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# Searching for an ancient port of Ptolemais

Whilst summarizing the available data concerning the area located directly by the sea, we were aware of its importance in the reconstruction of the process of planning and developing Ptolemais in various chronological stages, as well as determining the historical role of the harbour. It was expected that non-invasive prospection in these circumstances will be difficult, at the same time requiring actions resembling rather underwater archaeology if the aim of documenting visible relics of architecture and various surface finds (which would be the basis for dating) was to be fulfilled.

Even though research of ancient ports in the Mediterranean has a long tradition[1] and in many cases has yielded interesting results, many methodical aspects of such studies to this day remain not fully developed. Despite the identification of more than 3 000 ancient ports and harbours in the region[2], A. Raban's opinion from 1991 stating: "the archaeological research of harbours and maritime installations is actually in its infancy (...)" is unfortunately still up to date[3].

During our research we based our approach solely on interdisciplinary works, which should be considered during the examining of port areas. These are specified inter alia in the works of De Grauuwe, who defines a port as: "a harbour is a place where ships can seek shelter. In the concept of "shelter" must be included anchorages, landing places on beaches and ports with structures like, access channels, breakwaters, jetties, landing stages, quays, warehouses for storage of commodities and equipment, shipsheds and slipways for ships"[4]. We assumed that the presence of many of these elements can be determined with the application of non-invasive methods such as analyses of satellite images, aerial images, geophysical prospection, surveying of surface architecture and finds.

We hypothesised that the oldest part of Ptolemais (however it might have been called in that period) was located on a rocky, flat promontory which stretched into the sea at least 300 m in the NW-SE direction (fig. 1). Establishing the historical shape and size of this feature without underwater surveys is impossible due to the fact that it was intensely used in antiquity as a quarry, hence the northern and eastern shores no longer resemble their initial form.

Another problem with the study of this area are modern buildings and obstacles located at the base of the promontory. Our observations collected during

1 T. Georgiades, Les ports de la Grèce dans l'antiquité, qui subsistent encore aujourd' hui (Athenés 1907); C. Lehmann-Hartleben, Die antiken Hafenanlagen des Mittelmeeres, Klio 14, 1923; D.J. Blackmann, Ancient harbours in the Mediterranean, International Journal of Nautical Archaeology 11.2, 1982, 79-104 and 11.3, 185-211; Y. Carmon, Geographical components in the study of ancient Mediterranean ports, in: J.A. Gifford (ed.), Harbour Archaeology. Proceedings of the First International Workshop on Ancient Mediterranean Harbours, Caesarea Maritime, 24-28.6.83, BAR Int. Series 257 (Oxford 1985) 1-4; A. Raban, Coastal processes and ancient harbour engineering, in: Archaeology of Coastal Changes, BAR Int. Series 404 (Oxford 1988), 185-208.

2 A. De Graauw, Ancient Ports and Harbours I. The catalogue (Port Revel 2014).

3 A. Raban, Minoan and Canaanite harbours, in: L. Basch – R. Laffineur (ed.), Thalassa. L'Égée Préhistorique et la Mer, Aegaeum 7 (Liège 1991) 131.

4 A. De Graauw, Ancient Ports..., 29.


▪ *fig. 1*

many years of archaeological investigations in Ptolemais regarding mostly antiquity are noted below. It needs to be kept in mind that the region of the promontory was still a booming port up the modern era. Not much has remained from those periods, however relicts of architecture and material culture have been documented. Unfortunately without excavations the dating of these features is impossible. The promontory and its neighborhood were subjected to surface and/or geophysical surveys only.

The possibility of surveying this area with the use of geophysical methods, as mentioned before, was severely limited. One of the problems was the large amount of garbage thrown out on the shore by the sea. These items often contained metal elements, which were the source of dipolar magnetic anomalies, which efficiently masked more subtle anomalies stemming from archaeological features such as remnants of architecture. Test

