



1MC12 – Stage 2 – Main Works Civils for C2 and C3 Sectors

Fieldwork Report for Construction Integrated Recording at C25148 Chetwode Mill Buckinghamshire

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1 Executive Summary

- 1.1.1 Headland Archaeology (UK) Ltd was commissioned to undertake Construction Integrated Recording (CIR) works on a historic mill structure at Chetwode (CrID: C25148). The Site was located in the parish of Chetwode, Buckinghamshire, c 1.5km southeast of the historic centre of the village of Chetwode, which is located c 8km south-west of Buckingham, and east of the A4421 (NGR: SP 64852 28407). Chetwode is of early medieval origin and includes multiple moats, fishponds and other features of medieval date, including the mill (CAL094, CAL).
- 1.1.2 The CIR area comprised a small section of the extant PRoW (Public Right of Way), encompassing c 45m². The Site forms an extension of C25147 which was previously excavated and recorded in 2022 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005). C25148 was not included in this previous excavation as it functioned as a right of way. Construction integrated recording (CIR) was implemented in 2024 to complete the investigation of the remains of a mill of a medieval to post-medieval date.
- 1.1.3 A mill at Chetwode is noted in the Domesday Book (compiled in 1086) suggesting early origins. This continuation of the mill through the medieval period is supported by historical evidence with the post-medieval mill depicted on maps dating from the early 17th century AD. The mill fell into disuse in the early 20th century and was demolished in the 1940s. Features relating to the mill including the mill leat, mill race, and a building platform were still in existence during a walkover survey in 2021. Archaeological features identified during excavation included structural features consisting of both timber beams and stone walls, a cobbled surface, a single post-hole, and a modern culvert.

2 Introduction

- 2.1.1 Headland Archaeology (UK) Ltd undertook Construction Integrated Recording (CIR) works on a site associated with a historic mill structure (CrID: C25148), located in the parish of Chetwode in Buckinghamshire, c 1.5km southeast of the historic centre of Chetwode to the south of Southam and east of the A423 (NGR: SP 64852 28407).
- 2.1.2 This work was commissioned by EKFB (the Principal Contractor) on behalf of HS2 Ltd (the Employer). Fieldwork took place between 5th May 2024 and 27th May 2024.

2.2 Project Background and Objectives

- 2.2.1 High Speed Two (HS2) is a railway network proposed by the UK Government to provide a new rail link between London, the West Midlands, the East Midlands, South Yorkshire, Leeds and Manchester. Phase One of HS2 will involve the construction of a new railway route approximately 230km (143 miles) in length between London and the West Midlands. Powers for the construction, operation and maintenance of Phase One are conferred by the High Speed Rail (London - West Midlands) Act 2017.
- 2.2.2 The CIR area was required for both temporary road diversion and permanent works and any archaeological remains present would therefore be removed by construction.
- 2.2.3 The overall framework within which archaeological work will be 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 (HS2-HS2-EV-STR-000-000015). Accordingly, the nominated undertaker or the 'Enabling Works Contractor' is 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.

2.3 Site Location and Description

- 2.3.1 The site is located in Buckinghamshire, c 50m north of the Buckinghamshire and Oxfordshire border. The Site is centred at NGR: SP 64852 28407 and lies within the parish of Chetwode, c 1.5km southeast of the historic centre of Chetwode (Figure 1). The CIR area comprises a small section of the extant PRow, encompassing c 45m² (Fusion Site GIS ID no: C25148).
- 2.3.2 The site lies within Community Form Area (CFA) 13 and Archaeological Sub-Zone 23 (Chetwode). To the south of Southam and east of A423. The ASZ is situated on a slight west-facing slope ASZ noted Chetwode is a small settlement dispersed over a large area and interspaced with agricultural fields and other features. Chetwode is of early medieval origin and includes multiple moats, fishponds and other features of medieval date, including the mill (CALog4, CAL).

2.4 Archaeological Background and Previous Work

- 2.4.1 The archaeological and historical background presented below has been summarised from the AWHI Fieldwork Change Control Form (1EW03-FUS-EV-FRM-CS06_CL10-

000011) and AWH – Detailed desk-based assessment concerning Chetwode Mill (1EW03-FUS-EV-REP-CS06_CL10-007824). The Domesday Book (compiled in 1086) notes the presence of a watermill at Chetwode suggesting it may have formed part of an earlier Anglo-Saxon estate developing after AD 949 to support the burh at Buckingham. The continuation of the mill through the medieval period is supported in the historical evidence with features such as the watermill, races, channels and meadows remaining largely unchanged from 1638. The watermill was depicted on historic maps in the early 17th century, fell into disuse in the early 20th century, and was demolished in the 1940s.

- 2.4.2 A detailed desk-based assessment was carried out by volunteers from Buckinghamshire Archaeological Society in June 2021 under Fusion guidance (1EW03-FUS-EV-REPCSo6_CL10-007824). The walkover highlighted the survival of several of the mill's features, including the leat and mill race, and masonry which would have held the mill wheel, proving it would have been of 'undershot' design. Several photographs of the mill whilst still standing were also identified, showing it to be of stone construction, with a smaller lean-to building and thatched roof. A preliminary date for this structure, from observing the photographs, was given as probably 16th century.
- 2.4.3 The previous phase of CIR (C25147) confirmed the survival of multiperiod archaeological remains including the medieval mill complex (1EW03-FUS_COP-EV-REP-CS06_CL10-000005). The medieval mill complex was evidenced by three curvilinear ditches, representing water management features, from which medieval pottery and timbers were recovered. The three beam timbers potentially represent the earliest remains of a mill structure on site (1EW03-FUS_COP-EV-REP-CS06_CL10-000005, Appendix 2, Plates 1 and 2). The medieval mill was truncated by a post-medieval mill with several phases of construction. The principal surviving evidence for the mill building comprised a pair of stone retaining walls defining the former mill race and flanking the modern watercourse. Directly north of the mill race were the truncated remains of the post-medieval mill building. At the northern end of the mill building two smaller rectangular rooms were defined by wall foundations constructed of stone and brick. The larger of the two rooms was constructed against the northern wall of the mill building and had two phases of brick floor sealing a brick-lined drain, possibly indicating domestic function. The smaller northernmost room was subdivided east-west, indicated by a row of postholes, with a stone rubble floor, potentially forming stables. A large post-medieval quarry pit, located centrally within the area truncated earlier features but respected the mill building. This was in turn truncated by a rectangular brick-lined manhole or soakaway.
- 2.4.4 The wider surrounding area has also been subject to a programme of archaeological investigation comprising
- Lidar/Hyperspectral imaging survey.
 - Trial Trench investigation.

2.4.5 No geophysical surveys were carried out on site due to the overgrown nature making the area unsuitable. The land to the immediate south, 'Great Mill Meadow' was until recently used as a dirt bike racetrack which has highly truncated and disturbed the ground, with the creation of artificial jumps, ramps and banks. Geophysics were carried out in the field to the north by Connect in 2018 (Site Code 1C18GODMG; 1EW03-FUS-EV-REP-CS06_CL10-007814) but only modern ferrous disturbance was identified.

2.4.6 Trial trenching was carried out approx. 200m to the west of the site during Urgent Works (North of Moat Farm; 1EW03-FUS-EV-REPCS06_CL10-007813) and comprised five 30m x 2m trenches. Several pits and ditches possibly comprising a late Roman farmstead were identified.

2.5 Geology and Topography

2.5.1 The highest point of the Site, 87.147m above Ordnance Datum (aOD), was directly above the remains of the former building, with the land sloping in all directions. Two parallel east/west aligned ditches form the northern and southern limits of the Site.

2.5.2 The British Geological Survey (NERC 2022) indicates that the underlying solid geology within the Site is primarily till situated on Mudstone of the Peterborough Member. This member is a lower part of Oxford Clay Formation and formed in the Middle Jurassic Period. The Quaternary superficial deposit is mapped as being River Terrace sand and gravel.

2.6 Specific Aims and Objectives

2.6.1 The programme of Construction Integrated Recording was required to record any archaeological remains identified within the vicinity, identified during the geophysical survey and confirmed by trial trenching.

2.6.2 The specific aims of the Construction Integrated Recording were to:

- confirm and record the presence, extent, character and state of preservation of the remains of Chetwode Mill within the Site;
- confirm and record the presence/absence, extent and depth of any surviving archaeological remains predating the mill within the Site;
- investigate and record the origin of milling activity on the Site;
- place the Site within the historic landscape, with particular emphasis on its development and modification/management of local watercourses;
- investigate and examine the potential for further preserved timbers or waterlogged organic remains; and
- to contribute to the delivery of GWSI: HERDS Specific Objectives as specified in the FCCF (Table 1).

- 2.6.3 The potential for further CIR works contributing to knowledge creation objectives for the site is very high. The known existence of the medieval and post-medieval Chetwode mill can greatly contribute to KC33, with contributions also possible to KC21 and KC34.

Specific Objective	Contribution
KC33: Investigate the development of water mills from the Anglo Saxon through to the modern period. How did the technology of milling change, and what implications did this have for farming practice?	The mill and associated infrastructure are recorded as present on site from at least 1086, and potentially even 949, through to demolition in the 1940's. The presence of such as structure and its investigation has the potential to contribute to this objective.
KC34: Undertake research and investigation into medieval manorial complexes. What was their origin, development, and impact on the landscape	The mill is recorded as part of the wider Chetwode Manor estate and would therefore contribute to this objective potentially allowing a greater understanding of the development, use and impacts of the surrounding landscape.
KC40: Identify patterns of change within Medieval rural settlement from the 11th to mid- 14th century	Any evidence recovered for the evolution of the mill over time and its relationship to the wider manorial setting, may have the potential to contribute to this objective.

Table 1 Contribution to HERDS Specific Objectives

3 Methodology

- 3.1.1 The Construction Integrated Recording (CIR) was undertaken in accordance with specific guidance produced by HS2, in particular the Technical Standard Specification for historic environment investigations (HS2-HS2-EV-STD-000-000035); the GWSI: HERDS (HS2-HS2-EV-STR-000-000015); the Route-wide Project Plan for Archaeological monitoring and Construction Integrated Recording (1EW03-FUS-EV-REP-C000-009812), the LSWSI (1MC12-EKF-EV-REP-CS10-000106) and the Fieldwork Change Control Form (1EW03-FUS-EV-FRM-CS06_CL10-000012).
- 3.1.2 The works adhered to guidance provided by the Chartered Institute for Archaeologists (CIfA) Code of Conduct (CIfA 2014a), the Standard and Guidance for Archaeological Excavation (CIfA 2014b), and the Creation, Compilation, Transfer and Deposition of Archaeological Archives (CIfA 2014c).

3.2 Site Works

- 3.2.1 The CIR Area comprised an area totalling c 45m² positioned to target a small section of the extant PRow (Public Right of Way) descoped from the previous works (C25148; 1EW03-FUS-COP-EV-REP-CS06_CL10-000005; 1EW03-FUS-EV-FRM-CS06_CL10-000012). The site works took place between the 6th of May 2024 and the 25th of May 2024.

- 3.2.2 Headland Archaeology carried out archaeological monitoring, strip and record of all main works ground disturbance activities (following Spec C, 1EW03-FUS-EV-REP-C000-009812) comprising:
- the removal of the current PRow surfacing and overburden to formation level;
 - the excavation of overburden and ground works required for the installation of the 1200mm diameter culvert, which may remove structural evidence for the medieval and post-medieval mills, mill race walls and wheel pit;
 - followed by appropriate time and resources allowed for hand excavation and recording of all sub-surface archaeology and masonry unearthed.
- 3.2.3 Archaeological excavation of the PRow surface and overburden was carried out using a mechanical excavator fitted with a ditching (flat blade) bucket under constant archaeological supervision. Identified archaeological features were hand excavated and fully recorded.

