Bexhill to Hastings Link Road

Archaeological Project Research Design
and
Written Scheme of Investigation

Addendum 2
Mitigation Works
(Excavation and Targeted Excavation Sites 10 - 18)

Oxford Archaeology
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Archaeological Project Research Design and Written Scheme of Investigation

Addendum 2 Mitigation Works (Excavation and Targeted Excavation Sites 10 - 18)

1 INTRODUCTION

1.1.1 Oxford Archaeology (OA) has been contracted by Hochtief Taylor Woodrow Joint Venture and their archaeological consultants Jacobs Consulting on behalf of East Sussex County Council (ESCC) to undertake the archaeological works along the route of the proposed Bexhill to Hastings Link Road (BHLR), East Sussex. A Written Scheme of Investigation (WSI) (OA June 2012) was produced in response to a brief (Project Design) supplied by Casper Johnson, County Archaeologist for ESCC (ESCC 2009). The WSI covered evaluation trial trenching, test pitting, borehole survey, metal detecting, field walking, standing building and historic landscape feature survey and was termed Advance Works. It also outlined possible further mitigation works comprising a combination of preservation *in-situ* if possible, excavations and watching briefs leading to full analysis, reporting and dissemination.

1.1.2 The evaluation trial trenching, test pitting and borehole survey work has now been completed and reported on (OA December 2012) and a review of proposed mitigation undertaken. An addendum to the WSI was issued (OA Addendum 1, January 2013) as an update on the position as regards the progress of the archaeological works and to outline proposed mitigation sites based on the updated baseline information.

1.1.3 This document (Addendum 2) should be read in conjunction with the main WSI for the project and provides the outstanding detail on the Excavation and Targeted Excavation Sites (numbers 10 - 18) identified in outline in Addendum 1 together with additional methodology information relevant to those sites.

2 MITIGATION SITES

2.1 General

2.1.1 A plan of the location of the proposed mitigation sites is presented on Figure 1. Each site is described below with a summary of it's archaeological background as defined by the evaluation work followed by the strategy for the proposed mitigation work. Plans for each site illustrating the proposed work are presented on Figures 2 – 10.

2.1.2 The works illustrated represent a reasonable level of initial investigation given the baseline information available. However, the general environment and type of archaeological deposits being dealt with mean that there is the potential that extensions to the proposed investigations, or additional excavation areas will be required by the planning authority, represented by the East Sussex County Council Archaeologist in order to fully investigate and mitigate the archaeological potential of the Scheme as revealed by these works. A flexible approach will be maintained by OA and variations to the scope of work will be agreed with the County Archaeologist in consultation with Hochtief Taylor Woodrow Joint Venture, their archaeological consultant and ESCC. Indications of possible additional works which may be required are given for some sites but these are not exhaustive and further works will need to be appropriate for the specific site circumstances.

2.2 Methodology

2.2.1 The investigation strategy for each site is presented below. Work will be undertaken in accordance with the methodologies outlined for archaeological work in the main WSI for the project. However, due to the presence of waterlogged peat deposits and potential in situ organic and flint artefacts in the mitigation excavations additional information regarding OA's approach to excavation of flint sites, environmental sampling and dating is given in this document.

2.2.2 It is OA's intention that as far as possible the processing of finds and bulk samples for artefact recovery will be conducted on site. Environmental samples, particularly waterlogged samples and those requiring sub-sampling for dating etc will be returned to OA's facilities in Oxford where they can be better assessed and dealt with.

2.2.3 While the main excavations are in progress OA will organise specialist attendance from a geoarchaeologist and flint specialist who will be directly involved in directing excavations and advising on strategy and finds. Site visits will also be instigated for other specialists (wood, environmental, conservation, scientific dating, specific finds such as pottery or metal working) as the need arises. The site teams will be supported by a Project Manager and a site based Project Officer who will oversee all works and on-site survey and finds administrators who will collate information for interim plans and co-ordinate spot dating by specialists etc.

2.3 Programme

2.3.1 An indicative time scale for completion of each site is given in the strategy below. In principle the excavations will be conducted at the earliest opportunity, when adequate access to the sites is available and allowing for ecological constaints. It is envisaged that a number of mitigation excavations will run concurrently and the excavations will be completed during a 20 – 25 week period commencing mid May 2013.

3 SITE 10

3.1 Archaeological Background

3.1.1 **Site 10 (Hillcroft Farm Spur).** In this area the archaeological remains constituted an overall low density of features that spanned the Mesolithic to the post-medieval periods but the presence of a number of concentrations of flint finds and associated features on what would have been a significant spur of drier land encroaching into the wetland environment highlights this site as a key area in terms of past activity. Topographically after the ground surface begins to give way to peat deposits to the south there may be a further 'island' of relatively higher ground beneath parts of Trenches 108, 109 and 110 which could also be a focus of activity.

3.1.2 Flint sites, particularly those where artefacts may be found 'in-situ' rather than disturbed by ploughing or deposited in other features, require careful machining and meticulous hand excavation and recording. This area has therefore been designated as area excavation rather than strip, map and sample.

3.1.3 There were flints in a ditch (Trench 102), a posthole (Trench 103) and an old ground surface, (Trench 99); as well as flints in the topsoil (Trench 100) that dated to the Mesolithic to Neolithic period. These flints are described as a cluster (Scatter F1) that may not all be in situ.

3.1.4 There was also a cluster of flints (Scatter F2) of late Neolithic to Bronze Age date from a ditch in Trench 100 and deposits in Trench 101.

3.1.5 Two further flint concentrations adjacent to this area (Scatters E and G) are the subject of targeted excavation Sites 15 and 16.

3.1.6 Later Prehistoric (possibly Iron Age) activity was evident in Trench 96. There were a number of flints, in features and the topsoil across this area, without sufficiently diagnostic elements to closely date them (Trench 91). There were also features both ditches and probable postholes which lacked dateable material (Trenches 95, 104 and 111). The later Prehistoric activity could indicate the opening up of the landscape and the assertion of divisions and man made boundaries, linked to agricultural, functional or 'ownership' issues. The small flint assemblage had a strong domestic character and could suggest the potential for contemporary archaeological features.

3.1.7 Post-medieval features and deposits were identified in Trenches 93 and 94.

3.2 Excavation Strategy

3.2.1 STANDARD AREA EXCAVATION (Fig.2). Machine overburden strip of c. 4.35ha followed by full excavation to standard methodology as outlined in main project WSI. Possibility of flint scatters so care to be taken when machining and if identified scatters to be dealt with employing the flint scatter methodology outlined in this document.

3.2.2 This is essentially a 'dry land' excavation but its southern limit is at the wetland margin. If results indicate potential in the deeper wetter deposits to the south then following agreement on further work with all parties investigation of these deposits will be undertaken. The scope of this work will be agreed depending on the circumstances but typically might follow the excavation of the 6x4m areas as outlined for Site 15 below.

3.2.3 The trackway from Hillcroft Farm which runs N-S to the west of the Site 10 area (between Sites 10 and 15) will also be investigated to establish its relationship with features on these sites. This will involve a machined trench across the line of the track which may be undertaken as part of the Site 10 or Site 15 investigations or at a convenient time as part of SMS or watching brief operations.

3.2.4 Estimated time: 10 weeks (including 6 weeks strip time).

4 SITE 11

4.1 Archaeological Background

4.1.1 **Site 11 (Upper Wilting Farm).** This area is on high ground at Upper Wilting Farm. Archaeological remains constituted an overall high density of features that spanned the late Iron Age to the post-medieval periods. There were possible late Iron Age to Roman deposits and features in Trenches 164 and 168; post-Roman to Medieval features and deposits in Trenches 161, 166 and 171; and undated remains in Trenches 161, 163, 164, 166 and 168.

4.1.2 The evidence shows probable boundary ditches established and used in the late Iron Age to Roman period. The paucity of dating means that at present it is difficult to establish whether there was any continuity or hiatus in occupation at the site, between the main phases. The earlier activity certainly seems to demonstrate a level of organisation. The lack of dating for metal working activity noted to the north of Trench 164 means it is not possible to determine whether the site includes another 'bloomery' of later Iron Age to Roman date. There are several known sites within the region and this could be another. It may also relate to later metal-working, further work will aim to establish this. The activity at the site during the later Medieval period is consistent with occupation and probably habitation. This settlement would almost certainly be associated with the management of the landscape for primarily agricultural purposes.

4.2 Excavation Strategy

4.2.1 STANDARD AREA EXCAVATION (Fig.3). Machine overburden strip of c. 2ha followed by full excavation to standard methodology as outlined in main project WSI. Excavation will include investigation of the extant earthwork on the site.

4.2.2 Excavation may include supervised use of volunteers and outreach activities such as site visits.

4.2.3 Excavation may be 'signed off' in stages as this is a key area for plant access to the main construction site.

4.2.4 Estimated time: 10 weeks (including 4 weeks strip time).

5 SITE 12

5.1 Archaeological Background

5.1.1 **Site 12 (Glovers Farm).** Site 12 is contained within the strip, map and sample area Site 1. Higher ground to the north may be the location of Iron Age / Roman activity, possibly iron working and a number of trenches in this general area demonstrated colluvium or hill wash deposits which contained material which had travelled down slope and been buried. Trench 34 indicated a possible prehistoric feature (pit with flint) beneath the colluvium.

5.2 Excavation Strategy

5.2.1 TARGETED EXCAVATION (Fig.4). The strip, map and sample works are unlikely to facilitate investigation of the deeper deposits in a controlled manner so the intention is to target two excavations to specifically sample the colluvial deposits in the area of Trench 41 and Trench 38. This will be accomplished by two N-S orientated 50m long trenches, 2m at the base adjacent to Trenches 41 and 38 to profile the colluvium in those locations and take samples of the material. Trenches to be stepped as required.

5.2.2 To investigate possible further features beneath the colluvium a targeted excavation, stepped (overburden 1-1.5m), to be 20x4m at the base will be excavated in the area of Trench 34 to mitigate the immediate area and assess potential for further features in the wider area.

5.2.3 Depending on the results of the targeted investigations final decisions will be made in consultation with the County Archaeologist as to the approach to SMS and bulk excavation in this area.

5.2.4 Estimated time: 2 - 3 weeks.

6 SITE 13

6.1 Archaeological Background

6.1.1 **Site 13 (Scatter D / Tr75).** Targeted on a flint find in Trench 75. The potential in this location is unclear from the limited evidence so initially this will be a small exploratory investigation to examine the possibility of further flints or related deposits. A contingency will be included to extend the excavation if further evidence is revealed.

6.1.2 Note; the description in the evaluation of 'Scatter D' combines the find here with flints retrieved from Trench 79. In the mitigation works Trench 79 is the subject of a separate investigation (Site 14).

6.2 Excavation Strategy

6.2.1 TARGETED EXCAVATION (Fig.5). Trench 75 contained 1 flint associated with an area forming a possible island of dryer ground. The area around Trench 75 will be investigated with 5 machine excavated test pits 2x2m at the base and stepped as required. An 80L control sample will be wet sieved from each for the retrieval of artefacts. Further work to be agreed depending on results.

