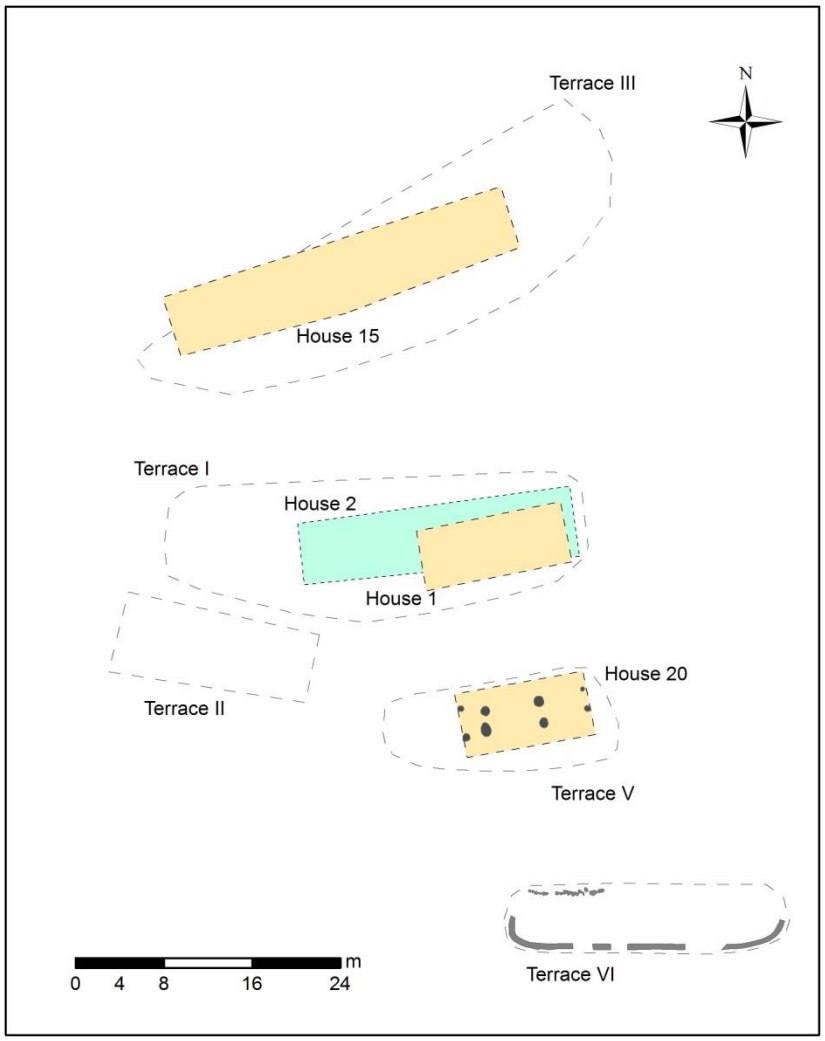

Houses on Helgö

An archaeological analysis of the buildings on Terraces V and VI in Building Group 2 at Helgö

Hans Göthberg

UPPLANDSMUSEET

Houses on Helgö

An archaeological analysis of the buildings on Terraces V and VI in Building Group 2 at Helgö

Hans Göthberg

Upplandsmuseets rapporter 2017:07
ISSN 1654-8280

Drawings and plans: Hans Göthberg
Translation to english and glossary: Helen Clarke
English version of Upplandsmuseets rapporter 2015:10: *Hus på Helgö. Arkeologisk analys av byggnader på terrass V och VI inom husgrupp 2 på Helgö*

Allmänt kartmaterial: © Lantmäteriet, dnr I2014/00634.

Upplandsmuseet, Drottninggatan 7, 753 10 Uppsala
Telefon 018 – 16 91 00
www.upplandsmuseet.se

Contents

Introduction

This is a report on a study of a small area of Building Group 2, Helgö, Ekerö parish, Stockholm county, in which the building remains from Terraces V and VI were digitized and analysed. They were excavated 1960—64 as part of the Helgö Project. Kristina Lamm, formerly of the Helgö Project commissioned Upplandsmuseet (Uppland museum) to do this study, with financial assistance from *Berit Wallenbergs stiftelse*. The study is a sequel to the investigation of the buildings on BG2 Terraces I and III (Frölund & Göthberg 2011).

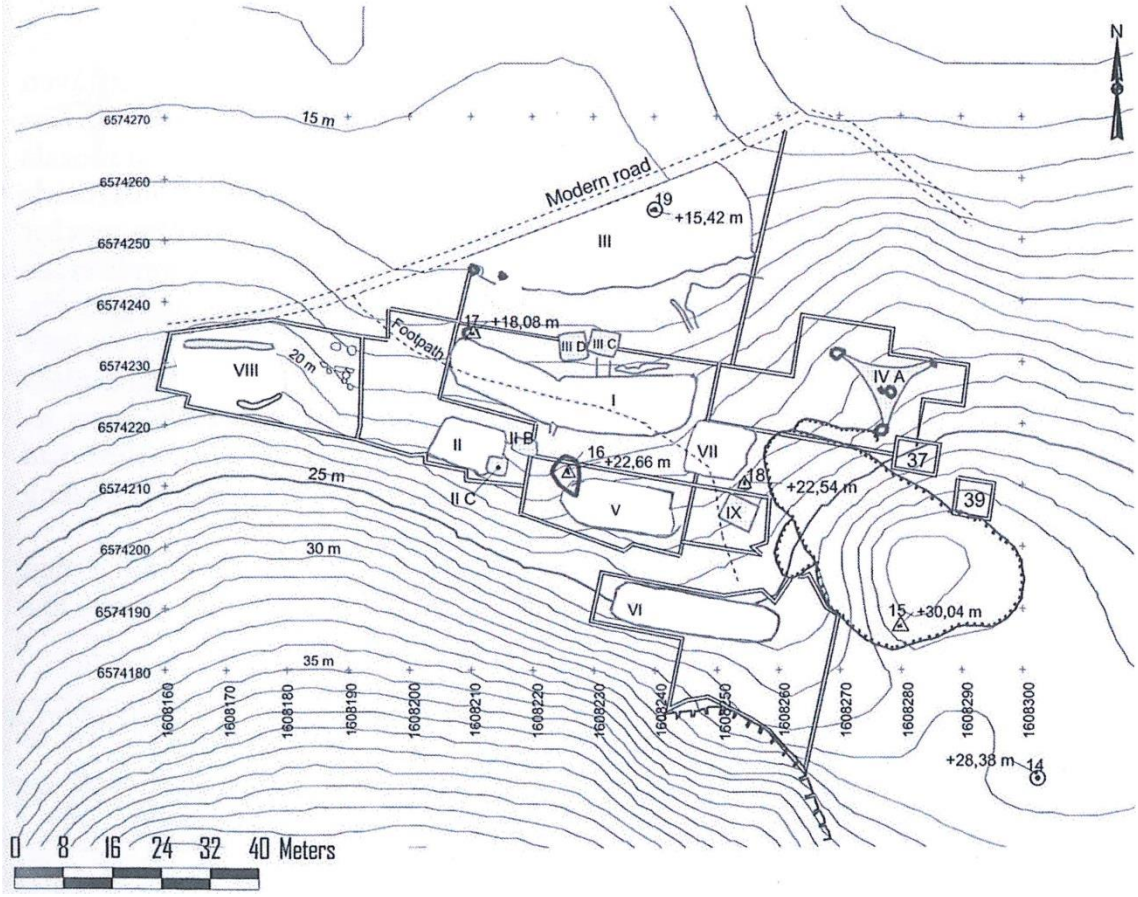

Figure 1. The terraces in Building Group 2 at Helgö lay on a north-facing slope, between 30m and 15m a.s.l. (Kitzler Åhfeldt 2008, fig. 4, slightly modified).

Background and earlier interpretations

The presence of buildings on Terraces V and VI in BG2 was established through investigations in the field (Holmqvist, Lamm & Lundström 1970). The dimensions of the terraces suggested it, as did the discovery of paired post-holes, characteristic of the internal roof-supporting construction in post-built aisled houses (Holmqvist 1970c, p127). It was thought that there had been two post-built houses on Terrace V (Holmqvist 1970a, p4—8; 1970c, p127) and one on Terrace VI (Holmqvist 1970b, p20—21; 1970c, p127). Rows of stones, stone sills, ditches and layers with burnt clay

(interpreted as remains of daubed walls) suggest that there had also been log houses (*timmerbyggnader*) on both terraces (Holmqvist 1970a, p4; 1970b, p20), probably later in date than the post-built examples (Holmqvist 1970c, p127).

Aims

The aim of the study was to try to differentiate the buildings and to use them to distinguish building phases. This involved establishing methods of construction, and dates and functions. The paradoxical situation is that the artefactual evidence for Helgö Building Group 2 is very rich and thoroughly researched, whereas the buildings and structures have been largely disregarded. There are many reasons for this, one being the difficult conditions on the terraces, where there were a great number of features in a small space. Another possible reason is that when Helgö was being dug, excavations of complex prehistoric/early medieval settlement sites with houses were not common, apart from on Öland and Gotland where the buildings were investigated as individual and isolated houses without context (see Säfvestad 1995). In the Mälaren region it was not until the 1980s that sites comparable to Helgö began to be excavated, that is, settlements occupied over a long period, with many features and houses in complex relationships.

