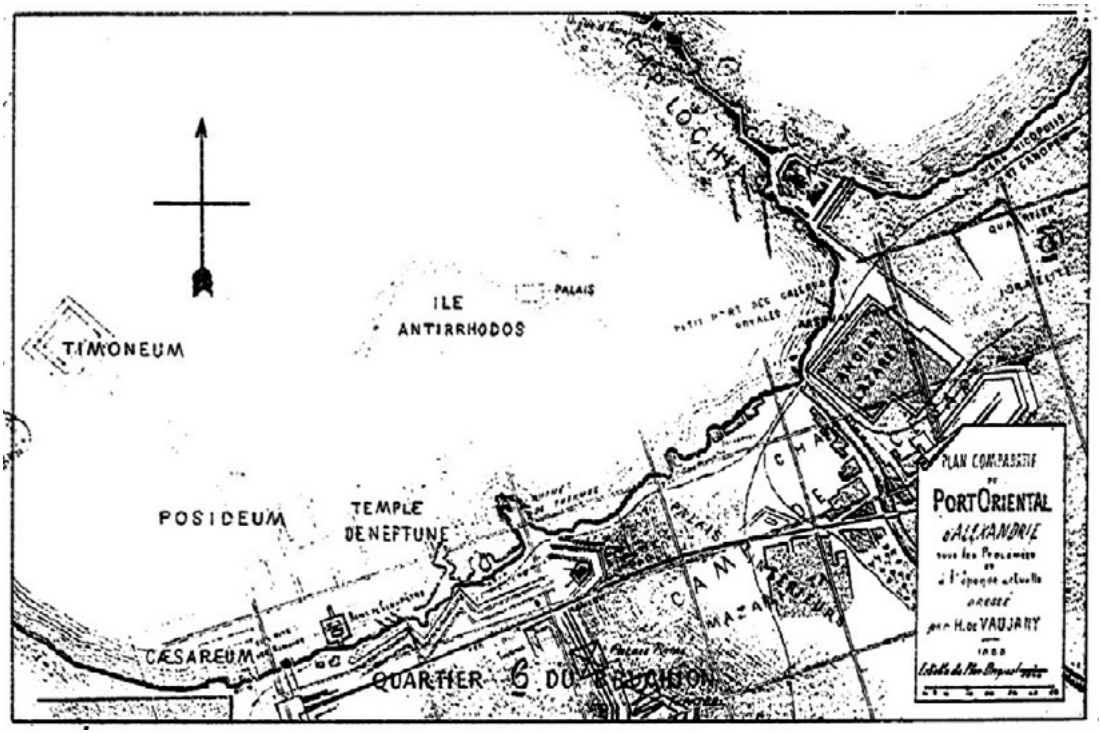


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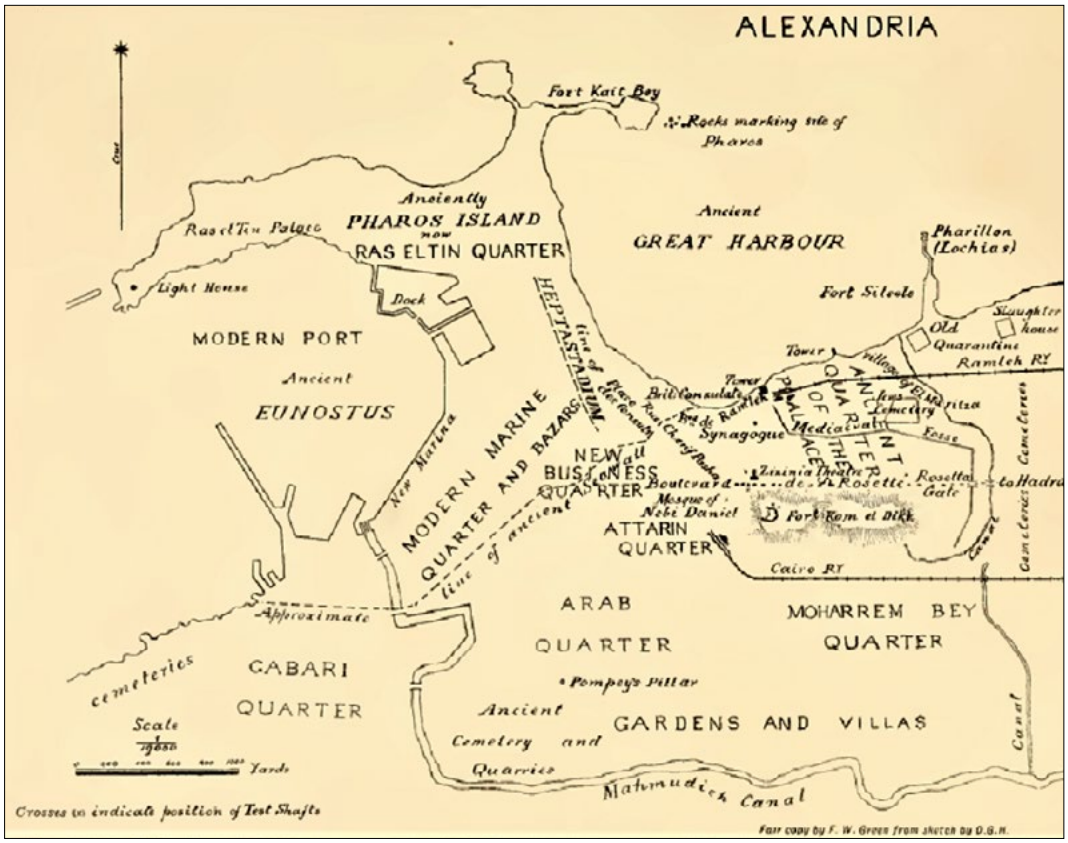


Figure 51. David George Hogarth and Edward Frederic Benson. 'Alexandria' – 1894-95. Hogarth and Benson 1894-95. (Introduction II.e: p. 4)

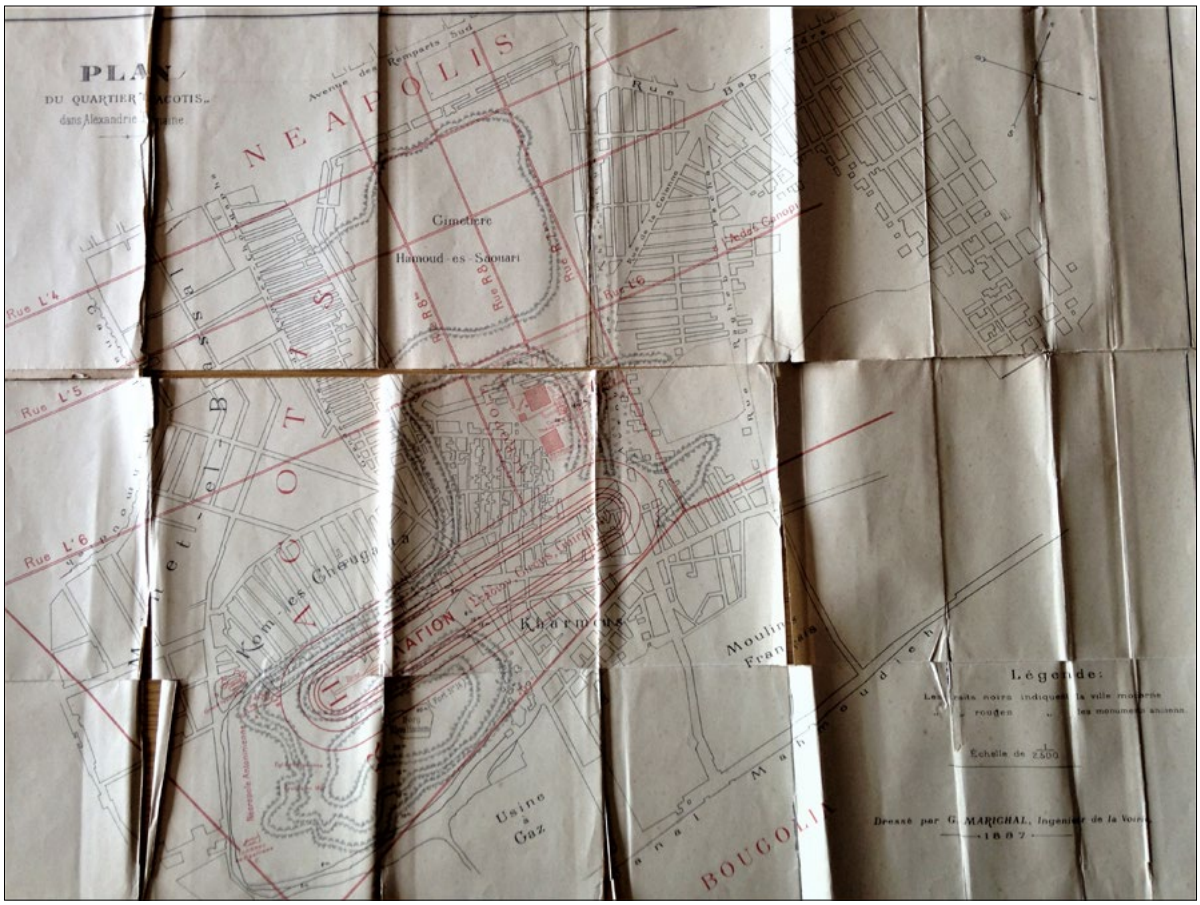


Figure 52. Georges Marichal. 'Plan du Quartier "Rhacotis" dans l'Alexandrie Romaine' – 1897.
Botti 1897c. (Introduction II.e: p. 4)



Figure 53. Giuseppe Botti. 'Carte de l'Antique Alexandrie' – 1898.
Botti 1898c. (Introduction II.e: p. 4)

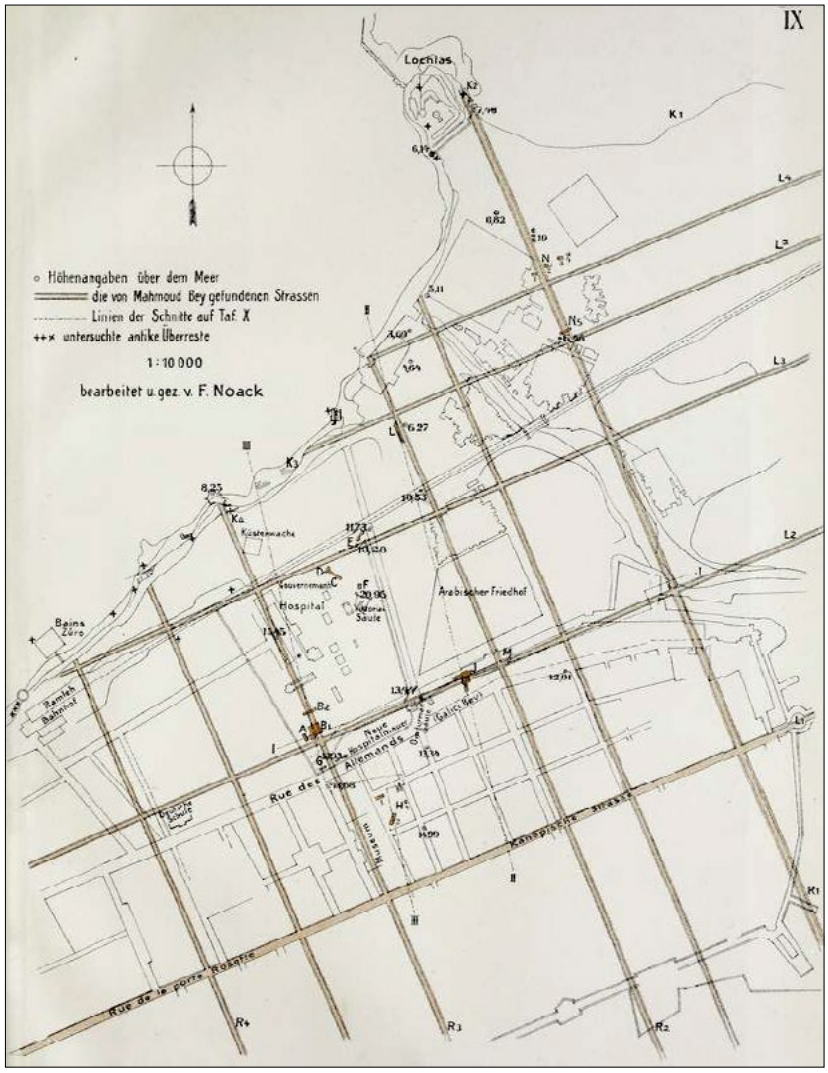


Figure 54. Ferdinand Noack. 'Ausgrabungen in Alexandrien; Übersichtsplan' – 1900. Noack 1900: Tafel IX. (Introduction II.e: p. 4)

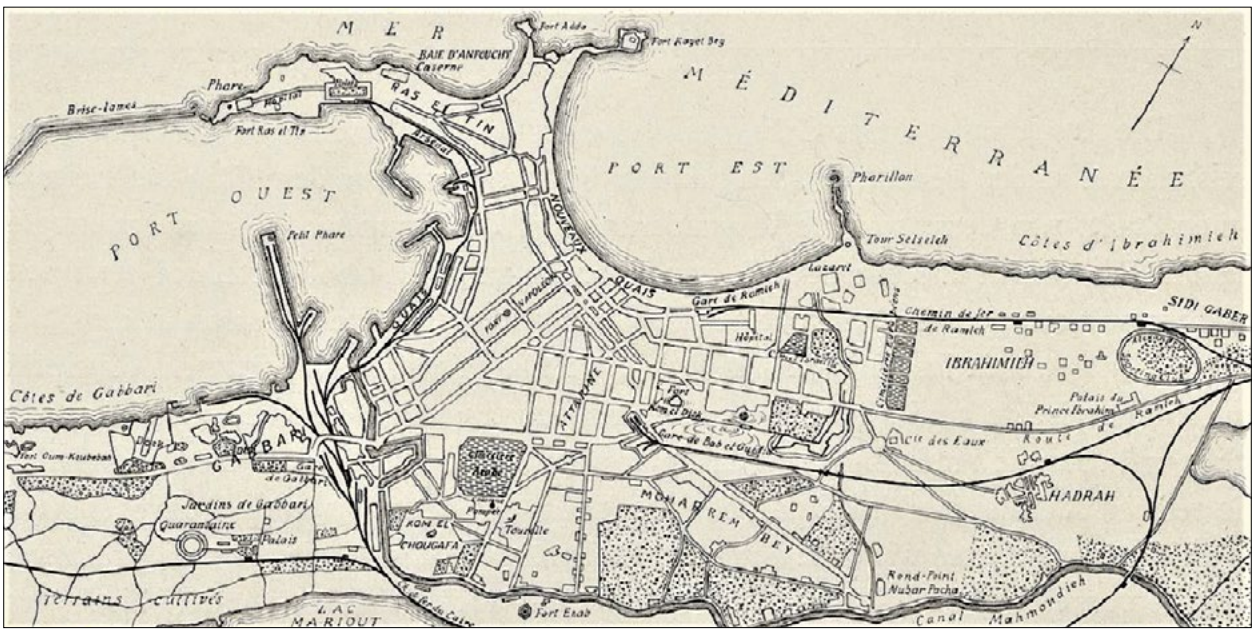


Figure 55. Expedition Ernst Sieglin (1898-1902). 'Plan von Alexandrien und Umgebung' – 1908. Schreiber *et al.* 1908b: 1, Abbildung 1. (Introduction II.e: p. 4)

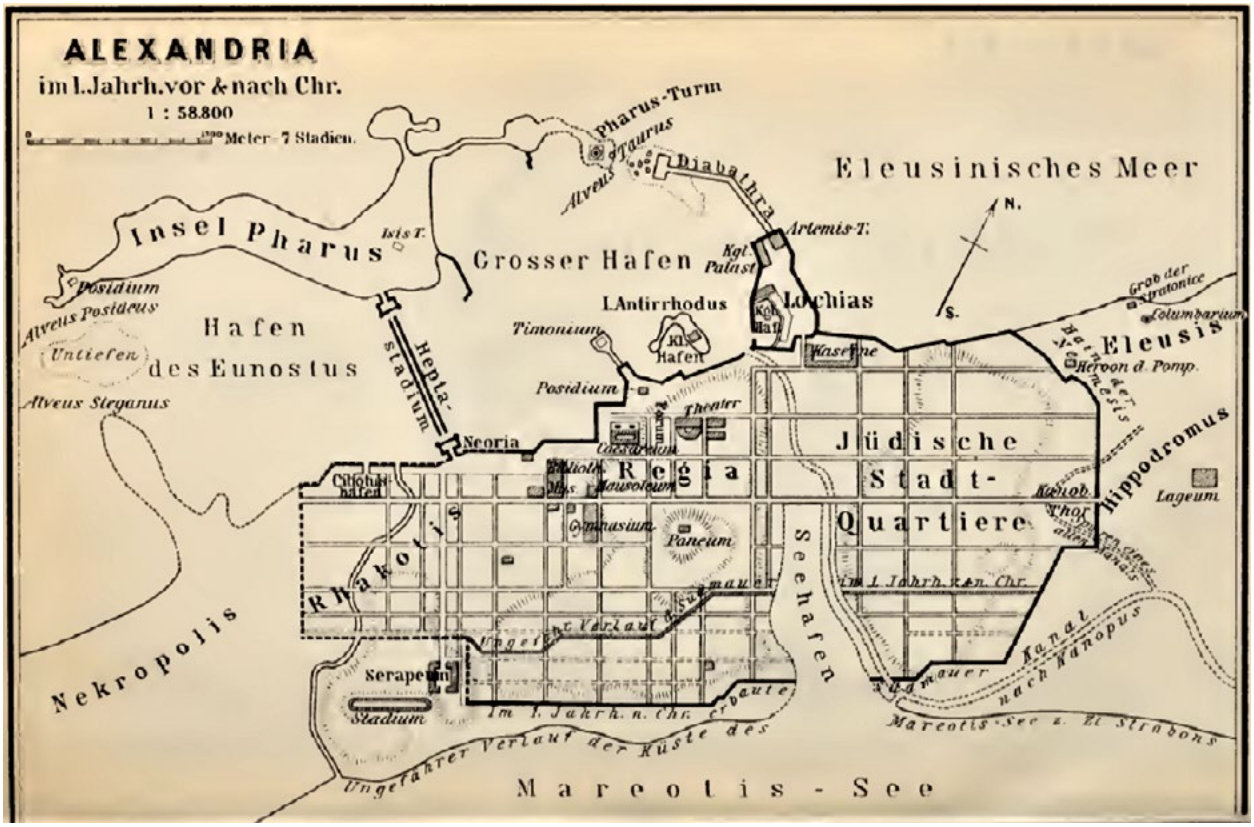


Figure 56. Wilhelm Sieglin. 'Alexandria 100 BC – AD 100' – 1897.
Baedeker 1897: Plan IV. (Introduction II.e: p. 4)

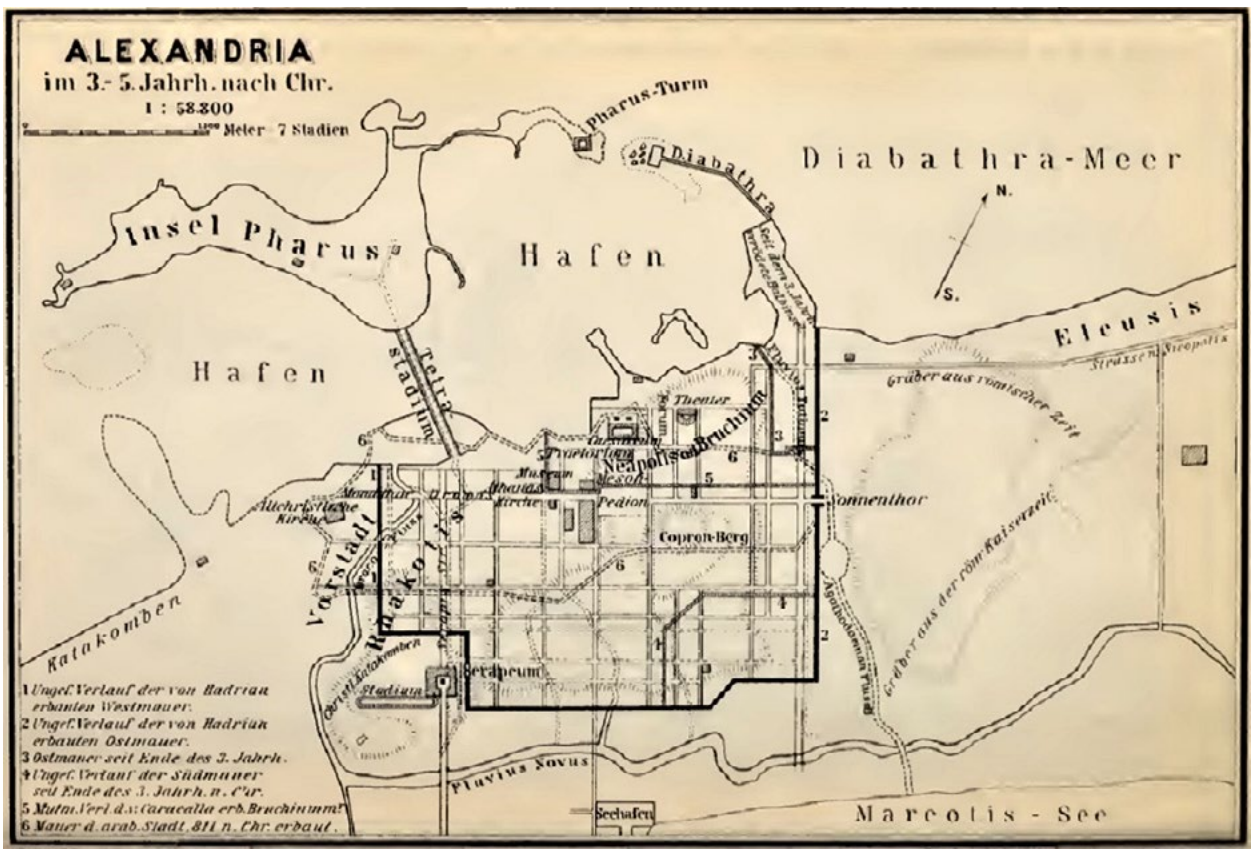


Figure 57. Wilhelm Sieglin. 'Alexandria 3rd – 5th Century AD' – 1897.
Baedeker 1897: Plan V. (Introduction II.e: p. 4)



Figure 58. Les Services Techniques de la Municipalité. 'Plan de la Ville d'Alexandrie' – 1902.
Jondet 1921: Planche L. (Introduction II.f: p. 4)

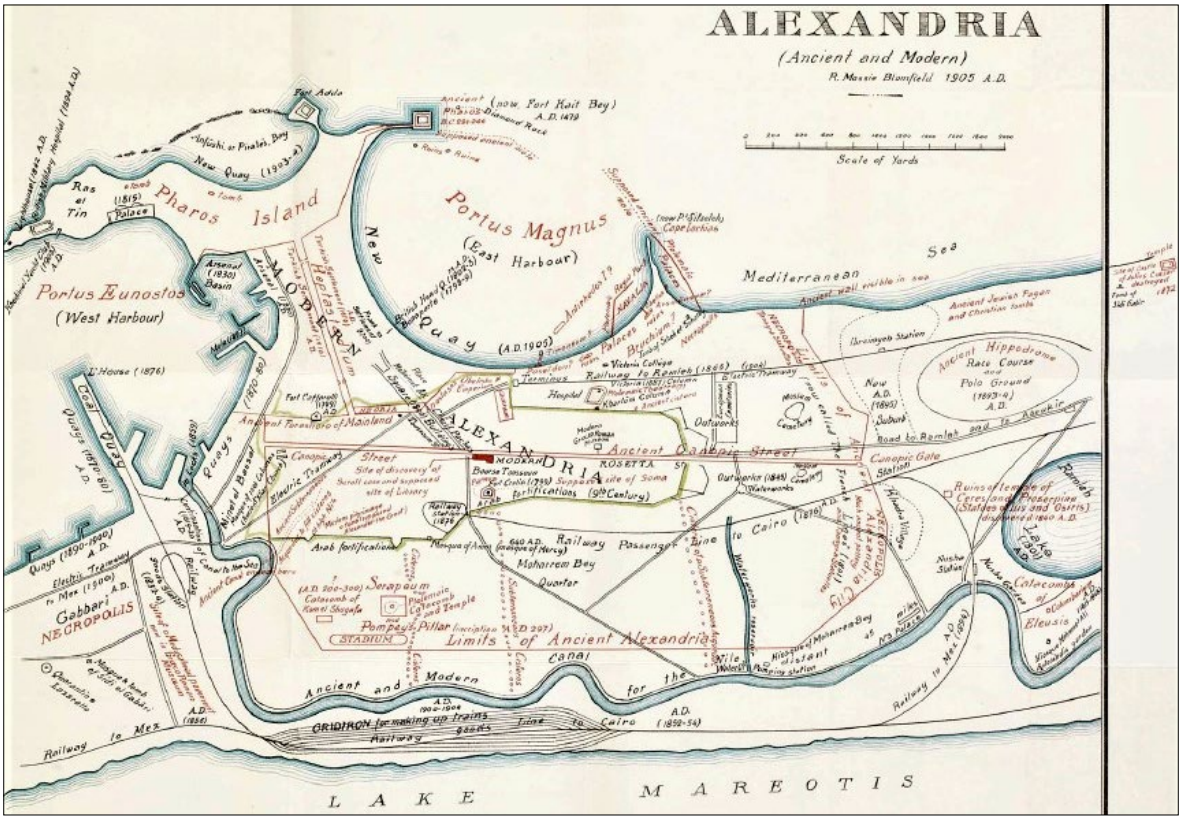


Figure 59. Richard Massie Blomfield. 'Alexandria (Ancient and Modern)' – 1905.
Breccia 1907b: 3. (Introduction II.f: p. 4)

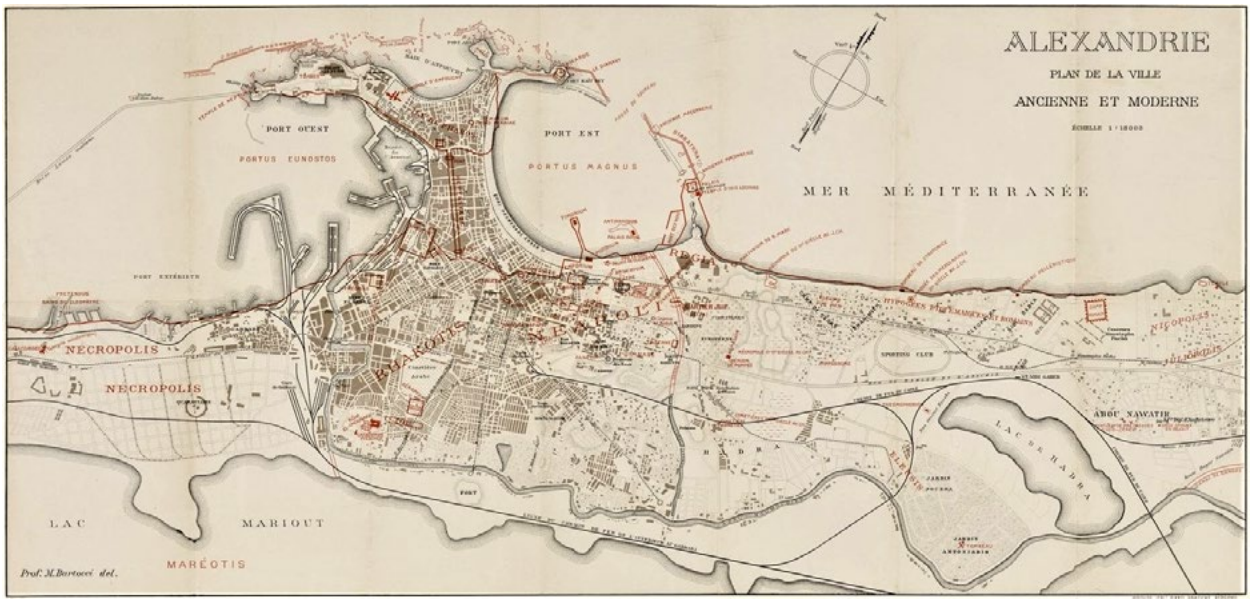


Figure 60. Mariano Bartocci. 'Alexandrie. Plan de la Ville Ancienne et Moderne' – 1914.
Breccia 1914a. (Introduction II.f: p. 4)

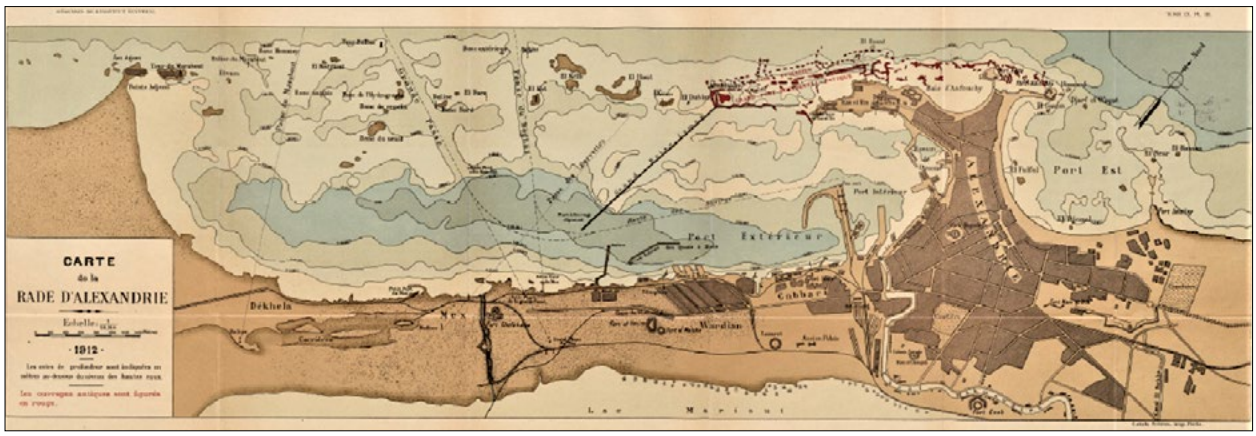


Figure 61. Gaston Jondet. 'Carte de la Rade d'Alexandrie' – 1916.
Jondet 1916: Planche III. (Introduction II.f: p. 4)

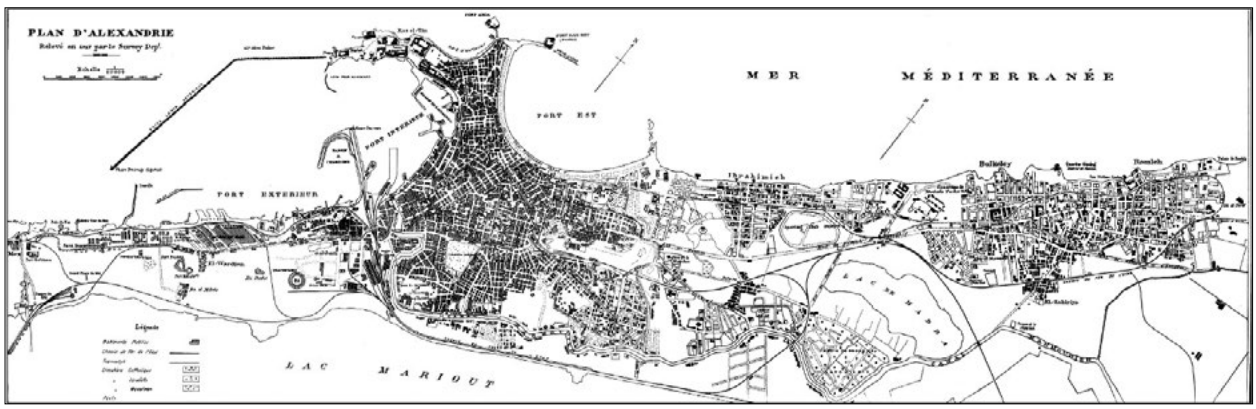


Figure 62. Le Survey Department. 'Plan d'Alexandrie' – 1917.
Jondet 1921: Planche LIII. (Introduction II.f: p. 4)



Figure 63. Edward Morgan Forster. 'Alexandria: Historical Map' – 1922. Forster 1922: 84-85. (Introduction II.f: p. 4)

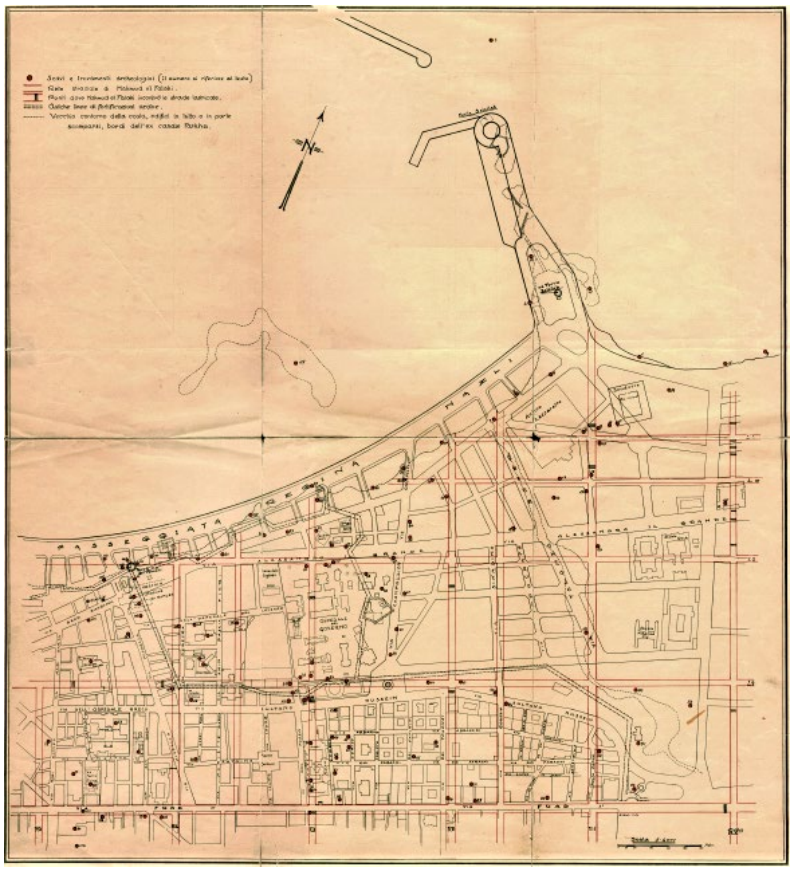


Figure 64. Achille Adriani. 'Saggio di una Pianta Archeologica di Alessandria' – 1934. Adriani 1934. (Introduction II.f: p. 4)

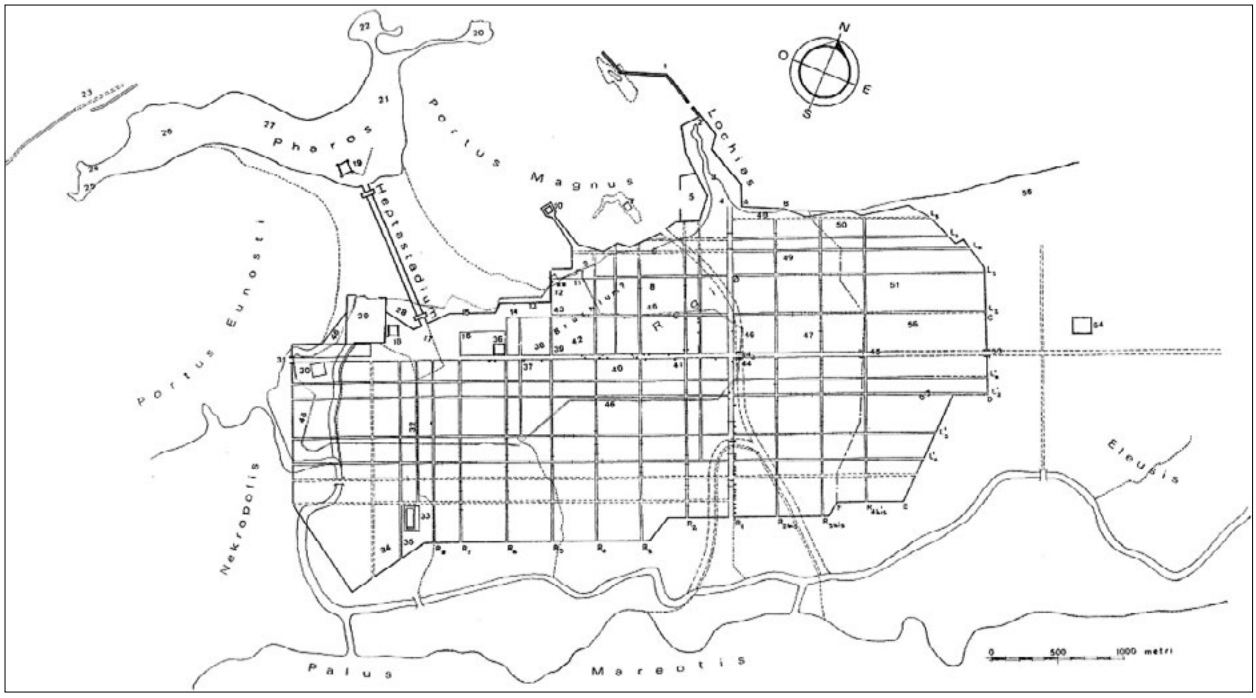


Figure 65. Achille Adriani. 'Pianta Schematica di Alessandria Antica a Cura di Mahmûd Bey el-Falaki (Con Varianti e Aggiunte di A. Adriani)' – 1966. Adriani 1966a: 269, Tavola di Aggettivo 'A'. (Introduction II.f: p. 4)

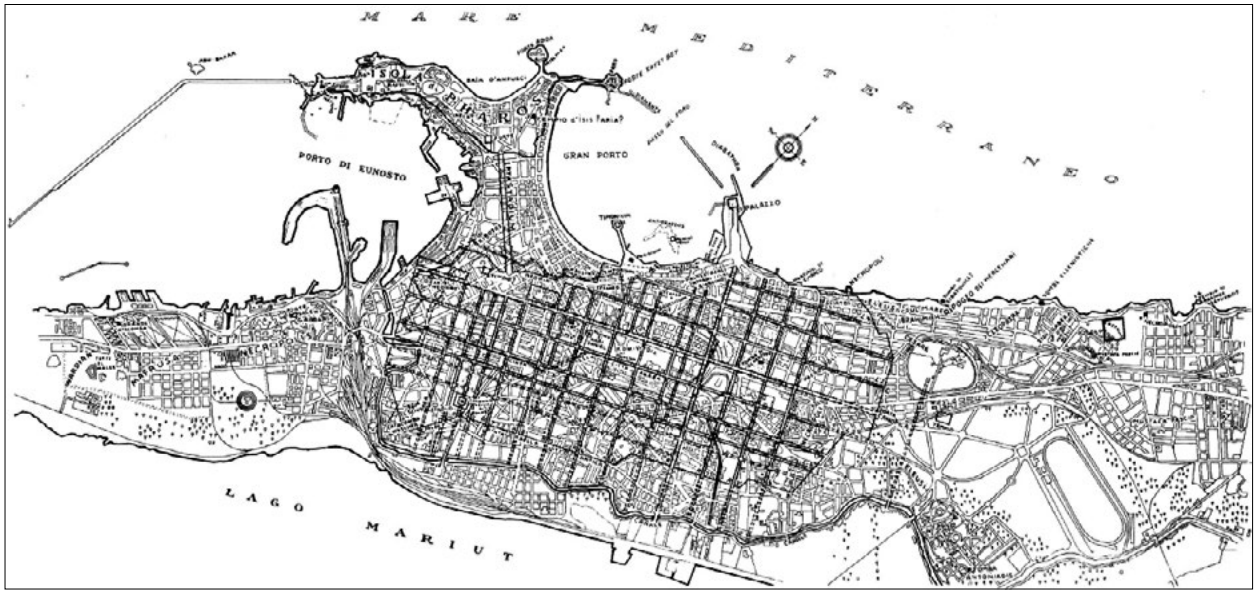


Figure 66. Achille Adriani. 'Pianta Comparativa di Alessandria Antica e Moderna' – 1966. Adriani 1966b: Catalogue Number 1, Tavola 1, Figure 1. (Introduction II.f: p. 4)

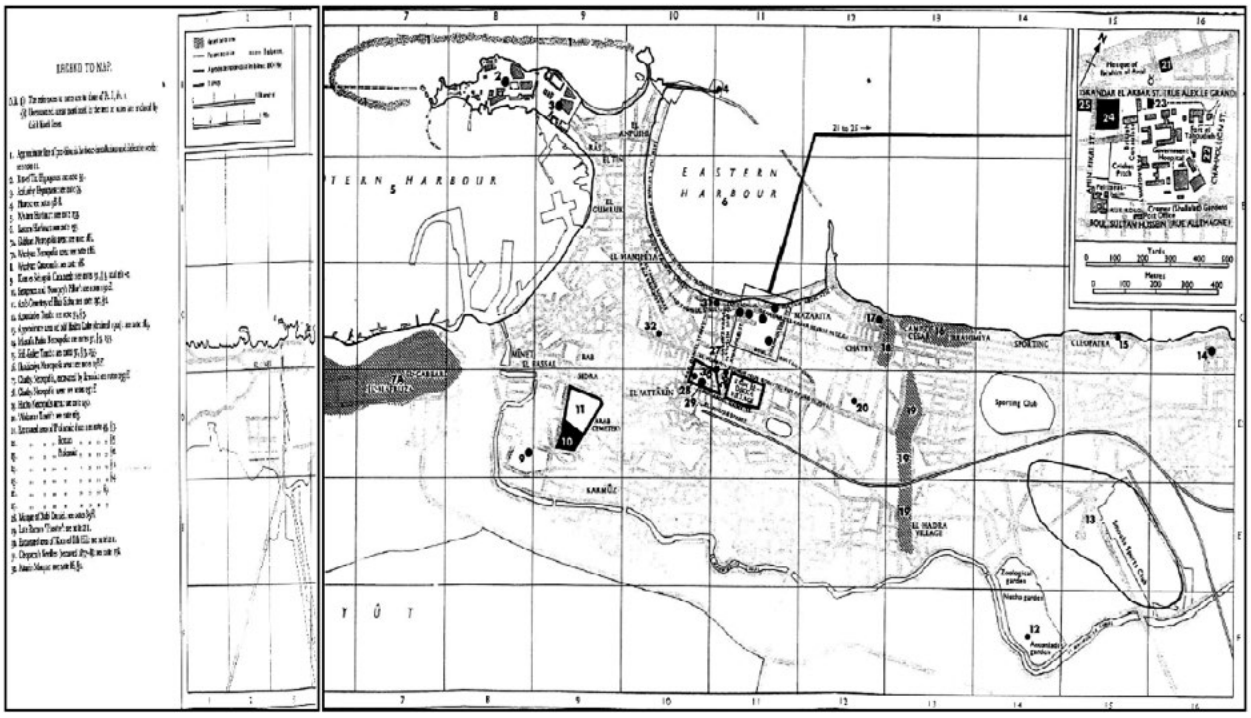


Figure 67. Peter Marshall Fraser. 'Outline Map of Alexandria' – 1972.
Fraser 1972. (Introduction II.f: p. 4)

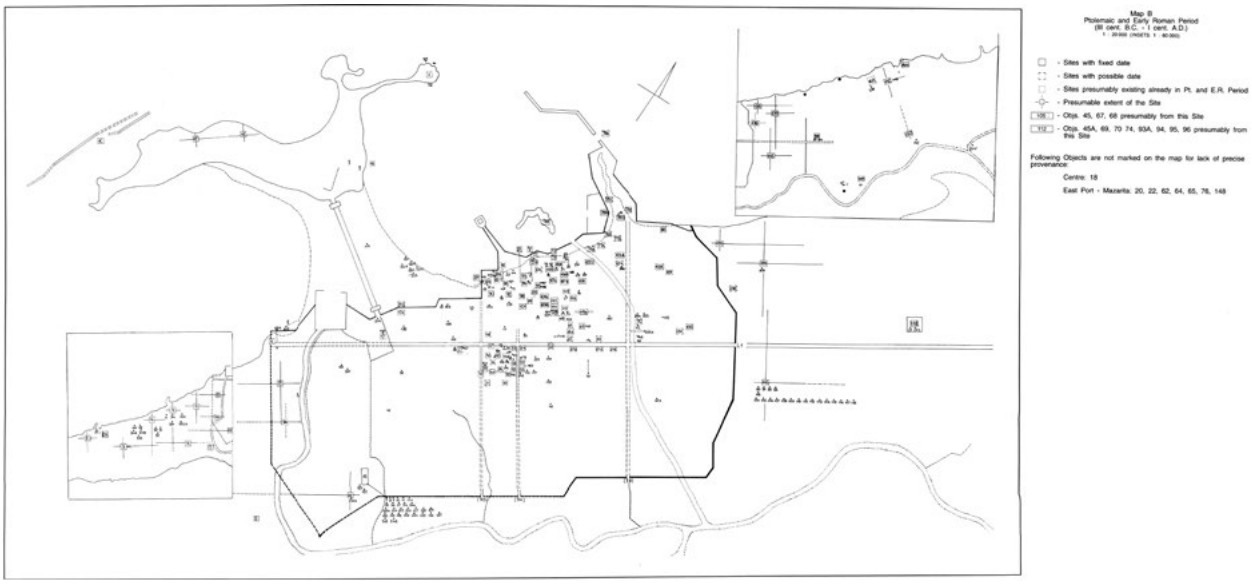


Figure 68. Barbara Tkaczow. 'Ptolemaic and Early Roman Period: 3rd – 1st Century BC' – 1993.
Tkaczow 1993: Map B. (Introduction II.f: p. 4)

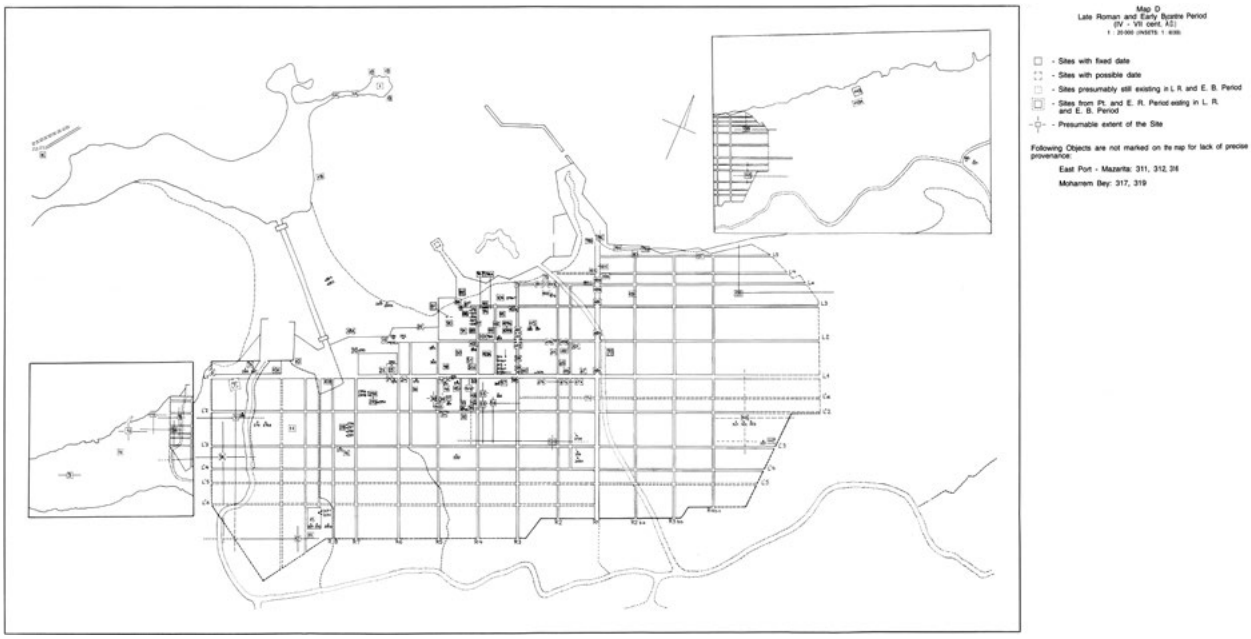


Figure 69. Barbara Tkaczow. 'Late Roman and Early Byzantine Period: 4th – 7th Century AD' – 1993.
Tkaczow 1993: Map D. (Introduction II.f: p. 4)



Figure 70. Barbara Tkaczow. 'Collective: 3rd Century BC – 7th Century AD' – 1993.
Tkaczow 1993: Map A. (Introduction II.f: p. 4)

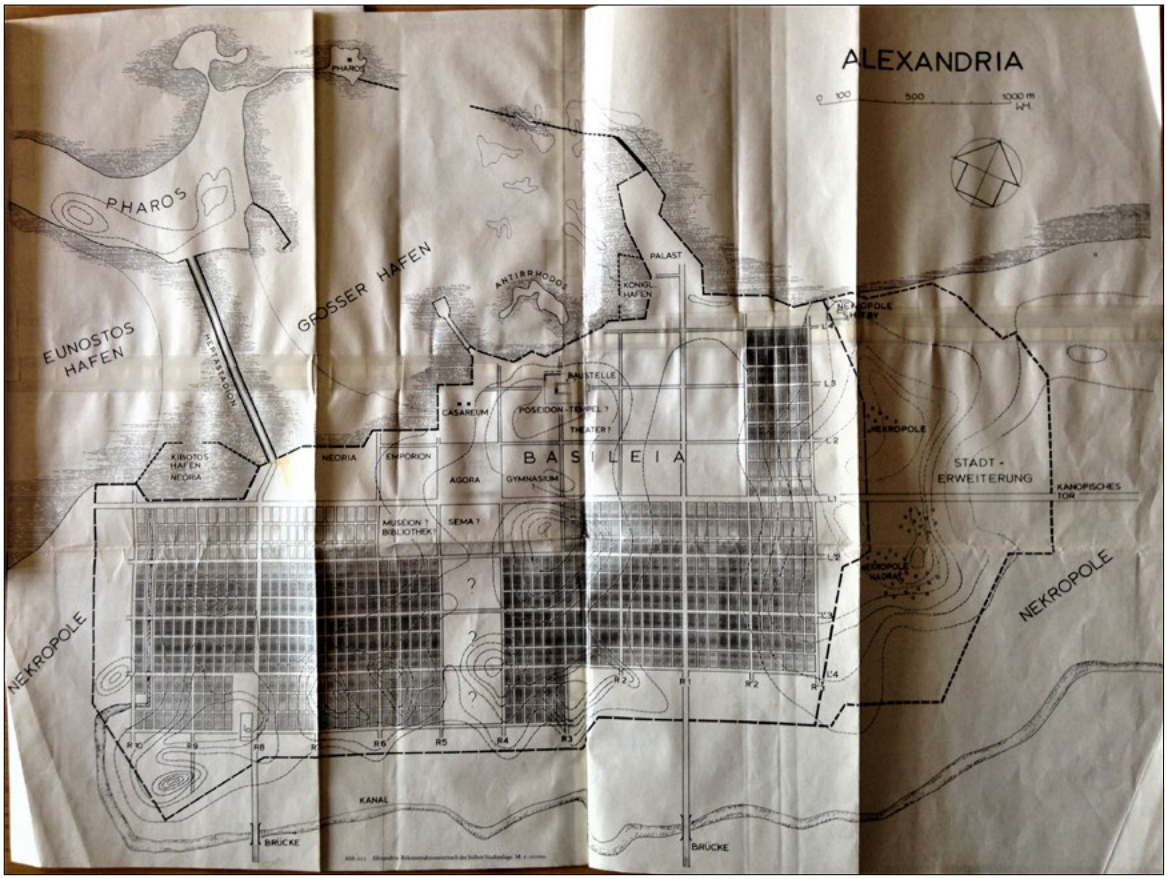


Figure 71. Wolfram Hoepfner and Ernst-Ludwig Schwandner. 'Alexandria' – 1994. Hoepfner and Schwandner 1994: 'Rekonstruktionsversuch der Frühen Stadtanlage'. (Introduction II.f: p. 4)

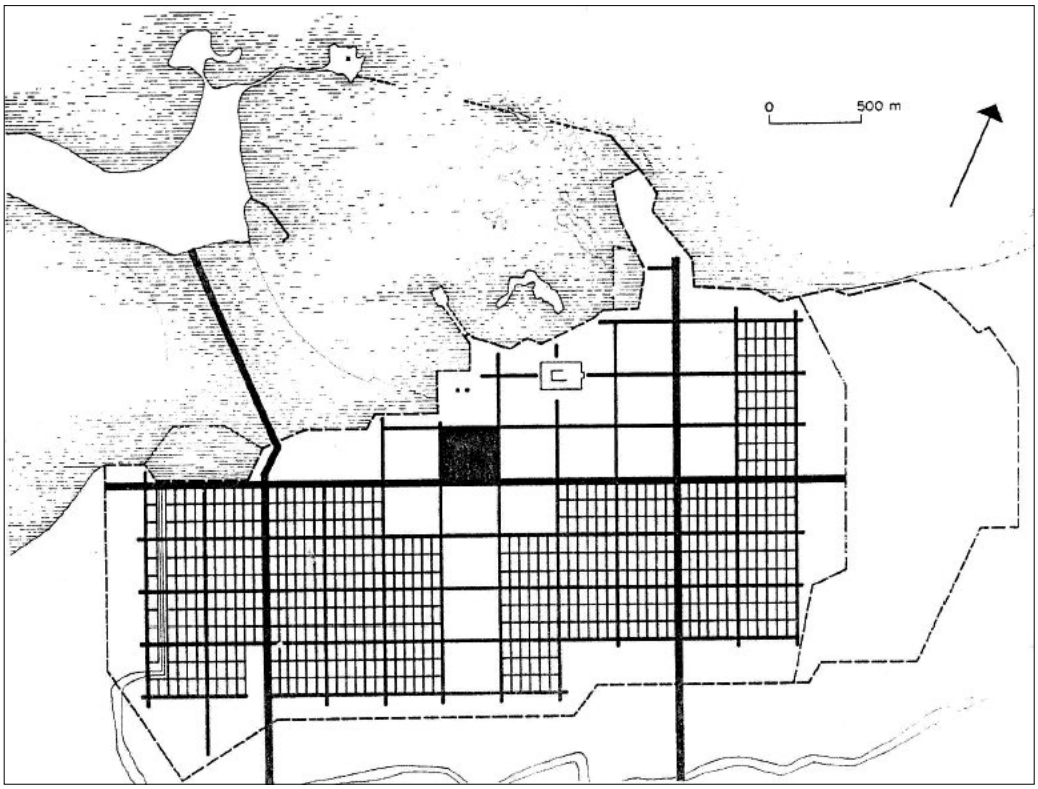


Figure 72. Wolfram Hoepfner and Ernst-Ludwig Schwandner. 'Alexandria' – 1994. Hoepfner and Schwandner 1994: 243, Abbildung 231. (Introduction II.f: p. 4)

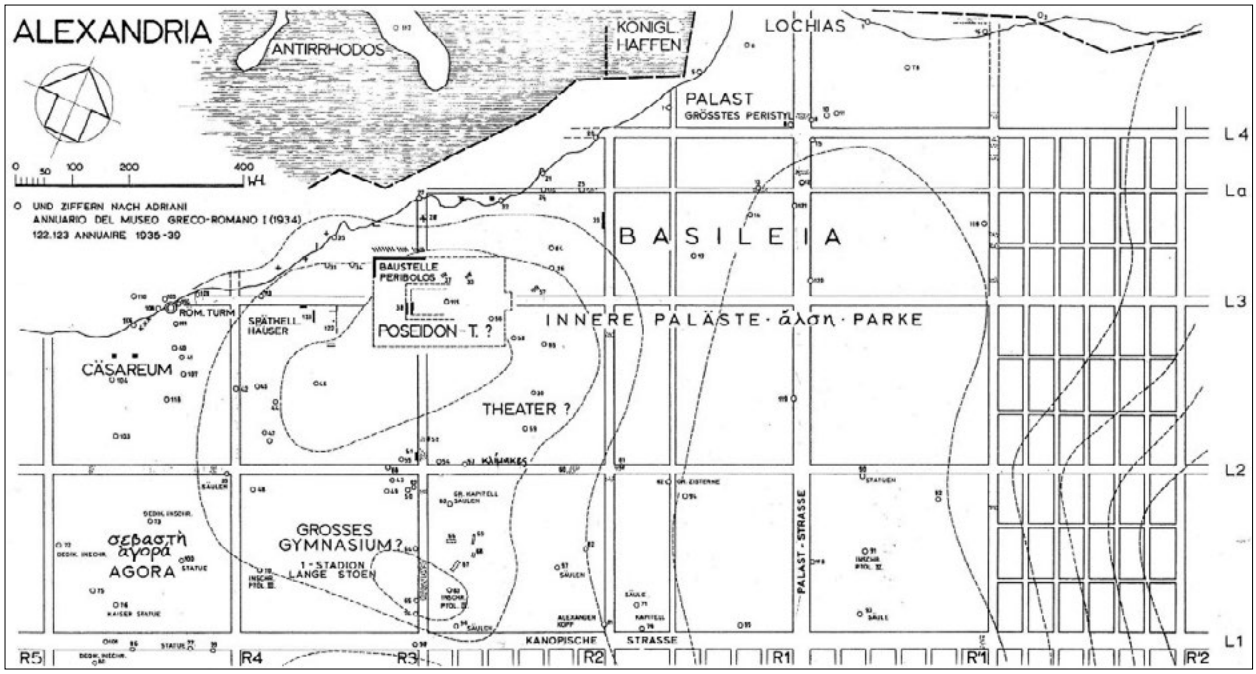


Figure 73. Wolfram Hoepfner and Ernst-Ludwig Schwandner. 'Alexandria' – 1994.
Hoepfner and Schwandner 1994: 'Basileia'. (Introduction II.f: p. 4)

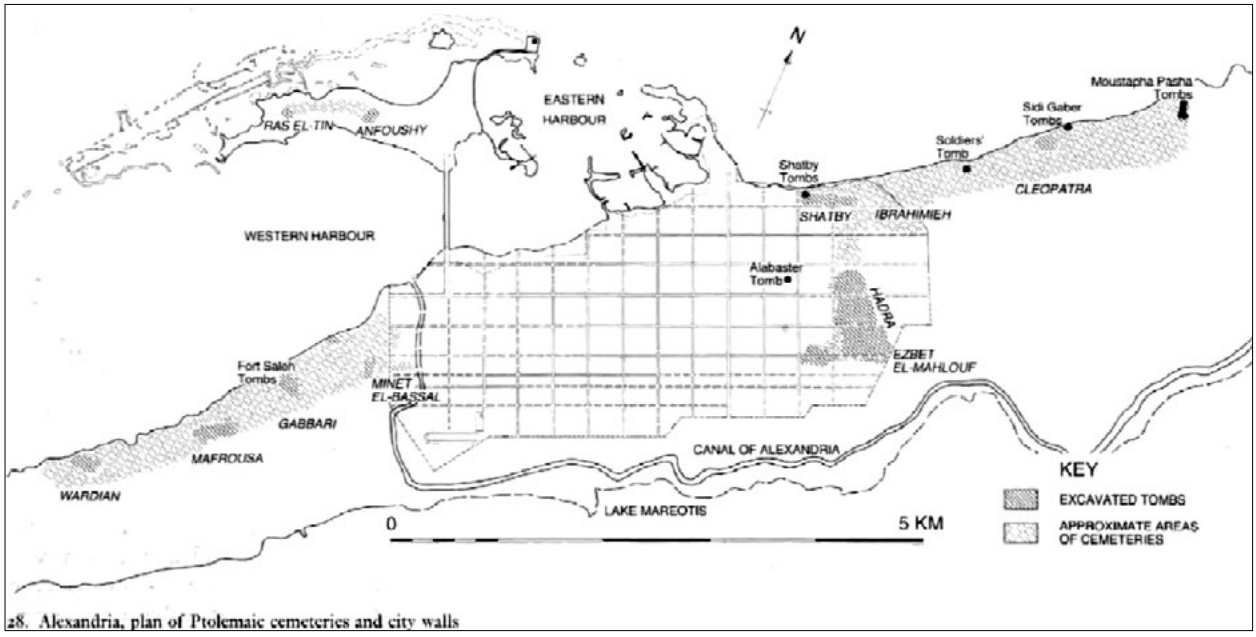


Figure 74. Judith McKenzie. 'Alexandria: Plan of Ptolemaic Cemeteries and City Walls' – 2007.
McKenzie 2007: 26, Figure 28. (Introduction II.f: p. 4)

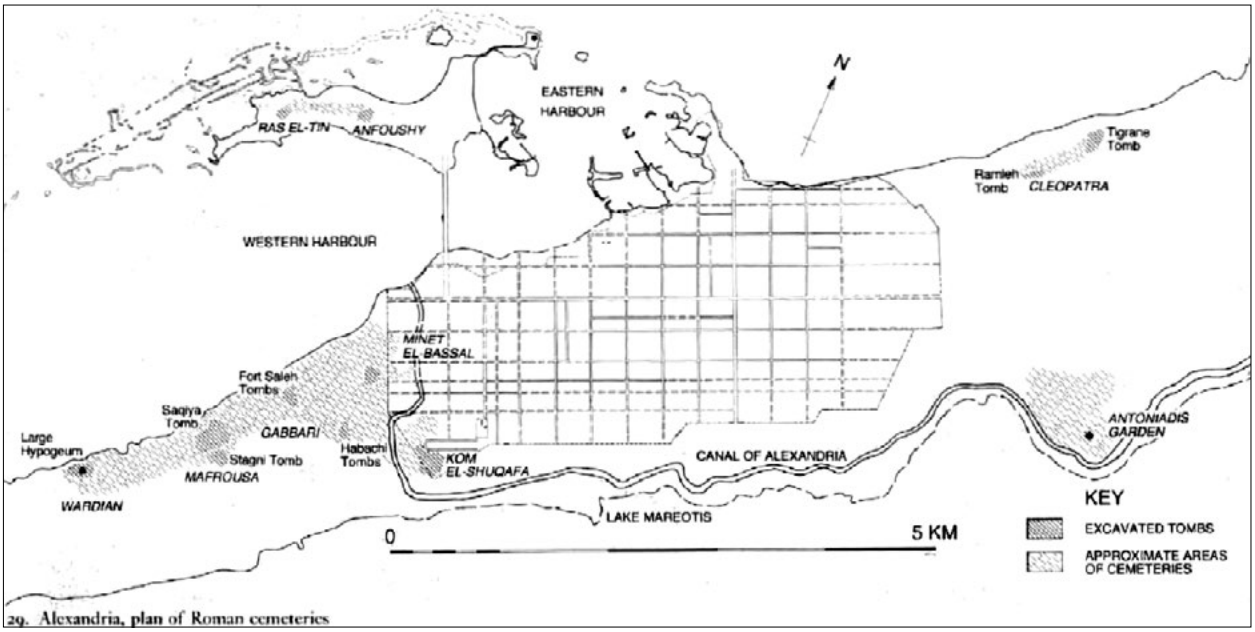


Figure 75. Judith McKenzie. 'Alexandria: Plan of Roman Cemeteries' – 2007.
McKenzie 2007: 26, Figure 29. (Introduction II.f: p. 5)

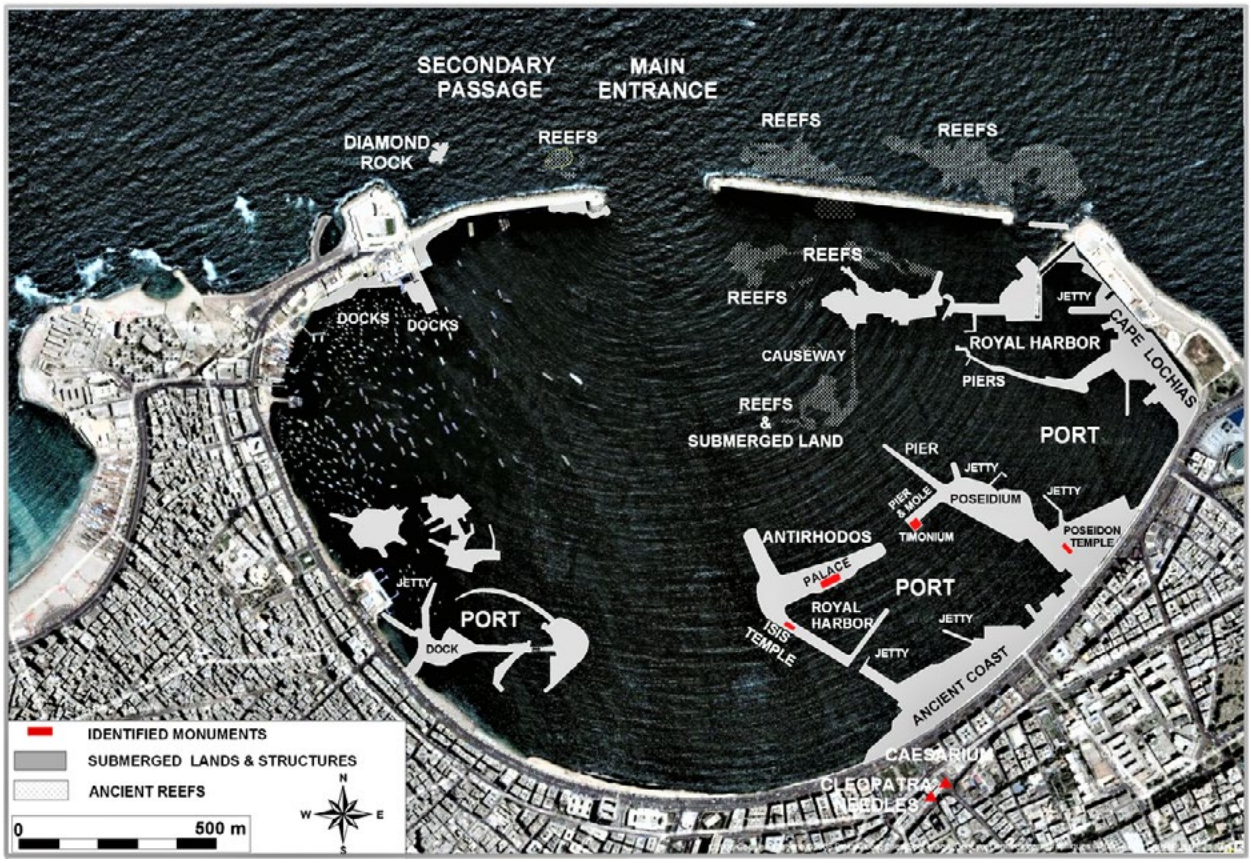


Figure 76. Institut Européen d'Archéologie Sous-Marine (IEASM). 'Great Harbour of Ancient Alexandria' – 2011.
IEASM & Franck Goddio. (Introduction II.f: p. 5)



Figure 77. AutoCAD Map (V1). 'Alexandria: 4th – 2nd Century BC (Ptolemaic)' – 2019. Annex in digital format. Author © 2019. (Introduction III: p. 5)



Figure 78. AutoCAD Map (V2), 'Alexandria: 1st Century BC – 3rd Century AD (Late Ptolemaic-Roman)' – 2019, Annex in digital format. Author © 2019. (Introduction III: p. 5)



Figure 79. AutoCAD Map (V3). 'Alexandria: 4th – 7th Century AD (Late Antique)' – 2019. Annex in digital format. Author © 2019. (Introduction III: p. 5)

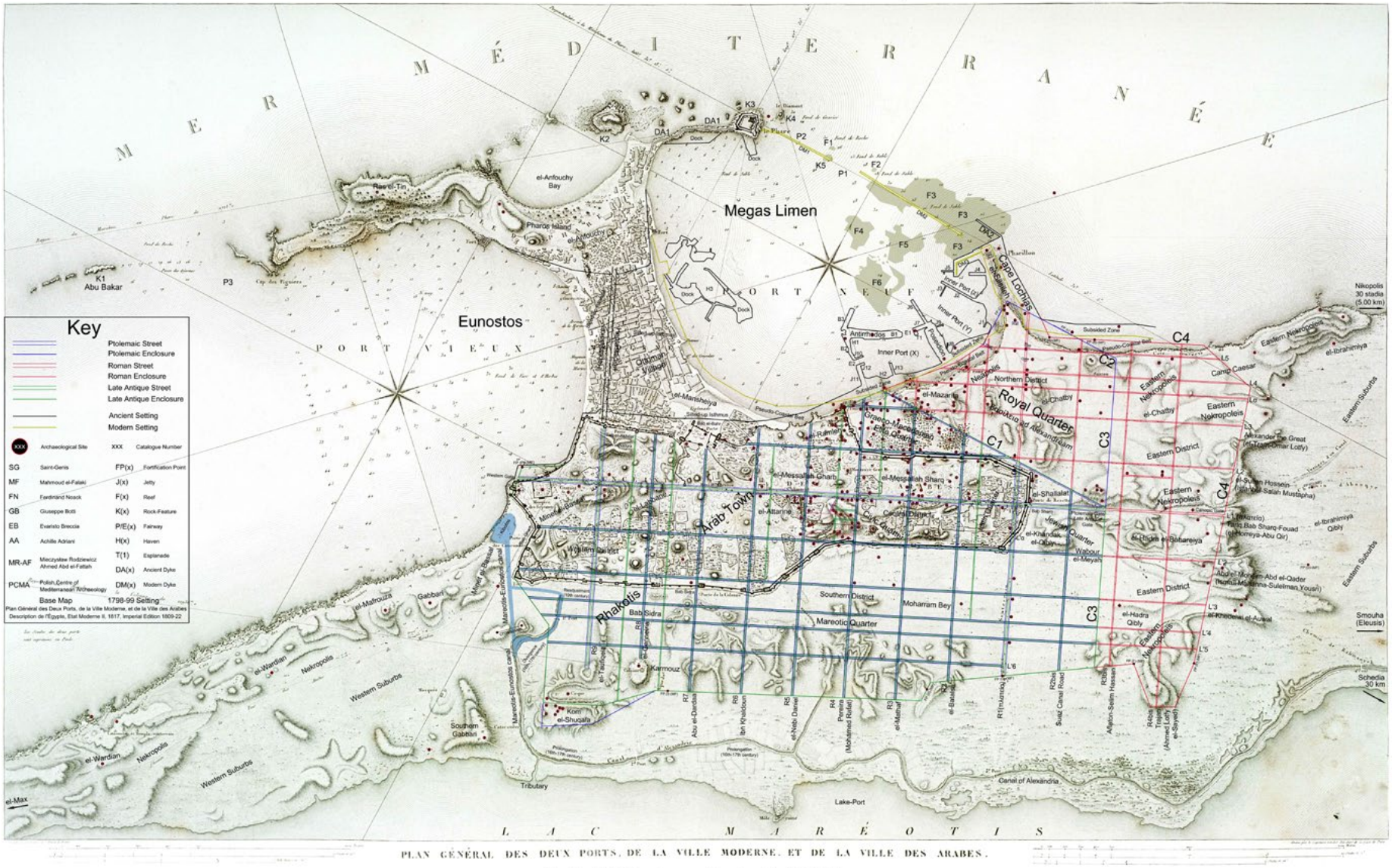


Figure 80. AutoCAD Map (V4). 'Alexandria: 4th Century BC – 7th Century AD (Collective)' – 2019. Annex in digital format. Author © 2019. (Introduction III: p. 5)

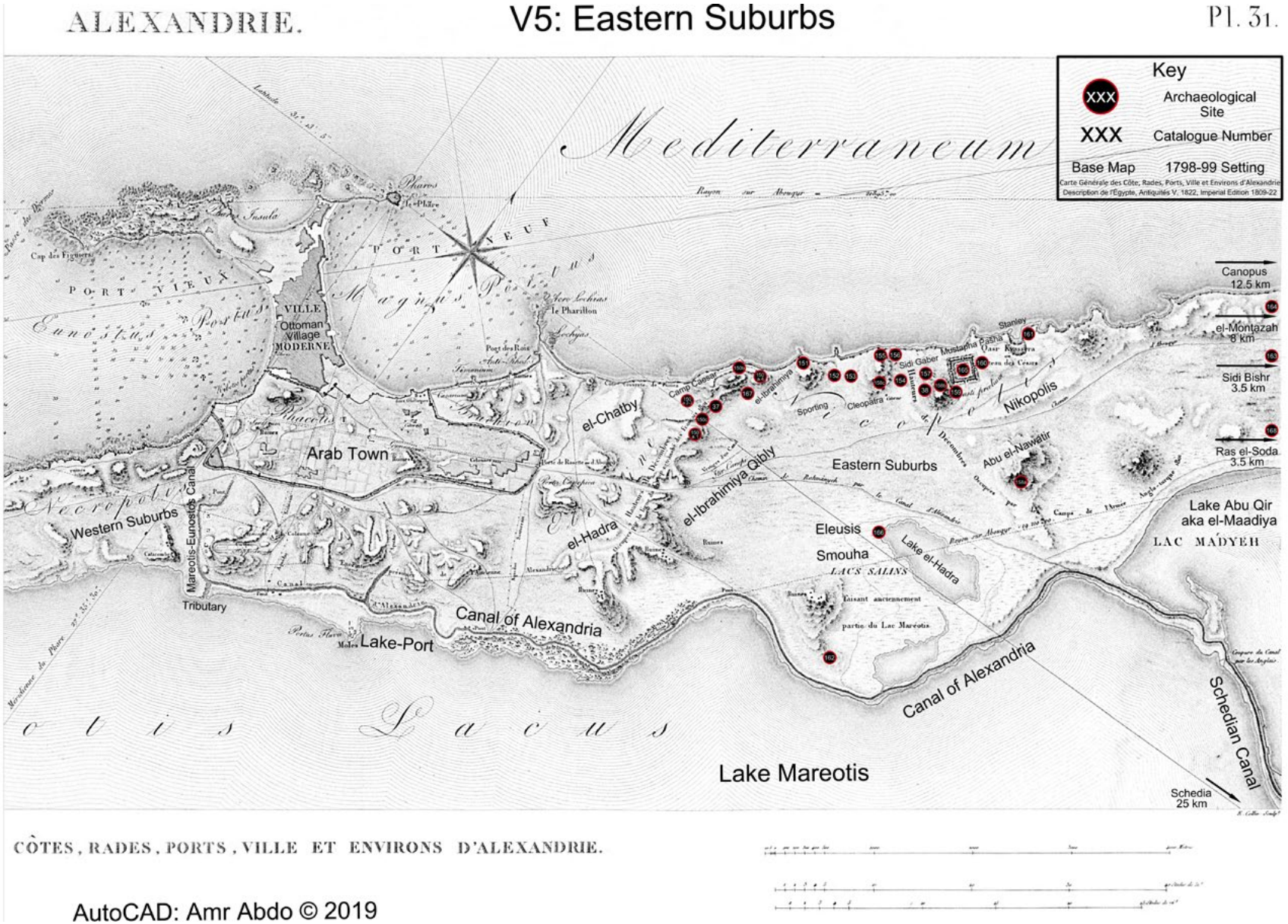


Figure 81. AutoCAD Map (V5). 'Alexandria: Eastern Suburbs' – 2019. Annex in digital format. Author © 2019. (Introduction III: p. 5)

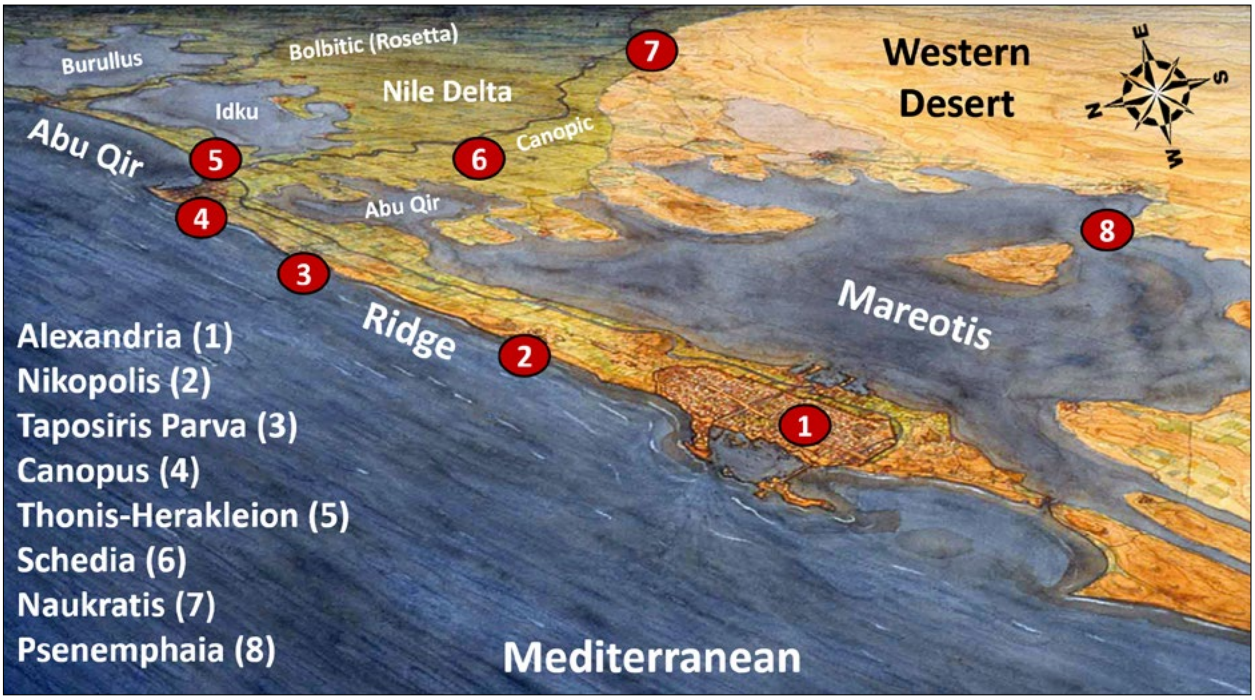


Figure 82. Alexandria and its environs in antiquity. Aquatint by Jean-Claude Golvin. Labels added by author. (Chapter 1, section 1.2: p. 8)



Figure 83. Satrap Stela; recorded decree issued in autumn 311 BC. Egyptian Museum in Cairo, Inventory Number CG.22182. (Chapter 1, section 1.4: p. 9)



Figure 84. Fortification-point (α). Localisation. AutoCAD map (V1).
Extract. Author © 2019. (Chapter 2, site 1: p. 14)

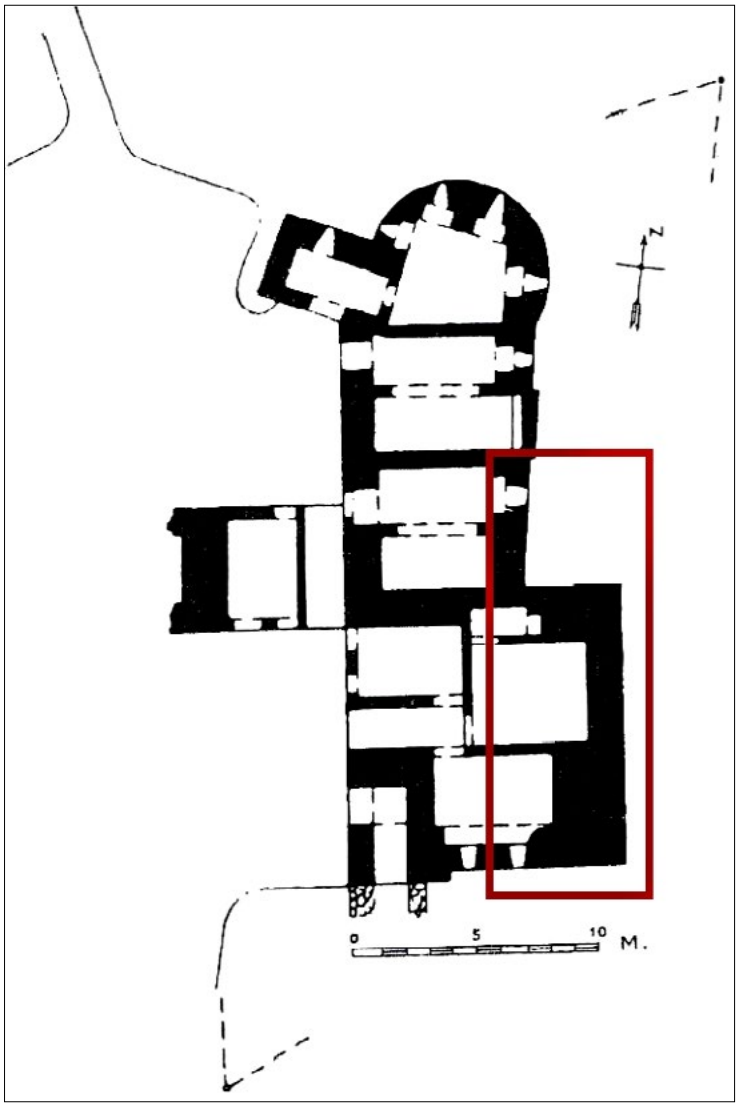


Figure 85. Fortification-point (α). Plan. Outlined in red is the segment of nummulithic limestone. Adriani 1966b: Catalogue Number 16, Tavola 9, Figure 27. (Chapter 2, site 1: p. 14)

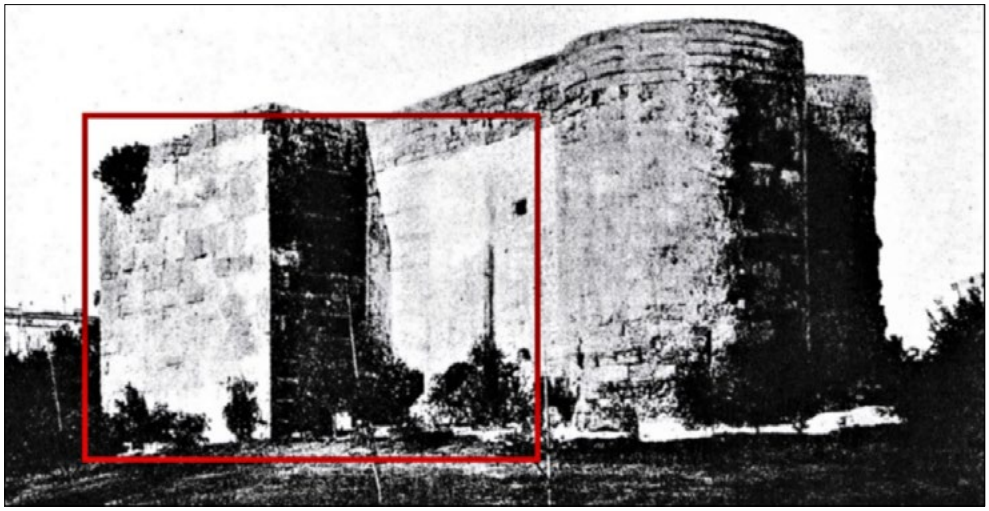


Figure 86. Fortification-point (α). View of the outer façade of nummulithic limestone. Adriani 1966b: Catalogue Number 16, Tavola 9, Figure 22. (Chapter 2, site 1: p. 14)

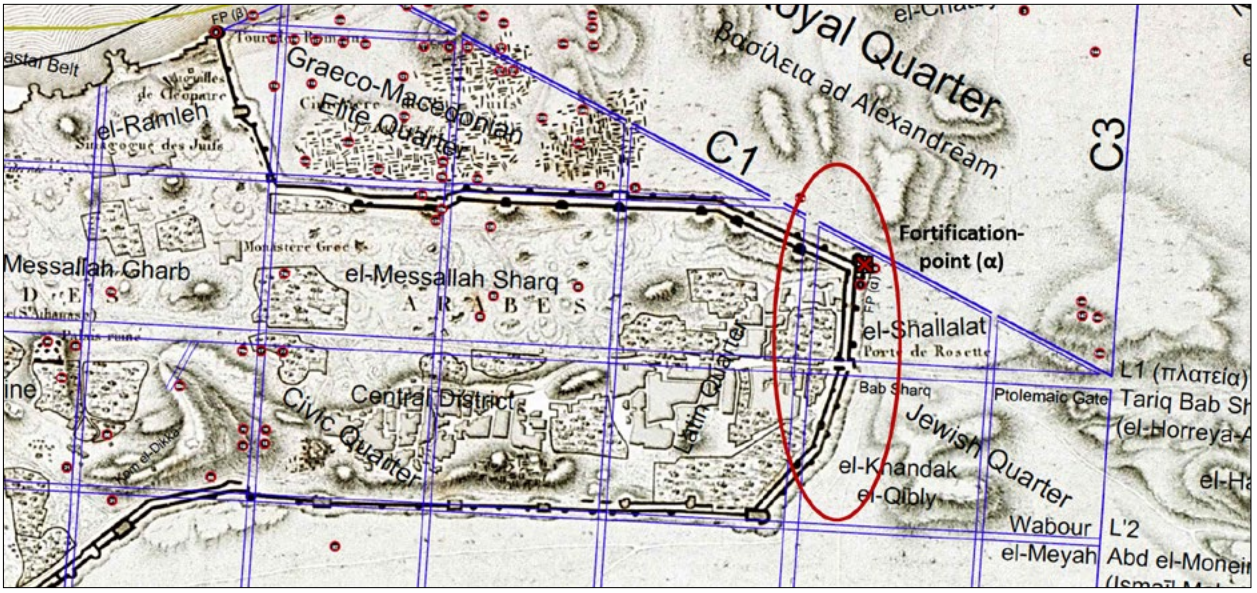


Figure 87. Fortification-point (α). A slight deviation of the Tulunid circuit to the east of transversal street R1. AutoCAD map (V1). Extract. Author © 2019. (Chapter 2, site 1: p. 14)

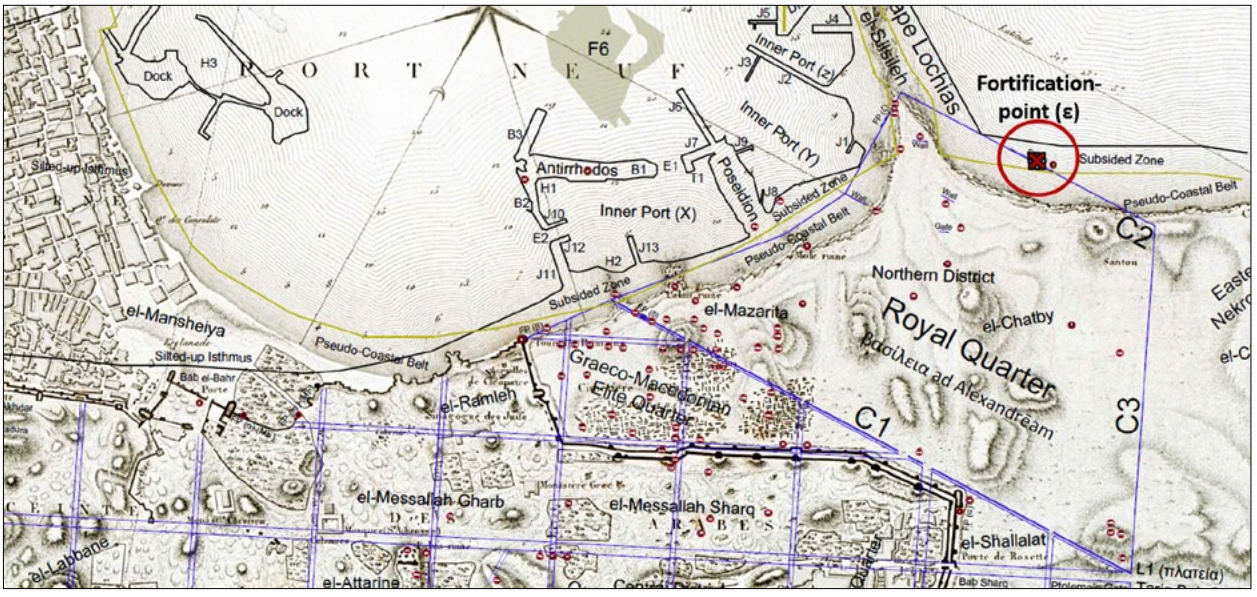


Figure 88. Fortification-point (ε). Localisation. AutoCAD map (V1). Extract. Author © 2019. (Chapter 2, site 2: p. 15)

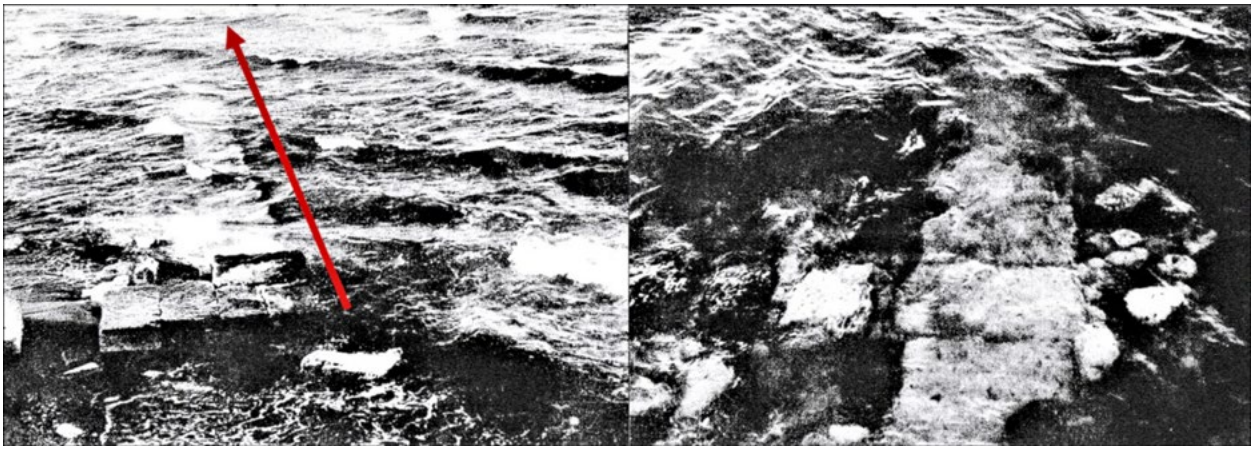


Figure 89. Fortification-point (ε). View of submerged remnants to the east of el-Silsileh.
Adriani 1966b: Catalogue Number 43, Tavola 21, Figures 75-76. (Chapter 2, site 2: p. 15)

