

1EW03 - Enabling Works Central

AWHi– Fieldwork Report for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire (AC320)

Site Code: 1C21SOUAM

Document Number: 1EW03-FUS_CNA-EV-REP-CS07_CL24-000054

Revision	Author	Checked by	Approved by	Date	Revision details
C01	Jonny Small	Christina O'Regan	Iain Williamson	07/07/2022	For acceptance
C02	Christina O'Regan	Jonny Small	Iain Williamson	02/08/2022	Address HS2 comments; sections 2.4, 8.3.7, 10.1, 13.

HS2 Ltd - Code 1 - Accepted

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1 Executive Summary

- 1.1.1 This report details the results of Construction Integrated Recording (CIR) carried out at Southam North (Area C32098), Southam Cutting, Warwickshire (Site Code: 1C21SOUAM), between 7th March 2022 and 29th March 2022 on behalf of High Speed Two Limited (hereafter referred to as HS2 Ltd).
- 1.1.2 The Site was located approximately 0.6km west of Southam (NGR centre 440235, 261352), within the Ladbroke and Southam Community Forum Area (CFA16), on land required for the construction of the HS2 rail alignment for the Southam Cutting and Leamington Road Embankment, together with associated earthworks, temporary works and landscaping. The Site was located within a single field and measured approximately 0.73ha in size.
- 1.1.3 The Site has been the subject of several previous investigations including a remote sensing undertaken as part of the HS2 Phase One Environmental Statement (ES 3.5.2.16.4-7), and geophysical survey in 2018. Archaeological trial trench investigation (Area C32039) was subsequently carried out by Connect Archaeology between the 1st of July 2020 and 21st August 2020 at Southam, Warwickshire. The archaeology within the Site as revealed by the Trial Trench Investigation was characterised by scattered pits, a gully and two ditches. A fragment of slag was uncovered from the fill of a pit in Trench 29 which may have been indicative of metal working in the area. No other finds were present. Due to the presence of a large concentration of complex features immediately west of the Site, but beyond the limits of the HS2 scheme, as well as a background of early medieval archaeology, Construction Integrated Recording was recommended within Area C32098. Soil stripping and ground reduction works were monitored to mitigate possible impacts on any archaeological remains that were encountered.
- 1.1.4 A small number of archaeological features were identified during the programme of Construction Integrated Recording. These comprised undated pits and gullies with furrows and a land drain, indicating archaeological activity from at least the medieval period. One pit contained the articulated remains of at least two sheep/goat. Medieval/post-medieval agricultural activities were indicated by the presence of numerous furrows.
- 1.1.5 The results of Construction Integrated Recording at Southam North have the potential to contribute to the GWSI: HERDS Specific Objective KC47, testing and developing geophysical survey methodologies.
- 1.1.6 OASIS ID: hs2connez-506691

2 Project Background and Scheme Design

- 2.1.1 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.

- 2.1.2 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.
- 2.1.3 The Site was required for the construction of engineering and landscape earthworks for the Southam Cutting and Leamington Road Embankment and associated temporary soil storage areas. The scope, aims, objectives and methods for the CIR were defined in Fieldwork Change Control Form A for Construction Integrated Recording at Southam North (Document No.: 1EW03-FUS-EV-FRM-CS07_CL24-000008).

3 Geology and Topography

3.1 Geology and Topography

Geology

- 3.1.1 The British Geological Survey (BGS 2019) indicates that the underlying solid geology within the Site is composed of two lithologies. A small area (measuring less than 0.1ha) in the western part of the Site overlies the Langport Member limestone formation, formed approximately 201 to 210 million years ago during the Triassic Period. The remainder of the Site overlies the Saltford Shale Member mudstone formation, formed approximately 199 to 210 million years ago in the Jurassic and Triassic Periods.
- 3.1.2 The parent geology gives rise to lime-rich loamy and clayey soils with impeded drainage throughout the Site. During archaeological trial trenching under the site code 1C20SOUTT trenches within area C32098 reached natural geology at a depth of 0.6-0.8m below the site surface. The natural geology comprised a yellowish brown sand and gravel that was firmly compacted.

Topography

- 3.1.3 The Site is located in a field c. 100m to the south-east of the River Itchen. The land parcel exhibits a gently undulating surface topography that shows a small elevation drop from 84m aOD in the eastern part of the Site to 81m aOD in the west.