3.3 Recording

- 3.3.1 Archaeological recording included, as a minimum:
- The written record of individual context descriptions on appropriate pro forma.
 - Section drawings of the mill structure and its deposits at an appropriate scale (1:10 or 1:20 scale) and located on the relevant plan.
 - Plans at appropriate scales (1:10, 1:20 or 1:50).
 - Digital photographs.
 - A digital site plan showing the location of archaeology investigated in relation to the investigation area, produced using a combination of dGPS and total station.
- 3.3.2 A record of the full extent of all archaeological features as revealed in the investigation was made. These plans were based on digital survey data (digital planning methods shall be agreed in advance with the Employer). The final deliverables are supplied in an Esri format and adhere to standards set out in the Cultural Heritage GIS Standard (HS2-HS2-GI-SPE-000-000004).
- 3.3.3 The photographic record was in digital format, captured by cameras with a minimum sensor size of 10 megapixel, resulting in high resolution TIFF (uncompressed) images. Photographs illustrate both the detail and context of the principal archaeological features discovered. In addition, appropriate record photographs were taken to illustrate work in progress. All photographic records include information detailing: site name and number/code, date, context, scale and orientation.
- 3.3.4 All paper and digital records made during the course of the Archaeological Recording, and the treatment of artefacts and environmental remains, were reviewed

continuously. Record checking and collation were completed at regular intervals, as appropriate, and before an area was considered complete.

3.4 Reporting and Archives

- 3.4.1 All post-excavation archaeological reporting was completed by Headland Archaeology in accordance with the Section 4 of the Technical Standard for Historic Environment Investigations (HS2-HS2-EV-STD-000-000035) and relevant ClfA standards and guidance.
- 3.4.2 The physical and digital archive contains records, drawings and photographs, and will be collated in line with the London Archaeological Archive and Research Centre (LAARC), Museum of London, Standards for the Deposition of Archaeological Archives, and the HS2 tech standards for Digital (HS2-HS2-EV-STD-000-000040) and Physical (HS2-HS2-EV-STD-000-000039). Until the final location of the project archive has been confirmed by the Employer, the site archives will be secured and suitably stored.
- 3.4.3 All data will be in accordance with the Geographical Information System Standards (HS2-HS2-GI-STD-000-000002) and the Cultural Heritage GIS specification (HS2-HS2-GI-SPE-000-000004).
- 3.4.4 Headland Archaeology will deliver all reports, including illustrations, in accordance with the HS2 Document Management Procedure (HS2-HS2-IM-PRO-000-000004).

4 Stratigraphic Report C25148

4.1 Results of the Construction Integrated Recording

- 4.1.1 The surviving archaeology proved to be consistent with the previous CIR work at C25147 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005) which identified structural remains relating to a watermill, and associated buildings dating to the post-medieval period (Figure 2). The features identified in C25148 included timber and stone structural remains representing two phases of activity associated with the mill (Figure 3). A cobbled surface, a single post-hole, and a modern culvert were also identified.
- 4.1.2 The mill race channel and outflow pond are still present at the southern extent of the Site. Table 2 outlines the structural features present on site

Structure number	Type	Associated construction cut
10012	Timber Beam	[10013]
10015	Timber Beam	[10013]
10027	Timber Beam	No Construction cut identified
10028	Timber Beam	No Construction cut identified
10007	Stone Wall	[10008]
10017	Stone Wall	[10016]
10004	Modern culvert	[10003]

10022	Cobbled surface	[10023]
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Table 2: Overview of structural features.

The Mill House and Race

- 4.1.3 A series of timber beams and stakes, potentially related to the early phase of the mill house construction identified in C25147 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005), were uncovered. These included four well-preserved worked timber beams; (10012), (10015), (10027), and (10028). Adjacent to the timber remains, were two wall foundations (10007) and (10017) (Figure 4).
- 4.1.4 Timber beams (10012) and (10015) were located within construction cut [10013], which was oriented broadly east to west, with a width of 3.7m and a length of 5.6m. The construction cut was 0.79m deep and had a flat base with sloped sides. A fragment of 15th century pottery was recovered from the packing fill of the construction cut [10013], (10014). No construction cut was identified for timber beams (10027) and (10028).
- 4.1.5 Timber beam (10012) was oriented east to west and had a length of 3.5m and a width of 0.3m. Timber beam (10015) was located at the eastern extent of (10012), was oriented north to south, and had a length of 2.3m, and a width of 0.3m. At the northern extent of (10015) was timber beam (10027) which was oriented east to west and had a length of 1m and a width of 0.25m. Timber (10015) was overlain by wall (10017) and shown as continuing in Figure 2.
- 4.1.6 The final timber beam (10018) was located at the eastern extent of (10027), was oriented north to south, and had a length of 1.3, and a width of 0.3m. Located approximately 0.5m east of (10027) and (10028) was a collection of oak stakes; (10032), (10033), (10034), (10035), (10036), and (10037), which likely represent driven piles (Figure 5).
- 4.1.7 Adjacent to the timber remains were the remains of two east to west orientated wall foundations: (10007) and (10017). Wall (10007) was the more northerly of the two walls and was located directly south of timber beam (10012). Wall (10007) formed a corner and likely represents the surviving southern wall of the mill building. Wall (10007) measured 0.6m wide, and had a length of 2.9m, with a height of 0.6m. The construction cut for wall (10007) [10008] measured 2.9m in length, with a width of 1.8m, and a depth of 0.6m, and had a flat base and sloped sides. Sherds of 16th century pottery were recovered from the packing fill of the cut.
- 4.1.8 Wall (10017) was located 0.30m south of wall (10007), and measured 0.75m wide, 4.27m long, with a height of 0.25m. Wall (10017) was interpreted as being built to stabilise the edge of the mill race where it narrows. The construction cut for wall (10017), [10016] measured 4.27m in length, with a width of 0.45m, and a depth of 0.55m. The profile of construction cut [10017] was irregular with a curved base and sides.
- 4.1.9 The walls were constructed of four to five courses of large and medium-sized stones, which were bonded with clay (Figure 6). Following recording, all masonry was

removed to investigate if any further structural remains were below, however none were identified.

- 4.1.10 Atop wall (10017) was a single course of bricks, bonded with mortar (10030) (Figure 7). The lowermost layer of bricks formed an arch. These bricks have been interpreted as having supported a bridge that spanned the mill race, which is visible in historic photos.
- 4.1.11 A single post-hole [10010] located at the eastern extent of wall (10007) truncated construction cut [100008]. The post-hole measured 0.3m in diameter and 0.08m in depth with a single fill (10011) of firm brownish-grey fine sandy clay. No other post-holes were identified on site and as such the exact function of the post-hole is uncertain.

Cobbled Surface

- 4.1.12 A cobbled surface (10022) was located to the north of the site approximately 10m north-east of the mill (Figure 8). The cobbled surface measured 2.85m by 1.53m and comprised frequent small stones and a coarse sandy gravel. The surface was located within a shallow cut [10023] which had a depth of 0.15m. Due to the limited excavation area, it is not clear whether [10023] was a deliberate construction cut for cobbled surface (10022) to be set into, or if it was a natural depression, with (10022) being used to consolidate the ground.
- 4.1.13 Above the cobbled surface (10022) were three deposits; (10024), (10025), and (10026). Deposit (10024) comprised of a 0.18m thick mid-brownish grey fine silty clay with frequent angular stones, and ten sherds of post-medieval pottery. Due to the frequent stones, the deposit was interpreted as a layer of destruction debris. Deposit (10025) comprised 0.25m thick sterile mid brownish-grey fine silty clay, which was interpreted as a layer of deliberate backfill or levelling to consolidate the ground. The final deposit in the sequence, deposit (10026) comprised a 0.15m thick mid-reddish grey coarse sand, like (20025) this was also interpreted as a layer of deliberate backfill or levelling.

Modern Culvert

- 4.1.14 Located in the south of the site, directly south of wall (10017), was a linear construction cut [10003] for culvert (10004). The finds from this culvert were dated to c 1919-1960, indicating a modern date and likely relate to when the mill fell out of use.

5 Finds

5.1 Post-Roman Pottery

Paul Blinkhorn

Introduction and quantification

- 5.1.1 The pottery assemblage comprised 25 sherds with a total weight of 295g. With the exception of a single residual Romano-British sherd (weight = 18g), it was all medieval or later.

Methodology

- 5.1.2 The pottery was examined, using 10x magnification, and divided into fabric groups. It was recorded using the conventions of the Milton Keynes Archaeological Unit type-series (e.g. Mynard and Zeepvat 1992; Zeepvat et al 1994) and is summarised below (Table 3).

Fabric code	Description	Sherd Count	Total Wgt (g)	Dating
MS9	Brill/Boarstall Ware	1	10	AD 1200 – 1600.
PM2	Staffordshire Slip-Trailed ware	1	8	17th-18th century
PM8	Red Earthenware,	8	120	16th-19th century
PM22	Staffordshire White Salt-Glazed Stoneware	1	8	AD 1730 – 1800
PM23	Creamware	1	1	AD 1740 – 1880
PM25	White Creamware	8	73	late 18th – 20th century
PM29	Frechen Stoneware	2	20	AD 1550-1750
TLMS9	Late Brill/Boarstall Ware	2	37	15th – 16th century.
RB	Roman sherd	1	18	RB
Total		25	295	

Table 3 Post-Roman pottery quantification

Fabrics and forms

- 5.1.3 The pottery occurrence by number and weight of sherds per context by fabric type is shown in Table 3. Each date should be regarded as a terminus post quem. Most of the pre-modern assemblage consists of plain body sherds although the fragment of MS9 is a handle from a small jug and the sherd of TLMS9 is from the rim of a deep bowl with an internal glaze. These are both typical products of the industry (Mellor 1994).
- 5.1.4 The single sherd of Creamware, from context (10009), is small and in very poor condition. It appears likely to be intrusive and has been treated as such in this report.

Distribution

- 5.1.5 The pottery was recovered from only three stratified contexts – fill (10009) of construction cut [10008] (10 sherds) fill (10014) of construction cut [10013] (one sherd) and fill (10024) of construction cut [10023] (ten sherds), along with four unstratified sherds.

5.2 Metalwork

Rebecca Sillwood

Introduction and quantification

- 5.2.1 The metalwork assemblage consisted of 20 objects (465.5g) including 18 of iron and two of copper alloy. The metal was in poor to good condition and consisted mainly of undatable iron nails.

Methodology

- 5.2.2 The metalwork was examined by eye and with the aid of x-radiography. It was catalogued by count and weight, with spot dates and descriptions produced where possible. Measurements were recorded in millimetres using digital callipers, which were checked for accuracy often. Weight was recorded in grams, to the nearest 0.1g, using digital scales, which were also checked for accuracy frequently using a known weight.
- 5.2.3 The metalwork was subject to x-radiography and this report was written with benefit of these.

Results and observations

- 5.2.4 All of the iron from the site was identified as nails of various form and types, and in varying states of completeness. The two copper alloy finds comprised a probable post-medieval mount (SF4) and a post-medieval button (SF3).

Distribution

- 5.2.5 The feature containing the most nails (14 in total) was construction cut [10008]; one of the copper alloy finds was also recovered from this feature. Construction cut [10016] contained two iron nails, whilst construction cut [10013] only had one nail. A single copper alloy find came from construction cut [10003] and one nail was unstratified.

5.3 Glass Report

Rebecca Sillwood

Introduction and quantification

- 5.3.1 A total of 71 pieces of glass (187.5g) were recovered from this site. The pieces were much fragmented and almost all were likely of post-medieval to modern date.

Methodology

- 5.3.2 The glass was examined by eye and catalogued by count and weight.