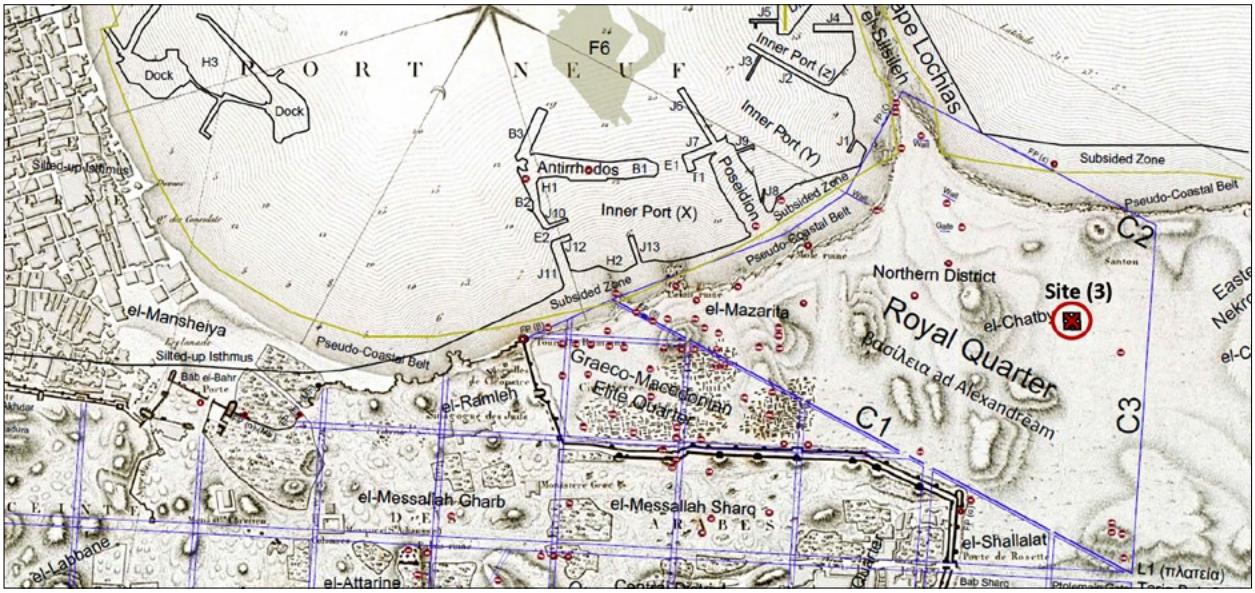


Figure 90. Site 3. Localisation. AutoCAD map (V1). Extract. Author © 2019. (Chapter 2, site 3: p. 15)

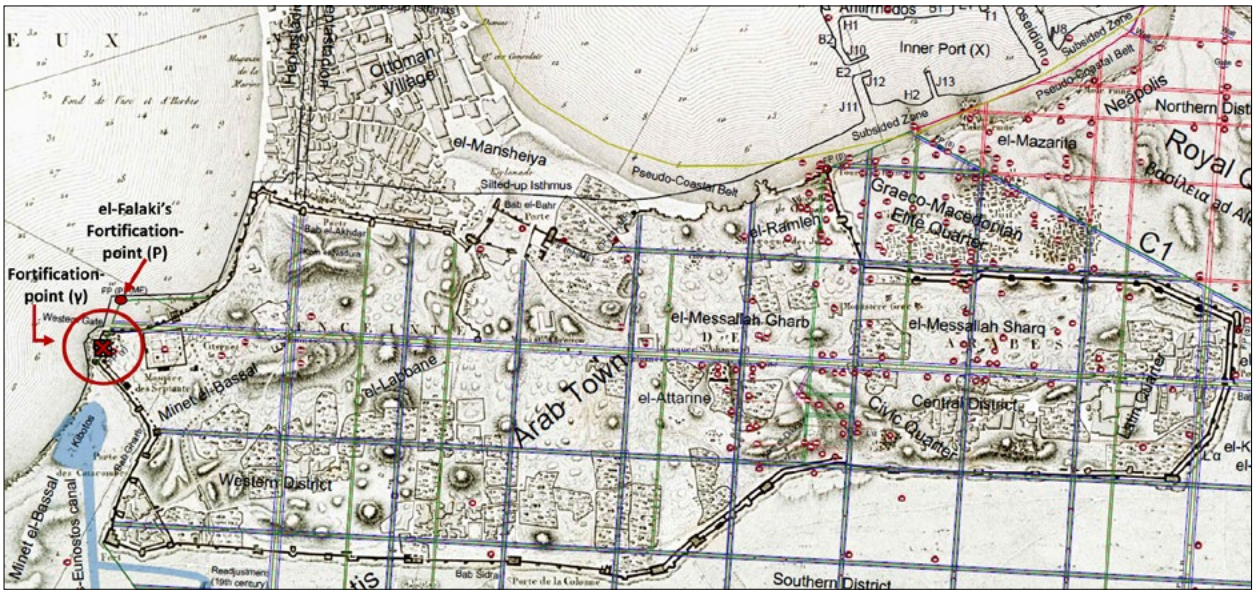


Figure 91. Fortification-point (γ). Relative location to el-Falaki's fortification-point (P).
AutoCAD map (V1). Extract. Author © 2019. (Chapter 2, site 4: p. 19)

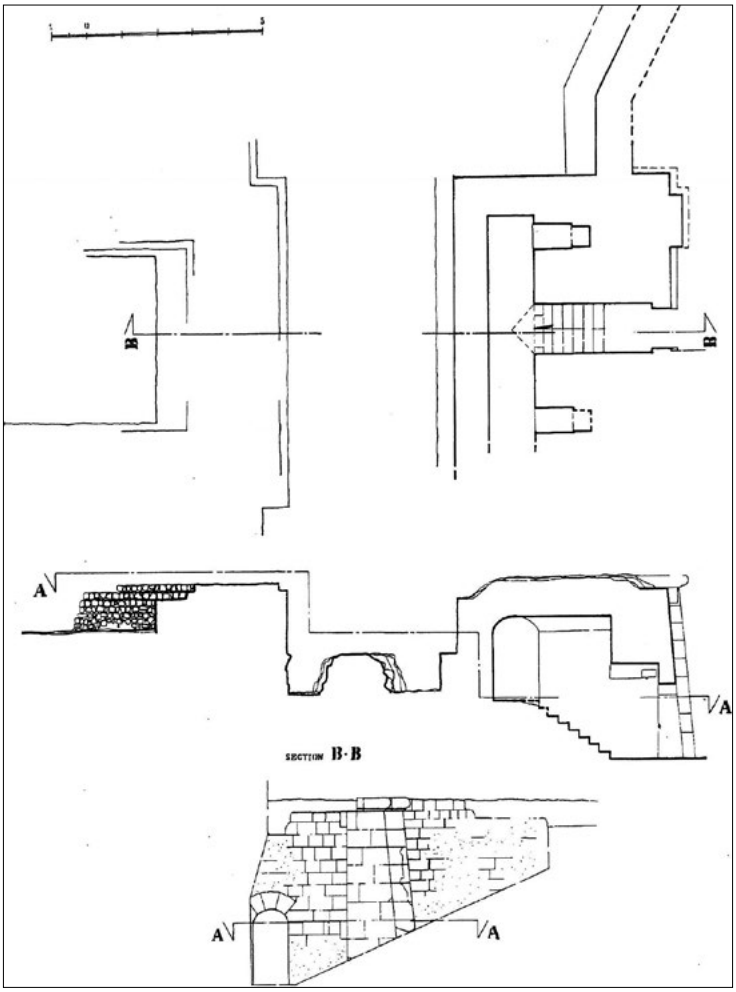


Figure 92. Fortification-point (γ). Plan and sectional view. Tkaczow 1993: Catalogue Number 6, Figure 9. (Chapter 2, site 4: p. 19)



Figure 93. Fortification-point (γ). View of excavated remnants. Leclant 1979: Table II, Figure 1. (Chapter 2, site 4: p. 19)

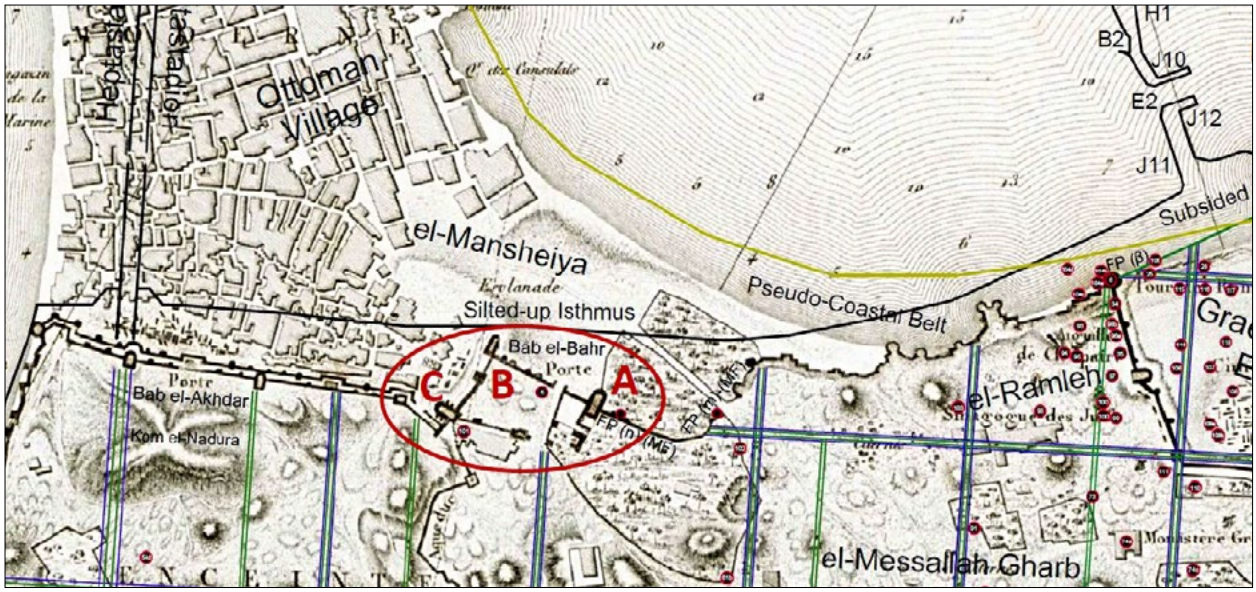


Figure 94. Bab el-Bahr, the northern entrance to the Arab town. Localisation.
AutoCAD map (V4). Extract. Author © 2019. (Chapter 2, site 5: p. 19)

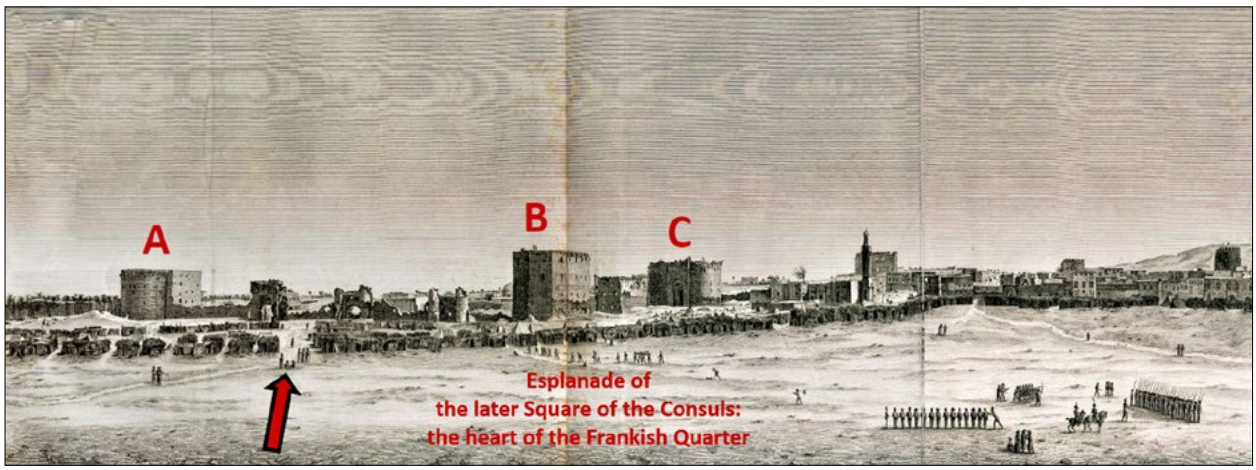


Figure 95. Bab el-Bahr, the northern entrance to the Arab town, c. 1798-99. *Description de l'Égypte*.
Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 98. (Chapter 2, site 5: p. 19)

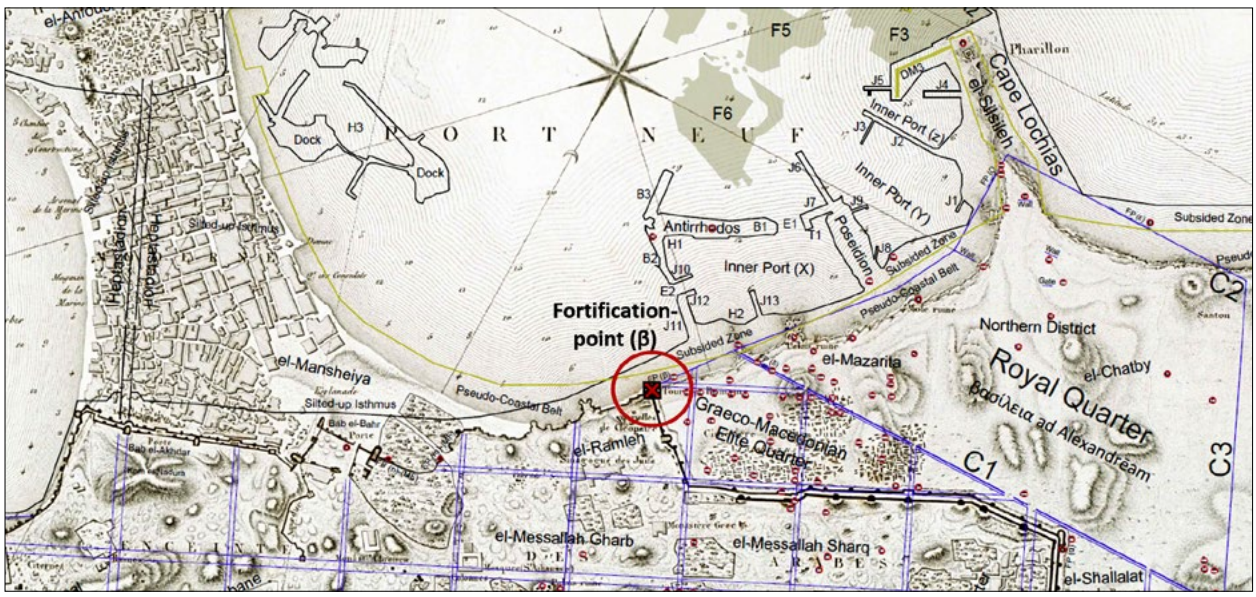


Figure 96. Fortification-point (β). Localisation. AutoCAD map (V1). Extract. Author © 2019. (Chapter 2, site 6: p. 20)

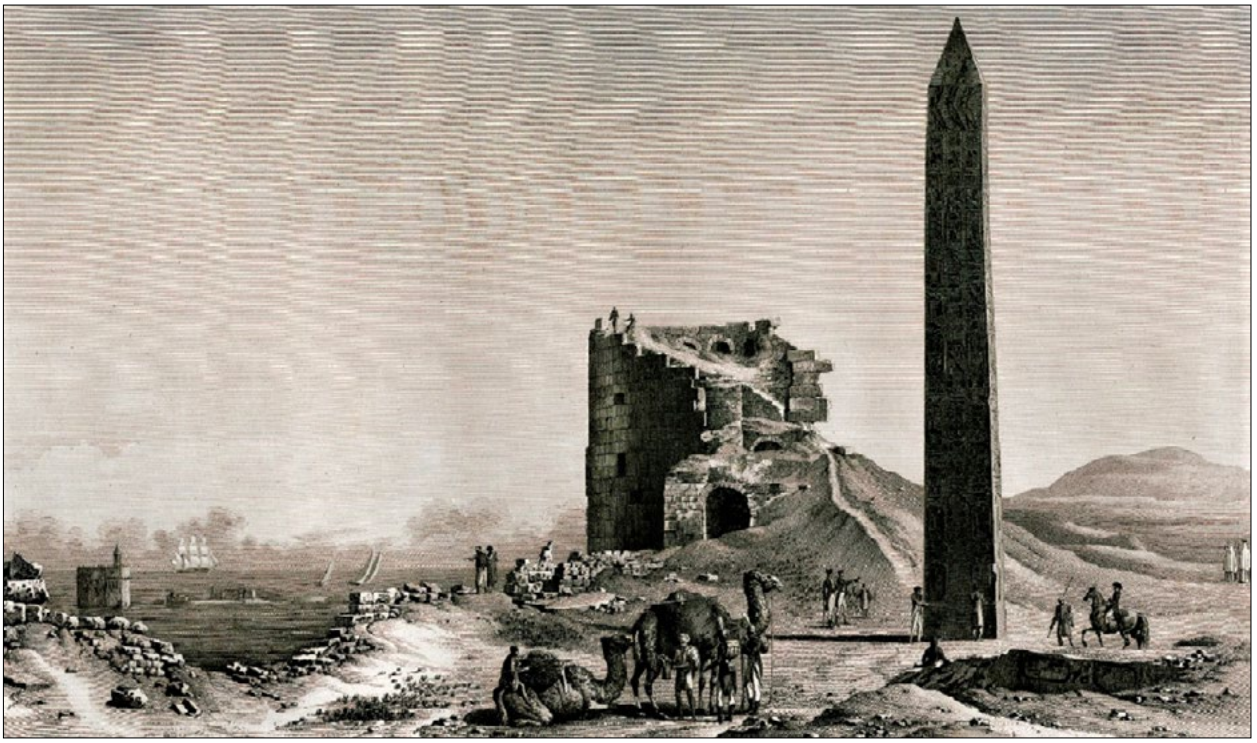


Figure 97. Fortification-point (β): the so-called 'Tower of the Romans' next to the Heliopolis obelisks aka Cleopatra's Needles, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 32. (Chapter 2, site 6: p. 20)



Figure 98. Fortification-point (β): the so-called 'Tower of the Romans' and the standing Heliopolis obelisk (transported shortly after to New York) on the 19th-century shoreline – October 1879. Gorringe 1885: Plate I. (Chapter 2, site 6: p. 20)

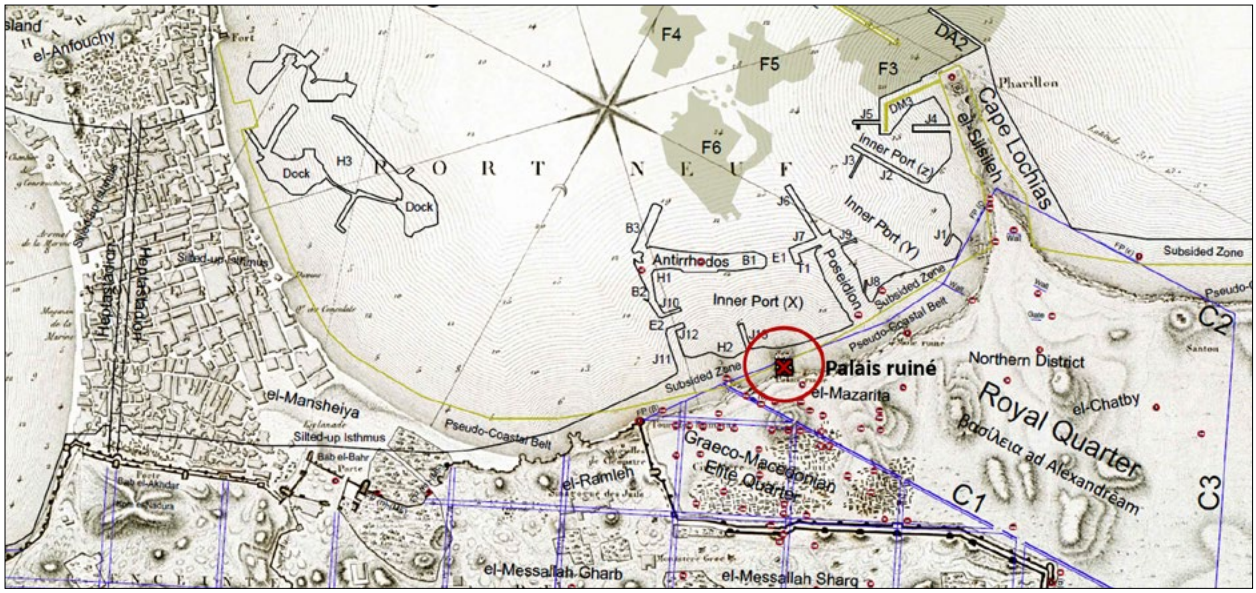


Figure 99. The so-called 'Palais ruiné'. Localisation. AutoCAD map (V1).
Extract. Author © 2019. (Chapter 2, site 7: p. 21)

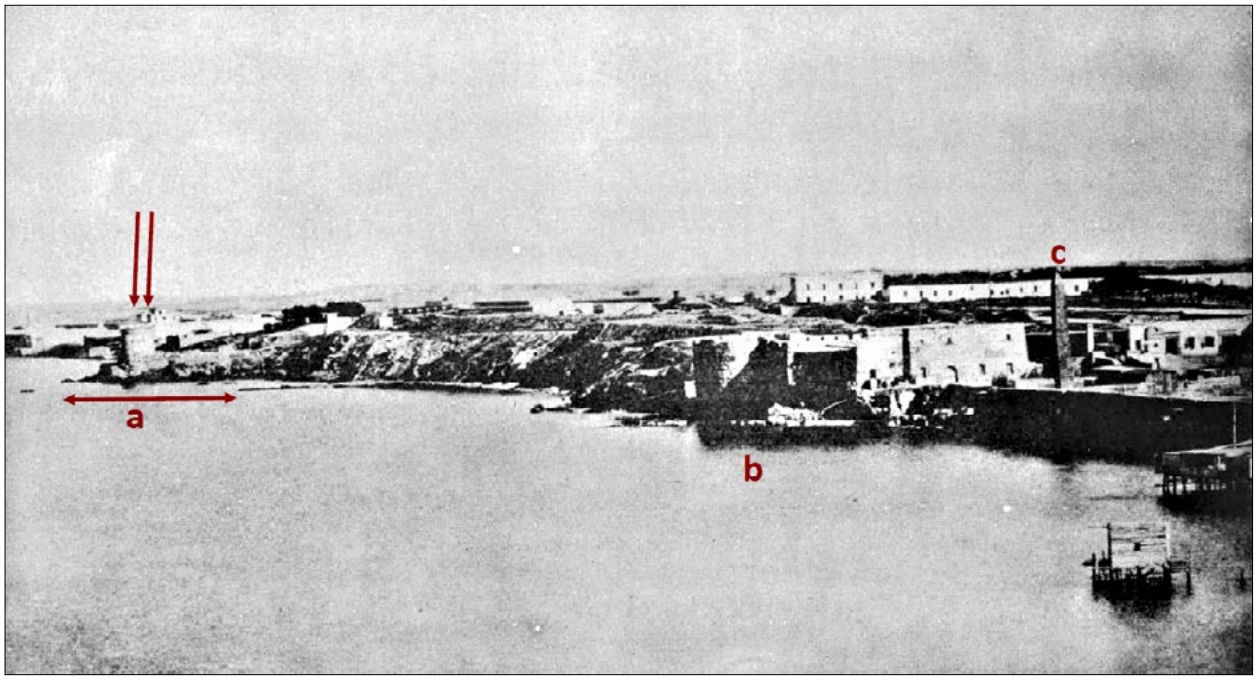


Figure 100. Relative location of 'Palais ruiné' (a: site of Tabiat el-Menchérieh) to the 'Tower of the Romans' (b: Fortification-point β) and the standing Heliopolis obelisk (c). View of the eastern harbour's 19th-century shoreline. Adriani 1934: Tavola XXVIII. Labels added by author. (Chapter 2, site 7: p. 21)

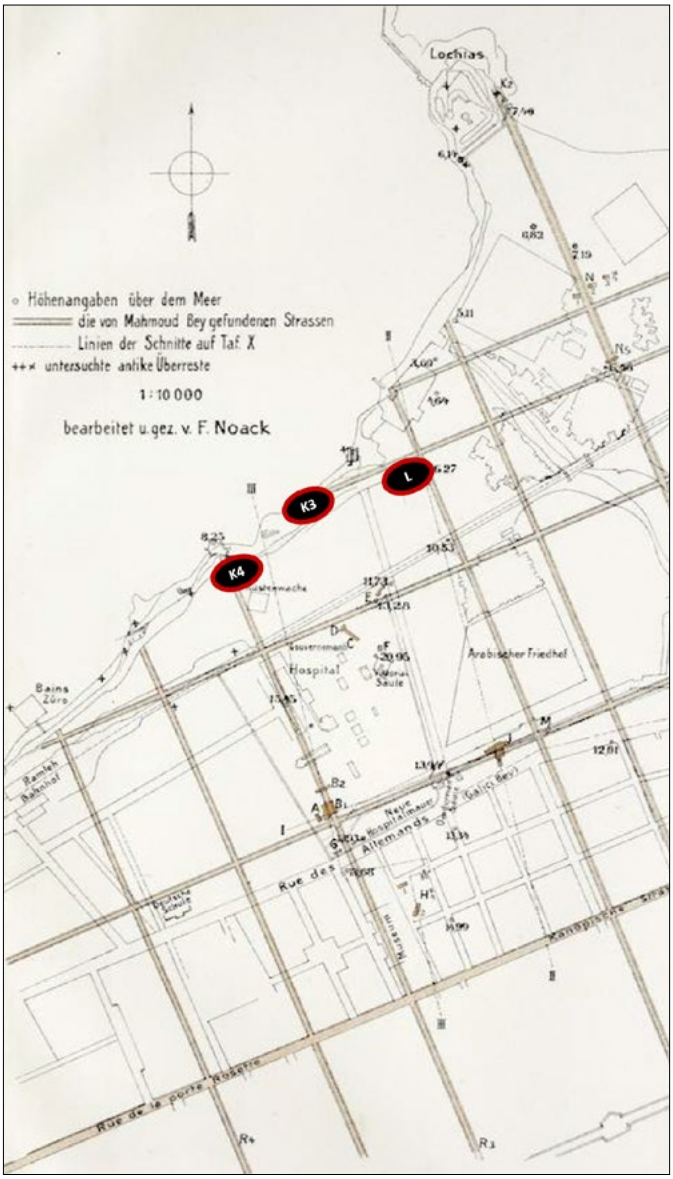


Figure 101. Noack's trenches (K3), (K4), and (L). Localisation. Noack 1900: Tafel IX. Labels added by author. (Chapter 2, site 7: p. 21)

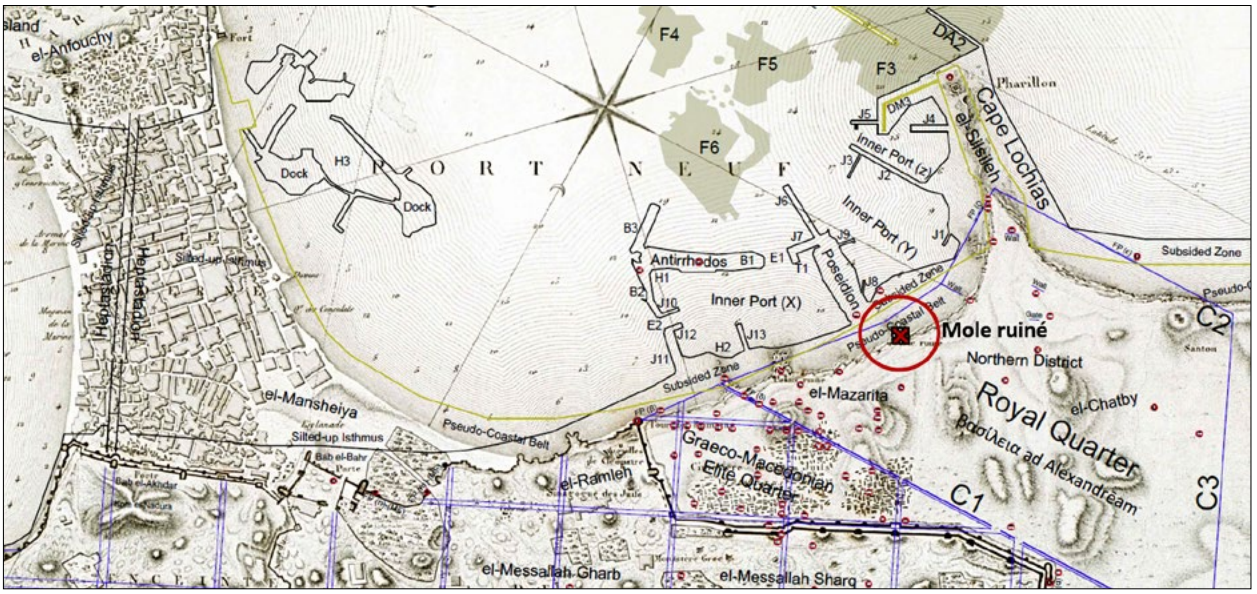


Figure 102. The so-called 'Mole ruiné'. Localisation. AutoCAD map (V1). Extract. Author © 2019. (Chapter 2, site 8: p. 21)

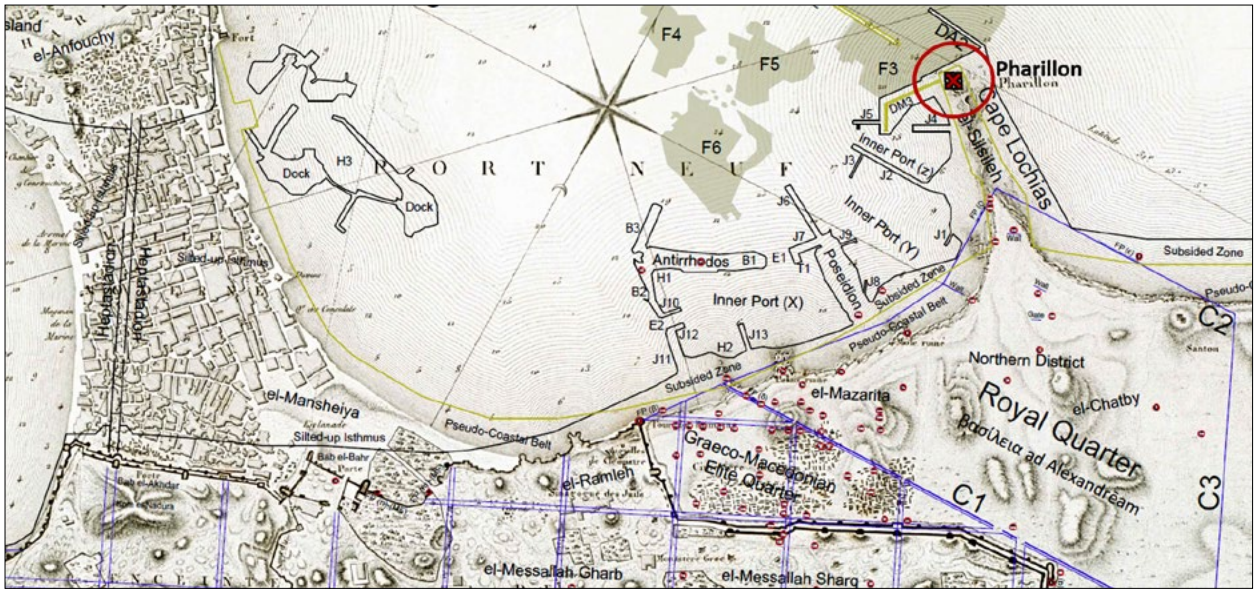


Figure 103. The Pharillon site. Localisation. AutoCAD map (V1).
Extract. Author © 2019. (Chapter 2, site 9: p. 22)

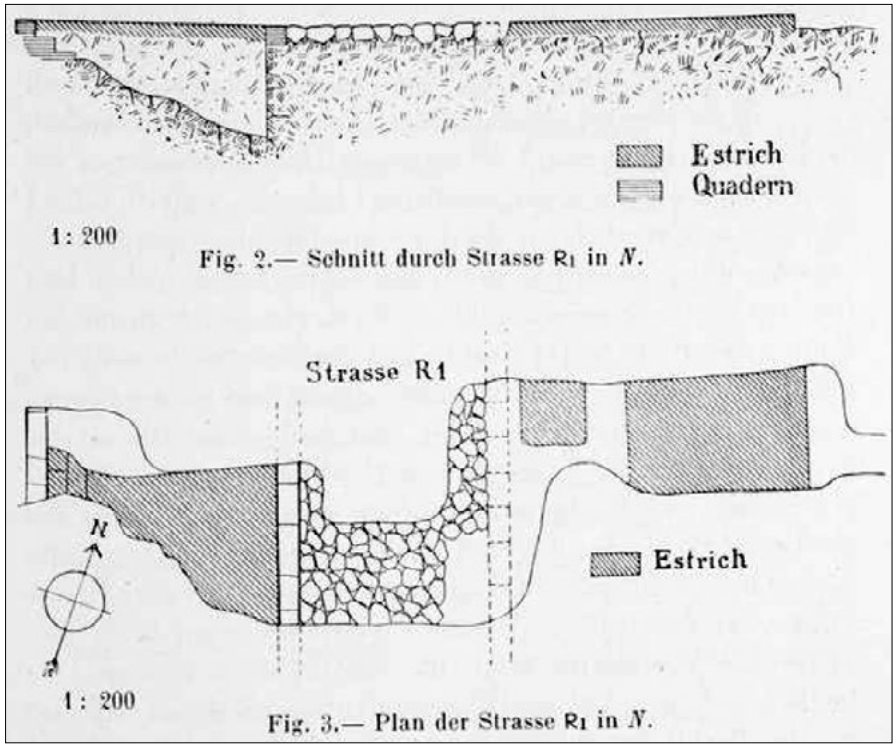


Figure 104. Traces of street R1. Plan and sectional view. Noack's trench (N5); approximately, the present-day site of the Faculty of Commerce, el-Mazarita.
Noack 1900: 235, Figures 2-3. (Chapter 2, site 11: p. 24)

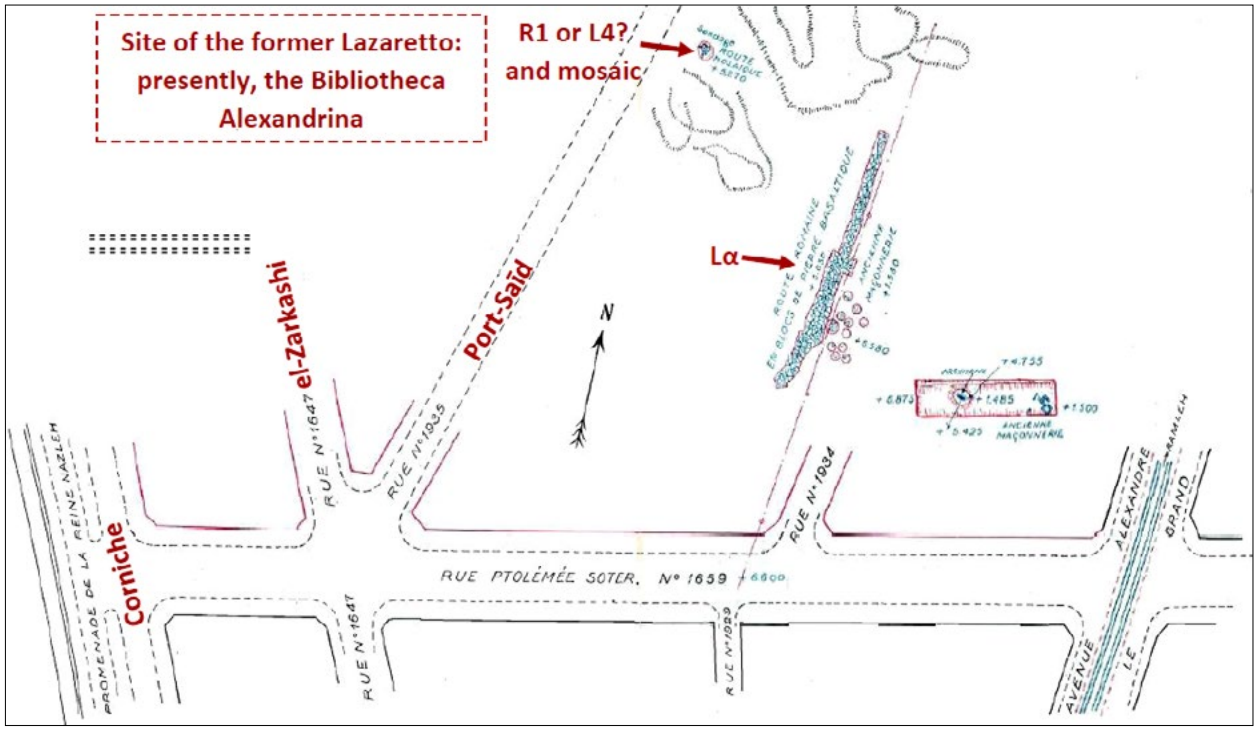


Figure 105. Breccia's 'Route-Mosaique': traces of street R1 or L4? and a fragment of a mosaic; approximately, the present-day site of the Faculty of Commerce, el-Mazarita. Breccia 1932: Planche LXII. Extract. Labels added by author. (Chapter 2, site 12: p. 23)

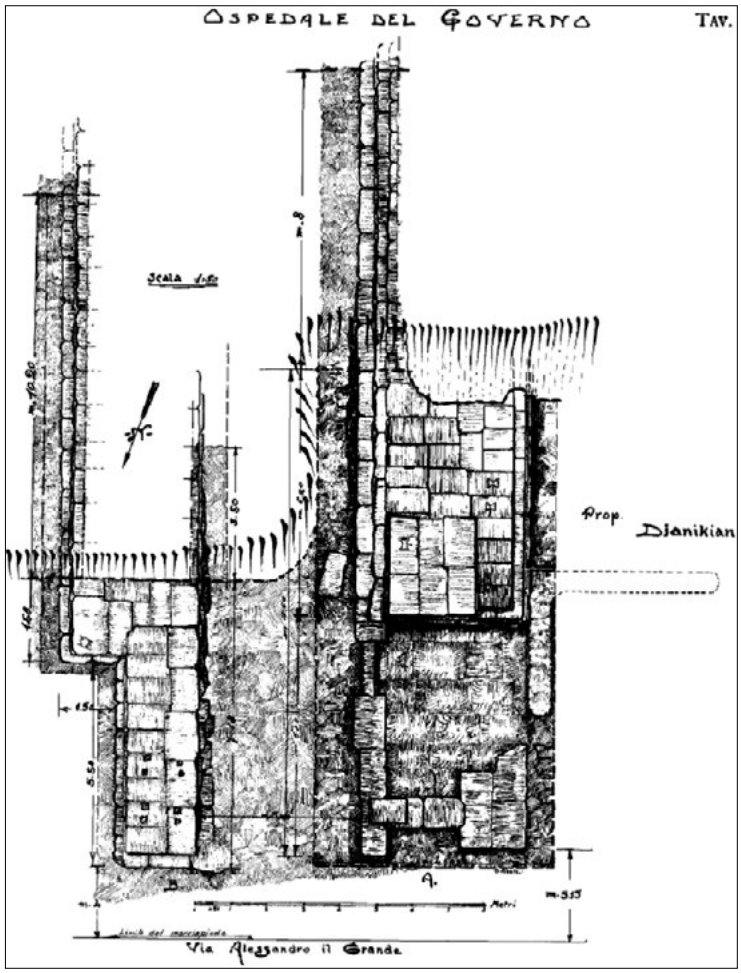


Figure 106. Chantier Djanikian, el-Mazarita. Plan of constructions (A) and (B). Adriani 1934: Tavola III. (Chapter 2, site 14: p. 24)

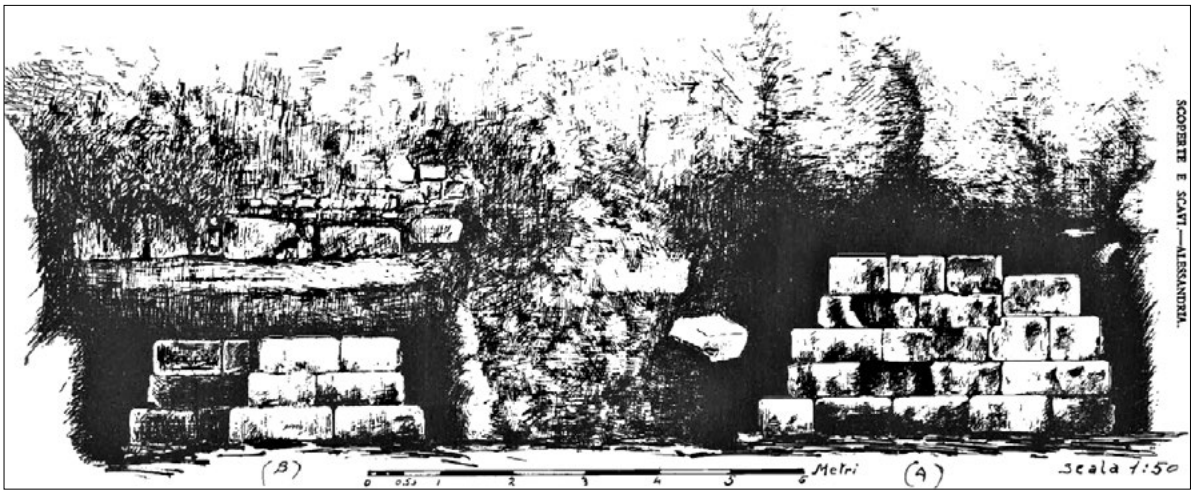


Figure 107. Chantier Djanikian, el-Mazarita. Sectional view of constructions (A) and (B). Adriani 1934: 13, Figure 1. (Chapter 2, site 14: p. 24)

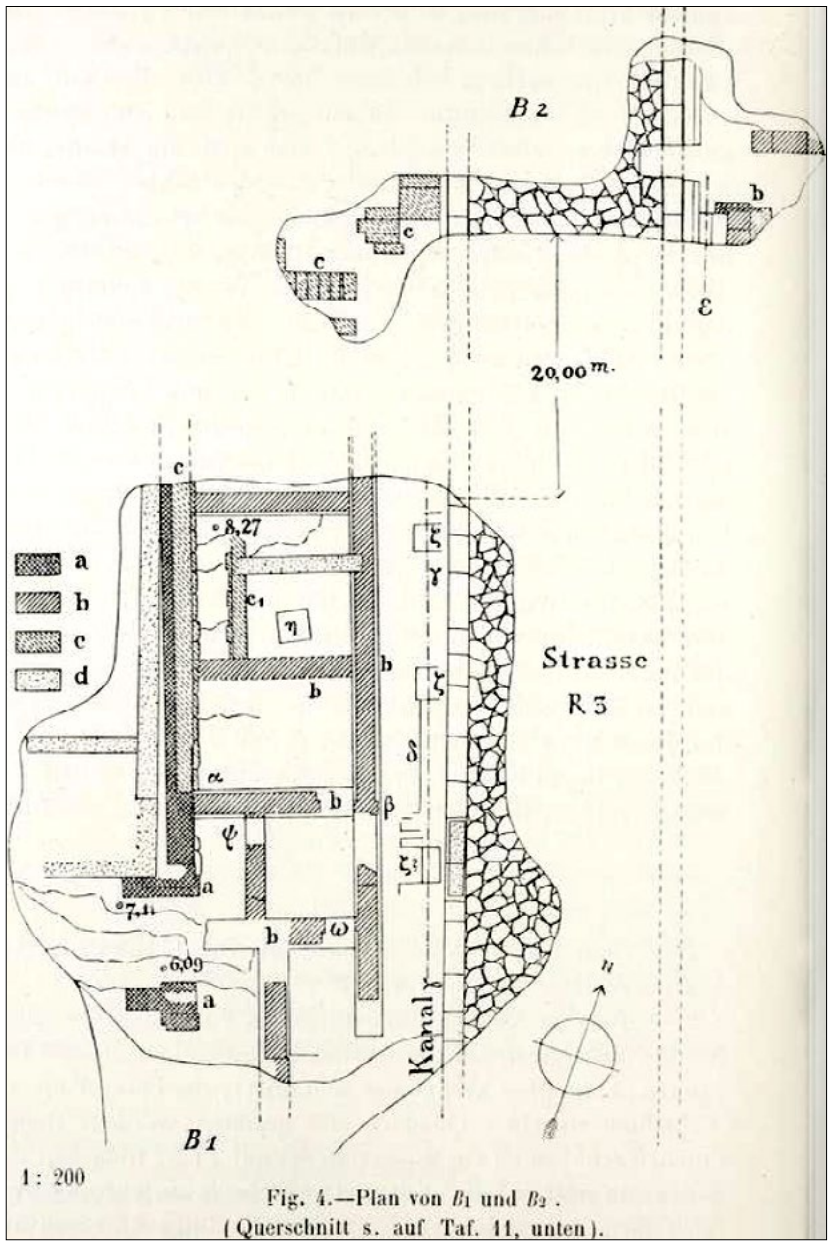


Fig. 4.—Plan von B_1 und B_2.
(Querschnitt s. auf Taf. 11, unten).

Figure 108. Noack's trenches (B1) and (B2), el-Mazarita. Plan of remnants pertaining to four phases of construction (a; b; c; d). Noack 1900: 240, Figure 4; Adriani 1966b: Catalogue Number 25, Tavola 12, Figure 37. (Chapter 2, site 15b: p. 25)

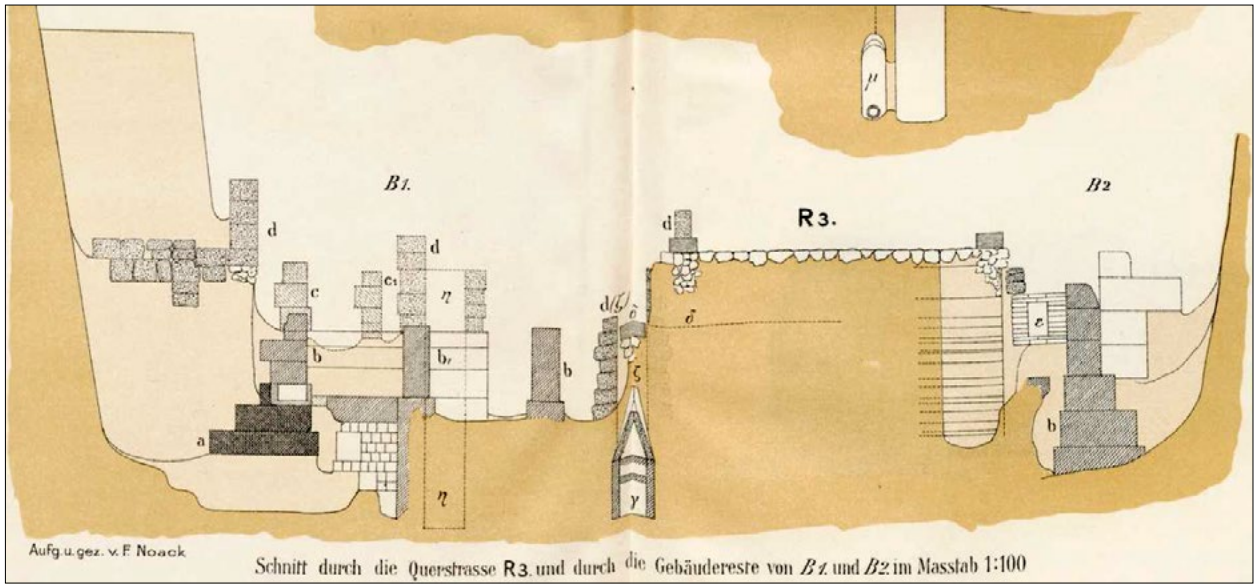


Figure 109. Noack's trenches (B1) and (B2), el-Mazarita. Sectional view of remnants pertaining to four phases of construction (a; b; c; d). Noack 1900: Tafel XI, Figure 2; Adriani 1966b: Catalogue Number 25, Tavola 13, Figure 42. (Chapter 2, site 15b: p. 25)

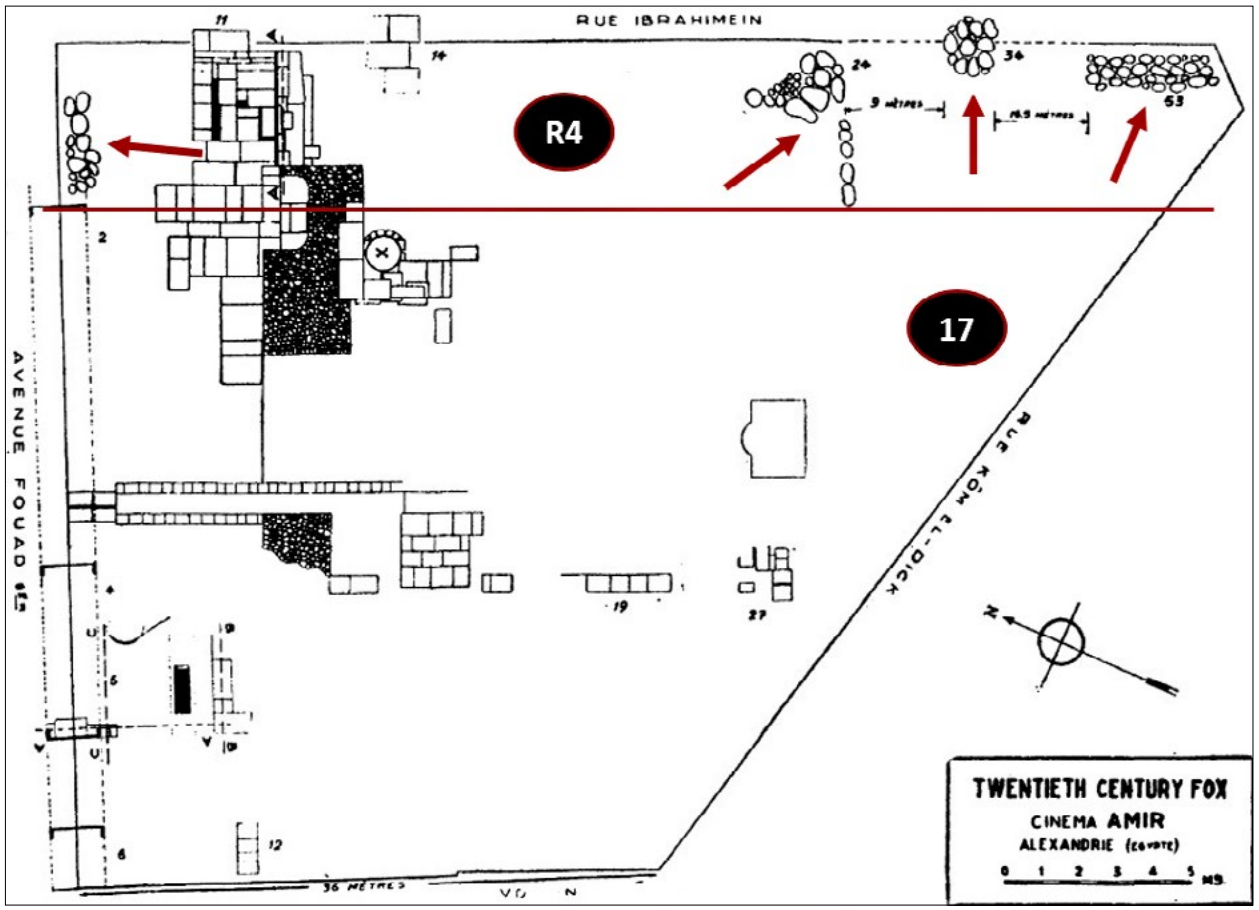


Figure 110. Cinema Amir, Kom el-Dikka. Excavation plan. Adriani 1956a: 2, Figure 1. Labels added by author. (Chapter 2, site 17: p. 27)

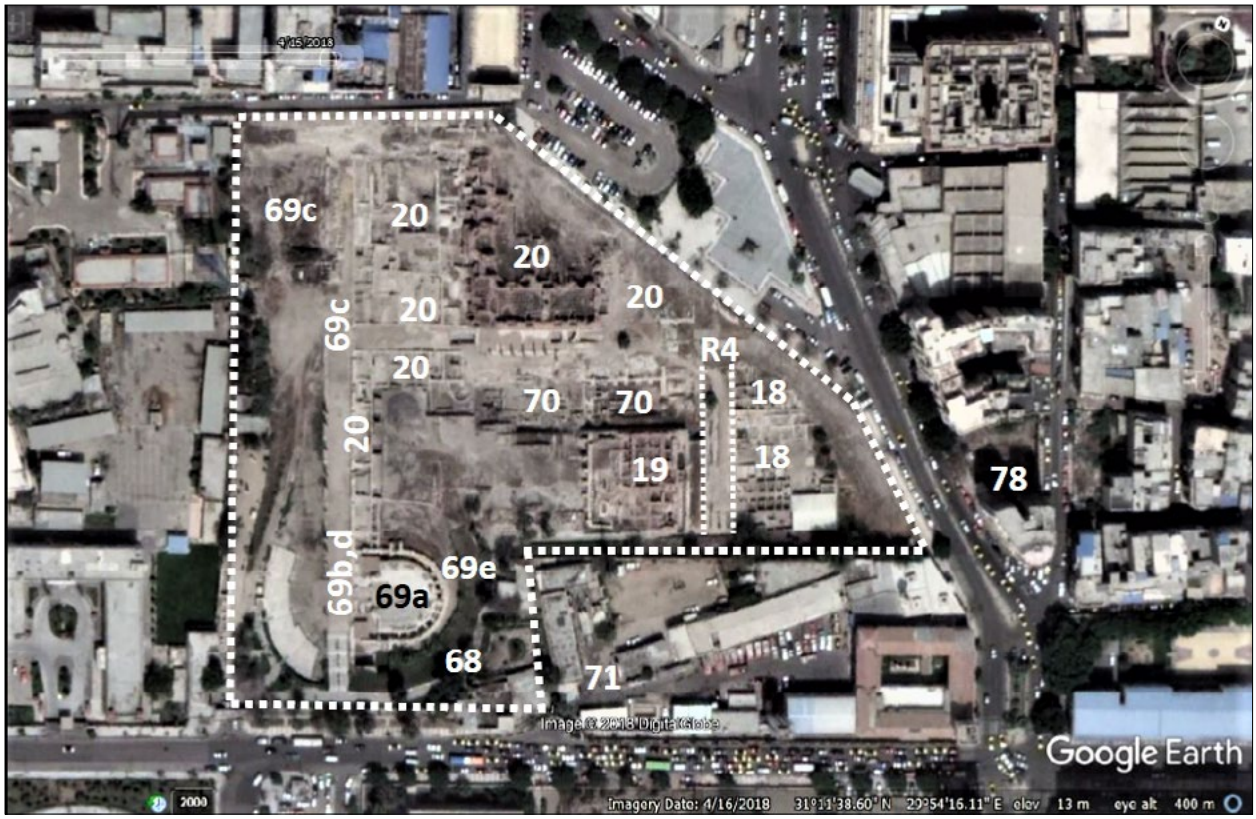


Figure 111. Kom el-Dikka archaeological park. Satellite image: localisation of sites.
Google Earth © 2018. Labels added by author. (Chapter 2, site 18: p. 27)

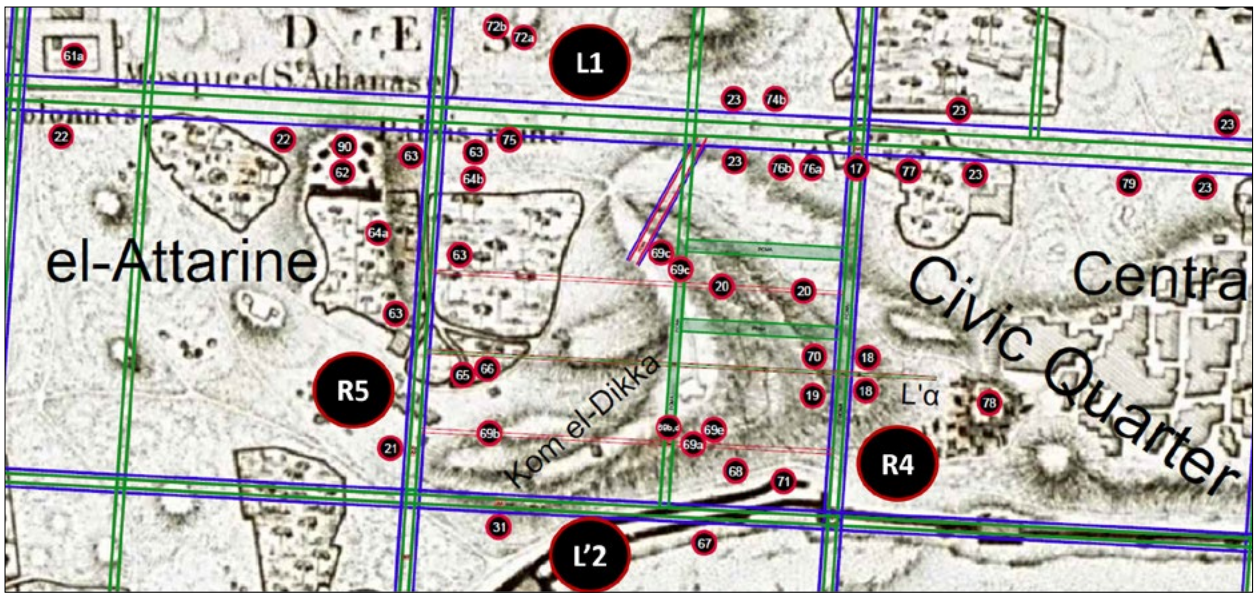


Figure 112. Kom el-Dikka archaeological park. Localisation of sites. AutoCAD map (V4).
Extract. Author © 2019. (Chapter 2, site 18: p. 27)

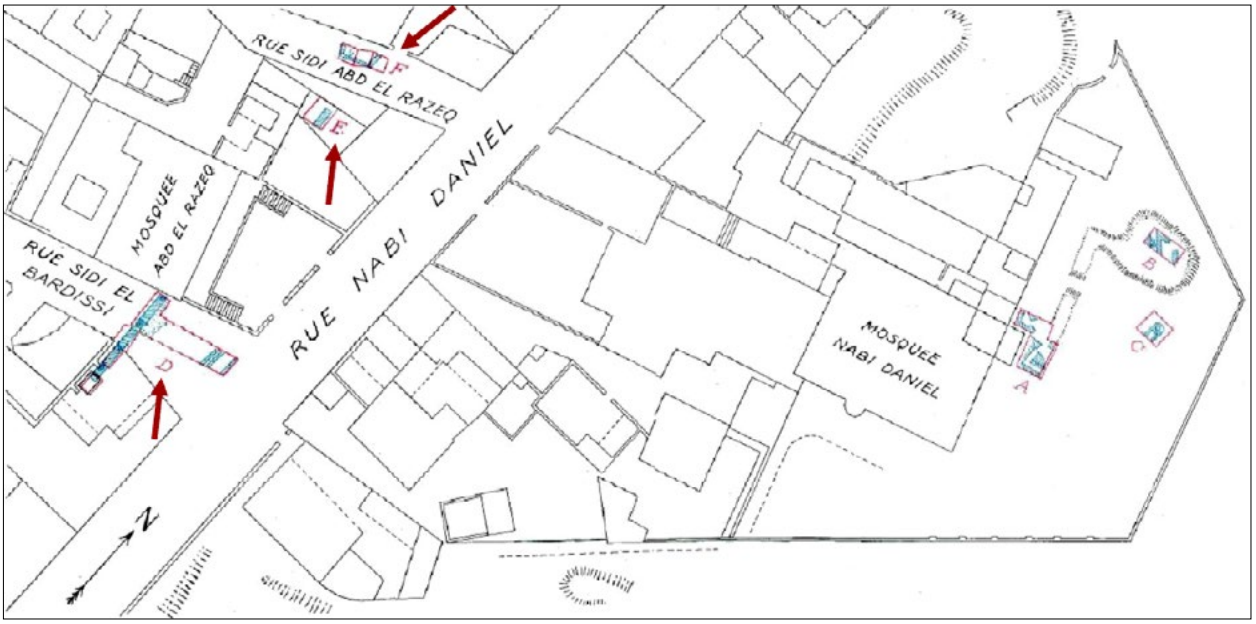


Figure 113. Excavations at Sidi el-Bardissi and Sidi Abd el-Razzak el-Wafai, off el-Nebi Daniel, Kom el-Dikka. Breccia's trenches (D; E; F). Breccia 1932: Planche LXI. Labels added by author. (Chapter 2, site 21: p. 31)

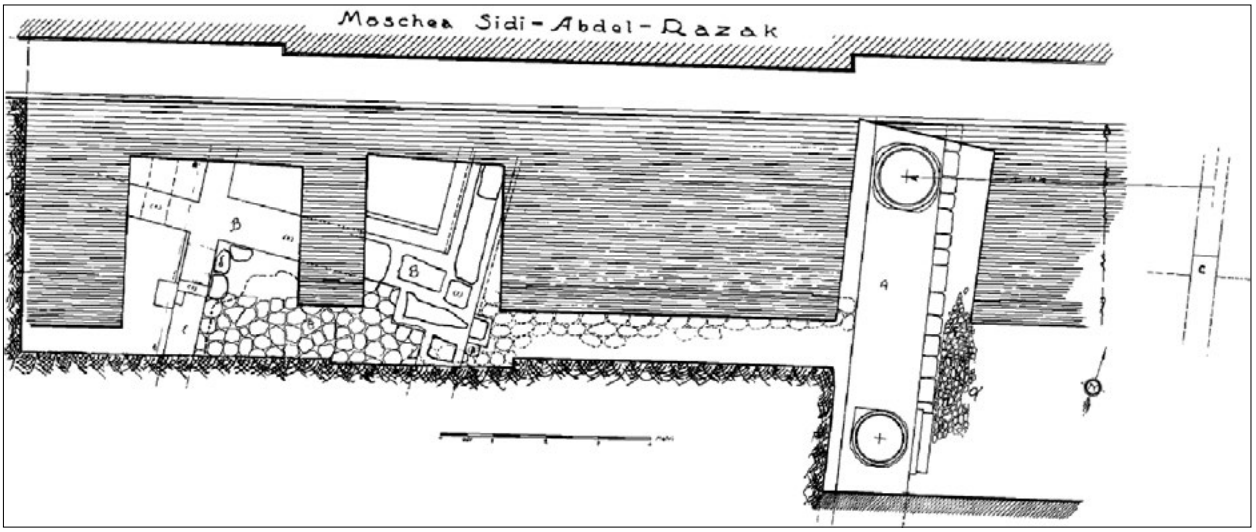


Figure 114. Excavations at Sidi el-Bardissi, off el-Nebi Daniel, Kom el-Dikka. Breccia's trench (D). Plan of excavated remnants. Adriani 1934: Tavole VI-VII. (Chapter 2, site 21: p. 31)

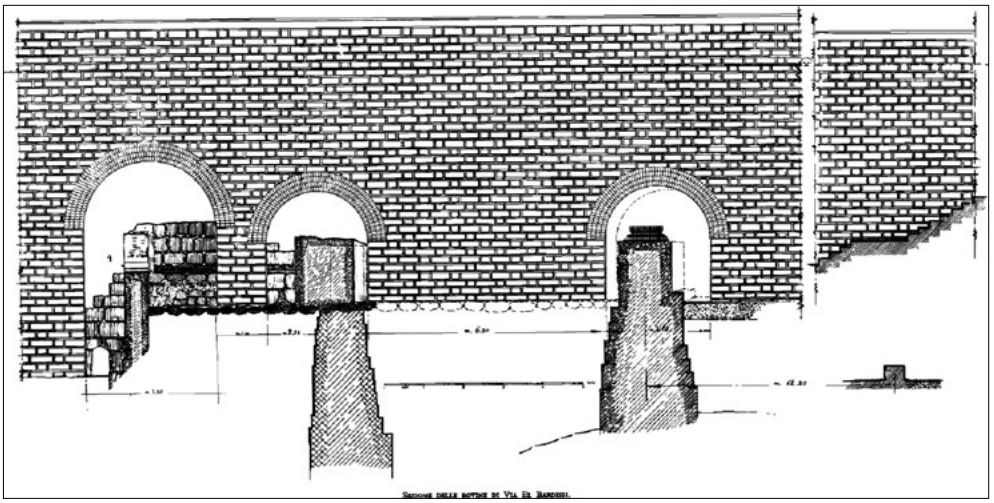


Figure 115. Excavations at Sidi el-Bardissi, off el-Nebi Daniel, Kom el-Dikka. Breccia's trench (D). Sectional view of excavated remnants. Adriani 1934: Tavole VIII-IX. (Chapter 2, site 21: p. 31)

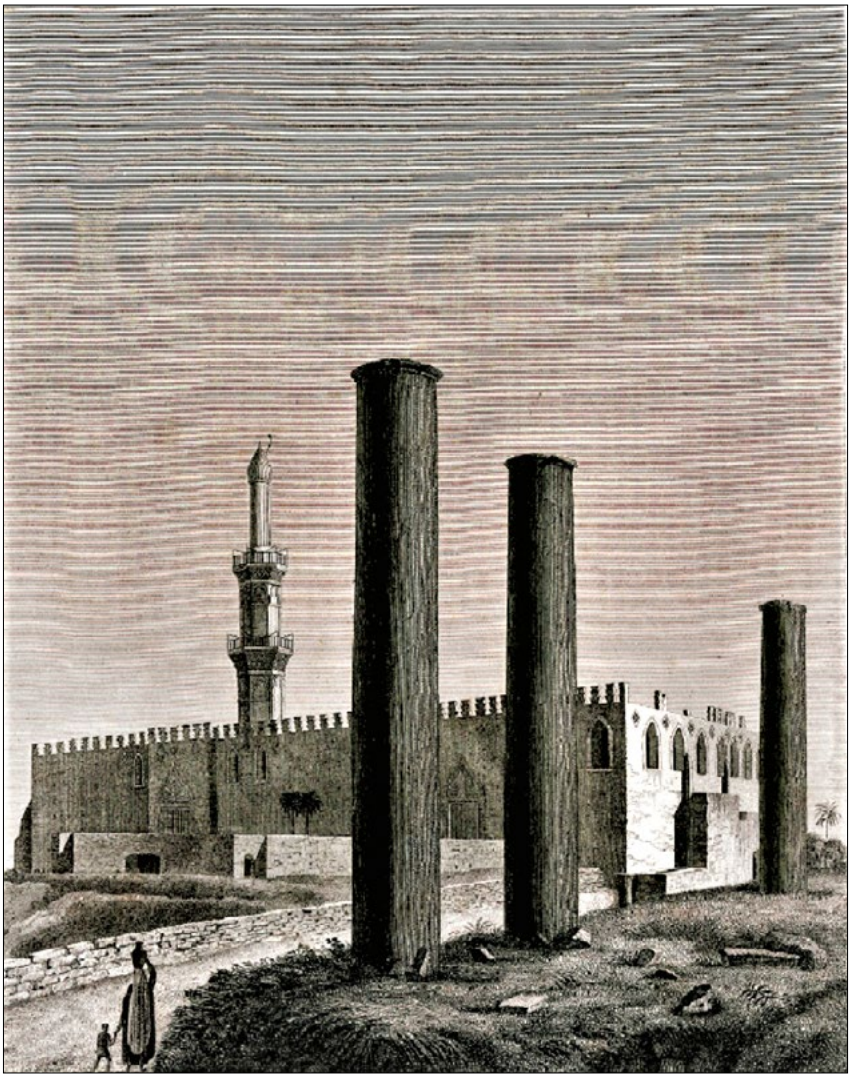


Figure 116. Columns opposite el-Attarine Mosque, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 35, Figure 1. (Chapter 2, site 22: p. 32)

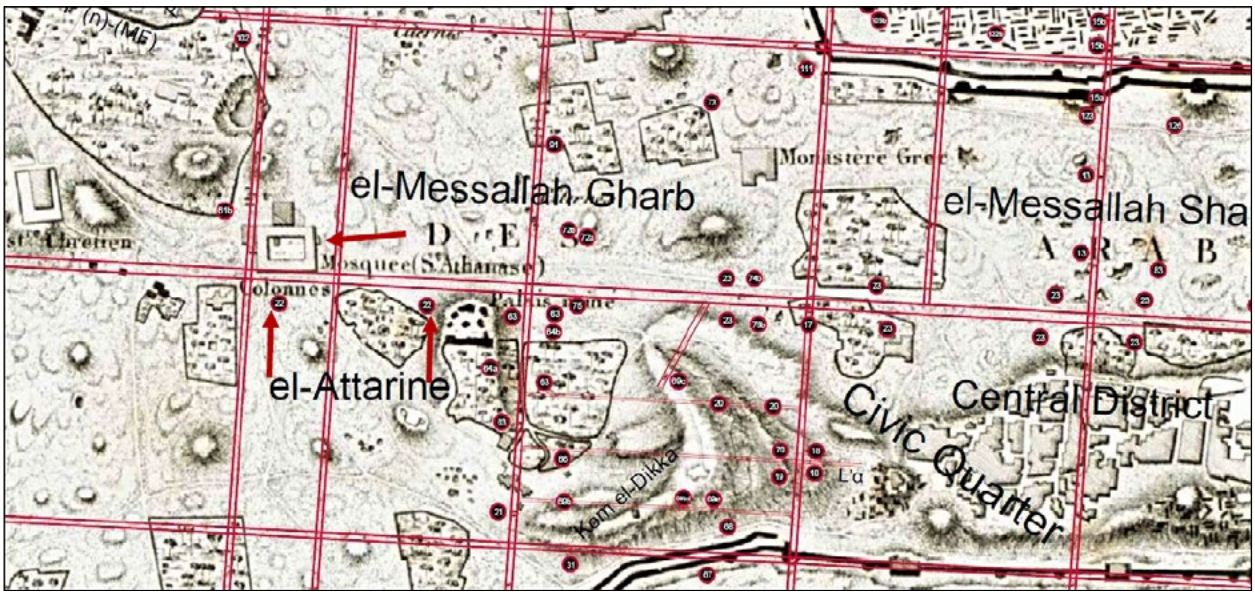


Figure 117. Columns opposite el-Attarine Mosque. AutoCAD map (V2). Extract. Author © 2019. (Chapter 2, site 22: p. 32)

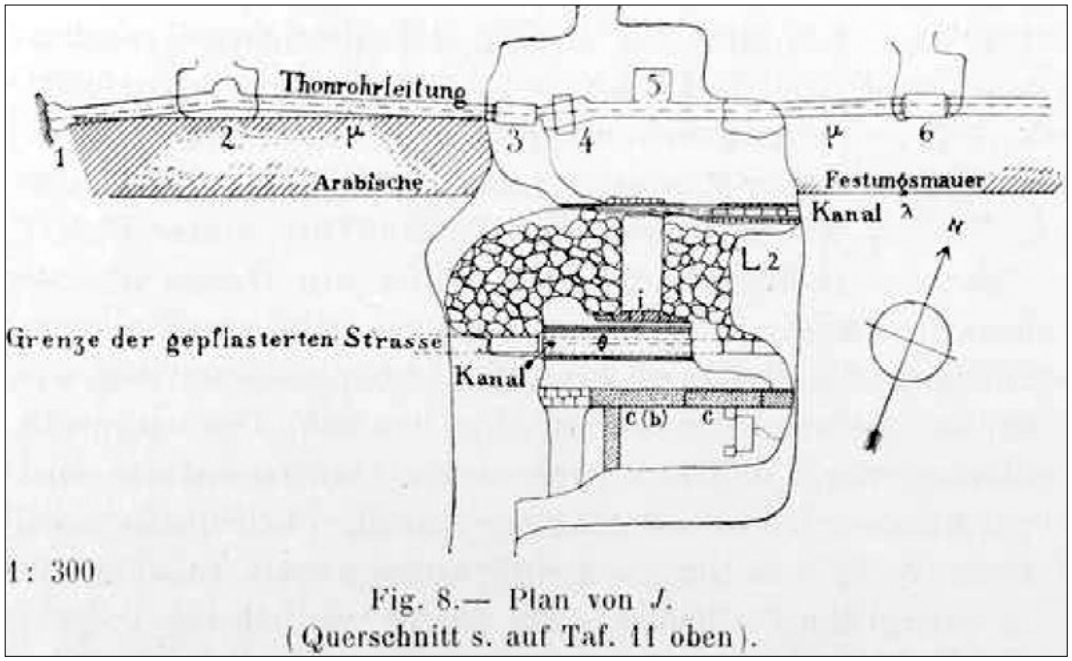


Figure 118. Noack's trench (J), east of el-Khartoum (Saīd Pasha) Square, el-Mazarita. Plan of remnants pertaining to four phases of construction (a; b; c; d). Noack 1900: 252, Figure 8; Adriani 1966b: Catalogue Number 26, Tavola 12, Figure 39. (Chapter 2, site 24: p. 32)

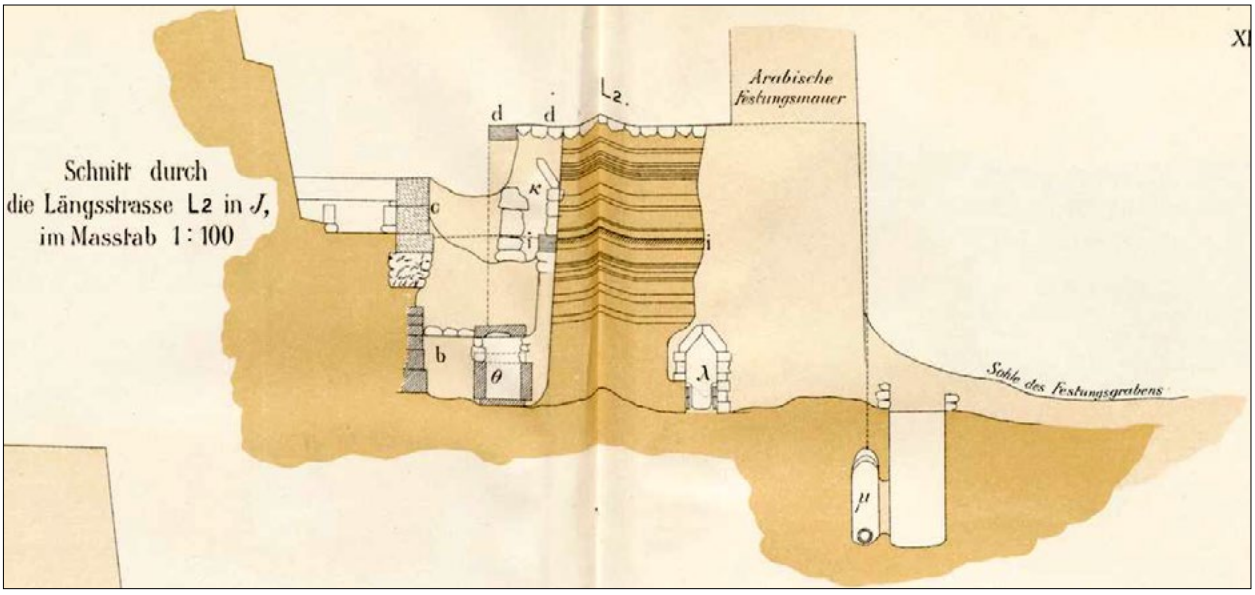


Figure 119. Noack's trench (J), east of el-Khartoum (Saīd Pasha) Square, el-Mazarita. Sectional view of remnants pertaining to four phases of construction (a; b; c; d). Noack 1900: Tafel XI, Figure 1; Adriani 1966b: Catalogue Number 26, Tavola 13, Figure 41. (Chapter 2, site 24: p. 32)

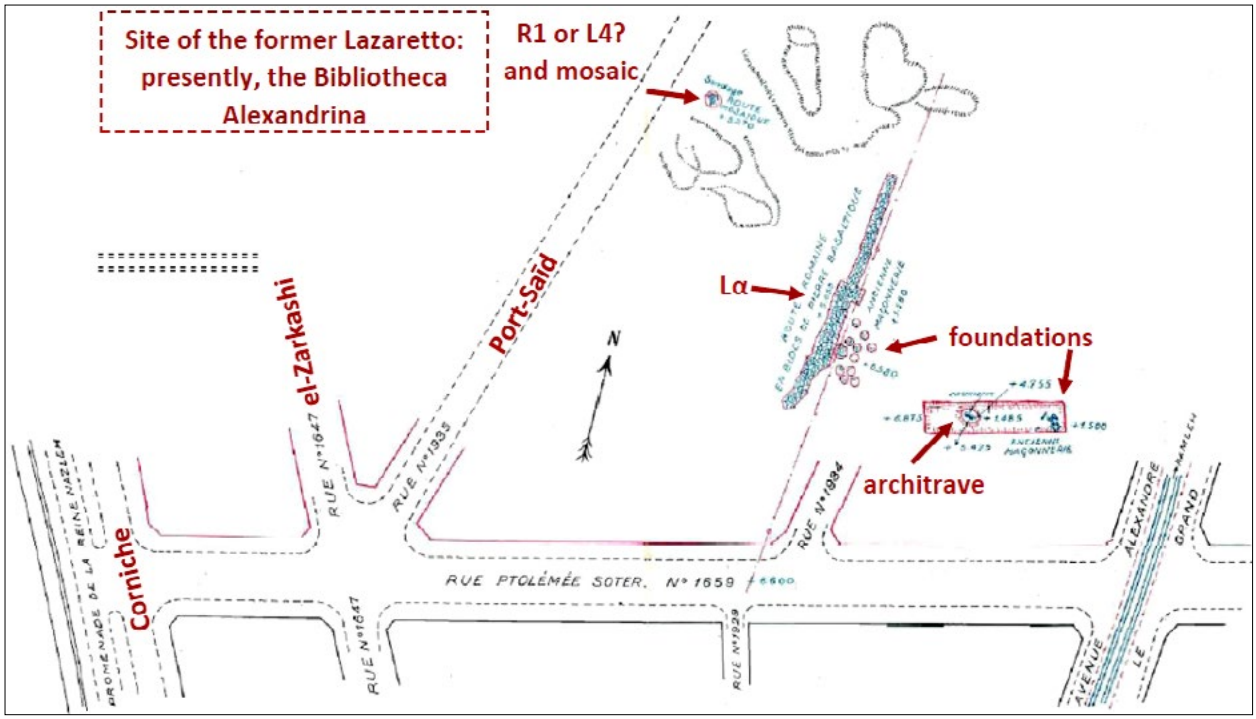


Figure 120. Ptolemaic foundations, and traces of Roman street Lα; approximately, the present-day site of the faculties of commerce and law, el-Mazarita. Breccia 1932: Planche LXII. Extract. Labels added by author. (Chapter 2, site 28: p. 34)

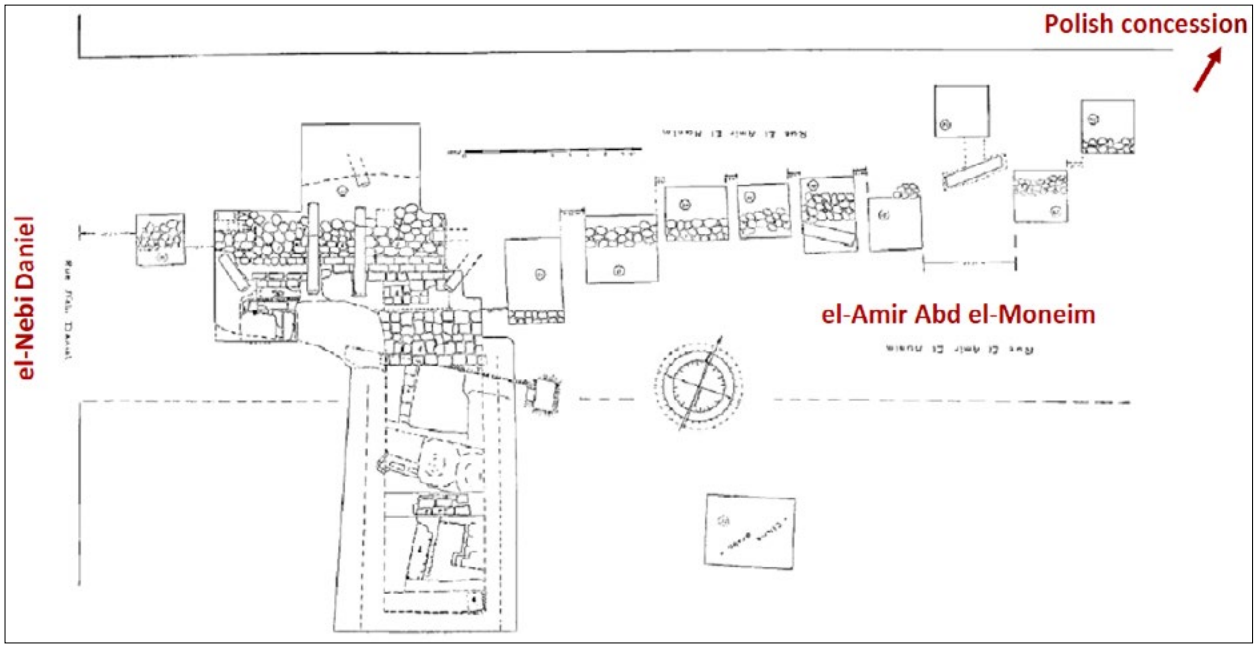


Figure 121. Excavations at el-Amir Abd el-Moneim (Ismaïl Mahanna) Street, Kom el-Dikka. Plan. Adriani 1940: 58, Figure 27. Labels added by author. (Chapter 2, site 31: p. 35)

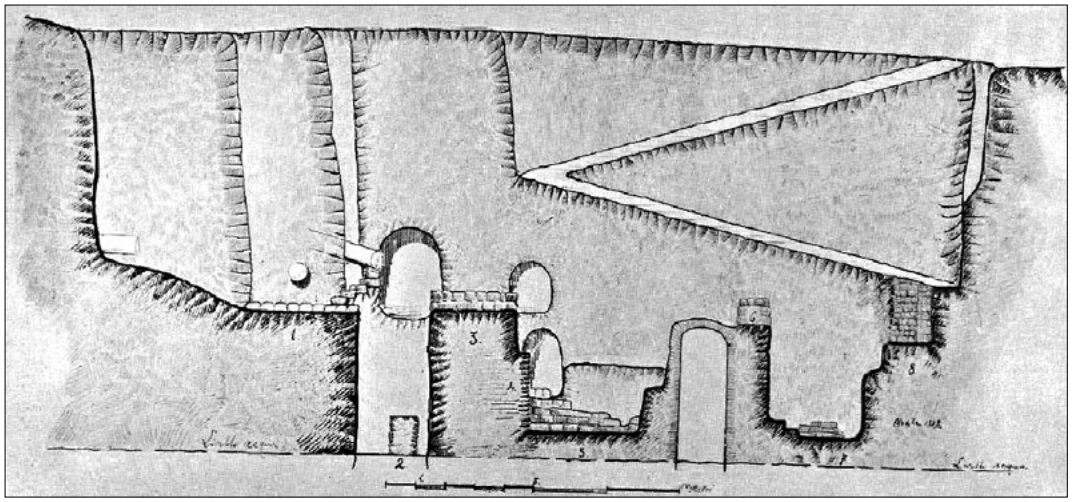


Figure 122. Excavations at el-Amir Abd el-Moneim (Ismaïl Mahanna) Street, Kom el-Dikka. Sectional view. Adriani 1940: Planche XXVI. (Chapter 2, site 31: p. 35)



Figure 123. Street R8 as a δρόμος to the Sarapeion, extending between two intermediate thoroughfares. AutoCAD map (V2). Extract. Author © 2019. (Chapter 2, section 2.2.3: p. 40)

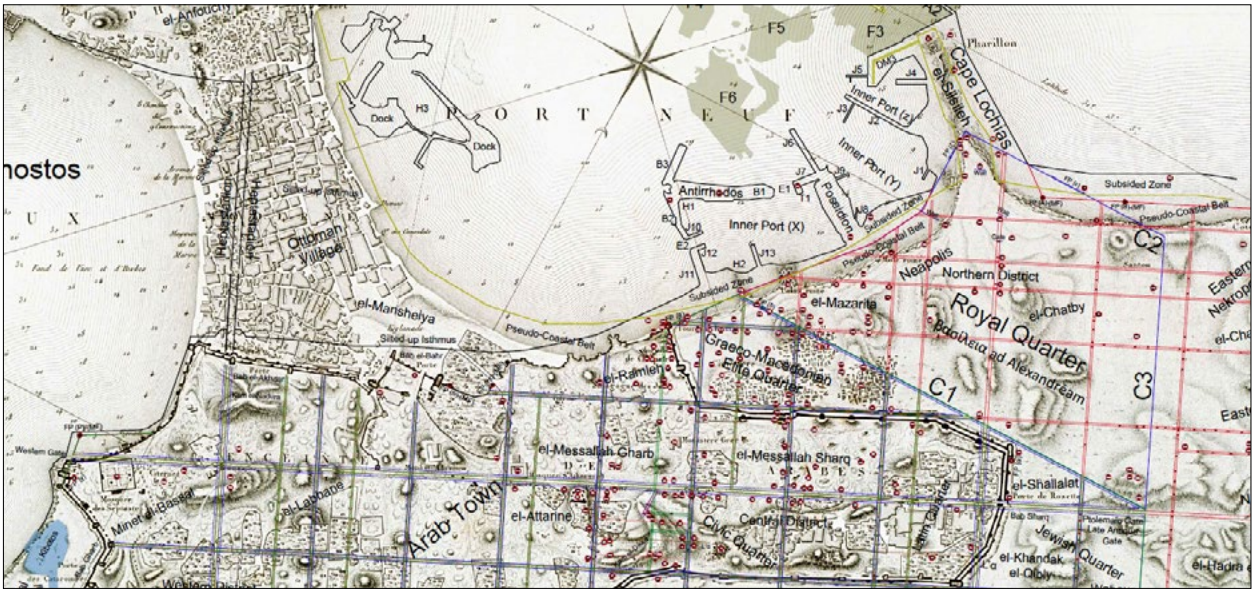


Figure 124. Waterfront of ancient Alexandria (black line) relative to the 1798-99 post-mediaeval setting (base map) and modern setting (yellow line). AutoCAD map (V4). Extract. Author © 2019. (Chapter 2, section 2.3.1: p. 42)



Figure 125. Construction of the Corniche, c. 1906.
Haag 2008: 26, Figure a. (Chapter 2, section 2.3.1: p. 44)



Figure 126. The standing Heliopolis obelisk on the 19th-century seashore, c. 1860s.
Haag 2008: 27. (Chapter 2, section 2.3.1: p. 44)

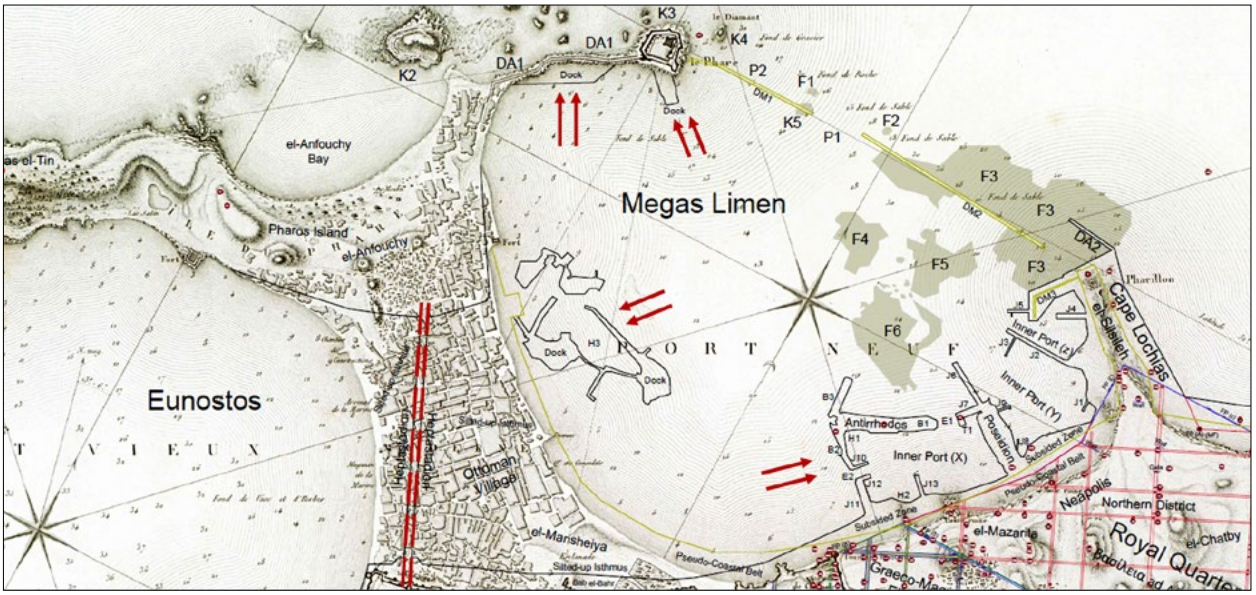


Figure 127. Relative location of dockyards and detected harbour amenities to the Heptastadion.
AutoCAD map (V4). Extract. Author © 2019. (Chapter 2, section 2.3.2: p. 44)

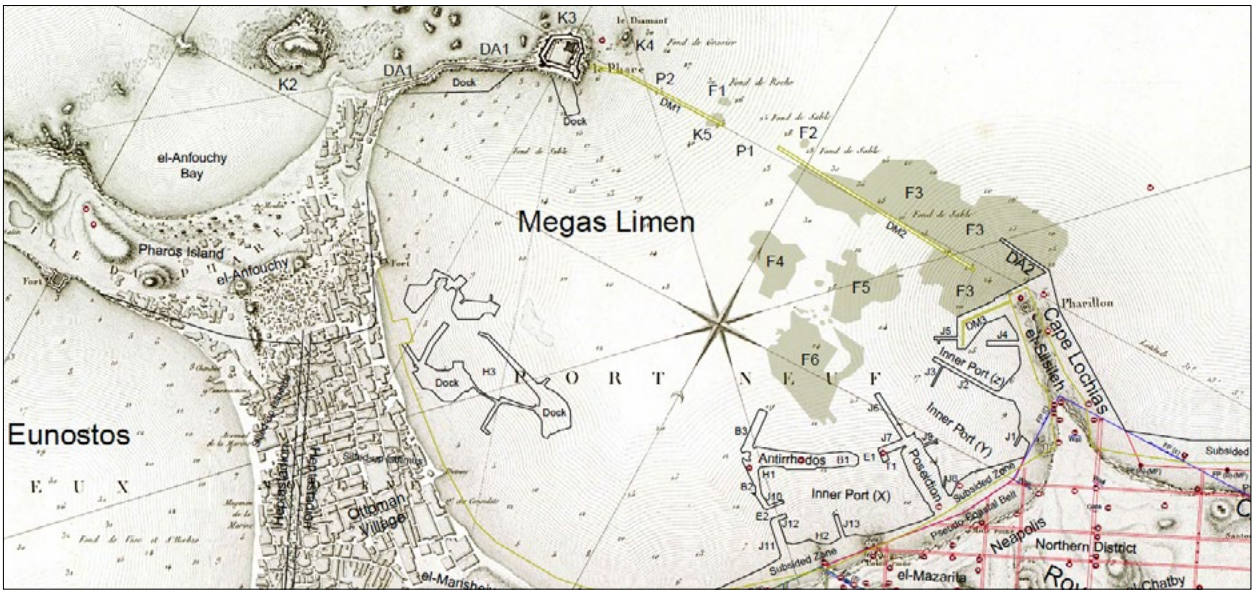


Figure 128. Great Harbour of ancient Alexandria. AutoCAD map (V4).
Extract. Author © 2019. (Chapter 2, section 2.3.3: p. 44)



