

## Becoming Urban: Investigating the Anatomy of the Late Bronze Age Complex, Maroni, Cyprus

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### Abstract

*The transformations entangled in becoming an urban society are increasingly attracting attention in archaeology, including in the Mediterranean. The place-making entailed in the development of urban settlement represents a fundamental change for a society; it creates over time a new urban mentalité and habitus, such that the urban fabric and place become an active part of social life, and its reproduction. While urbanism does not require the 'state', urban settlements form key venues for social, economic and political change leading to the potential development of sedentary early complex polities. For several areas of the world and in multiple periods, there are increasingly sophisticated studies of urbanisation. To date, Cyprus has received relatively little attention—but, as increasingly recognised, urbanisation was central to the island's rapid change into, and emergence as, a substantial element of the Late Bronze Age eastern Mediterranean world. We consider and critique the case of urbanisation on Late Bronze Age Cyprus and highlight its importance to Cypriot*

*and eastern Mediterranean prehistory. We explore in detail one particular case, the Maroni valley area and its Late Bronze Age complex, where relatively detailed information is becoming available from a combination of excavations, pedestrian survey and archaeological geophysics. We argue that only such detailed study allows proper recognition of the nature and anatomy of urban settlements on prehistoric Cyprus; we also argue that the scale (spatial and demographic) of the main Late Bronze Age urban settlements on Cyprus should not be underestimated.*

**Keywords:** *Cyprus, demography, geophysics, Late Bronze Age, Maroni, urbanisation*

## Introduction

The urban form is a fundamental and transformative, semi-autonomous human institution. It is thus a primary object of investigation, not just a locale or descriptive adjective (Fox 1972). The development of urbanism has long been a central, but often problematic, theme in archaeology, with discussion around whether it was largely an outcome of, or synonymous with, civilisation and the state (e.g. Childe 1950), or potentially a building block toward the state (Service 1975: 280-82). Childe (1950: 9-16) famously offered a trait-list for urbanism, but, even accepting his criteria (also Smith 2009) and noting his (Childe 1950: 16-17) observations of variations and differences, many of his elements are problematic for archaeological research. What exactly comprised an urban entity was left fairly vague: in essence, a large and/or walled town with some monumental buildings. Since Childe, sophisticated archaeological studies of urbanisation have been undertaken for several areas of the world and periods. Cyprus, however, has received relatively little attention to date. In this essay we consider and critique the case of urbanisation on Late Bronze Age (LBA) Cyprus, and the present state of knowledge, exploring one case where relatively detailed information is becoming available: the Maroni Valley area and its LBA complex.

## Urbanism: Concept and Critique

The notion of the urban revolution (Childe 1950) both attracts and repels scholars in Medi-

terranean archaeology. Locating a point where an ancient society enters what we choose to recognise as our modern urban social form seems to domesticate and familiarise a different and distant past. It places the subject society within the generic evolutionary path from barbarism to civilisation and into 'our' zone. The trouble is that such logic has led to an association between urban and state-level society—assumed as the apparent goal of any right-minded population. Yet, whereas the neo-evolutionary model of social evolution towards the state has come under sustained critique in the past couple of decades (e.g. Yoffee 1993; 2005; Keswani 1996; Smith 2003), the urban label remains less theorised. The ten-point check-list for an urban case provided by Childe is now largely avoided (cf. Morgan and Coulton 1997; Smith 2009), but in its place there is an opaque vagueness—a 'scepticism regarding a fixed definition of urbanisation' (Damgaard Andersen *et al.* 1997a: 13)—that loses any real utility, especially for initial and transformation cases of most interest (contrast, e.g., classical Greek and Roman urbanisation, where the concerns are sufficient data, choices of analogies and whether methods of more recent historical and geographic analysis, *not* the paradigm, can be applied: e.g. Bowman and Wilson 2011).

Although easy to criticise in application, Childe (1950) was correct to observe that urbanisation represents a profound and relevant aspect of social, economic and political *change*—'[u]rban centres were features of all early civilisations' (Trigger 2003: 120)—and his approach and this topic have become a major focus of

archaeological and anthropological research in the ensuing decades (Smith 2009, with refs.). The trouble has been (1) the focus of study and (2) the assumptions entailed. With regard to the former, the consideration of a list of urban traits and analysis of any given settlement loses sight of the diachronic and regional processes leading to this urban centre, and yields only the un-contextualised end product. As van Dommelen (1997: 245) argues, urbanisation should therefore be viewed from the perspective of the region or territory. With regard to the latter, we return to the often assumed or stated linkage of urbanisation with state-level society (implicit in Childe's 1950 analysis, and most subsequent work: e.g. Cowgill 2004; Smith 2009). Iacovou (2005: 19), for example, concludes for LBA Cyprus that 'the first urban episode is a gradual process that follows and depends upon state formation'. But Osborne (2005: 19), in the same volume, is right to critique this general association and to posit that 'the formation of urban communities neither requires nor produces "the state"'—whereas, of course, the latter can and often does deliberately produce the former (Blanton 1976; Harmanşah 2013). One can point to many cases of urban towns without state-level civilisation (starting as early as Neolithic Çatalhöyük: Hodder 2006: 36–49). The development of an urban mindset and worldview—where inhabitants of urban areas see this setting as their home and as a distinct place, and perceive of themselves as differing in 'activities, roles, practices, experiences, identities, and attitudes' (Cowgill 2004: 256) from people in rural areas—is the fundamental transformation, but at the same time is entirely distinct from 'the state'. On Cyprus, the shift from extra- to intra-mural burials in the Late Cypriot period presents an example; tombs become a key element of the (new) urban places (Fisher 2009) and arenas for status display (Keswani 2004).

Nonetheless, Osborne's critique is only half right. We must consider the inverted question: can sedentary early complex polities (the alternative

formulation of Smith 2003 for early states) easily come into being without the prior existence of one or more quasi-urban centres? In face-to-face and pre-mechanised societies, population nucleation and centralisation may be linked with political centralisation through an economy of time (Roscoe 1993); in turn, this enables new possibilities and potentials for social, economic and political interactions. Such plurality and competition subsequently can provide a context where groups beyond kinship linkages may more easily form. Such groups require structure and hierarchy to be efficient and, as larger groups are more successful, further structure and hierarchy may follow (Kosse 1994).

In these ways, urban centres (from towns or proto-urban centres through urban centres/cities) 'make possible a whole range of economic, social, and political activities which cannot be managed, or managed as effectively, in other forms of settlement' (Osborne 2005: 13). Furthermore, by creating a special, centralising place—separate from the countryside and food and resource production (primary goods), but with (co-locating) all or most of the key craft and prestige goods production (secondary goods), as well as the social, economic, political and ideational or religious actors, venues and institutions—the proto-urban to urban centre itself starts to become an actor and structuring element in social life and its reproduction. The creation of this common urban *habitus* with shared beliefs, experiences, codes for communication and communal events affords the milieu for some individuals and groups to build power over time by manipulating, restricting access to, or controlling key technologies, communications, symbols or events (Yoffee 2005: 196–232). These steps facilitate the city-urban place-making aspects of monumental architecture and the structuring of space, minimising the ordinary individual or family-kinship group, and instead constantly affirming the status, power, legitimacy and usually ideational authority of the elite or particular ruler (as Rapoport 1993 explores in his analysis of the capital

city as a type; for the LBA Cypriot case, see Fisher 2009; 2014).

At this juncture, in the city, we find the elision of urban and state. And from then on the state (as an actor) attempts to own, shape and assert control over the urban place (Scott 1998: 53-83; Smith 2003; Smith 2007), often with only partial success as the web of forces created by urban place-making processes are difficult to corral, once unleashed. A diachronic progression (of unknown duration) is thus envisaged. For example, where we find large urban centres newly laid out on grid systems (or similarly coherently coordinated and organised, even if non-orthogonally—as argued by Smith 2007) replacing previous more organic patterns (such as Enkomi Level IIIA in Cyprus), we can reasonably assume the prior existence and role of a central authority (or authorities) and a state-level context. Here the urban form—a planned city—does follow the state. This can be the case despite difficulties in recognising a structure to be identified with a ruler (as in Mesopotamia and some other early states, and it seems, LBA Cyprus: Yoffee 2005; Peltenburg and Iacovou 2012). In contrast, the mere appearance of an initial monumental building at a town—like the so-called ‘Fortress’ of Enkomi Level IA and onwards (Dikaio 1969-71: 16-34; Crewe 2007: 75-79)—does not by itself indicate the pre-existence of a state, although it may represent a place-making constituent towards state-level society. There is thus good reason to explore the process of urban development—accepting a loose and minimalist definition and viewpoint—when considering the social, political and economic trajectories of societies, rather than treating it as a mere check-list of items to declare a state-level society (Osborne 2005).

### **Late Bronze Age Cyprus and its Urban Centres**

The LBA of Cyprus, ca. 1650–1100 BC (Figure 1), is widely recognised as a time when significant social, economic and political changes defined a

largely new framework on the island. Internal processes and external engagements with the wider east Mediterranean led to reorientations in settlement patterns, ‘urbanisation’, embellishment of burial practices and construction of monumental architecture (e.g. Keswani 2004: 84-144; Webb 2005; Knapp 2008; Fisher 2009; Tsipopoulou and South 2012: 218-23). In addition, changes or developments in metallurgical production, socio-political organisation and administration, and trade transformed Cyprus into a significant factor in the wider LBA Mediterranean social, economic and political system(s) (e.g. Knapp and Cherry 1994; Webb 1999; Knapp 2008: 144-73), and into an active participant in LBA international royal diplomacy and trade—accepting the identification of *Alashiya* with Cyprus (Goren *et al.* 2003; Knapp 2008: 300-41).