3.2 Previous Disturbance

- 3.2.1 The Site appears to have remained rural in the post-medieval period and the geophysical surveys undertaken within the Site provided evidence for agricultural use of the land, comprising predominantly medieval and post-medieval ridge and furrow remains. The Site is currently in use as improved grassland. The Warwickshire HER indicates that quarrying took

place just to the north of Area C32098 (HER ref. MWA780). The eastern part of the Site was crossed by the line of a pipeline for Severn Trent Southam Area Rationalisation Scheme (HER ref. EWA10241), although no details were available at the time of writing this report. The excavations for drainage, buried services and posts carrying the overhead electric lines within the Site would have had only localised impacts

4 Previous Works

4.1.1 The Site has been included in several previous archaeological investigations, the summarised results of which are discussed below.

4.2 Remote Sensing Survey (ES 3.5.2.16.4-7)

4.2.1 As part of the HS2 Phase One Environmental Statement the site was included in a remote sensing survey. Anomaly WA16.52 (HS2 asst refs LBS071 and LBS111) was identified in fields to the west of Southam, within which C32098 is located. This anomaly bore the distinctive traces of medieval and post-medieval ridge and furrow agriculture, and was identified on both the LiDAR and hyperspectral surveys.

4.3 Geophysical Survey 2018

4.3.1 The Site was included in a remote sensing and geophysical survey in 2018 (Document no.: 1EW03-FUS-EV-REP-CS07_CL24-007768). This did not identify any definite archaeological features, but possible archaeological linears, gullies and pits were identified within area C32098. A large area of magnetic disturbance was located immediately adjacent to the northern boundary of area C32098.

4.4 Trial Trench Evaluation 2020

4.4.1 Archaeological trial trenching was carried out by Connect Archaeology between the 1st of July 2020 and 21st August 2020 at Southam, Warwickshire (Doc. no.: 1EW03-FUS_CNA-EV-REP-CS07_CL24-000027). This targeted the potential features as identified in the geophysical survey as well as testing blank areas of the site.

4.4.2 Seven trial trenches were located within area C32098; Trenches 26, 28, 30, 32, 34, 36, 39. Archaeological remains were identified in Trenches 30, 34, 36 and 39. Two pits and a furrow were identified in Trench 30. A possible pit or ditch terminus was present in Trench 34. A furrow was identified in Trench 36. Two pits were identified in Trench 39. No archaeological remains were identified in Trenches 26, 28 or 32.

4.4.3 Trench 23, located c.5m north of area C32098 uncovered evidence for a quarry pit, which may be that recorded on the Warwickshire HER as MWA780.

5 Archaeological background

5.1.1 The following archaeological and historical background is taken from the Project Plan produced for the preceding Trial Trench Investigation (Document no.: 1EW03-FUS-EV-REP-CS07_CL24-007847).

5.2 Prehistoric and Roman

5.2.1 Evidence for Late Neolithic/ Early Bronze Age activity in the vicinity of the Site is limited to an unstratified flint fragment from Trench 4 in trial trench investigation area C32039 (c.60m north of C32098), which is considered indicative of low-level activity during these periods within the Site.

5.2.2 The Trial Trench Investigation demonstrated the presence of a dense area of archaeological features c.690m to the south-east of area C32098, in area C32026. This represented enclosures and field boundaries with associated discrete features of a Roman settlement that occupied the south-facing slope. Where excavated, the features contained relatively large quantities of pottery, ceramic building material and animal bone. A coin, a brooch and an antler tool were also recovered from ditch deposits. Assessment of the pottery from these features suggests that the main phase of activity was in the later Roman period, although there is some evidence for early Roman use of the site. The assemblage was dominated by jars, mainly large storage vessels, with only a small amount of finewares, consistent with the type of assemblage found in low-status rural settlements. The animal remains were also typical of a settlement of this period, many medium-to-large domesticates, such as cattle, pig and sheep/goat. The presence of brick and flue tile fragments amongst the finds may suggest that the material has been derived from a nearby hypocaust structure.

5.3 Early medieval and medieval

5.3.1 Archaeological investigations undertaken by MOLA (2017; Egan and Atkins 2017) examined a small Middle Saxon Christian open-ground cemetery. These investigations were located c.900m to the south-east of the Site, with part of the excavation area being within the limits of the HS2 scheme, although the burials were outside of the limits. The cemetery comprised 13 individuals dating to the late 7th century to 8th century AD (MWA30407) and two undated burials (MWA30971). The cemetery consisted of eight adults and five juveniles. Two grave goods were recovered in a child's burial comprising an amber bead and an iron knife. It was therefore possible that Saxon remains could be encountered on site.