Methods

The study uses the many ways in which information from plans and texts in archives and basic publications can be analysed and interpreted when digitized.

So, the first approach was to digitize the field plans (original scale 1:75) and scan them into tif files (tagged image file format). The Helgö Project's local co-ordinate system was re-created digitally and the plans then rectified to this system. Then the archaeological features on the plans were vectorized. Rectification and vectorization were done in Esri ArcGis; during this procedure, details of the archaeological features were recorded.

The second step was to analyse the buildings, which basically involved recording each archaeological feature in with its shape plan in plan, depth, dimensions and its stratigraphic context. The basis data were compiled from the plans and sections held in ATA and the published plans, sections and special descriptions in Excavations III (Holmqvist, Lamm & Lundström 1970). The sections and the special descriptions were particularly helpful for working out the stratigraphy. From this information, it was possible to discern which features belonged together to delineate structures such as buildings. The interpretations published by Holmqvist (1970c) soon after the fieldwork had finished was a starting point for comparison with data from the past three decades of excavations at Iron Age settlements, mainly in the Mälaren region (see Herschend 1993; Göthberg 2000; Göthberg 2007; Wikborg & Onsten-Molander 2007; Göthberg et al. 2014).

Glossary

Prefix A = feature (*anläggning*)
Prefix F = find (*fynd*)

Balanced or overbalanced construction *(balanserad eller överbalanserad konstruktion):* used of plans of three-aisled halls.
The central aisle (or nave), defined by longitudinal rows of paired posts, was about (or slightly less than) half the total width of house. Mainly found in Pre-Roman and Early Roman Iron Age (5th century BC—2nd century AD) and are much less common in Late Roman Iron Age (late 2nd century AD—4th century AD) See Göthberg 2000, p91; Wikborg & Onsten-Molander 2007, p114–115).

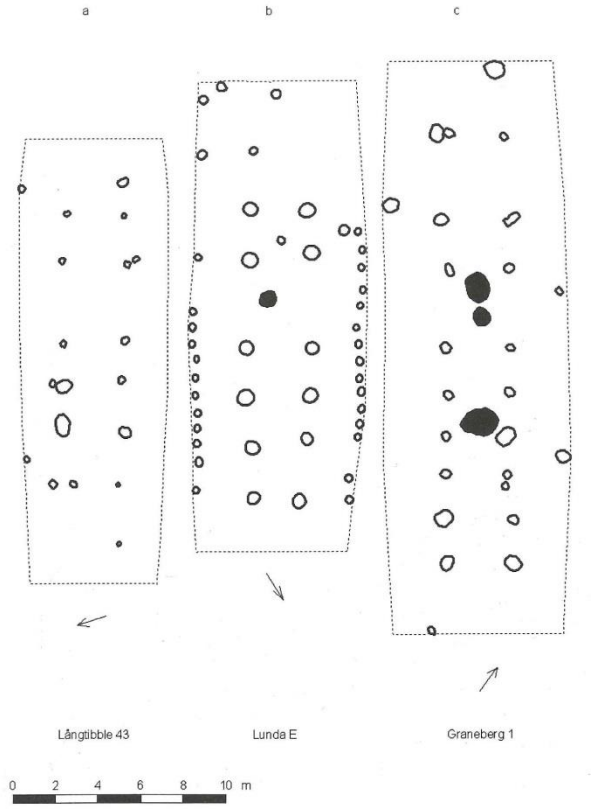

Figure2. Examples of houses with balanced construction (Göthberg 2000, fig. 9).

Underbalanced construction (*underbalanserad konstruktion*): used of plans of three-aisled halls. The central aisle (or nave), defined by longitudinal rows of paired posts, was about on third of the total width of house. This type first appears sporadically in the Early Roman Iron Age (1st or 2nd century AD), becoming more prevalent from the Late Roman Iron Age (late 2nd century AD onwards).

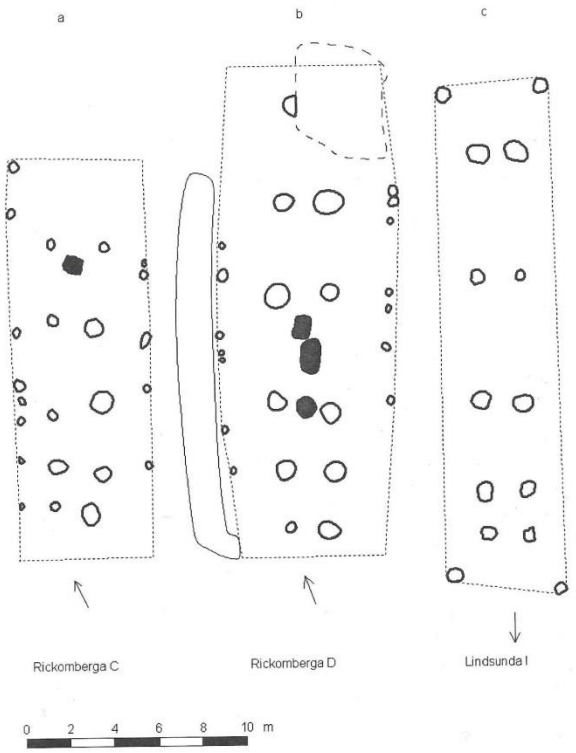

Figure 3. Examples of houses with underbalanced construction (Göthberg 2000, fig. 21).

Hall (*hall*): rectangular three-aisled building, usually of a single long room, with or without hearth. The term is often combined with the adjective 'feasting', 'festive', 'banqueting' or 'assembly' to indicate its status. Not primarily a dwelling, although sometimes the building is divided into two rooms by a transverse partition, so that one of the rooms could be used as a dwelling, the other the place of assembly.

House (*hus*): used here of any building, not necessarily used as a dwelling.

Log house (*timmerbyggnad*): used of unaisled buildings. One-roomed, rectangular, structures defined by stone sills on which lay horizontal logs notched (lafted) together at the corners. The Swedish timmerbyggnad may also be translated as 'blockhouse' or 'lafted' constructions.

SFB: Sunken-floored building

Trestle (*bock*): interior frame of three-aisled building comprising a pair of upright posts connected by a tie-beam.

Features analysed

Seventy-six features on Terraces V and VI were digitized. Many were postholes but there were also hearths and pits, ditches, stones etc. (Fig. 4).

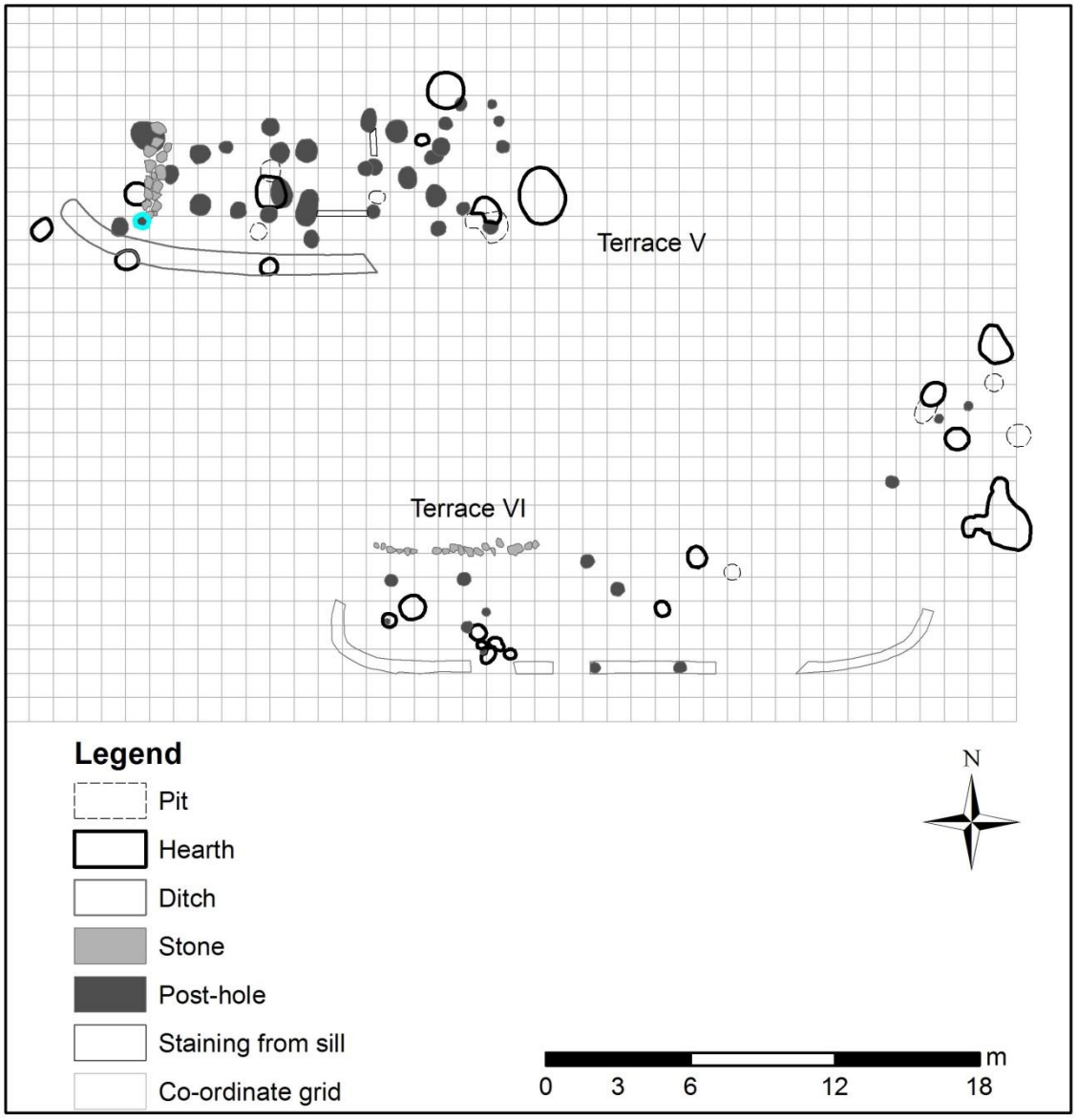

Figure 4. General plan of the features on Terraces V and VI. The stones shown here are those which seem to have been part of structures. The features are set against the Helgö Project's co-ordinates. Scale 1:300.