The standard narrative of this LBA transformation identifies broad shifts in settlement towards coastal areas, into larger towns described as ‘urban’, and the development of apparent three- or four-tier site hierarchies centred on the large urban settlements (Catling 1962; Negbi 1986; 2006; Keswani 1993; 1996; Knapp 2008; 2013a: 349-81; 2013b: 28-32). These urban settlements in their more final forms were characterised by monumental and multiple-purpose structures that served as foci for economic, administrative and ideological practices (Webb 1999; Knapp 2008: 211-33; 2013a: 359-81; Fisher 2009), and formed the primate centre of their region (either as the single large centre, or evident top of a regional site hierarchy). ‘Towns’ or ‘cities’? In the discussions noted earlier, Iacovou (2005) and Osborne (2005) seem divided by a perceived but unstated difference between two forms of urban settlement: towns versus cities. The problem is that we lack useful definitions of either, other than a general view that towns are smaller, or exhibit less of the range of built or functional complexity. Osborne’s critique seems to apply largely to towns, whereas some of the

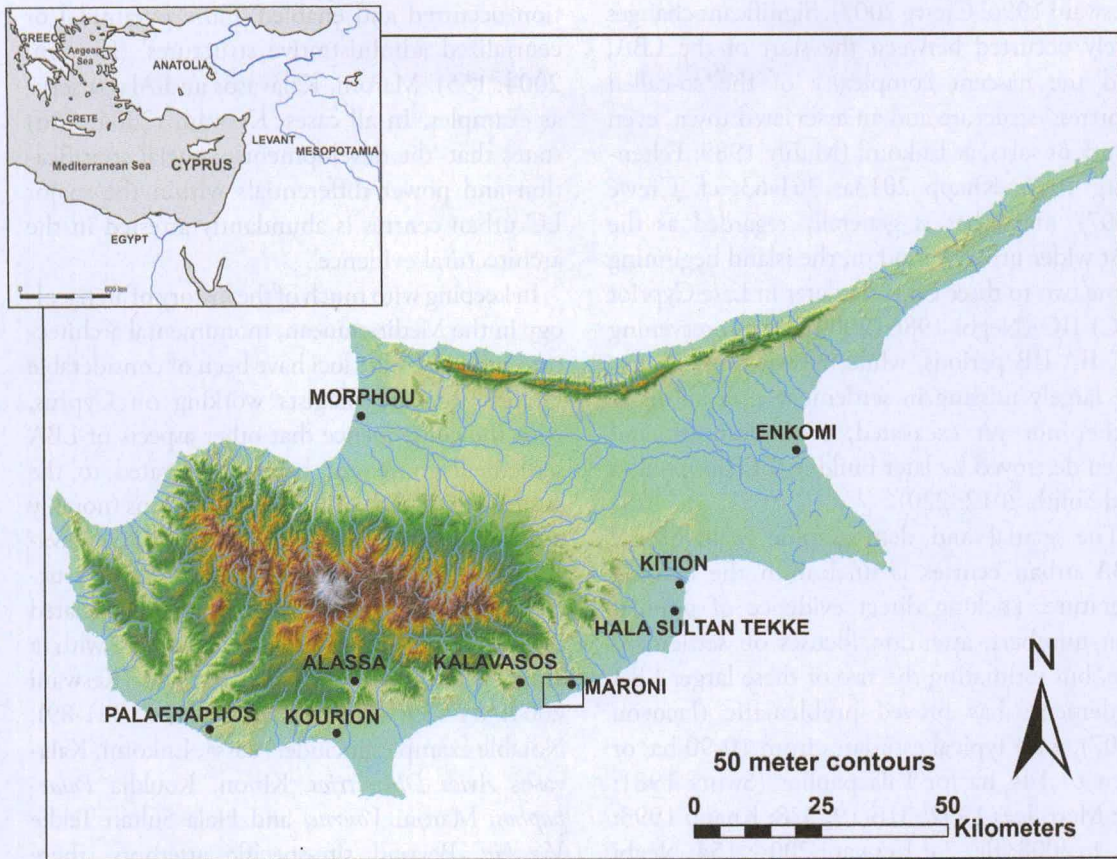


**Figure 1.** Location of Cyprus in east Mediterranean. Cyprus and LBA sites mentioned in the text (note the village name, e.g. Maroni, not toponyms such as *Vournes*, etc. in most cases; the exception is Palaepaphos rather than Kouklia *Palaepaphos*).

Childe-type criteria apply more to cities (and of course there is a zone in between). While sometimes one might observe an evolution of towns (or proto-urban) settlements into cities (or fully urban settlements), we argue that the divide is usually unhelpful: the issue is instead when and how urban settlement(s) and *mentalité* develop and begin to structure a society.

An understanding of the roles, nature and internal structure of these sites is, however, much less clear, as are the origins and evolution of the majority of these settlements—even in the case of the most extensively, if still very partially, excavated but un-surveyed example

of Enkomi (e.g. Dikaios 1969-71; Courtois *et al.* 1986; Keswani 2004: 113-15; Crewe 2007). Scholarship to date remains largely top-down and generalising. Iacovou (2005: 19) states that 'it was connection with the centralized economies of the empires and palatial states of the Mediterranean that triggered the urban process' (citing Webb 1999: 3), a process understood as coming very 'late' on Cyprus compared to the surrounding east Mediterranean (cf. Knapp 2013b: 38-39). Yet at the same time, it is debated whether, when and where LBA Cyprus saw state-level society or societies emerge—a point noted by Iacovou (2005: 19 n. 1; see also

Keswani 1996; Crewe 2007). Significant changes likely occurred between the start of the LBA, and the nascent complexity of the so-called 'Fortress' structure and an associated town, even polity of sorts, at Enkomi (Muhly 1989; Peltenburg 1996; Knapp 2013a: 361-63; cf. Crewe 2007), and what is generally regarded as the first wider urban period on the island beginning some two to three centuries later in Late Cypriot (LC) IIC (Negbi 1986; 2005). The intervening LC IIA-IIB periods, while known from tombs, are largely missing in settlement excavations as 'either not yet excavated, or underneath and often destroyed by later buildings' (Tsipopoulou and South 2012: 220).

The spatial and demographic scale of the LBA urban centres is unclear in the existing literature. Lacking direct evidence of population numbers, attention focuses on settlement size, but estimating the size of these larger LBA settlements has proved problematic (Iacovou 2007), with typical estimates from 10-90 ha, or even to 144 ha for Palaepaphos (Swiny 1981: 78; Merrillees 1992: 316-19, 328; Knapp 1993: fig. 1; 2008: fig. 24; Keswani 2004: 154; Negbi 2005: 3). Knapp (2013a: 355 and fig. 95; 2013b: 32, table 3) has recently downgraded earlier, larger estimates; the stated range for 'first tier' settlements is now 12-25 ha.

Some diversity within the LBA urban centres is accepted, with Keswani (1996; 2004: 154-57) suggesting two 'primary site' types. The first are urban centres comprising new foundations or else with significant input from population movements. In her view, these exhibit a primarily heterarchical form of social organisation, with numerous, spatially independent, elite complexes and production zones and no clear evidence of primary or central administrative structures (e.g. no 'palace'). Enkomi, Morphou *Toumba tou Skourou*, Kition and Hala Sultan Tekke provide examples. The second type consists of urban centres that developed in valleys with long settlement histories, where more localised processes of population nuclea-

tion occurred and enabled 'more pyramidal or centralized administrative structures' (Keswani 2004: 155). Maroni, Kalavassos and Alassa serve as examples. In all cases, Keswani (2004: 156) states that 'the development of social stratification and power differentials within the major LC urban centres is abundantly attested in the architectural evidence'.

In keeping with much of the history of archaeology in the Mediterranean, monumental architecture and other elite loci have been of considerable interest to archaeologists working on Cyprus, with the consequence that other aspects of LBA settlements have not been investigated to the same degree. With only a few exceptions (notably at Kourion *Bamboula*—Weinberg 1983), excavations have focused on several monumental structures (e.g. Knapp 2008: 211-49), their associated complexes and surrounding cemeteries with a range of impressive imported artefacts (Keswani 2004: 84-139; 2007; Knapp 2013a: 381-89). Notable examples include: Alassa, Enkomi, Kalavassos *Ayios Dhimitrios*, Kition, Kouklia *Palaepaphos*, Maroni *Vournes* and Hala Sultan Tekke *Vyzakia*. Beyond site-specific attempts, there have also been pedestrian survey of the associated regions, especially at Kalavassos and Maroni, enabling Given (2004: 40-48) to write of the likely role played by taxation, display and control in the LC urban settlements:

...for those whose produce was controlled by the elites of Ayios Dhimitrios, Vournes and Tsaroukkas, it meant a trip with animal-loads of olives or grain into the imposing, straight streets of the town and up to the monumental walls of the ashlar building that controlled their subsistence and well-being. ... [T]he results of their labour were taken, measured and processed, and then poured into the vast storage jars in the ashlar halls.

(Given 2004: 48)

This standard narrative, however, is overdue for critique and revision. There is limited material evidence for the straight streets and, beyond perhaps a 0.5 ha area, of monumental walls in

these same cases, with just a single indisputable example of a street leading to the 'Northeast Area' at Kalavassos *Ayios Dhimitrios* (Given 2004: 43). Given's own careful review instead highlights how partial our knowledge is of the same settlements. In the case of *Ayios Dhimitrios*, perhaps the most thoroughly investigated hierarchical urban valley settlement identified by Keswani (1996), Given (2004: 47) notes that only 7-10% has been excavated, much of it only partially (Iacovou 2007: 8, cites ca. 5%). For both Kalavassos and the Maroni settlement cluster in the adjacent river valley, Given (2004: 41 and esp. 47) notes that, in view of the fragmentary evidence, we cannot even be sure that a more heterarchical model does not apply. This raises the potential for a revision of Keswani's (1996) theoretically rigid two-type model, especially recognising that several regions of Cyprus also remain largely *terra incognita* in the LBA.

In addition, we need to avoid combining evidence from different time periods to produce a ubiquitous model for urbanism on LBA Cyprus. The extant grid-plan of Enkomi Level IIIA, for example, is pervasive in publications, but it is critical to note that this represents a significant re-organisation of the settlement at the end of LC IIC or during LC IIIA (ca. 1200-1125 BC). This replaced an earlier site layout consisting of large open spaces between various structures and domestic quarters (Dikaios 1969-71: 514-18; Courtois 1982: 155-58). This re-organised Enkomi Level IIIA is at least a century later than the usually agreed first urban phase on Cyprus (LC IIC, ca. 1350-1200 BC), and so not analogous to other comparative LC urban sites on the island. The earlier settlement pattern, characterised by various quarters set amid open spaces, can potentially be found at some other sites, e.g. Maroni (summary in Iacovou 2007: 7), which, like Enkomi, has a long history from LC I onward. In contrast, *Ayios Dhimitrios*, which at this time lacks much evidence for LC I buildings, does seem to have had some form

of street or grid plan in LC IIC (South 1996; Rogers, Leon *et al.* 2012; Urban *et al.* 2013), and perhaps is one of the earlier examples on Cyprus. This is also the case for LC IIIA Hala Sultan Tekke (Åström 1996: 10; Iacovou 2007: 8-9, although the basis of the claimed 'Hippodamic' plan is unclear from published evidence); the earlier, LC IIC, settlement is now being explored but the general urban structure is as yet unclear (Fischer 2012). Circuit and fortification walls raise similar issues; they are known only at some LC sites, and in most cases are relatively late features (Iacovou 2007: 10-13). In terms of political models, we may be seeing a reflection of a range of trajectories, from emergent state-level urbanisation processes at some of the earlier LC IIC sites to state-level directed urbanisation at others (in LC IIC and LC IIIA).