Figure 129. Submerged harbour infrastructure north and northwest of Pharos.
Jondet 1916: Tome IX, Planche IV. (Chapter 2, section 2.3.4: p. 49)



Figure 130. Submerged harbour infrastructure northwest of Pharos; detailed view.
Jondet 1916: Tome IX, Planche IV. Extract. (Chapter 2, section 2.3.4: p. 49)

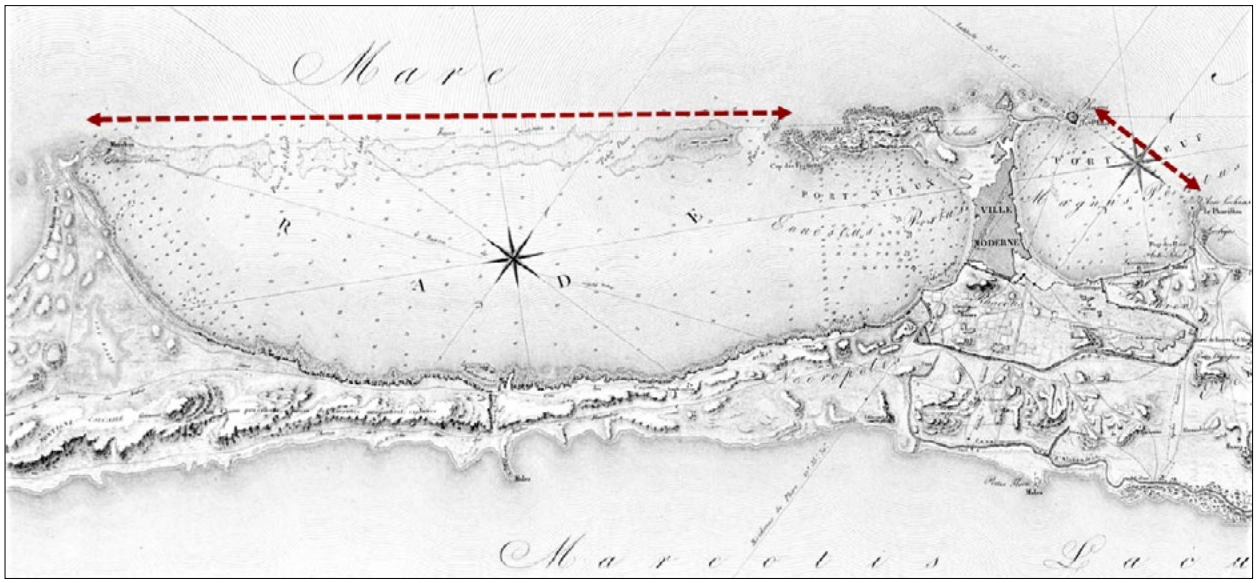


Figure 131. Line of shoals extending E-W, from el-Silsileh to el-Agamy, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31, 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'. Extract. Labels added by author. (Chapter 2, section 2.3.4: p. 49)



Figure 132. Remnants of Mareotic lake-ports detected within the main basin, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31, 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 50)

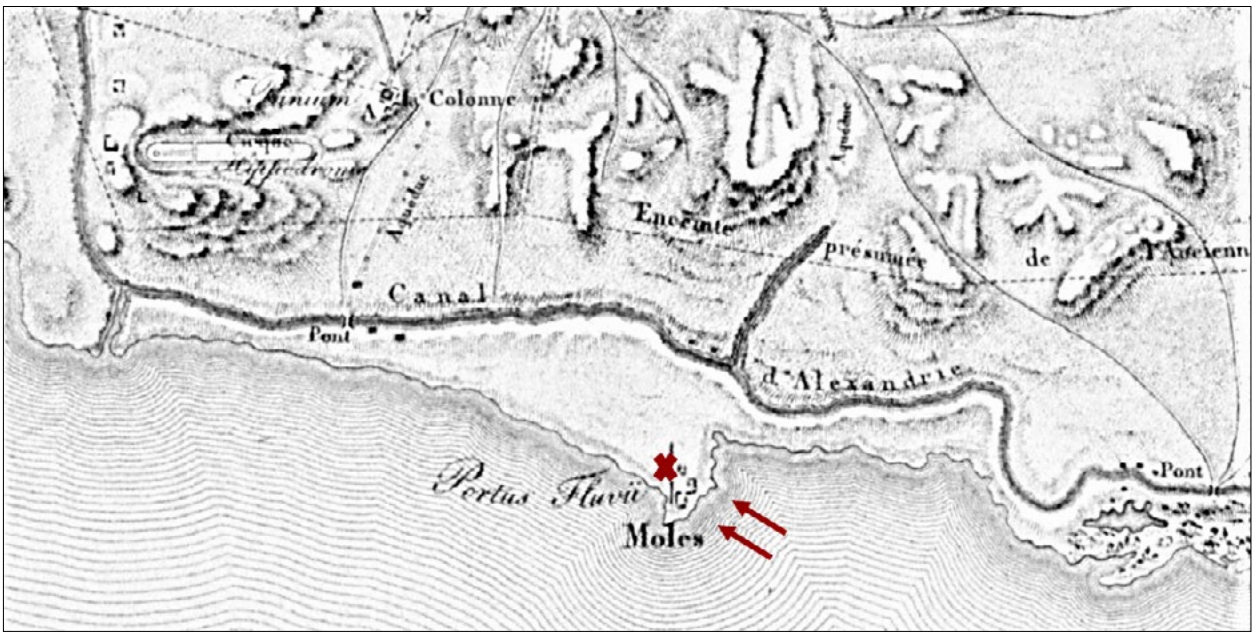


Figure 133. Remnants of a Mareotic lake-port south of Alexandria, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31, 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'. Extract. Labels added by author. (Chapter 2, Section 2.3.5: p. 50)



Figure 134. Remnants of a Mareotic lake-port south of el-Max, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31, 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 50)

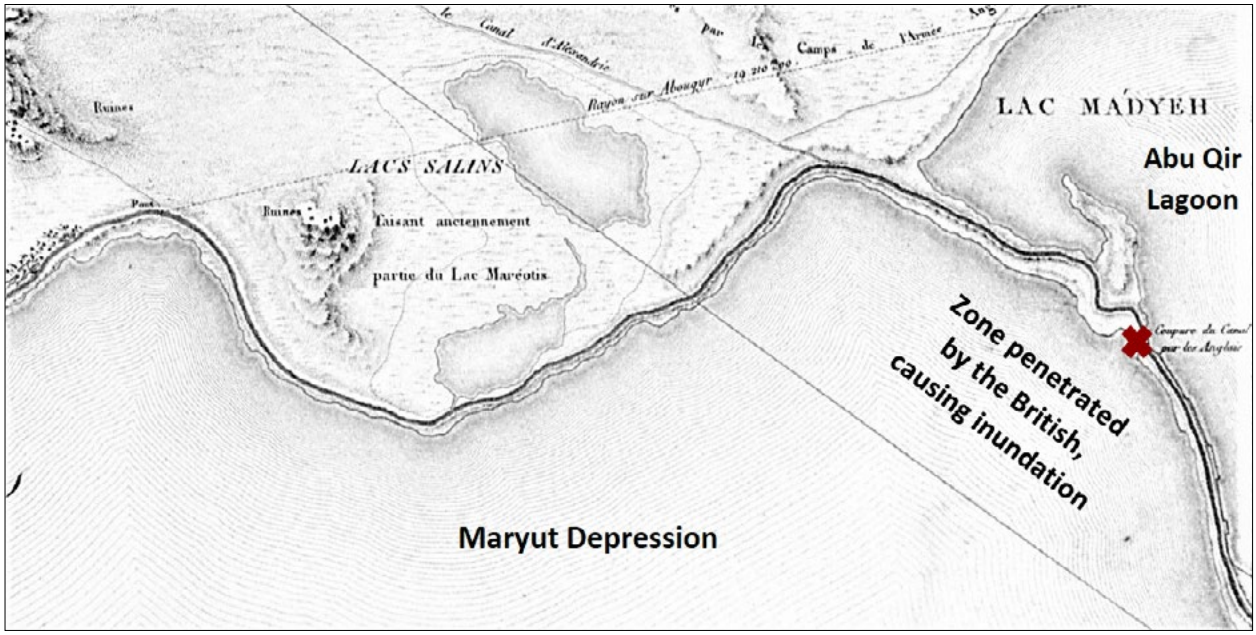


Figure 135. Dyke separating the Maryut Depression from Abu Qir aka el-Maadiya Lagoon, c. 1801. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31, 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 50)

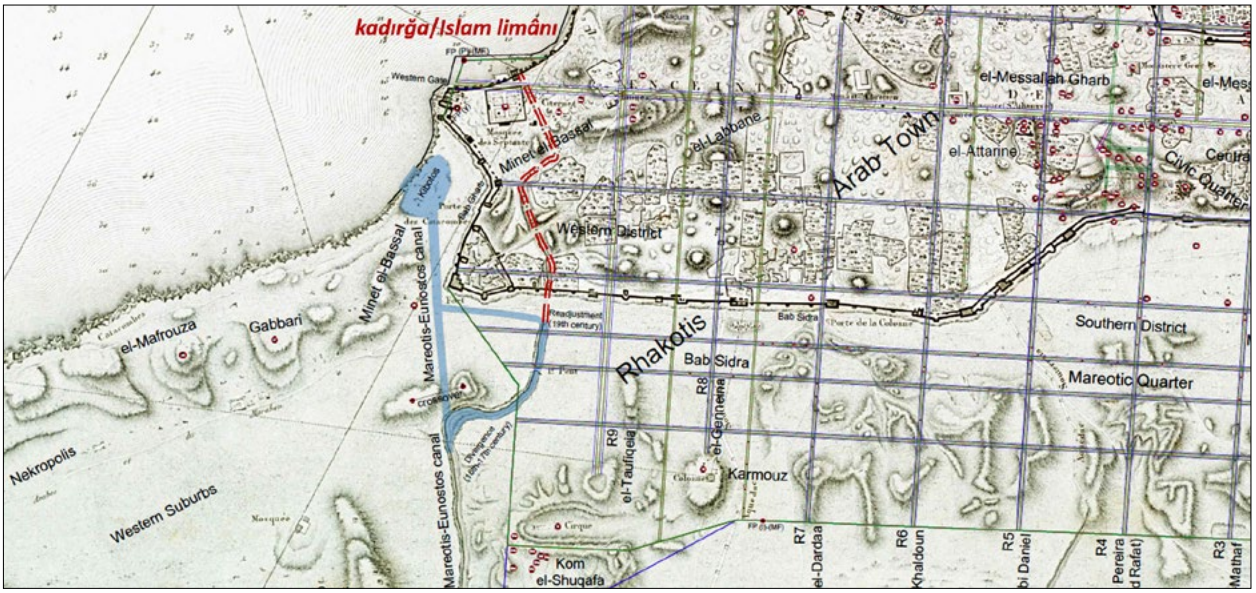


Figure 136. Prolongation of the canal towards the westernmost sector of the Arab town, whence a subterranean aqueduct extends to the amenities of the Ottoman-controlled western port (*kadırğa/Islam limânı*), c. the 16th-17th century. *Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84, 'Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes'. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 61)



Figure 137. Course of el-Mahmoudiya Canal at Minet el-Bassal, Alexandria. Satellite image. Google Earth © 2018. Labels added by author. (Chapter 2, section 2.3.5: p. 51)

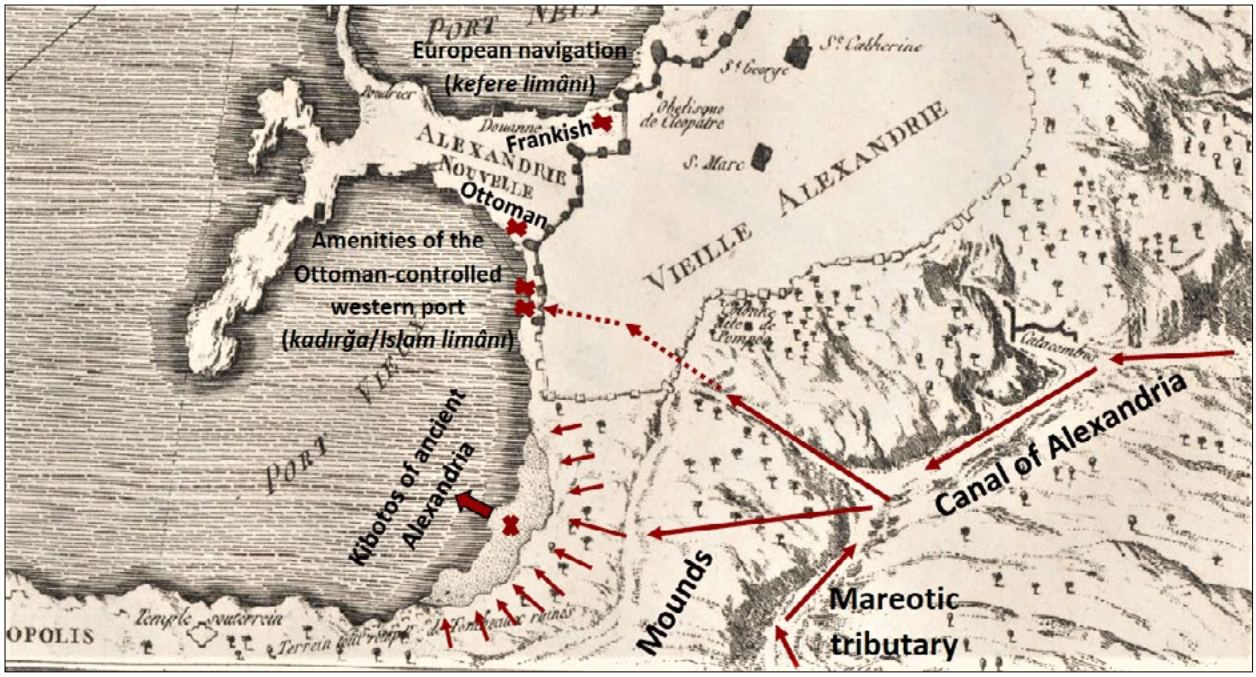


Figure 138. Possible location of the Kibotos basin of ancient Alexandria. Norden 1795: Planche I. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 51)

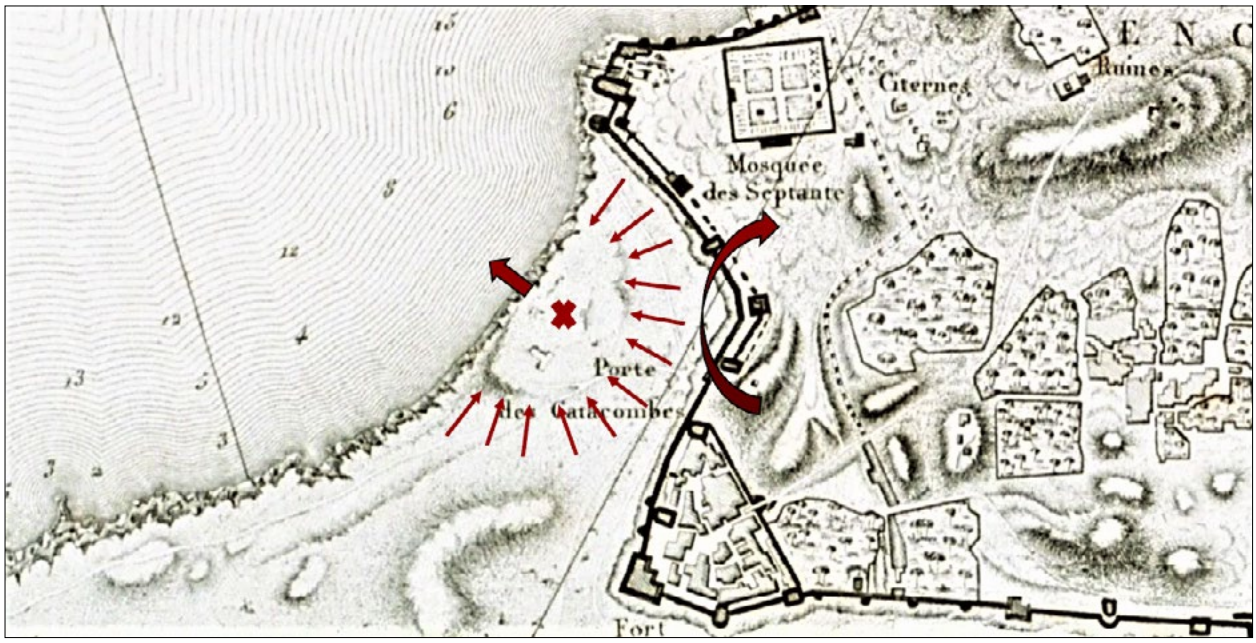


Figure 139. Depression at the proposed location of the Kibotos basin. *Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84, 'Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes'. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 51)



Figure 140. Canal divergence from (c. 16th-17th century) and readjustment to (early 19th century) its possible course in antiquity. *Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84, 'Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes'. Extract. Labels added by author. (Chapter 2, section 2.3.5: p. 51)

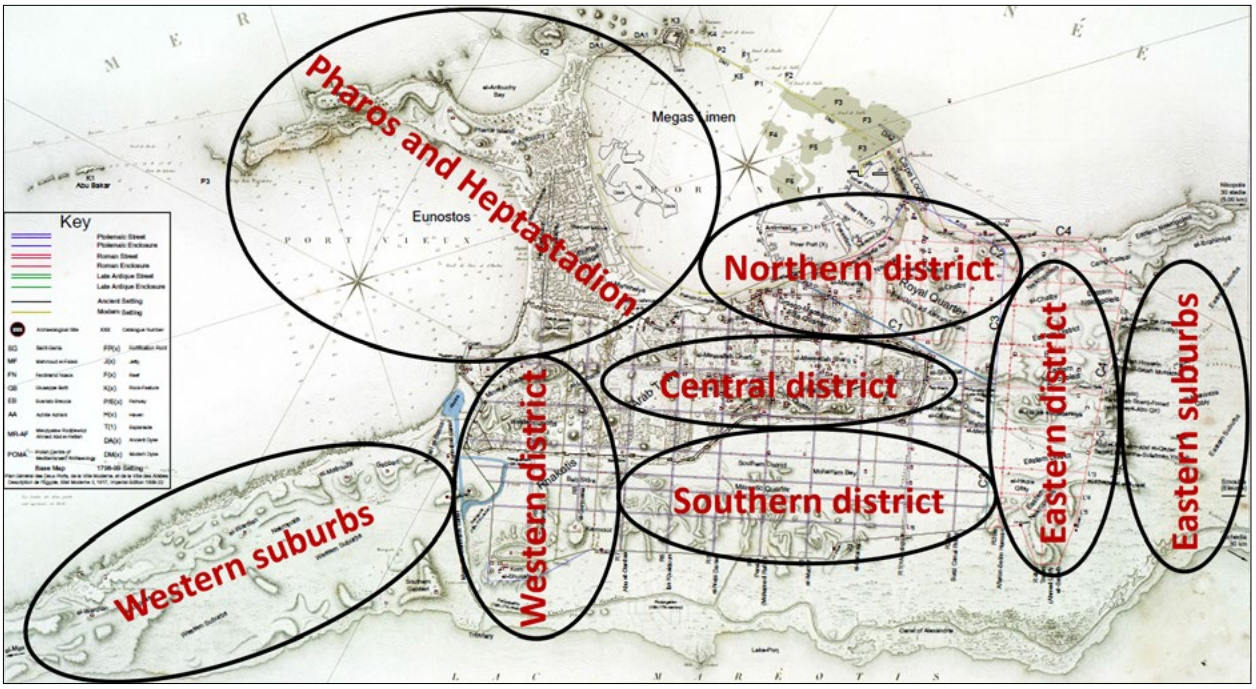


Figure 141. Segmenting the cityscape into predetermined urban and suburban sectors. AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, section 3.1: p. 52)

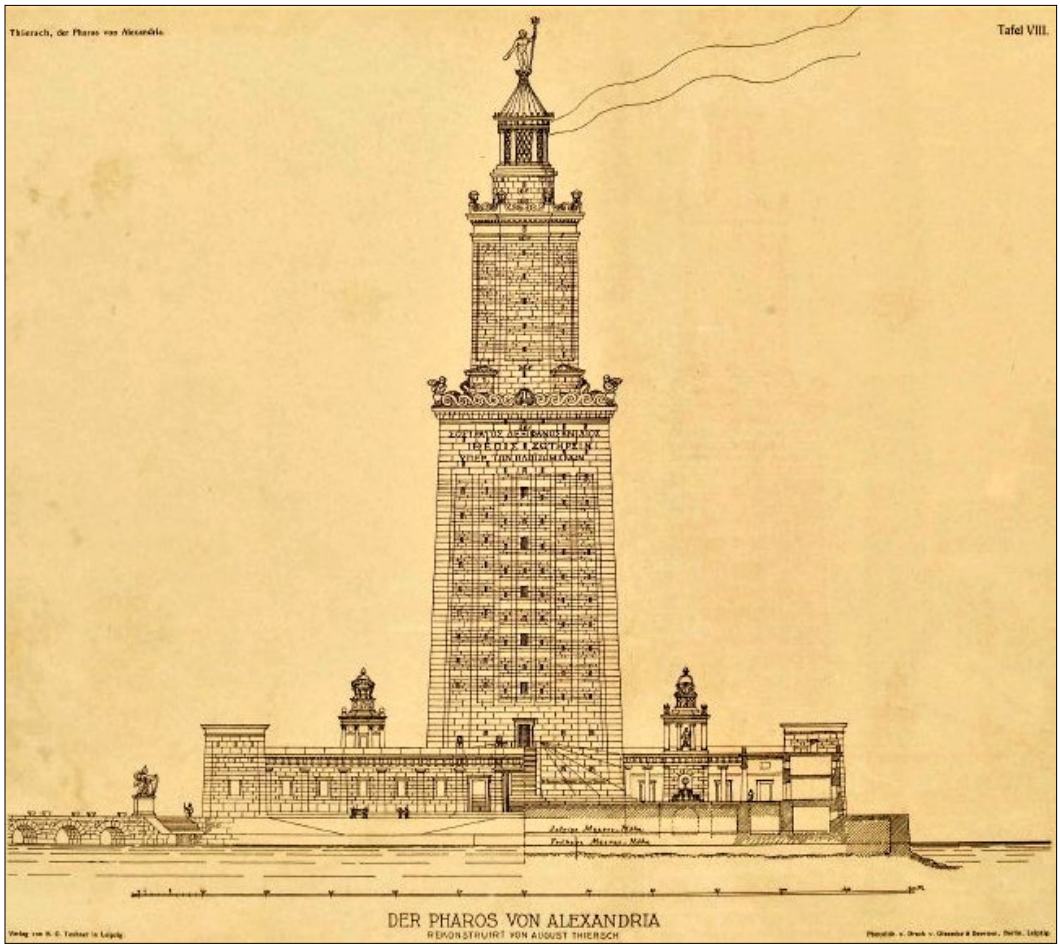


Figure 142. Pharos Lighthouse of Alexandria; reconstruction by Hermann and August Thiersch. Thiersch 1909: Tafel VIII. (Chapter 3, site 43: p. 53)

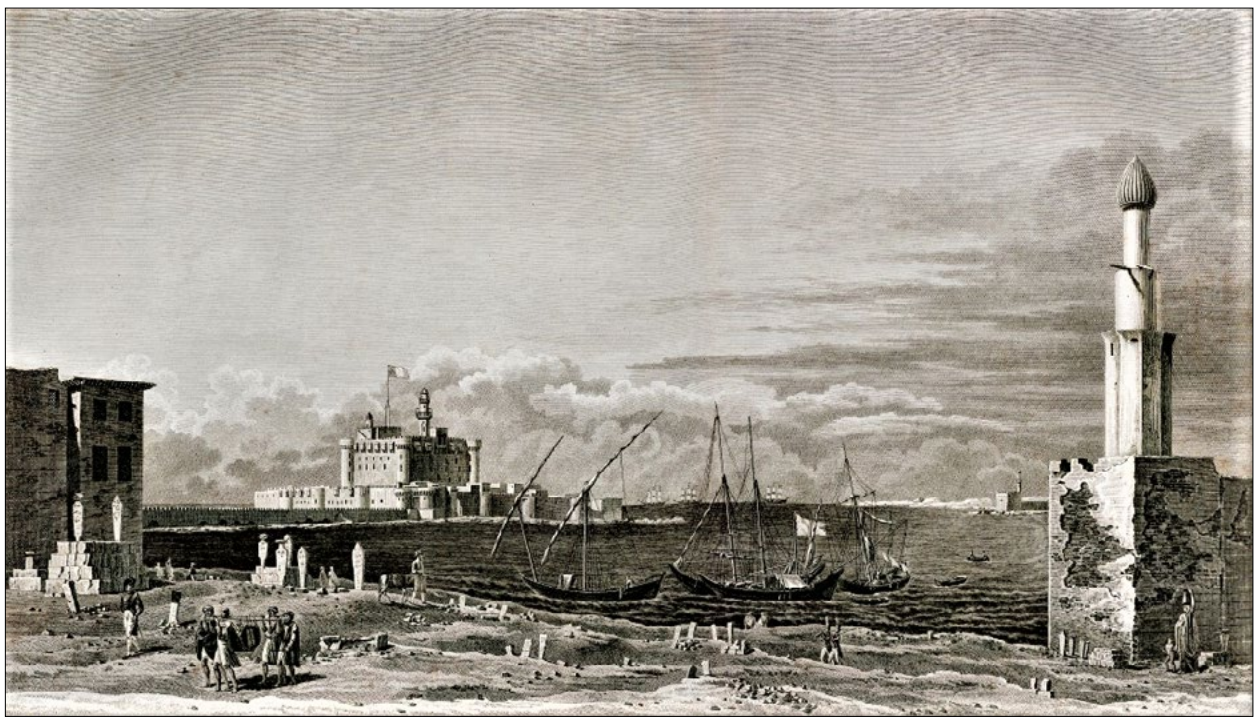


Figure 143. Fort Qaitbay. View from the Ottoman village (el-Anfushy), c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 85. (Chapter 3, site 43: p. 54)

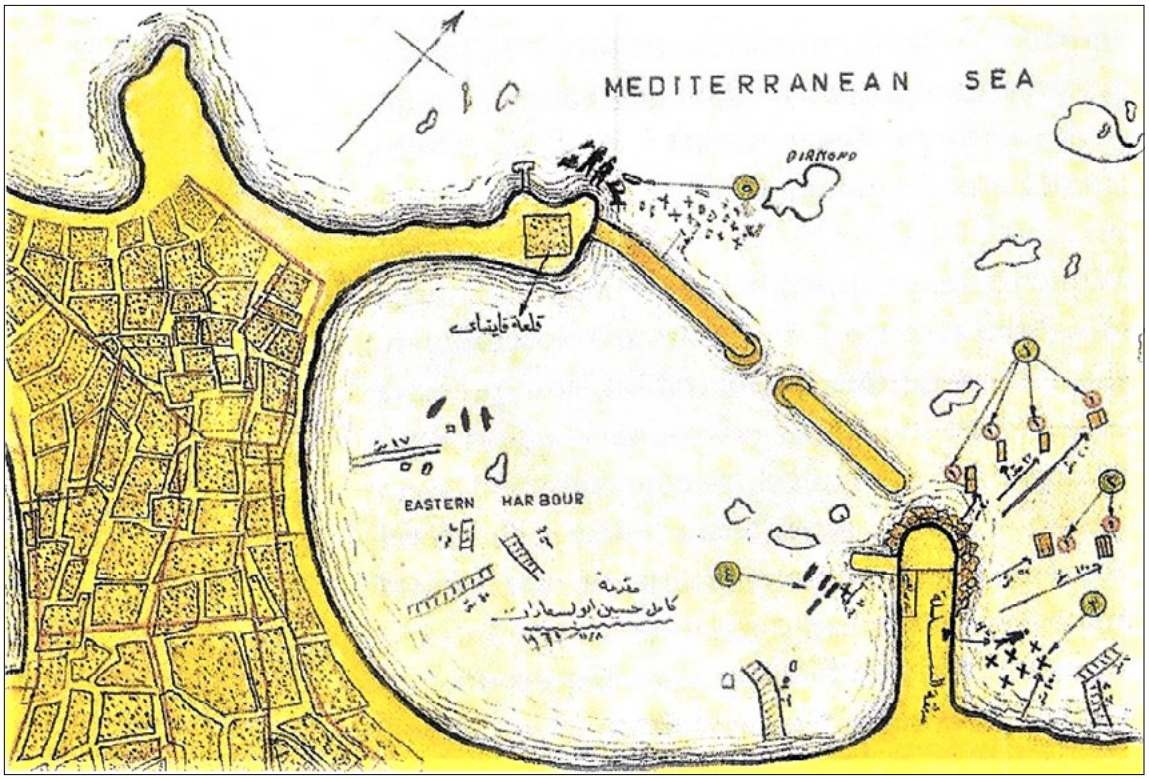


Figure 144. Map showing Abul-Saadat's encounters in the eastern harbour during the early 1960s; after K. Abul-Saadat. Mostafa, Grimal, and Nakashima 2000: Plate 4. (Chapter 3, site 43: p. 55)

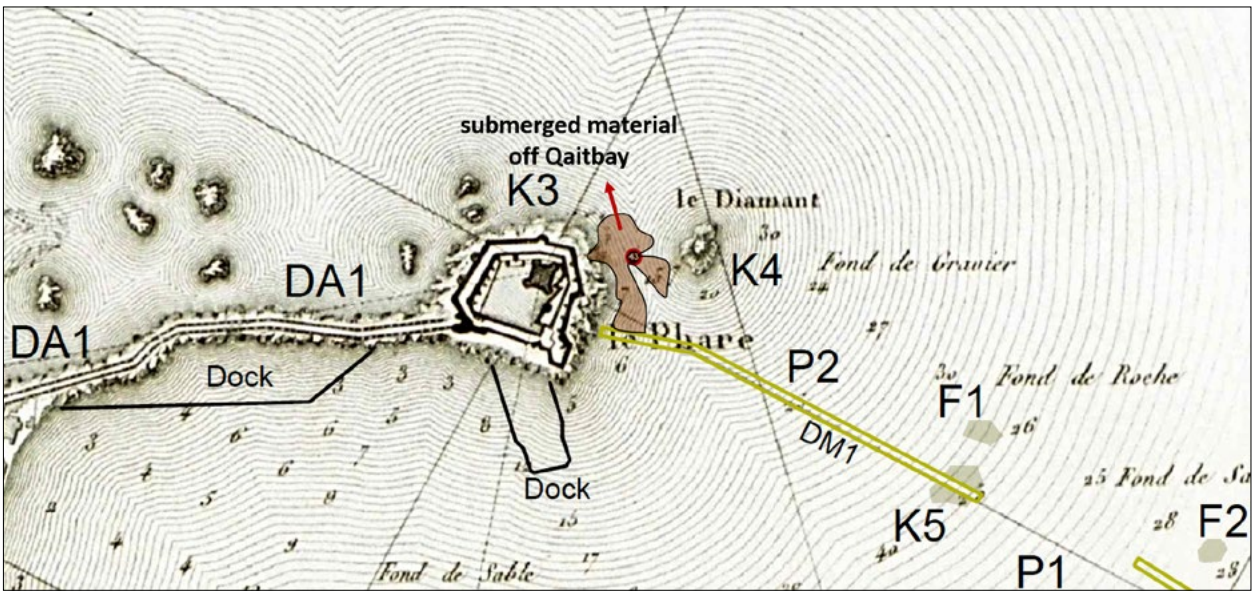


Figure 145. Marked zone with submerged fragmentary architecture and statuary off Fort Qaitbay (K3). AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 43: p. 55)

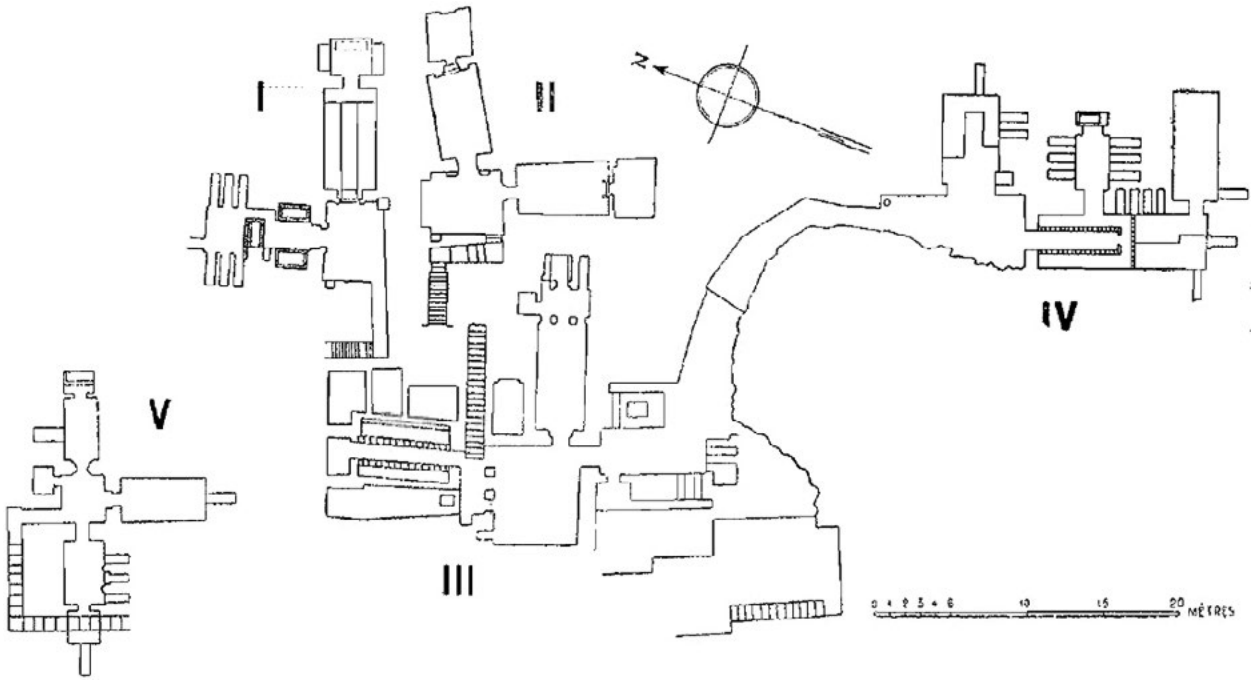


Figure 146. el-Anfushy necropolis. Hypogea (I-V). Plan. Adriani 1952: 55, Figure 28. (Chapter 3, site 44: p. 57)

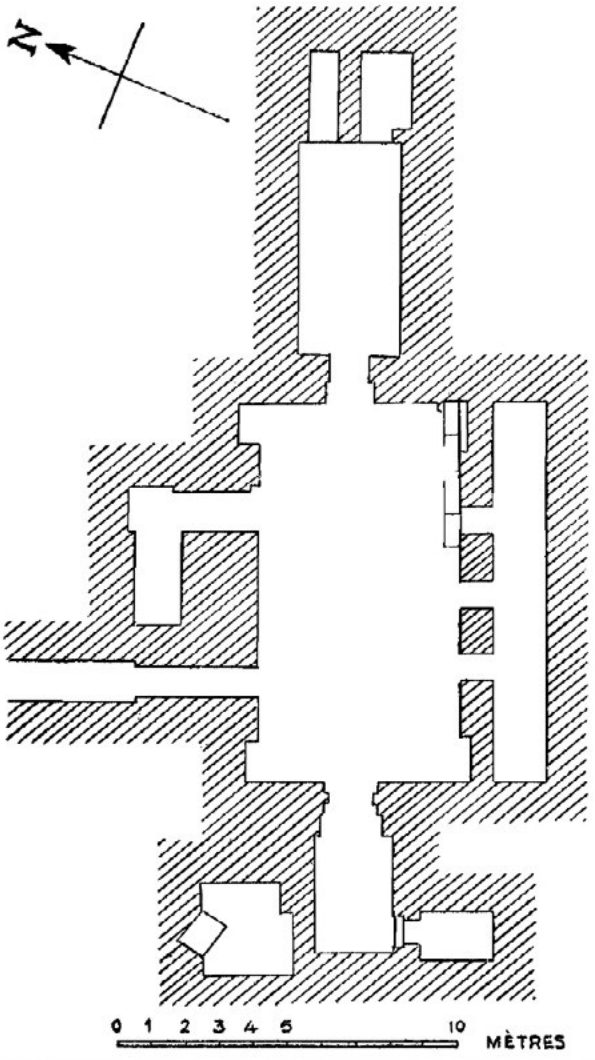


Figure 147. el-Anfushy necropolis. Hypogeum (VI). Plan. Adriani 1952: 96, Figure 56. (Chapter 3, site 44: p. 57)

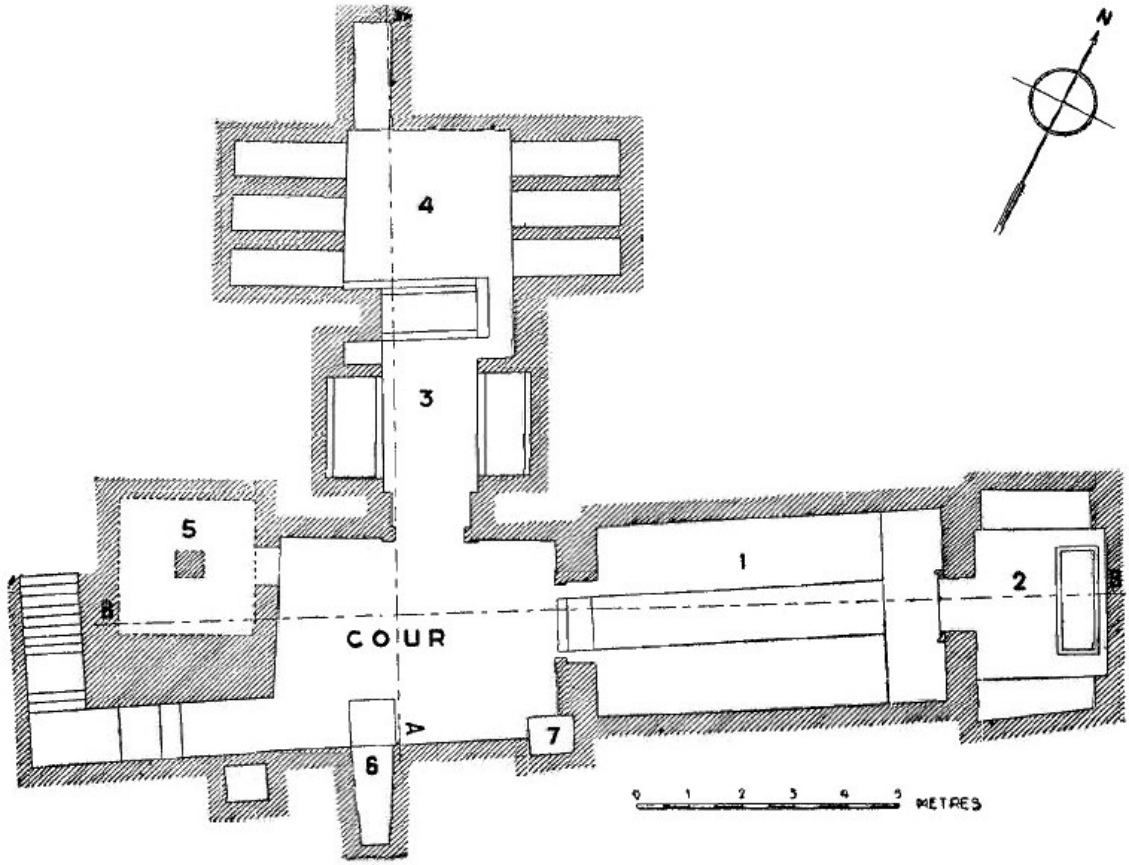


Figure 148. el-Anfushy necropolis. Hypogeum (I). Plan. Adriani 1952: 57, Figure 29. (Chapter 3, site 44: p. 57)

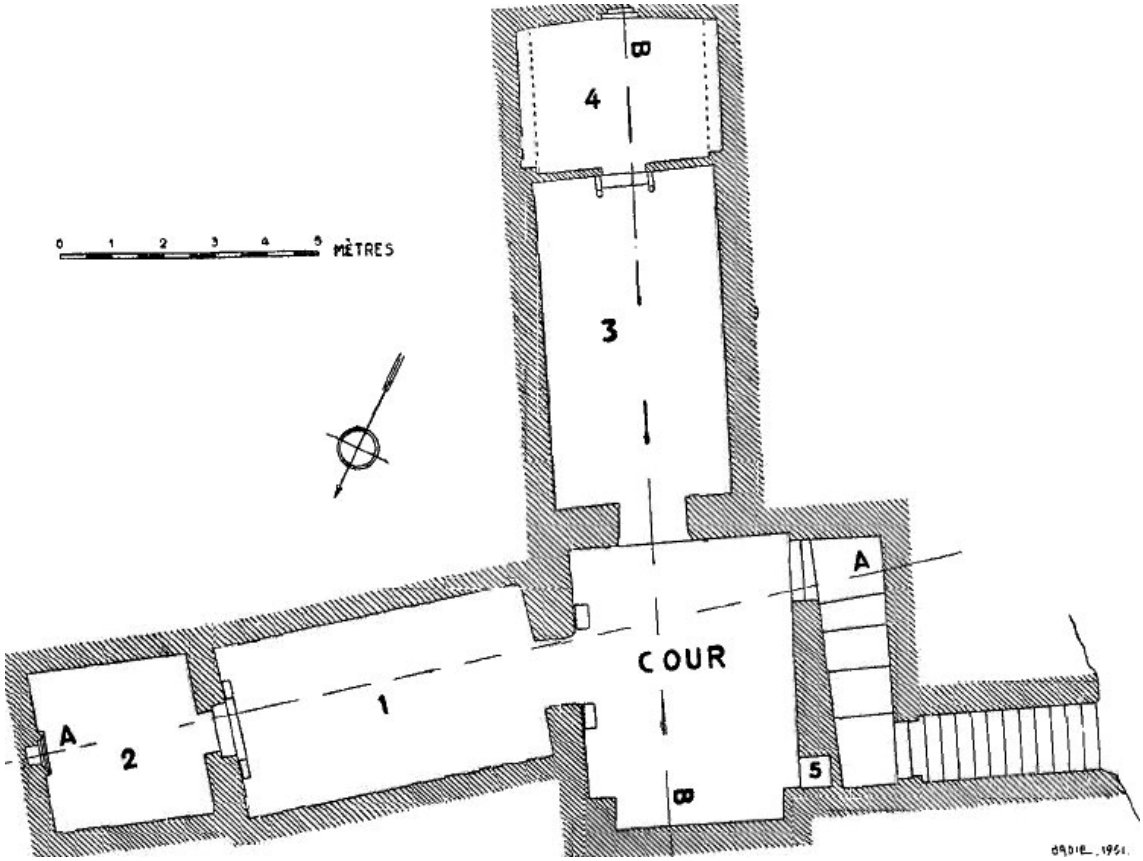


Figure 149. el-Anfushy necropolis. Hypogeum (II). Plan. Adriani 1952: 62, Figure 32. (Chapter 3, site 44: p. 57)

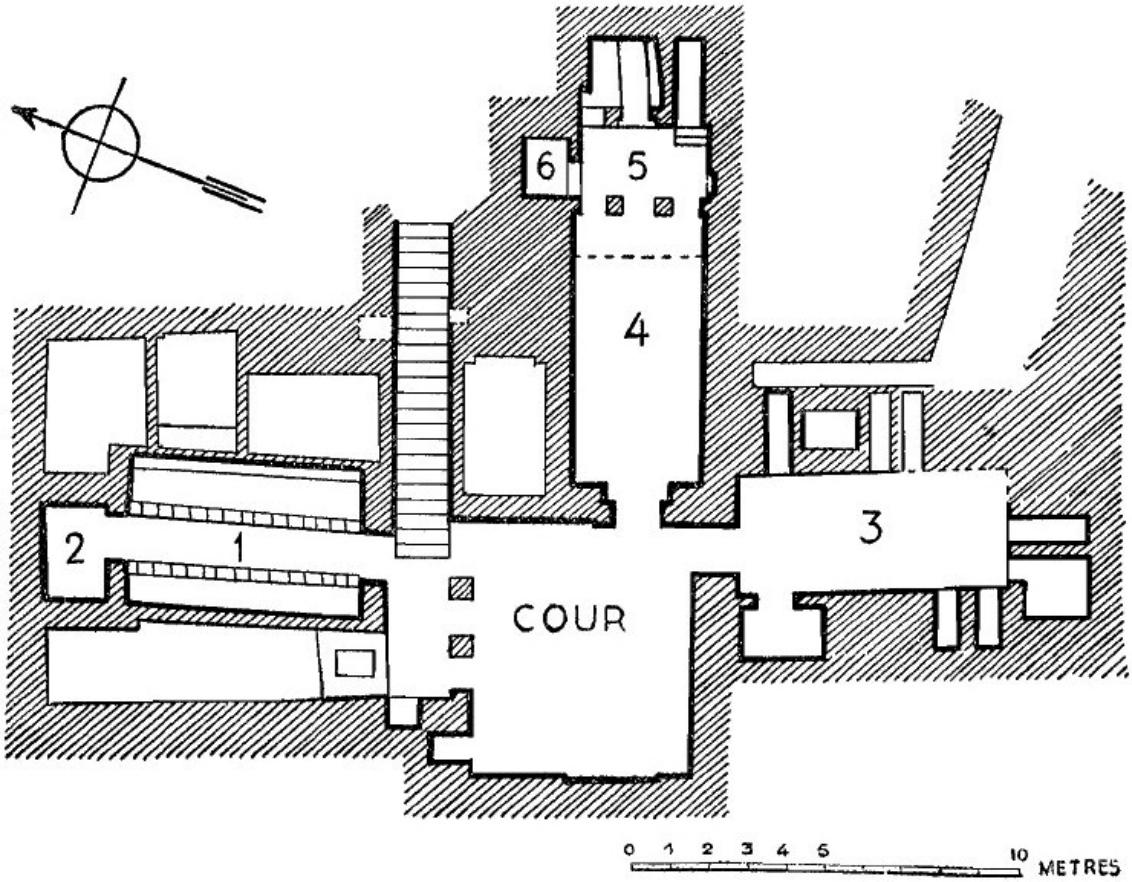


Figure 150. el-Anfushy necropolis. Hypogeum (III). Plan.
Adriani 1952: 80, Figure 45. (Chapter 3, site 44: p. 57)

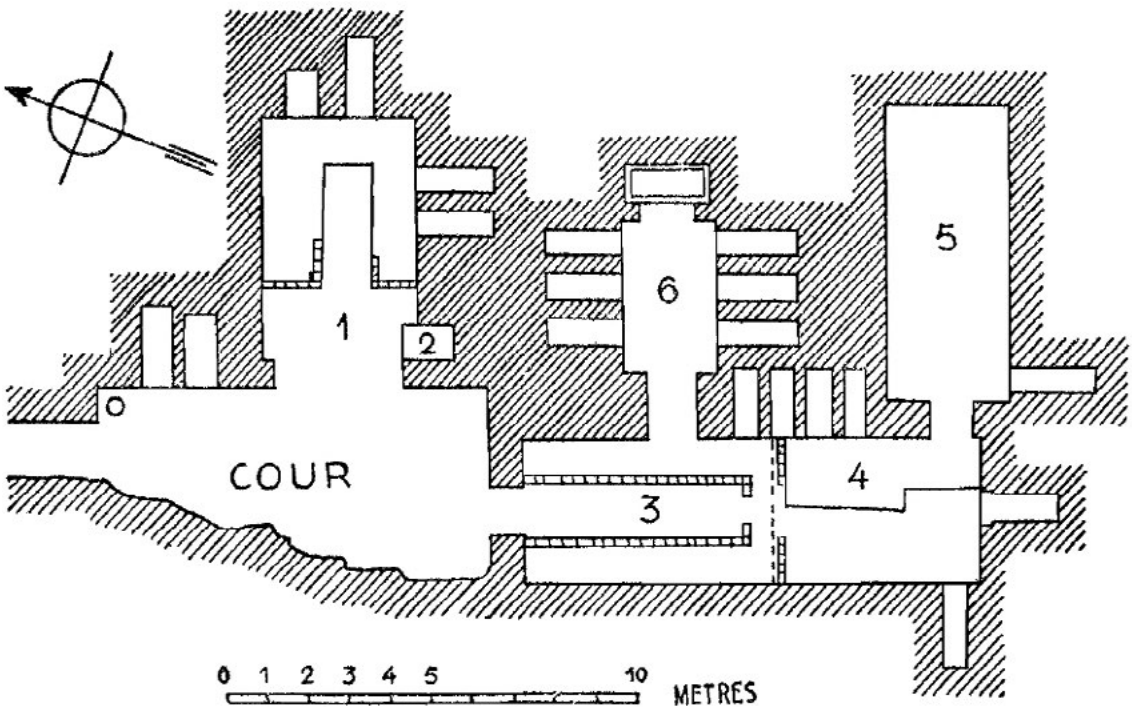


Figure 151. el-Anfushy necropolis. Hypogeum (IV). Plan.
Adriani 1952: 86, Figure 49. (Chapter 3, site 44: p. 57)

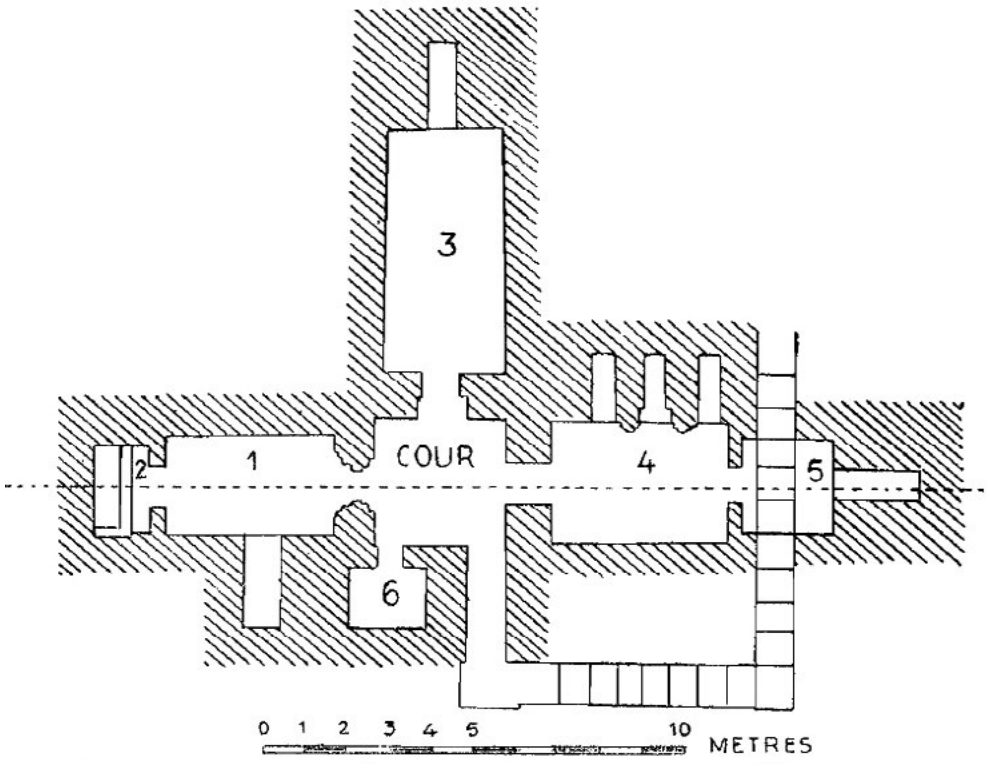


Figure 152. el-Anfushy necropolis. Hypogeum (V). Plan. Adriani 1952: 87, Figure 50. (Chapter 3, site 44: p. 57)

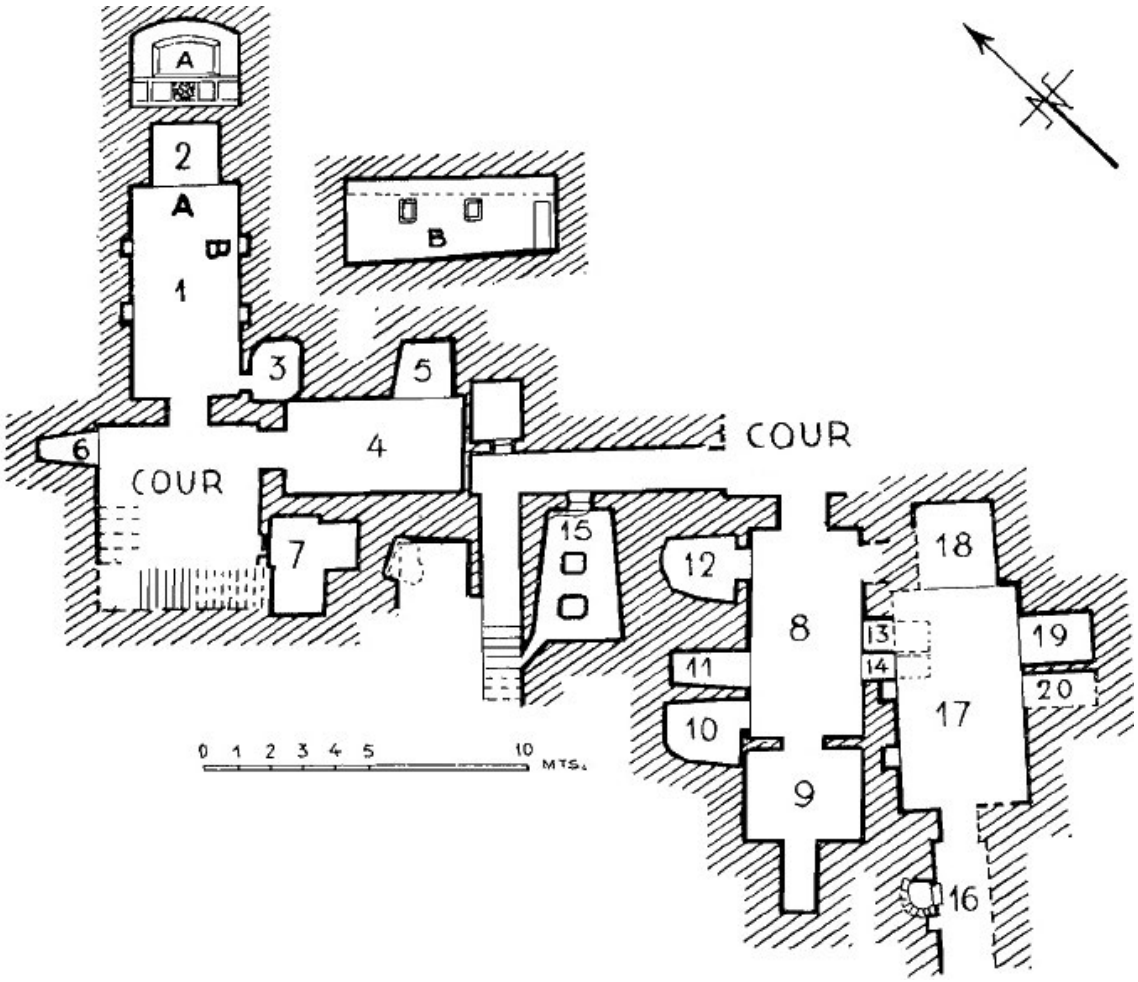


Figure 153. Ras el-Tin necropolis. Hypogea (I-III). Plan. Adriani 1952: Planche XXX, Figure 1. (Chapter 3, site 45: p. 58)

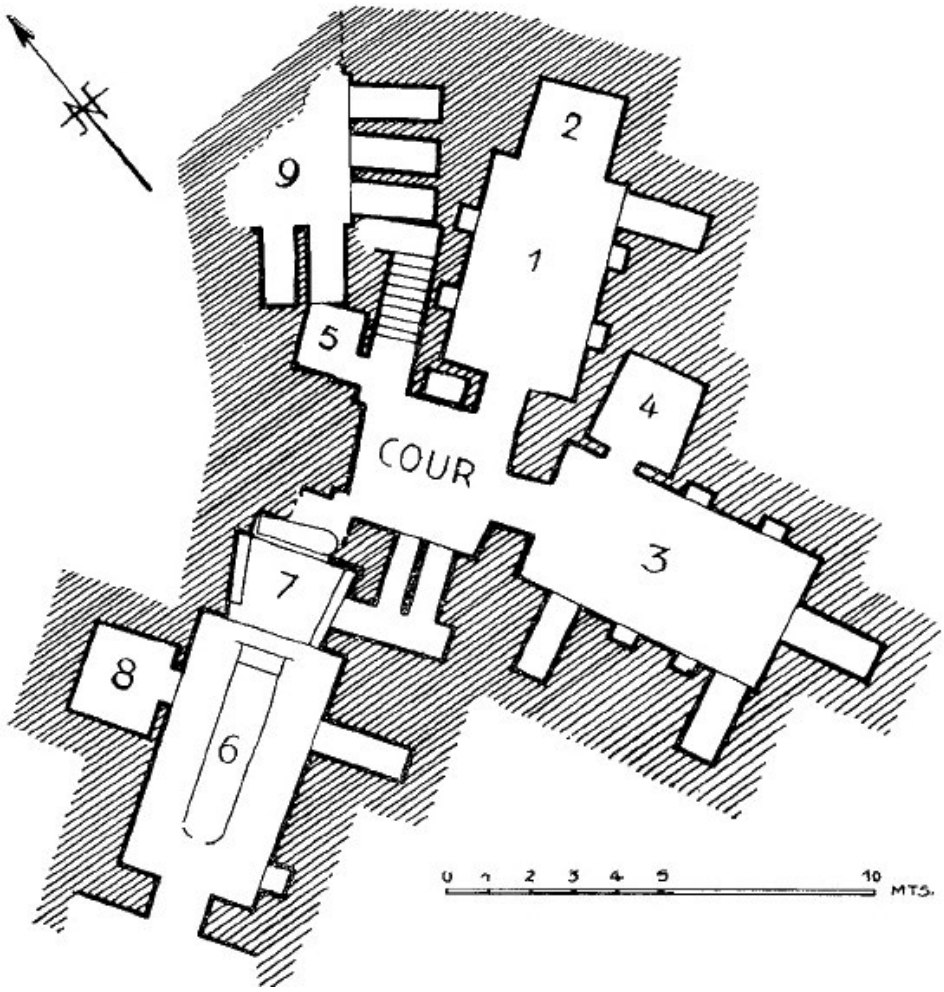


Figure 154. Ras el-Tin necropolis. Hypogea (IV-VI). Plan. Adriani 1952: Planche XXX, Figure 2. (Chapter 3, site 45: p. 58)

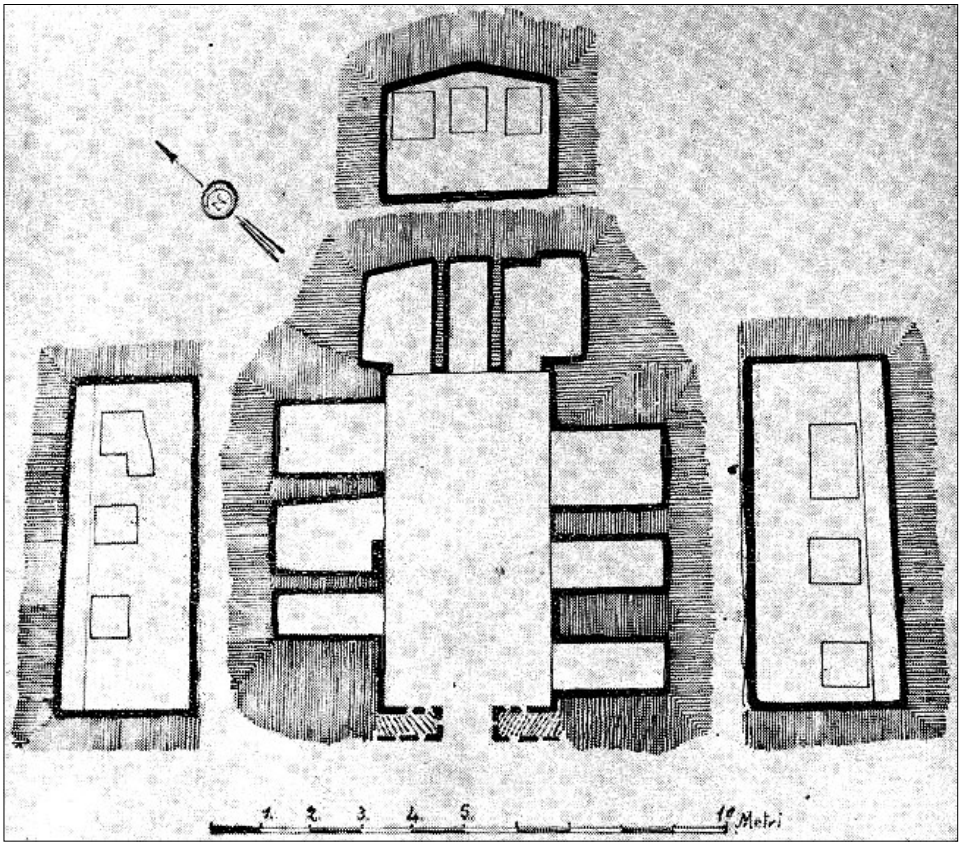


Figure 155. Ras el-Tin necropolis. Hypogeum (VII). Plan. Adriani 1952: Planche XXXI, Figure 1. (Chapter 3, site 45: p. 59)

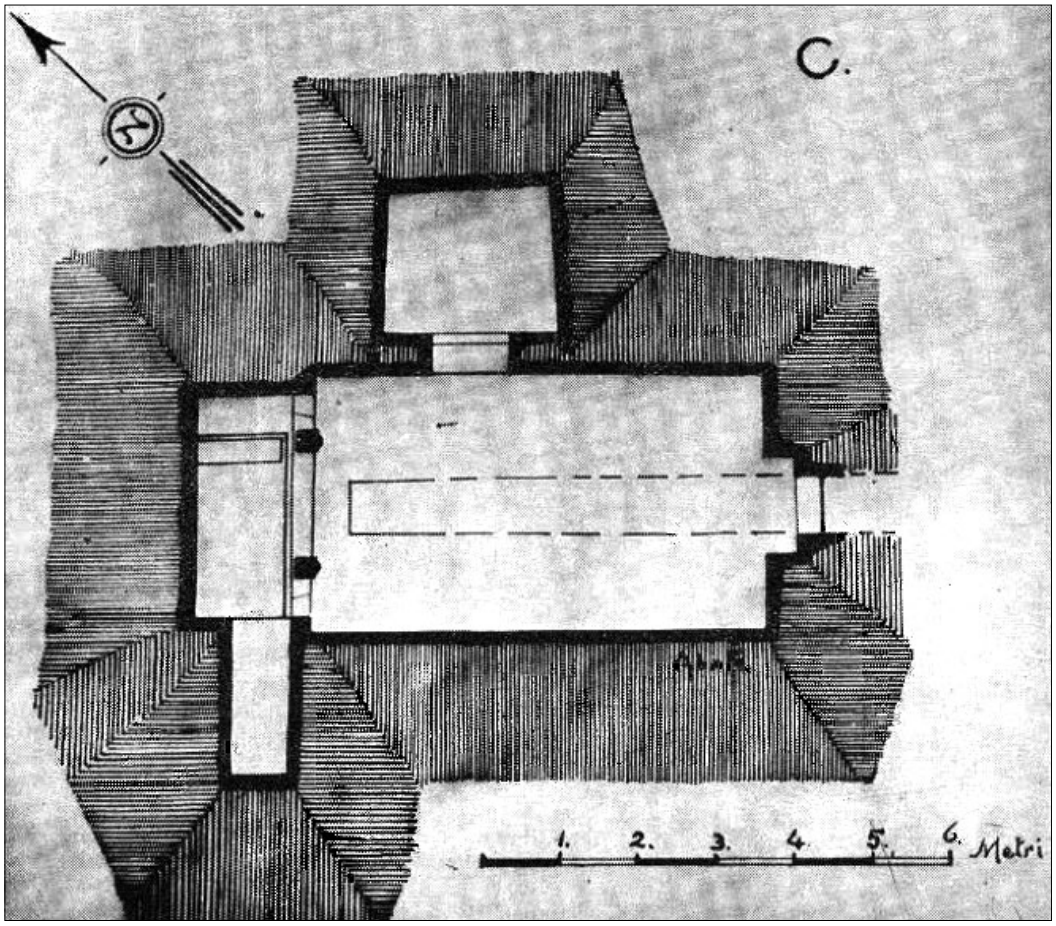


Figure 156. Ras el-Tin necropolis. Hypogeum (VIII). Plan. Adriani 1952: Planche XXXI, Figure 2. (Chapter 3, site 45: p. 59)

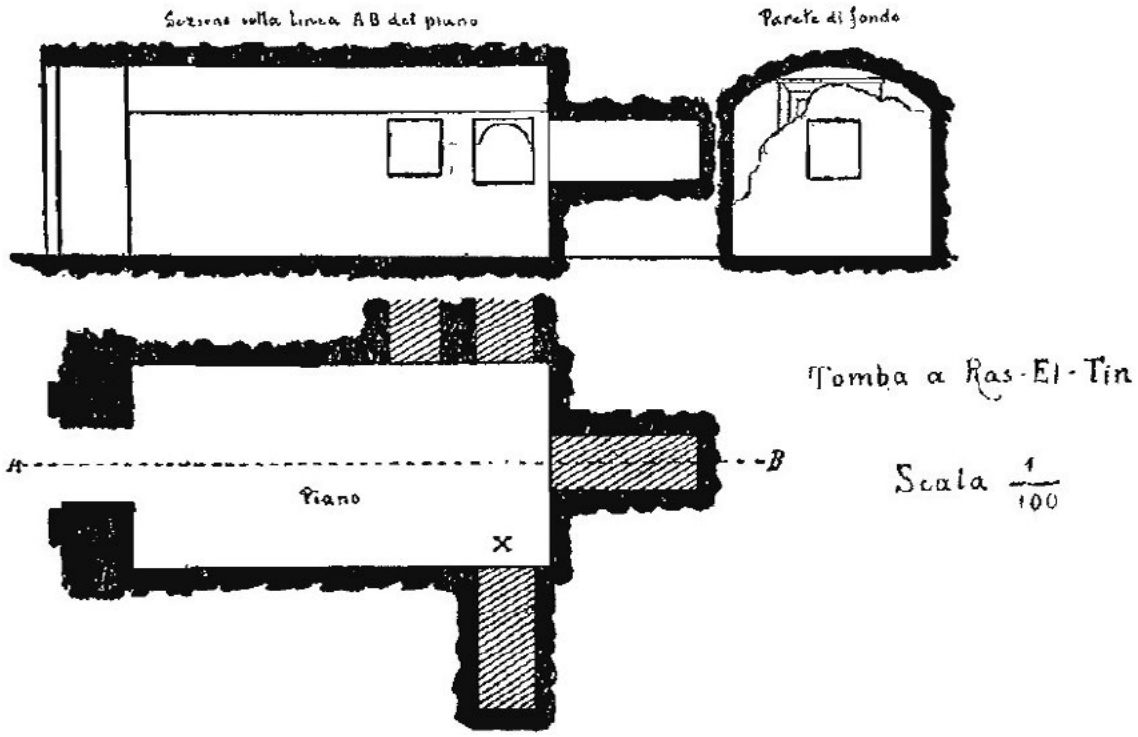


Figure 157. Ras el-Tin necropolis. Hypogeum (IX). Plan and sectional view; after M. Bartocci. Adriani 1952: 52, Figure 25. (Chapter 3, site 45: p. 59)

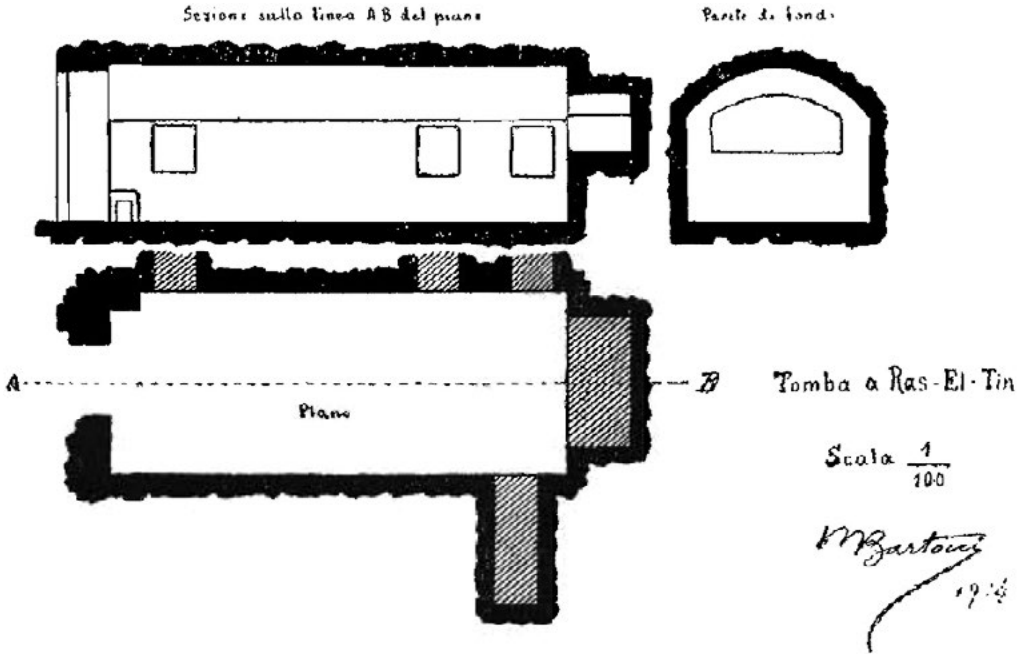


Figure 158. Ras el-Tin necropolis. Hypogeum (X). Plan and sectional view; after M. Bartocci. Adriani 1952: 53, Figure 26. (Chapter 3, site 45: p. 59)

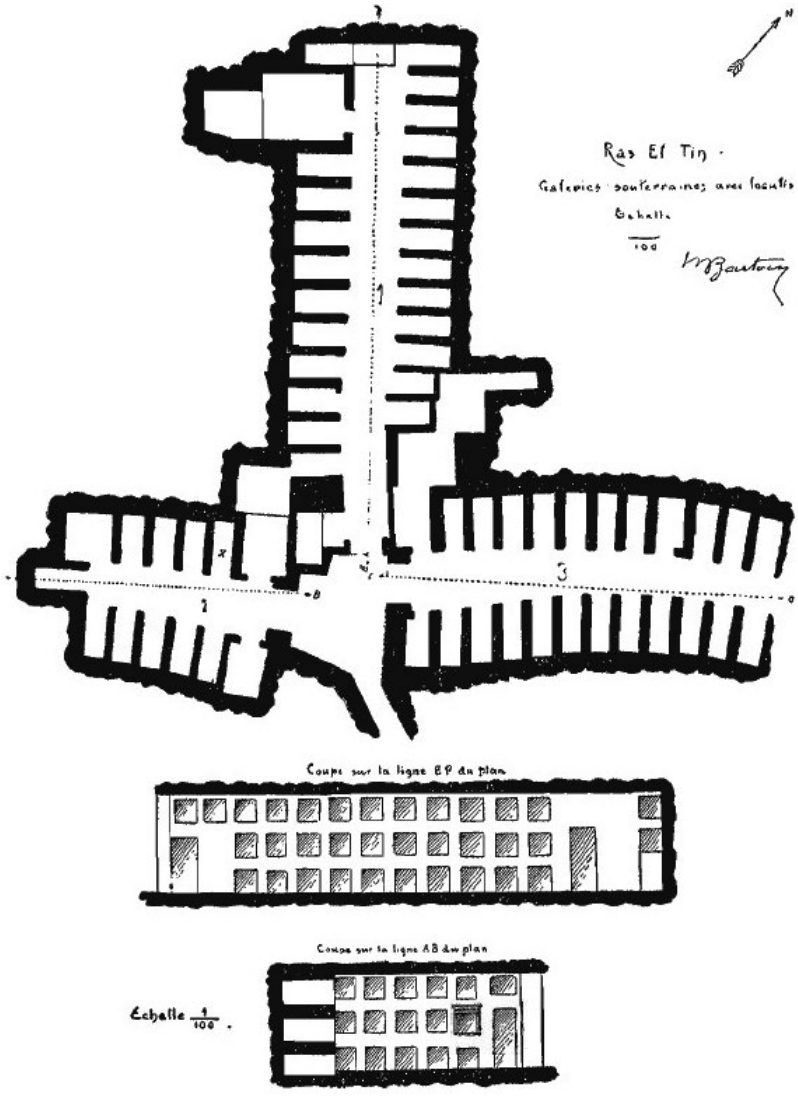


Figure 159. Ras el-Tin necropolis. Hypogeum (XI). Plan and sectional view; after M. Bartocci. Adriani 1952: 54, Figure 27. (Chapter 3, site 45: p. 59)

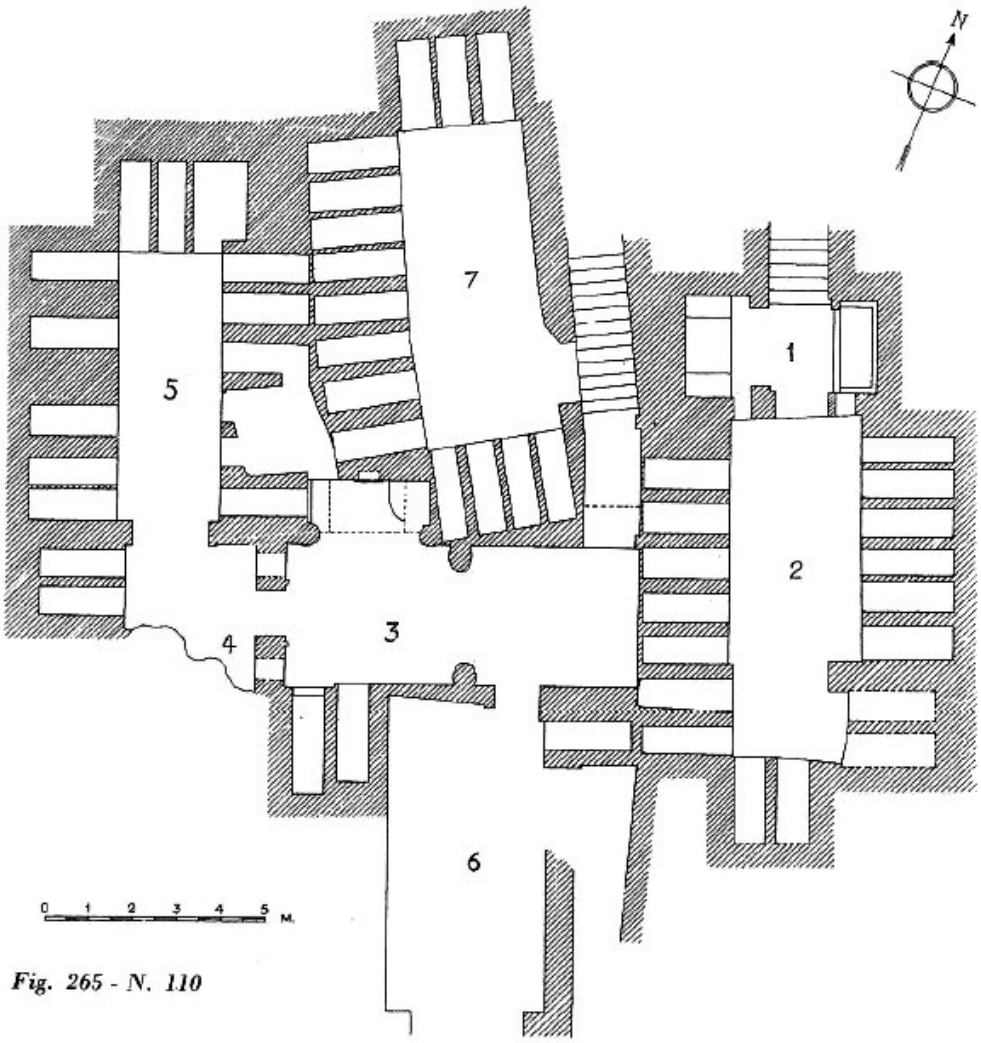


Figure 160. Minet el-Bassal necropolis. Sezione (A). Hypogea (I-III). Plan. Adriani 1956a: 17, Figure 18; 1966b: Catalogue Number 110, Tavola 81, Figure 265. (Chapter 3, site 46: p. 60)

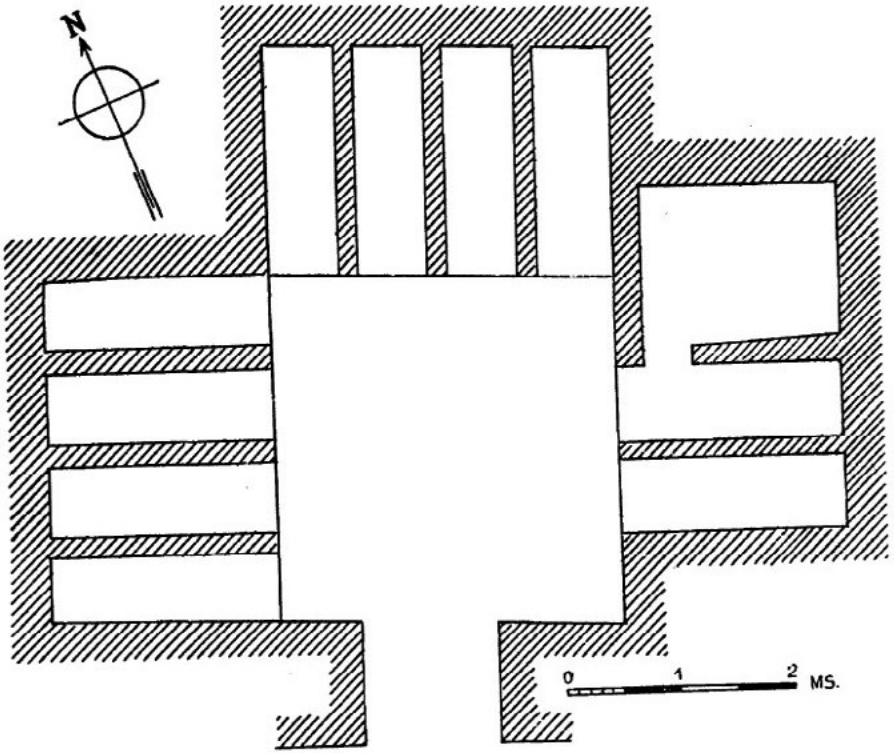


Figure 161. Minet el-Bassal necropolis. Sezione (B). Extant section of a hypogeum. Plan. Adriani 1956a: 26, Figure 28. (Chapter 3, site 46: p. 60)

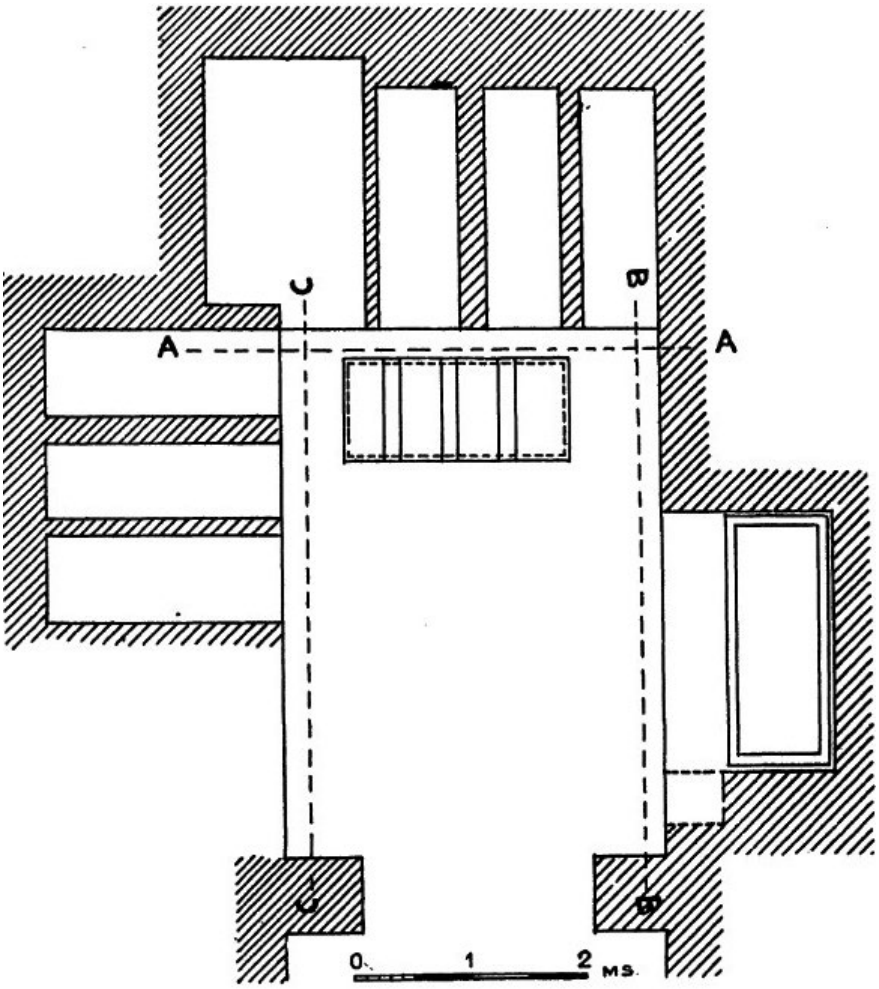


Figure 162. Minet el-Bassal necropolis. Sezione (C). Extant section of a hypogeum. Plan. Adriani 1956a: 29, Figure 30. (Chapter 3, site 46: p. 60)

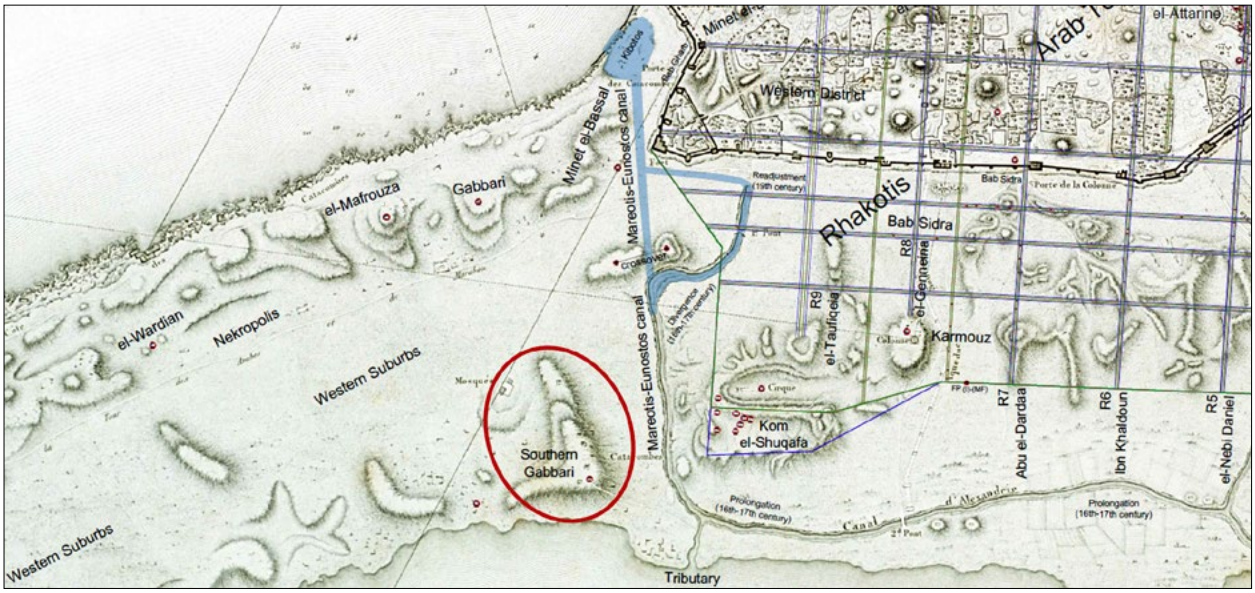


Figure 163. Gabbari necropolis. Southern Gabbari (Gebel el-Zeitoun). Agnew hypogeum. Approximate location. AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 47a: p. 63)

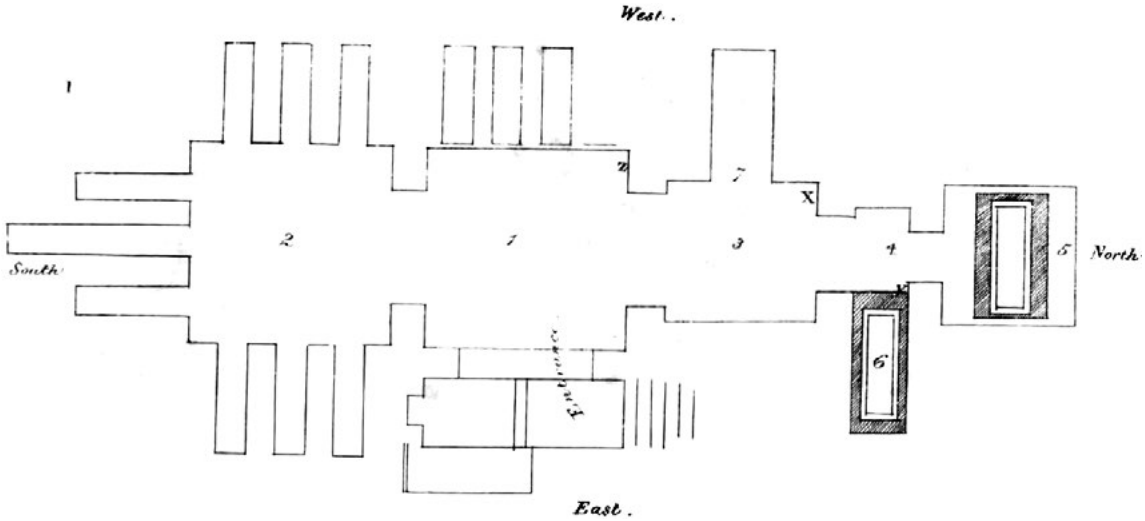


Figure 164. Gabbari necropolis. Southern Gabbari (Gebel el-Zeitoun). Agnew hypogeum. Plan. Agnew 1840: Plate IX, Figure I. (Chapter 3, site 47a: p. 61)

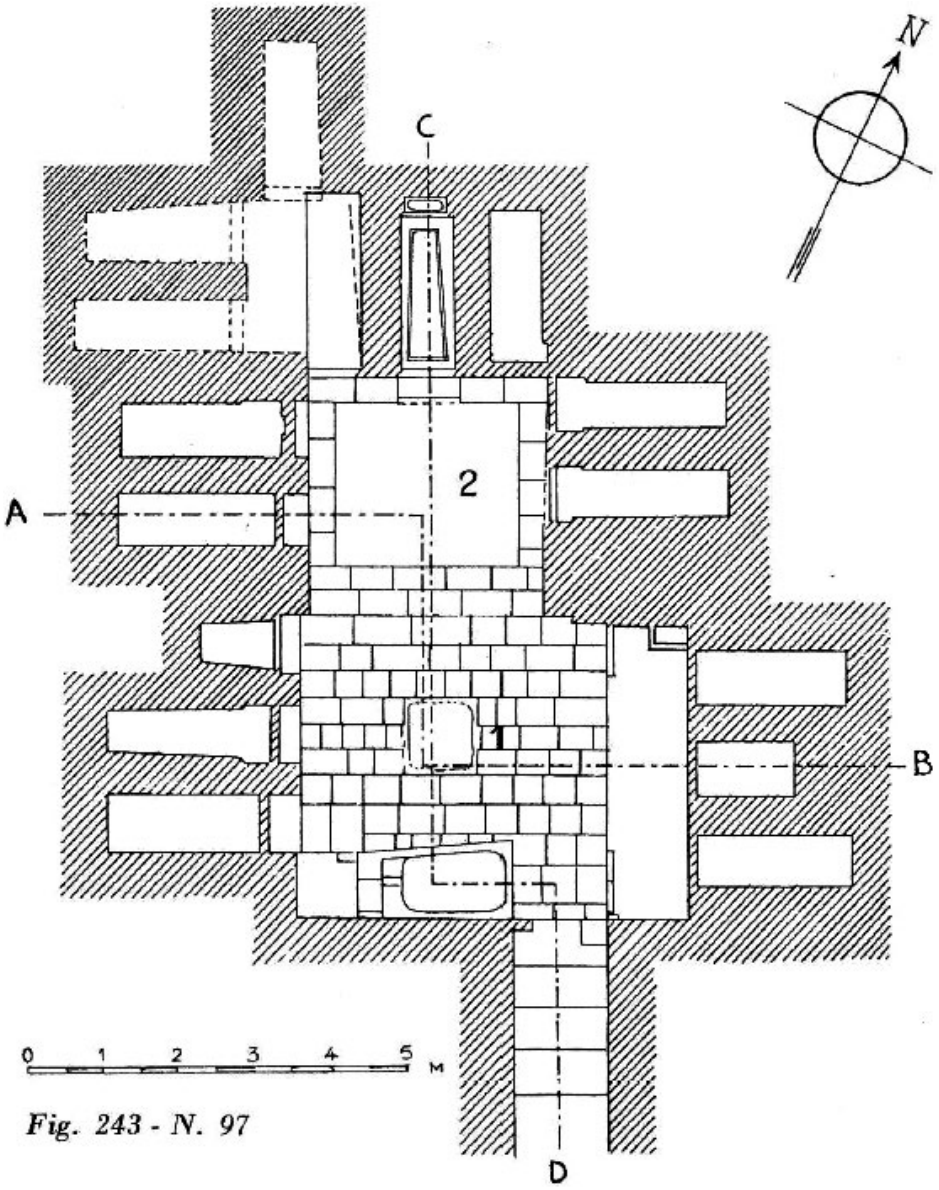


Figure 165. Gabbari necropolis. Zwei gräber (I-II): Hermann Thiersch. Hypogeum (I). Plan. Thiersch 1900: Tafel I; Adriani 1966b: Catalogue Number 97, Tavola 73, Figure 243. (Chapter 3, site 47c: p. 63)