▪ *fig. 2*

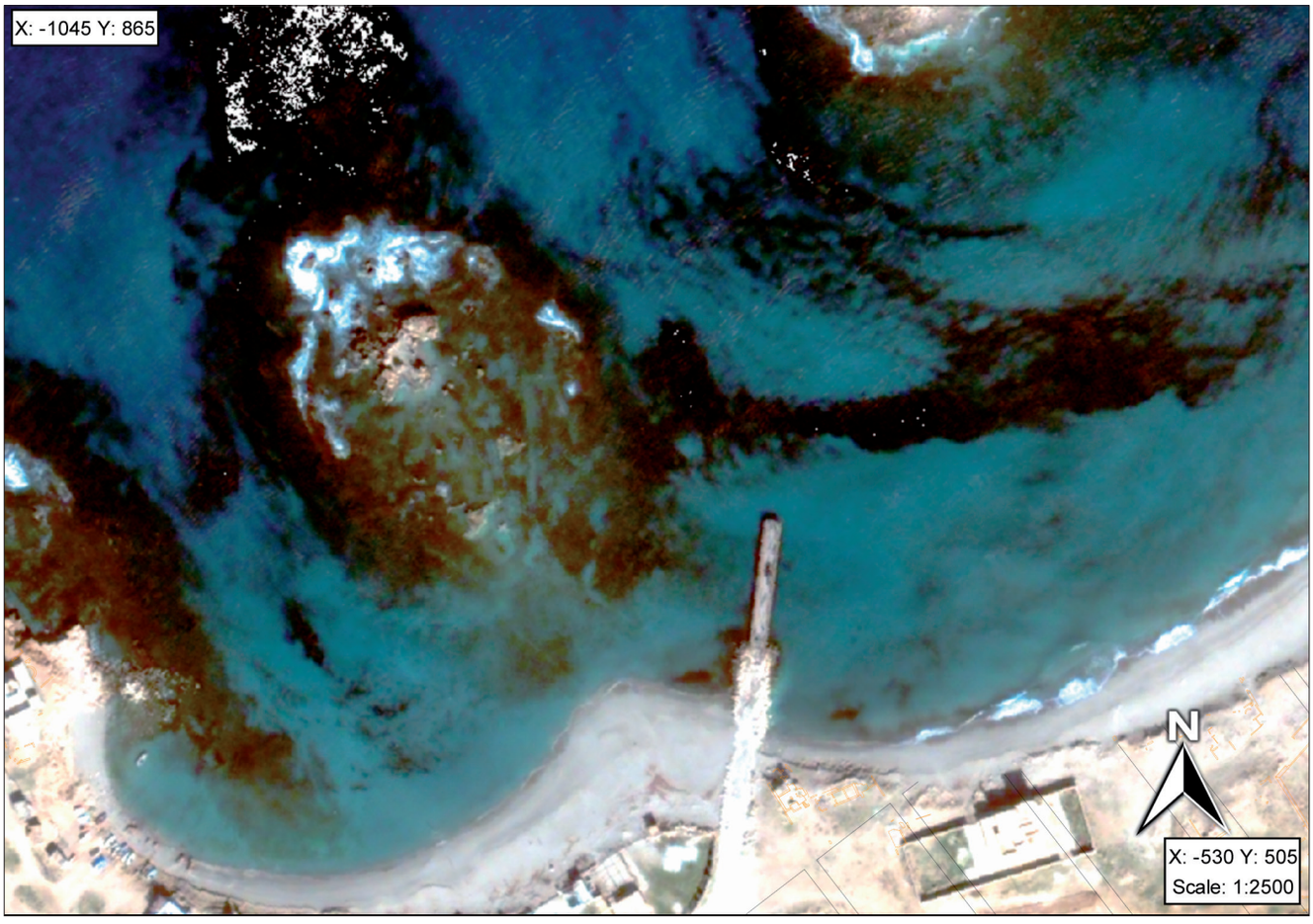


*fig. 3*

surveys with the use of a proton magnetometer in the eastern part of the promontory proved this to be true (fig. 2). Efforts were put into the investigation of the area on the border of the sea shore and modern beach, as it was deemed probable that ancient port installations and municipal architecture could be located there. Unfortunately both magnetic total field and vertical gradient maps only revealed the massive dipolar anomalies from various non-archaeological metal items. Under these circumstances geophysical prospection in the study of the port area was deemed ineffective and further studies took into account remote sensing data from aerial and satellite images completed by the results of field walking surveys..

