1EW03 – Enabling Works Central

AWHe – Interim Report for Trial Trench Evaluation at Field H, Hunts Green Farm (Grim's Ditch Environs, AC210/15)

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C01	11/05/2021	V. Hughes, D. Fernandes, S. Wilson	S. Roper	D. Bonner	For acceptance

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1 Executive Summary

1.1.1 An archaeological trial trench evaluation was undertaken on land at Field H, located adjacent and to the north-east of the main fields of Hunts Green (C21023), evaluated in 2020. The work lies within the environs of Grim's Ditch, Buckinghamshire (henceforth the 'Site'). The site code allocated for this work was 1C19HGFTT. The Site is located to the east of the Grim's Ditch Scheduled Monument (List Entry 1021198), the archaeological investigation of which is covered by a separate Project Plan (1EW03-FUS-EV-REP-CS03_CL05-009409).

1.1.2 The Site (C21046) lies off Kings Lane, 2km due north of Great Missenden, Buckinghamshire. The evaluation was targeted on land required for the main rail alignment, which in this section will be in a cutting, as well as associated engineering works that include environmental bunds and tree-planting alongside the cutting as well as land needed for temporary soil storage areas as outlined in the Project Plan (1EW03-FUS-EV-REP-CS03_ CL05-009432) and followed the methodology laid out in the Location Specific Written Scheme of Investigation (1EW03-FUS-EV-REP- CS03_CL05-000002).

1.1.3 A total of 22 trenches were excavated, investigated and recorded between 12th and 23rd April 2021. Of these 11 revealed features of archaeological origin. The majority of the features were ditches but there were several pits and possible postholes. The ditches were of variable dimensions and orientations and contained a small number of fills in most instances.

1.1.4 There was a concentration of features focused on Trenches 1009, 1010, 1011, 1021 and 1022. Most of the features contained reasonable pottery assemblages of probable medieval or post-medieval date as well as metal working slag. The presence of slag suggests that metal working was likely taking place within the vicinity of the Site but no in-situ industrial remains were identified, although an area of baked clay was noted in Trench 1010.

1.1.5 Several ditches appeared to be of later post-medieval date and in several cases corresponded to visible earthworks and undulations within the site.

1.1.6 A total of nine trenches were blank or contained only field drains, while two trenches contained features which, upon investigation were determined to be of probable natural origin.

1.1.7 The key findings are summarised in this Interim Report in order to inform subsequent decision making for any further archaeological works at the Site.

2 Site Location

2.1.1 The Site lies off Kings Lane, 2km due north of Great Missenden railway station, centred on 489630 203382. It occupies high ground, with the Misbourne Valley, Woodlands Park and the A413 Aylesbury Road to the west and Hunts Green Farm and the buildings of The Lee village to the east (Figure 1).

2.1.2 The Site lies within Community Forum Area 10 (Dunsmore, Wendover and Halton) and is within Archaeological Sub-Zone (ASZ) 2: Land to the West of Hunts Green Farm including the Grim's Ditch Scheduled Monument (NGR 489270 203580).

2.1.3 The Site consists of a sub-rectangular plot of land comprising a single pasture field, with remnants of former sub-dividing field boundaries still visible. The Site occupies an area of 6.016ha (Fusion Site GIS ID Ref: C21046) and the fields were under pasture during the works. The ground conditions on Site during the fieldwork were generally firm.

2.1.4 The Site is within the hinterland of the surviving earthworks of the Cottage Farm section of the Grim's Ditch Scheduled Monument (henceforth referred to as 'Grim's Ditch').

3 Methodology

3.1.1 The evaluation was undertaken as outlined in the Project Plan (1EW03-FUS-EV-REP-CS03_CL05-009432) and followed the methodology laid out in the Location Specific Written Scheme of Investigation (1EW03-FUS-EV-REP- CS03_CL05-000002) and the issued Fieldwork Change Control for Hunts Green Farm, Buckinghamshire FCCF175 (1EW03-FUS-EV-FRM-CS03_CL05-000011). A total of 22 trenches were excavated, no trenches were descoped and five were moved through change control (Figure 2).

3.1.2 The work commenced with the excavation of 66no. 0.50m x 0.50m test pits through the topsoil within the footprint of each trial trench (3 per trench, Figures 5 and 6), with all excavated soil sieved for unstratified artefact collection.

3.1.3 The footprint of each evaluation trench was also subject to metal detecting prior to excavation, as well as features subsequently revealed within the trenches in order to assist with artefact recovery.

3.1.4 This was followed by the excavation of 21 evaluation trenches, of which 20 measured 30m x 2m and one (Trench 1010) measured 30m x 4m. An additional evaluation trench (Trench 1022), making 22 trenches in total, was also excavated as part of the trench allocation from the Phase 1 Hunts Green trial trenching within the adjacent fields. This was done in order to better understand some of the early results.

Aims

3.1.5 The general aims of the trenching were to:

- confirm the presence/ absence, extent and depth of any surviving archaeological remains within the Site
- determine the nature, date, condition, state of preservation including any preservation bias, complexity and significance of any archaeological remains
- determine the likely range, quality and quantity of artefactual and environmental evidence present
- suggest measures, if appropriate and feasible, for further archaeological investigation to mitigate identified significant impacts
- contribute to the delivery of GWSI: HERDS Specific Objectives as specified in Section 4.2 of the project plan.

3.1.6 The LSWSI: HERDS Specific Objectives of the Trial Trench Evaluation were:

- KC2: Explore the location of Palaeolithic deposits, reconstruct past environments and investigate the relationship between climate variation and phases of human activity.
- KC5: Identifying settlement location and developing models for settlement patterns of the Mesolithic, Neolithic and Early Bronze Age.
- KC13: What was the date of the establishment of Grim's Ditch? What impact did it have on the landscape following its construction?
- KC15: Can we identify regional patterns in the form and location of Late Bronze Age and Iron Age settlements across the route, and are there associated differences in landscape organisation and enclosure?
- KC16: Investigate the degree of continuity that existed between Late Bronze Age and Iron Age communities in terms of population, mobility and subsistence strategies.
- KC18: Explore the evidence for increasing social complexity in the archaeological record in the Late Bronze Age and Iron Age and identify patterns of intraregional and regional variation.