5.3.2 During the medieval period, the character of the area encompassing the Site was predominantly rural. There was no urban centre, although Southam, which is mentioned in the Domesday survey, did have a market from 1227 and would have acted as a minor local centre. The area was heavily depopulated at the end of the medieval period as many villages were abandoned, fields enclosed and estates turned over to extensive pasture for grazing. This process preserved the former villages, and their open fields of ridge-and-furrow, as earthworks, fossilised within the new grasslands. The remains of a medieval building located c.400m

northeast of the Site may have been a chapel associated with the deserted settlement at Stoney Thorpe, however Warwickshire HER map shows the possible chapel located c. 230m to the north-western of the Site (HER ref. MWA5424).

5.4 Post-medieval and later

5.4.1 Throughout the post-medieval period, the character of the area remained fundamentally rural. The period saw the enclosure of the landscape, at first on a piecemeal basis, and later, from the 18th century onwards, on a more rigid pattern under the Enclosure Acts and Commons Acts of 1773 to 1882. Agricultural systems are evidenced by the presence of ridge and furrows (HER Reference: LBS071) within the site. The 17th Century Grade II listed Stoney Thorpe Hall Lodge (NHLE Entry: 1364757; HER Reference: MWA1644) is located 750m north of the Site.

5.4.2 In the post-war period, agricultural land holding was further consolidated, and fields amalgamated, with arable cultivation now predominating.

6 Aims and Specific Objectives

6.1 General Aims

6.1.1 The aim of the CIR was to identify and record the extent and character of any surviving archaeological remains within the site. The outcomes of the CIR 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).

6.1.2 The general aims of the CIR, as defined in the Project Plan for Archaeological Monitoring and Construction Integrated Recording – Route Wide (Document No.: 1EW03-FUS-EV-REP-C000-009812), were:

- to integrate the investigation and recording of archaeological remains into the main works programme, where it has not been possible to gain prior access for archaeological evaluation or recording (via AT23/AT03);
- to ensure a rapid and adequate HERDS compliant, investigation, recording and reporting of archaeological remains that are exposed during construction works;
- to avoid or minimise any delays to the PC's works through careful planning of the work sequence, provide sufficient subcontractor resources to complete works quickly; and develop sequential hand back of areas of the site to the PC via issue of regular completion certificates.

6.2 Specific HERDS Objectives

6.2.1 For land parcel C32098 the FCCF Form A identified that the archaeological investigation may make a contribution to the following GWSI:HERDS knowledge creation objective.

Table 1 HERDS objectives

Specific Objective	Contribution
KC21: Assess the evidence for regional and cultural distinctiveness along the length of the route in the Romano-British period, with particular regard to the different settlement types encountered along the route.	Finds of Roman pottery and coins, and the results of a previous geophysical surveys may suggest that a Romano British settlement(s) was located near and/or within the Site.

7 Scope and Methodology

7.1 Scope

- 7.1.1 The Construction Integrated Recording was located within a single field (F30_0016; Fusion Site GIS ID No. C32098; NGR centre 440235, 261352), measuring a total of 0.73ha (Figure 1).
- 7.1.2 The Construction Integrated Recording was carried out under the site code 1C21SOUAM in line with the specification as set out in the Fieldwork Change Control Form (Form A006) for Construction Integrated Recording at Southam North (Document No.: 1EW03-FUS-EV-FRM-CS07_CL24-000008), the Project Plan for Archaeological monitoring and Construction Integrated Recording – Route Wide (Document No.: 1EW03-FUS-EV-REP-C000-009812).

7.2 Methodology

- 7.2.1 The works were undertaken in accordance with the FCCF Form A and in accordance with Technical Standard Specification for Historic Environment Investigations (Document No. HS2-HS2-EV-STD-000-000035), and the guidance provided by the Chartered Institute for Archaeologists (CIfA) Code of Conduct (CIfA 2014a) and Standard and Guidance for Archaeological Excavation (CIfA 2014b).