Nonetheless, despite the range of scholarship cited above, it is important to highlight how little is known about the development history and organisation of the new LC urban centres (diachronically, spatially and structurally), especially non-elite areas, notwithstanding the fact that they are recognised as fundamental to LBA society on the island. This, of course, is not a problem unique to Cyprus; the diachronic development of many major settlements in the Mediterranean is a fraught topic in several areas and periods (the Iron Age offers several examples—e.g. Damgaard Andersen *et al.* 1997b). Even at Knossos, 'the most comprehensively documented major prehistoric site in Greece' (Whitelaw 2004: 147), we are only starting to achieve a reliable dataset (e.g. Whitelaw *et al.* 2007); nonetheless, the intra-site structure remains largely elusive moving away from the palace area. The situation on Cyprus becomes urgent because so much is made of so little solid (and challenging) information, and because the history of the main centres is relatively compressed—just the half millennium of the LBA—with no long (e.g. tell-type) settlement history to make a more general settlement evolution apparent.

The main LBA Cypriot settlements have been identified as urban without any real criteria: a loose minimalist model is either implicit (as in Osborne 2005) or, as in Negbi (2005: 3), explicit, with settlements identified as urban and non-urban on the basis of towns functioning as central places. The scholarly community appears fairly content, ascribing the same list of major settlement sites as urban, so there is no actual disagreement. Defining an urban settlement, however, even in the modern context, is challenging and varies by place, society and so on (e.g. Weeks 2010), and takes many different forms when looking at early civilisations (Trigger 2003: 120–41; Smith 2007; Fletcher 2012). Thus further clarity is desirable. As Iacovou (2007) notes and chastises, guesstimated site sizes seem to have been the *de facto* measure of urbanism for LBA Cyprus (as in many cases in archaeology where real structural layout information is lacking: e.g. Wilson 2011). On critical examination, however, many of these guesstimates lack sound evidence. Nor does site size necessarily characterise urban space, given the variety of human-built settlement forms and different societal approaches to the use of space, as well as toleration of crowding and the elite's (cross-cultural) quest for distinction and separation (e.g. Hall 1966; Rapoport 1969; Altman 1975; Blanton 1994; Fletcher 1995). In all, despite the concern with urbanism and settlement hierarchy in LBA Cyprus, the anatomy of most multifunctional LBA settlements remains unclear, and they exhibit considerable diversity (Iacovou 2007). At present, they are effectively just (large) dots on a map, with no relevant natural-human thick description, nor spatio-temporal biography (Given 2013: 4).

### Maroni

The lower Maroni Valley and its LBA settlement cluster offers an important opportunity to expand our knowledge of one major LC site (Figure 2), both by increasing our knowledge of

a 'non-standard' case, and because much of its surface area remains accessible to research. The earliest information on Maroni concerns various visits, and excavations of tombs (of doubtful legitimacy or strategy), in the late 19th century (Johnson 1980; Cadogan 1992a; Manning and Monks 1998). Finds from these excavations, and other tomb robbing, led Portugali and Knapp (1985: 54, fig. 4–4) to identify Maroni as a major source of imported Late Helladic (LH) IIIA material, indicating involvement in international trade and a consuming local elite (Steel 1998). Following a series of excavations and survey projects (see below), Maroni is now listed in Knapp (2013a: fig. 95) at ca. 25 ha in extent, making it one of the three largest LC sites known in his assessment (also Knapp 2008: 212–14). Since it is the only larger LC complex in its region (the greater Maroni valley catchment), and includes monumental structures, evidence of administration, crafting, inter-regional trade and large-scale storage, production and consumption, it appears to be the regional centre, and can by most definitions reasonably be defined as an urban centre. In addition, occupation over the greater site is attested from LC I–IIC (Manning and Monks 1998; Cadogan 1984; 2011; Cadogan *et al.* 2001; Manning *et al.* 2002; Manning *et al.* 2006), making it one of the older and longer-lived (450–500 years) major LC sites (Manning 1998b). But past work also left many questions. Iacovou (2007: 7) highlights that the 25 ha Maroni LBA site area was not a continuous settlement, but instead shows different areas of activity, as well as likely non-urban space (or rather open urban space: Stanley *et al.* 2012) within the site area; she asks the pertinent question: 'Maroni: 25 hectares of what?'

To start to answer this fundamental question, relevant to general syntheses of the transformation of LBA Cyprus, we review what is known about the LBA 'Maroni complex', integrating work from excavations, pedestrian survey and geophysics. Excavations at six areas of the greater Maroni LC complex (Figure 2) have produced:

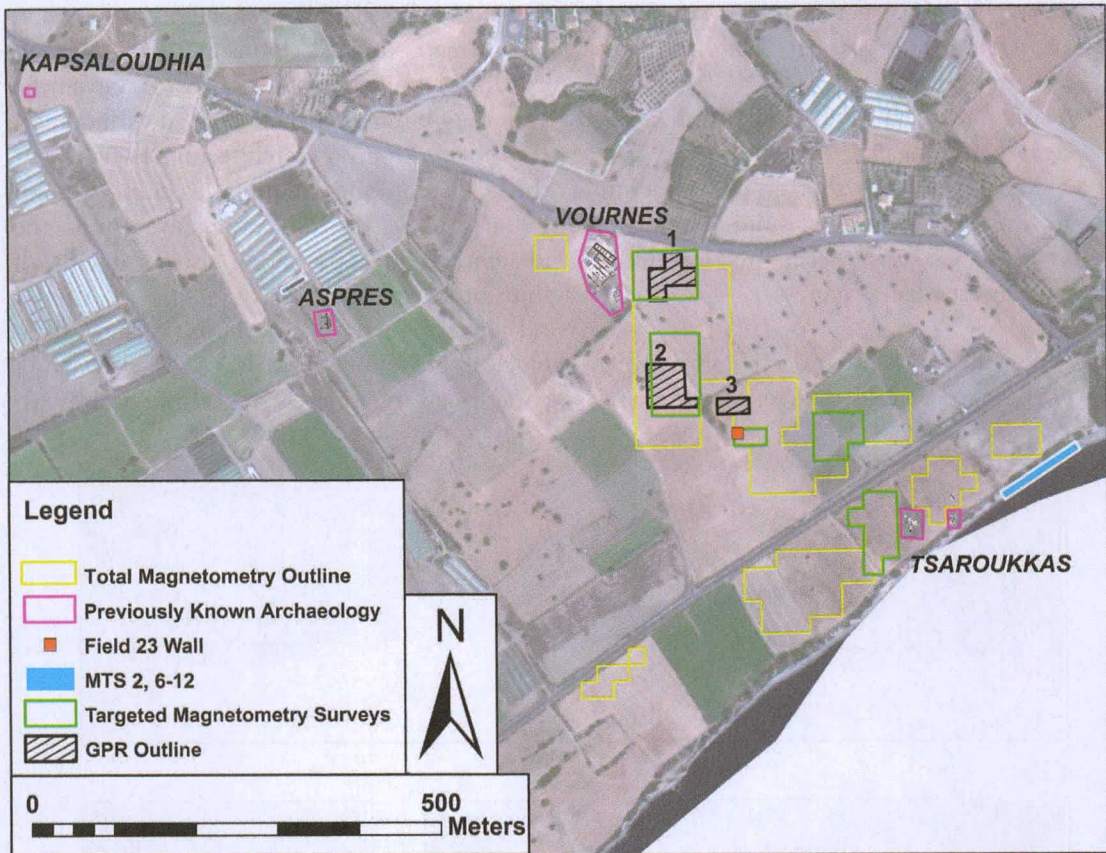


**Figure 2.** Map showing the location of the Maroni LBA settlement in southern Cyprus, and the excavation loci and features (toponym names) from previous excavations at Maroni (MTS = Maroni *Tsaroukkas*). The areas of fluxgate gradiometer survey (see also Figures 9, 10 and 11) and ground-penetrating radar (GPR) survey (see Figure 12) are indicated, as is the area of eroding LC features illustrated in Figure 3, and the ground-truthing test excavation in the southwest edge of Field 23 (Figure 4).

- (1) the well-known monumental LC II structures on a low eminence at Maroni *Vournes* (British Museum 1897 'Site C'): the ca. 600 sq m Ashlar Building (on top of a large LC I predecessor) and the West Building (ca. 40 × 17 m), along with other architecture and tombs of LC I–II date (Cadogan 1989; 1992a; 1992b; 1996; 2011; Cadogan *et al.* 2001)—combining administrative, storage and production (metalworking, textiles, olive oil) areas;
- (2) LC I–II tombs (some excavated by the British Museum in 1897 as their 'Site A', some robbed, some re-excavated in the 1990s, some eroding from the coastal scarp) and several LC I–II domestic and utilitarian/production buildings and contexts—including additional structures, a recently investigated tomb observed in 2013 (Figure 3.iv), and an LC anchorage off Maroni *Tsaroukkas* (Johnson 1980; Cadogan 1992a; Manning *et al.* 1994; Manning 1998a; Manning and DeMita 1997; Manning and Monks 1998; Manning *et al.* 2002; Manning *et al.* 2006);
- (3) LC tombs from British Museum work at 'Site 2', northwest of *Vournes* (Cadogan 1992a);

- (4) a large LC II structure with storage and processing elements at Maroni *Aspres* (Manning 1998a);
- (5) a wall and LC I tombs at Maroni *Kapsaloudhia* (Cadogan 1984); and
- (6) a wall forming part of an LC structure uncovered as part of ground-truthing in Cyprus—Cadastral Sheet LV 31 Field 23 (southwest edge) (Figure 4).

In addition, British Museum activities in 1897 recovered tombs at and between *Vournes* and

*Tsaroukkas*, based on the general description and sketch map provided (Johnson 1980; Cadogan 1992a; Manning and Monks 1998). Given the pattern of burials closely associated with domestic and multipurpose architecture elsewhere at the LC Maroni site and other LC sites (Keswani 2004: 86–88), we can reasonably assume the existence of built space at, or associated with, all finds of LC tombs.