Ditches were located on both terraces. As in Terraces I and III they ran along the side of the terrace which faced the upper slope, so they were probably drainage ditches intended to lead water down from the ground above. In Terrace V the ditch was along its west side only, and its position in relation to the houses may mean that it was a relatively late feature. It also overlay some hearths (Holmqvist 1970a, p4–8). Terrace VI was mainly defined by the ditch. It definitely overlay some post-holes, but it was

not clear whether the ditch was of the same date as the houses or later than they were (Holmqvist 1970b, p20–22).

Hearths were present on both terraces. On Terrace V they were scattered over the whole of its surface with some particularly big ones at the eastern edge of the terrace, probably remains from some form of activity which took place in the open air. The stratigraphy of the other hearths indicates that they were used both before the buildings were constructed and after the ditch was dug. None can be associated with a house. On Terrace VI hearths were found in both the Early and Late Building Phases, with some of the latter being stratigraphically later than the house (Holmqvist 1970b, p21). No hearth could be associated with a house.

Eight *depressions* and *pits* were found, equally divided between both terraces.

Most of the features were discovered on Terrace V: 33 post-holes and nine hearths in total. There were many superimpositions, suggesting use over a long time. The east end of Terrace V had been virtually destroyed by a later road, thereby skewing the distribution-pattern of the archaeological artefacts (Holmqvist 1970a, p4).

Terrace VI revealed only thirteen post-holes and thirteen hearths, with a few superimpositions. This terrace may also have been damaged by a later road (Holmqvist 1970b, p20). The archaeological features were clearly concentrated in the western and central areas, with a total absence in the east even though there were a few features beyond the eastern edge of the terrace.

Six houses have been identified on the two terraces: Houses 20–23 on Terrace V and Houses 24–25 on Terrace VI. The numbering of the houses continues that used in the report on Terraces I and III (Frölund & Göthberg 2011), but the features are numbered according to the Helgö publications.

Descriptions of buildings

Terrace V

House 20, three-aisled

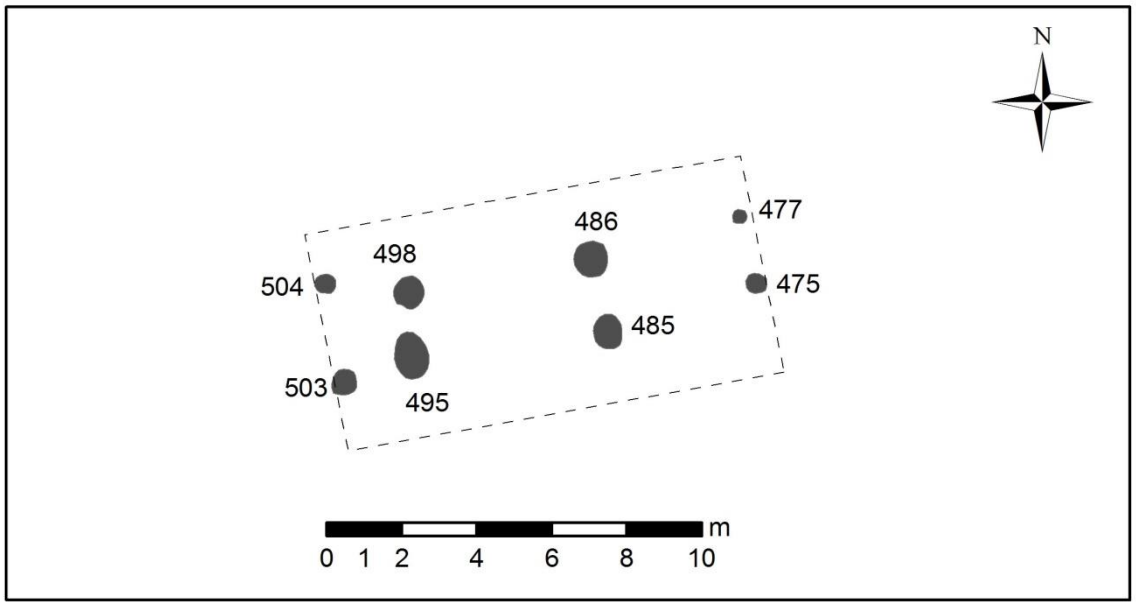

Figure 5. Plan of House 20, scale 1:200.

Features which could be interpreted as forming a house consisted of eight post-holes. Four large holes could have been for roof-supporting posts positioned in two opposed pairs (trestles). They suggested a house **12m** long and probably **6m** wide. The width of the trestles suggested an under-balanced construction. One of the post-holes was lined with stones. The remaining four marked the east and west gables, but not the corners. The gables were asymmetrically arranged in comparison with the inner posts.

One of the features displayed relationships:

A495 overlay hearth A496 which was not related to any building.

A495 overlay pit A497 which was not related to any building.

House 21, three-aisled

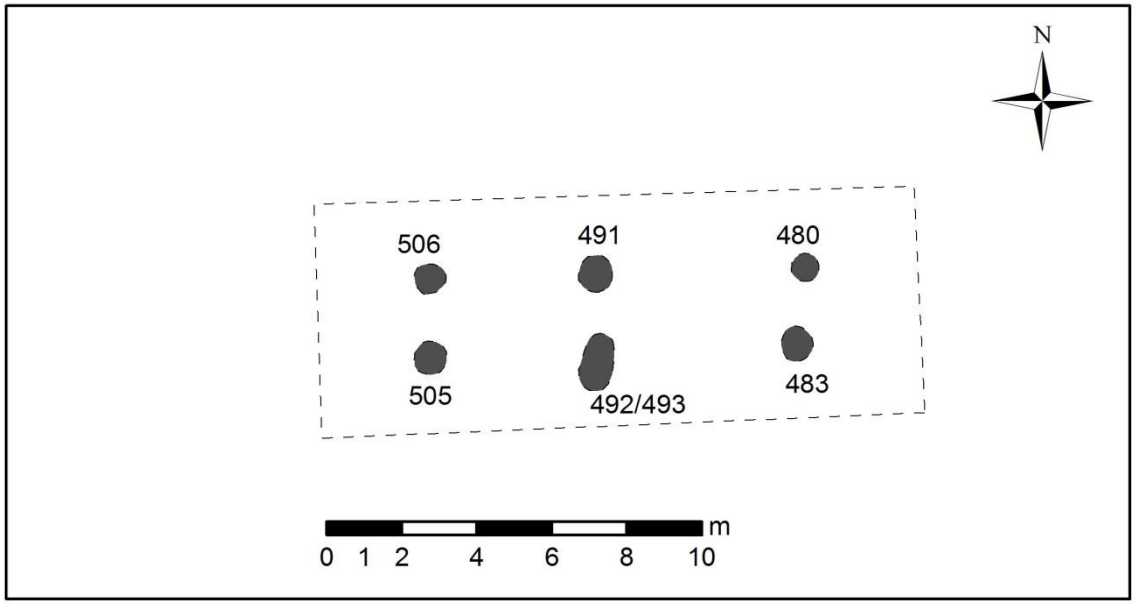

Figure 6. Plan of House 21, scale 1:200.

The plan of the house can be concluded from six post-holes arranged in three pairs, forming trestles. They suggested a house at least **11m** long, but possibly up to **16m**, width probably **6m**. The transverse widths between the paired posts indicate an underbalanced construction and probably a single room. Five of the post-holes were heavily lined with stones, and five also contained charcoal, suggesting that the building had burnt down. Three of the post-holes in the east had an external depression and staining from a post, perhaps from a rebuilding.

One of the features displayed relationships:
A480 overlay post-hole A481 which was not related to any building.

