

**Enclosures**

1. Enclosures – modern
2. Enclosures – post-medieval
3. Enclosures – post-medieval *based on* Fields – medieval
4. Enclosures – post-medieval *based on* Braided terraces – medieval
5. Enclosures – post-medieval *based on* Step terraces straight/contour – post-medieval
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11. Step terraces (contour) – modern/post-medieval
12. Step terraces (straight) – modern/post-medieval
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**Rough ground**

15. Rough ground – post-medieval/medieval
16. Rough ground – modern/post-medieval *with* Enclosures – post-medieval
17. Rough ground – modern/post-medieval *with* Enclosures – post-medieval *based on*  
Braided terraces – medieval
18. Rough ground – modern/post-medieval *based on* Braided terraces – medieval
19. Rough ground – modern/post-medieval *with* Terraces
20. Woodland – modern/post-medieval
21. Outcrop, scree, cliff
22. Sand

**Settlement**

23. Settlement – modern
24. Settlement – post-medieval
25. Villas – modern
26. Recreation – modern
29. Settlement - medieval
30. Orchard

**Industrial**

27. Industrial – modern
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## NAXOS HLC TYPES

The farming landscape of Naxos is an enclosed landscape. Traditional boundaries are built from dry stone walls, though in places mortared walls, fences, hedges and banks are also used (**fig. 1**). Virtually all the fields are enclosed, and much of the rough grazing ground is divided up by long pasture boundaries. How long the landscape here has been an enclosed landscape is not totally clear. Whilst some boundaries appear to be very ancient – particularly the outer boundaries of field systems – the majority probably date to the post-medieval period. Comparing the air photographs taken in the 1940s by the RAF and the modern IKONOS satellite imagery shows that the enclosure pattern visible today was very largely already established in the 1940s, and there have been only relatively minor changes since that time.



Fig. 1. Dry stone field wall topped with thorns as an extra barrier at Ag. Mamas Triti (Jim Crow, 17 August 2007).

With the exception of olives – and even here there is potential for confusion with fruit orchards or other trees – it is usually not possible to identify specific crops through the sources used for this project. In addition to this, intercropping or polycropping was and remains common on Naxos: the custom of planting more than one crop in the same field (e.g. fruit trees and arable crops or vegetables). For these reasons, the HLC types do not generally refer to the type of crop under cultivation, but instead to the form of the fields in which they are grown.

The HLC ‘types’ we have used to map the landscape of Naxos are described below.

## ENCLOSURES

### Enclosures (modern)

‘Modern’ enclosures are those whose dominant character clearly derives from 20th century reforms of the farming landscape, especially where differences are visible between the fields on the 1940s APs and the modern satellite imagery. Most modern enclosures in the study have been created by re-shaping earlier field patterns. Many of the boundaries within such field systems may well be older.

### Enclosures (post-medieval)

The post-medieval period seems to have been the time when most of today’s existing Naxian fields were enclosed. Often, the nature of the earlier landscape character of areas with post-medieval enclosures can be discerned with some confidence. As described below under ‘braided terraces’ and ‘enclosures (post-medieval) *based on* medieval fields’, it seems likely that much of Naxos’ farmed landscape was largely ‘open’ until the early eighteenth century, i.e. it was not subdivided by permanent boundary features into small individual plots. As on other Cycladic islands, there are very many areas where field boundaries, usually drystone walls, cut across earlier terraces (e.g. Kea: Whitelaw 1991). This shows quite clearly that they post-date the underlying features. Although some enclosures are recorded in medieval documents (Kasdagli 1987; 1999), it seems likely that the context for their creation and the enclosure of Naxos generally might have been after the abolition of feudal lordship in 1721 and the economic fluctuations of the mid-late 18th and early 19th centuries (see Kasdagli 1999: 167; Vionis 2005a).



Fig. 2. Straight-sided post-medieval enclosures [351] at the eastern edge of the Livadhia plain contrast with braided terraces (probably of medieval date) [367] (IKONOS).

Where such histories can be discerned with a reasonable level of confidence, the likely earlier HLC types are included in the database (these HLC types are discussed below). However, in many cases, it has not been possible to suggest what the earlier landscape character might have been, so the character type has been described simply as ‘enclosure (post-medieval)’. This is an over-simplification that will inevitably conceal richer histories. Several slightly different types of enclosures have been included in this category.

Firstly, those blocks of enclosed fields mapped simply as ‘enclosures (post-medieval)’ in the HLC generally share these characteristics:

- a majority of straight field boundaries (**fig 2**).
- visible largely in their current form on 1940s APs (where available), and substantially unchanged to the present day
- lack of clear evidence for earlier uses in the form of terraces, etc. In many – perhaps most – cases they will replace some earlier form of field system, but what this might have been is hard to identify based on the sources available for this study.

There are occasional areas of regular enclosures with straight, apparently surveyed boundaries, for example those immediately to the west of Apano Kastro. Such enclosures commonly appear to be post-medieval creations cut from rough grazing ground and are commonly associated with deserted post-medieval buildings.

Finally, curvilinear enclosures that appear to form corrals or pasture boundaries in upland location have been mapped under this type; whilst they could be post-medieval, in most cases their actual dates of origin are uncertain.

### **Enclosures (post-medieval) based on Fields (medieval)**

We know from documentary sources that much of Naxos’ agricultural landscape lay in subdivided, probably open, fields in the Middle Ages. These fields seem to have been made up of individual plots cultivated side-by-side within the field as a whole.

Aglaia Kasdagli’s study of marriage contracts and wills from 17th century Naxos has brought to light a good deal of relevant documentary evidence that can help us to interpret the physical evidence of the farming landscape (Kasdagli 1999). The 17th century was effectively the last full century during which medieval landholding practices prevailed on Naxos. The island landscape was divided between a series of feudal estates called in Greek *topoi* (literally ‘places’). The 56 *topoi* recorded in the 1670 *tahrir defter* were perhaps the same 56 that the island’s first Venetian ruler, Marco I Sanudo, had established after his conquest of Naxos in 1207 (Vionis 2005a: 40). In the later 17th century, there were five Greek lords of *topoi*, though the vast majority were Latins or of Latin descent (Kasdagli 1999: 164-7). Each of the *topoi* comprised a range of agricultural resources including arable land and pasture. Many examples of large, fortified tower-houses associated with these estates still survive, e.g. the towers of Chalki, Kalavros, Bazeos and Oskelos.