Pedestrian survey by the Maroni Valley Archaeological Survey Project (MVASP) detected a pattern of varying levels of ceramic finds, with

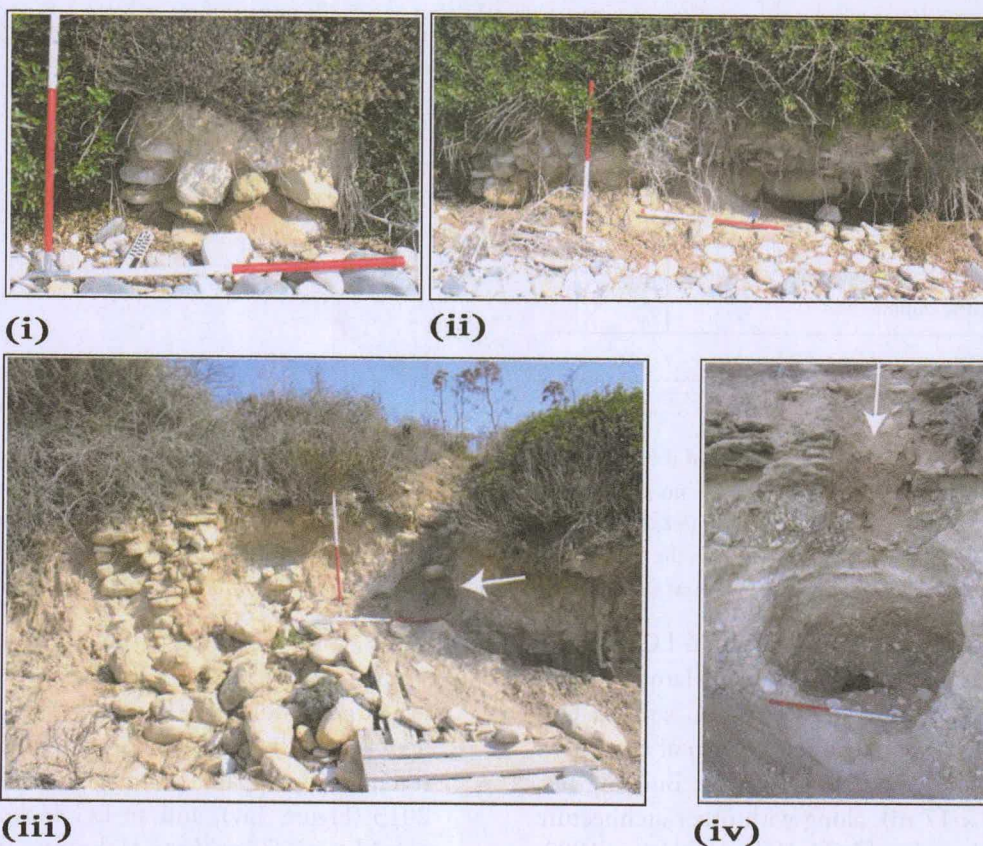


**Figure 3.** Images of some additional evidence of LC built structures and tomb, from Maroni *Tsaroukkas*, eroding out of the coastal scarp (Cyprus Sheet LV 31 Field 51 and 50) as visible in June 2013

- (i) LBA wall to footings (MTS 12) eroding from coastal scarp;
- (ii) LBA walls/buildings to footings (MTS 10, 11) eroding from coastal scarp;
- (iii) LBA walls (only some shown) and pithoid jar (shown with arrow; area = MTS 6, 7, 8, 9) found eroding from coastal scarp after illegal robbing/excavation (especially centre and right of area shown); and
- (iv) tomb cutting and chamber fragment (shown with arrow). Locations indicated in Figure 2. Scale (total length) 1 m.

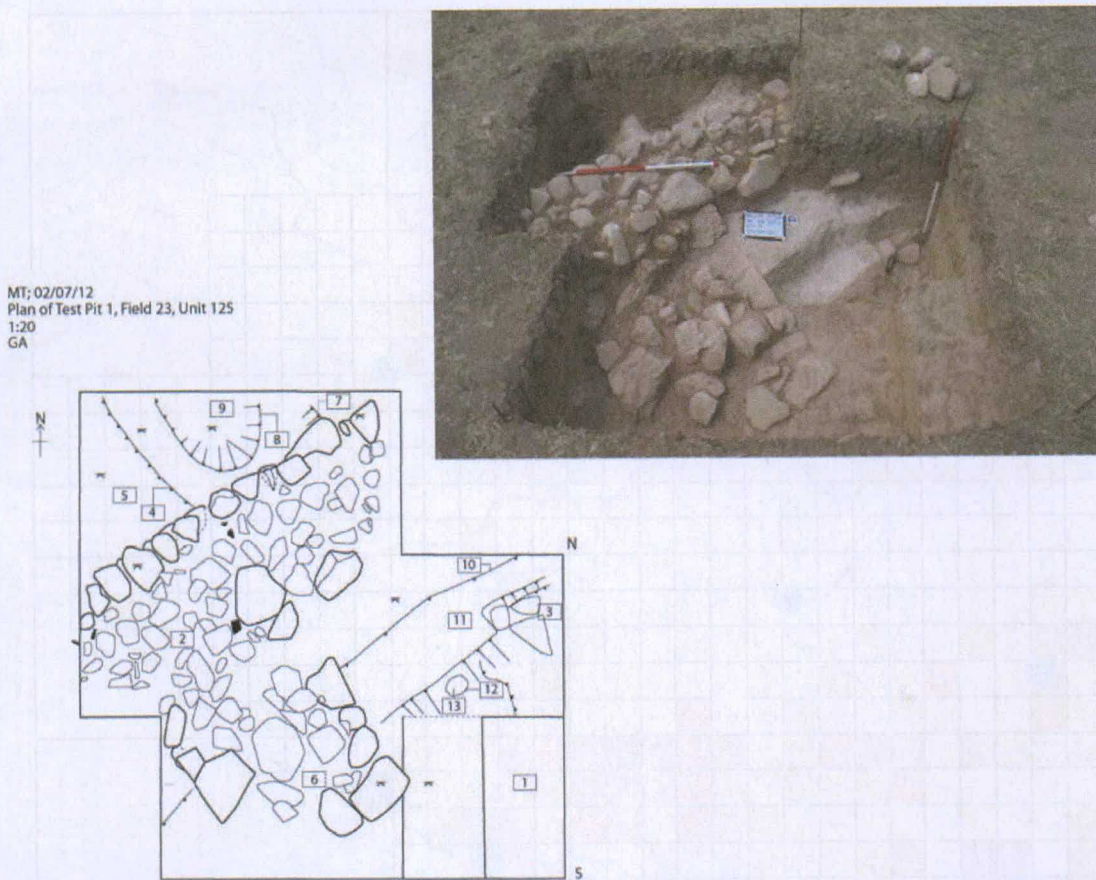


**Figure 4.** Ground-truthing excavation trench showing the LC built features found in Cyprus (Cadastral Sheet LV 31, Field 23). Left: plan of final state before backfilling. Top right: photo of final state before backfilling.

distinct concentrations several hundred metres apart within an area over 1 km east–west and 0.5 km north–south (Figures 5–6; see also Figure 2, above). These finds led to the hypothesis that settlement was discontinuous across the greater site (e.g. Manning and DeMita 1997: 126–28), and that a set of separate earlier LC groupings were only transformed into a more unified political entity in the early LC IIC period (later 14th century BC—Manning 1998b). Differences between walkers, light and temperatures at varying times of day, transect widths, artefact types, geomorphology and land surface use and visibility in the areas walked by MVASP all contribute to variation in pedestrian survey findings (e.g. Webb and Frankel 2004: 130–35; Banning *et al.* 2006; 2011). Even so, the stark contrast

between areas of high and low LBA ceramic density around Maroni (Figure 6) leaves little doubt that, whereas some areas have clear concentrations of LBA ceramics (implying settlement and/or tombs), there is also a significant amount of open or ‘empty’ space indicated by areas with only a few collected diagnostic LBA finds.

In other words, there is no single coherent dense habitation area, rather several clusters surrounded by seemingly open space. Whether these spacings demarcate what might be defined as neighbourhoods or districts within a greater urban settlement (Smith 2010) is unclear, given the available information. Nonetheless, the Maroni dispersed pattern shows many similarities in form and scale to the neighbourhoods in several early urban cases reviewed in Smith

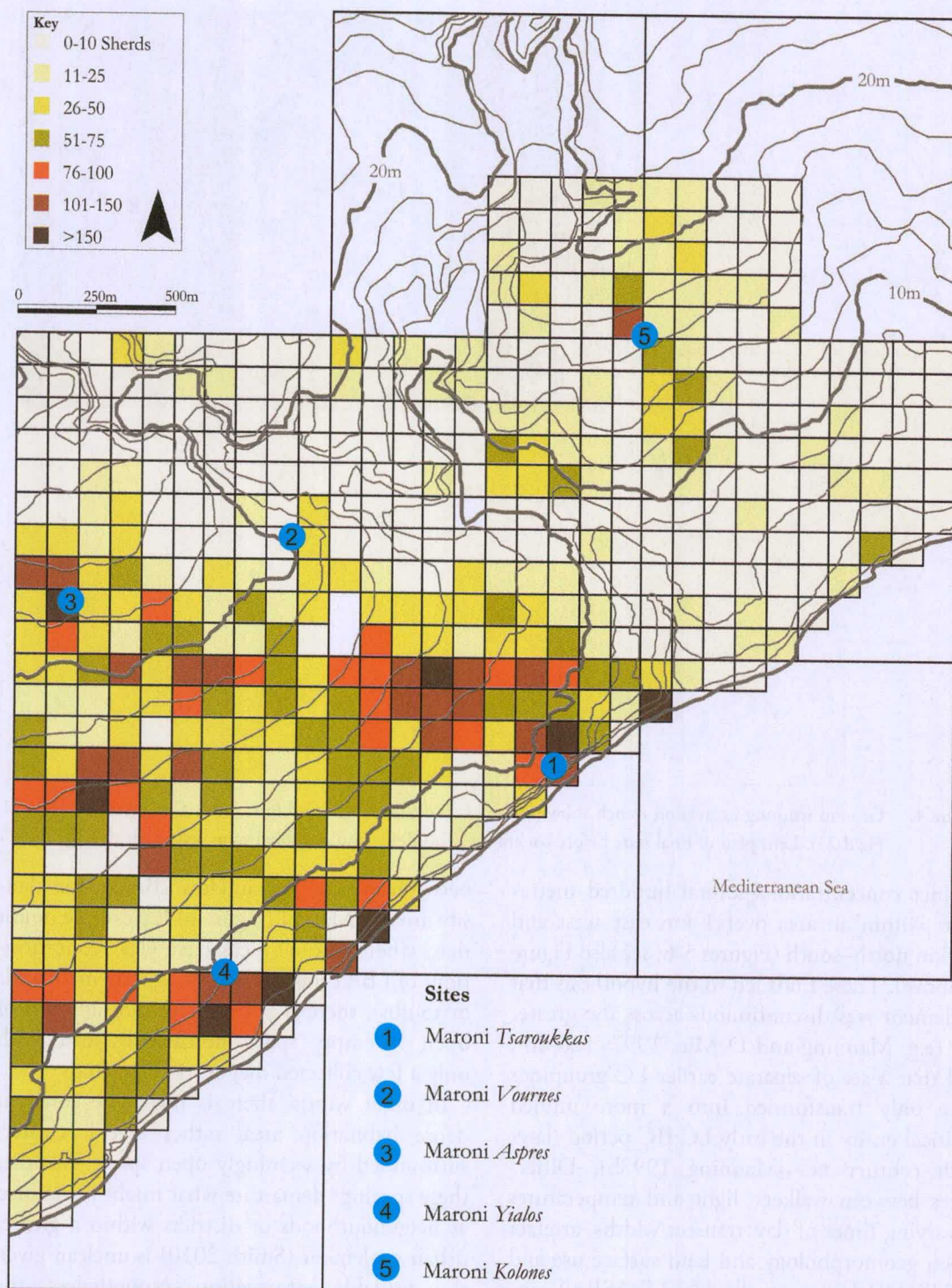


**Figure 5.** MVASP cumulative total ceramic finds by 50 × 50 m units from work carried out 1991 through 1995 in the area of the LBA settlement. 2 m contours shown. Note: methodology changed between 1991 (10 walkers per unit) and 1992 onwards (4 walkers per unit)—data from 1991 is thus scaled down by a factor of 2.5.