Setting-out

- 7.2.2 The extents of the CIR area were positioned to an accuracy of ± 500 mm using Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) equipment referenced from the Permanent Ground Markers (PGM). This utilised a Virtual reference system comprising three PGMs located on the Site.
- 7.2.3 All excavation limits and significant archaeology detail were surveyed 'as dug' in relation to the project grid. The survey methodology is outlined in full in the Survey Report for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire (Document Number: 1EW03-FUS_CNA-EV-REP-CS07_CL24-000053).

Machine Excavation

- 7.2.4 Stripping of topsoil was carried out by a 20-tonne tracked excavator with toothless ditching bucket (2.4m wide) loading spoil into a 13-tonne rearward-tipping dump truck.

- 7.2.5 Soil was excavated in sequential spits with the topsoil first to be stripped at the haul road edge of the first marked strip and loaded into a dumper. This was followed by the subsoil layer. Each layer was stripped to its natural thickness without incorporating material from lower layers.
- 7.2.6 The dumper stood within the designated haul routes or within the works area. To prevent damage to underlying archaeology it did not traverse unstripped subsoil and did not traverse stripped surfaces until it had been inspected by the Connect Archaeologist. The excavator then moved onto and traversed the topsoil of the adjacent area to be stripped and the sequence of soil stripping was repeated for that area.
- 7.2.7 Each spit was examined carefully to assist the recovery of any archaeologically significant artefacts. The finished surface was machined to a suitably 'clean' state to identify, define and investigate the exposed archaeological deposits. Hand cleaning of the surface was required in some areas to better define archaeological features.
- 7.2.8 Excavator machine movements were overseen by a qualified operative whilst all other working machinery (dumper truck, site vehicles etc.) used segregated routes to prevent access to the works area.

Hand excavation

- 7.2.9 Archaeological hand excavation and recording was undertaken in accordance with GWSI: HERDS and the Technical Standard Specification for historic environment investigations (Document No. HS2-HS2-EV-STD-000-000035; section 4.14 and 4.17). A sufficient sample of the archaeological features and deposits revealed was excavated by hand to characterise and date the remains, contributing to the aims and objectives of the CIR. Features and deposits encountered were sampled or fully excavated to allow the resolution of the aims and objectives of the work.
- 7.2.10 All investigation of archaeological levels was carried out by hand, with cleaning, examination and recording both in plan and section.

Recording

- 7.2.11 All archaeological recording was carried out in accordance with the general requirements as described in Project Plan for Archaeological monitoring and Construction Integrated Recording – Route Wide (Document No.: 1EW03-FUS-EV-REP-C000-009812) and the GWSI: HERDS and the HS2 Technical Standard for Historic Environment Investigations (Document No. HS2-HS2-EVSTD-000-000035).
- 7.2.12 As a minimum, the following was recorded:
- a written record of individual context descriptions on appropriate pro-forma;
 - plans at appropriate scales (1:10, 1:20 or 1:50);
 - photographs and other appropriate drawn and written records.

- 7.2.13 Other sections, including the half-sections of individual layers or features were drawn as appropriate to 1:10 or 1:20.
- 7.2.14 A 'site location plan', was prepared at 1:1250. Individual works area plans at 1:200 (or 1:100) were also produced indicating the location of archaeology investigated in relation to the individual investigation areas. The location of site plans was identified using OSGB coordinates.
- 7.2.15 Section drawings were located on the relevant plan and OSGB co-ordinates recorded. The locations of the PGM bench markers used and any site TBM were also indicated.
- 7.2.16 A record of the full extent in plan of all archaeological deposits as revealed in the investigation was made. These plans were based on digital survey data and supplemented where appropriate by hand drawn records on polyester-based drawing film (at a scale of 1:10 or 1:20).
- 7.2.17 All hand drawn information was digitised, and final deliverables supplied in an Esri format adhering to standards set out in the Employer's Cultural Heritage GIS Standard (Document No. HS2-HS2-GI-SPE-000-000004). Single context planning shall be used where complex stratigraphy is encountered.
- 7.2.18 The photographic record was recorded in digital format, resulting in high resolution TIFF (uncompressed) images. Photographs illustrate both the detail and context of the principal archaeological features discovered. In addition, photographs illustrating work in progress were taken. All photographic records include information detailing: site name and number/code, date, context, scale and orientation.