Change Controls

3.1.7 The relocation of 4 of the 21 trenches from their original locations was implemented through change control, due either to proximity to existing hedges or bat roosting trees, and an additional trench was excavated.

3.1.8 Where these trenches targeted geophysical anomalies they were adjusted to target the same anomalies, and maintain approximately the same orientation, within the constraints of the Site.:

- Trench 1005 was moved 5m to the east and maintained the same alignment, to avoid an existing hedge. (Change Control Doc No. TBC)
- Trench 1012 was moved 5m to the south and maintained the same alignment, to avoid an existing hedge. (Change Control Doc No. TBC)
- Trench 1019 was moved by 5m from the south and maintained the same alignment, to avoid a high potential bat roosting tree. (Change Control Doc No. TBC)
- Trench 1020 was rotated 90 degrees anticlockwise by moving the eastern end further south. This avoided a mature tree and targeted geophysical anomalies and also crossed an existing earthwork in the field at right angles, rather than obliquely. (Change Control Doc No. TBC)
- Trench 1022 was established as the result of on-site discussions with Jay Carver and the pending / unexcavated Trench 072 was de-scoped from the main field and used to determine the path of the significant ditch seen in Trench 1010 in Field H (Change Control Doc No. TBC)

4 Factual Summary of Key Archaeological Findings

Site Geology

4.1.1 The underlying bedrock comprises chalk of the Lewes Nodular Chalk/Seaford Chalk Formations, formed approximately 84 to 94 million years ago in the Cretaceous Period in a local environment previously dominated by shallow seas, which are overlain by deposits of clay, silt, sands and gravels of the Clay-with-Flints formation laid down up to 23 million years ago, (BGS 2020).

4.1.2 Soils are described as well-drained flinty fine silty soils, over chalk or chalk rubble on the valley sides varying to well drained fine silty or loam, and variably flinty over chalk (Cranfield Online 2020).

4.1.3 The general absence of subsoil observed within most of the trenches demonstrates the Site has been truncated by ploughing, with 0.3m thick topsoil directly overlying the natural clay-with-flints geology for most of the area. The only intermittent areas of subsoil present were either preserved in the depressions of underlying archaeological features or within the northern part of the Site in the vicinity of Trench 1006 (Appendix 3).

Test Pitting and Metal Detecting Archaeological Results (Figures 5-6)

4.1.4 The 66 test pits (Figures 5-6) did not produce a single artefact. No notable concentrations of finds that warranted immediate further investigation were identified. Similarly, the results from any single test pit were not sufficiently significant to warrant individual discussion.

4.1.5 Metal detecting within the trench footprints only recovered a very limited number of slag fragments from within the topsoil. There were no notable scatters of metallic artefacts to indicate further investigation would be required.

Trial Trench Evaluation Archaeological Results (Figures 2-4)

4.1.6 Archaeological features were found in 11 of the 22 excavated trenches. The features were mostly concentrated within the eastern central portion of the Site, although with some dispersed features to the north and south.

4.1.7 The types of archaeological features uncovered were predominantly linear ditches, but several pits and possible postholes were also noted. There were no structural or in-situ industrial remains preserved on the Site, although an area of baked clay was noted in Trench 1010.

4.1.8 Trenches were categorised in the following manner:

Table 1 Provisional qualification of trenches

Category	Description	Trench No.	Total No.
B - Blank	Trenches contained no features, or only land drains	1001, 1002, 1007, 1008, 1013, 1014, 1015, 1017, 1019	9
N - Natural	Trenches had features which were investigated and determined to be of Natural	1005, 1016	2

	origin, either rooting or geological.		
L – Low Significance	Trenches had features which were investigated and were: of ambiguous origin, but probably natural; single isolated, undated discrete features; or single post-med features.	1003, 1006, 1020	3
M – Moderate Significance	Trenches had features which were investigated and there were several features of possible archaeological origin, with only poor or no finds assemblages.	1004, 1012, 1018	3
H – High Significance	Trenches had features which were of archaeological origin.	1009, 1010, 1011, 1021, 1022	5

4.1.9 Blank trenches and those with only land drains or natural features are discounted from the remaining descriptions and discussion.

4.1.10 In terms of stratigraphic relationships, the majority were relatively simple single event features, with a single fill. There were only a few instances of intercutting features, as either the result of the interplay between natural features and man-made ones, or a recutting of original features, rather than the result of major re-establishment activity belonging to different periods. Features were sealed by the topsoil and subsoil and truncated the geological substrate.

Field H (Figures 4 and 5)

4.1.11 A total of 22 trenches were excavated within Field H (Trenches 1001-1022). Nine trenches were blank or contained only field drains (Trenches 1001, 1002, 1007, 1008, 1013, 1014, 1015, 1017 and 1019).

4.1.12 Two trenches contained a small number of features which when investigated were determined to be of probable natural origin (Trenches 1005 and 1016).

4.1.13 The remaining 11 trenches all contained features of archaeological origin (Trenches 1003, 1004, 1006, 1009, 1010, 1011, 1012, 1018, 1020, 1021, 1022). The majority of the features were ditches but there were several pits and possible postholes. The ditches were of variable dimensions and orientations and contained a limited number of fills in most instances. Most features contained good finds assemblages, although a small number were undated.

4.1.14 Spot dates for individual features are contained within Appendix 3 but are subject to change after specialist input.

Trench 1003

4.1.15 Four features were noted within the trench. Linear ditch [100302] had a gentle V-shaped profile and two fills with a small assemblage of probable Roman pottery recovered from top fill. The feature was orientated east-west but north of the present east-west hedge line.

4.1.16 Ditch [100305] had a gentle V-shaped profile and contained one gradually accumulated fill from which a sherd of pottery (date uncertain) was recovered. It was orientated east-west but north of the present east-west hedge line, broadly parallel to [100302].

4.1.17 Linear feature [100307] was shallow and east-west aligned, possibly a truncated ditch or perhaps more likely, bioturbation related to a former hedgerow.

4.1.18 Straight sided, flat based linear feature [100309] was east-west aligned and situated to the immediate south of [100307]. It was interpreted as a possible ditch and contained a small assemblage of pottery (date uncertain) and a piece of slag.

Trench 1004

4.1.19 Trench 1004 contained a small probable ditch [100402]. It contained a gradually accumulated grey fill but no finds.

