

1EW03 - Enabling Works Central

AWHi – Post-Excavation Assessment Report for Archaeological Recording at North Portal (AC210/22) C21036 & C21037

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Executive summary

- 0.0.0 Archaeological Recording was undertaken at Chiltern Tunnel North Portal, on land near Great Missenden, Buckinghamshire (henceforth 'the Site'). The site code for these works was 1C20CTNAR which was carried out from January to February 2021.
- 0.0.1 The land at Chiltern Tunnel North Portal was targeted to investigate and record the archaeological remains identified at the Site through Archaeological Recording ahead of the construction of HS2 Phase 1 Central, (Project Plan for Archaeological Recording at Chiltern Tunnel North Portal ref: 1EW03-FUS-COP_EV-PLN-CS02_CL16-000001).
- 0.0.2 The Site lies to the east of the A413, approximately 1.4km northeast of Great Missenden and 700m northwest of South Heath. The area of Archaeological Recording comprised parts of a single arable field divided into two land parcels (C21036 & C21037) with a total area of approximately 0.59ha.
- 0.0.3 A small number of archaeological features were found in both land parcels, with the majority in C21036. The features identified comprised possible post holes and pits dispersed across the Archaeological Recording areas. Only six features produced artefactual remains (pottery and flint), suggestive of a Bronze/Iron Age date for the activity, an early medieval/Saxon date for the activity is also possible. There is limited potential for further work.

Part A – Factual report

1 Introduction

1.1.1 This report is an assessment of the results of Archaeological Recording of two areas to the northeast of Great Missenden, C21036 and C21037. The Archaeological Recording was outlined in the Project Plan (*Project Plan for Archaeological Recording at Chiltern Tunnel North Portal 1EW03-FUS-COP_EV-PLN-CS02_CL16-000001*) which contains a detailed archaeological baseline for the Site. The following documents detail works relevant to the archaeology of the Site and are summarised within this section:

- HS2 Phase One Environmental Statement (ES 3.5.2.9.4, ES 3.5.2.9.5, ES 3.5.2.9.6, ES 3.5.2.9.7).
- Detailed Desk Based Assessment for Potter Row, Great Missenden (1D037-EDP-EV-REP-040-000034).
- Buckinghamshire Historic Environment Record (HER) data updated in 2019.
- Geophysical and LiDAR surveys (ES 3.5.2.9.7 CS006; C252-ETM-EV-REP-020-000151).
- Previous trial trench evaluation (1EW03-FUS-EV-REP-CS02_CL16-002524)
- Phase 1 Archaeological Recording (1EW03-FUS-EV-REP-CS02_CL16-002529)
- Archaeological Monitoring (Interim report ref.: 1EW03-FUS-EV-REP-CS02_CL16-002535).

1.1.2 Based on the results of the previous trial trench evaluation two Archaeological Recording areas (C21036 & C21037) measuring 0.59 hectares, were opened. The works were carried out in advance of main construction activities at the North Portal of the Chiltern tunnel leading to the main rail alignment and associated engineering earthworks. An electricity substation and infiltration basin will be built, as well as tree planting. There will also be an alteration to the public right of way. During construction, the Site will also be at risk due to land needed for temporary earthwork storage, satellite construction compounds, an access road and the formation of the rail alignment and portal. The location for the Archaeological Recording has been selected to address construction programme risk to land required for the proposed development.

1.1 Project Background and Scheme Design

- 1.1.0 The High Speed Two (HS2) railway network has been proposed by the Government to provide a new link between London, the West and East Midlands, South Yorkshire, Leeds, and Manchester. Phase One of HS2 entails the construction of a new railway approximately 230km (143 miles) in length between London and Birmingham. Powers for the construction, operation, and maintenance of Phase One are conferred by the High-Speed Rail (London - West Midlands) Act 2017.
- 1.1.1 The overall framework within which archaeological work was undertaken is set out in the Environmental Minimum Requirements (EMR), in particular the Heritage Memorandum, the Code of Construction Practice (CoCP) for HS2 Phase One and the GWSI: HERDS. Accordingly, the nominated undertaker or the Enabling Works Contractor was required to implement appropriate and reasonable measures to identify, avoid or where practicable reduce impacts to the significance of heritage assets prior to the start of construction.
- 1.1.2 Location Specific Written Scheme of Investigation for Archaeological Recording Chiltern Tunnel North Portal, Buckinghamshire (Document no: 1EW03-FUS_IFA-EV-REP-CS02_CL16-000001) was prepared for this work.
- 1.1.3 Specific GWSI: HERDS objectives appropriate to the site were identified in the Project Plan for Archaeological Investigations at North Portal (1EW03-FUS-COP_EV-PLN-CS02_CL16-000001) and are listed in section 1.5 of this report.

1.2 Site Location

- 1.2.0 The Site is located in CFA09 (Central Chiltern) in the Chiltern District of the county of Buckinghamshire, within Archaeological Character Sub-Zone (ASZ) 16 (Potter Row). The Site, located to the east of the A413, approximately 1.4km north-east of the village of Great Missenden (Fig. 1), comprises two parcels of land, encompassing a total area of c. 0.59ha:
- C21036 (NGR centre 490300 202170) measuring c. 0.42ha
 - C21037 (NGR centre 490285 202090) measuring c. 0.17ha
- 1.2.1 The two areas of the Site were located within an agricultural field, situated to the south-west of Jenkin's Wood, which is designated as Ancient Woodland. A pond surrounded by a hedgerow is situated immediately north of Area C21036. Area C21036 lies c. 37 m to the north of Area C21037.
- 1.2.2 The works were carried out under the Site Codes 1C18NPOTT for the trial trench evaluation and the Site Code 1C20CTNAR for the mitigation excavation in line with the specification as set out in the Project Plan (PP) (1EW03-FUS-COP_EV-PLN-CS02_CL16-000001). Location Specific

Written Scheme of Investigation for Archaeological Recording (LSWSI) (1EW03-FUS_IFA-EV-REP-CS02_CL16-000001).

1.3 General Aims and Specific Objectives

1.3.0 The aim of the Archaeological Recording was to identify the extent and character of any surviving archaeological remains within the site. The outcomes of the investigation will define the character, extent, quality, preservation and significance of the archaeology present in order to determine its potential to contribute to specific objectives set out in the GWSI: HERDS (HS2-HS2-EV-STR-000-000015).

1.3.1 The aims of the Archaeological Recording as defined in the project plan were:

- To confirm and record the presence and extent of any surviving archaeological remains, in particular those relating to prehistoric and/or Anglo-Saxon settlement/agricultural activity and medieval/post-medieval activity.
- To provide further understanding of the undated features across the Site and establish a date for their use.
- To understand the impact of the later phases (medieval/post-medieval) of agricultural activity on those of an earlier date
- To contribute to the delivery of GWSI: HERDS Specific Objectives as specified in Section 6.3.

1.3.2 The specific aims of each of the areas of Archaeological Recording were as follows:

- Area C21036: trial trench evaluation established the presence of a number of possible late Bronze Age–Iron Age or Anglo-Saxon and undated pits in Trenches 21 and 22. The Archaeological Recording will enable closer investigation of these pits and the potential for further associated remains within their immediate surroundings. The examination of further discrete anomalies of possible archaeological origin identified by the geophysical survey will also be afforded.
- Area C21037: the evaluation recorded a large undated pit in Trench 34, which was suggestive of a storage pit and contained evidence related to iron smithing. The Archaeological Recording will allow for the examination of the immediate area surrounding this pit in order to establish the presence/absence of potentially related features.

1.4 Specific HERDS Objectives

The Archaeological Recording consisted of targeted open area excavation, and was required to determine, as far as reasonably possible, the nature of the archaeological resource within the Site.

1.4.1 The project plan identifies the contribution the results of the archaeological investigation can make to a number of specific research objectives set out in the GWSI: HERDS. The Project Plan provides full aims and objectives, scope and methodology for the Archaeological Recording within C21036 and C21037. The site-specific objectives are summarised in table 1 below:

Table 1 Summary of site-specific objectives

Specific Objective	Proposed Contribution
<p>KC15: (KEY OBJECTIVE) Can we identify regional patterns in the form and location of Late Bronze Age and Iron Age settlements across the route, and are there associated differences in landscape organisation and enclosure?</p>	<p>During excavations at Bury Farm to the east of the Site, a posthole of late Bronze Age – early Iron Age date was recorded. Pits of potentially similar date were encountered during the preceding evaluation of the Site. The further remains suggestive of associated activity revealed during the Archaeological recording may potentially be used to contribute to the understanding of late Bronze Age - Iron Age settlement patterns across the region and along the route.</p>
<p>KC30: Identify the location and form of early and middle Saxon settlement and investigate evidence for land use in the period.</p>	<p>To the south-west of the Site, the remains of an Anglo-Saxon settlement were revealed in 2019 as part of the first phase of the HS2 North Portal mitigation. Within the site several pits of possible early – middle Anglo-Saxon date were recorded during the evaluation. Investigations might clarify the dating of these pits and more broadly the activity in this area of the landscape, which may have been associated with the nearby settlement and / or metal working. Archaeological Recording works will provide an increased opportunity for recovery of artefactual dating material (pottery), along with metal detecting and the provision for radiocarbon dating. This will be used to provide further dating evidence, such evidence uncovered has the potential to inform on more generally the nature of land-use during the Anglo-Saxon period.</p>

Specific Objective	Proposed Contribution
KC31: Identify the location of Middle to Late Saxon settlement, explore processes of settlement nucleation and understand the development of associated field types and agricultural regimes.	As above, Archaeological Recording works will provide information towards the general the nature of land-use during the Anglo-Saxon period.
KC34: Undertake research and investigation into medieval manorial complexes. What was their origin, development and impact on the landscape?	A number of medieval moated sites are known in the vicinity of the Site, the closest being Bury Farm. Investigations might uncover information about the relationship between these possible manorial sites and their effect on the surrounding landscape.
KC4o Identify patterns of change within Medieval rural settlement from the 11th to mid-14th century.	As above, the site is immediately adjacent to at least one moated site at Bury Farm. Archaeological Recording has the potential to enhance understanding of change in this landscape.

1.5 Scope and Methodology

- 1.5.0 The Archaeological Recording work was required to locate any archaeological features, structures, deposits and artefacts within the proposed working areas. The works were undertaken in accordance with a Location Specific Written Scheme of Investigation (LSWSI) (Document no. 1EW03-FUS_IFA-EV-REP-CS02_CL16-000001) and specific guidance for HS2 namely the Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035) and the GWSI: HERDS (HS2-HS2-EV-STR-000-000015) and followed the scope and methodology set out in the Project Plan (section 5).
- 1.5.1 In addition to the documents noted above, this design takes account of the guidance and specifications set out in the HS2 Phase One EMRs, CoCP, the guidance provided by the Chartered Institute for Archaeologists (CIfA) Code of Conduct (CIfA 2019), the Standard and Guidance for Archaeological Field Evaluation (CIfA 2020), and Historic England’s guidance documents on Geoarchaeology (HE 2015b), Environmental Archaeology (HE 2011) and Managing Lithic Scatters and Sites (HE 2019).
- 1.5.2 The site comprised land parcels C21036 and C21037.

- 1.5.3 Many of the features investigated during the 2018 evaluation failed to produce dateable evidence and those in the north-east may represent prehistoric or Anglo-Saxon activity. The limited evidence in the north-east of the evaluation site (Trenches 21, 22 and 34) is drawn from a small number of pits containing either late Bronze Age–Iron Age or Anglo-Saxon pottery and several undated pits that may have been related, including a large possible storage pit with evidence suggestive of nearby iron smithing. During the subsequent phase of Archaeological Recording in 2019, which focused on the possible prehistoric evaluation results in the south-west of the site, unexpectedly revealed the remains of an Anglo-Saxon settlement, including several post-built structures. Given the results of both the 2018 evaluation and 2019 Archaeological Recording, it is possible that the evaluation results targeted by Areas C21036 and C21037 may be suggestive of outlying activity related to the nearby Anglo-Saxon settlement or perhaps prehistoric activity associated with the inhumation burial also recorded in the south-west of the evaluation site.
- 1.5.4 Prior to excavation of the Archaeological Recording areas, a visual scan of the area was undertaken to retrieve any artefacts that may have been present in the topsoil as a result of agricultural ploughing, no artefacts were recovered as a result of this visual inspection. Topsoil and subsoil heaps were metal detected as well as visually inspected for finds, no artefacts were present. The Archaeological Recording areas were stripped to the archaeological horizon using a 360-degree mechanical tracked excavator equipped with a toothless ditching bucket under constant archaeological supervision in accordance with the LSWSI (1EW03-FUS_IFA-EV-REP-CS02_CL16-000001). Sides were battered and stepped in deeper areas for safety. Once archaeological remains were identified, these were hand cleaned and where appropriate, fully or partially hand excavated and recorded.
- 1.5.5 The limits of excavation, surface heights, archaeological ground levels and archaeological features of both excavation areas were surveyed using a differential GPS utilising Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS). This was in accordance with the Ordnance Survey National Grid and Ordnance Survey Newlyn Datum (ODN) as defined by the OS Active GNSS network.
- 1.5.6 Deposits identified as being of archaeological significance were sampled for environmental material and finds. These were recorded on a series of individual pro-forma context sheets and a total of 85 context numbers were allocated. Bulk environmental samples were taken from 20 contexts collected in 10 litre buckets and bags when appropriate, all bulk finds were recorded by context and sent for specialist assessment (Appendix 3; Sample Register). The environmental sampling employed during the excavation followed the sampling strategy outlined in section 9.2 of the LSWSI (1EW03-FUS_IFA-EV-REP-CS02_CL16-000001) and was based on specifications for sampling laid out in the Project Plan (sections 5.2.42 and 5.2.54), and in consultation with palaeo-environmental specialist Val Fryer.

- 1.5.7 A single change control was implemented relating to the reduction in area (due to new fencing) of land parcel C21036 (1EW03-FUS_IFA-EV-FRM-CS02_CL16-000001).

1.6 Stakeholder Consultation

- 1.6.0 In undertaking the Archaeological Recording, the Archaeological Contractor sought relevant knowledge and advice from national and local stakeholders and expert bodies through the mechanisms defined in the GWSI: HERDS.
- 1.6.1 Regular on-site meetings were held with the Fusion HERDS Manager Sectors C1 and C23, Iain Williamson.

1.7 Geology and Topography

- 1.7.0 The British Geological Survey (BGS2020) indicates that the underlying solid geology within the Site comprises Lewes Nodular Chalk Formation and Seaford Chalk Formation (chalk), a sedimentary bedrock formed approximately 84 to 94 million years ago in the Cretaceous period. The superficial deposits are recorded as Clay-with-Flints Formation (clay, silt, sand and gravel), formed up to 23 million years ago in the Quaternary and Neogene Periods
- 1.7.1 The parent geology gives rise to freely draining, slightly acid but base-rich soils (Cranfield Online 2021).
- 1.7.2 The two areas of the Site are located at c. 192 mAOD, on a relatively flat plateau overlooking the valley of the River Misbourne, which flows c. 930 m to the south-west. The land to the south-west of the Site slopes down steeply towards the river valley.
- 1.7.3 The Site appears to have remained rural in nature throughout the post-medieval period. The results of the geophysical and remote sensing surveys of the wider development site indicate the remains of ridge and furrow are present to the north, east and south-east of the Site, and it is likely that other areas were also subjected to medieval and post-medieval ploughing. The Site was at the time of excavation, within an agricultural field and it is possible that areas of pasture were ploughed in the 20th century. This agricultural activity may have damaged buried archaeological features.

1.8 Archaeological background

- 1.8.0 No designated heritage assets are recorded within the Site. The designated heritage assets closest to the Site comprise several Grade II listed buildings on the site of Bury Farm (CC070) located c. 250 m to the east, including a farmhouse (List No. 1159256), two barns (List Nos 1124801, 1159262) and a granary (List No. 1124802). Ancient Woodland of Jenkin's Wood (CC073), which is to the north-east site boundary of Area C21036, and other areas of designated Ancient Woodland are located within the vicinity of the Site: Hickman's Coppice to the north-

east, Sibley's Coppice to the south-east (CCo50), Stockings Wood to the south-west (CCo62) and Havenfield Wood to the north-west (CCo81).

- 1.8.1 An Archaeological Notification Area (ANA) Potter Row Historic Core (CCo77), as defined by Buckinghamshire County Council, extends into Area C21036. Within this area, there is potential for remains of medieval settlement, farming and industry, notably pottery production based on the recovery of scattered finds of mixed medieval pottery. Recognised ANAs within the wider Potter Row ANA include the medieval moat at Bury Farm (CCo66), medieval enclosures in Jenkin's Wood (CCo73) and north-west of Hillcroft (CCo74), and medieval pottery recovered at Springfield Farm (CCo76). Other ANAs in the vicinity include the scheduled medieval homestead moat and enclosures at Redding Wick 1.2km to the east of the Site (CCo65; List No. 1014605; not illustrated) and the scheduled moated site in Chalkdell Wood (CCo54), c. 770 m to the south (CCo54; List No. 1014600; not illustrated).
- 1.8.2 The Site is located in the south-east of ASZ16 (Potter Row), which is situated on the valley shoulder on undulating ground that gently slopes down towards the valley. This area has been identified as an area of potential medieval settlement, agriculture and pottery production, evidenced by the remains of ridge and furrow, and scattered finds of medieval pottery, including mis-fired sherds. It has also been recognised that there is the potential for later prehistoric, particularly Iron Age, remains in ASZ16, as the Iron Age Grim's Ditch Scheduled Monument (List No. 1021198) lies at the northern edge of the area (though it falls within AZCo2).

Previous Investigations

Remote Sensing Survey 2013

- 1.8.4 The Site was included in a remote sensing survey (interpretation of aerial photographs, hyperspectral imagery and LiDAR imagery) undertaken for the wider area as part of the ES. No features were recorded at the Site, but in the surrounding area this work revealed features originating in the medieval and post-medieval periods, mostly relating to agriculture (ridge and furrow cultivation and former field boundaries), as well as settlement features in the form of earthworks of probable medieval origin at Bury Farm (CCo66).

Geophysical Survey 2014

- 1.8.5 A geophysical survey undertaken across the north-eastern part of the wider development site (CS006; C252-ETM-EV-REP-020-000151_P03; Fig. 4a) in 2014 identified a number of geophysical anomalies, some of which were interpreted to be of possible archaeological origin. These included a large number of discrete positive anomalies suggestive of archaeological cut features and/or natural pitting in the chalk bedrock and a small area of dipolar responses on a linear alignment suggestive of a possible trackway. The survey did not identify any features of probable archaeological origin. Other identified anomalies were interpreted to be of natural

and modern origin, with modern anomalies related to on-site pylons, overhead cables, fencing and debris.

Trial Trench Evaluation 2018

- 1.8.6 A trial trench evaluation was undertaken in 2018 across the wider North Portal site (C10022) (1EW03-FUS-EV-REP-CS02_CL16-002524), comprising the excavation of 159 trenches targeted upon the results of the preceding geophysical survey. Archaeological remains were encountered across the site, with slight concentrations in the north-east and south-west. Features comprised several substantial ditches and large pits, as well as a moderate number of smaller ditches and pits along with some possible post-holes and a single inhumation burial. There was limited correlation between the geophysical survey and evaluation results. The majority of these features did not produce any dating evidence; however, the results of the evaluation provided evidence of at least four phases of land use activity dating between the Prehistoric and Post-medieval periods.
- 1.8.7 The evaluation results are suggestive of Prehistoric land use c. 550m to the south-west of the Site, with the remains of a potentially defensive enclosure recorded across Trenches 115 and 118, and storage pits recorded in Trenches 115 and 125 and a inhumation burial in Trench 117 suggestive of associated funerary activity within the confines of the enclosure. The burial was initially thought to be prehistoric but has since been radiocarbon dated to the middle Anglo-Saxon period (1EW03-FUS-EV-REP-CS02_CL16-002529). Several undated ditches were also encountered in Trenches 133 and 134. These remains were targeted by the 2019 phase of Archaeological Recording.
- 1.8.8 Evidence of possible late Bronze Age–early Iron Age or Anglo-Saxon activity in the form of several, potentially associated, dated and undated pits in Trenches 21, 22 and 34 in the north-east of the evaluation site were revealed; these remains were investigated in Areas C21036 and C21037 which form the subject of this report. Two pits were recorded in Trench 21: in the east of the trench was an irregular, pit-like feature [02103] measuring 0.46 m long by 0.25 m wide and 0.17 m deep from which pottery of potentially late Bronze Age–early Iron Age or Anglo-Saxon date was recovered, as well as an undiagnostic flint flake and a single charred seed, and to the west was a large 1 m deep pit [02105], which was devoid of finds. Approximately 25 m to the south-west of Trench 21, Trench 22 revealed a single, large pit [02204] measuring 0.94 m in diameter and 0.85 m deep. It contained several small, abraded sherds of pottery that may date to the late Prehistoric period or possibly the early–middle Anglo-Saxon period. In Trench 34, c. 75 m to the south of Trench 22, another large pit [03403] was recorded. It was 2.45 m in diameter and 1.12 m deep with steep straight sides and an uneven base and may have originally been used for storage. Although no finds were hand collected from its fills, a small quantity of slag suggestive of nearby iron smithing was recovered from a bulk soil sample collected from its lowest fill. Except for an undated pit recorded in Trench 30 and another in Trench 46, no archaeological remains were encountered within nearby trenches.

- 1.8.9 Evidence of later land use relating to medieval and Post-medieval agriculture was also scattered across the evaluation site, including the remains of medieval pits and medieval/post-medieval ridge and furrow, which was largely concentrated in trenches to the south-east of the Site, as well as the recovery of residual finds in topsoil and subsoil deposits.
- 1.8.10 A small assemblage of pottery recovered during the trial trench evaluation comprising sherds of middle Bronze Age, late Bronze Age–Iron Age and/or Anglo-Saxon date, as well as sherds dating to the medieval and post-medieval periods. Small quantities of broadly Prehistoric worked flint, animal bone, ceramic building material, clay pipe, metalwork, slag and glass were also recovered, together with a small amount of charred plant remains. Although limited, the material evidence is suggestive of settlement and agricultural occupation activity onsite.