Environmental Sampling

- 7.2.19 Environmental Sampling was carried out in line with the Employer's Technical Standard Specification for Historic Environment Investigations (Document No. HS2-HS2-EVoSTD-000-000035). The following archaeological features were targeted for environmental sampling:
- Archaeological features identified as cropmarks or geophysical anomalies which were likely associated with potentially prehistoric, Roman or medieval activity (i.e. ditches or gullies,) as well as other relevant remains (i.e. pits or postholes) and;
 - Deposits representing the main phases of activity on Site (to assess whether there were changes in rates of deposition, or material survival over time).
- 7.2.20 The sampling strategy was reviewed throughout the course of the archaeological works and was adapted to the characteristics and potential of revealed deposits.
- 7.2.21 Samples were recovered from a representative range of contexts, which adequately characterised past activities on site and allowed the assessments included in this report to take place.
- 7.2.22 All samples were taken to address a specific question. The purpose of the sample, and the question it has been taken to address were recorded on the Site-specific sample record sheets.

- 7.2.23 Samples were taken using ten litre plastic buckets (with lids and handles) for the recovery of bulk 'disturbed' environmental samples. Labelling followed guidance set out in the Technical Standard Specification for Historic Environment Investigations (Document No. HS2-HS2-EV-STD-000-000035).
- 7.2.24 Bulk samples were normally in the range of 40-60 litres. Where contexts had a volume of less than that stated above, then 100% of the context was sampled. Each bulk sample only contained sediment derived from a single context.
- 7.2.25 Samples were protected at all times from temperatures below 5°C and above 25°C and from wetting and drying out due to weather exposure.
- 7.2.26 Processing of all bulk soil samples collected for biological assessment was completed within four weeks of collection.
- 7.2.27 The preservation state, density and significance of material retrieved was assessed by specialists.

8 Results of Construction Integrated Recording

8.1 General

- 8.1.1 Across the archaeological recording area, the natural geology was a firmly compacted yellowish-brown sand and gravel. This was overlain by subsoil which comprised a friable mid greyish brown sandy silt that contained occasional-to-frequent stones. The overlying topsoil was a friable sandy silt, dark greyish brown in colour, and containing occasional charcoal, cobbles and stones.
- 8.1.2 A total of 11 interventions were completed (shown in Figure 2), which generally correlated well with the results of a preceding geophysical survey and trial trench investigation. Section drawings of the excavated features are shown in Figure 4.
- 8.1.3 Evidence of undated but possibly prehistoric activity comprised three roughly northeast-southwest orientated gullies and a pit located in the southwest part of the Site. The parallel gullies extended beyond the limit of excavation and were filled by naturally accumulated deposits which did not produce any datable artefacts. A pit was located in close proximity and contained the remains of two articulated sheep/goats, which had been partly truncated by a land drain. A discrete pit in the eastern part of the site was probably of natural origin.
- 8.1.4 A further pit, which incorporated a charcoal-rich deposit, and the remains of a heavily truncated gully were identified in the northeast part of the excavation area. Although undated, these features may be contemporary with the activity to the south.
- 8.1.5 Evidence of furrows was present across the Site, suggesting that the area lay within open fields from at least the medieval period. Post-medieval and modern disturbance was encountered

along the northern excavation limit which corresponded with the 19th century mapped field boundary.

- 8.1.6 Truncation of features was evident across the Site. In addition to the disturbance recorded along the northern edge of the Site, land drains and furrows also truncated features across the Site.
- 8.1.7 No animal burrows or tree holes were encountered across the Site, and so bioturbation was not detrimental to the overall interpretation of the site.

8.2 Stratigraphic Results

Undated Features

Group 1

- 8.2.1 All of the features encountered during Construction Integrated Recording at Southam were undated.
- 8.2.2 Group 1 comprises three gullies [1005], [1010], and [1012], and two pits [1007] and [1014] located in the southwest part of the Site. Gullies [1005], [1010], and [1012] were parallel, with a northeast-southwest orientation. They extended beyond the limit of excavation, measuring at least 2m in length. Gully [1005] had gradual-to-moderate sloping sides and a concave base, measuring 0.92m in width and 0.27m in depth. It was filled by (1006), a yellowish-brown silty clay, and was cut by a field drain (Plate 2). Gully [1010] was excavated at the terminus, where it had concave sides and a flat base, measuring 0.74m in width and 0.12m in depth. It was filled by (1011), a mid-brownish silty clay (Plates 4–5). Gully [1012] was also excavated at the terminus, with concave sides and a flat base. It had a width of 0.88m and a depth of 0.24m, and was filled by (1013), a grey silty clay (Plates 6–7).
- 8.2.3 Two pits were located in close proximity to the gullies. Pit [1007] was subcircular, with uneven sides and a concave base, measuring 1.05m in length and width, and 0.34m in depth. The primary fill (1009) was a mid-brown silty clay, and the upper fill was a dark greyish brown silty clay, that included occasional charcoal flecks (Plate 3). Pit [1007] was cut by a furrow. Pit [1014] was subcircular in plan, with concave sides and a flat base, measuring 1.62m in length, 1.12m in width, and 0.31m in depth. The upper fill (1015) was a dark brown grey silty clay, and the primary fill (1016) was a mid-yellowish brown silty clay that contained the remains of at least two sheep/goat (Plates 8–10). This pit was partially truncated by a land drain.