House 22, three-aisled

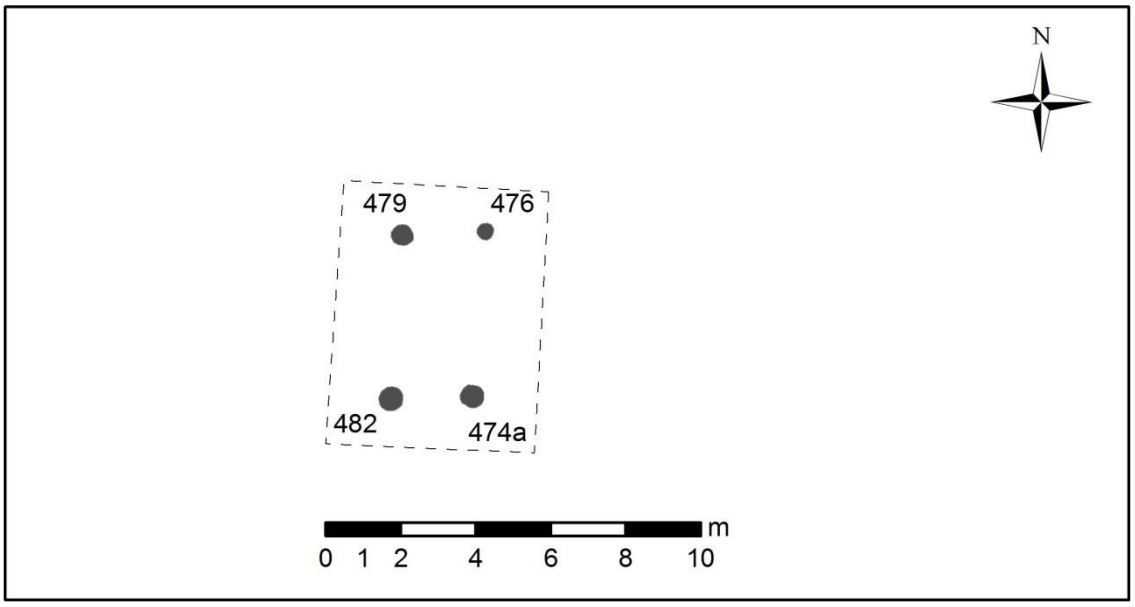

Figure 7. Plan of House 22, scale 1:200.

The house is indicated by four post-holes in two opposed pairs, suggesting a house probably ***c.*7m** long and **5m** wide. The width of the trestles suggests an underbalanced construction. Three of the post-holes were lined with stones.

One of the features displayed relationships:
A474a was overlain by pit A474b, which in its turn was overlain by hearth A474c.

House 23, unaisled

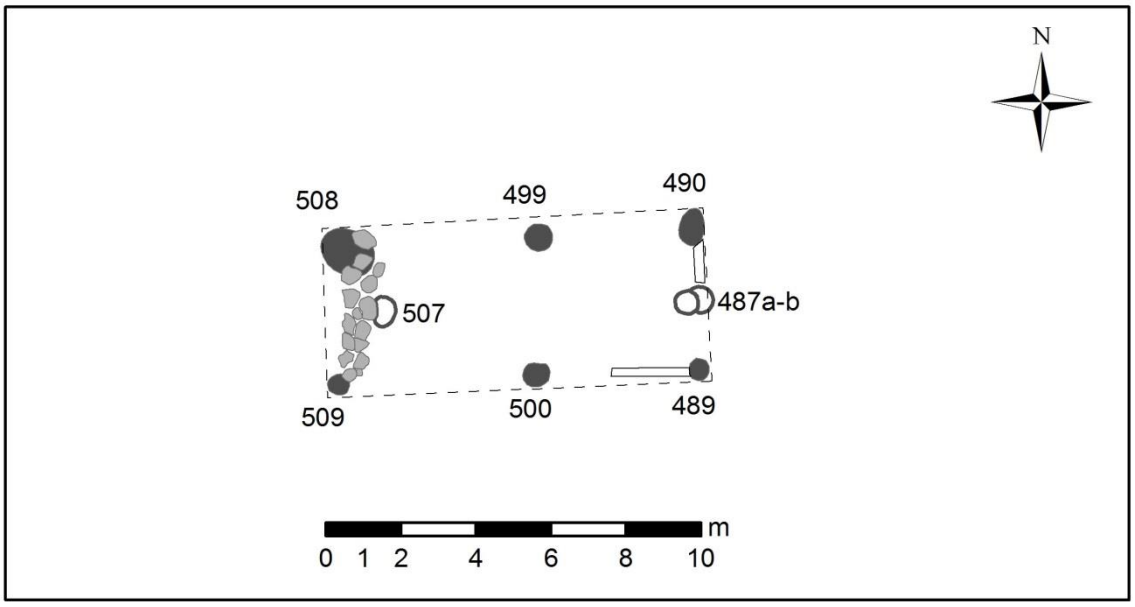

Figure 8. Plan of House 23, scale 1:200. The post-holes in the walls are supplement by post-holes in the central axis, and there is also a stone sill in the west and staining indicating a wooden sill in the east.

Eight post-holes indicated the plan of the house. Six were for wall posts and two for central posts, one of which was in the east gable. They suggested a house **10m** long and **4.5m** wide.

In the west gable, two rows of stones lay beside one another and in a single layer. They appear to have been a stone sill, probably from a late phase as the stones had sunk down into post-holes 508 and 509. Between the post-holes in the east part of the house were two dark-coloured streaks ***c.*0.3m** wide (Holmqvist 1970a, p6). They may have been staining from wooden sills. The stratigraphic relationship between these and the post-holes was not made clear so it is now impossible to know whether they were contemporary. But it is possible, as one of the dark-coloured streaks appeared to have been aligned on the south end of the stone sill, but not on the post-hole at the post-hole there. This could mean that both the wooden and the stone sills represented a second building phase.

Three of the features displayed relationships:
A487b was overlain by post-hole A487a.
A508 was overlain by the stone row.
A509 was overlain by the stone row.

Terrace VI
House 24, with cornerposts

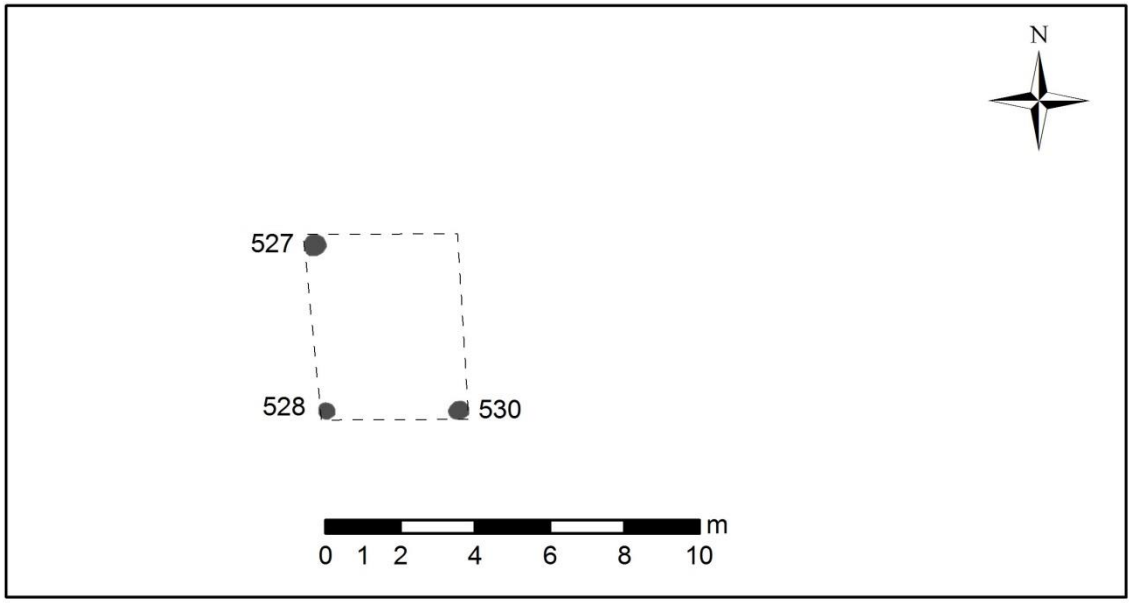

Figure 9. Plan of House 24, scale 1:200.

The features lay on the central part of the terrace and consisted of three post-holes for roof-supporting corner posts. There is no evidence for a post-hole in the fourth corner although the plans show a concentration of stones there. The post-holes suggest dimension of **4x5m**. Two of the post-holes lay under the drainage ditch and the third lay at almost a right angle from them.

Two of the features displayed relationships:
A528 was overlain by the drainage ditch.
A530 was overlain by the drainage ditch.

House 25, aisled

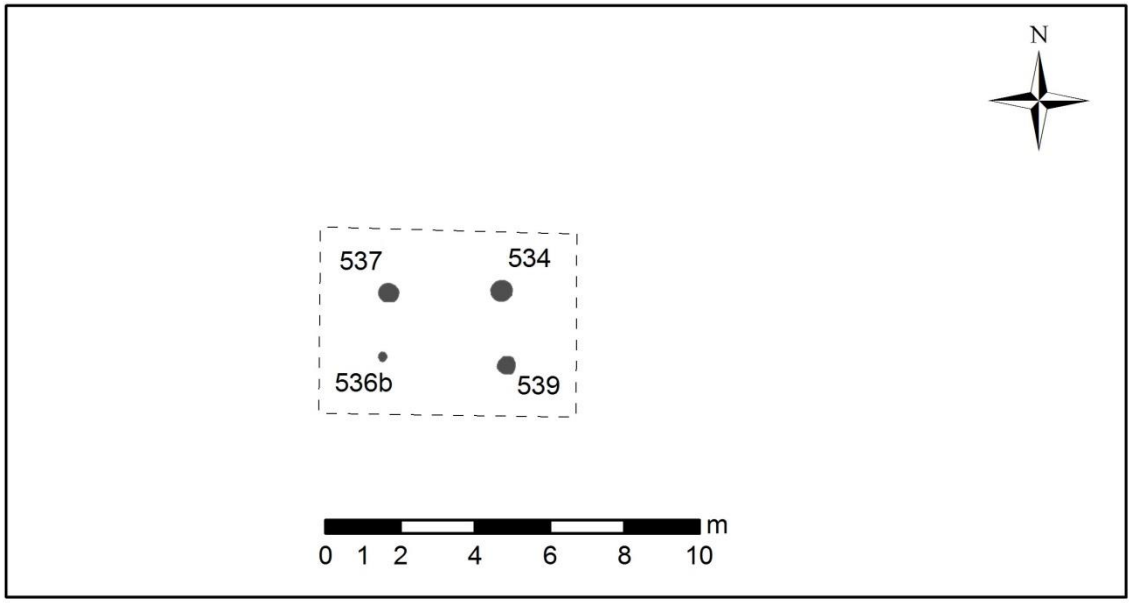

Figure 10. Plan of House 25, scale 1:200.