Archaeological Recording 2019

- 1.8.11 Given the results of the 2018 trial trench evaluation, a phase of Archaeological Recording was undertaken in 2019 approximately 600 m to the south-west of Area C21037, targeted upon possible prehistoric remains, including a large enclosure ditch and inhumation burial, and several undated features revealed in the evaluation (Interim Report: 1EW03-FUS-EV-REP-CS02_CL16-002532); post-excavation assessment for this work has now been completed (1EW03-FUS-EV-REP-CS02_CL16-002529). The investigation uncovered the remains of several large quarry pits, large pits, post-holes and ditches. Prehistoric dated features were limited to two pits located toward the south-east, with evidence of possible tree clearance associated with this date or slightly later into the Roman period. The dating of the quarrying activity is largely uncertain, though some evidence of potentially Roman quarrying was encountered in the south and west. The Archaeological Recording unexpectedly revealed the remains of five post-built structures of probable Anglo-Saxon date, including a square structure interpreted as a possible granary and an Anglo-Saxon style longhouse with post-holes and beam slots, a style of building that typically dates between the 4th and 7th centuries AD. Small assemblages of probable Anglo-Saxon pottery and fired clay (including daub) were recovered from these structures. These structural remains provide evidence of an Anglo-Saxon settlement, which is rare within the wider landscape. Furthermore, as part of the post-excavation assessment for the Site, Radiocarbon dating was undertaken on the single inhumation burial discovered during the 2018 evaluation and has determined it to be middle Anglo-Saxon in date (648 – 718 cal AD - 78.4% probability). Evidence of later activity on site was in the form of the remains of a post-medieval field system, with lynchets terracing the slope in the centre-east of the site.
- 1.8.12 The identification of the Anglo-Saxon settlement remains is the key driver behind the investigation of the possible later Prehistoric or Anglo-Saxon features revealed in the north-east of the evaluation site in Trenches 21, 22 and 34, targeted by Areas C21036 and C21037.

Archaeological Monitoring 2019-2020

1.8.13 Following on from the evaluation, a phase of archaeological monitoring was undertaken from November 2019 to January 2020 during works associated with the construction of a compound, haulage road and pylon bases for the overhead power cable realignment works. This site (C10054) was situated immediately south of C21037 and to the west of C21036. No archaeological features were observed. An assemblage of two finds was recovered from the topsoil: a small piece of post-medieval roof tile and a small sherd of abraded Bronze Age pottery.

Prehistoric

1.8.14 Limited evidence of early prehistoric activity is noted in the vicinity of the Site. A flint flake of probable Mesolithic date was recovered during the 2018 evaluation, though it was found to be residual within the subsoil.

1.8.15 Neolithic or Bronze Age flints were found during fieldwalking surveys on land at Springfield Farm, located c. 400 m to the north of the Site (CC076), and on land to the north and south of Cudsden's Farm, located c. 0.42-1.3 km to the south-east of the Site (CC034, CC035, CC064). An assemblage of Neolithic or Bronze Age worked flint was also recovered during the 2018 evaluation of the Site, though the material was largely residual within overburden deposits.

1.8.16 A section of Grim's Ditch, a Scheduled Iron Age (or possibly earlier) earthwork (DWH008; List No. 1021198), lies c. 1.7km to the north-west of the Site, within the Dunsmore, Wendover and Halton area (CFA10/AZCo2), indicating the location of an important Iron Age land boundary. Evidence of Iron Age settlement within the wider landscape, however, is limited. An Iron Age coin was discovered by metal detector north-west of Cudsden's Farm (CC064). During excavations at Bury Farm, c.220 m to the east of the Site, a post-hole was discovered containing late Bronze Age-early Iron Age pottery (CC066). Evidence of possible prehistoric activity was also encountered during the preceding evaluation, comprising a possible enclosure ditch, with associated storage pits and an inhumation burial of tentative later prehistoric date. Several pits of possible late Bronze Age-early Iron Age date and possibly associated undated pits were also recorded in Trenches 21, 22 and 34 though an Anglo-Saxon date for these features is also possible.

Roman

1.8.17 No Roman finds or features are recorded in the immediate vicinity of the Site in the ES or on the HER; however, limited evidence of possibly Roman iron smithing has been recovered c. 750 m to the south-east of the Site (ES 3.5.2.9.4; Head 1964) and up to six Roman finds have been recorded by the Portable Antiquities Scheme (PAS) to the north-west and south-east of the Site, including four coins (PAS: BUC-5F2396; SUR-DCBo5E; SUR-DCBF37; BUC-B23FF6), pottery (PAS: BUC-9DCFB5) and a possible Roman spindle whorl (PAS: SUR-DCCC05). Small

quantities of Roman pottery and further Roman coins have also been recovered during fieldwalking surveys c. 1.3km to the south-east of the Site (CCo34, CCo35; not illustrated). Possible evidence for Roman activity was encountered during the preceding evaluation and Archaeological Recording of the wider site, including a Roman pit recorded in Trench 49 c. 100 m to the south of Area C21037 and possible quarry pits c. 625 m to the south-west, as well as residual Roman pottery in overburden deposits.

Early Medieval

- 1.8.18 No heritage assets of early medieval date were identified in the 2013 ES, though it is possible that the medieval settlements at Little and Great Missenden and at Potter Row had early medieval origins. The 2018 evaluation of the wider site, however, revealed evidence of possible Anglo-Saxon activity in the north-east in Trenches 21, 22 and 34, which fall within Areas C21036 and C21037. These remains comprised several pits from which a small quantity of possible early to middle Anglo-Saxon pottery was recovered, but a later prehistoric date for this material cannot be ruled out.
- 1.8.19 Following the evaluation of the Site, Archaeological Recording in 2019 targeted prehistoric features in the south-west and unexpectedly revealed the remains of an Anglo-Saxon settlement, c. 650 m to the south-west of Area C21037. Five post-built structures were identified, including a four-post structure interpreted as a possible granary and a rectangular building consisting of post-holes and beam slots in the style of a longhouse that was common between the 4th and 7th centuries.

Medieval

- 1.8.20 The landscape during this period was probably at least partially wooded. By the Norman Conquest (AD 1066), the present settlement pattern focused on the villages of Little and Great Missenden had probably been established, though it is possible they had early medieval origins. Both were recorded as part of the 1086 Domesday survey, situated in the hundred of Stone and the county of Buckinghamshire (Open Domesday). Domesday Book also reflects the concentration of woodland in the Chilterns as a whole, with ploughed land prevalent in the north, suggesting that there may have been a focus of settlement and agricultural activity in this part of the landscape, including Great Missenden in particular. The extensive surviving distribution of Ancient Woodlands around the site is something of a reflection of the probable quite heavily wooded landscape of the medieval period.
- 1.8.21 The Site is in a landscape within which a large number of medieval moated sites and enclosures have been identified. During excavations at Bury Farm (CCo66), evidence of a medieval field system, a ditch, undated post-holes and a wall were recorded and an assemblage of mis-fired 11th-to 14th-century pottery was recovered from within the rectangular moat, suggestive of a nearby kiln site. Field survey at the farm also recorded a moat, which is depicted on the 1843

tithe map, and the remains of medieval boundary ditches associated with field systems and a possible medieval fishpond (CCo66).

- 1.8.22 Scheduled moats are also located in Chalkdell Woods, c. 770 m to the south of the Site (CCo54; List No. 1014600; not illustrated), and at Redding Wick, 1.2 km to the east (CCo65; List No. 1014605; not illustrated); two further Scheduled moats are further afield (List Nos 1016702, 1009539; not illustrated). Possible medieval enclosures are also known c. 325 m to the north-east of the Site (CCo74) and within Jenkins Wood (CCo73). 3.2.26 In the vicinity of the Site, remains of the medieval agricultural landscape are visible on aerial photographs and from the LiDAR survey. Evidence of ridge and furrow is recorded to the north, east and south-east of the Site (CCo32) and possible former field boundary banks have been recognised from the remote sensing survey. This agricultural activity was probably related to medieval settlement at Great Missenden and/or the moated sites mentioned above. It is likely that further finds or features relating to medieval agricultural practices will be discovered and might provide information regarding the relationship between the moated sites and other areas of medieval settlement and agricultural activity in the wider landscape.
- 1.8.23 Approximately 650 m to the south-west of the site, Archaeological Recording in 2019 identified the remains of an Anglo-Saxon settlement, possibly dating to the early–middle Anglo-Saxon period; however, no clear evidence of continued land use into the medieval period was identified. It is probable that, once the settlement fell out of use, only low-level activity occurred in this area of the landscape, perhaps of an agricultural nature.
- 1.8.24 Potter Row, the road to the north-east of the Site, appears to have been named after an area of medieval pottery production. Two probable kiln locations have been identified and scattered finds of pottery dating between the 13th and 15th centuries, including mis-fired examples, have been recorded (CCo76-7). The area producing these finds forms part of a wider expanse stretching from Frith Hill to the south, to Leather Lane to the north. The eastern half of Area C21036 falls within the wider Potter Row ANA (CCo77).
- 1.8.25 One of the major landholders of the area during the medieval period was Missenden Abbey, which was founded at Great Missenden in 1133, c. 1.2 km to the south-west of the Site (CCo51; not illustrated). Fragments of medieval building fabrics are still visible within the extant buildings and others are known from archaeological excavation. After its dissolution in 1536, it was converted into a private house, now a Grade II listed building (List No. 1124783; not illustrated); the landscape park now associated with the abbey was laid out in the late 18th/early 19th century and is a Grade II registered park and garden (List No. 1000605; not illustrated).

Post-Medieval and Later

- 1.8.26 Pottery production appears to have continued into the early post-medieval period to the north-east of the Site and the location of a possible kiln site, suggested by the recovery of mis-fired

pottery sherds dating to the 16th-17th century, is known within the Potter Row ANA (CC077; HER EBC15975; Michael Farley Archaeology 2000).

- 1.8.27 During the post-medieval period, the medieval agricultural organisation based on open fields with its ridge and furrow strips divided by headlands was replaced by enclosed fields both for arable production and to provide enclosed pasture. A number of hedgerows of potential historic interest are recorded in the vicinity of the Site. Although predominantly post-medieval in date, it is possible some have medieval origins (CC068-9, CC071-2). These are found to the immediate north-east of the Site.
- 1.8.28 Four 18th-century Grade II listed farm buildings (CC070; List Nos 1159256, 1124801, 1159262, 1124802) are located within the medieval moat at Bury Farm. A 17th-century, Grade II listed farmhouse (CC049; List No. 1311111) is also located on Kings Lane c. 880 m to the south-east. A number of later post-medieval buildings of historic interest are located along Frith Hill to the south-east of the Site and along Potter Row to the north and north-east (CC033, CC056, CC060-1, CC075, CC078-9, CC0102-6, CC110-11, CC114).
- 1.8.29 Abandoned chalk pits are shown on the 1878 and subsequent Ordnance Survey (OS) maps of the wider landscape, including within Stockings Wood (CC062) to the south-west of the Site and Havenfield Wood to the north-west (CC081). Given the growth of the wooded areas since their abandonment, they appear to have been of some antiquity in 1878 and it is possible that the pits relate to medieval and early post-medieval clay extraction for the nearby pottery industry.
- 1.8.30 Historic maps show that the Site has changed little in the last 140 years. Field boundaries and patches of woodland have remained consistent since at least 1878. The pond located c. 15 m to the north of the Site is recent, not shown on the 1993 map.

2 Stratigraphic Report

2.0 Results of Archaeological Recording

- 2.0.0 The Chronology presented below is based on the specialist assessment of the finds assemblage (see section 6). However, the pottery assemblage which provided the primary dating evidence could reasonably have derived from both the late Prehistoric and/or Saxon periods. Taking a holistic approach to the finds evidence, it has been determined that the chronology that follows is the most likely.
- 2.0.1 The excavation was spread over two distinct land parcels (c21036 and c21037) with the results being presented separately for each area. The archaeological features were dispersed in loose clusters across the Recording Areas and had single fills unless stated otherwise. All

measurements should be considered the maximum unless stated otherwise. A summary of the findings from both land parcels is in table 2, below.

Table 2 Summary of archaeological results by area

Site/Area	Feature Type	Number	Spot date/s
C21036	Pits	1	Undated
	Postholes	8	Iron Age
	Natural features	23	Undated
C21037	Pits	1	Iron Age
	Deposit	1	Undated
	Natural features	6	Undated

2.1 Site sequence and chronology

2.1.0 Within land parcel C21036, the topsoil was 0.28-0.30m thick and it directly overlaid the orange-brown silty clay natural. Within land parcel C21037, the topsoil was 0.30m thick and directly overlaid the orange-brown silty clay natural.

2.1.1 The Archaeological Recording revealed a small quantity of postholes and pits that from the sparse dating evidence appear to be Iron Age in date. Aside from undated features, no other periods of occupation were identified. The features were cut into the geological substrate and sealed below the topsoil horizon. There were no upstanding remains preserved on the site, and all the features have been truncated by modern agricultural practices.

2.2 Archaeological Results Land Parcel c21036 (Figure 5)

Iron Age

2.2.0 In total eight possible postholes were recorded, four of which contained Iron Age pottery. As no other dating evidence was found, all the post holes are included within this phase and will be described in order from west to east.

2.2.1 In the western part of the Area was possible post hole [30046]. This was sub-circular measuring 0.4 m in average diameter and was 0.12 m deep. Iron Age pottery was present within the fill. This feature was isolated, the closest other features were located 7.5 m to the northeast and were non-archaeological.

2.2.2 Within the central part of the Archaeological Recording area was possible post hole [30030]. This was circular, measuring 0.2 m in diameter, 0.2 m deep and contained no finds. This feature formed part of a cluster with three other features that prior to excavation were provisionally thought to be post holes. Upon excavation however, they appeared to be of non-anthropogenic origin and had sterile fills.

- 2.2.3 Close to the eastern edge of the Archaeological Recording area were six possible post holes. These were part of a cluster of otherwise natural features. Two of the post holes [30048] and [30051] were distinct from the others as they had two fills (Plates 1 and 2). Post hole [30048] was circular, measured 0.5 m in diameter and was 0.37 m deep. Post hole [30051] was sub-oval, measuring 0.79 m in length, 0.3 m in width and was 0.3 m deep. Iron Age pottery and worked flint was recovered from the upper fills of both features.
- 2.2.4 The remaining four postholes, [30060], [30062], [30066] and [30074], each contained a single fill with occasional flecks of charcoal. One sherd of Iron Age pottery was recovered from [30066] along with burnt flint that was recovered from the environmental sample but no artefacts were present in the other postholes. They ranged in size between 0.2 m to 0.49 m diameter and 0.09 m to 0.25 m in depth.

Undated

- 2.2.5 Possible pit [30054] (Plate 3) was located within the northeast part of the Archaeological Recording Area and measured 1.1 m by 0.8 m and was 0.16 m deep. It contained a single fill with occasional charcoal inclusions but no finds.

Natural Features

- 2.2.6 The remaining 23 features were all deemed to have been of non-archaeological origin. These comprised eight irregular tree throws or root hollows: [30040=30056], [30058], [30064], [30068], [30070], [30072], [30080], a natural geological depression [30044] and 14 small discrete features resulting from variation in the natural geology or as irregularly shaped deposits within stone sockets caused by ploughing [30018], [30020], [30022], [30024], [30028], [30032], [30034], [30036], [30038], [30042], [30076], [30078], [30082], [30084]. The fill of feature [30022] was charcoal rich and contained residual Iron Age pottery. The fills of [30020], [30022], [30024] and [30068] contained burnt flint, while the remaining features all had sterile fills.

2.3 Archaeological Results Land Parcel c21037 (Figure 6)

Iron Age

- 2.3.0 A single sub-oval pit [30016] was located towards the western edge of the Archaeological Recording area. The pit measured 2.46 m by 1.9 m and was 0.52 m deep. It contained three fills: a basal fill (30027), overlain by (30026), in turn overlain by the uppermost fill (30017). A small amount of pottery sherds of coarse black fabric, of Iron Age date and a few worked flints were recovered from the upper fill (30017).

Undated

- 2.3.1 On the southwest side of the excavation was charcoal rich deposit, (30003) that measured 1.23 m by 0.9 m and 0.01 m thick. Burnt flint was recovered during sample processing. No *in situ* burning was evident within the underlying natural geology (Plate 4).

Natural Features

- 2.3.2 A total of six other deposits investigated as potential archaeological features were recorded. Two proved to be irregular tree throws or root hollows [30004] and [30014]. The remaining four were small discrete, circular features and in plan prior to excavation were provisionally thought to be post holes [30006], [30008], [30010], [30012]. The sterile character of their fills and lack of obvious association suggests these are more likely to be localised variations in the geology or originated as stone sockets caused by ploughing.

2.4 Discussion

- 2.4.0 Of the 40 features investigated, 29 (approximately 75%) were deemed to be non-archaeological in origin, with most features characterised as variations within the geology or as deposits infilling stone sockets caused by disturbance from ploughing. The archaeological features uncovered were predominantly small discrete probable postholes (eight) with only two possible pits and a charcoal rich deposit of unknown date. The postholes do not seem to form a coherent structure or structures. As such there is no indication as to the purpose of the postholes or pits due to the limited evidence recovered.

- 2.4.1 Overall, the findings give a similar impression to the preceding Evaluation which also recorded limited activity which was thought to be loosely associated with Iron Age dating evidence. However, the key driver behind this investigation was the identification of Anglo-Saxon settlement remains during Archaeological Recording which targeted the south part of the 2018 Evaluation Site, and whilst the dating of the features in the current investigation is provisionally to the Iron Age, due to similarities in fabric type it is possible that the pottery evidence could prove to be of later date, potentially of early Medieval/Saxon date.

2.5 Consideration of Results in their Wider Context

- 2.5.0 Looking at the wider context of the results adds little to our understanding of Iron Age or early Medieval activity in the immediate area beyond noting its existence. There is little evidence for other sites of these dates within the immediate area although there is evidence for substantial Iron Age activity within the local region for example at Wellwick Farm located approximately 6.5 km to the northwest. It is probable that the limited evidence uncovered by the Archaeological Recording is indicative of short-term use/occupation of the site although it is not possible to determine what activity or activities were undertaken during the use of the Site. The results do however imply that Iron Age activity in the region was widespread and somewhat dispersed.

3 Finds Report

3.0 Prehistoric pottery

Dr Rob Young

Introduction and quantification

3.0.1 In total, 72 pieces of pottery, weighing some 194g were submitted for analysis. This figure can be broken down by context as shown in table 3 below. A full catalogue is provided in appendix 10.

Table 3 Prehistoric pottery by context

CONTEXT	Cut No.	No.	% Total Assemblage
30017	30016	30	41.66
30047	30046	1	1.38
30048	30049	6	8.33
30053	30051	8	11.11
30067	30066	1	1.38
30023 Sample 257	30022	18	25
30049 Sample 264	30048	4	5.55
30053 Sample 265	30051	4	5.55
TOTAL		72	99.96 (100)

3.0.2 The material consists mainly of featureless body sherds, but two rim and two base forms have been identified. All of the material appears to be hand-built and given the nature of the assemblage, it has proved difficult, beyond the generalised observations set out in the catalogue, to identify the range and number of vessels present. In terms of broad dating, the material would appear to be of Iron Age or Anglo-Saxon character. These observations are amplified in the discussion below.

Fabric

3.0.1 In total 11 fabric types have been identified and these are described in table 4 below.

Table 4 Prehistoric pottery fabric types

FABRIC NO.	DESCRIPTION	CAT. NOS.
1	Hard fired, totally reduced black/dark brown interior and exterior surfaces and core. Fine sandy matrix with small, angular, ill-sorted, crushed, burnt flint fragments	1, 4.
2	Oxidised orange/brown inner and outer surfaces and darker, reduced core. Sandy clay matrix, medium, angular, ill-sorted, burnt flint fragments and some milky quartz particles.	2, 14, 24
3	Orange, oxidised outer surface, black, reduced core and inner surface. Very fine quartz sandy fabric matrix.	3, 27
4	Oxidised, orange exterior surface, reduced brown/black interior and core. Fine sandy clay matrix with very rare burnt flint fragments and some organic inclusions visible as burnt-out voids in the fabric surface.	5,19

5	Reduced external and internal surfaces and core. Fine sandy matrix, organic inclusions visible as burnt-out voids in the fabric.	6,12
6	Highly oxidised inner and outer surfaces and core. Fine sandy matrix with rare red, rounded hard grits iron stone/manganese.	7
7	Grey/black, reduced inner and outer surfaces and core. Fine sandy matrix with very rare flint inclusions.	8, 10, 18
8	Oxidised external surface reduced inner surface and core. Very fine sandy matrix and very rare quartz particles and oxidised grog pellets.	9, 20
9	Totally reduced, black, fine quartz sandy clay matrix	11, 13, 16, 21, 22, 23, 25, 26.
10	Oxidised external surface reduced inner surface and core. Well sorted crushed flint fragments and rare oxidised grog pellets.	15
11	Oxidised external surface reduced inner surface and core. Fine sandy matrix with organic inclusions visible as burnt-out voids.	17

3.0.2 It is suggested that all of these fabrics are most likely of local origin.

Abrasion and Fragmentation

3.0.3 As the catalogue of finds indicates, the North Portal pottery assemblage exhibits medium to heavy abrasion. This would suggest that the material had been moving around in the soil for some time before its incorporation into the excavated features. The overall small size range of the fragments also indicates that the material had probably been in circulation for quite a while before its final deposition.

General Discussion

3.0.1 The majority of this assemblage is made up of largely amorphous body sherds. The exception is the vessel noted in Cat. No. 1. This appears to be a small straight sided jar. The rim is rounded and slightly in-turned and the rim sherds exhibit vertical, parallel, ridging or 'cabling', probably caused by the potter drawing his/her fingers vertically down the body of the vessel. This seems to mimic the upright stakes on a woven basket and Evans (1984, 155) has suggested that this is a Later Bronze Age/Iron Age decorative technique. It was found on 7 vessels from excavations at Wellwick Farm (Vessels 18-24) (Young 2020, unpublished). These vessels may also be of Later Bronze Age/Iron Age date.

3.0.2 One further, small, rim fragment (Cat. No. 16) was also recorded. This is a flat -topped rim fragment from what appears to be a thin-walled vessel. Again, it may be of Iron Age date. While it is difficult to place such amorphous pieces of pottery into chronological contexts on the basis of fabric alone, it might be suggested that the sherds in fabrics 1,2,4 and 10 could also be of Later Bronze Age/Iron Age date.