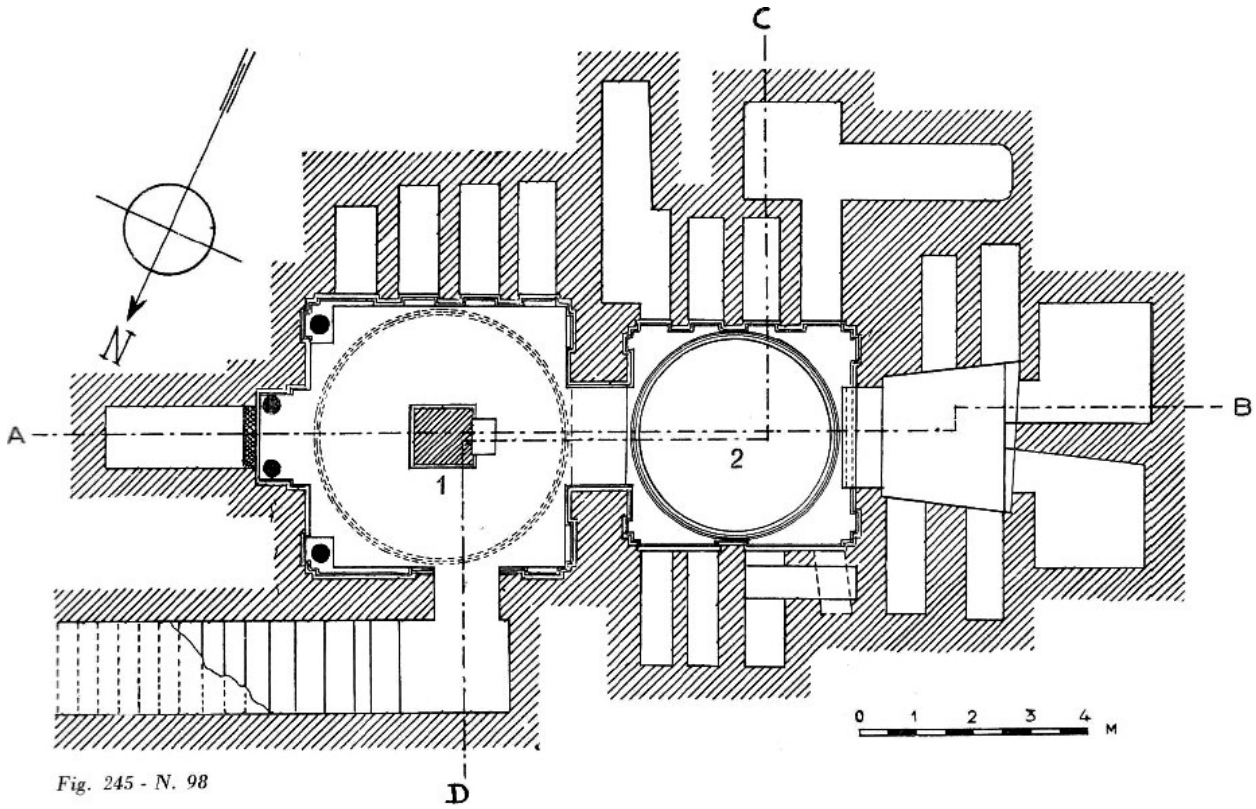


Figure 166. Gabbari necropolis. Zwei gräber (I-II): Hermann Thiersch. Hypogeum (II). Plan. Thiersch 1900: Tafel IV; Adriani 1966b: Catalogue Number 98, Tavola 74, Figure 245. (Chapter 3, site 47c: p. 63)

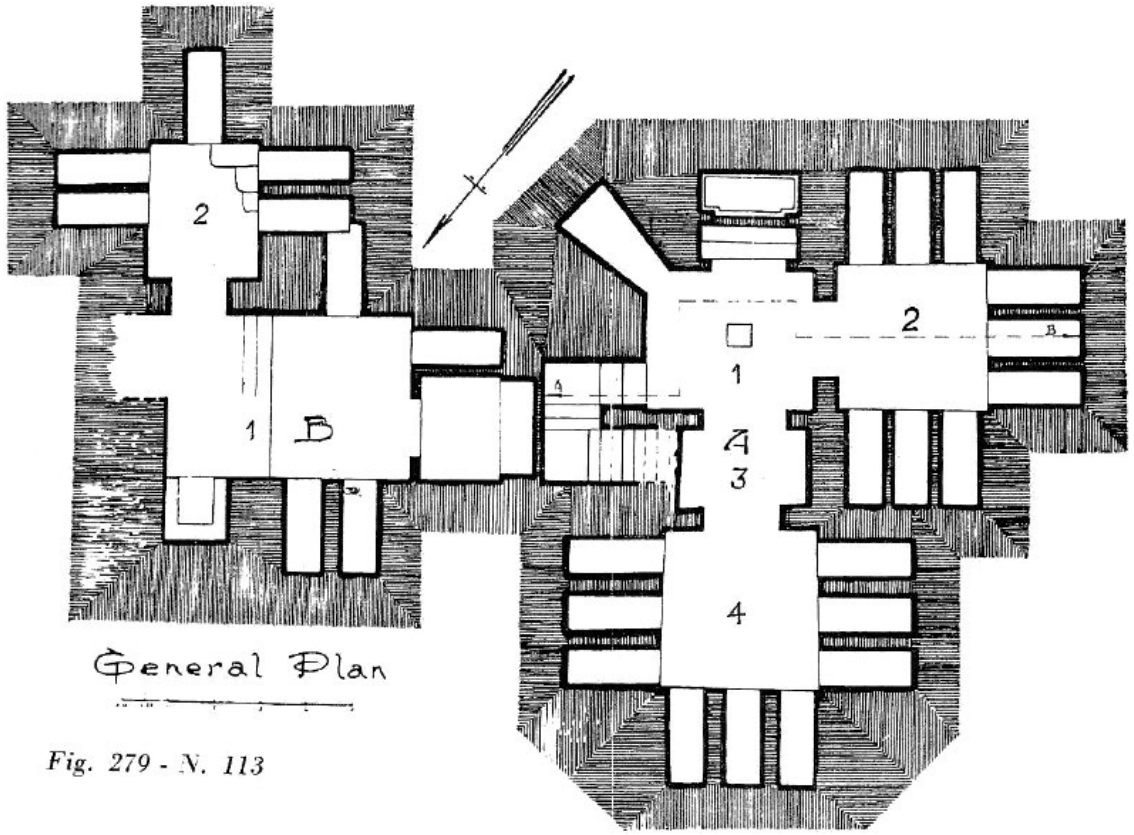


Figure 167. Gabbari necropolis. Two hypogea (A-B): Banoub Habachi. Plan. Habachi 1937: Figure 13; Adriani 1966b: Catalogue Number 113, Tavola 84, Figure 279. (Chapter 3, site 47e: p. 64)

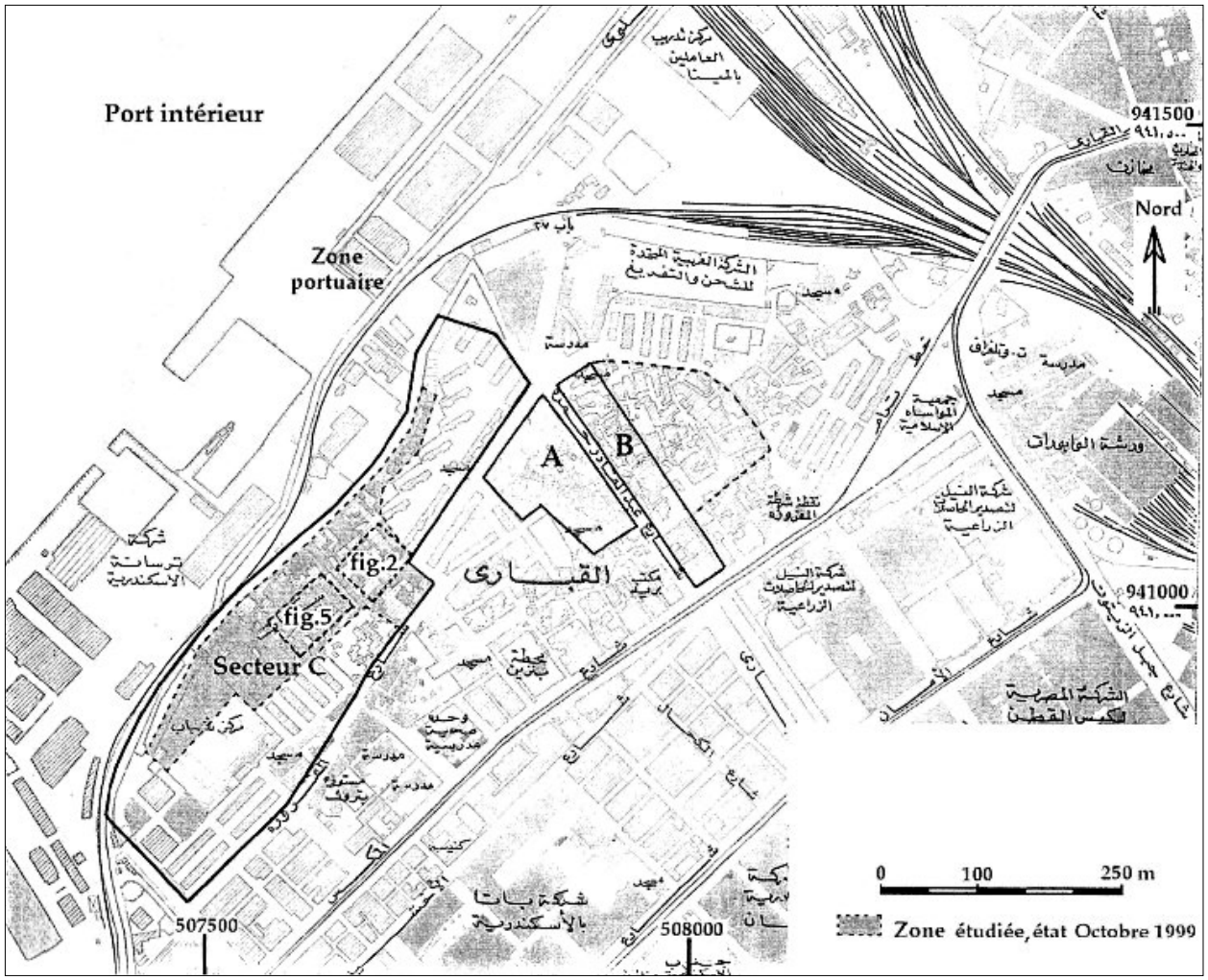


Figure 168. Gabbari necropolis. Gabbari Zone (B): Centre d'Études Alexandrines. Relative location to Zone (A) of the Deutsche Archäologische Institut (site 47i) and Zone (C) of the Centre d'Études Alexandrines (site 47k); after S. Rousseau. Rousseau 2003: 688, Figure 1. (Chapter 3, site 47j: p. 65)

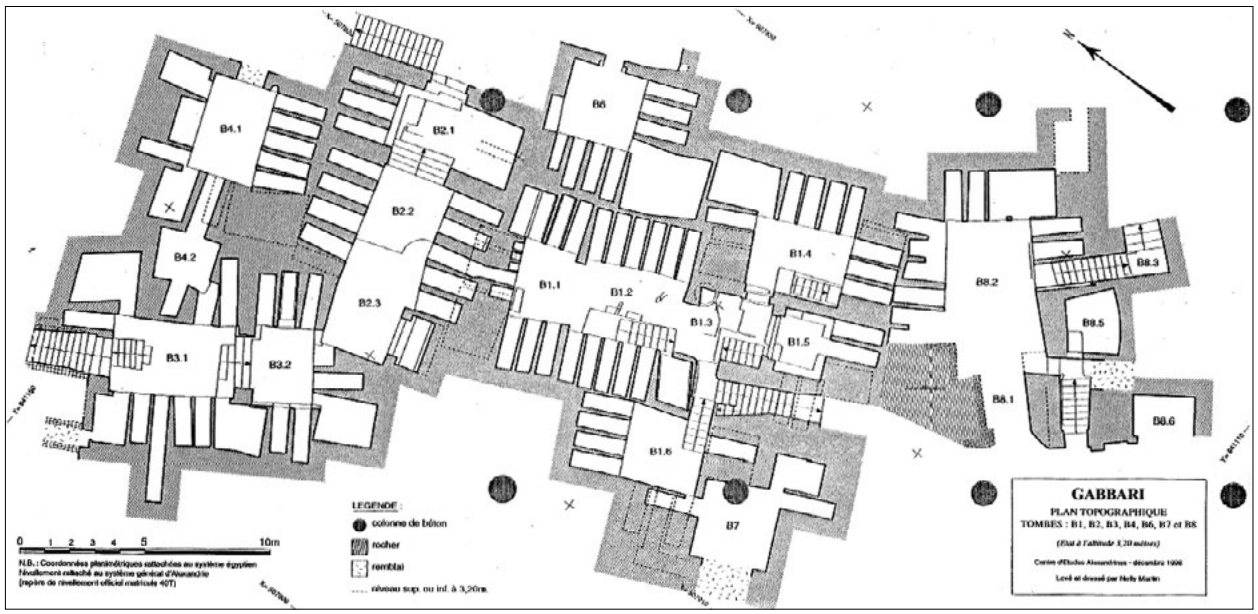


Figure 169. Gabbari necropolis. Gabbari Zone (B): Centre d'Études Alexandrines. Excavation zone (I). Sector (I). Hypogea (B1-B8). Plan; after N. Martin. Empereur 2001b: 22, Figure 1.15. (Chapter 3, site 47j: p. 66)

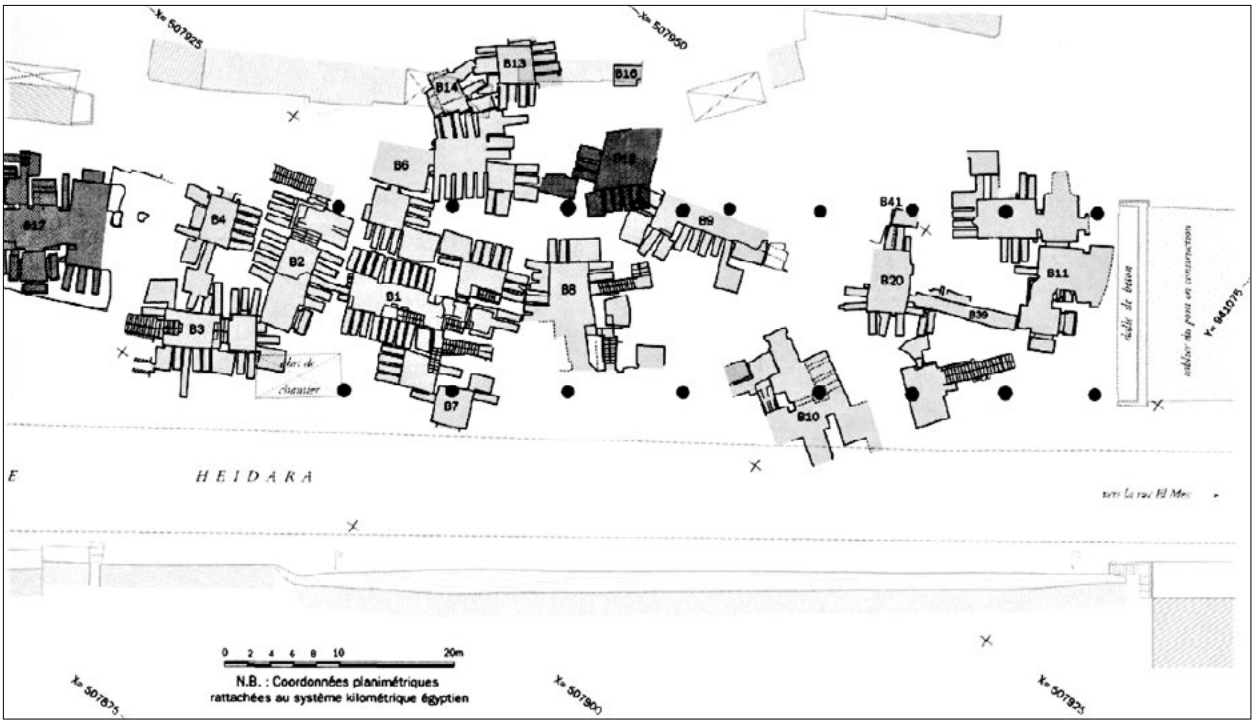


Figure 170. Gabbari necropolis. Gabbari Zone (B): Centre d'Études Alexandrines. Excavation zone (I). Sectors (I-II). Plan; after N. Martin, T. Gonon, and S. Rousseau. Empereur 1999b: 559, Figure 6. (Chapter 3, site 47j: p. 66)



Figure 171. Gabbari necropolis. Gabbari Zone (B): Centre d'Études Alexandrines. Excavation zone (II). Sectors (III-VI). Plan; after N. Martin, T. Gonon, and S. Rousseau. Empereur 1999b: 558, Figure 6. (Chapter 3, site 47j: p. 66)

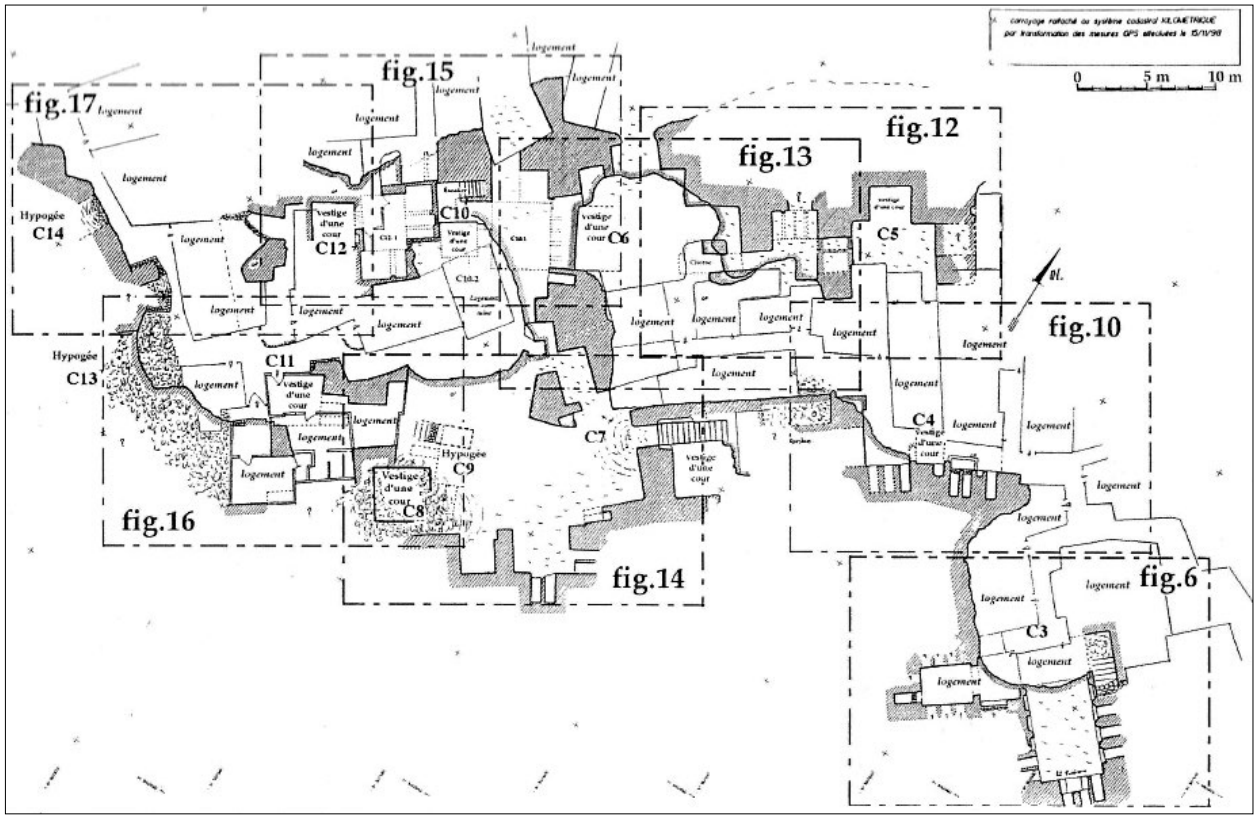


Figure 172. Gabbari necropolis. Gabbari Zone (C): Centre d'Études Alexandrines. Central sector. Hypogea (C3-C14). Plan; after S. Rousseau. Rousseau 2003: 691, Figure 5. (Chapter 3, site 47k: p. 66)

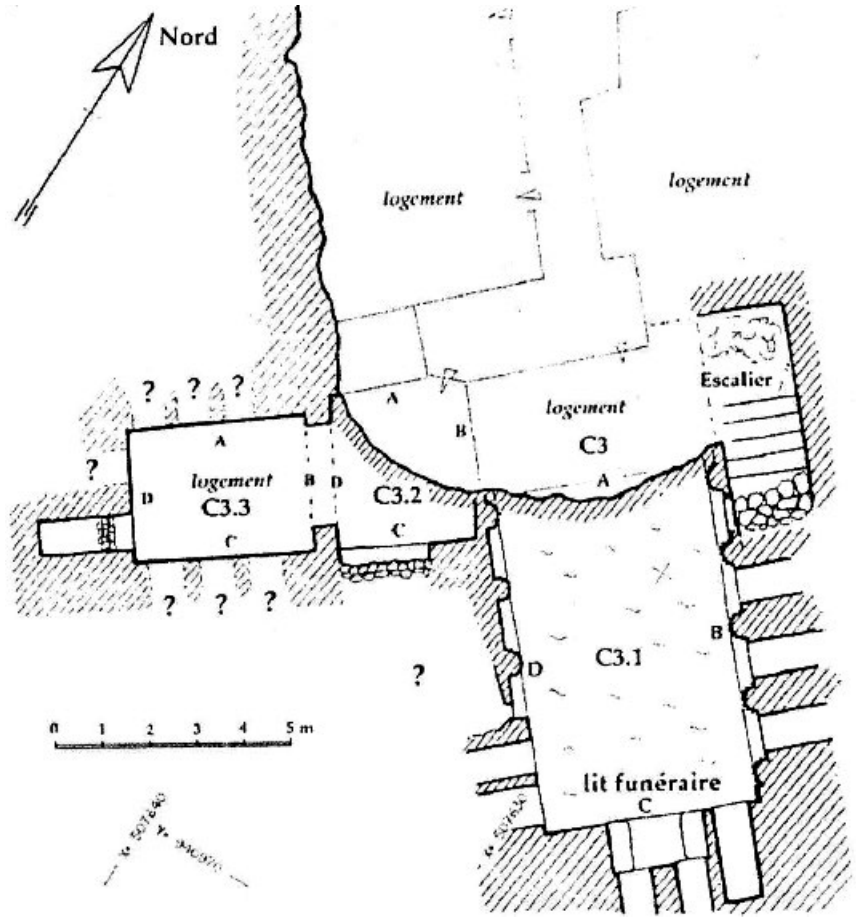


Figure 173. Gabbari necropolis. Gabbari Zone (C): Centre d'Études Alexandrines. Central sector. Hypogeum (C3). Plan; after S. Rousseau. Rousseau 2003: 692, Figure 6. (Chapter 3, site 47k: p. 67)

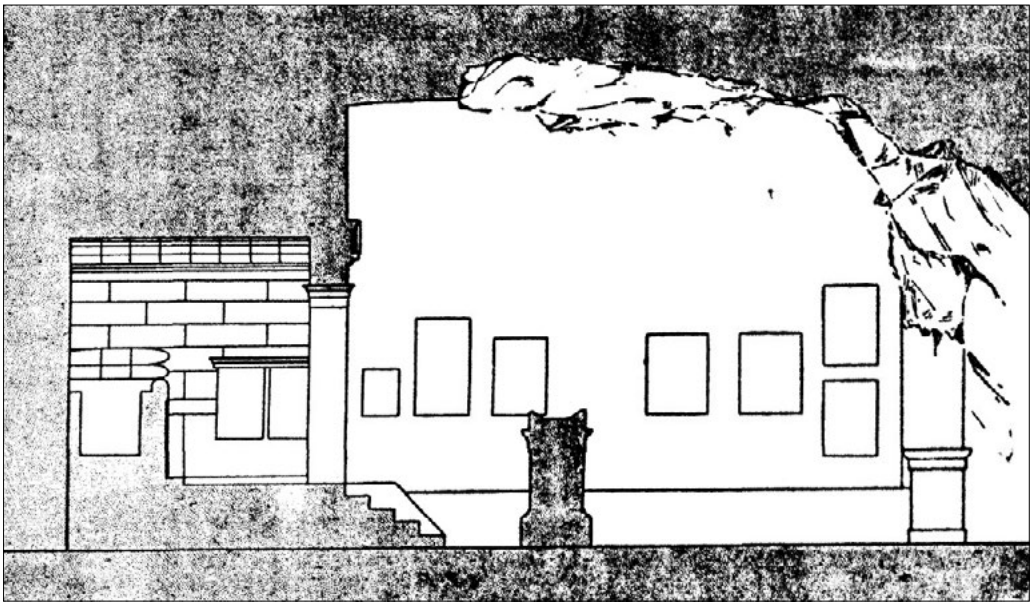


Figure 174. el-Mafrouza necropolis. Suq el-Wardian hypogeum. Sectional view.
Breccia 1907c: 65, Figure 2. (Chapter 3, site 48b: p. 67)

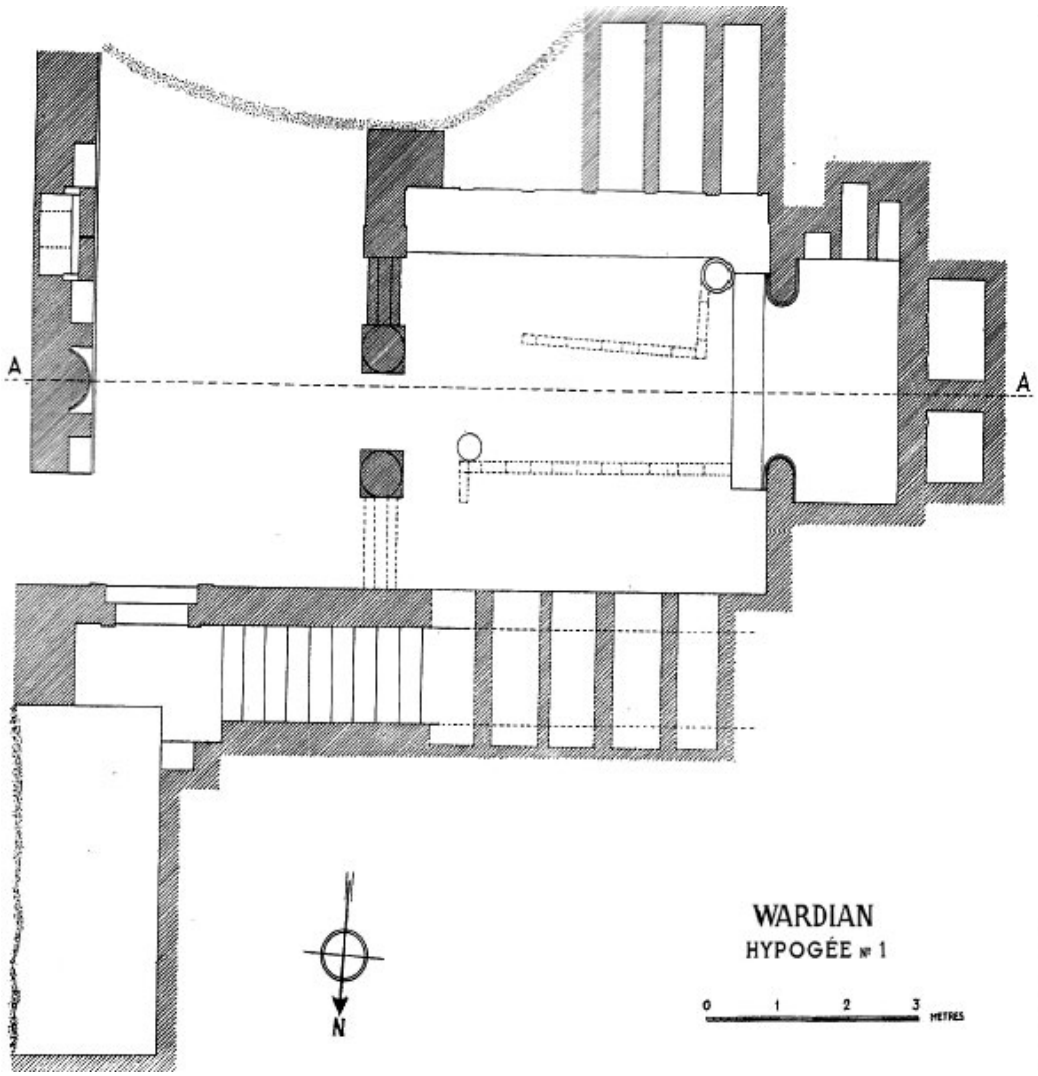


Figure 175. el-Mafrouza necropolis. A complex of hypogea, including the *saqiya*. Hypogeum (I). Plan;
after B. Abd el-Malek. Riad 1967b: Planche I, Figure 1. (Chapter 3, site 48c: p. 67)

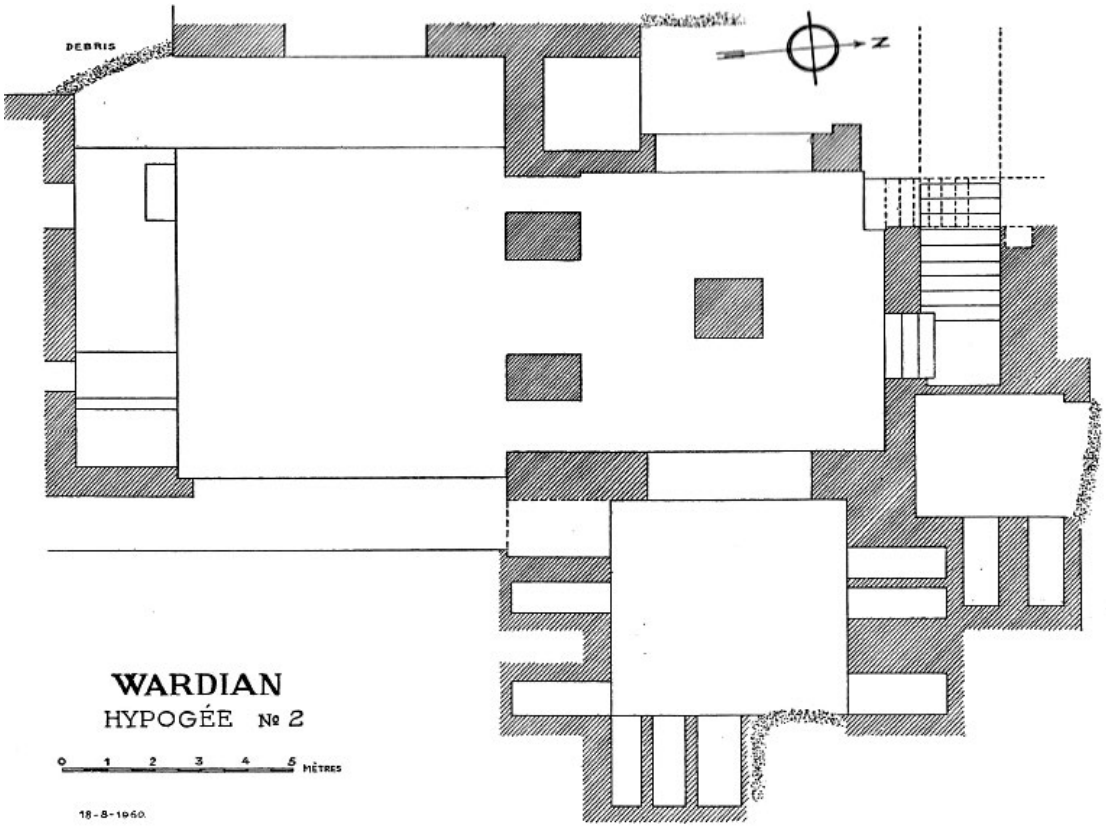


Figure 176. el-Mafrouza necropolis. A complex of hypogea, including the *saqiya*. Hypogeum (II). Plan; after B. Abd el-Malek. Riad 1967b: Planche II. (Chapter 3, site 48c: p. 68)

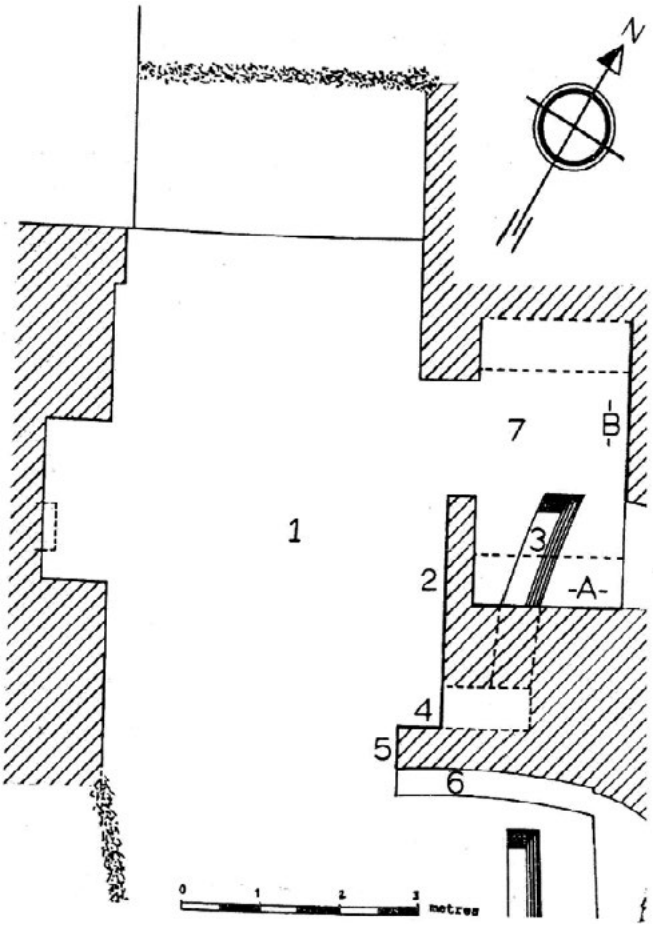


Figure 177. el-Mafrouza necropolis. A complex of hypogea, including the *saqiya*. Hypogeum (III). Plan; after B. Abd el-Malek. Riad 1964: 169, Figure 1. (Chapter 3, site 48c: p. 68)

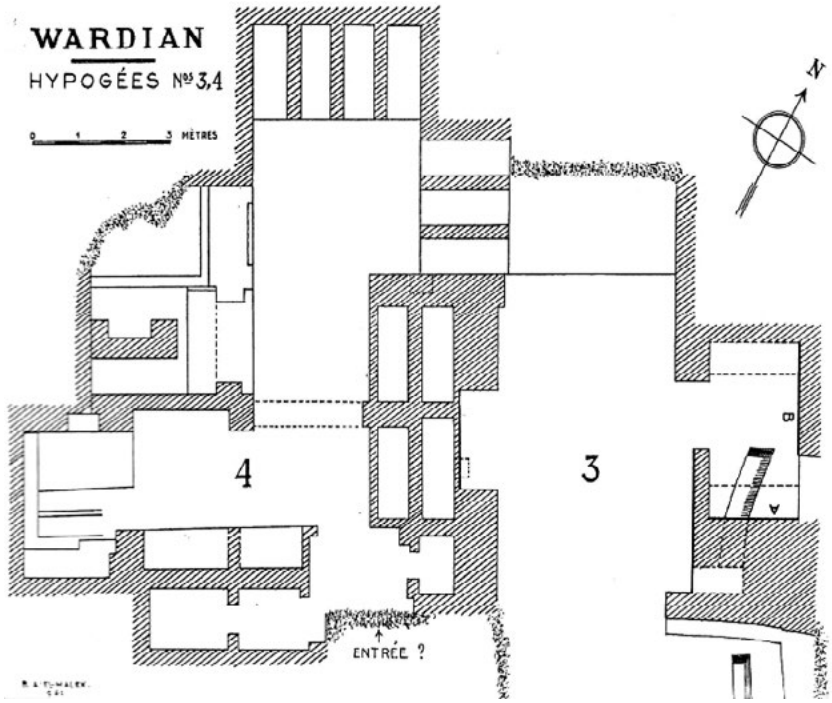


Figure 178. el-Mafrouza necropolis. A complex of hypogea, including the *saqiya*. Hypogea (III-IV). Plan; after B. Abd el-Malek. Riad 1967b: Planche III, Figure 1. (Chapter 3, site 48c: p. 68)

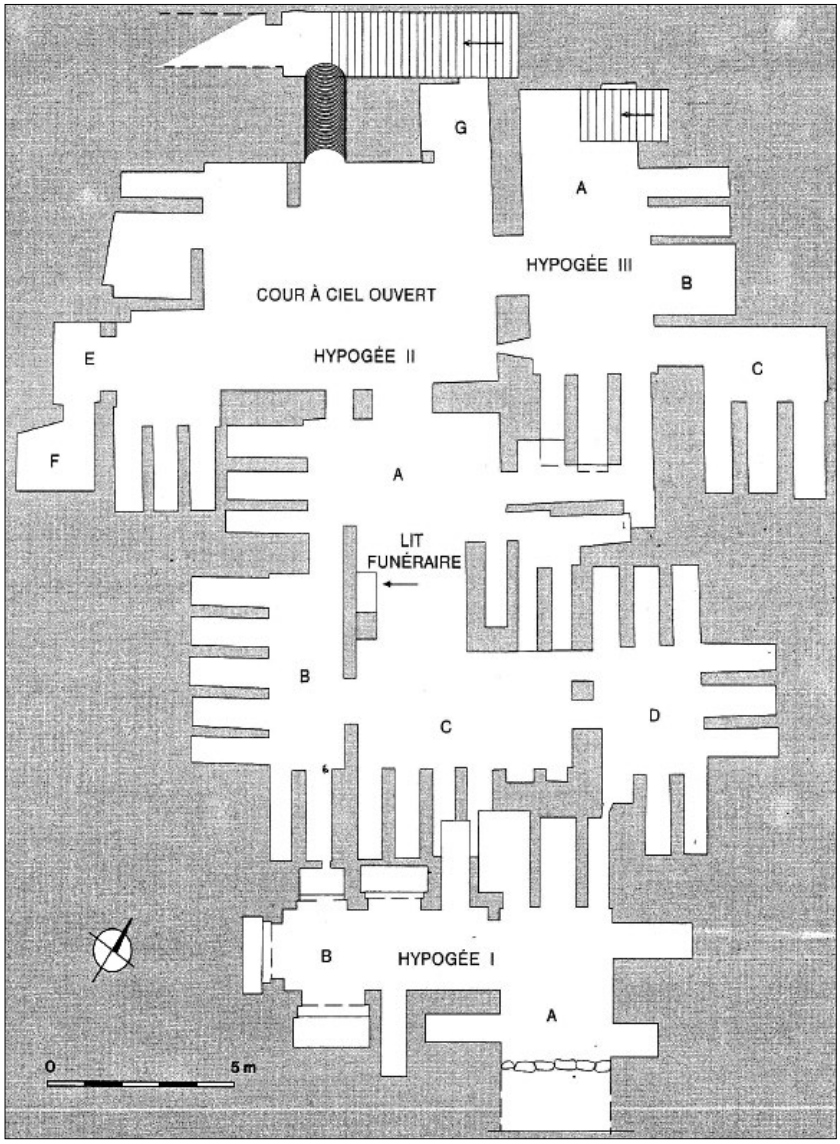


Figure 179. el-Mafrouza necropolis. Stagni complex of hypogea. Hypogea (I-III). Plan; after A. Abd el-Fattah and S.A. Choukri. Abd el-Fattah and Choukri 1998: 43, Figure 1. (Chapter 3, site 48d: p. 69)

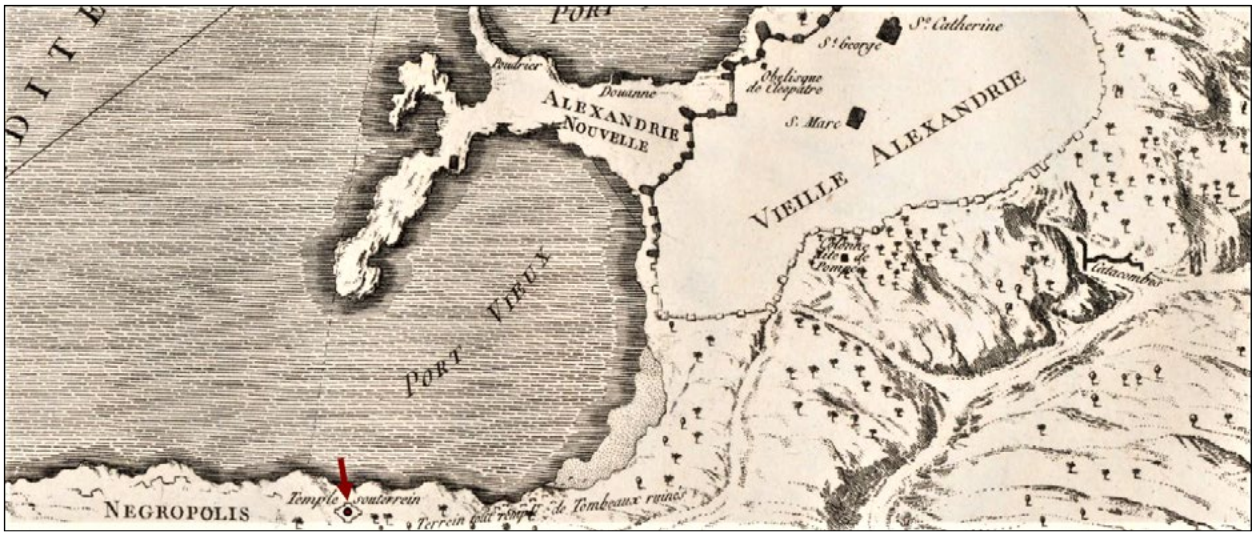


Figure 180. el-Wardian necropolis. Grand catacomb. Location in Norden's 1755 map (Norden's visit to Alexandria: June 1737). Norden 1795: Planche I. Extract. Labels added by author. (Chapter 3, site 49a: p. 69)

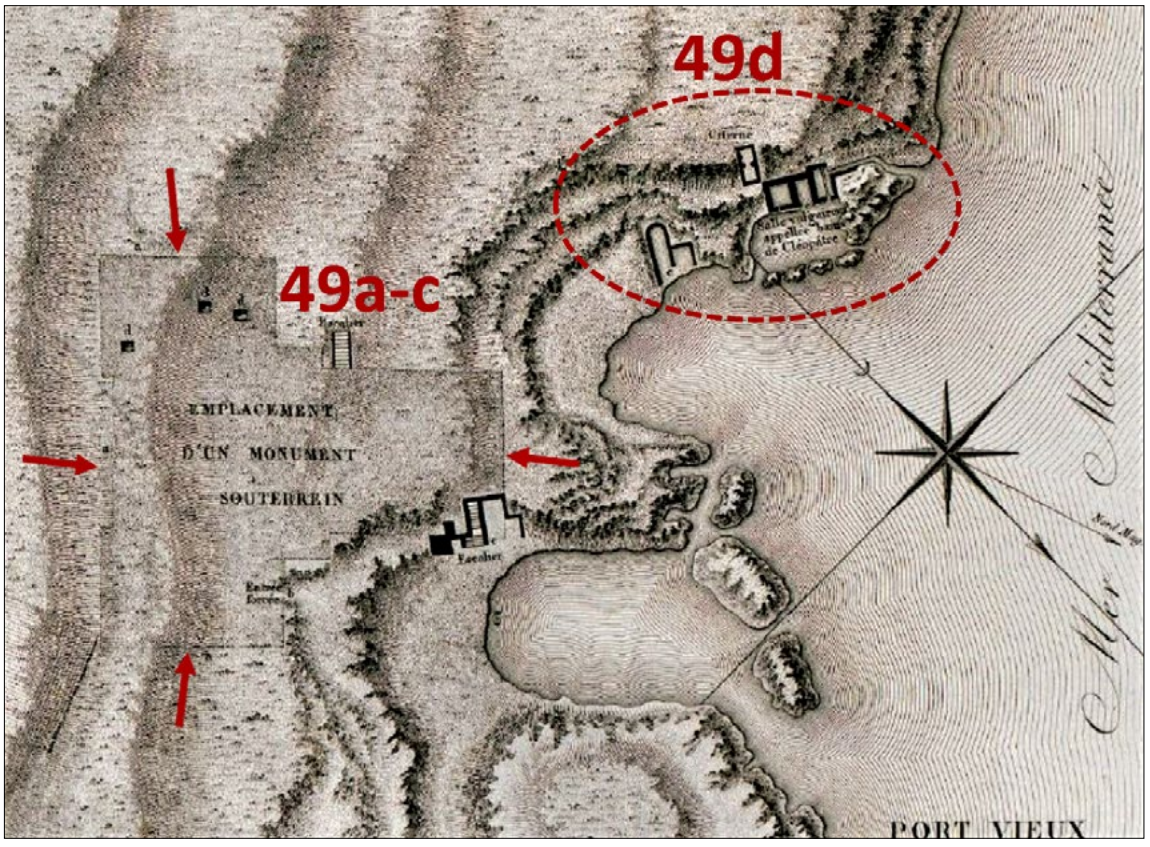


Figure 181. el-Wardian necropolis. Grand catacomb (site 49a-c) and the so-called 'Baths of Cleopatra' (site 49d). Location c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 42, Figure 1. Extract. Labels added by author. (Chapter 3, site 49a: p. 70)



Figure 182. el-Wardian necropolis. Grand Catacomb. Satellite image: localisation.
Google Earth © 2018. (Chapter 3, site 49a: p. 70)

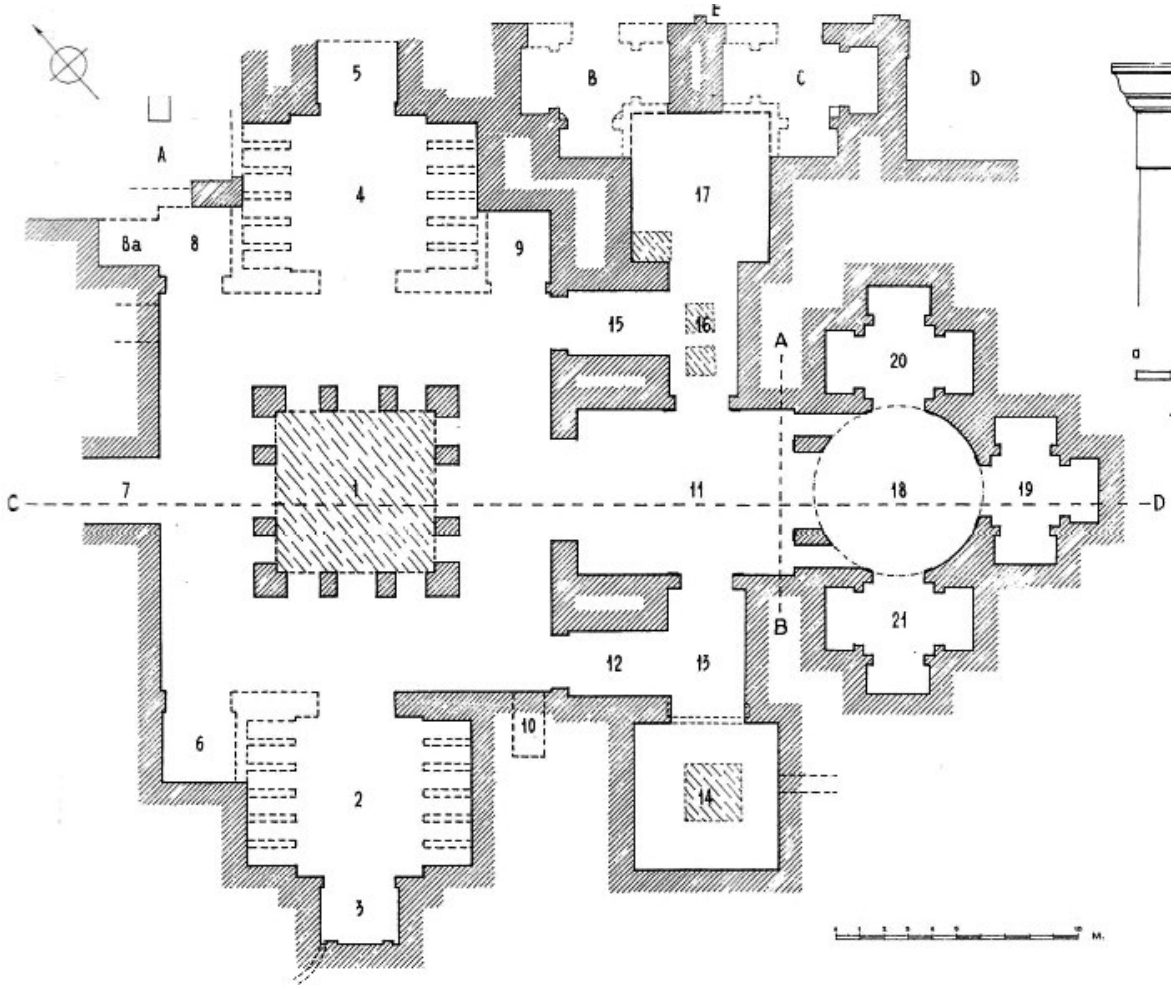


Figure 183. el-Wardian necropolis. Grand Catacomb. Plan (a); after B. Abd el-Malek. Adriani 1966b: Catalogue Number 118, Tavola 86, Figure 290. (Chapter 3, site 49a: p. 70)

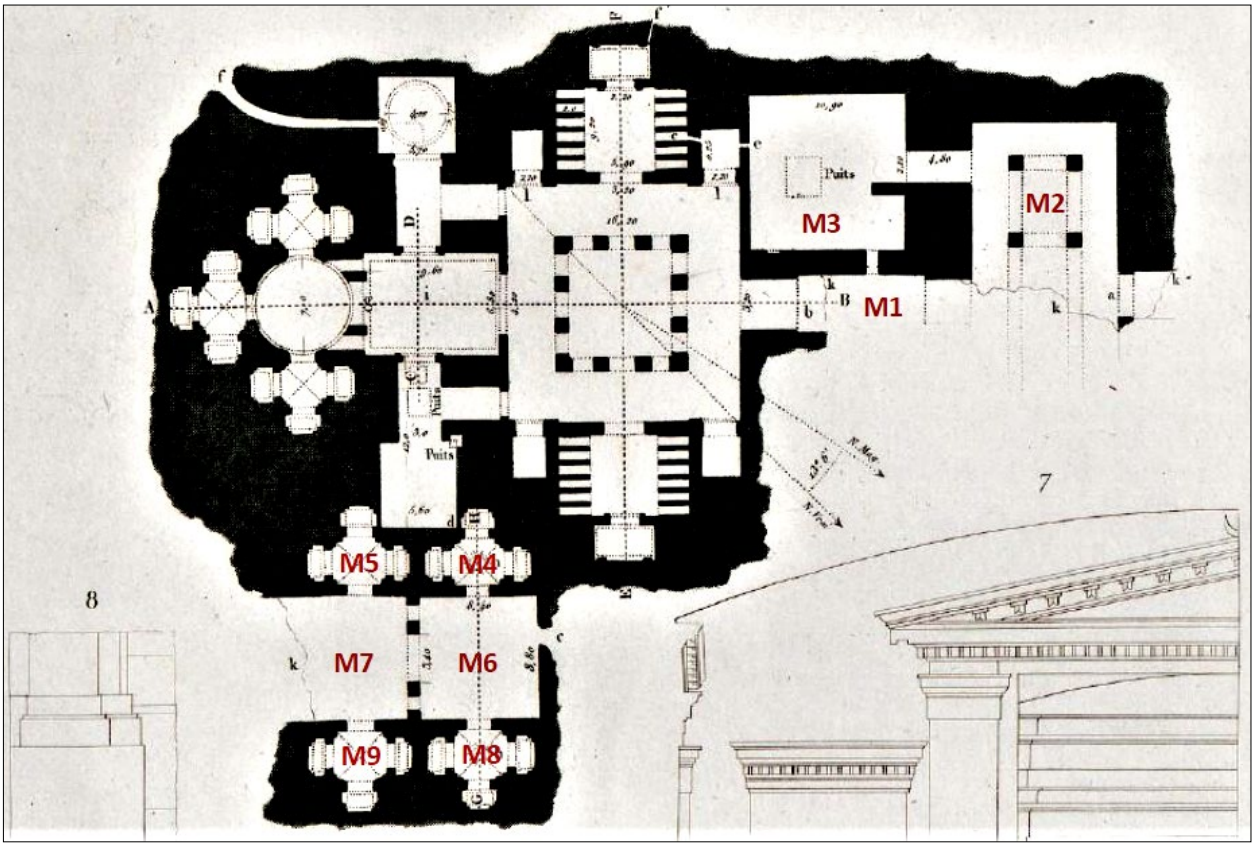


Figure 184. el-Wardian necropolis. Grand Catacomb. Plan (b); after P.-D. Martin. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 42, Figures 2, 7-8. Labels added by author. (Chapter 3, site 49a: p. 70)

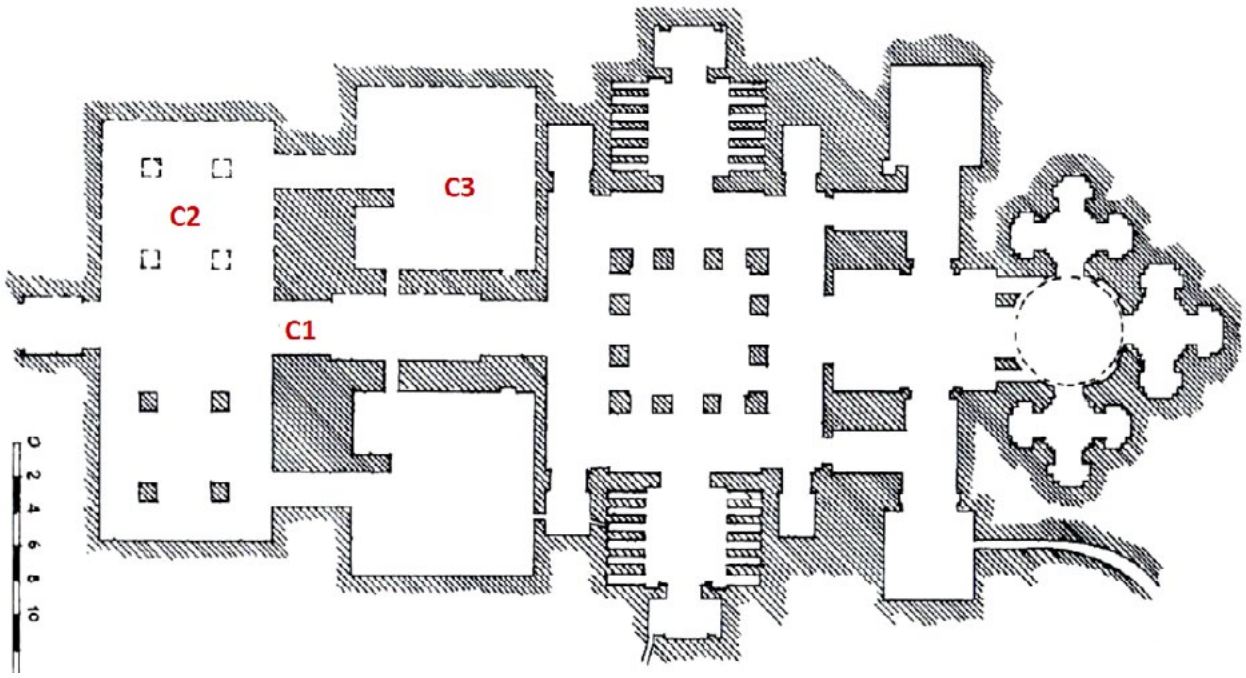


Figure 185. el-Wardian necropolis. Grand Catacomb. Plan (c); after B. Abd el-Malek. Adriani 1966b: Catalogue Number 118, Tavola 88, Figure 301. Labels added by author. (Chapter 3, site 49a: p. 70)

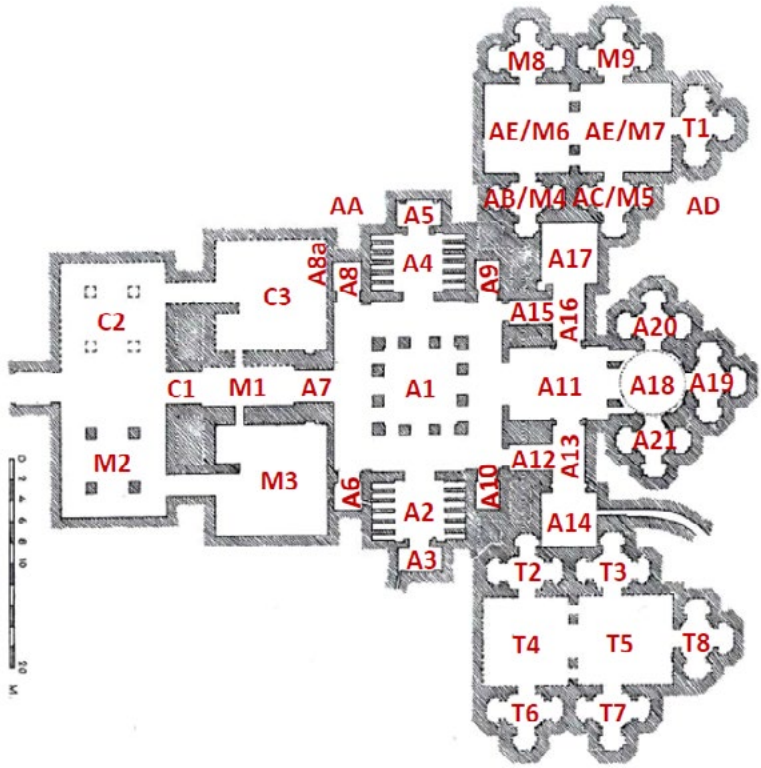


Figure 186. el-Wardian necropolis. Grand Catacomb. Plan (d); after B. Abd el-Malek. Adriani 1966b: Catalogue Number 118, Tavola 88, Figure 300. Labels added by author. (Chapter 3, site 49a: p. 70)

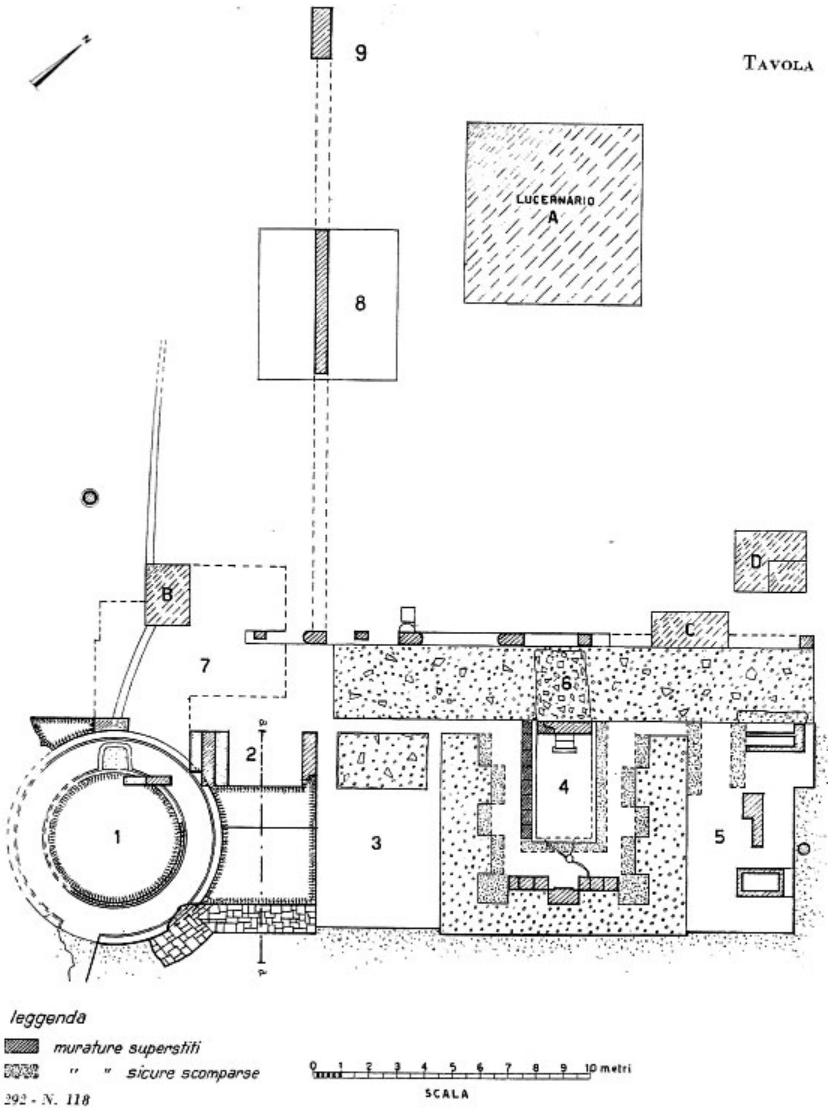


Figure 187. el-Wardian necropolis. Grand Catacomb. Surface constructions. Plan; after B. Abd el-Malek. Adriani 1966b: Catalogue Number 118, Tavola 86, Figure 292. (Chapter 3, site 49a: p. 70)

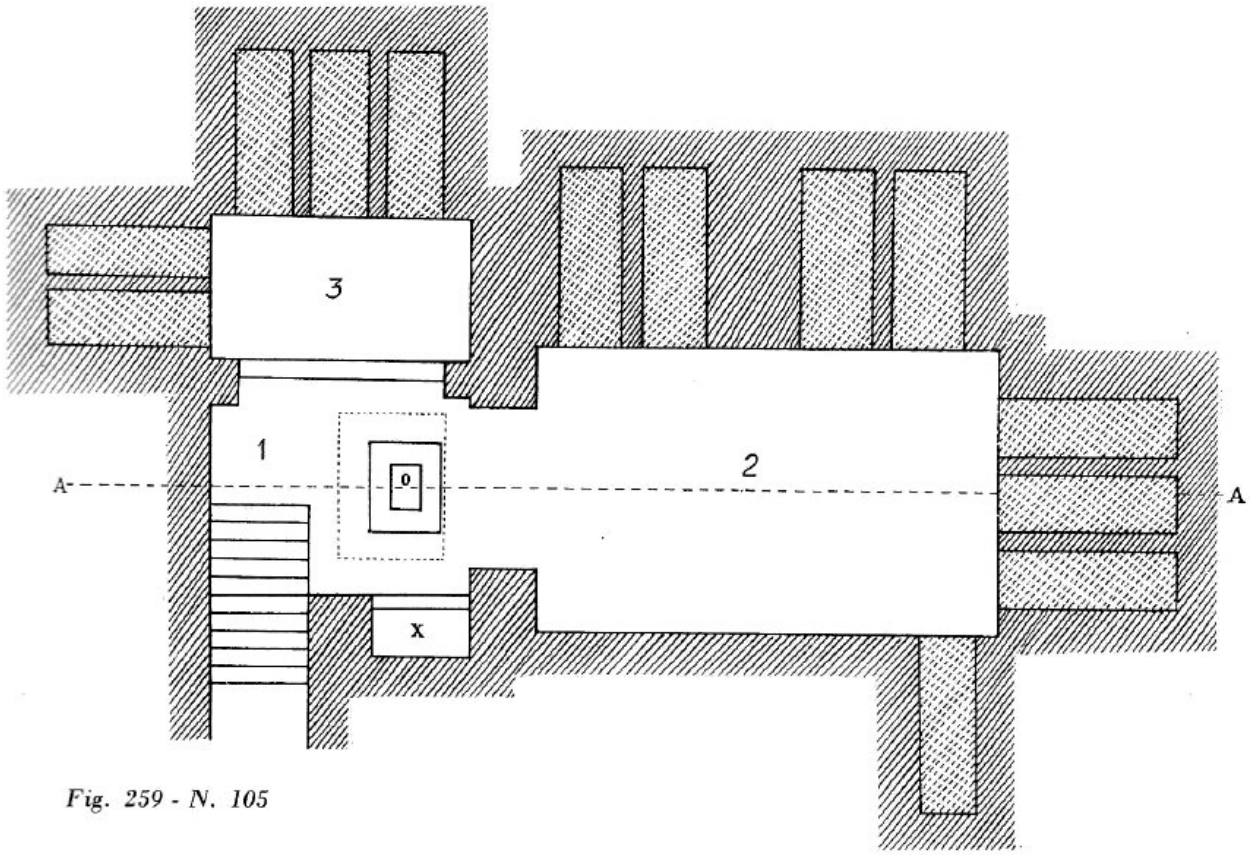


Figure 188. el-Wardian necropolis. Bartocci hypogeum. Plan. Adriani 1966b: Catalogue Number 105, Tavola 79, Figure 259. (Chapter 3, site 49e: p. 72)

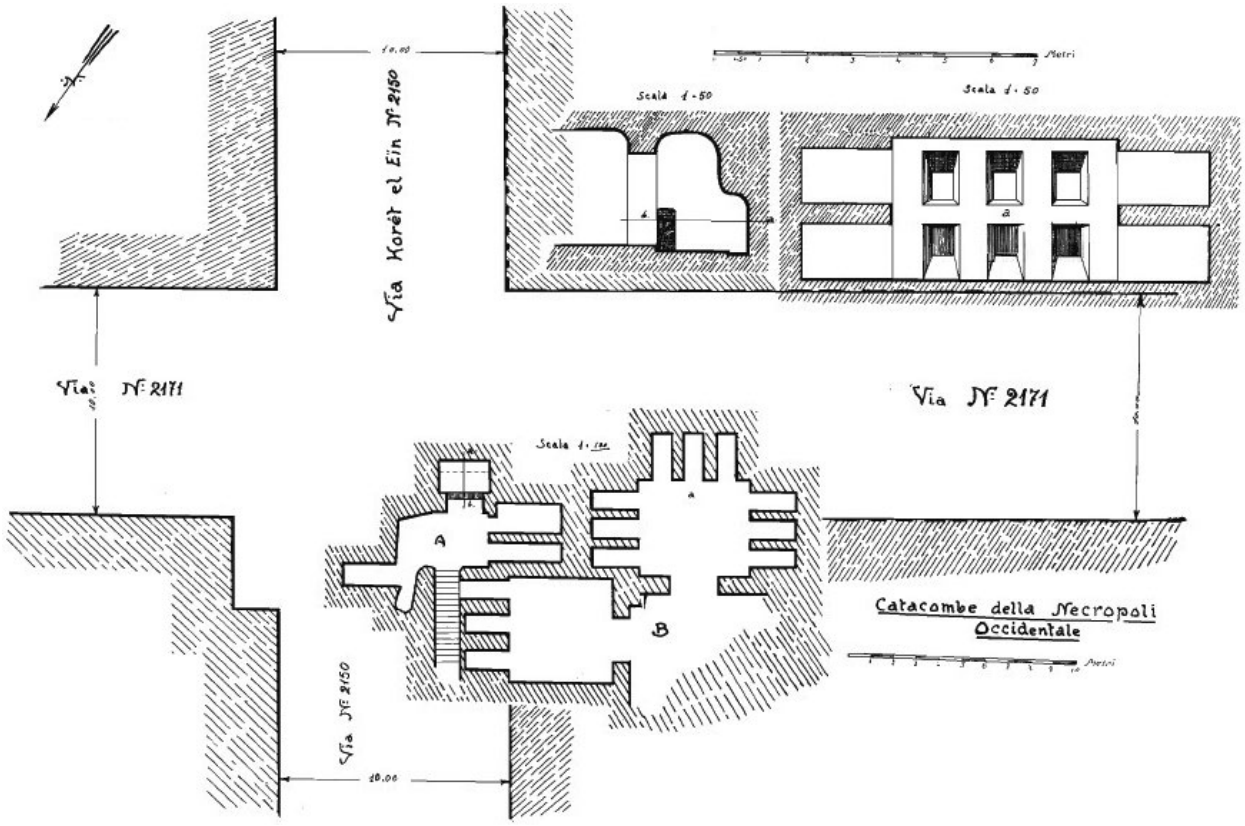


Figure 189. el-Wardian necropolis. Two adjacent hypogea: junction of streets number 2171 and 2150 (Korret el-Ein). Plan. Adriani 1934: Tavola XVIII. (Chapter 3, site 49f: p. 72)

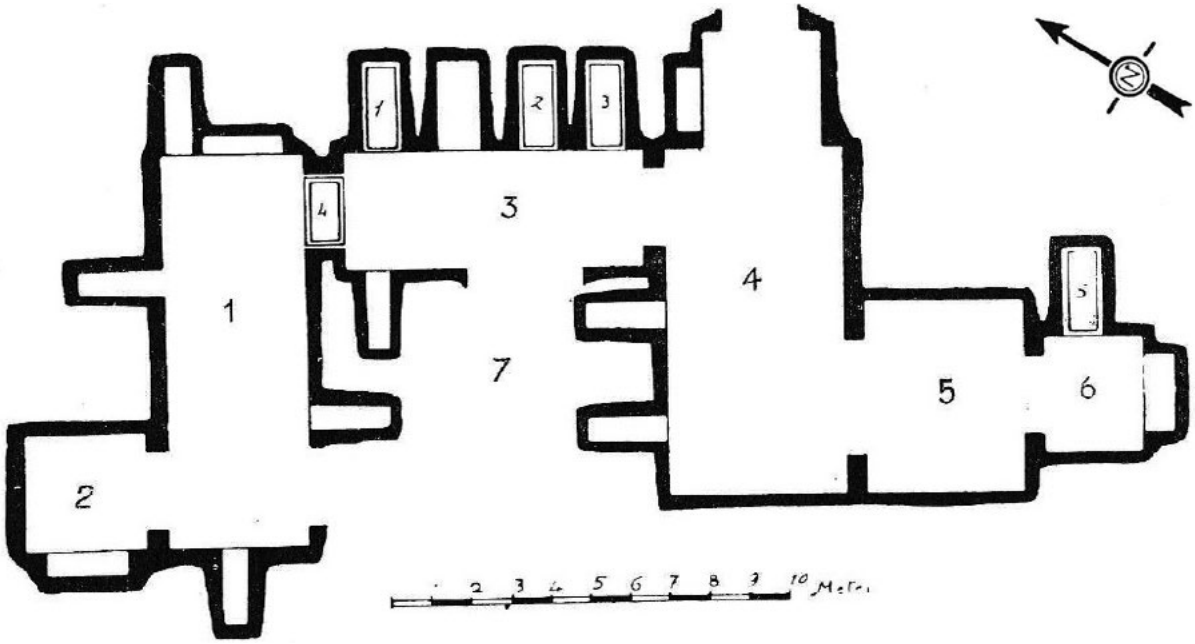


Figure 190. el-Wardian necropolis. Youssef Mahmoud hypogeum. Plan. Adriani 1966b: Catalogue Number 115, Tavola 84, Figure 281. (Chapter 3, site 49g: p. 72)

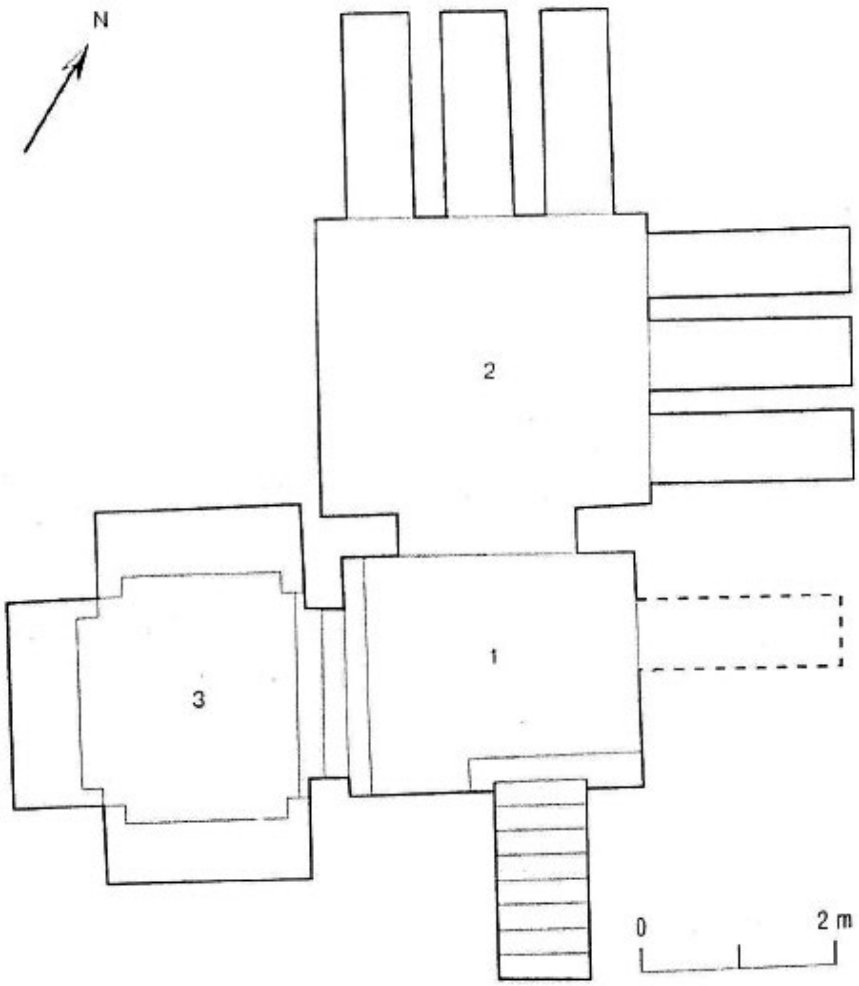


Figure 191. el-Wardian necropolis. Ezbet el-Yousra hypogeum. Plan. Choukri 2003: 702, Figure 1. (Chapter 3, site 49h: p. 72)



Figure 192. *Hippodromos-circus* dug into the northern sector of Kom el-Shuqafa. AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 51: p. 74)

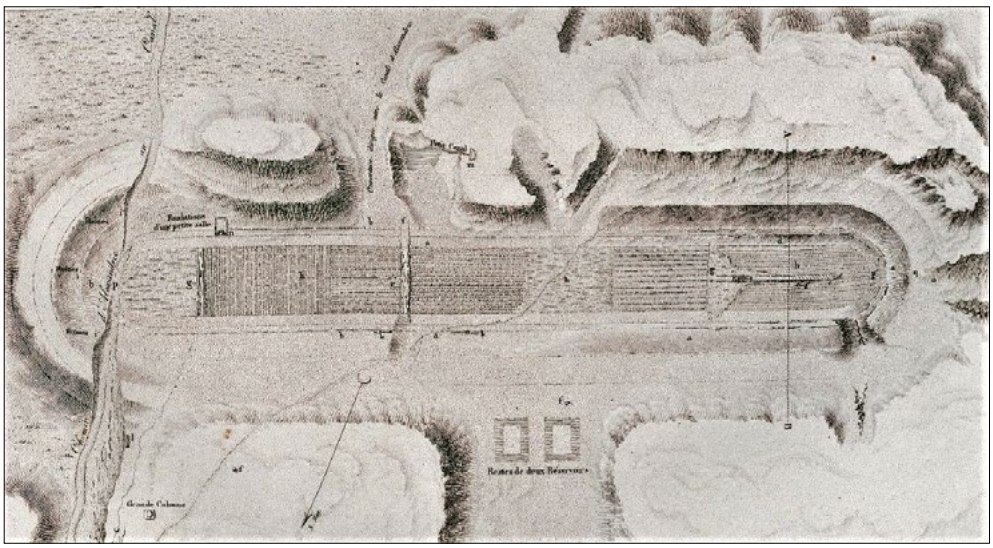


Figure 193. Remnants of a *Hippodromos-circus*, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 39, Figure 2. (Chapter 3, site 51: p. 74)

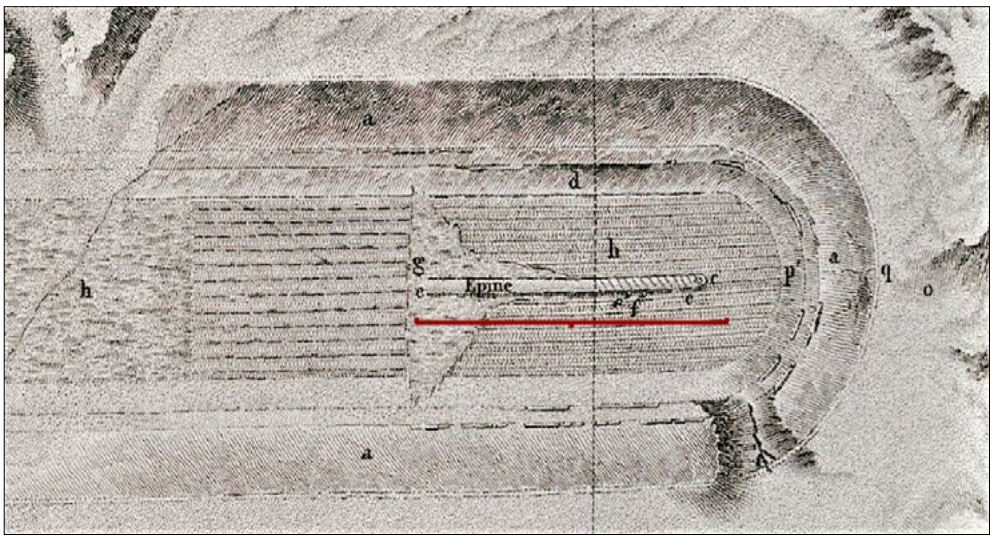


Figure 194. Remains of the *spina* of a *Hippodromos-circus*, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 39, Figure 2. Extract. Labels added by author. (Chapter 3, site 51: p. 74)

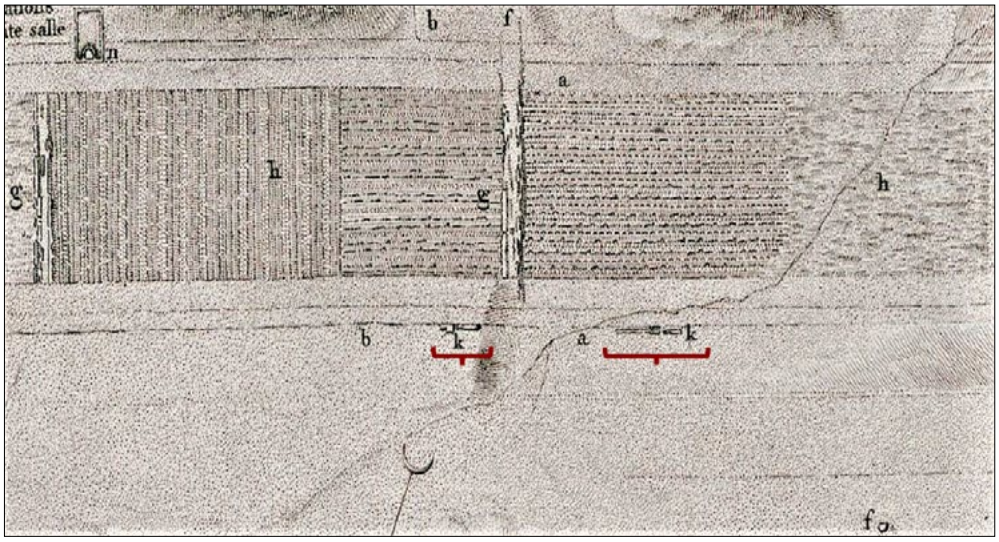


Figure 195. Remains *in situ* of the seats (marked k) of a *Hippodromos-circus*, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 39, Figure 2. Extract. Labels added by author. (Chapter 3, site 51: p. 74)

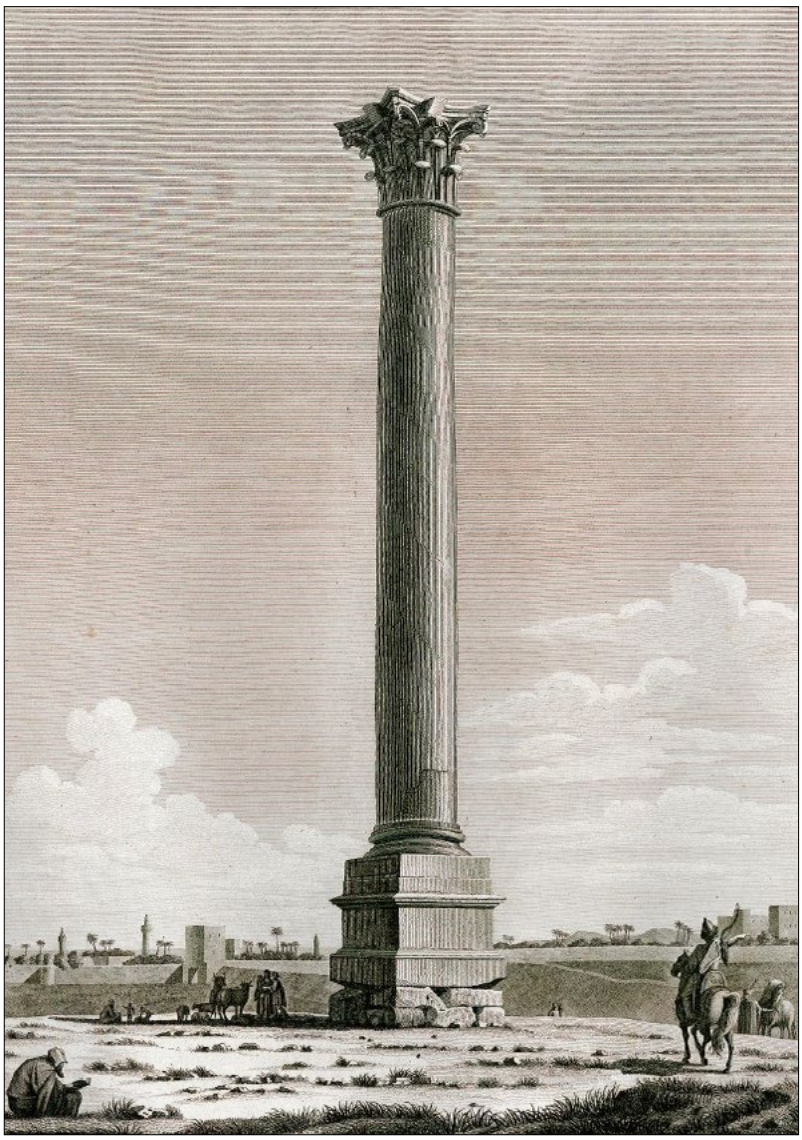


Figure 196. Sarapeion. Diocletian's Column aka Pompei's Pillar, c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 34, Figure 1. (Chapter 3, site 52: p. 75)

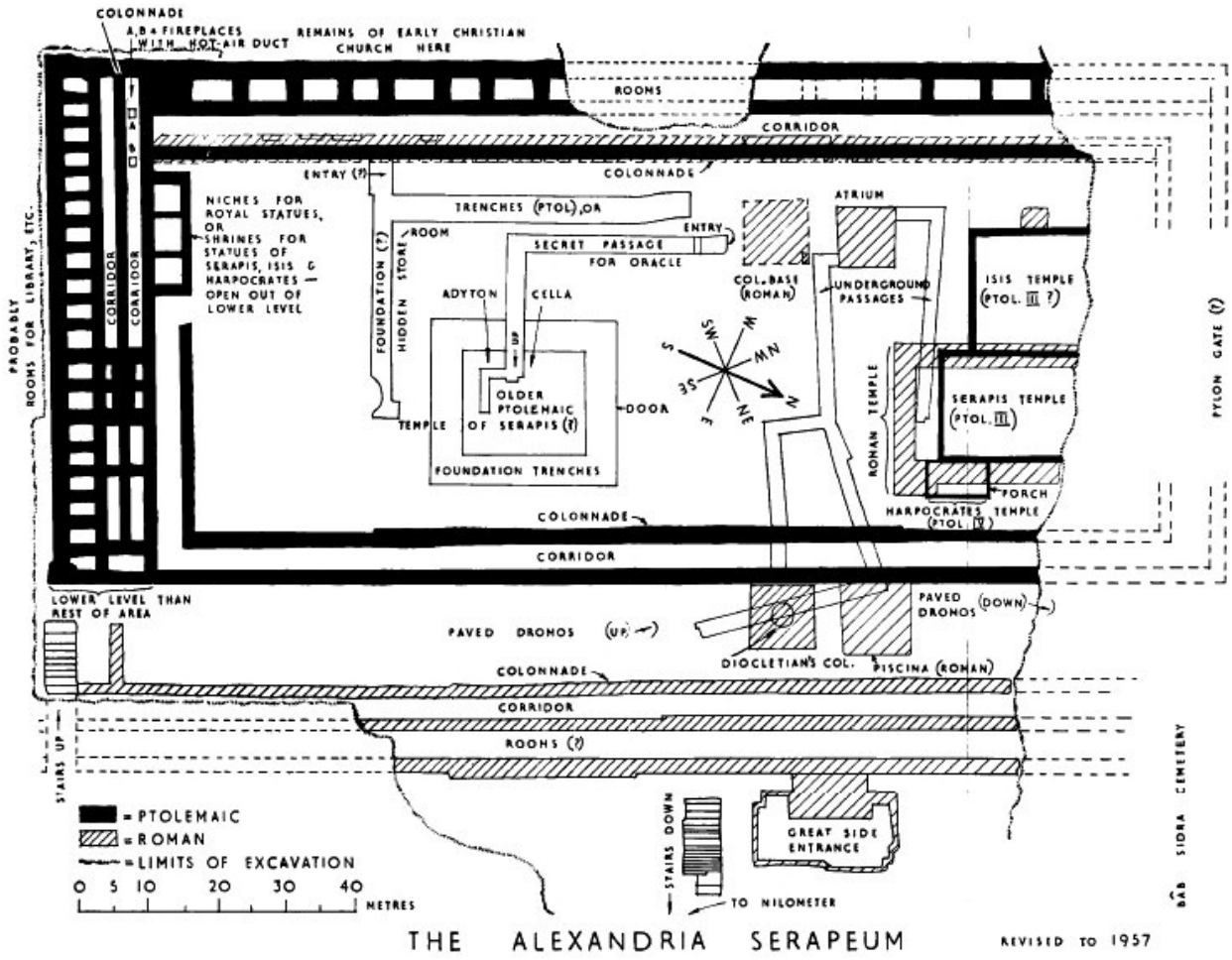


Figure 197. Sarapeion. Genera plan of site. Rowe and Rees 1957: The Alexandria Serapeum. (Chapter 3, site 52: p. 75)

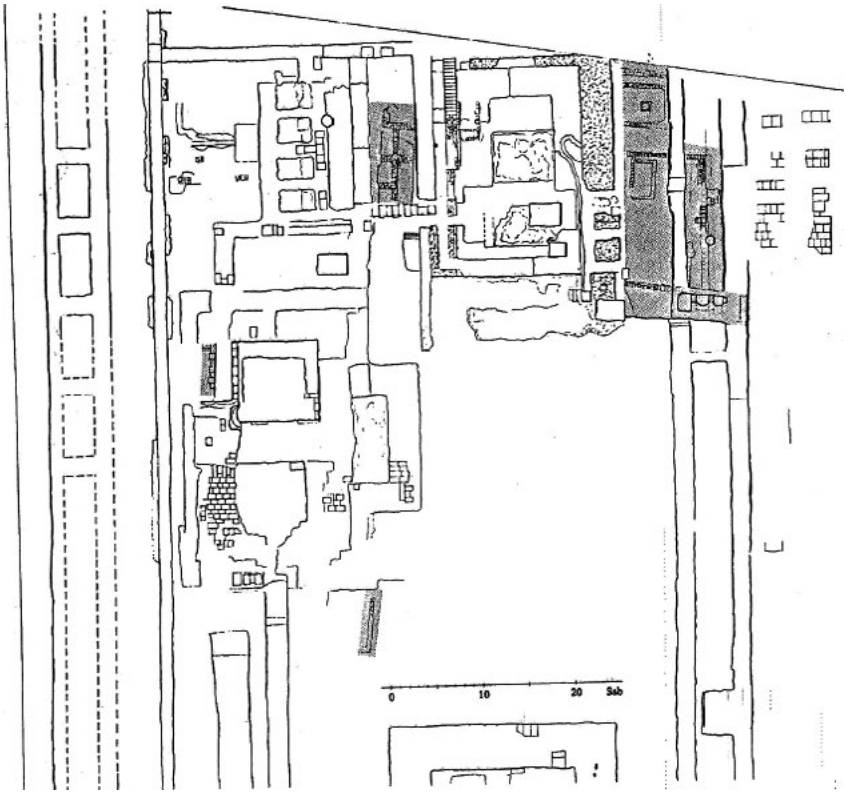


Figure 198. Sarapeion. Northern sector. Excavated off-grid vestiges of construction phase (I) (shaded in grey). Sabottka 2008: 379, Abbildung 5. (Chapter 3, site 52: p. 75)

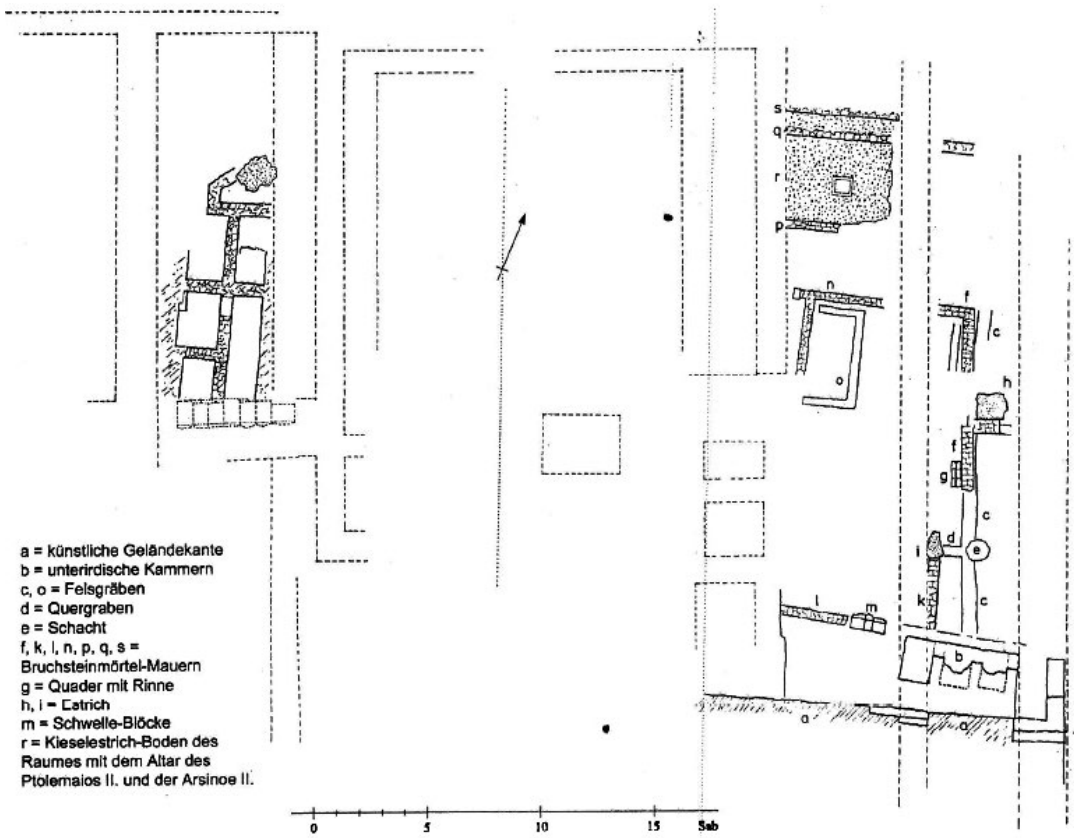


Figure 199. Sarapeion. Northeastern sector. Excavated off-grid vestiges of construction phase (I) (solid line) on either side of the Euergetean temple of construction phase (IIb) (dashed line).
Sabottka 2008: 381, Abbildung 7. (Chapter 3, site 52: p. 75)