6.2.2 Estimated time. 1 week

7 SITE 14

7.1 Archaeological Background

7.1.1 **Site 14 (Trench 79 Wood / flints).** Focussed on Trench 79 this small area produced evidence of Mesolithic to Neolithic wetland margin activity in terms of flints sealed beneath the peats that contained natural wood, two samples radio carbon dated to 3855 ± 27 and 4359 ±27 years BP indicate a later Neolithic to Bronze Age date. Whether some other elements of the wood in this trench may demonstate human agency in their 'working' or placement is ambigious. The finds of flints and later wood are located within a wider landscape with the potential for hunter-gatherer sites to be distributed across it and this area is located at one of the points where it is closest to the opposite bank and may have been a suitable crossing point over the Watermill Stream valley in the Mesolithic-Neolithic period.

7.2 Excavation Strategy

7.2.1 TARGETED EXCAVATION (Fig.6). Trench 79 revealed peat deposits containing wood with potential to be associated with human activity. This peat (c. 0.2m thick) overlay a horizon with flints.

7.2.2 Six machine excavated test pits will be excavated to qualify the deposits in the surrounding area, 2x2m at the base with 80L control samples wet sieved from each. Further work to be varied if required depending on results but otherwise will be followed by:-

7.2.3 A 25x15m excavation targeting the previous trench findings. Machine excavation to the 'timber horizon', investigation of timbers and sampling of peat with 1x1m pits and 80L control sampling on 5m grid (24 80L samples allowed for). Then dependant on results hand excavate peat deposit and underlying alluvial horizon (for flints) as appropriate. Environmental sampling, excavation of flint scatters and dating of peat deposits and timbers to follow the guidelines as set out later in this document.

7.2.4 Dependant on the results of the excavation there may be a requirement for further work which will be agreed with all parties.

7.2.5 Estimated time: 6 weeks.

8 SITE 15

8.1 Archaeological Background

8.1.1 **Site 15 (Watermill Stream scatter).** Initially contained within the boundary of general area excavation Site 10 along the northern edge of Field 20 the evaluation located evidence of a flint scatter, visible in situ in Trenches 85 and 86 and a previous test pit (OA 2007; rev 2008b, TP 4). The scatter (Scatter E) shows some evidence of being disturbed by continued ploughing, with finds being present in the topsoil.

8.1.2 This scatter consists of 15 flints constituting a small collection of tools and flakes of probable Neolithic-early Bronze Age date. From TP 4 there were six flints, that included three tools and displayed a mix of soft-hammer and hard-hammer technology on finished forms. Trench 86 yielded a further seven pieces, (six flakes and a blade). There were also two flints from Trench 85 and one from Trench 83.

8.1.3 The forms may relate to a specialist site, however, the presence of piercing tools and notches suggests a range of activities such as leather and wood working and they may be part of a domestic site. Opportunities to investigate settlements of this period are rare.

8.1.4 The trenches excavated so far have been in Field 20 and are encroaching on the wetter valley area. However, it is probable that the focus of activity is to the NE in Field 7 which was not accessible for the evaluation. It is unclear to what extent any in situ flint scatters may have been disturbed by recent ploughing but some truncation is likely resulting in flints distributed in the topsoil deposits.

8.2 Excavation Strategy

8.2.1 TARGETED EXCAVATION (FIG.7). This site is an area of dry land bordering wetland zone to the SW. Flints present demonstrating human activity and significant preserved wood deposits at the wetland margin. This targeted excavation will aim to determine the focus of the flint deposition on the higher ground first and then extend the excavation into the wetland area at the most favourable location to test for associated deposits with preserved wood such as bank side revetments, track ways or boats. The area of wood fragments (which did not appear to be worked) in Trench 89 was heavily disturbed by outside agencies and the preference would be to open a new area close to this to investigate similar deposits. However, it it hoped that the most productive area for investigation out into the peat area will be indicated by the strip of the adjacent dry land.

8.2.2 Recent deep ploughing may have disturbed in situ flints and distributed some of them into the topsoil. It is therefore proposed that a 30m evaluative trench to determine depth of deposits in the area not previously evaluated be excavated. Then in order to mitigate potential flints in the topsoil :-

8.2.3 Hand excavated ‘Shovel pits’ on a 5m grid (c.178) will be dug as detailed in the methodology set out later in this document. Followed by:-

8.2.4 Hand dug 1x1m test pits (c.12) on 20m grid with 80L control sampling to wet sieve for flint.

8.2.5 There will then be a machine strip of c. 0.8ha dry land area (this includes area to NE, not to be test pitted, where more traditional archaeological features may be revealed – NB: machining of this area could start while test pits in progress). Hand excavation and recording of features as standard methodology. Possibility of flint scatters so care when machining and if identified scatters to be dealt with employing the flint excavation methodology.

8.2.6 To mitigate human activity into the wetland zone, 2 (more could be added as further works if required) targeted, stepped, excavations 6x4m at the base (again size could be adjusted as a variation to the works if needed to for example extend further out into the peat deposits to investigate more deeply buried horizons not seen in the evaluation works) will be excavated. Locations to be confirmed in light of area strip results (i.e. locate in association with concentrations of dry land archaeological deposits). Machine excavation will be to first significant archaeological horizon, then hand investigation of timber deposits and excavation and sampling of associated flints and artefacts. Pumps will be employed to de-water excavations as required.

8.2.7 The above two deeper excavations are presented as a basic level investigation in line with the established potential of the area. However, the full extent or nature of archaeological deposits which might be present is not certain so as noted above the scope of these works can be increased if required by the County Archaeologist in order to ensure that significant finds are adequately mitigated.

8.2.8 Estimated time: 6-8 weeks.

9 SITE 16

9.1 Archaeological Background

9.1.1 **Site 16 (Spur island south of Site 10).** Initially **c**ontained within the boundary of general area excavation Site 10 a number of flints were identified from Trenches 107 and 108 (Scatter G) and may represent 'in-situ' deposition. The boundary of Site 10 has been refined and Site 16 now forms a discreet investigation.

9.2 Excavation Strategy

9.2.1 TARGETED EXCAVATION (Fig. 8). Island of dryer ground at the southern end of the Hillcroft Farm spur. This specifically targeted excavation will aim to carefully define the extent of the island and any remains and employ an appropriate strategy to excavate and record them.

9.2.2 A machine strip of c. 0.3ha to stop at edges of the island (i.e. overburden max 0.5m) will be undertaken. Followed by full excavation as standard and flint scatter methodologies.

9.2.3 If results indicate potential in the deeper wetter deposits surrounding the island then following agreement on further work with all parties investigation of these deposits will be undertaken. The scope of this work will be agreed depending on the circumstances but typically might follow the excavation of the 6x4m areas as outlined for Site 15 above.

9.2.4 Similarly, if the presumptions regarding the approximate size of the island are incorrect and for example the area between Site 16 and Site 10 to the north is also effectively 'dry land' then following agreement on extending the scope of works the area striped and subject to excavation as above can be increased.

9.2.5 Estimated time: 3 weeks (including 1 week strip time).

10 SITE 17

10.1 Archaeological Background

10.1.1 **Site 17 (West bank of Powdermill Stream).** Targeted on the area of Trench 117 where a number of flints were retrieved (Scatter J). The three flakes and blade-like flake were not diagnostic but demonstrate activity in a location on the western margin of the Powdermill Stream Valley.

10.2 Excavation Strategy

10.2.1 TARGETED EXCAVATION (Fig.9). Trench 117 revealed flints. The area of dryer land surrounding this trench has been defined by the evaluation.

10.2.2 Hand excavated 'Shovel pits' on a 10m grid (c.63) will be dug as detailed in the methodology set out later in this document. Followed by:-

10.2.3 Hand dug 1x1m test pits (c.15) on 20m grid with 80L control sampling to wet sieve for flint.

10.2.4 There will then be a machine strip of c. 0.4ha dry land area (targeted on Trench 117 but area could be enlarged as further works if potential revealed in pits to the east). Hand excavation and recording of features as standard methodology. Possibility of flint scatters so care when machining and if identified scatters to be dealt with employing the flint excavation methodology.

10.2.5 If results indicate potential in the deeper wetter deposits surrounding the island then following agreement on further work with all parties investigation of these deposits will be undertaken. The scope of this work will be agreed depending on the circumstances but typically might follow the excavation of the 6x4m areas as outlined for Site 15 above.

10.2.6 Estimated time. 5 weeks (including 3 weeks strip time)

11 SITE 18

11.1 Archaeological Background

11.1.1 **Site 18 (NE of Powdermill Stream - major scatter H).** Situated on the eastern margin of the Powdermill Stream Valley this site targets the location of a major flint scatter (Scatter H) retrieved from Trench 126 and Test Pit 20 which based on the numbers, types and working of the flints is of probable late Mesolithic date. This does not necessarily mean that all the scatter is of this date, on many occasions a favoured place in the landscape can be visited over several millennia and these 'persistent places' often coupled Mesolithic and early Neolithic activity. However, there is no single piece from this scatter that could not belong to a late Mesolithic assemblage. Another key issue in interpreting these finds is what type of site or sites does this scatter represent? Mesolithic sites are often viewed as representing a contrast between base camps and specialist camps, the latter often being described as hunting, gathering or resource extraction stations and these often have a limited range of lithic types and far smaller total assemblages. The assemblage from H is currently too small to be certain as to what type of site we have identified, however, there are several indications that it may be a base camp.

11.1.2 Although culturally the material retrieved so far can be considered to be Mesolithic or Neolithic an important focus of all the excavations on the Scheme will be to attempt to provide as detailed a chronology as possible for the flint assemblages and related evidence reinforced by methods such as radio carbon dating.

11.1.3 The presence of microlithic fragments in the burnt waste is of importance and strongly suggests a domestic focus. The fragments most likely originated from hunted game and their burnt and fragmentary condition has occurred due to them being cooked in the fire and either falling from the game, or being thrown/spat back onto the hearth. Concentrations of burnt microlith fragments are very often a feature of Mesolithic hearth deposits. Here, given the levels of fine flint debitage that had been heavily burnt, it would appear as if such hearths were routinely cleaned out and the waste dispersed away from the main domestic focus.

11.2 Excavation Strategy

11.2.1 TARGETED EXCAVATION (Fig.10). A significant concentration of flint was found in evaluation TP 20 at c.1.5m depth sealed by c.0.2m peat deposit. Initial mitigation will comprise a targeted excavation divided into 3 units of 15x8m at the base, stepped and pumped as required. First to target TP 20 location, others can be adjusted if appropriate. Machine excavation will proceed to the first significant archaeological horizon. There is the possibility of structural timbers in this area and these will be hand investigated if encountered. The peat deposit / interface with alluvium will be hand excavated and the methodology for flint excavation and sampling for environmental and artefactual evidence as set out in this document followed.

11.2.2 The remains in this area may be extensive and the above is intended as a basic level investigation which retains flexibility on locating the excavations. However, if required the excavations will be increased in size or additional excavations added as a variation to the works and to a scope agreed with the County Archaeologist.

11.2.3 This site is in the location of a large balancing pond proposed for the Scheme but Site 18 will also have a secondary focus to the east on an area not evaluated but with significant potential given the proximity of the flint scatter and which will be impacted by a haul road. This area will also be investigated with a targeted excavation prior to any wider strip map and sample due to the potential for a find of further 'flint' archaeology which has the potential to delay construction works.