3.0.3 The fine gritted, sandy fabrics and the fabrics exhibiting organic inclusions are much more difficult to categorise. Similar fabrics are known from excavations at George Street in Aylesbury.

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(Allen and Dalwood, 1981, 14) where it was suggested that the fine sandy fabrics were probably of Iron Age date, but that fabrics containing organic inclusions could be either Iron Age or Saxon. Such was the difficulty in assigning these vessels to a chronological context, the excavators termed them as 'Iron Age/Saxon pottery' (Allen and Dalwood, 1981, 15).

- 3.0.4 Excavations by the Wessex Archaeology at Berry Hill Farm, Taplow, Buckinghamshire in 2019 recovered some 486 sherds of Saxon pottery. Fabrics were approximately equally divided between organic-tempered and sandy wares, with two sherds of mixed temper (sandy with organic inclusions), although the divisions between these groups are not clear-cut and they are more likely to represent a spectrum of variation between the two types' (Wessex Arch. Trust, 2019, 35)
- 3.0.5 The excavation team believed that both the sandy and organic-tempered fabrics were typical of Early/Middle Saxon ceramic traditions across much of southern England. They provide possible parallels from sites like Castleview Road, Slough (Brook with Seager Smith, 2019), Taplow (Blinkhorn, 2009), Dorney (Blinkhorn, 2002), Wraysbury, in Berkshire (Astill and Lobb, 1989), the London Borough of Harlington (Mepham, 2015) and Staines and Molesey, Surrey (Jones, 1982; Laidlaw and Mepham, 1996). (Wessex Arch. Trust, 2019, 35). It was assumed that the pottery from all these sites was of local production.
- 3.0.6 Further work by Wessex Archaeology at Eaton Leys (near Milton Keynes), also carried out in 2019, produced a total of 772 sherds of probable Saxon date. All fabrics were sandy and with quartz inclusions and some also contained sparse amounts of organic temper. (Wessex Arch., Trust, 2019a, 27).
- 3.0.7 In conclusion it seems that the small number of largely undiagnostic pottery sherds recovered at North Portal probably spans the Later Bronze Age/Iron Age and Saxon periods in terms of broad dating. Given the nature of the finds it is impossible to give definitive dating for the majority of the material.

3.1 Ceramic Building Material (CBM)

Dr Rob Young

- 3.1.1 Four fragments of CBM were submitted for analysis, a catalogue is provided in appendix 7. All are from Context 30001 – Topsoil. All 4 examples are flat and tile-like and they are all of the same overall thickness -13-14mm. They could be modern, but this is unlikely, and they are mostly like fragments from Tegulae (roof tiles) of possible Roman date. If there is Saxon activity in the general area, then the tiles may have been robbed from a nearby Roman settlement for re-use. The purpose of the perforation visible on Cat. No. 4 is uncertain. Fired clay cheese presses, again known from the Roman period onwards, do exhibit similar perforations, alternatively this could be part of a loom weight. All of the fabric types are probably of local production.

3.2 Flint

Dr Rob Young

Introduction and quantification

3.2.0 In total 83 pieces of flint material were submitted for analysis. 5 pieces were recovered directly during the excavation of the site while 78 pieces were recovered from sieved soil samples. This number can be broken down by context as shown in table 5 below. A full catalogue can be found in appendix 8.

Table 5 Flint by context

CONTEXT	From Excavation	From Soil Samples	TOTAL BY CONTEXT	% Total Assemblage
30001	2		2	2.40
30003		9	9	10.80
30011		12	12	14.40
30017	1	2	3	3.61
30020		4	4	4.81
30023		26	26	31.32
30025		1	1	1.20
30049	1	19	20	24.09
30053	1	1	2	2.40
30067		2	2	2.40
30069		2	2	2.40
TOTAL	5	78	83	99.83 (100)

Raw Material

3.2.0 Exploited raw material can be broken down by type as shown in table 6.

Table 6 Exploited raw material

Raw Material Type	Total	%Total Assemblage
Grey Mottled Flint	7	8.4
Grey Semi-Translucent Flint	1	1.20
Red/Brown Semi-Translucent Flint	1	1.20
Burnt Flint	74	89
TOTAL	83	99.8 (100)

3.2.1 Almost all of the material has fresh/sharp edges. 5 pieces (just over 6% of the total assemblage) retain pebble/nodular cortex to a greater or lesser degree. Four retain hard, fawn, rolled pebble cortex and one exhibits grey/brown, hard, rolled pebble cortex.

Typology

3.2.0 Recovered material can be categorised as shown in table 7 below.

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Table 7 Flint typology

Artefact Type	TOTAL	% Total Assemblage
Primary Flakes (Complete)	1	1.20
Secondary Flakes (Complete)	2	2.40
Inner Flakes (Complete)	3	3.60
Inner Flakes (Broken)	4	4.81
Secondary Bladelets (Complete)	1	1.20
Secondary Blade-Like Flakes (Complete)	1	1.20
Inner Blade-Like Flakes (Complete)	1	1.20
Chips	68	81.90
Chunks	1	1.20
Natural Flakes	1	1.20
TOTAL	83	99.91 (100)

Technology

3.2.0 Seven pieces retain features relating to knapping technology. These are summarised in table 8 below.

Table 8 Flint technology

BUTT TYPE	TOTAL
Plain	7
BULB OF PERCUSSION TYPE	
Pronounced	4
Diffuse	3
PRESENCE OF DISTAL END HINGE FRACTURE	2

3.2.1 The limited information suggests that both hard and soft hammer percussive techniques were used in the removal of material from cores. No features relating to retouching or utilisation were visible on any of the recorded pieces.

General Discussion

3.2.0 In terms of the broad dating of this group of material it is difficult to come to any definitive conclusions. There are no chronologically diagnostic artefacts in the overall assemblage, though the three pieces from Context 30017 (pit fill) could well be of Later Bronze Age/Iron Age date given their association with a straight sided, jar-like ceramic vessel whose fabric suggests this date.

3.2.1 Some of the finds could be residual material from earlier activity on the site, but the large number of small chips and burnt pieces from various shallow pits and post holes (see catalogue) might indicate that the material was derived from activity that was contemporary with the post holes and other cut features. The large number of chips does suggest that they are debris from

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knapping and the presence of much small, burnt material from the soil samples might indicated that the material had been swept up and deposited in the various archaeological features.

3.2.2 While it is not possible to provide a definitive discussion of overall chronology and parallels for this material (it would not be out of place on any prehistoric settlement site) the possibility must be entertained that some of the pieces from might well be of later prehistoric origin, and possibly later Bronze Age/Iron Age. The continued use of flint in the later Bronze Age/Iron Age periods has been the subject of some discussion in the literature (See Clark and Fell, 1953; Robins, 1996; Humphrey, 1996; Young and Humphrey, 1999; Humphrey and Young, 1999; Humphrey and Young, 2003). A similar phenomenon was observed in the flint assemblage from Wellwick (Young, unpublished 2020).

3.3 Animal bone

Rose Calis BA MSc

3.3.0 A total of 5 bone fragments from two samples and two contexts were recovered from the Archaeological Recording.

3.3.1 Due to the small size of the assemblage, material from samples were added to the assessment. Samples were floated and passed through 2mm and 300micron sieves, and dry sieved through 2mm and 4mm sieves. Each context was assessed separately and added to a maintable as seen in table 9. Countable, measurable and ageable bones and teeth were recorded following the Historic England guidelines of best practices (2019) and the Cardiff University recording system. Butchery, pathology, gnawing, and general comments were also noted. Preservation was recorded as Good (G), Medium (M), Poor (P) or mixed (MX).

Table 9 Faunal remains

Context	Sample	Species	Counted	Not counted	Burning	Weight (g)
30049	264	Indet.	0	3	Calcined	0.21
30053	265	Indet.	0	1	Calcined	0.1
30049	-	Indet.	0	1	Calcined	0.26
Total			0	5		

3.3.2 All fragments were <1cm, moderately well preserved and from indeterminate species, therefore were not counted. All fragments were calcined and from post-hole fills (30049) (30053), dated as prehistoric. A total of four bone fragments were recovered from samples and one from hand-collection.

3.3.3 The presence of calcined bone fragments is suggestive of domestic waste material. The deposition in post-holes further suggests the location near or part of domestic dwellings. As the fragments could not be identified to species the presence of human bone cannot be ruled out.

4 Environmental Report

4.0 Environmental evidence report

Val Fryer, Environmental Archaeologist

Introduction

4.0.0 Pits, post holes and other discrete features, all of which were of probable prehistoric date were identified during the Archaeological Recording. Samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated area and twenty were submitted for assessment.

Results

4.0.0 Cereals, chaff and seeds of common weeds are recorded at a low density within nine of the assemblages studied. Preservation is generally poor, with the cereals in particular being severely puffed and distorted, probably as a result of high temperature combustion. In addition, the seeds and chaff elements are highly fragmented and abraded, possibly indicating that they had been exposed to the elements for a considerable period prior to inclusion within the feature fills.

4.0.1 Barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains are recorded along with cereals which are too poorly preserved for close identification. Cereal chaff is exceedingly scarce, but sample 251 (from deposit (30003)) includes a wheat glume base whilst the assemblage from post-hole [30051] (sample 265) contains a wheat spikelet base. Weed seeds are also very scarce, with all occurring as single specimens within an assemblage. Taxa noted include brome (*Bromus* sp.), knapweed (*Centaurea* sp.), fat hen (*Chenopodium album*), black bindweed (*Fallopia convolvulus*) and goosegrass (*Galium aparine*). Individual fragments of hazel (*Corylus avellana*) nutshell are present within samples 265 and 268 (pit [30066]). Highly comminuted charcoal/charred wood fragments are present throughout, with any larger fragments being rounded and abraded. Other plant macrofossils are all but absent.

4.0.2 Small pieces of black porous and tarry material are present within a number of assemblages. Most are hard and brittle, and it is thought most likely that they may be bi-products of the

combustion of coal, fragments of which are also noted within many of the assemblages studied. Such materials are often recorded where either night soil was spread during the later medieval or post medieval periods or where steam implements were used on the land during the early modern era. However, two fragments of porous material noted within samples 256 (pit [30020]) and 258 (pit [30024]) are noticeably different, with both having large, irregular open voids. It is unclear what the material may be, but it is tentatively suggested that they could be fragments of either a charred foodstuff or burnt dung. Few other remains are noted, although occasional pieces of burnt/calined bone are recorded along with pellets of burnt/fired clay and splinters of heat shattered stone.

Conclusions

- 4.0.0 In summary, the assemblages are mostly very small (i.e. <0.1 litre in volume) and sparse and the plant macrofossils which are noted are comminuted, weathered and abraded. However, the following points may be of note:
- 4.0.1 Plant remains other than charcoal are generally more common within the post-hole assemblages along with burnt bone fragments, pellets of burnt/fired clay and splinters of burnt stone. Although far from conclusive, this may suggest that the remains are derived from activities occurring within built structures on the site, for example domestic food preparation. However, it should also be noted that at various points throughout prehistory (for example during the later Neolithic and Early Bronze Age periods) there is increasing evidence that sites may have been ritually cleansed at the end of each seasons use. This cleansing appears to have involved the deposition of small amounts of domestic refuse/hearth waste within a series of post holes (cf. Harford Park and Ride site, Norwich, Fryer, forthcoming).
- 4.0.2 On the whole, the pit assemblages from the current site contain marginally higher densities of charcoal, with sample 266 (pit [30054]) being particularly charcoal rich. However, there is very little to suggest that the remains were deliberately deposited within the pit fills. Instead, the abraded and comminuted state of the material may well indicate that it is largely derived from midden deposits, with a proportion of the remains being accidentally incorporated within the pit fills in the form of scattered refuse or wind-dispersed detritus.
- 4.0.3 Environmental indicators are scarce, but it would appear that cereals, both barley and wheat, were probably being grown on (or close to) areas of freshly tilled rough grassland.

5 Conservation Report

Introduction and quantification

- 5.0.0 The following note is an assessment of conservation needs for the registered and bulk finds from North Portal. In accordance with currently accepted standards of best practice (as defined

in MAP2, now incorporated within MoRPHE) for the transfer of the assemblage to the receiving organisation.

5.0.1 As there is no specified receiving archive with specific deposition guidelines, this report uses the Museum of London's Standards for archive preparation (Museum of London 2009) as example of best practice.

5.0.2 No registered finds were recovered from North Portal.

Methodology

5.0.3 The accessioned and general finds were reviewed with reference to the finds assessments by MHI finds specialists.

Finds investigation

5.0.4 No objects have been identified as needing investigative conservation input at this stage.

Work required for illustration/photography

5.0.5 No specific objects have been identified as requiring conservation input for illustration or photography.

Preparation for deposition in archive

5.0.6 The finds from this site are appropriately packed for the archive. No further packaging is necessary for transfer into the archive.

6 Site Archive

6.0 Quantification and characterisation of the site archive

Site records

6.0.0 All site records (spatial data; context records, image files, indexes) have been digitized and are currently stored on INFRA servers. Quantities of the various components are provided in table 10 below. The physical paper archive is currently held at the INFRA offices.

Table 10 Site records quantities

Item	Quantity
Field recording sheets	85
GPS Plans	1
Field Drawings	39
Digital Photographs	250
Registers (Context, drawing, photo)	11
Sample recording sheets	20

Finds assemblages

6.0.1 The archaeological works at North Portal yielded 164 artefacts and ecofacts which are currently stored at INFRA offices. The finds were recovered and recorded under different categories: Bulk, Registered and Sample finds (Table 11).

Table 11 Quantification of finds assemblages

Find type and material	Count	Weight (g)
Bulk Find	51	328.77
Animal Bone	1	0.26
CBM	4	146
Flint	5	52.11
Pottery	41	130.4
Registered Find	0	0
Sample Find	113	120.32
Animal Bone	4	0.31
Flint	78	47.72
Pottery	31	72.29
TOTAL	164	449.09

Bulk Finds

6.0.1 A total of 51 objects, weighing 328.77g, were recovered as bulk finds. This group was represented by animal bone, CBM, flint and pottery.

Registered Finds

6.0.4 No registered finds were recovered from the Archaeological Recording at North Portal.

Sample processing Finds

6.0.5 A total of 113 objects, weighing 120.32g, were recovered as finds from samples. This group was represented by animal bone, pottery and stone (worked and burnt).

Processing

6.0.6 All material has been washed and dry-cleaned, re-bagged and labelled. Marking and bag labelling for archive deposition did not yet take place.

Storage conditions

6.0.7 All finds, from all categories, were safely packed by material type, within archive boxes. In the case of the metalwork, the objects were stored airtight plastic boxes, with silica gel and a visible humidity strip.

Assessment of finds

6.0.8 All finds have been assessed by specialists. The recording was performed within the recommended level of detail for an assessment report. Each specialist applied specific guidance

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and standards for the recording of the material. Further work, with relevant site data, was recommended for some assemblages. Spot dates were presented when it was possible.

- 6.0.9 **Animal Bone:** All bones and teeth were recorded in an Access database in order to assess the potential of the assemblage. Fragmentation limited the potential of identification. The assemblage was too small for further analysis to produce information beyond the list of species provided. No further work was recommended.
- 6.0.10 **CBM:** The assemblage was recorded on an Access database, complying with the guidelines laid out in Slowikowski, et al. (2001) and the Archaeological Ceramic Building Materials Group (2001). The fired clay and CBM offered little information to site interpretation. The possible cheese press or loom weight fragment, spot dated as possible Iron Age, should be retained.
- 6.0.11 **Flint:** The assemblage was recorded at archive level. The worked flint was typologically and technologically undiagnostic. The significance of the assemblage lies in its demonstration of human activity at the site during prehistory. Further work was not recommended however the assemblage should be included alongside any future work.
- 6.0.12 **Pottery:** The assemblage was recorded and spot-dated at context level. The pottery was dated predominantly to the Iron Age. Full retention and further work were recommended, including the full recording of the assemblage following the standards of the Prehistoric Ceramics Research Group (PCRG 2010; PCRG et al. 2016), by dividing each context assemblage into individual vessels with a record for each of these vessels.

Environmental remains

- 6.0.13 Palaeo-environmental sampling was conducted on 105 suitable deposits. Soil samples were taken from a range of feature types including pits, and post holes. Assessment of the environmental data, dating evidence, artefacts, ecofacts and characterization of potential was conducted.
- 6.0.14 An index of recovered environmental samples, processing carried out and volume of flots (sorted and retained) can be seen in Appendix 9. The flots are currently stored with the environmentalist, Val Fryer at Sisland, Norwich.

Human Remains

- 6.0.15 No human remains were recovered during the works at North Portal

Chronology

- 6.0.16 The principal and only readily identifiable phase of occupation within the Site is Iron Age.

Digital archive components

- 6.0.17 Digital archive components consist of site photos, GPS data and digital survey plans.

Readiness of archive components

6.o.18 The archive components (physical and digital) are not yet ready for deposition.

7 Part B Assessment of potential for further work

7.0 Assessment and Interpretation of results

Potential for further stratigraphic analysis

7.0.1 The phasing proposed in this post-excavation assessment report will be revised once the final analysis reports are prepared. This may involve the following tasks:

- Update the matrices, defining primary and secondary contexts for the finds, allocating groupings to feature types to define activity zones across the site.
- Produce detailed drawn plans and sections of selected features to illustrate targeted details. Number and type of drawings to be determined in the UPD.
- More detailed comparison with the results of other sites in the vicinity will be undertaken to see how the results relate to the overall local situation for each period.

Absolute dating summary

7.0.2 All environmental samples are considered broadly suitable for C14 pending identification of the tree species comprising the charcoal assemblage.

Potential for analysis of flint

7.0.3 The worked flint assemblage was very limited, it is mostly undatable beyond broadly Prehistoric and it demonstrates either very low-level pre-Iron Age activity within the Site with the flint material being then residually incorporated into later features, or represents later Prehistoric activity and therefore could be contemporary with the Iron Age pottery and activity.

7.0.4 Further work is not recommended however the assemblage should be included alongside any future work.

Potential for analysis of prehistoric pottery

7.0.5 The assemblage should be fully recorded following the standards of the Prehistoric Ceramics Research Group (PCRG 2010; PCRG *et al.* 2016). This should include dividing each context assemblage into individual vessels with a record for each of these vessels.

7.0.6 The assemblage is too small and highly fragmented for cross-context refitting to provide much useful information. The assemblage is not a particularly good candidate for scientific work such

as lipid analysis as it is quite small and fragmented with a limited number of identifiable forms. The fabrics all appear to comprise generic local inclusions and as such is not particularly suitable for petrological work. None of the instances of carbonised residue adhering to the surfaces was large enough to be radiocarbon dated.

- 7.0.7 While the pottery should date predominantly to the Iron Age there is some doubt due to the similarity of fabric to Anglo-Saxon pottery. Understanding of Iron Age pottery from the Chilterns area requires publication of further data (Kidd 2014, 2), and it is recommended that radiocarbon dates are obtained to provide calendar dates for the pottery assemblage. Radiocarbon dating for the pottery could help to better understand the pottery fabrics in a wider, regional context. All environmental samples contained charcoal in sufficient quantities for radiocarbon dating and could be used for this purpose. The report should include a comment on the radiocarbon dating programme and its relationship to expected date of the assemblage.
- 7.0.8 All the pottery has future research potential and should be retained after it has been recorded and reported upon.
- 7.0.9 The pottery assemblage did not include any particular features of note, although of some significance were the complete profile of an Early Iron Age shouldered jar and much of a Middle Iron Age slack sided vessel within pit [251], fill (315). It is thought that the remains of eight vessels survived sufficiently to warrant illustration, with an additional six vessels that could be illustrated. The most significant context was (315) within pit [251] which yielded three of these vessels and the largest overall number of sherds.

Potential contributions to specific objectives

- 7.0.10 The later prehistoric pottery from the Site can contribute to the following research aims:
- KC15. The Iron Age pottery can help build up evidence which can be used to identify regional patterns in the form and location of Iron Age settlement.

Potential for analysis of CBM

- 7.0.11 Due to the small assemblage and fragment size and the abraded nature of some of the building material, this material cannot contribute to the interpretation of the results or the HERDS objectives. No further work is recommended.

Potential for analysis of animal bone

- 7.0.12 The assemblage is too small for further analysis to produce information beyond the list of species provided here. No further work is recommended.
- 7.0.13 The small quantity and poor quality of the recovered animal bone means that it has limited potential to contribute to the interpretation of the results or the HERDS objectives.

Potential for analysis of Plant remains

- 7.0.14 As none of the current assemblages contain a sufficient density of material for quantification (i.e. >100 specimens), no further analysis is recommended.
- 7.0.15 However, a summary of this assessment should be included within any synthesis of data from the site. In addition, it is suggested that the larger charcoal fragments from sample 266 are identified to species, as this may provide valuable data about both the environment and the exploitation of local resources by those occupying/using the site.
- 7.0.16 Charcoal fragments from other samples may also need to be identified prior to any potential C14 selection.

HERDS objectives summary

- 7.0.17 An assessment of the Archaeological Recording results against the Specific Objectives and original expectations is made below as defined in Project Plan for Archaeological Recording at Chiltern Tunnel North Portal (Document ref: 1EW03-FUS-COP_EV-PLN-CS02_CL16-000001). The excavation has limited potential to contribute to a number of Specific Objectives.

KC15: Can we identify regional patterns in the in the form and location of Late Bronze Age and Iron Age settlements across the route, and are there associated differences in landscape organisation and enclosure?

- 7.0.17 The Archaeological Recording has provided evidence (including the environmental evidence) suggesting the presence of settlement activity albeit on a small scale and which could potentially represent short-lived or seasonal activity, and so does potentially contribute to our understanding of settlement patterns more broadly. However, contribution to this objective relies to some extent on more refined dating of the pottery evidence because the date of activity represented could prove to be from later i.e., potentially early Medieval, activity.

KC30: Identify the location and form of early and middle Saxon settlement and investigate evidence for land use in the period.

- 7.0.18 The dating evidence was somewhat ambiguous, therefore as no material or features conclusively date to the periods in question, the Archaeological Recording adds nothing to this objective at present. Scientific dating may demonstrate that there was relevant archaeology on the Site, at which point this objective could be re-visited.

KC31: Identify the location of Middle to Late Saxon settlement, explore processes of settlement nucleation and understand the development of associated field types and agricultural regimes.

- 7.0.19 The dating evidence was somewhat ambiguous, therefore as no material or features conclusively date to the periods in question, the Archaeological Recording adds nothing to this

objective at present. Scientific dating may demonstrate that there was relevant archaeology on the Site, at which point this objective could be re-visited.

