Final Report on an Archaeological Strip, Plan and Record Excavation at Ryhall Substation, Cable Trench Route, Rutland.

Pit [2003]within Area 2

For Jacobs UK Ltd

Prepared by M. Dodd
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SUMMARY

- National Grid Ltd (NG) have planning permission to build a new electricity substation near Ryhall (National Grid Reference TF0471511233) (2013/02/FUL).

- During construction a cable trench will be excavated from the substation, approximately 1km north towards the nearby settlement of Essendine.. Following the positive identification of Late Bronze Age-Early Iron Age archaeology during an evaluation of the cable trench route (Dodd 2014), Trent & Peak Archaeology were commissioned by Jacobs UK Ltd, to carry out a strip and record excavation. The excavation comprised 2 areas (Area 1 to the south, Area 2 to the north) measuring 965m2 and 1773m2 respectively.

- The excavation that was undertaken successfully identified 2 main phases of archaeological activity. These were located within 3 distinct areas along the length of the cable trench route.

- The first phase of activity was evidenced by a multiphase deposit of worked flint that appears to have been principally created during the Mesolithic and Neolithic periods.

- The second phase was evidenced by two areas of activity, with features dating from the mid to late Iron Age. One of the sites was positioned alongside the flint scatter within the valley bottom. Whilst the second was towards the southern end of the route, utilising the more elevated topography to the south of the West Glen valley.

Assessment Report on an Archaeological Strip, Plan and Record Excavation at Ryhall Substation, Rutland.

Prepared by M. Dodd

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1. INTRODUCTION

1.1 National Grid Ltd (NG) have planning permission to build a new electricity substation near Ryhall (National Grid Reference TF0471511233) (2013/02/FUL). As a part of Planning Permission, Rutland County Council imposed a condition on the proposed development:

8. No development shall take place within the application site until the applicant or developer has secured the implementation of a programme of archaeological work in accordance with a written scheme of investigation which has been submitted to and approved, in writing, by the Local Planning Authority.

1.2 During construction a cable trench will be excavated from the substation, approximately 1km north towards the nearby settlement of Essendine. The overall impact area (including working areas) will be 2 hectares in size (up to 15m wide easement) (Fig.1). Following the positive identification of Late Bronze Age-Early Iron Age archaeology during and evaluation of the cable trench route (Dodd 2014), Trent & Peak Archaeology were commissioned by Jacobs UK Ltd, to carry out a strip and record excavation. The excavation comprised 2 areas (Area 1 to the south, Area 2 to the north) measuring 965m2 and 1773m2 respectively.

2. PROJECT BACKGROUND

2.1 In order to address Condition 8 of the planning application, a Desk-Based Assessment (DBA) for the development was prepared by Hyder on behalf of National Grid in 2013 (Hyder, 2013). The DBA recommended that a geophysical survey of the development site should be undertaken to establish the presence or absence of buried remains within the scheme footprint to determine the need for any further archaeological work.

2.2 The geophysical survey was carried out in September 2013 by Archaeophysica Ltd but was limited to the northern field of the two within the development area, as the southern field had recently been ploughed, hindering access. Within the area surveyed a pair of possible narrow ditch fills and where highlighted as possibly representing a small, perhaps squarish, enclosure of 20 – 25m width. However, it was acknowledged that neither of the anomalies contrasted well with the variable background magnetic field and that their recognition was tentative. A little to the south, were a pair of narrow ditch fills approximately 5m apart.

2.3 Overall it was concluded that despite a reasonable level of magnetic contrast, there was a low incidence of features of archaeological interest.

2.4 Subsequently the Principal Planning Archaeologist at Leicestershire County Council specified that archaeological trial trenching of 5% of the development site was required. This equated to approximately 20, 25m x 2m trial trenches.

2.5 The corresponding work took place between the 20th October and 3rd November 2014 and identified three distinct areas of archaeological interest:

1. At the southern end of the site within Trench 2 were the remains of a late Bronze Age or early Iron Age pit, containing domestic waste, this was accompanied by an undated possible post hole. These provide evidence for a possible later prehistoric settlement activity at the southern end of the development route.

2. Within the central portion of the site there was an accumulation of colluvial deposits containing artefactual material. This deposit was shown to be sealing possible buried soil horizons containing charcoal rich deposits that may be related to earlier activity.

3. The final area was within the low lying northern field, specifically within trenches 17 and 18. Throughout this area, the presence of organic alluvial deposits indicated that the area had previously been part of a wetland environment. Although no definite archaeological features were found in association with this episode of water logging, there were fragments of burnt bone within elements of this alluvial material, notably within Trench 18 – suggesting human activity within the vicinity during its accumulation. Within Trench 17 the presence of worked flint and late prehistoric pottery were further indicators of this activity. Whilst later, undated features appeared to be related to the reclamation of this marginal landscape.

2.6 In December 2015, a geoarchaeological assessment was carried out on the flood plain at the northern end of the development route. This work revealed alluvial deposits and the presence of a confluence between a major palaeochannel and the River West Glen. It was concluded that this would have provided an ideal place for settlement.

2.7 This report details the results of strip, plan and sample excavation.

3. SITE TOPOGRAPHY AND GEOLOGY

3.1 The entire cable trench consists of an angular 'S' shaped corridor, approximately 800m in length and 15m wide. The southern end of the cable route terminates with the Essendine road, at approximately 36m AOD. From here, it runs diagnonally for a distance of 250m along the edge of an open arable field before turning almost 90 degrees to the NW. This change in direction coincides with a notable change in the topography as the field is more steeply sloped, descending by almost 8m into the base of the West Glen river valley. The NW-SE aligned portion of the route traverses this slope at an angle, descending onto the flatter, though slightly undulating flood plain of the West Glen. The final SW-NE orientated portion of the route continues across the valley bottom, stopping at the edge of the railway embankment, at a height of 20m AOD.

3.2 Area 1 was located at the southern end of the route on the higher portion of the development, overlooking the West Glen valley. The underlying geology at this location was a mixture of Blisworth Limestone Formation, brashy fine loams and calcareous clays. Area 2 was was positioned within the valley bottom with underlying sand and gravel river terrace deposits.

3.3 The 1: 50,000 British Geological Mapping shows that site is situated on the border between bedrock geology of Edlington Formation sandstone (a Sedimentary Bedrock formed approximately 251 to 271 million years ago in the Permian Period) and Lenton Formation sandstone (a Sedimentary Bedrock formed approximately 246 to 271 million years ago in the Triassic and Permian periods) (http://mapapps.bgs.ac.uk/geologyofbritain/home.html). No superficial soils were recorded.

4. ARCHAEOLOGICAL AND HISTORICAL BACKGROUND

4.1 Prehistoric (10,000BC to 43AD)

4.1.1 There are a number of cropmarks, in some places supported by excavated evidence, which suggest a Prehistoric presence in the vicinity of the site. On this basis the study area was assessed in the DBA as having a moderate potential for unknown archaeological remains dating to the prehistoric period (Hyder, 2013). The cropmarks include:

- To the south-east of the site, analysis of aerial photographs in the 1980s observed a cropmark of a curvilinear ditch which was interpreted as an Iron Age Enclosure (Hyder, 2013).

- Further evidence of potential Iron Age activity can be seen to the east of the southern tip of the site (Hyder 2013, Site 3) where aerial photographs reveal cropmarks of a large, double-ditched, sub-rectangular enclosure. Here, excavations prior to the construction of a gas pipeline in the 1980s recorded boundary ditches and a possible round-house. Pottery recovered from these features was dated to the Iron Age.

- A square cropmark with a ditch running north from the enclosure was observed on aerial photographs to the east of the site (Hyder 2013, Site 5). To the west of the site aerial photographs show a complex series of pits and ditches which have been interpreted as an indication of later prehistoric settlement activity (Hyder 2013, Site 2).

4.1.2 All of this cropmark evidence taken together could suggest that the area around the site was a focus for activity in the Iron Age with potential settlements existing within at least one of the enclosures. To the north of the substation site, a pottery vessel of presumed prehistoric date was discovered during the construction of the Stanford and Essendine railway in the mid-19th century (Hyder, Site 6).

4.1.3 During March 2014, Trent and Peak Archaeology carried out a trial trench evaluation of the main Ryhall Substation site, immediately to the south of the cable trench route, on the opposite side of the Essendine road.

4.1.4 This work successfully identified a number of archaeological features. On the basis of both morphology and artefactual data, features indicative of later Bronze Age or earlier Iron Age settlement activity – perhaps now relatively ephemeral – were identified. These may comprise the remains of an unenclosed settlement. At this stage it is uncertain if two distinct activity foci are represented or if one contiguous area of less densely occupied habitation is in fact indicated.

4.1.5 Where artefacts were identified within features, it was demonstrated that rich primary deposits of settlement related waste were present in discrete parts of the site. Artefact assemblages contained worked flint in addition to pottery and charred remains suggesting that plant macrofossils may be present. The trial trenching established that there is significant potential to recover evidence for Late Bronze Age – Earlier Iron Age settlement, including aspects of the contemporary economy, and the ceramic traditions.

4.2 Roman (AD43-AD410)

4.2.1 There is little evidence for activity dating to the Roman period within the study area. However, a number of cropmarks identified in the Hyder DBA could date to either the Prehistoric or Roman periods. On this basis, the study area was assessed as having a moderate potential for unknown archaeological remains dating to the Roman period (Hyder, 2013). Features include:

- A set of potential Roman or prehistoric field boundaries outside the western boundary of the site (Hyder 2013, Site 7) was identified from aerial photographs.

Analysis of the aerial photographs identified a number of fields each defined by a single ditch with a maximum length of 210m.

- To the west of the site, analysis of aerial photographs revealed a potential trackway and two enclosures (Hyder 2013, Site 10). The trackway is approximately 350m long and is defined by two ditches.

- To the west of the study area cropmarks showing a trackway approximately 200m long which are identified as potentially Roman (Hyder, 2013). The trackway is defined for part of its length by two ditches and for another part of its length by a line of pits (Hyder 2013, Site 11).

4.3 Early Medieval (AD450-1066 AD)

4.3.1 The villages of Ryhall, Belmesthorpe and Essendine all appear in the Domesday book as established settlements suggesting that they were in existence in the early medieval period. However, the Ryhall site was assessed in the DBA as having a low potential for unknown archaeological remains dating to the early medieval period (Hyder, 2013). During the construction of the Stanford and Essendine Railway line in the 19th century (which passes just by the site) an Anglo Saxon pot was recovered. Although the exact findspot is unclear it is located by the HER in the study area (Hyder 2013, Site 12).

4.4 Medieval (1066- 1540 AD)

4.4.1 By the medieval period Ryhall, Belmesthorpe and Essendine were established settlements. To the west of the study area, aerial photograph evidence shows ridge and furrow (visible as earthworks near Ryhall), consistent with open field arable cultivation in the medieval period. The study area was assessed in the DBA as having a low potential for unknown archaeological remains dating to the medieval period (Hyder, 2013).

4.5 Post-Medieval (1540-1914 AD)

4.5.1 In the post-medieval period Ryhall, Belmesthorpe and Essendine continued to expand with a number of new buildings being built. However later in the post-medieval period the fortunes of Essendine declined rapidly when its castle was destroyed by Cromwell in the Civil War. In the late post-medieval period the railways came to Rutland. In 1846 the Great Northern Railway construction began on a route from London via Peterborough, Lincoln and Gainsborough; eventually the line was extended to provide a direct link between London and York. This railway line passes to the north of the study area and remains in use today and is now the East Coast Mainline. In 1856 the Stamford and Essendine Railway was opened to link Stamford with the Great Northern Railway. This railway line runs partially within the eastern boundary of the site (Hyder 2013 DBA Site 16). At the height of the railway both Ryhall and Essendine had stations; Ryhall Station was on the Stamford and Essendine line and Essendine Station was on the Great Northern Railway. The study area was assessed in the DBA as having a low potential for unknown archaeological remains dating to the post-medieval period (Hyder, 2013).

4.6 Modern (1914- present)

4.6.1 In 1959 the Stamford and Essendine Railway closed down and at the same time both Ryhall and Essendine stations were closed. The DBA assessed the study area as having a negligible potential for unknown archaeological remains dating from the Modern period (Hyder, 2013).

4.7 Undated

4.7.1 A number of undated features were visible on aerial photographs and have been interpreted as potential boundary ditches (Sites 17, 18, 19, 20 and 21). These features could suggest an early field pattern which has been superseded by the present day pattern. Adjacent to the Iron Age double ditched enclosure (Hyder 2013, Site 3) to the south-east of the study area, a T-shaped collection of linear features can be seen on aerial photographs (Hyder 2013, Site 22). The function of these features is unknown and it is not clear whether they are contemporary with the enclosure. To the south-west of the study area is the potential site of a windmill (Hyder 2013, Site 23).

5. METHODOLOGY

5.1 All work was carried out in accordance with the requirements and standards set out in *Management of Research Projects in the Historic Environment Project Planning Note 3: Archaeological Excavation* (MoRPHE PPN3) (English Heritage 2008), and the requirements and standards set by the Institute for Archaeologists (IfA) in their *Standard and Guidance for archaeological field excavation* (IfA 1994; revised 2008) *Standard and Guidance for the collection, documentation, conservation and research of archaeological material* (IfA 2001; Revised 2008); *Code of Conduct* (IfA 1985; revised to 2008) and *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives (*IfA, 2009).

General and Specific Aims

5.2 The main objective of the excavation was to preserve by record any elements of the archaeological resource present within the footprint of the proposed substation. This was to be achieved by an appropriate level of hand excavation (relative to the density of archaeological features and deposits revealed) and recording to be agreed in conjunction with the LCC Principle Planning Archaeologist following completion of the soil stripping.

5.3 Specific objectives were as follows:

- To assess the date, form, function and interrelationships of archaeological features on the site
- To assess the structural development of the archaeological components on site
- To establish the function of archaeological activity on the site.

Surveying and setting out

5.4 Excavation areas were set out, surveyed as excavated and tied in to the Ordnance Survey (OS) National Grid and Ordnance datum, using a GPS, Leica CS15/GS15 RTK Differential GNSS. TPA holds full co-ordinate data which can be supplied as DXF/DWG files if necessary.

Mechanical excavation

5.5 Topsoil and subsoil was removed using a 360^{o} mechanical excavator fitted with a toothless ditching bucket. All such mechanical excavation was undertaken under the direct and continuous supervision of Trent & Peak Archaeology staff. Mechanical excavation ceased at the first archaeologically significant horizon or when the absence of any such horizon was adequately demonstrated. Topsoil and subsoil was segregated in separate spoil heaps. Spoil from the excavation of archaeological features was stored on the subsoil heap. After the completion of archaeological excavation the material was replaced in reverse order of removal and the soil was graded to a smooth, even profile, free from local mounds and depressions.

5.6 During stripping the extent and alignment of all medieval/post-medieval cultivation furrows present were recorded by rapid survey using GPS/Total Station. A sample of the furrows was hand excavated in order to attempt to recover dating evidence to help establish the period of use and abandonment of ridge and furrow cultivation in the environs of the site.

5.7 The location of any artefacts recovered in the topsoil/subsoil was recorded three-dimensionally, and metal detecting of freshly machined areas and topsoil was regularly undertaken.

Hand Excavation

5.8 All fieldwork was carried out in accordance with the code of conduct of The Institute for Archaeologists. The depth and complexity of archaeological features and deposits across the whole site was evaluated by hand excavation. At least one long section of each trench was recorded by scale drawing. Hand excavation was undertaken in compliance with the WSI to a level sufficient to characterise all key features and provide opportunities for the recovery of dateable finds and palaeoenvironmental material

5.9 Excavation firstly aimed to establish and record the extent of the archaeological remains exposed following the soil stripping, with a resulting detailed ground plan produced by GPS/Total Station survey. Features then prioritised for excavation were those best preserved, or those where there may have been potential to recover structural remains, palaeo-environmental or industrial evidence.

5.10 Targeted hand excavation aimed to assess the date, form, function and interrelationships of archaeological features on the site. In particular, assessing the structural development of the archaeological components on site and establishing the function of archaeological activity were important research goals detailed within the approved WSI.

5.11 To date the various features identified, sections through cut features were excavated in order to retrieve datable artefacts and environmental samples. Artefacts were either recorded three dimensionally in order to distinguish between feature fills or by spit/context where substantial quantities were encountered. All pits and other discrete features were fully excavated (100% sample) whilst a 10% sample of linear features was obtained.

Recording

5.12 All excavated contexts were fully recorded on TPA written context records giving details of location, composition, shape, dimensions, relationships, finds, samples, cross-references to other elements of the record and other relevant contexts, etc.

5.13 All features were recorded on at least one plan (normally at 1:20 scale) and at least one section drawing (normally at 1:10 scale). A complete post-excavation plan and long section of each trench was prepared. All drawings included co-ordinate data and spot-heights related to the Ordnance Survey Datum and accurate to two decimal places. The level of recording increased relative to the presence of features of archaeological significance.

5.14 A photographic record, utilising high resolution digital data capture, comprising images of each trench/context will be maintained together with general views illustrating the principal features of the excavations. Images will be captured in a RAW format using cameras with manual controls and sensors of at least 10 megapixels. Images will then be converted to uncompressed baseline v.6 TIFF for archiving. All images will have accompanying metadata specifying; photo ID, capture device, converting software, colour space, bit depth, resolution, date of capture, photographer, caption, and any alterations made to the image.

5.15 All finds were recorded by context; and individually significant finds were also individually labelled with a TPA three-letter code (e.g. AAA) and recorded three-dimensionally. All artefacts recovered were retained and removed from site for conservation (if necessary) and specialist examination/analysis (see Section 6). All recording, cleaning, storage and conservation of finds has been carried-out in accordance with the Institute for Archaeologist's *Standard and Guidance for the collection, documentation, conservation and research of archaeological materials* (2001, revised 2008).

Palaeoenvironmental Sampling

5.16 All environmental archaeology was undertaken in accordance with the principles set out in *Environmental Archaeology: a guide to the theory and practice of methods, from sampling and recovery to post-excavation* (English Heritage 2011) and with reference to the Association for Environmental Archaeology's Working Paper No. 2, *Environmental Archaeology and Archaeological Evaluation* (1995).

5.17 Soil samples comprising at least 40 litres per context or 100% of smaller contexts were taken for the recovery of charred plant remains, small bones and finds shall be taken from appropriate contexts. These comprised basal/primary fills of at least 50% of all cut archaeological features and at least 25% of all other anthropogenic soil deposits, including all deposits containing any visible charcoal or other carbonised material and all deposits considered to be of particular interest on the basis of artefactual content or other characteristics.

5.18 During the excavation a total of 29 palaeoenvironmental soil samples were recovered (and retained), of these 22 were selected for further analysis. These have been assessed as part of this report (see section 7.7 below). Processing and assessment of soil samples was undertaken in line with the above referenced strategies.

5.19 Where samples suitable for scientific dating were recovered this is noted in section 7.8 below.

Site Archive

5.20 Archive consolidation was undertaken immediately following the conclusion of fieldwork. The site record was checked, cross-referenced and indexed.

5.21 All retained finds have been marked and packaged as necessary but due to their friable nature have not been heavily washed. Recommendations for their treatment are made in Section 7.1 and should follow this assessment.

5.22 All retained finds have been assessed and recorded by suitably qualified and experienced staff, prehistoric pottery by Sarah Percival worked flint by Peter Webb and environmental remains by Sharon Carson, Ruth Whyte & Jennifer Miller (YAT).

5.23 The archive has been assembled in accordance with the guidelines set out in Appendix 1, P1 of MoRPHE PPN3 (English Heritage 2008) and the Rutland County Museum's *Transfer of Archaeological Archives to Rutland County Museums and Record Service (Rutland Museum, 2013)*. In addition to the site records, artefacts, ecofacts and other sample residues, the archive shall contain:

- site matrices where appropriate;
- a summary report synthesising the context records;
- a summary of the artefact record; and
- a summary of any other records or materials recovered.

The integrity of the primary field records shall be preserved and the Contractor shall create security copies in digital, fiche or microfilm format of all primary field records.

5.24 Contact has been made with Lorraine Cornwell, Collections Manager at Rutland County Museum and the following accession number issued for this site: OAKRM:2014.5. An archive index is provided below:

Field Records	*Description*	*Number*
Context Sheet	Record of each context	149
Registers	Registers	15
A3 Drafting Film	Scale plans and Sections	30
Digital Photographs	All views	706
Documents	*Description*	*Number*
Written scheme of investigation	Statement of the aims, objectives and methodology for the project.	1
Health & Safety	Safe working statement & risk assessment	1
Report to client	Report of findings.	2
Pottery Artefacts	Pottery Artefacts	59 individual sherds
Flint Artefacts	Flint Artefacts	425
Bone	Burnt Bone/Bone	58
Metal and Slag	Industrial Residues (slag)	2 x slag

Table 1: Archive quantification.

5.25 The archive is temporarily stored at the TPA office at Unit 1, Holly Lane, Chilwell, Nottingham, NG9 4AB. The full archive will ultimately be deposited at Rutland Museum.

6. RESULTS

6.1 Introduction

6.1.1 A narrative of the results of the archaeological excavation is now presented below. The overall location of the excavations areas is shown on Figure 1 with more detailed plans of the two areas shown on Figures 2 and 3, a full context list is provided as Appendix 1.

Stratigraphic Narrative

6.1.2 For ease of analysis the archaeological features in the following report text are now discussed by group and in chronological order where possible. Each group has been established on both spatial and morphological grounds, supported by dating where possible. Where features have been grouped for ease of discussion, but where there is no obvious spatial relationship between them, it is stated. The site is also divided into areas: Area 1 being the southern part the site and Area 2 the northern. Where necessary for clarification of sentences, cardinal points are abbreviated, e.g. North = N, Southwest = SW and so on.

6.2 Area 1 – Southern end of the route

Natural Geology and Soils

6.2.1 Desk-based assessment within the development area suggested that the underlying bedrock comprises Blisworth Limestone Formation (Hyder, 2013), with overlying soils classified in the Elmton 1 association, characterised as well drained, brashy fine loams and calcareous clays (Hyder, 2013).

6.2.2 Soil stripping of Area 1 removed the topsoil layer comprised of dark greyish brown, clay silt (generally c.0.3 in depth). Beneath the topsoil was a mid greyish brown deposit forming a shallow interface between the underlying natural substrate and the topsoil deposit. The depth of this subsoil increased from less than 0.1m deep at the southern end of the site, to c.0.2m at the northern end.

6.2.3 Removal of topsoil and subsoil by machine exposed a mixed natural substrate which at the southern end of the site comprised a mixture of calcerous blue-grey clay and weathered limestone. Within the central portion of the site the natural was predominantly weathered limestone, mixed with calcerous blue-grey clays and light yellow brown, loamy clay. At the northern end of the site the subsoil was immediately underlain by a consistent deposit of yellow brown loamy clay.

Archaeological Features

6.2.4 As Figure 2 shows, soil stripping revealed a moderate density of archaeological features. These were typically pit and post hole type features, and were concentrated towards the NE portion of the area. Several linear probable boundary ditches were observed towards the periphery of the excavated area.

Post hole features – [1008], [1051], [1098], [1100], [1104], [1090], [1088], [1083]

6.2.5 Within the concentration of discrete features towards the NE of the site, a number have been interpreted as probable post holes (Figure 4). This has drawn largely upon the morphological nature of these features rather than any discernible spatial relationships that might indicate a specific structure.

6.2.6 Post holes [1008], [1028] and [1051] were located near the western edge of the site. They were circular in plan, with steep, near vertical sides and concave bases. Post hole [1008]

measured 0.38m in diameter and was preserved to a depth of 0.25m (Plate 3), whereas [1022] was slightly smaller with a diameter of 0.3m and a depth of 0.23m. The largest of the three was [1051], with a maximum diameter of 0.6m and a depth of 0.3m. The limits of all three features were diffuse, and each contained a single fill of mid to dark greyish brown clay silt. Occasional charcoal flecks were noted within all three features, and some fragments of limestone were noted within both [1028] and [1051]. None of the post holes contained any packing material or deliberate backfill relating to their initial construction.

6.2.7 Features [1104], [1100] and [1098] were situated towards the eastern portion of the site and were each very diffuse in appearance. In plan they were identified as either circular or sub-circular in shape with subsequent excavation revealing vertical sides and slightly concave bases. Post hole [1104] measured a diameter of 0.38m and a total depth of 0.23m. It contained a 0.12m thick, primary fill of mid yellowish brown, silty clay (1111), and was overlain by a secondary deposit (1110), comprising mid brownish grey, silty clay up to 0.11m thick. Post hole [1100] measured 0.36m x 0.26m in plan with a total depth of 0.16m. It contained a single fill of mid brownish grey, silty clay. The third of these three post holes, [1098] was a slightly larger diameter of 0.4m, with a depth of 0.28m, into which a single fill of mid brownish grey, silty clay had accumulated. At the base of the feature was a single, large rounded stone, 0.16m in diameter which was likely inserted as packing material alongside the original post.

6.2.8 Located towards the centre of the excavation area was a relatively isolated possible post hole, [1053]. Circular in plan, it measured a diameter of 0.2m and with steep sides and a concave base, 0.2m deep. Within the feature was a single deposit of dark grey, clay silt containing frequent fragments of limestone. It is possible that the limestone fragments observed represent the collapsed remnants of packing material surrounding a post.

6.2.9 Post holes [1090] and [1088] were located at the southern edge of the main concentration of features within the area. Both were sub-circular in plan, up to 0.38m in diameter, although [1088] was recorded with a shallow concave profile, 0.09m deep, feature [1090] had steep sides and a narrow base, 0.22m deep (Plate 1). Both features contained a single deposit of dark orangey brown, silty clay with occasional charcoal flecks.

6.2.10 Post hole [1083] was the largest to be recorded within the area and was located near the southern edge of the excavation area (Plate 2). It was a sub-circular feature approximately 0.5m in diameter with vertical sides leading to a flat base, 0.28m deep. At the edges of the feature were several large, flattish limestone fragments (1085) up to 0.2m across, representing packing material. Towards the interior was a single relatively homogenous deposit (1084) of dark grey, sandy clay with occasional charcoal flecks forming a post-pipe at the centre of the feature, approximately 0.4m across.

Pit 1149

6.2.12 Pit [1149] was located within the northern portion of the excavated area. Oval in plan, it measured 4.36m x 2.4m, with moderately steep sloping sides (Figure 5). At the surface the pit was cut into the loamy clay drift geology, but the bottom of the feature was excavated into the underlying limestone geology, leaving an irregular concave base, approximately 0.7m deep (Plates 4 and 5). Within the pit two separate fills were identified, with an initial deposit of dark greyish brown, silty clay (1150) measuring 0.24m thick along the edge of the feature. A secondary deposit (1151) of reddish brown, slightly sandy, silty clay with frequent limestone fragments was recorded as a deliberate backfill within the remainder of the pit. Multiple later features were recorded truncating the pit including [1116] from pit group 1157, and later linears 1155, 1158, 1152 and 1148. The function of this feature remains uncertain, due in part to the lack of artefactual

material associated with it. The only feature of a similar scale and form was a possible waterhole towards the south. However, there was no evidence to suggest a similar function for pit [1149]. Alternatively it may have served as an extraction pit to quarry the limestone bedrock.

Pit Group 1157

6.2.13 Located towards the northern end of the site was a small cluster of slightly ephemeral pits, which in many cases were intercutting with each other (Figure 5). A total of 8 pits are included within this grouping ([1070], [1072], [1039], [1041], [1043], [1058], [1059] and [1116]).

6.2.14 Pits [1039], [1041] and [1043] were situated to the west of the group, with [1041] the earliest of the three, and truncated to the NW and SE by [1039] and [1043] respectively The NE edge of pit [1039] had been truncated by ditch group 1148. All three pits were sub-circular or oval in plan, ranging between 0.5m and 0.9m across. Pit [1041] was the shallowest of the three, just 0.13m deep, forming a shallow concave feature (Plate 6). Pit [1043] was slightly larger, with steep sides and a concave base, 0.21m deep, whilst the largest of the three, [1039] was also steep sided with a concave base 0.38m deep. Each pit contained a single homogenous fill with only a slight variation in colour and consistency to distinguish between them. The earliest pit, [1041] contained a deposit of mid greyish orange, clay sandy silt, whilst the two later features contained dark orangey grey, clay silt. Only very occasional charcoal flecks were identified within these pits, and were otherwise largely sterile.

6.2.15 The two intercutting pits, [1070] and [1072] were recorded at the southern edge of the group (Plate 7). Features were cub-circular in form, with the earliest of the two, [1072] measuring 0.38m across and a steep concave profile, 0.14m deep. The NW edge of [1072] had been partially truncated by [1070] which was slightly larger with a maximum width of 0.52m and a steeply sloped concave profile also 0.14m deep. Both pits contained single homogenous fills of grey brown, sandy silt with moderately frequent charcoal flecks, but no artefactual material.

6.2.16 Pit [1116] was recorded cutting into the NE edge of pit [1149]. Later truncation by linears 1152 and 1155 prevented the full extent of pit [1116] from being observed, although the remaining portions did indicate an oval form in plan. It measured approximately 0.68m in diameter and 0.32m deep, with steep concave sides and a concave base. As with the other pits within the group, it had been filled by single deposit of orangey, grey brown, silty clay.

6.2.17 The remaining two pits within the group, [1058] and [1059] were positioned on the SW edge of pit [1149], although later truncation by ditches [1056] and 1152 had removed evidence of the relationship between these pits and [1149]. Pit [1058] was the largest of the two, measured no less than 0.96m across, and 0.58m deep, with steep sides and a concave base. It had been filled by a single deposit of dark grey brown, silty clay, with occasional charcoal flecks. Pit [1059] measured at least 0.56m in width, very steep sides leading to a concave base 0.6m deep. Within this feature was a homogenous deposit of brownish orange, silty sand with moderately frequent charcoal fragments. Neither feature produced artefactual material.

Pit Group 1156

6.2.18 Pit group 1156 was represented by a low density scatter of features located within the northern half of the excavation area (Figure 6). These pits were typically circular in plan with shallow concave profiles, containing domestic waste material. Pit [0203] was

uncovered during the evaluation phase of work and also fits into this grouping of features.

6.2.19 The largest pit, [1037] was located at the western extent of this grouping and measured 2.2m x 2m in plan, with a shallow, slightly concave profile 0.2m deep. Within the feature was an initial deposit of mid to dark greyish brown, clay silt (1045) with frequent, small angular stones filling the majority of the pit. Towards the SE edge was a later, deliberate deposit of dark grey, clay silt (1038) which contained moderately frequent fragments of charcoal and the largest quantity of pottery from any single feature, indicating that it was used as a dump for domestic waste.

6.2.20 Pits [1010], [1033] and [1136] were very similar in appearance. Circular in plan, with shallow concave profiles, they measured between 0.72m and 1.04m in diameter with depths of 0.14m to 0.18m. Contained within pit [1010] was a single fill of greyish orange silty clay with moderately frequent charcoal flecks (Plate 8). Pits [1033] and [1136], each contained a single fill of dark greyish brown, clay silt, with frequent charcoal flecks, animal bone and sherds of pottery (Plates 9 and 10). It is important to note that pit [1136] was recorded as truncating ditch 1148.

6.2.21 Pit [1128] was the smallest pit within this group, with a diameter of 0.6m and steep sides leading to a flat base that followed the underlying limestone bedrock to a depth of 0.14m. Within the pit was an initial fill of natural silting, represented by a dark orangey brown, silty clay (1141), 0.07m thick. This had been overlain by a deliberate backfill of dark grey brown, silty clay (1129) containing domestic waste.

6.2.22 Located at the southern edge of the group was pit, [1086]. It was slightly more sub-circular in plan, but a similar size measuring 0.6m x 0.53m in plan and 0.13m deep, with steep sides and a concave base. It contained a single naturally accumulated deposit of dark brown, silty clay. No anthropogenic material was recovered in association with this feature.

6.2.23 Feature [1130] was located within the NE corner of the site and measured approximately 0.8m in diameter and 0.16m deep, with the same steep sides and slightly concave base that characterise this group. In contrast to the other features observed on the site, pit [1130] had a deliberate lining of light grey clay (1132), 0.09m thick. Overlying the clay was a secondary backfill of mid greyish brown, clay silt (1131) containing charcoal fragments and animal bone indicating domestic waste.