The remains of the house, in the west part of the terrace, consisted of four post-holes in two pairs for roof-supporting posts in two trestles; thus, an underbalanced building ***c.*7m** long and **5m** wide.

Two of the four features displayed relationships:
A536b was overlain by hearth A536a.
A539 was overlain by hearth A533.

Dating

The only dating for these two terraces is from artefacts. The objects from Terrace V date from the Vendel Period and Viking Age (late 6th to 10th centuries), whereas those from Terrace VI date from Roman Iron Age and Migration Period (1st to 6th centuries; Lundström 1970a, p144).

This agrees well with the artefacts found in the whole of Building Group 2, which date from the Roman Iron to the Viking Age, most of them from Migration and Vendel Periods (Lundström 1970b, p151). The earliest objects from the Early Roman Iron Age often originated in Rome itself, they are unlikely to date activities on the site (Lundström 1970b, p152). Taken together, all the dating evidence for BG2, (imports, local material and ^{14}C dates) suggests that occupation began during the Late Roman Iron at the latest. The artefacts cluster in the Migration and Vendel Periods (Lamm 1988, p91) but the ^{14}C dates provide a somewhat divergent picture, with their emphasis falling in the Migration Period which came to an end with the beginning of the Vendel Period. There was then a second period of occupation in the Viking Age (Kyhlberg 1982, p22).

The constructional features of the houses can also be used for dating. All the three-aisled buildings had a trestle width of less than 2.5m and therefore were underbalanced. This means that they dated from the Roman Iron Age or later periods. (see Herschend 1993; Göthberg 2000; Wikborg & Onsten-Molander 2007).

Dating is even more uncertain for several reasons. All the houses that were identified on Terraces V and VI were fairly small and unlikely to have fulfilled more than one function. Small buildings have few chronological features (Göthberg 2000, p76–79). Additionally, most of the Iron Age buildings excavated in the Mälaren region date from the Early Iron Age (Göthberg 2007b, p439—443). Houses dated to the Late Iron Age are usually large, and few small buildings have been dated to this period.

Comparisons to House 21 with pairs of post-holes for three trestles separated by a fairly equal distance, date from the Migration Period (Göthberg 2000, p49—50). A parallel to House 20 with two trestles and asymmetric gable posts can be found in the Later Roman Iron Age – Migration Period (Göthberg *et. al.* 2002, p25–26), and parallels to Houses 22 and 25, with two trestles, are from the roman Iron Age and Migration Period (Göthberg 2000, p76).

The construction and size of the unaisled House 23 have comparisons with pre-Viking Age houses (see Göthberg 2000, p83–85) although there are occasional examples from the Roman Iron Age and Migration Period (Göthberg *et al.*, 2014, p242).

House 24 belongs to a simple type of construction with some variations in size and in square or short rectangular shape. Most are c.2—4m in length but a few are of comparable size to House 24 (Frölund & Schütz 2007, p96–103; Göthberg 2014, p243). They have proved to belong to the Early Iron Age, but an earlier or later date cannot be ruled out.

Comparison with earlier interpretations

Most of the interpretations in this study are similar to those in Holmqvist 1970a. House 21 on Terrace V was identified during fieldwork (Holmqvist 1970a, p4—8), and was more recently described as a small hall by Arrhenius (2011, p18). She considered that the features inside the house were the remains of a platform which had had a ritual purpose, rejecting the idea that it was simply a house, as that interpretation disregarded the paired post-holes and the dark-coloured streaks which were too narrow to have been from wooden sills. Arrhenius's interpretation demands that all the features on Terrace V were of the same date, and remains of a single event. This cannot be so as many of the features cut or overlay one another, indicating that there had been a number of consecutive events on Terrace V. There is further evidence in that the paired post-holes showed signs of burning whereas those from the so-called platform contained no such traces. Thus, it is highly likely that there were several buildings and rebuildings on the terrace, even though it cannot be seen in the stratigraphy.

House 23 was also identified as a house by Holmqvist (1970a, p4—8) who suggested that it was a log house, at least in part (1970a, p127). Kaufmann (1995, 41—2) suggested that it was a three-aisled house (her 5A) in which craft activities took place, and Göthberg (2000, p83—5, fig. 38a) kept closer to the original interpretation of a rectangular, unaisled building.

House 24 and 25 on Terrace VI were identified during fieldwork (Holmqvist 1970b, p15—22; Holmqvist 1970c, p127). Houses 20 and 22 on Terrace V have not been identified before.

Building construction and function

The housing stock on Terraces V and VI is remarkable in that there are no buildings in the group measuring 20m or more. This suggests that there were no multifunctional buildings which included a dwelling area. If, as is possible, these were located on Terraces I and III (F&G 2011), the small houses on Terraces V and VI could have been ancillary to them.

Therefore, the buildings on Terraces V and VI must have housed functions which the multifunctional ones did not have room for, perhaps storage or craft working. The finds from the two terraces indicate certain functional differences. For instance, the discovery of quantities of potsherds on both terrace sis evidence for 'everyday' activities (Lundström 1970a, p144), and the smithing slag and crucibles on Terrace VI point to metalworking. This could account for the many hearths present on both terraces, some of which were later in date than House 25 and so indicate a late phase of use of the terrace.

Ceremonial or ritual functions must also be considered (cf. Arrhenius 2011). Imported artefacts such as a few sherds of glass, fragments of bronze vessels and gold were found on Terrace V although in much smaller quantities than objects of the same date found on Terrace I (Lundström 1970a, p144). Bearing this reservation in mind, some of the houses, particularly 20 and 21 on Terrace V, could possibly have been halls (see Glossary).

Relative and absolute chronology of the houses

The houses on Terrace V form a sequence, either broken or unbroken, but features provide little evidence for the stratigraphical relationships between the houses. One starting point is that House 20 is orientated slightly differently from Houses 21, 22 and 23 (Figs 12—13). A similar variation in orientation has been noted on Terrace I (F&G 2011, 38—9), and comparison between the two terraces shows that the orientation of House 20 is fairly similar to Houses 1 and 2 on Terrace I. This may mean that House 20 was of more or less the same date as they were, and probably earlier than the other houses on Terrace V.

House 22 cannot be contemporary with either 21 or 22 because of their positions on the terrace, but it may have been of the same date as House 23 even though they stood so close together. Finally, the underbalance building method used in House 21 is earlier than the log house on sills of House 23, so 21 was built before 23.

The positions of the houses in relation to the terraces and, particularly, the drainage ditches can give pointers to the chronology (see Fig. 2). House 20, with its divergent orientation, is probably earlier than the ditch. House 21 has roughly the same orientation as the ditch, although at its western end the ditch curves rather more towards the north, and the house could only have fitted against the ditch if it had had a layout with curved walls. No post-holes could be associated with the south wall of House 21, and this may mean that it was not of the same date as the drain, and probably older. In contrast, House 23 fits well beside the drain, thus they are probably contemporary. There must have been continuing activity on Terrace V after the houses had been abandoned, for the ditch was overlain by several hearths.

Houses 24 and 25 on Terrace VI were probably contemporary as they stood on different parts of the terrace although stratigraphy suggests that House 24 was older than the ditch. The interpretation of House 25 as three-aisled and underbalanced suggests that its walls must have been at least partly contemporary with the drain. The probable position of the walls of House 25 was outside the stone revetment of the terrace. This suggests that the house was contemporary with neither the drain not the revetment, but as it was overlain by many hearths it must have belonged to an early building phase. The revetment and the hearths were from the later phase.

Overall conclusions

The earliest houses must have been Houses 24 and 25 on Terrace VI (Fig. 11). Artefacts from the terrace date the houses to the Roman Iron Age (Lundström 1970a, p144; Arrhenius 2011, p16).