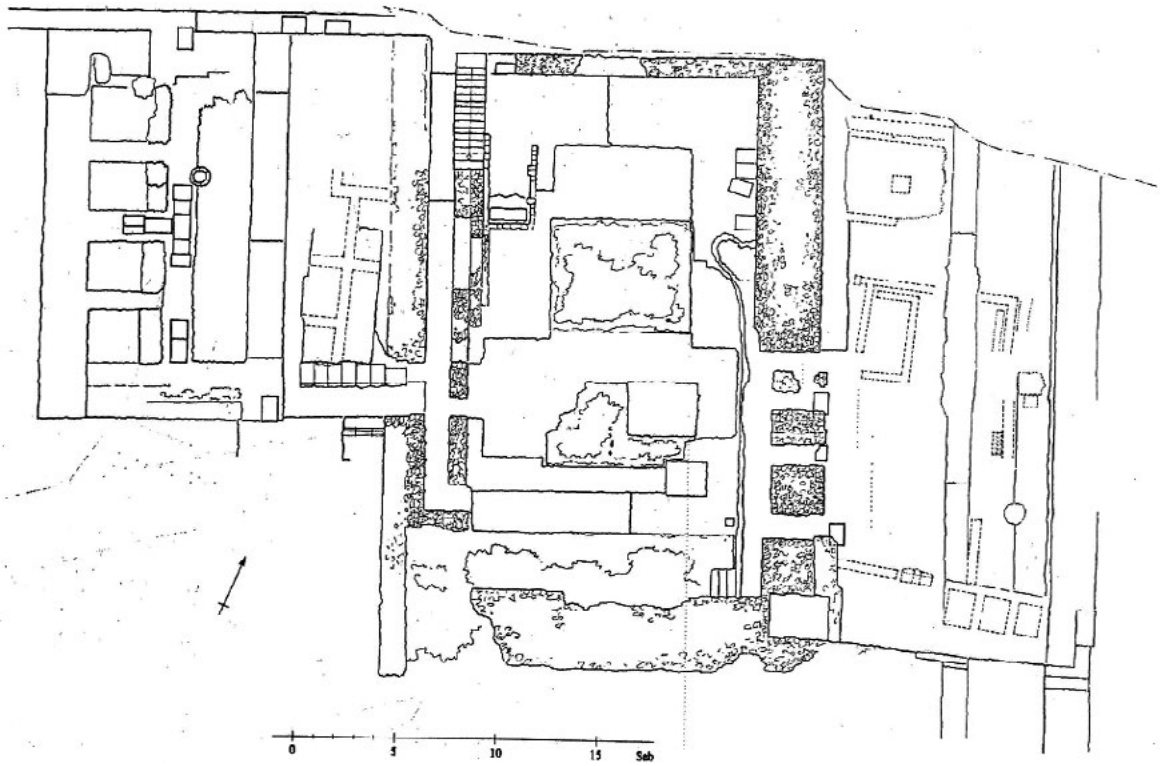


Figure 200. Sarapeion. Northeastern sector. Excavated vestiges of the Euergetean temple and *oikos* building of construction phase (IIb) (solid line) relative to the off-grid constructions of phase (I) (dashed line).
Sabottka 2008: 381, Abbildung 6. (Chapter 3, site 52: p. 75)

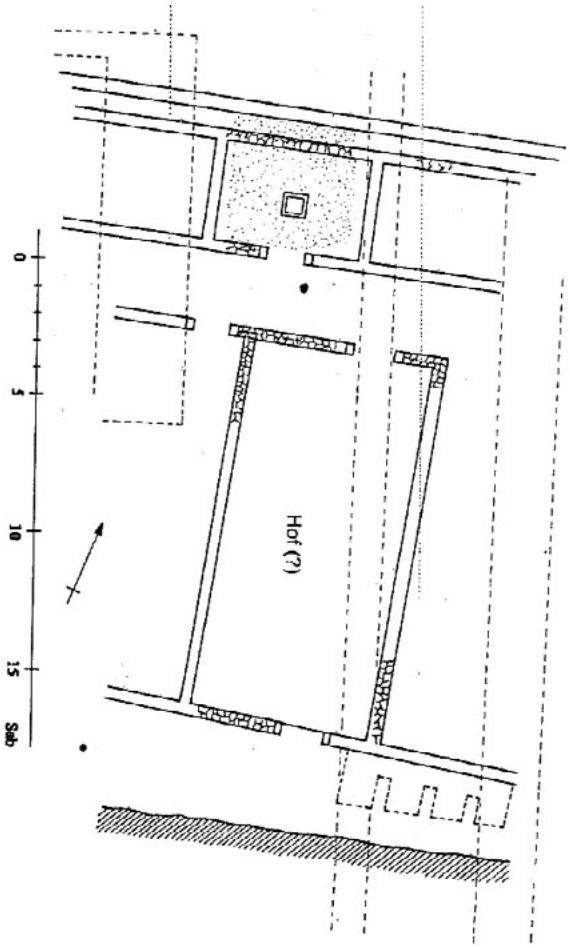


Figure 201. Sarapeion. Northeastern sector. Excavated off-grid vestiges of construction phase (I) (solid line) to the east of the Euergetean temple of construction phase (IIb). The earlier remnants are overbuilt with successive constructions of phase (II) (dashed line). Sabottka 2008: 383, Abbildung 8. (Chapter 3, site 52: p. 75)

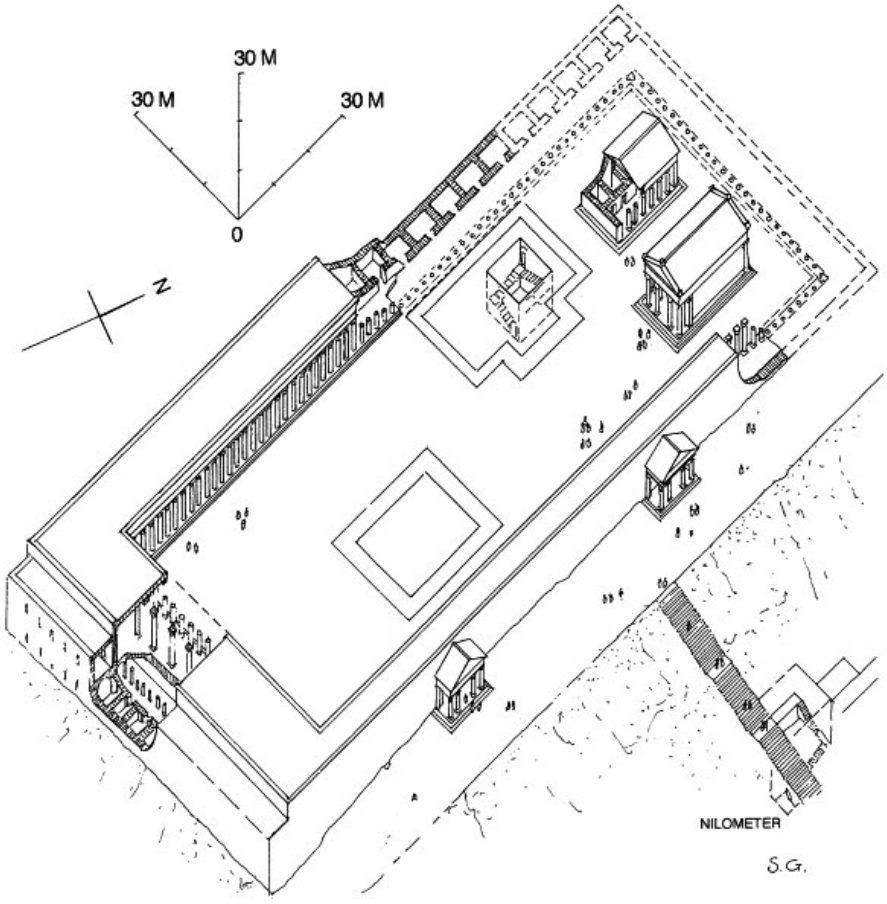


Figure 202. Sarapeion. Axonometric reconstruction of the Euergetean sanctuary c. the second half of the 3rd century BC; after S. Gibson. McKenzie, Gibson, and Reyes 2004: 88, Figure 9. (Chapter 3, site 52: p. 76)

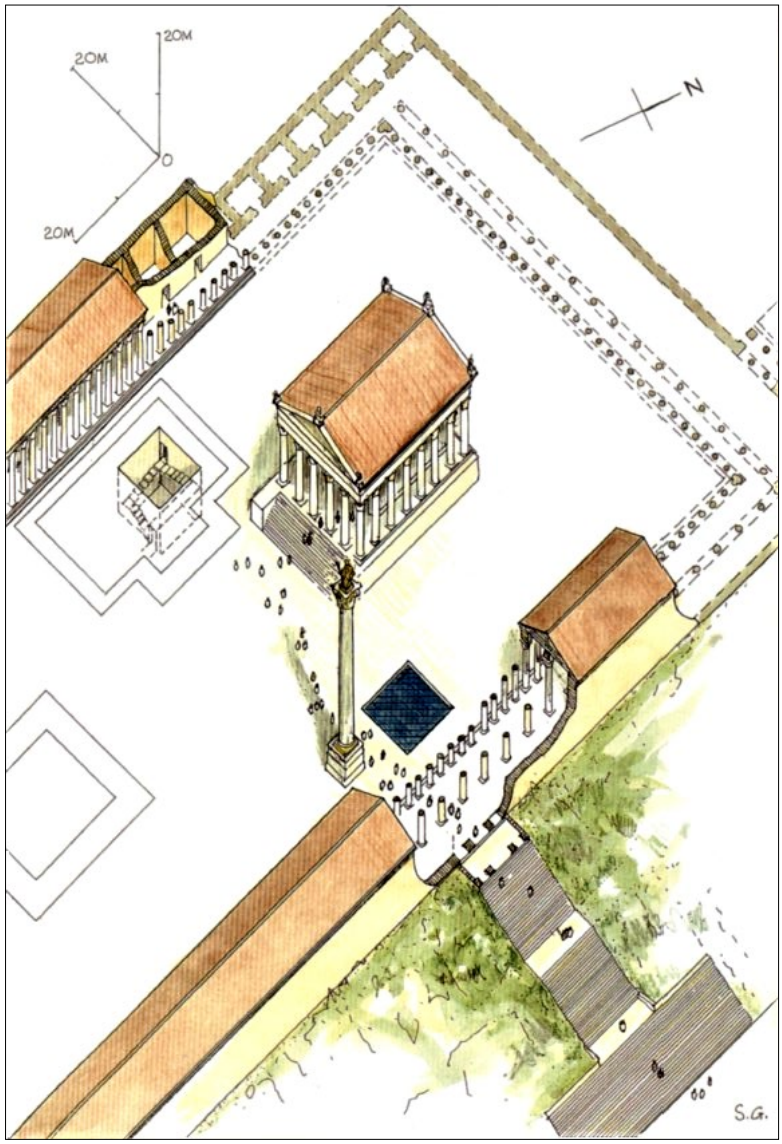


Figure 203. Sarapeion. Axonometric reconstruction of the Roman-renovated sanctuary c. the 3rd century AD; after S. Gibson. McKenzie, Gibson, and Reyes 2004: Plate I. (Chapter 3, site 52: p. 77)

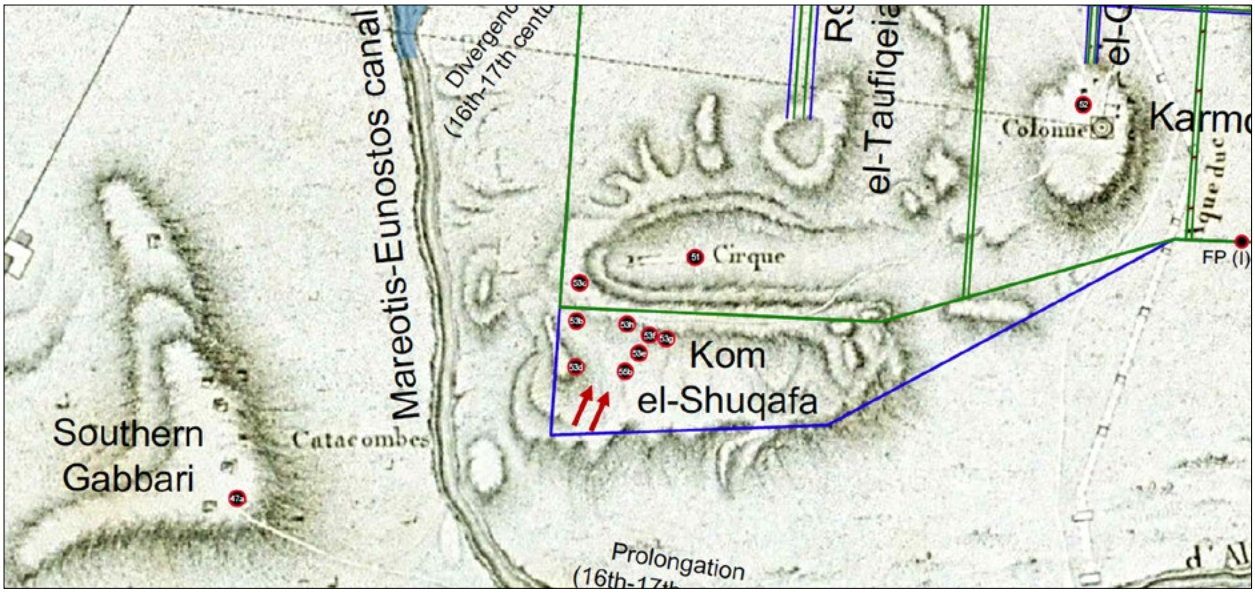


Figure 204. Kom el-Shuqafa necropolis. Relative location of the funerary structures recorded by G. Botti, Expedition Ernst Sieglin, and H. Riad (site 53b-h) to the nearby bath complexes (site 55b), *Hippodromos-circus* (site 51), Sarapeion (site 52), and Agnew hypogeum (site 47a). AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 53: p. 78)

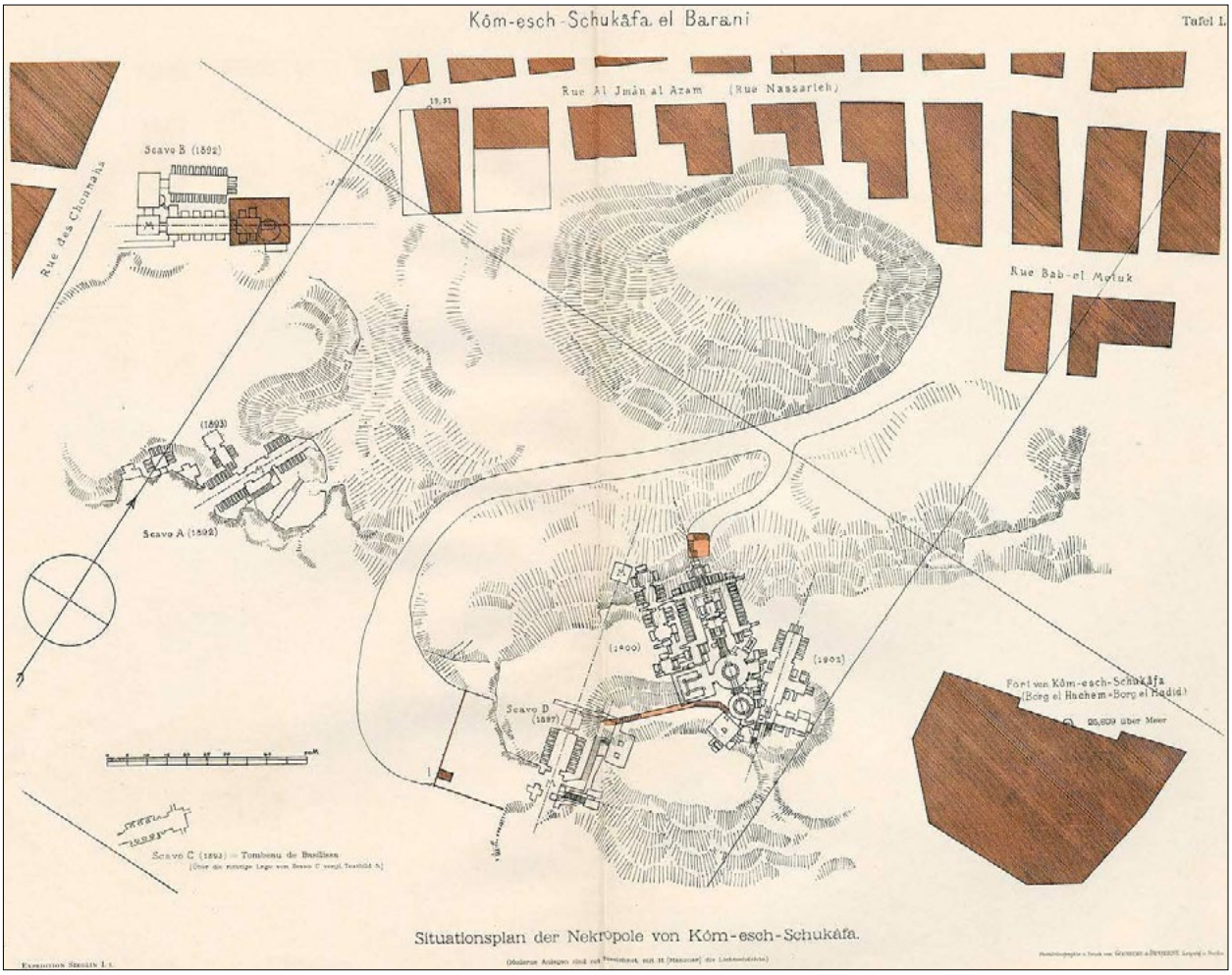


Figure 205. Kom el-Shuqafa necropolis. Funerary structures recorded by G. Botti (1892-93, 1897, 1900-01) and Expedition Ernst Sieglin (1900-02), and revisited by A. Rowe (1941-42). General plan; after A. Thiersch. Schreiber *et al.* 1908b: Tafel I. (Chapter 3, site 53: p. 78)

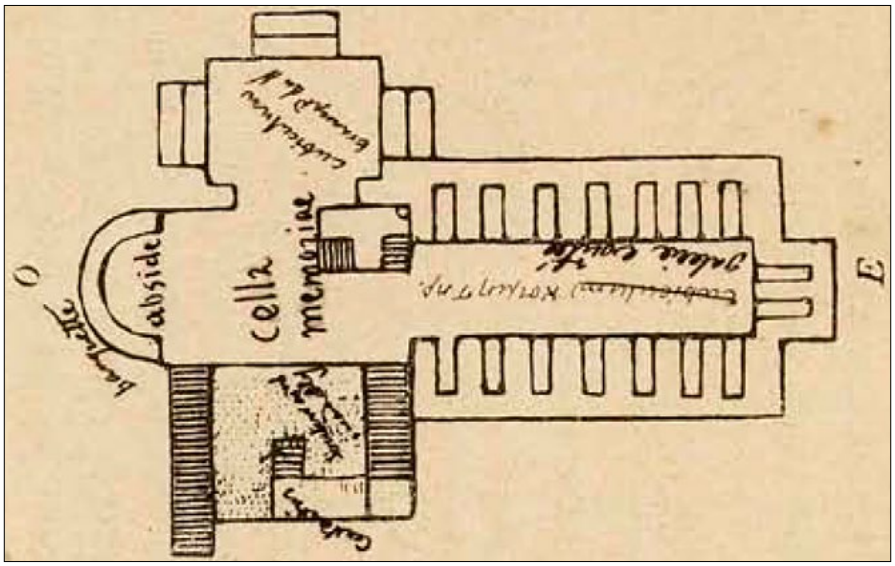


Figure 206. Kom el-Shuqafa necropolis. Wescher hypogeum. Plan. Neroutsos 1888: 41, Chapelles Funéraires Chrétiennes. (Chapter 3, site 53a: p. 79)

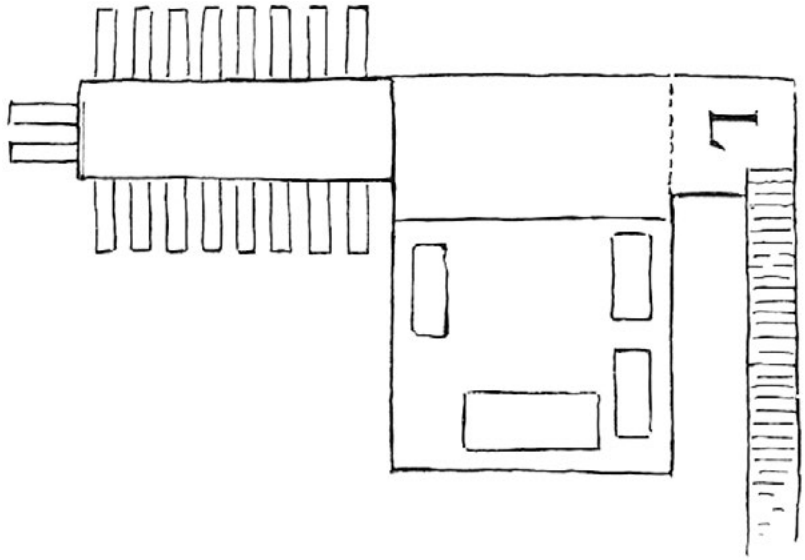


Figure 207. Kom el-Shuqafa necropolis. Pugioli hypogeum: Schreiber's Typus (ε). Plan. Schreiber 1908c: 167, Abbildung 101. (Chapter 3, site 53a: p. 79)

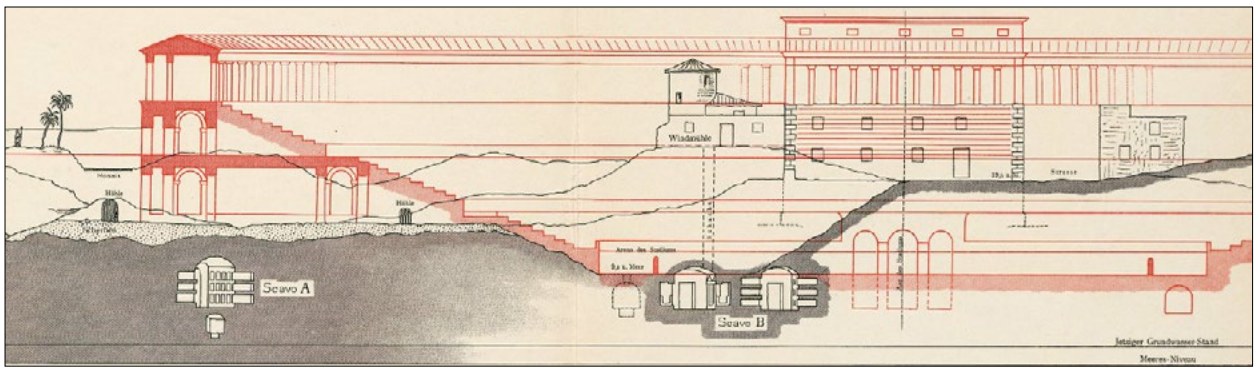


Figure 208. Kom el-Shuqafa necropolis. Sectional view of Botti's Scavi (A) and (B), with conjectural surface constructions and the *Hippodromos-circus* (site 51) in red; after A. Thiersch. Schreiber *et al.* 1908b: Tafel II, Abbildung 1. Extract. (Chapter 3, site 53b: p. 79)

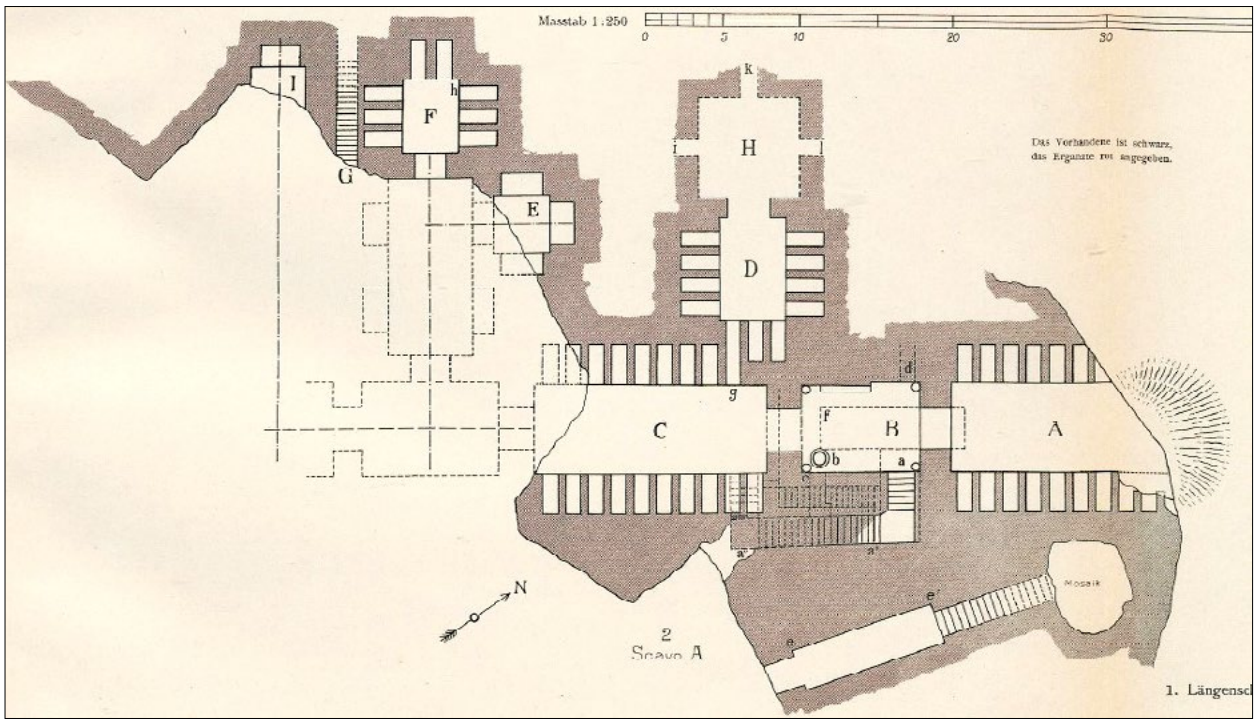


Figure 209. Kom el-Shuqafa necropolis. Botti's Scavo (A). Plan; after A. Thiersch. Schreiber *et al.* 1908b: Tafel II, Abbildung 2. (Chapter 3, site 53b: p. 79)

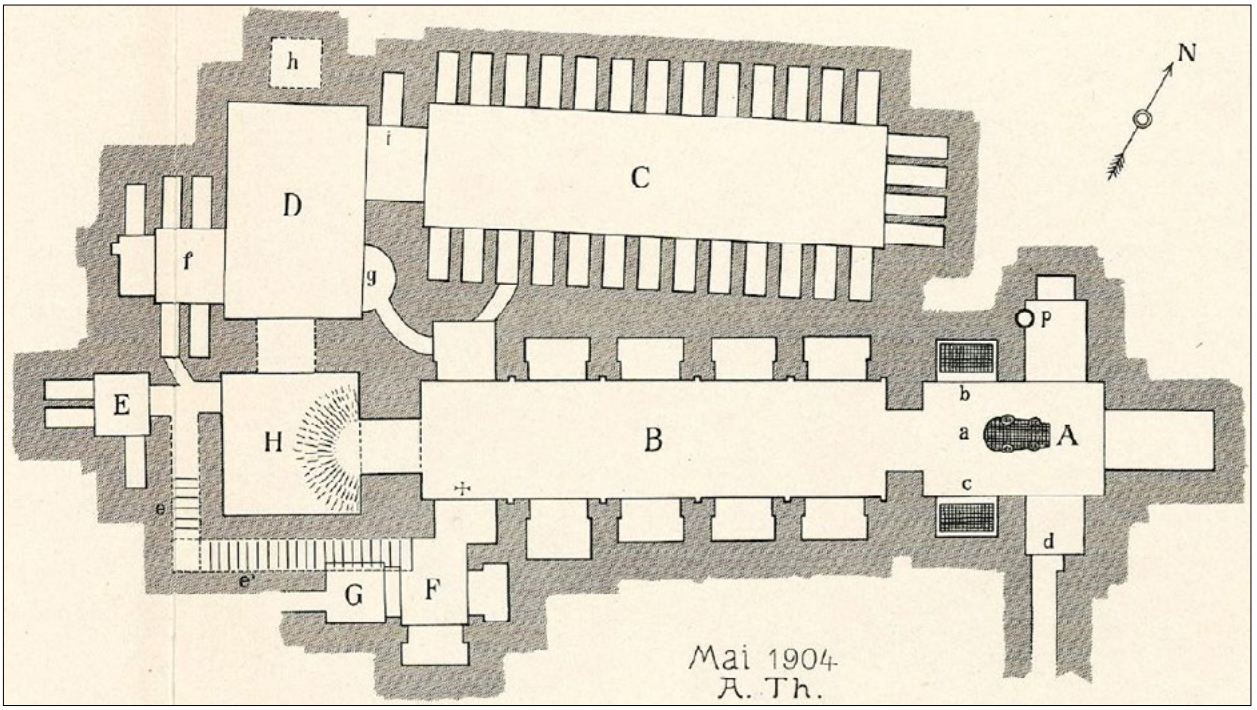


Figure 210. Kom el-Shuqafa necropolis. Botti's Scavo (B). Plan; after A. Thiersch. Schreiber *et al.* 1908b: Tafel II, Abbildung 4. (Chapter 3, site 53c: p. 80)

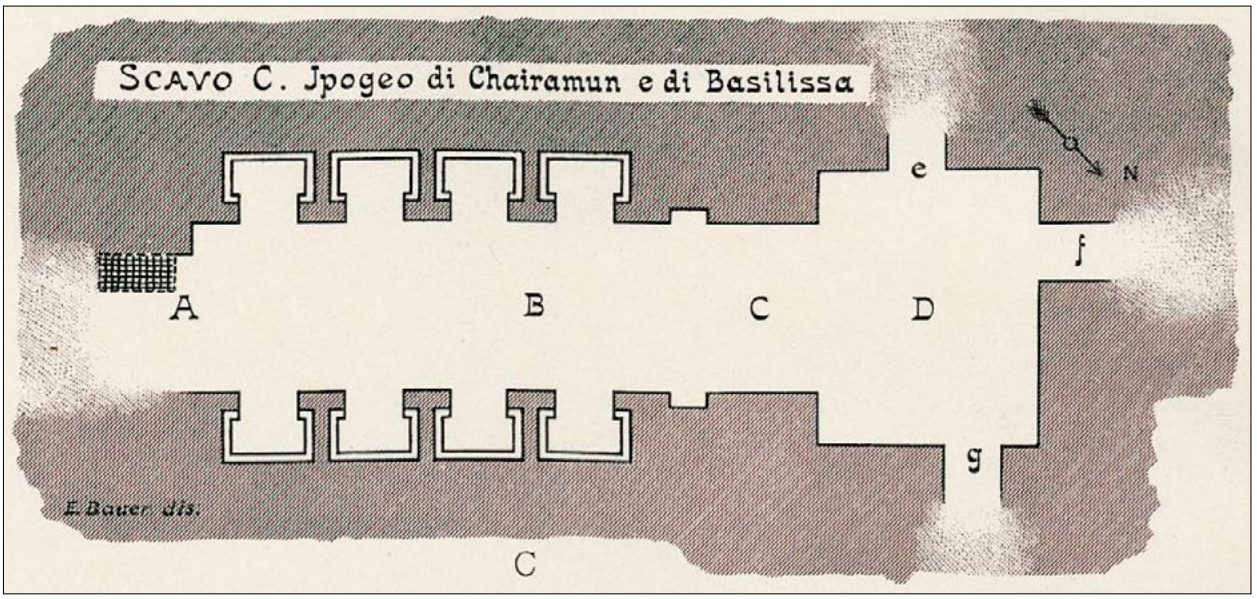


Figure 211. Kom el-Shuqafa necropolis. Botti's Scavo (C). Plan; after E. Bauer. Schreiber *et al.* 1908b: Tafel III, Abbildung 1. (Chapter 3, site 53d: p. 80)

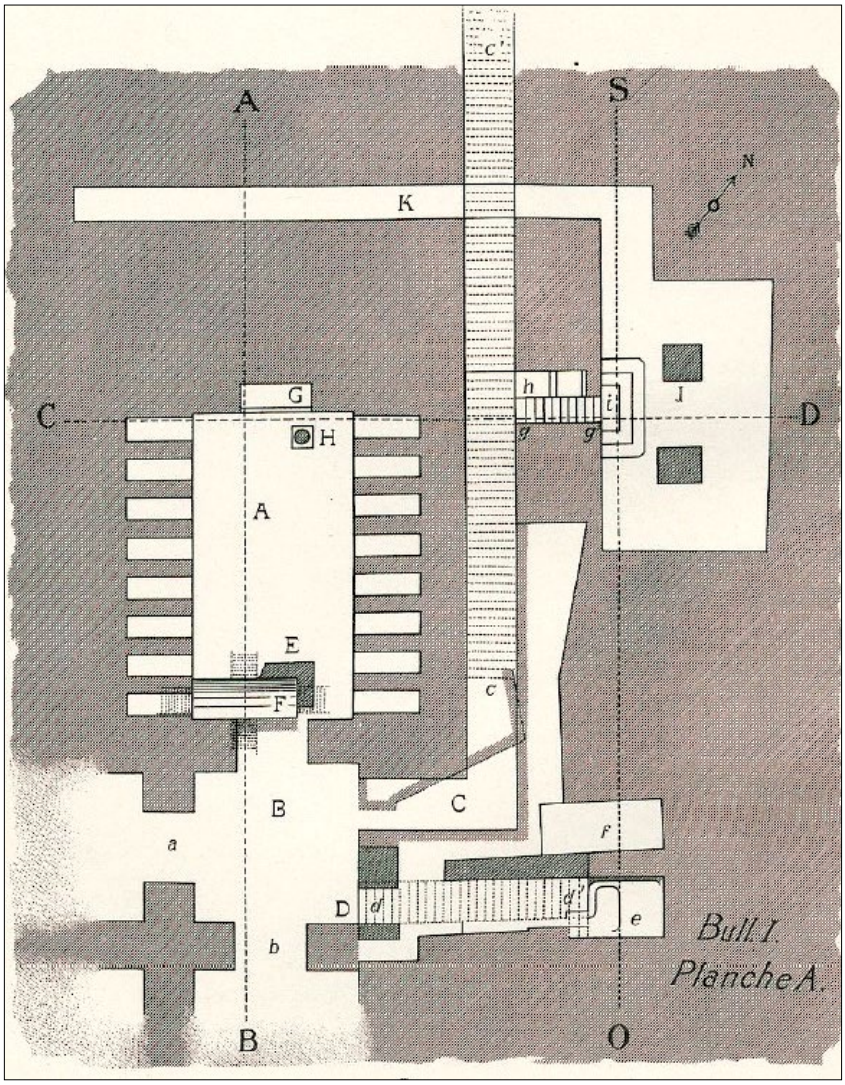


Figure 212. Kom el-Shuqafa necropolis. Botti's Scavo (D). Plan; after E. Bauer. Schreiber *et al.* 1908b: Tafel III, Abbildung 2. (Chapter 3, site 53e: p. 81)

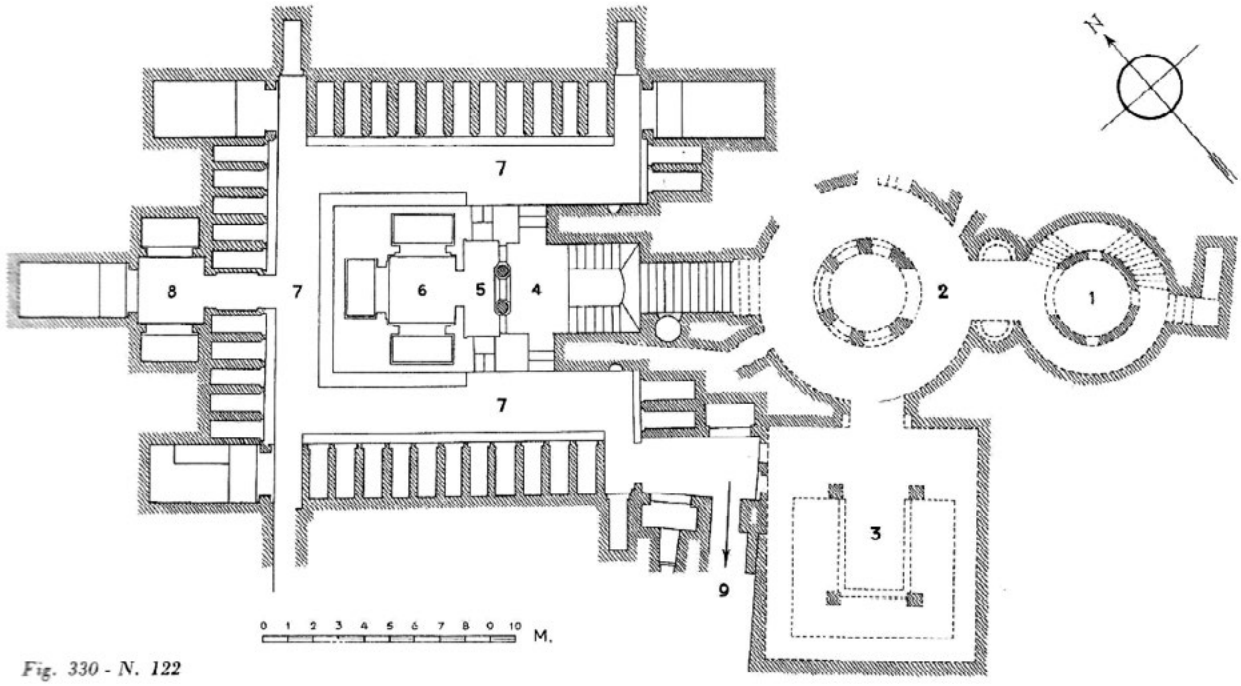


Figure 213. Kom el-Shuqafa necropolis. Hauptgrab: construction phase (I). Plan. Adriani 1966b: Catalogue Number 122, Tavola 98, Figure 330. (Chapter 3, site 53f: p. 81)

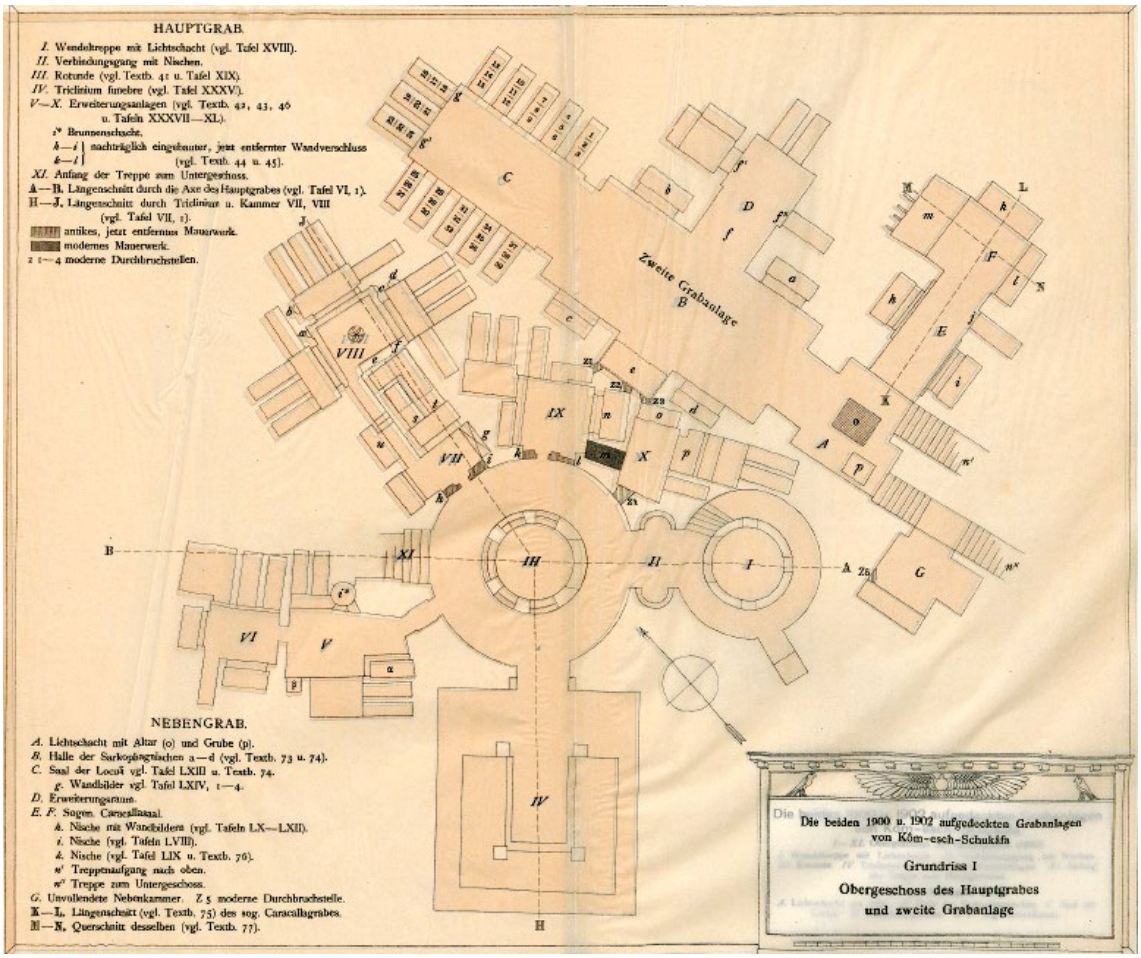


Figure 214. Kom el-Shuqafa necropolis. Hauptgrab and Nebengrab: subsequent phases of construction: subterranean level (I). Plan; after A. Thiersch. Schreiber *et al.* 1908b: Tafel IV. (Chapter 3, site 53f: p. 81)

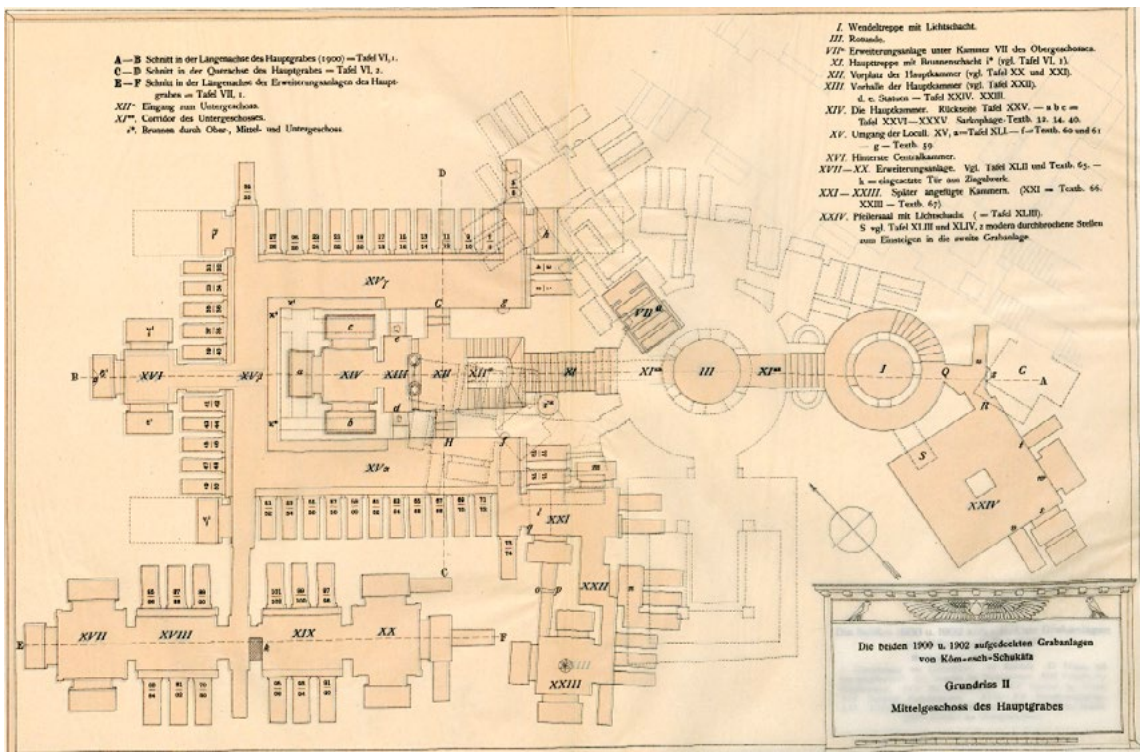


Figure 215. Kom el-Shuqafa necropolis. Hauptgrab: subsequent phases of construction: subterranean level (II). Plan; after A. Thiersch. Schreiber *et al.* 1908b: Tafel V. (Chapter 3, site 53f: p. 81)

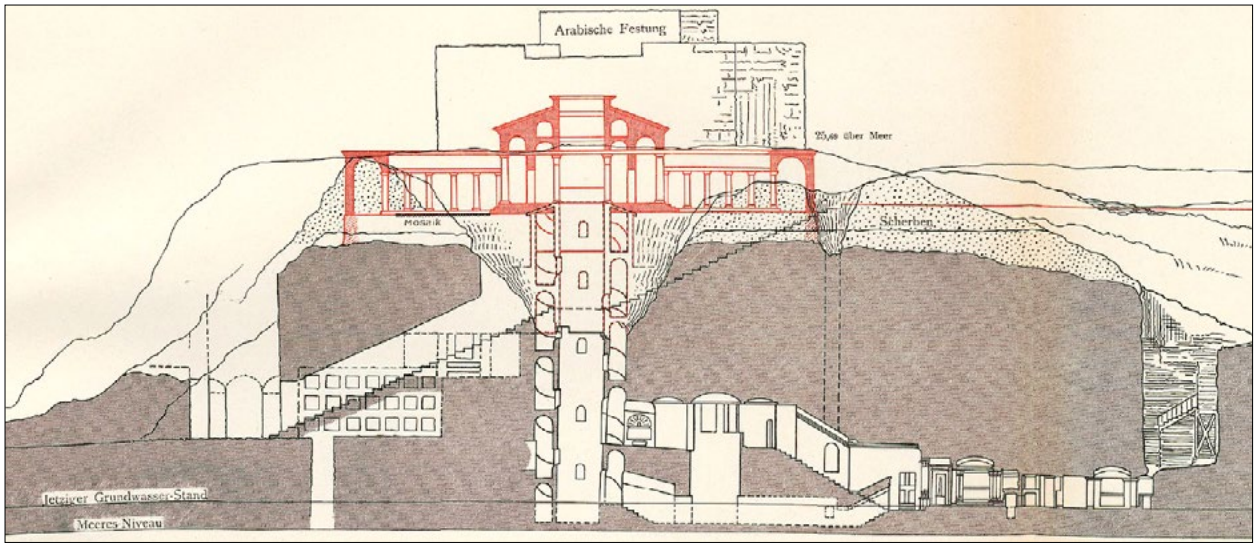
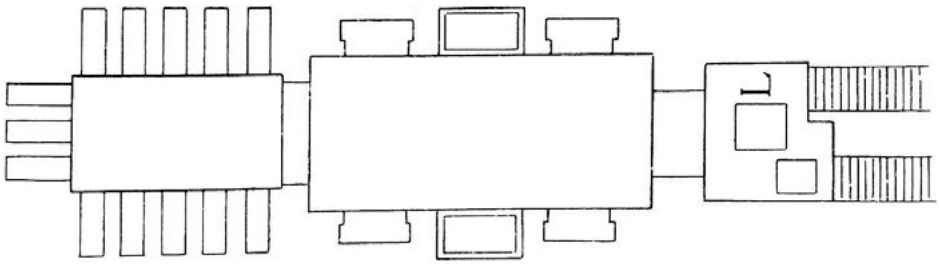


Figure 216. Kom el-Shuqafa necropolis. Sectional view of the Hauptgrab, with conjectural surface constructions in red; after A. Thiersch. Schreiber *et al.* 1908b: Tafel II, Abbildung 1. Extract. (Chapter 3, site 53f: p. 81)

Figure 217. Kom el-Shuqafa necropolis. Nebengrab: construction phase (I). Plan. Adriani 1966b: Catalogue Number 123, Tavola 104, Figure 353. (Chapter 3, site 53g: p. 83)



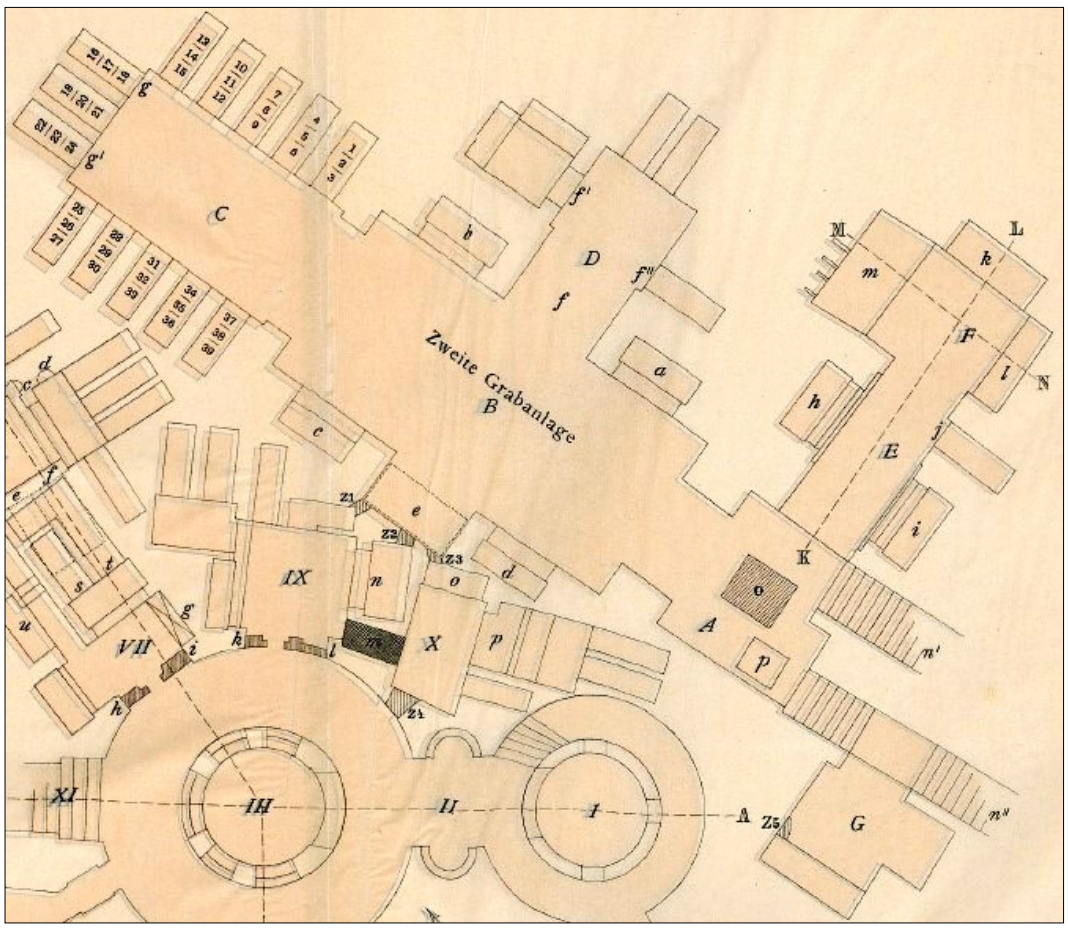


Figure 218. Kom el-Shuqafa necropolis. Nebengrab: subsequent phases of construction. Plan; after A. Thiersch. Schreiber *et al.* 1908b: Tafel IV. Extract. (Chapter 3, site 53g: p. 83)

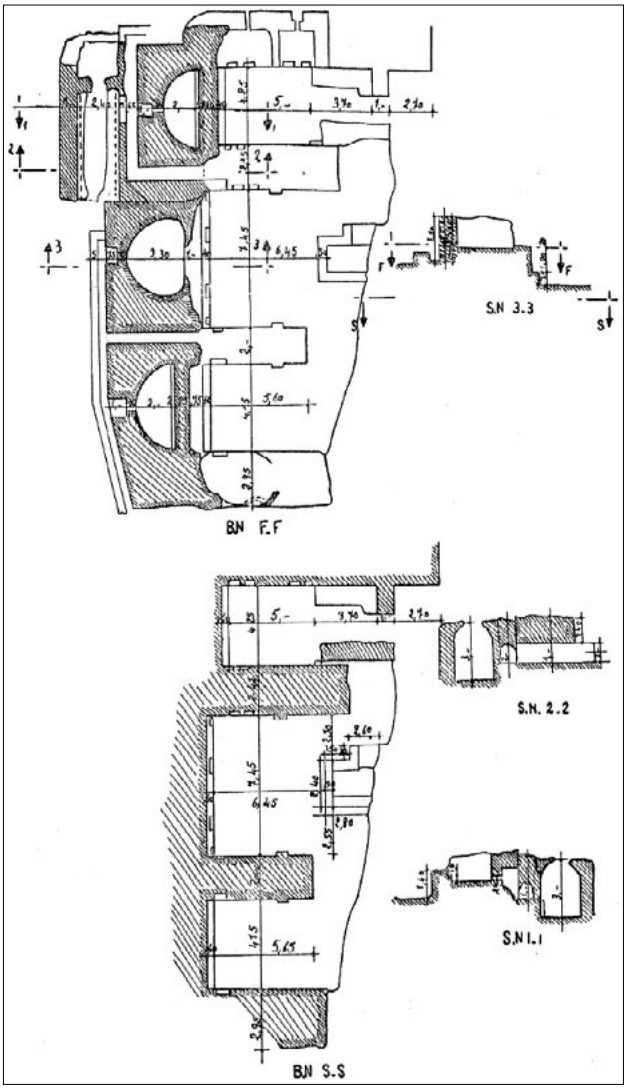


Figure 219. Kom el-Shuqafa bath complexes. Bath complex (A). Plan and sectional view. Riad 1975: 119, Plan 2. (Chapter 3, site 55b: p. 85)

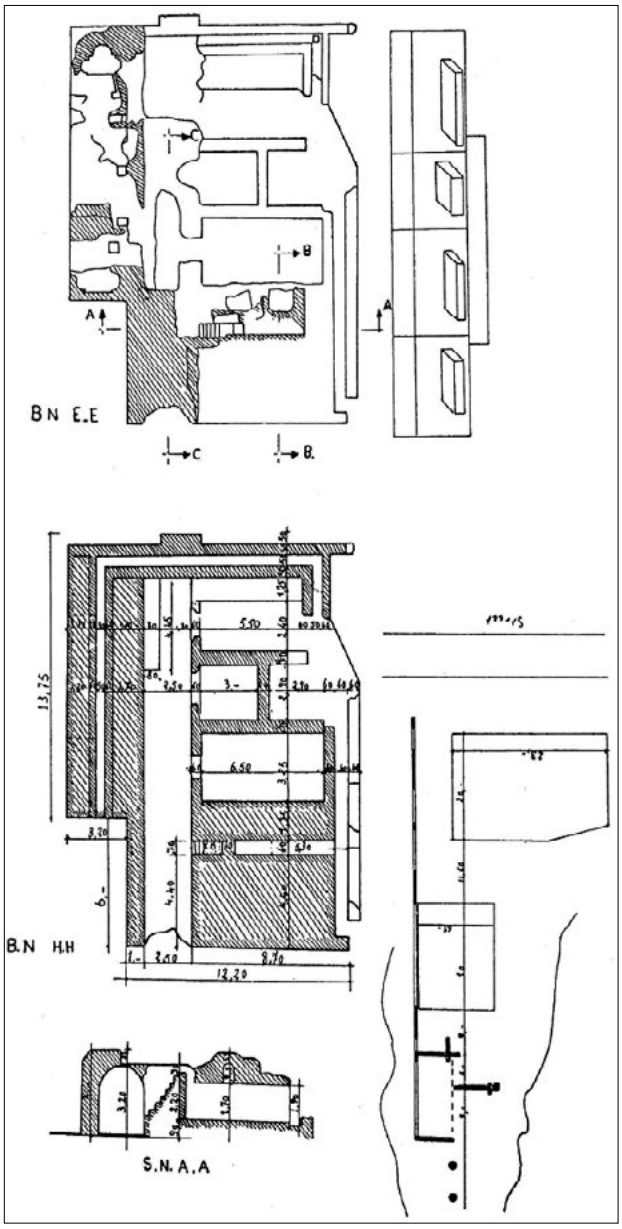


Figure 220. Kom el-Shuqafa bath complexes. Bath complex (B). Plan and sectional view. Riad 1975: 121, Plan 3. (Chapter 3, site 55b: p. 85)

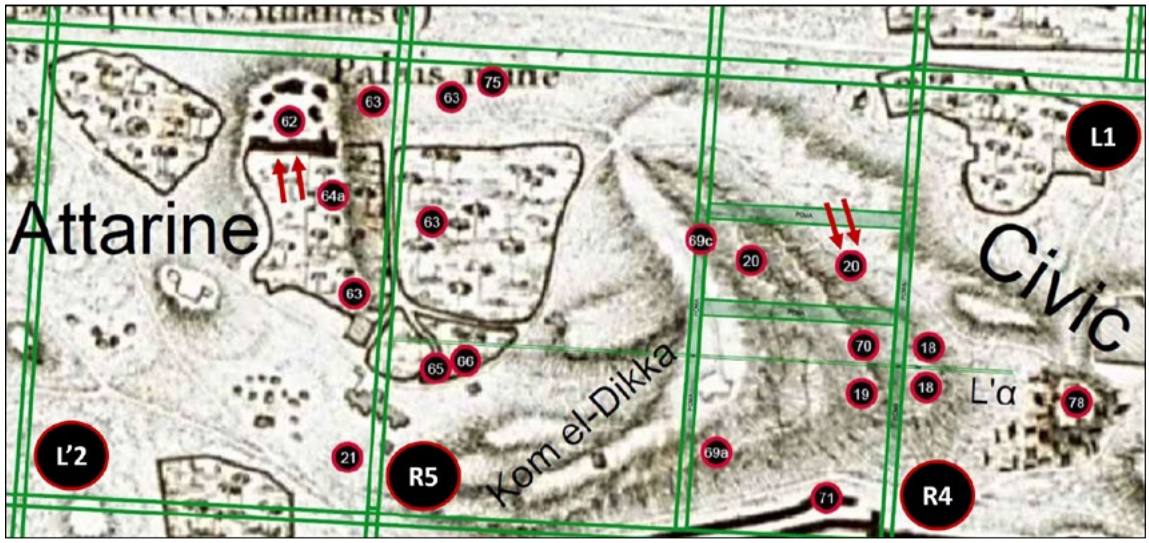


Figure 221. el-Attarine and Kom el-Dikka bath complexes: *insulae* L1-L'2-R4-R6. Relative location of the recorded bath complex in el-Attarine to that excavated at the nearby Polish concession in Kom el-Dikka (site 20). AutoCAD map (V3). Extract. Author © 2019. (Chapter 3, site 62a: p. 87)



Figure 222. el-Nabi Daniel Mosque. Breccia's 1929 trenches (A), (B), and (C). Breccia 1932: Planche LXI. Extract. Labels added by author. (Chapter 3, site 66: p. 98)

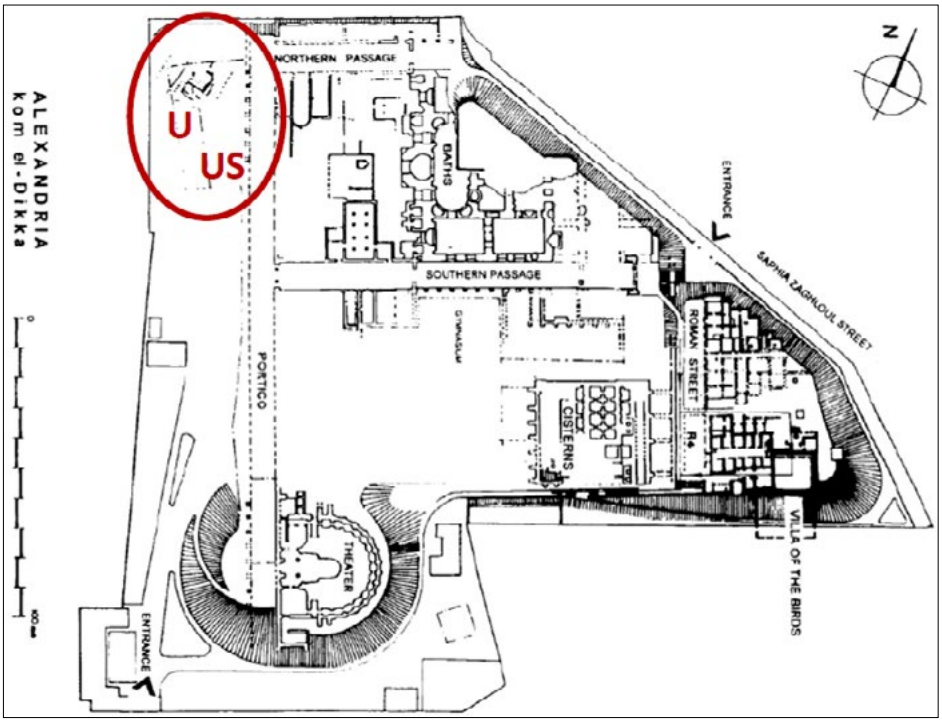


Figure 223. Kom el-Dikka archaeological park. Localisation of sectors (U) and (US). Plan; after W. Kołątaj. Majcherek 2001: 24, Figure 1. Labels added by author. (Chapter 3, site 69c: p. 92)

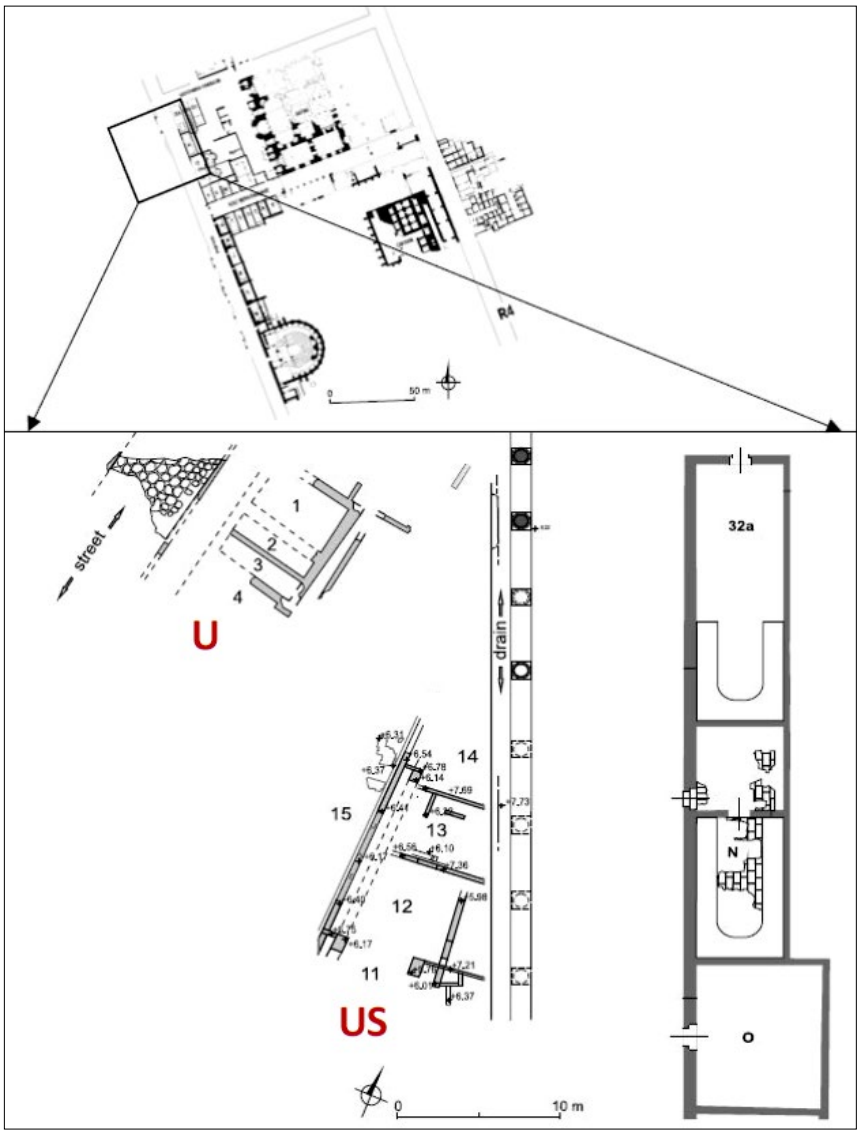


Figure 224. Kom el-Dikka archaeological park. Cardinally-oriented (N-S) off-grid vestiges excavated at sectors (U) and (US), against the secondary intercardinal orientation (NNW-SSE) of later constructions (*odeum's* portico and *auditoria*) on site. Plan; after M. Polak, A. Pisarzewski, and G. Majcherek. Majcherek and Kucharczyk 2014: 32, Figure 6. Labels added by author. (Chapter 3, site 69c: p. 92)

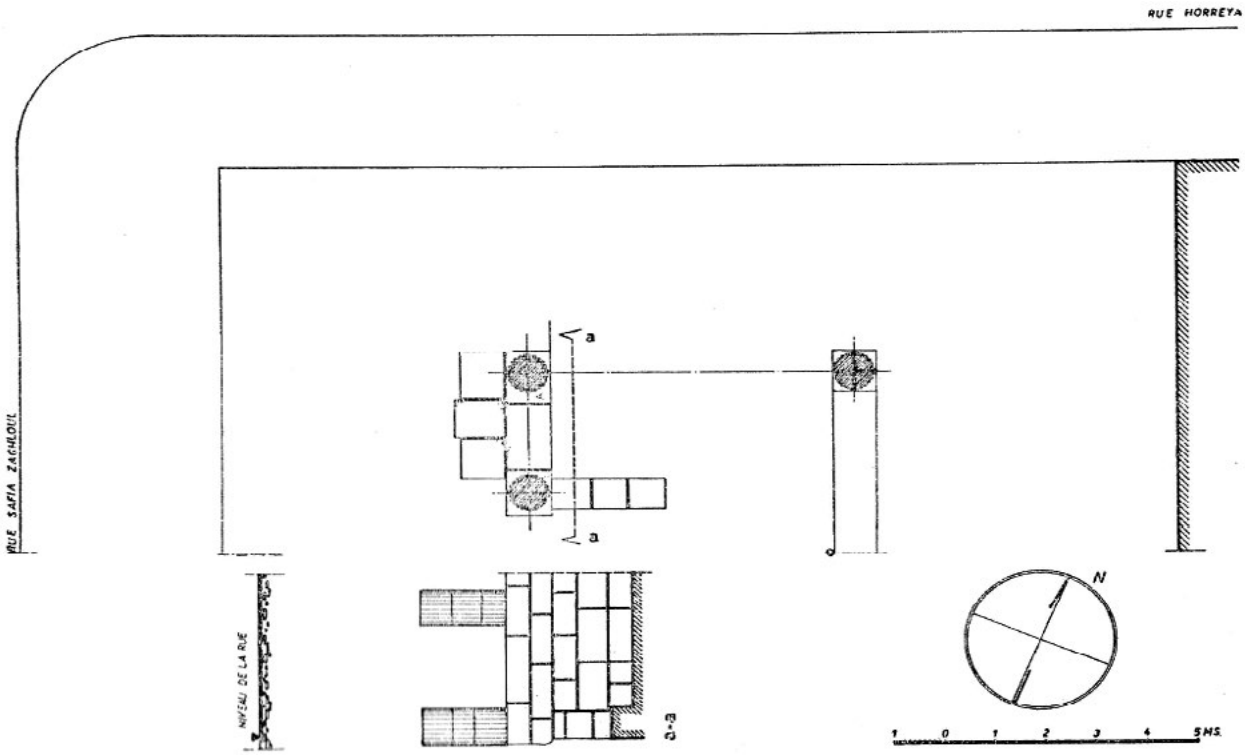


Figure 225. Kom el-Dikka. SE. corner of the Fouad-Safia Zaghloul junction. Stylobate of a Doric colonnade (stoa?). Plan and sectional view. Riad 1967a: 86.
(Chapter 3, site 77: p. 96)



Figure 226. el-Attarine. Southern side of Fouad Street, at the junction with Morsi Badr and Sherif Pasha: the present-day site of Markaz el-Horreya lel-Ibda bel-Askandarreiya. Localisation of a temple to Sarapis and Isis, Θεοὶ Σωτῆρες, and Ptolemy IV Philopator and Arsinoe III, Θεοὶ Φιλοπάτορες. Google Earth © 2018. Labels added by author. (Chapter 3, site 90: p. 100)

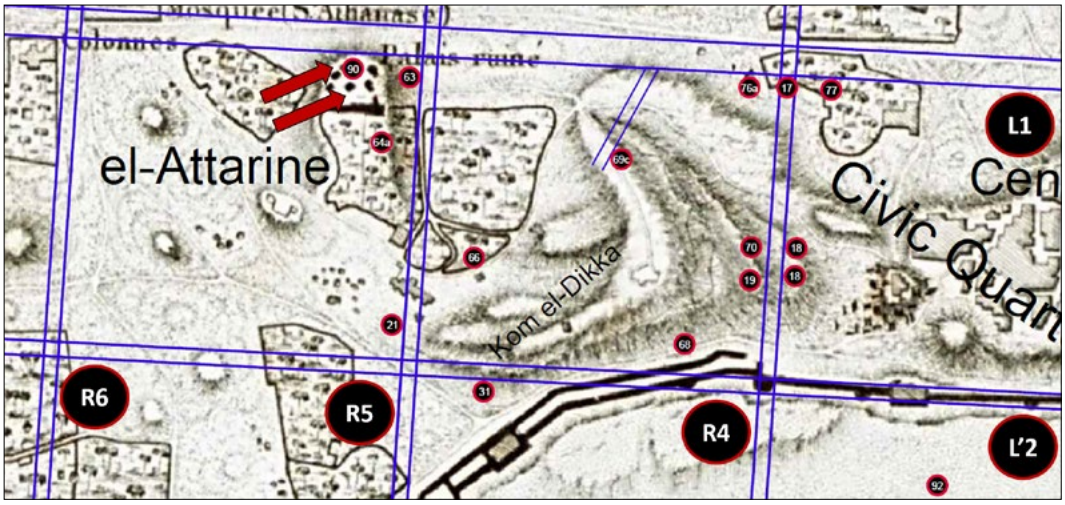


Figure 227. el-Attarine. NE. sector of *insula* L1-L'2-R5-R6. Localisation of a temple to Sarapis and Isis, Θεοὶ Σωτῆρες, and Ptolemy IV Philopator and Arsinoe III, Θεοὶ Φιλοπάτορες. AutoCAD map (V1). Extract. Author © 2019. (Chapter 3, site 90: p. 100)

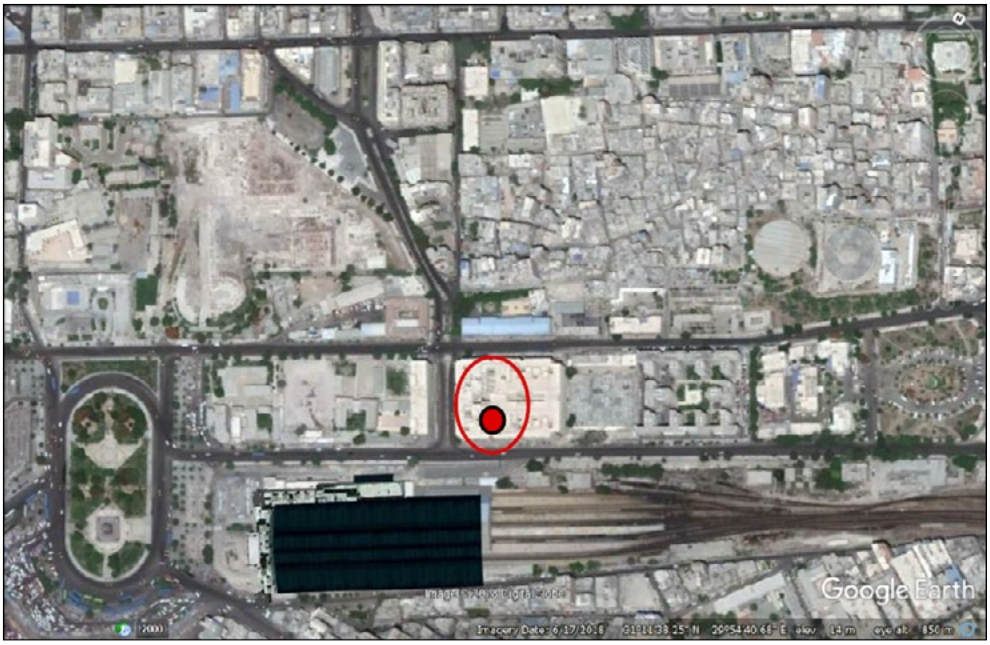


Figure 228. Kom el-Dikka. SE. of the archaeological park. Localisation of a temple to Bastet (Boubasteion). Google Earth © 2018. Labels added by author. (Chapter 3, site 92: p. 101)

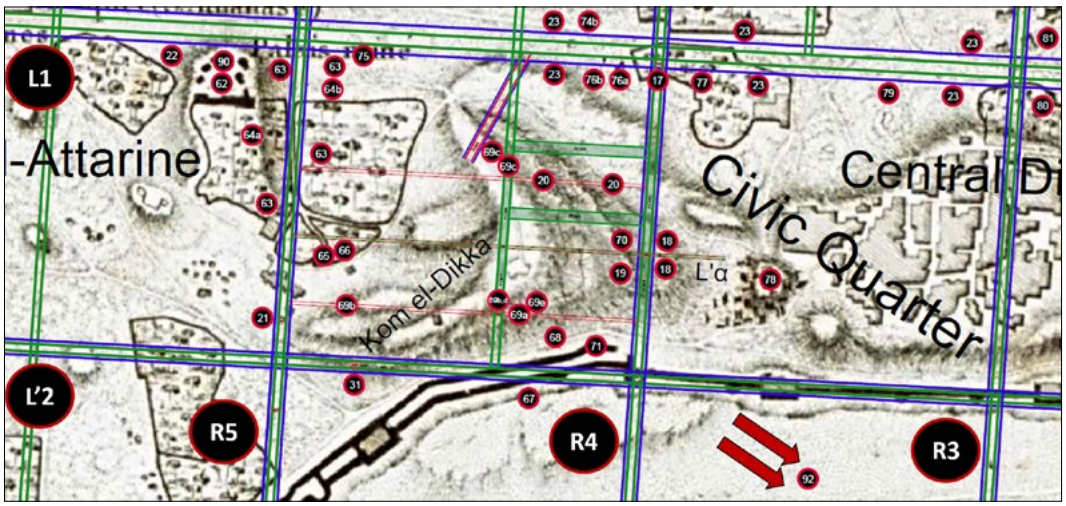


Figure 229. Kom el-Dikka. *Insula* L'2-L'3-R3-R4. Localisation of a temple to Bastet (Boubasteion). AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 92: p. 101)

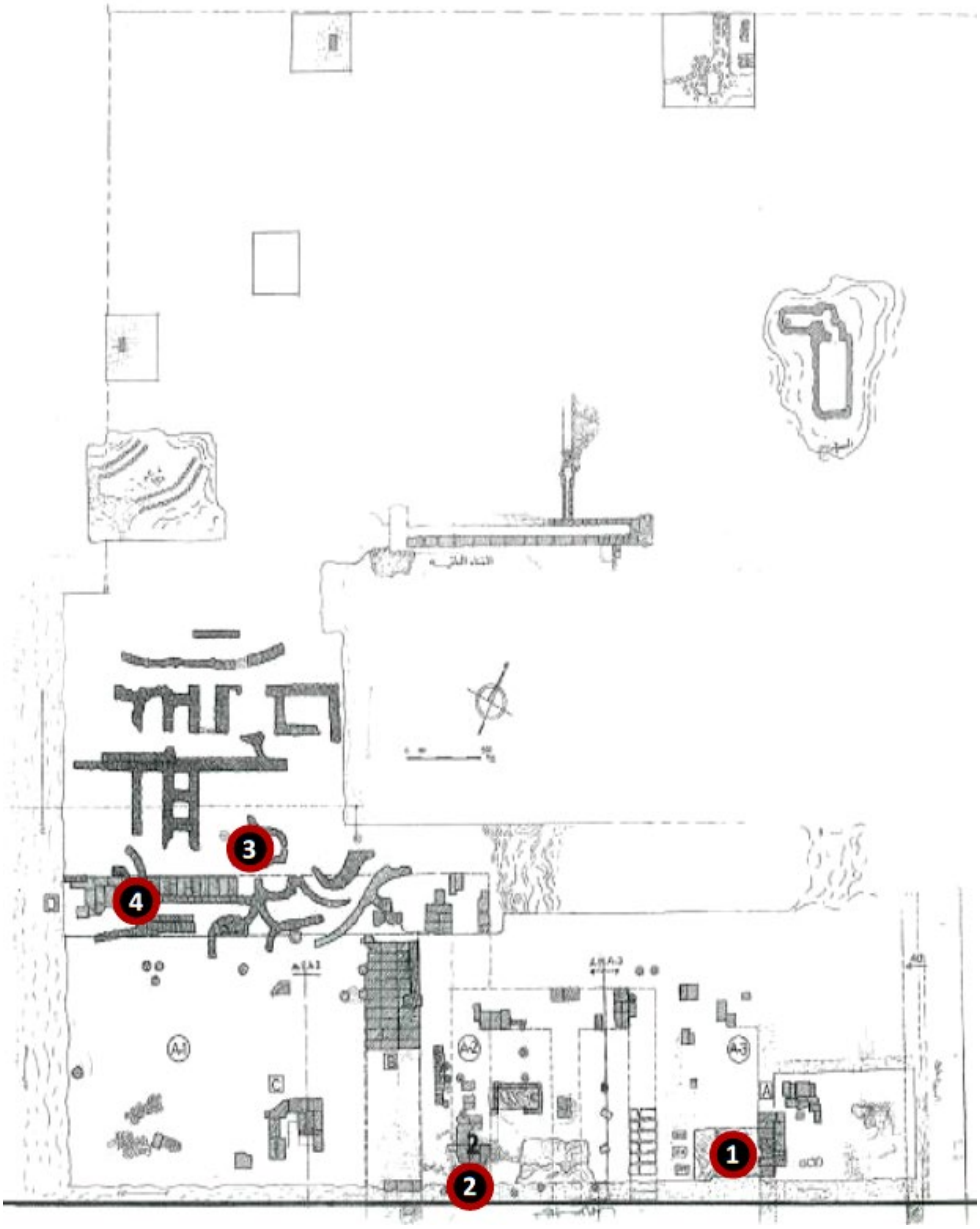


Figure 230. Kom el-Dikka. Temple to Bastet (Boubasteion). Localisation of deposits on the SCA excavation plan. Abd el-Maksoud, Abd el-Fattah, and Seif el-Din 2012: 434, Figure 8. Labels added by author. (Chapter 3, site 92: p. 101)

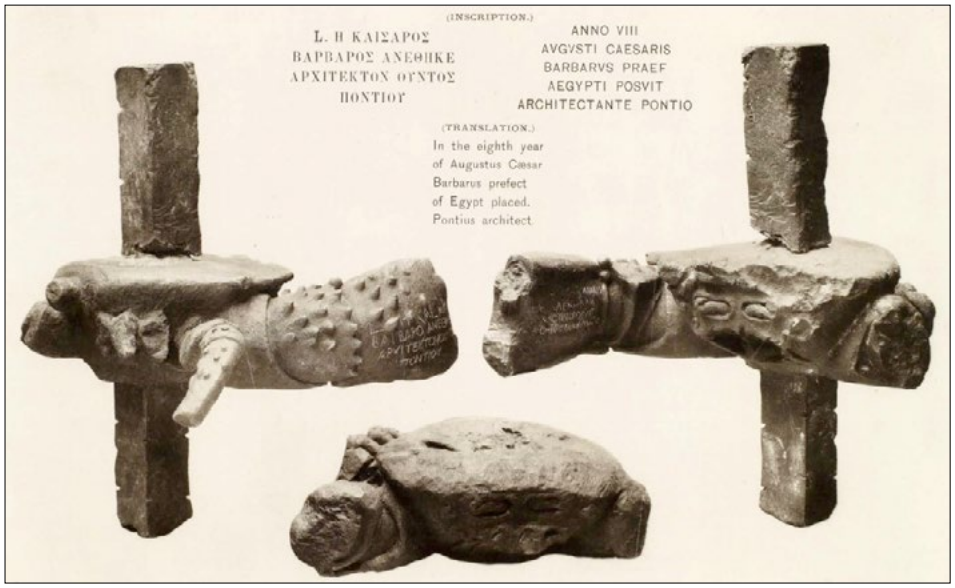


Figure 231. el-Ramleh. Bronze crabs of the standing (New York) obelisk, bilingually inscribed in Greek and Latin. Gorringe 1885: Plate V. (Chapter 3, site 93: p. 103)



Figure 232. el-Ramleh. Façade of the Caesareum; reconstruction. Gorringe 1885: Front cover. (Chapter 3, site 93: p. 103)

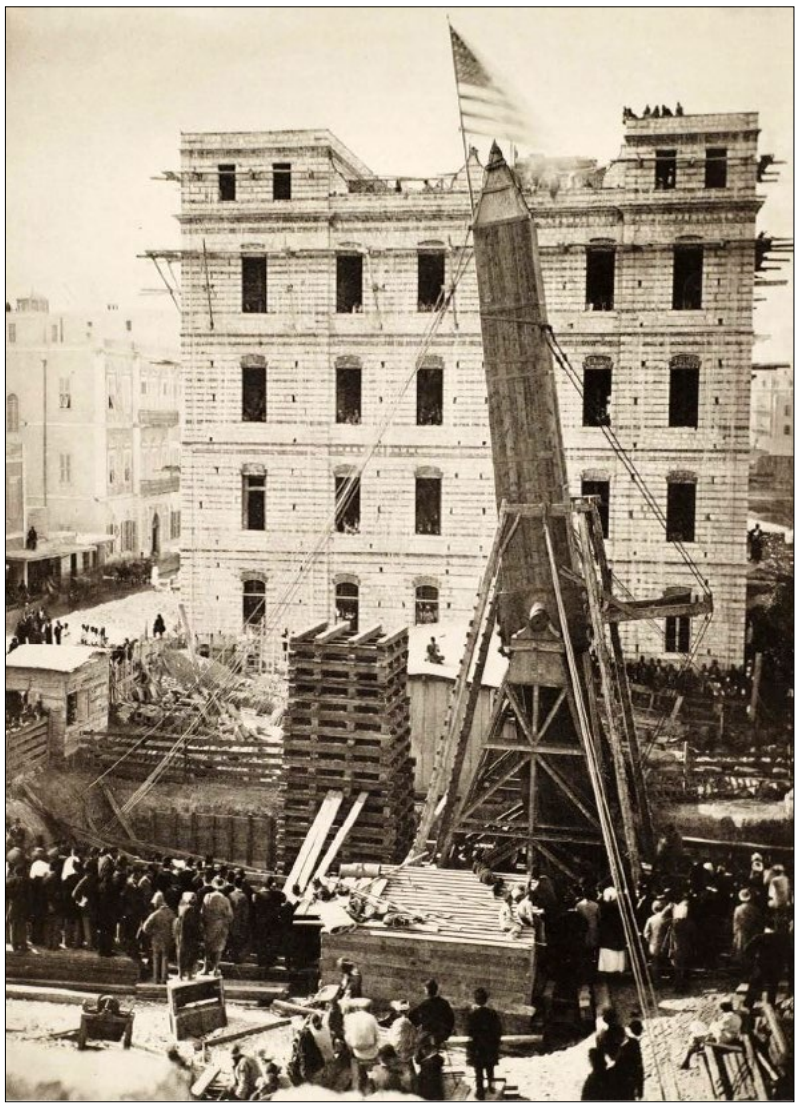


Figure 233. el-Ramleh. The present-day site of Le Hotel Métropole. Turning the standing (New York) obelisk. December 6th, 1879. Gorringe 1885: Plate VIII. (Chapter 3, site 93: p. 104)

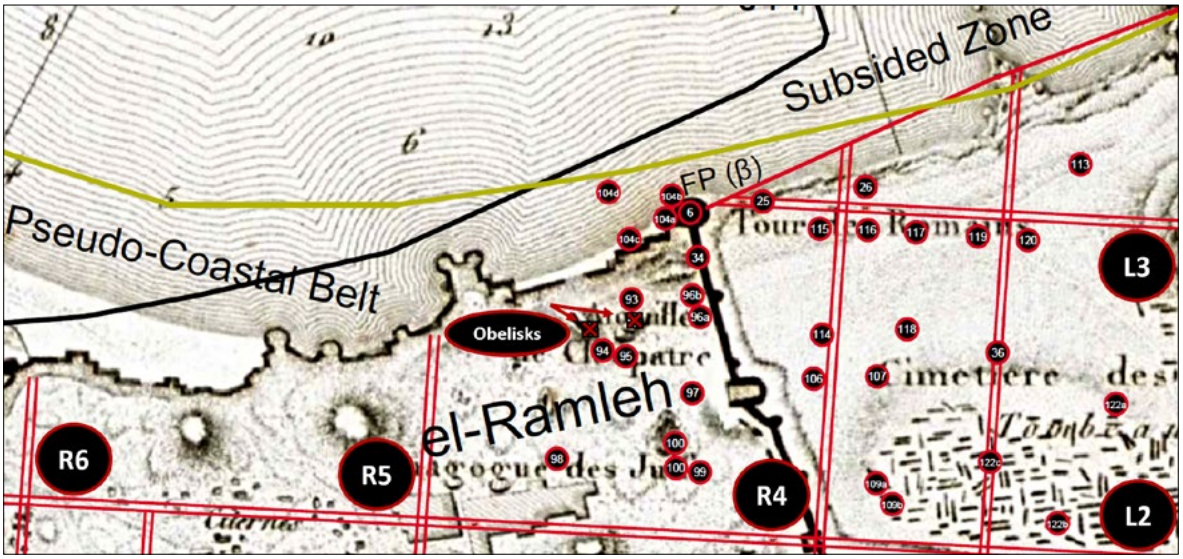


Figure 234. el-Ramleh. *Insula* L2-L3-R4-R5, encompassing the site of the historical Caesareum.
AutoCAD map (V2). Extract. Author © 2019. (Chapter 3, site 93: p. 104)

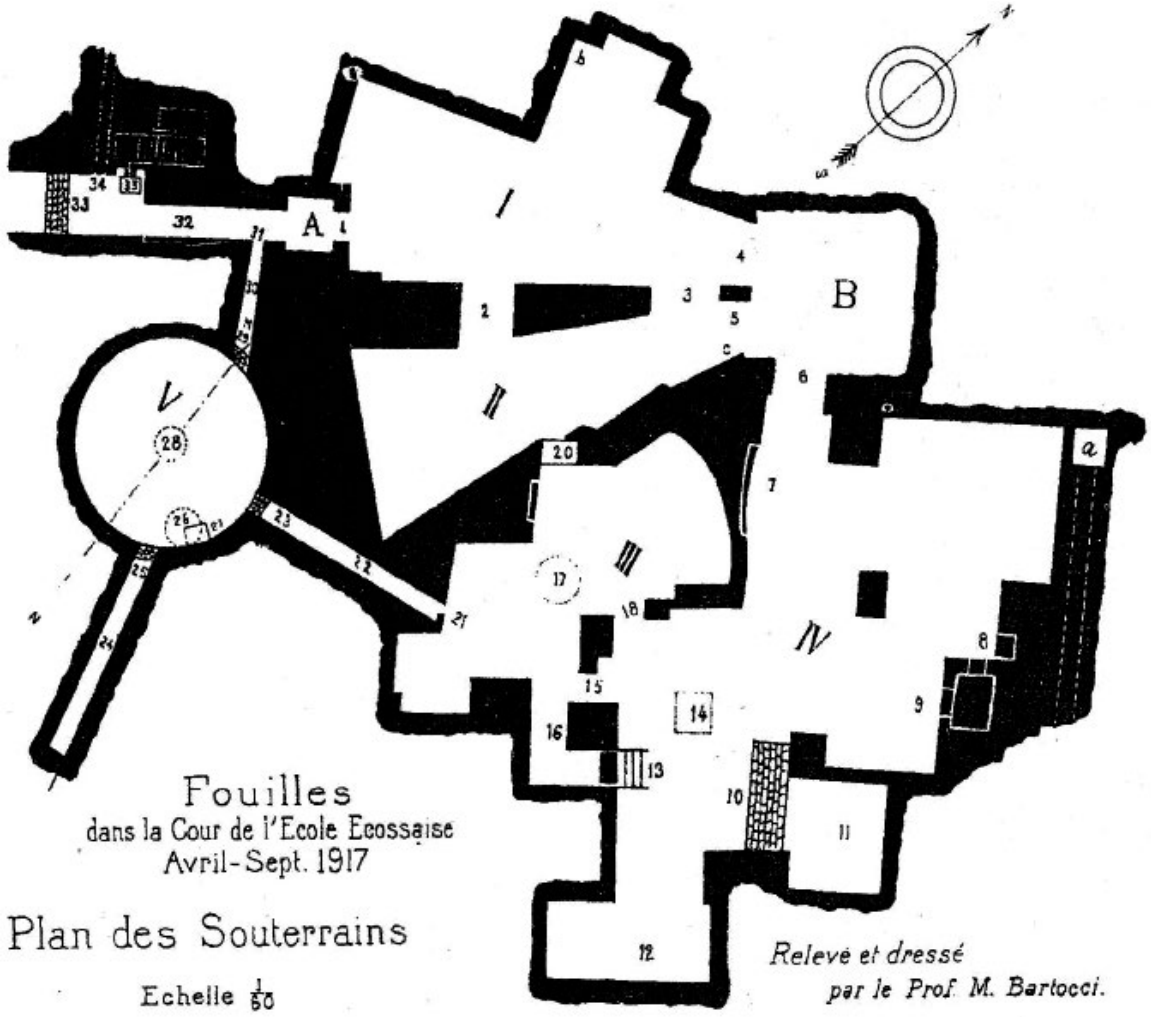


Figure 235. el-Ramleh. Scottish (el-Manar) School. Subterranean complex.
Plan; after M. Bartocci. Combe 1919: Planche I. (Chapter 3, site 109a: p. 112)