Other Pits

6.2.24 The remaining pit features within Area 1 were much more varied in their morphology and character, and may represent a number of different functions (Figure 7).

6.2.25 Pit [1031] was located within the northern concentration of features, towards the western periphery (Plate 11). It was irregular in shape, but overall formed an elongated oval in plan, measuring 1m x 0.25m with the longest axis along a NE-SW alignment. The sides were moderately steep, but equally irregular with a concave base, 0.12m deep. It contained a mid grey brown, clay silt deposit with fragments of burnt clay and charcoal throughout, but particularly concentrated at the NE end. No specific dumps of material could be determined and so it is likely that this deposit accumulated naturally, or was subject to significant post-depositional bioturbation.

6.2.26 Positioned towards the centre of the northern concentration of features was pit [1108]. It formed an irregular oval shape in plan, 0.8m x 0.45m with steep sides and an irregular concave base which deepened to a maximum depth of 0.23m at the SE end. It contained a diffuse mottled fill of dark brown grey and orange brown, silty clay with occasional

charcoal flecks. This appeared to be a naturally accumulated deposit, either within a pit or possibly a tree bole.

6.2.27 Immediately to the SW of [1108] was a large pit [1105]. Oval in plan it measured 1.77m x 1m with steep sides and a flat base that followed the top of the underlying bedrock, 0.32m deep (Plate 12). It was filled with an initial deposit of mid orange brown, silty clay (1106), 0.14m deep with an upper fill of dark orangey grey brown, silty clay (1107) which contained evidence of domestic waste including occasional fragments of burnt stone, charcoal and decorated pottery dating to the 4th/5th centuries BC.

6.2.28 Pit [1094] was recorded 2.2m to the SW of [1105]. It measured 0.35m x 0.3m in plan, forming an oval shape, with a shallow concave profile 0.1m deep. It contained a single mixed deposit of dark orange brown silty clay, with several large fragments of burnt stone and charcoal presumably dumped into the feature.

6.2.29 Located within the NE corner of the site two shallow intercutting features, [1139] and [1140]. The earlier of the two, [1139] was oval in plan and measured 0.9m x 0.6m in plan and 0.12m deep. The edges were slightly irregular and only gradually sloped, leading into a slightly concave base. It was filled by a single mixed fill of mid orange brown and grey brown silty clay. It was truncated to the NW by [1140], a large sub-circular cut, approximately 1.9m in diameter and 0.19m deep. This was a relatively shallow feature with steep sides and a broad flat base. It contained a deposit of dark grey brown, silty clay with occasional stones and charcoal fragments. Cutting across the middle of this pit was ditch 1148.

Waterhole [1074]

6.2.30 Situated at the southern end of Area 1 was a large irregular feature, [1074] (Plates 13, 14 and 15). It mainly consisted of a large oval portion measuring 4m x 2.67m in plan, with moderately steep concave sides leading to a concave base 1m deep (Figure 7). At the NE edge there was an irregular portion creating a ledge measuring 2m x 1m in plan and approximately 0.3m deep. At the base of the feature was a compact layer of slightly silty dark brownish grey clay, (1119), approximately 0.2m deep. This was overlain by a more substantial deposit of mid orangey brown, silty clay, (1133) 0.4m deep with occasional sub-angular stones. A subsequent layer of charcoal rich dark grey silty clay, (1102) approximately 0.2m deep was recorded overlying (1119). Unlike the previous deposits this formed a distinct horizon and was likely the result of deliberate deposition rather than natural accumulation. The final upper fill of the feature, (1075) was mid greyish brown, silty clay, 0.2m deep. This deposit likely represents a phase of natural silting which accumulated as the earlier fills had settled and human activity within the vicinity had ceased.

6.2.31 During excavation of this feature groundwater was constantly present, coinciding with the earliest two deposits and is likely the reason for their slightly gleyed nature. It also seems likely that this feature was primarily excavated as a waterhole to access the water residing within the geology. The irregular ledge to the NE which was not covered by the groundwater, would probably have served as a step to facilitate access. However it should be considered that although the environmental samples contained charred remains of both Oak and Ash, there was no evidence for material preserved by permanent waterlogging.

Features 1158, 1155 and 1154

6.2.32 Located at the northern end of the excavated area were three short linear features, of uncertain function, but based upon their morphological similarities and spatial relationships were likely related to each other.

6.2.33 The most westerly of the three, [1158] was also the largest. It measured 4.1m x 0.82m with steep sides and a narrow concave base 0.5m deep. It was recorded cutting into the backfill of both pits [1149], [1058] and [1059]. Contained within the feature was a single deposit of light greyish brown, silty sandy clay, with only occasional charcoal flecks. A small amount animal bone and worked flint were recovered from this feature. It was subsequently truncated by ditch 1152.

6.2.34 A little more than 1m to the NE was feature 1155, which was recorded partially truncating pit [1149] and a second, later pit, [1116]. Later truncation prevented the original extent of this feature from being observed, but the remaining elements measured approximately 3.4m x 0.72m in plan and just 0.11m deep, with steep sides and a broad concave profile. It had been filled by a single homogenous deposit of mid grey brown, silty clay which appeared to have naturally accumulated. It had been truncated by ditches 1148 and 1152.

6.2.35 The third of these short linear pits, 1154 was located more than 2m to the east of 1155. It measured at least 1.4m in length, 0.6m wide and up to 0.18m deep. Steep sides led to a broad concave base into which a single fill of mid to dark grey brown sandy clay had accumulated. The original dimensions of this feature are unknown as it was truncated by ditch 1152 at its NW end.

Ditch 1148

6.2.36 Ditch 1148 measured approximately 23m in length, extending across the northern extent of Area 1. Although broadly orientated E-W, the edges of the ditch were irregular with significant variations in width and depth. At its western end cuts [1014] (Plate 16) and [1120] revealed a profile with steep sides and a broad undulating base, up to 0.62m wide and 0.36m deep. Further to the west the ditch measured up to 1m wide, with a broad, slightly concave base, 0.2m deep ([1124]). This boundary ditch was recorded cutting through one of the short linear pits, 1155 and also pits [1140] and [1039]. It had been filled by a naturally accumulated deposit of mid grey brown, silty sand. Interestingly, it was cut by pit [1136] from pit group 1156 indicating that it did not post-date all phases of domestic activity. It was also truncated by ditch 1152.

Ditch 1152

6.2.37 Ditch 1152 appears to represent one of the latest phases of activity revealed within Area 1. It was recorded traversing the site along a WSW-ENE orientation creating a relatively regular, linear boundary comprising cuts [1112] (Plate 17), [1012], [1062], [1050], [1134] and [1126]. It was recorded cutting through several earlier features including ditch groups 1158, 1155, 1154 and 1148 and pit [1149]. It measured a length of at least 26m and a width of between 0.48m and 0.65m. The profile was generally consistent, with moderately sloped sides and a concave base. The depth varied between 0.3m towards its centre and 0.19m and 0.14m at the W and E ends respectively. It appears to have been left open and naturally silted up over time containing a single, mid orangey, grey brown, sandy clay fill with occasional stones towards its base. Some small fragments of pottery and worked flint were recovered from the ditch fill, along with some large, relatively well-preserved fragments of animal bone.

Ditch 1082

6.2.38 Situated within the SW corner of the excavation area was an E-W aligned ditch, 1082 (Figure 8). It measured an overall length of at least 5.94m, extending beyond the western limit of excavation and terminating to the east within Area 1. Excavated in four separate locations ([1035], [1004], [1046] and [1048]), the ditch maintained a broad concave profile, ranging in width from 0.52m to 0.8m and between 0.11m and 0.15m in depth. It

seems likely that the ditch has been subject to significant truncation, probably resulting from post-medieval agricultural activity. Along the length of the ditch a mid greyish brown, slightly clay, sandy silt was recorded within the ditch. No dumps of material or deliberate backfill were identified along the length of the feature. It was later truncated by the NE-SW aligned ditch 1081.

Ditches 1081 and 1080

6.2.39 Ditch 1081 was recorded with a length of 6.87m, extending from the southern limit of the excavation area along a NE-SW orientation (Figure 8). It is uncertain whether the NE end of the ditch represents a termination or truncation, but the latter is considered to be more likely due to the presence of a second ditch, 1080 continuing on the same alignment, just 0.4m to the NE of ditch 1081. Ditch 1080 measured approximately 5.3m in length, extending beyond the north eastern limit of the excavated area.

6.2.40 Ditch 1081 was investigated in four locations ([1027], [1024], [1021] and [1076]) and was noted to have truncated the earlier ditch, 1082. The width of the ditch varied along its length between 0.62m and 0.87m with moderately steep sides and a narrow concave base. The truncated NE end measured a maximum depth of just 0.13m, with the ditch deepening to a depth of 0.27m at the SW. It had been filled by light greyish brown, silty clay which had naturally accumulated along its length.

6.2.41 Ditch 1080 was excavated in two locations ([1002] and [1078]) and varied in width between 0.38 and 0.48m. It had a broad concave profile of approximately 0.12m and was filled by a single deposit of mid greyish brown, silty clay.

6.2.42 It is likely that ditches 1081 and 1080 formed part of the same boundary and were probably contemporary, if not part of the same ditch. Both appear to have naturally silted and the relatively low quantities of anthropogenic material may indicate that they were not located within close vicinity to contemporary domestic or industrial activities.

Other features

6.2.43 Features [1025] and [1006] were recorded near the SW corner of the site and were both extremely irregular in shape. Feature [1025] measured approximately 1.1m in diameter with an irregular concave profile 0.12m deep (Plate 18). [1006] was notably smaller, approximately 0.6m in diameter, but a similar depth of 0.13m. Both features contained a deposit of dark grey brown silty clay, with a significant concentration of charcoal present within [1025]. The shallow irregular nature of these two features may be the result of truncation leaving just the bases of pits. Equally they may be the result of midden waste accumulating within natural depressions, or naturally created cuts such as tree throws.

6.2.44 Features [1018] and [1016] were also recorded within the SW corner of the excavated area. They were both irregular in form and in plan measured 1.76m x 0.9m and 2.58m x 0.52m respectively. The deepest of these feature was [1016], with a depth of 0.28m, compared to [1018] which measured 0.2m deep. Both features contained single homogenous deposits of dark greyish brown, silty clay with occasional stones and charcoal flecks. These likely represent the remains of tree throws or silted natural depressions, as opposed to archaeological features.

6.3 Area 2 – Northern part of the Site

Natural Geology and Soils

6.3.1 Area 2 was located within the floodplain of the River West Glen, where the previous geoarchaeological assessment identified the presence of river gravels and alluvium forming the superficial geology (Stein, 2014).

6.3.2 During stripping, a consistent layer of topsoil comprising dark greyish brown, clay silt (generally c.0.3 in depth) was removed by machine. At the southern end of the excavation area, topsoil was shown to be sitting directly on top of an area of river gravels (2002). Further to the north, the topsoil was underlain by a subsoil deposit of mid greyish brown clay silt, that measured up to 0.3m in depth. Within this central and northern portion of the site, removal of the subsoil layer revealed a mottled surface of mid to light brown silty clay alluvium, overlain in patches by dark peaty clay silt. This horizon was fully exposed revealing several cut archaeological features and a significant quantity of worked flints (Figures 3 and 18).

Pit Group 2090

6.3.3 Located at the southern end of the excavated area were a small number of low density discrete features, [2037], [2068], [2076], [2069], [2044], [2046] and [2051] (Figure 15) (Plate 23). These features were of mixed morphology and presumably function, but they each appear to have been located in order to exploit the firmer gravel terrace exposed at this location.

6.3.4 Features [2037] and [2068] were both oval in plan, with steeply cut openings leading into slightly undercut, bell-shaped profiles with flat bases. At its opening, pit [2037] measured 1.47m x 0.74m, with an overall depth of 0.7m (Plate 19). Pit [2068] measured 1.41m x 0.95m and 0.6m deep. At the base of pit [2037] was a narrow cone of backfilled material, comprising light grey, silty sand (2041). It was overlain to the north by a dark brownish grey, sandy clay deposit (2040) containing frequent charcoal flecks and domestic waste including animal bone and pottery. A subsequent slump from the edge of the pit, or deliberate backfill, (2039), was then overlain by the upper fill (2038). This final deposit was comprised of dark greyish brown, sandy clay with frequent stones and charcoal. It also contained several sherds of Iron Age pottery, including probable late Iron Age fabric, several fragments of bone and several fragments of slag. Pit [2068] was also filled by a succession of moderately sterile, deliberately dumped deposits ((2071), (2072) and (2080)), and a possible slumping event (2073) represented by a light orange sandy gravel deposit. The final upper fill was a dark grey sandy clay deposit (2074) containing pottery and animal bone (Plate 22).

6.3.5 Approximately 1m to the south of pit [2068] a possible third bell-shaped pit, [2076] was identified. It was only partially exposed by stripping as it extended beyond the western edge of the excavation area. The visible portion appeared to be oval and measured at least 1.7m x 1.1m, with a dark grey brown, silty sandy clay upper fill. This feature was left unexcavated due to the fact it was not fully exposed.

6.3.6 Pit [2069] was located to the north of [2068], and although oval in plan, the profile was only slightly undercut with moderately sloped sides leading to a narrow concave base. It measured 1m x 0.72m and 0.42m deep and was filled by two naturally accumulated deposits of sandy gravel, (2079) and (2070). A small amount of pottery was recovered from the later, upper fill (2070).

6.3.7 At the SW extent of the group was a small circular feature, [2051]. It measured approximately 0.4m in diameter, with steep sides curving into a flat base, 0.15m deep (Plate 21). Two fills were identified within the feature, the earliest of which was a deliberate lining of blue-grey clay (2057) (0.1m deep) containing small pockets of brown silt, occasional pieces of limestone and fragments of fired clay. Lying within a shallow (0.07m deep) depression at the top of the clay deposit was a second fill of dark greyish

brown, silty clay (2056) which contained a high concentration of charcoal, burnt stone and some small fragments of burnt bone. It also contained several sherds of pottery. The mixed nature of this secondary deposit is indicative of discarded waste material, dumped into a feature and marking disuse.

6.3.8 Pits [2044] and [2046] were two intercutting features located towards the west of this group. They were both sub-oval in shape, measuring 0.6m x 0.38m and 0.74m x 0.45m respectively. The earliest of the two, [2044] had a shallow concave profile just 0.12m deep and filled by a single deposit of mid orange brown, slightly silty clay with frequent gravel inclusions (Plate 20). Its NW end was truncated by the later pit [2046] which measured 0.2m deep with steep sides and a concave base. Filling this later pit was a single deposit of dark grey brown, slightly silty clay, within which a piece of worked flint was recovered.

Pit Group 2091

6.3.9 Pit group 2091 is represented by two pits ([2029] and [2003]) that were located towards the centre of the excavation area (Figure 14). Unlike pit group 2090, these two were cut into the silty clay alluvial layers that had developed over the river gravels.

6.3.10 Pit [2029] was located furthest to the south near the middle of the excavation (Plate 27). It had an irregular oval form in plan, with moderately sloped, but irregular sides and a concave base, measuring 1.02m x 0.91m and a depth of 0.25m. Around the upper edges of the pit, the underlying alluvium was a mottled, orangey-red colour indicating that there had been in-situ burning, within the pit (Plate 28). Interestingly there was no trace of this burning at the base which may either be because it was insulated from the heat by a thick layer of ash, or because it had been cleaned out and truncated after the final burning event. Within the pit was an initial mottled deposit (2032) of light brown and black, clay silt which despite the evidence for burning, contained very low quantities of charcoal. This observation was supported by the environmental analysis of the fills which confirmed a very negligible quantity of charcoal. The overlying secondary fill, (2031) was a dark yellowish brown, silty clay loam, with occasional stones which appeared to have naturally silted within the open feature.

6.3.11 The second pit within this group, [2003] was positioned approximately 13m to the NE of [2029], close to the western limit of excavation. It was oval in plan, measuring 1.23m x 0.83m and 0.19m deep, with steep sides sloping into a concave base. Within the feature was a thin primary deposit of ash and charcoal, represented by contexts (2007) and (2006), together these totalled 0.08m thick (Plate 24). Positioned on the top of this ashy deposit was a layer of burnt stones (2005), extending across the full extent of the pit (Plate 25). The stones ranged in size between 0.06m and 0.2m in diameter and were mainly rounded river cobbles, although around 20% were more angular limestone fragments, and were likely derived from the upper slopes of the West Glen valley. Many were also fractured in-situ, presumably due to being heated. Whether there was a fire within the pit is unclear, as although the sides and base had been heat affected (Plate 26) (considerably more so than [2029]), there was again a negligible quantity of charcoal recovered with the environmental sampling. It is therefore quite likely that the evidence for burning resulted from the hot stones and accompanying ash being placed into the pit, rather than being heated in-situ. The final upper deposit of mid greyish brown, silty clay (2004) indicates that the feature was abandoned after use, and was allowed to naturally silt up. Although it should be noted that some small pottery fragments, worked flint and animal bone were present within this final fill and so the area was not entirely abandoned.

Ditch 2086

6.3.12 Ditch 2086 (Plate 32) was located within the northern half of the excavation. It was orientated N-S, and extended beyond the northern limit of excavation, with an overall length of almost 19m terminating within the excavation area at its southern end (Figure 12). Towards its northern end, the ditch measured 1.9m wide and 0.69m deep, with steep sides and narrow concave base ([2024]), where it truncated the small pit, [2033] (Plate 29). The overall size of the ditch was reduced at the southern terminus, [2034] where it measured 1.5m wide and 0.55m deep, with steep sides and a broad flat base (Plates 30 and 31).

6.3.13 The northern end of the ditch was recorded cutting through the sand and gravel river terrace deposit, whereas the remainder of the ditch was cut the alluvial deposits occupying the centre of the excavation area. Consequently, the accumulation of deposits within the two end were notably different. Within [2024] to the north, there was an initial primary deposit (2025) of mid brown sandy clay, fine gravels, approximately 0.2m thick, representing erosion, predominantly from the western side. This was overlain by probable alluvial accumulations comprising a dark brown, silty clay deposit, (2026) up to 0.16m deep, and a mid brown silty clay layer (2027) with visible laminations of small stones, up to 0.23m thick. Within this deposit was a single sherd of possibly Iron Age pottery, although the sandy fabric may indicate an earlier date. The finally upper fill, (2028) was mid yellow brown, silty clay, with well sorted small limestone fragments throughout. Some small pottery fragments and a worked flint were recovered from deposit (2027). The terminal end contained an initial deposit of mid to dark, grey brown, slightly clay silt (2035), 0.25m deep, overlain by a mid grey brown, clay silt with very occasional limestone fragments, 0.3m deep (2036). A single piece of worked flint was recovered from each deposit.

Ditch [2008]

6.3.14 Ditch [2008] was located within the northern half of the excavation area (Plate 33). From the western edge of the excavation it was orientated NW-SE, with the SE end curving towards a NNW-SSE alignment, and extending beyond the eastern limit of excavation (Figure 12). It measured in excess of 25m in length, with a varied width that increased from 0.47m at the western edge, to 1.3m at the eastern edge. Upon excavation, a slightly irregular concave profile was revealed, measuring up to 0.34m deep. It contained a single fill of mid to light brownish grey, sandy silt, containing a small amount of pottery and animal bone. The ditch was identified during the previous evaluation phase, and was recorded as containing post-medieval CBM fragments (Dodd 2014).

Ditch 2088

6.3.15 Ditch 2088 was one of several linears identified within the southern portion of the excavation area (Figure 13). It was orientated ENE-WSW, and extended beyond both edges of the excavation area over a distance in excess of 20m. The western end of the ditch had been identified and recorded during the previous evaluation, revealing a broad V-shape profile, 0.92m wide and 0.3m deep with a sterile, dark brown, clay silt contained within it (Dodd, 2014).

6.3.16 During excavation at the eastern end, a significantly different profile and sequence of deposits were revealed. Ditch [2042] measured 1.59m wide, with a slightly irregular upper profile, leading to a steep sided narrow base U-shaped base, 0.65m deep. An identical profile was recorded as ditch [2077] to the west. Within both slots, the ditch was initially filled by an alluvial deposit of light grey brown, sandy silt, approximately 0.35m deep, ((2053)/(2085)). This was sealed by a compact layered deposit of fine gravel and mid grey brown, silty clay, with iron panning throughout ((2054)/(2084)). Within ditch [2042] this was overlain by an upper fill of light brownish grey, silt. This naturally silted tertiary fill was not recorded within [2077] due to truncation by the terminal end of a later ditch, 2087.

Ditch 2087

6.3.17 Ditch 2087 was a N-S aligned boundary ditch and was excavated as slots, [2010] and [2078]. It extended to the north, beyond the limit of excavation, and terminated at its southern end as it truncated the upper fills of ditch 2088 (Plate 34). It measured at least 12m in length, 0.65m wide and approximately 0.25m deep, with steep sides and a concave base. It was filled by a naturally silted deposit of light brownish grey, sandy silt, which within slot [2010] contained a fragment of animal bone. No dating material was recovered from this feature.

Ditch 2089

6.3.18 Ditch 2089 was positioned along a parallel alignment to ditch 2087, approximately 8.5m to the SE. It traversed the on an ENE-WSW orientation over a distance of 23m. At its eastern end, excavation revealed moderately steep sides, with a flattish base, approximately 1m wide and 0.4m deep([2043]). Further to the west the profile the ditch was recorded with very steep sides, and a more rounded base, 0.6m wide and 0.24m deep ([2063]). It was filled by a dark grey brown, clay silt deposit, and contained several sherds of pottery within slot [2063]. It was truncated at the eastern and, along it's NW edge by the later ditch [2048].

Ditches [2048] and [2061]

6.3.19 Ditch [2048] was recorded truncating the NW edge of ditch 2089, at the west of excavation. It was aligned ENE-WSW and visible over a length of 4m, terminating to the WSW. Excavation of the feature revealed moderately sloped sides and a concave base, 0.6m wide and 0.2m deep, with a single fill of light greyish brown, sandy silt.

6.3.20 Approximately 9.5m to the WSW of ditch [2048] was the terminus of ditch [2061], which was positioned along the same alignment as the former. Extending beyond the western edge of excavation, ditch [2061] measured almost 10m in length, 0.4m wide and 0.32m deep. The full profile was not exposed during excavation, although the sides were proven to be steep, with a probable flattish base (Plate 35). It was filled by a single deposit of light greyish brown, sandy silty clay.

6.3.21 There is no direct evidence to suggest that these two ditches were related, and neither contained any dating evidence to indicate their contemporaneity. However, they were of a similar form and size and it is likely that they were intended to reassert the same boundary.

Other features

6.3.22 Features [2014], [2016], [2018] and [2020] represent a small arc of shallow pits towards the west of the excavation area (Plate 36). They were oval in plan, and ranged between 0.3m and 0.47m in length, and 0.2m to 0.3m in width, with depths of between 0.06m and 0.18m. Within features [2020], [2018] and [2016] a single deposit of reddish dark brown, sandy clay, with occasional charcoal flecks was recorded and in each instance appears to have accumulated through gradual silting. A fourth feature within the arc, [2014] was visible in the edge of a machine excavated slot, and so it was possible to see that the fill reddish brown, sandy clay, had been combined with heat affected material, and also subjected to significant bioturbation. It is therefore unclear whether the burnt material formed part of the original fill, or if it had been introduced as a result of post-deposition root activity.

6.3.23 At the opposite, eastern side of the excavation area a large feature was recorded [2012]. It was only partially visible as it extended beyond the limits of the area, but its longest axis was orientated N-S and measured approximately 2m, with a width of at least 1.2m (Plate 37). Excavation of the feature revealed moderately sloped sides and a concave base that was deepest at the northern end, measuring 0.48m deep. It was cut into the dark peaty alluvial deposit, and had a single naturally accumulated fill of slightly orange, light brown, sandy clay with occasional pebbles and charcoal flecks. Both worked flint and some small fragments of pottery were recovered from this deposit, but both appear to be residual material. Without revealing the full extent of the feature, it is unclear whether this was the terminal end of a ditch, or a large pit.

Pit [2023]

6.3.24 Pit [2023] was an irregular, oval shaped pit truncated by ditch [2024] at the northern end of the site. It measured at least 0.75m x 0.45m in plan, with moderately sloped sides and a concave base 0.18m deep. It contained a single deposit of dark greyish brown, silty clay, with occasional small stones throughout. No charcoal was found within the deposit, and it was probably a naturally accumulated fill. Recovered from the pit during excavation was a single piece of worked flint, a probable microlith. Given the date of the artefact, and the context from which it was recovered, it seems likely that this was a residual piece.

Structure 2030

6.3.25 Structure 2030, was an alignment of unworked limestone fragments orientated ENE-WSW, within the southern half of the excavation area. The structure was recorded over a length of 3.54m, and up to 0.8m wide, although the NW edge appeared to have been partially truncated along its length by a modern drainage ditch (Plate 38). The remains of the structure comprised a single layer of stones with a central core formed from a double width of larger blocks, and randomly located smaller stones along the two external edges. The larger fragments measured up between 0.17m and 0.41m in diameter, with the smaller external stones typically measuring 0.02m in diameter. The stones were laid directly onto the dark, peaty alluvial layer exposed across much of the area, and were not within any identifiable cut. In addition, no bonding material was identified in association with the stones.

6.3.26 Clearly a deliberate structure, there was no evidence to indicate what its function may have been, although the linear arrangement is indicative of a wall, or at least foundations, no associated structures were observed.

6.4 Flint Scatter

Introduction

6.4.1 During the topsoil and subsoil stripping of Area 2, a considerable number of worked flints were identified at the interface between the subsoil and underlying alluvial deposits. These flints were revealed in relatively low density across the entire area where the alluvial deposits were revealed, and were entirely absent from the surface of the gravel terraces (2002) towards the south of the area. The greatest density of flint was located at the northern end of the area, within the alluvial deposits, either side of a patch of gravel. These two scatters were investigated in detail to evaluate the extent and nature of the material (Figures 18 and 19) (Plates 39, 40, 41 and 44).

Methodology

6.4.2 Based upon the potential for several in-situ flint scatters, each piece of worked flint not identified within an archaeological feature was located 3-dimensionally and attributed a

unique 3 letter identifying code. Unless evidence indicated to the contrary, flints recovered from archaeological features were determined not be in their primary context and were recorded as bulk finds, although bagged individually.

6.4.3 Once all surface flints had been recovered and recorded, it was possible to determine two distinct concentrations at the northern end of the site. These were then divided into three 5m x 5m grids, and then further sub-divided in 1m squares, with 25 squares per grid. Within each grid, the 1m squares were attributed a single identifying letter from A to Y.

6.4.4 In order to rapidly evaluate the nature of the material and the extent of the scatters an initial 5cm deep spit was excavated from 50% of the squares -in effect creating a chequer board pattern. It was later possible to dig the alternate squares within grids 1 and 2. All squares marked with an X were unexcavated, with only surface flints being recovered.

6.4.5 During the excavation of a spit, the location of each piece of worked flint was marked using a nail, to indicate its height within the spit. Periodically the flints were located using a GPS, and were then bagged individually using their 3 letter identifying codes, alongside their grid number, the letter of the square they were found in, and the spit from which they were excavated..

6.4.6 Excavation of the grids was initially limited to every other square, in effect creating a chequer board pattern. It was later possible to dig spit 1 within the remaining squares of grids 1 and 2.

6.4.7 Grids 1 and 2 were hand cleaned to identify any deposits or features that may have been related to the deposition of the flints.

6.4.8 Grids, 4, 5 and 6 were excavated to help determine the extent of the scatters. At least 2 spits were excavated within Grid 6 where the depth of alluvium overlying the gravels was known to be deeper. This was to ensure that there were no buried horizons containing knapped material not previously seen.

6.4.9 A full detailed assessment of the lithics recovered has been included below as section 7.3.

Features associated with the flint scatter

6.4.10 Following the removal of spit 1 within Grids 1 and 2, it was possible to observe diffuse patches of the dark brown silty alluvium, as noted across much of Area 2. The diffuse nature of the material made it difficult to determine the presence of features within the two grids, although two distinct areas of interest were identified (Figure 19).

6.4.11 Primarily located within square 2I, an irregular oval patch of the dark brown clay silt was recorded, measuring approximately 1m across. In contrast to the surrounding patches of similar material, it contained moderately frequent fragments of fired clay and charcoal (Plate 43). The deposit (2067) was half sectioned, and a Palaeoenvironmental sample was recovered. However there was no surviving evidence for in-situ burning at that location, despite the concentrated nature of the material. It is therefore most likely that this was the remnants of dumped material originally derived from elsewhere.

6.4.12 The second area of interest was a slightly darker, irregular arc of sandy silt, (2065), which occupied much of Grid 1 (Plates 41 and 42). Located on the surface of this deposit within square 1U a discrete concentration of burnt river pebbles (2066), was revealed. They occupied an area of approximately 0.3m across, with the stones measuring between 0.05m and 0.1m diameter. Excavation of the stones and the underlying

deposits revealed that they did not appear to be within a cut feature - they were resting on the surface of deposit (2065). Despite excavating a sondage to investigate the nature of deposit (2065), it was far too diffuse to identify any limits which corresponded with those observed in plan. Presumably this is a result of the alluvial origins to the deposit.

7. SPECIALIST REPORTS

7.1 Environmental Remains

By Sharon Carson, Ruth Whyte & Jennifer Miller

Summary

7.1.1 Few artefacts were recovered from the range of samples; only magnetic material identified as probable iron stone and burnt clay was recovered, with occasional flint flakes. Carbonised botanical remains and charcoal were scarce, including those within features described as fire or cooking pits. Scant evidence for cereal processing practices and other food processing practices was observed. The malacological evidence was particularly prevalent within Area 2, generally indicative of a damp shaded environment with areas of more open dry grassland.

Introduction

7.1.2 During the excavations, a total of 29 samples were recovered from a variety of features and deposits. After the initial processing and examination of these samples, 22 were selected for further detailed analysis.

7.1.3 A range of samples recovered from Area 1 and Area 2 features were submitted for specialist processing and analysis. It was anticipated this would contribute towards the interpretation of the site and provide evidence for the nature and land use of the occupied area over time.

Methodology

Flotation & Sorting

7.1.4 Bulk soil samples were processed by Trent & Peak Archaeology using a standard Siraf flotation method. The dry retents were delivered to the Dickson Laboratory and sieved using 4mm and 2mm calibrated *Endicot* sieves before being sorted using magnified illuminated lamps for all categories of artefacts and ecofacts. A magnet was employed to locate magnetised stone and metals. Sorted materials were bagged and labelled for submission to specialists and weighed (where relevant) using an *Ohaus CS200* digital scale calibrated to 0.01g. Sorted residues were also weighed on a digital scale, bagged and stored pending decision regarding disposal. The volume of each dried flot was recorded and then sorted through calibrated sieves of 4mm, 1mm and 500µm mesh diameters. The matrix composition was described according to Hubbard & Clapham's abundance scale (1992) and all botanical and significant non botanical components were removed for further analysis. A magnet was used to remove magnetic materials.

Botanical Material Identification

7.1.5 Charcoal identification was undertaken using the reflected light of a Brunel SP80 metallurgical microscope at x40 magnification. Depending upon volume present, 100% of the charcoal >4mm fragment size, or a representative sample thereof, was identified as completely as preservation would allow. Charcoal <4mm fragment size was scanned, and if necessary and feasible a selection was identified to ensure the identified material provided an accurate representation of the species composition for each sample analysed. The total volume of charcoal present was recorded. Carbonised and uncarbonised cereals, seeds and other macroplant remains were 100% identified as specifically as preservation would allow using a Nikon 93756 binocular microscope at variable magnifications of between X8 - X40 with associated Schott cold light source.

7.1.6 Charcoal identification was undertaken with reference to Schweingruber (1990). Confirmation of cereal morphology was achieved with reference to Jacomet (1987), whilst seed identification was confirmed by comparison with images within Beijerinck (1947) and Cappers (2006) and the Dickson botanical reference collection. Plant nomenclature follows Stace (1997) except cereals, which conform to Zohary & Hopf (2000).