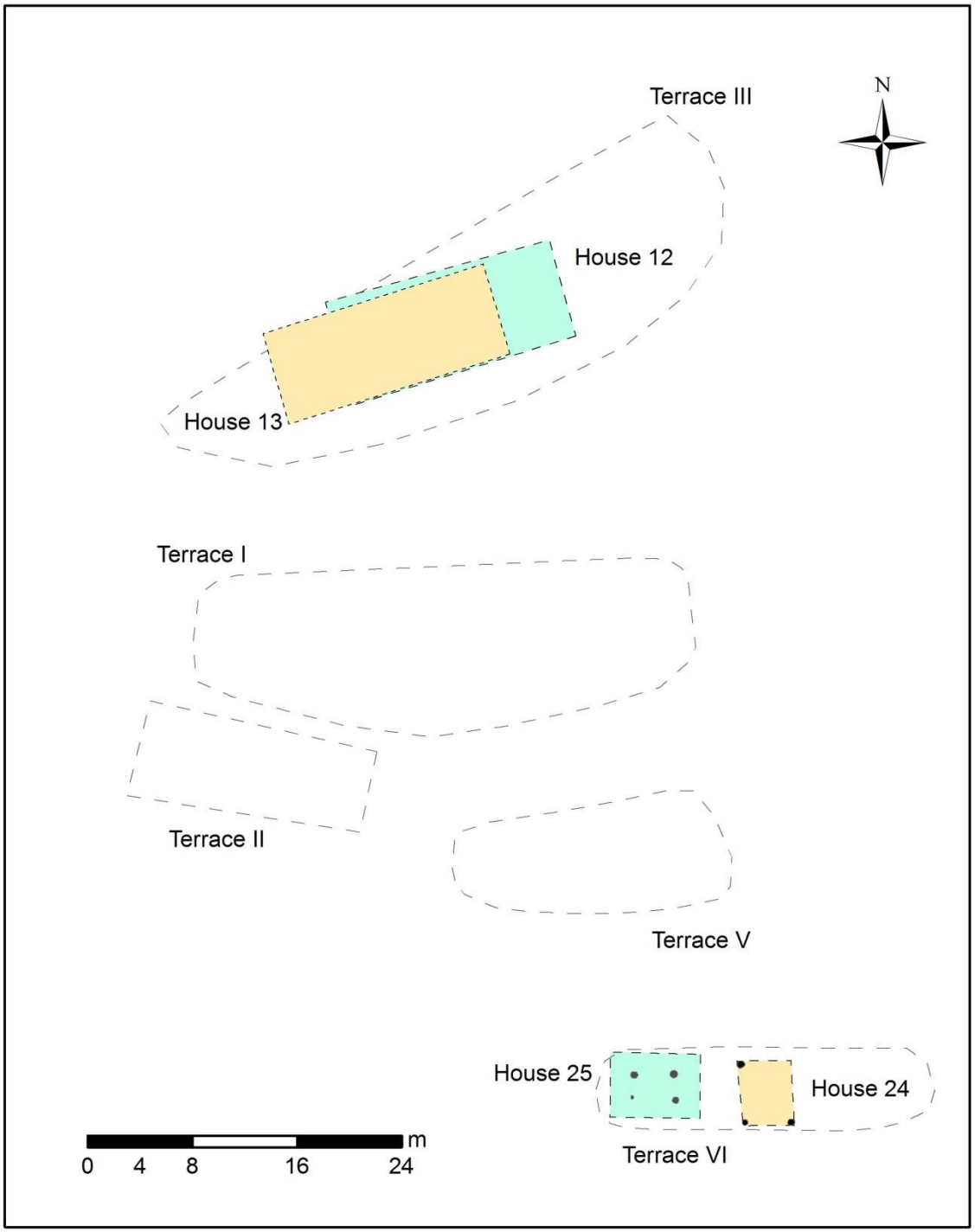

Figure 11. Houses 24 and 25 on Terrace VI date from the Roman Iron Age, some distance away from the nearest houses on Terrace III. Scale 1:500.

Comparisons with the other terraces in BG2 suggest that Houses 24 and 25 on Terrace VI were in use at the same time as the early houses on Terrace III. In the Roman Iron Age there was no occupation on the intervening Terrace I (see F&G 2011). The distance between Terraces III and VI was almost 50m, and the difference in height *c.*8m, so the functional connection between them is uncertain This is underlined by the fact that equivalent settlements in the Mälaren region often have

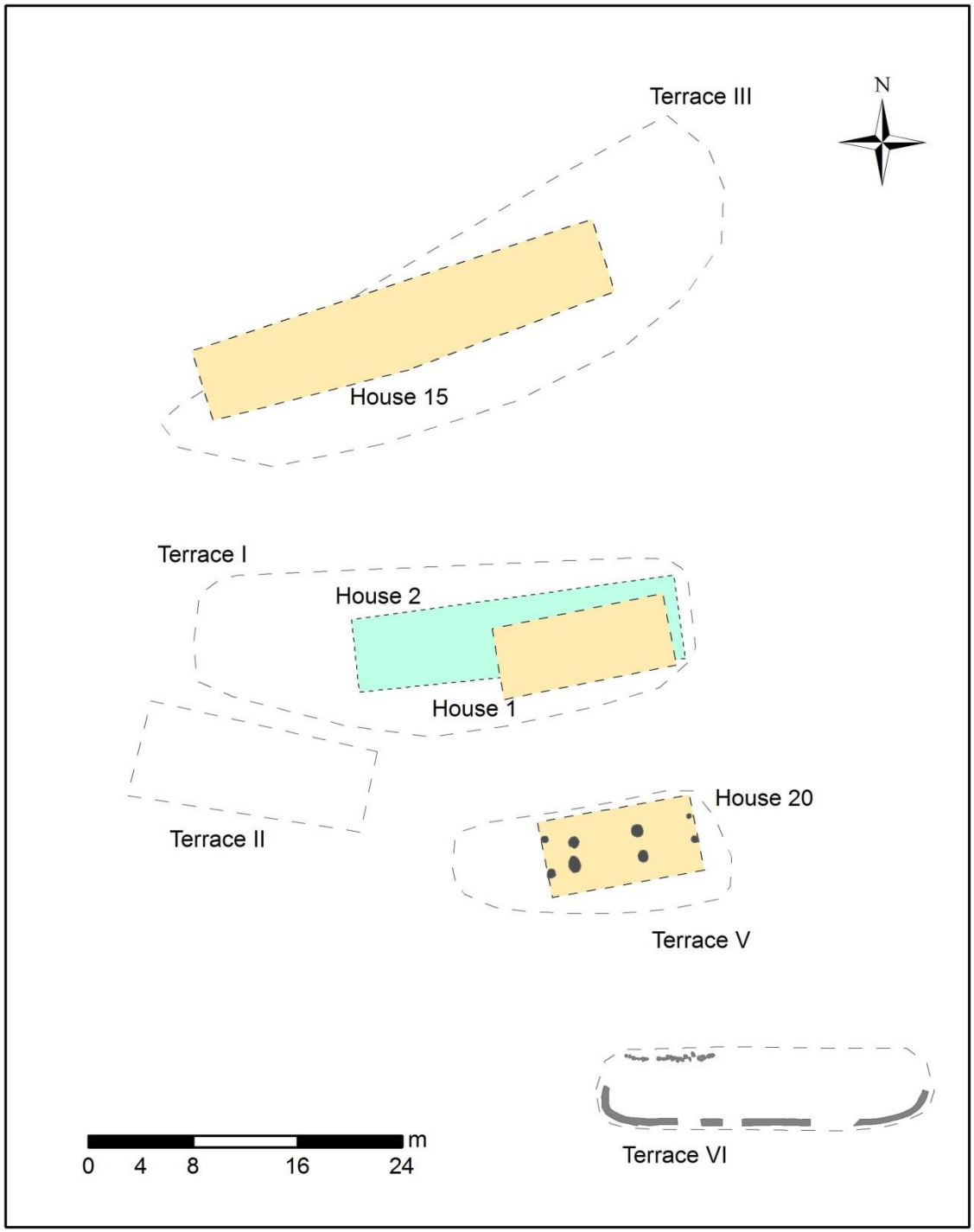

Figure 12. House 20 on Terrace V dates from the Migration Period –Vendel Period. The dating is primarily based on the similarity of orientation with the houses on the neighbouring Terrace I. The largest buildings in the group were on Terrace III, exemplified by House 15. Scale 1:500.

their buildings closer together (Eklund et al. 2007). That being so, there could have been a connection between Terrace VI and Terrace II where artefactual and ^{14}C dating is from Roman Iron Age to Viking Age (Lundström 1970a, p138; Lundström 1970b, p148). Although there were many post-holes on Terrace II they were damaged