Kasdagli’s documents record various details about the character of 17th-century fields. She notes that ditches serving as both boundaries and drains were common, and that temporary fencing of reeds, posts and twigs were very important. In places stone walls (*petrotoichoi*) formed the outer boundaries of fields, though lands were

also delimited by irrigation channels, tracks, bushes, trees, boulders or other natural features (1999: 90).

The evidence suggests that in the 17th century and earlier large ‘open’ fields, comprising many individual plots cultivated as a whole, existed across much of the island – probably in every *topos* and every village. Such fields were called *engairies*, and the term and practice were still common in some of the Cyclades until the late 19th century. On Kimolos, for example, all arable land was divided into an upper and a lower part (*apano meria* and *kato meria*). The first part was sown with crops each year and called the *engairia*, and was separated by a wall or fence from the second part which remained uncropped and served as common pasture – the *parengairia* (Kasdagli 1999: 99). On Kea, *voles* and probably *platyvoles* were large tracts of land exploited both for grazing and for growing arable crops on unfenced subdivisions (Cherry *et al.* 1991: 359-60; Whitelaw 1991: 410-11). According to Kasdagli, the memory of such a field system has survived at the village of Komiaki on Naxos, where in the past the area around the village is supposed to have been divided into four *engairies*, two of which would be planted with arable crops whilst two were left unsown to provide grazing for livestock. In the 17th century, the Jesuits’ *topos* of Megalas Petres was divided into upper and lower parts that were cropped alternately (Kasdagli 1999: 100-1). On such arable lands, crop rotation was a prominent feature of the farming system. Though little is known about the rotations, there seems to have been considerable flexibility. Indeed, the fertile plains seem to have been planted every year in the 18th century, the only respite coming from leguminous crops. Elsewhere, in addition to fallowing, other means of restoring soil fertility including manuring and even burning over the waste are also mentioned in a few 17th-century documents (Kasdagli 1999: 96-8).

In hilly areas subdivisions of these ‘open’ fields could have been formed from blocks of terraces, individual terraces or even parts of long terraces. These may be the *louroi* referred to in the written sources (Kasdagli 1999: 88). In the flatter areas of the plains, it is harder to suggest what form any sub-divisions of possible earlier fields might have taken. However, by applying the principles of retrogressive analysis to a few case-studies it is possible to tentatively suggest the form of these hypothetical medieval field systems.

In the plain of Traghea around the village of Chalki (now planted with olives, see below), retrogressive analysis reveals a number of long, roughly parallel boundaries running roughly east-west which appear to have once defined large, roughly rectangular units. These features are abutted by many, shorter north-south boundaries which appear to subdivide these units into long, narrow parcels of land (**fig. 3**).



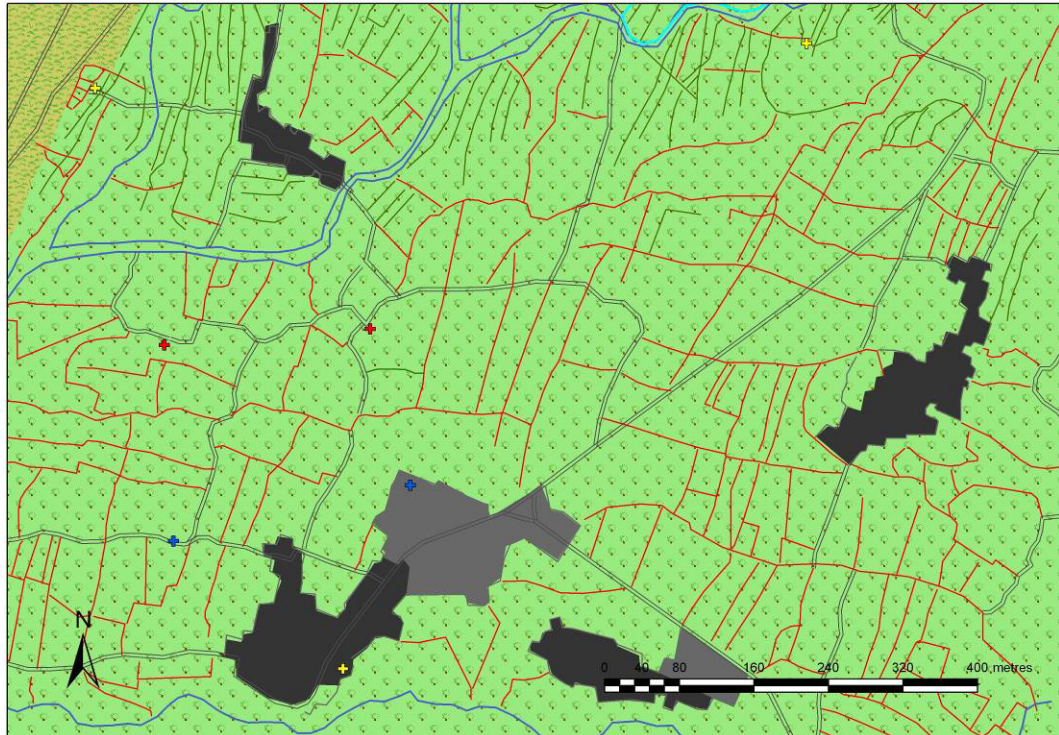


Fig. 3. Historic field systems of the olive groves around Chalki (see **fig. 7**).  
(Red: field boundaries; green: terraces).