4.1.20 Feature [100404] appeared as a regular linear feature in plan but upon excavation was found to be shallow with uneven edges, possibly part of a tree throw hole or the very base of a heavily truncated ditch. A vessel base of possible Roman date was recovered from the single fill.

Trench 1005

4.1.21 A possible linear or sub-oval feature [100504] was recorded towards the western end of the trench, but partly obscured by the north-western trench baulk. It contained a gradually accumulated pale grey fill and was interpreted as likely to have been naturally formed.

Trench 1006

4.1.22 A linear ditch [100604] was present at the north-western end of the trench which contained gradually accumulated grey fill. It appeared visible as a slight earthwork still extant within the field. Possible Roman pottery was recovered from the fill which was also paleo-environmentally sampled.

4.1.23 Ditch [100606] was located towards the south-eastern end of the trench and contained a gradually accumulated mid brownish grey fill. A small assemblage of possible Iron Age/Roman pottery was recovered, and a palaeo-environmental sample taken.

Trench 1009

4.1.24 Small ditch [100902] was located towards the centre of the trench. It had two fills, the lower of which contained small quantities of charcoal and probable Iron Age to Roman pottery, as well as a residual nearly complete barbed and tanged flint arrowhead of probable Early Bronze Age date. The lower fill was environmentally sampled. The feature appeared to correspond with a slight extant earthwork within the Site.

Trench 1010

4.1.25 A total of eight features were identified within Trench 1010. A discrete sub-circular feature [101002] was interpreted as the possible remains of posthole. Feature [101006] was a small, rounded patch of heat affected natural clay, at the south-eastern end of the trench. It appeared to be discoloured and part baked through proximity to heat, possibly as the result of an overlying feature which had been truncated away. A palaeo-environmental sample was taken. It was further explored through sondage [101011] which suggested that the heat affected area was larger than that seen on the surface.

4.1.26 North-east – south-west aligned possible ditch [101004] was recorded at the north-western end of the trench, but the full width was not exposed in plan. It had steep sides and was truncated by later field drain (with stone fill). It contained a small assemblage of possible medieval pottery and a piece of slag.

4.1.27 Feature [101012]/[101022] was a wide ditch which had a gently sloping V-shaped profile and contained two fills including one extremely rich in slag and medieval pottery (101013), sealed by a browner more clay rich fill (101024). It was aligned north-west – south-east and appeared to continue into Trench 1022. Fill (101013) was sampled. This ditch appeared to truncate an earlier ditch terminal [101004]/[101020] which also yielded an assemblage of medieval pottery and slag.

4.1.28 Possible pit [101015] was shallow and sub-circular in plan. It contained a single fill with charcoal and a small amount of slag, which was also palaeo-environmentally sampled. Feature [101018] was smaller but of a similar form and profile, as well as the single fill being notably similar and also containing charcoal and small volumes of slag. It too was sampled, although was truncated by a land drain so some contamination of the sample is possible.

Trench 1011

4.1.29 A total of six features were present within Trench 1011. Ditch [101102] had a wide gently sloping V-shaped profile and contained two fills from which a moderate assemblage of medieval pottery and slag were recovered. It was aligned approximately east-west.

4.1.30 Ditch [101106] also had a gently sloping V-shaped profile and two fills. A small collection of probable medieval pottery was recovered.

4.1.31 Wide linear feature [101109] was interpreted as a possible ditch, which was truncated by a ceramic field drain. It was stratigraphically later than an underlying circular feature [101111], a probable post hole or small pit, which contained a moderate assemblage of medieval pottery and slag. A further possible post hole [101104] was noted centrally within the trench.

4.1.32 A sub-circular pit [101114] was partially exposed at the southern end of the trench, with slag and medieval pottery recovered from the single fill.

4.1.33 Discrete feature [101115] appeared to be a regular terminal in plan but on excavation was found to be shallow with uneven edges, possibly a root hollow or very base of a heavily truncated pit.

Trench 1012

4.1.34 Ditch [101202] was located centrally within the trench, aligned approximately north-east – south-west. It contained a single, gradually accumulated brownish grey fill and no finds.

4.1.35 Ditch [101206] was recorded at the northern end, on a parallel alignment with [101202]. It similarly contained a gradually accumulated mid brownish grey fill and also no finds.

4.1.36 A probable irregular root hollow [101204] was also present, which did not contain any finds.

Trench 1016

4.1.37 Feature [101604] appeared regularly sub-circular in plan but on excavation was found to be shallow with uneven edges, possibly a root hollow or very base of a heavily truncated pit. No finds present.

4.1.38 Upon investigation, suspected linear feature [101602] was found to contain a ceramic field drain.

Trench 1018

4.1.39 A single ditch [101802] was located towards the centre of the trench aligned approximately north-south. It contained a gradually accumulated mid brownish grey fill. A fragment of probable medieval pottery and a piece of metalworking slag were recovered from the fill.

Trench 1020

4.1.40 Trench 1020 contained three features within the north-eastern part of the trench, all on the same north-west – south-east alignment. At the north-eastern end was ditch [102002], the full width of which was not fully exposed, but which contained a moderate assemblage of pottery and slag. The central feature [102004] was wide and shallow and appeared to be a deposit surviving in a slight undulation of the underlying natural substrate rather than a cut feature. A small assemblage of medieval pottery and slag was recovered from the single fill which may have been comprised of a subsoil remnant.

4.1.41 Ditch [102006] had a wide, slightly stepped profile and contained two fills, and appeared to correspond with a partially denuded but still extant field boundary earthwork. A small pottery assemblage of medieval/post-medieval date was recovered.

Trench 1021

4.1.42 Oval pit [102102] contained a single fill with charcoal and a small amount of pottery and slag. It was environmentally sampled.

4.1.43 Ditch [102108] was aligned approximately north-east – south-west and appeared to correspond with an existing slight earthwork in the field. It contained one gradually accumulated fill which produced a fragment of medieval/post-medieval CBM and two fragments of slag.

4.1.44 A linear shallow feature [102109] present at the northern end of the trench but not fully exposed, appeared to be a deposit surviving in a slight undulation of the underlying natural substrate rather than a cut feature. It contained a very small assemblage of medieval pottery and slag.