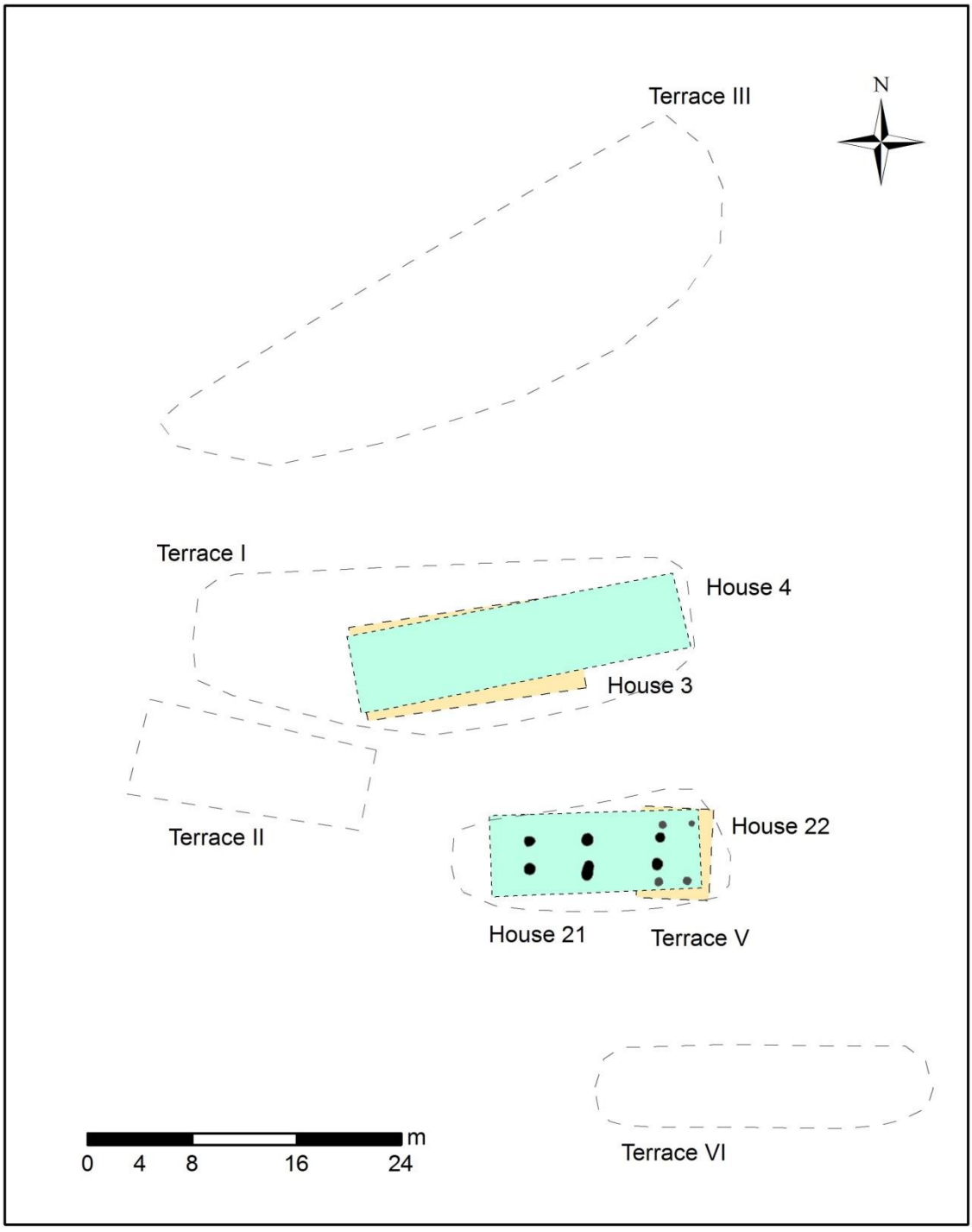

Figure 13. According to artefactual dating, Houses 21 and 22 on Terrace V belonged to the Vendel Period–Viking Age settlement. Proximity to the occupation on Terrace I is striking. Small houses were discovered on Terrace III but have not been included here. Scale 1:500.

by SFBs, large pits and later occupation. The post-holes were of sufficient size to suggest that there had been buildings there, but type, size and date remain unknown.

House 20 belonged to a later phase, its similar orientation to House 1 on Terrace I suggesting a probable Migration—Vendel Period date (Fig. 12). Finally, Houses 21, 22, and 23 (Figs 13—14) have an artefactual date of Vendel Period—Viking Age (Lundström 1970a, p144; Arrhenius 2011, p19).

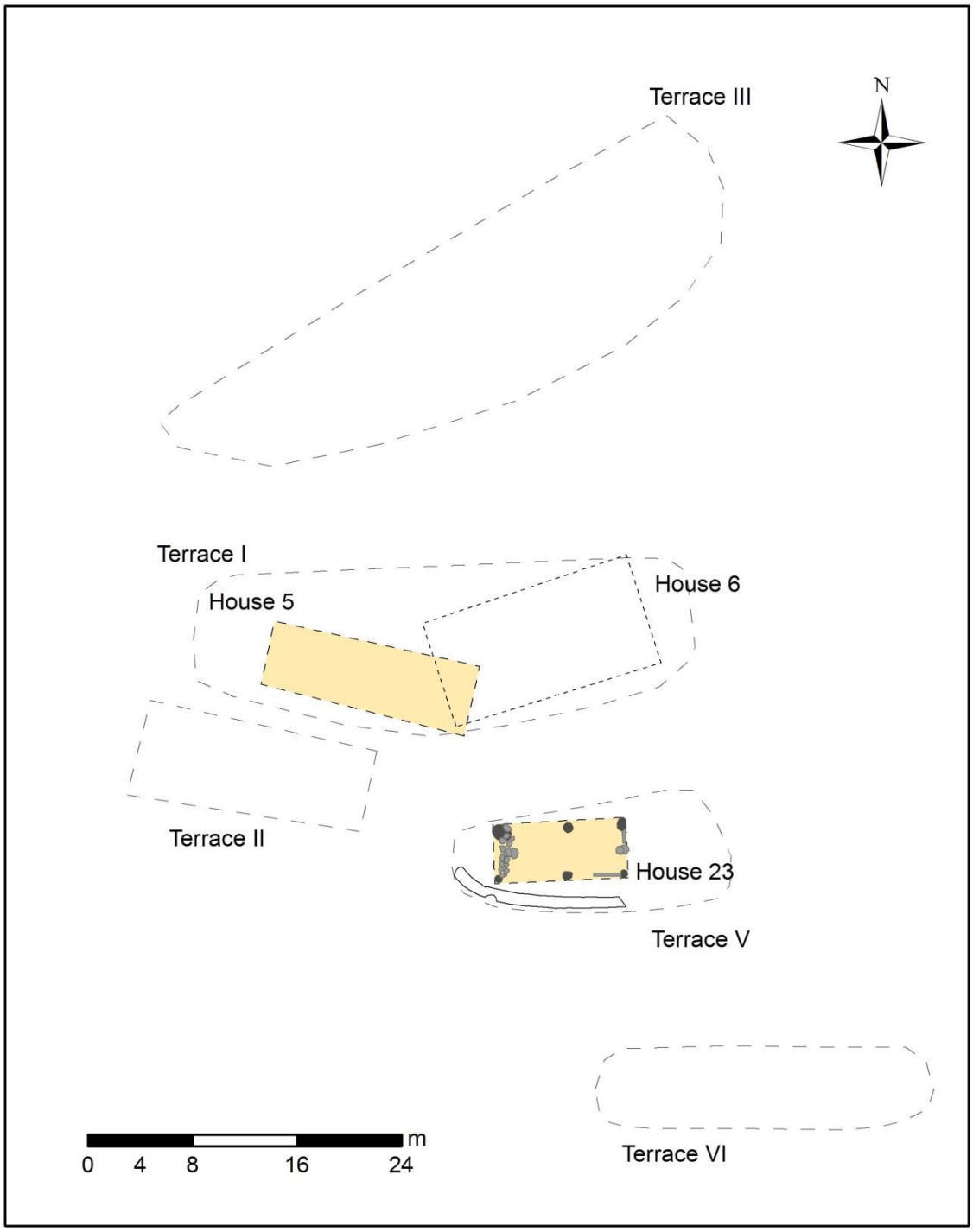

Figure 14 Artefactual dating also attributed House 23 on Terrace V to the Vendel Period–Viking Age settlement. There are distinct differences in orientation between it and House 5 on Terrace I. Small houses were discovered on Terrace III but have not been included here. Scale 1:500.

In the Vendel Period and Viking Age, Houses 21, 22 and 23 on Terrace V had connections with Terraces I and III (F&G 2011). The physical distance between them was closer and the difference in level slighter. For these reasons, it is very likely that there was a functional connection between the occupants of these three terraces.

Evaluation

The evaluation is given from two points of view, first the difficulties involved in the analysis of an old excavation, and then the new discoveries that have emerged from that analysis. The first aspect is treated in the publication of the buildings on Terraces I and III (Frölund & Göthberg 2011, p41), and much the same comments can be made for Terraces V and VI. There is one difference, however, in that there were far fewer features on those two terraces and that they were not so close together, so fewer features overlay or cut each other. Yet the features on Terrace V in particular had accumulated over a long period of time and may therefore represent various activities, of which living was only one.

Because there were only a few features on Terraces V and VI, it was easier to identify buildings during and immediately after the fieldwork than it had been in Terraces I and III. That is the reason why hardly any new buildings were revealed by the current analysis. On the other hand, the spatial and stratigraphic relationships between the buildings and other remains on the terraces led to new interpretations. For instance, many buildings appeared to be older than the drainage ditches which defined the terraces, and therefore should have been from an early phase in the lifetime of the terraces. Paradoxically, it could be that Terrace VI was later than the houses which were built on it, and that there could have been enough space for considerably larger buildings than the ones proposed here. But the area bounded by the drainage ditch seems to have been used for making heat/fire in hearths. This is clearly different from Terrace III, for example, where the drainage ditches were present in the earliest settlement phase (Frölund & Göthberg 2011, p36).