Faunal Remains Identification

7.1.7 The material was examined at macroscopic level with identifiable fragments assigned to the lowest taxonomic level possible. Identifications were made with comparison to reference specimens from the Zooarchaeological reference collections at the Dickson Laboratory. These were further supplemented with reference texts (Pales & Garcia 1981). Mammalian fragments that could not be identified, yet retained characteristics which enabled size estimation of the animal, were assigned into the following categories; large mammal (eg. horse, cow, large deer), medium mammal 1 (eg. sheep, goat, pig, small deer), medium mammal 2 (eg. dog, cat, hare), small mammal (eg. rabbit, rodent). Remaining fragments that could not be assigned to any of these categories, and fragments below 10mm in size without any size determinant characteristics were recorded as unidentified. All recorded identifications were compiled into a database of number of identified specimens (NISPs).

7.1.8 For each sample observations of bone preservation, colour, angularity of breaks and general fragment size were recorded using qualitative scales. This was undertaken in order to make general observations on the taphonomy of each context and was completed with reference to O'Connor (2000).

Mollusc Identification

7.1.9 Molluscs were sorted initially by shape/type before specific identification and habitat criteria were achieved using Cameron & Riley (2008), Evans (1972) and modern reference materials. Shell taphonomy and interpretation was achieved with reference to Claassen (1998). Common names for molluscs given in tables follow Daw & Ivison's online key.

Results

7.1.10 Results are discussed below by excavation area and feature type where information was available. Detailed results of sorting and analysis are tabulated separately. Table 1 shows the results from the sorting of the retents; Table 2 provides data from sorting of the flot material, full analysis and identification of botanical remains and Table 3 gives results of the bone analysis.

Area 1

Pit [1034] fill (1034) sample <13>

7.1.11 Pit fill (1034) contained occasional small charcoal fragments from mixed deciduous woodland including ash (*Fraxinus*), apple type (Maloideae), cherry type (Prunoideae) and oak (*Quercus*). One carbonised dock (*Rumex sp*) seed was also recovered. Interpretation of environment is difficult from such sparse botanical evidence and the terrestrial molluscs cannot provide any further information for interpretation other than to suggest a shaded habitat.

7.1.12 The sample produced a small number of medium mammal 1 fragments, including partial rib and metapodials (foot). The remaining fragments consisted of non-diagnostic medium to large mammal and unidentified specimens. A small number of these were calcined, demonstrating that they had been burnt at high temperatures in a well oxidised fire (Shipman *et al.* 1984; Stiner *et al.* 1995). The preservation was generally good; angular breaks and trabecular patterning were both commonly observed. The

combination of both calcined and un-burnt bone suggests that the pit may have been used for refuse disposal.

Pit/tree throw [1037] fill (1038) sample <02>

7.1.13 Tentative evidence for cereal processing practices was recovered in the form of limited carbonised cereals grains identified as spelt/emmer (*Triticum spelta/dicoccum*) and two indeterminate grains. These were probably lost during processing and re deposited with other hearth waste material. Charcoal was limited to occasional fragments of cherry type fragments. Uncarbonised seeds of fat hen (*Chenopodium album*) were also recovered but these are likely to be modern contaminants. Interpretation of environment and agricultural practices is tenuous due to such sparse botanical evidence and the information derived from the terrestrial molluscs is also limited. A shaded habitat with more open areas is implied by the inclusion of both *Cecilioides acicula* and *Vallonia excentrica/pulchella*.

7.1.14 Sample <02> contained a single identifiable fragment of sheep tooth plus a further, general tooth fragment assigned to medium mammal 1. A small mammal claw was also recovered from the sample, although this could not be identified to species. The remaining fragments of bone were assigned to the category of medium to large mammal, in addition to a small number of unidentified items smaller than 10mm. The generalised fragments were a mixture of both calcined and un-burnt material. Preservation was generally good, with sharp edges and trabecular patterning evident. The presence of a common domesticate (sheep), along with both burnt and non-burnt material indicates that this pit may have been used for waste disposal. The presence of small mammal may indicate that the pit was left open for a length of time during usage.

Pit [1105] fill (1107) sample <06>

7.1.15 Few fragments of poorly preserved charcoal were recovered, identified as taxa representative of mixed woodland resources including apple type, possible poplar/willow (*cf Populus/Salix*) cherry type and possible cherry type. Two indeterminate cereals grains and one seed of possible knotweed family (cf Polygonaceae), a commonly associated crop weed were recovered. Such remains are usually associated with cereal processing waste. Only one probable *Cecilioides acicula* mollusc was noted and does not lend any great interpretative value to the deposit.

7.1.16 Sample <06> contained a range of different specimens of bone. Five fragments of cow tooth were identified. Seven pieces of medium to large mammal were recovered, along with a single specimen of small mammal and twenty unidentified fragments smaller than 10mm. Both calcined and non-burnt material was noted as present. The preservation of all fragments was recorded as good, with sharp edges and trabecular patterning evident in the majority of bone.

Pit [1130] fills (1131 & 1132) samples <08 & 09>

7.1.17 The primary fill (1132) of the pit did not contain any notable botanical components other than occasional indeterminate minute charcoal flecks. Only indeterminate fragments of terrestrial mollusc were noted. The secondary fill (1131) contained occasional identifiable fragments of charcoal. However, these were poorly preserved and included cherry type, oak (*Quercus*) and possible oak, all likely to have derived from local mixed woodland sources. No other carbonised botanical remains were recovered and only occasional fragments of terrestrial mollusc were noted.

7.1.18 The bone recovered from primary fill (1132) sample <09> consisted of elements of large mammal, medium to large mammal, small mammal and unidentified fragments. These all displayed poor preservation, with significant root-etching and smoothed edges. The mixture of large and small mammals indicates that the pit may have been used for waste disposal, although since species identification was not possible this is not certain.

7.1.19 Sample <08> from secondary fill (1131) contained the highest frequency of bone fragments. The majority of these were unidentified fragments smaller than 10mm in size. Twenty specimens of medium to large mammal were also recorded. One of these was black, indicating that it had been burnt at a low temperature in a slow fire. Overall the preservation of the bone was middling; significant fragmentation and extensive root etching were noted, but trabecular pattering on the fragments was still evident.

Pit [1136] fill (1137) sample <10>

7.1.20 Botanical remains were scarce and limited to a small number of charcoal fragments identified as predominantly cherry type with occasional oak. Such a diminutive assemblage does not lend any great interpretive value as to the function of the pit, however cherry type includes several types of scrubland taxa used within a domestic hearth as kindling.

7.1.21 Sample <10> contained a range of bone. A single sheep tooth was identified along with seven fragments assigned to medium mammal 1. Additionally fragments of medium to large mammal were recorded, as well as fifty-six unidentified fragments smaller than 10mm. The fragments of medium to large mammal showed significant root-etching, demonstrating post-depositional root alteration through the sample. Generally the fragments showed poor preservation, with smoothed edges and a loss of surface texture. Two fragments of medium to large mammal were calcined, demonstrating that they had been burnt. The presence of calcined fragments and a common domesticate indicates that the pit is likely to have been used for general waste disposal.

Ditch [1112] fill (1113) sample <14>

7.1.22 Few botanical remains were recovered from ditch fill (1113); only occasional poorly preserved small flecks of charcoal were observed and tentatively identified as possible apple type. Such a limited assemblage may suggest single event backfill rather than a gradual accumulation of material from a general background scatter of domestic waste.

7.1.23 The bone recovered from sample <14> consisted of four fragments of medium to large mammal and twenty unidentified specimens smaller than 10mm. A single fragment of medium to large mammal was calcined, demonstrating burning activity. The shape and size of the fragment suggests it is likely to be from a domesticate although this cannot be categorically proven. The preservation was generally fair, suggesting that the context had not been disturbed after deposition.

Pond/watering hole [1074] fills (1075, 1102 & 1119) samples <04, 05, & 07>

7.1.24 This feature was described as a pond/watering hole and may once have been waterlogged. However, the botanical assemblage does not reflect this and only occasional charcoal fragments were recovered from each of the fills, identified as predominantly oak, with occasional hazel (*Corylus*) and ash. Instances of oak and ash together are typically suggestive of demolition or high temperature industrial hearth features. Occasional flint flecks were recovered from the primary fill (1119) which may or may not have been derived from anthropogenically worked stone. The bone recovered from the primary fill was predominantly large mammal long bone shaft fragments. These displayed significant root etching and erosion, indicating that there had been significant post-depositional plant activity. An additional unidentified bone fragment with equally poor preservation was also recovered.

7.1.25 A single fragment of bone was recovered from secondary fill (1102). This was smaller than 10mm and was unidentified. It was calcined, demonstrating burning, and was poorly preserved. As a single fragment this does not give much information about the context.

7.1.26 A total of ten bone specimens were recovered from tertiary fill (1075). Two of these were assigned to the category of medium to large mammal. The remaining fragments

were smaller than 10mm and were unidentified. Both calcined and non-calcined bone was noted in the unidentified fragments, demonstrating that some items had been subject to burning at high temperatures in well oxidised conditions. The mixture of burnt and non-burnt material within the same context may indicate waste disposal.

Area 2

Pit [2003] fills (2004, 2006 & 2007) samples <2000, 2001 & 2002>

7.1.27 Feature [2003] was described as a fire or cooking pit and contained 3 distinct fills. Each of these contained only a small number of charcoal fragments, predominantly hazel with the inclusion of possible poplar/willow within secondary fill (2006) and apple type and cherry type within tertiary fill (2004). The only other carbonised botanical remains recovered from the fill were carbonised hazel nutshell fragments. Collectively the remains suggest residual hearth waste disposal.

7.1.28 Frequent terrestrial molluscs were recovered from each of the fills within this feature, predominantly those that thrive in shaded well vegetated damp areas, particularly under leaf litter and in hedgerows. However, others more synonymous with dry open grassland were also recovered to reflect the variable nature of the local environment. Fragments of possible Helicidae/Hygromiidae were also noted; these could include synanthropic types that are usually associated with anthropogenically modified environments. Collectively the environmental evidence may infer deposition of materials from a variety of sources.

7.1.29 A total of seven pieces of bone were recovered from primary fill (2007). The majority of these were unidentified fragments smaller than 10mm, all of which were calcined. A single specimen of medium to large mammal was also recovered, however this was not burnt. The bone recovered from secondary fill (2006) consisted of three unidentified fragments, each smaller than 10mm. These were calcined, demonstrating that they had been burnt at extremely high temperatures. The calcined bone and charcoal may support the idea that feature [2003] was a fire pit, although deposition of waste from one such feature is perhaps more likely, given the rarity of carbonised material. Three small unidentified fragments of bone were recovered from the tertiary fill (2002). Each of these was also calcined, which correlates with the theory that the context originated from a fire.

Pit [2029] fill (2032) sample <2004>

7.1.30 Also described as a burning pit, fill (2032) only contained a minimal quantity of charcoal fragments, with only two large enough to be identifiable as hazel. Two carbonised seeds from the knotweed family were also recovered; these may have been part of a much larger assemblage of hearth waste material. However, this scant assemblage cannot lend any great interpretative value alone to corroborate the initial interpretation of the feature as having in-situ burning. Occasional terrestrial molluscs were noted and identified as those synonymous damp shaded areas, particularly hedgerows and woodland. Fragments of possible Helicideae/Hygromiidae were also noted which could include synanthropic types that are usually associated with anthropogenically modified environments.

7.1.31 Only two unidentified fragments of bone were recorded, both smaller than 10mm. The preservation of these was fair, however due to their size they give little further information about the context. Neither of the fragments was burnt, and consequently the bone cannot give any evidence towards the theory that this was a fire pit.

Pit [2037] fills (2038 & 2040) samples <20007 & 2008>

7.1.32 Tentative evidence for cereal processing practices was recovered in the form of two possible wheat and four indeterminate carbonised cereal grains within primary fill (2040) and one grain of wheat within secondary fill (2038). These were probably lost

during one of the various stages of processing, probably parching, and have been deposited with other hearth waste material. The charcoal abundance and taxon assemblage varied between the two fills to confirm different provenance. The primary fill contained charcoal identified as apple type, possible cherry type and oak whereas the secondary fill contained the only alder (*Alnus*) and yew (*Taxus baccata*) charcoal recorded from this study. Both alder and yew woods lend themselves well to small item turnery, such that the presence of them here may reflect debitage from woodworking or incidental burning of carved or utilitarian items rather than fuel.

7.1.33 Frequent terrestrial molluscs were recovered from both of the fills within the pit feature, dominated by taxa that thrive in well vegetated shaded areas, particularly under leaf litter and within hedgerows, although some are also indicative of a more open drier habitat. Collectively, the malacological evidence indicates a fairly damp and densely vegetated environment with areas of open grassland.

7.1.34 The pieces of bone recovered from fill (2038) were all smaller than 10mm and were consequently recorded as unidentified. Both calcined and non-burnt fragments were noted, all with fair preservation. The small size and quantity of the fragments make it difficult to establish the use of the pit, however the presence of burnt and non-burnt material may indicate waste disposal, which corroborates the interpretation derived from the botanical evidence. The bones recovered from fill (2040) consisted of three specimens of rodent and five unidentified fragments. The rodent bones were not diagnostic of species, although the presence of them suggests that the pit could have been open for some time. The unidentified fragments were calcined to imply high temperature burning.

Pit [2051] fills (2056 & 2057) samples <2009 & 2010>

7.1.35 Primary fill (2057) contained three poorly preserved charcoal fragments identified as possible cherry type; a fourth was indeterminate. Similarly, the secondary fill only contained occasional small fragments identified as apple type and cherry type. Such an assemblage may have derived from kindling within a hearth. No other botanical components were recovered. The terrestrial mollusc assemblage within both fills of the pit feature included exclusively taxa that thrive in shaded well vegetated damp areas, particularly under leaf litter and in hedgerows.

7.1.36 Fill (2056) contained two specimens of calcined unidentified bone smaller than 10mm. Both of these were noted to be particularly poorly preserved and fragile. This highlights poor levels of preservation across the context. A total of four unidentified fragments were recovered from (2057). Each one was smaller than 10mm and was calcined. The preservation of these was recorded as poor; each displayed rounded edges and a loss of original surface texture. The low quantity of the bone found in the context may indicate residual accumulation; however it is also possible that it is a result of poor preservation conditions.

Ditch [2063] fill (2064) sample <2012>

7.1.37 Occasional possibly worked flint flakes were recovered from the ditch fill, with occasional fragment of charcoal identified as possible cherry type, cherry type and oak. Terrestrial molluscs were recovered from this feature, predominantly identified as those that thrive in shaded well vegetated damp areas, particularly under leaf litter and in hedgerows. Others more synonymous with dry open grassland were also recovered signifying the presence of these habitats within the vicinity.

7.1.38 A single fragment of bone from sample <2012> was assigned to the category of medium mammal 1. The remaining three fragments from the sample were smaller than 10mm and were recorded as unidentified. The fragment of medium mammal 1 displayed significant amounts of root etching, demonstrating significant plant growth through the sample. The unidentified fragments were calcined, indicating that they had been burnt

at high temperatures. The frequency of these fragments is not enough to say whether the bone accumulated naturally or as waste disposal.

Deposit (2067) Grid 2 sample <2011>

7.1.39 Layer (2067) contained occasional flint flakes which may or may not have been intentionally worked. A number of charcoal fragments were recovered and identified as oak; this was the only taxon recorded within the sample. This may reflect intentional selection of this wood for structural strength or other attributes including prolonged burning at high temperatures. The terrestrial mollusc assemblage within the fill of the pit feature was exclusively those that thrive in shaded well vegetated damp areas, particularly under leaf litter and in hedgerows.

Flint scatter spit 1 samples <2005 & 2006>

7.1.40 Both samples from the flint scatter produced possibly worked flint flakes. Relatively few botanical remains were present but occasional charcoal fragments identified as ash or indeterminate were recorded within sample <2005> and oak with ash in sample <2006>. Both samples contained one carbonised indeterminate cereal grain indicative of some degree of cereal processing within the area. Uncarbonised elder/red berried elder (*Sambucus nigra/racemosa*) were also present, although these are not considered likely to be contemporaneous with the other components with the context. Occasional terrestrial molluscs were noted and identified as those synonymous damp shaded areas, particularly hedgerows and woodland.

Discussion

7.1.41 Few artefacts were recovered from any of the samples, the most notable being magnetic material, whether natural iron stone or magnetised as a result of exposure to prolonged and intense heat. Burnt clay fragments were also occasional. This may have derived from the hearth area within domestic structures. No evidence for structural remodelling or definitive industrial processes was recovered. Other components included flint/chert flakes. These were particularly abundant within the flint scatter samples, layer (2067) and ditch fill (2064) within Area 2 and *possibly* reflect anthropogenically worked stone. However, this interpretation is tentative, based upon their fractured nature and rarity within the samples in comparison with the rest of the soils and geological material; the flakes may equally well reflect natural breakages.

7.1.42 Carbonised botanical materials of all kinds were scarce, including within features described as fire pits [2003, 2029]. There does not appear to be any particular reliance on any single taxon across the site as a whole with the exception of the pond/watering hole feature [1074] in Area 1 and the layer within grid 1 of Area 2, both of which were predominantly oak, albeit only in small quantities. When available, oak is usually the preferred wood for fuel use that requires prolonged burning at very high temperatures. As such oak is regularly associated with metalworking and industrial processes and has been the smelting fuel of choice since antiquity (Tylecote 1962, Dickson & Dickson 2000). Oak also has a similar association with construction and commonly used for structural timbers. However, it is also easier to identify in very small fragments than many other taxa, such that identification here may be an artefact of poor preservation.

7.1.43 Pit [2037] contained two fragments of yew charcoal. Yew wood timber is generally very durable and elastic, recorded most frequently on calcareous soils (Gale & Cutler 2000). The high tensile strength of the wood rendered yew valuable for many utilitarian uses in the past but especially for longbows. The presence of it here may be debitage from woodworking or incidental as part of the wider site assemblage of general waste disposal.

7.1.44 Most of the features did not contain carbonised cereals or seeds of commonly associated cereal crop weeds. In those that did [1037, 1105, 2037 & spit 1] grains were

too rare to be of significant interpretative value. However, their presence does imply cereal processing activities within the vicinity. Carbonised cereal grains and similarly burnt commonly associated crop weed seeds are often recorded together in archaeological contexts representing cereal processing waste, as the weed seeds are difficult to remove by winnowing or sieving (Kenward & Hall 1995). At this site such remains were scarce; nevertheless, cereal grains intended for consumption would only be charred accidently and so even in societies that are dependant upon cereals, charred grains are not usually abundant. The waste of cereals would have been avoided as much as possible and the deposits may not reflect the actual availability of such food items or the scale of processing (Monckton 2002).

7.1.45 Hazelnut shell fragments were recovered from fire pit [2003]. The shell is the unwanted waste products of consumption, which would either be deliberately discarded, often onto domestic fires, or may even have been used as kindling. Evidence of such corroborates the interpretation of a pit utilised for the deposition of domestic hearth waste material. It has also been suggested that the presence of hazel nutshell in pits is the result of storage of the food product for consumption at a later date (Monckton 2002), although in such instances entire nuts and/or naturally fractured shells from nuts that had germinated might be expected rather than smashed carbonised fragments. Hazel nutshells are commonly recovered from archaeological sites of many periods ranging from the Mesolithic to later prehistoric and historic periods; they are thought to have been one of the most important plant foods before the introduction of cereal cultivation. The nuts are rich in many vital nutrients including fats, starch and sugar and are likely to have formed an invaluable source of calories when other foods were not available (Dickson & Dickson 2000).

7.1.46 Few terrestrial molluscs were recovered from the Area 1 samples, which may be a result of adverse preservation conditions rather than a complete absence of individuals. Many of the molluscs recorded were of taxa that are particularly prevalent within damp, shaded environments, particularly hedgerows and woodland. This suggests strongly that the local environmental conditions included damp scrub woodland. *Cecilioides acicula* was the most abundant mollusc recorded. This snail burrows to depths of up to two metres below the surface and is predominantly a later introduction within loose anthropogenic soils (Evans 1972) such as pit fills. Consequently, it has not been used in environmental interpretation, although the abundance of it has been noted. Shell fragments derived from possible Helicidae/Hygromiidae were recovered from fire pits [2003 & 2029] within Area 2. The Helicidae/Hygromiidae family include those species that are typically synanthropic (ie environmentally associated with human activity) and usually exclusively thrive in man-made habitats including hedgerows, gardens and waste deposition areas (Evans 1972).

7.1.47 The majority of the bone recovered from the samples followed distinct trends; generalised medium to large mammal fragments were recorded in many samples with unidentified small fragments predominant. Similarly, calcined and non-burnt material was often found together. These trends are unsurprising given that the majority of the bone was recovered from pits. It is likely that these features were used for similar purposes, most likely general waste disposal. An exception to this may be pit [2003], which contained almost exclusively calcined bone across three contexts. This could support the theory that this was a fire pit, although context (2007) did contain a fragment on non-burnt bone, demonstrating that the usage of this pit may be more varied than first thought. It may just reflect refuse including primarily hearth waste instead of *in situ* burning. Similarly, the bone recovered from (2032) was of insufficient quality to give any evidence that this was also a fire pit. Identified species were mostly common domesticates such as cow and sheep, with the addition of rodent in one sample; all of which we would expect to find in a domestic settlement.

7.1.48 No other carbonised seeds were recovered other than those previously discussed. Those that contained uncarbonised remains are likely to reflect contamination from more modern agricultural practices. Modern roots were prolific within most contexts, so seeds are very likely to have been introduced by bioturbation from root action or invertebrate activity, including especially the prolific burrowing molluscs. The absence of waterlogged deposits within this site and the generally degraded condition of many of the uncarbonised botanical remains further implies more recent incorporation.

7.2 Prehistoric Pottery

By Sarah Percival

7.2.1 A total of 275 sherds weighing 2,199g were collected from 27 excavated features and from unstratified surface collection which formed less than 1% of the total assemblage. The pottery is in poor condition being mostly small, fragmented and abraded. The average sherd weight is 8g. The assemblage is perhaps a little later than pottery found during previous work at the site (RYS2 AS2 and evaluation trench 14) and includes rims from six vessels, mostly dating to earlier to mid Iron Age with one sherd perhaps being later Iron Age.

Methodology

7.2.2 The assemblage was analysed in accordance with the Guidelines for Analysis and Publication of the Prehistoric Ceramic Research Group (PCRG 2010). The total assemblage was studied and a full catalogue was prepared. The sherds were examined using a binocular microscope (x10 magnification) and were divided into fabric groups defined on the basis of inclusion types present. Fabric codes were prefixed by a letter code representing the main inclusion type: F representing flint, G grog and Q quartz). Vessel form was also recorded: R representing rim sherds, B base sherds, D decorated sherds and U undecorated body sherds. The sherds were counted and weighed to the nearest whole gram. Decoration and abrasion were also noted.

Fabric

7.2.3 In keeping with the Iron Age pottery previously found at Ryhall the majority of the assemblage is shell tempered (Table 1). Again two broad shelly fabric groups were identified, the fabrics being divided between those with fine, regularly sized shell pieces and those with coarser more unevenly sized inclusions (Table 1). A third sandy fabric with shell inclusions is also present in small quantities. In addition two further fabrics, not found previously were recovered. One is flint-tempered with moderate white, angular, flint pieces and may be earlier prehistoric. The second is sandy and micaceous and is perhaps later Iron Age to early Roman.

Fabric	Description	Quantity	% quantity	Weight (g)	% weight
S1	Common fine shell pieces >1mm	22	8.0%	146	6.6%
S2	Moderate to common medium shell >3mm	221	80.4%	1770	80.5%
QS	Common rounded quartz sand grains, moderate medium to coarse shell	30	10.9%	210	9.5%
F2	Moderate medium angular flint in sandy clay matrix	1	0.4%	15	0.7%
QM	Dense fine sandy fabric with sparse fine mica shreds	1	0.4%	58	2.6%
Total		**275**	**100.0%**	**2199**	**100.0%**

Table 1: Quantity and weight of pottery by fabric

7.2.4 As previously noted the assemblage compares well with late Bronze Age to early Iron Age pottery from Empringham, on eastern edge of Rutland Water (Cooper 2000, 67), and to the slightly later pottery from Market Deeping Lincolnshire, c. 11km and 15km east of Ryhall (Knight 2010).

Form

7.2.5 The assemblage is dominated by ovoid jars, which have direct rounded rims, a change of angle at the neck and rounded girths. These are similar to those found previously at Ryhall and to examples identified at Market Deeping dating to the fifth to third centuries BC (Knight 2002, fig.12.3, 7; Knight 2010, fig.136, 7). One thick-walled vessel, which may be a storage jar, has a flattened, T shaped rim and concave neck (Knight 2010 fig.142, 108). Base sherds are simple. Limescale deposits were noted on fourteen sherds and two have sooting or burnt food residues.

7.2.6 Almost all of the assemblage is plain, however unlike the pottery found previously around 1.6% of the sherds have rough wiping or scoring to the exterior surface and a further 8% are finely wiped or lightly brushed. Approximately 50% of the sherds have smoothed or closed surfaces. One elaborately decorated vessel was recovered. The large rim and upper body sherd was found in the fill of pit 1105. The rim has fingernail impressions along the rim top and rim edge with shallow fingertip impressed dimples below the rim and light scoring on the vessel body. The shell-tempered jar is almost identical to a vessel found in topsoil at Market Deeping belonging to the East Midlands Earlier La Tène ceramic tradition of the fifth/fourth to first centuries BC (Knight 2010 fig. 145, 141).

Distribution

7.2.7 Over 60% of the total assemblage was recovered from pits, a further 23% from tree throw/ pit 1037 and 0.5% from fire pit 2003. Around 10% of pottery came from ditch fills and linear features and the remainder from deposit 2033 and from surface finds.

7.2.8 Tree throw/ pit 1037 contained the single largest assemblage recovered producing 71 sherds 512g representing 23% of the total assemblage. As noted from previous excavations at Ryhall, pottery was not evenly distributed between the pits with pit 2037 containing an especially large assemblage of 62 sherds weighing 684g and including rims from two vessels.

Feature	Context	Feature type	Quantity	% quantity	Weight (g)	%weight
128	129	Surface?	3	1.1%	10	0.5%
1010	1011	Pit	2	0.7%	2	0.1%
1033	1034	Pit	12	4.4%	84	3.8%
1035	1036	Ditch	7	2.5%	6	0.3%
1037	1038	Treethrow/pit	27	9.8%	102	4.6%
	1045		44	16.0%	410	18.6%
1039	1040	Pit	7	2.5%	7	0.3%
1062	1063	Linear	2	0.7%	5	0.2%
1074	1119	Waterhole	1	0.4%	19	0.9%
1094	1095	Posthole	1	0.4%	2	0.1%
1105	1107	Pit	28	10.2%	142	6.5%
1112	1113	Ditch	6	2.2%	19	0.9%
1122	1123	Ditch	5	1.8%	71	3.2%

Feature	Context	Feature type	Quantity	% quantity	Weight (g)	%weight
1126	1127	Linear	1	0.4%	2	0.1%
1128	1129	Pit	4	1.5%	5	0.2%
1130	1132	Pit	4	1.5%	6	0.3%
1134	1135	Linear	1	0.4%	2	0.1%
	1138	Linear	5	1.8%	3	0.1%
1136	1137	Pit	14	5.1%	62	2.8%
1138	1142	Linear	1	0.4%	1	0.0%
1140	1144	Pit	1	0.4%	8	0.4%
2003	2004	Fire pit	6	2.2%	10	0.5%
2008	2009	Ditch	1	0.4%	5	0.2%
2012	2013	Ditch	2	0.7%	19	0.9%
2024	2027	Linear	1	0.4%	15	0.7%
2033	2033	Deposit	2	0.7%	110	5.0%
2037	2038	Pit	47	17.1%	331	15.1%
	2040		13	4.7%	262	11.9%
	2041		2	0.7%	91	4.1%
2051	2056	Pit	6	2.2%	78	3.5%
2062	2064	Ditch	9	3.3%	78	3.5%
2068	2072	Pit	9	3.3%	223	10.1%
2069	2070	Pit	1	0.4%	9	0.4%
Total			**275**	**100.0%**	**2199**	**100.0%**

Table 2: Quantity and weight of pottery by feature

Discussion

7.2.9 The assemblage from RYS7 is similar to that recovered from RYS2 which was dated by form to the Later Bronze Age and earlier Iron Age. However the presence of the large decorated rim from pit 1105 plus scored body sherds found in pits 1033, 2012 and 2068 suggests that at least part of this assemblage may be of mid to later Iron Age date, c.350-100BC contemporary with pottery found in the palaeochannel at Outgang Road, Market Deeping (Knight 2010).

7.3 Lithics

By Peter Webb

Introduction

7.3.1 The lithic assemblage recovered during excavations carried out in association with preparatory works for the construction of a national grid sub-station at Ryhall, Rutland is composed of 425 pieces weighing a total of 1280.26g. The material was recovered from the excavation of two areas, though the lithics were concentrated predominantly at the northern-most point of excavation, and derived from two scatters at the interface between the subsoil and the underlying alluvial deposits. The remaining pieces were recovered as a general scatter across the site and from a small number of cut features: ditches [1014], [1056], [1096], [1146], [2012], [2024], [2034], and [2037]; pits [1105], [1136], [2003], [2023], and [2046]; and pond/watering hole [1074]. The ceramic evidence suggests that the features date to the Neolithic and Early Bronze Age, though the lithic assemblage indicates earlier, Mesolithic and Early Neolithic use of the area, indicating the multi-period nature of the site.

Methodology

7.3.2 Artefacts were studied individually and quantified by number and weight of piece types. In order to assess the nature of the assemblage the lithics were examined under a 20x magnification hand-lens for signs of retouch and indications of use-wear in order to allow them to be subdivided by type category based on tool form, presence of retouch and use-wear. Complete cores were classified based on Clark's 1960 typology with the addition of removal type. Measurements of each artefact were taken to ascertain the original form of blank, based on the length:breadth ratio (squat flakes <1:1; flakes ≥1:1 - <1.5:1; long flakes ≥1.5:1 - <2:1; blades ≥2:1) using digital vernier calipers rounded to 0.01mm accuracy as a guide to the possible period of production. Length measurements were taken at the maximum distance between two points along the bulbar axis at right angles to the bulbar platform. Where this could not be identified, the measurement was taken following the percussion ripples. Width measurements were taken at the maximum distance between two points perpendicular to the length. Thickness measurements were taken at the maximum distance between points on the ventral and dorsal surfaces. Where artefacts were incomplete, measurement data was deemed not suitable for analysis, though all measurements were recorded. All artefacts were weighed on digital scales and rounded to 0.01g accuracy. Colour comparisons were made using the Munsell Rock Colour Book (2013) based on the dominant hue of the material, excluding the cortex, patination or burning discolouration to ascertain if there was a preferred colour for particular tool types. The nature of the cortex (whether rolled or not) was used to establish whether the material was from a nodule or river gravel source. The amount and nature of the cortex was also measured to establish the presence of primary, secondary and tertiary flaking waste. The presence of burning was also noted.

Raw materials

7.3.3 The assemblage is made up of 412 pieces of worked flint (1221.51g) and 12 pieces of worked chert (58.75g) (1 piece was missing at the time of analysis) (see Appendix 1). The flint and chert represent several different sources with the flint that retains significant amounts of dorsal cortex predominantly derived from nodule deposits, likely to be located within clay-with-flint geologies. The remaining identifiable pieces are of derived from gravels which are a common component of the coarse-grained sands of the local underlying geology of the Trent Valley basin. The colour of the material recovered,

whilst only summarily worth comment due to the highly patinated nature of much of the material, appears to be dominated by light grey to dark greys, with only small quantities of other colours (Table 1).