Results and observations

- 5.3.3 Most of the glass was comprised of flat window fragments, with 66 sherds in total. Only two probable vessel fragments, two bottle fragments, and one possible jar fragment were found in addition. The window glass was extremely fragmented. The finest and most probably the earliest fragment of glass from this site was part of a decorative base from a vessel which has rigaree design. The vessel is pale green in colour and may be a beaker or similar and perhaps of 17th to 18th century date. The rest of the assemblage comprised bottle fragment and undiagnostic vessels.

Distribution

- 5.3.4 The window glass was concentrated in construction cut [10008] with 55 sherds present in this feature – this is also where the potential earlier piece of fine vessel glass was found. Six pieces of glass were unstratified, six came from post-hole [10010] and one from construction cut [10023].

5.4 Clay pipe

Rebecca Sillwood

Introduction and quantification

- 5.4.1 Two pieces of undiagnostic clay pipe stem (5g) were found in two contexts on this site.

Methodology

- 5.4.2 The clay pipe was examined by eye and catalogued by count and weight.

Results and observations

- 5.4.3 Both fragments were undecorated and can only be broadly dated as post-medieval.

Distribution

- 5.4.4 One piece came from construction cut [10008] and one came from post-hole [10010].

Ceramic Building Material

Sara Machin

Introduction and quantification

- 5.4.5 A total of two complete bricks were recorded weighing a total of 5661g.

Methodology

- 5.4.6 The material was examined by eye and using a 10x hand lens and a brief fabric description is provided below.

Results and observations

- 5.4.7 The bricks are plain rectangular bricks, dimensions are recorded in the database. The bricks are composed of a coarse red-orange fabric with red iron oxides, clay pellets, and occasional flint inclusion. The bricks are stock-moulded and date to the late 18th to mid-19th century though production of this type of brick did persist beyond this date.

5.5 Conservation Report

Rebecca Sillwood

Introduction and quantification

- 5.5.1 The finds assemblage was reviewed with reference to material types, condition and stability in regard to future long-term storage, analysis and illustration requirements. The only parts of the assemblage potentially requiring conservation were the metalwork, though given that all of the metalwork comprised either undiagnostic iron nails or post-medieval copper alloy, it is not thought necessary for this particular assemblage. All other finds are stable and do not require conservation.

Methodology

- 5.5.2 The assessment of the metalwork was based on visual examination and x-radiography. The needs of each object were considered based on their condition,

dating, significance and requirements for further identification, analysis and illustration.

Work required for analysis and illustration

5.5.3 No further work required on any finds type.

Preparation for deposition in archive

5.5.4 The finds archive is packaged appropriately to the various material types but is otherwise stored in temporary containers needed for transport to specialists. It requires packaging in the specific containers required by the relevant receiving body. This work will be undertaken after assessment reporting is completed.

5.6 Finds Archive Summary

Post-Roman pottery

Count	25
Weight	2959
Current location	Headland Archaeology, Silsoe
Packaging	Ziploc bag labelled with permanent marker, boxed within temporary containers
Format	sherds
Current condition	Stable
Processing	Wet-washed
Recording	Recorded to PXA level
Dating	One Roman sherd, the rest medieval to post-medieval
Indexing	To be done
Marking	To be done

Metalwork

Count	20
Weight	465.5g
Current location	Headland Archaeology, Silsoe
Packaging	Ziploc bags, labelled with permanent marker, stored within Stewart box
Format	Finds - small
Current condition	Corroded and in poor condition
Processing	Dried
Recording	Recorded to PXA level
Dating	Undated and post-medieval
Indexing	To be done
Marking	-

Glass

Count	71
Weight	187.5g

Current location	Headland Archaeology, Silsoe
Packaging	Ziploc bags, labelled with permanent marker, stored within Stewart box
Format	Finds - small
Current condition	Stable
Processing	Wet-washed
Recording	Recorded to PXA level
Dating	Post-medieval to modern
Indexing	To be done
Marking	To be done

Clay pipe

Count	2
Weight	59
Current location	Headland Archaeology, Silsoe
Packaging	Ziploc bags, labelled with permanent marker, stored within Stewart box
Format	Finds - small
Current condition	Stable
Processing	Wet-washed
Recording	Recorded to PXA level
Dating	Post-medieval
Indexing	To be done
Marking	To be done

CBM

Count	2
Weight	5661g
Current location	Headland Archaeology, Silsoe
Packaging	Loose – stored within a cardboard box
Format	Finds - medium
Current condition	Stable
Processing	Wet-washed
Recording	Recorded to PXA level
Dating	Post-medieval
Indexing	To be done
Marking	To be done

6 Environmental

6.1 Environmental Assessment

Laura Bailey

Introduction

6.1.1 This report details the assessment of environmental material from three bulk samples, ranging in volume from ten to forty litres. The samples were recovered during Construction Integrated Recording (CIR) works at Chetwode Mill, Chetwode, Buckinghamshire. The works revealed well preserved structural remains associated with the former mill buildings and mill race. A very small amount of animal bone was also recovered during the works and included in this report.

6.1.2 The aims of this assessment are to determine the presence and preservation of any archaeobotanical remains and to evaluate their significance and potential for enhancing the environmental and economic interpretation of the site.

Methodology

6.1.3 Samples were processed using a Siraf-style water floatation system. The floating material (flot) was collected using a 250µm mesh and the residue (retent) a 1mm mesh. Both fractions were air-dried, and the heavy residue was sieved at 10mm, 5mm and 1mm and then sorted for the recovery of finds and environmental remains. Once dried, the flots were scanned using a binocular microscope at magnifications up to x60.

6.1.4 Macro-botanical identifications were carried out with reference to standard catalogues (Cappers et al 2012 and Jacomet 2006) and using modern reference material. Nomenclature for economic plants follows Van Zeist (1984) and for other plant taxa follows Stace (1991).

6.1.5 Molluscs were identified with reference to Kerney (1999), with habitat information obtained from Evans (1972).

Results

6.1.6 The results of the assessment are presented in Appendix 2 (Environmental Results).
Charred plant remains

6.1.7 A single grain of emmer wheat (*Triticum dicoccum*) was recovered from the fill (10009) of construction cut [10008]. The grain was in good, unabraded condition.

Uncharred wild taxa

6.1.8 A small number of untransformed plant remains were recovered from two samples. A single bogbean (*Menyanthes trifoliata*) was present in fill (10031) of construction cut [10013] and elder seeds (*Sambucus nigra*) were recorded in fill (10009) of construction cut [10008]. Both samples also contained plant matter, and it is likely that the seeds and plant matter were preserved by waterlogging in an anoxic environment.

Charcoal

- 6.1.9 Charcoal was observed in contexts (10009) and (10011). A small twig fragment was recorded in context (10009). The charcoal fragments were generally comminuted and abraded, suggesting that they were likely incorporated into the features by natural processes, such as windblow.

Molluscs

- 6.1.10 Shells of terrestrial and freshwater molluscs were present in all three samples. Fill (10009) of construction cut [10008] contained a significant number of freshwater molluscs, although the overall species diversity was generally low. Shells and opercula of *Bithynia* sp. were found alongside *Lymnaea* cf. *peregra*, *Planorbis* sp., and shells of the obligatory marsh species *Succinea* sp. *Bithynia* sp. favours muddy-bottomed environments with dense aquatic plant growth (Kerney 1999, 39). *Planorbis* sp. is an air-breathing freshwater snail that can inhabit a wide range of freshwater habitats and is typically found in shallow, standing freshwater (Kerney 1999). Terrestrial snails in deposit (10009) were represented by shells of *Cochlicopa lubrica*, a catholic species common in all kinds of moderately damp, sheltered locations (Kerney 1999, 81).
- 6.1.11 Contexts (10011) and (10031) also contained shells of *Bithynia* sp. The sample from fill (10011) of posthole [10010] additionally included shells of *Vallonia* sp. and *Discus rotundatus*. *Vallonia* sp. is typically an open-country species frequently found in short grassland habitats. *Discus rotundatus* is nearly ubiquitous, inhabiting various moderately moist and sheltered locations. The specimens are in excellent condition, with many shells retaining their surface structure and colouration, suggesting they may be intrusive within the contexts from which the samples were taken.

Wood

- 6.1.12 Wood was present in all three samples. Notably, a large fragment of wood measuring 12.5cm x 0.04cm x 0.02cm was recovered from fill (10031) of construction cut (10013). It is likely the wood was preserved by waterlogging.

Other

- 6.1.13 A small number of puparia were recorded in fill (10009) of cut [10008]. They were in excellent condition and are likely to be modern intrusions.

Animal bone

- 6.1.14 Vertebrate remains (0.5 g) extracted from the residue of sample <001>, taken from fill (10009) of cut [10008], included a well-preserved ulna of a mouse/vole and some tiny indeterminate fragments. A small amount of hand-collected bone (9 g) was also recovered from fill (10009) and comprised a fragment of large (cattle-sized) mammal rib and an unfused metapodial of a juvenile pig. Unstratified remains (14 g) included a small piece of large mammal vertebra and sheep-sized mammal rib fragments.

Discussion

- 6.1.15 The environmental assemblage from Chetwode mill was comparatively sparse, yet context (10009) yielded a large number of freshwater molluscs. The presence of these

molluscs indicates that this feature was likely damp and waterfilled. It is probable that the cereal grain in context (10009) and the charcoal in all three samples were incorporated into the features by natural mechanisms such as windblow. The small amount of animal bone represents domestic animals: pig, and most likely cattle and sheep. The small mammal ulna was relatively well-preserved and may be intrusive.

Summary

- 6.1.16 The environmental assemblage from Chetwode mill contained several freshwater molluscs that attest to the wet nature of the former mill site.

6.2 Timber Assessment

Michael Bamforth

Introduction

- 6.2.1 This report has been compiled by Michael Bamforth (MB) on behalf of Headland Archaeology (HA) and aims to consider the potential for further analysis, in terms of woodworking technology, woodland reconstruction, decay analysis, species identification, illustration, dendrochronology and conservation and retention, for an assemblage of wood recovered during Construction Integrated Recording at Chetwode Mill, Buckinghamshire. The wood was recorded on site by the author.
- 6.2.2 This report considers twelve oak timbers encountered during this phase of work, whilst also providing details of two oak timbers encountered during a previous phase (Bamforth 2022). A total of six large, horizontally set, oak timbers, four of which were encountered during this phase of CIR, form a probable base plate for a wooden structure, assigned to the post-medieval period. Two of the timbers are aligned east/west, along the long axis of the structure (10012 and 10027), whilst two sit perpendicular to this, towards the east end (10015 and 10028). The principal timbers encountered during this phase are all jointed together and seem to have been assembled from east to west. A split oak stake 10021 sits within the horizontal timbers, retaining 10015. A group of seven large, oak uprights, probably driven piles, are aligned roughly north/south, parallel and to the east of horizontal timber 10028. The west end of 10012 was encountered during the previous phase (where it was numbered 249) and the remains of one of the timbers encountered during the earlier phase (probably 250) sat at the south-west extent of the excavation, aligned north/south.
- 6.2.3 A previous phase of the investigation considered: "two timbers recovered for detailed recording (250 and 251). A third timber was partially exposed but was not removed (249). The timbers were all sat in the base of steep sided, flat bottomed, construction cut 248, a 2.2m length of which was revealed, measuring 1.2m wide and 0.82m deep. The timbers were packed with compacted clay 252 and 266. Timbers 250 and 251 were aligned north/south with the southern ends truncated by cut 182 of mill race wall 184. Timber 249 was aligned east/west, was only partially exposed and was not removed. The timbers have been interpreted as the north-western corner of a timber structure on the mill race, suggested to be part of the watermill structure to connect

the drive mechanism of the watermill to the waterwheel. The timbers have been assigned to the post-medieval period, based on the presence of pottery in the clay packing” (Bamforth 2022: 1).