4.1.45 Subcircular feature [102111] was interpreted as a possible posthole. It did not contain any finds.

4.1.46 A stone filled field drain [102104] contained a fragment of pottery and slag, although this was thought to be residual.

Trench 1022

4.1.47 Ditch [102206] was positioned in the centre of the trench and aligned east – west, possibly representing a continuation of one of the ditches from Trench 1010. It had a stepped but generally V-shape profile and contained a sequence of three fills which produced post-medieval pottery and slag. It appeared to truncate an earlier but undated ditch [102211].

4.1.48 Curvilinear ditch [102204] was located at the northern end of the trench. A small assemblage of pottery was recovered from the single fill, which was notably truncated by a ceramic land drain.

4.1.49 Ditch [102213] was narrow in plan and located within the northern half of the trench. It contained a very small amount of pottery and slag within a single fill.

Correlation with Geophysical Survey

4.1.50 The correspondence of features and geophysical anomalies was inconsistent, with some features being corroborated in Trenches 1010 and 1011 such as the broadly north-east – south-west orientated slag-rich features. Other features such as those in Trenches 1003, 1004 and 1012 were not visible on the geophysics. Overall, the geophysics was determined to be a relatively unreliable indicator of the presence of the more subtle archaeological remains.

5 Interim Artefactual Summary

5.1.1 The bulk finds recovered during the second phase of Trial Trench Evaluation comprised 1680 artefacts and ecofacts, weighing 94,420kg. The assemblage displayed material of prehistoric to modern date and was mainly composed of slag or production process residues (76%), pottery (20%), ceramic building material (2%), metal objects (1.25%), clay pipe (0.25%), coal (0.25%) and flint (0.25%).

5.1.2 The finds were largely fragmented but in otherwise stable condition. The largest assemblage recovered from this site was represented by metalwork production residues or slags, indicate ironworking was taking place nearby. Prehistoric elements were merely represented by flint objects - one possible side scraper and one barbed and tanged arrowhead with fragmented barbs and rounded tang. Pottery fragments were predominantly medieval ceramics, although there were also a very small number of sherds that could fit Roman, post-medieval and modern chronologies. The ceramics were mostly undiagnostic body shards, nevertheless various rims, base sherds or decorated fragments did feature in the group. All finds have been cleaned, safely stored and quantified by material type and trench, as summarised below (Table 1).

Table 2 Provisional quantification and dating of artefactual remains from features

Artefact Type	Trench No.	Estimated quantity (count)	Weight (grams)	Provisional date
Ceramic: Ceramic building material	1002; 1003; 1004; 1007; 1009; 1010; 1013; 1016; 1020; 1021; 1022	24	1780	Medieval – Post medieval
Ceramic: Roman Pottery	1003; 1004; 1006; 1009;	24	196	Roman
Ceramic: Medieval Pottery	1003; 1010; 1011; 1018; 1020; 1021	310	3872	Medieval
Ceramic: Post Medieval – Modern Pottery	1003; 1004; 1010; 1022; Unstratified	9	48	Post Medieval - Modern
Clay Tobacco Pipe	1003; 1004; 1022	7	16	Post medieval – Modern
Coal	1004	1	4	Uncertain
Flint	1009; 1010; 1011; 1021	4	13	Prehistoric
Metalwork	1005; 1010; 1011; 1020; Unstratified	16	515	Uncertain
PPR / Slag	1003; 1006; 1009; 1010; 1011; 1018; 1020; 1021; 1022	1285	87976	Uncertain

5.1.3 The 66 test pits did not recover any artefacts and similarly the metal detecting recovered a small assemblage of slag, but due to the very limited volumes, on Site both were incorporated into the contexts from which they were recovered.

6 Interim Palaeo-Environmental Summary

6.1.1 Palaeo-environmental sampling took place on 14 suitable deposits identified during the trial trench evaluation. These were taken from a range of features including ditches, pits and post holes for the retrieval of environmental data, dating evidence, finds and characterization of potential. No specialist samples were taken.

6.1.2 The samples were processed by manual water flotation/washover and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Table 1. Nomenclature within the table follows Stace (2010). All plant remains were charred. Modern fibrous roots were abundant within all fourteen assemblages.

6.1.3 The non-floating residues were collected in a 1mm mesh sieve and sorted when dry. All artefacts/ecofacts were retained for further specialist analysis.

Results (Appendix 2)

6.1.4 Charcoal/charred wood fragments are abundant within all fourteen assemblages. Much of the material is highly comminuted, but larger fragments >10mm in size are also present. Some material is heavily encrusted with mineral concretions and it is noted that the charcoal from ditch [101012] (sample <101004>) is rounded and very abraded. The reason for this latter is not clear, but it is presumed that the material had probably been exposed to the elements for a considerable period of time prior to inclusion within the ditch fill. Other plant remains are exceedingly scarce. A single poorly preserved wheat (Triticum sp.) grain is recorded from ditch [101004] (sample <101001>) and fragments of additional indeterminate cereal grains are noted within five of the assemblages studied. Sample <101105> (pit [101111]) includes what appears to be part of a large legume (Fabaceae), but further identification is not possible. Individual hazel (Corylus avellana) nutshell fragments are recorded from ditch [101102] (sample <101101>) and possible ditch [101109] (sample <101104>).

6.1.5 Other remains noted within the assemblages mostly appear to derive from industrial activities and/or processes requiring very high temperatures of combustion. These include black porous and tarry residues, pieces of burnt or fired clay (possibly from hearth linings), splinters of burnt stone, ferrous globules and hammer scale (both commonly associated with smithing), small pieces of coal (coal 'dust') and vitreous globules. Fragments of possible slag, with a glassy interior and orange/red exterior surfaces are also common (most particularly from samples <101101>, <101106> and <102101>), while samples <101004>, <101005> and <101101> all include small pieces of a vivid orange/red mineral concretion.

6.1.6 In summary, given the composition of the assemblages, it is thought most likely that all derived from one or more industrial/craft activities which were occurring on or near the site. Possible industrial residues of Roman date were also recorded from the initial phase of work at Hunts Green Farm (Fryer 2021), but at the time of writing, it is unclear how or if these may relate to the current assemblages. Given the limited nature of the plant macrofossil assemblages, it is thought most likely that wood/charcoal were the main fuels in use for the activities, with cereal processing waste and/or dried herbage and hedge brush being used as tinder, kindling or a supplementary fuel source.