Colour	Count	%
Brownish grey	15	4%
Dark grey	30	7%
Dark yellowish brown	2	0%
Greenish grey	1	0%
Greyish black	8	2%
Greyish brown	1	0%
Greyish orange	1	0%
Light bluish grey	26	6%
Light brownish grey	3	1%
Light grey	42	10%
Light olive grey	24	6%
Medium bluish grey	42	10%
Medium dark grey	20	5%
Medium grey	33	8%
Medium light grey	67	16%
Olive black	3	1%
Olive grey	5	1%
Pale brown	1	0%
Pale red purple	1	0%
Pale yellowish brown	1	0%
Very dusky purple	1	0%
Very light grey	40	9%
Very pale orange	1	0%
White	12	3%
Yellowish grey	44	10%
Grand Total	424	100%

Table 1: Material colour

Composition and technology

7.3.4 The assemblage shows evidence of a variety of different approaches to lithic reduction, with examples of both intensive controlled reduction as well as casual expedient working. This is perhaps best illustrated by the range eight different core types represented in the assemblage (see below), perhaps reflecting the mixed quality of the material selected.

7.3.5 The presence of 80 blades and blade fragments alongside the blade cores (see below) indicates that this was a strong proportion of the assemblage, and that it was key to the nature of production, and indicates earlier activity alongside the more dominant flake technology.

7.3.6 The production stages (Table 2), indicated by the amount of cortex present and size of the debitage, represented by the assemblage include only a small amount of primary

reduction (1 piece), which increases if pieces with hemispherical profiles are included to demonstrate early rather than simply initial core reduction. There is increased secondary stage (61 pieces) reduction, but it is predominantly the final stages of tool production and refinement (362 pieces) reflected in the tertiary and non-cortical pieces that is represented in the Ryhall assemblage.

Stage	Count	%
Primary	1	0%
Secondary	61	14%
Tertiary	134	32%
Non-cortical	228	54%
Grand Total	424	100%

Table 2: Stage of production

Objective pieces

7.3.7 The 24 cores within the assemblage represent an unusually high number given that there are 275 pieces of debitage and 83 retouched tools (Table 3), which would represent only 11 removals and 3 tools per core. They were predominantly produced on flint material, though one (ACG) may have been derived from chert. The low mean weight (17.93g) is also reflected in the small size of the cores at point of discard and gives an indication of the high intensity with which the material was worked, perhaps suggesting a need for economic use of materials. However, a number of the cores present are fragments, and may represent larger pieces. A much greater size, however, is unlikely given the extent to which the fragments have been worked. The cores show evidence of systematic single and multi-platform reduction, which form eight distinct types based on Clark's 1960 classification (Table 4). The most common were Class B3 two-platform and Class D keeled cores with 25% and 21% of the total respectively.

Piece type	Count	%
Debitage	275	65%
Objective piece	24	6%
Retouched tool	83	20%
Utilised tool	42	10%
Grand Total	424	100%

Table 3: Piece type

Core type	Count	%
Class A1, single-platform core	3	13%
Class A2, single-platform core	2	8%
Class B1, two-platform core	1	4%
Class B2, two-platform core	4	17%
Class B3, two-platform core	6	25%
Class C, multi-platform core	2	8%

Class D, keeled core	5	21%
Class E, keeled core	1	4%
Grand Total	24	100%

Table 4: Objective piece types (based on Clark 1960 typology)

7.3.8 This range in typology may indicate that multiple periods of working were involved in the assemblage, with two-platform (and particularly bi-polar) cores most commonly showing evidence of predominantly blade removal, and may indicate Mesolithic use of the site. However, very few of the cores can be defined as Mesolithic blade cores in their truest sense (AHX, ANA and AQB come closest), and may indicate that the assemblage is more likely Early Neolithic in date. Their presence alongside keeled cores suggests that a multi-period site is likely given that they represent later Neolithic lithic reduction.

7.3.9 The size ranges of the complete cores are relatively restricted, with the largest range between minimum and maximum sizes of less than 30mm. This, along with the small size of the pieces (no core is larger than 50mm in any direction), and whilst the weights differ by 45g, this is likely a result of the material being used to exhaustion, and the larger pieces being discarded due to impurities.

Debitage

7.3.10 The debitage comprises a total of 275 pieces, composed of blades, blade fragments, core rejuvenation flakes, flakes, scraper rejuvenation flakes and shatter fragments (Table 5). That there is only one primary flake (AKA), and relatively few secondary pieces (61 pieces) indicates that the initial stages of reduction occurred elsewhere, perhaps at the point of extraction as a means of weight reduction prior to the return to site. The majority of the material were either tertiary (134) or non-cortical (228) pieces indicating that it was primarily the final stages of tool production and maintenance that were occurring on the site. This is supported by the small size of the pieces of debitage, with none above 60mm, and the vast majority below 40mm, which indicates that they may represent removals from cores that are close to exhaustion, or from tools themselves. This latter may be suggested by the smallest of the flakes which may indicate the final retouch of tool edges.

Piece type	Count	%
Blade	25	9%
Blade fragment	55	20%
Blade fragment?	1	0%
Core rejuvenation flake	12	4%
Core rejuvenation flake / core tablet?	1	0%
Flake	157	57%
Scraper rejuvenation flake	2	1%
Shatter fragment	22	8%
Grand Total	275	100%

Table 5: Debitage

7.3.11 The combination of both blades and flakes, with the vast majority the latter, indicates that the assemblage is likely to reflect either mixed Mesolithic and Early Neolithic; or solely Early Neolithic activity. The presence of crested blades within the debitage (AFZ and AGS) would indicate specific blade core production, a more Mesolithic typology. There are also three pieces that suggest at possible microlith preparation (ANJ, AMV and

AFB), a uniquely Mesolithic occupation. It should also be noted that with 48% of the debitage not being complete, it is possible that there could be many more blades that were not identified, again indicating a potential earlier date.

7.3.12 The presence of scraper rejuvenation flakes shows that there was tool repair and curation associated with the site.

Retouched tools

7.3.13 A total of 82 retouched tools were recovered during the excavation, located spread across the site, though the greatest concentration occurred to the north, in the two concentrated scatters. None of the tools show invasive retouch, with all demonstrating only marginal working, commonly of only a very crude and partial nature, and indicating earlier, rather than later activity.

7.3.14 The retouched tool assemblage is composed of 2 blades with burin removals (2%), 10 edge-trimmed blades and blade fragments (12%), 21 edge-trimmed flakes (25%), 7 microliths (7%), 9 microlith preparation pieces (10%), 2 multiple tools (2%); 2 notched blades (2%); 4 notched flakes (4%); 4 piercers (5%); 6 end-scrapers (7%); 1 serrated blade (1%); and 14 pieces with miscellaneous retouch (16%).

Retouched tools	Count	%
Blade with burin removal	2	2%
Edge-trimmed blade	8	10%
Edge-trimmed blade fragment	2	2%
Edge-trimmed flake	21	26%
Microlith - Elongated lanceleote	1	1%
Microlith - Type 1A, obliquely truncated	1	1%
Microlith - Type 1B, obliquely truncated. Damaged	1	1%
Microlith - Type 2As, large scalene triangle	1	1%
Microlith - Type 5, straight backed blade	2	2%
Microlith - Type 5B, straight backed bladelet	1	1%
Microlith preparation blade	6	7%
Microlith preparation blade - possible pre-form	2	2%
Microlith preparation blade. Crude	1	1%
Miscellaneous retouch	10	12%
Miscellaneous retouch - possible edge-trimmed blade	1	1%
Miscellaneous retouch - possible notched blade	1	1%
Miscellaneous retouch - possible notched flake	1	1%
Miscellaneous retouch - possible piercer	1	1%
Multiple tool - double-end scraper & burin removal	1	1%
Multiple tool - notched & edge-trimmed flake	1	1%
Notched blade	1	1%
Notched blade. Possible microlith preparation blade	1	1%
Notched flake	2	2%
Notched flake. Possible broken oblique or tanged arrowhead	1	1%
Notched flake. Possible microlith preparation blade	1	1%
Piercer	4	5%

Scraper - end-scraper	5	6%
Scraper - end-scraper?	1	1%
Serrated blade	1	1%
Grand Total	82	100%

Table 6: Retouched tools

Burin removals

7.3.15 The two pieces with burin removals (ADN and AFP) are both of flint, with the former from an unclear source and the latter likely to be from gravel sources. Both are on blades, and along with their small size indicates a likely Mesolithic date. The use of burins has been attested to the production of bladelets for use within projectile and composite tool technology (Dinnis 2012:78) similar to the use of microliths, and their presence indicates Mesolithic hunting activities, or at least the production of associated weaponry.

Edge-trimmed pieces

7.3.16 By far the largest category of retouched tools are the edge-trimmed pieces, comprising a total of 31 (37%) pieces and including both blades (ACU, ADI, ADK, AEL, AGT, AGU, AKE, ALQ, AMA, and APK) and flakes (ABN, ADP, AEE, AGF, AGQ, AGV, AHG, AHH, AIM, AKG, AKR, ALB, AMG, AMM, ANC, ANN, ANP, AOW, APA, APB and APQ). Only one was produced from chert (AGF) with the remainder flint from a mix of nodule and gravel sources. They conform to the rest of the assemblage in terms of their small size and are typologically undiagnostic as they were used throughout prehistory for a variety of cutting tasks. They are likely to be little more than expedient tools that were retouched to give them an extend use-life.

Microliths

7.3.17 A total 7 (8%) microliths were recovered during the excavations, along with 9 (11%) microlith preparation pieces showing evidence of retouch. They were all produced from flint, and where its source was identifiable, from gravel derivation. It is possible, though, that some of the pieces were produced from nodular material. The typology of the microliths (based on Jacobi's 1978 classification) show both broad- and narrow-blade types, indicative of both Early and Late Mesolithic production. The broad-blade forms include obliquely-truncated blades (AIX and AKL); and a large scalene triangle (AIZ). The narrow-blade forms included straight-backed bladelets (AFI, AOL, and APG) and an elongated lanceleote (ALN).

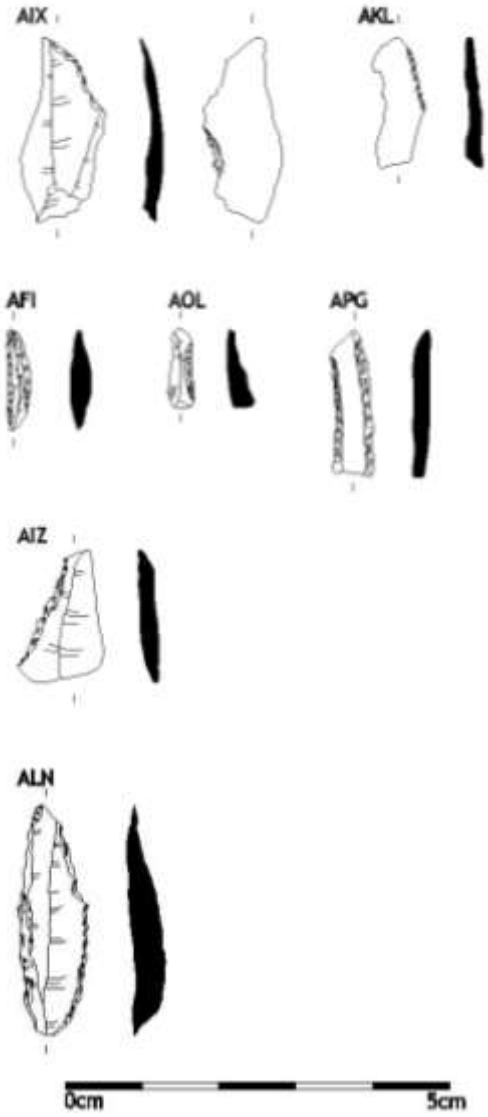


Figure 1: Microliths: Obliquely truncated points AIX, AKL; large scalene triangle AIZ; straight backed bladelets AFI, AOL, APG; and elongated lanceleote ALN.

7.3.18 The microlith preparation pieces predominantly take the form of blade fragments, usually the proximal end, and show evidence of a notch having been made at the point of fracture, indicating that a microlith has been removed (ADF, AIQ, AMN, AND, ANZ, and AQI). However, two of the pieces (ADA and AFW) do not show a break at the point of the notch, and are likely to be earlier stages of microlith production. Piece ACE is likely to be a microlith pre-form.

7.3.19 The microliths and associated production pieces indicate a mix of both earlier and later Mesolithic hunting activities, including the preparation of hunting equipment.

Multiple tools

7.3.20 Two multiple tools (ACS and AJU) were recovered from the site. ACS comprises a notched and edge-trimmed flake. It has been produced on gravel flint and its relatively small size and abrupt retouch matches the rest of the assemblage. However, it is not typologically distinctive and is likely to have been used as a cutting tool.

7.3.21 AJU is a double-end scraper with burin removals produced on flint of unclear origin. The scraper retouch is abrupt, and near vertical suggesting that it had been repaired on at least one occasion and had probably reached the end of its use-life prior to the removal of two burins. These indicate that it could be Mesolithic or Early Neolithic in date. However, it is thought that combination tools are more typical of the later Neolithic (Butler 2012:168).

Notched pieces

7.3.22 The six notched pieces recovered during the excavations include a mix of both blades (AAL and ALS) and flakes (ACZ, ADY, AGM, and AOT) produced on a combination of gravel and nodule flints. They range in size considerably, from 11 to 59mm, which contrasts with the majority of the retouched pieces which are much more closely sized. This may suggest that there is a wider spread in their production dates, with the larger pieces more likely to have been produced in the later Neolithic period.

7.3.23 The function of notched pieces is not entirely clear. It has been suggested that they are rough-outs for microliths (Butler 2012:112), as can be seen in the microlith preparation pieces described above, and may indeed be possible for two of the pieces in this collection (AAL and AOT). However, this is not true of all notched pieces, many are likely to have acted as scrapers, the notch defining the width and curvature of the material being worked (ADY, ALS); the notch may also have been used to facilitate hafting (AGM) and may indicate another tool type entirely; whilst on other tools the function of the notch is unclear (ACZ).

Piercers

7.3.24 A total of four piercers (ADO, AEU, AMF, and APL) were identified in the assemblage, all likely of nodule flint derivation and all small in size. They are a typically undiagnostic tool, and appear in a range of forms, likely as a result of expediency rather than design, with only minimal working of the points. These pieces suggest that clothing manufacture or repair was taking places, being predominantly too delicate to survive wood or antler working, whilst their expedient nature indicates clothing repair most likely.

Scrapers

7.3.25 The six scrapers recovered during the excavations are all derived from flint with those from an identifiable source from gravel, though some are likely from nodule sources. The majority of the pieces have been produced from thin blades and flakes, implying that they may not have been required for robust or heavy-duty tasks. All are small, and appear to be end-scrapers, though one (APF) is damaged and may have been another form. The majority of the pieces (ABG, ACH, AEY, AFX, and AGA) have been produced on blade or blade-like flakes and may indicate Mesolithic or Early Neolithic use of the site. The damaged piece is larger in size and was produced on a flake, suggesting that it is later in date. Several of the pieces (ABG, AEY, AGA, and APF) show near vertical retouch, indicating high levels of curation, and all indicate domestic activity on the site.

Serrated blade

7.3.26 A single serrated blade (AIJ) was recovered during the excavations. It had been produced on probable gravel flint and was small in size. The serration had been crudely created through alternate retouch. It is likely a Mesolithic tools, based on its size, though the tool type was used into the Early Neolithic, and would have been used as a cutting tool.

Miscellaneous retouch

7.3.27 A total of 14 miscellaneous retouched pieces were recovered during the excavations. Of these, 13 had been produced from mixed gravel and nodule flint sources (ABY, ACA, ADD, AEK, AEN, AFD, AFH, AKJ, AMP, AOJ, AOM, and AQE) and two had been produced from chert-like material of gravel derivation (ACN and AFA). They show a range of abrupt and semi-abrupt retouch, and whilst some may be unusual examples of more distinct forms (ABY and AFD may be large irregular microlith preparation flakes), many are likely crude or unfinished forms, whilst others still have been made unclear through subsequent use, post-depositional and rolling damage.

Utilised tools

7.3.28 A total of 43 pieces were recovered during the excavations that show possible signs of utilisation. They were predominantly produced on flint derived from mixed gravel and nodule sources, though two pieces (AFY and AGD) were produced from chert-like material. They show evidence of having been produced on both blades and flakes of varying sizes and show no signs of deliberate choice other than having a sharp edge, and are likely to have been used as expedient cutting tools.

Discussion

7.3.29 The material recovered shows all stages of lithic chipped stone tool production were carried out at the site, with the exception of initial core selection and testing. However, the debitage indicates that it was predominantly the later stages of production, and particularly tool finishing and maintenance that was carried out, as indicated by the large numbers of small and particularly thin pieces.

7.3.30 Of the pieces that could be identified to their source, these show a preponderance towards nodule sources, likely derived from local clay-with-flint deposits, but with a significant number of tertiary river gravel sources, which are likely to have been derived from material collected from watercourses in the vicinity.

7.3.31 The majority of the assemblage is non-diagnostic, being of tool types utilised throughout prehistory. However, the presence of blade forms would indicate that much of the material is unlikely to date beyond the Early Neolithic, and the presence of microliths would push it back further to the Mesolithic. The particular microlith types suggest that the site may have been used during both the Early and Late Mesolithic, though perhaps it may be that there was continued use of earlier forms in the later period. Despite this early evidence, the presence of keeled cores may indicate Late Neolithic use of the site, and suggests that the assemblage is likely to represent a multi-period activity or settlement site, with continued episodes of activity dating from the earlier Mesolithic through to the later Neolithic. However, the later activity is more likely to be limited due to the lack of invasively retouched pieces and of larger flakes and tools. This is in contrast to the ceramic evidence, and it may be that the function of the site altered over time, with lithic production no longer carried out, or at least carried out elsewhere, in the later periods.

7.3.32 At the time of excavation it was suspected that the two large scatters could represent *in situ* knapping floors. Whilst tools and utilised pieces could easily have been dumped on top of a knapping floor, and similarly the presence of only a small number of burnt pieces could be explained in the same way, the multi-period nature of the tools and lack of re-fitting pieces make it unlikely that the scatters represent *in situ* knapping debris, but rather dumps of material resulting from multiple knapping episodes. It may be that there was an initial knapping floor, after which the area was used as a dump for material no longer needed. This may indicate that the scatter was located on the periphery of a general settlement site, with ethnographic evidence suggesting that less than 1% of

debris was discarded within habitation areas (Schofield 1991:117), whilst at least small-scale activity was carried out around the hearth (Binford 1997), implying that waste material would be collected and subsequently dumped elsewhere. The relative absence of tools, and particularly more formalised tools would also indicate that the scatters represent dumps of production waste and expedient tools, with more carefully crafted tools curated.

7.3.33 The majority of the assemblage was collected from two scatters located at the northern end of Area 2: 274 pieces from the north-west corner, and 94 pieces from the north-east corner, and both are likely to contain more lithics as they extend beyond the confines of the excavation. A further 106 pieces were recovered from elsewhere on the site, including 24 from features or deposits associated with features. These include single pieces from ditches [1014], [1056], and [1146]; and pits [1105], and [1136], whilst multiple artefacts were recovered from ditch [1096]; and pond/watering-hole [1074] in Area 1. Meanwhile, single pieces were recovered from deposit (2033); ditch [2024]; and pit [2023]; whilst multiple pieces were recovered from ditches [2012], [2034], and [2037]; fire pit [2003]; and pit [2046] within Area 2. With so few pieces being recovered from the features, and primarily only single pieces of debitage, it is likely that these were not primary dumps of material, and may represent individual acts of discard, or more likely, residual artefacts deposited within later features.

7.3.34 The presence of such a large assemblage of chipped stone tools at Ryhall indicates that there was significant Mesolithic or Early Neolithic settlement and activity at the site. This is not surprising given its location close to a water source, but also given the wider landscape use during prehistory.

7.3.35 Previous excavations for Ryhall Substation produced a small collection of lithic material, including bladelets, stone axe fragments and a Conygar Hill type barbed-and-tanged arrowhead (Webb 2014) supportive of the activity represented in the current assemblage, but also indicating the continuation of activity into later periods.

7.3.36 The evidence for Mesolithic activity in Rutland has been limited almost entirely to artefact scatters, with Early Mesolithic sites known at Oakham (Healy 1998), though Later Mesolithic sites are more common, including at Leighfield (Clay 2002:27). Some of these are large enough to potentially represent settlement sites, including approximately 20km to the south-west of Ryhall and Oakham. This would fit with settlement movement patterns suggested for the period (Mellars 1976:382), and it may be that these sites may represent part of a Mesolithic settlement pattern of movement through river valleys from lowlands (Ryhall) to more upland locales (Oakham) following animal migrations. Findspots located along the route could easily represent individual hunting camps or episodes carried out along the way.

7.3.37 A similar pattern can be seen for the Early Neolithic, though the increased sedentism of this period may indicate that the settlements had become distinct units, possibly linked by common ancestry and burial monuments, as indicated by the presence of burials between Ryhall and Oakham.

7.3.38 By the later Neolithic and Early Bronze Age artefactual evidence in the area is scarcer, though there is an increase in the incidence of monuments, reflecting the increased sedentism of these periods. This is perhaps reflected in the apparent decline in activity suggested by the lithic evidence at Ryhall. However, the presence of features and ceramics dating to the later Neolithic and Bronze Age indicates that activity did not cease, and it may be that whilst lithic tool production declined, other activities flourished.

Conclusions

7.3.39 The chipped stone artefacts recovered during the excavations at Ryhall form a relatively substantial assemblage, totalling 425 artefacts. The material is dominated by flint collected from both nodule and gravel sources, and is all likely to have been collected locally, with the gravels likely collected from the nearby river. The large proportion of debitage indicates that core reduction was carried out, though the absence of primary flakes suggests that it was the latter stages and tool production that are represented. The tool typology suggests that the assemblage relates to activity dating to between the Mesolithic and Late Neolithic.

7.3.40 The majority of the artefacts were recovered from two scatters, and it was thought that these might be *in situ* knapping floors. Whilst this may still be possible, it is more likely that they represent dumps of material produced elsewhere in the settlement, and that the scatters are on the periphery.

7.3.41 The nature of the tools recovered indicates that domestic activity was taking place on the site, though that tools related to hunting were being produced or repaired. The large amount of debitage would suggest that it was more than a hunting-camp, and likely a more long-term settlement.

7.5 Faunal remains

7.5.1 During the course of the excavations, a moderate quantity of animal bone was recovered from the features identified. The table below provides a basic quantification of the material recovered by context.

Context	Area	Cut	Weight (g)
1057	1	1056	4
1075	1	1074	61
1107	1	1105	1
1113	1	1112	2
1123	1	1122	4
1129	1	1128	3
2038	1	2037	22
1011	1	1010	56
1013	1	1012	0.5
1015	1	1014	17
1034	1	1033	195
1038	1	1037	30
1045	1	1037	5
1052	1	1051	10
1063	1	1062	112
1067	1	1064	10
1075	1	1074	35
1084	1	1083	2
1102	1	1074	23
1107	1	1105	74.5

1113	1	1112	0.5
1119	1	1074	48
1129	1	1128	1
1132	1	1130	21
1135	1	1134	409
1137	1	1136	13
2004	2	2003	17
2009	2	2008	71
2011	2	2010	312
2030	2	-	38
2040	2	2037	13
2050	2	2043	13
2057	2	2051	2
2074	2	2068	20

7.5.2 Detailed specialist analysis of the assemblage is forthcoming.

7.6 Metal and Slag

7.6.1 Several fragments of iron working slag were recovered from the fill of pit [2037]. In total, 3 pieces totalling 48g were recovered. Detailed specialist analysis of this material is forthcoming.

8. Discussion and Conclusion

8.1 The strip, plan and sample excavation that was undertaken prior to the installation of a cable trench, has successfully identified 2 main phases of archaeological activity. These were located within 3 distinct areas along the length of the cable trench route. The first phase of activity was evidenced by a multiphase deposit of worked flint that appears to have been principally created during the Mesolithic and Neolithic periods. This was located alongside several features resulting from mid to late Iron Age settlement activity, also positioned within the valley bottom. But it appears that this may have been broadly contemporary with a second mid to late Iron Age site towards the southern end of the route, utilising the more elevated topography to the south of the West Glen valley.

Phase 1

8.2 The various microliths recovered from the flint scatter within Area 2 provide clear evidence that earliest phase of activity was during the Mesolithic. Although initially suspected to be part of an in-situ knapping site, detailed analysis of the assemblage has indicated that they were more probably the result of waste material being discarded away from the working areas. Consequently the exact nature of the Mesolithic activity within this valley bottom is difficult to determine as the primary context for this material does not appear to have been located. But at the very least, it demonstrates there was human activity and possibly seasonal exploitation of this valley bottom.

8.3 Although there were a significant number of undiagnostic pieces forming the lithic assemblage, it has been suggested that this dumping of waste material may have continued into at least the Neolithic period.

Phase 2

8.4 The second phase of activity is principally characterised as middle to late Iron Age. Within Area 1, at the southern end of the site this was represented by a moderate density of pits and post holes suggesting an area of settlement which may have begun in the 4th/5th centuries BC and potentially continued into up until the end of the 2nd century BC. Within Area 1 the artefactual and environmental evidence is mainly indicative of domestic activities and supports the supposition that this was a settlement site. Throughout the numerous environmental samples, there were charred remains of cherry, apple and oak which would typically be used as kindling type wood for domestic rather than industrial fires and evidence for cereal processing was also present, albeit in relatively low quantities. Although the area stripped was relatively small, it appears as though ditch 1148 formed a northern limit to the activity.

8.5 Further Iron Age activity was evidenced to the north within Area 2, where similar sherds of scored pottery have indicated that it was broadly contemporary with the evidence in Area1 - probably dating to c.350-100 BC. Although the distance between the sites and difference in nature may provide indications that they may have not have been active at precisely the same time. Within the Area 2 the features were less densely observed and were typically in the form of large bell-shaped pits. The environmental remains did not provide sufficient evidence to help determine to purpose of these pit, but they were probably for storage. Combined with the presence of slag within pit [2037] it may be that there was a slightly more industrial role to the activity within the valley bottom during this period.

9. Bibliography

ASWYAS, 2013b. East Coast Mainline Electrification – New 400kV Substation, Ryhall, Rutland; Geophysical Survey Report Unpublished ASWYAS Report 2476

Brown, D.H., 2007, *Archaeological Archives: a guide to best practice in creation, compilation, transfer and curation*, Archaeological Archives Forum

Binford, L. *In pursuit of the past: Decoding the archaeological record.* University of California Press.

Butler, C. 2012. *Prehistoric flintwork.* The History Press.

Beijerinck, W. (1947) *Zadenatlas der Nederlandsche Flora.* Wageningen: Veenman & Zonen.

Cooper, N.J., 2000. *The Archaeology of Rutland Water.* Leicester Archaeology Monographs No.6

Knight, D., 2010. 'Iron Age Pottery' in Lane, T. and Trimble, D. *Fluid Landscapes and Human Adaptation: Human Adaptations on Prehistoric Sites on the Lincolnshire Fen Edge 1991 -1994*. Lincolnshire Archaeology and Heritage Reports Series 9

Clark, J., Higgs, E., and Longworth, I. 1960. 'Excavations at the Neolithic site of Hurst Fen, Mildenhall, Suffolk'. In *Proceedings of the Prehistoric Society* 26 pp. 202-245.

Clay, P. 2002. *The prehistory of the East Midlands claylands: Aspects of settlement and land-use from the Mesolithic to the Iron Age in central England.* Leicester Archaeology Monograph No.9.

Cameron, R. & Riley, G. (2008) *Land Snails in the British Isles.* Telford: Field Studies Council

Cappers, R.T.J., Bekker, R.M. & Jans, G.E.A. (2006) *Digital Seed Atlas of the Netherlands*.

Claassen, C. (1998) *Shells.* Cambridge: Cambridge University Press.

Groningen: Barkhuis Publishing.

Davies and Parker 2014. Ryhall Substation, Rutland: Archaeological Evaluation. TPA Report 43/2014.

Dinnis, R. 2012. 'The timing of the Aurignacian occupation of the British Peninsula'. *Quartär*, vol 59, pp.67-83.

Daw, A. & Ivison T. Key to the snails of the Bristol Region. Bristol Regional Environmental Records Centre (BRERC). www.brerc.org.uk Accessed July 2nd, 2015.

Dickson, C. A. & Dickson, J. H. (2000) *Plants and People in Ancient Scotland*. Tempus, Stroud.

Dobney, K., Jacques, D.S., Johnstone, C.J. (1999) Protocol for recording vertebrate assemblages, *Reports from the Environmental archaeology Unit, York*, 99, 15, p. 1–12.

DCMS, 1997, *The Treasure Act 1996 Code of Practice (England and Wales)*, Second Revision 2002

Evans, J.G. 1972. *Land Snails in Archaeology*. London: Seminar Press Inc.

Gale, R. & Cutler, D.F. (2000). *Plants in Archaeology* – Identification Manual of Artefacts of plant origin from Europe and the Mediterranean. Kew: Westbury Scientific Publishing & Royal Botanic Gardens

Hubbard, R. N. L. B. & Clapham, A. (1992) Quantifying macroscopic plant remains, *Review of Palaeobotany and Palynology* 73, pp117-132.

Hyder Consulting (UK) Ltd, 2013. Cultural Heritage Desk Based Assessment for East Coast Mainline Electrification – New 400kV Substation, Ryhall, Rutland Unpublished Client Report Ref. 0002-UA003805Ryhall-UE21R-01-F

Institute for Archaeologists, 1985, *Code of Conduct* (revised to 2008)

Institute for Archaeologists, 1994, *Standard and Guidance for archaeological excavation* (revised to 2008)

Institute for Archaeologists, 2001, *Standard and Guidance for the collection, documentation, conservation and research of archaeological material* (Revised 2008)

Institute for Archaeologists, 2009, *Standard and Guidance for the creation, compilation, transfer and deposition of archaeological archives*

Jacobi, R. 1978. 'The Mesolithic of Sussex'. In Drewett, P. (ed) *Archaeology in Sussex to AD1500.* CBA Research Report No.29. Council for British Archaeology pp.15-22.

Jacomet, S. (1987) *Prähistorische Getreidefunde, Eine Anleitung zur Bestimmung Prähistorischer Gersten und Weizen Funde.* Basel: Herausgegeben im Eigenverlag.

Kenward, H.K. & Hall, A.R. (1995) *Biological Evidence from Anglo-Scandinavian Deposits at 16-22 Coppergate*. Dorset: The Dorset Press.

Knight, D., 2002. 'A regional ceramic sequence: pottery of the first millennium BC between the Humber and the Nene' in Woodward, A. and Hill, J.D., (eds), *Prehistoric Britain: the Ceramic Basis.* Oxford, Oxbow Books.

Mullis, J. Ryhall Substation, Rutland: Written Scheme of Investigation for Archaeological Trial Trenching (2 Vols). Jacobs UK Ltd.

O'Connor, T.P., York Archaeological Trust, Council for British Archaeology, 2003. *The Analysis of Urban Animal Bone Assemblages*, Council for British Archaeology.

Parker, R. and Davies, G. 2014. Assessment Report on an Archaeological Strip, Plan and Record Excavation at Ryhall Substation, Rutland. Trent and Peak Archaeology, Report: 60/ 2014.

Mellars, P. 1976. 'Settlement patterns and industrial variability in the British Mesolithic' In Sieveking, G., Longworth, I., and Wilson, K. (eds) *Problems in economic and social archaeology.* Duckworth pp 375-399.

Munsell Colour 2013. *Munsell rock colour book*. Geological Society of America.

Monckton, A. (2002) Later Prehistoric Features, a *Bronze Age Burnt Mound* and *Saxon Features* at *Willow Farm, Castle Donington, Leicestershire* (*XA14.1997*). ULAS Archive Report.

Schofield, A. 1991. 'Artefact distributions as activity areas: Examples from south-east Hampshire' In Schofield, A. (ed) *Interpreting artefact scatters: Contributions to ploughzone archaeology.* Oxbow Monograph 4. Oxbow Books pp. 117-128.

O'Connor, T. (2008) *The Archaeology of Animal Bones.* Texas; Texas A&M University Press.