- 6.2.4 The material was all situated in waterlogged deposits which created the anaerobic conditions necessary for organic preservation. A full catalogue is provided as Appendix 3.

Methodology

- 6.2.5 This document has been produced in accordance with Historic England guidelines for the treatment of waterlogged wood (Brunning and Watson 2010). The system of categorisation and interrogation developed by Taylor (1998; 2001) and the condition scale developed by the Humber Wetlands Project (Van de Noort et. al. 1995) have been adopted within this report. Material was identified as *Quercus* sp. (oak) using a x10 hand lens, following anatomical guides (Schoch et al. 2004; Wheeler et al. 1989) and modern reference material.

Condition

- 6.2.6 The assemblage scores from poor to good for condition. Half the assemblage (50%) sits at or above the threshold for meaningful technological analysis, which is set at moderate (Table 44). The cluster of uprights at the east of the structure were all in poor condition, reflecting that only the degraded tops were exposed.
- 6.2.7 Condition was moderate at the west end of the structure, with the wood encountered during the earlier phase in moderate condition, with intrusive roots causing extensive damage and fragmentation. Condition improved towards the slightly lower, east, end of the structure, where the bottom faces of the horizontal timbers were in good condition. The upper surfaces were degraded and desiccated, with the wood becoming increasingly friable and fragmented towards the western extent.

Condition score		Museum conservation	Technology analysis	Woodland management	Dendro-chronology	Taxonomic identification
5	excellent	yes	yes	yes	yes	yes
4	good	no	yes	yes	yes	yes
3	moderate	no	yes / no	yes	yes	yes
2	poor	no	yes / no	yes / no	yes / no	yes
1	very poor	no	no	no	no	yes / no
0	non-viable	no	no	no	no	no

Table 4: Condition scoring system (After Van de Noort et. al. 1995: Table 15.1)

Range and Variation

- 6.2.8 The material has all been identified as oak and is all classed as timber – larger material, derived from parent logs with a diameter an excess of 150mm, and generally

formed of the trunks of trees. No woodworking waste (such as woodchips or timber debris / off-cuts) was encountered.

- 6.2.9 All the horizontal timbers from the current phase have been hewn into shape and the ends, where not degraded, have been cut to length with an axe. The method of conversion of the timbers from the previous phase is uncertain.
- 6.2.10 The first horizontal timber to be laid down appears to be 10028, sitting perpendicular to the axis of the structure and aligned north/south. This boxed heart timber measures 1700 x 300 x 350mm. The south end terminates in a halving lap cut from the underside of the timber, with a recessed slot cut in the south-east corner. The north end terminates in a halving lap, cut into the top face of the timber, jointed to a halving lap cut into the underside of 10027, which is secured by a centrally located, round, oak heartwood peg with a diameter of 40mm. The peg hole is blind within 10028. The upper face of 10028 has a large, blind, rectangular mortise at the north end.
- 6.2.11 10027 is aligned east/west, is a boxed heart and measures 1040 x 240 x 200mm. The east end terminates in a halving lap, which sits over 10028 and is pegged in place. A roughly cut halving lap at the west end sits under 10015.
- 6.2.12 Timber 10015 is aligned north/south, is a boxed heart and measures 1900 x 230 x 300mm. The south end is degraded, and the north end terminates in a halving lap, which sits over 10027. A rectangular, blind mortise is cut into the west edge, at the north end, to receive the tenon of 10012.
- 6.2.13 Timber 10012 is aligned east/west, is a boxed half and measures 3640 x 280 x 200mm. The west, cross-cut end was encountered during the previous phase of works, numbered as 249. The east end terminates in a full width tenon, jointed into the blind mortise in the edge of 10015.
- 6.2.14 The previous phase of investigation encountered a pair of timbers aligned north/south, sitting to the west of 10012 / 249, but not jointed together. Timber 250 is radially faced and measured 1700 x 180 x 110mm, both ends are degraded. Timber 251 is a partially boxed quarter, cross-cut at the north end and degraded at the south end. Timber 251 measures 1850 x 180 x 110mm. It is possible that 250 and 251 originally formed part of the same timber, which had fractured in the ground due to the action of intrusive roots.
- 6.2.15 Upright 10021 sat against the east edge of the north end of horizontal 10015, retaining it in place. The upright is a modified radial quarter, probably split into shape. The top is degraded, and the base was not extracted. The cross section of 10021 measures 90 x 50mm.
- 6.2.16 A group of seven uprights were encountered, aligned roughly north/south, to the east of the horizontal timbers. The tops of all are degraded. The uprights were not extracted, but probably represent driven piles. Conversions range from boxed halves (10032, 10033 and 10034), though boxed quarters (10037 and 10038) to tangentially boxed items (10035 and 10036). The method of conversion is unclear. Cross sections range from 120 x 120mm to 280 x 180mm.

7 Conclusions

- 7.1.1 The results of the excavation at C25148 fit in well with those from the previous excavations at the adjacent site C25147 and provide further evidence for this mill complex spanning the medieval to post-medieval periods. Archaeological features identified during excavations at C25148 included structural features consisting of both timber beams and stone walls, a cobbled surface, a single post-hole, and a modern culvert.
- 7.1.2 The features uncovered represent an extension of activity identified during earlier excavations at C25147 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005). A mill at Chetwode is mentioned in the Domesday book (compiled 1086) but no evidence for earlier activity was found during the excavations at C25148 or C25147. The ceramic assemblage from ditches excavated at C25147 was dated from the 13th – 15th centuries. This suggests that the initial construction of the mill at this location may relate to the mill recorded in documentary sources at the Chetwode estate in 1224 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005, 43).
- 7.1.3 A series of timber beams were identified defining the northwest corner of a structure, potentially housing the mill's waterwheel, located adjacent to the PRoW. The excavations at C25148 uncovered further timbers defining a structure with 15th-16th century pottery recovered from the construction cuts. This matches the assemblage recovered from deposits associated with the timbers in C25147. The timber structure appears to date to the 16th century located adjacent to the mill race.
- 7.1.4 A secondary phase of development was indicated by two stone walls (10007) and (10017) constructed of four to five courses of large and medium-sized stones bonded with clay. Wall (10007) formed a corner and may represent the surviving southern wall of the mill building. Wall (10017) was interpreted as being built to stabilise the edge of the mill race where it narrows. Mill race walls were identified at C25147 forming part of the post-medieval development of the mill designed to funnel water to the waterwheel (1EW03-FUS_COP-EV-REP-CS06_CL10-000005, 44). The walls are substantial constructions with those identified at C25148 potentially representing an earlier reinforcement of the mill race.
- 7.1.5 Post-medieval activity in C25148 was identified with a single course of bricks located atop wall (10017) correlating to a bridge that spanned the mill race visible in historic photos. A linear area of cobbles was also identified to the north-east from which post-medieval pottery was recovered. This was capped by a series of destruction deposits. The cobbled surface may relate to activity associated with the post-medieval building identified in C25147 adjacent to the mill (1EW03-FUS_COP-EV-REP-CS06_CL10-000005).
- 7.1.6 Historic sources document the development of the mill with the 1638 Chetwode Manor estate plan showing the location of the mill, millrace, channels and outflow

pond. The layout matches that depicted on the 1888 OS map. Historic photographs from the 1910s and 1930s, and historic maps indicate that the watermill building fronting the mill race, with outbuildings on the northern side extending up to the northern bypass channel. The historic photographs of the mill show it to be constructed on stone with a thatched roof, and no evidence of a watermill mechanism in the southern facing wall. The mill was demolished in the 1940's. During a walkover survey in 2021 undertaken as part of the desk-based assessment (1EW03-FUS-EV-REPCSo6_CL10-007824), features of the mill including the leat, mill race, and masonry which would have held the mill wheel were identified, suggesting that the mill would have been of an 'undershot' design.

- 7.1.7 The results of the excavation have limited potential to contribute to GWSI: HERDS objectives KC33, KC34, and KC40.

8 Part B Assessment of potential

8.1 Assessment and interpretation of the stratigraphic results

- 8.1.1 The stratigraphic analysis of the site is complete, with the features having been described in detail, with the evidence for the artefactual and environmental assessment incorporated into the narrative. The results of the excavation have limited potential to contribute to GWSI: HERDS objectives KC33, KC34, and KC40
- 8.1.2 The results of this excavation should be incorporated with previous work at Chetwode Mill C25147 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005).
- 8.1.3 All records have been digitised and processed in line with HS2 Standards and Guidance.
- 8.1.4 All finds and environmental samples have been processed and assessed. No further processing work is required. Individual material-specific methodologies are detailed below.

8.2 Potential of the results

The finds assemblage

Post-Roman pottery

- 8.2.1 The assemblage is small and of little further potential. It should be considered alongside the rest of the finds assemblage.

Metalwork

- 8.2.2 The metalwork comprises only undated iron nails and two copper alloy post-medieval finds of standard type. This assemblage has little further potential.

Glass

- 8.2.3 The glass assemblage is mainly of standard type and of post-medieval to modern date – there is, however, a single piece of finer and earlier vessel glass that is of great

interest. This object, though fragmentary, is the standout piece from this entire finds assemblage and a small amount of analysis time should be allocated to this object with comparisons to local sites.

Clay pipe

- 8.2.4 Only two undiagnostic pieces of clay pipe were recovered from the site; these have no further potential for analysis.

Ceramic Building material

- 8.2.5 The two bricks from the site are fully recorded and have little further potential for analysis. They provide some dating evidence for the structure they were recovered from.

The environmental assemblage

- 8.2.6 The environmental assemblage has limited potential. The data, however, should be considered alongside other findings from Chetwode Mill C25147 (1EW03-FUS_COP-EV-REP-CS06_CL10-000005).

The timber assemblage

Woodworking technology

- 8.2.7 Where the method of conversion is apparent, the timbers have been hewn into shape, or in one case (upright 10021), split. The majority of the wood has been boxed in various forms. Additional evidence for working shows the use of an axe to cut the ends to length, and an auger to drill the peg hole. Where evidence for tooling remains, it shows the joints being cut with an axe. However, it is likely that additional tools were used, particularly to cut the mortise holes and the recessed slot. There is no evidence for sawing.
- 8.2.8 The arrangement of unused joints suggests the structure continued to the south, as evidenced by the halving lap and recessed slot in the south-east end of 10028, describing this timber originally being jointed to another, that is no longer present. Similarly, the blind mortise in the top face of the north-west end describes an upright timber being jointed into the top 10028, which is no longer present.
- 8.2.9 Given the timbers location adjacent to a mill race, it is likely that the timbers form the base of a mill-house. It would be of value to consider both the layout of the timbers, and the style of the woodworking technology employed in relation to other mill-houses of similar date. Mills are well represented from the post-medieval period, in terms of standing buildings, documentary sources and archaeological remains (Historic England 2018; Syson 1980; Watts 2002).

Woodland reconstruction and species identification

- 8.2.10 The wood has all been identified as oak, which will grow on damp soils and splits readily in both planes (Gale and Cutler 2000). Oak occurs ubiquitously throughout the prehistoric and historic periods as an excellent structural timber.
- 8.2.11 The timber used is of moderate quality, with some knots and side branches present and occasional twists to the grain. Growth rates are moderate, and where recorded vary from c.3-5mm per year. The timbers are derived from relatively large parent logs, most probably the trunks of moderate to large trees, with reconstructable original diameters varying from >170mm to >530mm.
- 8.2.12 A brief consideration of the timber selected will provide some limited insights into the type of woodland that may have been exploited.

Decay analysis

- 8.2.13 As the wooden remains and the burial context have been excavated, it does not seem necessary to carry out a programme of decay analysis on the material to secure baseline data regards the preservation of the waterlogged wood.