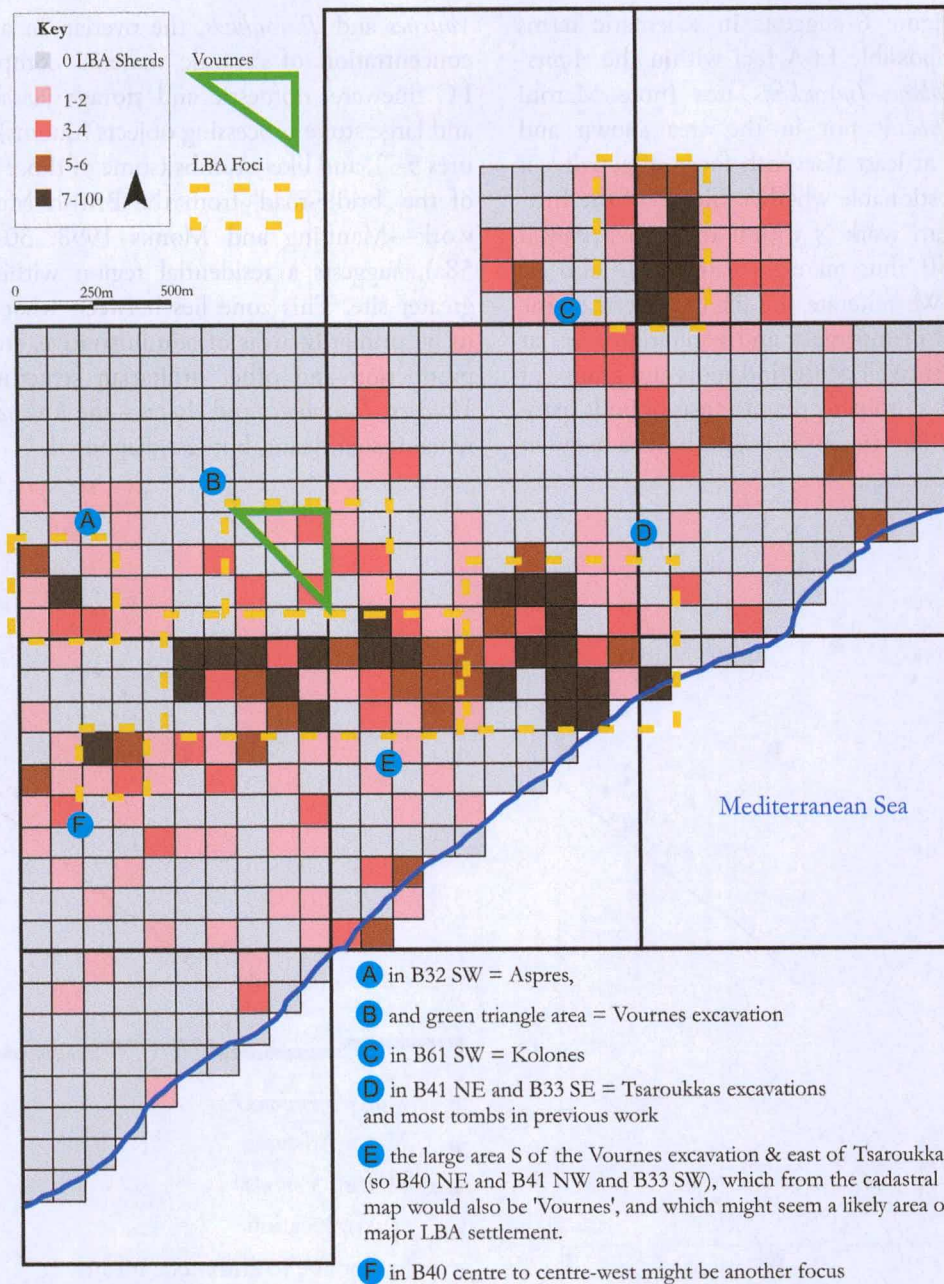


**Figure 6.** LBA ceramic finds (collected, diagnostic sherds) from MVASP in blocks (B32, 33, 40, 41, 48, 58, 60 and 61) by 50 x 50 m units around *Vournes* and *Tsaroukkas*. Some possible main LBA areas are approximately indicated by the yellow rectangles (A-F). B and green triangle area = *Vournes* excavation, A in B32 SW = *Aspres*, D in B41 NE and B33 SE = *Tsaroukkas* excavations and most tombs in previous work, C in B61 SW = *Kolones*, F in B40 centre to centre-west might be another focus, E the large area south of the *Vournes* excavation and east of *Tsaroukkas* (so B40 NE and B41 NW and B33 SW), which from the cadastral map would also be 'Vournes', and which might seem a likely area of major LBA settlement. Note that Maroni *Kapsaloudhia* is not within the area shown.

(2011). Figure 6 suggests in schematic terms up to six possible LBA foci within the *Aspres-Vournes-Kolones-Tsaroukkas* area (note Maroni *Kapsaloudhia* is not in the area shown and represents at least a seventh focus of activity; it is also questionable whether 'Site 2' of the British Museum work is within the area surveyed by MVASP, thus an eighth area may also be missing). We reiterate the likely pattern of the association of mortuary and habitation areas at Maroni; hence all dense find spots and groups of LC ceramics probably denote areas of built space and habitation. In particular, in the area between

*Vournes* and *Tsaroukkas*, the overlap in a large concentration of ceramic material comprising LC fineware, domestic and storage jar sherds, and large stone processing objects (querns) (Figures 5-7), and likely tombs (some of those north of the 'bridle-road' from the British Museum work—Manning and Monks 1998: 304, pl. 58a), suggests a residential region within the greater site. This zone lies between what seem to be primarily areas of administrative, storage, production and other utilitarian structures at *Vournes*, *Tsaroukkas* and *Aspres*—the *Kolones* area remains significant, but less diagnosed.

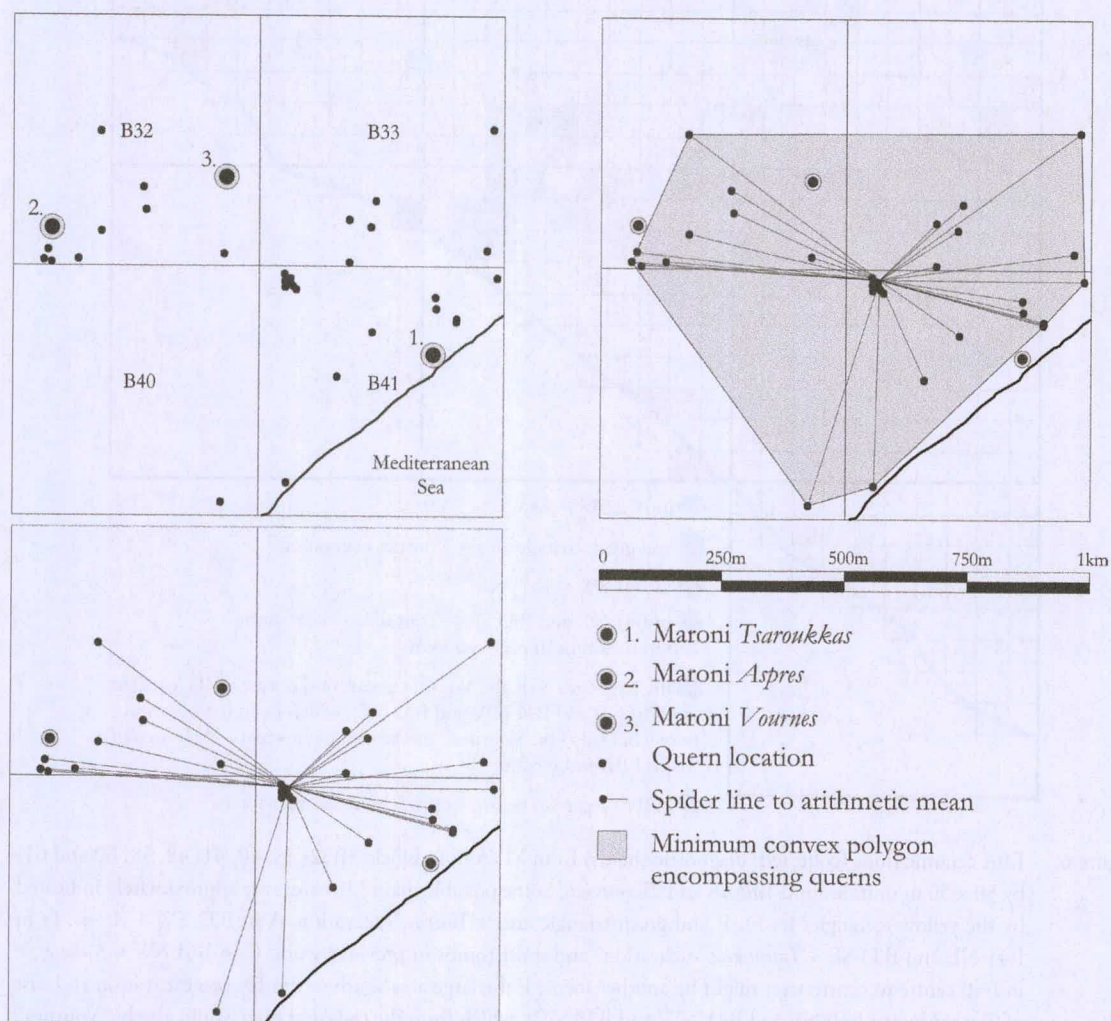


**Figure 7.** Findspots and least distance common location analysis of querns from the area of the LBA settlement in MVASP Blocks 32, 33, 40 and 41. A minimum convex polygon encloses 47.64 ha.