Based on what is known from the Naxiot documentary sources, and by analogy with other parts of Europe, it seems likely that these post-medieval boundaries could perpetuate the layout of individual parcels or strips in earlier open fields. On Kythera, Bevan *et al.* have tentatively suggested similar semi-regular field patterns may have Byzantine or Medieval origins (2003: 220). Particularly around Chalki, but also in the south of the study area around the village of Ano Sangri, the subdividing boundaries are slightly curved in form. Elsewhere in Europe, this morphology could be interpreted as perpetuating the form of strip divisions in earlier open arable fields, and the Chalki examples are very similar to those identified in Crete's Mesara plain by Rackham and Moody (e.g. France: Chouquer 1993: 102; England: Herring 2006; Crete: Rackham and Moody 1996: 147-9, fig. 12.6). It seems highly likely that around Chalki this prime agricultural land would have formed the core of the medieval *topoi* (see below). In the HLC, such areas have been mapped as 'enclosures – post-medieval based on fields – medieval (possible)'.

#### *The Plain of Livadia:*

##### *Enclosures (post-medieval) based on Enclosures (medieval)*

In some other places, it is less easy to suggest what the earlier method of dividing and farming the land in the plain might have been or when it might have originated. For example, a large area of enclosed fields lies on the fertile, well-watered land in the alluvial plain of Livadia to the south of Chora (Dalongueville and Renault-Miskovsky 1993). Kasdagli notes that irrigated plots (*potistika*) recorded in 17th-century documents were usually enclosures (*pervolia*), and were commonly used to grow arable crops and legumes alongside fruit-trees (Kasdagli 1999: 88): it seems likely that many of these lay in this area. The field pattern of Livadia consists largely of short, straight enclosures that apparently subdivide larger, much more irregular fields.

These long irregular boundaries often mark (mainly) seasonal watercourses and trackways (**fig. 4**).



Fig. 4. Typical trackway in Livadhia, near the classical temple of Iria. (Jim Crow, 19 August 2007).

The great majority of the short, straight subdividing boundaries are visible on the 1940s RAF air photographs, and although some more have been inserted in the 65 years since these were taken, this is clearly a post-medieval and earlier pattern (**fig. 5**).

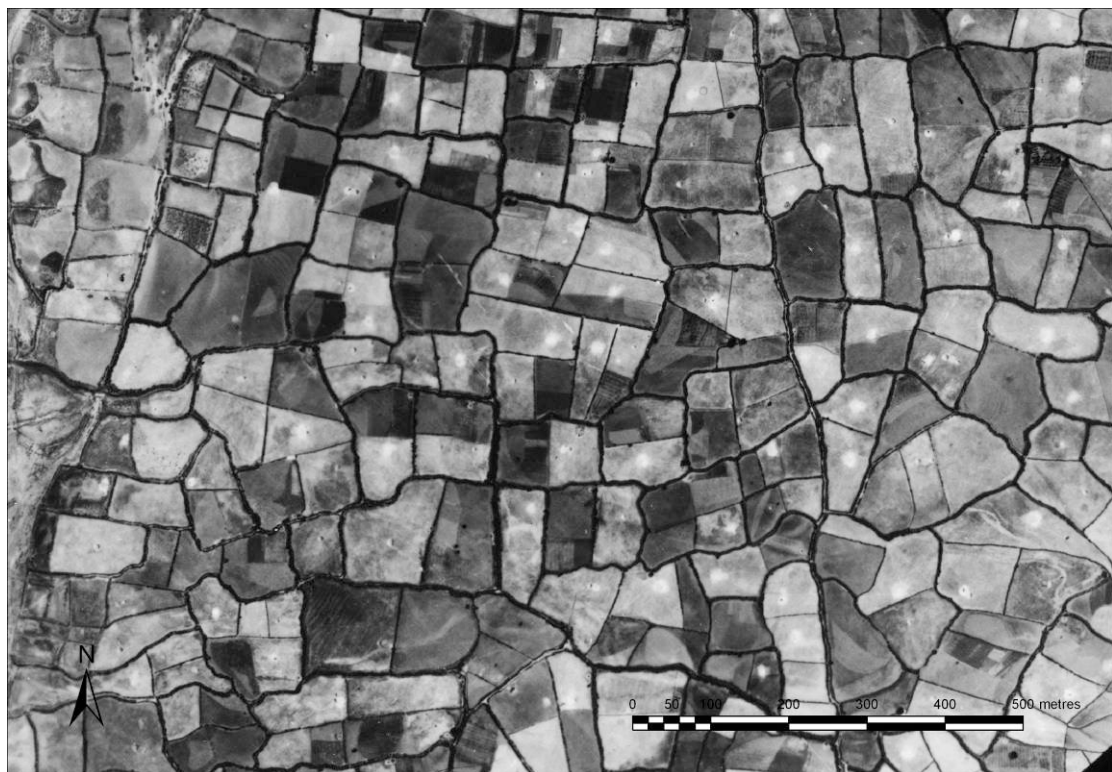


Fig. 5. The field pattern of the plain of Livadhia in 1943 (RAF).



In general, such straight boundaries are typical of the later 18th and 19th centuries and in this area virtually all of them abut irregular sinuous boundaries. It is, however, much harder to suggest a date of origin for the irregular sinuous boundaries. Clearly they are older than the straight subdivisions, but there are few stratigraphic relationships to suggest exactly how early they might be. None of them appear to be cut by the line of the road leading south from Chora towards Agios Arsenios, suggesting that the road, whose date is uncertain, is the earliest major man-made feature in this landscape. This is despite the fact that the fragmented watercourses carrying the streams from the central hills and mountains westwards towards the lake at Alikes and the coast have to cross the line of the road. However, even if they are later than the road, these streams must have been diverted for agricultural use across the plain for a long time: in the HLC it is tentatively suggested this may already have been the arrangement in the medieval period.

In travellers' accounts from the fifteenth and sixteenth centuries, vines are mentioned as an important crop: Porcacchi described '...a beautiful and spacious countryside around [the] town, all covered with a great abundance of vines, which yield large quantities of wine' (cited in Kasdagli 1999: 34). Even in 1670, the Ottoman *tahrir defter* records that nearly 65% of Naxos' tax was paid on wine (Vionis 2005b: 12). It may be that these vines stood in and around the plain of Livadia, though very few vineyards are present in the landscape of Naxos today.