8.3 Recommendations for further work

Stratigraphic analysis

- 8.3.1 During the analysis stage of the post-excavation process, it is recommended that a detailed comparison is undertaken between the results from the current works and the larger body of data related to Chetwode Mill and its surrounding landscape. Historical sources provide a detailed picture of the lifecycle of the mill which may be further supported through the application of dendrochronological analysis of the timber. This may aid in ascertaining the fell date of the timber, the construction of the mill and the potential reuse of structural elements.

The finds assemblage

- 8.3.2 The following are site specific broad proposals based on the potential of the assemblage. These may vary depending on priorities later identified in the UPD.

Post-Roman pottery

- 8.3.3 No further work is recommended on this assemblage in isolation. There are no sherds recommended for illustration.

Metalwork

- 8.3.4 No further work is recommended on this assemblage.

Glass

- 8.3.5 A small amount of further analysis should be undertaken on the fine vessel fragment recovered from this site. This would involve searching for parallels, closer dating, and illustration.

Clay pipe

8.3.6 No further work is recommended on this assemblage.

Ceramic Building material

8.3.7 No further work is recommended on this assemblage.

The environmental assemblage

- 8.3.8 No further environmental work is recommended. A summary of this report should be included in any further publications.

The timber assemblage

- 8.3.9 It is suggested that the dendrochronological samples are submitted for dating (section 8.4). Should this be unsuccessful, it may be desirable to submit one or more radiocarbon samples.
- 8.3.10 It is suggested that both the layout of the timbers and the woodworking technology employed are considered against other mill-houses of a similar date.
- 8.3.11 It is suggested that the type of woodland that may have been exploited is briefly considered.
- 8.3.12 Suggested tasks can be summarised as:
- Dendrochronological analysis of four samples.
 - 4 x Edge and face drawings re-drafted for analysis report.
 - Layout of timbers and woodworking technology considered against published parallels.
 - The type of woodland exploited briefly considered.
- 8.3.13 The principal timbers have been fully recorded and draft edge and face drawings prepared. It is suggested that figures of the edge and face drawings are produced for the analysis report.
- 8.3.14 Once removed from an anoxic burial environment, waterlogged wooden remains will begin to break down and decay. It is therefore recommended that the suggested dendrochronological dating is completed as soon as practically possible.

8.4 Scientific dating potential

Radiocarbon Dating

- 8.4.1 No material suitable from AMS (Accelerator Mass Spectrometry) was recovered from Chetwode mill.

Dendrochronology

- 8.4.2 Material can be considered for dendrochronology if it is oak and has more than 50 growth rings. If sapwood is present then if a cross match is achieved, a felling date can be estimated. If the bark edge is present then if a cross match is achieved, the felling date is known. It is also sometimes possible to trace the movement of timber via dendro-provenancing of cross matched samples.
- 8.4.3 Although part of a separate phase, two dendrochronological samples were recovered from the 2022 intervention, from timbers 250 and 251 (Table 5). These samples were not processed at the time due to a lack of sapwood (which would preclude estimation

of a felling date, even if a cross match was achieved). However, replication is often the key to success with dendrochronology and, furthermore, the two samples from the 2022 intervention also have longer ring sequences than those recently recovered. It is therefore suggested that if the two samples recently recovered are submitted (10015 and 10028), it would be desirable to submit these alongside 250 and 251, which would increase the likelihood of success. If the dendrochronology is unsuccessful, it may be desirable to submit one or more radiocarbon samples to date the structure. The sample from 10027 is the most suitable, having been recovered from the sapwood. Sapwood could also be recovered from the two dendrochronological samples which include this material (10015 and 10028).

Number	Phase	Setting	Samples
250	1C21CWMCI	Horizontal	Dendro, c.65 rings
251	1C21CWMCI	Horizontal	Dendro, c.85 rings
10012	EKFB	Horizontal	C14
10015	EKFB	Horizontal	Dendro, c.60 rings, sapwood
10027	EKFB	Horizontal	C14, sapwood
10028	EKFB	Horizontal	Dendro, c.45 rings, sapwood
10033	EKFB	Vertical	C14
10036	EKFB	Vertical	C14

Table 5: Samples available for dating

8.5 Retention and discard proposals

8.5.1 Retention and discard proposals are recorded in the finds data tables. The proposals are summarised in Table 6.

Material	Total count	Total weight (g)	Retain	Discard
Post-Roman pottery	25	295	None	All
Metalwork	20	465.5	None	All
Glass	71	187.5	1 sherd (8g)	70 (179.5g)
Clay pipe	2	5	None	All
CBM	2	5661	None	All

Table 6: Summary of retention/discard proposals

8.5.2 The environmental assemblage does not warrant archiving. It is proposed that the assemblage, including the animal bone, be discarded.

8.5.3 The timbers themselves were discarded on-site. It is suggested that the sub-samples recovered are retained until completion of the analysis phase, and then discarded. It is suggested that the analysis report and the site records form the physical archive.

9 Evaluation of the methodology employed, and results obtained

- 9.1.1 The Construction Integrated Recording (CIR) at C25148 successfully established the extent, nature and complexity of the archaeological features. The comparative assessment of the excavation data to that gathered from previous phases of work has allowed for the extent and nature of the mill and related features to be explored.
- 9.1.2 The identified features were generally clear and well-defined. The excavation methodology is judged to have been a suitable method of recording.
- 9.1.3 All archaeological remains uncovered within the Site (C25148) were investigated and recorded in line with the project plan and LSWSI.
- 9.1.4 The assessment of the artefactual and environmental assemblages has provided insights into the date of features. The limited proposals for further analysis have been presented in Section 8.3 of this report.
- 9.1.5 The stratigraphic assessment combined with the results of the assessment of the artefactual and environmental assemblages has allowed for the extent and significance of the surviving archaeological remains to be determined.

10 Publication and Dissemination Proposals

- 10.1.1 Publication of the results of this fieldwork will be undertaken in a method and at an appropriate time as determined by HS2 Ltd.
- 10.1.2 All archaeo-environmental samples have been treated and conserved in accordance with the UKIC's document, Guidelines for the Preparation of Excavation Archives for Long Term Storage (1990). Should further work be required, this archive along with any further archive will be compiled into an ordered, indexed and internally consistent Site archive that will be prepared and deposited in accordance with Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation – Revised Edition (Archaeological Archives Forum 2011). A summary of information from the project has been entered into the OASIS online databases of archaeological projects in Britain.

11 References

Title	Reference
AWH -Project Plan for Archaeological monitoring and Construction Integrated Recording – Route Wide	1EW03-FUS-EV-REP-C000-009812
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HS2 Technical Standard: Specification for historic environment investigations	HS2-HS2-EV-STD-000-000035
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12 Glossary of Terms

12.1.1 The following terms have been used in this report:

- **Archaeological Contractor** – the organisation undertaking the specific historic environment works for the Contractor.
- **Contractor** – the organisation undertaking the Enabling Works on behalf of the Employer.
- **Detailed Desk Based Assessment (DDBA)** – analytical document that builds on the information gathered previously in the Environmental Statement to address particular issues, questions or uncertainties within a given area. It may be developed to provide a more detailed understanding of the resource in an area to inform design development or construction programming.
- **Employer** – HS2 Ltd, the organisation responsible for delivery of HS2 Phase One Scheme and all terms and conditions, policies, procedures, and payments
- **Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS)** – the framework for delivering all historic environment investigations undertaken as part of the HS2 Phase 1 programme.
- **Location** – a specific HS2 worksite or group of worksites that are being addressed as a combine historic environment investigation programme of assessment, evaluation and investigation.
- **Project Plans** – specification document for each specific package of activity (e.g. a survey, desk-based assessment, excavation, recoding project). The plans would respond to the Specific Objectives set out in the GWSI: HERDS and be delivered within an agreed budget.
- **Works** – the specific historic environment assessment, evaluation or investigation works at each location.

13 Appendices

13.1 Appendix 1: Site and Context Registers

Context Register

Context no	Parent Context	Interpretation	Description	Dimensions (m)
10001	10001	Topsoil	Compact mid greyish brown silty fine sand. Contained frequent plant remains	
10002	10002	Subsoil	Compact mid orangish brown coarse sandy gravel	
10003	10003	Construction cut	Linear construction cut for culvert 10004. Fills indicate a modern date, c 1919-1960, likely relating to when the nearby mill fell out of use	5.2 x 5 x 1.52
10004	10003	Culvert	Concrete culvert - modern.	5 x 0.7 x 0.3
10005	10003	deliberate backfill	Firm mid grey brown coarse sandy clay. Contained moderate pottery, rare industrial waste, and frequent brick.	0.5
10006	10003	levelling layer	Plastic mid grey brown fine sandy clay. Contained frequent brick	0.12
10007	10008	Wall	Stone wall with a corner. Surviving southern wall of the mill building. Comprised 4-5 courses of large and medium sized stones. Wall seems to sit above the beams 10012 and 10015	2.9 x 0.6 x 0.6
10008	10008	Construction cut	Construction cut for wall 10007. Cut was truncated by Cotswold Archaeology excavation	2.9 x 1.8 x 0.6
10009	10008	Packing	Compact mid greyish brown coarse clay sand. Contained occasional pottery, rare fired clay, rare clay tobacco pipe, and occasional glass	0.6
10010	10010	Post-hole cut	Post-hole	0.32 x 0.31 x 0.08
10011	10010	Post-hole fill	Firm brownish grey fine sandy clay. Contained frequent brick	0.09
10012	10012	Wooden beam	Wooden beam	
10013	10013	Construction cut	Construction cut of walls	5.6 x 3.7 x 0.79
10014	10013	Fill	Wall built to stabilise the edge of the mill race where it narrows	
10015	10013	Wooden beam	Wooden beam	
10016	10016	Construction cut	Construction cut of walls	4.27 x 0.45 x 0.55
10017	10016	Wall	Wall	4.27 x 0.75 x 0.25
10018	10016	Fill	Firm light yellowish brown silty clay	0.5
10019		Void	Void	

10020	10016	Fill	Fill of construction cut	
10021	10016	Timber stake	Timber stake	
10022	10022	Surface	Cemented mid brownish grey coarse sandy gravel	2.65 x 1.53 x 0.14
10023	10023	Cut	Construction cut	1.47 x 0.15
10024	10023	Destruction debris	Firm mid brownish grey fine sandy clay. Contained moderate pottery and rare leather/textile.	0.18
10025	10023	Deliberate backfill	Firm mid brownish grey fine sandy clay. Contained moderate plant remains	0.25
10026	10023	levelling layer	Compact mid reddish grey coarse sand. Contained frequent brick	0.15
10027		Missing sheet	Firm mid yellowish brown gravelly clay	
10028		Missing sheet		
10029	10013	Packing	Firm mid yellowish brown silty clay. Contained rare marine shell, rare pottery, and rare clay tobacco pipe	0.6
10030	10030	Structure	Line of bricks built directly on top of the mill race wall 10017. The structure is visible in historic photographs	
10031	10013	Packing	Plastic mid blueish grey silty clay. Contained occasional charcoal	0.1
10032	10032	Timber stake	Timber stake, part of stake cluster	
10033	10033	Timber stake	Timber stake, part of stake cluster	
10034	10034	Timber stake	Timber stake, part of stake cluster	
10035	10035	Timber stake	Timber stake, part of stake cluster	
10036	10036	Timber stake	Timber stake, part of stake cluster	
10037	10037	Timber stake	Timber stake, part of stake cluster	
10038	10038	Timber stake	Timber stake, part of stake cluster	

Drawing Register

Drawing No.	Section	Contexts Shown	Description
1	S	10008, 10007, 10010	East facing section of post-hole and construction cut of wall.
2	S	10003	North-west facing section of culvert cut.
3	S	10022, 10023	South-east facing Rep section of surface and possible pit.
4		10007, 10012, 10015, 10017	Photogrammetry.
5		100012, 100015, 100027	Timber beam plan by wood specialist.
6	S	10016, 10030	Wrap section of wall, bridge and underlying deposits.