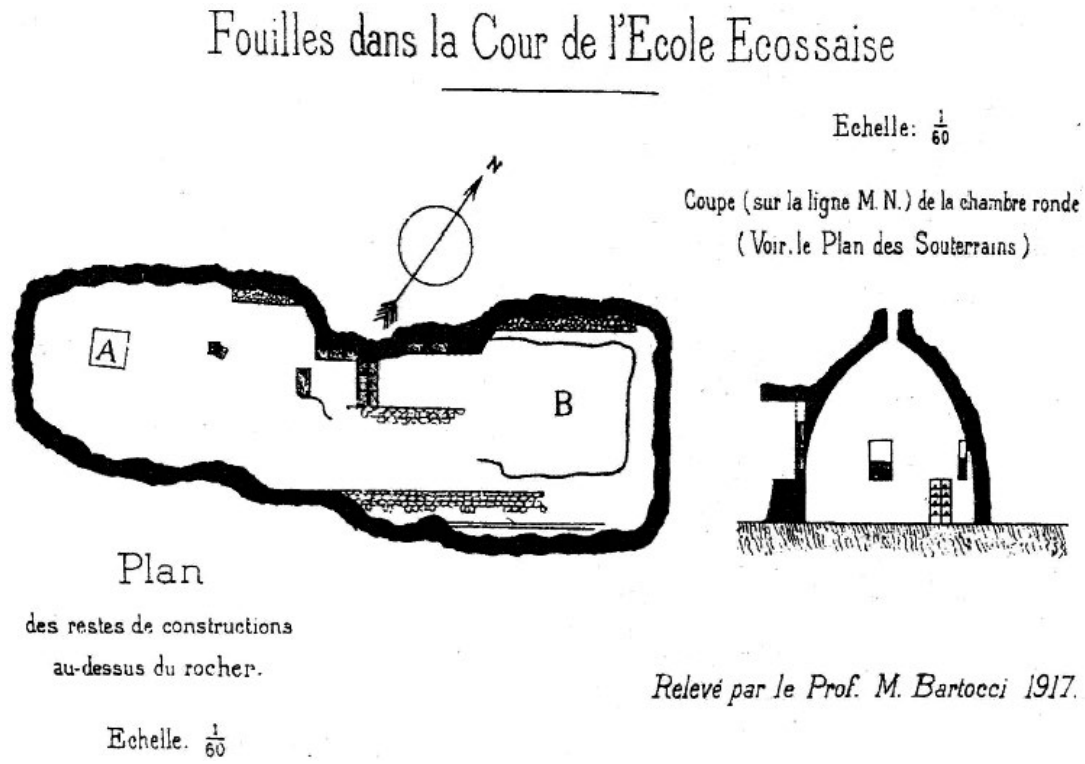


Figure 236. el-Ramleh. Scottish (el-Manar) School. Left: plan of surface constructions (A) and (B). Right: sectional view of subterranean round chamber (V); after M. Bartocci. Combe 1919: Planche II. (Chapter 3, site 109a: p. 112)

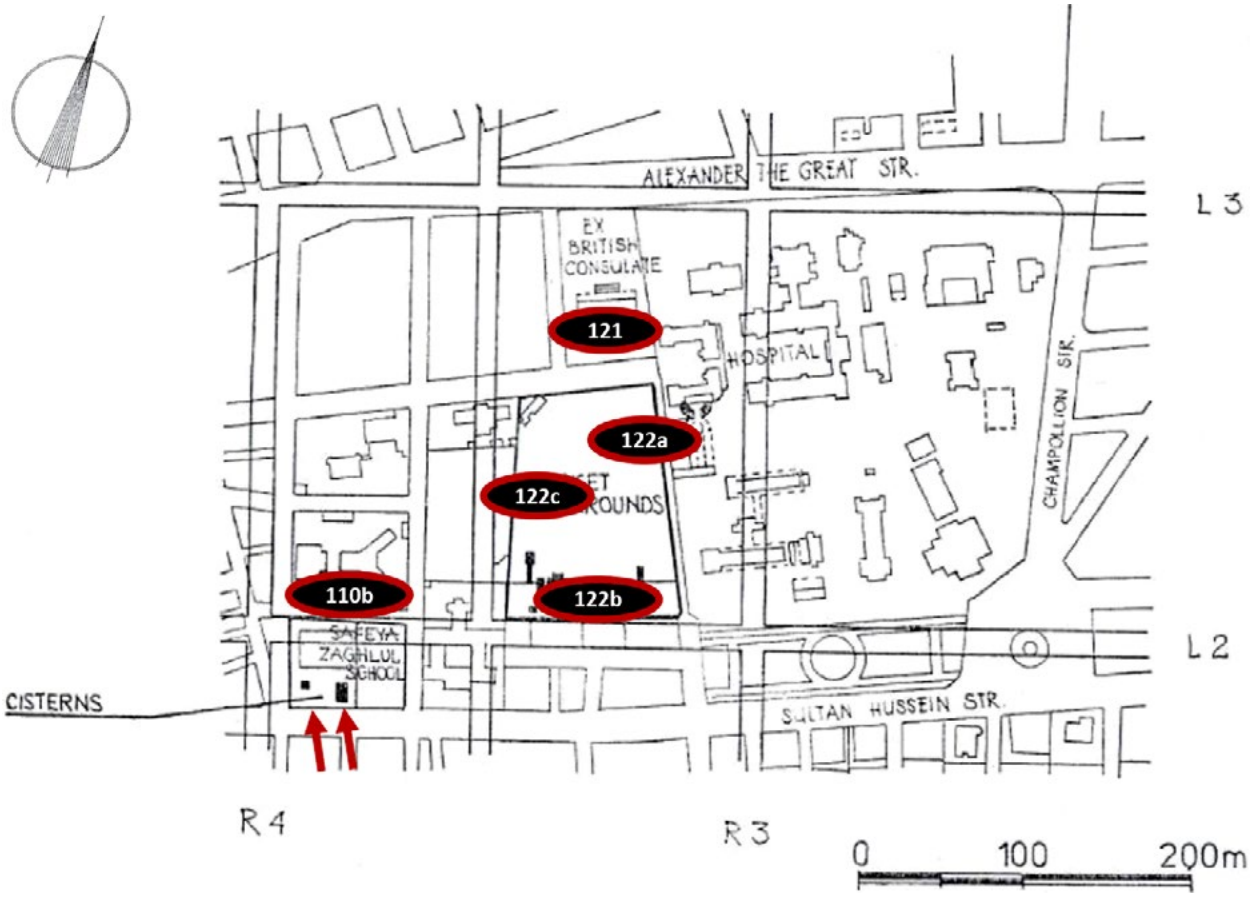


Figure 237. el-Ramleh. Pelizäus Heim (Safia Zaghloul School). Daszewski's localisation of two cisterns on Adriani's 1934 *pianta* (Figure 64). Daszewski 1985b: 179, Plan 1. Labels added by author. (Chapter 3, site 110b: p. 112)

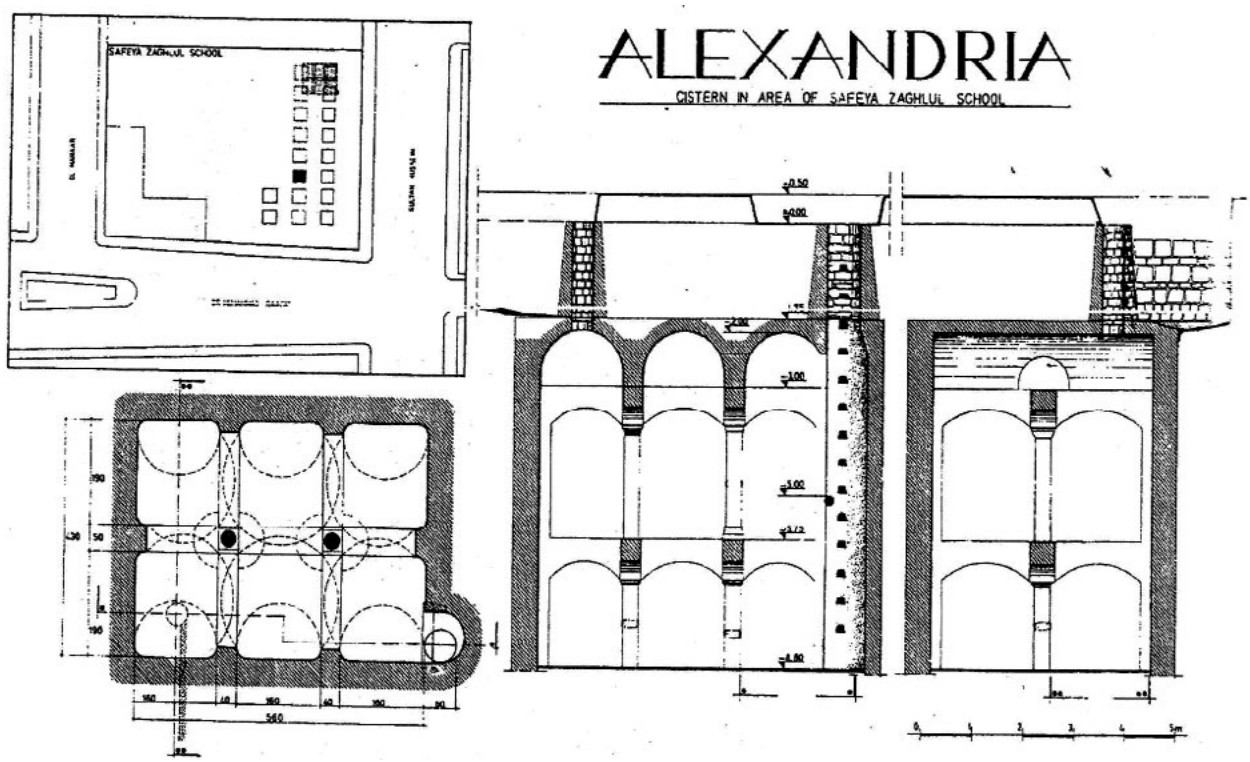


Figure 238. el-Ramleh. Pelizäus Heim (Safia Zaghloul School). Plan and sectional view of a cistern; after St. Medeksza. Daszewski 1985b: 181, Plan 2. (Chapter 3, site 110b: p. 112)

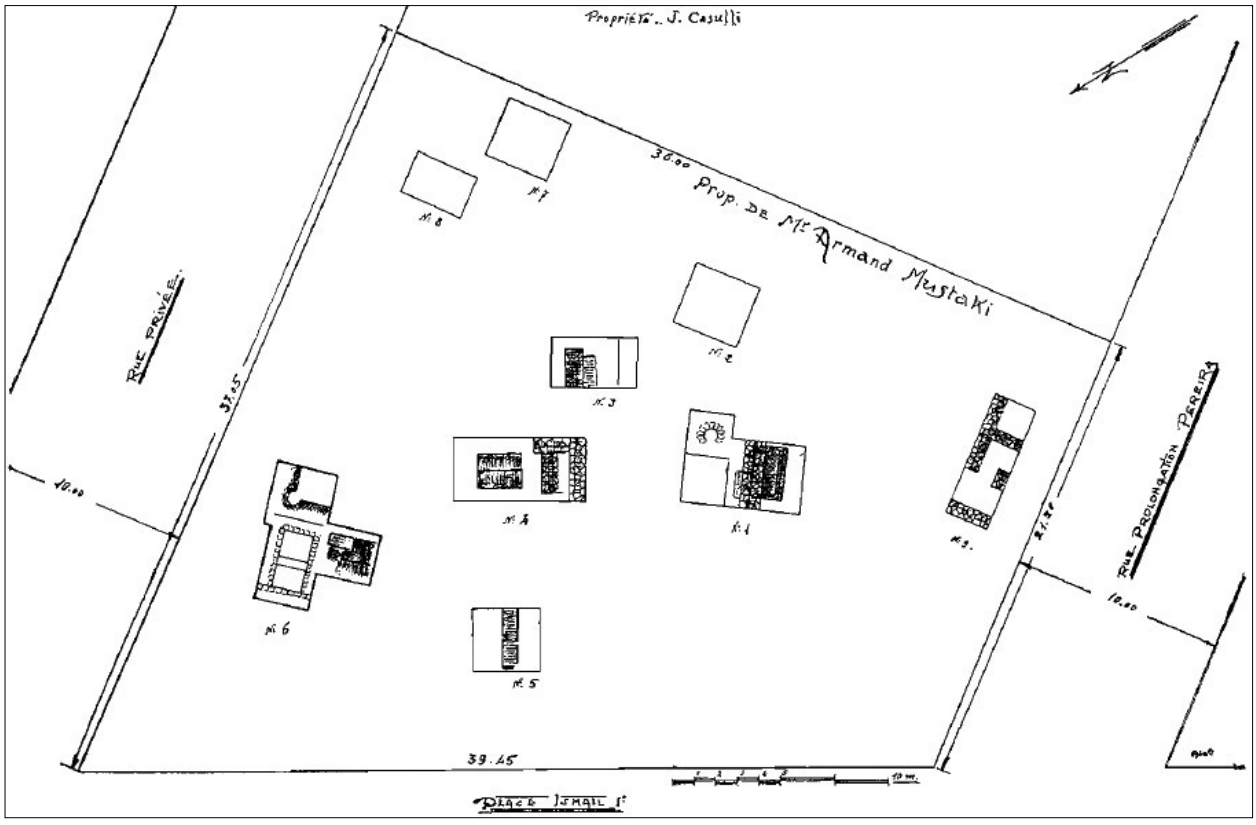


Figure 239. el-Ramleh. Chantier Moustaki. Excavation plan. Adriani 1940a: 36, Figure 10. (Chapter 3, site 116: p. 116)

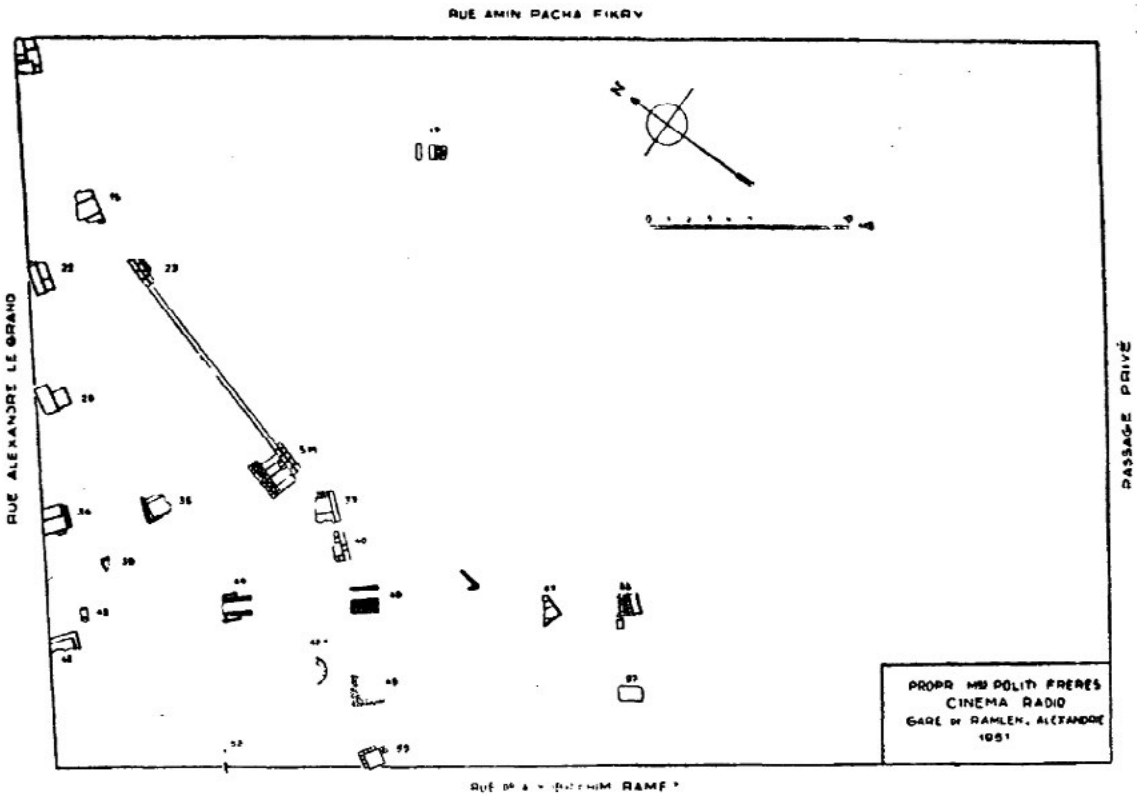


Figure 240. el-Ramleh. Chantier Politi (Cinema Radio). Excavation plan.
Adriani 1956a: 11, Figure 9. (Chapter 3, site 117: p. 117)

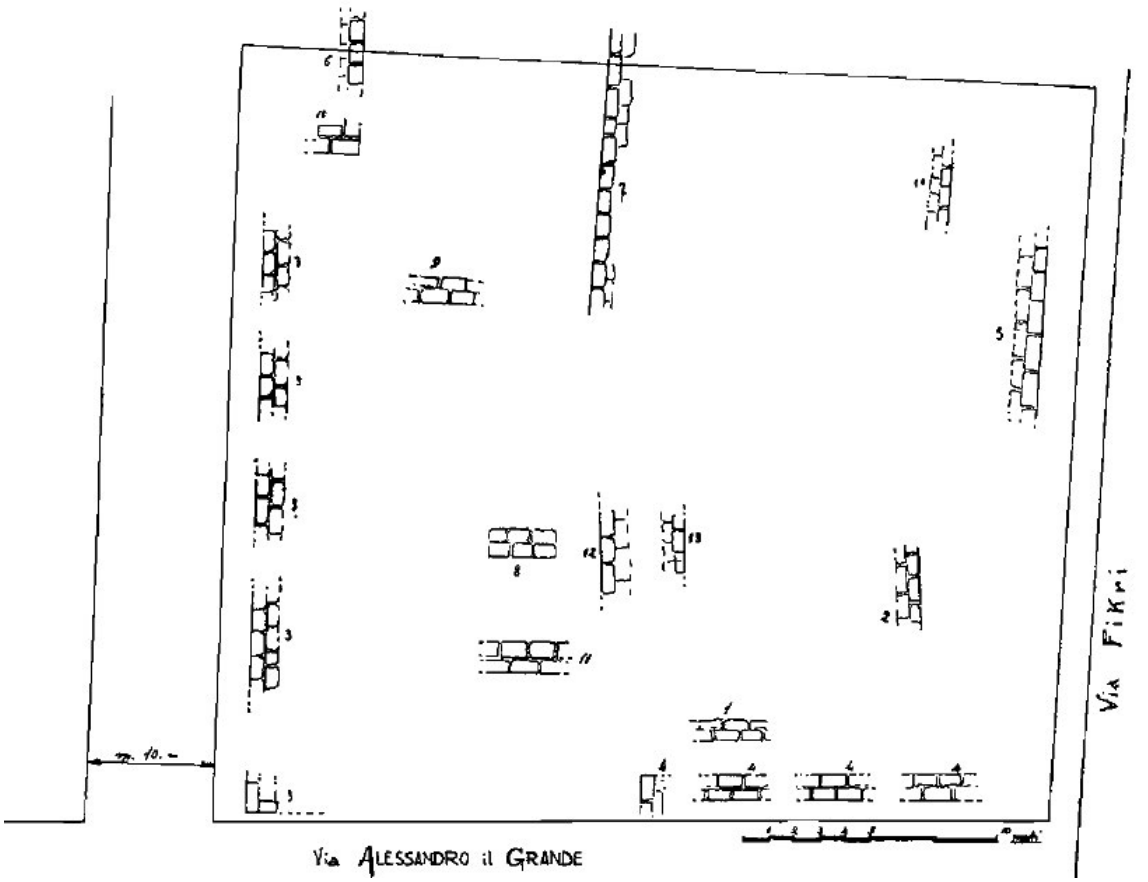


Figure 241. el-Ramleh. Chantier Heikal. Excavation plan.
Adriani 1940a: 34, Figure 9. (Chapter 3, site 119: p. 117)

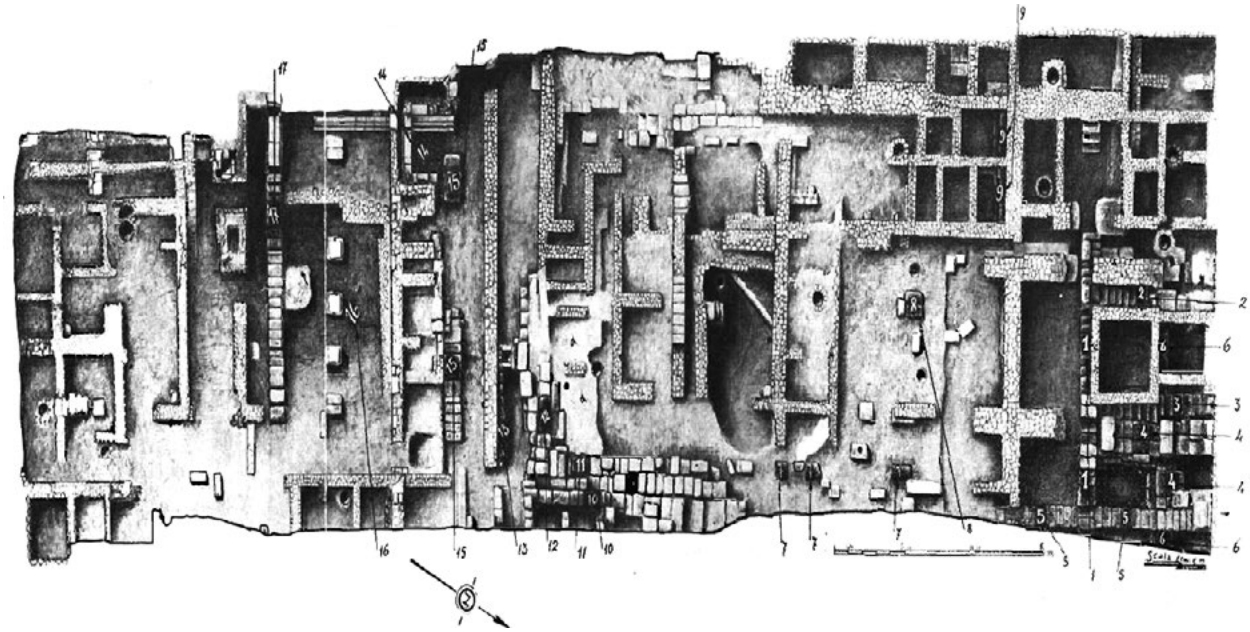


Figure 242. el-Ramleh. Chantier Finney. Excavation plan.
Adriani 1940a: Planche V. (Chapter 3, site 120: p. 118)

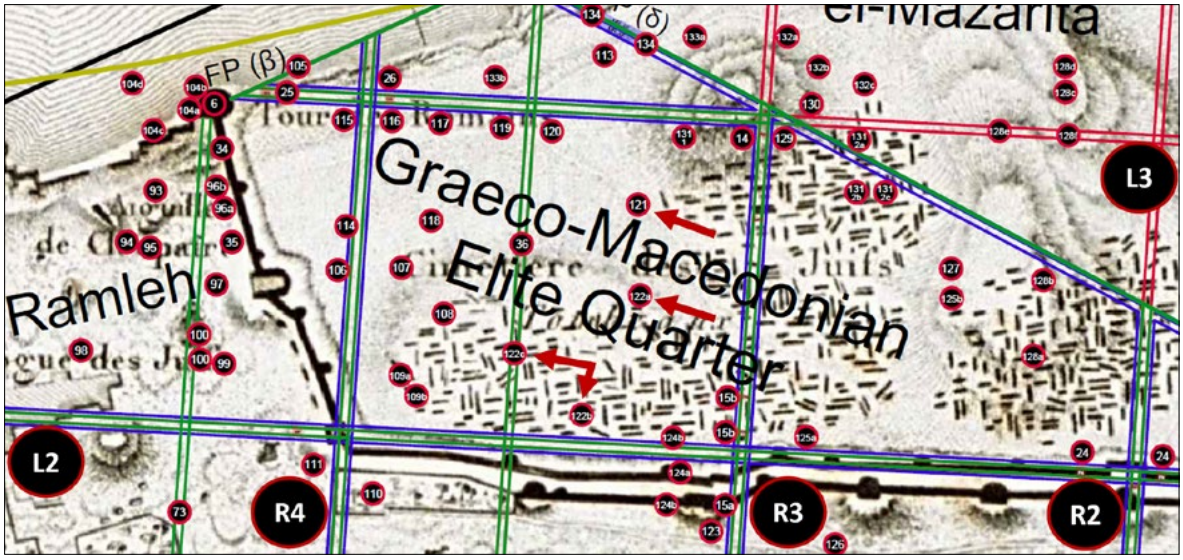


Figure 243. el-Mazarita. Localisation of key sites at the premises of the former British Consulate (site 121) and the former Cricket Playground (site 122a-c). AutoCAD map (V4).
Extract. Author © 2019. (Chapter 3, site 121: p. 121)

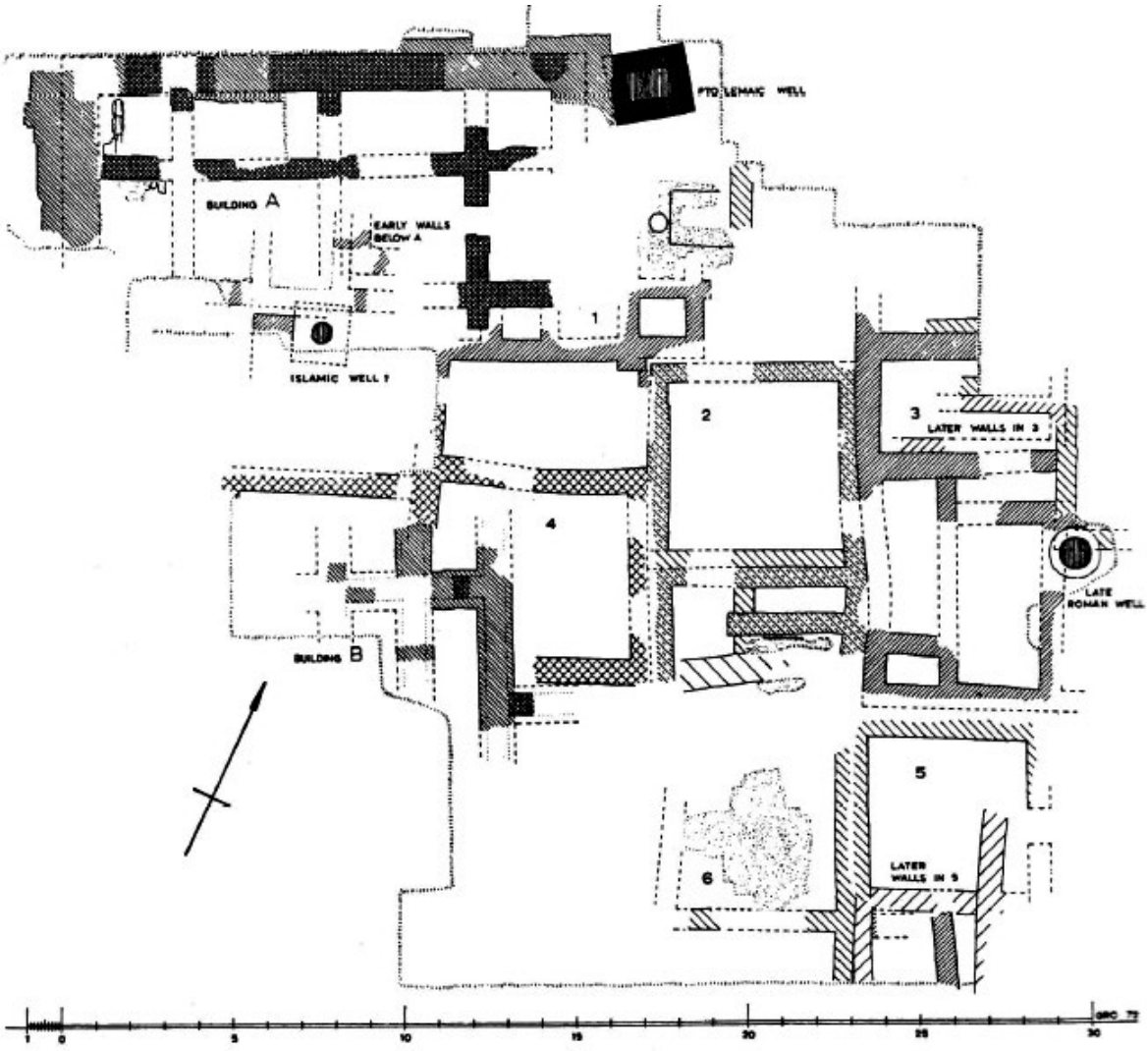


Figure 244. el-Mazarita. The former Cricket Playground. Shenouda's 1970-71 excavation plan. Daszewski 1983: 57, Figure 2. (Chapter 3, site 122a: p. 121)

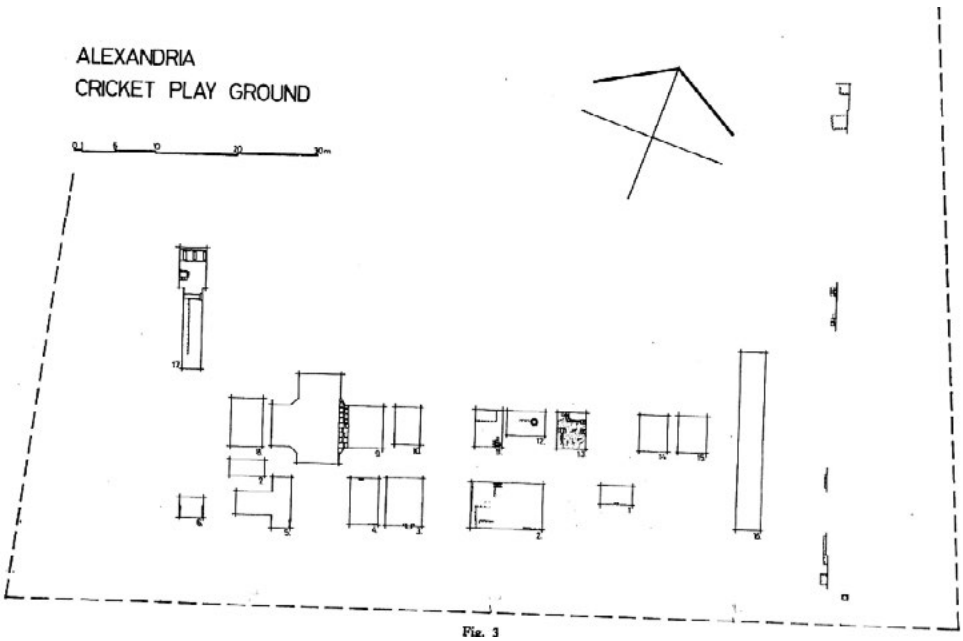


Figure 245. el-Mazarita. The former Cricket Playground. Plan of the Daszewski-Barański 1980 recordings. Daszewski 1983: 58, Figure 3. (Chapter 3, site 122b: p. 121)

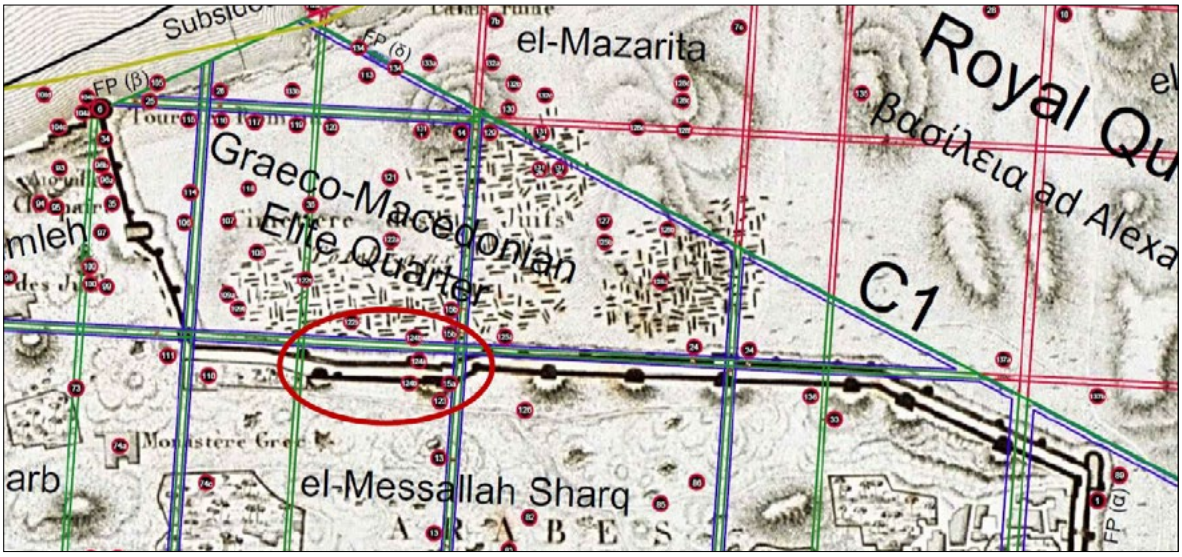


Figure 246. el-Mazarita. Tulunid circuit deviation near the junction of el-Sultan Hussein with el-Mathaf. AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 124a: p. 125)

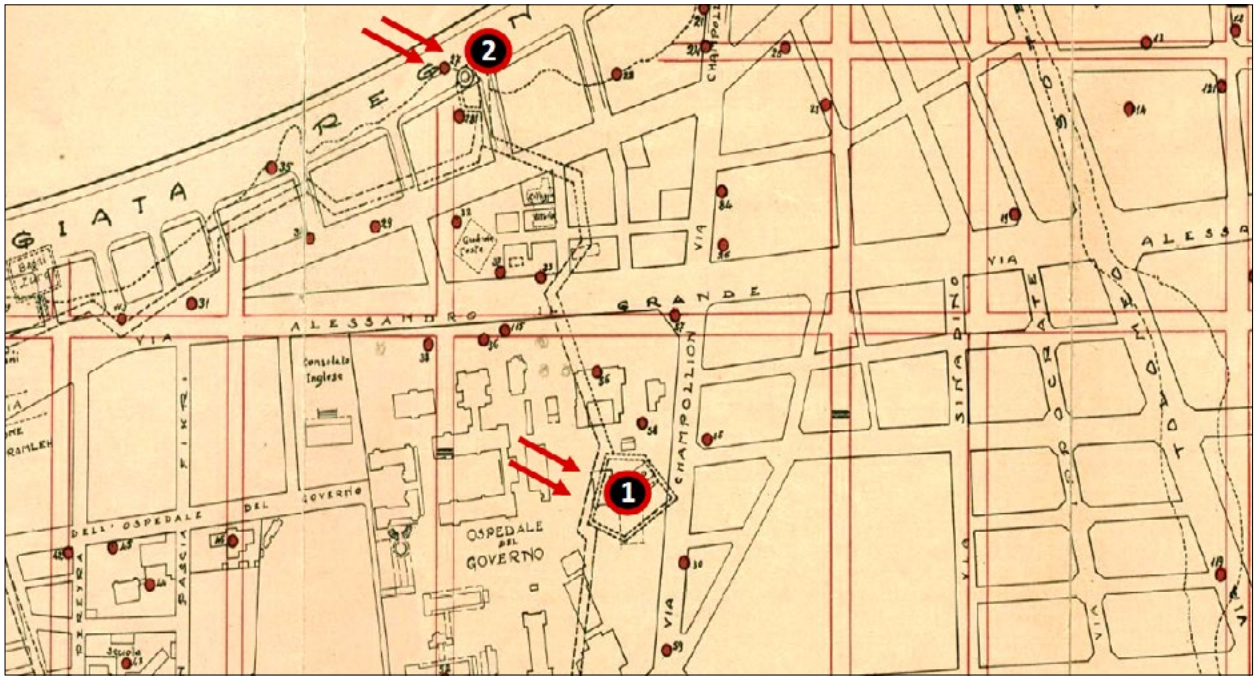


Figure 247. el-Mazarita. Localisation of the Arab bastions Tabiat el-Yahoudieh (1) and Tabiat el-Menchereih (2) on Adriani's 1934 *pianta* (Figure 64). Adriani 1934: Pianta Archeologica di Alessandria. Extract. Labels added by author. (Chapter 3, site 125b: p. 126)

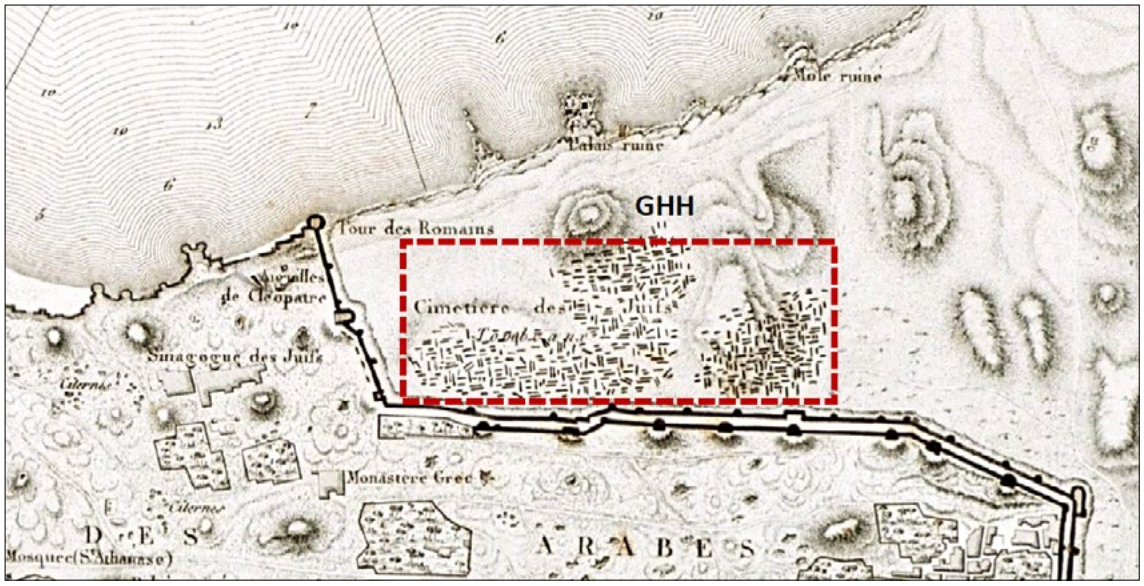


Figure 248. el-Mazarita. Extent of mediaeval and post-mediaeval Jewish interment down the Government Hospital Hill. *Description de l'Égypte*. Imperial Edition 1809-22. Etat Moderne II, Planches, 1817: Planche 84, 'Plan Général des Deux Ports, de la Ville Moderne, et de la Ville des Arabes'. Extract. Labels added by author. (Chapter 3, site 125b: p. 126)

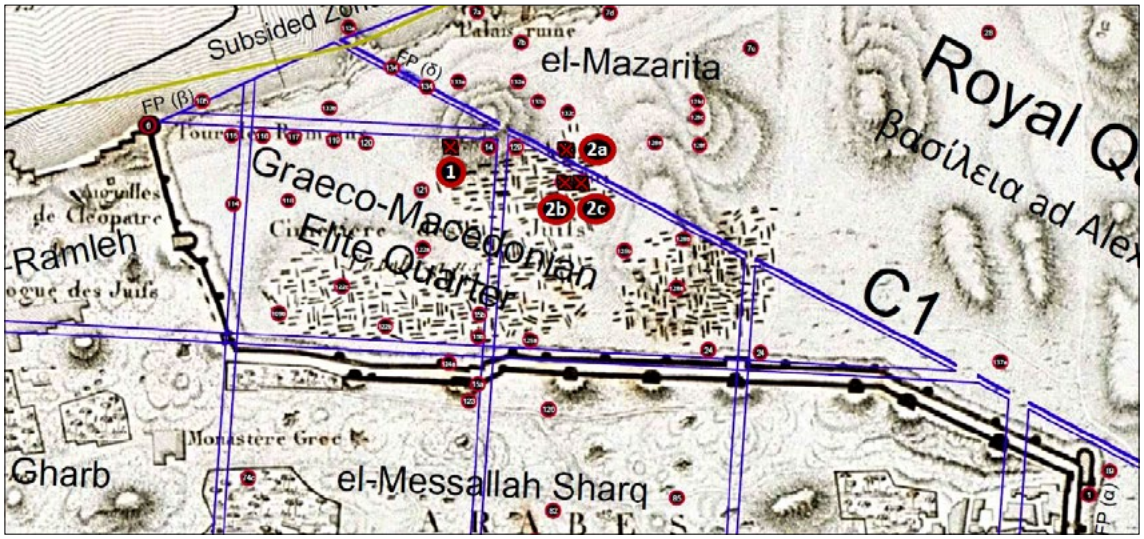


Figure 249. el-Mazarita. Localisation of the Daszewski-Kamiński 1976 trenches (1) and (2a-c). AutoCAD map (V1). Extract. Author © 2019. (Chapter 3, site 131: p. 129)

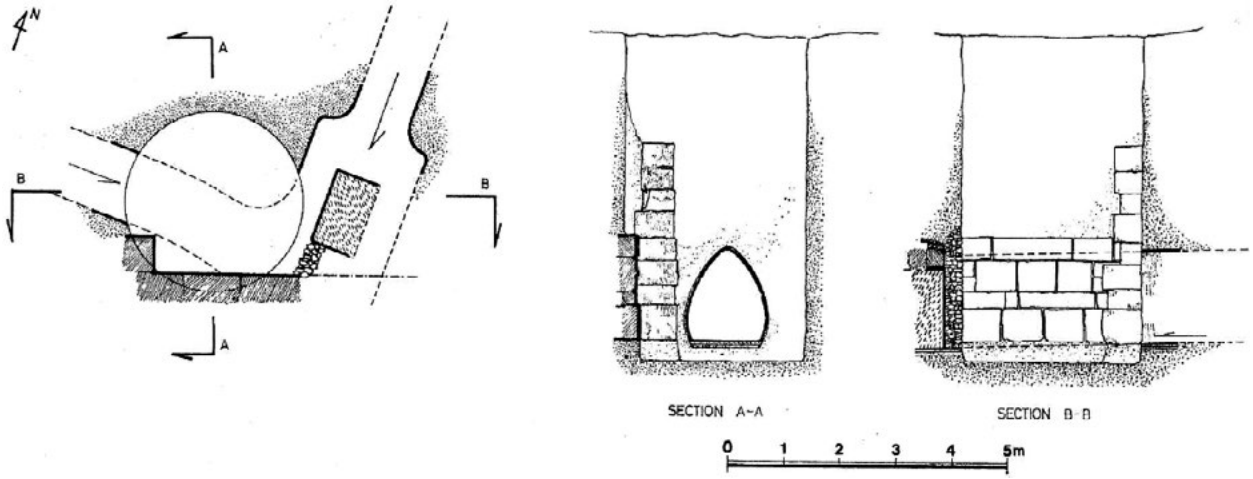


Figure 250. el-Mazarita. Major conduit following the cardinal directions. Trench (2b). Plan and sectional view; after K. Kamiński. Daszewski 1979: 100, Figure 5. (Chapter 3, site 131: p. 129)

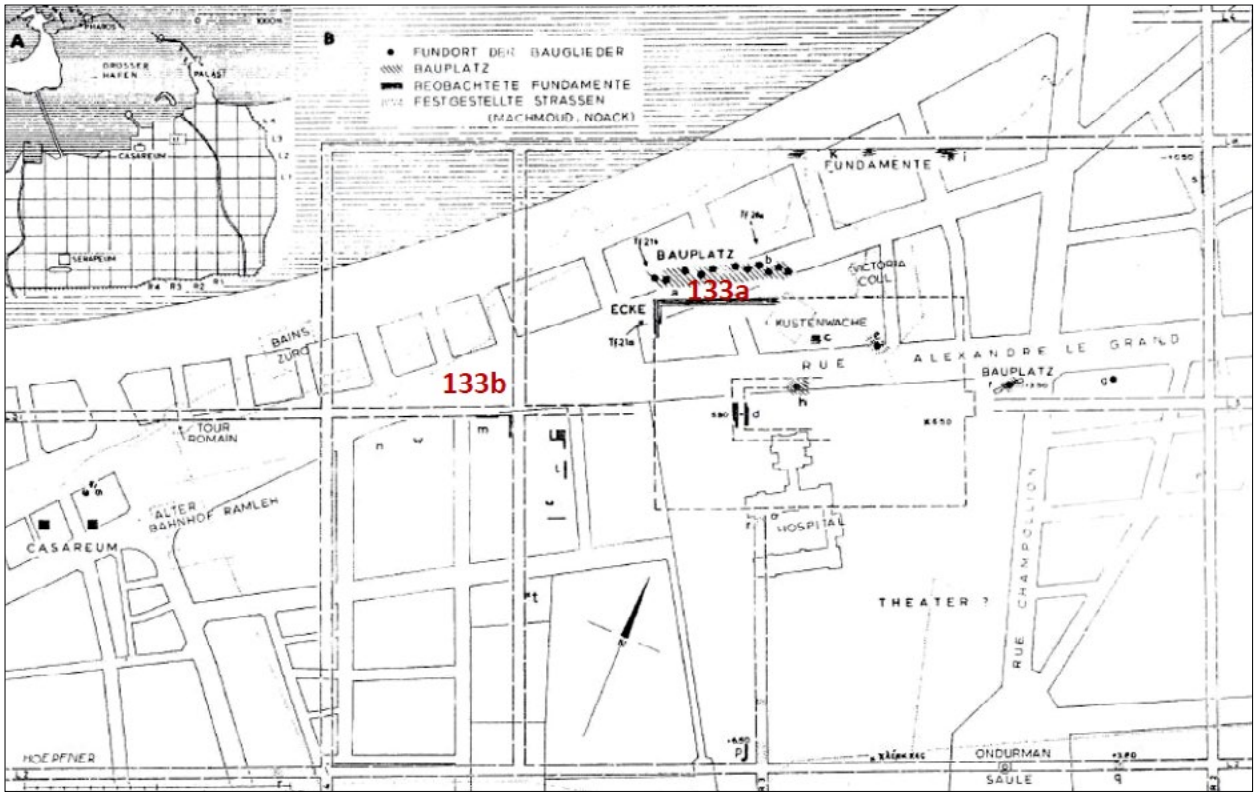


Figure 251. el-Mazarita. Localisation of foundations and fragmentary architecture recorded by G. Botti on the slopes of the Government Hospital Hill (site 133a), and by L. Borchardt opposite the GRM *chantiers* at el-Ramleh (site 133b). Plan; after W. Hoepfner. Hoepfner 1971: Beilage 22. Labels added by author. (Chapter 3, site 133b: p. 131)

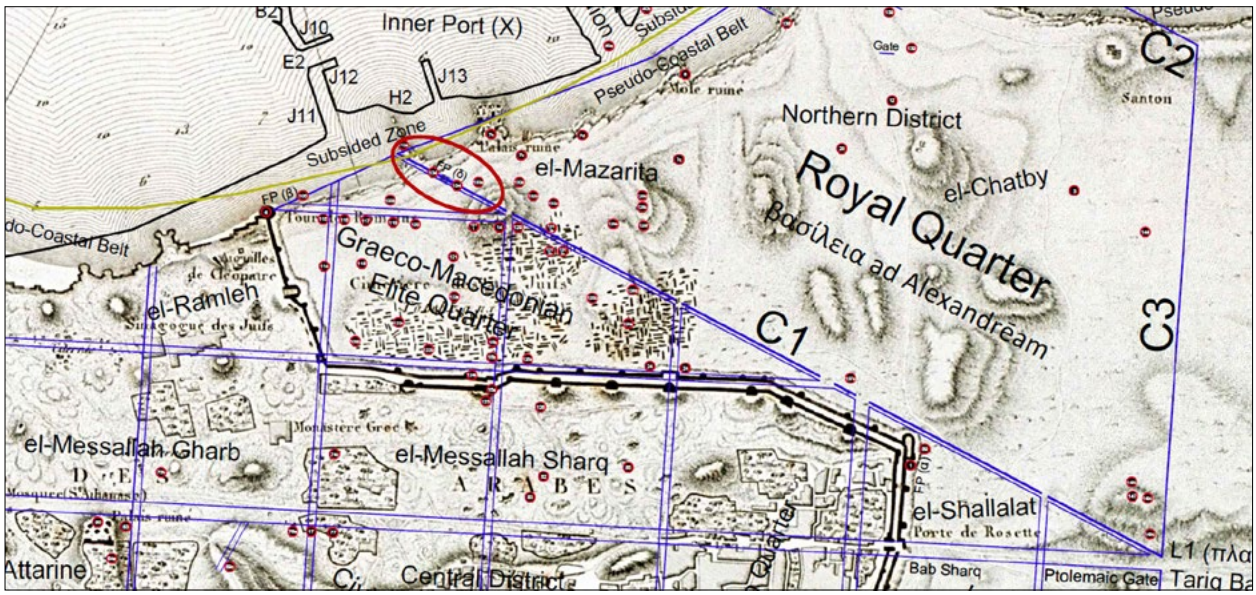


Figure 252. el-Mazarita. Present-day site of el-Khaledin Park. Enclosure wall and thoroughfare following the cardinal directions: fortification-point (δ). Localisation. AutoCAD map (V1). Extract. Author © 2019. (Chapter 3, site 134: p. 131)

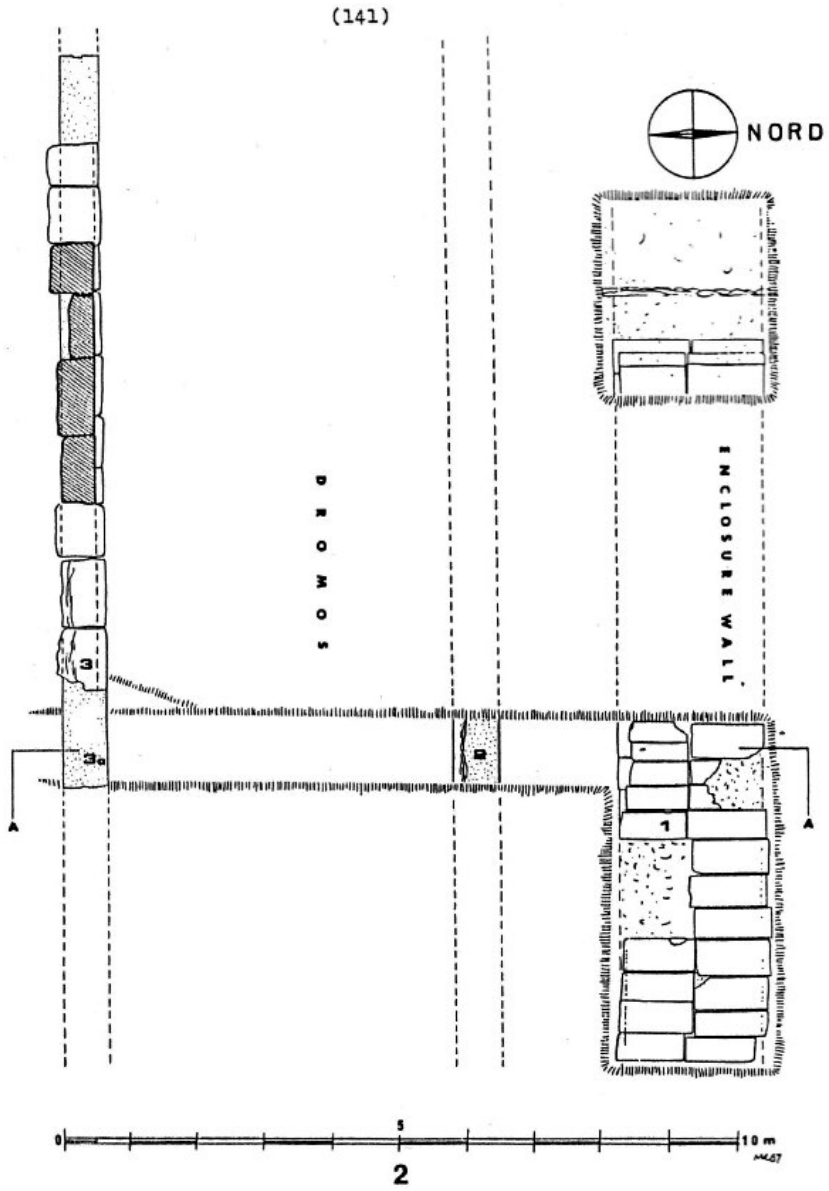


Figure 253. el-Mazarita. Present-day site of el-Khaledin Park. Enclosure wall and thoroughfare following the cardinal directions: fortification-point (δ). Plan. Rodziewicz and Abd el-Fattah 1991: 141, Figure 2. (Chapter 3, site 134: p. 131)

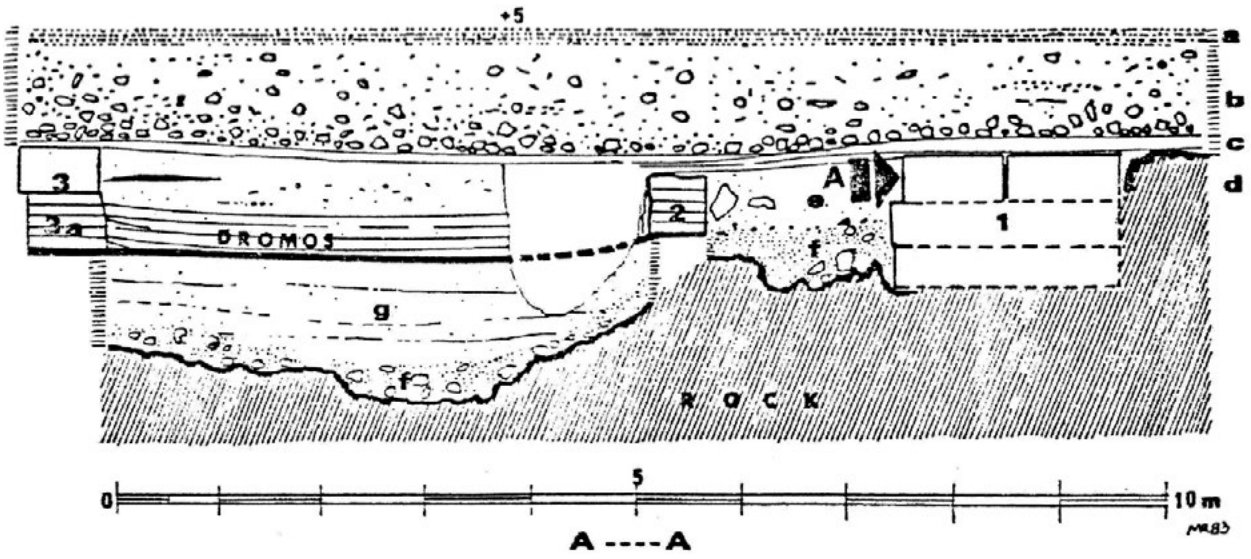


Figure 254. el-Mazarita. Present-day site of el-Khaledin Park. Enclosure wall and thoroughfare following the cardinal directions: fortification-point (δ). Sectional view. Rodziewicz and Abd el-Fattah 1991: 142, Figure 3. (Chapter 3, site 134: p. 131)

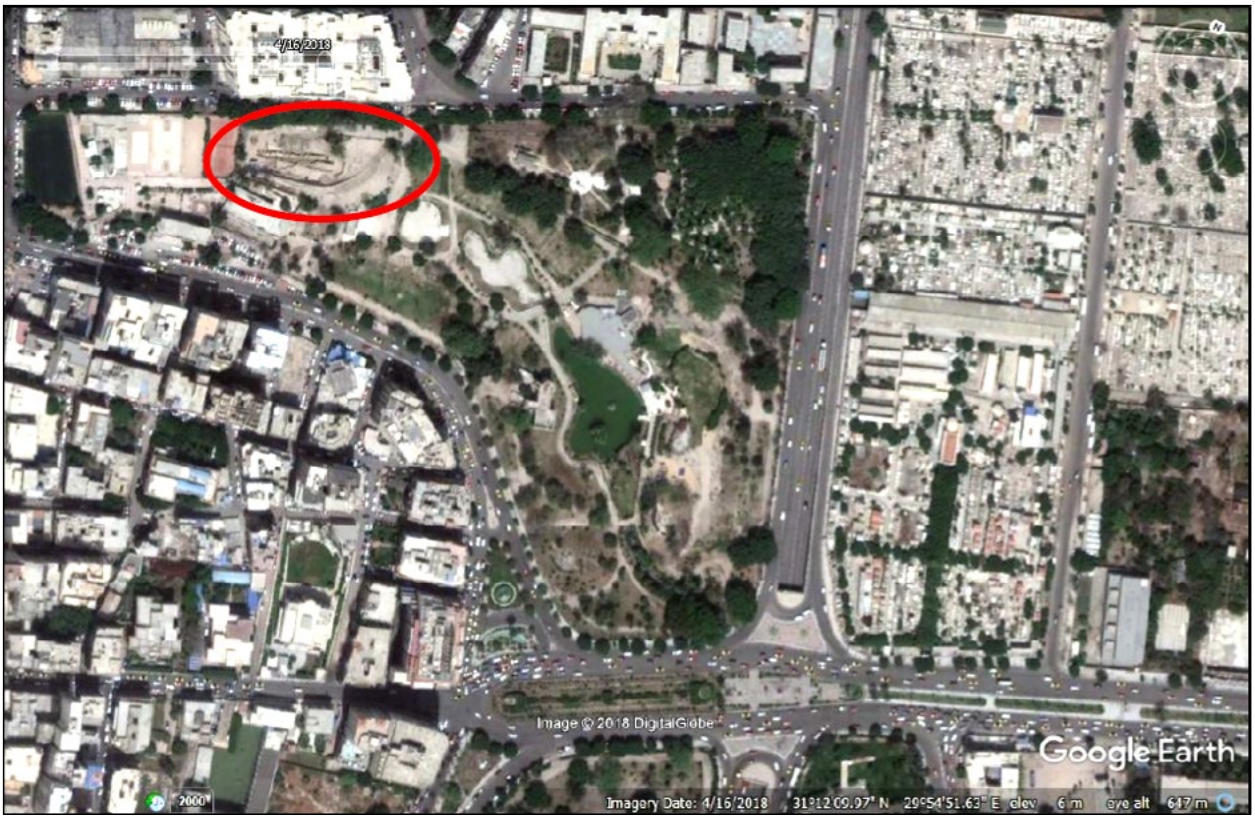


Figure 255. NW. sector of el-Shallalat Park. HRIAC excavations. Satellite image: localisation of site.
Google Earth © 2018. Labels added by author. (Chapter 3, site 137a: p. 133)

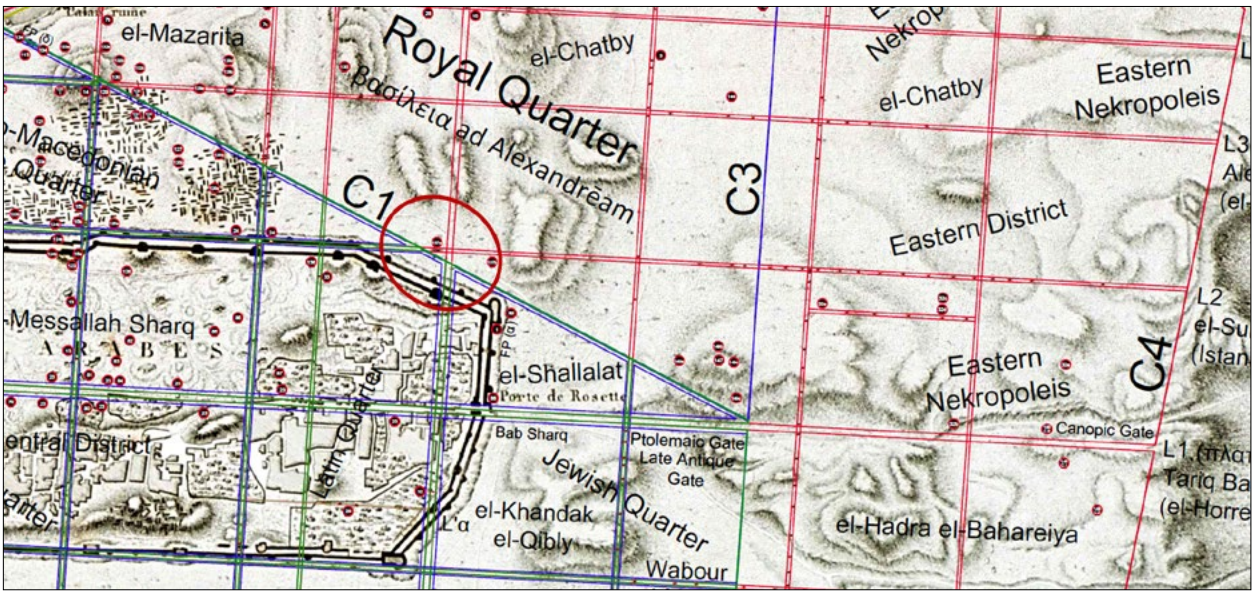


Figure 256. NW. sector of el-Shallalat Park. HRIAC excavations. Localisation of site.
AutoCAD map (V4). Extract. Author © 2019. (Chapter 3, site 137a: p. 133)

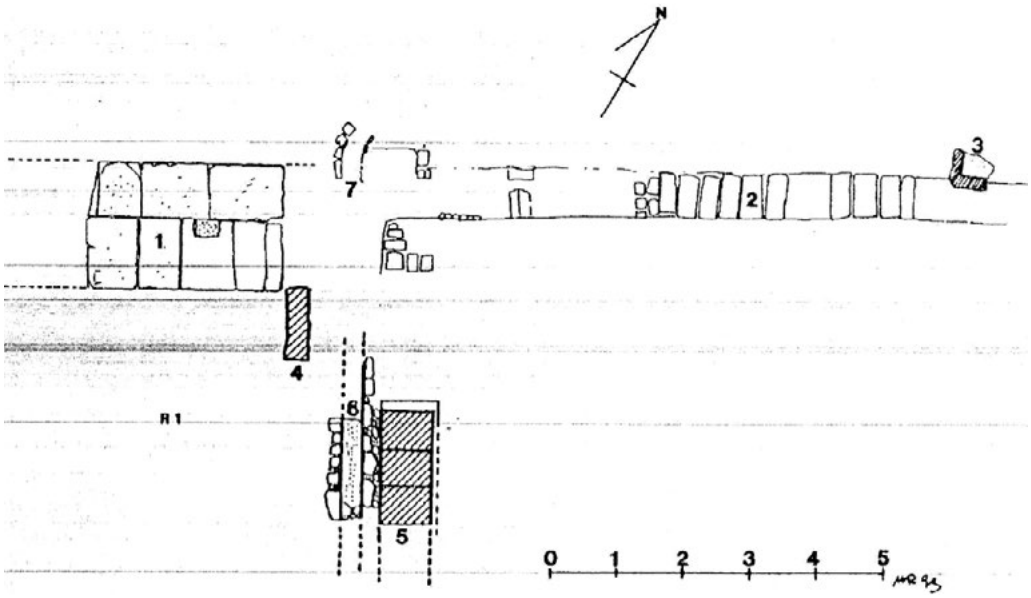


Figure 257. el-Chatby. Chantier Bibliotheca Alexandrina. Excavation plan.
Rodziewicz 1995: 235, Figure 5. (Chapter 3, site 139: p. 134)

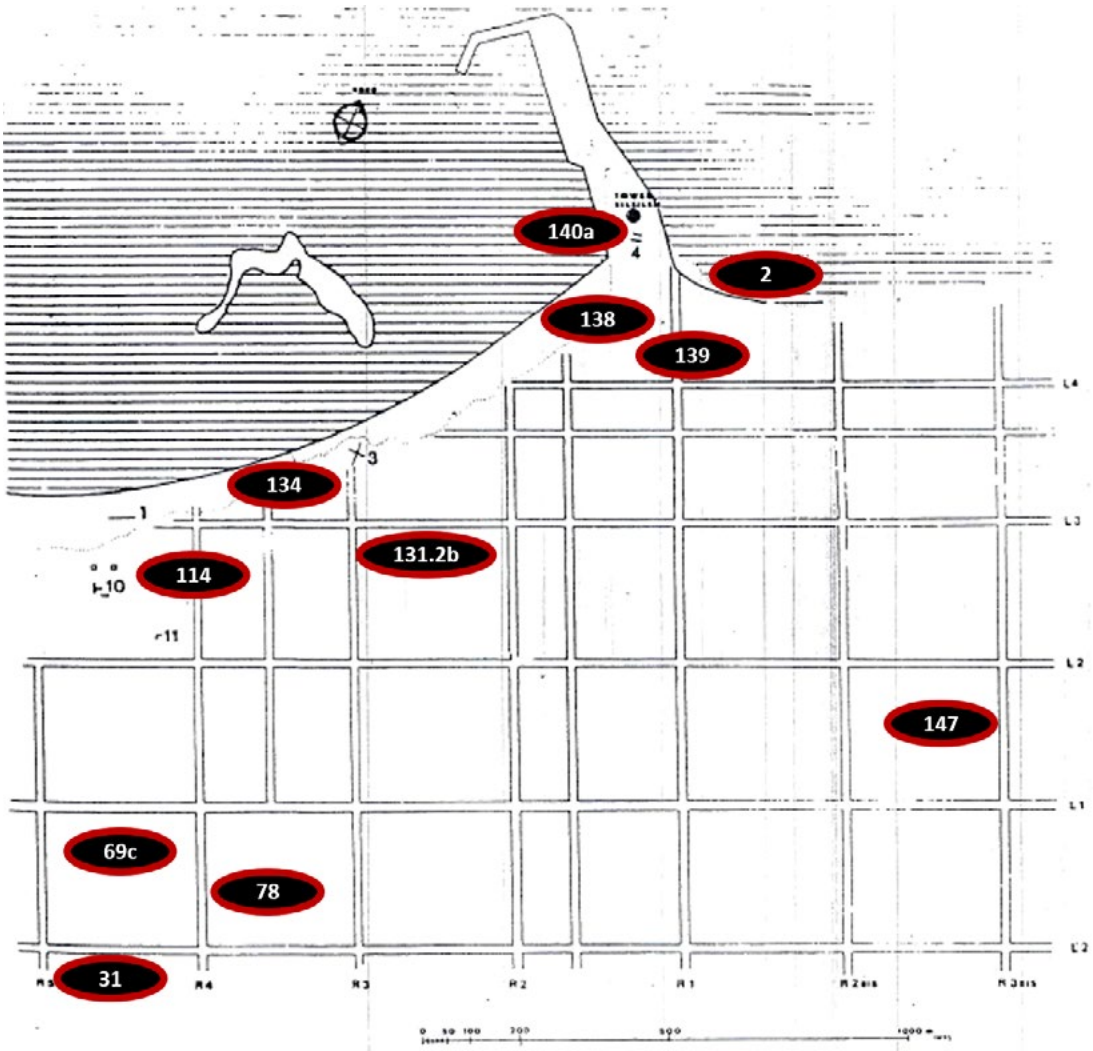


Figure 258. el-Mazarita; el-Chatby; Kom el-Dikka. Excavated remnants aligned in the cardinal directions, in the Ptolemaic βασίλεια and the central district. Rodziewicz 1995: 233, Figure 1. Labels added by author.
(Chapter 3, site 139: p. 134)

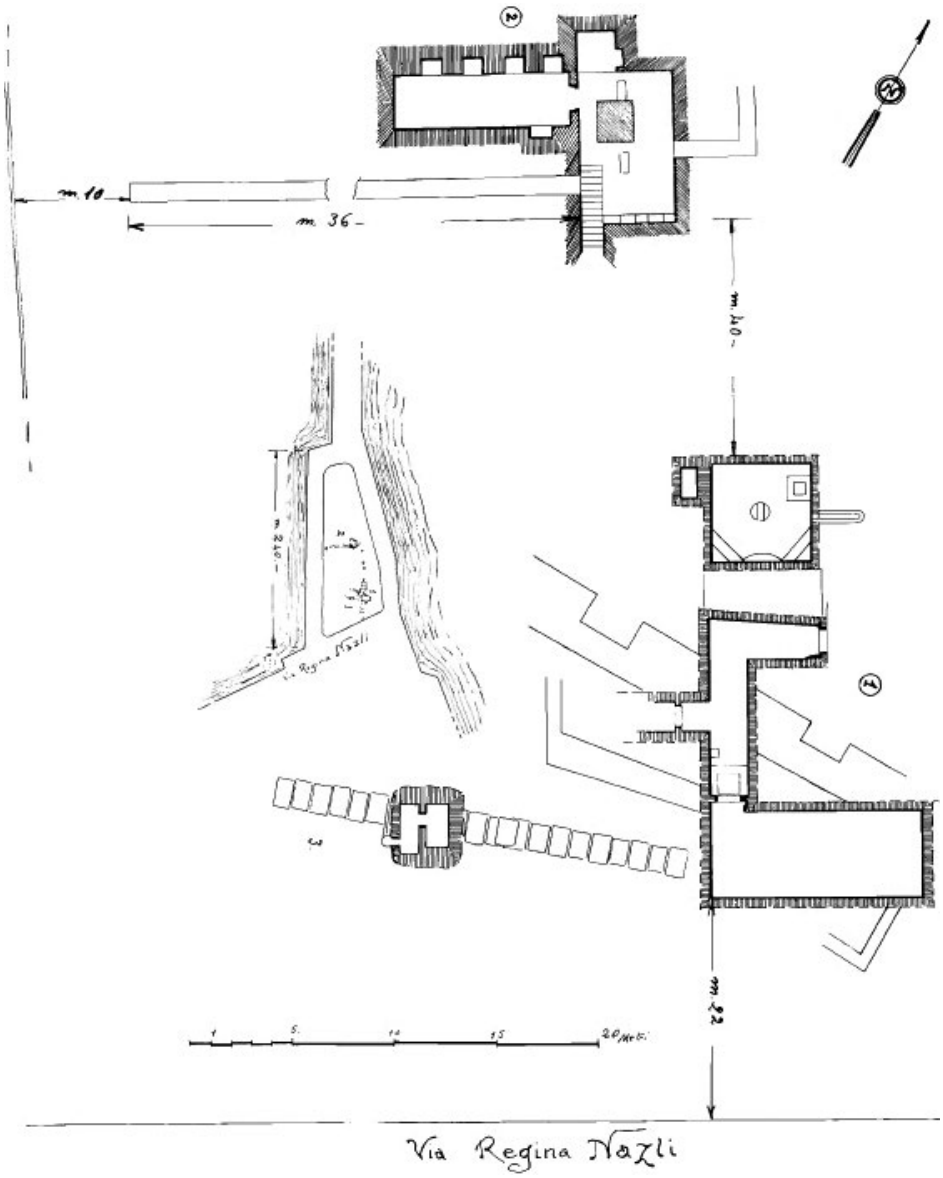


Figure 259. el-Chatby. Chantier el-Silsileh. Excavation plan. Adriani 1940a: Figure 12. (Chapter 3, site 141: p. 135)

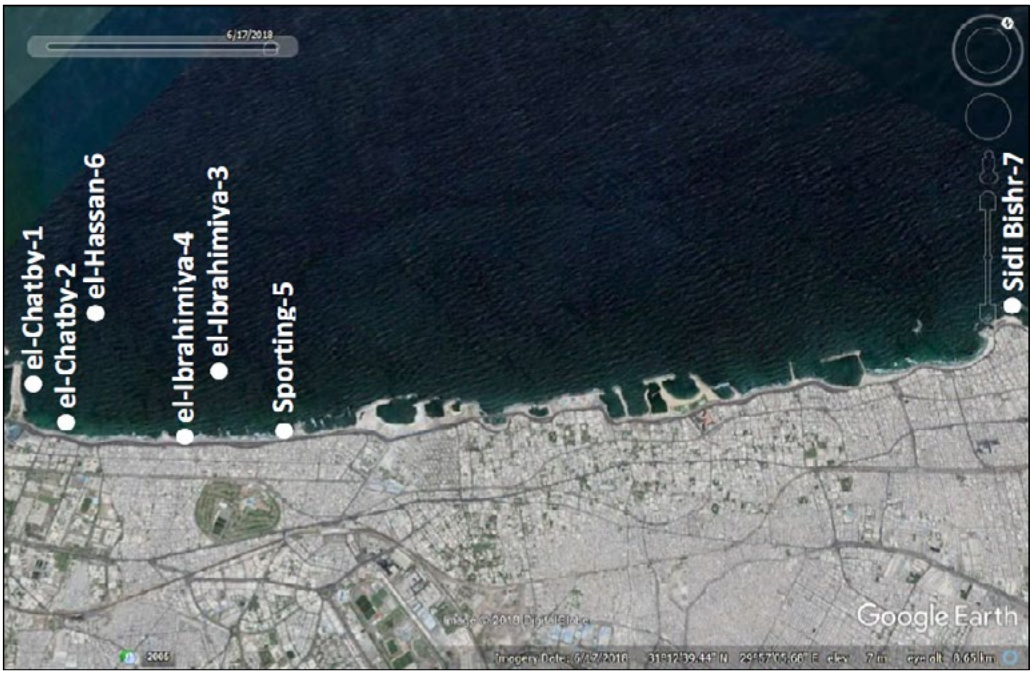


Figure 260. HIAMAS concession east of el-Silsileh. Satellite image: localisation of sites. Google Earth © 2018. Labels added by author. (Chapter 3, site 142: p. 136)

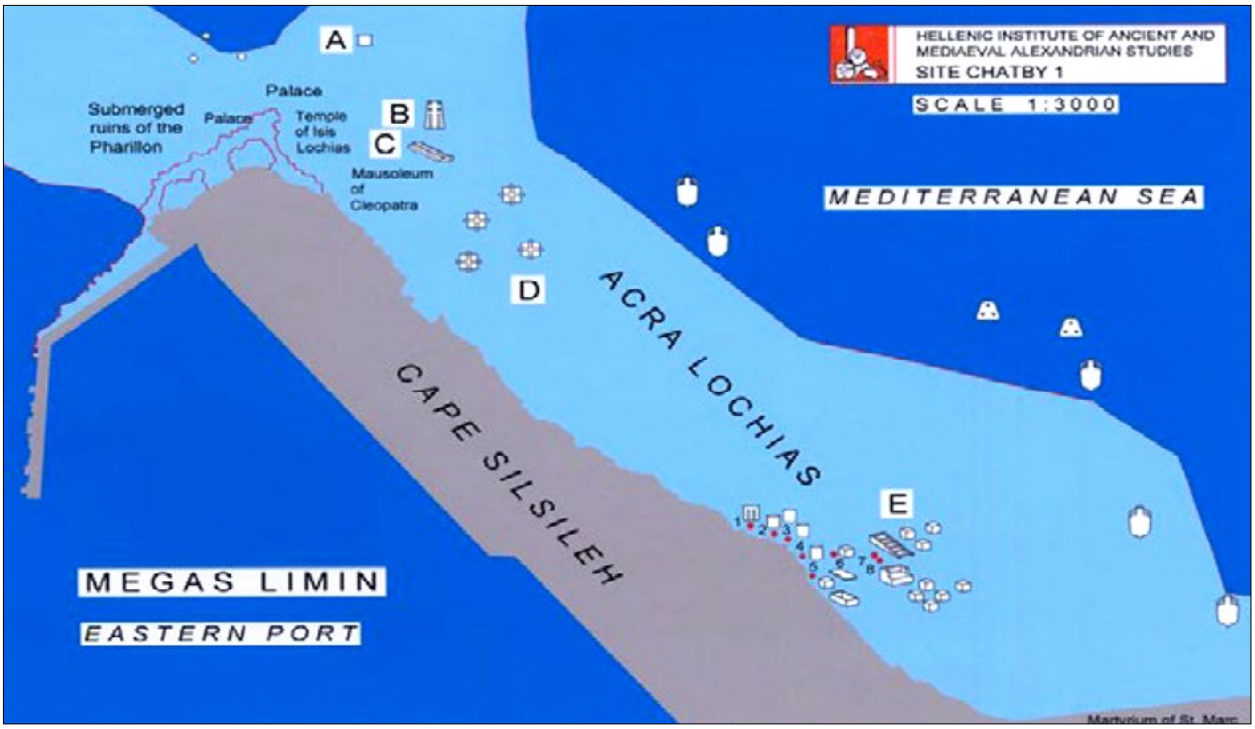


Figure 261. HIAMAS concession east of el-Silsileh. Recorded finds (A-E) on el-Chatby 1.
Tzalas 2018: 23, Figure 7. (Chapter 3, site 142: p. 136)



Figure 262. el-Chatby necropolis. Satellite image: localisation of Breccia's GRM excavations (1904-10).
Google Earth © 2018. Labels added by author. (Chapter 3, site 145b: p. 141)

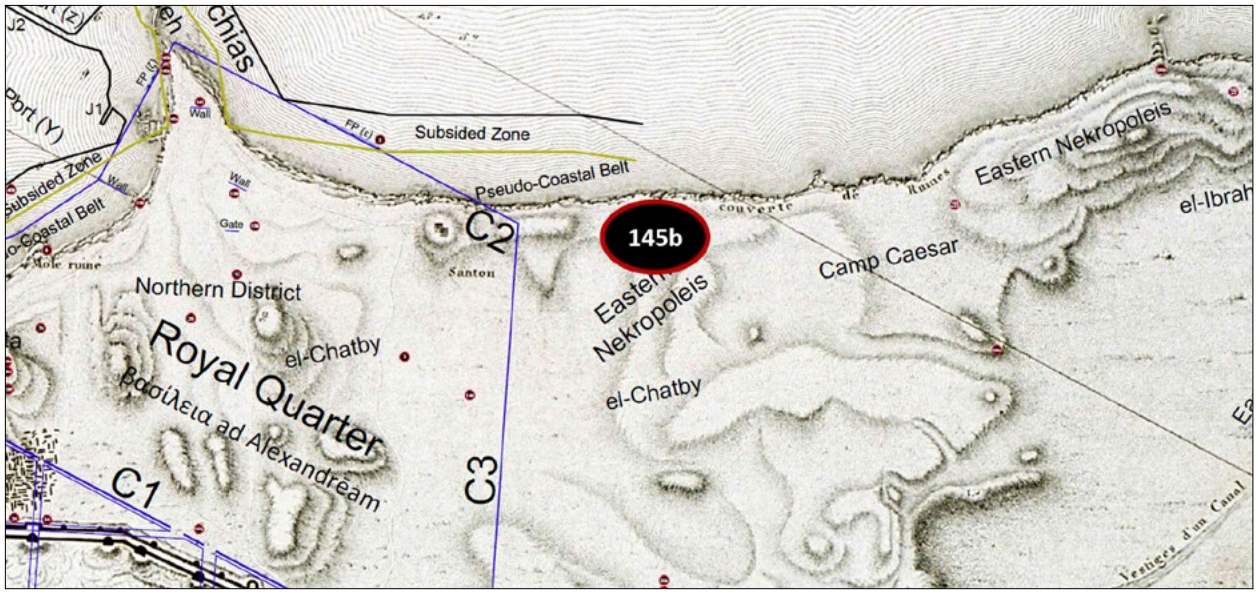


Figure 263. el-Chatby necropolis. Localisation of Breccia's GRM excavations (1904-10). AutoCAD map (V1). Extract. Author © 2019. (Chapter 3, site 145b: p. 141)

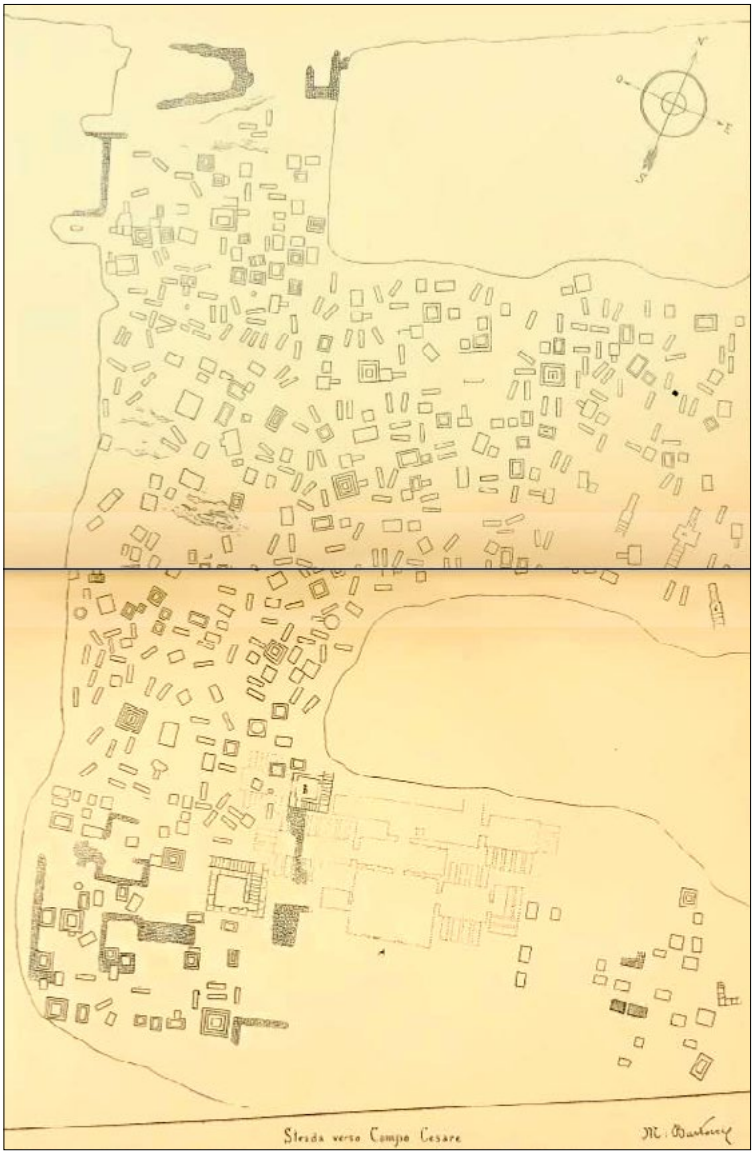


Figure 264. el-Chatby necropolis. Excavation plan (1904-10); after M. Bartocci. Breccia 1912b: Tavola A. (Chapter 3, site 145b: p. 141)

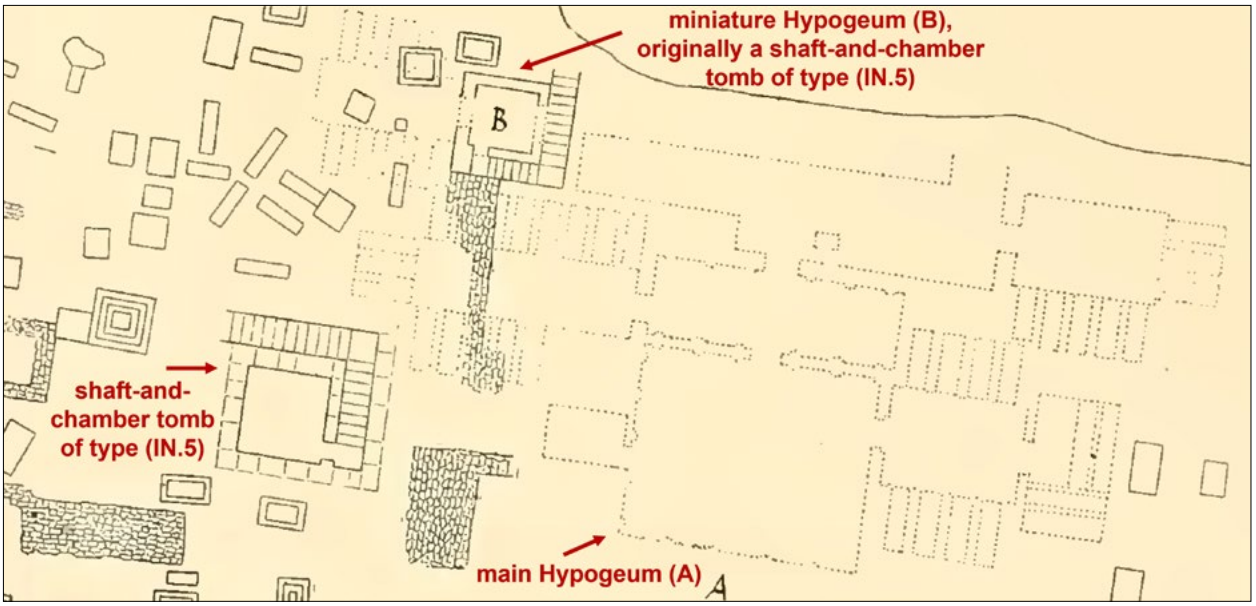


Figure 265. el-Chatby necropolis. Hypogea (A) and (B) and a shaft-and-chamber tomb of type (IN.5) as excavated in the early 20th century within the southern sector of the site (partially preserved to date). Plan; after M. Bartocci. Breccia 1912b: Tavola A. Extract. Labels added by author. (Chapter 3, site 145b: p. 142)

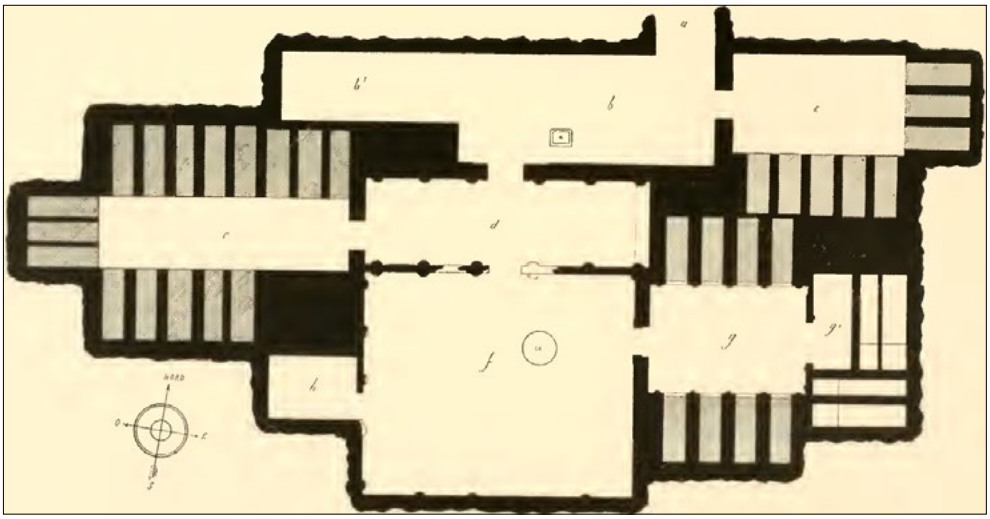


Figure 266. el-Chatby necropolis. Hypogeum (A). Plan; after M. Bartocci. Breccia 1912b: Tavola I. (Chapter 3, site 145b: p. 142)

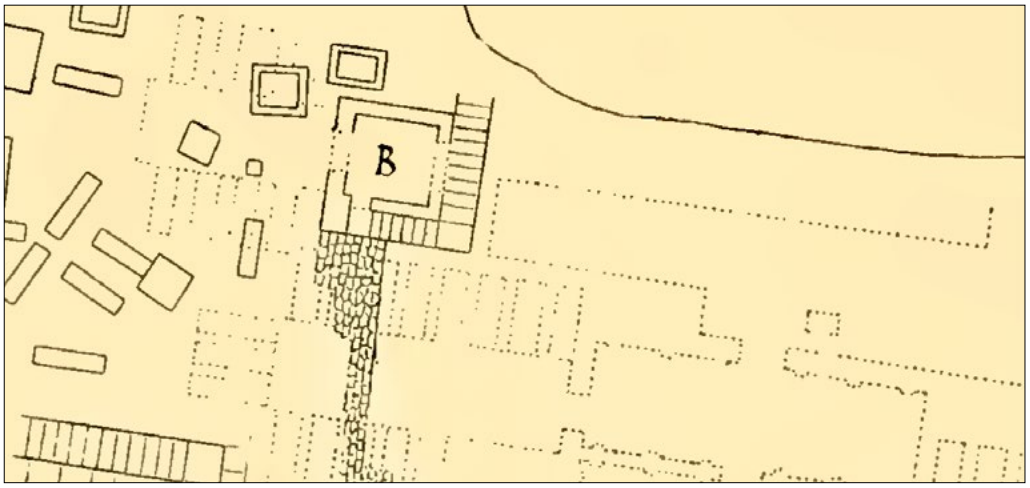
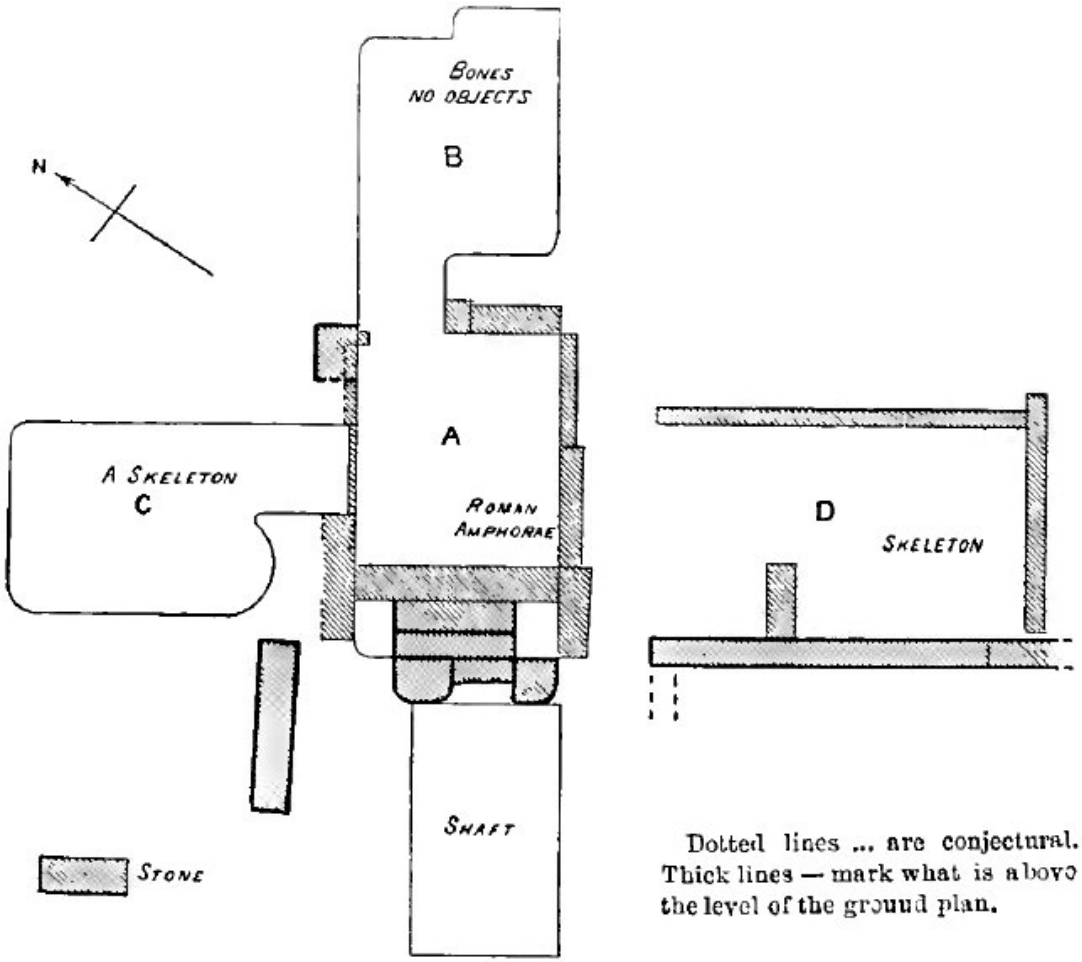


Figure 267. el-Chatby necropolis. Hypogeum (B). Plan; after M. Bartocci. Breccia 1912b: Tavola A. Extract. (Chapter 3, site 145b: p. 143)



GROUND PLAN OF HADRA TOMBS.