6.1.7 As none of the current assemblages contain a sufficient density of plant macrofossils for quantification (i.e. 100+ specimens), no further analysis is recommended at this time. However, it is strongly suggested that the potential industrial residues are studied to identify which activities may have been occurring. It is also strongly recommended that the charcoal is studied, as this may give indications about temperatures attainable during working and the extent to which local resources were being exploited. Together with the results from the Phase 1 work, this material has considerable potential, and if further excavation is planned, additional samples of up to 40 litres in volume should be taken from all recorded features.

7 Provisional Interpretation and Discussion

7.1.1 The trial trench evaluation on land at Hunts Green Farm (Field H) identified a number of features of archaeological origin, with the most notable concentration of features broadly within the central portion of the Site.

7.1.2 The presence of a very limited assemblage of Prehistoric flint on Site could suggest activity prior to the Iron Age-Roman period, but all were thought to be residual finds in later features, suggesting that the Prehistoric presence within the Site was limited to transient activity.

7.1.3 As it is currently understood prior to specialist analysis, the pottery assemblage appears to be predominantly medieval in date, although with some possible Roman fabrics also present. This appears to be in contrast to the predominantly Roman and Iron Age pottery recovered from the adjacent Site, closer to the Grim's Ditch monument. The presence of medieval pottery would seem to indicate a general focus of probable agricultural related activity of this period, within the central eastern part of the Site (Trenches 1010, 1011, 1020, 1021, 1022). This is further suggested by the albeit sparse presence of a small number of cereal grains recovered through environmental sampling. Features encountered in outlying trenches were typically ditches, likely representing an outlying field system of medieval or post-medieval date, with some features still visible as larger earthworks within the Site or positioned on the line of partially denuded but still extant field boundaries.

7.1.4 The presence of slag in a number of features across the Site would suggest that metal working is likely to have been taking place within the vicinity of the Site, although no in-situ industrial structures were identified. Environmental samples also yielded some evidence of industrial activity including possible furnace lining and hammer scale. This is comparable with the adjacent Site, where slag was also present in a number of features, although the pottery assemblage indicated they were of Roman date. This leads to the possibility that either the slag within this Site is related to nearby Roman iron working and has become incorporated into later features, or that metal working was being undertaken within the vicinity in two different periods. Specialist analysis of the slag may yield further light on the type and date of metal working which took place.

8 Potential Contribution to Specific Objectives

8.1.1 The results of the evaluation demonstrated the Site has potential to contribute to the HERDS objectives outlined in the LSWSI and Project Plan for this Site:

Table 3 Contribution to specific Objectives – Knowledge Creation

Specific Objective (KC)	Potential Contribution	Suggested Methods
KC2: Explore the location of Palaeolithic deposits, reconstruct past environments and investigate the relationship between climate	The probable presence of solution features in the chalk, indicated by the remote sensing surveys is an opportunity to examine the possible presence of Pleistocene deposits and	An examination of lower geologically exposed deposits encountered in future works may assist with this.

Specific Objective (KC)	Potential Contribution	Suggested Methods
variation and phases of human activity	evidence for Palaeolithic occupation.	Given the absence of any identified solution features or other geological deposits that might be associated with holding potential for Pleistocene activity, further pursuit of this objective could be through geoarchaeological test pits that target the deeper geological sequence and to reach the chalk beneath the superficial geological capping.
KC6: Understanding the evidence for change in the environment and management of the landscape for the Mesolithic and Early Neolithic periods.	The fills of solution features in the chalk could provide research material for investigation of changes in the local environment in the post-glacial periods.	An examination of lower geologically exposed deposits encountered in future works may assist with this. This site does not provide any contribution towards this objective as no such features have yet been identified as discussed above. Artefacts or features of Mesolithic/Early Neolithic date may be revealed during further Archaeological Recording.
KC13: What was the date of the establishment of Grim's Ditch? What impact did it have on the landscape following its construction?	The evaluation indicated a possible continuation of Grim's Ditch and a further possible discontinuous segment further north. Due to the depth of these features, none of the lower fills were able to be reached for the recovery of dateable artefacts or palaeoenvironmental sampling. The Site has the potential to identify evidence of activity contemporary to the construction and use of the monument which in turn could add to understanding of the date and origins of the monument. Additionally, the evaluation could also identify and date activity which predates the monument. Palaeoenvironmental evidence could provide a chronology for the changes in the surrounding landscape and the monument itself before, during and impact after its construction.	The fieldwork within this site is unable to contribute towards the direct understanding of the Grim's Ditch monument itself. However archaeological evidence recorded within the Site will provide valuable information on the archaeological activity in the landscape surrounding the monument and how the construction of the monument may have influenced contemporary or later activity within the general hinterland.
KC15: Can we identify regional patterns in the form and location of Late Bronze Age and Iron Age	Iron Age and possible Bronze Age pottery was recovered from features across Site. These	Archaeological Recording of the features to ascertain the nature, extent, date and development of

Specific Objective (KC)	Potential Contribution	Suggested Methods
settlements across the route, and are there associated differences in landscape organisation and enclosure?	features could contribute to models of landscape organisation and settlement.	the features and determine whether settlement is present. Refined dating of pottery sherds and more detailed palaeoenvironemental sampling would assist with better understanding the sequence of activity.
KC16: Investigate the degree of continuity that existed between Late Bronze Age and Iron Age communities in terms of population, mobility and subsistence strategies.	The presence of large-scale cross-country earthwork boundaries (ie. Grim's Ditch) and the possible continuations within the adjacent Site have the potential to provide evidence of change/continuity through an examination of the chronology, form, use and longevity. It has been argued that such earthworks open physical routeways through the landscape enabling a greater interaction of different groups, leading ultimately to the formation of tribes as well as changes in agricultural practice. Changes in landscape use after the establishment of these boundaries will assist with understanding the impact they had on people, economy and infrastructure.	Archaeological Recording would reveal additional information about the extent of Iron Age occupation within the Site and how this developed after the establishment of Grim's Ditch. Further work may also reveal features of Bronze Age date which were perhaps contemporary with the construction of the monument, providing additional evidence of the Bronze/Iron Age transition. The identification of field/systems and enclosures would further reveal evidence of continuity or change during these periods. Refined dating and analysis of pottery sherds would enable a more detailed insight into this general period of activity.
KC18: Explore the evidence for increasing social complexity in the archaeological record in the Late Bronze Age and Iron Age and identify patterns of intraregional and regional variation.	As above, cross-country earthwork monuments also have the potential to add to understanding of geographical, as well as cultural, variation. The opportunity to examine archaeological activity within the immediate environs of a monument such as Grim's Ditch has the potential to provide direct evidence of how the complexity of society changed throughout these periods and the impact the construction of the monument had on them, perhaps facilitating the wider movement of peoples, goods and ideas. It seems likely that some of the activity recorded could be from the Bronze or Iron Age.	Archaeological Recording would reveal further information about the development of the Site through the Iron Age, as well as any evidence for Late Bronze Age activity. Greater detail of the extent of Grim's Ditch is essential to understand it's impact on the landscape. Refined dating and analysis of pottery sherds would help understand the movement of pottery on a local or regional scale.