Photographic Register

Photo Number	Digital Image No	Contexts shown (main target first)	Description	Facing
100001	4973	NA	Pre-ex condition shots	SE

100002	4974	NA	Pre-ex condition shots	SE
100003	4975	NA	Pre-ex condition shots	E
100004	4976	NA	Pre-ex condition shots	N
100005	4977	NA	Pre-ex condition shots	N
100006	4978	NA	Pre-ex condition shots	NE
100007	4979		ID SHOT 07/05/2024	NA
100008	4980		Pre-ex condition shots	SW
100009	4981		Pre-ex condition shots	NE
100010	4982		Progress stripping made ground	NE
100011	4983		Progress stripping made ground	NE
100012	4984		Post strip Southern end	NE
100013	4985	10003	Culvert plan	NE
100014	4986	10003	Culvert and wall	SW
100015	4987	10003	Culvert and wall	SW
100016	4988	10003	NW facing section of stepped culvert cut	SE
100017	4989	10003	NW facing section of stepped culvert cut	SE
100018	4990	10003	Plan of culvert cut	SE
100019	4991		Site condition shots	SE
100020	4992		Site condition shots	SE
100021	4993		Site condition shots	SE
100022	4994		Site condition shots	SE
100023	4995	10007, 10008	Pre-exc of wall	SE
100024	4996	10007, 10008	Pre-exc of wall	NW
100025	4997	10007, 10008	Pre-exc of wall	SW
100026	4998	10023	Test pit plan	NE
100027	4999	10023	south-east facing section of test pit	NW
100028	5000	10023	north-west facing section of test pit	SE
100029	5001	10023	north-west facing section of test pit	SE
100030	5002	10010	south-east facing section of fence post and wall	NW
100031	5003	10010	Fence post and wall	NW
100032	5004	10010	Location of fence post and wall	NW
100033	5005	10010	south-east facing section of fence post hole	NW
100034	5006	10010	Plan of fence post and wall	NW
100035	5007	10010	Location of fence post and wall	NW
100036	5008	10022	Plan of stone surface	NW
100037	5009	10022	Plan of stone surface	NE
100038	5010	10022	Plan of stone surface	SV
100039	5011	10022	south-east facing section of stone surface	NW

100040	5012	10022	south-east facing section of stone surface	NW
100041	5013	10022	south-east facing section of stone surface	NW
100042	5014	10022	south-east facing section of stone surface	N
100043	5015	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	N?
100044	5016	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	
100045	5017	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	
100046	5018	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	
100047	5019	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	
100048	5020	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	
100049	5021	10007, 10008, 10012, 10015, 10017	Area shot of walls and beams	
100050	5022	10007	Long profile of wall	S
100051	5023	10007	Long profile of wall	S
100052	5024	10015, 10017	Profile of beam under wall	S
100053	5025	10017, 10007, 10015	Oblique of beams and wall	W
100054	5026	10007, 10012	North facing section of beams and wall	S
100055	5027	10012, 10015, 10007, 10017	Plan of beams	W
100056	5028	10012, 10015, 10007, 10017	Plan of beams	W
100057	5029-5125	Photogrammetry	Photogrammetry	
100058	5126	10029, 10031	South facing section of wall removal	N
100059	5127	10027, 10028, 10015	Plan of beams	S
100060	5128	10027, 10028, 10015	Plan of beams	Plan of beams
100061	5129	10027, 10028, 10015	Plan of beams	S
100062	5130	10027, 10028, 10015	Plan of beams	S
100063	5131	10027, 10028	Plan of beams	W
100064	5132	Void		
100065	5133	Void		
100066	5134	10012, 10015, 10027, 10028	Plan of beams	E
100067	5135	10012, 10015, 10027, 10028	Plan of beams	E
100068	5136	10012, 10015, 10027, 10028	Plan of beams	E
100069	5137	10012, 10015, 10027, 10028	Plan of beams	N
100070	5138	Void		
100071	5139	Void		
100072	5140	Void		
100073	5141	Void		
100074	5142	10012, 10015, 10027, 10028	Plan of beams	N

100075	5143	10012, 10015, 10027, 10028	Plan of beams	N
100076	5144	10012, 10015, 10027, 10028	Plan of beams	N
100077	5145	10012, 10015, 10027, 10028	Plan of beams	N
100078	5146	Void		
100079	5147	10012, 10015, 10027, 10028	Plan of beams	N
100080	5148	10012, 10015, 10027, 10028	Plan of beams	N
100081	5149	10012, 10015, 10027, 10028	Plan of beams	NW
100082	5150	10012, 10015, 10027, 10028	Plan of beams	SW
100083	5151	10012, 10015, 10027, 10028	Plan of beams	N
100084	5152	10012, 10015, 10027, 10028	Plan of beams	S
100085	5153	10012, 10015, 10027, 10028	Plan of beams	
100086	5154	10012, 10015, 10027, 10028	Plan of beams	
100087	5155	10012, 10015, 10027, 10028	Possible stake cluster	S
100088	5156	10012, 10015, 10027, 10028	Possible stake cluster	W
100089	5157	10012, 10015, 10027, 10028	Possible stake cluster	W
100090	5158	10012, 10015, 10027, 10028	Possible stake cluster	W
100091	5159	10012, 10015, 10027, 10028	Possible stake cluster	W
100092	5160	10012, 10015, 10027, 10028	Post ex of stakes	SE
100093	5161	10012, 10015, 10027, 10028	Beams West facing section of interior	N
100094	5162	10012, 10015, 10027, 10028	Beams West facing section of interior	N
100095	5163	10015, 10012	West facing section of beams	E
100096	5164	10027, 10028	West facing section of beams	E
100097	5165	10015, 10012	East facing section of beams	W
100098	5166	10015, 10012	East facing section of beams	W
100099	5167	10012, 10015, 10027, 10028	Post ex plan of beams	E
100100	5168	10012, 10015, 10027, 10028	Post ex plan of beams	E
100101	5169	10012, 10015, 10027, 10028	Post ex plan of beams	NW
100102	5170	10027, 10028	East facing section of beams- exterior	W
100103	5171	10027, 10028	East facing section of beams- exterior	W
100104	5172	10027, 10028	East facing section of beams- exterior	W
100105	5173	10027, 10028	East facing section of beams- exterior	W
100106	5174	10027, 10028, 10012	North facing section of beams	S
100107	5175	10027, 10028, 10012	North facing section of beams	S
100108	5176	10017, 10030, 10016	West facing section of wall & possible bridge foundation	E
100109	5177	10017, 10030, 10016	West facing section of wall & possible bridge foundation	E
100110	5178	10017, 10030	Plan of brick line	N
100111	5179	10017, 10030	Plan of brick line	N
100112	5180	Working shot	For wood specialist	E
100113	5181	10032, 10033, 10034, 10035, 10036, 10037, 10038	East facing oblique section of oak piles	E
100114	5182	10032, 10033, 10034, 10035, 10036, 10037, 10038	East facing oblique section of oak piles	E

Finds Register

Find number	Context number	Material Type	Description
1	10009	Iron	Iron nail
2	10009	Iron	Iron nail
3	10009	Copper	Coin (possibly snapped)
4	10005	Copper	Copper decoration (possibly butterfly)
5	10009	Iron	Iron nail
6	10009	Iron	Iron nail
7	10009	Iron	Iron nail
8	10009	Iron	Iron nail
9	10009	Iron	Iron nail
10	10009	Iron	Iron nail
11	10009	Iron	Iron nail
12	10009	Iron	Iron nail
13	10009	Iron	Iron nail
14	10014	Iron	Iron nail
15	10014	Iron	Iron nail
16	10014	Iron	Iron nail
17	10018	Iron	Iron nail
18	10018	Iron	Iron nail

Sample Register

Sample No.	Buckets	Volume	Context	Heavy Clay	Waterlogged	Notes
1	4	400	10009			
2	1	50	10011			
3	4	400	10031	x	x	
4	2	5	10030			
5	1 bag		10027			Oak sapwood taken for 14C dating
6	1 bag		10028			Wood sample taken for dendrochronology
7	1 bag		10015			Wood sample taken for dendrochronology

13.2 Appendix 2: Environmental Data

Context		10009	10011	10031
Sample		1	2	3
Feature		10008	10010	10013
Interpretation		Construction cut for wall	Post-hole	Construction cut
Sample vol processed (l)		40	10	40
Flot Vol (ml)		80	10	10
Sufficient for AMS?		N	N	N
Full analysis?		N	N	N
Cereal grain				
<i>Triticum dicoccum</i>	Emmer wheat	R (1)	-	-
Uncharred plant remains				
<i>Menyanthes trifoliata</i>	Bogbean	-	-	R (1)
<i>Sambucus nigra</i>	Elder	R	-	-
Charcoal				
Charcoal >4mm	Qty	-	-	-
Charcoal <4mm	Qty	F	R	-
Charcoal	Max size (mm)	2	2	-
Molluscs				
<i>Bithynia</i> sp.		D	R	R
<i>Bithynia opercula</i>		O	-	-
<i>Cochlicopa lubrica</i>		D	-	-
<i>Discus rotundatus</i>		-	R	-
<i>Lymnea</i> cf. <i>peregra</i>		R	-	-
<i>Planorbis</i> sp.		D	-	-
<i>Succinea</i> sp.		O	-	-
<i>Vallonia</i> sp.		-	R	-
Indet		-	-	R
Other				
Roots (% of flot)		-	-	-
Charred vesicular material		-	R	-
Wood		R	R	R
Untransformed tree roots		O	O	R
Stem fragments		O	-	-
Plant matter		R	-	F
Arthropod		R	-	-
Puparia		R	-	-
Coal		-	R	-
Scale of abundance: R = rare (0–5), O = occasional (6–15), F = frequent (16–50), A = abundant (51–200), D = Dominant (>200)				
Charcoal: fragments >4 mm in all dimensions may be sufficient for identification and AMS dating *= Suitable for C14 but not recommended				

13.3 Appendix 3: Timber Combined Catalogue

No.	Setting (Horizontal (H), vertical (V))	Orientation	Condition score	ID	Bark / Sapwood / Heartwood / Pith	Conversion	Method of conversion	Ends	Notes	Damage	Samples	Length (mm)	Breadth (mm)	Thick (mm)	Orig dia. (mm)
250	H	N-S	3	Oak	H	Radially faced	Uncert	Degraded	Straight grained with occasional knots. Growth rings c.3mm	Degraded and desiccated. Frequent root damage. Very friable	Dendro, c.65 rings	1700	180	110	>390
251	H	N-S	3	Oak	H	Partially boxed quarter at proximal end fading to radially faced at distal end	Uncert.	Proximal (N) end x-cut, probably with an axe, distal (S) end degraded	Slight twist to grain with occasional knots. Growth rings c.3mm	Degraded and desiccated. Frequent root damage. Very friable	Dendro, c.85 rings	1850	330	220	>450
10012	H	E-W	3	Oak	H, P	Boxed half	Hewn	E end cut to full width tenon, method unclear. W end x-cut, method unclear	Tenon in E end (L: 150 x B: 200 x T:70), extends into side of 10015. Moderate small knots. Growth rings c.3mm.	Upper surface degraded and desiccated. Frequent root damage. Very friable	C14	3640	280	200	>500