As a result of these actions, apart from the quarry, features from the Late Roman and Byzantine periods were most clearly visible:

1. Walls going along the eastern edge of the promontory to the modern lighthouse (X: -1046, Y: 582). Their best preserved part is highlighted in yellow on the plan, but a line of scattered blocks extending further south may be evidence that this wall originally continued much further.

2. A second, similarly dated wall, visible at the base of the promontory (X: -1093, Y: 273). The orientation of this feature indicates that it ran on the western edge of the promontory, although today it is covered by sand, rubble and rubbish, however a number of individual blocks near a modern concrete structure (X: -1126, Y: 345) possibly define the further course of the wall.

A bay located east of the rocky promontory (fig. 3) could have also been an ancient port. Currently this sandy beach is occupied by a small fishing harbour and an old ruined Italian period quay. Two rocky islets are located approximately 155 m and 255 m from the beach. The western islet at low tides had formed a small peninsula with the mainland and it is possible that in ancient times this was a permanent aspect of the landscape. It is hard to imagine that this narrow and safe port basin was not adapted in antiquity, however today it is difficult


*fig. 4*

to assess whether this feature was sufficiently large for a sizeable city. Along the eastern shore several blocks of stone are visible in the water. Some of them, quite impressive in size, fell from the bank during the process of cliff erosion, though some may possibly be the remains of ancient berths.

The use of natural terrain features for the creation of safe, sea sheltered port basins seems highly likely, especially in the early phases of the city. Similarities may be observed with the port in Cherchel, Algeria (ancient Caesarea), where the port area adapted an islet located between two promontories and the rocky coastal area was also used as a quarry. Another analogy is the port in Tipasa, Algeria, utilising two islets (however lacking a promontory). Both of these ports are however of larger dimensions than the one found in Ptolemais[5].

It should be noted that this is the most convenient natural point for the establishment of a harbour on a long stretch of Libyan coast. The nearest locations suitable for a harbour foundation are: modern Benghazi (ancient Euesperides) 105 km to the west and modern Suza (ancient Apollonia – the best preserved ancient port) 106 km to the east.

The western islet in Ptolemais (fig. 4) was also used as a quarry and little remains of its topside, which may suggest that it too once was a promontory. Kite aerial images revealed wall features located on the sea floor between the islet and Italian quay. The first of these features is either two parallel walls (4 m apart) or perhaps two faces of a single wall which formed a massive construction oriented NW-SE. It is located between the X: -825, Y: 617 and X:-763, Y: 595 coordinates. Another wall extends from the second coordinate perpendicularly in the NE direction over a distance of 15 m. A circular feature is visible in the corner of the wall, which suggests the existence of a circular tower. Near X:-761,

5 R.A. Yorke – D.P. Davidson, Roman harbours of Algeria, Underwater Association Report 1969, 10-16.


*fig. 5*

Y: 605 traces of another circular structure may be noticed, from which a second large double wall runs parallel to the previous one, in the direction of the islet. While the former disappears under all sorts of debris and sediments, the last wall clearly joins with the circular structures, which makes it probable that these are the remnants of the islands peripheral wall system. Sections of the circular features are short, while a large part of the island's circumference, especially in the southern part, is marked by a clear stripe visible on the remote sensing data and may be interpreted as a negative of a wall. This building is perhaps a remnant of a fort from medieval-modern times. In any case it does not seem to be part of a quay or breakwater system. It can be rather attributed to walls surrounding an isolated area. This is a further argument that the island was once joined with the mainland and only as a result of tectonic movements (most likely earthquakes) and rising sea levels[6], partially collapsed into the water. Further wall features, extending tangentially are visible by the island's former eastern shore. Basing on the available data, the chronology and function of these discoveries remain unknown. We do not even know if they were founded on the see bottom or on the land.

The most extended part of the promontory (fig. 5) was used as a quarry, perhaps in ancient times, and certainly later. What today is the low portion of the terrain, in fact, was once part of the plateau that at one point in time was leveled. Different stages of stone procuring may be traced due to numerous remnants, especially intensely visible in the NE part. A stone feature (X: -1228, Y: 530), sometimes considers as a dock, is in fact another remnant of stone exploration, though it can not be ruled out that such form could serve for storage or other activities. A further feature located nearby is rock fragment, cut vertically into blocks which have never been removed from the substrate (a similar feature is visible at X:-1208, Y: 452).