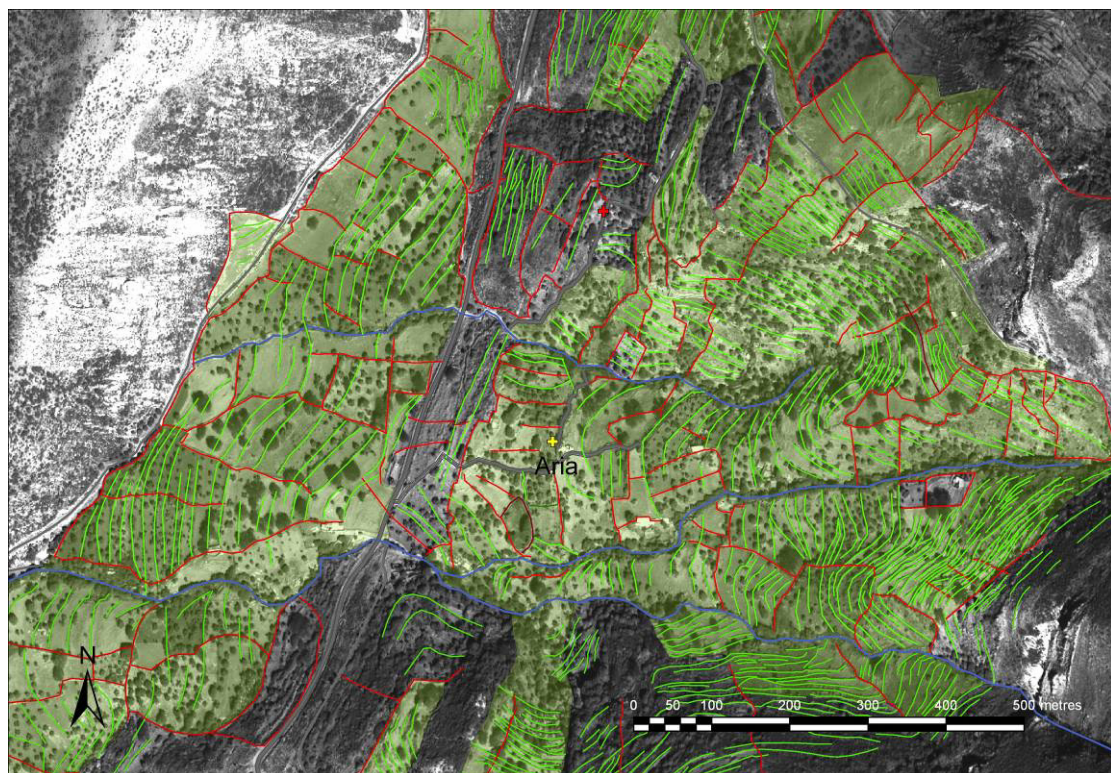


Fig. 6. Enclosures (post-medieval) with braided terraces (medieval) around Aria, highlighted here with a green wash ([1042], [1043], [1048], [1050] and [1052]). Other terraces and fields now lie abandoned in rough ground. Field boundaries: red; terraces: green. (IKONOS).



### **Enclosures (post-medieval) based on Braided terraces (medieval)**

Away from the plains, much of the land in the area studied for the HLC is terraced (the different types of terraces are discussed below). In virtually all cases where braided terraces exist, they are cut stratigraphically by enclosure boundaries that divide them into separate fields (**fig. 6**).

It should be noted that it is not uncommon for individual terraces within such systems to abut dividing walls. However, this does not necessarily show the whole system is later than the walls since invariably other terraces within the same system will underlie them. Instead, it suggests the braided terraces continued to be used and rebuilt after the walls were constructed, probably in the early post-medieval period.

### **Olives**

Much of modern Naxos – and particularly the plain of Traghea/Drymalia – is dedicated to the production of olives. Olives are commonly grown within enclosed fields or terraces, and have often been intercropped with other plants in the past (in the HLC database, HLC type ‘Olives’ implies the existence of enclosed plots). For the purposes of this HLC project, all areas of olives have been called either post-medieval (where they already existed in the 1940s) or modern (where planted since the 1940s).



Fig. 7. The olive trees of Traghea/Drymalia. The structure in the foreground is the early Byzantine church of Taxiarchis Rachis. Directly behind it stands the slightly later church of Ag. Georgios Dhiatoritis. Beyond that lies the village of Chalki, with several Byzantine churches and a restored Venetian tower house. Right in the distance, below Mount Zas, lies the large village of Filoti. (October 2006).

In reality, it seems highly likely that many of today's olive groves were first planted in the Middle Ages or perhaps even before. Documentary evidence shows that Traghea/Drymalia was the major olive-producing area in the 17th century (Kasdagli

1999: 37-9) (**fig. 7**). Many of the olives trees growing in the region are so massive that it is hard to see how they can be less than several hundred years old.

### **Horticulture**

In a few places – particularly along the main road leading from Chora towards Melanes and Potamia – there are areas of small, regular, rectangular plots that have been inserted into earlier field systems. The 1940s air photographs show clearly that many of these small fields were well established at that time. They have been interpreted in the HLC as garden plots used for intensive horticulture.

### **TERRACES**

Naxos and many of the other Cycladic islands are heavily terraced landscapes. Terraces make it possible to cultivate Naxos' steep mountain sides; scholars suggest that in addition to creating flat areas the main ways they achieve this are by redistributing sediment, increasing root penetration, improving water retention and controlling erosion; and by removing stones the soil to make the terrace walls (Rackham and Moody 1996: 142). Rackham and his collaborators have identified six principal terrace types that are widespread on Naxos: braided terraces, step terraces (parallel/straight and contour), check-dams, terraced fields and modern false terraces (Rackham and Moody 1996: 140-5; Grove and Rackham 2001: 108). These types, as they have been used to help map the historic landscape of Naxos, are discussed below.