Table 5 Specific Objectives - Community

Specific Objective (CE)	**Potential Contribution**	**Suggested Methods**
CE1: Marking and communicating the changes to landscapes and environments.	Virtual reality reconstructions showing the construction and evolving history of the monument.	Collection and analysis of environmental material. Capture of visual data to provide baseline and background

Specific Objective (CE)	**Potential Contribution**	**Suggested Methods**
CE2: Identifying and sharing our stories	The investigation of Grim's Ditch and its landscape context focusses on the monument and its place in the wider landscape, and ways that local communities have understood their landscape and history through time.	Online blogs and use of social media to keep people updated.
CE3: Meeting the challenge of inspiring the next generation	Dissemination of the results, including the results of any further possible mitigation, to the wider public and younger audiences in particular at a later stage (after any further mitigation activity) and as part of the bigger public presentation for this part of the route section, in a manner to be determined by the Employer and Contractor.	Presentations to local schools and colleges, supported by online resources. Online blogs and use of social media to keep people updated.
CE4: Accessible information and knowledge sharing.	Post fieldwork: presentations to local history and archaeology societies in addition to events allowing local residents to meet and talk to members of the archaeological team and see and handle finds from the site.	Presentations to interested local parties including; schools, colleges, societies and the general public. Such presentations may be in person or virtual and supported by online resources. Stand alone / pop up displays or in conjunction with local museums. Installation and maintenance of permanent information display boards at any accessible relevant locations.
CE5: Contribute to the process and facilitation of audience project creation.	Involvement and liaison with community groups: the 'Mystery of Grim's Ditch' project, local history societies and art groups.	Liaise with interested local parties including; schools, colleges, societies and the general public

9 Provisional Conclusion

9.1.1 The Trial Trench Evaluation principally found evidence of medieval/post-medieval ditches, pits and post holes, most likely related to agricultural type activity, with the majority of ditches probably representing remnants of earlier field systems. This suggests that the Site was located within an agricultural hinterland during these periods.

9.1.2 Earlier Prehistoric activity in the vicinity is suggested by a small number of struck flints although no features of this date were identified within the trenches.

9.1.3 A limited assemblage of Roman pottery was also recovered, although this may mostly be residual in later features. This is in contrast to the adjacent Site, closer to the Grim's Ditch monument where the predominant periods represented by the pottery assemblage were Late Iron Age and Roman. Notable quantities of slag were recovered as well, although prior to specialist analysis, it is uncertain if this relates to nearby Roman activity or later periods.

9.1.4 There did not seem to be any direct correlation between features identified within the Site and those recorded in the adjacent Site.

Recommended targeted Archaeological Recording

9.1.5 The Trial Trench Evaluation at Hunts Green Farm Field H identified a low density of predominantly medieval and post-medieval activity in 11 of the 22 excavated trenches, including potential metal working in the same vicinity. The main focus of activity appeared to be in the eastern central part of the Site, within the area of Trenches 1010, 1011, 1020, 1021 and 1022. More limited numbers of features were present within outlying trenches, which in all likelihood represent ditches associated with former field system boundaries.

9.1.6 At present however the extent, phasing and interrelationships between features within the vicinity of Trenches 1010, 1011, 1020, 1021 and 1022 are poorly understood. In order to fully ascertain the nature, extent, date, development of these features and their relationship to the adjacent Site and perhaps more widely, Grim's Ditch itself, targeted Archaeological Recording within the Site is recommended.

9.1.7 For the targeted Archaeological Recording, formal confirmation will be agreed with the Employer, following stakeholder consultation, through a Decision Record Notice.

Appendix 1 Context Summary

Table 5 Summary of results by context with finds and environmental data

Trench No.	Feature No. (cut)	Type	Filled by	Interpretation	Depth (m)	Finds	Sample Nos	Provisional Period
1003	100302	cut	100303, 100304	DITCH	0.45	Pottery		Roman
1003	100305	cut	100306	DITCH	0.3	Pottery		Uncertain
1003	100307	cut	100308	HEDGELINE	0.4			
1003	100309	cut	100310, 100311	DITCH / DRAIN	0.45	Pottery, CBM		Uncertain
1004	100402	cut	100403	DITCH	0.18			
1004	100404	cut	100405	DITCH	0.2	Pottery		Roman
1005	100502	cut	100503	probable LAND DRAIN	0.12			
1005	100504	cut	100505	NATURAL FEATURE	0.24			
1006	100604	cut	100603	DITCH	0.33	Pottery	100601	IA/Roman
1006	100606	cut	100605	DITCH	0.17	Pottery	100602	IA/Roman
1009	100902	cut	100903, 100904	DITCH	0.27	Worked flint, Pottery	100901	IA/Roman
1010	101002	cut	101003	PIT	0.21			
1010	101004	cut	101005	DITCH	0.3	Pottery, CBM	101001	Medieval
1010	101006	cut	101007, 101008	HEARTH	0.12			
1010	101009	cut	101010	DITCH	0.38			
1010	101012	cut	101013, 101024	DITCH	0.55	Worked flint, Pottery, CBM, Iron Obj.	101004	Medieval/Post-medieval
1010	101015	cut	101016, 101017	PIT / HEARTH	0.24		101005	
1010	101018	cut	101019	PIT	0.4		101006	
1010	101020	cut	101021	UNCERTAIN LINEAR FEATURE	0.15	Pottery		Medieval
1010	101022	cut	101023	DITCH	0.18	Pottery, CBM		Medieval/Post-medieval