KC34: Undertake research and investigation into medieval manorial complexes. What was their origin, development and impact on the landscape?

7.0.20 The Archaeological Recording adds nothing to this objective as no material or features were dated to this period.

KC40: Identify patterns of change within medieval rural settlement from the 11th to mid-14th century.

7.0.21 The Archaeological Recording adds nothing to this objective as no material or features were dated to this period.

7.1 Additional HERDS objectives

7.1.0 There are not thought to be any further HERDS Objectives, in addition to those listed above, to which the results of the Archaeological Recording could currently contribute.

7.2 Evaluation of methodology used

7.2.0 The Trial Trench evaluation of the Site identified limited archaeology, mostly small pits and post holes which were interpreted as Prehistoric or Saxon in date. The concentration of features was predominantly towards the central portion of the Site, with the frequency and size of the features diminishing towards the east, and to a lesser extent the west. This information informed the mitigation strategy against the impact of the rail construction and associated works. The two Archaeological Recording areas were located on and around the foci of features within the footprint of the development.

7.2.1 It was possible to excavate all features across Site under a Safe System of Work. No deep excavations were required, so it was not necessary to implement temporary works according to a Temporary Works Design (Document Ref BBM.0090-CALC-C Rev A; Stepped Excavation for Archaeological Inspection Works)

7.2.2 All features were sampled according to the GWSI and LWSI, where potential PBS were encountered these were 100 percent excavated for dating evidence. Often fully excavating features did not provide any further dating evidence.

7.2.3 The features identified in the evaluation were fully exposed and were generally as expected, all features were excavated to their full depth.

7.2.4 The soil horizons throughout the stratigraphic sequence were relatively clear and well-defined against the white chalk. Hand cleaning of some areas was also undertaken, and it is very unlikely that features were not identified.

7.3 Risk assessment

7.3.0 No ethical, methodological, cost or resource risks have yet been identified.

7.4 Third Parties, potential collaboration

7.4.0 No opportunities have yet been identified.

8 Acknowledgements

8.0.0 The Archaeological Contractor acknowledges the contributions made by all its staff and the help and advice provided by the Contractor's HERDS team, and the Employer for commissioning the project.

8.0.1 In addition, the following specialists contributed to this report:

- Dr Rob Young – Prehistoric Pottery, Flint and CBM
- Val Fryer – Environmental Remains
- Rose Calis – Faunal and Human Remains

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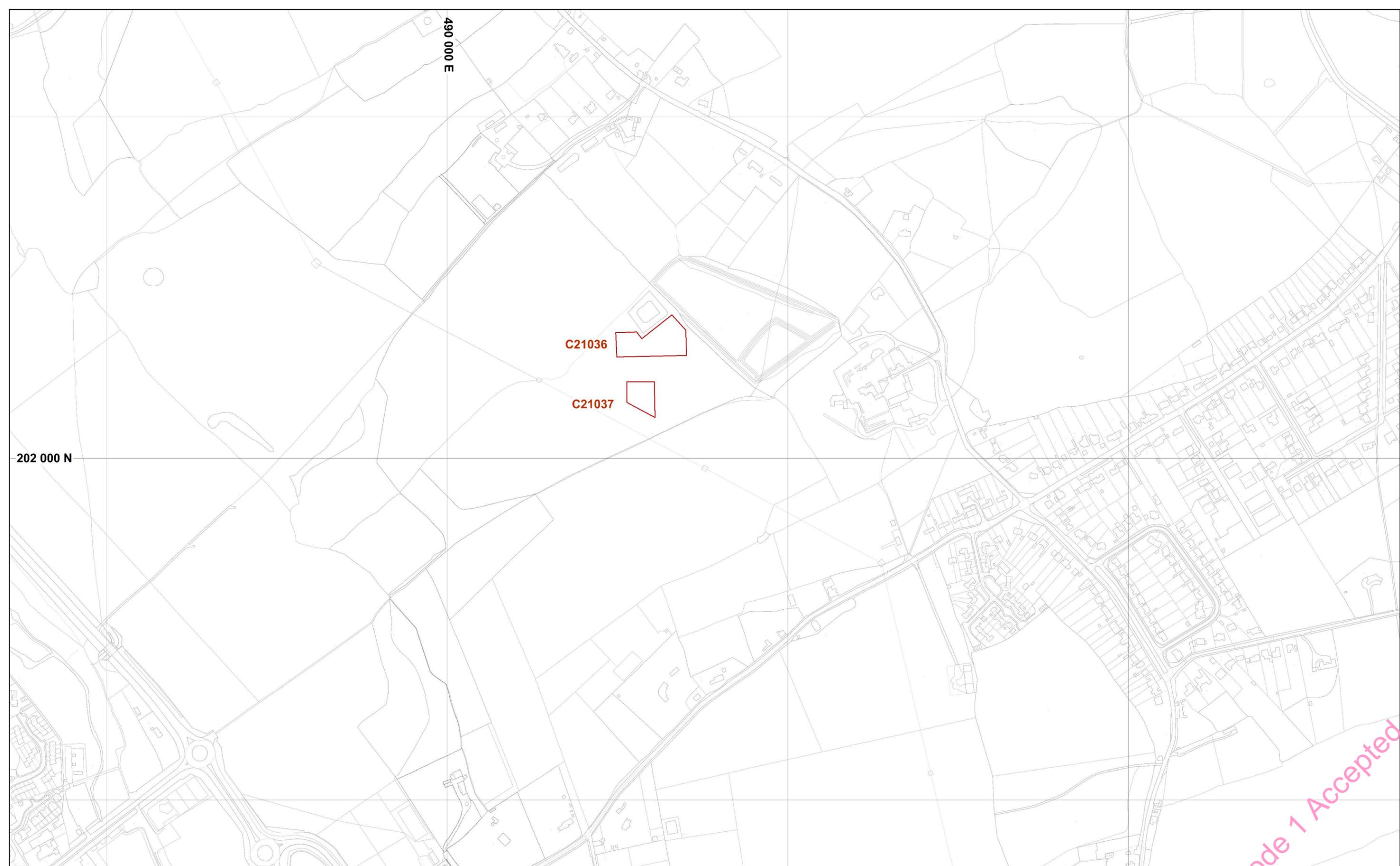
10 List of Acronyms

- AIMS Asset Information Management System
- ANA Archaeological Notification Area
- aOD above Ordnance Datum
- ASZ Archeologically Sub-Zone
- BGS British Geological Survey
- CBM Ceramic Building Material
- CCB Consolidated Construction Boundary
- CFA Community Forum Area
- Clfa Chartered institute for Archaeologists
- CLB Construction Land Boundary
- CoCP Code of Construction Practice
- DDBA Detailed Desk Based Assessment
- EMR Environmental Minimum Requirements
- ES Environmental Statement

- GIS Geographical Information Systems
- GLAAS Greater London Archaeology Advisory Service
- GNSS Global Navigation Satellite Systems
- GWSI Generic Written Scheme of Investigation
- HERDS Historic Environment Research and Delivery System
- HER Historic Environment Record
- HS2 High Speed Two
- LSWSI Location Specific Written Scheme of Investigation
- MHI MOLA Headland Infrastructure
- MOLA Museum of London Archaeology
- NGR National Grid Reference
- ODN Ordnance Survey Newlyn Datum
- PBS Post Built Structure
- PDF Portable Document Format
- QA Quality Assurance
- RTK Real Time Kinematic

11 Figures

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202 000 N

C21036



C21037

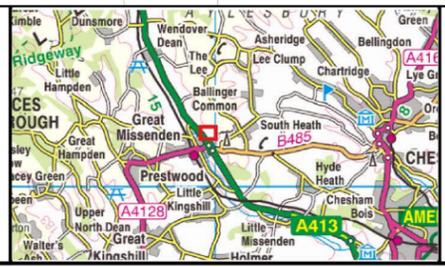


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Legend

Site extent

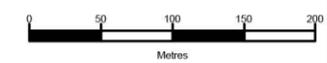


High Speed Two
North Portal
Figure 1. C21036 and C21037,
site location

Published

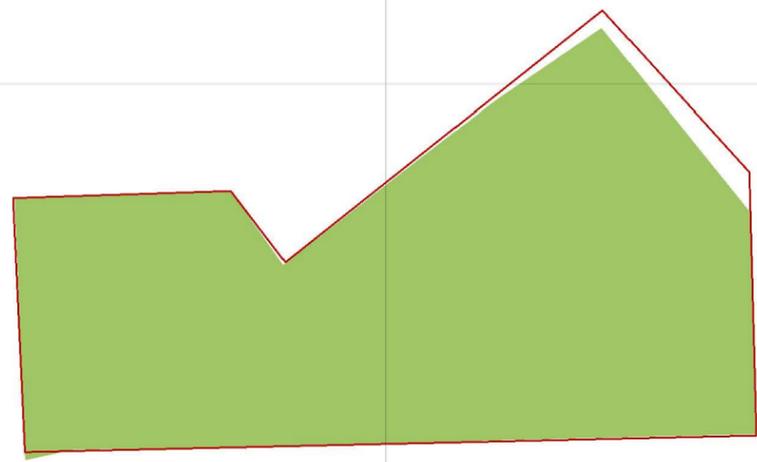
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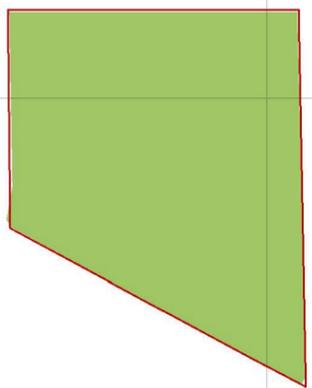


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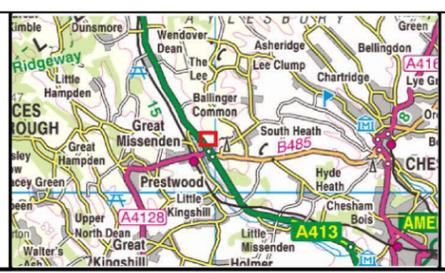
C21036



C21037

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- Legend**
- Site extent
 - Site extent excavated



High Speed Two
North Portal
Figure 2. Overview of excavated areas

Published

HS2 Scale at A3: 1: 1,000

0 10 20 30 40
Metres

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS02_CL16-000008 Date: 23/11/21

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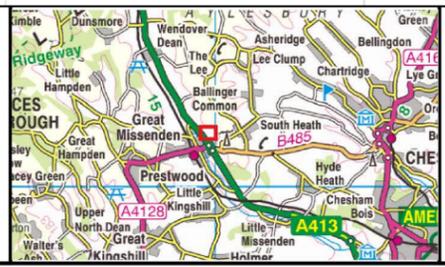
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- Legend**
- Site extent
 - Location of Iron Age feature



High Speed Two
North Portal
Figure 3. Iron Age phase plan

Published

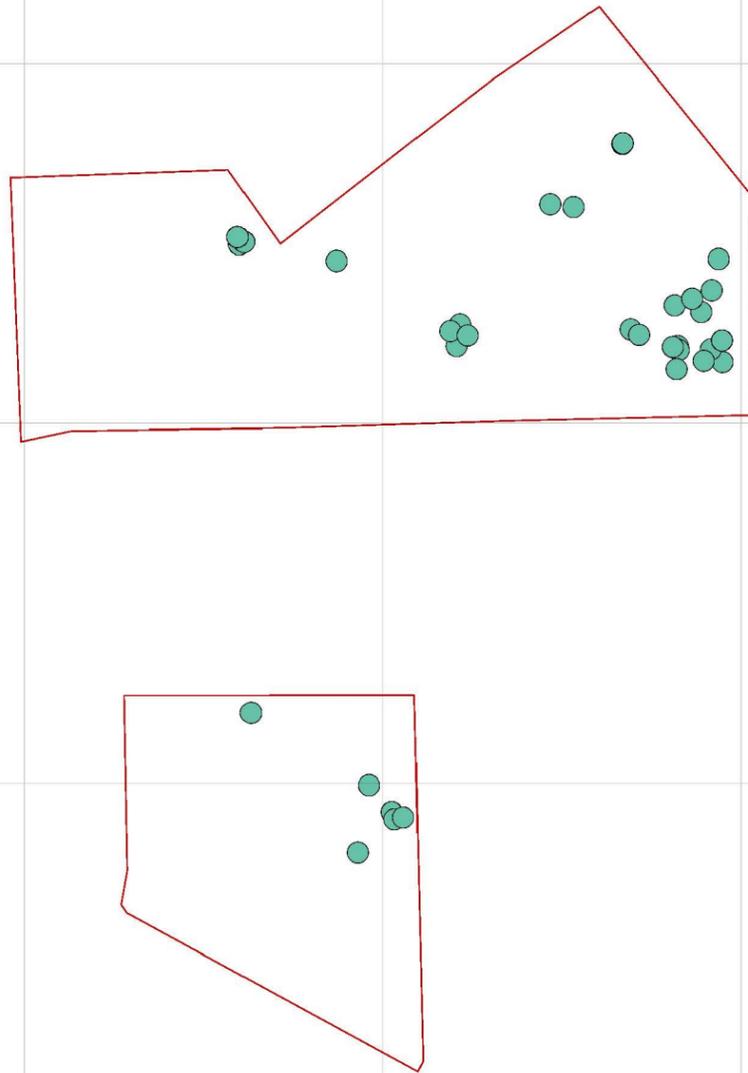
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Legend

-  Site extent
-  Location of undated feature

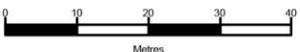


High Speed Two
North Portal
Figure 4. Undated phase plan

Published

HS2

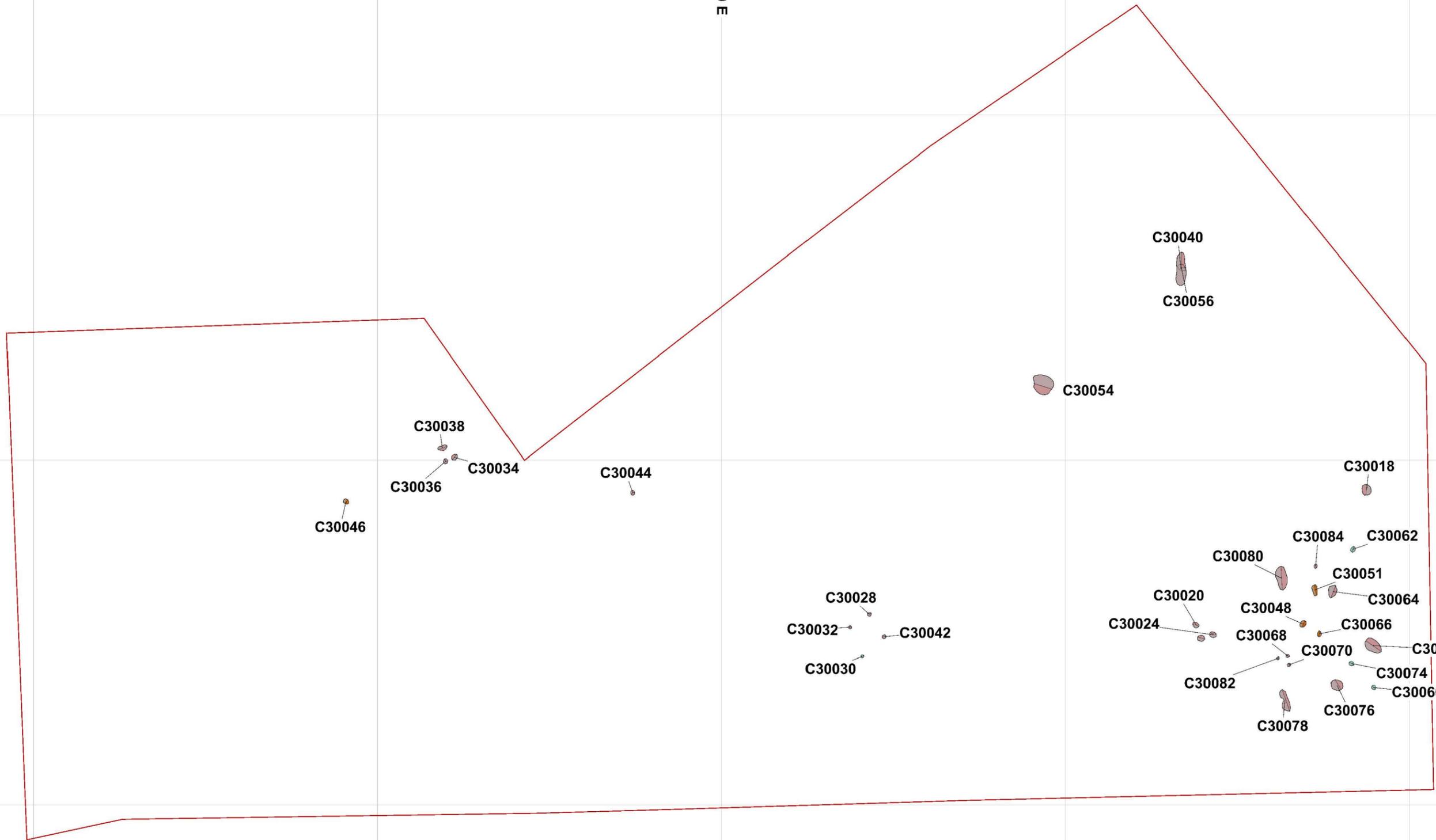
Scale at A3: 1: 1,000



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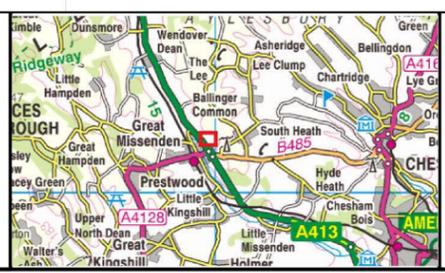
202 200 N

490 300 E



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Legend	
	Site extent
	Excavated area
	Iron Age feature
	Undated archaeological feature
	Natural feature



High Speed Two
 North Portal
 Figure 5. Archaeological results.
 Overview of Land Parcel C21036
 Published

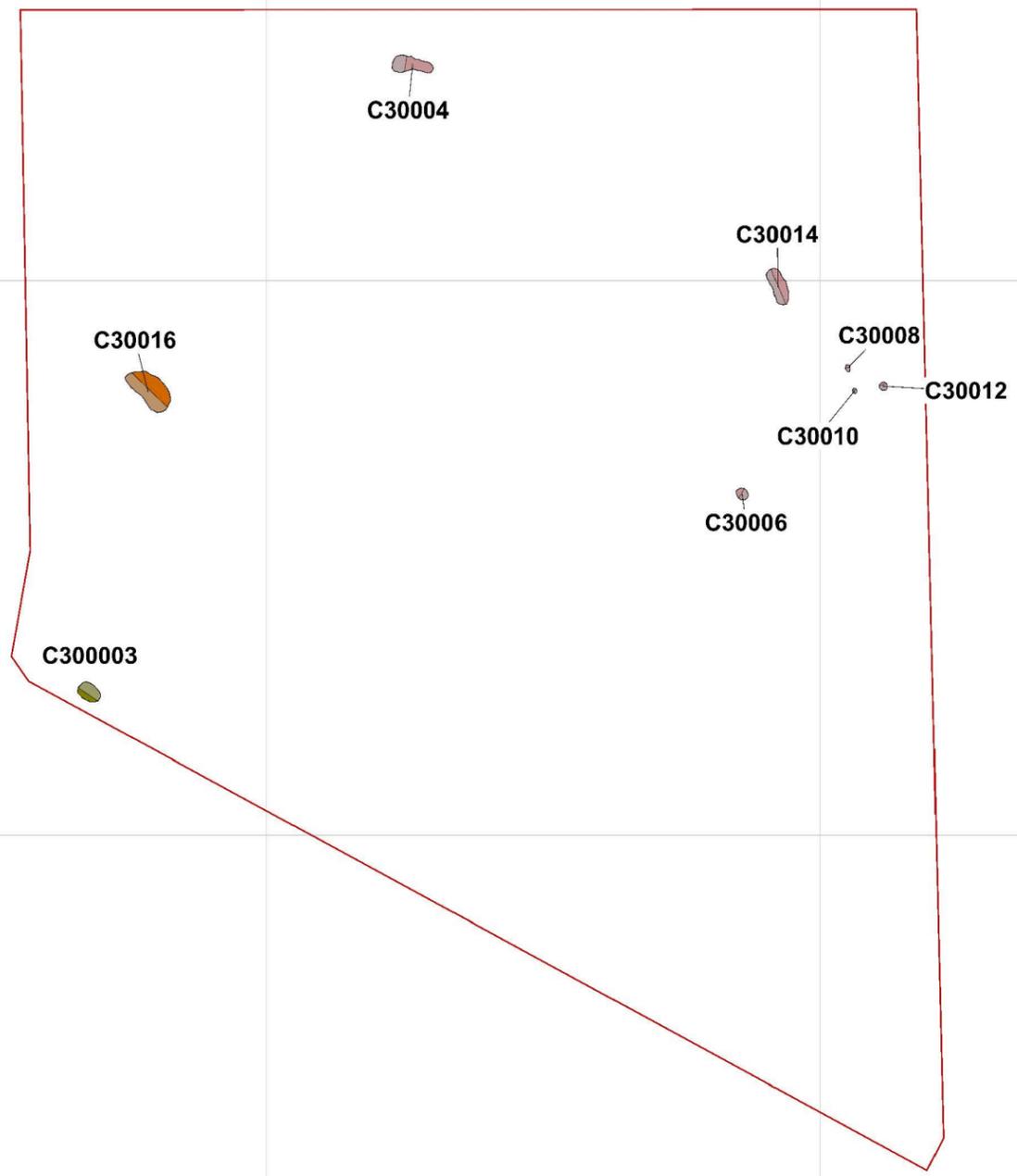
HS2 Scale at A3: 1: 300

Doc Number: 1EW03-FUS_IFA-GI-MAP-CS02_CL16-000008 Date: 23/11/21

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490 300 E

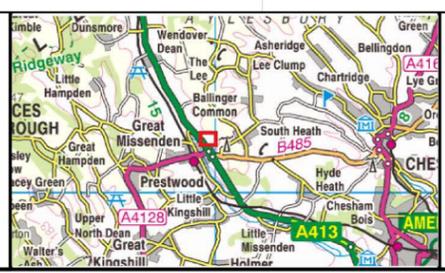
202 100 N



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Legend

- Site extent
- Excavated area
- Iron Age feature
- Undated archaeological feature
- Deposit
- Natural feature