10015	H	N-S	4	Oak	S, H, P	Boxed heart	Hewn	N end cross-cut with axe. S end degraded	Halving lap in N end (L:70 x T:80) sits over 10027. Blind mortise in S edge at N end (L:100 x B:220 x T:90) to receive 10012. Relatively straight grained, occasional small knots. Growth rings c.3mm	Upper surface degraded and desiccated	Dendro, c.60 rings, sapwood	1900	230	300	c.400
10021	V		4	Oak	H	Rad 1/4 (modified)	Split	Top degraded. Base not extracted	Retaining 10015. Straight grained, knot free. Rings c.3mm	Top degraded		>250	90	50	N/A
10027	H	E-W	4	Oak	B, S, H, P	Boxed heart	Hewn	W end x-cut with axe. E end x-cut with axe	Halving lap in E end (L:260 x B:190 x T:60) sits over 10028 and is pegged in place (oak heartwood peg, dia. 40). Rough halving lap in W end (L:230 x B:190 x T:140) sits under 10015. Large limb scar on underside	Upper surface degraded and desiccated	C14, sapwood	1040	240	200	>315

10028	H	N-S	4	Oak	S, H, P	Boxed heart	Hewn	N (proximal) end trimmed from one direction, remains of probable felling scar. S end cross cut with axe	Blind mortise in top face of N end (L:210 x B: 90 x T:80). Halving lap in N end (L:340 x B: 280 x T:120) sits under 10027, pegged in place with blind hole (oak heartwood peg, dia, 40). Halving lap at S end (L:360 x B: 320 x T:160), with a recessed slot in SE corner (L:280 x B: 160 x T: 100). Twisted grain. Growth rings c.5mm	Upper surface degraded	Dendro, c.45 rings, sapwood	1700	300	350	>460
10032	V	Leaning to SW	2	Oak	H, P	Boxed half	Unclear	Top degraded. Base not extracted		Top degraded		>300	190	130	>320
10033	V	Leaning to NW	2	Oak	H	Boxed half	Unclear	Top degraded. Base not extracted		Top degraded	C14	>300	240	150	>380
10034	V	Leaning to SW	2	Oak	H	Boxed heart	Unclear	Top degraded. Base not extracted		Top degraded		>300	280	180	>335
10035	V	Leaning to SW	2	Oak	H	Boxed tangential	Unclear	Top degraded. Base not extracted		Top degraded		>300	200	80	N/A
10036	V	Leaning to NE	2	Oak	H	Boxed tangential	Unclear	Top degraded. Base not extracted		Top degraded	C14	>300	190	130	N/A
10037	V	Leaning to N	2	Oak	H	Boxed quarter	Unclear	Top degraded. Base not extracted		Top degraded		>300	230	130	>530
10038	V	Leaning to N	2	Oak	H	Boxed quarter	Unclear	Top degraded. Base not extracted		Top degraded		>30	120	120	>170

13.4 Appendix 4: Finds Data

Post-Roman pottery

Deposit ID	Feature	Parent context	Context	RB		MSg		TLMSg		PM8		PM29		PM2		PM22		PM23*		PM25	
				No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt	No	Wt
U/S						1	10			2	70					1	8				
10009	Construction cut	10008		1	18			1	15	5	38	2	20					1	1		
10014	Construction cut	100013						1	22												
10024	Pit	100023								1	12			1	8					8	73
Total				1	18	1	10	2	37	8	120	2	20	1	8	1	8	1	1	8	73

Metalwork

Context Number	Parent context	Feature Type	SF number	Material	Form	Count	Weight	Description	Period
		Unstratified		Iron	Nail	1	12.5	square sectioned shank only	Undated
10005	10003	Construction cut	4	Copper alloy	Mount	1	0.1	possibly a repousse mount in form of a bow?	PM
10007	10008	Construction cut	13	Iron	Nail	1	32	encrusted head; square sectioned shank	Undated
10009	10008	Construction cut	3	Copper alloy	Button	1	1.4	incomplete; flat circular front; remains of tinning	PM

10009	10008	Construction cut	15	Iron	Nail	1	100	encrusted example, possible circular sectioned shank	Undated
10009	10008	Construction cut	11	Iron	Nail	1	14	encrusted possibly shank only	Undated
10009	10008	Construction cut	1	Iron	Nail	1	67	square sectioned shank; domed square head	Undated
10009	10008	Construction cut	9	Iron	Nail	1	10.5	encrusted; domed circular head; circular sectioned shank	Undated
10009	10008	Construction cut	2	Iron	Nail	2	19	1x square sectioned shank only; 1x smaller rectangular sectioned shank and head	Undated
10009	10008	Construction cut	5	Iron	Nail	1	9.5	encrusted; possible square sectioned shank	Undated
10009	10008	Construction cut	8	Iron	Nail	1	8	rectangular sectioned shank; ?missing head	Undated
10009	10008	Construction cut	7	Iron	Nail	1	8.5	domed oval head; square sectioned shank	Undated
10009	10008	Construction cut	10	Iron	Nail	1	3.5	square sectioned shank only	Undated
10009	10008	Construction cut		Iron	Nail	1	3.5	bent square sectioned shank	Undated
10009	10008	Construction cut	6	Iron	Nail	1	3	oval head; circular sectioned shank	Undated
10009	10008	Construction cut	12	Iron	Nail	1	40	T-shaped head; square sectioned shank	Undated
10013	10013	Construction cut	14	Iron	Nail	1	4	square sectioned shank only	Undated
10018	10016	Construction cut	18	Iron	Nail	1	67	possible T-shaped head; circular sectioned shank	Undated
10018	10016	Construction cut	17	Iron	Nail	1	62	T-shaped head; square sectioned shank	Undated

Glass

Context Number	Parent context	Feature type	Form	Count	Weight (g)	Type	Description	Colour	Date /Period
0	0	Unstratified	Bottle	1	13		brown thick body sherd	brown	PM/Mod
0	0	Unstratified	Window	5	42		thick flat colourless fragments	colourless	PM/Mod
10009	10008	Construction cut	Window	55	94		mainly pale green flat fragments, a few colourless and two with ribbing to one side	green; colourless	PM
10009	10008	Construction cut	Vessel	1	0.5		colourless thin body sherd, very thin	colourless	Undated
10009	10008	Construction cut	Vessel	1	8		incomplete base; circular in plan; raised conical kick; pontil scar on base; decorated with globular projection all the way around the base forming a wave type pattern	pale green	17th-18th?
10011	10010	Post-hole	Jar?	1	4.5		colourless rim sherd; blocky slightly everted form	colourless	PM
10011	10010	Post-hole	Window	5	7		pale green flat fragments	pale green	PM
10024	10023	Pit	Bottle	1	12		opaque neck and body sherd; pale green	pale green	PM
10024	10023	Pit	Window	1	6.5		flat colourless fragment	colourless	PM

Clay pipe

Context Number	Parent Context	Feature type	Part descriptor	Count	Weight (g)	Date	Description
10009	10008	Construction cut	Stem	1	3	PM	undecorated stem fragment
10011	10010	Post-hole	Stem	1	2	PM	undecorated stem fragment

CBM

Context Number	Feature Type	Parent Context	Sample number	Material	Form	Count	Weight	Period	Early date	Late date	Comments (size lxb-d in mm)
10030	Structure	10030	4	CBM	Brick	1	2846	Pmed	L18th	M19th	224x108x68
10030	Structure	10030	4	CBM	Brick	1	2815	Pmed	L18th	M19th	221x107x67

13.5 Appendix 5: List of Specialists

Post-Roman pottery	External specialist	Paul Blinkhorn	<i>BTech</i>	paul.blinkhorn@ntlworld.com
Metalwork, glass, clay pipe	Headland Archaeology	Rebecca Sillwood	BA (Hons) MSc	rebecca.sillwood@headlandarchaeology.com
CBM	Headland Archaeology	Sara Machin	BSc MA PhD	sara.machin@headlandarchaeology.com
Environmental	Headland Archaeology	Laura Bailey	MA (Hons)	laura.bailey@headlandarchaeology.com
Timber	External specialist	Michael Bamforth	BSc (Hons) MA	michael.bamforth@gmail.com

13.6 Appendix 6: Illustrations

1MC12-EKF-EV-MAP-CS09-000017	Maps for Fieldwork Report for Construction Integrated Recording at C25148 Chetwode Mill Buckinghamshire
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Figure 1: C25148 - Site location

Figure 2: C25148 - Site plan

Figure 3: C25148 - Structural Phase Plan

Figure 4: Area shot of timber beams and stone walls

Figure 5: West facing shot of stake cluster

Figure 6: Area shot of timber beams and stone walls

Figure 7: Plan shot of bricks

Figure 8: North-west shot of cobbled surface

1MC12 - Stage 2 - Main Works Civils for C2 and C3 Sectors

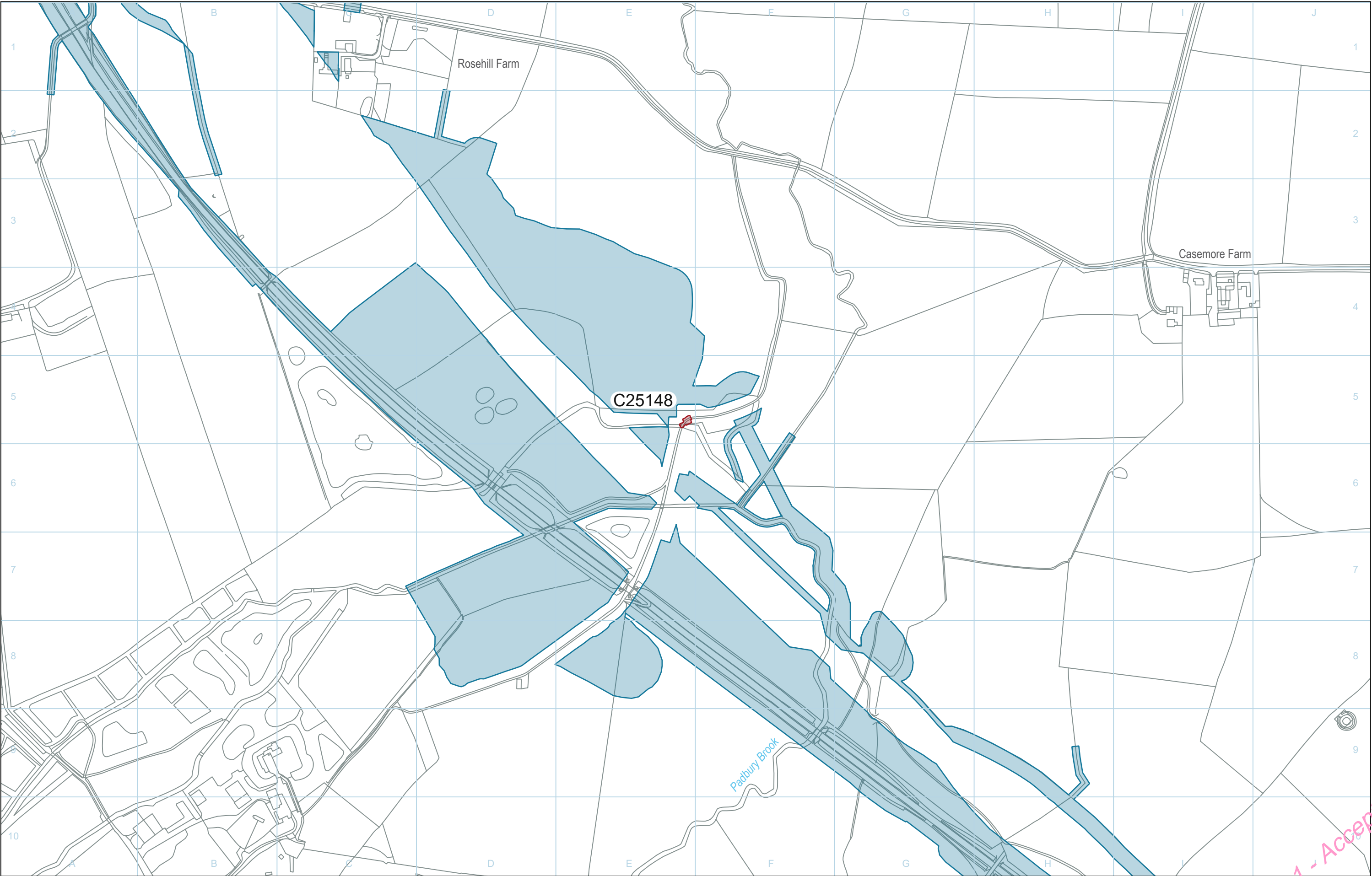
Maps for Fieldwork Report for Construction Integrated Recording at C25148 Chetwode Mill Buckinghamshire