Figure 268. el-Hadra necropolis. Benson funerary structure. Plan; after E.R. Bevan. Hogarth and Benson 1894-95: 30, Ground Plan of Hadra Tombs. (Chapter 3, site 146b: p. 145)

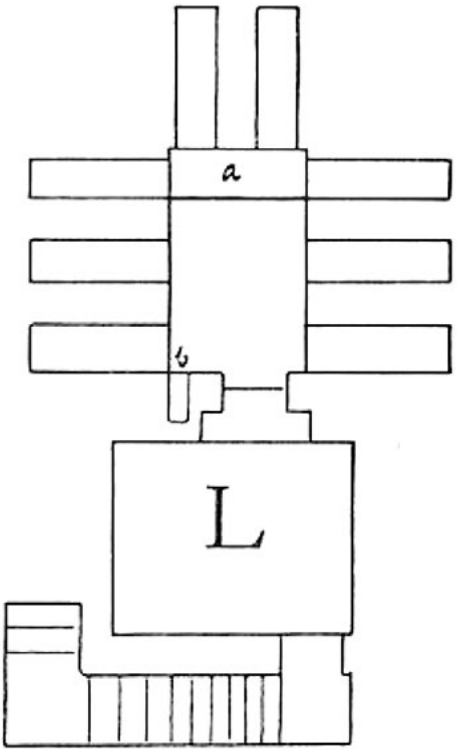


Figure 269. el-Hadra necropolis. Plan of Schreiber's Typus (*n*). Schreiber 1908c: 172, Abbildung 107. (Chapter 3, site 146b: p. 145)

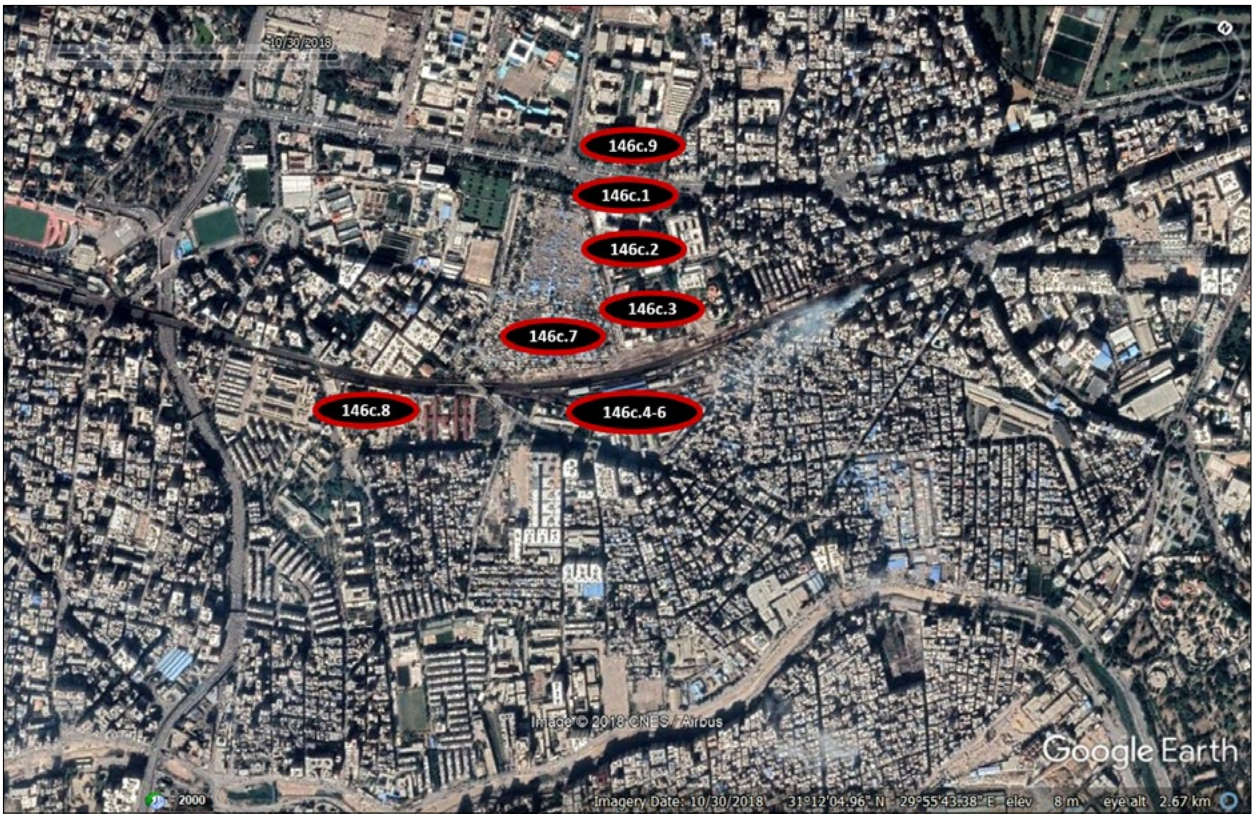


Figure 270. el-Hadra necropolis. Satellite image: localisation of excavated sectors (1-9).
Google Earth © 2018. Labels added by author. (Chapter 3, site 146c: p. 146)

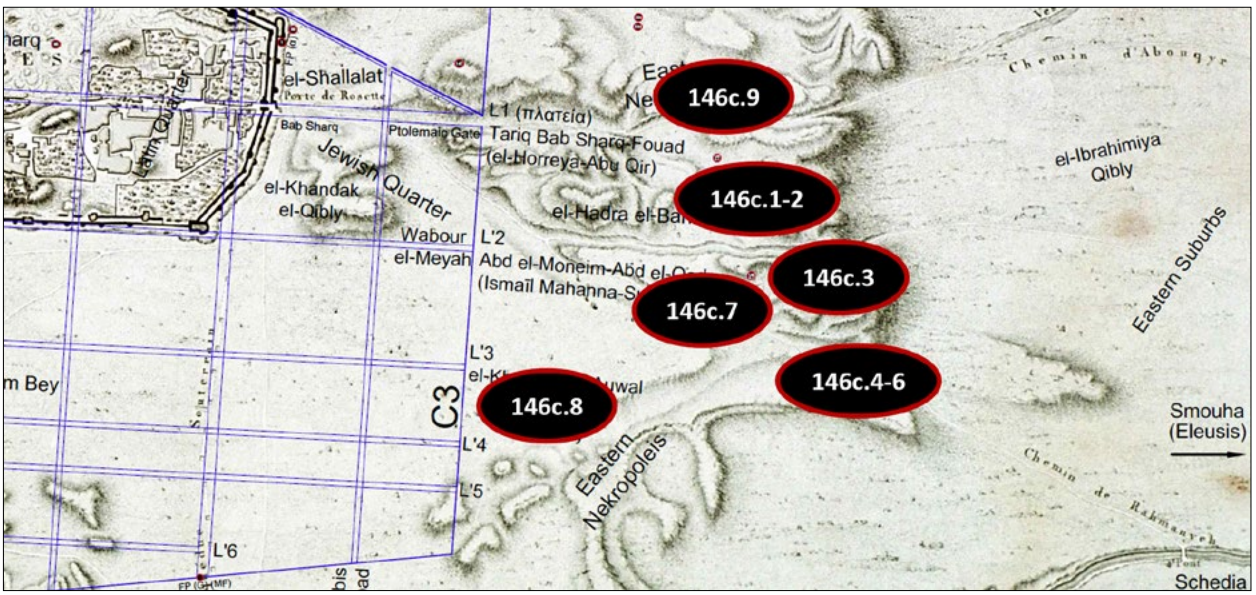


Figure 271. el-Hadra necropolis. Localisation of excavated sectors (1-9).
AutoCAD map (V1). Extract. Author © 2019. (Chapter 3, site 146c: p. 146)

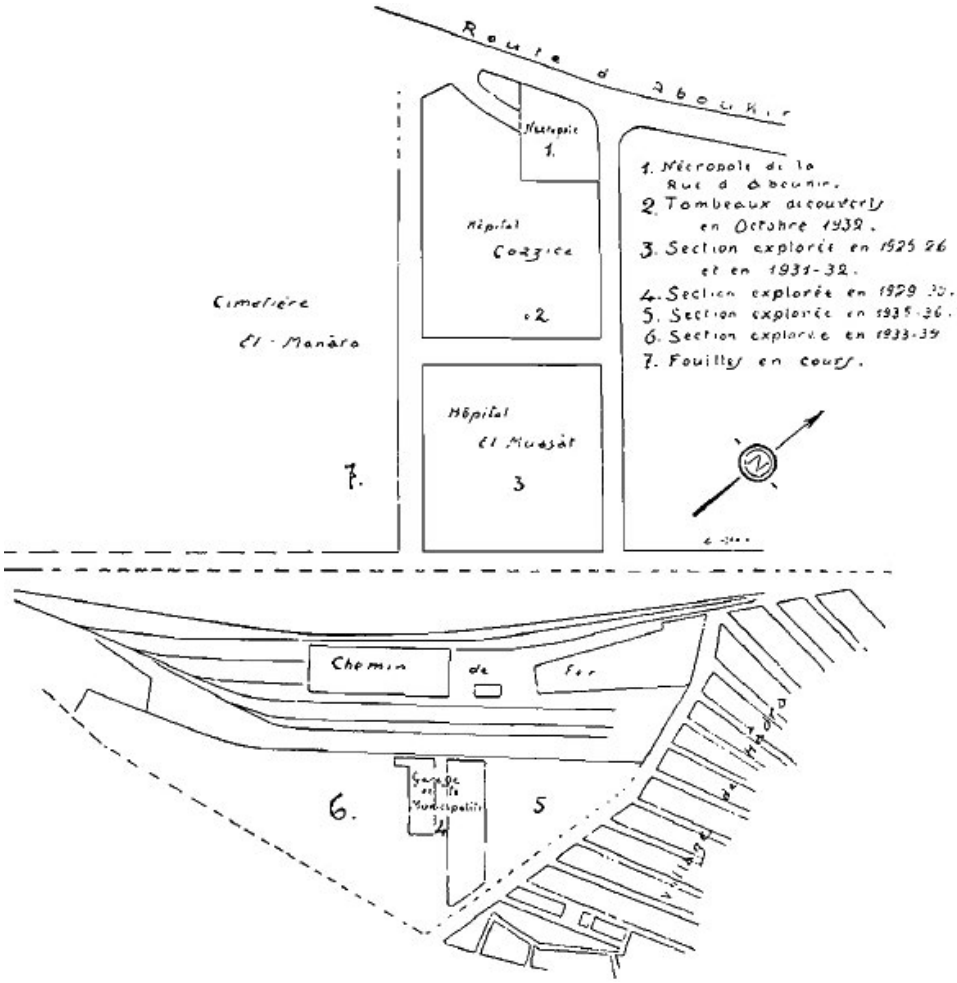


Figure 272. el-Hadra necropolis. Plan of excavated sectors (1-7).
Adriani 1940a: 84, Figure 41. (Chapter 3, site 146c: p. 146)

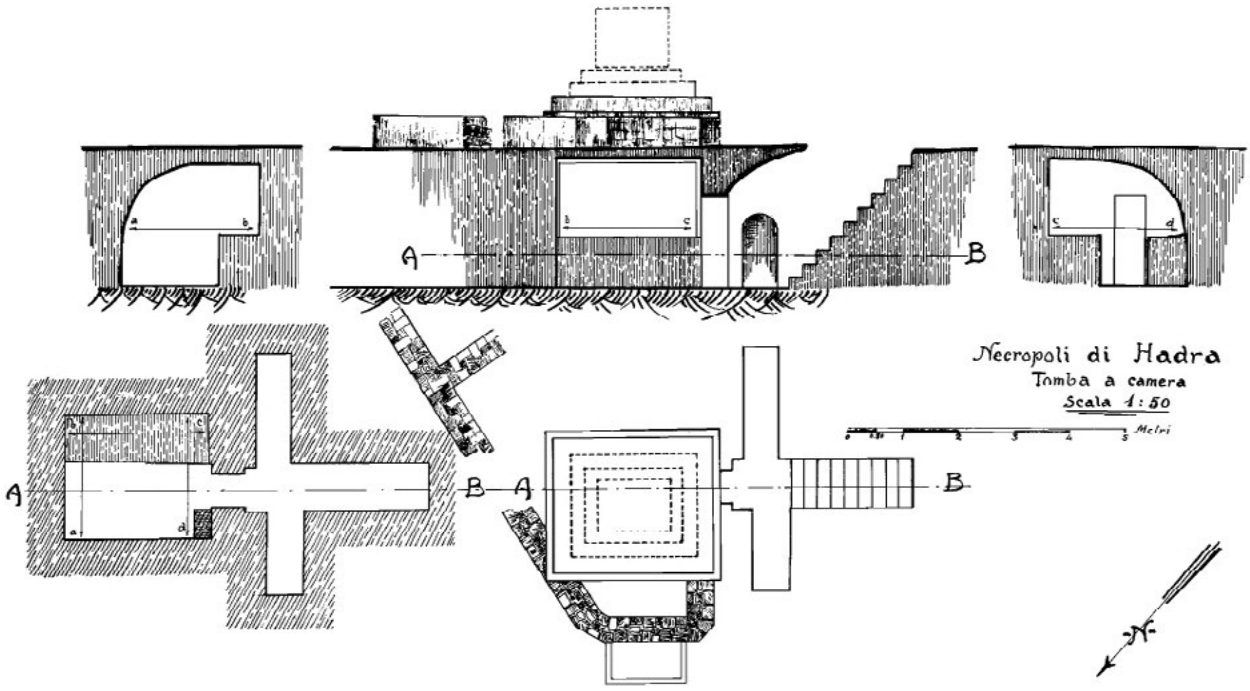


Figure 273. el-Hadra necropolis. Sectors (1-2): Abu Qir Road and Kotsika (Gamal Abdel-Nasser) Hospital. Plan and sectional view of a developed form of the shaft-and-chamber tomb with a vestibule, surmounted by a funerary monument. Adriani 1934: Tavola XIV. (Chapter 3, site 146c: p. 146)

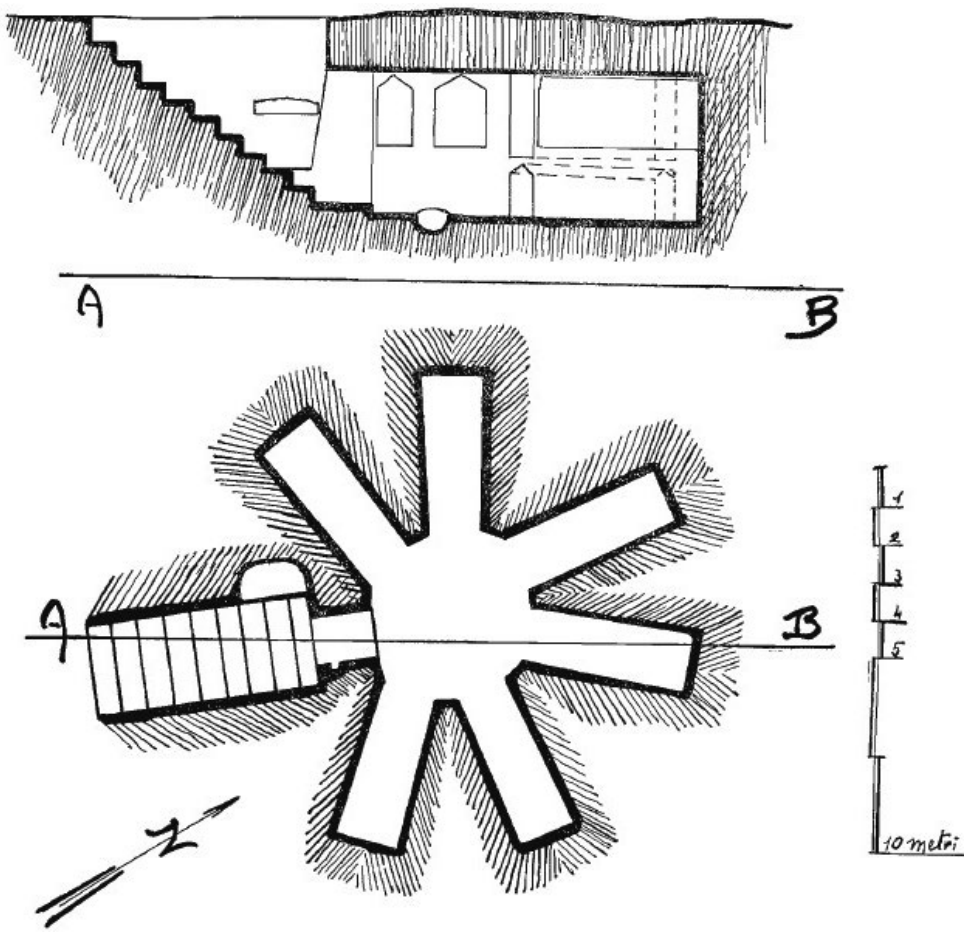


Figure 274. el-Hadra necropolis. Sectors (4-6): Ezbet el-Makhlouf. Funerary structure with a circular plan. Adriani 1940a: 87, Figure 44. (Chapter 3, site 146c: p. 147)

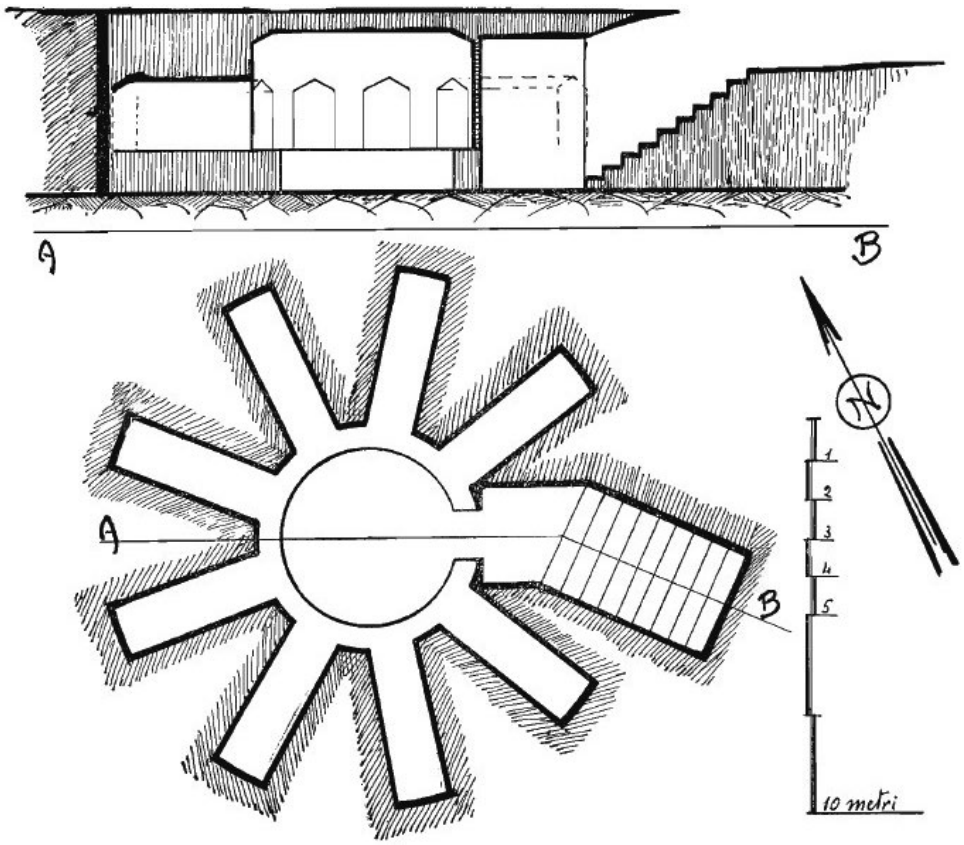


Figure 275. el-Hadra necropolis. Sectors (4-6): Ezbet el-Makhlouf. Funerary structure with a circular plan. Adriani 1940a: 89, Figure 45. (Chapter 3, site 146c: p. 147)

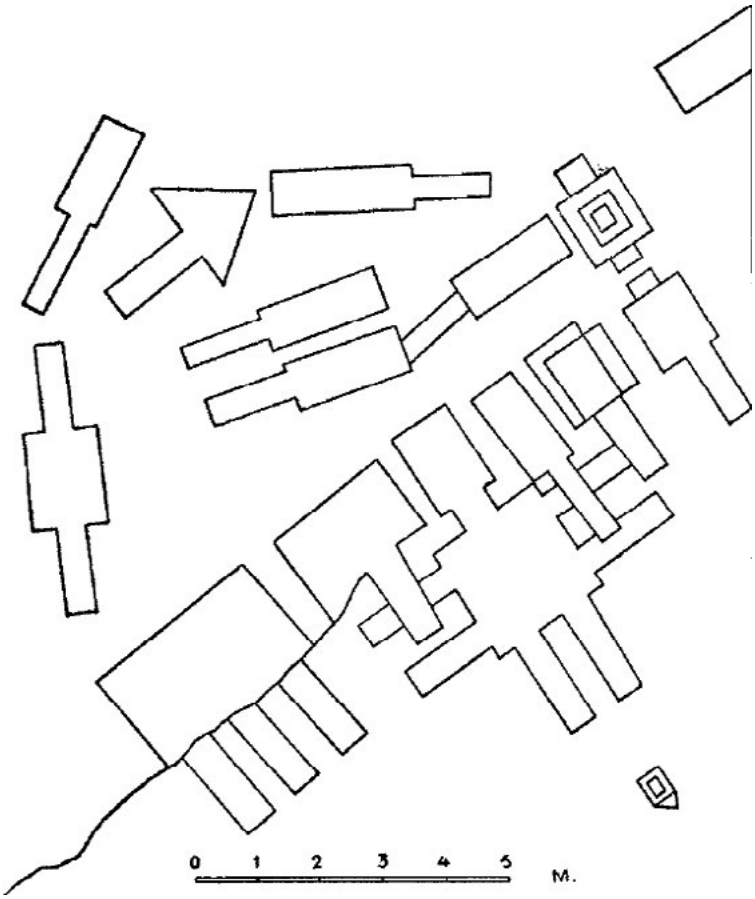


Figure 276. el-Hadra necropolis. Sector (7): el-Manara Cemetery. Plan of Section (A). Adriani 1952: 1, Figure 1. (Chapter 3, site 146c: p. 147)

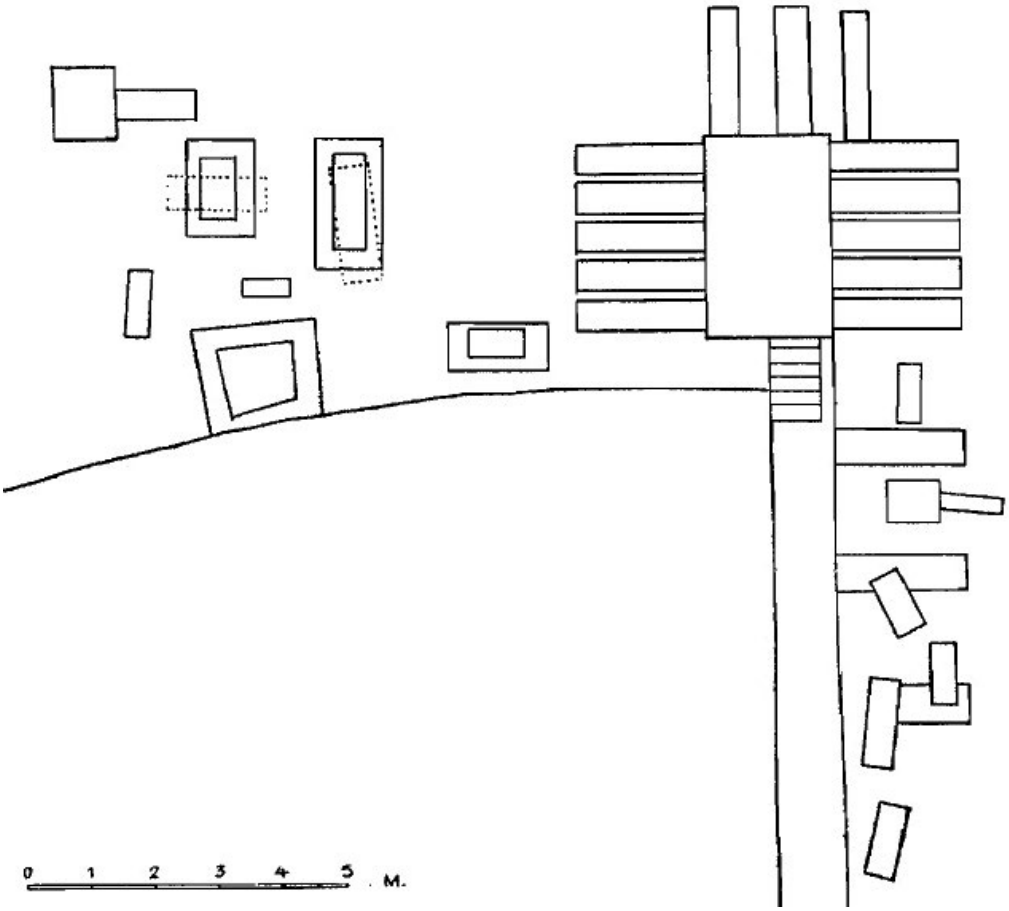


Figure 277. el-Hadra necropolis. Sector (7): el-Manara Cemetery. Plan of Section (B). Adriani 1952: 4, Figure 3. (Chapter 3, site 146c: p. 147)

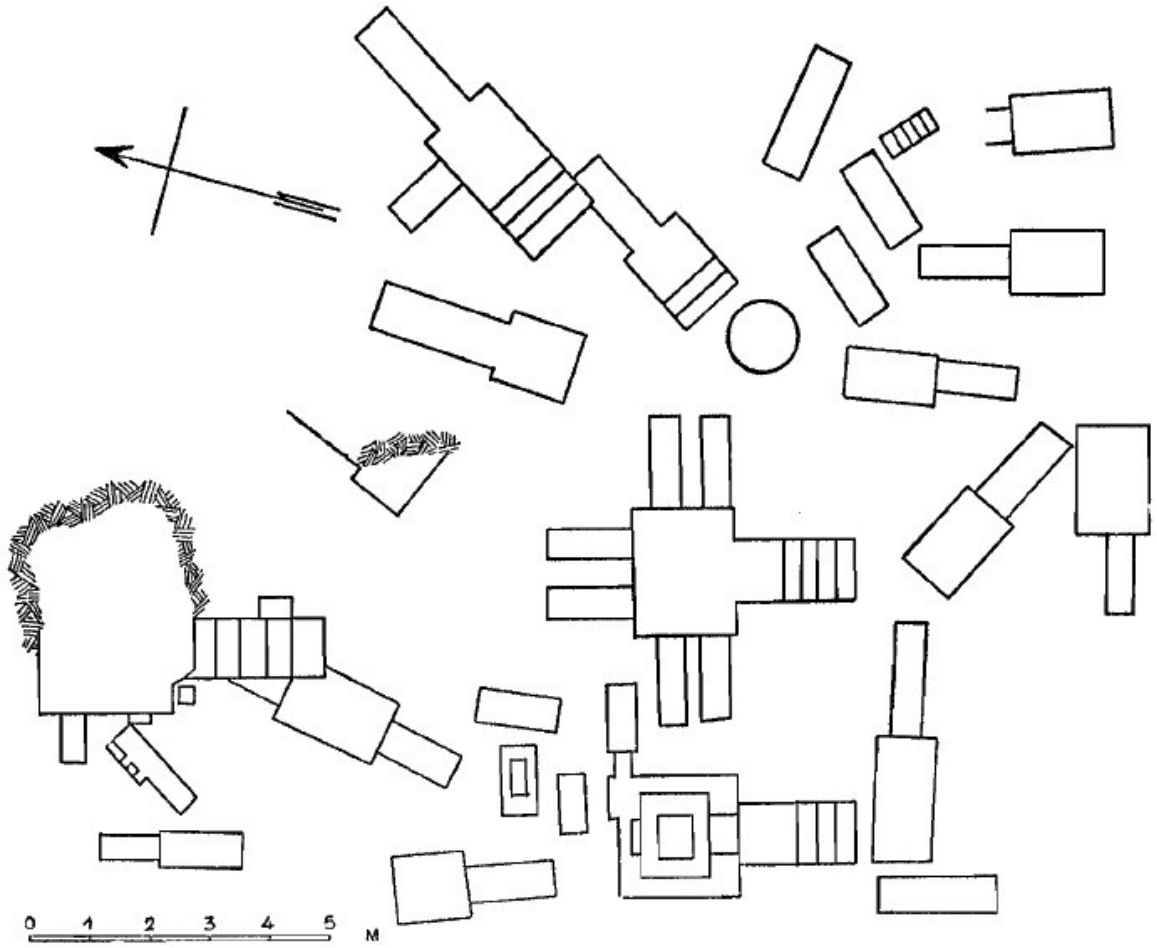


Figure 278. el-Hadra necropolis. Sector (7): el-Manara Cemetery. Plan of Section (C). Adriani 1952: 6, Figure 5. (Chapter 3, site 146c: p. 147)

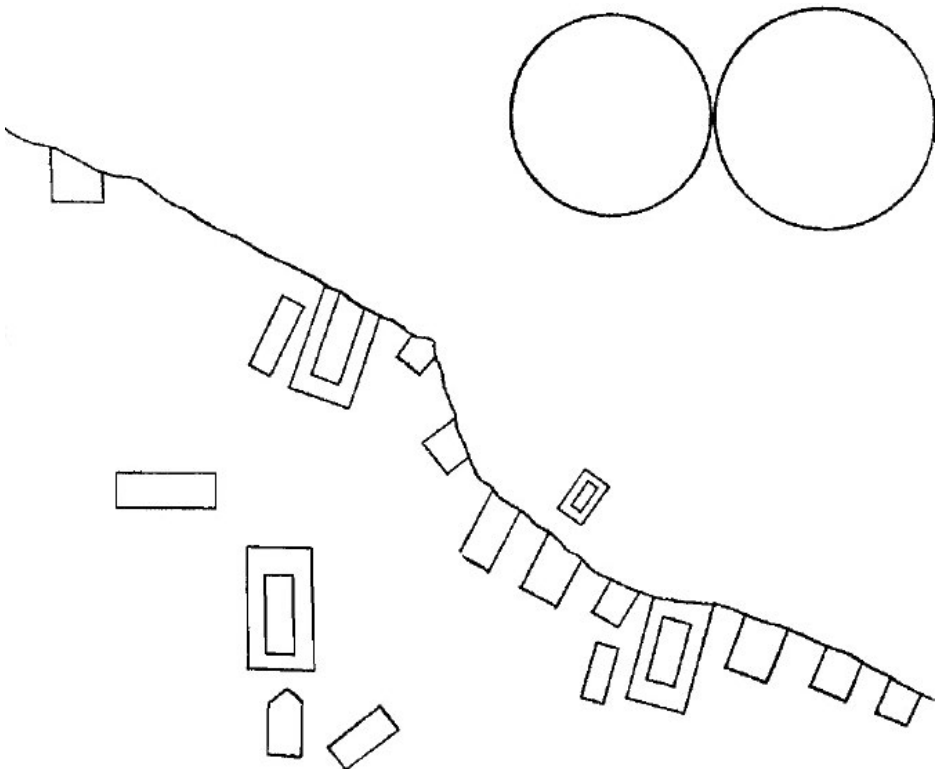


Figure 279. el-Hadra necropolis. Sector (7): el-Manara Cemetery. Plan of Section (D). Adriani 1952: 8, Figure 6. (Chapter 3, site 146c: p. 147)

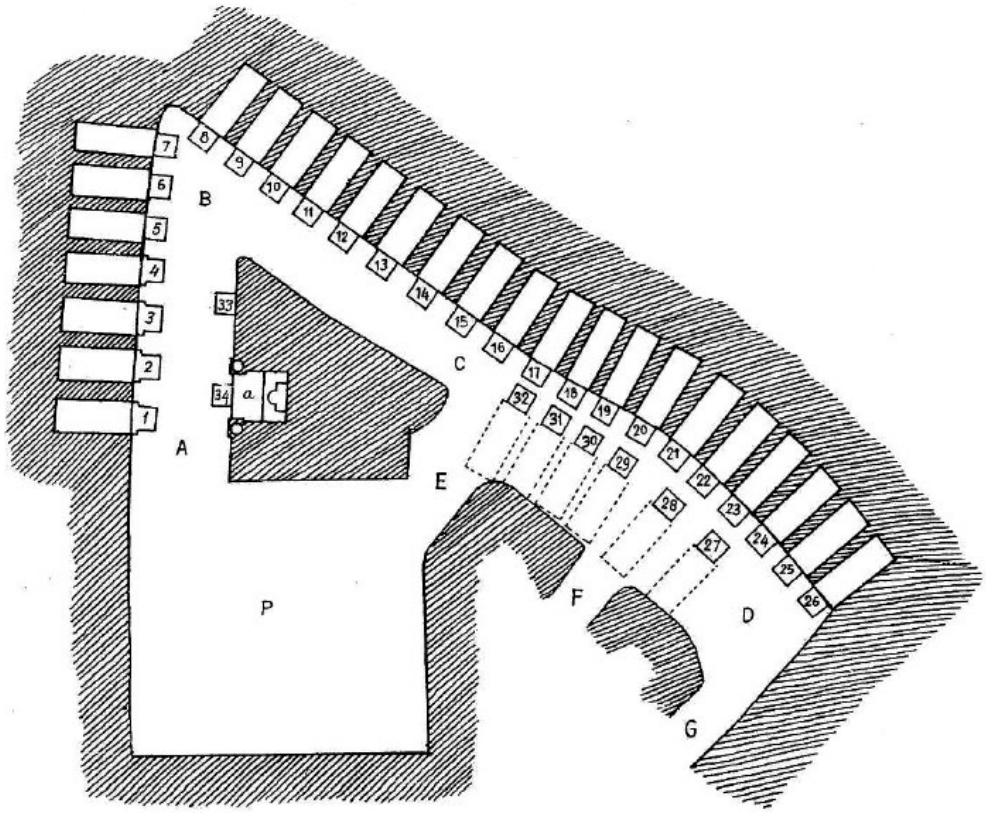


Figure 280. el-Hadra necropolis. Sector (8): courtyard of the Diaconesses (el-Hadra University) Hospital. Plan of a hypogeum. Adriani 1966b: Catalogue Number 74, Tavola 41, Figure 158. (Chapter 3, site 146c: p. 147)

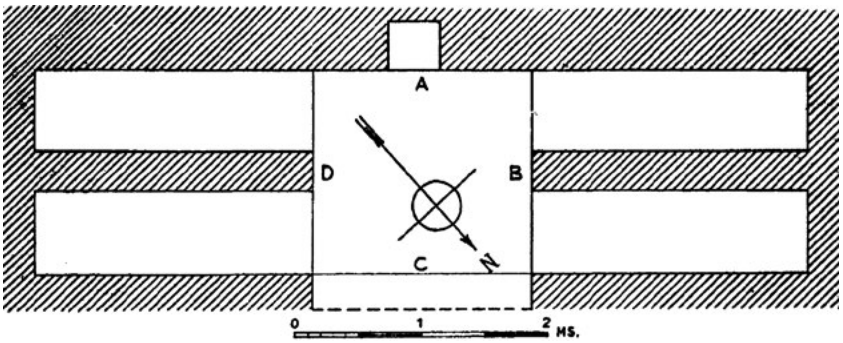


Figure 281. el-Hadra necropolis. Sector (9): Faculty of Engineering. Plan of an extant section of a hypogeum. Adriani 1956a: 38, Figure 37. (Chapter 3, site 146c: p. 148)

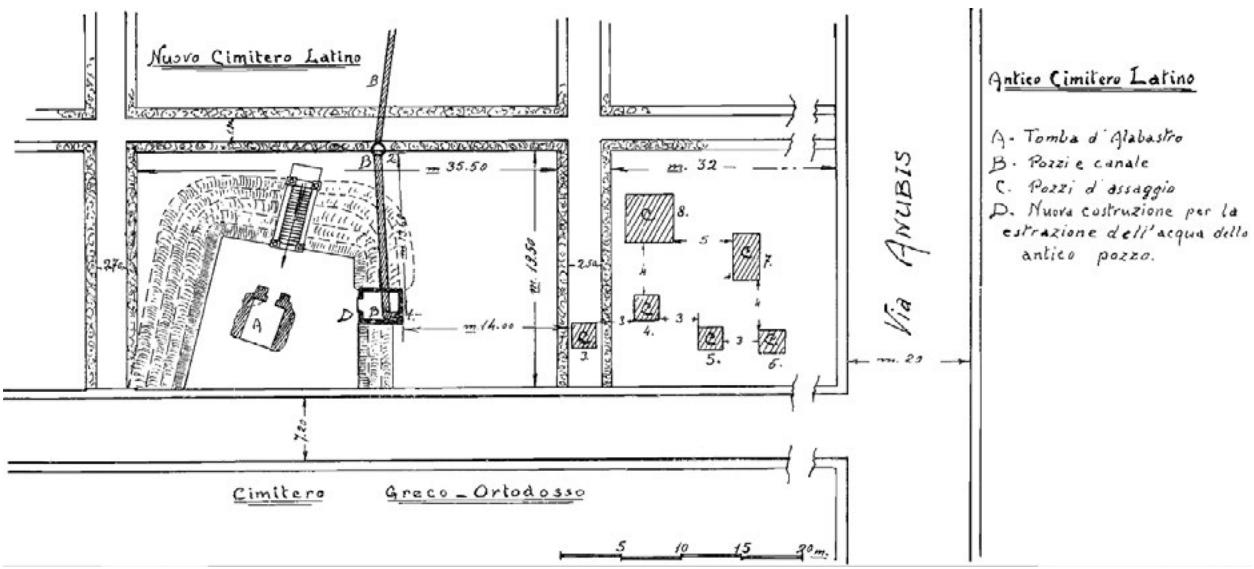


Figure 282. el-Chatby. Latin Cemetery (Terra Santa). Plan of Adriani's 1936 excavations near the Alabaster tomb. Adriani 1940a: 17, Figure 1. (Chapter 3, site 147: p. 148)



Figure 283. el-Chatby. Latin Cemetery (Terra Santa). Localisation of the Alabaster tomb within the proposed enclosure (C1-C2-C3) of the Ptolemaic Royal Quarter. AutoCAD map (V1). Extract. Author © 2019. (Chapter 3, site 147: p. 149)



Figure 284. el-Chatby. Latin Cemetery (Terra Santa). Satellite image: relative location of the Alabaster tomb to fortification-point (α) (site 1) and the HRIAC excavations (site 137a) at el-Shallalat Park. Google Earth © 2018. Labels added by author. (Chapter 3, site 147: p. 149)

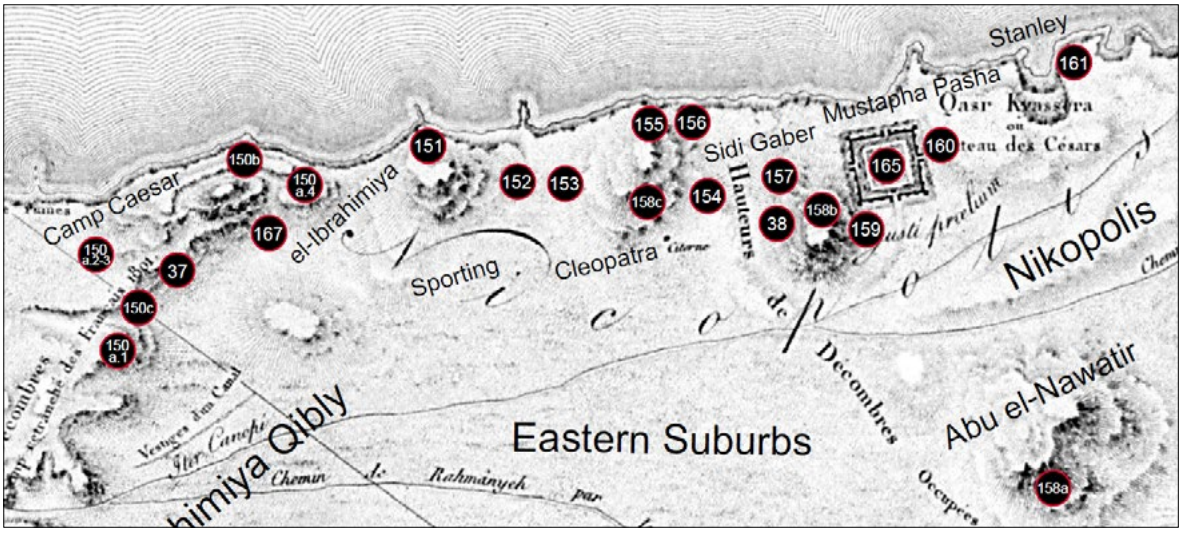


Figure 285. Eastern Suburbs. Localisation of recorded sites (150-161). AutoCAD map (V5). Extract. Author © 2019. (Chapter 3, site 150: p. 153)

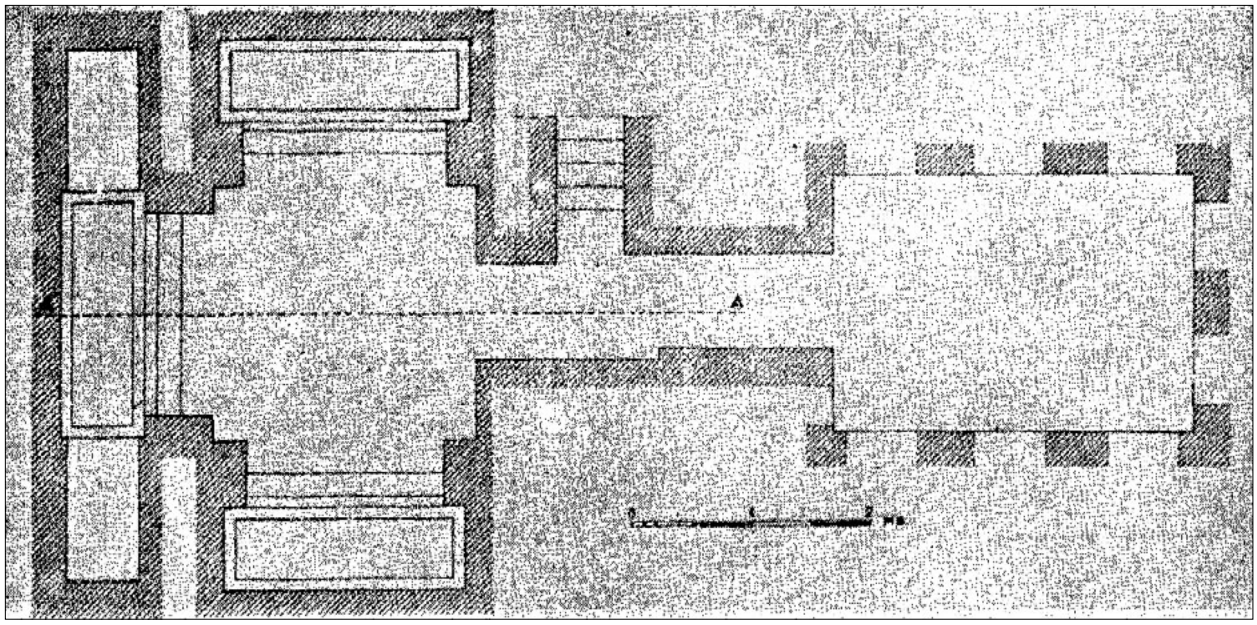


Figure 286. Cleopatra. Tigrane Pasha (Port-Saīd) Street. Plan of a hypogeum.
Adriani 1956b: Tavola I. (Chapter 3, site 153: p. 155)

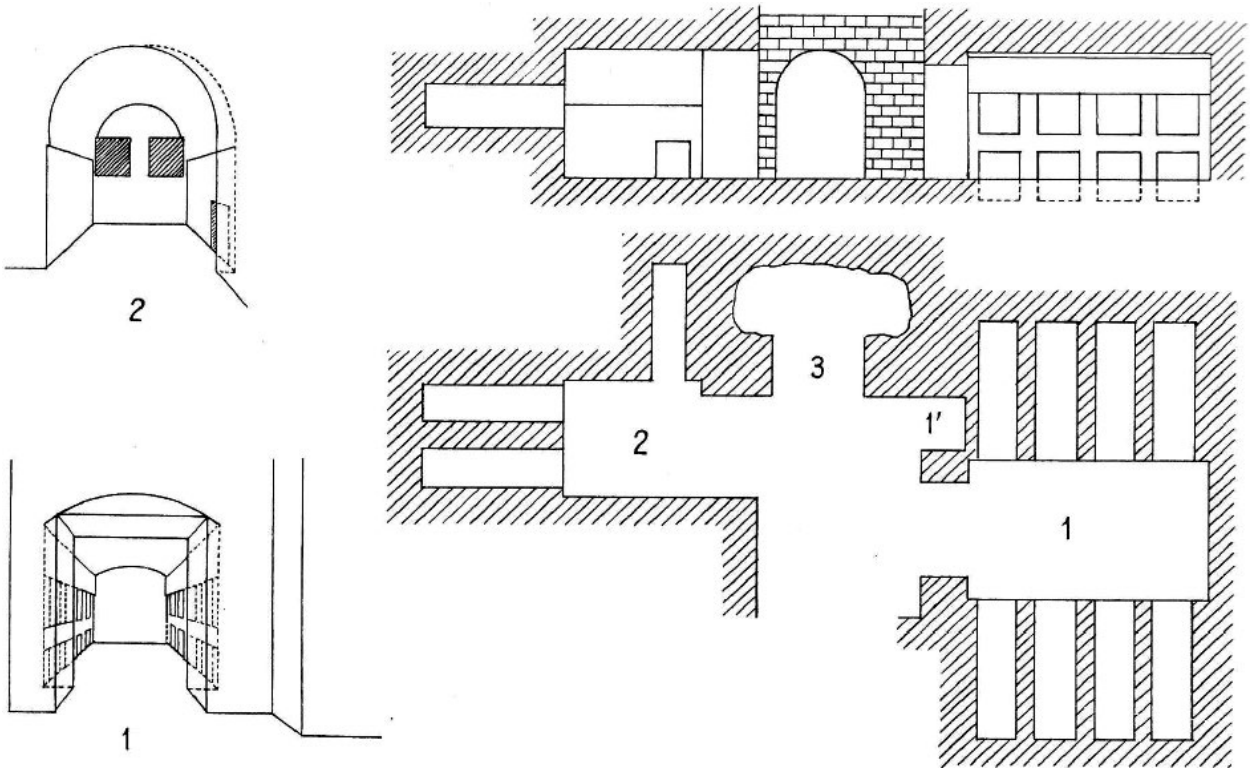


Figure 287. Cleopatra. Plan and sectional view of a hypogeum. Adriani 1966b:
Catalogue Number 92, Tavola 67, Figure 225. (Chapter 3, site 154: p. 155)

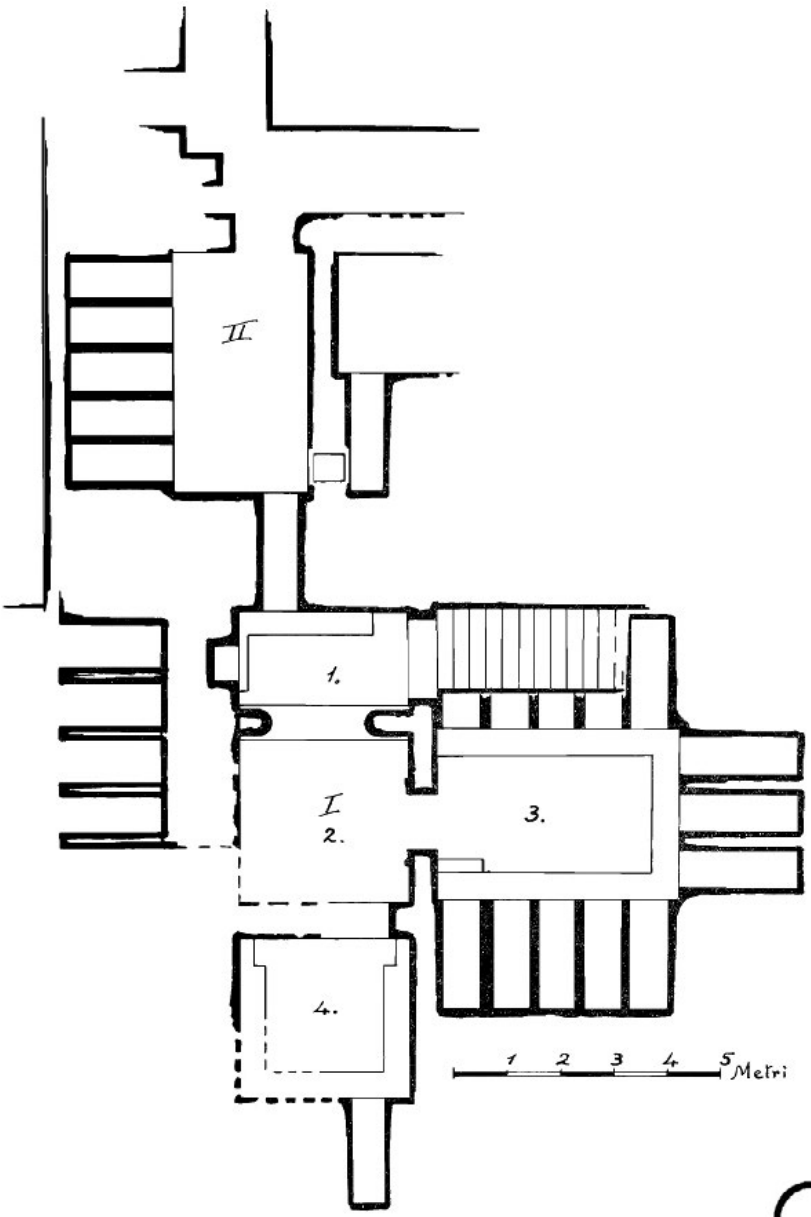


Figure 288. Cleopatra. Funerary complex. Plan of hypogea (I-II). Adriani 1940a: 125, Figure 59. (Chapter 3, site 155: p. 156)

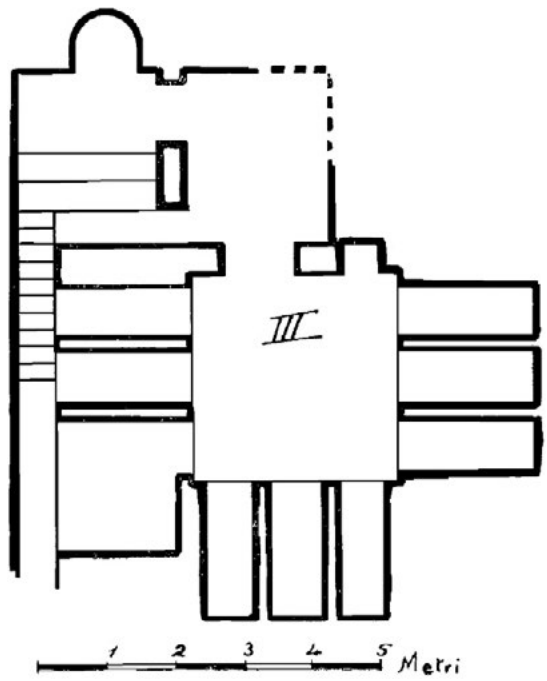


Figure 289. Cleopatra. Funerary complex. Plan of Hypogeum (III). Adriani 1940a: 124, Figure 58. (Chapter 3, site 155: p. 156)

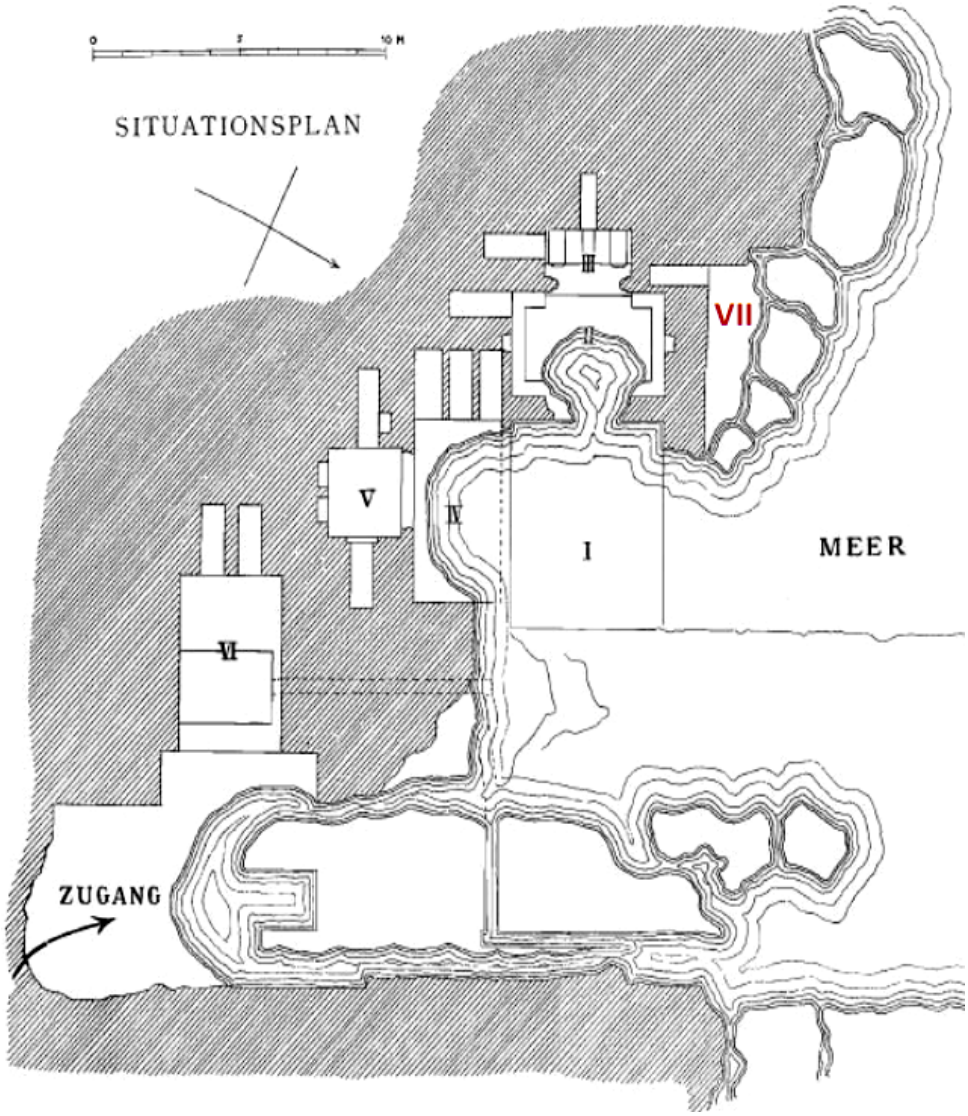


Figure 290. Sidi Gaber. Plan of a hypogeum. Thiersch 1904: 1, Abbildung 1. (Chapter 3, site 156: p. 156)

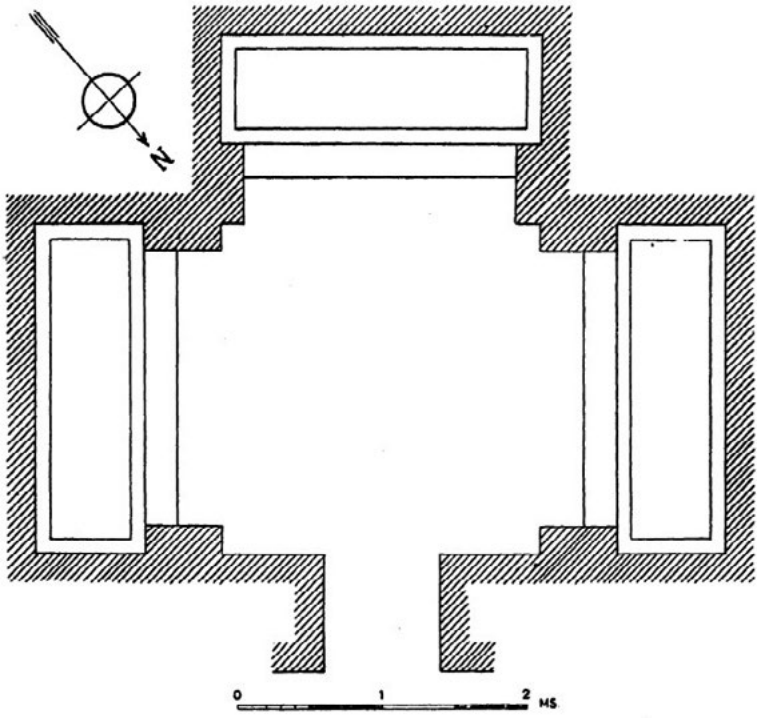


Figure 291. Sidi Gaber. Funerary complex. Hypogeum (II). Plan of a *triclinium*-like chamberette comprising three alcoves. Adriani 1956a: 40, Figure 42. (Chapter 3, site 157b: p. 157)



Figure 292. Mustapha Pasha. Satellite image: relative location of the funerary complex on el-Moaskar el-Romani Street (site 160) to analogous funerary structure at Stanley Bay (site 161). Google Earth © 2018. Labels added by author. (Chapter 3, site 160: p. 159)



Figure 293. Mustapha Pasha. Satellite image: localisation of the funerary complex on el-Moaskar el-Romani Street. Google Earth © 2018. Labels added by author. (Chapter 3, site 160: p. 159)

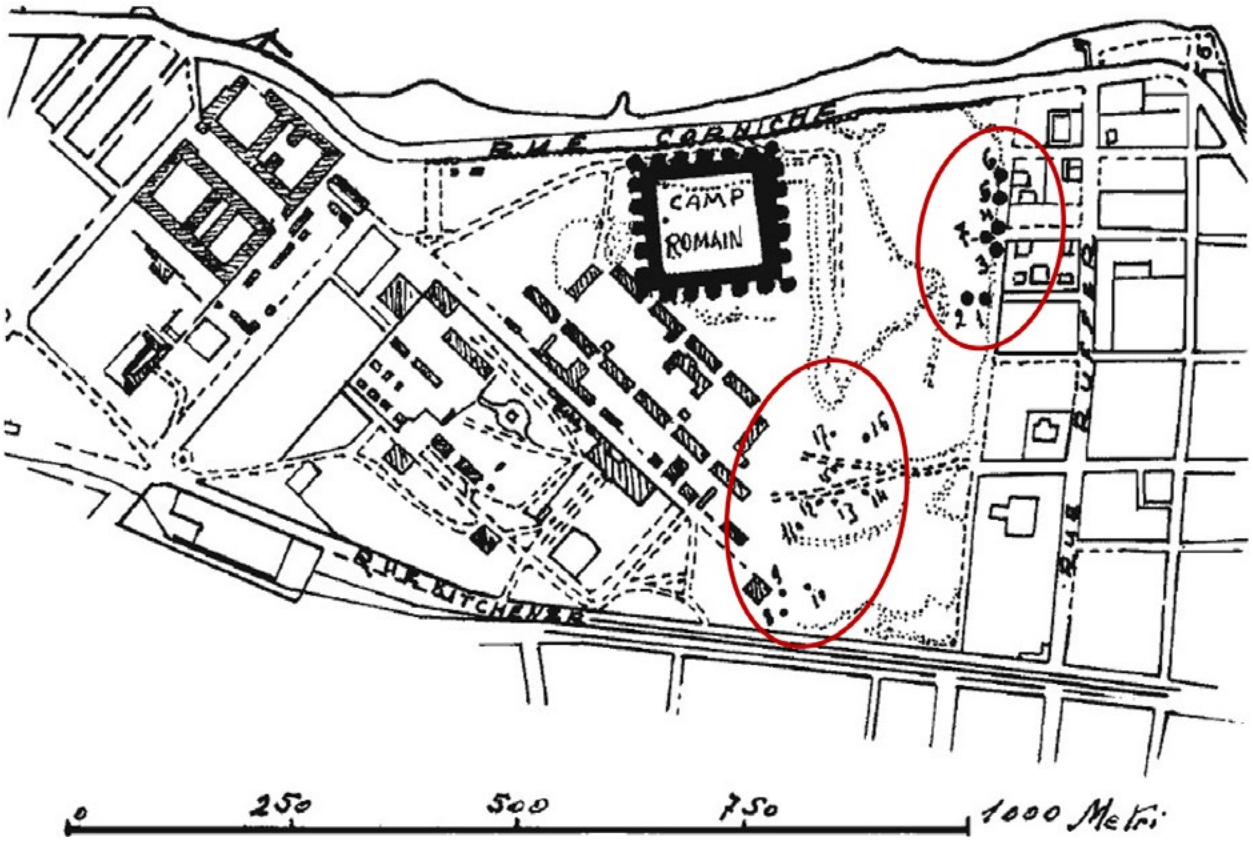


Figure 294. Mustapha Pasha. Zones (north: 1-7; south: 8-17) excavated by the GRM in 1933-35 on the western side of el-Moaskar el-Romani Street. Adriani 1936: 11, Figure 1. Labels added by author. (Chapter 3, site 160: p. 159)

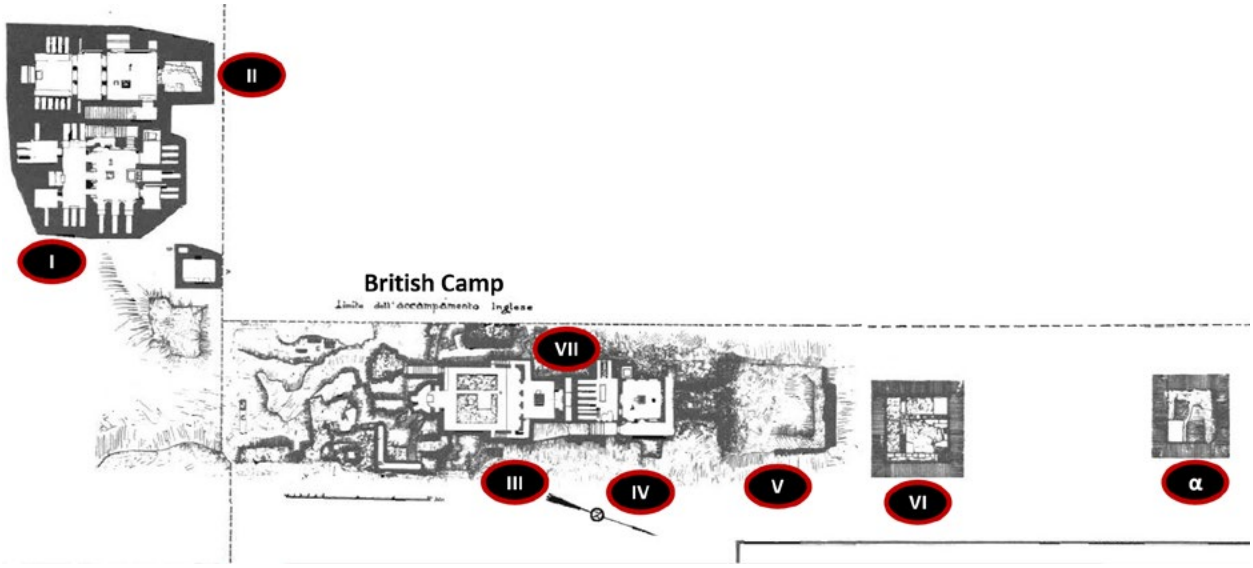


Figure 295. Mustapha Pasha. Excavation plan of the funerary complex on el-Moaskar el-Romani Street. Adriani 1936: Planche XXXV. Labels added by author. (Chapter 3, site 160: p. 159)

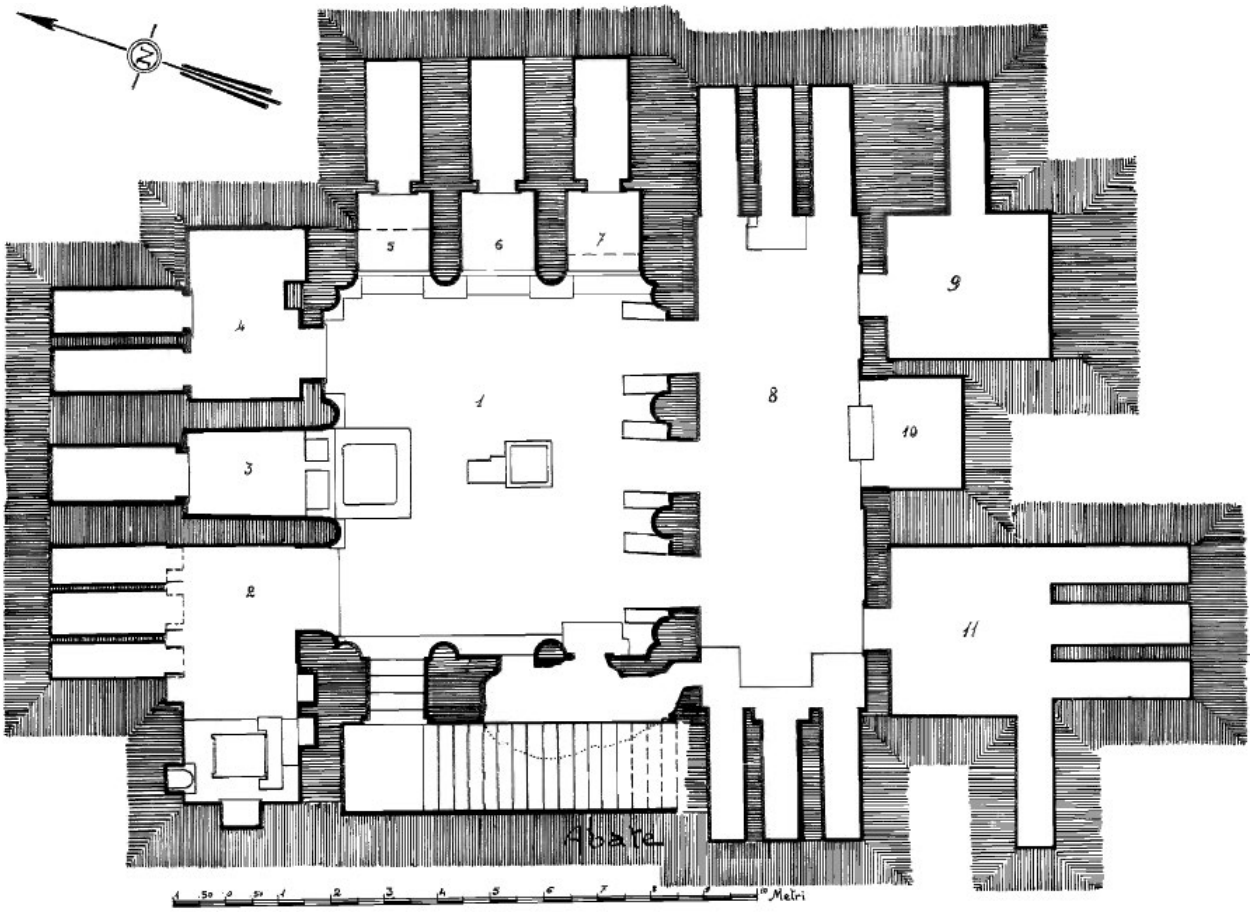


Figure 296. Mustapha Pasha. el-Moaskar el-Romani funerary complex. Hypogeum (I).
Plan; after O. Abate. Adriani 1936: Planche XXV. (Chapter 3, site 160: p. 159)

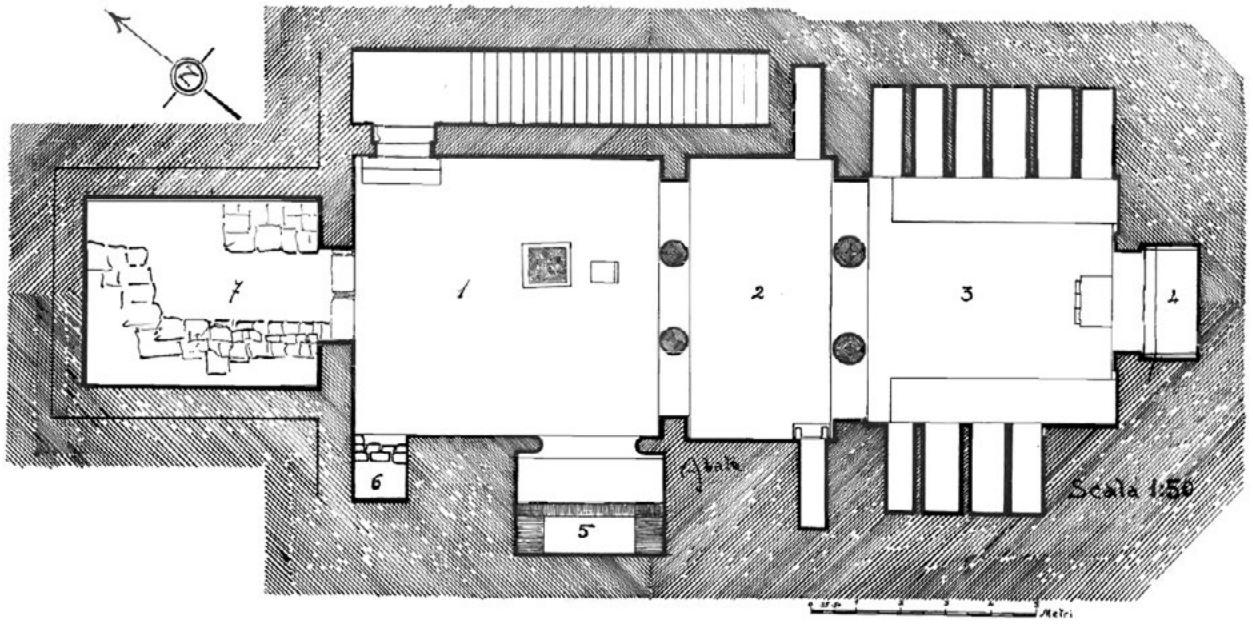


Figure 297. Mustapha Pasha. el-Moaskar el-Romani funerary complex. Hypogeum (II).
Plan; after O. Abate. Adriani 1936: Planche XXIX. (Chapter 3, site 160: p. 161)

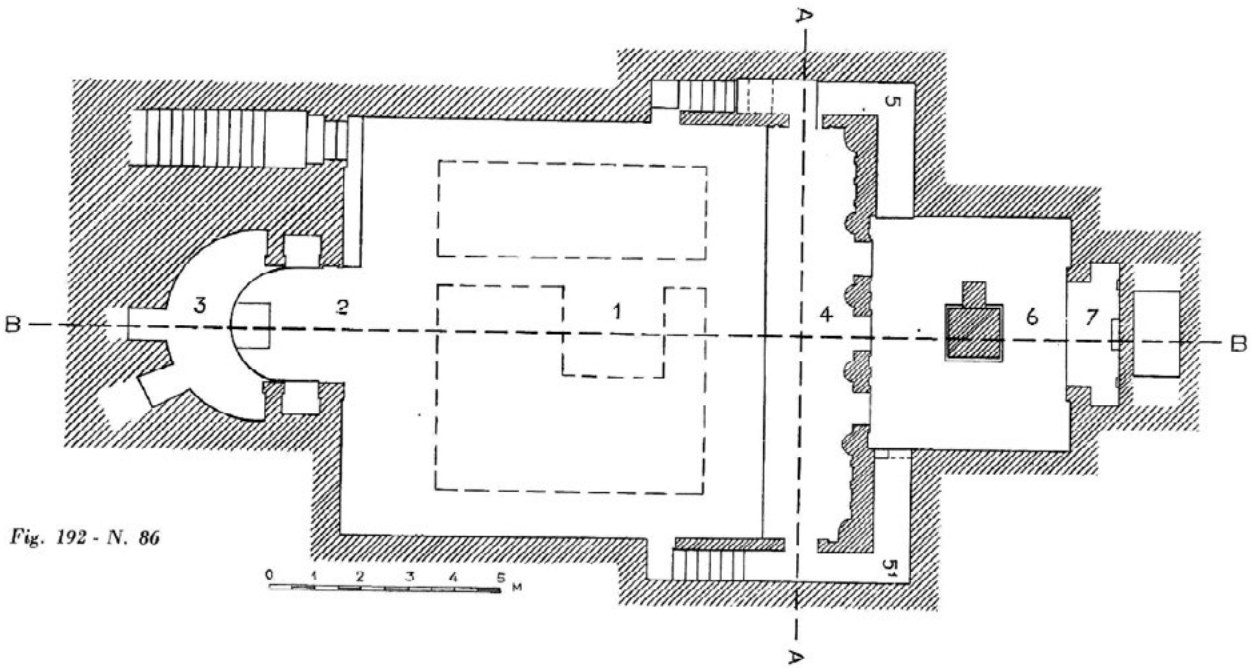


Figure 298. Mustapha Pasha. el-Moaskar el-Romani funerary complex. Hypogeum (III). Plan; after O. Abate. Adriani 1966b: Catalogue Number 86, Tavola 54, Figure 192. (Chapter 3, site 160: p. 161)

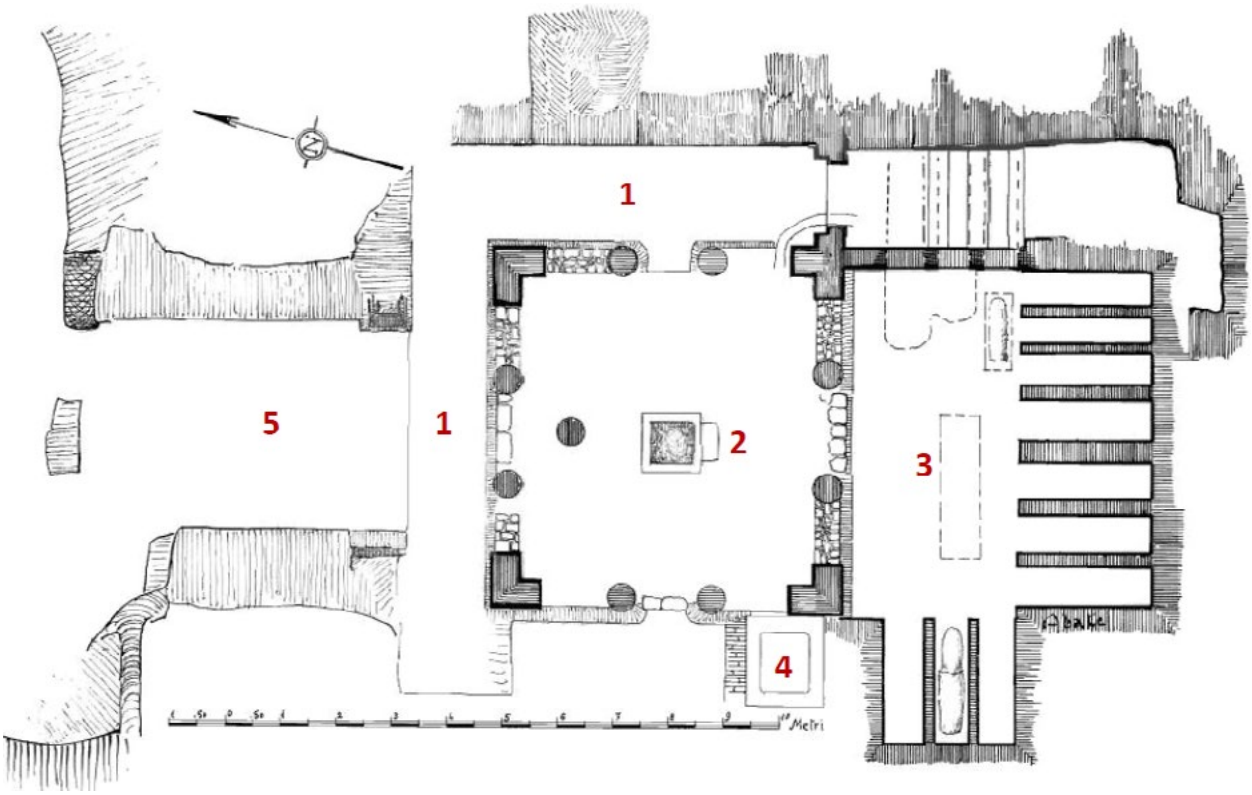


Figure 299. Mustapha Pasha. el-Moaskar el-Romani funerary complex. Hypogeum (IV). Plan; after O. Abate. Adriani 1936: Planche XXXIV. Labels added by author. (Chapter 3, site 160: p. 162)

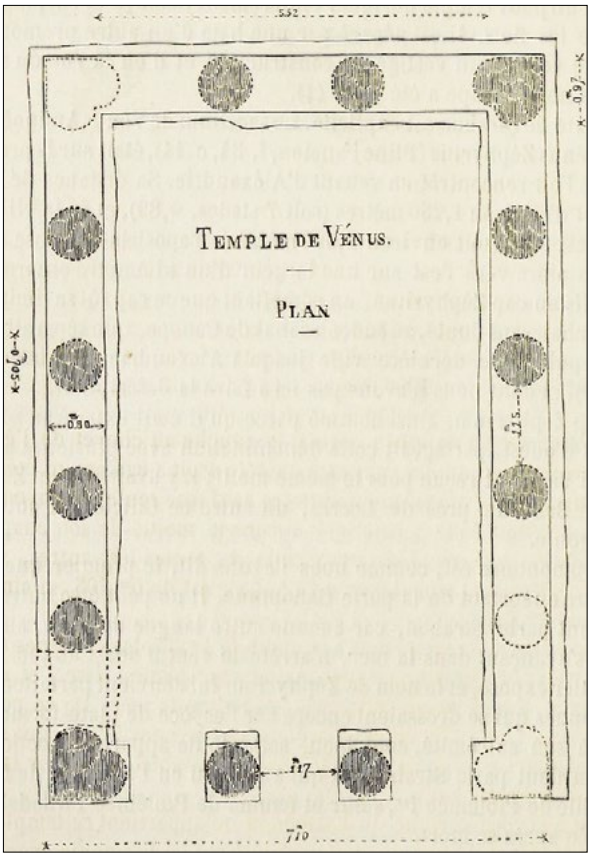


Figure 300. Stanley Bay. Plan of a funerary structure. Ceccaldi 1869: 270, Figure 1. (Chapter 3, site 161: p. 163)

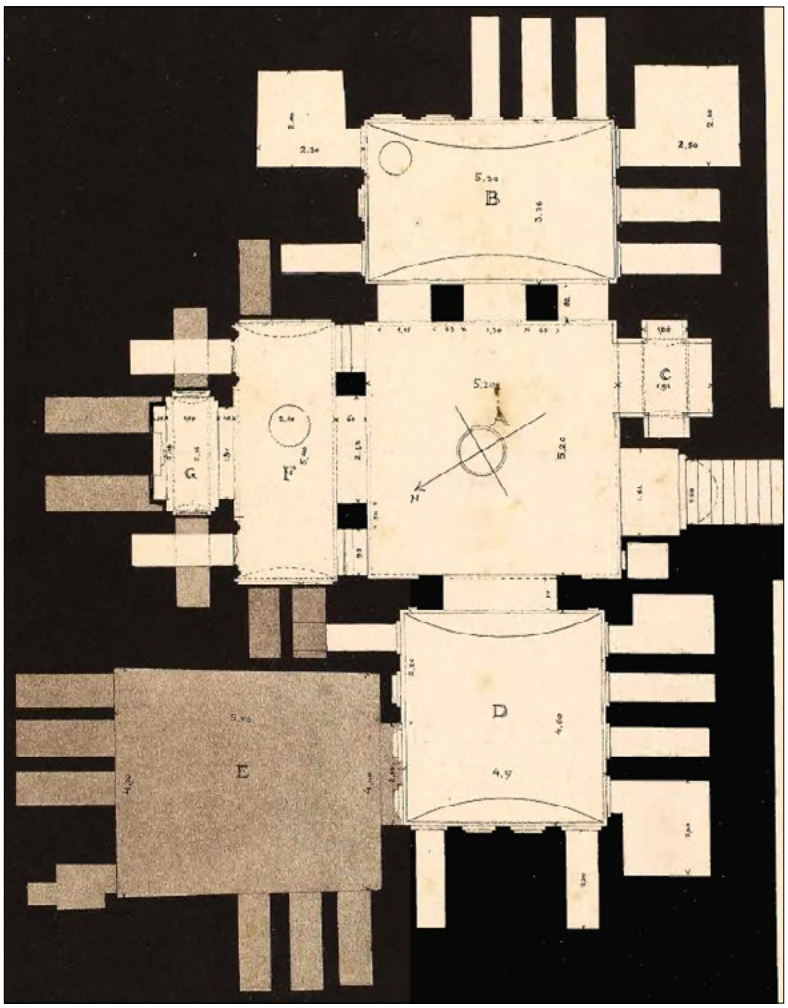


Figure 301. Smouha. Antoniadis Park. Plan of a hypogeum. Thiersch 1904: Tafel IV. (Chapter 3, site 162: p. 164)

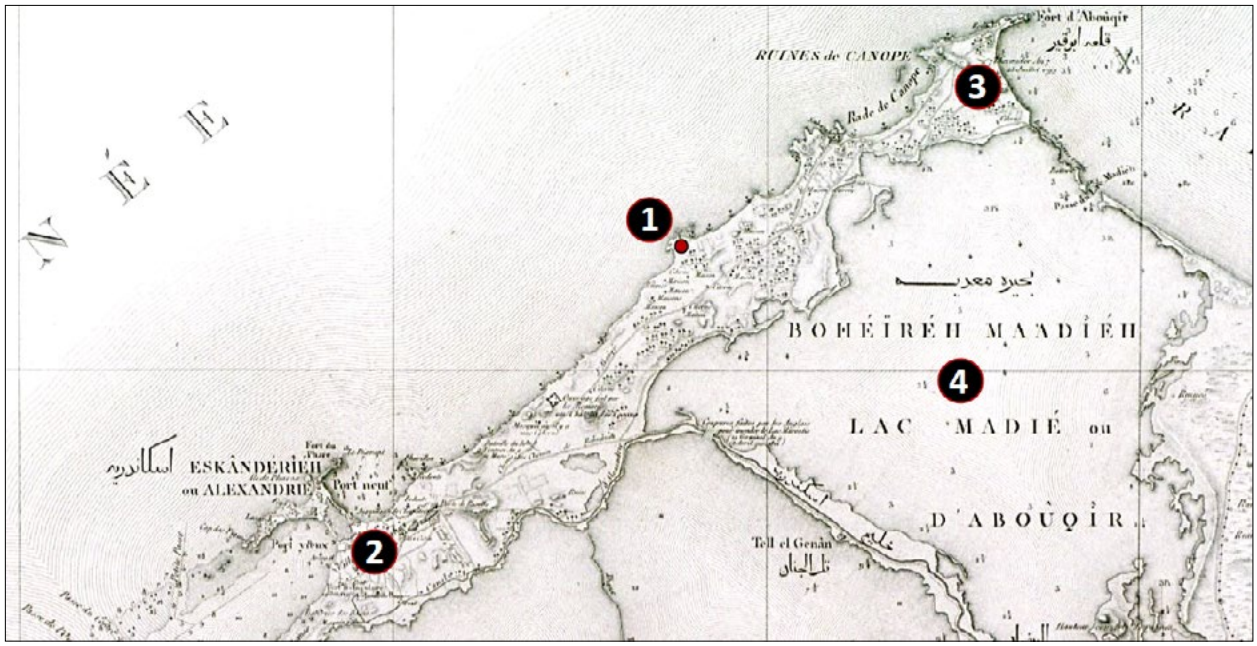


Figure 302. Sidi Bishr. HIAMAS excavations. Relative location of Bir Masoud (1) to Alexandria (2), Canopus (3), and Abu Qir aka el-Maadiya Lagoon (4), c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Carte Topographique de l'Égypt, 1818: Flle 37, 'Alexandrie'. Extract. Labels added by author.
(Chapter 3, site 163: p. 164)

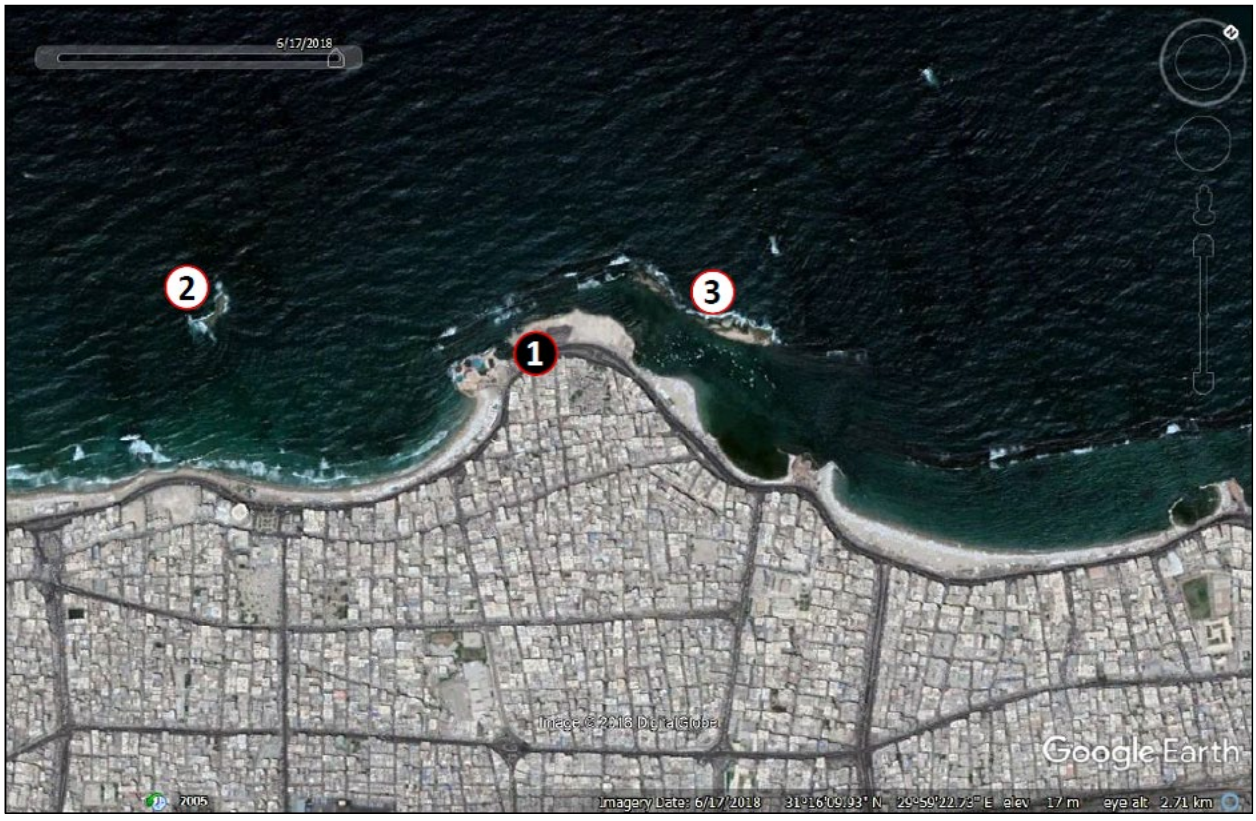


Figure 303. Sidi Bishr. HIAMAS excavations. Satellite image: localisation of the promontory of Bir Masoud (1) and the islets of el-Dahab (2) and Gabr el-Khur aka Miami (3). Google Earth © 2018. Labels added by author.
(Chapter 3, site 163: p. 165)



Figure 304. Sidi Bishr. HIAMAS excavations. Satellite image: relative location of Bir Masoud (1) to Gabr el-Khur aka Miami (3). Google Earth © 2018. Labels added by author. (Chapter 3, site 163: p. 165)

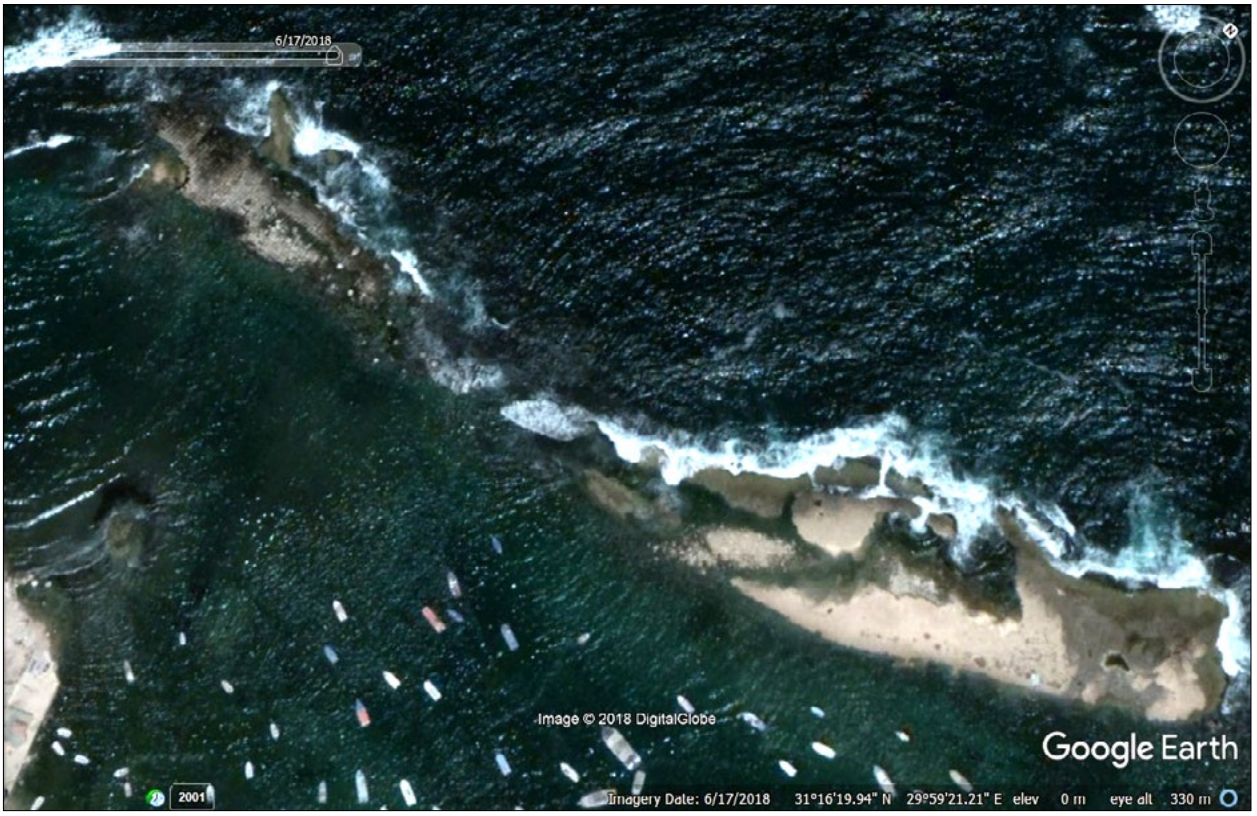


Figure 305. Sidi Bishr. HIAMAS excavations. Satellite image: islet of Gabr el-Khur aka Miami. Google Earth © 2018. (Chapter 3, site 163: p. 165)