High Speed Two
North Portal
Figure 6. Archaeological results.
Overview of Land Parcel C21037

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Doc Number: 1EW03-FUS_IFA-GI-MAP-CS02_CL16-000008 Date: 23/11/21

12 Plates



Plate 1 - C21036 posthole [30048], facing southeast



Plate 2 - C21036 posthole [30051], facing east

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Plate 3 - C21036 pit [30054], facing north



Plate 4 - C21037 deposit (30003), facing south

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Appendix 1 – Fieldwork signoff sheets

Historic Environment Fieldwork Sign-off Sheet			
Work Package Reference:		C20136	
Site code:		1C20CTNAR	
Shapefile:		AC210/22 -shape 8	
Site Name:		Chiltern Tunnel North	
Historic Environment Investigation Type:		Archaeological Recording	
Contractor:		INFRA	
Fieldwork Conducted by (Site Director):		Vix Hughes	Dates: 08/02/2021-23/02/2021
Summary of Results:			
<p>The 0.4ha was stripped centred on NGR 490285 202090. The revealed features were in the vicinity of those in Trench 21, in the original evaluation work.</p> <p>A total of 32 features were investigated. Of these eight were postholes with dark fills and occasional flecks of charcoal. Six were in a cluster towards the south-eastern side and the area was manually cleaned to ensure all were located. However, the positions of the postholes did not demonstrate any clear associations and there was no definable structural suggesting that the features may have resulted from a temporary and expedient activity, rather than occupation. Two of the postholes produced a few small fragments of coarse black fabric pottery, possibly prehistoric, although there were no pieces large enough to be diagnostic. All features have been sampled and fully excavated for maximum retrieval.</p> <p>The remaining 24 features were either irregular tree throws / root hollows (7) or rounded patches and pockets of geology (17) and none demonstrated human agency, or any associations.</p>			
Document References:			
	Document Type	Document No.	
1.	AWHf Project Plan for Archaeological Recording at Chiltern Tunnel North Portal Buckinghamshire AC210/22	1EW03-FUS_COP-EV-PLN-CS02_CL16-000001	
2.	AWH Location Specific Written Scheme of Investigation for Archaeological Recording at Chiltern Tunnel North Portal Buckinghamshire AC210/22	1EW03-FUS_IFA-EV-REP-CS02_CL16-000001	
Compiled by:	Name: Vix Hughes	Date: 24/02/2021	Signature: 
Checked by:	Name: Louis Stafford	Date: 24/02/2021	Signature: 
Approved by:	Name:	Date:	Signature:

Historic Environment Fieldwork Sign-off Sheet			
Work Package Reference:		C20137	
Site code:		1C20CTNAR	
Shapefile:		AC210/22	
Site Name:		Chiltern Tunnel North	
Historic Environment Investigation Type:		Archaeological Recording	
Contractor:		INFRA	
Fieldwork Conducted by (Site Director):		Vix Hughes	Dates: 03/02/2021-17/02/2021
Summary of Results:			
<p>The 0.17ha was stripped centred on NGR 490285 202090. There were two archaeological features found in the vicinity of the original pit excavated in Trench 34.</p> <p>A total of eight features were investigated. Of these two were irregular tree throws / root hollows, four were small circular features which were anticipated to be postholes, but excavation demonstrated no clear human agency, nor an association between the features and they are more likely to be pockets in the geology.</p> <p>There was a shallow pit located just NW of the previous evaluation Trench 34 which contained a small amount of coarse black fabric pottery, possibly prehistoric, and a few worked flints, but discard rather than tools. The feature has been sampled and now fully excavated to maximise retrieval.</p> <p>On the southern side of the excavation was an undated extremely shallow pit base which contained a low density of charcoal, which was probably discarded fuel waste as there was no in situ burning evident. The feature has been sampled and now fully excavated to maximise retrieval.</p>			
Document References:			
		Document Type	Document No.
1.	AWHf Project Plan for Archaeological Recording at Chiltern Tunnel North Portal Buckinghamshire AC210/22		1EW03-FUS_COP-EV-PLN-CS02_CL16-000001
2.	AWH Location Specific Written Scheme of Investigation for Archaeological Recording at Chiltern Tunnel North Portal Buckinghamshire AC210/22		1EW03-FUS_IFA-EV-REP-CS02_CL16-000001
Compiled by:		Name:	Date:
		Vix Hughes	17/02/2021
			
Checked by:		Name:	Date:
		Louis Stafford	17/02/2021
			
Approved by:		Name:	Date:

Appendix 2 – OASIS summary form

OASIS DATA COLLECTION FORM: England

[List of Projects](#) | [Manage Projects](#) | [Search Projects](#) | [No new projects - records transferred](#) | [Change your details](#) | [HER coverage](#) | [Change country](#) | [FAQs](#) | [Log out](#)

Printable version

OASIS ID: hs2infra1-420309

Project details

Project name	Chiltern Tunnel, North Portal, Buckinghamshire
Short description of the project	Chiltern Tunnel North Portal. Split into two areas, C21036 and C21037. Post holes and pits were uncovered, but the large majority of features were geological variations/tree throws/root hollows. The postholes and pits indicated Bronze Age/Iron Age activity.
Project dates	Start: 10-02-2021 End: 24-02-2021
Previous/future work	Yes / Not known
Any associated project reference codes	1C20CTNAR - Sitecode
Type of project	Field evaluation
Current Land use	Cultivated Land 2 - Operations to a depth less than 0.25m
Monument type	POSTHOLES Late Bronze Age
Monument type	POSTHOLES Iron Age
Monument type	PITS Late Bronze Age
Monument type	PITS Iron Age
Significant Finds	POTTERY Late Bronze Age
Significant Finds	POTTERY Iron Age

Project location

Country	England
Site location	BUCKINGHAMSHIRE CHILTERN GREAT MISSENDEN Chiltern Tunnel North Portal
Postcode	HP16 9QF
Study area	0.59 Hectares
Site coordinates	490300 202170 490300 00 00 N 202170 00 00 E Point
Site coordinates	490285 202090 490285 00 00 N 202090 00 00 E Point
Site coordinates	490295 201969 490295 00 00 N 201969 00 00 E Point
Height OD / Depth	Min: 0.28m Max: 0.3m

Project creators

Name of Organisation	INFRA
Project brief originator	INFRA

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Project design originator INFRA
Project director/manager Vix Hughes
Project supervisor Vix Hughes

Project archives

Physical Archive recipient Red River Archaeology
Physical Archive ID 1C20CTNAR
Physical Contents "Ceramics","Worked stone/lithics"
Digital Archive recipient Red River Archaeology
Digital Archive ID 1C20CTNAR
Digital Media available "Database","GIS","Geophysics","Images raster / digital photography","Text"
Paper Archive recipient Red River Archaeology
Paper Archive ID 1C20CTNAR
Paper Media available "Context sheet","Drawing"

Project bibliography 1

Publication type Grey literature (unpublished document/manuscript)
Title AWHi Interim Report for Archaeological Recording at North Portal
Author(s)/Editor(s) Hughes, V. Cosham, B.
Date 2021
Issuer or publisher INFRA
Place of issue or publication BUCKINGHAM

Entered by Isaac Derbyshire [REDACTED]
Entered on 27 April 2021

OASIS:

Please e-mail [Historic England](#) for OASIS help and advice

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Appendix 3 – Site registers

Context; Drawing; Image and Sample Registers

12.0.0 The Site archive appendices are provided separately in Excel spreadsheet form as:

- Context Appendix Register
- Drawings Register
- Image Register
- Soil Sample Register

CONTEXT REGISTER

WSIntID	FeatID	Deposit ID	MonDesc	Mon Type	Period	Period Phase	Sub group no.	Group no.	ObjectMater	Arch Object	Build Mater	Find Count	FindWeight	Arch Science	Max Length	Max Width	Max Depth	Estimated deposit excavated volume (m3)	Comments
C21036/C21037		30001	Dark greyish brown, silty clay, firm (varied). Flint nodules.	Topsoil			N/a	N/a	CBM, Flint	None	None	None	188	None	/	/	0.28-0.30		
C21036/C21037		30002	Brownish orange, firm, silty clay. Frequent gravel and flint patches.	Natural			N/a	N/a	None	None	None	None	0	None	/	/	0.28-0.30		
C21037		30003	Dark greyish black, charcoal rich, loose.	Surface Deposit	late Bronze Age or Iron Age		None	None	Flint	None	None	9	2	None	1.23	0.9	0.08	0.09	
C21037	[30004]		Running N-S, concave.	Tree throw	Undated		None	None							1	0.79	0.21	0.17	
C21037		30005	Secondary fill, low energy silting.	Fill	Undated		None	None	None	None	None	None	None	None	1	0.79	0.21	0.17	
C21037	[30006]		Irregular circle, shallow, u-shaped.	Geology or stone socket	Undated		None	None							0.49	0.43	0.1	0.02	
C21037		30007	Brownish grey, fine silty clay. Many large and small stones and flint.	Fill	Undated		None	None	None	None	None	None	None	None	0.49	0.43	0.1	0.02	
C21037	[30008]		Circular, u-shaped.	Geology or stone socket	Undated		None	None							0.2	0.2	0.18	0.01	
C21037		30009	Grey silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	0.2	0.2	0.18	0.01	
C21037	[30010]		Circular, concave sides, flat base.	Geology or stone socket	Undated		None	None							0.18	0.18	0.13	0.00	
C21037		30011	Grey silty clay, loose.	Fill	Undated		None	None	Flint	None	None	None	2	None	0.18	0.18	0.13	0.00	
C21037	[30012]		Circular, steep sides, concave base.	Geology or stone socket	Undated		None	None							0.26	0.25	0.17	0.01	
C21037		30013	Grey silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	0.26	0.25	0.17	0.01	
C21037	[30014]		Irregular, running N-S.	Tree throw	Undated		None	None							1.9	0.4	0.18	0.14	
C21037		30015	Grey silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	1.9	0.4	0.18	0.14	
C21037	[30016]		Sub-circular, gentle sides, ireegular base.	Pit	late Bronze Age/Iron Age or Saxon		None	None							2.46	0.9	0.52	1.15	
C21037		30017	Brownish grey, silty sand, friable.	Fill	late Bronze Age/Iron Age or Saxon		None	None	Pottery, Flint	None	None	30	98	None	2.46	1.25	0.26	0.80	
C21036	[30018]		Sub-circular, S-N, concave.	Geology or stone socket	Undated		None	None							1	0.9	0.12	0.11	
C21036		30019	Mid brown, silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	1	0.9	0.12	0.11	
C21036	[30020]		Oval, W-E, steep sides, undulating base.	Geology or stone socket	Undated		None	None							0.5	0.28	0.1	0.01	
C21036		30021	Dark brown black, charcoal rich burnt material, loose.	Fill	Undated		None	None	Flint	None	None	4	2	None	0.5	0.28	0.1	0.01	
C21036	[30022]		Oval, W-E, steep sides, undulating base.	Geology or stone socket	late Bronze Age/Iron Age or Saxon		None	None							0.55	0.28	0.08	0.01	
C21036		30023	Dark brown black, charcoal rich burnt material, loose.	Fill	late Bronze Age/Iron Age or Saxon		None	None	Pottery, Flint	None	None	44	46	None	0.55	0.28	0.08	0.01	
C21036	[30024]		Oval, W-E, steep sides, undulating base.	Geology or stone socket	Undated		None	None							0.65	0.38	0.08	0.02	
C21036		30025	Dark brown black, charcoal rich burnt material, loose.	Fill	Undated		None	None	Flint	None	None	1	1	None	0.65	0.38	0.08	0.02	
C21037		30026	Greyish brown, silty sand, friable. Charcoal moderate.	Fill	Undated		None	None	None	None	None	None	None	None	2.46	1.84	0.36	1.63	
C21037		30027	Light grey, silty sand, firm. Occasional charcoal.	Fill	Undated		None	None	None	None	None	None	None	None	2.46	1.63	0.52	2.09	
C21036	[30028]		Circular, concave sides, flat base.	Geology or stone socket	Undated		None	None							0.22	0.22	0.07	0.00	
C21036		30029	Grey silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	0.22	0.22	0.07	0.00	
C21036	[30030]		Circular, u-shaped.	Post hole	Undated		None	None							0.2	0.2	0.2	0.01	
C21036		30031	Dark grey silty clay, loose. Charcoal inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	0.2	0.2	0.2	0.01	
C21036	[30032]		Circular, steep concave sides, flat base.	Geology or stone socket	Undated		None	None							0.22	0.22	0.08	0.00	
C21036		30033	Grey silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	0.22	0.22	0.08	0.00	
C21036	[30034]		Sub-circular, steep sides, uneven concave base.	Geology or stone socket	Undated		None	None							0.42	0.39	0.15	0.02	
C21036		30035	Grey brown, silty clay. Angular flint inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	0.42	0.39	0.15	0.02	
C21036	[30036]		Circular, steep sides, base obstructed by large stone.	Geology or stone socket	Undated		None	None							0.35	0.35	0.17	0.02	
C21036		30037	Grey brown, silty clay. Angular flint inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	0.35	0.35	0.17	0.02	
C21036	[30038]		Oval, gradual sides, undulating base.	Geology or stone socket	Undated		None	None							0.73	0.39	0.13	0.04	
C21036		30039	Grey brown, silty clay. Angular flint inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	0.73	0.39	0.13	0.04	
C21036	[30040]		Sub-round, steep sides with concave base.	Tree throw	Undated		None	None							0.6	0.5	0.25	0.06	
C21036		30041	Firm, mid grey brown silty clay. Flint and stone inclusions, concentrated at base.	Fill	Undated		None	None	None	None	None	None	None	None	0.6	0.5	0.2	0.08	
C21036	[30042]		Circular, u-shaped.	Geology or stone socket	Undated		None	None							0.25	0.25	0	0.01	
C21036		30043	Grey silty clay, loose.	Fill	Undated		None	None	None	None	None	None	None	None	0.25	0.25	0.1	0.01	
C21036	[30044]		Circular, gentle sides, rounded base.	Natural geological depression.	Undated		None	None							1	0.2	0.05	0.01	
C21036		30045	Dark brown, silty clay, soft. Charcoal inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	1	0.2	0.05	0.01	
C21036	[30046]		Circular, u-shaped.	Post hole	Iron Age		None	None							0.41	0.38	0.12	0.02	

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WSIIntID	FeatID	Deposit ID	MonDesc	Mon Type	Period	Period Phase	Sub group no.	Group no.	ObjectMater	Arch Object	Build Mater	Find Count	FindWeight	Arch Science	Max Length	Max Width	Max Depth	Estimated deposit excavated intervention volume (m3)	Comments
C21036		30047	Grey silty sand, large and small stones, flecks of charcoal.	Fill	Iron Age		None	None	Pottery	None	None	1	2	None	0.41	0.38	0.12	0.02	
C21036	[30048]		Circular, verticle sides, slightly flat base.	Post hole	late Bronze Age/Iron Age or Saxon		None	None							0.6	0.25	0.37	0.06	
C21036		30049	Greyish brown, silty sand, friable. Occasional charcoal, pieces of pottery.	Post pipe	late Bronze Age/Iron Age or Saxon		None	None	Animal Bone, Pottery, Flint	None	None	36	26	None	0.6	0.3	0.28	0.05	
C21036		30050	Brownish grey, silty sand, friable. Occasional charcoal.	Packing fill	Undated		None	None	None	None	None	None	None	None	0.6	0.5	0.37	0.11	
C21036	[30051]		Sub-rectangular, steep sides, flatish base.	Post hole	late Bronze Age/Iron Age or Saxon		None	None							0.79	0.3	0.28	0.07	
C21036		30052	Dark grey silty sand. Charcoal flecks.	Packing fill	Undated		None	None	None	None	None	None	None	None	0.79	0.3	0.28	0.07	
C21036		30053	Dark grey silty sand. Charcoal flecks and bits of pot.	Post pipe	late Bronze Age/Iron Age or Saxon		None	None	Animal Bone, Pottery, Flint	None	None	None	48	None	0.79	0.3	0.28	0.07	
C21036	[30054]		Sub-circular, steep sides, irregular base.	Pit	Undated		None	None							1.1	0.4	0.16	0.07	
C21036		30055	Greyish brown, silty sand, friable.	Fill	Undated		None	None	None	None	None	None	None	None	1.1	0.5	0.14	0.08	
C21036	[30056]		Sub-rectangular, steep sides, uneven base (same as [30040])	Tree throw	Undated		None	None							2.5	0.6	0.2	0.30	
C21036		30057	Mid to light grey brown, silty clay, firm (same as (30041))	Fill	Undated		None	None	None	None	None	None	None	None	2.5	0.6	0.2	0.30	
C21036	[30058]		Circular uneven sloping sides, uneven base.	Tree throw	Undated		None	None							1.3	1.3	0.28	0.47	
C21036		30059	Yellow-brown, silty clay, friable.	Fill	Undated		None	None	None	None	None	None	None	None	1.3	1.3	0.28	0.47	
C21036	[30060]		Circular, u-shaped.	Post hole	Undated		None	None							0.36	0.36	0.19	0.02	
C21036		30061	Grey silty sand, small and medium stones and flint.	Fill	Undated		None	None	None	None	None	None	None	None	0.36	0.36	0.19	0.02	
C21036	[30062]		Sub-circular, steep sides, concave base.	Post hole	Undated		None	None							0.43	0.39	0.23	0.04	
C21036		30063	Mid brown grey, clay silt, compact. Rounded stones.	Fill	Undated		None	None	None	None	None	None	None	None	0.43	0.39	0.23	0.04	
C21036	[30064]		Circular, gradual sides, rounded/flatish base.	Tree throw	Undated		None	None							1	1	0.25	0.25	
C21036		30065	Greyish brown, silty clay, friable.	Fill	Undated		None	None	None	None	None	None	None	None	1	1	0.25	0.25	
C21036	[30066]		Circular, gradual sides, concave base.	Post hole	late Bronze Age/Iron Age or Saxon		None	None							0.49	0.49	0.09	0.02	
C21036		30067	Grey brown, silty clay, friable.	Fill	late Bronze Age/Iron Age or Saxon		None	None	Pottery, Flint	None	None	3	3	None	0.49	0.49	0.09	0.02	
C21036	[30068]		Circular, steep sides, narrow rounded base.	Root hollow	Undated		None	None							0.27	0.27	0.23	0.02	
C21036		30069	Dark blackish grey, silty clay. Occasional small- medium sub-rounded and sub-angular stones	Fill	late Bronze Age/Iron Age		None	None	Flint	None	None	2	1	None	0.27	0.27	0.23	0.02	
C21036	[30070]		Circular, verticle sides, narrow rounded base.	Rooting	Undated		None	None							0.25	0.25	0.3	0.02	
C21036		30071	Dark grey silty clay, occasional sub-angular stones, charcoal inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	0.25	0.25	0.3	0.02	
C21036	[30072]		Oval, steep sides, irregular base.	Tree throw	Undated		None	None							1.24	1.06	0.45	0.59	
C21036		30073	Orange brown, clay silt, compact. Charcoal flecks and infrequent stone inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	1.24	1.06	0.45	0.59	
C21036	[30074]		Circular, steep sides, flat base.	Post hole	Undated		None	None							0.33	0.27	0.25	0.02	
C21036		30075	Grey brown, clay silt. Flint inclusions.	Fill	Undated		None	None	None	None	None	None	None	None	0.33	0.27	0.25	0.02	
C21036	[30076]		Sub-circular/oval, concave sides, flat/rounded base.	Geology or stone socket	Undated		None	None							0.77	0.77	0.26	0.15	
C21036		30077	Light brownish grey, silty clay. Occasional flint.	Fill	Undated		None	None	None	None	None	None	None	None	0.77	0.77	0.26	0.15	
C21036	[30078]		Sub-circular, near verticle sides, concave base.	Geology or stone socket	Undated		None	None							0.82	0.62	0.23	0.12	
C21036		30079	Mid grey brown, silty clay, friable. Sub-angular flint pieces.	Fill	Undated		None	None	None	None	None	None	None	None	0.82	0.62	23	11.69	
C21036	[30080]		Circular, gradual sides, concave base.	Tree throw/rooting	Undated		None	None							1	1	0.22	0.22	
C21036		30081	Grey brown, silty clay, friable. Occasional stones.	Fill	Undated		None	None	None	None	None	None	None	None	1	1	0.22	0.22	
C21036	[30082]		Sub-rectangular, steep sides, irregular base.	Geology or stone socket	Undated		None	None							0.22	0.18	0.15	0.01	
C21036		30083	Mid grey silty sandy soil, friable. Flecks of charcoal.	Fill	Undated		None	None	None	None	None	None	None	None	0.22	0.18	0.15	0.01	
C21036	[30084]		Oval, steep sides, uneven base.	Geology or stone socket	Undated		None	None							0.25	0.25	0.28	0.02	
C21036		30085	Light blue grey, clay silt. Few stones.	Fill	Undated		None	None	None	None	None	None	None	None	0.25	0.25	0.28	0.02	