When terraces might have been created and how they should be dated are subjects that have given rise to considerable debate, particularly in relation to classical antiquity. Some scholars, such as Lynn Foxhall, argue that there was little terracing in classical Greece and that the lack of terms clearly referring to terraces in classical texts should be taken to reflect an actual absence (e.g. Foxhall 1996; Foxhall *et al.* 2007). Some archaeological research has suggested most terraces and other boundaries in the modern Greek landscape have recent origins. An example is Lee's (2001) study of the village territory of Maryeli in upland Messenia. It proved hard to identify ancient structures in the landscape around Maryeli, although Lee's work did not involve detailed archaeological survey or excavation. Lee assumed that because terraces might still have been built and repaired into the 1950s, there was little to be gained by undertaking detailed survey or recording of existing walls. As a result a number of strategies that might have been pursued to help date the area's field systems were not used (*cf.* Price and Nixon 2005: 670). A micromorphological study at Markiani on Amorgos by French and Whitelaw (1999) suggested that terraces post-dating Bronze Age settlement activity were of recent date. This tentative conclusion was based on the apparent lack of rebuilding phases in the terrace walls and the absence of a developed soil structure behind the terraces. However, these characteristics could have resulted from a short phase of use at any time in the historic periods rather than simply a recent origin.

Other scholars claim archaeological evidence proves terraces existed in the classical period, and suggest historians should widen the parameters of their search for relevant terms (Harfouche 2007: 44-8). In a recent *American Journal of Archaeology* article, Price and Nixon (2005) have attempted to address both the historical and archaeological evidence. Basing their arguments on both revised readings of ancient

texts and their fieldwork on Crete, they suggest that terracing was relatively common in the ancient world. In parts of the Near East scholars have suggested there is evidence for terraces – particularly check-dams – in prehistory (Wagstaff 1992; Kuijt *et al.* 2007). In Greece, terraces on the islet of Pseira off Crete have been firmly dated to the Bronze Age by their stratification below a layer containing tephra from the eruption of Thera (Betancourt and Hope Simpson 1992). Recent research around the Mediterranean has been reviewed and synthesised by Romana Harfouche (2007), who outlines a methodology for dating terraces by excavation and presents a range of case studies with particular emphasis on southern France in the late Iron Age and Roman period. In western Spain, Maria Ruiz del Árbol has excavated terraces dated by stratified ceramics to the Roman period near Salamanca (Ruiz del Árbol 2005).

In the Aegean, terraces that are claimed to have classical origins have been identified on several islands. On Crete Rackham and Moody (1996) and Price and Nixon (2005) have suggested ancient dates for terraces in Sphakia and elsewhere based on a range of criteria. In a few cases these include excavated evidence or stratification below living but ancient olive trees, like the one at Phoinix-Loutro dated by its tree-rings to the Hellenistic period (Rackham and Moody 1996: 86). However, most of the examples cited by Price and Nixon are dated by association with buildings or other structures rather than direct evidence (2005: 672-3).

Some of the most convincing evidence for classical terracing comes from the Cycladic island of Delos. Both historians and archaeologists have suggested the terraces here may be classical in origin, both because they are associated with the remains of classical farmsteads and because the island is supposed to have been deserted from the early Byzantine period until the mid-20th century (Brunet 1990; Poupet 2001). Archaeological evaluation trenches within the terrace system have yielded pottery well-stratified within a developed soil structure. Although the date of this ceramic material is not certain, it is not thought to be later than Byzantine (Brunet 1999; Harfouche 2007: 156-6). High-resolution remote sensing imagery available *via* Google Earth (5th January 2008) certainly shows that the form of the drystone enclosure boundaries of Delos are unlike the post-medieval enclosure walls of Naxos or indeed those on the neighbouring island of Rhenea. Instead, they do appear to be associated with the 20th-century farms noted by Harfouche (2007: 154-5). Beneath them lie abandoned terraces. Although some are rather regular in form (hinting at a later date), many have a slightly sinuous morphology and braiding suggesting more than a single phase of development.

The available evidence suggests that terraces are likely to have existed in Aegean landscapes during classical antiquity. Such terraces were probably also used, repaired, altered and developed during the Middle Ages. Late-medieval visitors to the Aegean such as Belon Du Mans noted the presence of terraces, including areas of desertion (Harfouche 2007: 153). As noted above, on Naxos 17th-century sources refer to *louroi*, which may represent terraced subdivisions of open *engairies* (Kasdagli 1999: 88).

Archaeologists working on Kythera have identified terracing of probable Byzantine or medieval date (Bevan *et al.* 2003), and on Kea and Lesbos terracing systems of pre-18th-century date have been identified by association and stratigraphic relationships to other features (Whitelaw 1991: 405-10; Schaus and Spencer 1994; for Lesbos see



also Kizos and Koulouri 2006). Using various dating methods including stratified finds from excavation and association with settlement sites, Price and Nixon have argued that Byzantine/Venetian/Turkish period terraces are common in the Sphakia region of Crete (2005: 674-5).

By analogy with examples elsewhere in the Aegean, and by retrogressive analysis of case studies around Ag. Kyriaki, Ano Sangri/Lathrina, Aria and Rachi, for the purposes of our project the terraces of Naxos have been divided into six broad HLC 'types' (based on Rackham's classification: Grove & Rackham 2001: 108):

### **Braided terraces (medieval)**

'Braided' terrace systems usually exhibit patterns of interleaved terraces that appear to have developed piecemeal over several different phases of use. As mentioned above, they are almost always overlain by drystone walls and often by tracks of probable post-medieval date. Sometimes, there are individual terraces within such systems that but up against (and are therefore later than) the stone walls. Even where this is the case, however, there are virtually always other terraces that underlie the walls (**fig. 6**). This shows that in these terrace systems there have been long (possibly discontinuous) periods of use with several phases of terrace development. The terraces must antedate the walls, which themselves can be no later than the 18th/19th centuries (**fig. 8**).



Fig. 8. Apiano Kastro viewed in evening sun from the west. Braided terraces with later dry stone walls lie on the intervening hills, with roofless field houses on the ridge in the foreground. (Jim Crow, 17 August 2007).