A large storage vessel buried in sand accumulated in a bedrock depression as well as two circular cutouts in

6 N. Flemming – C. Webb, Tectonic and eustatic coastal changes during the last 10 000 years derived from archaeological data, Zeitschrift für Geomorphologie, Suppl. 62 (Berlin 1986) 1-29.


*fig. 6*

the rock of unknown purpose (but known from other sites in Cyrenaica according to the information from verbal communication with Libyan colleagues) is also located in this region.

A series of rectangular pits cut into the rock, all having a different orientation is located on an heavily eroded remnant of the promontory's plateau, overlooking the sea (X: -1280, Y: 535). These features could be linked to the existence of a necropolis, but their location on the edge of a cape contradict this interpretation. It is more likely that they are reservoirs for goods. One of them is half-way destroyed by the quarry which indicates that they are older than the quarry.

At the foot of the cliff below the modern lighthouse (X: -1053, Y: 601) several non-decorated stone blocks and one with an architectural relief were documented. It is likely that they were thrown down during the construction of the lighthouse and belonged to some ancient buildings standing in its place. An element of a highly questionable chronology is a ramp, probably constructed to pull boats and goods out of the sea, cut into the edge of the eastern shore (X: -1020, Y: 553). It is heavily eroded which could be an evidence of the features ancient origin but further chronological divagation requires more data.

A quick survey of the promontory's plateau that took place in 2009 revealed that the study area is dotted with stone elements of buildings and huge amounts of pottery sherds from various periods. In some places even fragments of foundations were registered. Most of the pottery sherds are remnants of storage vessels and kitchen ware. A small cluster of thin walled, high quality black glazed ceramics (X: -1138, Y: 428 – fig. 6) was found. Dating of this find proved difficult based on such meager remnants, but it can not be later than the early Hellenistic Period or perhaps it belongs to the Classical Period. This would be one of the few previously known traces of the first phases of the city. Accidental discoveries of Archaic pottery were made earlier in the area of the promontory. This set of finds undoubtedly belongs to the beginnings