IMAGE REGISTER

Section No.	WSIIntID	FeatID	Scale	Datum Level	Description & facing	Author	Date
126		30003	01:10	189.49	N facing section of pit	SS	15/02/2021
127		[30004]	01:10	190.27	E facing section of pit	MN	15/02/2021
128		[30006]	01:10	189.82	N facing section of pit	AL	15/02/2021
129		[30008]	01:10	190.00	S facing section of pit	SS	15/02/2021
130		[30010]	01:10	189.97	S facing section of pit	SS	15/02/2021
131		[30012]	01:10	189.99	S facing section of pit	SS	15/02/2021
132		[30014]	01:10	190.19	E facing section of pit	TN	16/02/2021
133		[30016]	01:10	189.84	SW facing section of pit	CG	16/02/2021
134		[30018]	01:10	191.42	W facing section of pit	AL	16/02/2021
135		[30020]	01:10	191.45	S facing section of pit	SS	16/02/2021
136		[30022]	01:10	191.45	S facing section of pit	SS	16/02/2021
137		[30024]	01:10	191.45	S facing section of pit	SS	16/02/2021
138		[30028]	01:10	191.51	S facing section of pit	CG	18/02/2021
139		[30030]	01:10	191.47	S facing section of pit	CG	18/02/2021
140		[30032]	01:10	191.52	S facing section of pit	TN	18/02/2021
141		[30034]	01:10	191.81	NE facing section of pit	BP	18/02/2021
142		[30036]	01:10	191.81	NE facing section of pit	TN	18/02/2021
143		[30038]	01:10	191.82	NW facing section of pit	TN	18/02/2021
144		[30040]	01:10	191.88	SE facing section of possible posthole	BP	18/02/2021
145		[30040][30056]	01:10	191.81	SW facing section of posthole and treebole	BP	18/02/2021
146		[30042]	01:10	191.43	S facing section of pit	AL	18/02/2021
147		[30044]	01:10	191.72	NW facing section of small charcoal pit	AL	18/02/2021
148		[30048]	01:10	191.29	S facing section of pit	CG	18/02/2021
149		[30046]	01:10	191.60	E facing section of posthole	AL	18/02/2021
150		[30051]	01:10	191.28	NW facing section of pit	EB	18/02/2021
151		[30054]	01:10	191.75	SE facing section of pit	CG	19/02/2021
152		[30058]	01:10	191.77	NE facing section of tree throw	CK	19/02/2021
153		[30060]	01:10	191.20	E facing section of pit	MN	19/02/2021
154		[30062]	01:10	191.37	SE facing section of posthole	DF	19/02/2021
155		[30064]	01:10	191.27	W facing section of pit	DF	19/02/2021

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Section No.	WSIntID	FeatID	Scale	Datum Level	Description & facing	Author	Date
156		[30066]	01:10	191.28	E facing section of pit	DF	19/02/2021
157		[30068][30070]	01:10	191.28	W facing section of posholes	DG	19/02/2021
158		[30082]	01:10	191.32	NW facing section of pit	DG	19/02/2021
159		[30072]	01:10	191.25	W facing section of pit	SS	19/02/2021
160		[30074]	01:10	191.24	E facing section of pit	TN	19/02/2021
161		[30076]	01:10	191.16	W facing section of pit	PH	22/02/2021
162		[30078]	01:10	191.33	SW facing section of pit	PH	22/02/2021
163		[30080]	01:10	191.40	W facing section of pit	PH	22/02/2021
164		[30084]	01:10	191.35	NW facing section of pit	SS	24/02/2021

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DRAWING REGISTER

Archive_num	WSIntID	Direction (to)	Comments	Date of image	Accession Number	Material	Arch Object	SF number	Deposit_ID	FeatID	Sub group no.	Group no.	Subject Keywords	Period	Phase	Creator Organisation	Copyright Holder	Publication
724	C21037	N	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
725	C21037	NE	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
726	C21037	N/a	ID shot	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
727	C21037	N	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
728	C21037	NE	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
729	C21037	NW	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
730	C21037	SW	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
731	C21037	SW	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
732	C21037	NE	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
733	C21037	NE	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
734	C21037	SE	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
735	C21037	SE	General view	12/02/2021					N/a					N/a		INFRA	INFRA/HS2	
736	C21037	S	Section of charcoal deposit	15/02/2021					30003	30003				late Prehistoric		INFRA	INFRA/HS2	
737	C21037	S	Section of charcoal deposit	15/02/2021					30003	30003				late Prehistoric		INFRA	INFRA/HS2	
738	C21037	S	Section of tree throw	15/02/2021					30005	[30004]				Undated		INFRA	INFRA/HS2	
739	C21037	S	Section of tree throw	15/02/2021					30005	[30004]				Undated		INFRA	INFRA/HS2	
740	C21037	N	Section of posthole	15/02/2021					30007	[30006]				Undated		INFRA	INFRA/HS2	
741	C21037	N	Section of posthole	15/02/2021					30007	[30006]				Undated		INFRA	INFRA/HS2	
742	C21037	N	Section of posthole	15/02/2021					30009	[30008]				Undated		INFRA	INFRA/HS2	
743	C21037	N	Section of posthole	15/02/2021					30009	[30008]				Undated		INFRA	INFRA/HS2	
744	C21037	N	Section of posthole	15/02/2021					30011	[30010]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
745	C21037	N	Section of posthole	15/02/2021					30011	[30010]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
746	C21037	N	Section of posthole	15/02/2021					30013	[30012]				Undated		INFRA	INFRA/HS2	
747	C21037	N	Section of posthole	15/02/2021					30013	[30012]				Undated		INFRA	INFRA/HS2	
748	C21037	NE	Section of tree throw	15/02/2021					30015	[30014]				Undated		INFRA	INFRA/HS2	
749	C21037	NE	Section of tree throw	15/02/2021					30015	[30014]				Undated		INFRA	INFRA/HS2	
750	C21037	NE	Section of tree throw mid excavation	16/02/2021					30017, 30026, 30027	[30016]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
751	C21037	NE	Section of tree throw mid excavation	16/02/2021					30017, 30026, 30028	[30016]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
752	C21037	NE	Section of tree throw mid excavation	16/02/2021					30017, 30026, 30029	[30016]				Undated		INFRA	INFRA/HS2	
753	C21036	W	Section of shallow pit	16/02/2021					30019	[30018]				Undated		INFRA	INFRA/HS2	
754	C21036	W	Section of shallow pit	16/02/2021					30019	[30018]				Undated		INFRA	INFRA/HS2	
755	C21036	W	Section of shallow pit	16/02/2021					30019	[30018]				Undated		INFRA	INFRA/HS2	
756	C21036	NE	Section of shallow pit	16/02/2021					30021	[30020]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
757	C21036	NE	Section of shallow pit	16/02/2021					30021	[30020]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
758	C21036	NE	Section of pit	16/02/2021					30023	[30022]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
759	C21036	NE	Section of pit	16/02/2021					30023	[30022]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
760	C21036	NE	Section of pit	16/02/2021					30025	[30024]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
761	C21036	NE	Section of pit	16/02/2021					30025	[30024]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
762	C21037	NE	Section of tree throw	16/02/2021					30017	[30016]				Undated		INFRA	INFRA/HS2	
763	C21037	NE	Section of tree throw	16/02/2021					30017	[30016]				Undated		INFRA	INFRA/HS2	
764	C21036	NE	Section of posthole	18/02/2021					30029	[30028]				Undated		INFRA	INFRA/HS2	
765	C21036	NE	Section of posthole	18/02/2021					30029	[30028]				Undated		INFRA	INFRA/HS2	
766	C21036	NE	Section of posthole	18/02/2021					30031	[30030]				Undated		INFRA	INFRA/HS2	
767	C21036	NE	Section of posthole	18/02/2021					30031	[30030]				Undated		INFRA	INFRA/HS2	
768	C21036	NE	Section of posthole	18/02/2021					30033	[30032]				Undated		INFRA	INFRA/HS2	
769	C21036	NE	Section of posthole	18/02/2021					30033	[30032]				Undated		INFRA	INFRA/HS2	
770	C21036	NW	Section of posthole	18/02/2021					30035	[30034]				Undated		INFRA	INFRA/HS2	
771	C21036	NW	Section of posthole	18/02/2021					30035	[30034]				Undated		INFRA	INFRA/HS2	
772	C21036	E	Section of posthole	18/02/2021					30037	[30036]				Undated		INFRA	INFRA/HS2	
773	C21036	E	Section of posthole	18/02/2021					30037	[30036]				Undated		INFRA	INFRA/HS2	
774	C21036	SE	Section of possible pit	18/02/2021					30039	[30038]				Undated		INFRA	INFRA/HS2	
775	C21036	SE	Section of possible pit	18/02/2021					30039	[30038]				Undated		INFRA	INFRA/HS2	
776	C21036	N	Section of posthole	18/02/2021					30043	[30042]				Undated		INFRA	INFRA/HS2	
777	C21036	N	Section of posthole	18/02/2021					30043	[30042]				Undated		INFRA	INFRA/HS2	
778	C21036	SE	Section of posthole	18/02/2021					30045	[30044]				Undated		INFRA	INFRA/HS2	
779	C21036	SE	Section of posthole	18/02/2021					30045	[30044]				Undated		INFRA	INFRA/HS2	
780	C21036	E	Section of posthole	18/02/2021					30047	[30046]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
781	C21036	E	Section of posthole	18/02/2021					30047	[30046]				late Prehistoric/Saxon		INFRA	INFRA/HS2	

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Archive_num	WSIntID	Direction (to)	Comments	Date of image	Accession Number	Material	Arch Object	SF number	Deposit_ID	FeatID	Sub group no.	Group no.	Subject Keywords	Period	Period Phase	Creator Organisation	Copyright Holder	Publication
782	C21036	N	Section of posthole/pit	18/02/2021					30041	[30040]				Undated		INFRA	INFRA/HS2	
783	C21036	N	Section of posthole/pit	18/02/2021					30041	[30040]				Undated		INFRA	INFRA/HS2	
784	C21036	N	Section of posthole/pit	18/02/2021					30041	[30040]				Undated		INFRA	INFRA/HS2	
785	C21036	N	Section of posthole/pit	18/02/2021					30041	[30040]				Undated		INFRA	INFRA/HS2	
786	C21036	SE	Section of posthole	18/02/2021					30049, 30050	[30048]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
787	C21036	SE	Section of posthole	18/02/2021					30049, 30050	[30048]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
788	C21036	SE	Section of posthole	18/02/2021					30049, 30050	[30048]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
789	C21036	SE	Section of posthole	18/02/2021					30052, 30053	[30051]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
790	C21036	SE	Section of posthole	18/02/2021					30052, 30054	[30051]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
791	C21036	E	Section of tree throw	19/02/2021					30041	[30040]				Undated		INFRA	INFRA/HS2	
792	C21036	E	Section of tree throw	19/02/2021					30041	[30040]				Undated		INFRA	INFRA/HS2	
793	C21036	SW	Section of tree throw	19/02/2021					30059	[30058]				Undated		INFRA	INFRA/HS2	
794	C21036	SW	Section of tree throw	19/02/2021					30059	[30058]				Undated		INFRA	INFRA/HS2	
795	C21036	N	Section of pit	19/02/2021					30055	[30054]				Undated		INFRA	INFRA/HS2	
796	C21036	N	Section of pit	19/02/2021					30055	[30054]				Undated		INFRA	INFRA/HS2	
797	C21036	E	Section of posthole	19/02/2021					30061	[30060]				Undated		INFRA	INFRA/HS2	
798	C21036	E	Section of posthole	19/02/2021					30061	[30060]				Undated		INFRA	INFRA/HS2	
799	C21036	NW	Section of posthole	19/02/2021					30063	[30062]				Undated		INFRA	INFRA/HS2	
800	C21036	NW	Section of posthole	19/02/2021					30063	[30062]				Undated		INFRA	INFRA/HS2	
801	C21036									VOID						INFRA	INFRA/HS2	
802	C21036									VOID						INFRA	INFRA/HS2	
803	C21036	SE	Section of posthole	19/02/2021					30065	[30064]				Undated		INFRA	INFRA/HS2	
804	C21036	SE	Section of posthole	19/02/2021					30065	[30064]				Undated		INFRA	INFRA/HS2	
805	C21036	W	Section of posthole	19/02/2021					30067	[30066]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
806	C21036	W	Section of posthole	19/02/2021					30067	[30066]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
807	C21036	E	Section of posthole	19/02/2021					30069	[30068]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
808	C21036	E	Section of posthole	19/02/2021					30069	[30068]				late Prehistoric/Saxon		INFRA	INFRA/HS2	
809	C21036	NE	Section of posthole	19/02/2021					30071	[30070]				Undated		INFRA	INFRA/HS2	
810	C21036	NE	Section of posthole	19/02/2021					30071	[30070]				Undated		INFRA	INFRA/HS2	
811	C21036	NE	Section of posthole	19/02/2021					30073	[30072]				Undated		INFRA	INFRA/HS2	
812	C21036	NE	Section of posthole	19/02/2021					30073	[30072]				Undated		INFRA	INFRA/HS2	
813	C21036	NE	Section of posthole	19/02/2021					30075	[30074]				Undated		INFRA	INFRA/HS2	
814	C21036	NE	Section of posthole	19/02/2021					30075	[30074]				Undated		INFRA	INFRA/HS2	
815	C21036	E	Section of posthole	23/02/2021					30077	[30076]				Undated		INFRA	INFRA/HS2	
816	C21036	E	Section of posthole	23/02/2021					30077	[30076]				Undated		INFRA	INFRA/HS2	
817	C21036	E	Section of posthole	23/02/2021					30079	[30078]				Undated		INFRA	INFRA/HS2	
818	C21036	E	Section of posthole	23/02/2021					30079	[30078]				Undated		INFRA	INFRA/HS2	
819	C21036	E	Section of posthole	23/02/2021					30081	[30080]				Undated		INFRA	INFRA/HS2	
820	C21036	E	Section of posthole	23/02/2021					30081	[30080]				Undated		INFRA	INFRA/HS2	
821	C21036	NE	Area Shot with posthole and features	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
822	C21036	NE	Area Shot with posthole and features	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
823	C21036									VOID						INFRA	INFRA/HS2	
824	C21036	NE	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
825	C21036	NE	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
826	C21036	NE	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
827	C21036	NE	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
828	C21036	NE	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
829	C21036	SW	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
830	C21036	SW	Area Shot with posthole	23/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
831	C21036	NE	Area Shot with posthole	24/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
832	C21036	NE	Area Shot with posthole	24/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
833	C21036	NE	Area Shot with posthole	24/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
834	C21036	NE	Area Shot with posthole	24/02/2021					Area Shot	C21036				N/a		INFRA	INFRA/HS2	
835	C21036	E	Section of posthole	24/02/2021					30085	[30084]				Undated		INFRA	INFRA/HS2	
836	C21036	E	Section of posthole	24/02/2021					30085	[30084]				Undated		INFRA	INFRA/HS2	
837	C21036	E	Section of posthole	24/02/2021					30085	[30084]				Undated		INFRA	INFRA/HS2	
838	C21036	E	Section of posthole	24/02/2021					30083	[30082]				Undated		INFRA	INFRA/HS2	
839	C21036	E	Section of posthole	24/02/2021					30083	[30082]				Undated		INFRA	INFRA/HS2	

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 HS2 Ltd

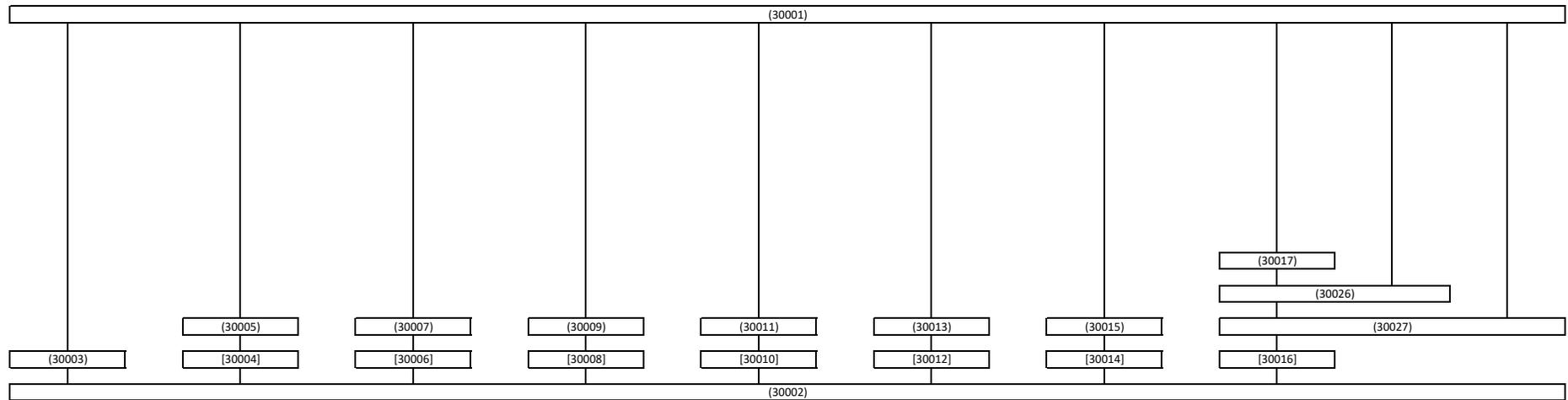
SAMPLE REGISTER

Deposit_ID	FeatID	Sample No.	Volume (L)	Processed (L)	Flot Volume (L)	Retent weight (g)	Sample type	ArchScience	Unprocessed_soil	Flot (Retain/Discard)	Retent (Retain/Discard)	Comments
30003	Charcoal deposit	251	30	30	<0.1		Bulk context			Retain	Retain	
30009	Posthole	252	10	10	<0.2		Bulk context			Retain	Retain	
30011	Posthole	253	10	10	<0.3		Bulk context			Retain	Retain	
30013	Posthole	254	10	10	<0.4		Bulk context			Retain	Retain	
30017	Tree throw with charcoal	255	20	20	<0.5		Bulk context			Retain	Retain	
30021	Shallow pit	256	10	10	<0.6		Bulk context			Retain	Retain	
30023	Shallow pit	257	10	10	<0.7		Bulk context			Retain	Retain	
30025	Shallow pit	258	10	10	<0.8		Bulk context			Retain	Retain	
30029	VOID	259										
30031	Post hole	260	10	10	<0.10		Bulk context			Retain	Retain	
30033	Post hole	261	10	10	<0.11		Bulk context			Retain	Retain	
30043	Post hole	262	10	10	<0.12		Bulk context			Retain	Retain	
30045	Post hole	263	10	10	<0.13		Bulk context			Retain	Retain	
30049	Post hole	264	10	10	<0.14		Bulk context			Retain	Retain	
30053	Post hole	265	10	10	<0.15		Bulk context			Retain	Retain	
30055	Small pit	266	10	10	<0.16		Bulk context			Retain	Retain	
30065	Posthole	267	10	10	<0.17		Bulk context			Retain	Retain	
30067	Posthole	268	10	10	<0.18		Bulk context			Retain	Retain	
30069	Posthole	269	10	10	<0.19		Bulk context			Retain	Retain	
30071	Posthole	270	10	10	<0.20		Bulk context			Retain	Retain	
30073	Pit	271	10	10	<0.21		Bulk context			Retain	Retain	

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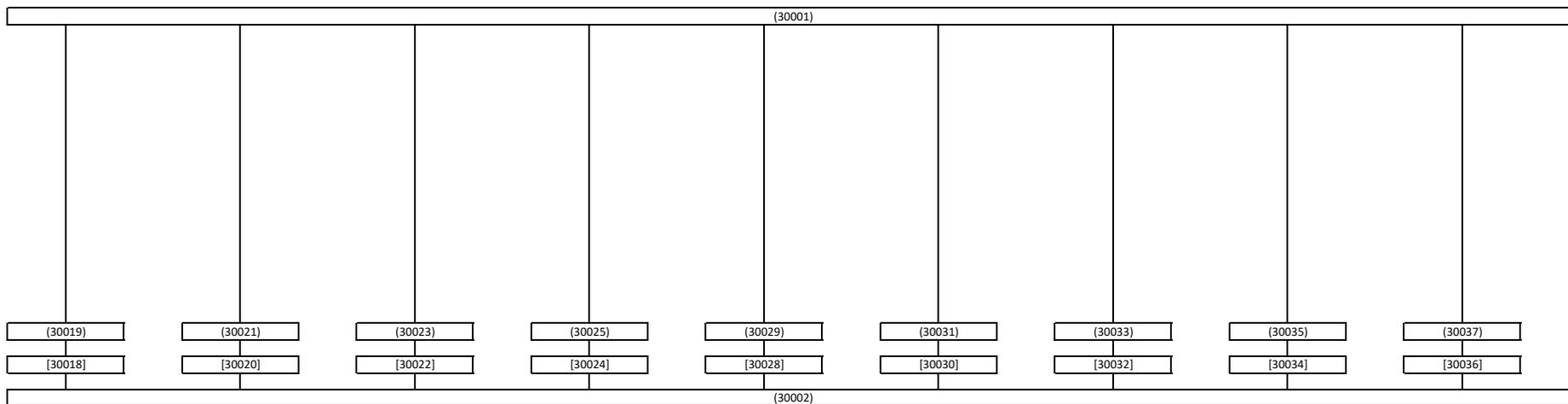
Appendix 4 – Harris Matrix

Area: C21037



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Area C21036



HS2 Ltd - Code 1 Accepted

Area C21036

(30001)									
(30039)	(30041)	=	(30057)	(30043)	(30045)	(30047)	(30049)	(30053)	(30055)
[30038]	[30040]	=	[30056]	[30042]	[30044]	[30046]	(30050)	(30052)	[30054]
							[30048]	[30051]	
(30002)									

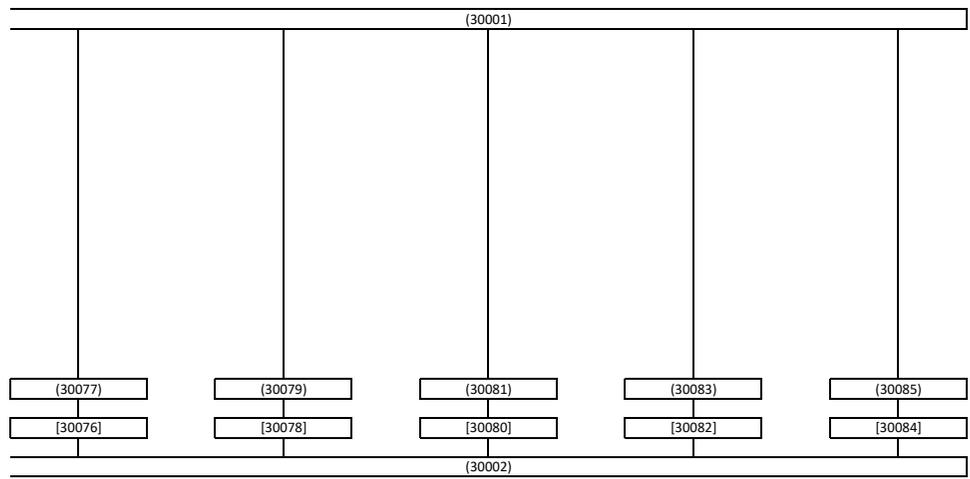
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Area C21036

(30001)								
(30059)	(30061)	(30063)	(30065)	(30067)	(30069)	(30071)	(30073)	(30075)
[30058]	[30060]	[30062]	[30064]	[30066]	[30068]	[30070]	[30072]	[30074]
(30002)								