11.2.4 The area will be evaluated with a 30m trial trench. Followed by targeted 30x30m machine strip (overburden 0.5m anticipated) and excavation employing standard and/or flint methodology if required. Location indicative and will take account of development impact in that area.

11.2.5 Estimated time: 10 weeks.

12 ENVIRONMENTAL SAMPLING STRATEGY

12.1 Sampling strategy for the late Mesolithic-Bronze Age

Alluvial / peat sequences (landscape zone 1 and, particularly, zone 2 - zones as referred to in OA December 2012, Section 7)

12.1.1 Archaeological evaluation of the site has revealed a significant alluvial sequence comprising peat and alluvial deposits, with some associated with buried land surfaces and *in-situ* flint scatters. The flint scatters appear to be concentrated on higher ground at the valley edges and wetland interface zone at the edge of the Combe Haven Basin (landscape zone 2). The peat and alluvial sequences consequently have high potential to contain important information on the development of the natural and human-made landscape during the earlier prehistoric period.

12.1.2 Sampling should target deeper sequences and sequences which can be clearly related to archaeology, such as buried soils associated with the flint scatters, as well as any features cut into the peat/alluvium. The aims should be:

- To collect bulk and intact monolith / kubiena samples from clean sections in order to recover *in-situ* sediments together with macrofossils and microfossils contained within them.
- To collect samples to enable dating of environmental sequences and activities.
- To assess the sediments in order to establish their potential for reconstructing the local ecology and past environment (including sea level change).

12.1.3 These aims will be achieved by:

- Full sediment recording/logging and sub-sampling the monoliths for radiocarbon dating, pollen, diatoms and ostracods/foraminifera (as below).
- Assessment/analysis of the microfossils within the monoliths.
- Thin-section analysis of buried soils.
- Processing and assessing/analysing the bulk samples in terms of condition, abundance and interpretative value of macrofossils (eg. waterlogged plant remains, insects, molluscs and micro-fauna).
- Careful selection of suitable samples for dating

12.1.4 Representative sedimentary sequences will be selected for sampling from open face sections. Samples will be taken from the sedimentary sequence according to established research targets and the perceived character, interpretative importance and chronological significance of the strata under investigation. The following gives an outline of the typical strategy likely to be adopted for deposits with particular potential for palaeoenvironmental analysis.

- Bulk samples of 10-20 litres for the recovery of anaerobically preserved macrofossils will be taken in a column from sediments containing organic material, generally at increments of 5 or 10cm, although the resolution of the sampling will depend on the nature of the stratigraphy ie. if the sections are deep and homogenous. These samples will be intended for the assessment and possible analysis of plant macro remains, molluscs and insects.
- A continuous (overlapping by 5cm) sequence of undisturbed monolith tins (or square section downpipe) will be retrieved for the assessment of sediments and microfossils.

- Ideally *in-situ* plant macrofossils (excluding root material and heartwood) will be used for radiocarbon dating, but in well-humified peat or organic silts this may not be possible. In this case, 200g sediment/peat samples for radiocarbon dating will be collected. Each sample will cover a depth of ideally 1cm and no more than 2cm and it is likely that samples will be collected from monoliths. The sampling interval will be dependant on the nature of the stratigraphy but as an absolute minimum will include the top and bottom of each identifiable peat and organic deposit. If these deposits cover a significant depth, or if variation is noted within these deposits, the number of samples will be increased.
- Sampling of any archaeological features (eg. pits/ditches will follow OA and English Heritage guidelines on sampling (OA July 2005; EH 2011). The standard sample size for bulk samples taken from dry deposits will be 40 litres. Larger samples (up to 100% of a deposit or grid-square) may be taken for artefact recovery.

Dating

12.1.5 The most useful dating method is likely to be radiocarbon, with short-lived material from samples selected on the basis of stratigraphical integrity and the location of samples marked on plans/sections. Sample selection could include wood or charcoal where sapwood is present; small roundwood or roundwood charcoal; charred hazel nutshell or grain where present in quantities to suggest that the material is not intrusive/residual; articulated bone.

12.1.6 Burnt flint may be suitable for TL dating, but any collection of material would need to be with direct guidance from a specialist in this dating technique. Sample depth would need to be recorded and soil samples collected to allow determination of water content. Note that fluctuating watertables and/or salinity is likely to cause a problem and less precision in dating.

12.1.7 OSL dating is unlikely to be of value given the presence of organic material for C14 dating: OSL dates are likely to be less precise. Errors on dates are generally of the order 5-10% of the quoted date at 68% confidence (EH 2008). Results may be affected by fluctuations in water content and the technique relies on the presence of suitable material (particularly quartz) in the sample.

12.2 Sampling strategy for Bronze Age- Roman

Activity on the valley slopes and Valley ridges (landscape zones 3 and 4)

12.2.1 The lower valley slopes appear to evidence Bronze Age – Roman activity and possible iron-working sites are indicated, together with extensive deposits of colluvium which may have accumulated as a consequence of deforestation for iron-working. The valley ridges seem to have been used for settlement from the Iron Age onwards.

12.2.2 Sampling should target potentially datable features such as pits and ditches, as well as any buried or stabilisation horizons within the colluvium. Understanding and dating the colluvium is a priority, but dating would rely on the recovery of i*n-situ* material. Sampling any industrial features or significant deposits of slag should be done in consultation with a specialist in ferrous metalworking. The aims should be:

- To collect bulk samples from potentially datable features and intact monolith / kubiena samples from clean sections through the colluvium and underlying sediments.
- To collect incremental series samples from potentially datable colluvial sequences where these can be related to archaeological features/activities.

- To collect samples appropriate for dating the colluvium and activities represented.
- To assess the samples in order to establish their potential for reconstructing the local ecology, industrial and/or agricultural activity and past environment (including sea level change).

12.2.3 These aims will be achieved by:

- Full sediment recording/logging and, if appropriate, sub-sampling the monoliths for radiocarbon dating, pollen, diatoms and ostracods/foraminifera (as below).
- Particle size analysis of colluvial sediments.
- An assessment of Mollusca from incremental series samples taken through collivium and underlying deposits, if suitable material is present (preliminary evaluation suggests that molluscs are scarce).
- Thin-section and magnetic susceptibility analysis from monoliths taken through any buried soils and colluvium.
- Processing and assessing/analysing the bulk samples in terms of condition, abundance and interpretative value of macrofossils (eg. plant remains, charcoal, molluscs).
- Selection of suitable material for dating; dating the colluvium will be important.
- Sampling of slag deposits will be undertaken with specialist advice. The proportion of the whole deposit represented by the samples will be estimated/recorded.

12.2.4 Representative sedimentary sequences will be selected for sampling from open face sections. Samples will be taken from the sedimentary sequence according to established research targets and the perceived character, interpretative importance and chronological significance of the strata under investigation. The following gives an outline of the typical strategy likely to be adopted for deposits with particular potential for palaeoenvironmental analysis.

- Bulk samples of 40 litres for the recovery of charred plant macrofossils, small bones and artefacts from pits, ditches, hearths, spreads etc. Kilns, ovens, spreads may need spatial sampling on a grid.
- A continuous (overlapping by 5cm) sequence of undisturbed monolith tins (or square section downpipe) will be retrieved for the assessment of colluvium, buried soils and selected feature fills for sediment analysis possibly for pollen (depending on the nature of the sediments: buried soils will be sampled for pollen).
- 100% sampling of any cremations, in spits and/or gridded as appropriate.

12.2.5 Sampling of any archaeological features (eg. pits/ditches will follow OA and English Heritage guidelines on sampling (OA July 2005; EH 2011). The standard sample size for bulk samples taken from dry deposits will be 40 litres. Larger samples (up to 100% of a deposit or grid-square) may be taken for artefact recovery.

Dating

12.2.6 The most useful dating method is likely to be radiocarbon, with short-lived material selected from samples selected of the basis of stratigraphical integrity and the location of samples marked on plans/sections. Sample selection could include charcoal where sapwood is present; roundwood charcoal; charred hazel nutshell; charred grain where present in quantities to suggest that the material is not intrusive/residual; articulated bone.

12.2.7 OSL dating may be of value for dating the colluvium in the absence of suitable well-sealed material for radiocarbon dating. Samples would be collected by the specialist during a site visit.

12.2.8 Archaeomagnetic dating may be appropriate if suitable *in-situ* hearths/ovens/kilns are found, but again would require sampling on site by the specialist (EH 2006). Likely precision is dependent on the period in question and would be considered in any decision regarding the use of this technique.

12.3 Sampling Strategy for Saxon-post-medieval activity

12.3.1 Saxon and later activity appears to be restricted to near Upper Wilting Farm. Sampling should again target potentially datable features such as pits and ditches, hearths/kilns/ovens and occupation spreads.

- 40L bulk samples will be taken from potentially datable features and spreads, for the recovery of charred plant macrofossils, small bones and artefacts from pits, ditches, hearths, spreads etc. Kilns, ovens, spreads may need spatial sampling on a grid.
- 10-20L bulk samples will be taken from any waterlogged features
- A continuous (overlapping by 5cm) sequence of undisturbed monolith tins (or square section downpipe) will be retrieved for the assessment of pollen from any secure waterlogged fills or buried soils.

Dating

12.3.2 The most useful dating method is likely to be radiocarbon, with short-lived material selected from samples selected of the basis of stratigraphical integrity and the location of samples marked on plans/sections. Sample selection could include charcoal where sapwood is present; roundwood charcoal; charred hazel nutshell; charred grain where present in quantities to suggest that the material is not intrusive/residual; articulated bone.

12.3.3 Archaeomagnetic dating may be appropriate if suitable in-situ hearths/ovens/kilns are found, but again would require sampling on site by the specialist (EH 2006). Likely precision is dependent on the period in question and would be considered in any decision regarding the use of this technique. The precision of this method is relatively poor for features dating between AD400-850 (100-200 yrs at 95%) but more precise for subsequent periods as a result of more rapid changes in declination

(http://www.brad.ac.uk/archaeomagnetism/archaeomagnetic-dating/secular-variation-calibration/precision/)

12.4 Waterlogged wooden structures and objects

12.4.1 Wetland edges and areas in the peat deposits where there is a focus of prehistoric archaeology form part of the targeted investigations and have the potential to reveal well preserved organic remains. Investigation area sizes are indicated in the site strategies but trenches can be targeting deposits of peat directly or leading from the drier activity areas into the wetland deposits. These trenches may need to be shored but steps will be the preferred method of excavation. They will also be drained with pumps where appropriate.

12.4.2 Preserved timber structures, platforms or trackways may be exposed in waterlogged deposits or within the wetland sequence. Man-made structures can be difficult to distinguish from natural accumulations of waterlogged wood. Natural accumulations are likely to occur far more commonly than worked wood and care should be taken to avoid detailed excavation until a positive identification has been made.

12.4.3 Treatment of wood on site will follow the OA wood policy guidelines (2001) and English Heritage guidelines on waterlogged wood (2010). If significant remains are identified, a specialist in ancient wood-working will be involved as early as possible to advise on identification, dating, recording and treatment of worked wooden structures. On-site assessment by the specialist should ensure that as much recording as possible is carried out on site. Individual timbers will only be removed from site for specific purposes, such as more detailed recording of technological characteristics, dendrochronological dating or for species identification. Natural accumulations may be a valuable source of palaeoenvironmental evidence, and samples may be taken for dendrochronological dating and species identification, on advice from suitably qualified specialists.