X: -1600 Y: 540
N
X: -570 Y: -180
Scale: 1:5000

*fig. 7a*

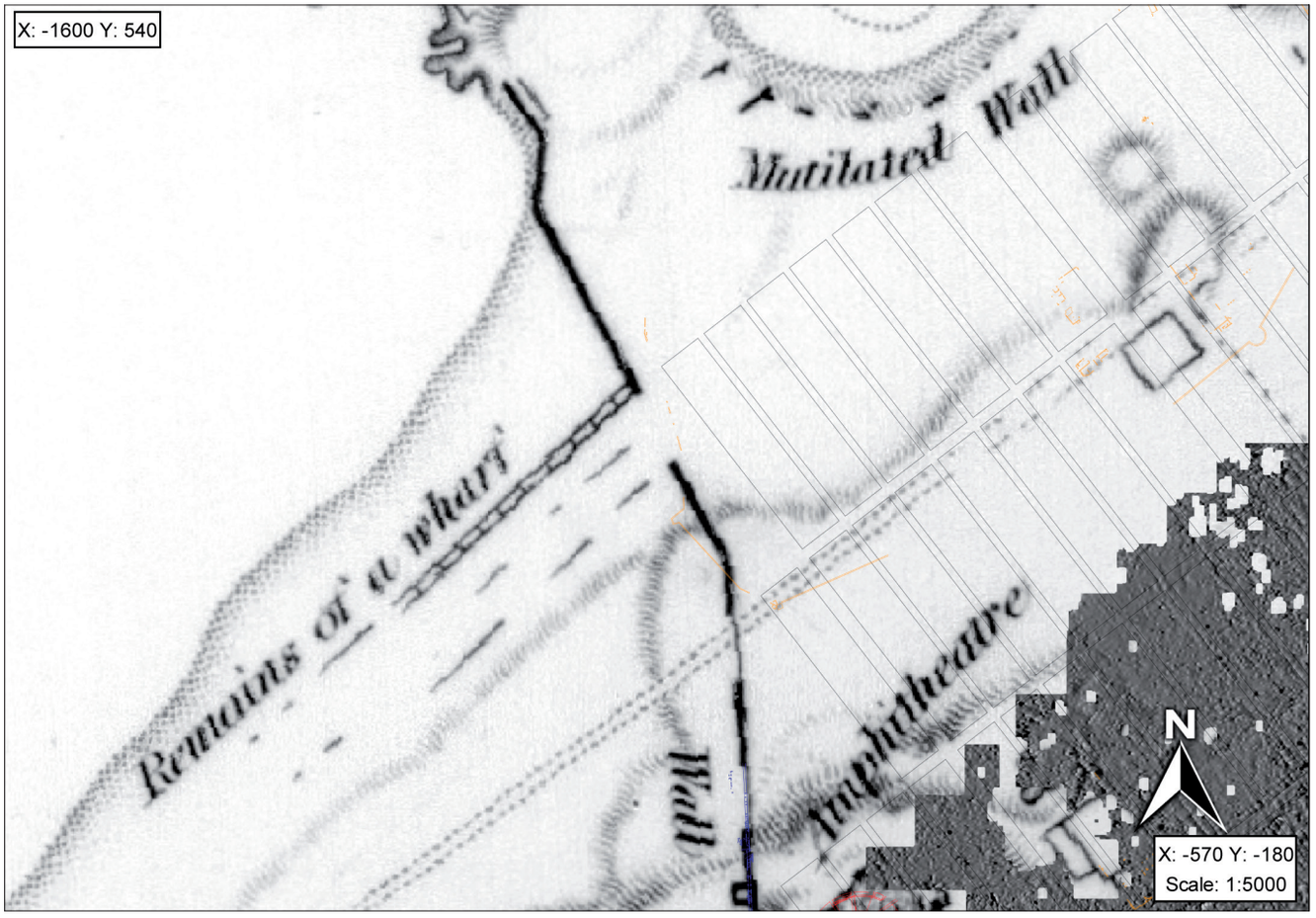
X: -1600 Y: 540
Mutilated Wall
Remains of a wharf
Wall
Amphitheatre
N
X: -570 Y: -180
Scale: 1:5000