In a study undertaken between 1989 and 1992 primarily to provide data on soil erosion and terrace degradation, Rainer Lehmann suggested tentatively that many Naxos terraces in his study area may have been used last between the 14th and 17th centuries (Lehmann 1993; 1994). Whilst Grove and Rackham contend Lehmann's date for the abandonment of Naxos terraces is likely to be too early (2001: 264-5), his general conclusions nevertheless support the argument that braided terrace systems on the island are likely to have medieval origins.



Fig. 9. The early Byzantine church of Ag. Isidoros, near Rachi. (October 2006).

In places, the location of dated Byzantine monuments hints at the antiquity of terrace systems. Although the relationship cannot be proved absolutely without more detailed fieldwork, many Byzantine churches appear to stand on terraces within braided



terrace systems. Examples include the early Byzantine churches of the Taxiarchis Rachis and Ag. Isidoros in Rachi, where both monuments perch on long terraces constructed along the hillside. On the opposite side of the valley below the middle Byzantine church of the Panagia Rachioditissa great oaks that must be several hundred years old stand on similarly massive terraces that can run for at least 800m. If earlier than the churches, the Rachi terraces must be late Antique or classical (**fig. 9**). Similar long, slightly sinuous terraces run along the hillsides below the temple of Demeter in the Ano-Sangri/Lathrina case study area.

Archaeological field survey also hints at the antiquity of these terrace systems. Around the church of Ag. Kyriaki, an early Byzantine monument north-east of Apeiranthos, analysis of fieldwalking data by Vionis *et al.* [insert reference] suggested that as much as 70% of the ancient finds collected in the area dated to the 7th–9th centuries. The curving drystone walls enclosing small fields here only partially and untidily enclose the terraces (**fig. 10**), which probably relate to the Byzantine settlement.

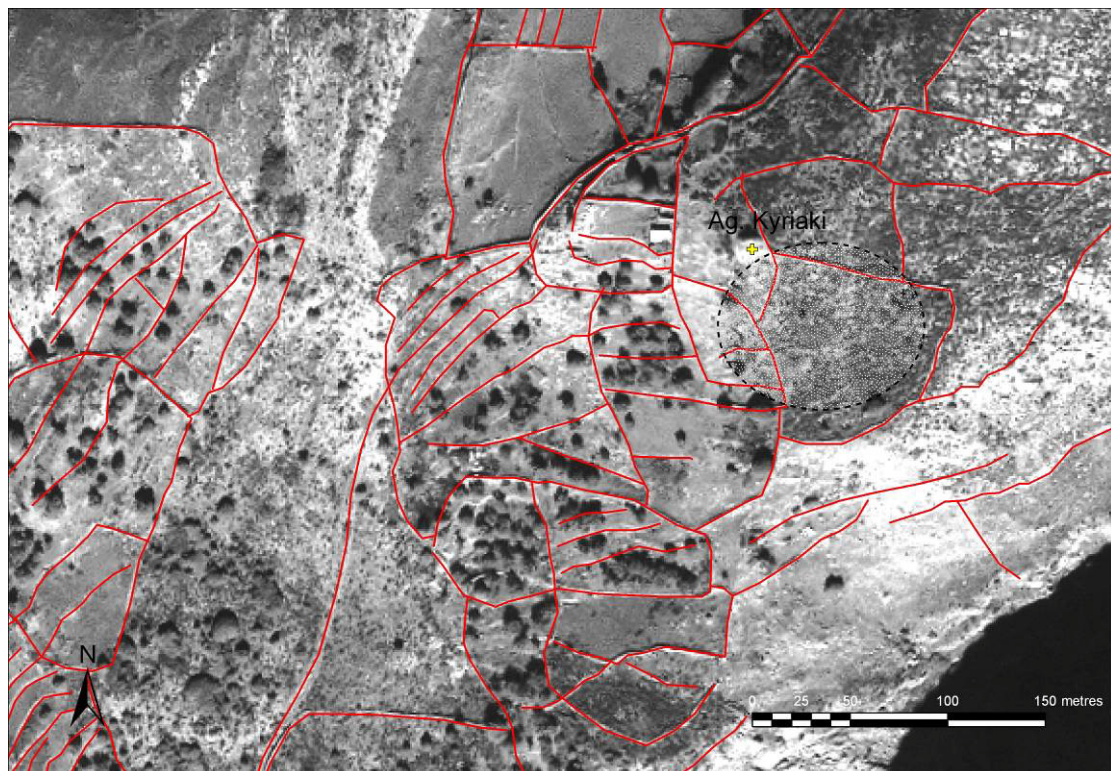


Fig. 10. Fields and terraces around the church of Ag. Kyriaki. The dotted line shows the approximate area of the early Byzantine settlement identified by Vionis *et al.* (forthcoming). (IKONOS).

It seems likely that whatever the original date of Naxos' braided terrace systems, the vast majority would have been in or before the 17th century. Systems of braided terraces have therefore been described as 'medieval' in the HLC database, though many could have earlier origins.

### Check-dams

Check-dams are terraces built across small stream gullies or other features with v-shaped profiles. As noted above, examples have been identified dating from



prehistory onwards, so they are hard to date on morphological grounds. Quite often, probably for topographical reasons, they are not enclosed by separate boundary features on Naxos; at other times each check-dam will define a small field in its own right.

### Step Terraces

For the purposes of this project, step-terraces are defined as terrace systems with roughly parallel terrace boundaries but lacking significant braiding. They are virtually always enclosed by drystone walls, and ‘step terraces’ in the HLC database implies the presence of walls. There are two kinds:

#### *Step terraces (contour)*

Contour step terraces follow the contour of the hillsides, so they tend to be sinuous in form. Several factors suggest the majority of these systems are probably post-medieval in date. Firstly, they often abut their enclosure boundaries, rather than underlie them as in the case of braided terraces. Secondly, many systems appear to be of only one phase, suggesting a relatively short lifetime in use. Thirdly, they are most commonly located in upland locations, principally towards the eastern edge of the study area on the slopes of Zas (**fig. 11**). Virtually none have been newly created since the 1940s.