1011	101102	cut	101103	DITCH	0.4	Pottery, Cu. Alloy Obj.	101101	Medieval
1011	101104	cut	101105	POSSIBLE POSTHOLE	0.06			
1011	101106	cut	101107, 101108	DITCH	0.49	Pottery, Iron Obj.	101103	Medieval
1011	101109	cut	101110	DITCH	0.37	Worked flint, Pottery	101104	Medieval
1011	101111	cut	101112, 101113	PIT	0.35	Pottery	101105	Medieval
1011	101114	cut	101115	PIT	0.16	Pottery	101106	Medieval
1012	101202	cut	101203	DITCH	0.27			
1012	101204	cut	101205	ROOT HOLLOW	0.34			
1012	101206	cut	101207	DITCH	0.26			
1016	101602	cut	101603	FIELD DRAIN	0.26			
1016	101604	cut	101505	UNCERTAIN DISCRETE FEATURE	0.23			
1018	101802	cut	101803	DITCH	0.3	Pottery		Medieval
1020	102002	cut	102003	POSSIBLE DITCH	0.32	Pottery, Iron Obj.		Medieval
1020	102004	cut	102005	HEDGELINE	0.18	Pottery		Medieval
1020	102006	cut	102007, 102008	DITCH	0.93	Pottery, CBM, Iron Obj.		Medieval/Post-medieval
1021	102102	cut	102103	PIT	0.23		102101	
1021	102104	cut	102105, 102106	FIELD DRAIN	0.23	Worked flint, CBM		Modern
1021	102108	cut	102107	DITCH	0.53	CBM		Medieval/Post-medieval
1021	102109	cut	102110	UNCERTAIN LINEAR FEATURE	0.14	Pottery		Medieval
1021	102111	cut	102112	POSSIBLE POSTHOLE	0.4			
1022	102204	cut	102205	POSSIBLE DITCH	0.23			
1022	102206	cut	102207, 102208, 102209, 102210	DITCH	0.88	Pottery, CBM, Clay pipe		Post-medieval
1022	102211	cut	102212	DITCH	0.21			

1022	102213	cut	102214	DITCH	0.15			

Appendix 2 Palaeoenvironmental Data

Sample No.	**100601**	**100602**	**100901**	**101001**	**101004**	**101005**	**101006**	**101101**	**101102**	**101103**	**101104**	**101105**	**101106**	**102101**
Context No.	**100603**	**100605**	**100903**	**101005**	**101013**	**101016**	**101019**	**101103**	**101115**	**101108**	**101110**	**101112**	**101113**	**102103**
Feature No.	**100604**	**100606**	**100902**	**101004**	**101012**	**101015**	**101018**	**101102**	**101114**	**101106**	**101109**	**101111**	**101115**	**102102**
Feature type	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Ditch**	**Pit**	**Pit**	**Ditch**	**Ditch**	**Ditch**	**?Ditch**	**Pit**	**Pit**	**Pit**
Plant macrofossils														
Triticum sp. (grain)				x										
Cereal indet. (grains)	xfg	xcffg						xfg			xcffg		x	
Large Fabaceae indet.												xcffg		
Chenopodiaceae indet.					x									
Corylus avellana L.								x			xcf			
Charcoal <2mm	xxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxx	xxxx	xxxx	xxxx	xxxx	xxxx
Charcoal >2mm	xx	xxx	xxxx	xxx	xxxx	xxxx	x	xxxx	x	xxxx	xxxx	xxxx	xxxx	xxxx
Charcoal >5mm		x	xxx	x	xxxx	xxx	x	xx	x	xxx	xxx	xx	x	xxx
Charcoal >10mm		x	x		xxxx	x		x		xx	xx	x	x	x
Charred root/stem					x	x		x				x		
Other remains														
Black porous material	xx	x	x		x		x		x	x				
Black tarry material					x						X	x	x	
Bone									xb	x				
Burnt/fired clay		x	x			x			xx	x	X			
Burnt organic concretion						x								
Burnt stone		x	x	x	x	x	x	x	x		X	x		
Ferrous globules				x	xx	x		x			X	x	x	x
Ferrous hammer scale		x	x		xx	x	x	x	x				x	
Red mineral concretion					xx	xx		x						

?Slag					x	x		xx		x	X		xx	xx
Small coal frags.	xx	x	x	x	x	x	x	x	x	x	X	x	x	x
Vitreous material				x	x	x		x	x	x	x	x		
Sample volume (litres)	**40**	**40**	**40**	**40**	**40**	**40**	**20**	**40**	**10**	**40**	**40**	**20**	**10**	**30**
Volume of flot (litres)	**0.1**	**<0.1**	**<0.1**	**<0.1**	**0.5**	**0.3**	**<0.1**	**0.2**	**<0.1**	**<0.1**	**0.1**	**<0.1**	**<0.1**	**0.2**
% flot sorted	**100%**	**100%**	**100%**	**100%**	**25%**	**50%**	**100%**	**50%**	**100%**	**100%**	**100%**	**100%**	**100%**	**50%**

Key to Table

x = 1 – 10 specimens xx = 11 – 50 specimens xxx = 51 – 100 specimens xxxx = 100+ specimens fg = fragment cf = compare b = burnt

Appendix 3 Provisional Spot Dates

Feature No. (cut)	Provisional Period
100302	Roman
100305	Uncertain
100309	Uncertain
100404	Roman
100604	IA/Roman
100606	IA/Roman
100902	IA/Roman
101004	Medieval
101012	Medieval/Post-medieval
101020	Medieval
101022	Medieval/Post-medieval
101102	Medieval
101106	Medieval
101109	Medieval
101111	Medieval
101114	Medieval
101802	Medieval
102002	Medieval
102004	Medieval
102006	Medieval/Post-medieval
102104	Modern
102108	Medieval/Post-medieval
102109	Medieval
102206	Post-medieval