12.4.4 In the event of the discovery of significant *in situ* waterlogged timbers, the area will be exposed where practicable and cleaned to allow the structure to be identified and characterized. Samples of waterlogged timbers and bulk soil samples from associated deposits will be recovered for possible radiocarbon and dendrochronological dating and for palaeoenvironmental analysis. Samples for radiocarbon dating (only a small chunk is needed) should be taken from the outer edge of the timber, ideally from sapwood or bark. Ephemeral wattle work structures will normally be recorded on site and sampled for the purpose of species identification.

12.4.5 In the event that waterlogged artefacts are discovered advice on treatment and conservation will be sought from a specialist but in the first instance the object will be stored in conditions as close to those in which it was found as possible. This may require immersion in a tank of water at the site.

13 EXCAVATION OF FLINT SITES

13.1 *In Situ* Lithics Scatters

13.1.1 In *situ* lithic scatters will be retrieved *in toto* with regard to their spatial distribution. Such a strategy will necessarily need to be tailored to the specific circumstances encountered, and determined by the level of scatter (levels I-VI, see table below), but the following describes the general approach. In general the discussion of methodology references Mesolithic examples but could be equally valid in an earlier Neolithic context. Where intense later prehistoric knapping occurred, the methodologies would be equally valid based on assemblage size, density and likelihood of contemporaneity.

13.1.2 All flints that measure greater than 10mm in maximum linear dimensions (MLD) will be recorded three-dimensionally by survey using a total station or GPS. All such flints will be individually bagged and recorded as small finds. Tools/tool fragments of less than 10mm in MLD will also be recorded in this manner, most likely these will represent whole or fragmentary microliths and many will be missed during hand excavation.

13.1.3 Non-tool fragments of less than 10mm MLD will be bagged as appropriate, either by fill, spit/subsoil horizon or grid square/spit determined upon the level of scatter being dealt with.

13.1.4 The surface deposit containing the flints will be excavated in spits of varying depths dependent on the intensity of flint material and level of the scatter, both of which will be closely interrelated. Spits will generally be in the order of 0.05-0.1m but may reduce in thickness under exceptional circumstances.

13.1.5 Flints can work their way down a spoil profile to a considerable degree and can in areas of peat formation be dragged upwards into the peat. Such flints still belong to a scatter even if they now occur in three or more geoarchaeological contexts. Often this will take the form of low levels of flint of varying sizes in the peat, a dense scatter sitting on and in any weathered sand/buried soil horizon and decreasing levels of flint intensity and object size with depth into any underlying soil horizons, particularly sandy deposits. In some instances 6 or more spits may be required to fully recover an in situ scatter that had sat on a ground horizon.

13.1.6 Scatters at level two or above will be excavated to a site grid of 1m squares to allow for better spatial patterning of sampled material. Samples at level III or above will be excavated in spits using a 1m grid. In exceptional circumstances, scatters at level VI may be excavated using a 0.5m grid. Such scatters are not expected but cannot be fully discounted.

13.1.7 Sampling will be conducted at varying intensities dependent on the scatter level. This will vary between no or very perfunctory sampling at the lowest level up to 100% sampling by grid square/spit for the densest self-contained scatters. These samples will be primarily for artefact recovery and will not be put through flotation. A secondary phase of sampling from each scatter will be retained for full flotation. The level of such sampling will be determined in the field dependent on the quality of preserved environmental remains.

13.1.8 Dating of any flint scatters can be problematic. While the technology present can give a date to period or sub-period, such a date will not be very precise. Every effort will be made to obtain datable material from each scatter. Most obviously, burnt ecofacts will be the main element selected for dating. Hazelnut fragments are frequently found in association with flint scatters, but any contemporary feature fill, organic remains, bone/bone tools or hearth deposits could also provide material for dating and will be extensively sampled where present.

13.1.9 Burnt flint pieces of the required size and degree of burning will be retained where appropriate for thermoluminescence dating. Any suitable buried soil horizon associated with a flint scatter may also be selected for O.S.L dating if appropriate. Sampling of buried soil horizons (e.g. peat) that seal or sandwich flint scatters may also yield dates that allow us to predict the age of the flint scatters with some degree of accuracy (see also advice regarding dating methods in environmental sampling guidance above).

13.1.10 Each flint concentration identified on site will be examined with a methodology selected from the following and dependent on the level of scatter identified. Mesolithic sites and site types can be problematic at the best of times and little work has gone into developing and discussing settlement patterns. One of the key papers on the subject was written more than 30 years ago by Paul Mellars (1976). In it he identified three site types based on surface area and structural complexity which he argued also closely correlated with patterns in assemblage variability. Myers (1987) argued for a slightly more complex pattern of assemblage types and identified concerns in comparing artefact types between periods since the composite microlith tools of later Mesolithic sites do not readily compare with other tool forms such as scrapers in nearly the same manner as early Mesolithic microliths. Earlier Mesolithic microliths may have been employed singularly or in pairs while the later Mesolithic types may have had over twenty microliths per arrow shaft, more if other forms of composite tool were being utilised (e.g. grater boards, Clark 1976; Finlay 2003).

13.1.11 At the time Mellars and Myers papers were written, Mesolithic settlement evidence was slight with extremely rare genuine structures and few other associated features, usually consisting of the use of natural features such as tree-throws. However, since then numerous structures have been identified along with genuine pit clusters indicating a more dynamic settlement pattern.

13.1.12 Mellars three settlement types have been equated to scatter levels III, IV and V. Some of the more complex artefact-related site types argued for by Myers could equate with level II and III scatters. Each level of scatter will now be briefly outlined with a corresponding detailed methodology.

Scatter	Size	Area	Density	Finds recovery	Grid	Sampling	Type of site	Notes	Mellars site types
Level I	varied	varied	<10/m2	by layer	no	No	Background scatter, discard zone at edge of larger scatter or disturbed site	Could cover entire site but at very low densities	
Level II	200-2,000	1-5m2	@20/m 2	3D	1m	Up to 25%	Expedient tool repair, or limited knapping event		
Level III	2,000-5,000	4-20m2	@200/ m2	3D	1m	By grid square/spit 50-100%	Task specific specialist camp,	Typical microlith dominated 'hunting camp', axe-working sites, burin heavy antler/bone working sites. Usually single visit sites of very high academic value	Type I
Level IV	5,000-50,000	<250m 2	@200/ m2	3D	0.5m-1m	By grid square/spit 50-100%	Settlement site, densities may reach 1000's/m2	Usually associated with structural remains varying from stakeholes/hearths up to post-defined structures, occupational hollows. Probably multiple visit sites but still of very high academic value	Type II
Level V	50,000-2,000,000+	<5,000 m2	@200/ m2	by grid-square	1m	Bulk by grid square spit	Amalgamation of levels II, III, IV and V scatters, possibly multi-period and multifunctional, densities may reach 1000's/m2	Very dense palimpsests raises issues in academic value. Size may prohibit full recovery and site sampling may be advisable.	Type III
Level VI	varied	varied	varied	5D	0.25m-0.5m	By grid square/spit 50-100%	Cemetery, midden, organic tool/art or craft site, ritual site (e.g. bead, antler harpoon or antler frontlet production site), organic structural remains.	Likely to have very high to total sampling, 5D refers to recording inclination and orientation of struck flint. Of highest academic potential	
Prehistoric features	varied	<10m2	varied	3D	0.5m?	By context/spit 50-100%	Likely candidates would by Neolithic or even Mesolithic pits, utilised treethrows, possibly postholes.	Grid may be used but usually sampling would be by context and along long axis of feature.	

13.1.13 Level I scatter represents very low densities of flints, potentially numbering in the thousands but more often reaching less than 100 pieces. They represent low-levels of flint use or the remains of prehistoric periods/sites in which flint use was not paramount. The low levels of flint tools and waste found on many later Bronze Age sites would be a good example, or the zone of downhill discard away from a hunting stance (level II/III scatter). They may also indicate where a larger scatter once was but had suffered heavily from truncation.

13.1.14 Level I scatter methodology will be to excavate any flint rich surface of very low density (less than 10/m2) in 0.1m spits. All finds greater than 10mm MLD will be 3D recorded. Sampling will be very cursory or non-existent. By definition any scatter meriting heavier sampling will be of level II or above.

13.1.15 Level II scatters represent small flint-related episodes but do not represent a more formal settlement area. They will usually have fewer than 500 flints and would only occupy a very limited surface area but could have high densities within that space. The knapping event will be contemporary and be of high academic value, as the scatter should relate to very specific activities with very high refit potential. They can be accounted for as sites where a hunter opportunistically repaired a tool-kit or where a gap in a round of gathering/foraging allowed for some knapping. They do not represent places of temporary residence and will not have associated features. They could also include unintentional tool discard, such as the loss of an arrow and its associated microlithic components. These sites could be seen as corresponding with the lessor type 1 settlement examples defined by Mellars (1976).

13.1.16 Level II scatter methodology will be to excavate any flint rich surface of low density (less than 20/m2) in 0.05-0.1m spits. All finds greater than 10mm MLD will be 3D recorded. The site need not be gridded but will be tied into to any existing site grids from nearby higher level scatters. Sampling levels will vary and will generally be low and may only be directed at control as the site is not believed to represent an industrial zone. Sampling may take the form of forty litres per m2 or may simply be targeted to the mid point of any scatter and its extremities.

13.1.17 Level III scatter represents a camp site where a small group of individuals (i.e. 1-5 knappers) conducted in situ knapping. The period of occupation would likely be short, perhaps as low as a few hours or a single night. It will generate an assemblage of anything up to 10,000 pieces but would usually be of the order of 2000-4000 flints and occupy an area of up to 20m2. It corresponds with Mellars (1976) type 1 sites believed to represent hunting camps, however Myers (1987) argued for a greater variety of site and it could include limited resource exploitation stations, primary knapping sites or areas in which non-hunting related activities were conducted such as hide or antler processing.

13.1.18 Because of the limited period of occupation and the focused intent of the knappers at these types of scatter, they represent one of the most important resources in understanding Mesolithic activity. The potential for refits would be very high and the recovery methodology and sampling strategy should reflect this. Level III scatter methodology would again consist of the 3D recording of all pieces greater than 10mm MLD alongside tools/tool fragments. They will have a very high flint density in their core areas exceeding 200/m2 but may show a marked drop off at the fringes of the site. They would occupy a small area of around 2m by 2m up to around 5m by 5m and may be associated with a central hearth or hearths and perhaps stakeholes for windbreaks or tent lines. They will be excavated in 1m grid squares and in spits of around 0.05m. Sampling would be at 50-100% levels though the majority of these samples would be processed solely for the flints with a smaller sub-sample being retained for flotation dependent on the levels of charred plant remains identified on site.

13.1.19 Level IV scatters represent occupational sites in which the artefact density is high and uniform over a considerable area. They include most of the 'accepted' structural dwelling sites from the British and Irish Mesolithic and can contain many thousands of flints (up to 50,000+). They correspond to Mellars type 2 settlements (1976) and have areas of around 40-250m2.