Small-scale geophysical survey (fluxgate gradiometer and electrical resistivity) was undertaken in the 1990s, and the results indicated likely structures at both *Tsaroukkas* and *Aspres* (Manning and DeMita 1997: 124–26; Manning 1998a). A second period of geophysical work at Maroni took place in 2008 and 2010–12 as part of the Kalavassos and Maroni Built Environments (KAMBE) Project (Rogers, Fisher *et al.* 2012). Some structures were again evident at *Tsaroukkas* in magnetic survey (Fisher *et al.* 2011–12). Ground-penetrating radar (GPR) survey was undertaken, but the equipment employed—carts which failed to cope well with the plough-soil landscape—and use of a higher frequency antennae (500 MHz for most work), despite soil conditions that promoted GPR signal attenuation (texture and moisture analysis of soil at the site indicated that the shallow subsurface is dominated by moist clay and silt), unfortunately led to less than ideal results at Maroni. Large-scale total field magnetic survey was also carried out, but proved to have restricted ability to resolve shallow, weakly magnetic features in the absence of diurnal corrections. In many instances, such features were obscured by larger anomalies likely to have been generated by modern burning. Nonetheless, one large structure was identified by both GPR and total field magnetometry (Rogers, Fisher *et al.* 2012: fig. 4), encouraging further survey with an adjusted methodology.

### Geophysical Survey 2012–13 at Maroni

A third period of geophysical survey was conducted in 2012–13 using a fluxgate gradiometer for large-scale coverage and GPR for detailed mapping (results to date shown in Figures 8–12). These surveys revealed a number of structures and provide data to begin to interpret the LBA Maroni urbane. While the geophysical data do not date the structures imaged—some might be earlier or, more likely, later than the LBA—the strong pattern of LBA or LBA-type objects found in the pedestrian survey and ex-

ceptions and the orientations of the structures suggest they are predominantly of LBA origin. The gradiometer survey (Figure 8) indicates a number of areas with rectilinear features, likely structures, while also identifying zones without apparent architectural features. These data support observations from the pedestrian survey (see Figures 5–6): contiguous but low-density settlement in the region around Maroni. Details of five areas with structures evident in the gradiometer data are shown in Figures 9–11.

Block A in Figure 9 shows a large feature (more than 40 × 40 m) comprising a series of parallel lines spaced approximately 10 m apart, potential internal partitioning, as well as curvilinear features (the latter not necessarily contemporary with the former). This feature is on a similar alignment to the nearby Ashlar and West Buildings at *Vournes*. GPR data (see Figure 12, Area 1, northern unit) likewise image this feature, although less clearly. Critically, depth estimates drawn from GPR data indicate the feature is below plough-soil, and hence archaeological, not the remains of modern structures or activities. Based on known farming practices from the 1980s and 1990s, and comparison with a 1963 aerial photo (Johnson 1980: pl. III), the strong dipole in the northwest of the area could be burnt out (and removed) trees. What this large feature represents is not clear; it is only about 30 m from the LBA *Vournes* buildings, and the MVASP survey revealed LBA sherds and ground stone objects in the area (see Figures 5–6). However, there is no proof that this feature is LBA, and it could represent later activity, given the background scatter of Roman to Late Roman material across much of the *Vournes-Tsaroukkas* area, and the Iron Age to Hellenistic sanctuary at *Vournes* (Ulbrich 2012). Excavation is clearly required to diagnose this large feature that may have considerable relevance to the history of the *Vournes* monumental area.

Block B in Figure 9 shows several rectilinear features. The tripartite feature in the lower portion of the image is also visible in the data of

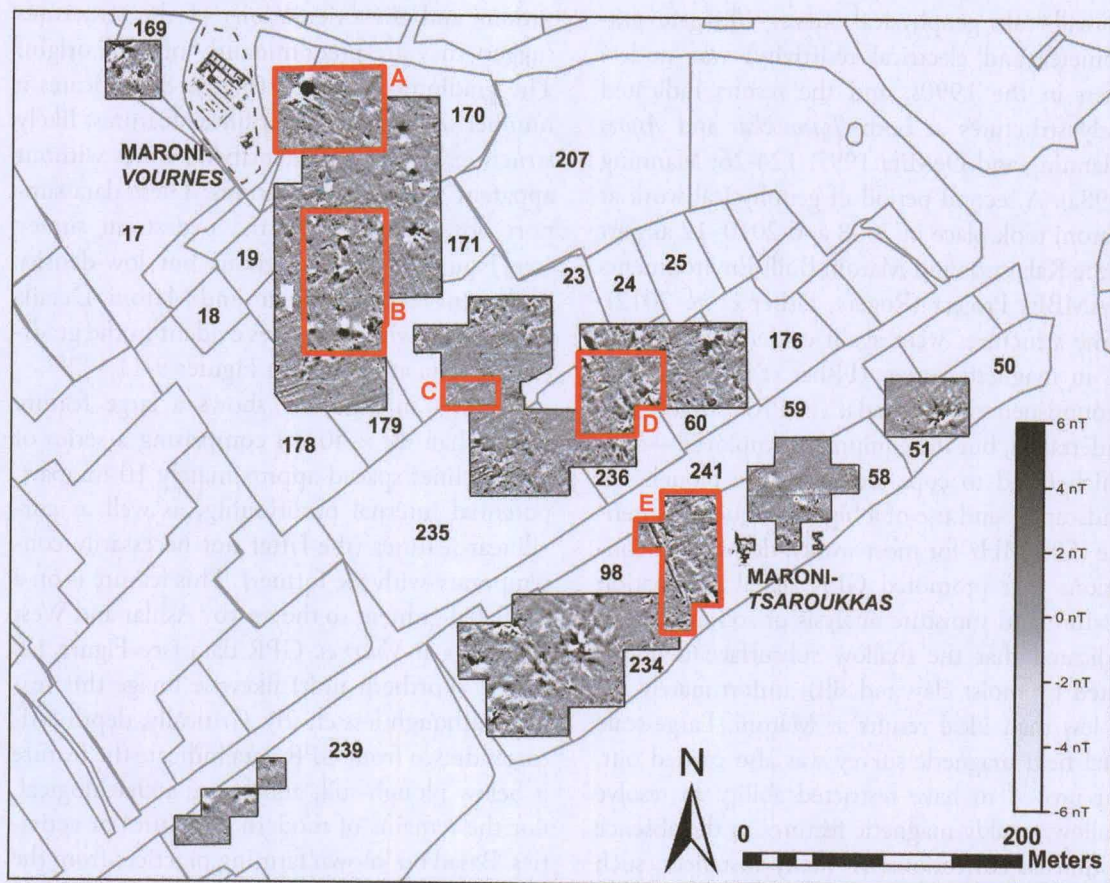


**Figure 8.** Fluxgate gradiometer (Geoscan FM256) survey performed 2012–13 with areas of interest highlighted in red and detailed in Figures 9, 10 and 11. Black numbers are cadastral field numbers (Cyprus Sheet LV31).

Rogers, Fisher *et al.* (2012: fig. 4a, and in the GPR data in fig. 4b), and is clear in the 2012–13 GPR data shown in Figure 12 (Area 2 and inset). This area produced LBA finds in the MVASP survey and is close to an *okhtos* (field boundary) that divulged a number of LBA storage jar fragments and several querns (the grouping of dots in the northeast corner of B41 in Figure 7). Together, the magnetic gradiometer data and survey results indicate the likely presence of substantive LBA structures/features in this area.

Block C in Figure 10 shows linear magnetic features tested with a small excavation (Figure 4). This ground-truthing uncovered a LBA stone wall and wall join (along with robbing pits), and underlying LC I fill. Figure 10D shows the area in Field 236 and Field 60 with a rectilinear

complex. This area is within the dense scatter of LBA material recorded by MVASP, and was likely part of a significant LBA habitation zone between *Vournes* and *Tsaroukkas*.

Figure 11 also shows a set of rectilinear features in Block E. One elongated bi-polar feature seemingly demarcates some form of western edge to the area, and may be ancient or modern. To the east of this, smaller rectilinear features appear. Some of this long demarcation feature and possible rectilinear features were observed in the 1990s fluxgate gradiometer survey (Manning and DeMita 1997: fig. 8, around Feature 12), and are also evident in the total field magnetic data of Rogers, Fisher *et al.* (2012: fig. 5, bottom centre). They appear to be associated with the area of Buildings 1 and 2 nearby at *Tsaroukkas* and

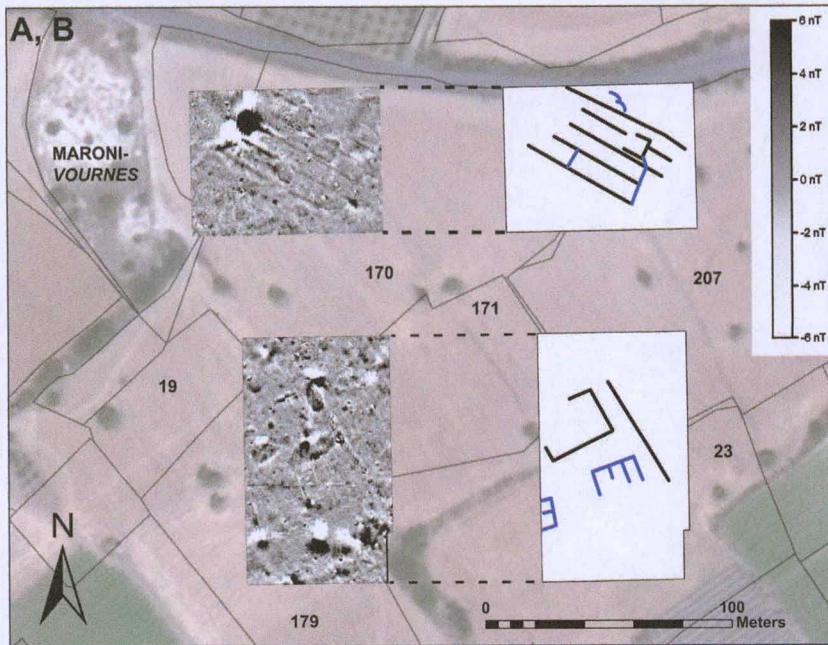


**Figure 9.** Detail of fluxgate gradiometer survey Blocks A and B with interpretations of magnetic signal. Blue interpretations indicate low (negative) magnetic anomalies, while black interpretations indicate high (positive) magnetic anomalies.