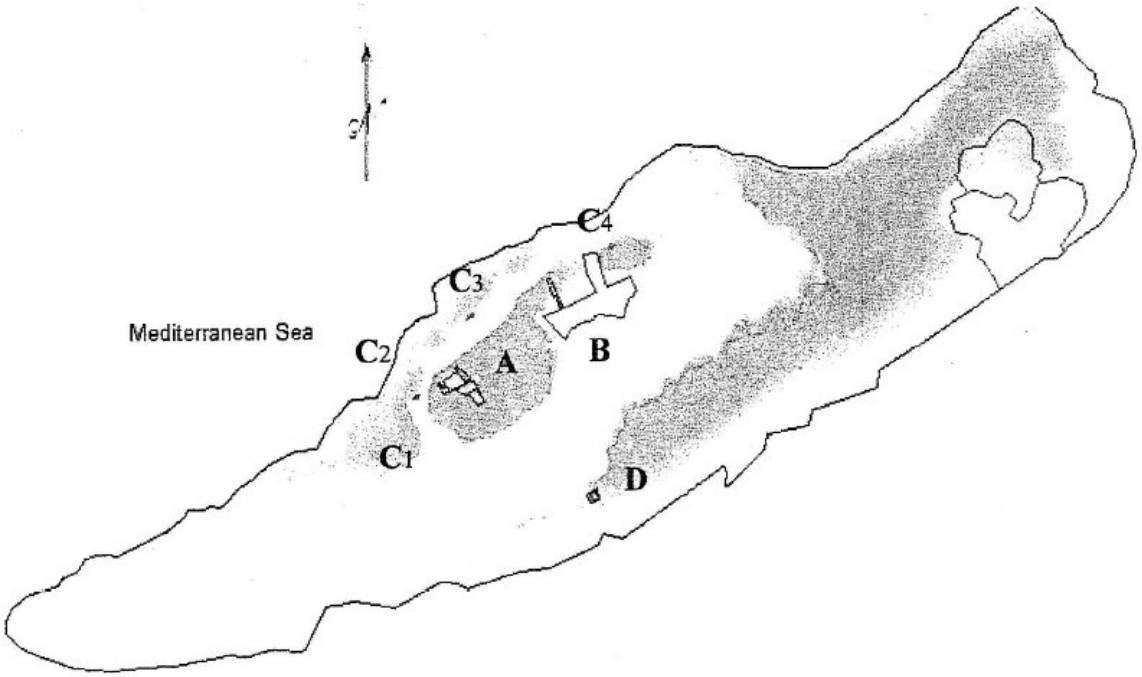


Figure 306. Sidi Bishr. HIAMAS excavations. Islet of Gabr el-Khur aka Miami. General plan of recorded vestiges. Tzalas 2012: 135, Figure 8. (Chapter 3, site 163: p. 165)

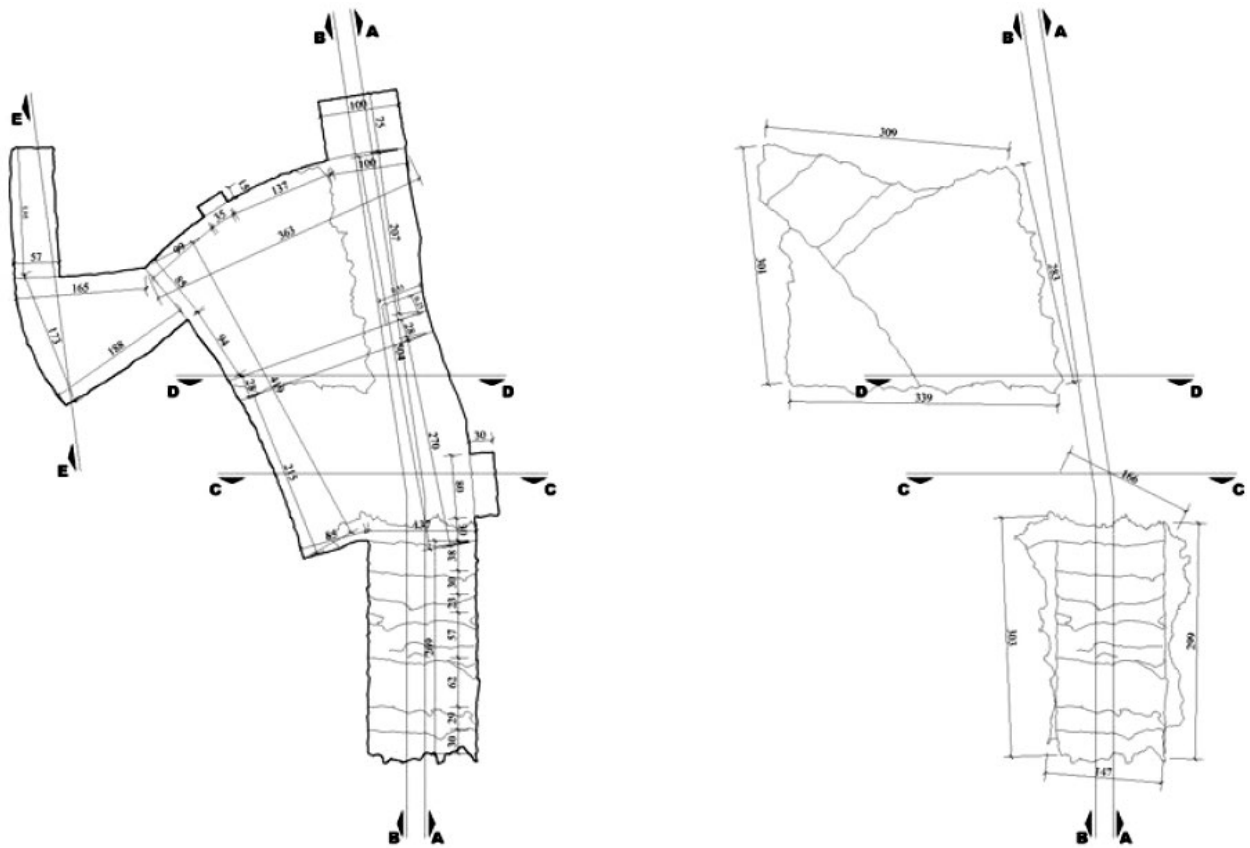


Figure 307. Sidi Bishr. HIAMAS excavations. Islet of Gabr el-Khur aka Miami. Plan of a hypogeum; after Awad Enterprises. Tzalas 2018: 33, Figure 33. (Chapter 3, site 163: p. 165)

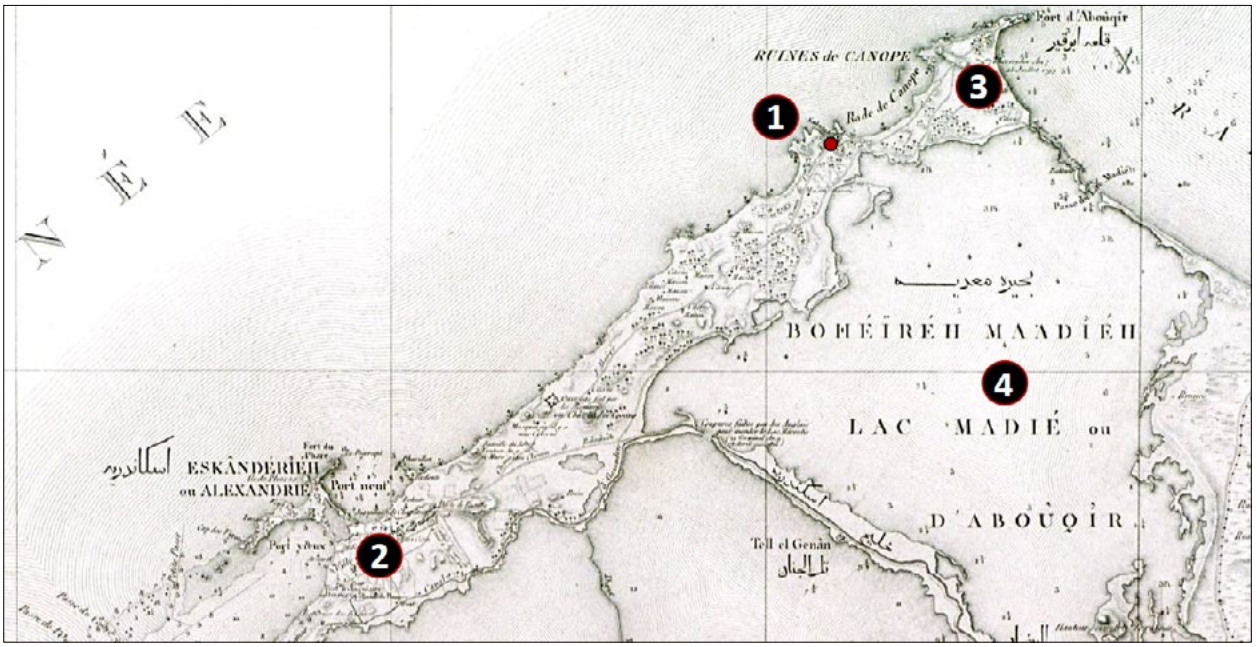


Figure 308. el-Montazah. Relative location of Taposiris Parva (1) to Alexandria (2), Canopus (3), and Abu Qir aka el-Maadiya Lagoon (4), c. 1798-99. *Description de l'Égypte*. Imperial Edition 1809-22. Carte Topographique de l'Égypt, 1818: Flle 37, 'Alexandrie'. Extract. Labels added by author. (Chapter 3, site 164: p. 165)

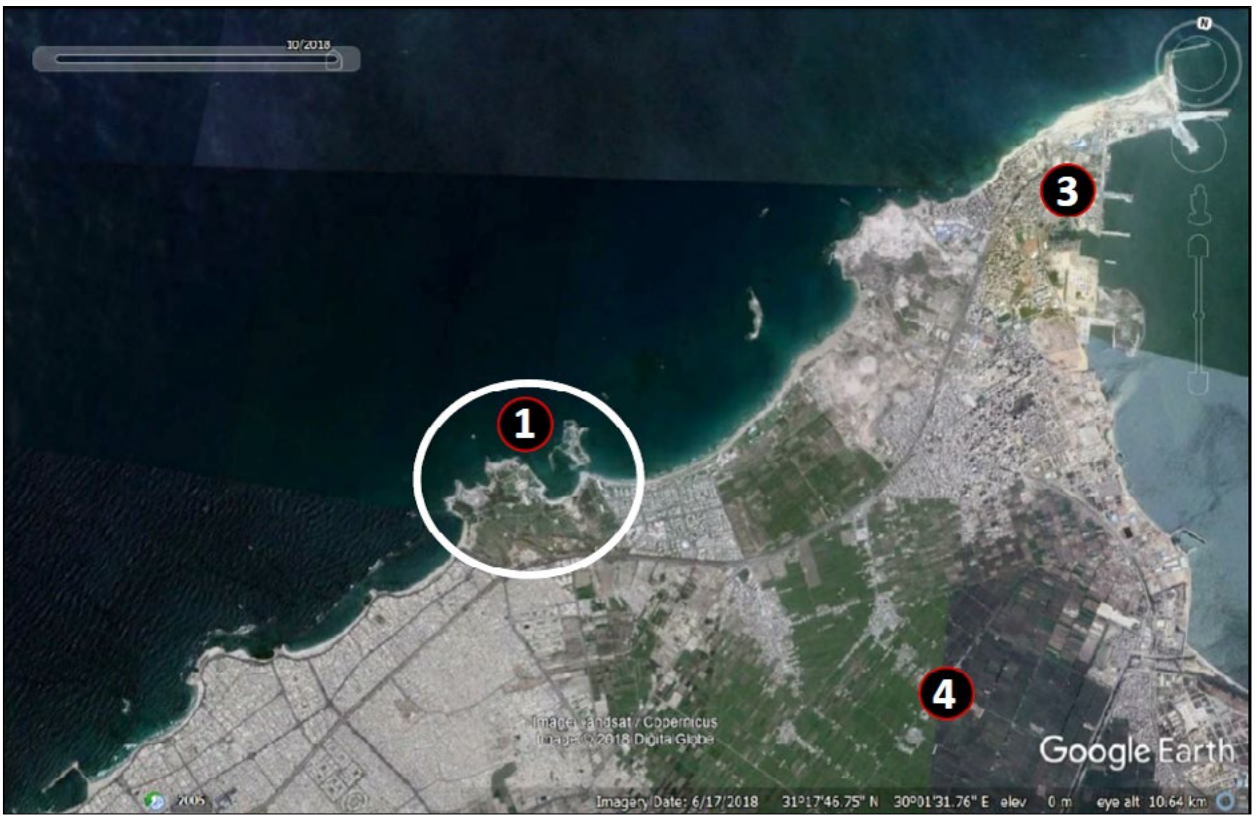


Figure 309. el-Montazah. Satellite image: relative location of Taposiris Parva (1) to Canopus (3) and the desiccated Abu Qir aka el-Maadiya Lagoon (4) (presently, agricultural land). Google Earth © 2018. Labels added by author. (Chapter 3, site 164: p. 166)

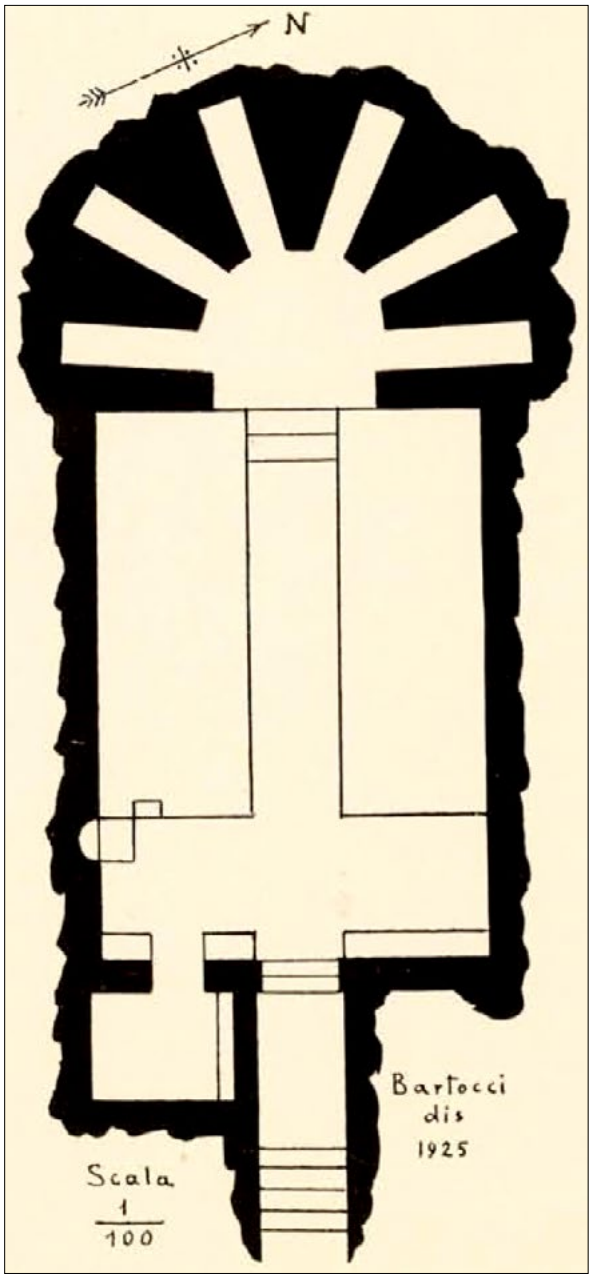


Figure 310. el-Montazah. Hypogeum (I). Plan; after M. Bartocci. Breccia 1926: Tavola L, Figure 2. (Chapter 3, site 164: p. 166)

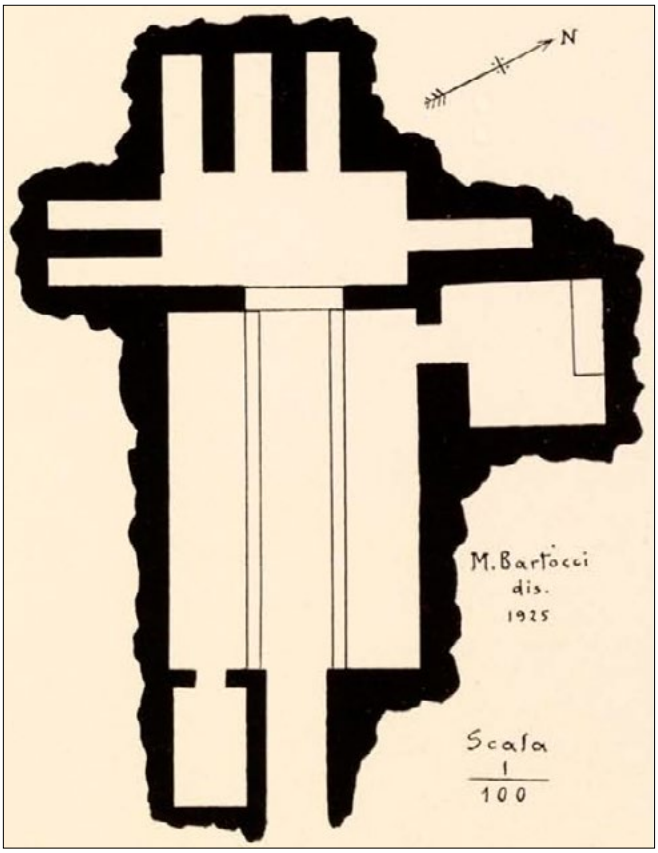


Figure 311. el-Montazah. Hypogeum (II). Plan; after M. Bartocci. Breccia 1926: Tavola L, Figure 3. (Chapter 3, site 164: p. 166)

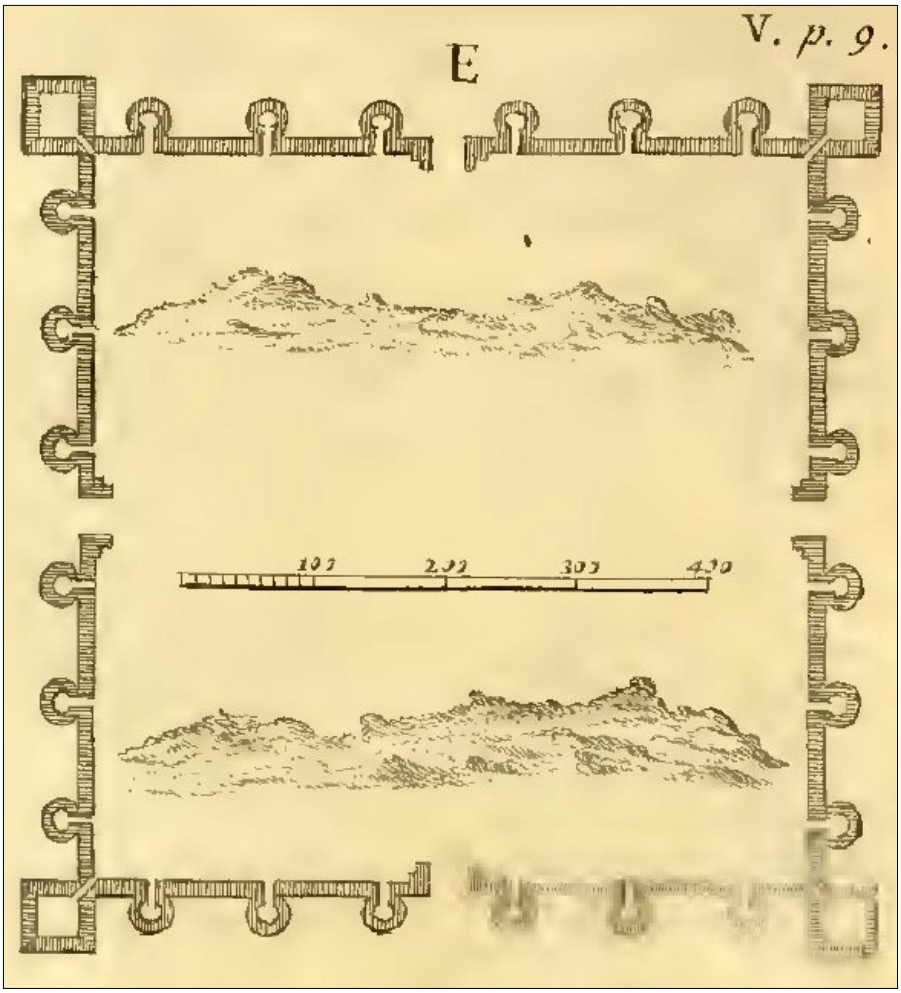


Figure 312. Mustapha Pasha. Enclosure of a Roman *castrum*. Pococke 1743: Plate V, Figure E. (Chapter 3, site 165: p. 166)

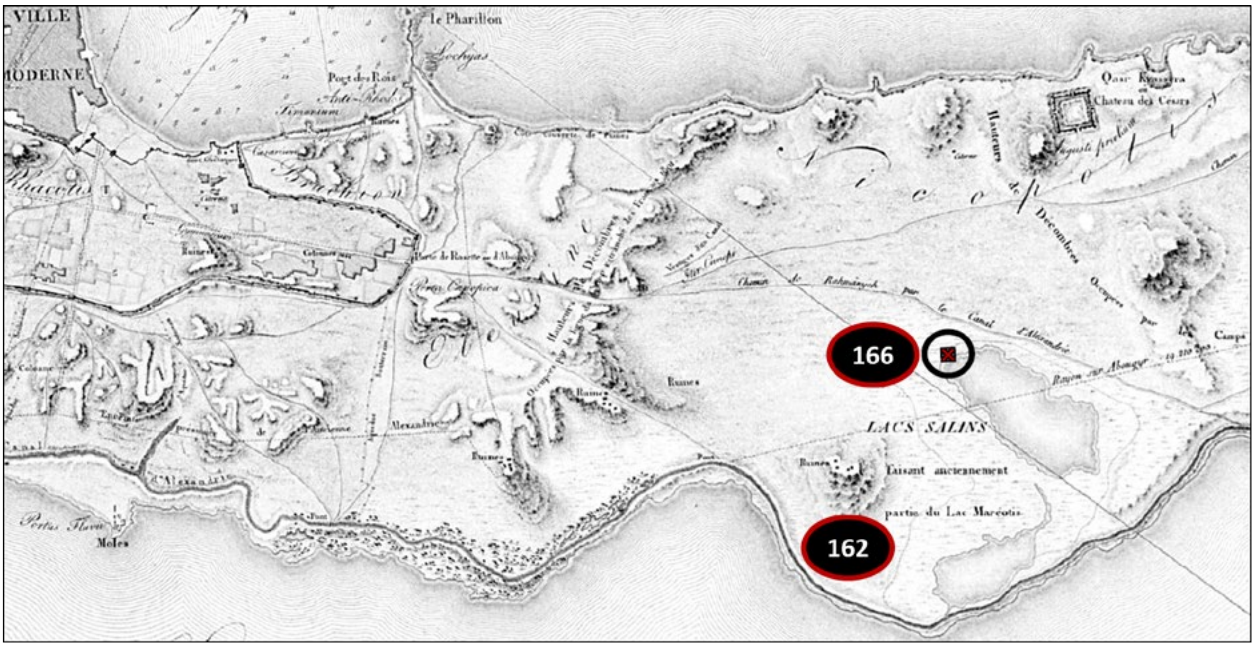


Figure 313. Smouha. Localisation of the Eleusinian temple on G. Le Père's 1822 *carte* (drafted c. 1798-99; Figure 26), relative to the Antoniadis hypogeum (site 162). *Description de l'Égypte*. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31, 'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'. Extract. Labels added by author. (Chapter 3, site 166: p. 167)

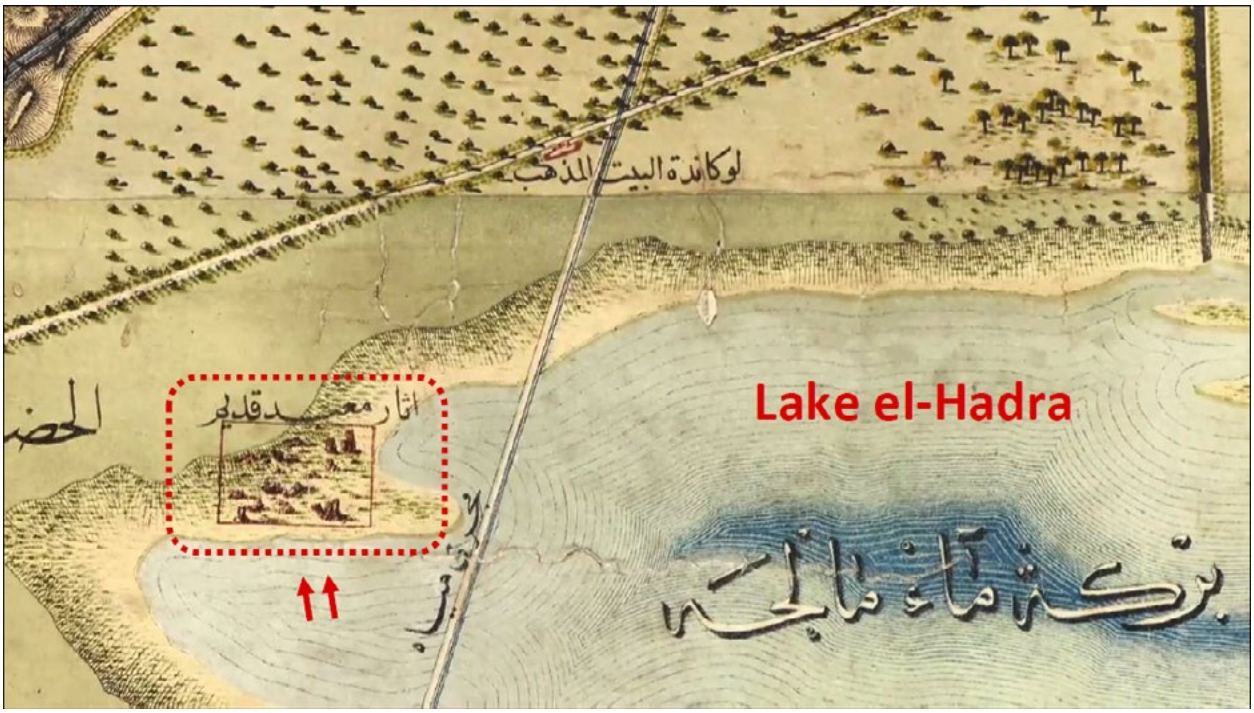


Figure 314. Smouha. Localisation of the Eleusinian temple on el-Falaki's 1871 *carte* of the 19th-century contemporary town (Figure 38). Mahmoud-Bey (el-Falaki), 'Carte d'Alexandrie en 1865', 1871. Extract. Labels added by author. (Chapter 3, site 166: p. 167)

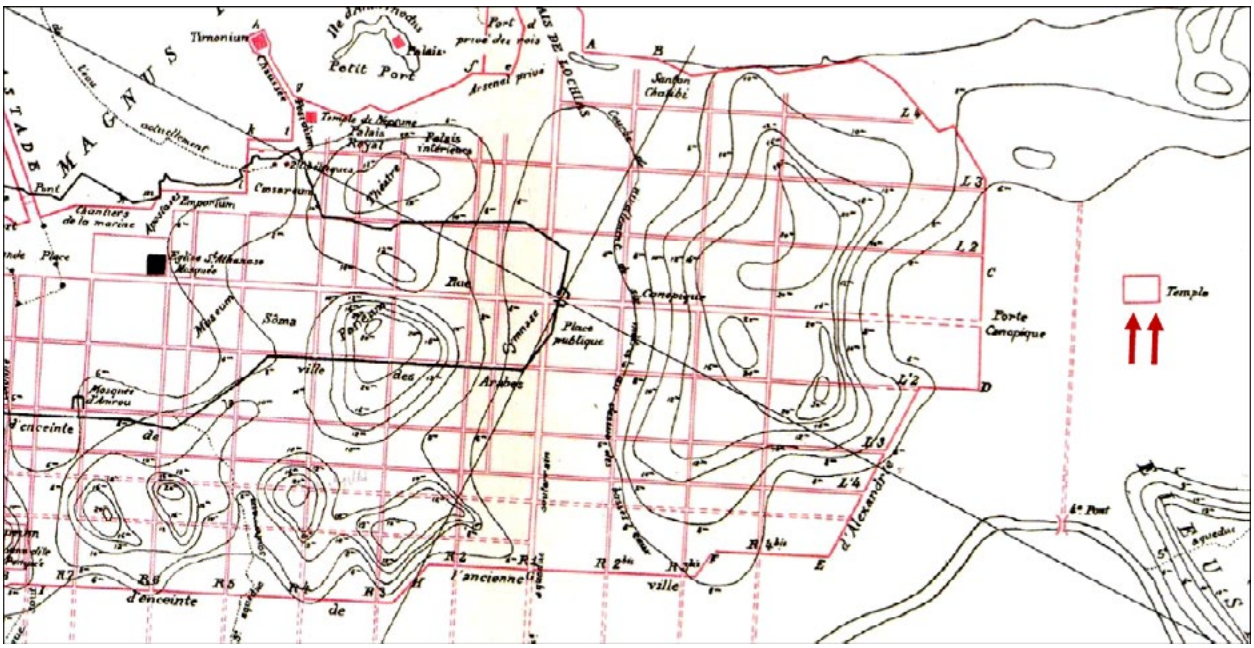


Figure 315. Smouha. Localisation of the Eleusinian temple on el-Falaki's 1866 *carte* of the ancient city (Figure 37). Mahmoud-Bey (el-Falaki), 'Carte de l'Antique Alexandrie et des Ses Faubourgs', 1866. Extract. Labels added by author. (Chapter 3, site 166: p. 167)



Figure 316. Smouha. Satellite image: localisation of the Eleusinian temple within the modern district of Smouha, between the streets of Tut-Ankh-Amun and Fawzi Moaz. Google Earth © 2018. Labels added by author. (Chapter 3, site 166: p. 168)

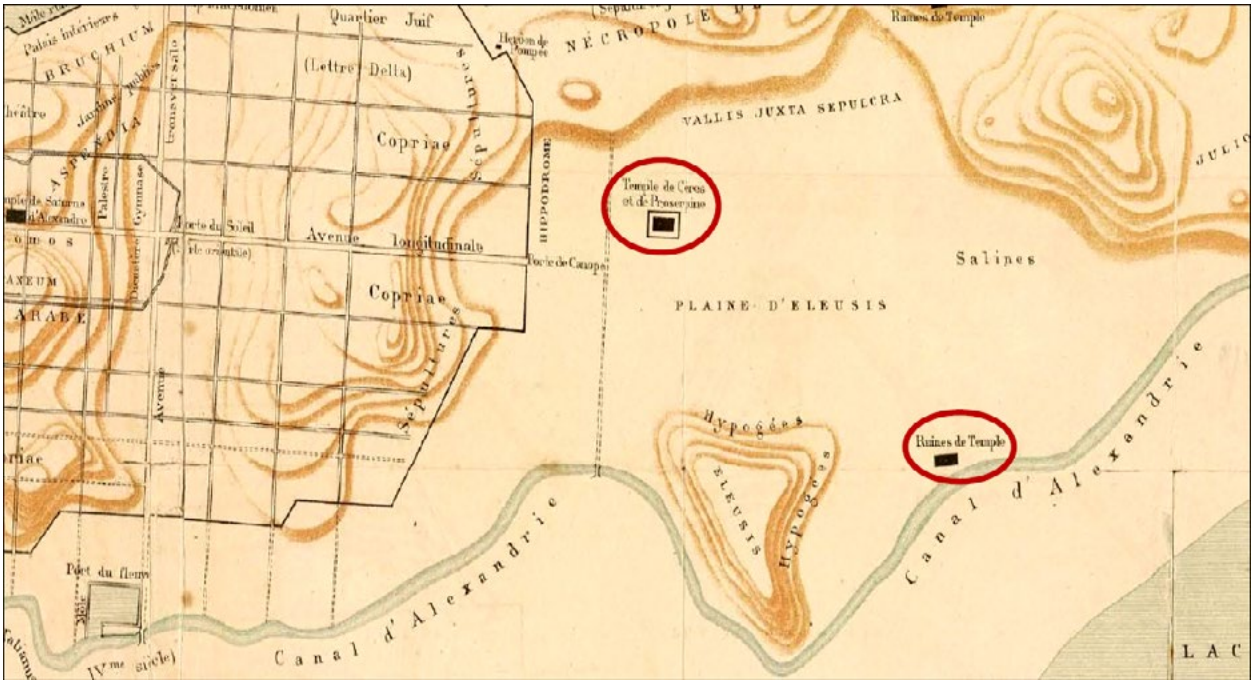


Figure 317. Smouha. Location of two Eleusinian temples on Neroutsos' 1888 map (Figure 49). Neroutsos 1888: 'Alexandrie Ancienne'. Extract. Labels added by author. (Chapter 3, site 166: p. 168)



Figure 318. Smouha. Satellite image: localisation of the plots (1-6) surveyed in 2008-12 by the Musée Royal de Mariemont and the Centre d'Études Alexandrines in the modern district of Smouha, between the streets of Tut-Ankh-Amun and Fawzi Moaz. Google Earth © 2018. Labels added by author. (Chapter 3, site 166: p. 168)

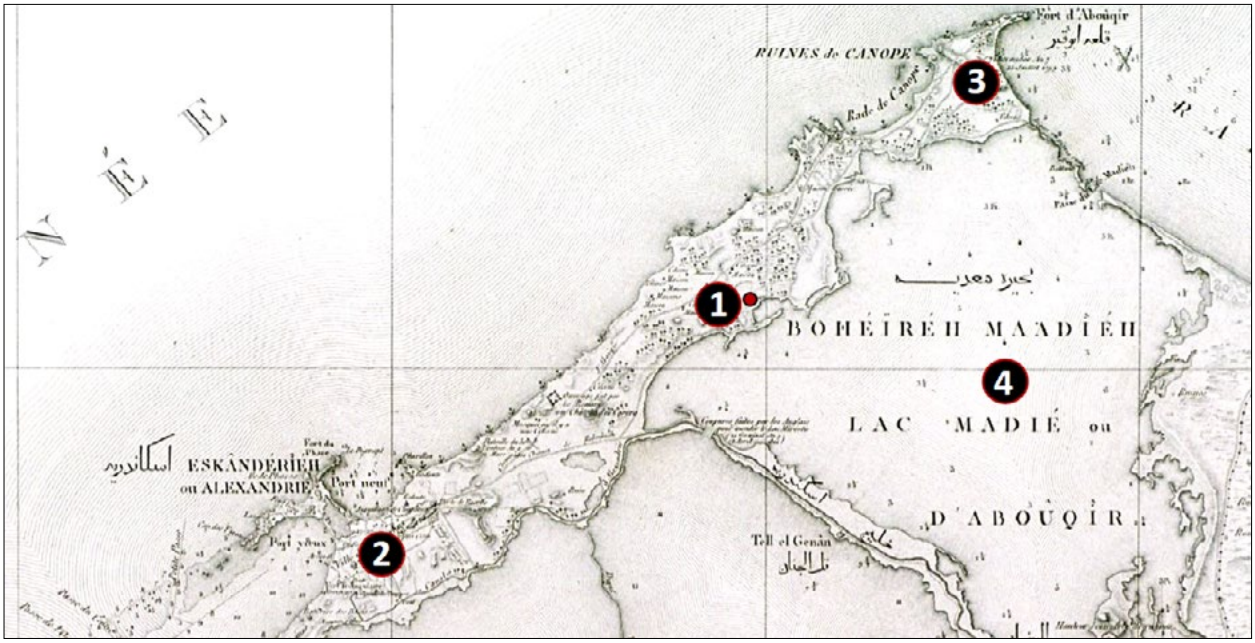


Figure 319. Sidi Bishr Qibly. Relative location of Ras el-Soda (1) to Alexandria (2), Canopus (3), and Abu Qir aka el-Maadiya Lagoon (4). *Description de l'Égypte*. Imperial Edition 1809-22. Carte Topographique de l'Égypt, 1818: Flle 37, 'Alexandrie'. Extract. Labels added by author. (Chapter 3, site 168: p. 168)



Figure 320. Sidi Bishr Qibly. Satellite image: relative location of Ras el-Soda (1) to the promontory of Bir Masoud (2), el-Montazah Bay (3), and the desiccated Abu Qir aka el-Maadiya Lagoon (4) (presently, agricultural land). Google Earth © 2018. Labels added by author. (Chapter 3, site 168: p. 169)

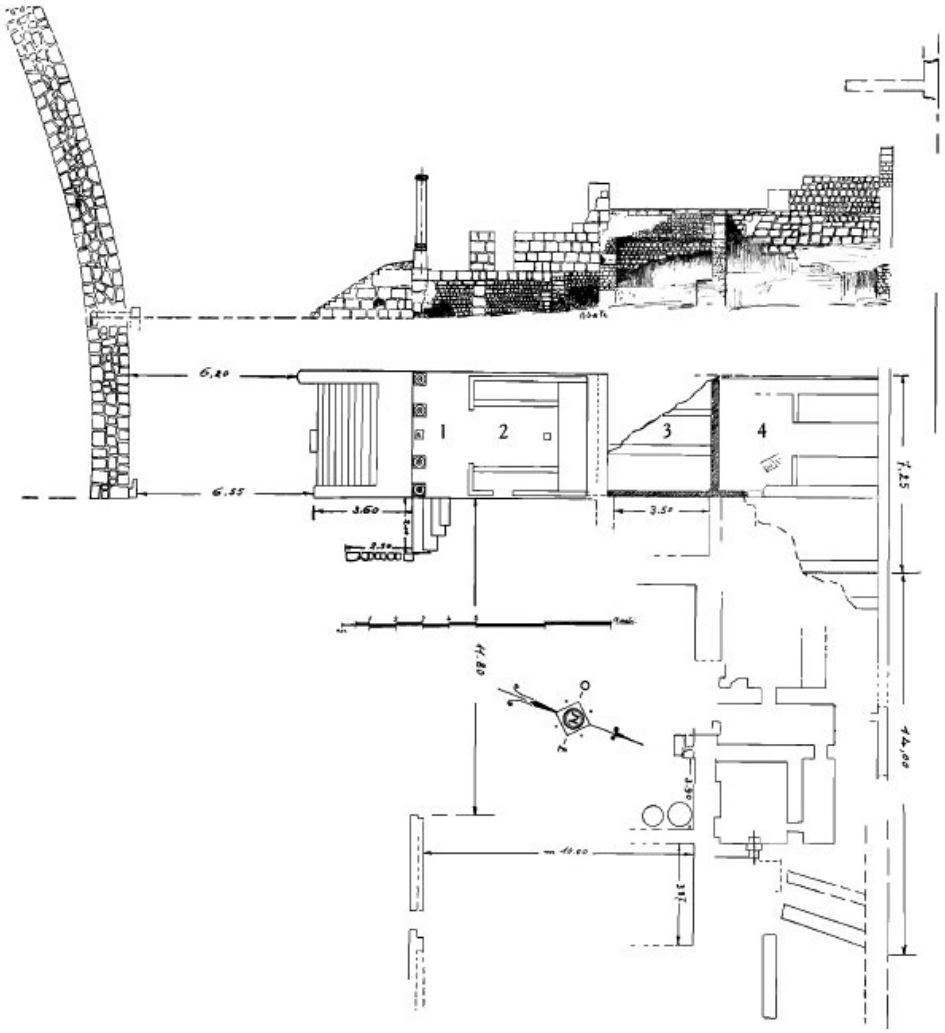


Figure 321. Sidi Bishr Qibly. Plan and sectional view of Ras el-Soda sanctuary. Adriani 1940a: Figure 61. (Chapter 3, site 168: p. 169)



Figure 322. Relocating the Ras el-Soda tetrastyle temple from Sidi Bishr Qibly (1) to el-Chatby's Latin Cemetery (2). Google Earth © 2018. Labels added by author. (Chapter 3, site 168: p. 169)

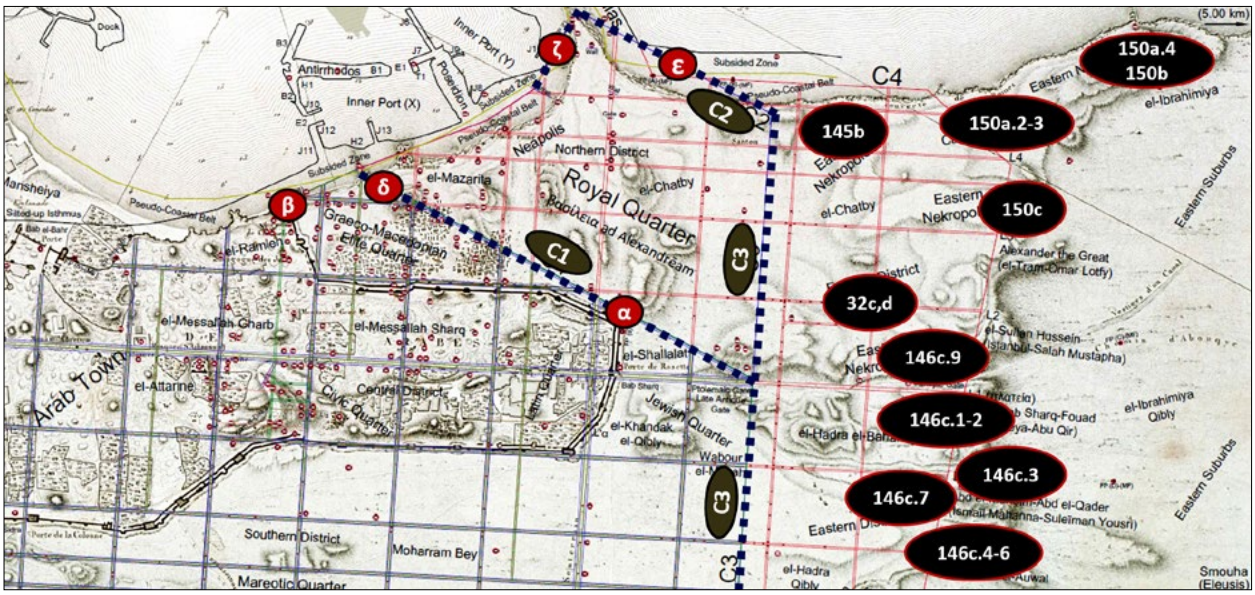


Figure 323. Circuit walls. The eastern peripheries. Eastern *necropoleis* of Ptolemaic Alexandria – c. late 4th to 2nd century BC. AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 171)

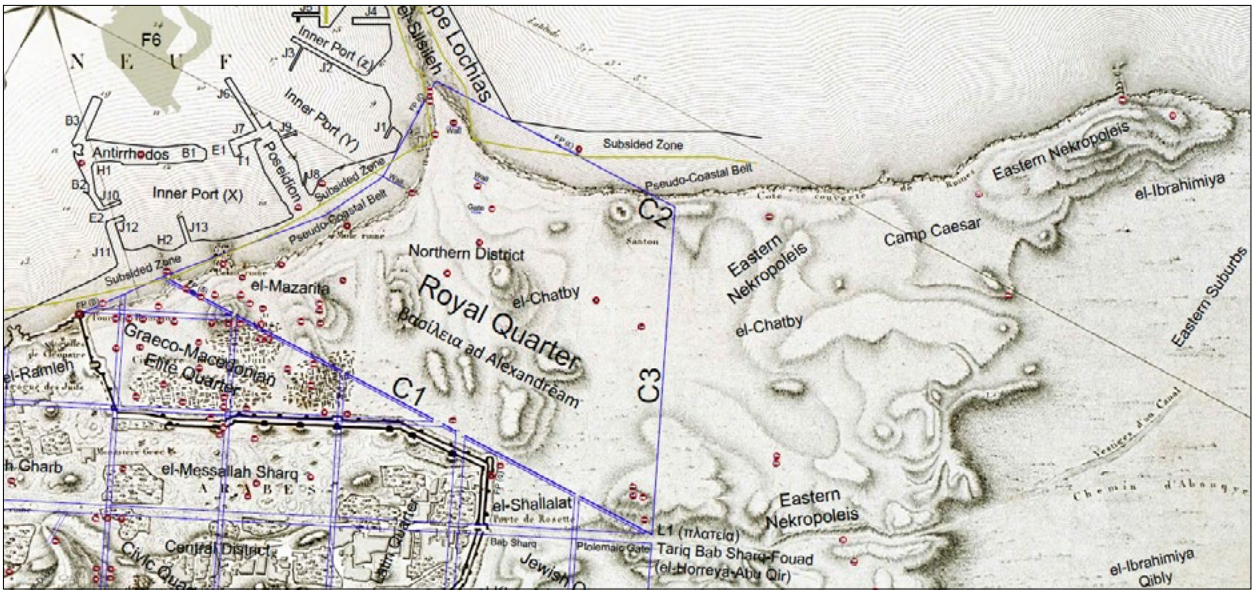


Figure 324. Circuit walls. The eastern peripheries. Proposed enclosure (C1-C2-C3) of the Ptolemaic Royal Quarter – c. late 4th to 2nd century BC. AutoCAD map (V1). Extract. Author © 2019. (Conclusion I.a: p. 171)

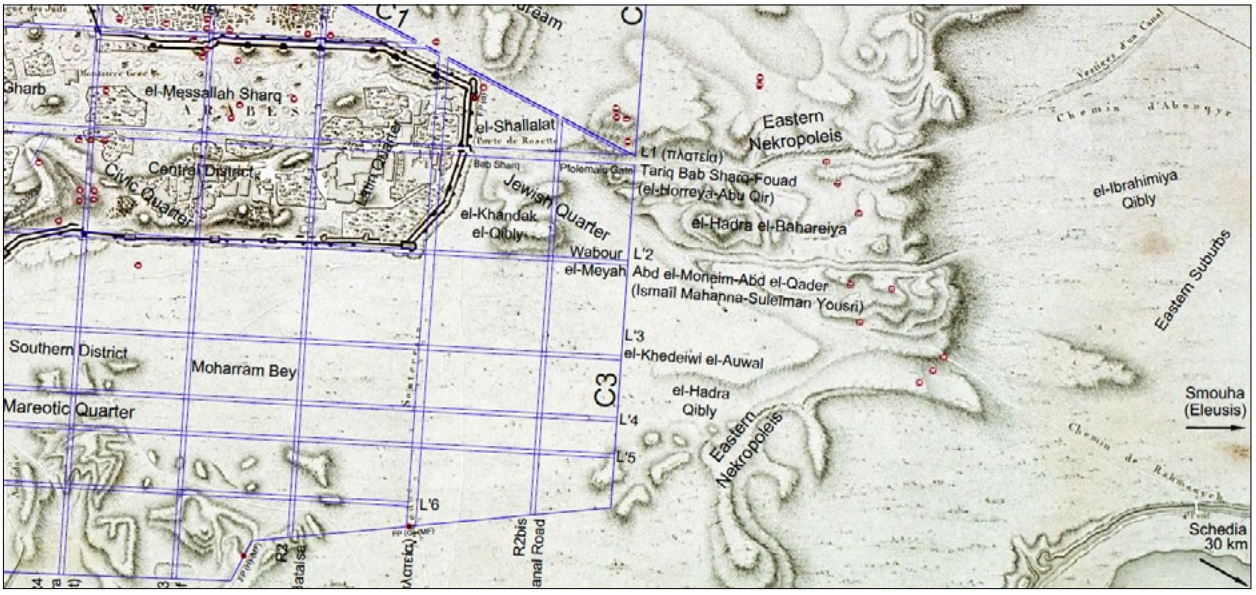


Figure 325. Circuit walls. Proposed eastern periphery (C3) of the Ptolemaic city: southern segment – c. late 4th to 2nd century BC. AutoCAD map (V1). Extract. Author © 2019. (Conclusion I.a: p. 171)



Figure 326. Buto (Tell el-Farraīn, Kafr el-Sheikh, the Nile Delta). A priestly adaptation of the Greek toponym 'Αλεξάνδρεια', and a record of 'Râ-Kedet' on the Satrap Stela of autumn 311 BC (Figure 83). Egyptian Museum in Cairo, Inventory Number CG.22182. (Conclusion I.a: p. 172)



Figure 327. Circuit Walls. Proposed eastern periphery (C4) of the Roman city: northern segment – c. 1st to 3rd century AD. AutoCAD map (V2). Extract. Author © 2019. (Conclusion I.a: p. 172)



Figure 328. Circuit walls. Proposed eastern periphery (C4) of the Roman city: southern segment – c. 1st to 3rd century AD. AutoCAD map (V2). Extract. Author © 2019. (Conclusion I.a: p. 172)

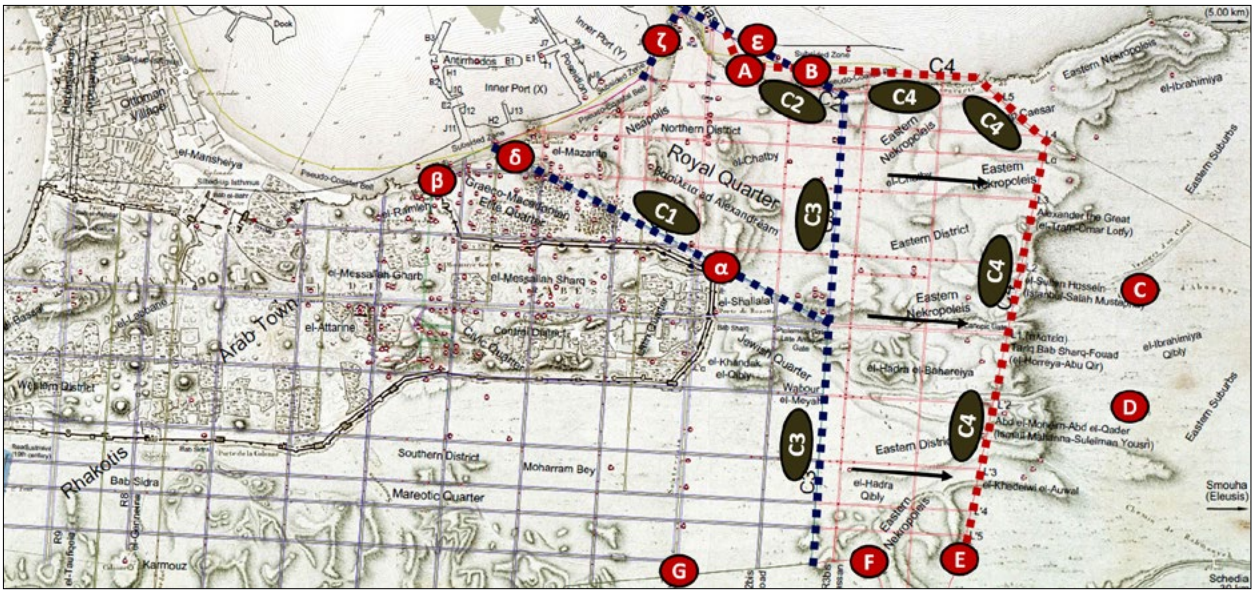


Figure 329. Circuit walls. The eastern peripheries. Expansion of the Roman city – c. 1st to 3rd century AD. AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 172)

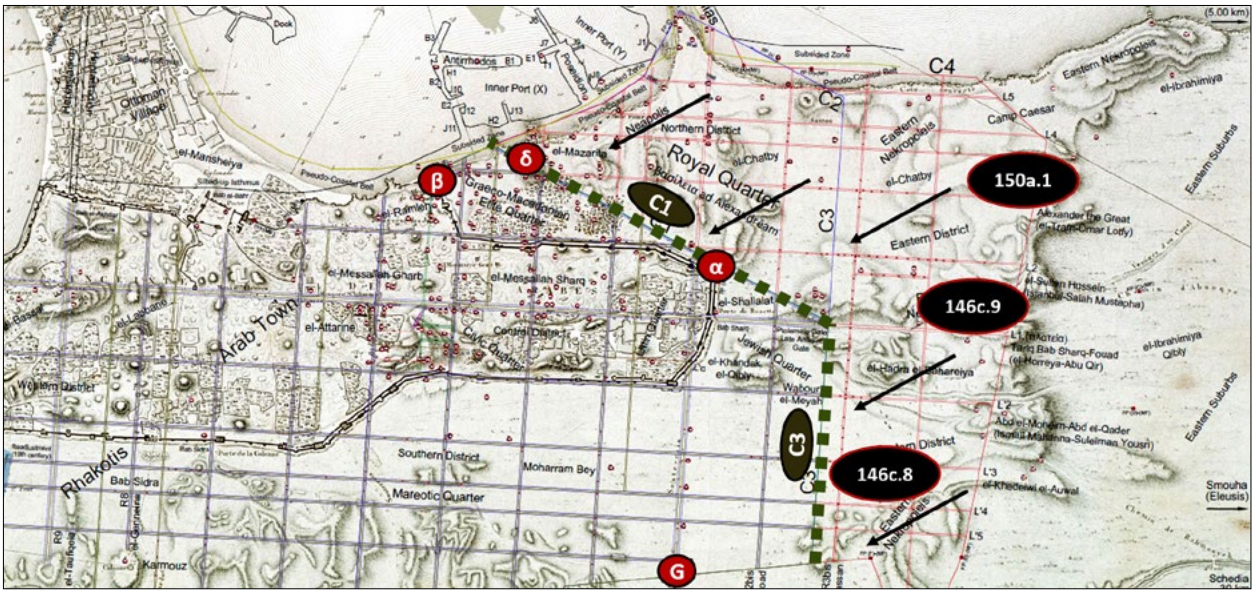


Figure 330. Circuit walls. The eastern peripheries. Late antique readjustment to the Ptolemaic frontiers, following an abandonment of the greater part of the Broucheion (including the annexed Royal Quarter) – c. 4th-5th century AD. Reutilization of the eastern mounds to receive interments. AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 173)

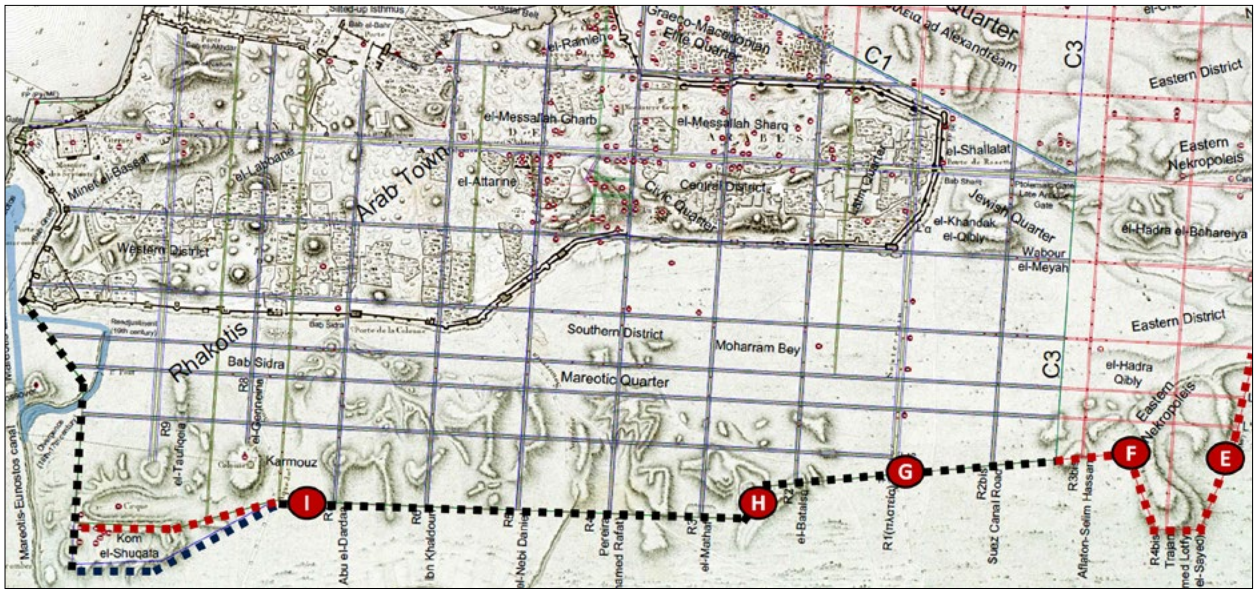


Figure 331. Circuit walls. Proposed southern periphery of the ancient city.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 173)

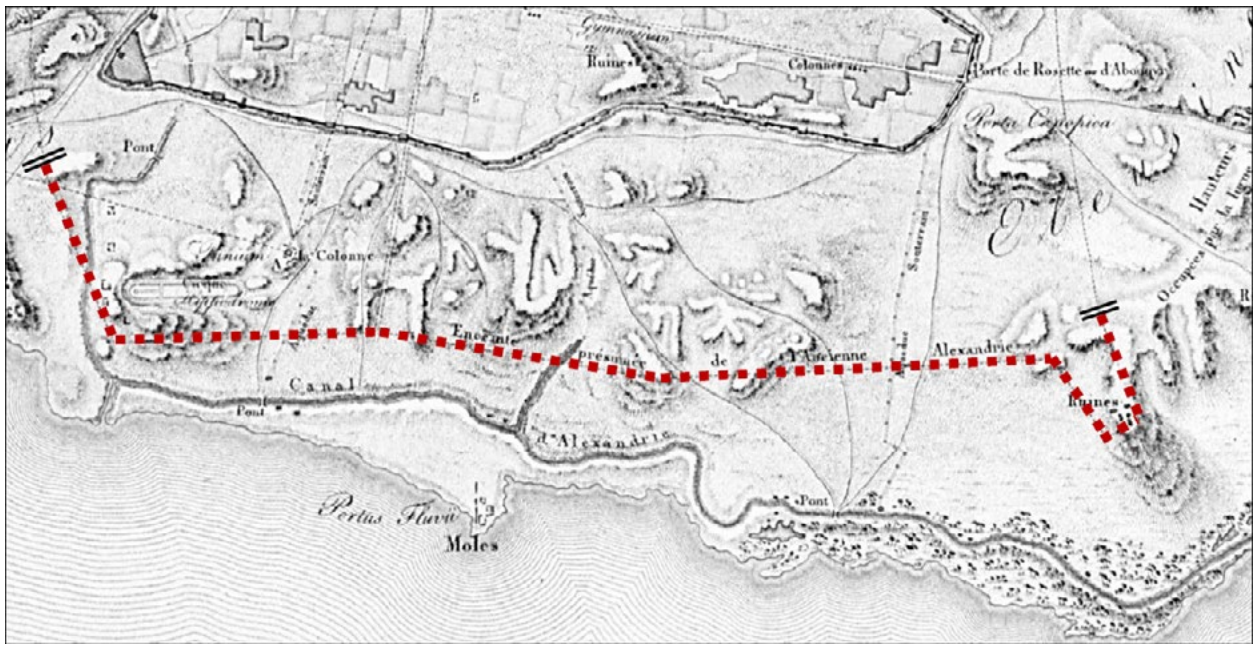


Figure 332. Circuit walls. G. Le Père's hypothetical southern periphery of the ancient city.
Description de l'Égypte. Imperial Edition 1809-22. Antiquities V, Planches, 1822: Planche 31,
'Carte Générale des Côte, Rades, Ports, Ville et Environs d'Alexandrie'.
Extract. Labels added by author. (Conclusion I.a: p. 173)

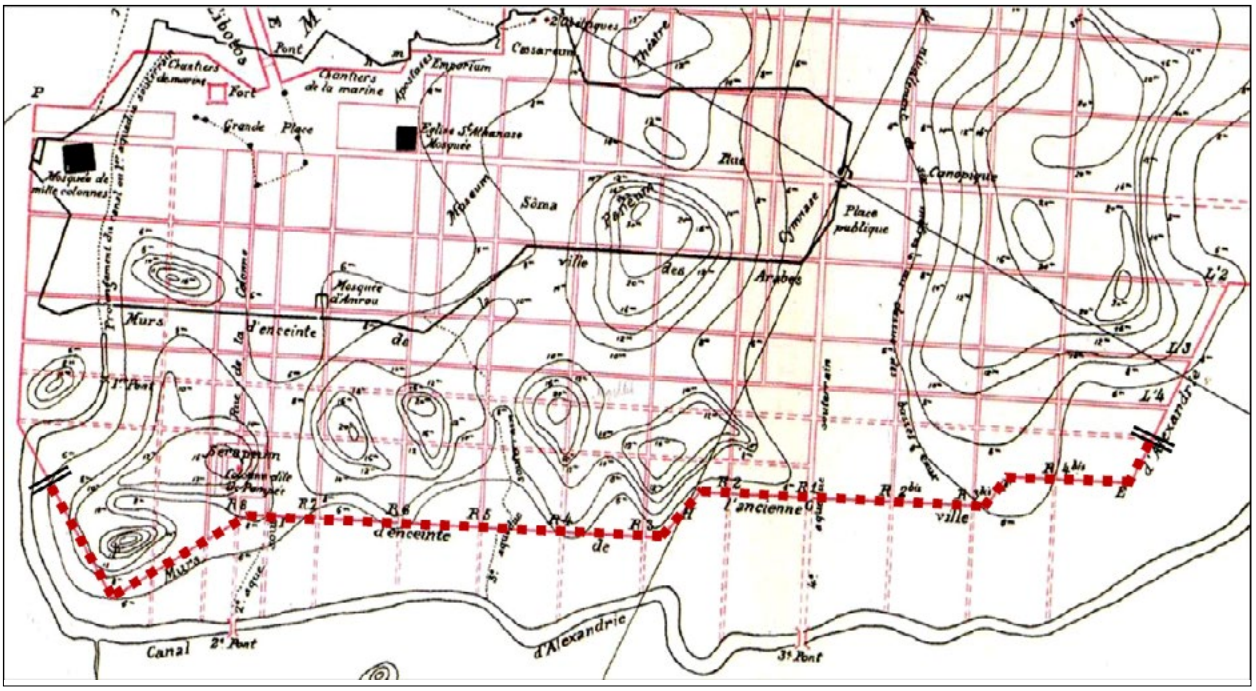


Figure 333. Circuit walls. el-Falaki's hypothetical southern periphery of the ancient city.
Mahmoud-Bey (el-Falaki), 'Carte de l'Antique Alexandrie et des Ses Faubourgs', 1866.
Extract. Labels added by author. (Conclusion I.a: p. 173)

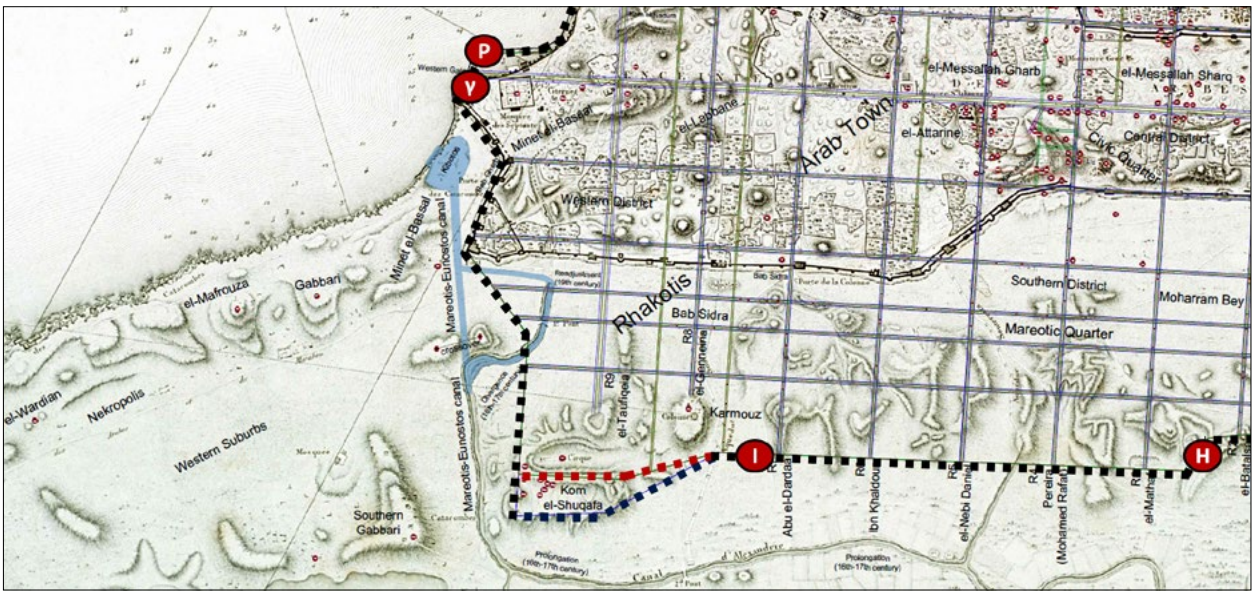


Figure 334. Circuit walls. Proposed western periphery of the ancient city.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 174)

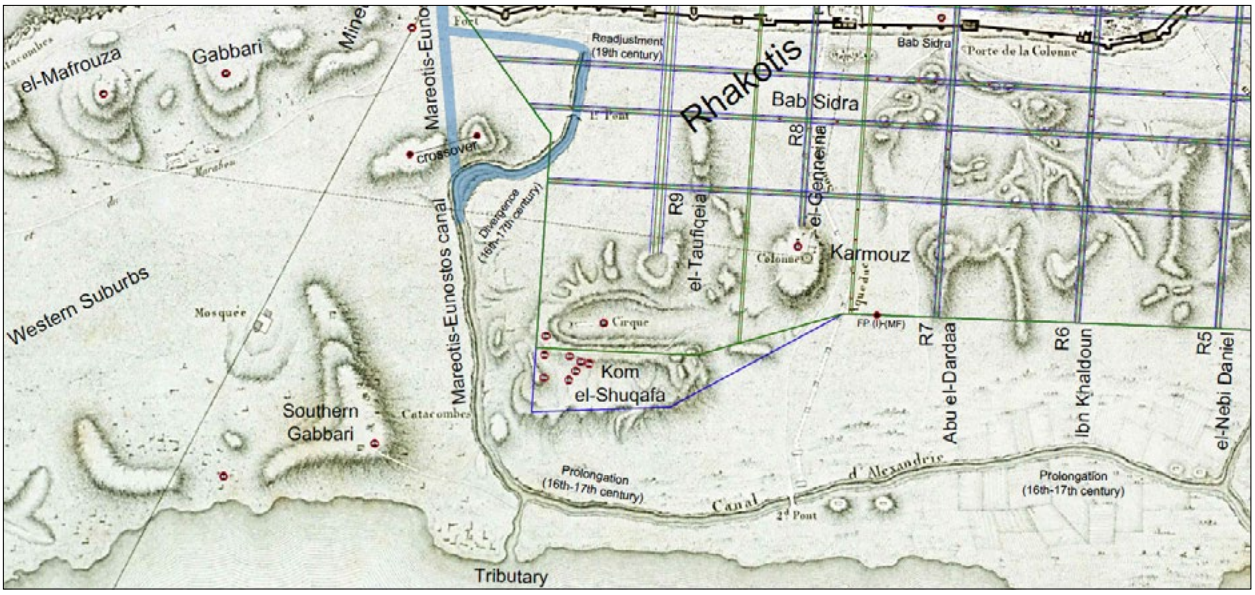


Figure 335. Circuit walls. Proposed western periphery of the ancient city: southern segment.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 174)

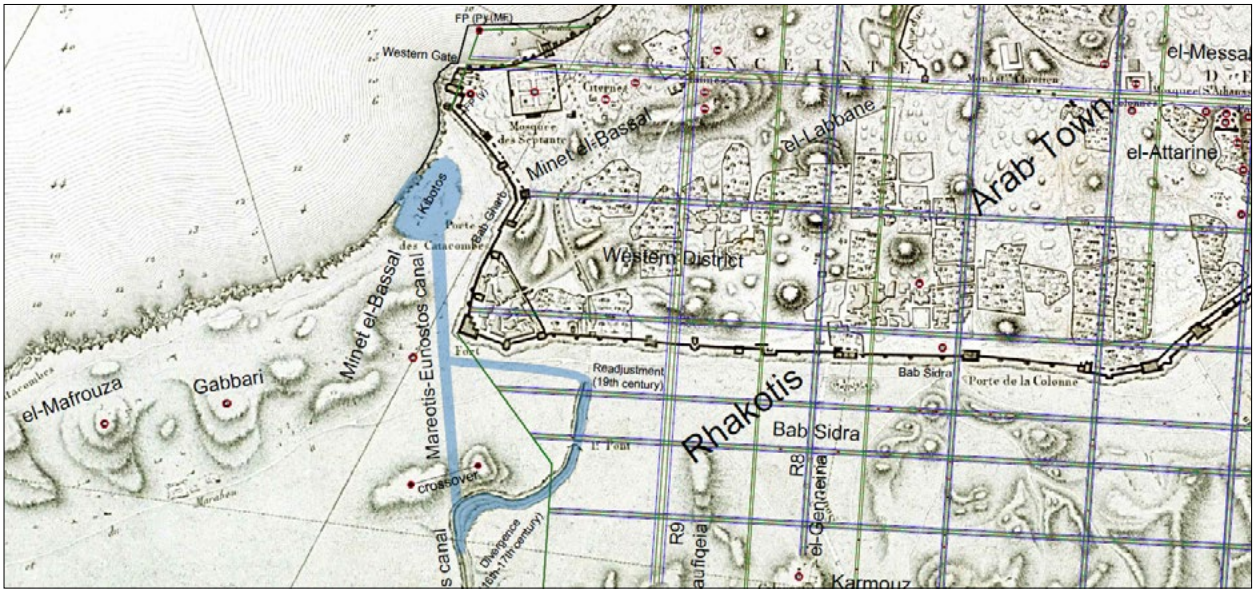


Figure 336. Circuit walls. Proposed western periphery of the ancient city: northern segment.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 174)

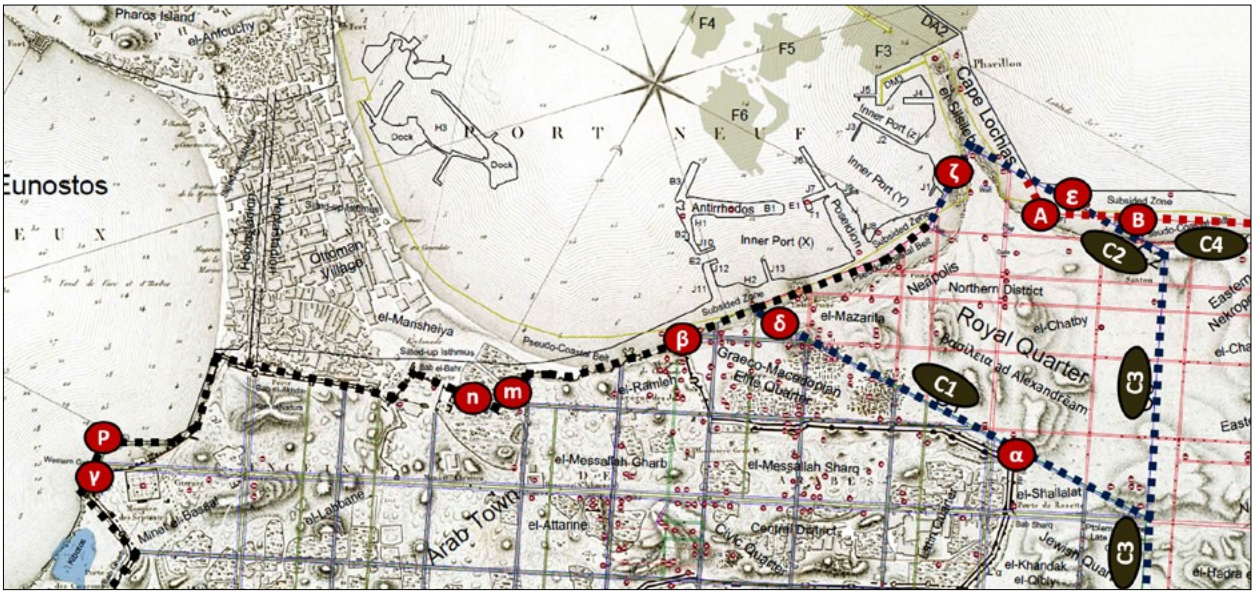


Figure 337. Circuit walls. Proposed northern periphery of the ancient city.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 174)



Figure 338. Circuit walls. Proposed northern periphery of the ancient city: western segment.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 174)

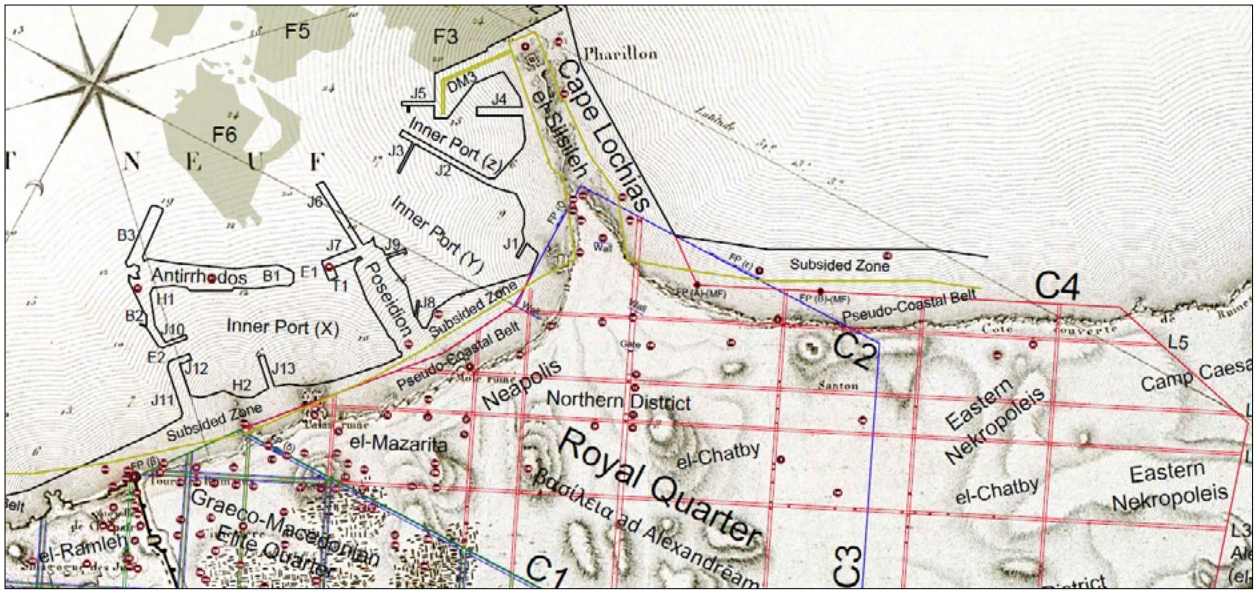


Figure 339. Circuit walls. Proposed northern periphery of the ancient city: eastern segment.
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.a: p. 174)

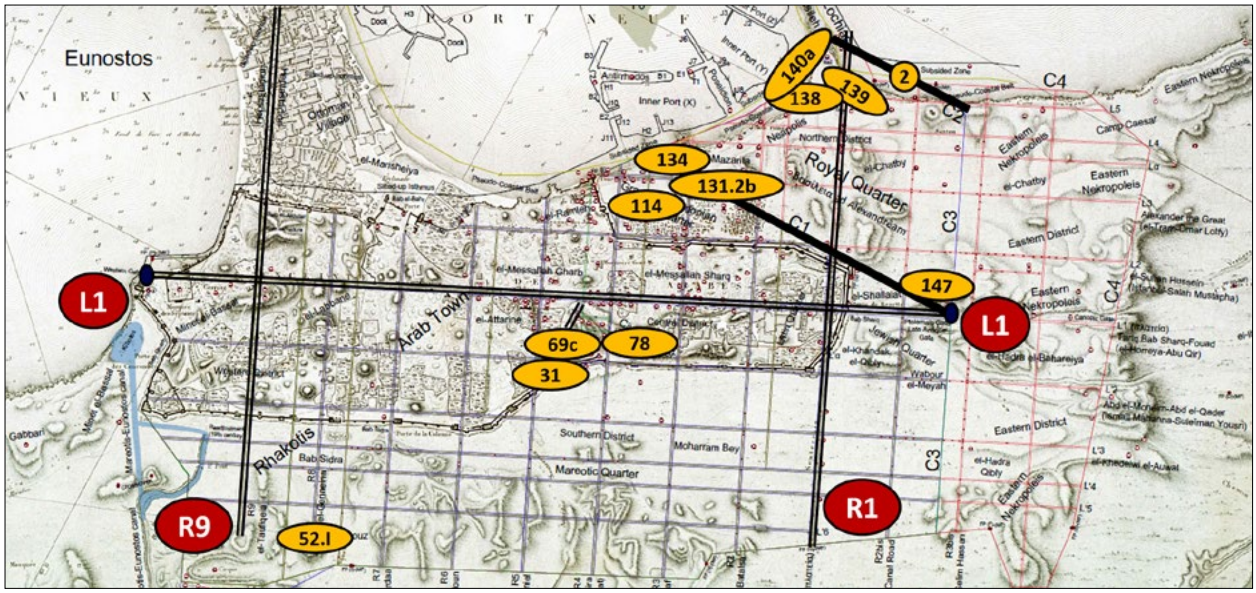


Figure 340. Grid plan. Ptolemaic period. πλατείες (red) relative to off-grid constructions (yellow).
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.b: p. 175)

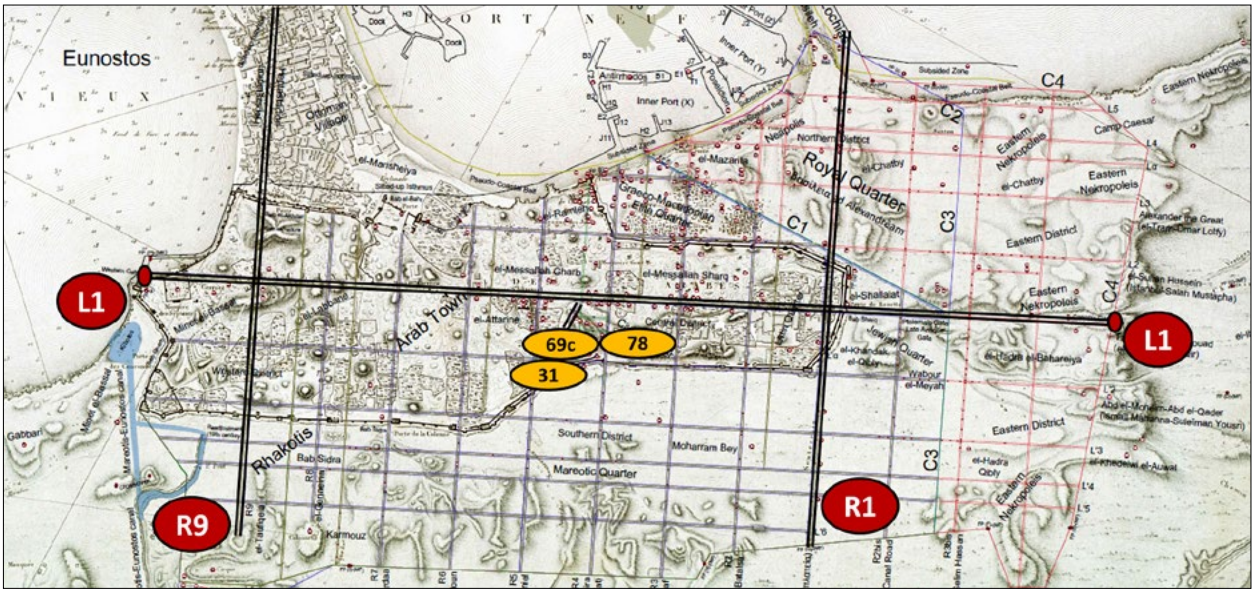


Figure 341. Grid plan. Roman period. πλατείες (red) relative to off-grid constructions (yellow).
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.b: p. 176)

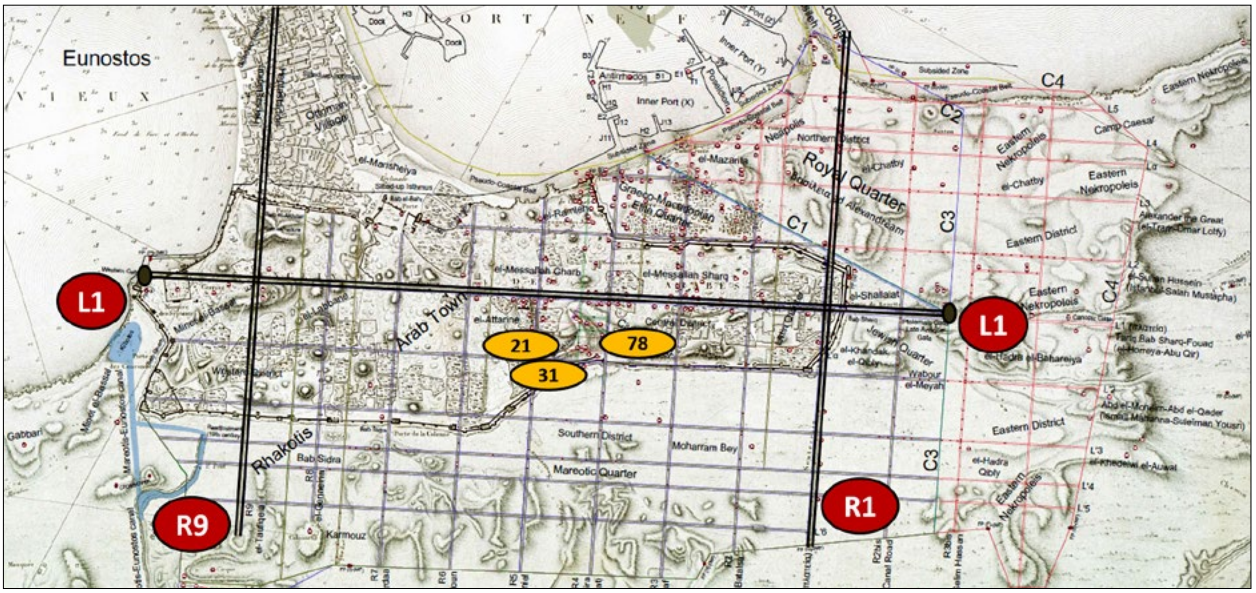


Figure 342. Grid plan. Late antique period. πλατείες (red) relative to off-grid constructions (yellow).
AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.b: p. 176)

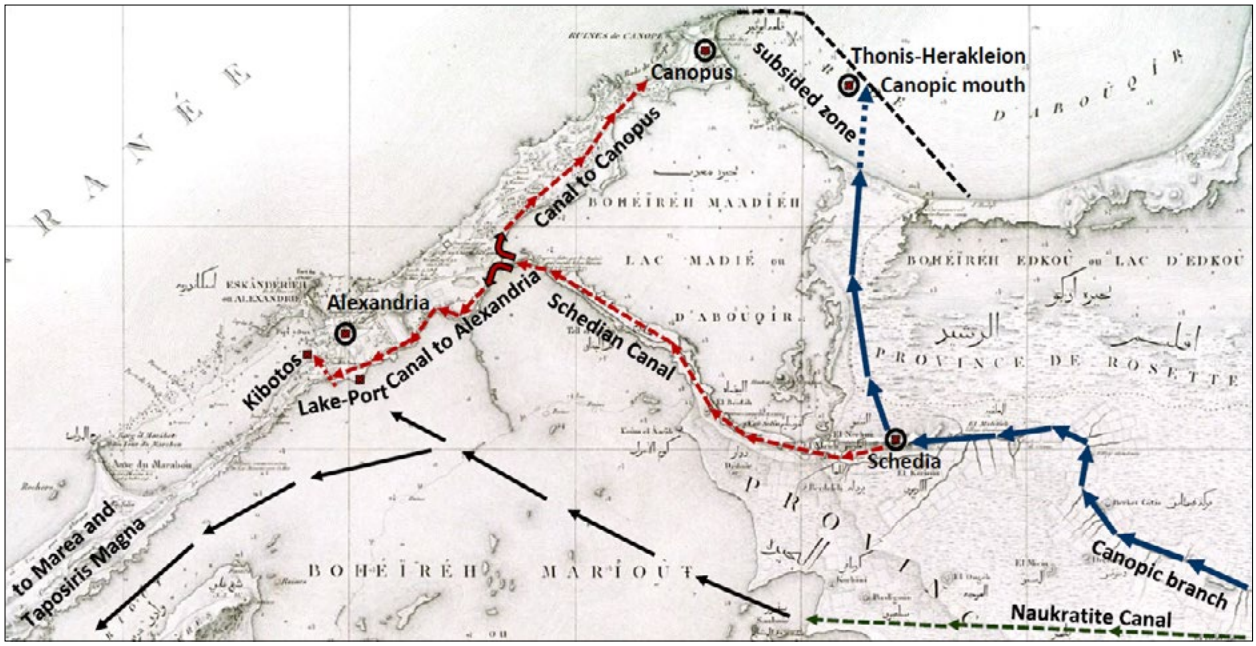


Figure 343. Waterways and harbour infrastructure. Proposed courses of the four segments forming the Canopic-supplied freshwater canal (Κανωβικῆς διώρυγος) and its Mareotis-Eunostos navigable counterpart in the west. *Description de l'Égypte*. Imperial Edition 1809-22. Carte Topographique de l'Égypt, 1818: Flle 37, 'Alexandrie'. Extract. Labels added by author. (Conclusion I.c: p. 176)



Figure 344. Waterways and harbour infrastructure. Dual-harbour complex of ancient Alexandria. AutoCAD map (V4). Extract. Author © 2019. (Conclusion I.c: p. 178)

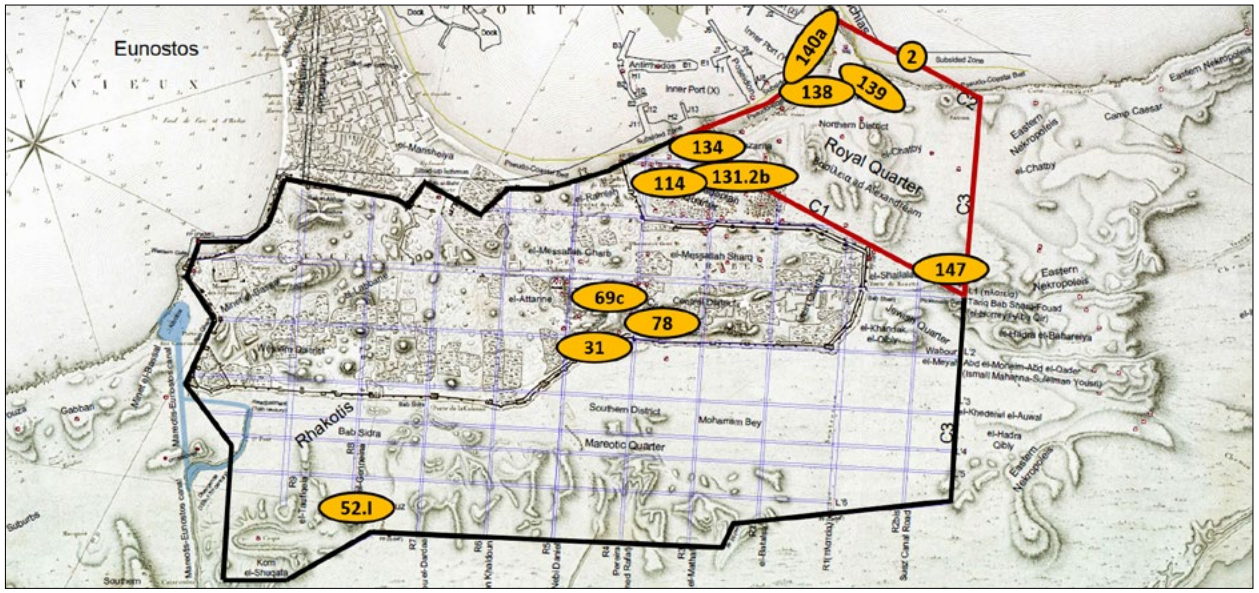


Figure 345. Cityscape. *βασίλεια ad Alexandrēam*: a Royal Quarter northeast of the city proper. Localisation of off-grid constructions (yellow). AutoCAD map (V1). Extract. Author © 2019. (Conclusion II: p. 178)

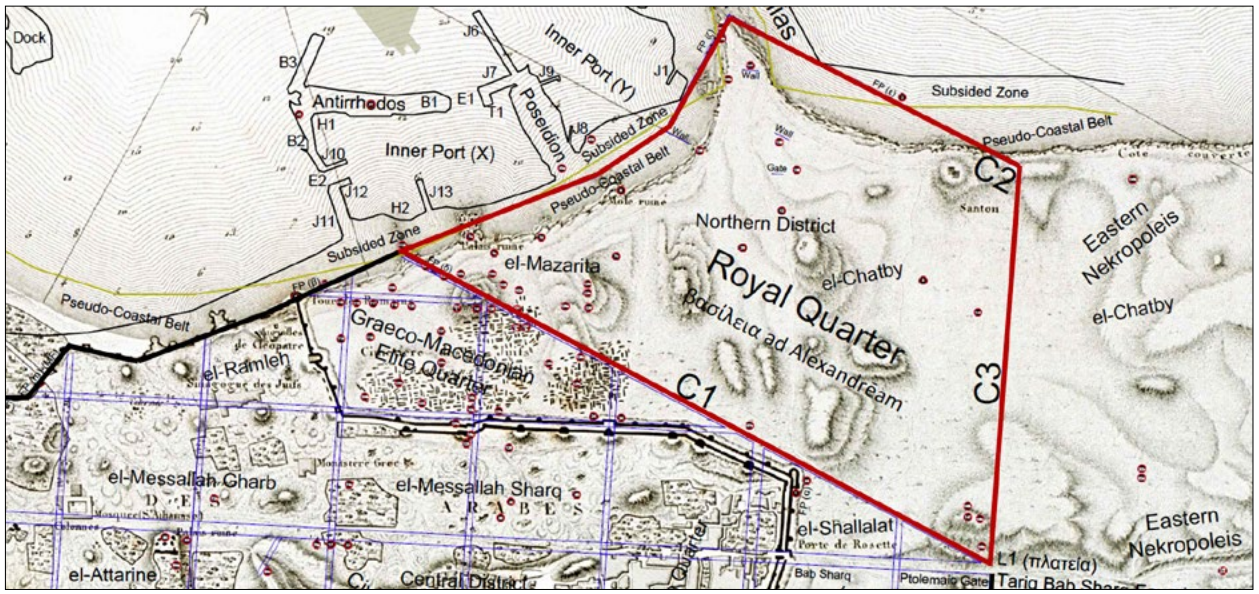


Figure 346. Cityscape. *βασίλεια ad Alexandrēam*: a Royal Quarter northeast of the city proper – c. late 4th to 2nd century BC. AutoCAD map (V1). Extract. Author © 2019. (Conclusion II: p. 178)