HS2 Ltd - Code 1 Accepted

Area C21036



HS2 Ltd - Code 1 Accepted

Appendix 5 – Specialist team summary table

Role/Material	Company	Name	Qualification	Contact Details
Pottery		Dr Rob Young	PhD	[REDACTED]
CBM		Dr Rob Young	PhD	[REDACTED]
Flint		Dr Rob Young	PhD	[REDACTED]
Faunal Remains	INFRA	Rose Calis	BA, MSc	[REDACTED]
Environmental		Val Fryer	Environmental Archaeologist	[REDACTED]

Appendix 6 - Specialist Data Tables

12.0.1 Specialist Data Tables are provided separately in Excel spreadsheet form:

- Animal Bone (Vertebrate Remains)
- Ceramic based material (CBM)
- Flint
- Pottery
- Environmental (Plant macrofossils)

Vertebrate Remains (mammals, birds, fish and amphibians)

Deposit_ID	Sample No.	ArchScience	Taxon	Anatomical part	Count (NISP)	MNI	Ageable	Measurable	State of preservation	Butchery	Burning	Gnawing	Total count	MonType	Discard/retain	Potential for analysis	Suitable for dating?	Comments
30049	264	None	Unidentified	Unidentified	Undetermined	Undetermined	No	No	Moderate	None	None	None	3	Animal Bone	Discard	No	No	
30049	None	None	Unidentified	Unidentified	Undetermined	Undetermined	No	No	Moderate	None	None	None	1	Animal Bone	Discard	No	No	
30053	265	None	Unidentified	Unidentified	Undetermined	Undetermined	No	No	Moderate	None	None	None	1	Animal Bone	Discard	No	No	

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CBM

Deposit_ID	Sample No.	SF number	ArchScience	ArchObject	BuildMater	Fabric Name	Fabric code	Form	FindCount	FindWeight (gms)	Condition	Period	Early date	Late Date	Residual/Intrusive	Discard/retain	Illustrate	Comments
30001	None	None	None	None	None	None	None	Tile	4	147	Abraded	Roman			Residual		No	

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FLINT

Deposit_ID	FeatID	MonType	Sample No.	SF number	Object Sub-Type	FindCount	FindWeight	Period	Condition	Discard/retain	Illustrate	Refit recommended	Comments
3001	N/a		None	None		2	41	late Bronze Age or Iron Age	Fresh	Retain	No	No	
3003	30003		251	None		9	2	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30011	30010		253	None		12	2	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30017	30016		255	None		3	2	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30021	30020		256	None		4	2	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30023	30022		257	None		26	4	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30025	30024		258	None		1	1	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30049	30048		264	None		20	5	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30053	30051		265	None		2	10	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30067	30066		268	None		2	1	late Bronze Age or Iron Age	Fresh	Retain	No	No	
30069	30068		269	None		2	1	late Bronze Age or Iron Age	Fresh	Retain	No	No	

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POTTERY

Deposit_ID	SF number	Sample No.	Description	Fabric Name	Fabric code	Form	FindCount	FindWeight (gms)	MNV	EVE	Decoration	Condition	Period	Early date	Late Date	Residual/Intrusive	Discard/retain	Illustrate	Comments
30017					1, 2		30	95				Abraded	late Bronze Age/Iron Age	late Bronze Age	Saxon	Uncertain	Retain	No	
30023		257			4, 7		18	42				Abraded	late Bronze Age/Iron Age	late Bronze Age	Saxon	Uncertain	Retain	No	
30047					3		1	1.89				Abraded	Iron Age			Uncertain	Retain	No	
30049					1, 4, 5, 6, 7		6	15				Abraded	late Bronze Age/Iron Age	late Bronze Age	Saxon	Uncertain	Retain	No	
30049		264			8, 9		6	6				Abraded	Iron Age			Uncertain	Retain	No	
30053					1, 5, 7, 8, 9, 10		8	37				Abraded	late Bronze Age/Iron Age	late Bronze Age	Saxon	Uncertain	Retain	No	
30053		265			2, 3, 9		4	4				Abraded	late Bronze Age/Iron Age	late Bronze Age	Iron Age	Uncertain	Retain	No	
30067					11		1	2				Abraded	Iron Age	late Bronze Age	Saxon	Uncertain	Retain	No	

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Plant macro remains (summary by sample)

Deposit_ID	Sample No.	ArchScience	Type /Group	Class	State of preservation	Abundance	Diversity of species
30003	251	Flotation	Charred	Chaff	<i>Triticum</i> sp.	rare (1-10)	low (1-3)
30017	255	Flotation	Charred	Indet. Cereal grain	<i>Triticum</i> sp.	rare (1-10)	low (1-3)
30031	260	Flotation	Charred	Indet. Cereal grain	Indeterminate grains	rare (1-10)	low (1-3)
30031	260	Flotation	Charred	Herbs	<i>Fallopia convolvulus</i> (L.)	rare (1-10)	low (1-3)
30043	262	Flotation	Charred	Indet. Cereal grain	Indeterminate	rare (1-10)	low (1-3)
30049	264	Flotation	Charred	Cereal grain	<i>Hordeum</i> sp.	rare (1-10)	low (1-3)
30049	264	Flotation	Charred	Indet. Cereal grain	Indeterminate grains	rare (1-10)	low (1-3)
30049	264	Flotation	Charred	Indet. Grasses seed	<i>Bromus</i> sp.	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Cereal grain	<i>Triticum</i> sp.	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Cereal grain	<i>Triticum</i> sp.	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Indet. Cereal grain	Indeterminate grains	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Herbs	<i>Centaurea</i> sp.	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Herbs	<i>Galium aparine</i> L.	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Fruit/nut	<i>Corylus avellana</i> L.	rare (1-10)	low (1-3)
30053	265	Flotation	Charred	Indet. Seeds	Indeterminate seed	rare (1-10)	low (1-3)
30065	267	Flotation	Charred	Cereal grain	<i>Hordeum</i> sp.	rare (1-10)	low (1-3)
30067	268	Flotation	Charred	Herbs	<i>Chenopodium album</i> L.	rare (1-10)	low (1-3)
30067	268	Flotation	Charred	Fruit/nut	<i>Corylus avellana</i> L.	rare (1-10)	low (1-3)
30069	269	Flotation	Charred	Cereal grain	<i>Triticum</i> sp.	rare (1-10)	low (1-3)

Plant macro remains species detail

Deposit_ID	Sample No.	Volume (L)	ArchScience	Type /Group	Taxon	Common Name	Plant_part	FindCount	Flot Volume (ml)	% flot sorted	Potential for analysis	Suitable for dating?	Comments
30003	251	27	Flotation	Charred	<i>Triticum</i> sp.	Wheat	Glume base	1-10	<100	100			
30017	255	20	Flotation	Charred	<i>Triticum</i> sp.	Wheat	Grains	1-10	<100	100			
30031	260	3	Flotation	Charred	Indeterminate grains	Indeterminate	Grains	1-10	<100	100			
30031	260	3	Flotation	Charred	<i>Fallopia convolvulus</i> (L.)	Black bindweed	Seeds	1-10	<100	100			
30043	262	2.5	Flotation	Charred	Indeterminate	Indeterminate	Grains	1-10	<100	100			
30049	264	10	Flotation	Charred	<i>Hordeum</i> sp.	Barley	Grains	1-10	<100	100			
30049	264	10	Flotation	Charred	Indeterminate grains	Indeterminate	Grains	1-10	<100	100			
30049	264	10	Flotation	Charred	<i>Bromus</i> sp.	Indeterminate	Grasses	1-10	<100	100			
30053	265	20	Flotation	Charred	<i>Triticum</i> sp.	Wheat	Grains	1-10	<100	100			
30053	265	20	Flotation	Charred	<i>Triticum</i> sp.	Wheat	Spikelet base	1-10	<100	100			
30053	265	20	Flotation	Charred	Indeterminate grains	Indeterminate	Grains	1-10	<100	100			
30053	265	20	Flotation	Charred	<i>Centaurea</i> sp.	Knapweed	Seeds	1-10	<100	100			
30053	265	20	Flotation	Charred	<i>Galium aparine</i> L.	Cleavers	Seeds	1-10	<100	100			
30053	265	20	Flotation	Charred	<i>Corylus avellana</i> L.	Hazelnut	Nutshell	1-10	<100	100			
30053	265	20	Flotation	Charred	Indeterminate seed	Indeterminate	Seeds	1-10	<100	100			
30065	267	10	Flotation	Charred	<i>Hordeum</i> sp.	Barley	Grains	1-10	<100	100			
30067	268	4	Flotation	Charred	<i>Chenopodium album</i> L.	Goosefoot/Fat hen	Seeds	1-10	<100	100			
30067	268	4	Flotation	Charred	<i>Corylus avellana</i> L.	Hazelnut	Nutshell	1-10	<100	100			
30069	269	3	Flotation	Charred	<i>Triticum</i> sp.	Wheat	Grains	1-10	<100	100			

Charcoal

Deposit_ID	Sample No.	ArchScience	Flot Volume (ml)	% flot sorted	Species	Common Name	FindCount	Fragment size range mm min-max (o,o)	Growth rings min-max(o,o)	Growth ring curvature	Suitable for dating?	Potential for analysis	Comments
30001	251	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30001	251	Flotation	<100	100	n/a	n/a	>100	3-5	indeterminate	indeterminate			
30001	251	Flotation	<100	100	n/a	n/a	11-50	6-10	indeterminate	indeterminate			
30001	251	Flotation	<100	100	n/a	n/a	1-10	>10mm	indeterminate	indeterminate			
30009	252	Flotation	<100	100	n/a	n/a	11-50	1-2	indeterminate	indeterminate			
30009	252	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30009	252	Flotation	<100	100	n/a	n/a	1-10	Unspecified size (Charred root/stem)	indeterminate	indeterminate			
30011	253	Flotation	<100	100	n/a	n/a	51-100	1-2	indeterminate	indeterminate			
30011	253	Flotation	<100	100	n/a	n/a	51-100	3-5	indeterminate	indeterminate			
30011	253	Flotation	<100	100	n/a	n/a	11-50	6-10	indeterminate	indeterminate			
30013	254	Flotation	<100	100	n/a	n/a	51-100	1-2	indeterminate	indeterminate			
30013	254	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30013	254	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30017	255	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30017	255	Flotation	<100	100	n/a	n/a	>100	3-5	indeterminate	indeterminate			
30017	255	Flotation	<100	100	n/a	n/a	11-50	6-10	indeterminate	indeterminate			
30017	255	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30017	255	Flotation	<100	100	n/a	n/a	1-10	Unspecified size (Charred root/stem)	indeterminate	indeterminate			
30021	256	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30021	256	Flotation	<100	100	n/a	n/a	1-10	3-5	indeterminate	indeterminate			
30023	257	Flotation	<100	100	n/a	n/a	51-100	1-2	indeterminate	indeterminate			
30023	257	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30025	258	Flotation	<100	100	n/a	n/a	11-50	1-2	indeterminate	indeterminate			
30025	258	Flotation	<100	100	n/a	n/a	1-10	3-5	indeterminate	indeterminate			
30025	258	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30031	260	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30031	260	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30031	260	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30033	261	Flotation	<100	100	n/a	n/a	11-50	1-2	indeterminate	indeterminate			
30033	261	Flotation	<100	100	n/a	n/a	11-51	3-5	indeterminate	indeterminate			
30043	262	Flotation	<100	100	n/a	n/a	51-100	1-2	indeterminate	indeterminate			
30043	262	Flotation	<100	100	n/a	n/a	1-10	3-5	indeterminate	indeterminate			
30043	262	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30045	263	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30045	263	Flotation	<100	100	n/a	n/a	>100	3-5	indeterminate	indeterminate			
30045	263	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30045	263	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30049	264	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30049	264	Flotation	<100	100	n/a	n/a	51-100	3-5	indeterminate	indeterminate			

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Deposit_ID	Sample No.	ArchScience	Flot Volume (ml)	% flot sorted	Species	Common Name	FindCount	Fragment size range mm min-max (o,o)	Growth rings min- max(o,o)	Growth ring curvature	Suitable for dating?	Potential for analysis	Comments
30049	264	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30049	264	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30053	265	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30053	265	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30053	265	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30053	265	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30055	266	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30055	266	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30055	266	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30055	266	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30065	267	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30065	267	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30065	267	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30067	268	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30067	268	Flotation	<100	100	n/a	n/a	11-50	3-5	indeterminate	indeterminate			
30067	268	Flotation	<100	100	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30069	269	Flotation	<100	100	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30069	269	Flotation	<100	100	n/a	n/a	>100	3-5	indeterminate	indeterminate			
30069	269	Flotation	<100	100	n/a	n/a	11-50	6-10	indeterminate	indeterminate			
30069	269	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30069	269	Flotation	<100	100	n/a	n/a	1-10	Unspecified size (Charred root/stem)	indeterminate	indeterminate			
30071	270	Flotation	<100	100	n/a	n/a	51-100	1-2	indeterminate	indeterminate			
30071	270	Flotation	<100	100	n/a	n/a	>100	3-5	indeterminate	indeterminate			
30071	270	Flotation	<100	100	n/a	n/a	11-50	6-10	indeterminate	indeterminate			
30071	270	Flotation	<100	100	n/a	n/a	1-10	>10	indeterminate	indeterminate			
30073	271	Flotation	<101	101	n/a	n/a	>100	1-2	indeterminate	indeterminate			
30073	271	Flotation	<101	101	n/a	n/a	51-100	3-5	indeterminate	indeterminate			
30073	271	Flotation	<101	101	n/a	n/a	1-10	6-10	indeterminate	indeterminate			
30073	271	Flotation	<101	101	n/a	n/a	1-10	>10	indeterminate	indeterminate			

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INDUSTRIAL RESIDUES and METALWORKING

Deposit_ID	Sample No.	ArchScience	ObjectMater	ArchObject	Description	Count (item;no. of fragments)	FindWeight	Potential for analysis	Comments
30001	251	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30001	251	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30001	251	Flotation	Indeterminate	other	Vitreous material	1-10	<1 gm		
30009	252	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30009	252	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30011	253	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30013	254	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30013	254	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30017	255	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30017	255	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30021	256	Flotation	Indeterminate	other	Black porous/tarry material	11-50	<1 gm		
30021	256	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30023	257	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30023	257	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30025	258	Flotation	Indeterminate	other	Black porous/tarry material	51-100	<1 gm		
30025	258	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30031	260	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30031	260	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30033	261	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30033	261	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30045	263	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30049	264	Flotation	Indeterminate	other	Black porous/tarry material	1-10	<1 gm		
30049	264	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30053	265	Flotation	Coal	other	Black porous/tarry material	1-10	<1 gm		
30053	265	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30053	265	Flotation	Coal	other	Vitreous material	1-10	<1 gm		
30055	266	Flotation	Coal	other	Black porous/tarry material	1-10	<1 gm		
30055	266	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30065	267	Flotation	Coal	other	Black porous/tarry material	1-10	<1 gm		
30065	267	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30073	271	Flotation	Coal	other	Black porous/tarry material	1-10	<1 gm		
30073	271	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30069	269	Flotation	Coal	other	Black porous/tarry material	1-10	<1 gm		
30069	269	Flotation	Coal	other	Small coal frags.	1-10	<1 gm		
30071	270	Flotation	Coal	other	Small coal frags.	1-11	<1 gm		

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Appendix 7 – Specialist reports

Pottery

INTRODUCTION

72 pieces of pottery, weighing some 194 gms were submitted for analysis. This figure can be broken down by context as follows:

CONTEXT	No.	% Total Assemblage
30017	30	41.66
30047	1	1.38
30049	6	8.33
30053	8	11.11
30067	1	1.38
30023 Sample 257	18	25
30049 Sample 264	4	5.55
30053 Sample 265	4	5.55
TOTAL	72	99.96 (100)

The finds are catalogued in Appendix 6.

The material consists mainly of featureless body sherds, but two rim and two base forms have been identified. All of the material appears to be hand-built and, given the nature of the assemblage, it has proved difficult, beyond the generalised observations set out in the catalogue, to identify the range and number of vessels present below. In terms of broad dating, the material would appear to be of Iron Age or Anglo-Saxon character. These observations are amplified in the discussion below.

METHODOLOGY

All sherds have been counted, weighed and examined under a X10 hand lens in natural daylight to determine and record fabric type. The part of the pot remaining (e.g., rim, body or base) is also recorded in the accompanying catalogue of finds. The small-scale, fragmentary, nature of the many of the surviving sherds has meant that it has proved impossible to establish rim diameters for the few vessels with surviving rim sherds.

Fabric types were determined by the nature, size, frequency, angularity/rounding and sorting of inclusions and by the extent of oxidation or reduction of the clay matrix within the firing process.

FABRIC

11 fabric types have been identified and these can be tabulated as follows:

FABRIC NO.	DESCRIPTION	CAT. NOS.
1	Hard fired, totally reduced black/dark brown interior and exterior surfaces and core. Fine sandy matrix with small, angular, ill-sorted, crushed, burnt flint fragments	1, 4.
2	Oxidised orange/brown inner and outer surfaces and darker, reduced core. Sandy clay matrix, medium, angular, ill-sorted, burnt flint fragments and some milky quartz particles.	2, 14, 24
3	Orange, oxidised outer surface, black, reduced core and inner surface. Very fine quartz sandy fabric matrix.	3, 27
4	Oxidised, orange exterior surface, reduced brown/black interior and core. Fine sandy clay matrix with very rare burnt flint fragments and some organic inclusions visible as burnt-out voids in the fabric surface.	5,19
5	Reduced external and internal surfaces and core. Fine sandy matrix, organic inclusions visible as burnt-out voids in the fabric.	6,12
6	Highly oxidised inner and outer surfaces and core. Fine sandy matrix with rare red, rounded hard grits ? iron stone/manganese.	7
7	Grey/black, reduced inner and outer surfaces and core. Fine sandy matrix with very rare flint inclusions.	8, 10, 18
8	Oxidised external surface, reduced inner surface and core. Very fine sandy matrix and very rare quartz particles and oxidised grog pellets.	9, 20
9	Totally reduced, black, fine quartz sandy clay matrix	11, 13, 16, 21, 22, 23, 25, 26.
10	Oxidised external surface, reduced inner surface and core. Well sorted crushed flint fragments and rare oxidised grog pellets.	15
11	Oxidised external surface, reduced inner surface and core. Fine sandy matrix with organic inclusions visible as burnt-out voids.	17

It is suggested that all of these fabrics are probably of local origin

ABRASION AND FRAGMENTATION

Abrasion is one of the few measurable indicators of the use of pottery between the breakage of a pot, and the deposition of the sherds. As Miket *et al.* (2008, 31) have argued, it relates to the interval between the original use of a pot and its archaeological recovery. The methodology developed by Sørensen (1996) to assess ceramic abrasion has been applied here to examine the Wellwick pottery. Sorensen identified four levels of abrasion: **1. None or very little abrasion** — very fresh breaks, un-patinated core colour, sharp edges, very rough texture, and extruding grains of temper. **2. Low abrasion** — edges maintain sharpness but markedly extruding edges and temper are worn, core colour generally still fresh but texture is slightly smoother. **3. Medium abrasion** — points and edges are now worn blunt, temper no longer extrudes, texture of core noticeably smooth, core colour is dull or patinated. **4. High abrasion** — sherd is heavily rolled: surfaces have receded from core and core worn smooth, presenting a rounded effect.

As the catalogue of finds below indicates, the North Portal pottery exhibits medium to heavy abrasion. This would suggest that the material had been moving around in the soil for some time before its incorporation into the excavated features. The overall small size range of the fragments also indicates that the material had probably been in circulation for quite a while before its final burial.

GENERAL DISCUSSION

The majority of this assemblage is made up of largely amorphous body sherds. The exception is the vessel noted in Cat. No. 1. This appears to be a small straight sided jar. The rim is rounded and slightly in-turned and the rim sherds exhibit vertical, parallel, ridging or 'cabling', probably caused by the potter drawing his/her fingers vertically down the body of the vessel. This seems to mimic the upright strakes on a woven basket and Evans (1984, 155) has suggested that this is a Later Bronze Age/Iron Age decorative technique. It was found on 7 vessels from excavations at Wellwick (Vessels 18-24) (Young 2020, unpublished). These vessels may also be of Later Bronze Age/Iron Age date.

One further, small, rim fragment (Cat. No. 16) was also recorded. This is a flat -topped rim fragment from what appears to be a thin-walled vessel. Again, it may be of Iron Age date. While it is difficult to place such amorphous pieces of pottery into chronological contexts on the basis of fabric alone, it might be suggested that the sherds in fabrics 1,2,4 and 10 could also be of Later Bronze Age/Iron Age date.

The fine gritted, sandy fabrics and the fabrics exhibiting organic inclusions are much more difficult to categorise. Similar fabrics are known from excavations at George Street in Aylesbury (Allen and Dalwood, 1981, 14) where it was suggested that the fine sandy fabrics were probably of Iron Age date, but that fabrics containing organic inclusions could be either Iron Age or Saxon. Such was the difficulty in assigning these vessels to a chronological context, the excavators termed them as 'Iron Age/Saxon pottery' (Allen and Dalwood, 1981, 15).

Excavations by Wessex Archaeology at Berry Hill Farm, Taplow, Buckinghamshire in 2019 recovered some 486 sherds of Saxon pottery.

'Fabrics are approximately equally divided between organic-tempered and sandy wares, with two sherds of mixed temper (sandy with organic inclusions), although the divisions between these groups are not clear-cut and they are more likely to represent a spectrum of variation between the two types' (Wessex Arch. Trust, 2019, 35)

The excavation team believed that both the sandy and organic-tempered fabrics were typical of Early/Middle Saxon ceramic traditions across much of southern England. They provide possible parallels from sites like Castleview Road, Slough (Brook with Seager Smith, 2019), Taplow (Blinkhorn, 2009), Dorney (Blinkhorn, 2002), Wraysbury, in Berkshire (Astill and Lobb, 1989), the London Borough of Harlington (Mepham, 2015) and Staines and Molesey, Surrey (Jones, 1982; Laidlaw and Mepham, 1996). (Wessex Arch. Trust, 2019, 35). It was assumed that the pottery from all of these sites was of local production.

Further work by the Trust at Eaton Leys (near Milton Keynes), also carried out in 2019, produced a total of 772 sherds of probable Saxon date. All fabrics were sandy and with quartz inclusions and some also contained sparse amounts of organic temper. (Wessex Arch., Trust, 2019a, 27).