13.1.20 These sites may represent intermittent activity over considerable time or a very intensive period of domestic use that corresponds with industrial levels of flint knapping. The former examples are of less value but determining between the two may only be possible at post-excavation stages. Therefore, the methodology for excavation should proceed on the grounds that they are short lived sites of very high academic value. A level IV scatter methodology would be very similar to those carried out on level III scatters but may need to allow for the excavation of negative cut features including occupation hollows. Such sites may require tighter grid intervals (0.5m) and smaller spit sizes (0.02-0.05m) and would almost certainly require a higher percentage of the spoil being sampled.

13.1.21 Level V scatters represent the very large scale palimpsests known from various parts of the United Kingdom in which flint-related industrial activity took place over a significant number of visits. They represent an agglomeration of lower level scatters at a site of importance to prehistoric communities and often see reuse in later periods. Sites such as the Mesolithic and early Neolithic sites at CNDR, Carlisle (OA 2011), the island of Rhum (Wickham-Jones 1990), Newbury bypass excavations (Birbeck 2000), Morton Farm (Coles 1971) or the midden site at Eton (Allen *et a*l forthcoming). Such sites occupy large areas, some even exceeding several thousand m2, and correspond with Mellars type 3 base-camp sites. Because of the multiple occupancy (often multi-period in nature), they represent a more problematic interpretative element of the prehistoric settlement landscape and most often have their assemblages sub-sampled for full analysis. Assemblages exceeding 300,000 are known (e.g. CNDR, OA 2011) and there is no real upper limit to assemblage size (numbers into the millions are known from the continent).

13.1.22 Level V scatter methodologies are problematic given the potential admixture of knapping events and the excessive size of the flint assemblage. A decision may be made on such sites to forego 3D artefact recording in favour of 100% collection by grid-square/spit. This would allow for artefact and tool density plots to be produced rather than the individual artefact planning required for detailed refitting and site interpretation. An alternative would be to select areas of such a site for more detailed artefact recovery. In every instance, the assemblages from such sites have been sub-sampled for metric analysis. The methodology for such a site would require consultation with the regional archaeologist to allow for the best approach to artefact recovery and to address selected research aims.

13.1.23 Level VI scatters represent exceptional circumstances and would in general be associated with extremely rare organic remains. Examples would include flint scatters associated with middens; stone, antler or bone working and even potentially associated with human remains. Examples of such sites in Britain would include some of the activity areas at Star Carr (Clark 1954) associated with antler frontlets, stone bead production sites such as at Nab Head in Wales (David 1989) or the scatter on Risga associated with bone working including fish hooks (Pollard 2000).

13.1.24 Level VI scatter would require site specific methodologies after considered discussions with relevant specialists and the county archaeologist. However, they would include as standard the 3D recording of all flints greater than 10mm MLD and also of smaller tool/tool fragments. Organic materials would also require similar levels of recording if they were present on site such as at an antler working station. Excavation may be required on a tighter grid interval, perhaps as low as 0.25m but more likely at 0.5m. Sampling would be at 100% with an increased level being put through full flotation. Again most of these levels would be determined by the nature of the exceptional discoveries.

13.1.25 If cut (eg pits) or positive (eg hearths) features are shown to be present on or during the removal of lithic-bearing deposits, then these will require investigation. Initially, the area will then be extended by removal of the lithic-bearing deposit(s) from adjacent squares so as to expose and define the features. It will be the intention to reveal any features or feature-complexes in their entirety, if possible. For example, a structure, such as a building with a hearth, would be exposed and excavated as a discrete entity. Pre-excavation photographs will be taken using both digital and analogue cameras, and any feature complexes will be photographed from overhead.

13.1.26 The features will be 100% excavated by context in spits of between 0.02-0.05m. At least one section will be drawn and photographed to record the stratigraphic sequence of deposits within the feature. Normally, the feature will be excavated in two halves or by quadrants, with half the deposit being removed, the section(s) recorded, and the remainder of the deposit excavated. However, if complex elements such as *in situ* hearths are found within features, consideration will be given to excavating these in plan.

13.1.27 Any finds within the features will be given a unique identifying number and recorded in three dimensions. The spoil generated by excavation will be collected by context and intervention, although in certain circumstances it may also be appropriate to differentiate the arisings from individual spits. These samples will be wet sieved for finds retrieval.

13.2 Recovery of artefacts from the topsoil

13.2.1 In a number of areas it is suspected that the archaeological horizon may have been disturbed by later activity, in particular ploughing resulting in flint artefacts being dispersed into the topsoil. In order to test and if necessary mitigate this and recover artefacts from the topsoil a programme of hand-excavated shovel and test pits and sample sieving of topsoil will be implemented where indicated in the site strategies. During this process the general site surface area will also be monitored and any surface flints collected and recorded. However, further formal field walking as such will not be undertaken due to the general ground conditions and proposed mitigation by test pitting.

13.2.2 **Shovel Pits.** These are rapidly hand excavated pits, dug on a formal grid layout which will be surveyed in. They will not be 'neatly finished' and stratigraphy etc will not be recorded. Excavation will consist of the removal of 80-100L of top/subsoil to a maximum depth of 0.5m (or higher if the archaeological horizon is reached first) This spoil will be hand sifted by the archaeologist excavating the pit, hand sieves may also be used. Artefacts retrieved will be bulk recorded by pit location.

13.2.3 **Hand Excavated Test Pits.** These are hand excavated test pits, also dug on a formal grid layout with wider spacing than the shovel pits (grid will be consistent with shovel pit grid, though test pits will be off set from shovel pits to maximise coverage). They will be 1x1m and dug to a maximum 0.5m depth or the archaeological horizon if that is reached first. These will be neatly squared off and records of stratigraphy etc made as required. Spoil will be hand sifted for artefacts and an 80L bulk sample retrieved from the topsoil in each pit (to be taken immediately above the archaeological horizon if visible). This sample will be wet sieve processed on site for retrieval of artefacts including microliths. Material of archaeological significance will be collected and labelled by pit.

13.2.4 Should five or more artefacts of broad chronological association be recovered from any single test pit or a similar concentration noted during the shovel pitting exercise then consideration will be given as to whether additional test pits or alternative investigation should be undertaken in the immediate vicinity in order to further characterise the nature of the material in the topsoil. A key aim of such work would be to estimate the probable level of disturbance/truncation which has occurred to underlying deposits and the relative significance/value of artefacts in the topsoil.

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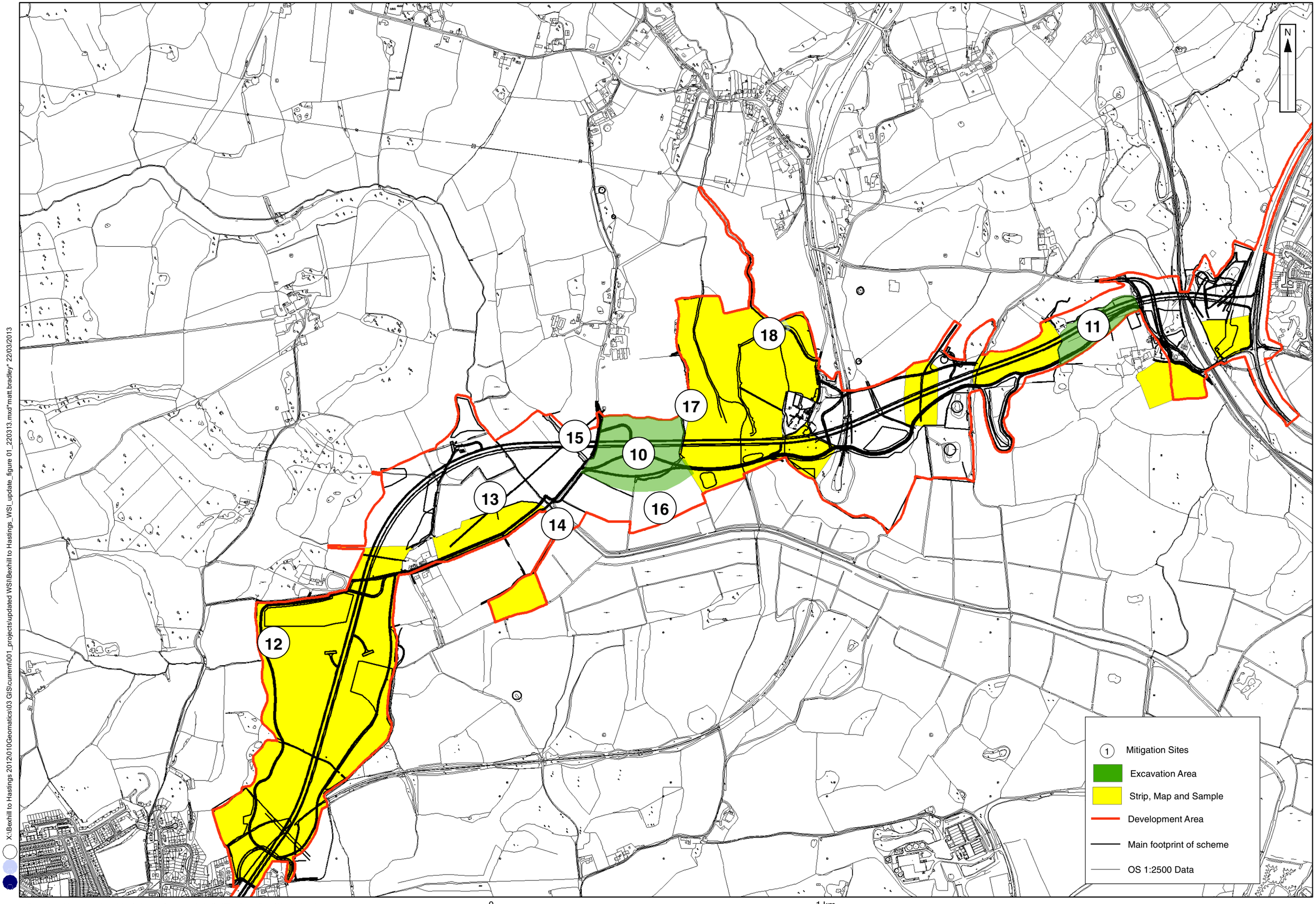