It is also clear that the buildings on Terraces V and VI were fairly small and therefore were probably used for functions other than just for dwelling. In that they differed radically from the large buildings on Terrace III. This supports the view of Frölund & Göthberg (2011, p38) that there appears to have been no large buildings during much of the Vendel—Viking occupation, possibly a result of the adoption of new building methods which produced smaller houses. Nevertheless, large buildings have occasionally been found on other Vendel Period—Viking Age settlements: Sanda in Uppland, for example (Åqvist 2006). Considering the wealth of artefacts found at Helgö, it is strange that no large buildings of Late Vendel and Viking Age date have been identified there. Another possible explanation is that there had been an extensive spatial restructuring within the occupation areas at Helgö, and dwellings had been relocated. At any rate, there is a striking difference in the distribution of buildings between the Roman Iron Age settlement at Helgö and the later periods. In the former, the buildings are very spread out with a considerable distance between Terrace III and Terrace VI (Fig. 11). By the Vendel Period the settlement was denser in that buildings were present on Terraces I, III and V, all fairly close together (Fig. 12).

Concluding summary

Uppland museum has carried out a study of Terraces V and VI in Building Group 2, Helgö, Ekerö parish. The study was based on the documentation and publication of the excavations from 1960 to 1964 and involved digitizing the plans, and processing and analysing the features on the two terraces. The aim was to see whether it was possible to extract building plans from those features.

Six buildings of differing constructions and sizes were discerned, four on Terrace V and two on Terrace VI. The post-holes on Terrace V made up three aisled and one unaisled building. On Terrace VI there were two buildings, one aisled and one with corner posts. All the buildings were small.

The earliest settlement was on Terrace VI, with the artefacts found there suggesting that it dated from the Roman Iron Age. Unusually, the buildings appeared to be earlier than the drainage ditch that defined the terrace. Occupation was confined to Terrace V during the Vendel Period and Viking Age. Here also the drainage ditch that defined the terrace seemed to be relatively late and probably contemporary with the last building on it.

Administrative information

Site:	Helgö-Bona, 4:1 and other properties, Ekerö *parish* and *kommun*, Stockholms *län*
Monument:	Ekerö 119:7
Project leader:	Hans Göthberg
Uppland museum project number	8528
Co-ordinates:	Helgö Project's local co-ordinate system
Surveying:	Helgö Project's local system for measuring height

References

Arrhenius, Birgit. 1988. Continuity and discontinuity at Helgö. I: Thirteen Studies on Helgö. Lundström, A. (ed.). SHM. Studies 7. Stockholm.

Arrhenius, Birgit. 2011. Helgö – pagan sanctuary complex. I: Excavations at Helgö XVIII. Conclusions and New Aspects. Arrhenius, B. & O'Meadhra, U. (eds.). KVHAA. Stockholm.

Arrhenius, Birgit & O'Meadhra, Uaininn (eds.). 2011. Excavations at Helgö XVIII. Conclusions and New Aspects. KVHAA. Stockholm.

Clarke, Helen & Lamm, Kristina (eds). 2008. Excavations at Helgö XVII. Workshop – part III. KVHAA. Stockholm.

Eklund, Susanna, Onsten-Molander, Anna & Wikborg, Jonas. 2007. Hem till gården – förhistoriska gårdsstrukturer i Tiundaland. I: Hus och bebyggelse i Uppland. Delar av förhistoriska sammanhang. Arkeologi E4 Uppland – studier. Volym 3. Göthberg, H. (ed.). Uppsala.

Göthberg, Hans. 2000. Bebyggelse i förändring. Uppland från slutet av yngre bronsålder till tidig medeltid. OPIA 25. Uppsala.

Göthberg, Hans. 2007. Mer än bara hus och gårdar. I: Hus och bebyggelse i Uppland. Delar av förhistoriska sammanhang. Arkeologi E4 Uppland – studier. Volym 3. Göthberg, H. (ed.). Uppsala.

Göthberg, Hans, Qviström, Linda & Åberg, Kerstin. 2002. Undersökningar för E4 – Äldre järnålder vid Danmarksby. Upplandsmuseet. Uppsala.

Göthberg, Hans, Frölund, Per & Fagerlund, Dan. 2014. Gamla Uppsala – åter till Berget. Om undersökningen av en förtätad bosättning från äldre järnålder med begravningar från äldre bronsålder till romersk järnålder. Upplandsmuseets rapporter 2014:16. Uppsala.

Herschend, Frands. 1993. The Origin of the Hall in Southern Scandinavia. Tor 25. Uppsala.

Holmqvist, Wilhelm. 1970a. Building foundation V. I: Excavations at Helgö III. Report for 1960-1964. Holmqvist, W, Lamm, K & Lundström, A. (eds.). KVHAA. Stockholm.

Holmqvist, Wilhelm. 1970b. Building foundation VI. I: Excavations at Helgö III. Report for 1960-1964. Holmqvist, W, Lamm, K & Lundström, A. (eds.). KVHAA. Stockholm.

Holmqvist, Wilhelm. 1970c. Summary concerning Building group 2. The buildings. I: Excavations at Helgö III. Report for 1960-1964. Holmqvist, W, Lamm, K & Lundström, A. (eds.). KVHAA. Stockholm.

Holmqvist, Wilhelm, Lamm, Kristina & Lundström, Agneta. (eds.). 1970. Excavations at Helgö III. Report for 1960-1964. KVHAA. Stockholm.

Kaufmann, Iris. 1995. Helgö husgrupp 2. En analys av bebyggelsespåren. C-uppsats, arkeologiska institutionen, Umeå universitet.

Kitzler Åhfeldt, Laila. 2008. A new Survey of Helgö. I: Excavations at Helgö XVII. Workshop – part III. H. Clarke & K. Lamm (eds). KVHAA. Stockholm.

Kyhlberg, Ola. 1982. Chronological and topographical analysis of the cemeteries and settlements. I: Excavations at Helgö VIII. The ancient Monument. Lundström, A & Clarke, H (eds.). KVHAA: Stockholm.

Lamm, Kristina. 1988. Helgö – international trading centre, local market or farming community? I: Thirteen Studies on Helgö. Lundström, A. (eds.). SHM. Studies 7. Stockholm.

Lundström, Agneta. 1970a. Find frequency. I: Excavations at Helgö III. Report for 1960-1964. Holmqvist, W, Lamm, K & Lundström, A. (eds.). KVHAA. Stockholm.

Lundström, Agneta. 1970b. The earliest settlement at Helgö. I: Excavations at Helgö III. Report for 1960-1964. Holmqvist, W, Lamm, K & Lundström, A. (eds.). KVHAA. Stockholm.

Säfvestad, Ulf. 1995. Husforskning i Sverige 1950 – 1994. I: Hus & gård i det förurbana samhället. Artikeldel – Rapport från ett sektorsforskningsprojekt vid Riksantikvarieämbetet. Göthberg, H., Kyhlberg, O, Vinberg, A. (eds.). Riksantikvarieämbetet Arkeologiska undersökningar Skrifter nr 14. Stockholm.

Wikborg, Jonas & Onsten-Molander, Anna. 2007. Aspekter på tid. Hus i Tiundaland under äldre järnålder. I: Hus och bebyggelse i Uppland. Delar av förhistoriska sammanhang. Arkeologi E4 Uppland – studier. Volym 3. Göthberg, H. (ed.). Uppsala.

Åqvist, Cecilia. 2006. Sanda – en gård i södra Uppland. Bebyggelse från vendeltid till 1600-tal. Riksantikvarieämbetet, UV Mitt Rapport 2004:15). Stockholm.

Appendix 1. List of digitized features

A= archaeological feature, T= terrace number, H= house number.

A	Typ	T	H
A473	Härd	V	
A474A	Stolphål	V	22
A474B	Grop	V	
A474C	Härd	V	
A474D	Stolphål	V	
A475	Stolphål	V	20
A476	Stolphål	V	22
A477	Stolphål	V	20
A478A	Stolphål	V	
A478B	Härd	V	
A479	Stolphål	V	22
A480	Stolphål	V	21
A481	Stolphål	V	
A482	Stolphål	V	22
A483	Stolphål	V	21
A484	Härd	V	
A485	Stolphål	V	20
A486	Stolphål	V	20
A487A	Stolphål	V	
A487B	Stolphål	V	23
A488	Grop	V	
A489	Stolphål	V	23
A490	Stolphål	V	23
A491	Stolphål	V	21
A492	Stolphål	V	21
A493	Stolphål	V	21
A494	Stolphål	V	
A495	Stolphål	V	20
A496	Härd	V	
A497	Grop	V	
A498	Stolphål	V	20
A499	Stolphål	V	23
A500	Stolphål	V	23
A501	Härd	V	
A502	Grop	V	
A503	Stolphål	V	20
A504	Stolphål	V	20
A505	Stolphål	V	21
A506	Stolphål	V	21
A507	Stolphål	V	23
A508	Stolphål	V	23
A509	Stolphål	V	23
A510	Härd	V	
A511	Härd	V	
A512	Stolphål	V	
A513	Härd	V	
A514	Härd	VI	
A515	Grop	VI	
A516	Stolphål	VI	
A517A	Härd	VI	
A517B	Grop	VI	
A518	Stolphål	VI	
A519	Härd	VI	
A520	Grop	VI	
A521	Härd	VI	
A522	Stolphål	VI	
A524	Härd	VI	
A525	Härd	VI	
A526	Stolphål	VI	
A527	Stolphål	VI	24
A528	Stolphål	VI	24
A529	Grop	VI	
A530	Stolphål	VI	24
A533	Härd	VI	
A534	Stolphål	VI	25
A535	Härd	VI	
A536A	Härd	VI	
A536B	Stolphål	VI	25
A537	Stolphål	VI	25
A538	Stolphål	VI	
A539	Stolphål	VI	25
A540	Stolphål	VI	