Pales, L. & Garcia, M. A. (1981) "Atlas ostéologique pour server à l'identification des mammifères du quaternaire", *Editions du centre national de la recherche scientifique.*

Shipman, P.; Foster, G.; Schoeninger, M. J. (1984) 'Burnt bones and teeth: an experimental study of colour, morphology, crystal structure and shrinkage', *Journal of Archaeological Science* 11, pp. 307-325.

Schweingruber, F. H. (1990) *Anatomy of European Woods.* Haupt, Berne & Stuttgart.

Stace, C. (1997) *New Flora of the British Isles*. Cambridge: Cambridge University Press.

Starley, D. (1995) *Hammerscale.* The Historical Metallurgy Society: Archaeology datasheet No 10.

Stiner, M. C.; Kuhn,S. L.; Weiner, S.; Bar-Yosef, O. (1995) 'Differential burning, recrystallisation, and fragmentation of archaeological bone', *Journal of Archaeological Science* 22, pp.223-227.

Tylecote, R.F. 1962. *Metallurgy in Archaeology*. Arnold, London.

Webb, P. 'Assessment report on the flint' In Dodd, M. *Report on an archaeological evaluation of Ryhall Substation Cable Route, Rutland*. TPA Report 141/2014.

Zohary, D. & Hopf, M. (2000) *Domestication of Plants in the Old World*. 3rd Ed. Oxford: Oxford University Press

http://mapapps.bgs.ac.uk/geologyofbritain/home.html

www.landis.org.uk/soilscapes

Appendix 1 Context Register

Area 1				
Context Number	**Context Type**	**Description**	**Length x Width (m)**	**Depth (m)**
1000	Layer	Topsoil - mid-dark greyish brown, clayey silt	-	0.8
1001	Layer	Subsoil – medium greyish brown. Clayey silt	-	-
1002	Cut	Ditch cut	12.5m x 0.5-0.8	0.12-0.15
1003	Fill	Fill of ditch [1002]	12.5m x 0.5-0.8	0.12-0.15
1004	Cut	Ditch cut	>1 x 0.52	0.1
1005	Fill	Fill of ditch [1004]	>1 x 0.52	0.1
1006	Cut	Cut of pit	0.61 x 0.3m	0.13
1007	Fill	Fill of pit [1006]	0.5 -0.13	0.13
1008	Cut	Cut of posthole	0.38 x 0.25	0.12
1009	Fill	Fill of posthole [1008]	0.38 x 0.25	0.12
1010	Cut	Cut of pit	0.72 x 0.6	0.14
1011	Fill	Fill of pit [1010]	0.72 x 0.6	0.14
1012	Cut	Cut of ditch	1 x 0.58	0.19
1013	Fill	Fill of ditch [1012]	1 x 0.58	0.19
1014	Cut	Cut of ditch	1 x 0.62	0.36
1015	Fill	Fill of ditch [1014]	1 x 0.62	0.36
1016	Cut	Cut of tree bole	2.58 x 0.52	0.28
1017	Fill	Fill of tree bole [1016]	2.58 x 0.52	0.28
1018	Cut	Cut of pit/tree bole/ tree throw	1.25 x 0.84	0.1
1019	Fill	Fill of pit/tree bole/tree throw	0.52	0.1
1020	Fill	Fill of pit/tree bole/tree throw	0.32	0.07
1021	Cut	Cut of ditch	1 x 0.8	0.15
1022	Fill	Fill of ditch [1022]	1 x 0.8	0.15
1023	Fill	Fill of ditch [1024]	0.8 x 0.32	0.28
1024	Cut	Cut of ditch	0.8 x 0.32	0.28
1025	Cut	Cut of pit/tree throw	1.1	0.12
1026	Fill	Fill of pit/tree throw	1.1	0.12
1027	Cut	Cut of ditch	1 x 0.87	0.27
1028	Cut	Cut of posthole	0.6 x 0.6	0.23
1029	Fill	Fill of posthole [1028]	0.6 x 0.6	0.23
1030	Fill	Fill of ditch [1027]	1 x 0.87	0.27
1031	Cut	Cut of pit/natural depression	1 x 0.25	0.12
1032	Fill	Fill of pit/natural depression [1032]	1 x 0.25	0.12
1033	Cut	Cut of pit	1.04 x 0.94	0.16
1034	Fill	Fill of pit [1034]	1.04 x 0.94	0.16
1035	Cut	Cut of ditch	0.9 x 0.8	0.11
1036	Fill	Fill of ditch [1035]	0.9 x 0.8	0.11
1037	Cut	Cut of pit/tree throw	2.2 x 2	0.2

1038	Fill	Primary fill of pit/tree throw [1037]	0.6	0.15
1039	Cut	Cut of pit	0.89 x 0.56	0.38
1040	Fill	Fill of [1039]	0.89 x 0.56	0.38
1041	Cut	Cut of pit	0.6 x 0.5	0.13
1042	Fill	Fill of pit [1041]	0.5	0.13
1043	Cut	Cut of pit	0.54 x 0.46	0.21
1044	Fill	Fill of pit [1043]	0.54 x 0.46	0.21
1045	Fill	Secondary fill of pit/tree throw [1037]	2.2 x 0.8	0.2
1046	Cut	Cut of ditch	>0.6 x 0.7	0.14
1047	Fill	Fill of ditch [1046]	>0.6 x 0.7	0.14
1048	Cut	Cut of ditch	>0.7 x 0.55/0.65	0.15
1049	Fill	Fill of ditch [1048]	>0.7 x 0.55/0.65	0.15
1050	Cut	Cut of ditch	1.07 x 0.64	0.3
1051	Cut	Cut of posthole	0.6 x 0.5	0.3
1052	Fill	Fill of posthole [1051]	0.6 x 0.5	0.3
1053	Cut	Cut of pit	0.56 x 0.54	0.12
1054	Fill	Fill of pit [1054]	0.56 x 0.54	0.12
1055	Fill	Fill of ditch [1050]	1.07 x 0.64	0.3
1056	Cut	Cut of ditch	0.8 x 0.76	0.5
1057	Fill	Fill of ditch [1056]	0.8 x 0.76	0.5
1058	Cut	Cut of pit	0.96 x 0.6	0.58
1059	Cut	Cut of pit	0.56 x 0.28	0.6
1060	Fill	Fill of pit [1058]	0.96 x 0.6	0.58
1061	Fill	Fill of pit [1059]	0.56 x 0.28	0.6
1062	Cut	Cut of linear	> 0.5 x 0.9	0.2
1063	Fill	Fill of linear [1062]	x 09	0.2
1064	Cut	Cut of linear	>0.7 x 1.3	0.22
1065	Fill	Primary fill of linear [1064]	0.88	0.07
1066	Fill	Secondary fill of linear [1064]	0.91	0.1
1067	Fill	Tertiary fill of linear [1064]	1.3	0.16
1068	Cut	Cut of linear	<0.2 x 0.1	0.12
1069	Fill	Fill of linear [1068]	0.1	0.12
1070	Cut	Cut of pit	0.52 x 0.46	0.14
1071	Fill	Fill of pit [1070]	0.52 x 0.46	0.14
1072	Cut	Cut of pit	0.34 x 0.38	0.14
1073	Fill	Fill of pit [1072]	0.38	0.14
1074	Cut	Cut of pond/watering hole	4.15 x 2	1
1075	Fill	Tertiary of pond/watering hole [1074]	4.15 x 2	0.20
1076	Cut	Cut of linear	0.91 x 0.62	0.13
1077	Fill	Fill of linear [1076]	0.91 x 0.62	0.13
1078	Cut	Cut of linear	0.86 x 0.38	0.11
1079	Fill	Fill of linear [1078]	0.86 x 0.38	0.11
1080	Group	Group of ditch [1002] and [1078]	5.2 x 0.45	0.12
1081	Group	Group of ditch [1021], [1024], [1027] and [1076]	6.87 x 0.61	0.27

1082	Group	Group of ditch [1004], [1035], [1046] and [1048]	5.94 x 0.86	0.19
1083	Cut	Cut of posthole	0.5 x 0.28	0.58
1084	Fill	Fill of posthole [1083]	0.5 x 0.28	0.58
1085	Stone	Packing stones of posthole [1083]	0.2	0.15
1086	Cut	Cut of pit	0.6 x 0.53	0.13
1087	Fill	Fill of pit [1086]	0.6 x 0.53	0.13
1088	Cut	Cut of posthole/pit	0.33 x 0.28	0.09
1089	Fill	Fill of posthole/pit [1088]	0.33 x 0.28	0.09
1090	Cut	Cut of posthole	0.38 x 0.37	0.22
1091	Fill	Fill of posthole [1090]	0.38 x 0.37	0.22
1092	Cut	Cut of linear	0.72 x 0.18	0.36
1093	Fill	Fill of linear [1092]	0.72 x 0.18	0.36
1094	Cut	Cut of posthole	0.35 x 0.3	0.1
1095	Fill	Fill of posthole [1094]	0.35 x 0.3	0.1
1096	Cut	Cut of ditch	1 x 0.34	0.38
1097	Fill	Fill of ditch	1 x 0.34	0.38
1098	Cut	Cut of posthole	0.4 x 0.4	0.28
1099	Fill	Fill of posthole [1098]	0.4 x 0.4	0.28
1100	Cut	Cut of posthole	0.36 x 0.26	0.16
1101	Fill	Fill of posthole [1100]	0.36 x 0.26	0.16
1102	Fill	Tertiary fill of pond/watering hole [1074]	4.15 x 2	0.2
1103	Fill	Primary fill of ditch [1096]	1 x 0.34	0.09
1104	Cut	Cut of posthole	0.38 x 0.36	0.23
1105	Cut	Cut of pit	1.77 x 1	0.32
1106	Fill	Primary fill of pit [1105]	1.1 x 1	0.14
1107	Fill	Secondary fill of pit [1105]	1.77 x 1	0.32
1108	Cut	Cut of posthole/tree throw	0.8 x 0.45	0.23
1109	Fill	Fill of posthole/tree throw [1108]	0.8 x 0.45	0.23
1110	Fill	Secondary fill of posthole [1104]	0.38x 0.36	0.15
1111	Fill	Primary fill of posthole [1104]	0.38 x0.36	0.14
1112	Cut	Cut of ditch	1.16 x 0.28	0.19
1113	Fill	Fill of ditch [1112]	1.16 x 0.28	0.19
1114	Cut	Cut of ditch	0.72 x 0.4	0.11
1115	Fill	Fill of ditch [1114]	0.72 x 0.4	0.11
1116	Cut	Cut of pit	0.68 x 0.64	0.32
1117	Fill	Fill of pit [1117]	0.68 x 0.64	0.32
1118	Fill	Same as (1075)	4.15 x 2	0.20
1119	Fill	Primary fill of pond/watering hole [1074]	4.15 x 2	0.20
1120	Cut	Cut of ditch	1.1 0.34	0.24
1121	Fill	Fill of ditch [1120]	1.1 x 0.34	0.24
1122	Cut	Cut of ditch	0.88 x 0.31	0.11
1123	Fill	Fill of ditch [1122]	0.88 x 0.31	0.11
1124	Cut	Cut of linear	1.04 x 1.3	0.2
1125	Fill	Fill of linear [1124]	1.04 x 1.3	0.2
1126	Cut	Cut of linear	1.15 x 0.54	0.14

1127	Fill	Fill of linear [1126]	0.54	0.14
1128	Cut	Cut of pit	0.6 x 0.56	0.2
1129	Fill	Secondary fill of pit [1128]	0.57	0.06
1130	Cut	Cut of pit	0.8 x 0.76	0.16
1131	Fill	Secondary fill of pit [1130]	0.8 x 0.76	0.09
1132	Fill	Primary fill of pit [1130]	0.8 x 0.69	0.09
1133	Fill	Secondary fill of pond/watering hole [1074]	2.4 x 2	0.4
1134	Cut	Cut of linear	>0.85 x 0.54	0.16
1135	Fill	Fill of linear [1134]	0.54	0.16
1136	Cut	Cut of pit	0.92 x 0.87	0.18
1137	Fill	Fill of pit [1136]	0.92 x 0.87	0.18
1138	Cut	Cut of linear	1.2 x 0.46	0.2
1139	Cut	Cut of linear	0.9 x 0.6	0.12
1140	Cut	Cut of pit	1.9 x 1.9	>0.19
1141	Fill	Primary fill of pit [1128]	0.6 x 0.56	0.09
1142	Fill	Fill of linear [1138]	0.46	0.2
1143	Fill	Fill of linear [1139]	0.9 x 0.6	0.12
1144	Fill	Fill of pit [1140]	0.6 x 1.5	>0.1
1145	Fill	Fill of [1140]	1.2 x 0.6	>0.2
1146	Cut	Cut of linear	>0.85 x 1.35	0.29
1147	Fill	Fill of linear [1146]	1.35	0.29
1148	Group	Group of ditch [1064], [1138] and [1148]	20 x 0.43-1.06	0.13-0.34
1149	Cut	Cut of pit	4.36 x 2.4	0.68
1150	Fill	Primary fill of pit [1149]	4.36 x 2.4	0.24
1151	Fill	Secondary fill of pit [1149]	3.78 x 1.51	0.56
1152	Group	Group of linear [1012], [1035], [1062], [1112], [1126], [1134]	22.66 x 0.48-0.65	0.15-0.28
1153	Group	Group of linear [1114] and [1122]	0.54 x 0.74	0.11
1154	Group	Group of linear [1068] and [1092]	1.4 x 0.6	0.18
1155	Group	Same as [1153]	1.6 x 0.72	0.11
1156	Group	Group of pits [1010], [1033], [1037], [1086], [1126], [1128] and [1136]	-	-
1157	Group	Group of pits [1039], [1041], [1043], [1058], [1059], [1070], [1072] and [1116]	-	-`

Area 2				
Context Number	**Context Type**	**Description**	**Length x Width (m)**	**Depth (m)**
2000	Layer	Topsoil	-	-
2001	Layer	Subsoil	-	-
2002	Layer	Natural	-	-
2003	Cut	Cut of fire pit	1.23 x 0.83	0.19
2004	Fill	Tertiary fill of fire pit [2003]	1.23 x 0.83	0.13
2005	Fill	Tertiary fill/stones of fire pit [2003]	1.09 x 0.83	0.09

2006	Fill	Secondary fill of fire pit [2003]	0.99 x 0.83	0.03
2007	Fill	Primary fill of fire pit [2003]	1.28 x 0.83	0.02
2008	Cut	Cut of ditch	1 x 1.5	0.34
2009	Fill	Fill of ditch [2008]	1 x 1.5	0.34
2010	Cut	Cut of ditch	1 x 0.66	0.25
2011	Fill	Fill of ditch [2010]	1 x 0.66	0.25
2012	Cut	Cut of ditch	2 x 1.2	0.48
2013	Fill	Fill of ditch [2012]	2 x 1.2	0.48
2014	Cut	Cut of posthole	>0.3 x 0.2	0.18
2015	Fill	Fill of posthole [2014]	0.2	0.18
2016	Cut	Cut of pit/posthole	0.44 x 0.3	0.08
2017	Fill	Fill of pit/posthole [2016]	0.44 x 0.3	0.08
2018	Cut	Cut of posthole	0.3 x 0.2	0.14
2019	Fill	Fill of posthole [2018]	0.3 x 0.2	0.14
2020	Cut	Cut of posthole	0.47 x 0.27	0.06
2021	Fill	Fill of posthole [2020]	0.47 x 0.27	0.06
2022	Fill	Fill of pit [2023]	0.78 x 0.45	0.18
2023	Cut	Cut of pit	0.78 x 0.45	0.18
2024	Cut	Cut of linear	1.2 x 1.9	0.69
2025	Fill	Fill of linear [2024]	1.9 x 0.55	0.14
2026	Fill	Fill of linear [2024]	1.9 x 0.34	0.17
2027	Fill	Fill of linear [2024]	1.9 x 1.08	0.18
2028	Fill	Fill of linear [2024]	1.9 x 1.55	0.21
2029	Cut	Cut of fire pit	1.02 x 0.91	0.25
2030	Structure	Linear stone lining	3.54 x 0.7	-
2031	Fill	Secondary fill of fire pit [2029]	1.02 x 0.91	0.11
2032	Fill	Primary fill of fire pit [2029]	0.49 x 0.91	0.2
2033	Deposit	Deposit overlying linear stone lining [2030]	-	-
2034	Cut	Cut of ditch	>1.34 x 1.5	0.55
2035	Fill	Primary fill of ditch [2034]	1.5	0.25
2036	Fill	Secondary fill of ditch [2034]	1.5	0.3
2037	Cut	Cut of pit	1.46 x 0.85	0.7
2038	Fill	Secondary fill of pit [2037]	1.46x 0.85	0.62
2039	Fill	Tertiary fill of pit [2037]	0.85 x 0.48	0.17
2040	Fill	Secondary fill of pit [2037]	0.85 x 0.32	0.36
2041	Fill	Primary fill of pit [2037]	0.85 x 0.84	0.23
2042	Cut	Cut of ditch	15 x 1.59	1.26
2043	Cut	Cut of ditch	0.65x1.1	0.4
2044	Cut	Cut of pit	0.6 x 0.38	0.12
2045	Fill	Fill of pit [2044]	0.6 x 0.38	0.12
2046	Cut	Cut of pit	0.74 x 0.45	0.2
2047	Fill	Fill of pit [2046]	0.74 x 0.45	0.2
2048	Cut	Cut of linear	0.64 x 0.6	0.2
2049	Fill	Fill of linear [2048]	064 x 06	0.2
2050	Fill	Fill of ditch [2043]	0.65 x1.1	0.4

2051	Cut	Cut of pit	0.43 x 0.4	0.15
2052	Cut	Cut of pit	0.36 x 0.36	0.16
2053	Fill	Primary fill of ditch [2042]	0.44	0.43
2054	Fill	Secondary fill of ditch [2042]	1.59	0.93
2055	Fill	Tertiary fill of ditch [2042]	1.27	0.76
2056	Fill	Secondary fill of pit [2051]	0.24	0.07
2057	Fill	Primary fill of pit [2051]	0.38	0.10
2058	Cut	Cut of pit	0.48 x 0.4	0.25
2059	Fill	Fill of pit [2058]	0.48 x 0.4	0.25
2060	Fill	Fill of pit [2052]	0.36 x 0.36	0.16
2061	Cut	Cut of ditch	1.06 x 0.4	0.32
2062	Fill	Fill of ditch [2061]	1.06 x 0.4	0.32
2063	Cut	Cut of ditch	2 x 0.6	0.24
2064	Fill	Fill of ditch [2063]	2 x 0.6	0.24
2065	Layer	Layer in Grid 1 and Grid 2	-	-
2066	Layer	Layer of stones in Grid 1	-	-
2067	Layer	Layer - dark blackish brown, clayey silt. Grid 2	1 x 1	0.16
2068	Cut	Cut of pit	1.4 x 1	0.6
2069	Cut	Cut of pit	1 x 0.72	0.42
2070	Fill	Secondary fill of pit [2069]	1 x 0.7	0.3
2071	Fill	Primary fill of [2068]	1.4 x 1	0.1
2072	Fill	Secondary fill of [2068]	1.4 x 1	0.2
2073	Fill	Natural lens within [2068]	1 x 0.8	0.23
2074	Fill	Tertiary fill of [2068]	1 x 1	0.3
2075	Fill	Fill of [2068]	1 x 0.6	0.4
2076	Cut	Cut of pit	1.8 x 0.66	-
2077	Cut	Cut of ditch	1.5 x 0.73	0.75
2078	Cut	Cut of ditch	12 x 0.39	0.26
2079	Fill	Primary fill of pit [2069]	1	0.2
2080	Fill	Tertiary fill of [2068]	1 x 0.78	0.6
2081	Fill	Tertiary fill of [2078]	0.6	0.29
2082	Fill	Secondary fill of [2078]	0.07	0.21
2083	Fill	Primary fill of [2078]	1.2	0.22
2084	Fill	Secondary fill of [2077]	0.7	0.16
2085	Fill	Primary fill of [2077]	0.43	0.76
2086	Group	Group of linear [2024] and [2034]	18.9 x 1.9	0.69
2087	Group	Group of linear [2010] and [2078]	12.4 x 0.65	0.26
2088	Group	Group of linear [2042] and [2077]	20.8 x 1.6	0.75
2089	Group	Group of Linear [2043] and [2063]	22.23 x 0.79	0.38

Appendix 2 Excavation Plates

Plate 1. Post hole [1090] (Looking NE)

Plate 2. Post hole [1083] (Looking NE)

Plate 3. Post hole [1008] (Looking SW)

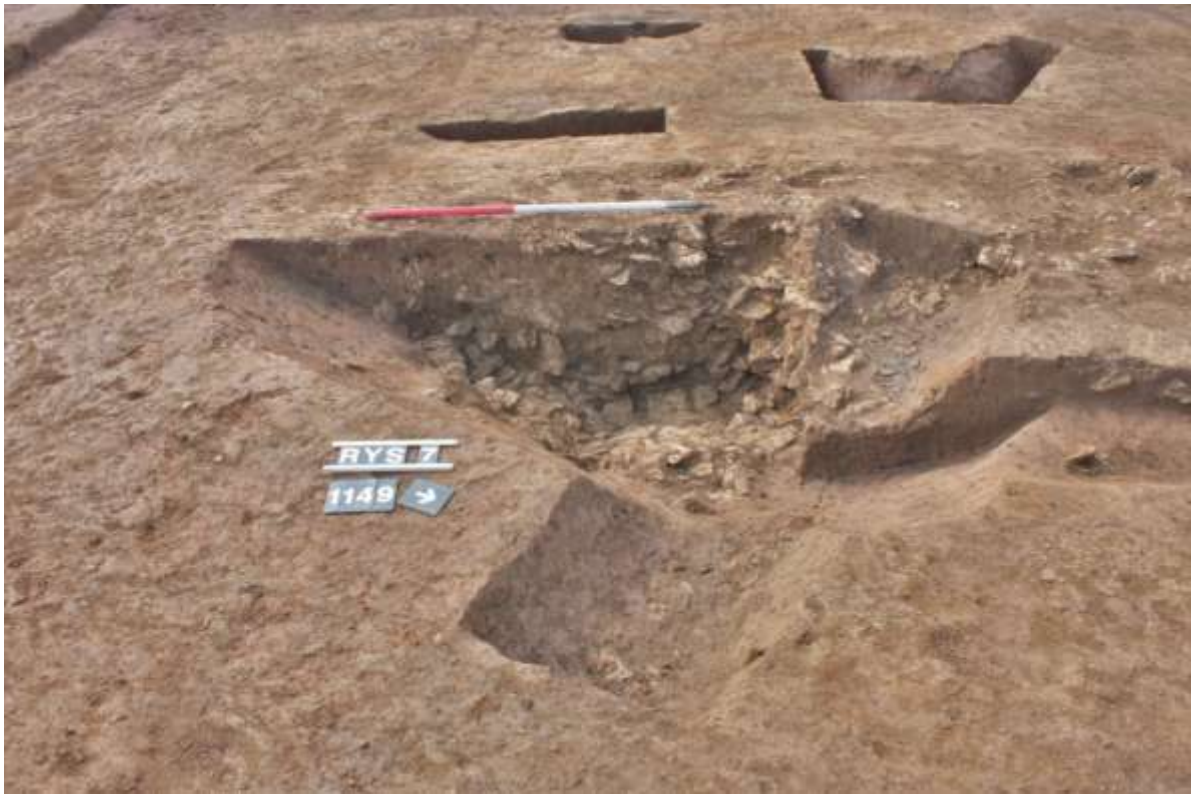


Plate 4. Pit [1149] (Looking SW)

Plate 5. Pit [1149] (Looking west)

Plate 6. Pit [1041] (Looking west)

Plate 7. Pit [1070] (Looking west)

Plate 8. Pit [1010] (looking SW)

Plate 9. Pit [1033] (Looking SE)

Plate 10. Pit [1136] (Looking NW)

Plate 11. Pit [1031] (Incorrect Board) (Looking NW)

Plate 12. Pit [1105] (Looking east)

Plate 13. Waterhole [1074] (Looking north)

Plate 14. Waterhole [1074] (Looking south)

Plate 15. Waterhole [1074] (Looking NE)

Plate 16. Ditch Group 1148, [1014] (Looking west)

Plate 17. Ditch Group 1152 [1012] (Looking west)

Plate 18. Pit or Tree throw [1025] (Looking NW)

Plate 19. Pit [2037] (Looking NE)

Plate 20. Pit [2044] (Looking west)

Plate 21. Pit [2051] (Looking SW)

Plate 22. Pit [2068] (Looking NW)

Plate 23. General view of Pit Group 2090 (Looking NW)

Plate 24. Half-section of Pit [2003] (Looking SE)

Plate 25. Burnt Stones (2005), within Pit [2003] (Looking SE)

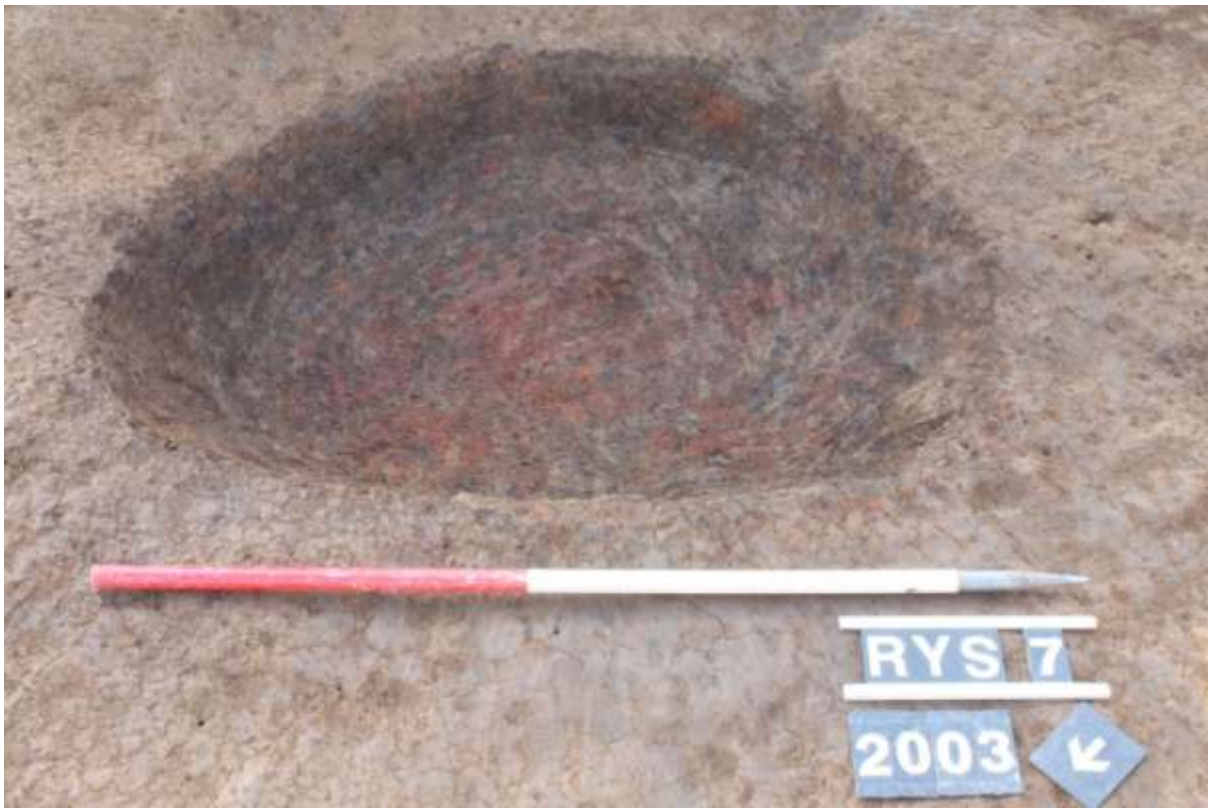


Plate 26. Post excavation view of Pit [2003] showing burning (Looking SE)

Plate 27: Half section of Pit [2029] (Looking north)

Plate 28. Post excavation view of Pit [2029] showing burning on upper edges (Looking north)

Plate 29. Ditch Group 2086 [2024] (Looking south)

Plate 30. Terminus of Ditch Group 2086 [2034] (Looking east)

Plate 31. Terminus of Ditch Group 2086 [2034] (Looking north)

Plate 32. Ditch Group 2086 [2034] (Looking north)

Plate 33. Ditch [2008] (Looking SE)

Plate 34. Ditch [2078] truncating Ditch [2077] (Looking east)

Plate 35. Ditch Terminus [2061] (Looking north)

Plate 36. Possible Post Hole [2018] (Looking SE)

Plate 37. Possible Ditch Terminus or Pit [2012] (Looking east)

Plate 38. Stone Structure 2030 (Looking SW)

Plate 39. Excavation of Flint Scatter Within Grid 1 (Looking SW)

Plate 40. Excavation of Flint Scatter Within Grid 1 (Looking SE)

Plate 41. Grids 1 and 2 Following Removal of Spit 1 (Looking NE)

Plate 42. Deposit (2065) visible within Grid 1 Following Removal of Spit 1 (Looking SE)