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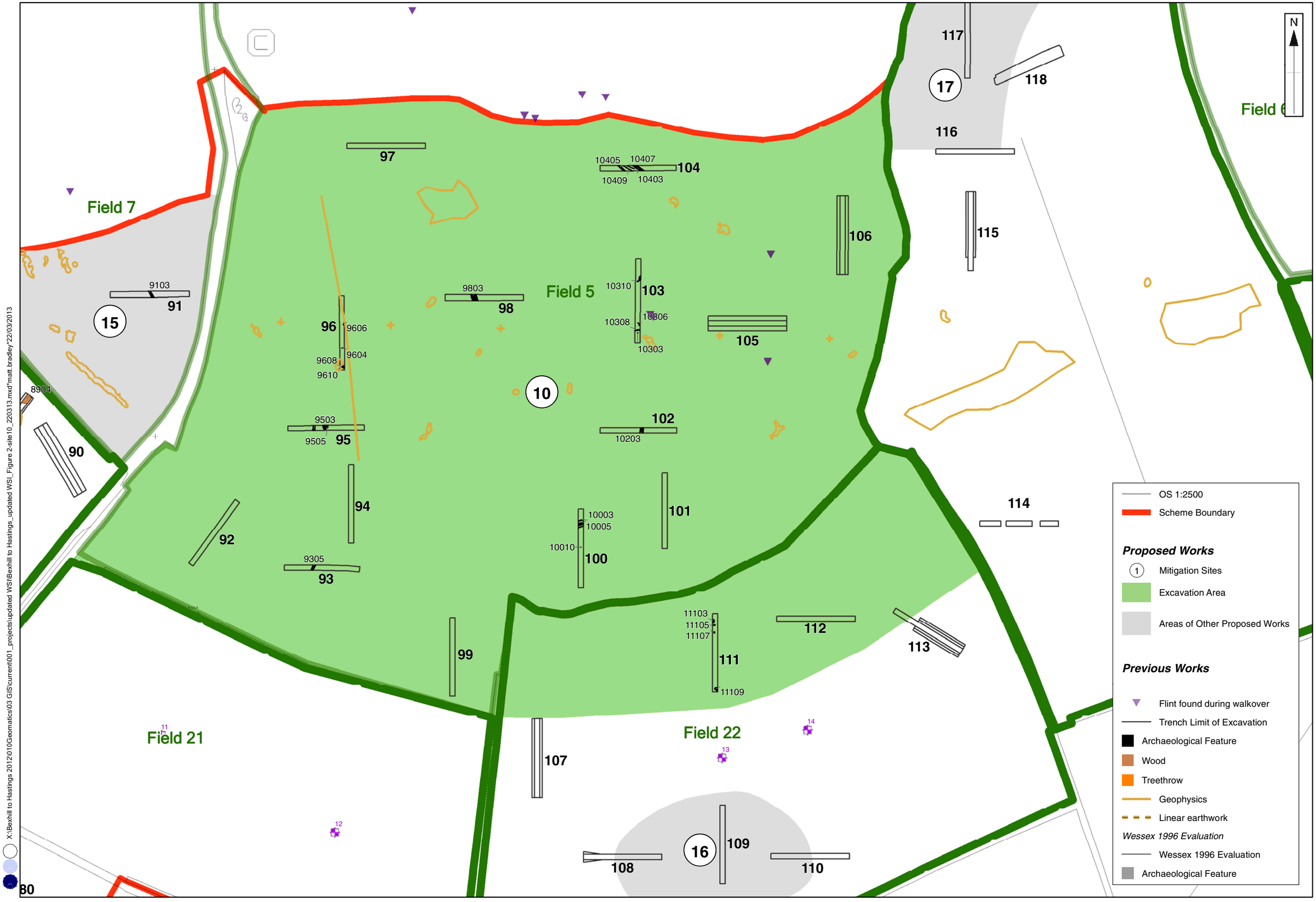
Figure 1: Proposed Mitigation Sites



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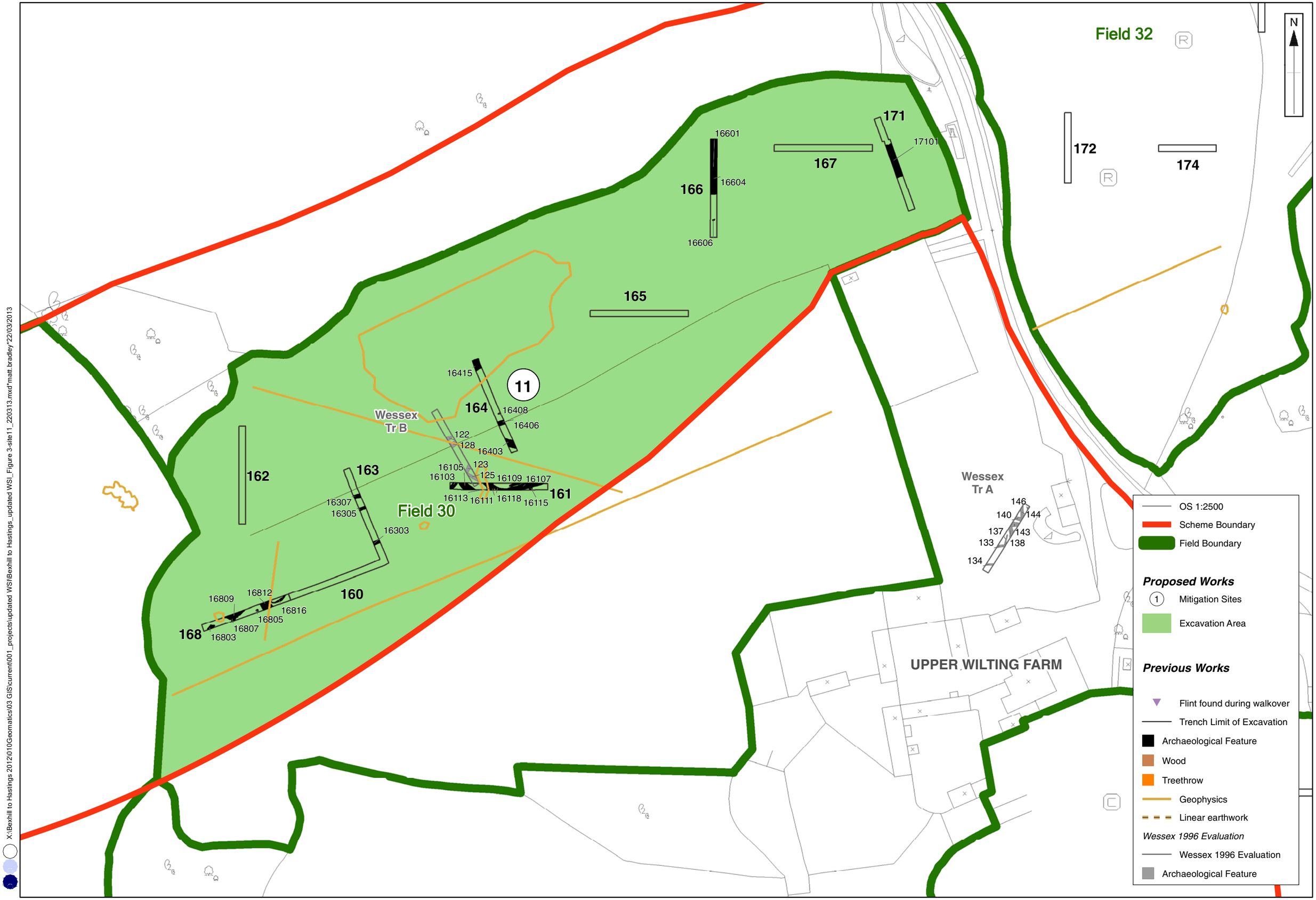
0 50 m

Scale at A3 1:1,250

Figure 2: Site 10



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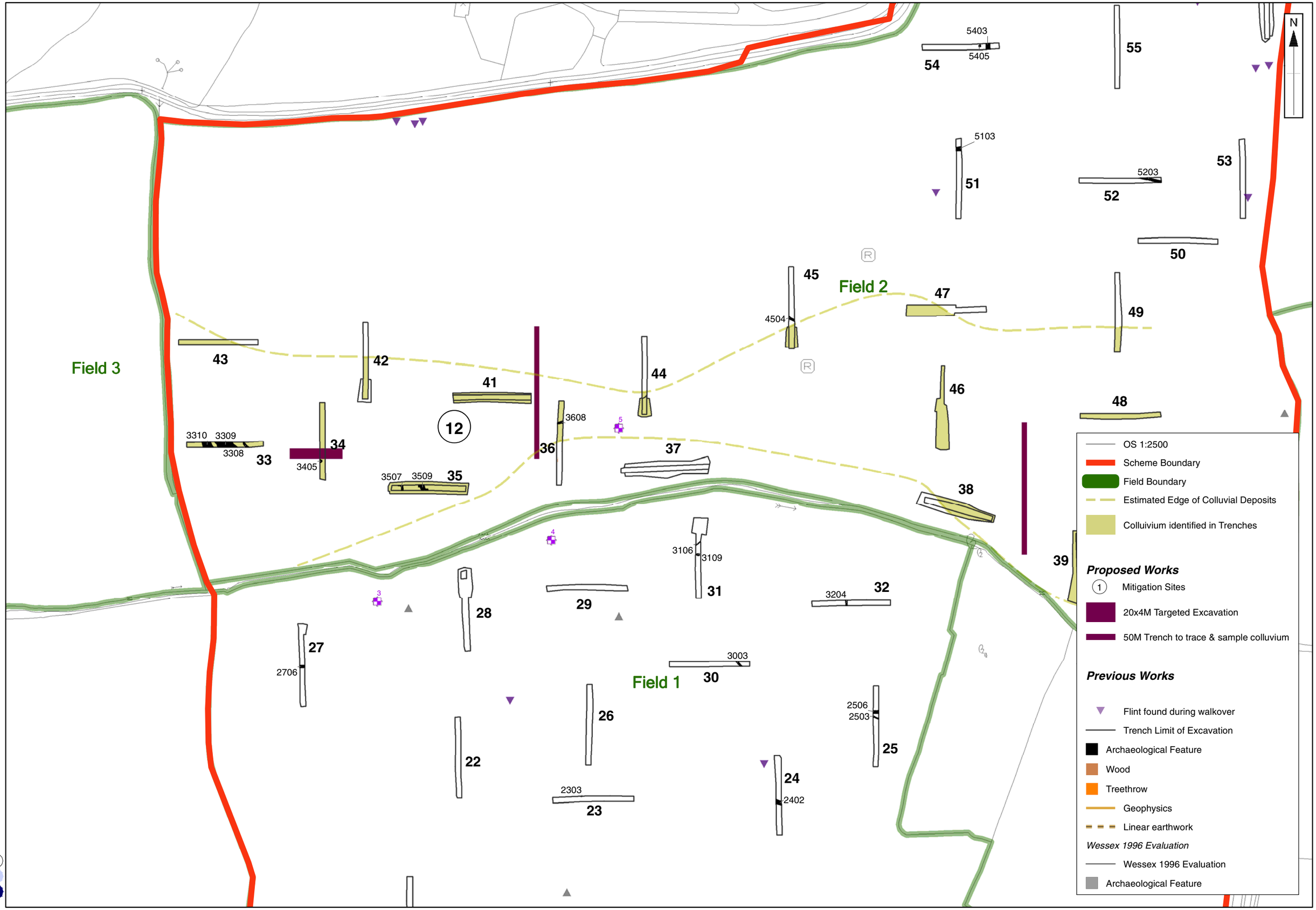
0 50 m