**Figure 10.** Detail of fluxgate gradiometer survey Blocks C and D with interpretations of magnetic signal. Blue interpretations indicate low (negative) magnetic anomalies, while black interpretations indicate high (positive) magnetic anomalies. A small ground-truthing excavation in Block C (see Figure 4) showed a linear anomaly to be an LC field-wall.

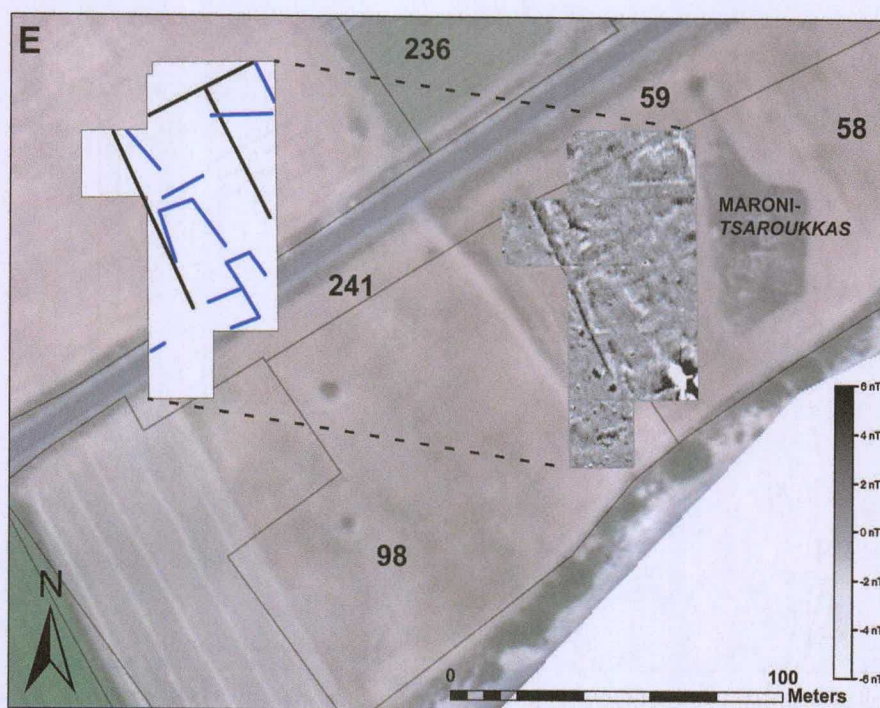


**Figure 11.** Detail of fluxgate gradiometer survey Block E with interpretations of magnetic signal. Blue interpretations indicate low (negative) magnetic anomalies, while black interpretations indicate high (positive) magnetic anomalies. Positive, linear features to the west of Maroni *Tsaroukkas* likely correspond to field boundaries; the dating for these is not known.

other ca. 20-25 × 20-25 m structures indicated in the previous gradiometer survey (Manning and DeMita 1997: fig. 8, e.g. features 12 and 13).

Two of the areas (A and B) identified in the magnetic data (GPR survey Areas 1 and 2), and a third area (GPR survey Area 3) were selected for detailed GPR survey (Sensors & Software Noggin 250 MHz instrument deployed in a Smart-Tow [sled] configuration—this set-up seemed to mitigate the problems experienced in earlier work). Transects were spaced 0.25 m apart and in-line sampling was 0.05 m (see Figure 12).

GPR survey Area 1 shows (less clearly than the magnetic data in Figure 9 Block A) the multi-aisled structure in the north, possible rectilinear traces in the east (see the inset) from around 60-80 cm depth, and in the centre-west a large (ca. 20 m diameter) irregular ovoid grouping. This feature is deeper (80-100 cm, parts to 125 cm), but also somewhat irregular in signal,

which at this depth (beyond plough activity) might indicate a tomb group. GPR survey Area 2 reveals a complex of likely structures or bounded spaces (Nos. 4, 3, 2, 5) associated with a multi-aisled building (No. 1—see the inset). Two large bounded areas (Nos. 2, 3) of 20 × 20 m and 20 × 30 m, lack much in the way of internal partitioning. These could be enclosed outside spaces (e.g. gardens or walled fields) rather than inside space, each with structures around them. Such enclosed exterior space hints at a relatively low-density urban landscape. GPR survey Area 3 reveals a likely linear wall perhaps bounding the built areas to the west and likely under the intervening field boundary (with some obvious LBA building stones included). It is clear from geophysical survey to date that a number of likely LBA structures exist in the landscape between Maroni *Vournes* and *Tsaroukkas*, especially associated with areas identified by ceramic finds from pedestrian

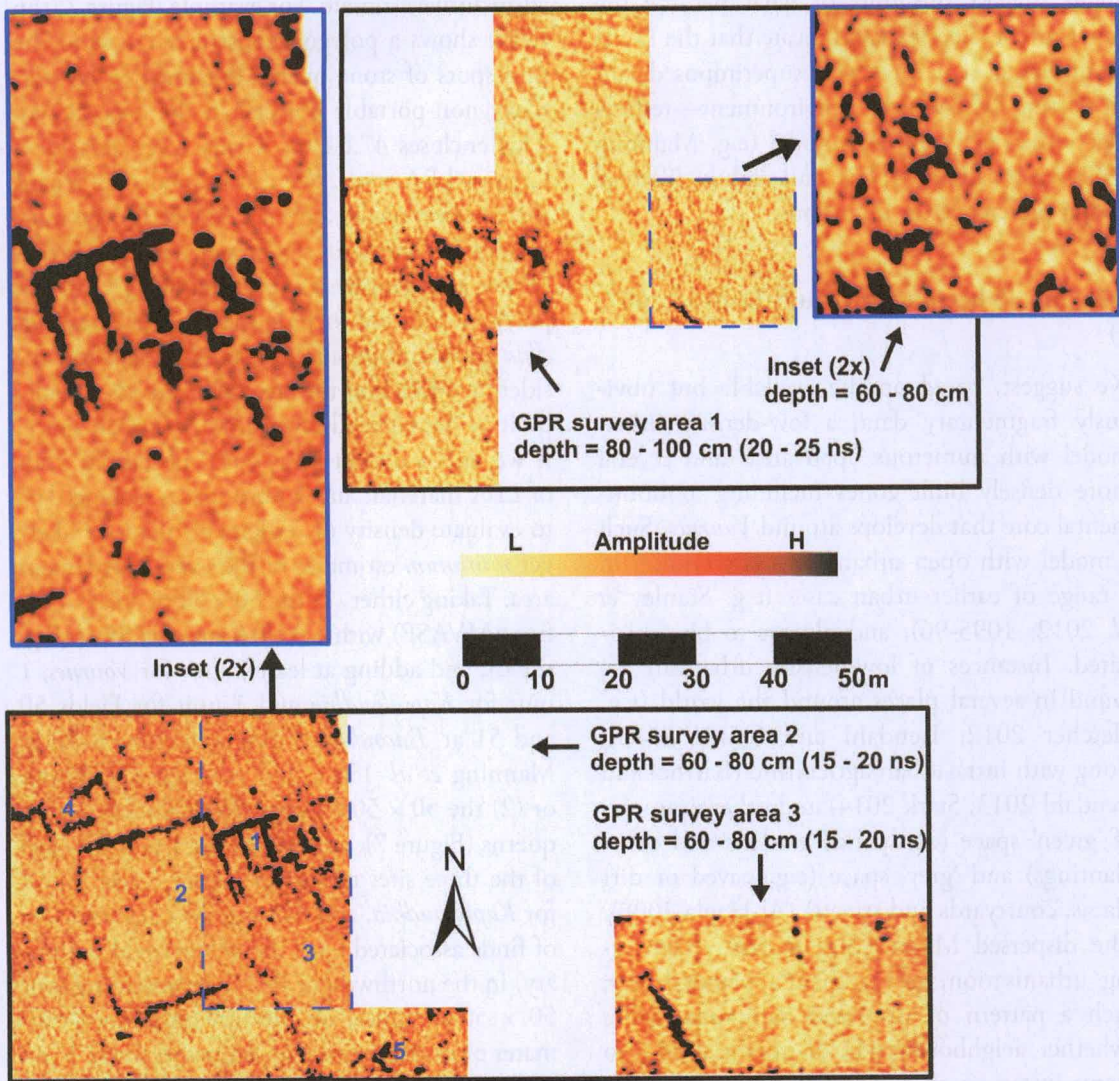


Figure 12. GPR survey data collected at Maroni. Survey Area 1 shows a circular feature and evidence for rectilinear structures. Survey Areas 2 and 3 show rectilinear/linear built structures with those in Area 2 indicating internal partitioning.

survey, revealing a spatially complex but low-density townscape.

The alignments of the geophysically observed structures exhibit some variation, which might reflect diachronic settlement development. The 'townscape' structures imaged between *Vournes* and *Tsaroukkas* (Figures 8-12) seem roughly to follow the south-southeast alignment of the structures at *Tsaroukkas*, and/or of the LC I struc-

tures in the south area of the *Vournes* excavation (Cadogan 1992b; Manning and DeMita 1997; fig. 7; Manning 1998a). In contrast, the monumental LC II *Vournes* structures (Ashlar Building and West Building—Cadogan 1992b), the LC II architecture at *Aspres* (Manning 1998a) and the large structure imaged to the east in Field 170 (Figure 9 Block A, and Figure 12), are on more south-easterly orientations. These alignments

might suggest sub-units of what became the larger urban site, or may indicate that the LC II monumental structures were superimposed into an existing LC I–II urban environment—reflecting both a new political model (e.g. Manning 1998b; Keswani 2004: 88), and slightly different design preferences or intentions.

### **‘Maroni: 25 hectares of what?’ (Iacovou 2007: 7)**

We suggest, based on the available but obviously fragmentary data, a low-density urban model with numerous open areas and several more densely built zones including a monumental core that develops around *Vournes*. Such a model with open urban areas is common in a range of earlier urban cases (e.g. Stanley *et al.* 2012: 1095–96), and almost to be anticipated. Instances of low-density urbanism are found in several places around the world (e.g. Fletcher 2012; Isendahl and Smith 2013), along with intra-urban agriculture (Barthel and Isendahl 2013; Stark 2014) and other examples of ‘green’ space (e.g. parks, gardens and other plantings) and ‘grey’ space (e.g. paved or dirt plazas, courtyards and streets) (Al-Hagla 2008). The dispersed Maroni case is one of emerging urbanisation, rather than a planned city; such a pattern of dispersed habitation zones (whether neighbourhoods, or not) is similar to many instances of earlier—and non-formally-planned—urban settlements (e.g. cases in Smith 2011). In addition, contrary to Childe’s (1950: 9) first urban trait, these new larger LBA towns were not necessarily ‘more densely populated than any previous settlements’—i.e. in contrast to known EC-MC settlement evidence (e.g. Marki *Alonia*—Frankel and Webb 2006).