In conclusion it seems that the small number of largely undiagnostic pottery sherds recovered at North Portal probably spans the Later Bronze Age/Iron Age and Saxon periods in terms broad dating. Given the nature of the finds it is impossible to give definitive dating for the majority of the material.

POTTERY CATALOGUE, ORGANISED BY CONTEXT NUMBER.

30017 (Upper Fill of Pit)

Cat. No. 1: 29 sherds, including 2 conjoining rims and 2 conjoining base sherds from a small straight sided jar. Rim rounded and slightly in-turned. FABRIC 1. Medium abrasion – grits stand proud of vessel surface and give a coarse feel. Rim sherds exhibit vertical, parallel, ridging, probably caused by the potter drawing his/her fingers vertically down the body of the vessel. Max. Sherd Size: 40mm x 40mm x 10mm, Min. Sherd Size: 10mm x 6mm x 5mm. Rim Diameter: 12cms, Max. Sherd Weight: 15g, Min. Sherd Weight: Less than 1g. Total Overall Weight: 92g.

Cat. No. 2:

Small, rounded, highly abraded body sherd. FABRIC 2. Max. Dimensions: 17mm x 12mm x 10mm. Weight: 3g.

30047

Cat. No. 3:

Medium abraded body sherd. FABRIC 3. Max. Dimensions: 22mm x 15mm x 6mm. Weight: 1.89g.

30049

Cat. No. 4:

Medium abraded body sherd. FABRIC 1. Broken along ring building/construction line. Max. Dimensions: 34mm x 26mm x 8mm. Weight: 6g.

Cat. No. 5:

Highly abraded body sherd. Fine sandy matrix. FABRIC 4. Max. Dimensions: 23mm x 14mm x 6mm. Weight: 1g.

Cat. No. 6:

2 small, highly abraded sherds, both from same vessel. FABRIC 5. Sherd sizes: 19mm x 5mm x 5mm; 13mm x 12mm x 5mm. Total Weight: 1g.

Cat. No. 7:

Highly abraded, rounded pottery fragment. FABRIC 6. Max. Dimensions: 12mm x 11mm x 9mm. Weight: Less than 1g.

Cat. No. 8:

Body sherd. Medium abrasion. FABRIC 7. Max. Dimensions: 26mm x 25mm x 10mm. Weight: 6g.

30053

Cat. No. 9:

Large, highly abraded, body sherd. FABRIC 8. Max. Dimensions: 50mm x 36mm x 10mm. Weight: 16g.

Cat. No. 10:

Highly abraded body sherd. FABRIC 7. Max. Dimensions: 26mm x 15mm x 9mm. Weight: 3g.

Cat. No. 11:

Small, medium abraded sherd FABRIC 9. Max. Dimensions: 15mm x 13mm x 7mm. Weight: Less than 1g.

Cat. No. 12:

Sample 265: Highly abraded body sherd. Possible grain impressions in body of fabric. FABRIC 5. Max. Dimensions: 29mm x 19mm x 8mm. Weight: 5g.

Cat. No. 13:

Sample 265: Highly abraded body sherd. FABRIC 9. Max. Dimensions: 21mm x 19mm x 9mm. Weight: 4g.

Cat. No. 14:

Sample 265: Highly abraded body sherd. FABRIC 1. Max. Dimensions: 28mm x 18mm x 7mm. Weight: 2g.

Cat. No. 15:

Highly abraded body sherd. FABRIC 10. Slightly twisted 'S' shaped profile. Possibly from just below rim going on to a slight shoulder. Max. Dimensions: 26mm x 22 x 10mm. Weight: 5g.

Cat. No. 16:

Very small, flat topped, rim fragment from a thin-walled vessel. Medium abrasion. Possibly a cup. The sherd is too small to estimate vessel diameter. FABRIC 9. Max. Dimensions: 17mm x 13mm x 7mm. Weight: 1g.

30067

Cat. No. 17:

Highly abraded body sherd. FABRIC 11. Max. Dimensions: 22mm x 19mm x 9mm. Weight: 2g.

SAMPLE FINDS: Pottery greater than 10mm.

30023 Sample 257

Cat. No. 18:

12 sherds from same vessel, including 2 possible base sherds. Highly abraded. FABRIC 7. Max. Sherd Dimensions: 41mm x 32mm x 10mm, Min. Sherd Dimensions: 16mm x 10mm x 4mm. Total Weight: 36gms.

Cat. No. 19:

6 amorphous, highly abraded, body sherds. Soapy feel. FABRIC 4. Max. Sherd Dimensions: 29mm x 18mm x 9mm, Min Sherd Dimensions: 16mm x 11mm x 4mm. Total Weight: 6gms.

30049 Sample 264

Cat. No. 20:

Highly abraded body sherd. FABRIC 8. Max. Dimensions: 17mm x 13mm x 5mm. Weight: 2g.

Cat. No. 21:

Highly abraded body sherd. FABRIC 9. Max. Dimensions: 22mm x 21mm x 8mm. Weight: 1g.

Cat. No. 22:

Same vessel as Cat. No. 21. Highly abraded body sherd. FABRIC 9. Max. Dimensions: 24mm x 18mm x 8mm. Weight: 1g.

Cat. No. 23:

Highly abraded body sherd. FABRIC 9. 19mm x 9mm x 11mm. Weight: 2g.

30053 Sample 265

Cat. No. 24:

Highly abraded body sherd. FABRIC 2. Max. Dimensions: 18mm x 15mm x 7mm. Weight: 1g.

Cat. No. 25:

Highly abraded body sherd. FABRIC 9. Max. Dimensions: 17mm x 7mm x 6mm. Weight: less than 1g.

Cat. No. 26:

Highly abraded body sherd. Fabric 9. same as Cat. No. 25. Max. Dimensions: 14mm x 11mm x 7mm. Weight: Less than 1g.

Cat. No. 27:

Highly abraded body sherd. FABRIC 3. Max. Dimensions: 15mm 10mm 7mm. Weight: Less than 1g.

CBM (Ceramic Based Material)

4 fragments of CMB were submitted for analysis. All are from Context 30001 – Topsoil. All 4 examples are flat and tile-like and they are all of the same overall thickness -13-14mm. They could be modern, but this is unlikely and they are mostly like fragments from Tegulae (roof tiles) of possible Roman date. If there is Saxon activity in the general area then the tiles may have been robbed from a nearby Roman settlement ? for re-use. The purpose of the perforation visible on Cat. No. 4 is uncertain. Fired clay cheese presses, again known from the Roman period onwards, do exhibit similar perforations. All of the fabric types are probably of local production.

CBM CATALOGUE, ORGANISED BY CONTEXT NUMBER

Context 30001

Cat. No. 1: Highly abraded, fully oxidised red/orange slab-like fragment? Tile. Quartz sand fabric with rare ferruginous inclusions, some rounded quartz crystals visible. Max. Dimensions: 63mm x 50mm x 13mm. Weight: 60g.

Cat. No. 2: Highly abraded, fully oxidised orange slab-like fragment of tile. Fine sandy matrix with some oxidised grog pellets visible and rare small, black grits. Oxidised outer and inner surfaces and greyer slightly reduced core. Max. Dimensions: 53mm x 34mm x 14mm. Weight: 30g.

Cat. No. 3: Highly abraded, fully oxidised orange slab-like fragment of tile. One edge is very regular and squared off. Fine quartz sandy matrix with rare ferruginous inclusions. Max. Dimensions: 46mm x 26mm x 14mm. Weight: 18g.

Cat. No. 4: Highly abraded, fully oxidised orange slab-like fragment of tile. Quartz sandy matrix with many ill-sorted rounded quartz particles visible. Perforated at an oblique angle. One side exhibits regular parallel striations impressed into the tile before firing. These may be marks left by the mat or rack on which the tile was drying before the firing process. Max. Dimensions: 58mm x 41mm x 13mm. Perforation diameter: c. 10mm. Weight: 39g.

Flint

83 pieces of flint material were submitted for analysis. 5 pieces were recovered directly during the excavation of the site while 78 pieces were recovered from sieved soil samples. This number can be broken down by context as follows:

CONTEXT	From Excavation	From Soil Samples	TOTAL BY CONTEXT	% Total Assemblage
3001	2		2	2.40
3003		9	9	10.80
30011		12	12	14.40
30017	1	2	3	3.61
30020		4	4	4.81
30023		26	26	31.32
30025		1	1	1.20
30049	1	19	20	24.09
30053	1	1	2	2.40
30067		2	2	2.40
30069		2	2	2.40
TOTAL	5	78	83	99.83 (100)

RAW MATERIAL

Exploited raw material can be broken down by context as follows:

Raw Material Type	Total	%Total Assemblage
Grey Mottled Flint	7	8.4
Grey Semi-Translucent Flint	1	1.20
Red/Brown Semi-Translucent Flint	1	1.20
Burnt Flint	74	89
TOTAL	83	99.8 (100)

Almost all of the material has fresh/sharp edges. 5 pieces (just over 6% of the total assemblage) retain pebble/nodular cortex to a greater or lesser degree. Four retain hard, fawn, rolled ? pebble cortex and one exhibits grey/brown, hard, rolled ? pebble cortex

TYOLOGY

Recovered material can be categorised as follows:

Artefact Type	TOTAL	% Total Assemblage
Primary Flakes (Complete)	1	1.20
Secondary Flakes (Complete)	2	2.40
Inner Flakes (Complete)	3	3.60
Inner Flakes (Broken)	4	4.81
Secondary Bladelets (Complete)	1	1.20
Secondary Blade-Like Flakes (Complete)	1	1.20
Inner Blade-Like Flakes (Complete)	1	1.20
Chips	68	81.90
Chunks	1	1.20
Natural Flakes	1	1.20
TOTAL	83	99.91 (100)

TECHNOLOGY

7 pieces retain features relating to knapping technology. These can be summarised as follows:

BUTT TYPE	TOTAL
Plain	7
BULB OF PERCUSSION TYPE	
Pronounced	4
Diffuse	3
PRESENCE OF DISTAL END HINGE FRACTURE	2

The limited information suggests that both hard and soft hammer percussive techniques were used in the removal of material from cores. No features relating to retouching or utilisation were visible on any of the recorded pieces.

GENERAL DISCUSSION

The area around the North Portal is dominated by a clay with flints drift geology, with stratified chalk flint deposits close at hand along the Chilterns ridge (Chilterns Conservation Board, 2003). All of the cortex surviving on the 5 pieces noted above is hard, smoothed and fawn or grey/brown pebble/nodule cortex. This material has clearly been moved from its original source, probably by early glacial activity, and has obviously been recovered from the clay with flints mantle surrounding the site.

In terms of the broad dating of this group of material it is difficult to come to any definitive conclusions. There are no chronologically diagnostic artefacts in the overall assemblage, though the three pieces from Context 30017 (pit fill) could well be of Later Bronze Age/Iron Age date given their association with a straight sided, jar-like ceramic vessel whose fabric suggests this date.

Some of the finds could be residual material from earlier activity on the site, but the large number of small chips and burnt pieces from various shallow pits and post holes (see catalogue) might indicate that the material was derived from activity that was contemporary with the post holes and other cut features. The large number of chips does suggest that they are debris from knapping and the presence of much small, burnt material from the soil samples might indicated that the material had been swept up and deposited in the various archaeological features.

While it is not possible to provide a definitive discussion of overall chronology and parallels for this material (it would not be out of place on any prehistoric settlement site) the possibility must be entertained that some of the pieces from might well be of later prehistoric origin, and possibly later Bronze Age/Iron Age. The continued use of flint in the later Bronze Age/Iron Age periods has been the subject of some discussion in the literature (See Clark and Fell, 1953; Robins, 1996; Humphrey, 1996; Young and Humphrey, 1999; Humphrey and Young, 1999; Humphrey and Young, 2003). A similar phenomenon was observed in the flint assemblage from Wellwick (Young, unpublished 2020).

FLINT CATALOGUE BY CONTEXT NUMBER

30001

Cat. No. 1:

Grey, mottled, secondary flake. Plain butt, pronounced bulb and bulbar scar. Roughly triangular in shape. Scars from 2 previous, large, flake removals visible on dorsal face. Retains hard, fawn, eroded chalk cortex on dorsal face, distal end. Cortex-like flaw visible within the piece. Bulbar face exhibits pronounced conchoidal fracturing and some internal flawing. Max. Dimensions: 5mm x 55mm x 17mm. Weight: 30g.

Cat. No. 2:

Naturally frost pitted plano-convex flake, exhibiting hard, brown ? cortex -like inclusions on flat surface. A network of interlinked, frost pitted, 'craters' is visible on the dorsal/convex face. Grey mottled flint exhibiting some off white incipient re-cortication and a patch of fawn, hard, smoothed and rolled pebble cortex on right edge. What appears to be a small patch of inverse retouch on the edge of the convex surface is not retouch but the end product of

plough damage. This edge also shows larger, irregular, flake removals on the flat/plano, surface, again from plough strikes. Max dimensions: 41mm x 24mm x 12mm. Weight: 11g.

30017

Cat. No. 3:

Grey. Mottled inner flint flake. Thick plain butt, pronounced bulb and scar. Fine sharp edges. Max. Dimensions: 21mm x 13mm x 4mm. Weight: Less than 1g.

30049

Cat. No. 4:

Red/brown, semi-translucent secondary bladelet. Thin Plain butt, diffuse bulb. Fresh sharp edges. Retains a patch of hard, grey/brown, smoothed pebble cortex on dorsal face, right edge at distal end. Max. Dimensions: 22mm x 9mm x 25mm. Weight: 0.54g.

30053

Cat. No. 5: Mottled grey, coarse, almost cherty inner flint flake. Thick plain butt, pronounced bulb and scar. Thick, lipped, hinge fracture on bulbar face at distal end. Scars from previous flake removals visible on dorsal face. Very fine, sharp edges and a very small patch of hard, fawn, pebble cortex on tip of the distal end. Max. Dimensions: 39mm x 37mm x 7mm. Weight: 9g.

SAMPLE FINDS/BURNT FLINT

30003 (Sample 251)

Cat. No. 6:

8 burnt, grey white, flint chips, all less than 1gm in weight. 1 burnt inner flake, irregularly spalled and shattered. Max. Dimensions: 29mm x 14mm x 7mm. Weight: 2g.

30011 (Sample 253)

Cat. No. 7:

11 burnt chips and very small flakes. White, crazed and irregularly shattered. Max. Weight: 2g.

30017 (Sample 255)

Cat. No. 8:

2 pieces of flint:

i) Light grey, semi-translucent, secondary blade-like flake. Slight hinge termination at distal end. Irregularly broken at bulbar end. Exhibits a patch of hard, fawn, rolled and eroded pebble cortex across distal end on dorsal face. Max. Dimensions: 23mm x 8mm x 3mm. Weight: Less than 1 g.

ii) Slightly spalled, highly calcined, shattered, fragment from an inner, grey flake. Max. Dimensions: 15mm x 9mm x 3mm. Weight: Less than 1 g.

30020 (Sample 256)

Cat. No. 9:

- i) Irregularly shattered, angular, calcined white chunk. Max. Dimensions: 18mm x 11mm x 5mm. Weight: Less than 1 gm.
- ii) 3 small calcined, white, flint chips. Weight: Less than 1g.

30023 (Sample 257)

Cat. No. 10:

26 irregularly palled, burnt flint fragments. Total Weight: 4g.

30025 (Sample 258)

Cat. No. 11:

Burnt, inner, blade-like flake. Broken transversely at bulbar end. Max. Dimensions: 15mm x 5mm x 3mm. Weight: Less than 1g.

30049 (Sample 264)

Cat. No. 12:

- i) 17 irregular, burnt, flint chips.
- ii) Burnt, primary Flake. Plain butt, pronounced bulb. Ochrous cortex on dorsal face. Max. Dimensions: 15mm x 9mm x 3mm.
- iii) Irregularly shattered inner flake. Broken at both ends. Max. Dimensions: 17mm x 9mm x 5mm. Total Weight: 4g.

30053 (Sample 265)

Cat. No. 13:

Grey mottled, semi-translucent, secondary flake. Thin plain butt, diffuse bulb and scar. Retains hard fawn/grey, smoothed, hard, pebble cortex on left edge and distal end, dorsal face. Max. Dimensions: 31mm x 14mm x 3mm. Weight: 1.37g.

30067 (Sample 268)

Cat. No. 14:

2 irregular burnt grey chips. Less than 1g.

30069 (Sample 269)

Cat. No. 15:

- i) Grey, mottled inner flake. Thin, plain butt, diffuse bulb. Thermal spalling visible on dorsal face. Max. Dimensions: 15mm x 12mm x 2mm.
- ii) Grey, mottled spalled chip. Less than 1g in weight.

Faunal Remains

A total of 5 bone fragments from two samples and two contexts were recovered from the excavations at North portal, 1C19CTNAR.

Methodology

Due to the small size of the assemblage, material from samples were added to the assessment. Samples were floated and passed through 2mm and 300micron sieves, and dry sieved through 2mm and 4mm sieves. Each context was assessed separately and added to a maintable as seen in Table 1. Countable, measurable and ageable bones and teeth were recorded following the Historic England guidelines of best practices (2019) and the Cardiff University recording system. Butchery, pathology, gnawing, and general comments were also noted. Preservation was recorded as Good (G), Medium (M), Poor (P) or mixed (MX).

All fragments were <1cm, moderately well preserved and from indeterminate species, therefore were not counted. All fragments were calcined and from post-hole fills (30049) (30053), dated as prehistoric. A total of four bone fragments were recovered from samples and one from hand-collection.

The presence of calcined bone fragments is suggestive of domestic waste material. The deposition in post-holes further suggests the location near or part of domestic dwellings. As the fragments could not be identified to species the presence of human bone cannot be ruled out.

Due to the small size of the assemblage no further analysis is required.

Table 1: Main table

Context	Sample	Species	Counted	Not counted	Burning	Weight (g)
30049	264	Indet.	0	3	Calcined	0.21
30053	265	Indet.	0	1	Calcined	0.1
30049	-	Indet.	0	1	Calcined	0.26
Total			0	5		

Environmental

Introduction and method statement

Excavations at the site of North Portal II were undertaken by Rubicon Archaeology as part of the HS2 train link project. The work revealed pits, post holes and other discrete features, all of which were of probable prehistoric date. Samples for the retrieval of the plant macrofossil assemblages were taken from across the excavated area and twenty were submitted for assessment.

The samples were bulk floated by Rubicon Archaeology and the flots were collected in a 300 micron mesh sieve. The dried flots were scanned under a binocular microscope at magnifications up to x 16 and the plant macrofossils and other remains noted are listed in Appendix 9. Nomenclature within the table follows Stace (2010). All plant remains were charred. Modern roots, seeds and fungal sclerotia were also noted (not tabulated).

Results

Cereals, chaff and seeds of common weeds are recorded at a low density within nine of the assemblages studied. Preservation is generally poor, with the cereals in particular being severely puffed and distorted, probably as a result of high temperature combustion. In addition, the seeds and chaff elements are highly fragmented and abraded, possibly indicating that they had been exposed to the elements for a considerable period prior to inclusion within the feature fills.

Barley (*Hordeum* sp.) and wheat (*Triticum* sp.) grains are recorded along with cereals which are too poorly preserved for close identification. Cereal chaff is exceedingly scarce, but sample 251 (from deposit [30003]) includes a wheat glume base whilst the assemblage from post-hole [30051] (sample 265) contains a wheat spikelet base. Weed seeds are also very scarce, with all occurring as single specimens within an assemblage. Taxa noted include brome (*Bromus* sp.), knapweed (*Centaurea* sp.), fat hen (*Chenopodium album*), black bindweed (*Fallopia convolvulus*) and goosegrass (*Galium aparine*). Individual fragments of hazel (*Corylus avellana*) nutshell are present within samples 265 and 268 (pit [30066]). Highly comminuted charcoal/charred wood fragments are present throughout, with any larger fragments being rounded and abraded. Other plant macrofossils are all but absent.

Small pieces of black porous and tarry material are present within a number of assemblages. Most are hard and brittle, and it is thought most likely that they may be bi-products of the combustion of coal, fragments of which are also noted within many of the assemblages studied. Such materials are often recorded where either night soil was spread during the later medieval or post medieval periods or where steam implements were used on the land during the early modern era. However, two fragments of porous material noted within samples 256 (pit [30020]) and 258 (pit [30024]) are noticeably different, with both having large, irregular open voids. It is unclear what the material may be, but it is tentatively suggested that they could be fragments of either a charred foodstuff or burnt dung. Few other remains are noted, although occasional pieces of burnt/calined bone are recorded along with pellets of burnt/fired clay and splinters of heat shattered stone.

Conclusions and recommendations for further work

In summary, the assemblages are mostly very small (i.e. <0.1 litre in volume) and sparse and the plant macrofossils which are noted are comminuted, weathered and abraded. However, the following points may be of note:

- Plant remains other than charcoal are generally more common within the post-hole assemblages along with burnt bone fragments, pellets of burnt/fired clay and splinters of burnt stone. Although far from conclusive, this may suggest that the remains are derived from activities occurring within built structures on the site, for example domestic food preparation. However, it should also be noted that at various points throughout prehistory (for example during the later Neolithic and Early Bronze Age periods) there is increasing evidence that sites may have been ritually cleansed at the end of each seasons use. This cleansing appears to have involved the deposition of small amounts of domestic refuse/hearth waste within a series of post holes (cf. Harford Park and Ride site, Norwich, Fryer, forthcoming).
- On the whole, the pit assemblages from the current site contain marginally higher densities of charcoal, with sample 266 (pit [30054]) being particularly charcoal rich. However, there is very little to suggest that the remains were deliberately deposited within the pit fills. Instead, the abraded and comminuted state of the material may well indicate that it is largely derived from midden deposits, with a proportion of the remains being accidentally incorporated within the pit fills in the form of scattered refuse or wind-dispersed detritus.
- Environmental indicators are scarce, but it would appear that cereals, both barley and wheat, were probably being grown on (or close to) areas of freshly tilled rough grassland.

As none of the current assemblages contain a sufficient density of material for quantification (i.e. >100 specimens), no further analysis is recommended. However, a summary of this assessment should be included within any synthesis of data from the site. In addition, it is suggested that the larger charcoal fragments from sample 266 are identified to species, as this may provide valuable data about both the environment and the exploitation of local resources by those occupying/using the site.