Scale at A3 1:1,000

Figure 3: Site 11



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0 50 m

Scale at A3 1:1,250

Figure 4: Site 12

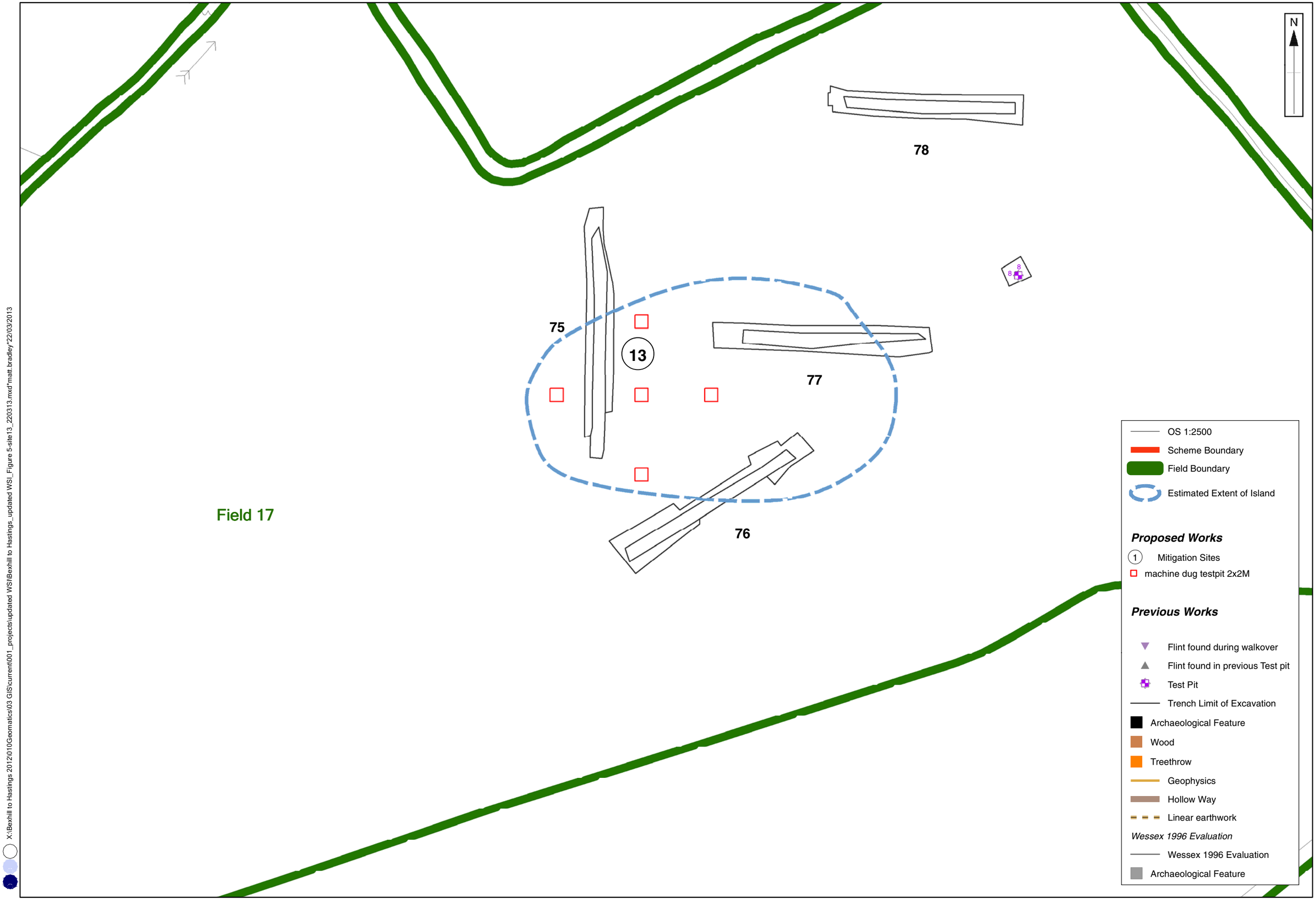

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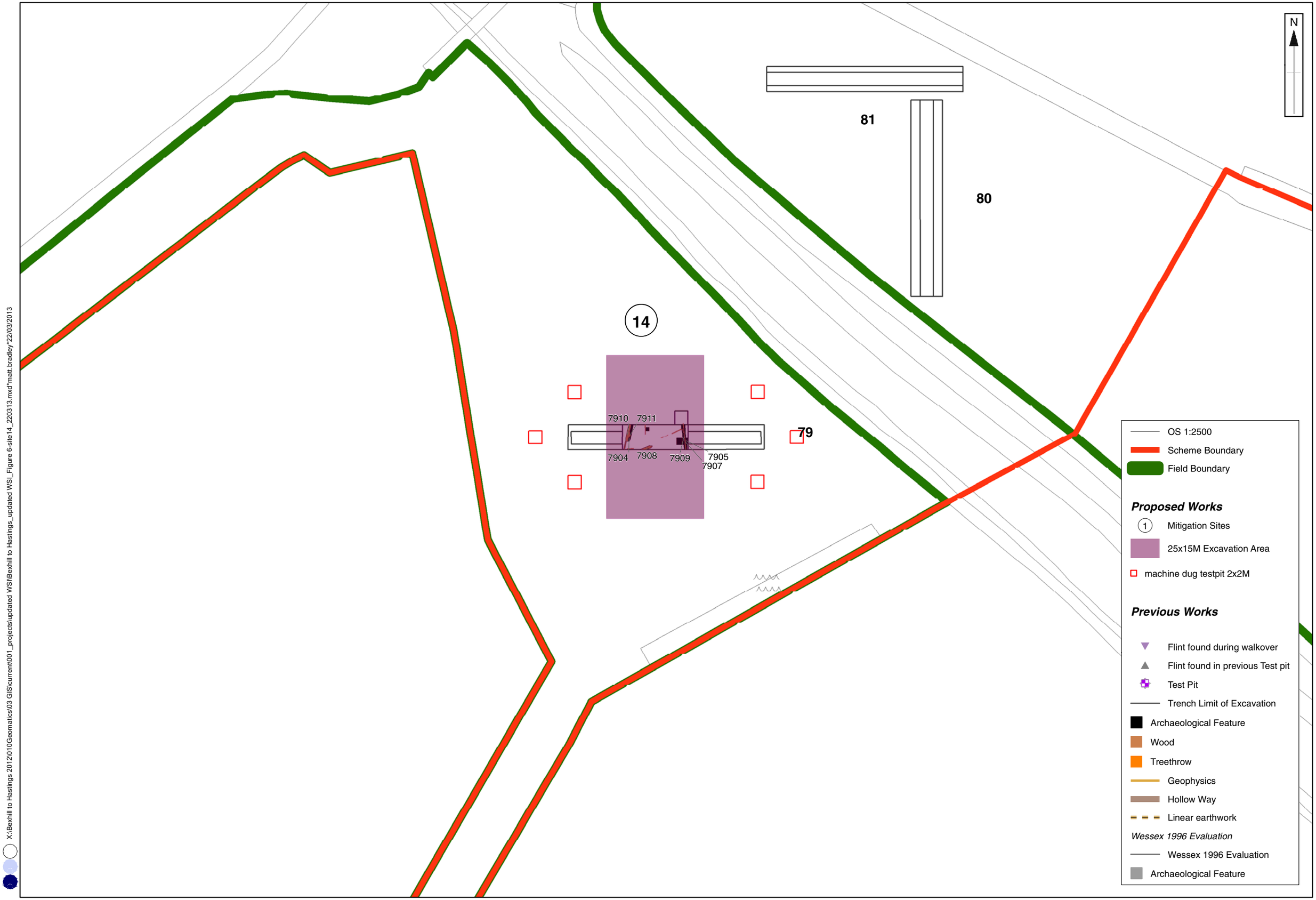
Figure 5: Site 13



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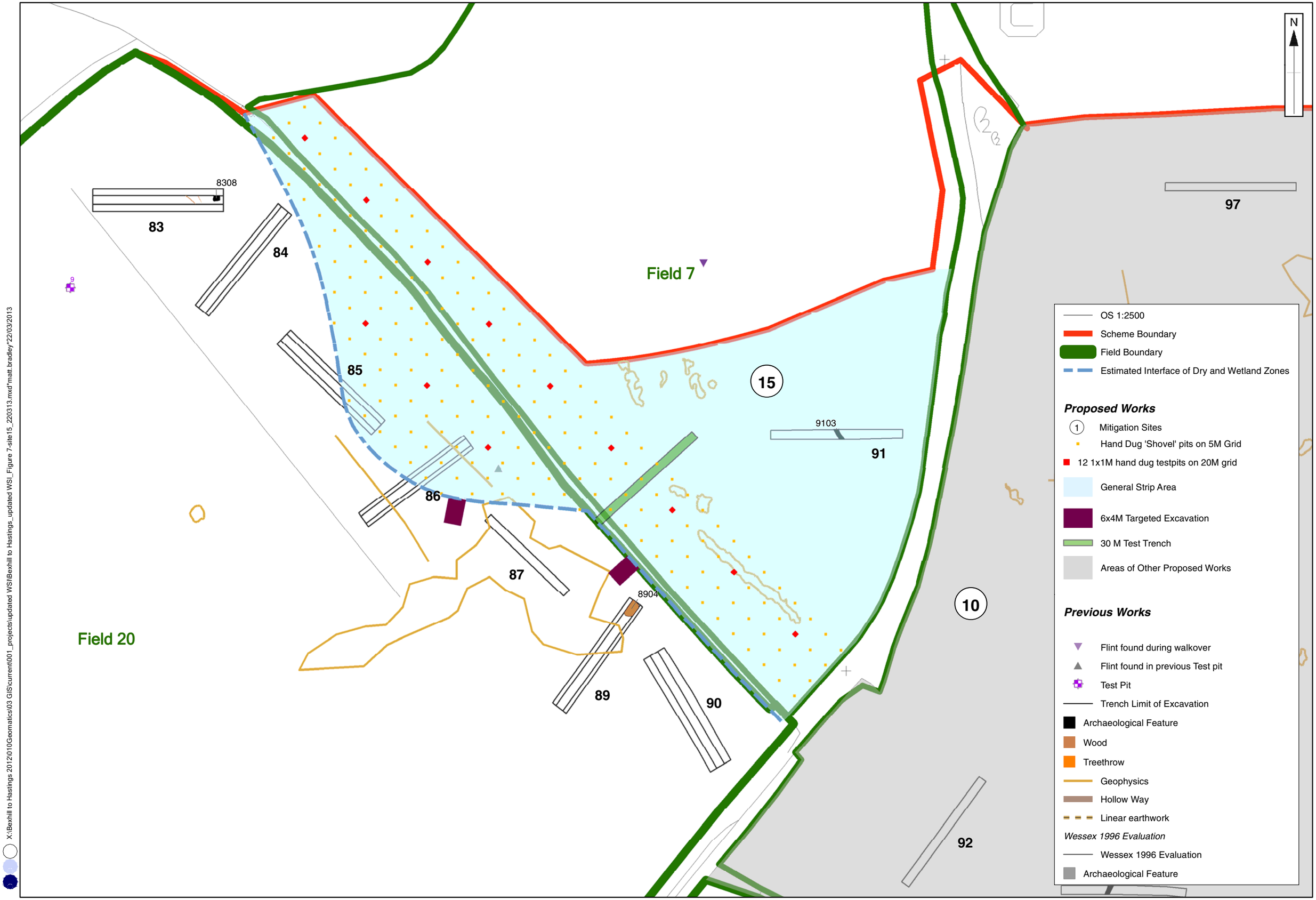
0 50 m