Table 2 Group 1 undated feature relations

Feature relation	Intervention	Filled by	Basic description	L (m)	W (m)	D (m)	Cutting	Cut by
[1005]	[1005]	(1006)	Linear gully	2m+	0.92m	0.27m	-	-
[1007]	[1007]	(1008), (1009)	Subcircular pit	1.05m	1.05m	0.34m	-	Furrow

[1010]	[1010]	(1011)	Linear gully terminus	0.61m+	0.74m	0.12m	-	-
[1012]	[1012]	(1013)	Linear gully terminus	0.84m+	0.88m	0.24m	-	-
[1014]	[1014]	(1015), (1016)	Subcircular pit	1.62m	1.12m	0.31m	-	-

Group 2

8.2.4 Group 2 comprises two undated features in the northeast part of the Site: pit [1017] and gully [1027]. Pit [1017] was circular, with concave sides and a flat base, measuring 1.05m in length, 0.84m in width, and 0.17m in depth. Its single fill (1018) was a dark brown grey silty clay with flecks of charcoal (Plate 11). Pit [1017] was the only feature to produce carbonised remains, comprising heavily abraded and iron pan damaged charcoal. A few 0.5cm slivers of Quercus (oak) charcoal were identified, but the remainder was indeterminate. This pit may have functioned as a small fire pit or waste disposal pit. Gully [1027] was curvilinear with moderately sloping sides and a concave base, running north-south and curving to the southeast-northwest. It was filled by (1028), a mid-reddish brown sandy silt (Plate 16). The gully measured over 4m in length and was 0.52m wide and 0.15m deep.

Table 3 Group 2 undated feature relations

Feature relation	Intervention	Filled by	Basic description	L (m)	W (m)	D (m)	Cutting	Cut by
[1017]	[1017]	(1018)	Circular pit	1.05m	0.84m	0.17m	-	-
[1027]	[1027]	(1028)	Curvilinear gully	4m+	0.52m	0.15m	-	-

Group 3 - Outliers

8.2.5 Group 3 comprises features that are spatially distinct from those in Group 1 and 2. An isolated pit [1003] in the east of the Site was subcircular in plan, with concave sides and a flat base, measuring 1.55m in length, 1m in width, and 0.18m in depth. The pit was filled by (1004), a light-yellow brown silty clay (Plate 1). Pit [1003] may have been natural in origin.

8.2.6 [1019], and [1021] are two linear furrows, orientated northwest-southeast across the Site, with gradually sloping sides and flat bases (Plates 12–14). Furrow [1021] comprised intervention cuts [1021] to the north-west, and [1025] to the south-east. The furrows continue across all of land parcel C32098, measuring at least 100m in length, and are spaced approximately 4m apart. An 18th–19th century clay pipe stem was present in the fill (1022) of furrow [1021], suggesting that the furrow was still in agricultural use into the post-medieval period.

8.2.7 Two modern truncations [1023] and [1029] were identified along the northern boundary of the Site, along with layer [1031], shown in Plate 17. These disturbances contained modern materials

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such as unfired clay, tarmac, brick, plastic and metal inclusions. Plate 18 shows the post-excavation overview shot of Area C32098.