Appendix 4 Topsoil and Subsoil Depths

Trench	Context	Layer	Depth (m)
1001	100100	Topsoil	0-0.35
1002	100200	Topsoil	0-0.29
1003	100300	Topsoil	0-0.3
1004	100400	Topsoil	0-0.34
1005	100500	Topsoil	0-0.2
1006	100600	Topsoil	0-0.38
1006	100602	Subsoil	0.05-0.19
1007	100700	Topsoil	0-0.25
1008	100800	Topsoil	0-0.22
1009	100900	Topsoil	0-0.32
1010	101000	Topsoil	0-0.3
1011	101100	Topsoil	0-0.36
1012	101200	Topsoil	0-0.2
1013	101300	Topsoil	0-0.37
1014	101400	Topsoil	0-0.34
1015	101500	Topsoil	0-0.32
1016	101600	Topsoil	0-0.25
1017	101700	Topsoil	0-0.28
1018	101800	Topsoil	0-0.28
1019	101900	Topsoil	0-0.33
1020	102000	Topsoil	0-0.54
1021	102100	Topsoil	0-0.28
1022	102200	Topsoil	0-0.27

Appendix 5 Figures

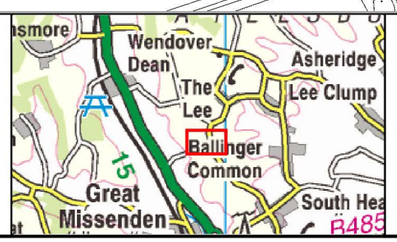
204 000 N

489 000 E

C21046

Legend

Site extent



High Speed Two
Figure 1. Site location, Hunts Green Farm : Field H C21023.

Published

HS2

Scale at A3: 1: 5 000

0 50 100 150 200
Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS03_CL05-000027 **Date:** 07/05/21

489 800 E

203 600 N

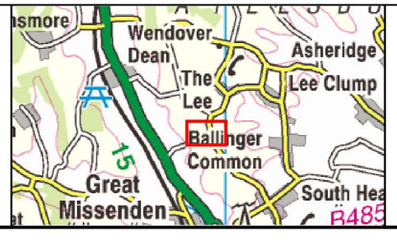
Figure 03, 05

Figure 04, 06

TR1001
TR1002
TR1003
TR1004
TR1005
TR1006
TR1007
TR1008
TR1009
TR1010
TR1011
TR1012
TR1013
TR1014
TR1015
TR1016
TR1017
TR1018
TR1019
TR1020
TR1021
TR1022

Legend

- Site extent
- Excavated evaluation trench
- Archaeological feature
- Possible bioturbation or geological feature
- Excavated area



High Speed Two
Figure 2. Overview of features within excavated evaluation trenches.

Published

HS2

Scale at A3: 1: 2 000

0 20 40 60 80
Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS03_CL05-000027 **Date:** 07/05/21

489 400 E

203 600 N

TR1001

TR1002

TR1003

TR1004

TR1005

TR1006

TR1007

TR1008

TR1009

TR1010

TR1011

TR1012

TR1014

TR1019

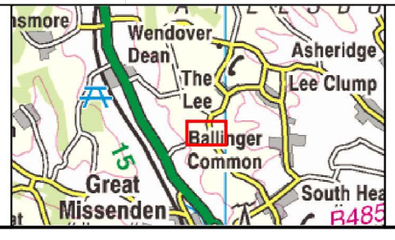
TR1020

TR1021

TR1022

Legend

- Site extent
- Excavated evaluation trench
- Archaeological feature
- Possible bioturbation or geological feature
- Excavated area



High Speed Two
Figure 3. Details of trench results.
1 of 2.

Published

HS2

Scale at A3: 1: 1 000

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Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS03_CL05-000027 **Date:** 07/05/21

TR1012

TR1007

TR1011

TR1010

TR1022

TR1008

TR1021

TR1020

TR1014

TR1019

TR1013

TR1015

TR1018

TR1016

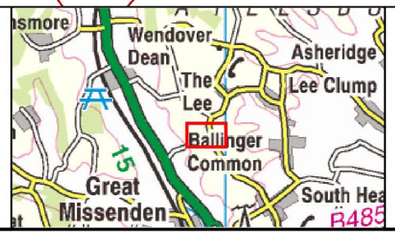
TR1017

489 800 E

203 400 N

Legend

- Site extent
- Excavated evaluation trench
- Archaeological feature
- Possible bioturbation or geological feature
- Excavated area



High Speed Two
Figure 4. Details of trench results.
2 of 2.

Published

HS2

Scale at A3: 1: 1 000

0 10 20 30 40
Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS03_CL05-000027 **Date:** 07/05/21

489 400 E

203 600 N

TR1006

TR1001

TR1004

TR1003

TR1002

TR1005

TR1009

TR1012

TR1022

TR1011

TR1010

TR1007

TR1021

TR1008

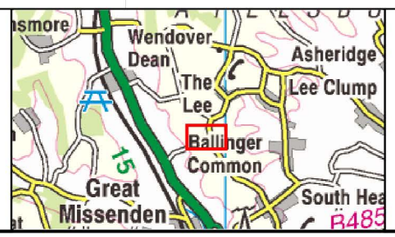
TR1020

TR1014

TR1019

Legend

- Site extent
- Excavated evaluation trench
- Test pit location



High Speed Two
Figure 5. Details of test pit locations.
1 of 2.

Published

HS2

Scale at A3: 1: 1 000

0 10 20 30 40
Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS03_CL05-000027 **Date:** 07/05/21

TR1012

TR1007

TR1011

TR1010

TR1022

TR1008

TR1021

TR1020

TR1014

TR1019

TR1013

TR1015

TR1018

TR1016

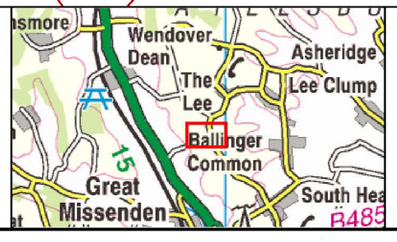
TR1017

489 500 E

203 400 N

Legend

- Site extent
- Excavated evaluation trench
- Test pit location



High Speed Two
Figure 6. Details of test pit locations.
2 of 2.

Published

HS2

Scale at A3: 1: 1 000

0 10 20 30 40
Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS03_CL05-000027 **Date:** 07/05/21

Appendix 6 Plates

Plate 1 - Trench 1010 pre-excavation

Plate 2 - Trench 1020 pre-excavation

Plate 3 - North-east facing section of ditch [101106]

Plate 4 - East facing section of linear feature [101109] and pit [101111]