Scale at A3 1:500

Figure 6: Site 14



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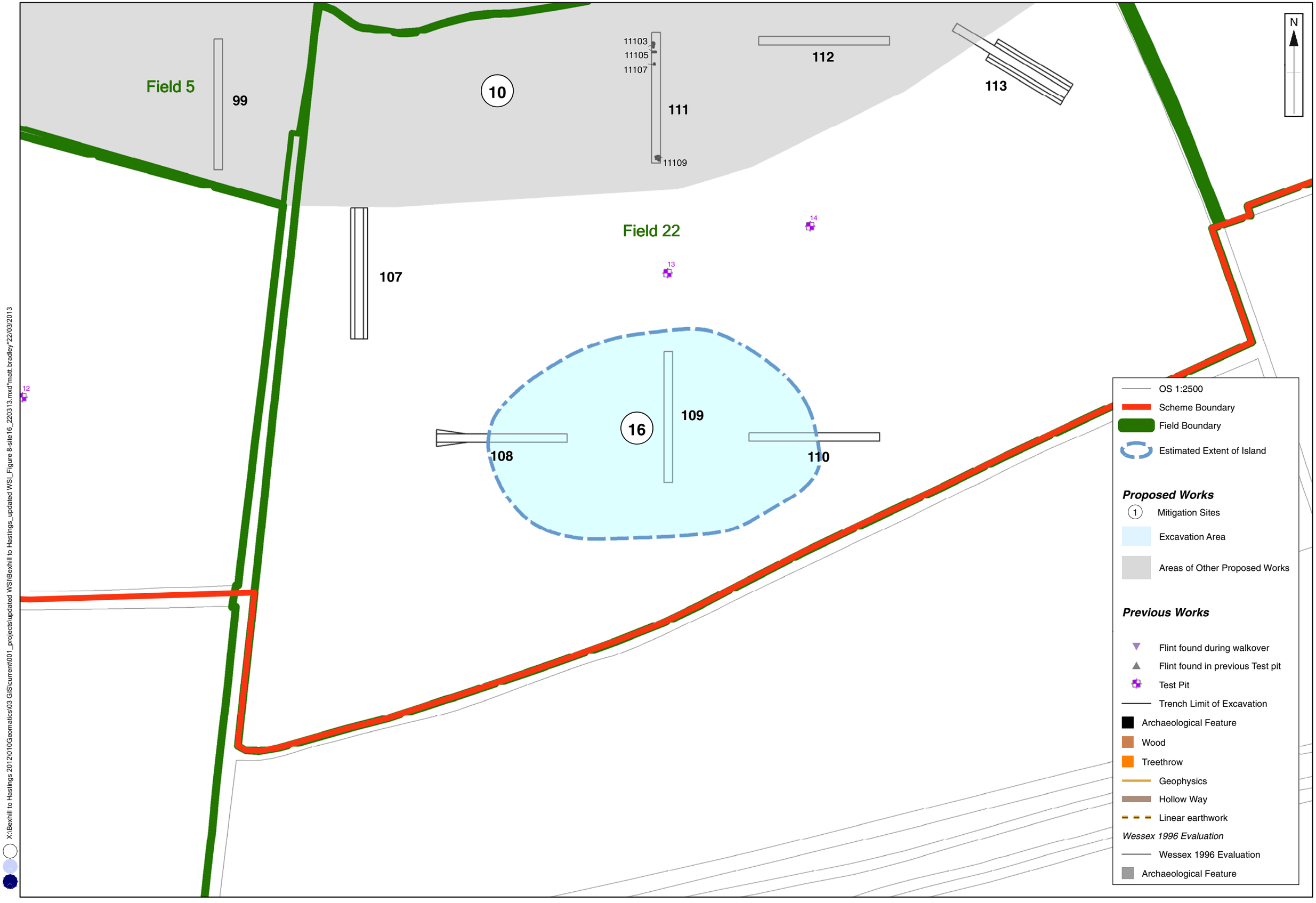
0 50 m

Scale at A3 1:750

Figure 7: Site 15



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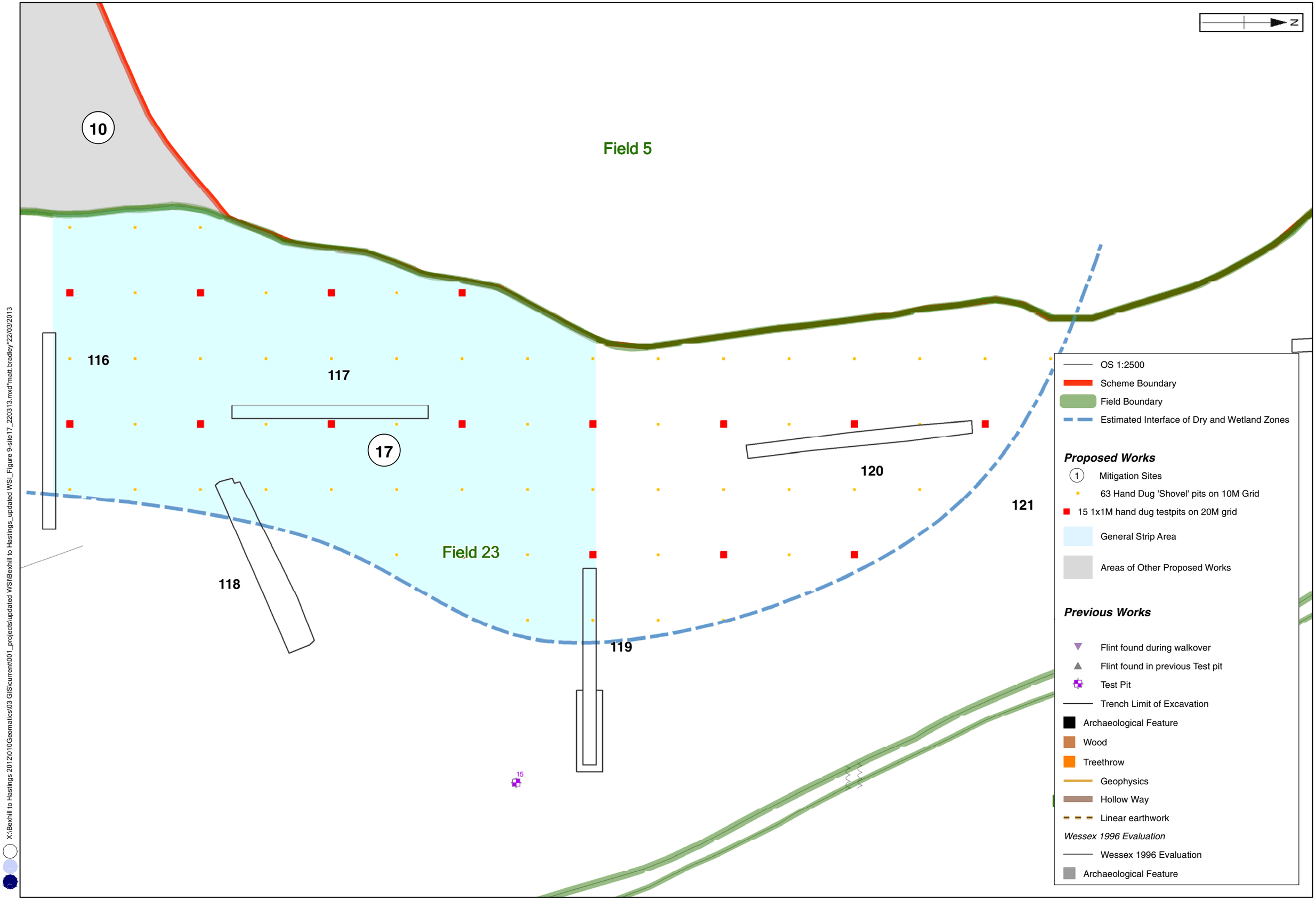
0 50 m

Scale at A3 1:750

Figure 8: Site 16



0 50 m

Scale at A3 1:500

Figure 9: Site 17

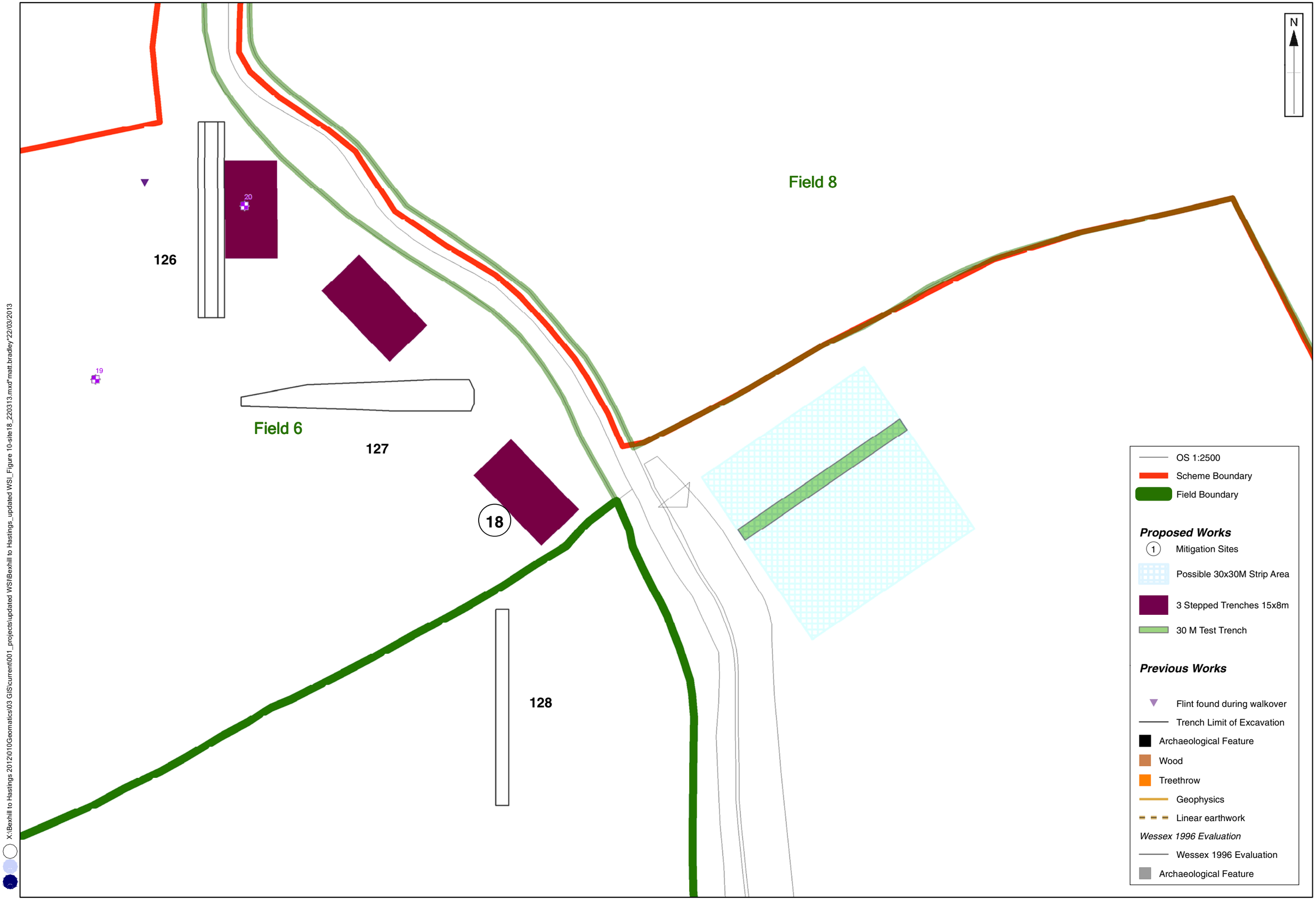


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Figure 10: Site 18