Table 4 Group 3 - outliers undated feature relations

Feature relation	Intervention	Filled by	Basic description	L (m)	W (m)	D (m)	Cutting	Cut by
[1003]	[1003]	(1004)	Subcircular pit	1.55m	1m	0.18m	-	-
[1019]	[1019]	(1020)	Linear furrow	2m+	0.11m	0.37m	-	-
[1021]	[1021]	(1022)	Linear furrow	2m+	0.16m	0.25m	-	-
[1021]	[1025]	(1026)	Linear furrow	2m+	1.95m	0.15m	-	-
[1023]	[1023]	(1024)	Modern truncation	LOE	2.80m	0.40m	-	-
[1029]	[1029]	(1030)	Modern truncation	LOE	0.68m	0.42m	-	-
[1031]	[1031]	-	Modern deposit	-	-	-	-	-

8.3 Finds Report

Pottery Assessment

Introduction and methodology

8.3.1 There were 11 sherds of ceramic material retrieved from site, weighing a total of 335g. Additionally three fragments of fired clay were identified in the sample <3> retent from pit [1017] (1018).

8.3.2 The pottery was recorded using national guidelines from A Standard for Pottery Studies in Archaeology (Barclay et al 2016). Each material and period type were quantified by count, weight, fabric, and basic period.

Results and recommendations

8.3.3 Eight fragments of pottery dated to the post-medieval period, with a date no earlier than the 18th century. They comprised blue and white transfer ware, modern yellow and blue glazed fragments of tables wares, such as plates and dishes as well as a modern transfer printed cup with flower motif and a shily golden transfer. There were three sherds of coarse oxidised wares of suspected earlier date; two were recovered from the subsoil (1001) and one sherd was recovered from the fill (1022) of a medieval furrow [1021]. These are spot dated Roman to modern, although were small and had no identifying features for further identification. Table 9 shows the quantification of material recorded, the assemblage is too small for any meaningful

functional analysis and is indicative of typical post-medieval agricultural activity. The three fragments of fired clay were too small to identify form or function.

Animal Bone assessment

Introduction

- 8.3.4 Animal remains comprising mammals (313 fragments weighing 3,192g) were recovered via hand collection during CIR at Southam (C32098). This assessment includes quantification of the animal bone assemblage, identification at species level where possible, an assessment of significance and recommendation(s) for any further work.

Methodology

- 8.3.5 The animal remains were identified to element, side and to as low a taxonomic level as possible using published and online identification guides (Hillson 2003; 2005). Quantification for mammal remains used the diagnostic zone method as presented by Dobney and Rielly (1988). A taphonomic assessment of each fragment was undertaken, recording the presence and absence of cut and chop marks, burning and calcination, any evidence for animal activity (canid or rodent gnawing), and surface preservation; any other surface modifications of note were also recorded. At this stage, no attempt was made to sex any of the remains, or to measure any elements. Sheep (*Ovis aries*) and goat (*Capra hircus*) distinctions were not considered. Fragments of bones that could be identified to element but not any specific species were grouped as far as possible using size and class or order categories.
- 8.3.6 This assessment has been undertaken in line with published standards and guidelines (Baker and Worley 2019; ClFA 2014).

Results

- 8.3.7 In total, 313 fragments of animal bone and teeth weighing 3,192g were recovered by hand-collection from one context (1016) during excavations at Southam. All of the fragments represented the remains of mammals, including sheep/goat (*Ovis aries*/*Capra hircus*). Other remains could only be allocated to size-based class (mammal) groups, forming 56% of the assemblage by count (n=177). A further fragment of unidentified burnt bone was recovered from the sample <3> retent, from pit [1017] (1018).

Taphonomic assessment

Bone surface preservation and fragmentation

- 8.3.8 Bone surface preservation varied throughout the assemblage from 'poor' to 'very good'. Most of the specimens displayed 'poor' surface preservation (39% by count, n=122). Fragmentation was prevalent throughout the assemblage with many partial bones recovered and some re-fitting fragments of single specimens.

Butchery

- 8.3.9 No evidence for butchery in the form of fine cut marks, more substantial chop marks or saw marks was recorded, possibly a result of poor surface preservation.

Animal Interaction

- 8.3.10 No evidence for carnivore or rodent activity was observed.

Pathology

- 8.3.11 One metacarpal of a sheep or goat showed an abnormal growth on the diaphysis. Evidence on the recovered sheep or goat mandible suggests a disease with ossification occurring on the affected area.

Burning and calcination

- 8.3.12 A single fragment of burnt bone was recovered from the retent of sample <3> in pit [1017] (1018), although it was too fragmented to be identified.

Potential for measurements

- 8.3.13 Long bones and vertebrae contain the potential for measurements to be taken to discover size and gender of the specimens in the assemblage.