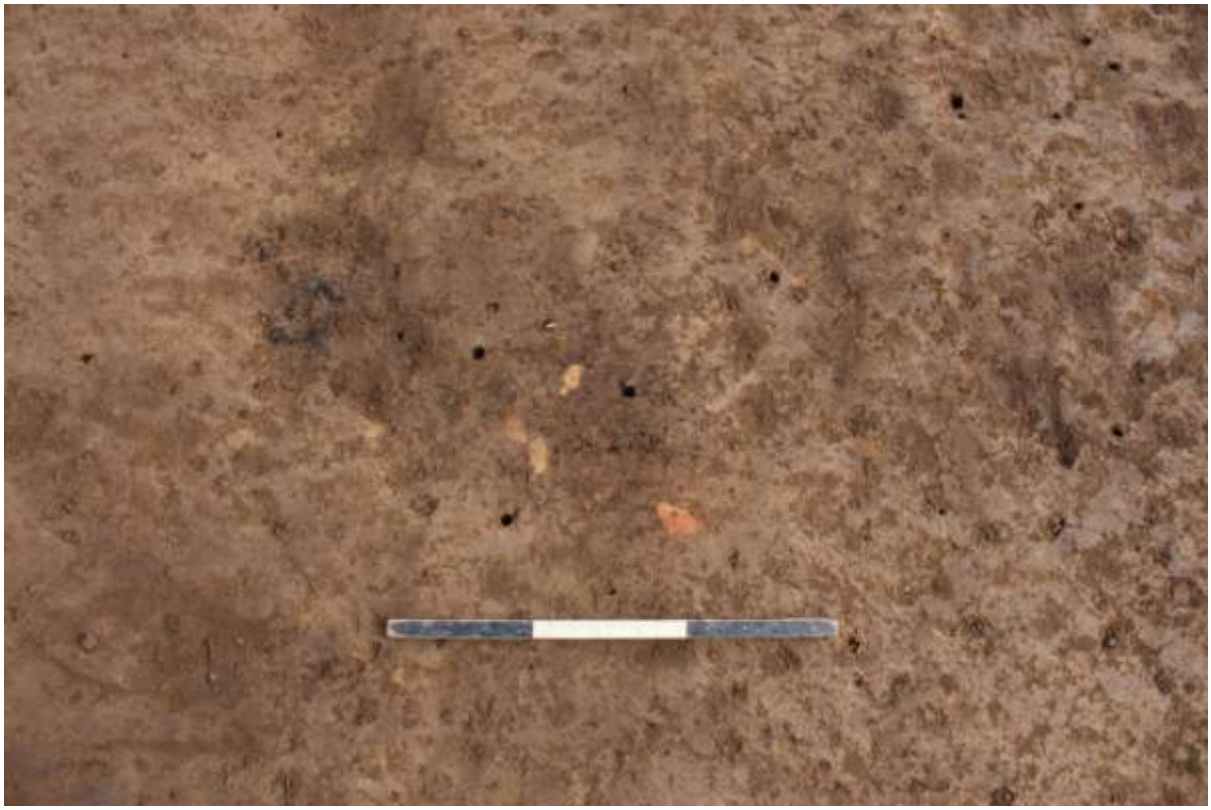
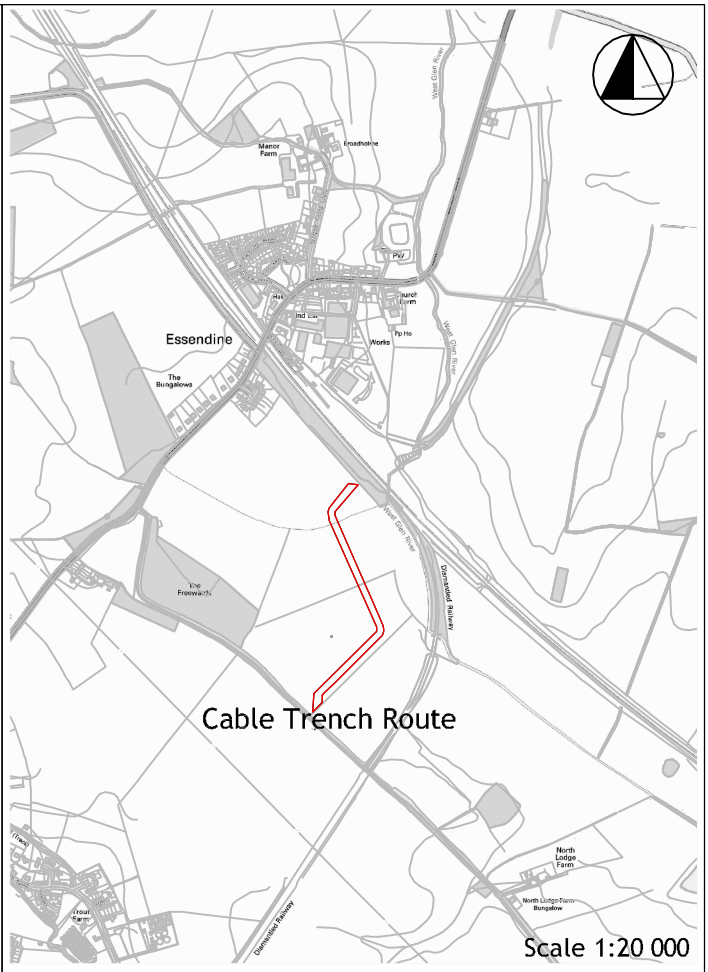
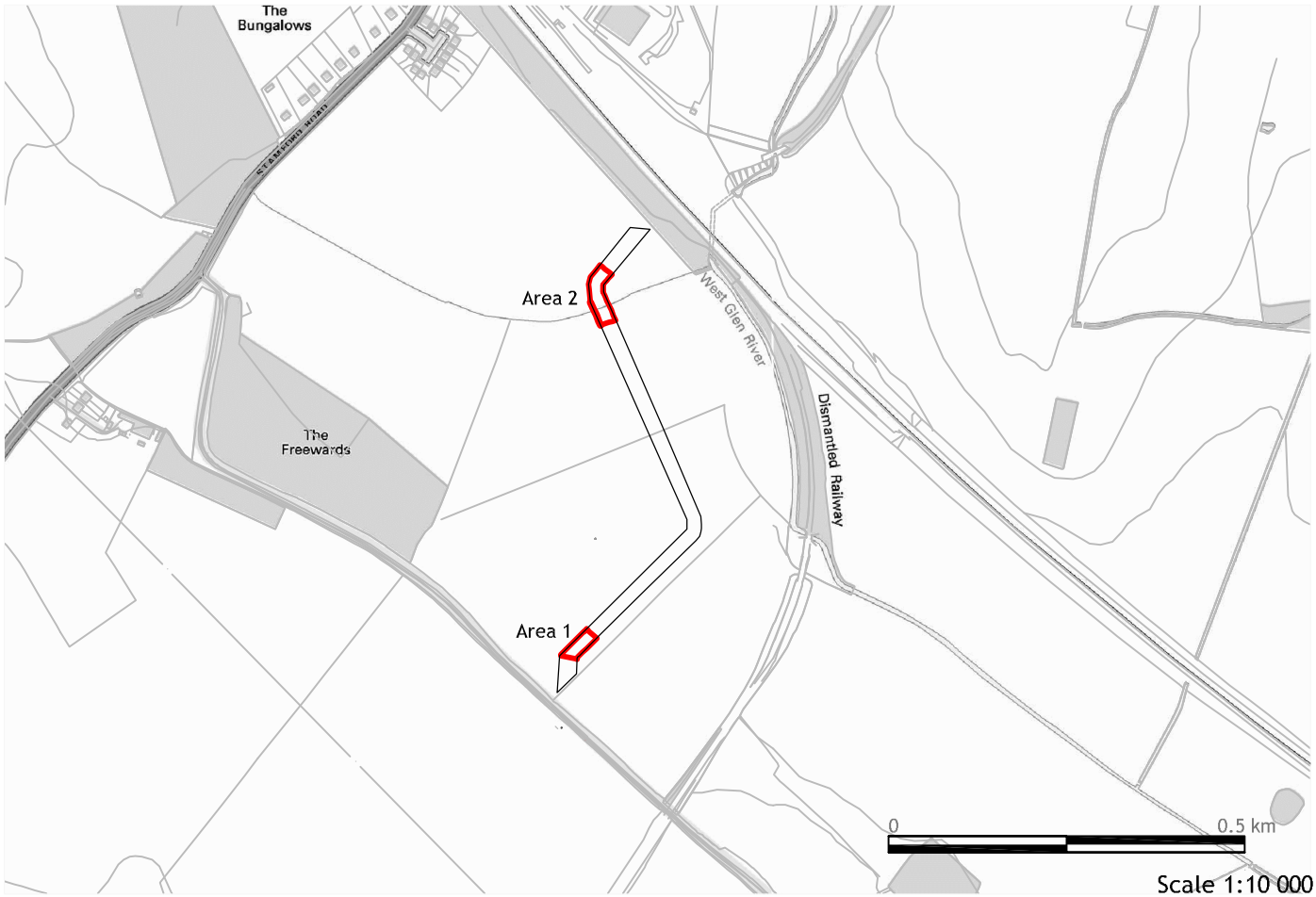


Plate 43. Burnt Material Within Deposit (2067), Grid 2. (Vertical Shot)

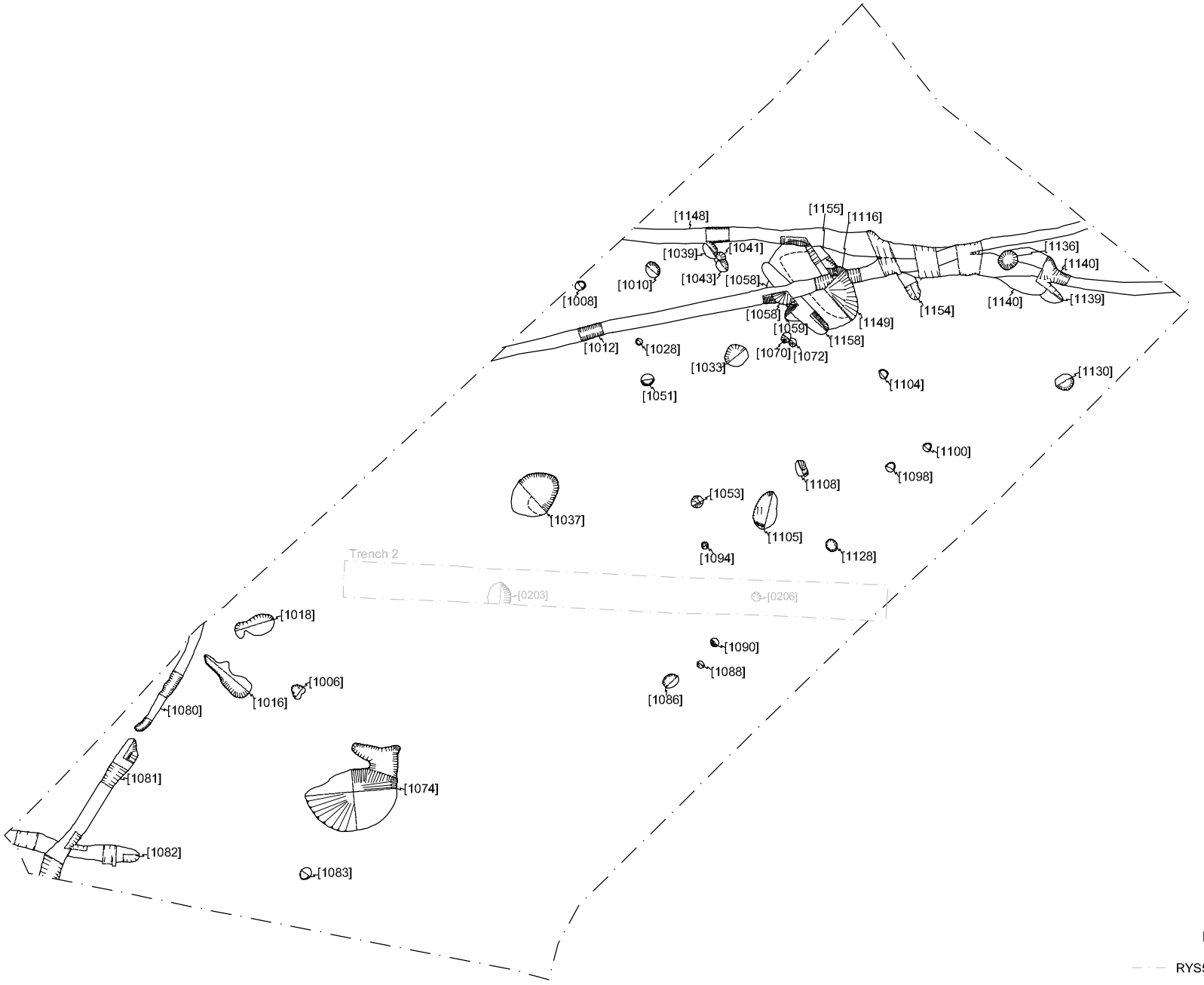
Plate 44. General view of Grids 3 and 4 (Looking east)

Appendix 3 Figures





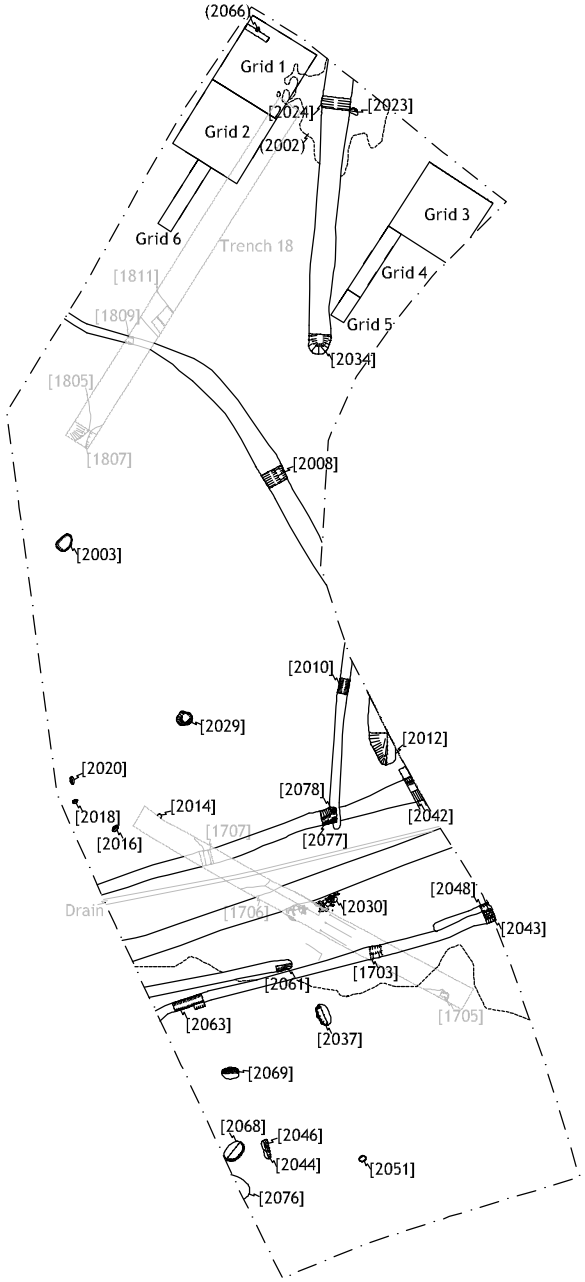
Trent & Peak ARCHAEOLOGY	RYS 7	Ryhall Substation, Cable Trench Route
	Figure 1	Site Location
	Scale at A4 - as stated	



Trent & Peak ARCHAEOLOGY

RYS 7
Figure 2
Scale at A4 - 1:250

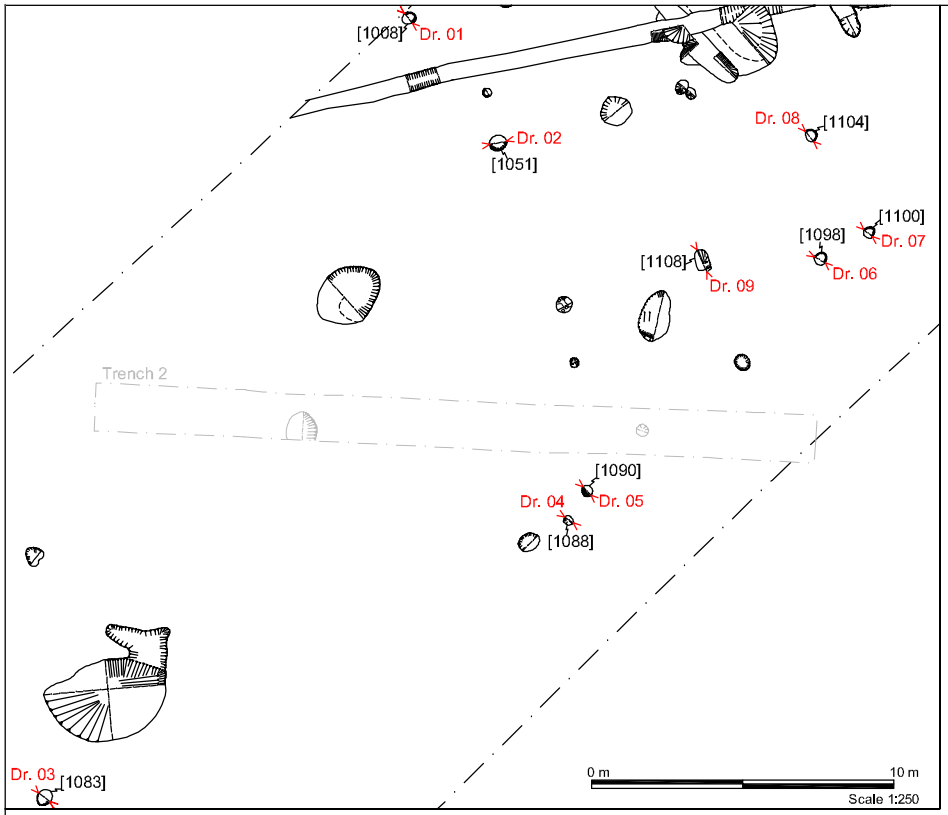
Ryhall Substation, Cable Trench Route
Area 1 Site Plan



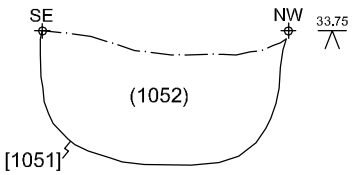
Key

RYS5 Evaluation Trench

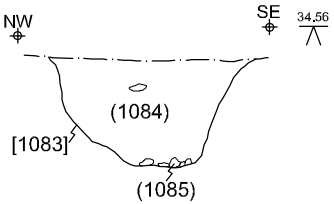
Trent & Peak ARCHAEOLOGY	RYS 7	Ryhall Substation, Cable Trench Route
	Figure 3	Area 2 Site Plan
	Scale at A4 - 1:500	0 m — 20 m



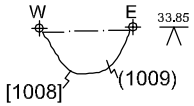
Dr. 01
North East Facing Section of [1051]



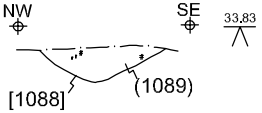
Dr. 02
South West Facing Section of [1083]



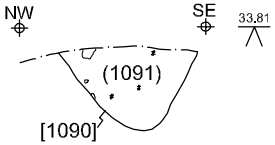
Dr.03
South Facing Section of [1008]



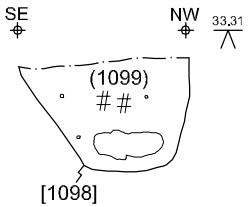
Dr. 04
South West Facing Section of [1088]



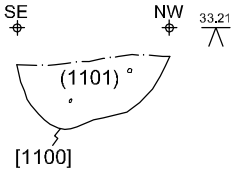
Dr. 05
South West Facing Section of [1090]



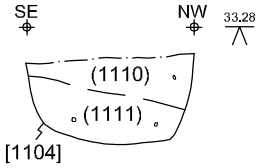
Dr. 06
North East Facing Section of [1098]



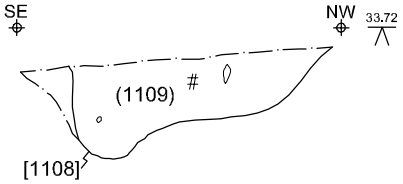
Dr. 07
North East Facing Section of [1100]



Dr. 08
North East Facing Section of [1104]



Dr. 09
North East Facing Section of [1108]

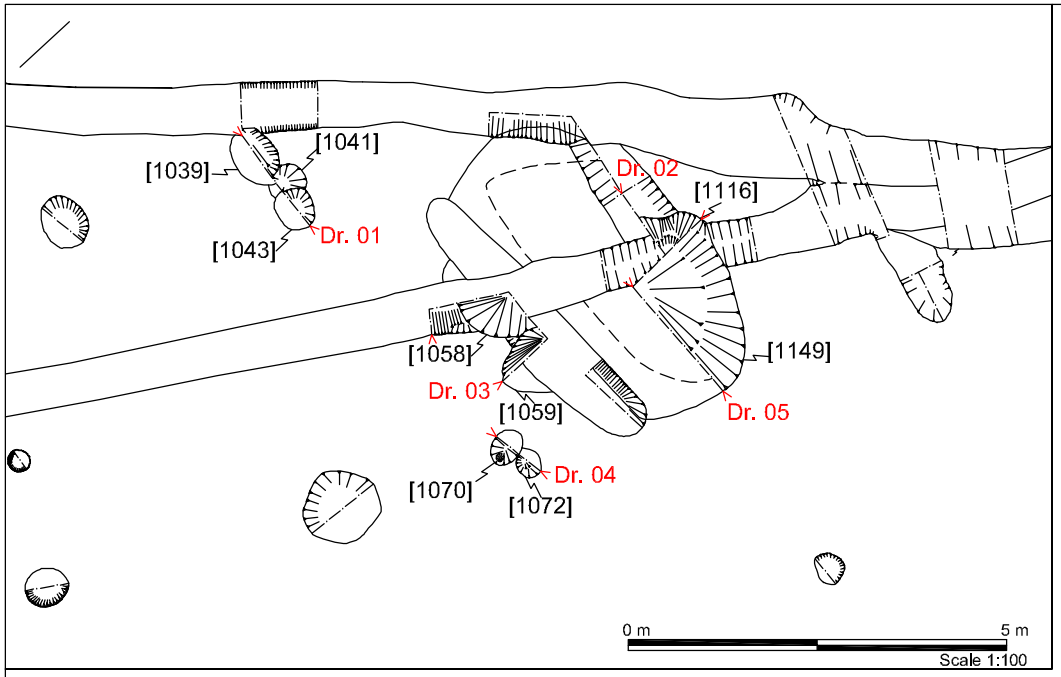


Trent & Peak ARCHAEOLOGY

RYS 7
Figure 4
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Posthole Features in Area 1

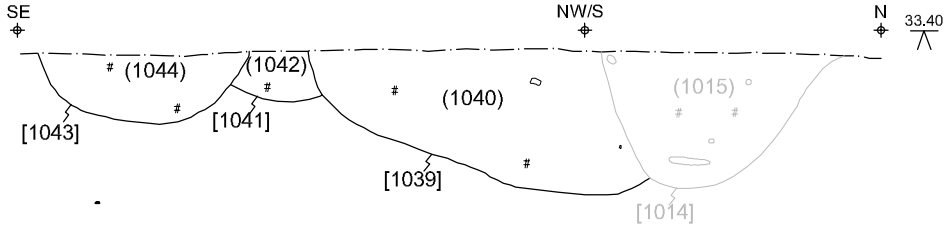
0 m
2 m



Dr. 01

North East Facing Section of [1043], [1041] and [1039]

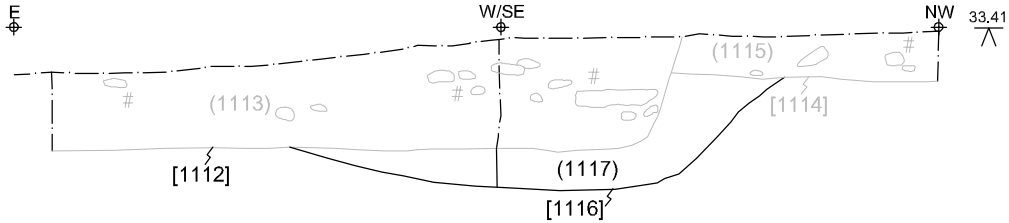
East Facing Section of [1039]



Dr. 02

North Facing Section of [1116]

North East Facing Section of [1116]



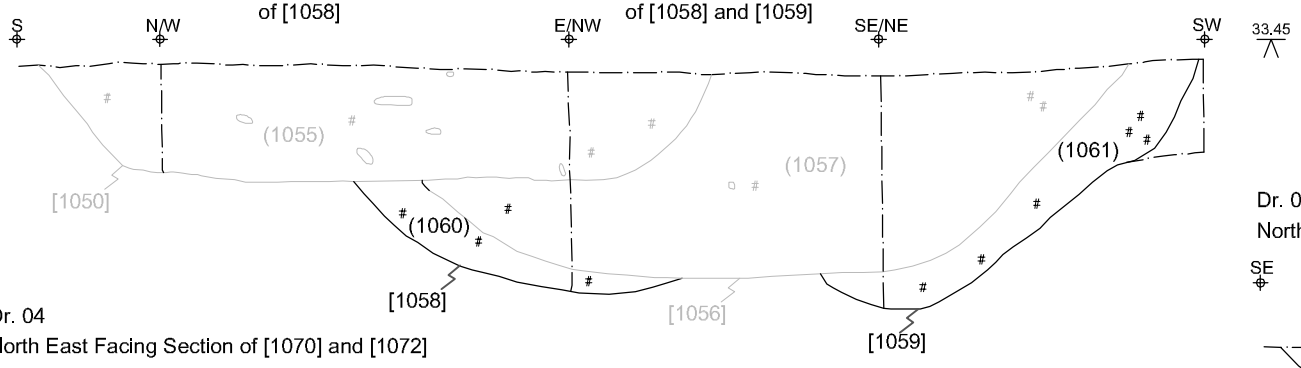
Dr. 03

East Facing Section

South Facing Section of [1058]

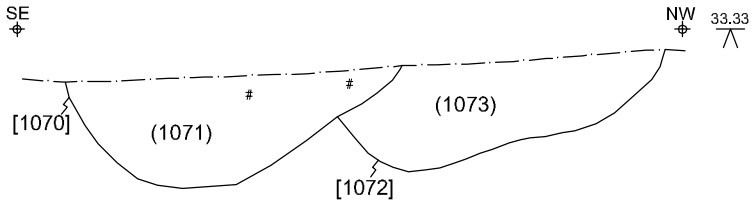
South West Facing Section of [1058] and [1059]

South East Facing Section [1059]



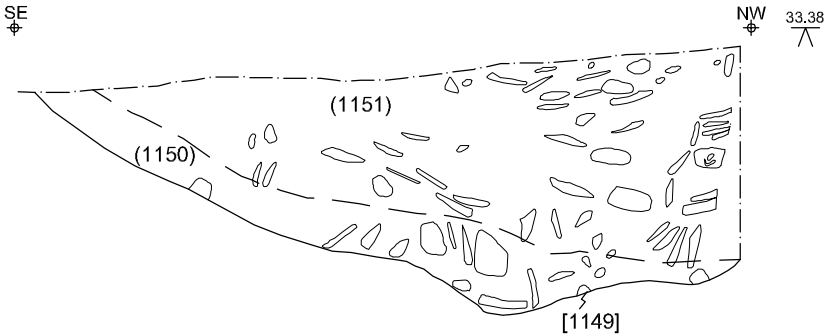
Dr. 04

North East Facing Section of [1070] and [1072]



Dr. 05

North East Facing Section of [1149]

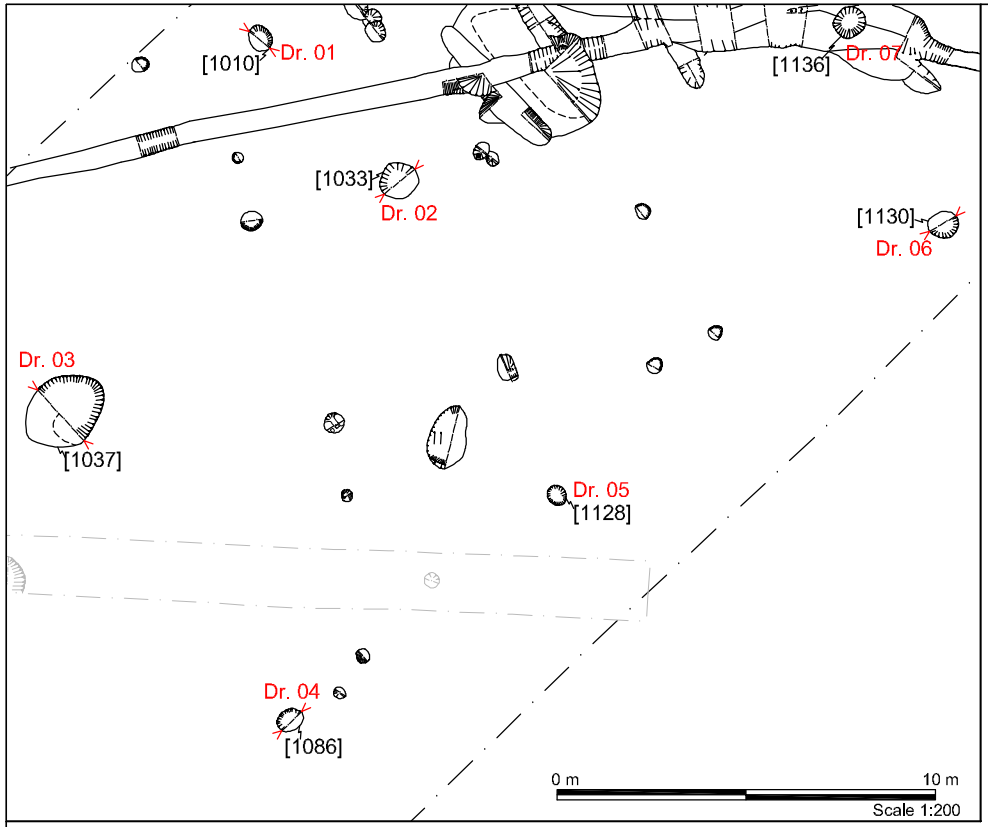


Trent & Peak ARCHAEOLOGY

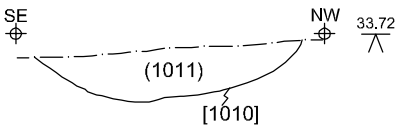
RYS 7
Figure 5
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of pit [1149] and Pit Group [1157] in Area 1

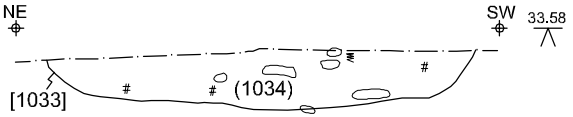
0 m 2 m



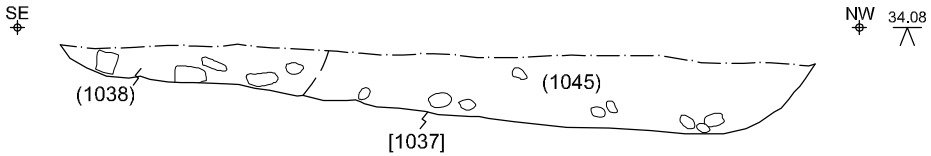
Dr. 01
North East Facing Section of [1010]



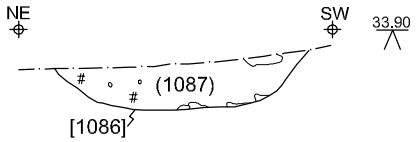
Dr. 02
North West Facing Section of [1033]



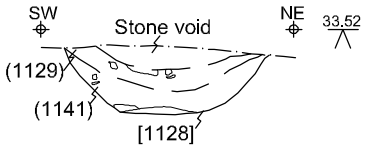
Dr. 03
South West Facing Section of [1037]



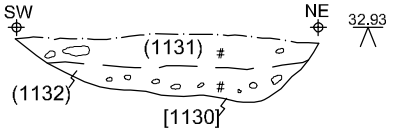
Dr. 04
North West Facing Section of [1086]



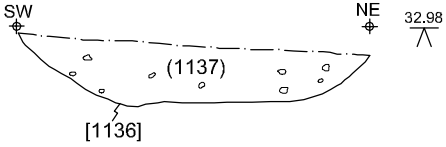
Dr. 05
South West Facing Section of [1128]



Dr. 06
South East Facing Section of [1130]



Dr. 07
South East Facing Section of [1136]

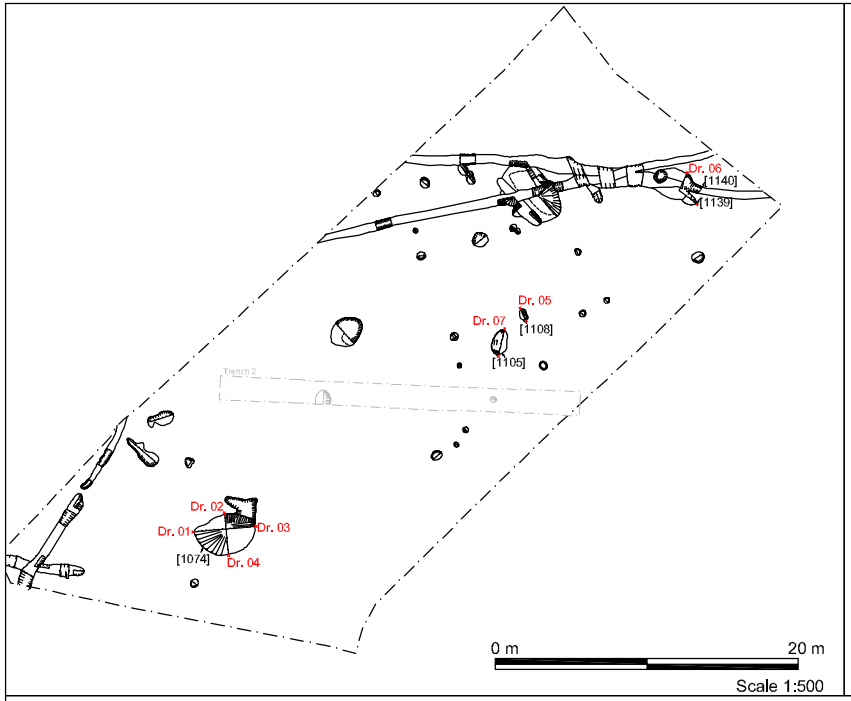


Trent & Peak ARCHAEOLOGY

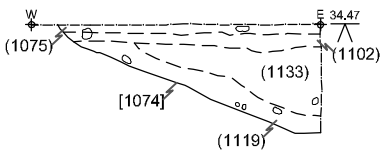
RYS 7
Figure 6
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Pit Group [1156] in Area 1

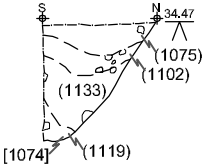
0 m
2 m



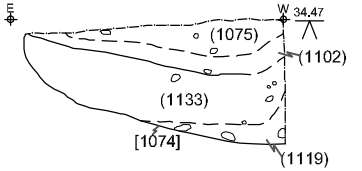
Dr. 01
South Facing Section of [1074]