*fig. 7b*

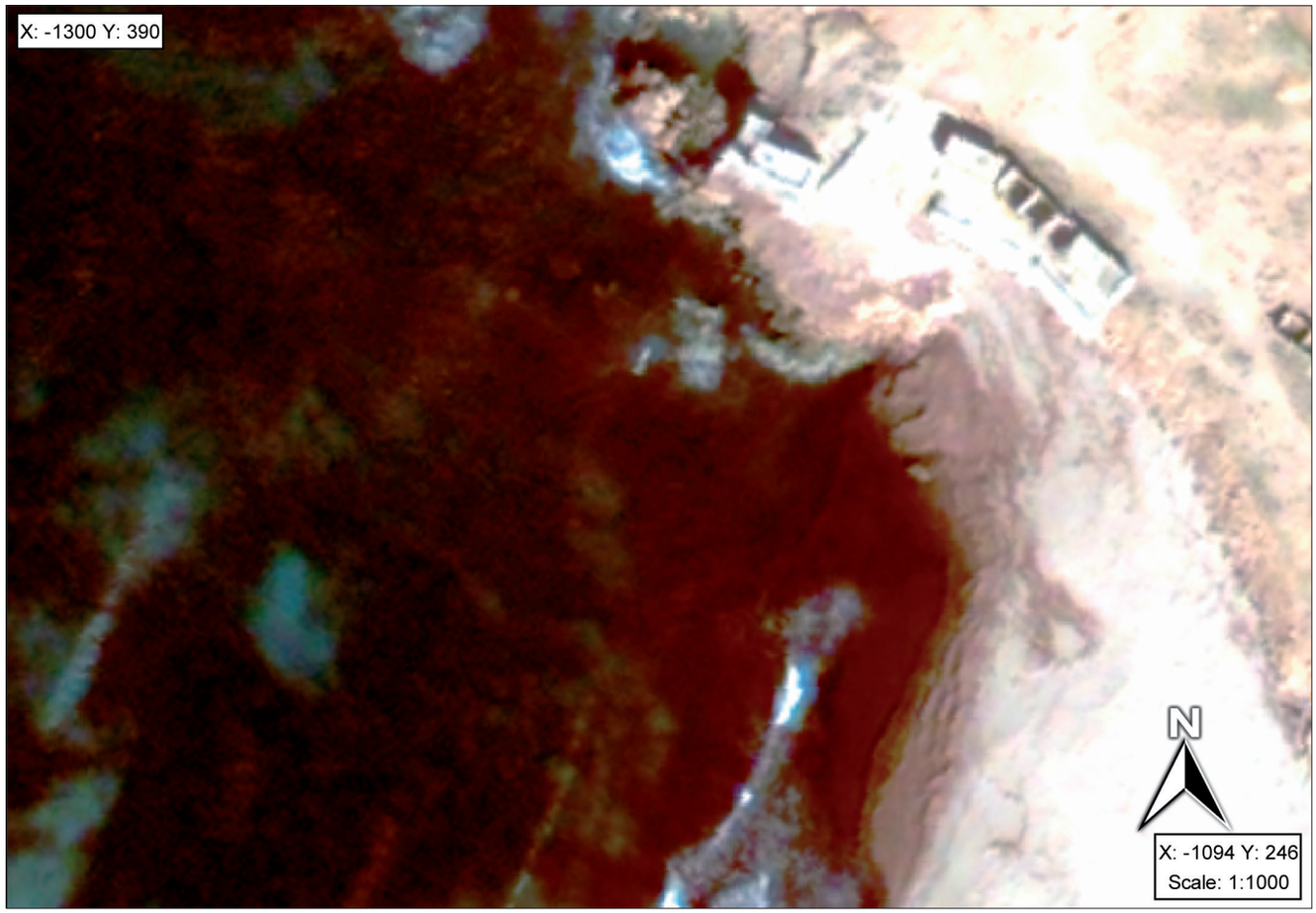


*fig. 8*

of a settlement which developed into later Ptolemais. It is hard to say whether the earliest housing was located on the studied promontory. It is rather more likely that such activities were located on the eastern bay, which formed a natural safe haven for shipping.

A wide, sandy beach situated west of the cape (fig. 7) could have also served as a port site. In ancient times, ships were often beached willingly in order to set out their wares for further transport or trade. Such beach sites without larger infrastructure were often also called ports. Today, on this beach, there are not any visible remains of older structures, but historical plans published by travelers who visited Tolmeita[7] show a long structure extending perpendicularly to the western wall, interpreted as a „wharf" – „waterfront". The terrain configuration was then different than it is today and the beach reached out further into the sea. This is visible on the satellite image, where a reddish shoal stands out. To the west another linear feature reflects a former shoreline, rather than an archaeological feature. The disappearance of this „waterfront" is not surprising in the light of other changes in natural and archaeological topography in the area.

A small promontory is located south of a concrete building, where a few rocks protrude above the sea level (fig. 8). In their vicinity (coordinates X:-1190, Y: 310) kite aerial images revealed features not visible on the satellite image, namely clusters of stone blocks. More loose, individual blocks are also noticeable a bit to the south. They may be the remains of buildings or quite possibly sunk transport material. A light, linear feature visible on the satellite image contrasting with the brown background most probably reveals an outline of one of the phases of the former course of the shore.

7 F.W. Beechey – H.W. Beechey, Proceedings of the expedition to explore the northern coast of Africa: from Tripoly eastward, in MDCCCXXI. and MDCCCXXII., comprehending an account of the Greater Syrtis and Cyrenaica; and of the ancient cities composing the Pentapolis (London 1828) 339; G. Oliverio – F. Halbherr, Cirenaica: Luglio 1910-Aprile 1911, Africa Italiana 4, 1931, 254.

Research in the area immediately adjacent to the modern coastline, despite bringing new information about the city's port area, failed to resolve major issues related to the topography of Ptolemais itself. Whether a regular grid of insulae and buildings existed remains an unknown. Modern constructions severely limit the ability to make effective use of the full potential of the application of non-invasive prospecting. Dating of the construction visible on the surface is also problematic. There is also the threat of new building investments, especially intensified in recent years, which leads to the chaotic development of many new structures erected on deep foundations which have a severe, negative impact on the state of preservation of archaeological features.