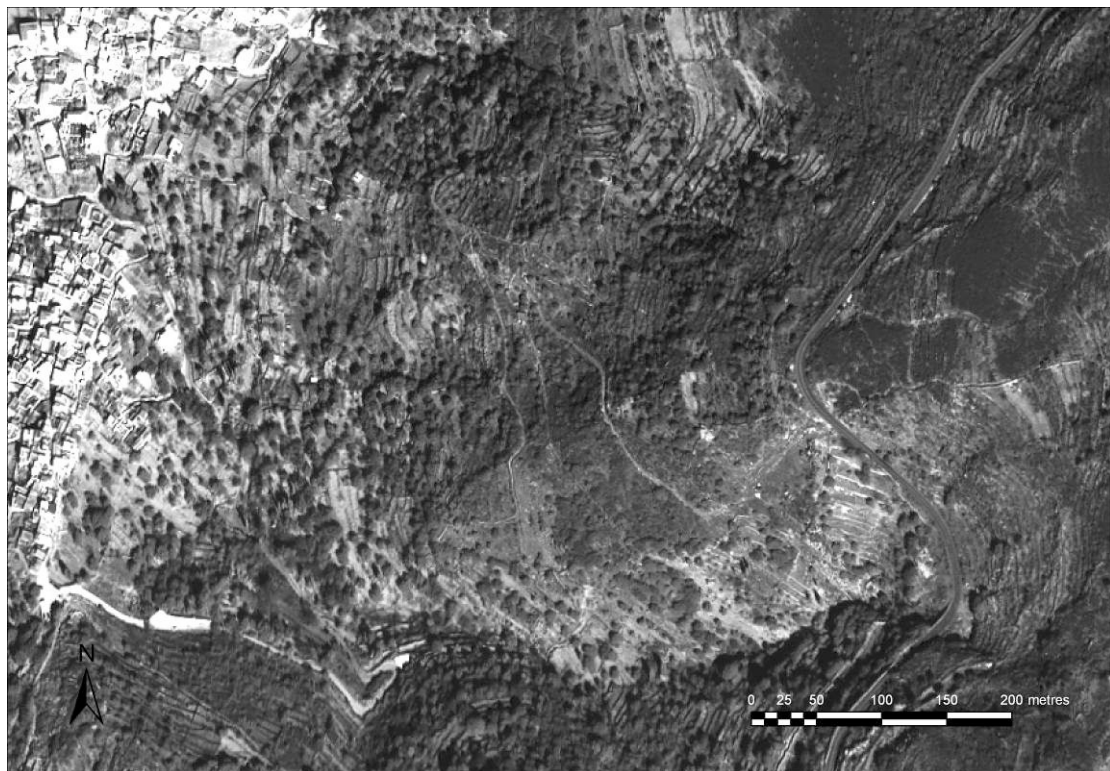


Fig. 11. Contour terraces – both still in use and now abandoned – on the slopes of Zas east of Filoti (IKONOS).

#### *Step terraces (straight)*

Straight step terraces share most of the characteristics of contour step terraces, but instead of being sinuous they are cut straight across the hillsides to create rigidly parallel straight lines. Like contour step terraces, most are in upland locations, though

some have been created in lower-lying arable areas by remodelling earlier fields (**fig. 12**).

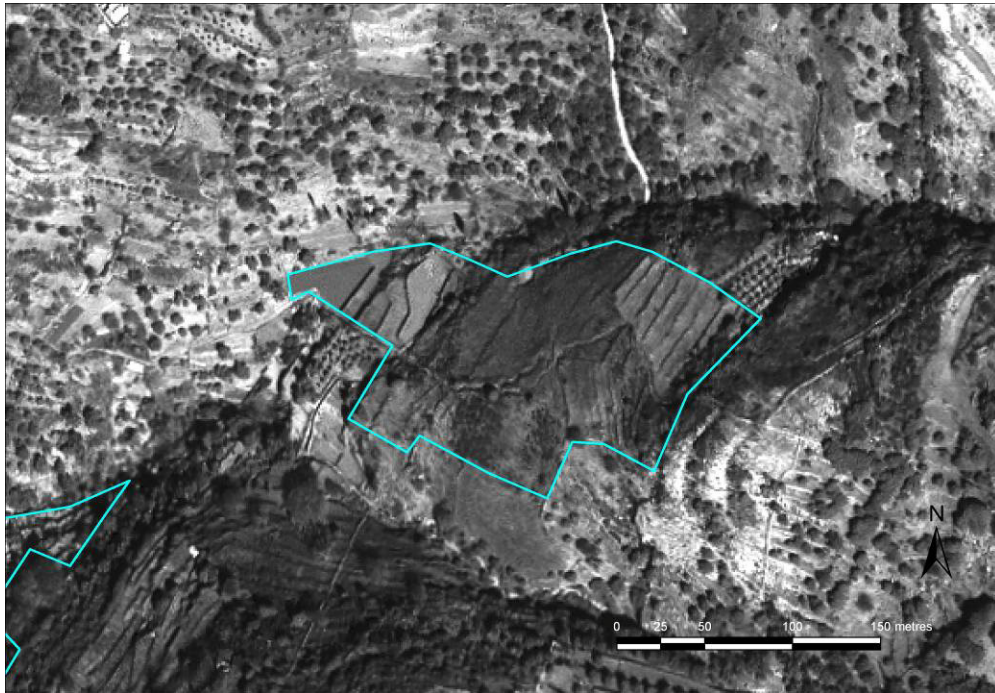


Fig. 12. Straight step terraces [862] inserted into earlier fields. (IKONOS).

Straight-terraced field systems probably belong to the 19th century, when the population of the Cyclades was at an historical high. There are excellent examples in the uplands to the west of Apano Kastro, where step terraces (mostly now deserted) sit within surveyed field boundaries between deserted post-medieval farmsteads (**figs 13 & 14**).