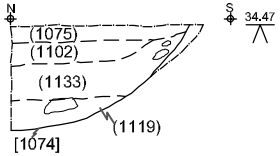
Dr. 02
East Facing Section of [1074]



Dr. 03
North Facing Section of [1074]

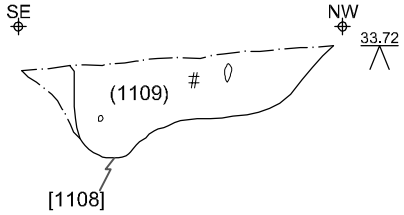


Dr. 04
West Facing Section of [1074]



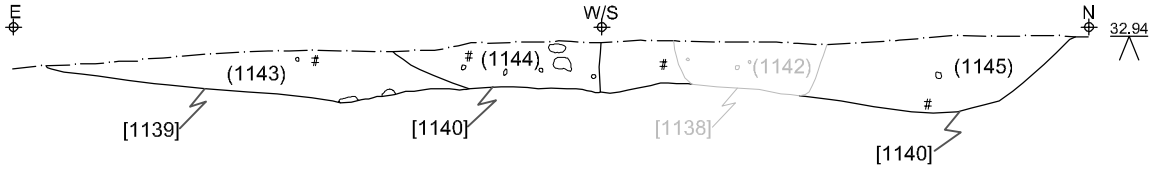
0 m
2 m
Scale 1:50

Dr. 05
North East Facing Section of [1108]

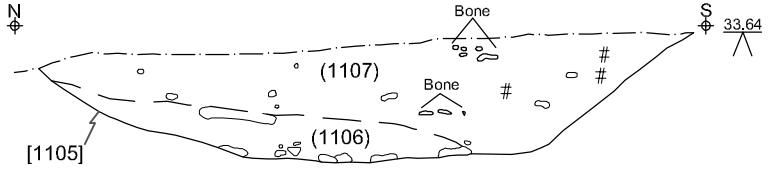


Dr. 06
North Facing Section of [1139] and [1140]

East Facing Section of [1140]



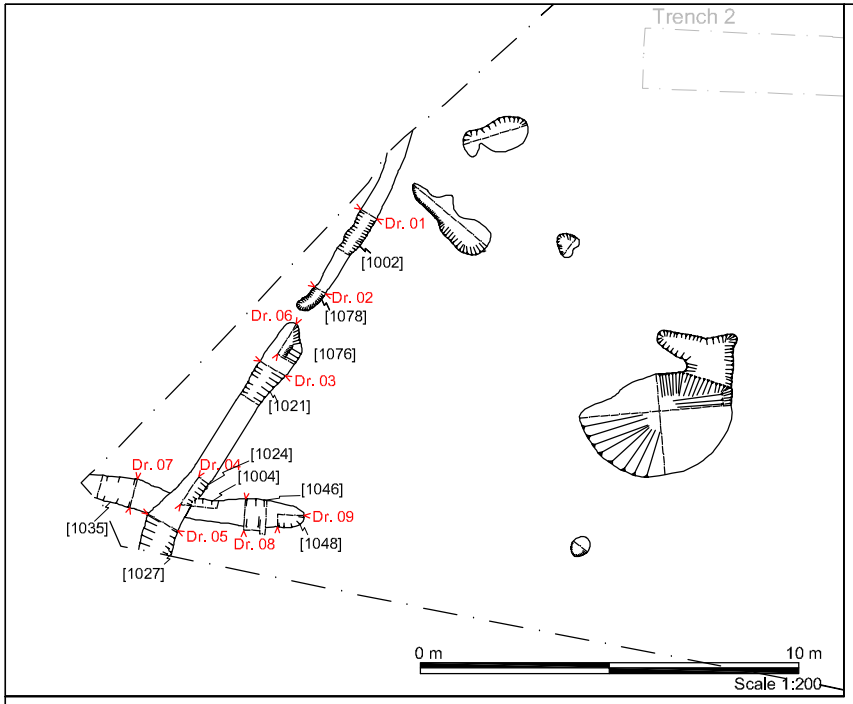
Dr. 07
West Facing Section of [1105]



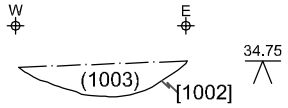
0 m
2 m
Scale 1:20

Trent & Peak ARCHAEOLOGY

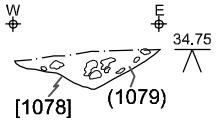
RYS 7 Ryhall Substation, Cable Trench Route
Figure 7 Sections of Waterhole [1074] and other features
Scale at A4 - as stated



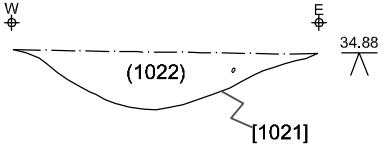
Dr. 01
South Facing Section of [1002]



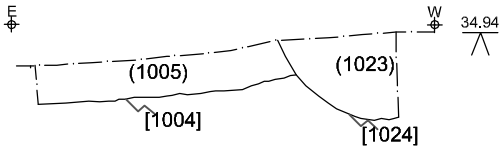
Dr. 02
South Facing Section of [1078]



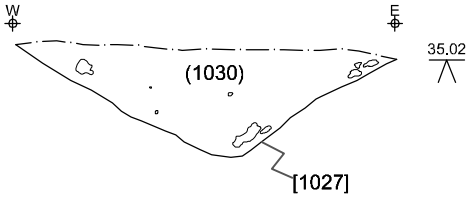
Dr. 03
South Facing Section of [1021]



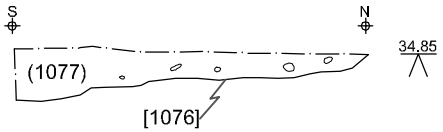
Dr. 04
North Facing Section of [1004] and [1024]



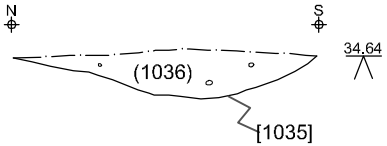
Dr. 05
South Facing Section of [1027]



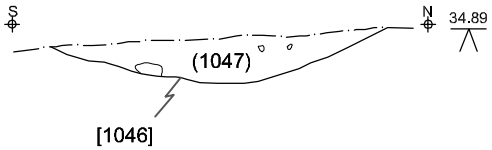
Dr. 06
East Facing Section of [1076]



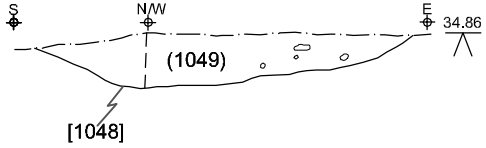
Dr. 07
West Facing Section of [1035]



Dr. 08
East Facing Section of [1046]



Dr. 09
East Facing
Section of [1048] South Facing Section

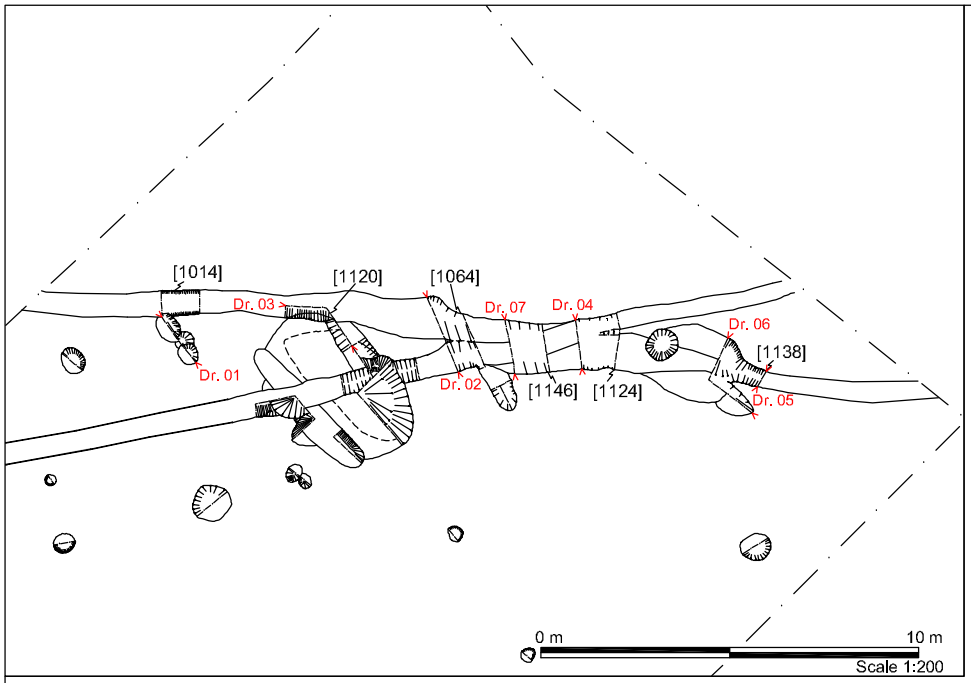


Trent & Peak ARCHAEOLOGY

RYS 7
Figure 8
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Ditch Groups [1080], [1081] and [1082] in Area 1

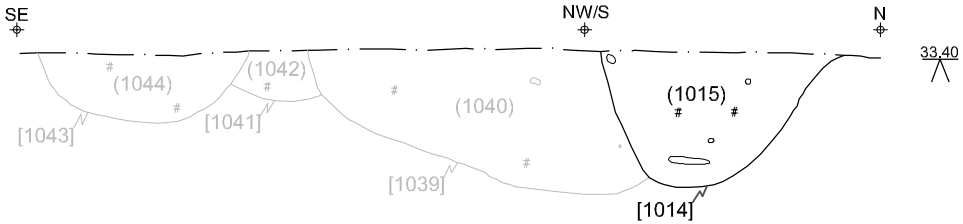
0 m
2 m



Dr. 01

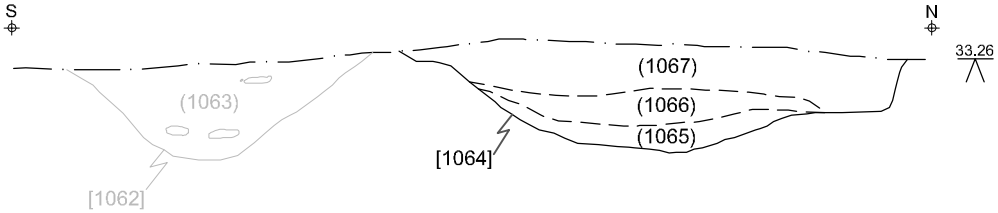
North East Facing Section

East Facing Section of [1014]



Dr. 02

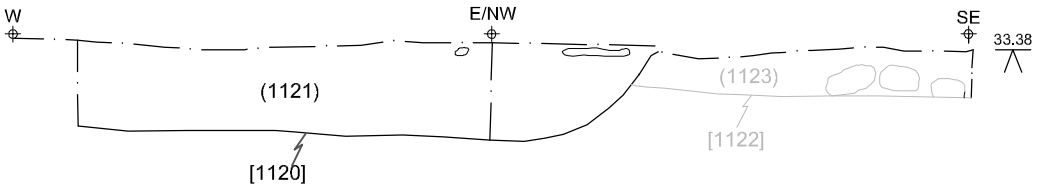
East Facing Section of [1064]



Dr. 03

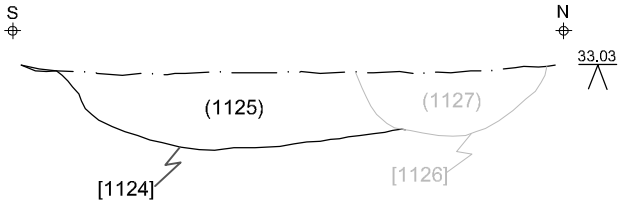
South Facing Section of [1120]

South West Facing



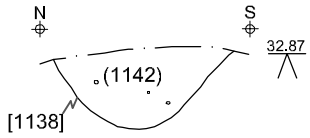
Dr. 04

East Facing Section of [1124]



Dr. 05

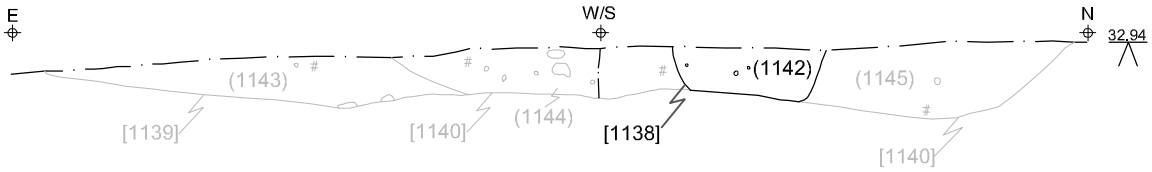
West Facing Section of [1138]



Dr. 06

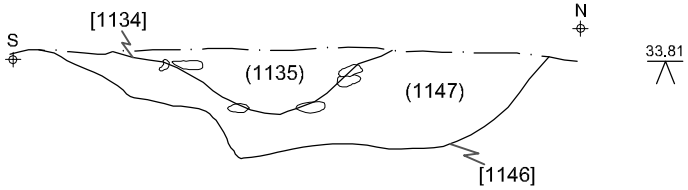
North Facing Section of [1138]

East Facing Section



Dr. 07

East Facing Section of [1146]

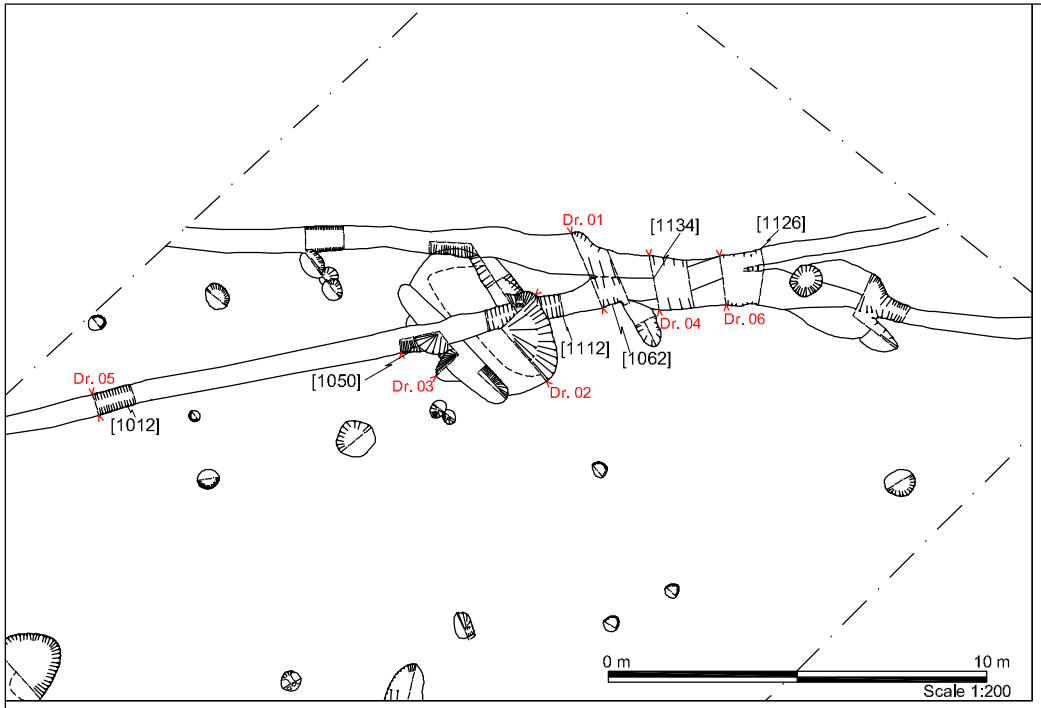


Trent & Peak ARCHAEOLOGY

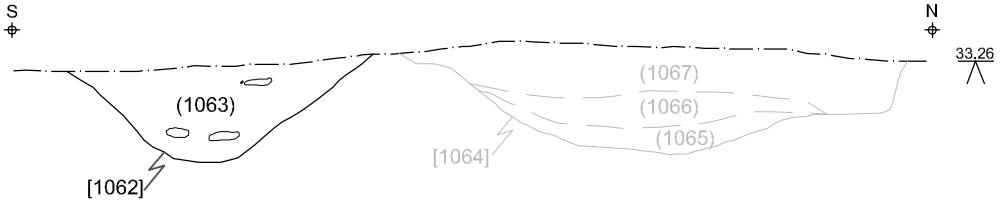
RYS 7
Figure 9
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Ditch Group [1148] in Area 1

0 m
2 m

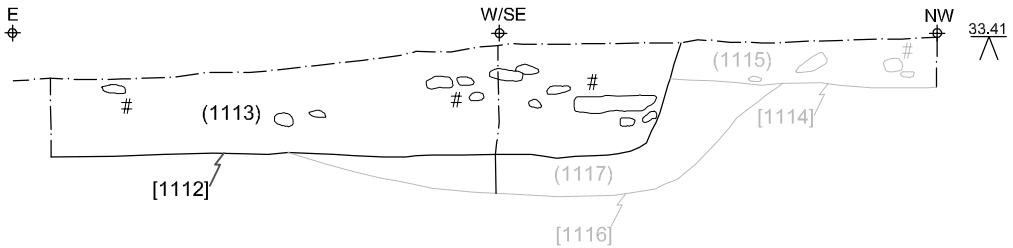


Dr. 01
East Facing Section of [1062]



Dr. 02
North Facing Section of [1112]

North East Facing Section

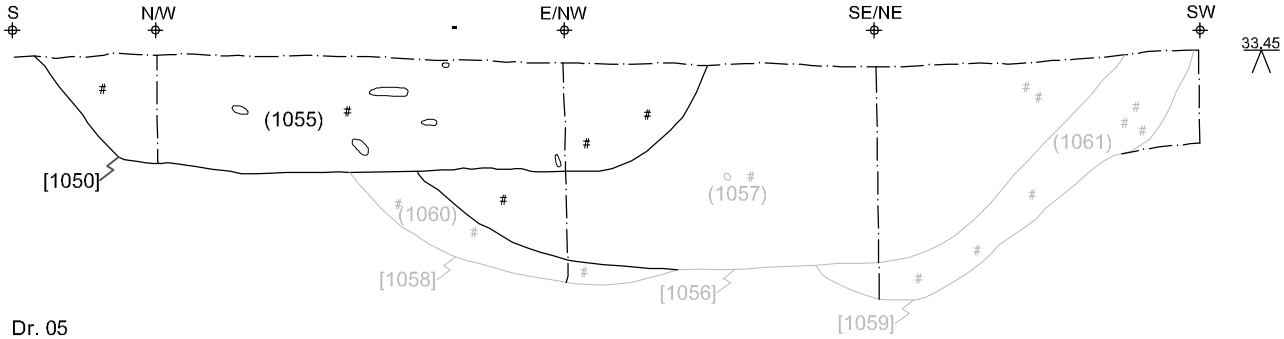


Dr. 03
East Facing Section
of [1050]

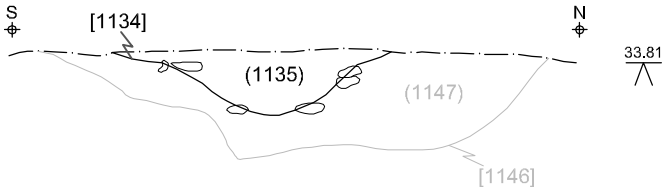
South Facing Section

South West Facing Section

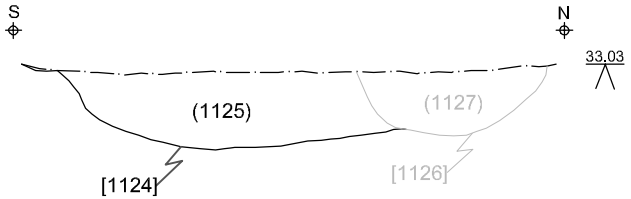
South East Facing Section



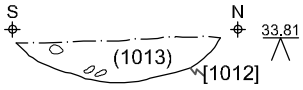
Dr. 04
East Facing Section of [1134]



Dr. 06
East Facing Section [1124]



Dr. 05
North East Facing Section of [1012]

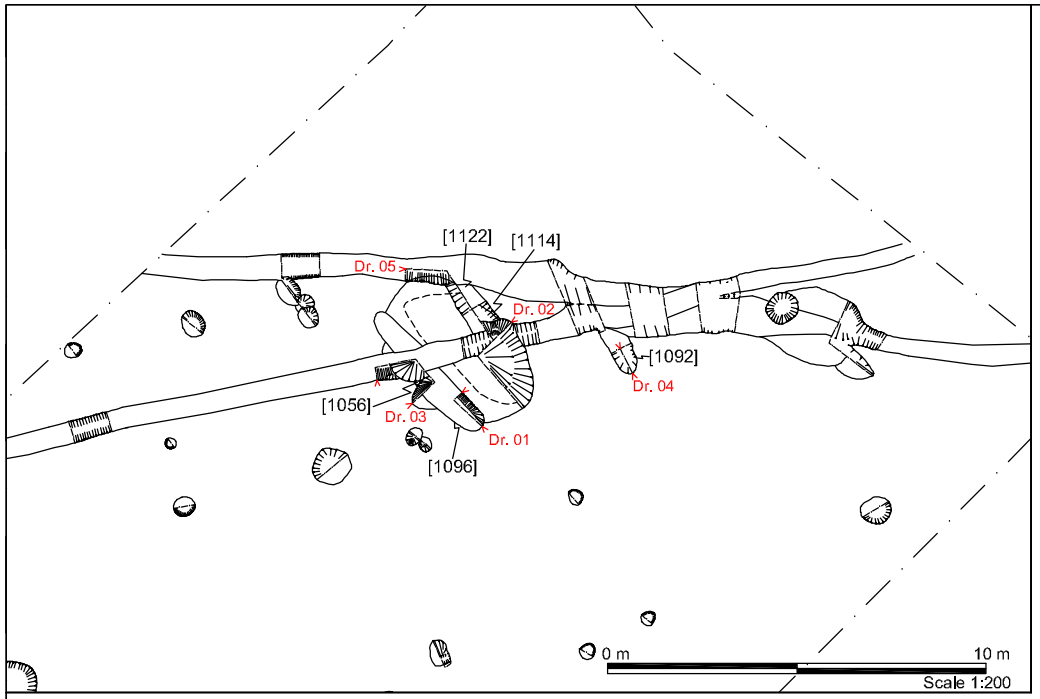


Trent & Peak ARCHAEOLOGY

RYS 7
Figure 10
Scale at A4 - 1:20

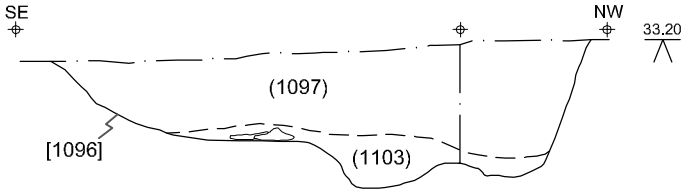
Ryhall Substation, Cable Trench Route
Sections of Ditch Group [1152] in Area 1

0 m
2 m



Dr. 01

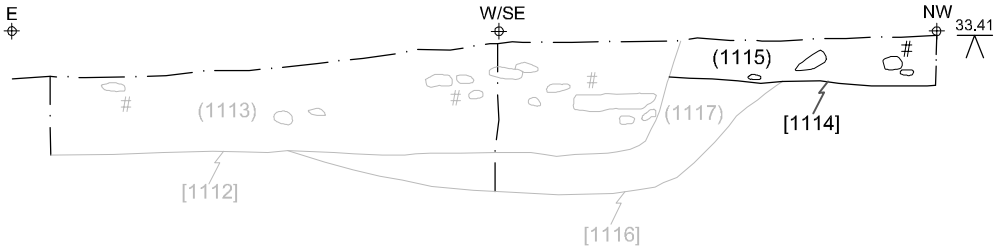
North West Facing Section of [1096]



Dr. 02

North Facing Section

North East Facing Section of [1114]



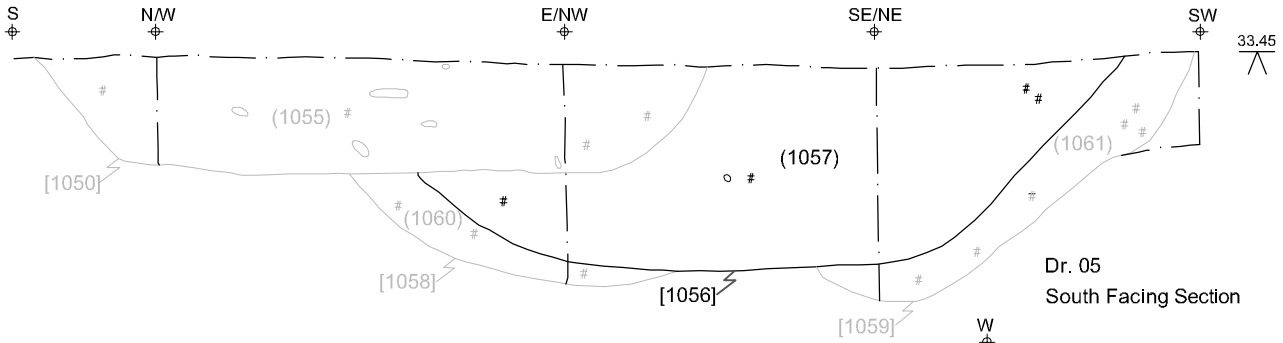
Dr. 03

East Facing Section

South Facing Section

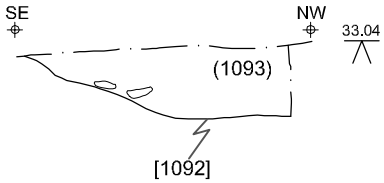
South West Facing Section of [1056]

South East Facing Section



Dr. 04

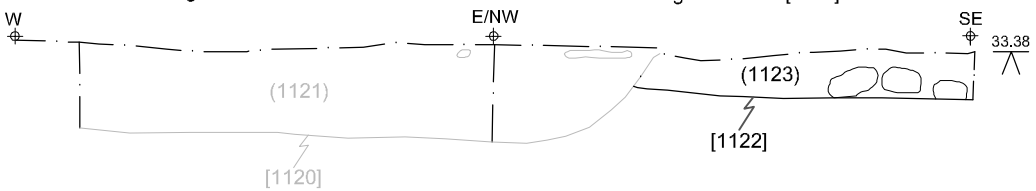
North East Facing Section of [1092]



Dr. 05

South Facing Section

South West Facing Section of [1122]

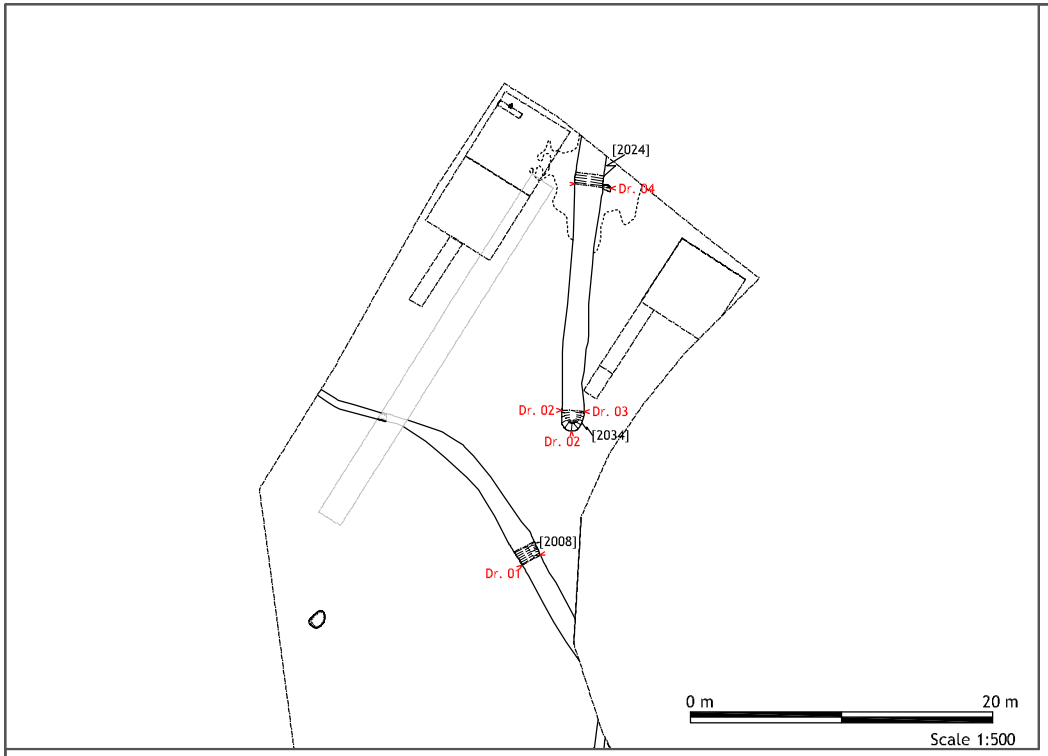


Trent & Peak ARCHAEOLOGY

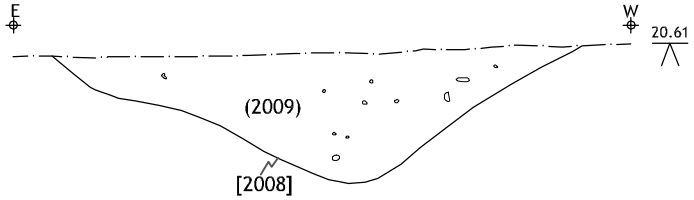
RYS 7
Figure 11
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Ditch Groups [1154], [1155] and [1158]

0 m
2 m

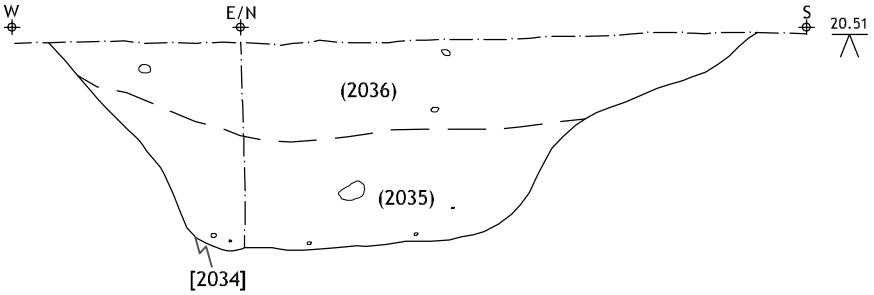


Dr. 01
North Facing Section of [2008]

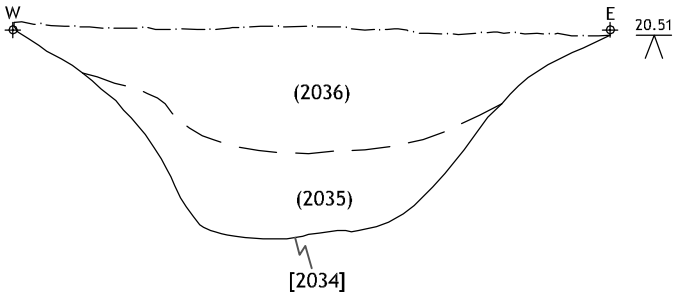


Dr. 02
South Facing Section of [2034]

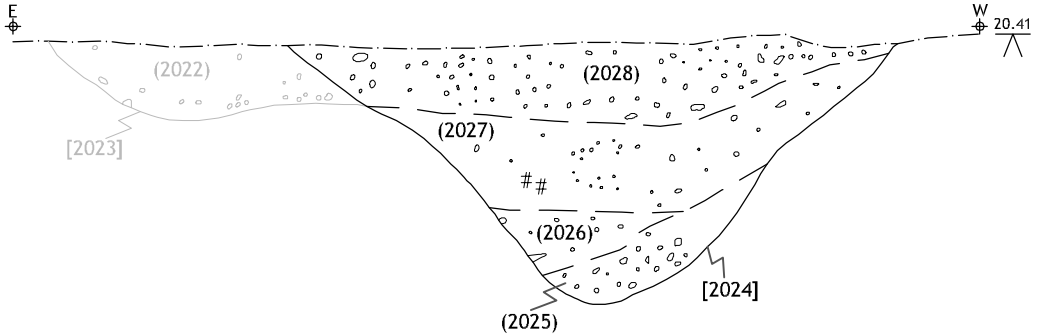
West Facing Section



Dr. 03
South Facing Section of [2034]