Document no: 1MC12-EKF-EV-MAP-CS09-000017

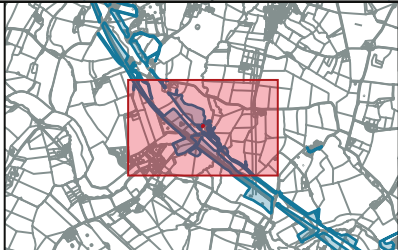
Revision	Date	Author	Checked by	Approved by	Revision details	EKFB Reviewer (EKFB Contractors only)
C01	18/09/2024	Tom Watson	Beata Wieczorek-Oleksy	Ailsa Westgarth	First Issue	Carsten Mieves
C02	09/01/2025	Tom Watson	Beata Wieczorek-Oleksy	Ailsa Westgarth	Revised in Line with Comments	Matthew Bolton

Stakeholder review required (SRR)	Purpose of SRR
☐ County / District / London Borough Council	☐ Acceptance
☐ LOV	☐ Approval
☐ LUL	☐ No Objection
☐ NRL	☐ Consent
☐ TFL	
☐ Utilities Company	
☐ Other (please specify)	

HS2 Ltd - Code 1 - Accepted



- Legend**
- LLAU
 - limit of excavation



Map Number	Figure 1
Map Name	C25248 - Site Location
HS2 Phase 2 EKFB	



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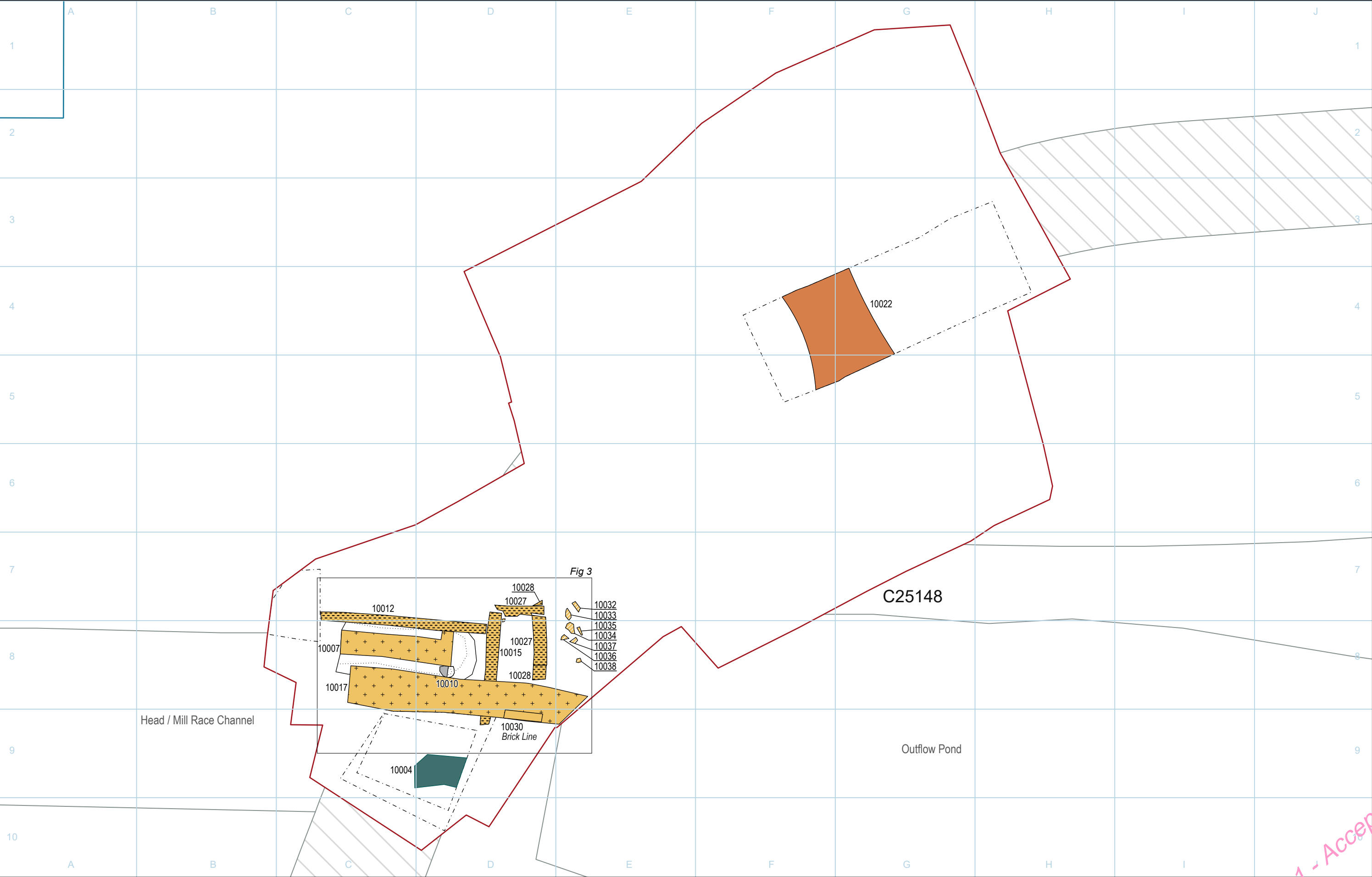
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Doc Number: 1MC12-EKFB-EV-MAP-CS09-000017_C02 **Date:** 09/01/25

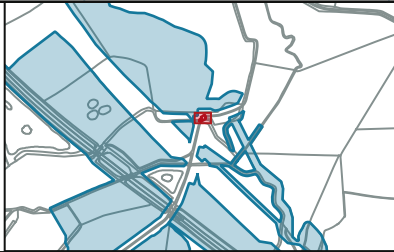


Scale at A3: 1:5,000





- Legend**
- | | | |
|------------------------|-----------------|--------------|
| LLAU | sondage | wooden stake |
| limit of excavation | modern | wooden beam |
| public right of way | cobbled surface | wall |
| archaeological feature | structure | |



Map Number	Figure 2
Map Name	C25148 - Site Plan
	HS2 Phase 2 EKFB

HS2

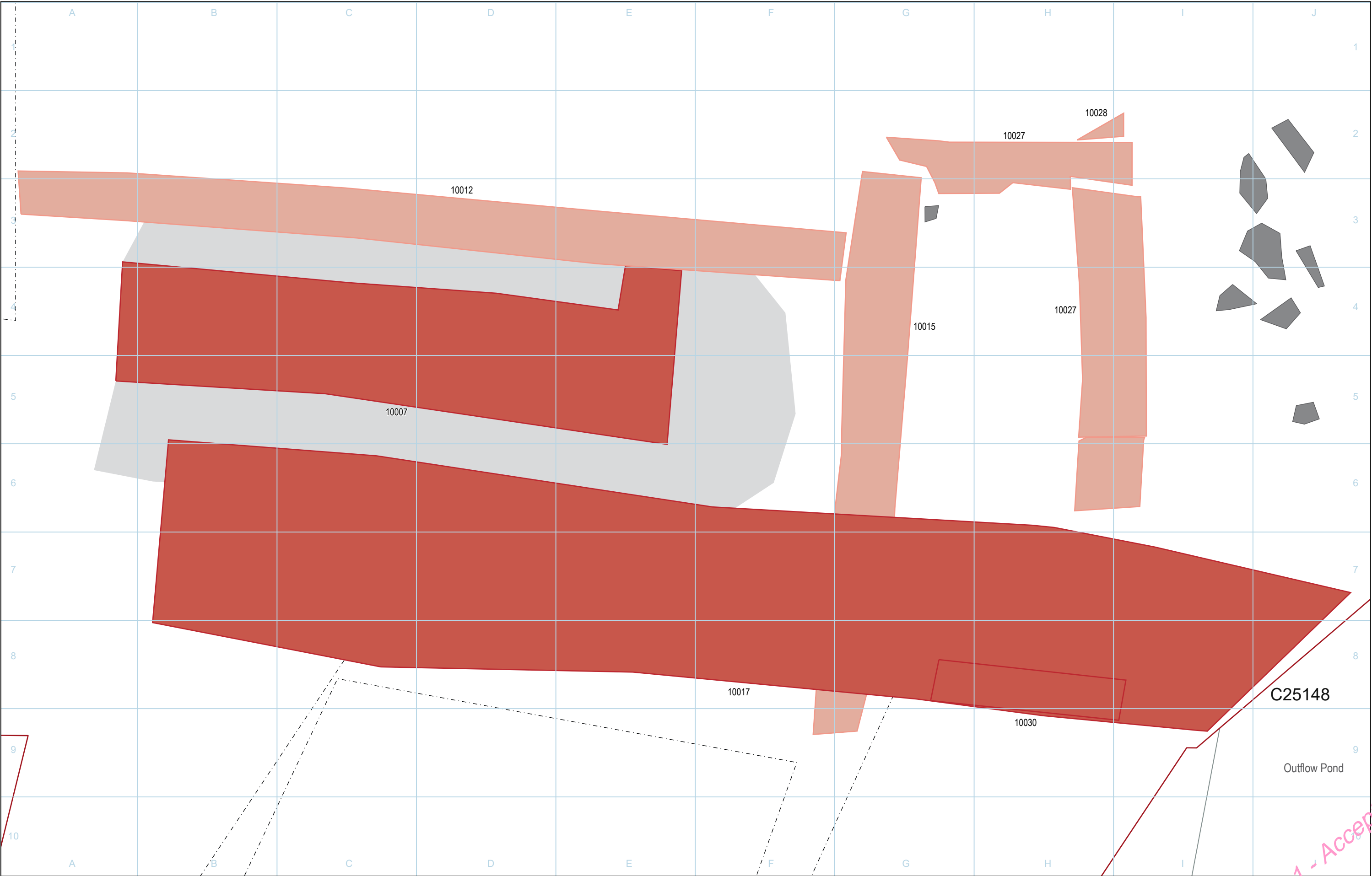
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Legend

limit of excavation

other archaeology

sondage

STRUCTURAL PHASING

phase 1 - wooden beams

phase 2 - wall

unphased structure

Map Number	Figure 3
Map Name	C25148 - Structural Phase Plan
HS2 Phase 2 EKFB	

HS2

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0

0.125

0.25

0.375

0.5m

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Date: 09/01/25



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	Map Name	Area shot of timber beams and stone walls	

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	Map Number	Figure 5	HS2 HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way. Registered in England. Registration number 06791686. Registered office: Eland House, Bressenden Place, London SW1E 5DU. © Crown copyright and database rights 2025. Ordnance Survey Licence Number 100049190.
	Map Name	West facing shot of stake cluster	
Doc Number: 1MC12-EKF-EV-MAP-CS09-000017_C02			Date:07/08/24

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	Map Name	Area shot of timber beams and stone walls	

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	Map Number	Figure 7	HS2 HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way. Registered in England. Registration number 06791686. Registered office: Eland House, Bressenden Place, London SW1E 5DU. © Crown copyright and database rights 2025. Ordnance Survey Licence Number 100049190. Doc Number: 1MC12-EKF-EV-MAP-CS09-000017_C02 Date: 07/08/24
	Map Name	Plan shot of bricks	

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	Map Name	North-west shot of cobbled surface	

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