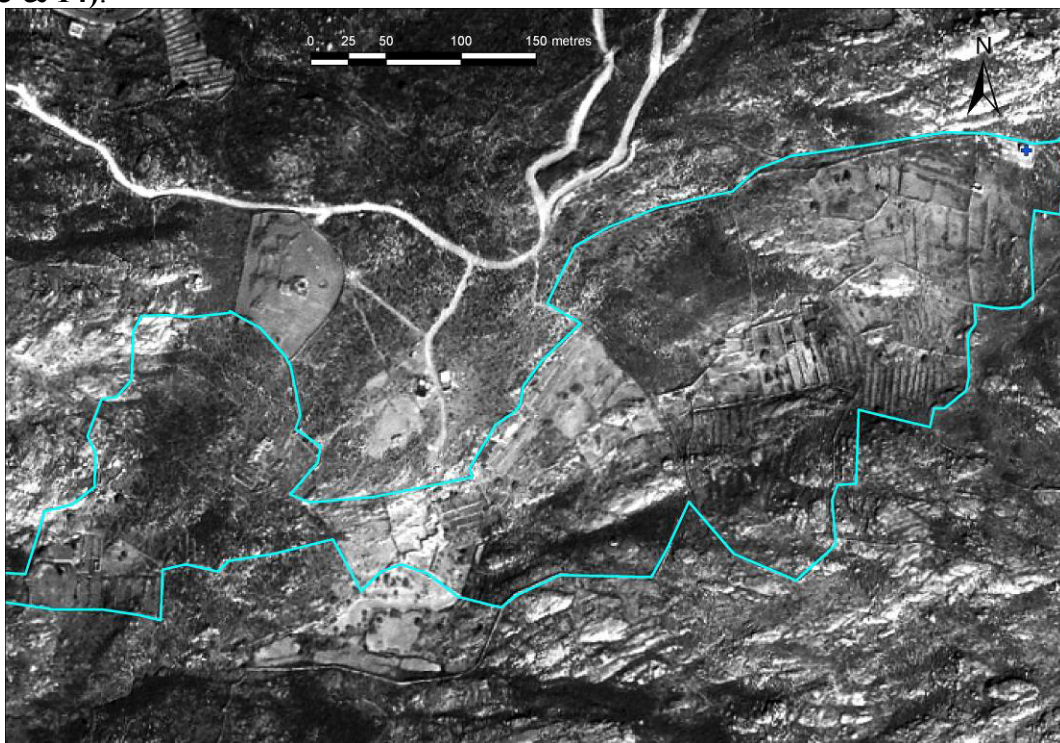


Fig. 13. Straight post-medieval step terraces immediately west of Apano Kastro (IKONOS).





Fig. 14. Apiano Kastro from the west. The buildings on the bottom right are the remains of post-medieval farmsteads whose straight-sided fields are shown in **fig. 13**. (October 2006).

A few examples have been created in the later 20th century, but most were already in existence by the 1940s.

### **Terraced fields**

The ‘terraced fields’ of Naxos are generally similar to step terraces. They have been put into a separate category because they tend to be somewhat broader, forming squarer enclosures with terraced downhill edges (though the differences are not normally as marked as some of the examples cited by Grove and Rackham, 2001: 107-9).

### **False terraces**

‘False’ terraces have been created by bulldozing in the 20th century (Grove & Rackham 2001: 109). Compared to many other parts of the Mediterranean and of Greece, the historic landscape of Naxos appears to have suffered relatively little from this particular innovation.

## **ROUGH GROUND**

### **Rough ground**

Today, rough ground occupies much of the study area. The remains of countless medieval and post-medieval terrace systems lie abandoned beneath grassland, phrygana or maquis; especially in the east of the study area below Zas and in the north-west inland from Chora, the cultivated area has retracted markedly compared to the 1940s. There are also some areas of rough ground that never appear to have been



cultivated, like the highest ridges of Zas and the other mountains, and lower-lying but inhospitable hills like the ridge to the west of the Koutsouria opposite Aria.

Now as in the past the rough ground provides important grazing land for goats and other animals, and livestock enclosures are fairly common in the highlands.

### Woodland

There are few true woods in the Naxos study area. Most of the ‘woodland’ identified in the HLC is scrubby and relatively recent growth. Ancient trees do exist as wood-pasture, and in places they grow on the earthworks of even older braided terraces (the oaks to the north-east of Rachi provide an excellent example, **fig. 15**).



Fig. 15. Oaks and olives on long, braided terraces opposite Ag. Isidoros near Rachi. (October 2006).

As on Kea these oaks may also have been used to produce *velanidi* for tanning (Whitelaw 1991), though in contrast to Kea the 1670 *tahrir defter* does not report the value of any such trade for Naxos (Vionis 2005b: 12).

## SETTLEMENT

### Settlement

The historic settlement pattern of the area comprises both villages and dispersed settlement. Villages have been mapped as ‘settlements’ in the HLC. Virtually all have seen some growth in the 20th century, with new villas and houses added to the earlier village cores. In plan form, these cores remain much as they were in the 1940s. One deserted settlement has been mapped in the HLC as a ‘settlement (medieval)’ – the medieval Venetian castle at Apano Kastro.

## **Villas**

Modern villas and their associated features – in particular concrete or post and wire boundaries – continue to be developed in many parts of the study area. They occur singly, in small groups and in larger developments. Often they are located on hillsides, and commonly their construction has involved the destruction or significant alteration of historic terraces. In our study area they are most common around the town of Chora, but also occur frequently close to larger villages such as Filoti and around the plain of Livadhia (significant villa development also affects the landscape of the coast south of Chora for many kilometres). Their impact on both the visual quality of the landscape and its historic grain is very noticeable in these areas.

## **INDUSTRIAL**

### **Industrial**

This HLC ‘type’ has mainly been used to map modern industrial developments, which cluster around Chora in the north west of the study area.

### **Quarry**

Naxos was famous in antiquity for its marble, and the remains of ancient quarries survive at sites including Melanes and Potamia where *kouroi* are famously preserved *in situ*. There are several post-medieval and (more significantly) modern stone quarries in the study area, particularly between Moni and Melanes, where the great white scars of the quarries cut deeply into the mountain rough ground.

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