Dr. 04
North Facing Section of [2024]

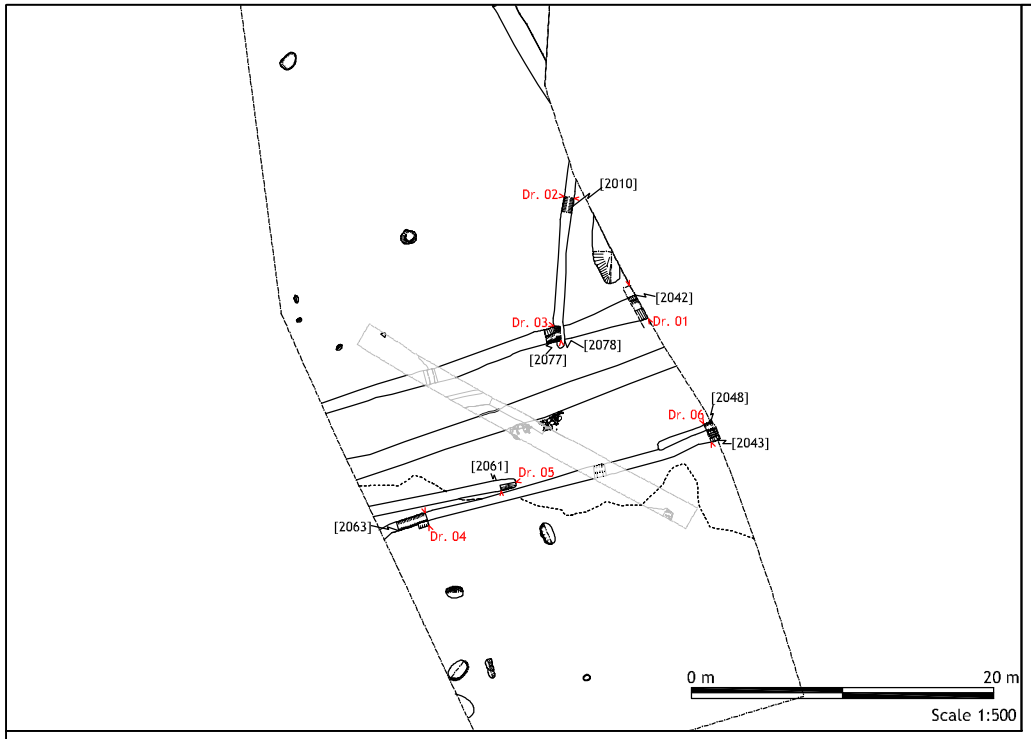


Trent & Peak ARCHAEOLOGY

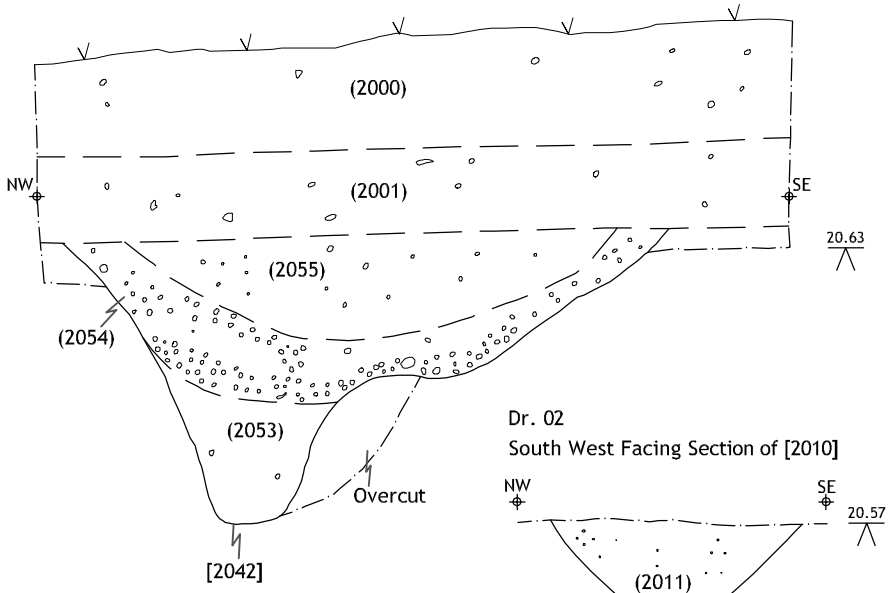
RYS 7
Figure 12
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Ditch [2008] and Ditch Group [2086] in Area 2

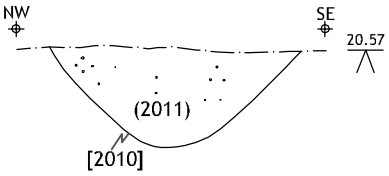
0 m
2 m



Dr. 01
South West Facing Section of [2042]

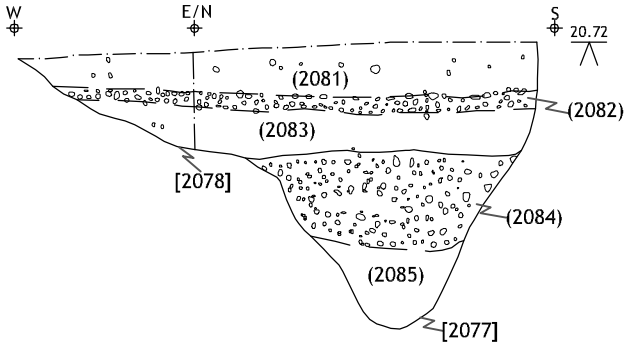


Dr. 02
South West Facing Section of [2010]

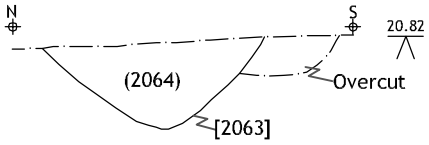


Dr. 03
South Facing Section
of [2078]

West Facing Section of [2077]

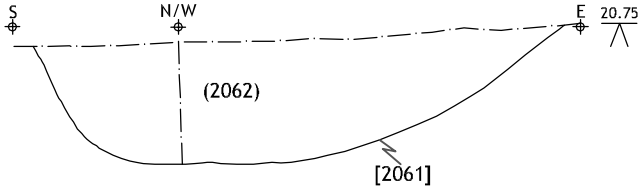


Dr. 04
West Facing Section of [2063]

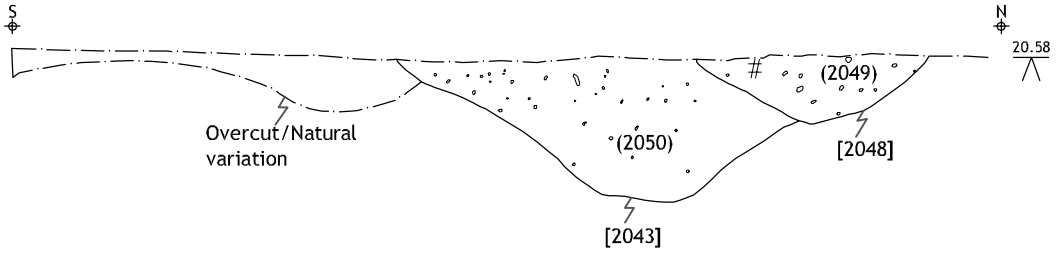


Dr. 05
East Facing Section
of [2061]

South Facing Section of [2061]

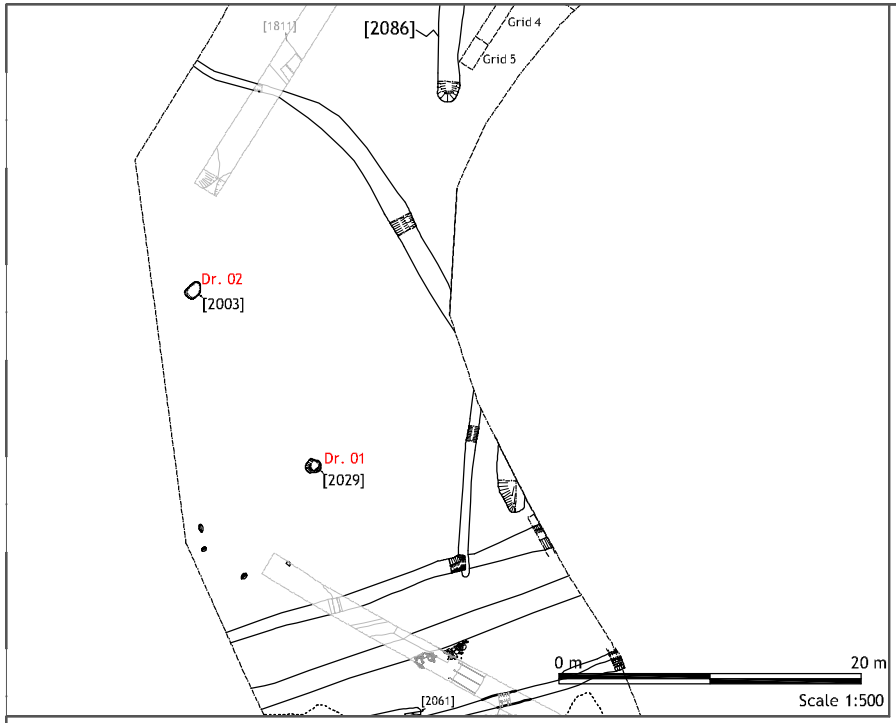


Dr. 06
East Facing Section of [2043] and [2048]

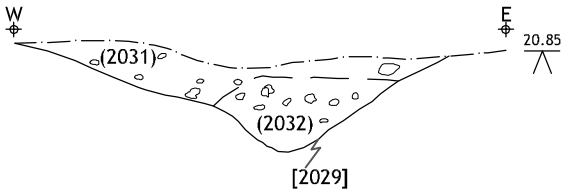


Trent & Peak ARCHAEOLOGY	RYS 7 Figure 13 Scale at A4 - 1:20	Ryhall Substation, Cable Trench Route Sections of Ditches [2048], [2061] and Ditch Groups [2087], [2088] and [2089] in Area 2

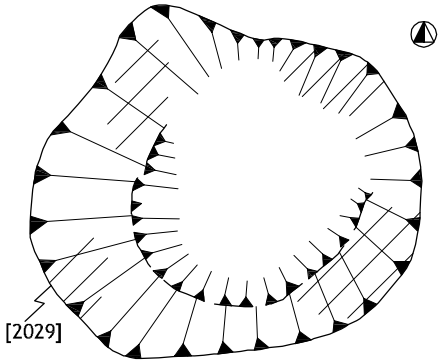
0 m — 2 m



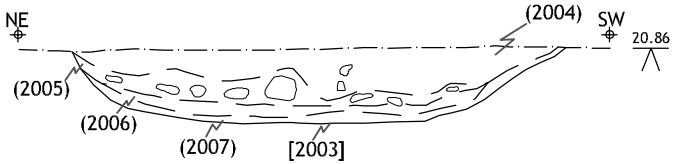
Dr. 01
South Facing Section of [2029]



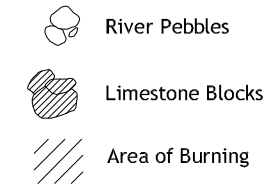
Areas of Burning with [2029]



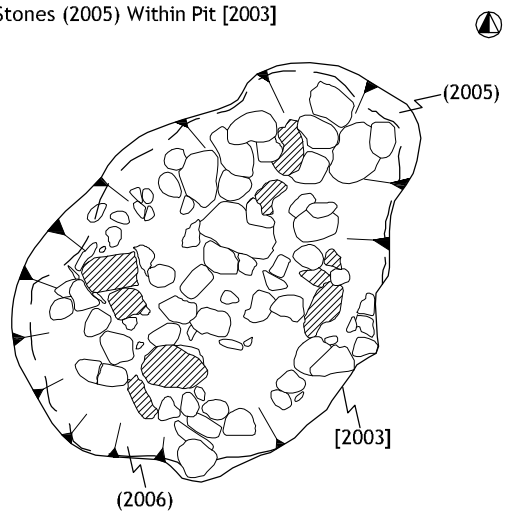
Dr. 02
North West Facing Section of [2003]



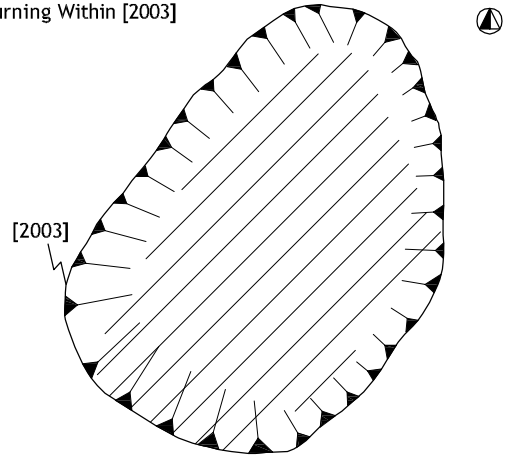
Key



Burnt Stones (2005) Within Pit [2003]



Areas of Burning Within [2003]

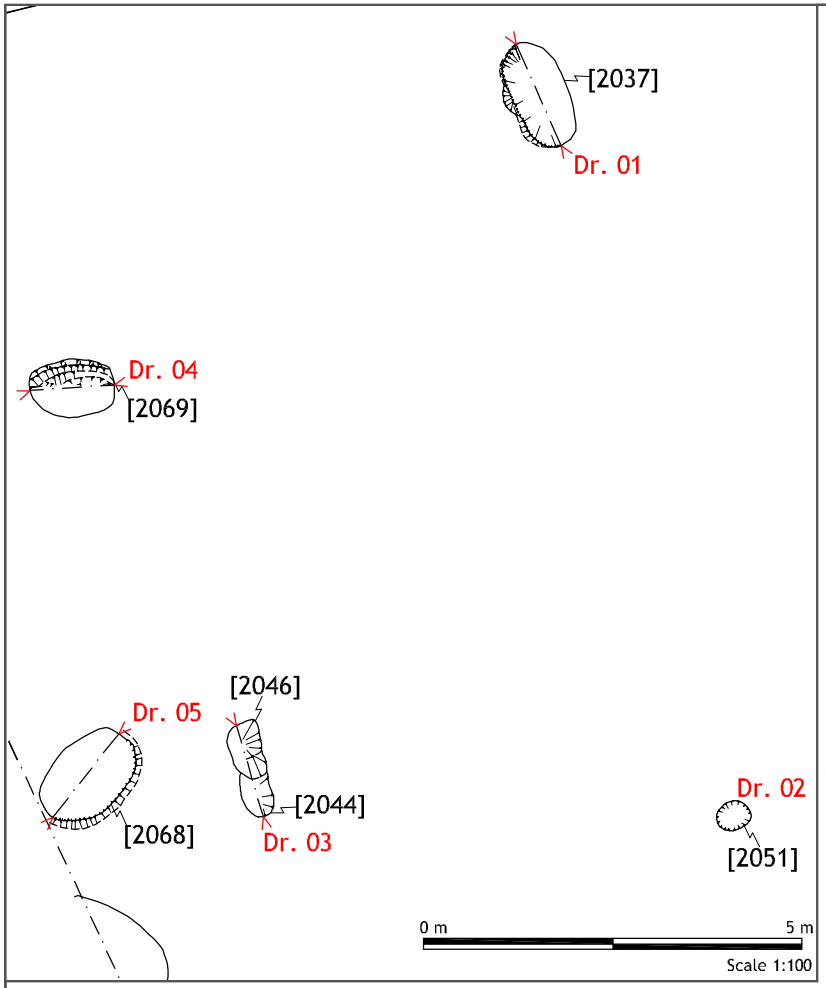


Trent & Peak ARCHAEOLOGY

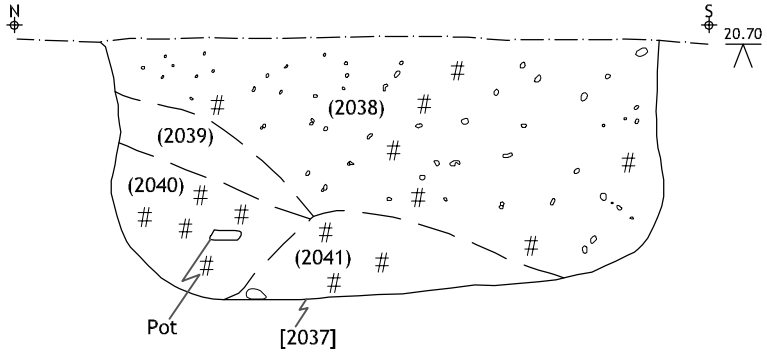
RYS 7
Figure 14
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Plan and Sections of Pit Group [2091] in Area 2

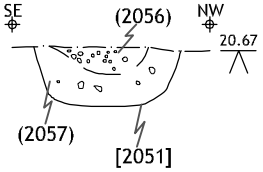
0 m
2 m



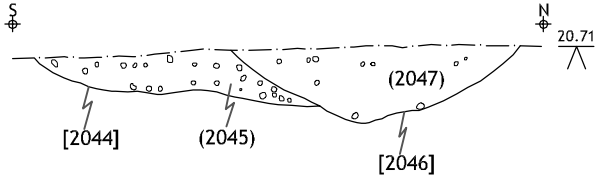
Dr. 01
West Facing Section of [2037]



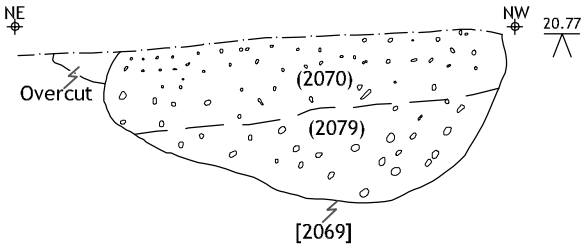
Dr. 02
North East Facing Section of [2051]



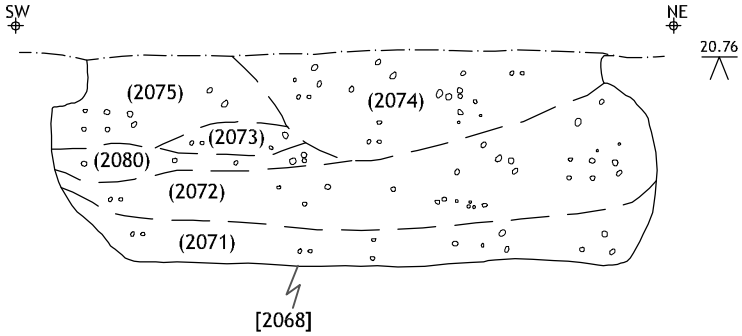
Dr. 03
East Facing Section of [2044] and [2046]



Dr. 04
North East Facing Section of [2069]



Dr. 05
South East Facing Section of [2068]

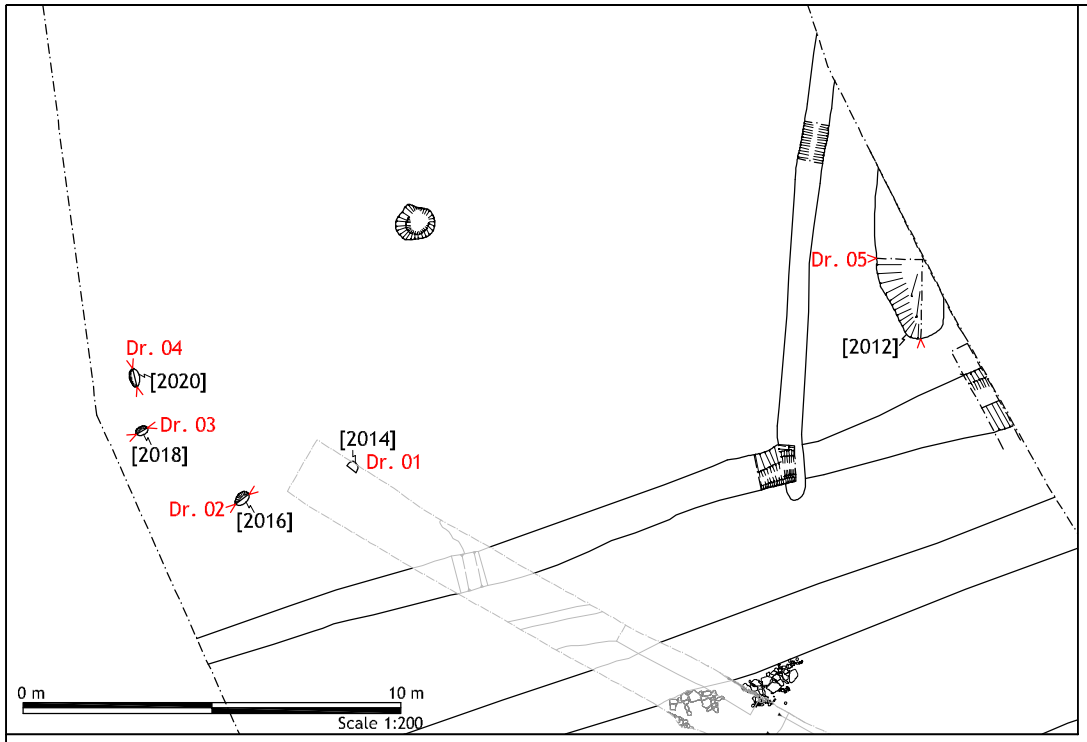


Trent & Peak ARCHAEOLOGY

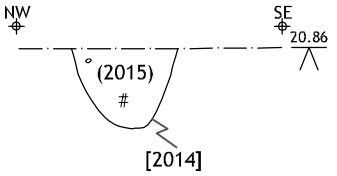
RYS 7
Figure 15
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Pit Group [2090] in Area 2

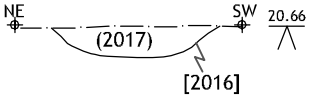
0 m
2 m



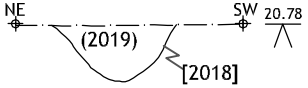
Dr. 01
South West Facing Section of [2014]



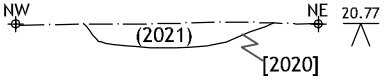
Dr. 02
North West Facing Section of [2016]



Dr. 03
North West Facing Section of [2018]

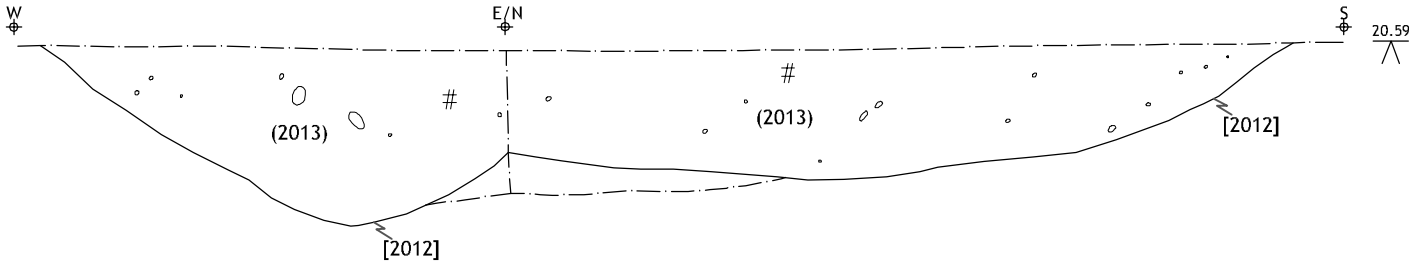


Dr. 04
South West Facing Section of [2020]



Dr. 05
South Facing Section of [2012]

West Facing Section

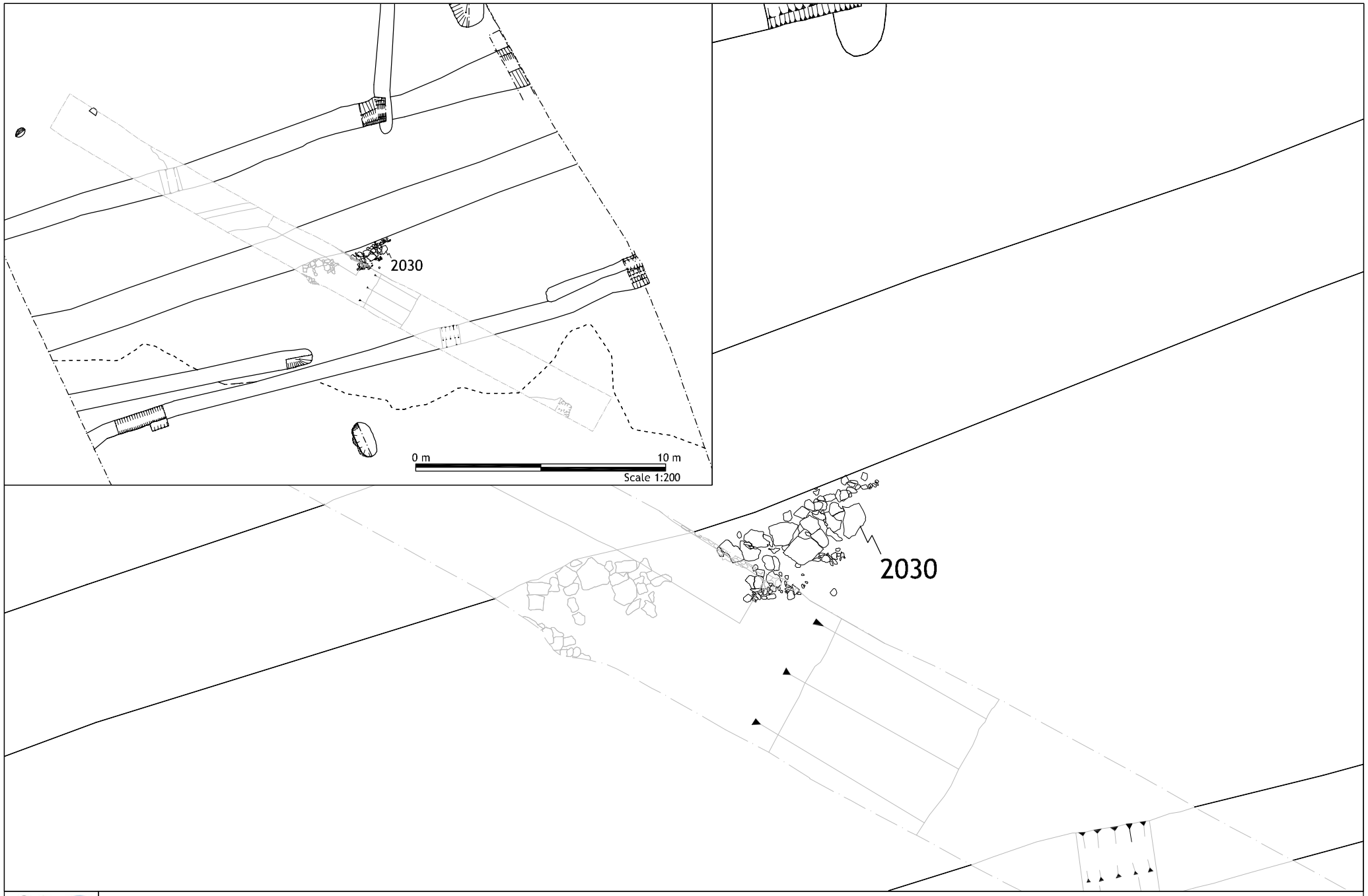


Trent & Peak ARCHAEOLOGY

RYS 7
Figure 16
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Sections of Pit Group [2092] in Area 2

0 m 2 m



Trent & Peak ARCHAEOLOGY

RYS 7
Figure 17
Scale at A4 - 1:20

Ryhall Substation, Cable Trench Route
Geo-rectified Plan of Stone Deposit (2030) in Area 2

0 m 5 m

Grid 1

Grid 2

Grid 3

Grid 4

Grid 5

Grid 6

Key

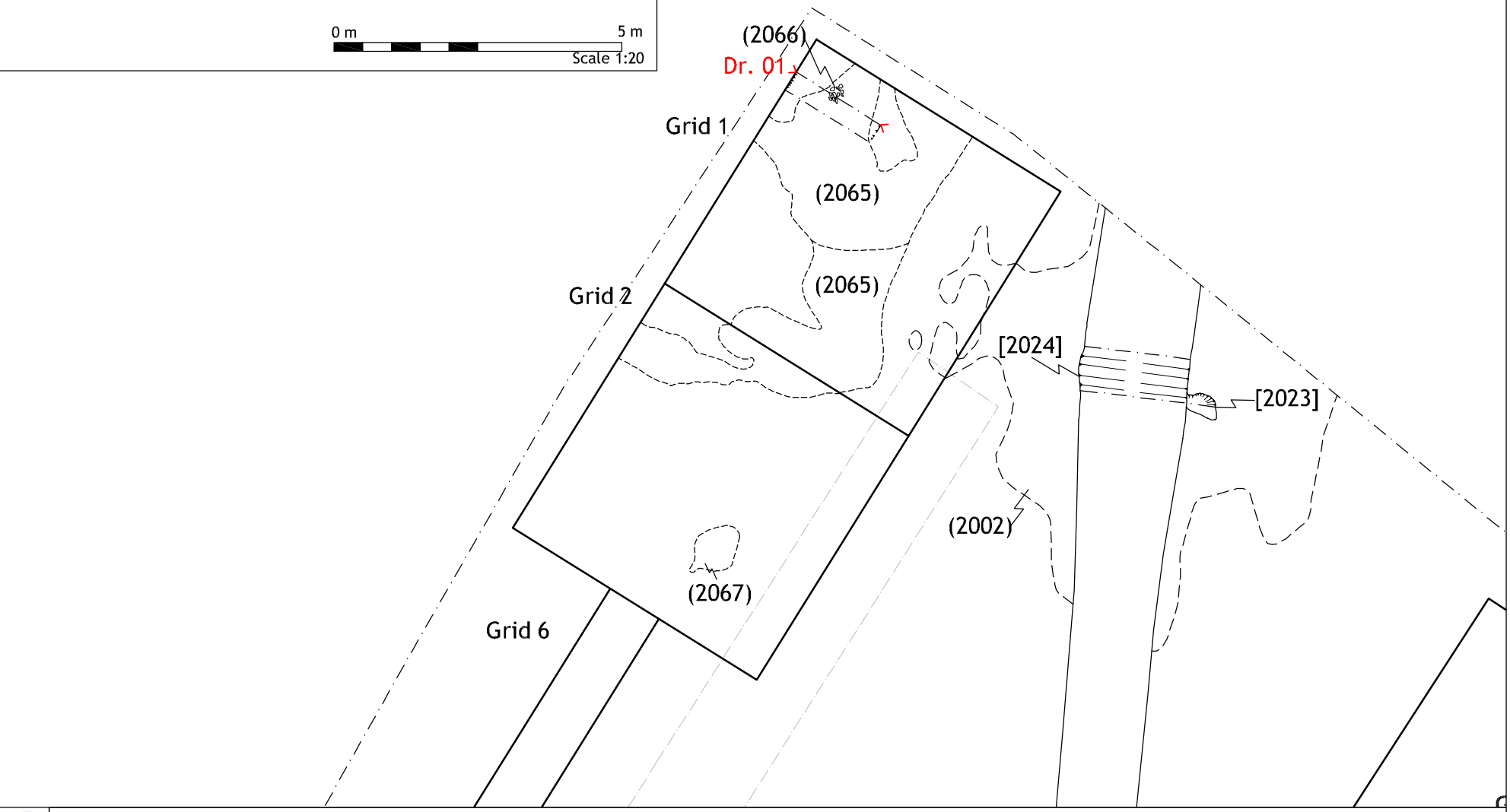
Unexcavated Squares

0 m 10 m

RYS 7
Figure 18
Scale at A3 - 1:100

Ryhall Substation, Cable Trench Route
Plan of Flint Scatter in Area 2

Trent & Peak ARCHAEOLOGY



Trent & Peak ARCHAEOLOGY

RYS 7
Figure 19
Scale at A4 - 1:100

Ryhall Substation, Cable Trench Route
Plan of Deposits Associated with Flint Scatter

0 m 10 m