Given the information currently available, how large was the LBA settlement at Maroni and what did this urban area comprise? One option for modelling the size of LBA Maroni is to draw a polygon around all evidence for settlement; this will achieve a maximum and

all-inclusive estimate. For example, Figure 7 (top right) shows a polygon constructed around the find spots of stone querns (assumed to be relatively non-portable objects) in the area shown. This encloses 47.64 ha, a very large area for a Cypriot LBA town. We can immediately regard this as questionable, given evidence for the non-contiguous nature of settlement from pedestrian survey and geophysics (even allowing that this polygon does not include the Maroni *Kapsaloudhia* area), and because this method fails to consider how much of the area delineated is actually built or demarcated (even if open) urban space. If we only consider areas with substantial finds of LBA material, and ignore spaces lacking data to evaluate density of settlement, then we likely get *minimum* estimates of the overall settlement area. Taking either (1) the 50 × 50 m areas (units from MVASP) with ≥ 6 LBA ceramic finds (Figure 6), and adding at least 1 unit for *Vournes*, 1 unit for *Kapsaloudhia* and 1 unit for Fields 50 and 51 at *Tsaroukkas* (from architectural finds: Manning *et al.* 1994; and see Figure 3 above), or (2) the 50 × 50 m areas (MVASP units) with querns (Figure 7), adding at least 1 unit for each of the three sites named in Figure 7 and 1 unit for *Kapsaloudhia*, and treating the concentration of finds associated with the *okhtos* (field boundary) in the northwest of B41 as representing four 50 × 50 m units, we produce minimum estimates of ca. 8 ha and 7.25 ha, respectively. Even these clear minimum values place Maroni in the so-called ‘First Tier’ of settlements in Knapp’s (2013a: fig. 95) analysis.

There are, however, problems. The MVASP could not survey all relevant areas; in particular, several areas to the immediate north and north-east of *Vournes* are either built upon, have poor ground visibility, or were extensively terraced. In these locations, attempting to recognise the real nature of the use of the space between *Vournes* and *Kolones* in the LBA is problematic. Figure 6 (above) shows that this issue affects parts of the northern half of B33 and some of B32. This circumstance may minimise misleadingly the

size estimate of the overall settlement, especially when the dense scatter of material around *Kolones* might suggest that there was more activity between *Vournes* and *Kolones* than is evident from MVASP results.

As evident from Figure 3 (above), a substantial amount of the coast at *Tsaroukkas* has been lost to a combination of minor sea-level change, local tectonic movements and along-shore erosion; apart from the last, the general but complex and debated picture is a mixture of likely small, ca. 0 to 2–3 m, net higher sea-level change combined with local tectonic activity leading to some coastline loss (e.g. Flemming and Webb 1986; Morhange *et al.* 2000; Sivan *et al.* 2001; Lambeck and Purcell 2005; Pirazzoli 2005). We observe the latter in action with buildings and tombs being eroded into the sea at *Tsaroukkas* (Figure 3, above), as elsewhere along this stretch of coastline in Cyprus (e.g. Manning *et al.* 2000; Sewell 2011–12); this is a recognised issue for Cyprus (Nicholls and Hoozemans 1996: 121–24). Gomez and Pease (1992) estimate that the Maroni-area shoreline was perhaps ca. 100 m farther out at 5000 BP (i.e. 3000 BC), so we might guesstimate around half as far at 1500–1000 BC (see also Manning *et al.* 2002: 111 n. 40). If we use a modest estimate of coastline change since the LBA of 30–50 m, this would add another couple of hectares or more to the LBA settlement area, bringing a minimum 8 ha estimate up to 10 ha.

The appropriate estimate of site size for the LBA Maroni complex undoubtedly lies somewhere between the maximum/minimum estimates. Considering all the 50 × 50 m units in Figure 6 with ≥ 2 LBA ceramic finds, allowing at least one extra 50 × 50 m unit for each of *Vournes* and *Kapsaloudhia*, one for Field 50 and 51, and another two for the lost coastline area, we calculate ca. 26 ha, more or less the number Knapp estimated. This likely over-estimates the actual habitation space of the settlement, but the geophysics indicates structures of likely LBA date in some areas with only two to six LBA

ceramic finds per 50 × 50 m unit (and not only in the 6–100 finds per 50 × 50 m units): thus we should not retreat too far towards the minimum estimate. As Smith *et al.* (2012: 7618) highlight, informal settlement areas around central districts are a recurrent pattern back into prehistory. Another alternative is to estimate the maximum area, e.g. around 45–50 ha (Figure 7, above, top right, but including *Kapsaloudhia*), and assess the built area at no more than about 50% of this space (as seems to be the case for the areas where gradiometer data are available). This produces approximations of about 25 ha of total built space; perhaps in outer, less densely settled areas the percentage should be less than 50%, with 15–20 ha of total built or inhabited space therefore a more realistic estimate.

The scale of population at the Maroni LBA settlement is equally difficult to estimate (nor is it known whether all identified settlement space was in contemporary use—Porčić 2011). Overall, it appears to lack dense settlement over more than a few areas, in contrast to dense walled towns (like Iron Age Tell en-Nasbeh with ca. 450 persons per ha—Zorn 1994) or relatively dense large settlements like Knossos estimated to have an overall site average of 200–225 persons per ha (Whitelaw 2004: 153). At the other extreme, modern traditional villages in Cyprus suggest much lower estimates of just 35–50 persons per ha (Swiny 1981: 78–79), and Price (2011), in his review of a range of ancient, ethnographic and historical evidence for ancient Greek population density, leans the same way, concluding ‘lower rather than higher densities seem to be correct, 40–60 persons/ha rather than 125–250 persons/ha’ (Price 2011: 31; he suggests, p. 22, that above 150 persons per ha is exceptional and, taking the example of Kyanai in central Lycia, posits ca. 80 persons per ha for the main town but only 30–40 persons per ha for the surrounding villages or hamlets). Other estimates tend to be in between, with ranges of 100–200 persons per ha (e.g. Garr 1987; Manning 1993: 42 and refs.). Wilson

(2011: 176), for example, after noting that average population density of medieval cities in Europe was about 100-120 people per ha, suggests for Roman cities 'normal outer ranges of 100-400 people per hectare and likely ranges of 150-250 people per hectare; even more in some cities'. Yet with reference to a case like the Roman-British town and *civitas* capital of Silchester, 'with considerable areas of intramural gardens or open space' (Wilson 2011: 177), he suggests a figure nearer 100 people per ha. The latter might be thought somewhat comparable to the Maroni LBA case and is similar to numbers proposed by Keswani (1993: 77, 80 n.3). An average figure around 100 persons per ha might be the best guesstimate for the Maroni LBA settlement. Alternative approaches, trying to estimate the average number of persons belonging to actual identified residential space, or the numbers of houses or rooms, or interpreted family units, etc., are not practical at this stage for Maroni, but might be anticipated to offer somewhat higher numbers (compare Garr 1987: 39; Zorn 1994; Hansen 2006). Maroni lacks usefully quantified numbers on burials, let alone numbers of persons per burial—multiple burials seem to be the norm in the LBA on Cyprus (Keswani 2004: e.g. 84-144)—so this evidence is unhelpful for deriving any population estimates (cf. Webb and Frankel 2004: 128-30 for Early-Middle Bronze Age Marki Alonia).

Carrying capacity is also unhelpful, as the scale of the LBA Maroni polity's territory is poorly defined and, as a regional centre in this urban era, some supplies may have come from other farms, hamlets or villages within its territory (assuming some settlement hierarchy as argued by Keswani 1993; Knapp 2008: 137-42; 2013a: 354-55). The landscape around the site is fertile and, especially to the west, suitable for cereals and olive and carob cultivation (Christodoulou 1959: 211; Pantazis 1967: 19; Davies 1970: 460), as well as a range of other crops with more intensive agriculture near the

available river or streams. Application of any of the standard approximations of yields and consumption for pre-modern societies in the eastern Mediterranean in moderately favourable dry-farming circumstances (e.g. Foxhall and Forbes 1982; Garnsey 1988; Wilkinson 1994; Zorn 1994: 43-44) would find that even the immediate agricultural area within 2-4 km of *Vournes* easily offers the potential to support a sizeable population (e.g. 1000-3000+ persons). Such a territorial range ( $\geq 4$  km or so) seems about the maximum without passing out of the lower Maroni Valley area and, to the west, into the likely territory of the Vasilikos Valley and its major sites (Todd and South 1992; Sewell 2011-12). Thus, we might speculate on a population for peak LC IIC Maroni in the 1000-2500+ range.

## Conclusions

Attempts to define urban space for any major LBA settlement on Cyprus are difficult, and Maroni represents a notably challenging case in the literature as it offers no neat grid-plan, enclosing walls or single concentration of material debris. The site provides an opportunity to study settlement history from LC I-IIC, or approximately the 17th-13th centuries BC. By combining information from excavation, pedestrian survey and geophysics, we begin to gain a better idea of the anatomy of the Maroni region's key urban centre. Recent geophysical investigations grant us access to a view of the built structure of previously unknown parts of the LBA town. While no grid system is evident so far, or even one or more axial roads (though we might anticipate at least one main route from *Vournes* towards the port area at *Tsarouk-ka*), a relatively large, if dispersed, area of built town is starting to appear at Maroni.

Maroni offers an example of a moderately large LBA settlement (perhaps up to ca. 26 ha or more), but with a type of low-density urbanism that comprises a mixture of built space and

complexes, surrounded by intervening empty and open spaces. These findings inform our understanding of the site, and raise questions with regard to several other early LC urban centres. In particular, and in very basic terms, there is likely more of an urban settlement and *habitus* at LBA Maroni than many previous scholars perhaps imagined, and a likely larger LBA city-scale population. In line with some of the observations of Whitelaw (2004) regarding Knossos, it would appear a mistake inherently to downscale the size and population and thus the importance of the major LBA Cypriot settlements so that they become, in effect, mere large villages, rather than treating them as a form of primary regional urban settlement. Instead, our data from Maroni encourage us to view the major LBA Cypriot settlements as belonging within, and equivalent to, the category of other smaller to medium regional towns and urban centres of the contemporary Levant and Aegean. This better explains how *Alashiya* (Cyprus), and its leading figures, had the resources and capacity to play a significant role in the LBA east Mediterranean world (Knapp 2008: 308–41; Peltenburg and Iacovou 2012: 345–51).

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