Potential for ageing and sexing

Bone fusion data for estimation of age at death was recorded for one or both epiphyses of two tibiae. Both specimens were still fusing, suggesting a non-adult to young adult age at death. Dental wear suggests that one sheep or goat was of a particularly advanced age at the time of death, whilst a singular sheep or goat tooth recovered suggests a young adult age at death. A subset of the assemblage showed unfused diaphysis on small bones, suggesting the presence of a neonatal sheep or goat in the assemblage.

Discussion

- 8.3.14 The animal remains from Southam comprise those expected from archaeological sites in Britain dating between the Bronze Age and modern periods (Baker and Worley 2019, 3). It is not possible to further narrow the date of origin due to fragmentation and a lack of butchery or working marks. Sheep or goats would be kept for meat, milk and/or wool.
- 8.3.15 The quantity of fragments is relatively large, though the number of individuals is probably low, with the MNI of the assemblage at only two. It is probable that the actual number of specimens is at least three, likely an elderly sheep or goat, a young adult sheep or goat and a neonatal sheep or goat. No further comment can be made regarding the role of these animals at the site and no other finds were recovered from the context for dating.

8.4 Environmental Report

Carbonised plant macrofossils and charcoal assessment

Introduction and Quantification

- 8.4.1 Six environmental sample flots taken during the CIR at Southam (1C21SOUAM) were assessed for carbonised plant remains and charcoal. Material sorted from one sample retent was also examined for identifiable charred remains.

- 8.4.2 Samples were taken from ditch, gully and pit features with most deposits found to be sterile apart from pit [1017] which contained a small concentration of charcoal fragments.

Methodology

- 8.4.3 The bulk environmental samples were processed using a Siraf style water flotation system (French 1971). The samples were from 5 litres up to 40 litres in volume. The flots were dried before examination under a low power binocular microscope typically at x10 magnification. All identified plant remains including charcoal were removed and bagged separately by type.
- 8.4.4 Wood charcoal was examined using a high-powered Vickers M10 metallurgical microscope at magnifications up to x200. The reference photographs of Schweingruber (1990) were consulted for charcoal identification. Plant nomenclature utilised in the text follows Stace (1997) for all vascular plants apart from cereals, which follow Zohary and Hopf (2000).

Discussion

- 8.4.5 Five of the environmental samples were found to be sterile of carbonised remains. One sample from pit [1017] produced a small 15ml in volume deposit of charcoal fragments <0.5cm to 1.0cm in size mostly heavily abraded and iron pan damaged. Modern material was recorded in amounts 30ml up to 100ml mainly root detritus with a few finds of modern wood slivers and earthworm egg capsules indicating bioturbation was taking place.
- 8.4.6 Pit [1017] (1018) was the only feature to produce carbonised remains, all consisting of heavily abraded and iron pan damaged charcoal. It was possible to identify a few 0.5cm slivers of Quercus (oak) charcoal, but the remainder was indeterminate. This was possibly a small fire pit or waste disposal pit.
- 8.4.7 Pits [1007] (1008) and [1014] fills (1015) and (1016) were sterile and perhaps natural features such as stone holes or sediment accumulations. All the samples were highly rooted.
- 8.4.8 Gully terminus [1010] (1011) was sterile with a small fragment of modern wood present whilst ditch terminus [1012] (1013) was also sterile. Both contained lots of modern roots.
- 8.4.9 Artefactual material recovered from the sample retent comprised bone, ironstone and fired clay.

Conclusion

- 8.4.10 The environmental samples were largely found to be sterile of carbonised remains apart from pit [1017] which contained a small deposit of charcoal likely to be fuel waste. There was therefore limited evidence for any substantial burning activity taking place in this part of the site.
- 8.4.11 Further excavation work in this area has a low potential to produce any significant finds of carbonised plant remains.

9 Assessment and Interpretation of Results

- 9.1.1 Following the completion of the Construction Integrated Recording, the site archive has been collated and checked for consistency and has been transcribed to a database which includes all contextual and artefactual evidence. A site matrix was also compiled and cross-referenced to incorporate the limited dating evidence.
- 9.1.2 The assessments were carried out in line with nationally recognized standards and guidelines, and codes of practice specific to individual finds categories (including Historic England, Chartered Institute for Archaeologists, BABAO; see specialist reports for full details).
- 9.1.3 The survival of the site stratigraphy was moderate to good with the negative archaeological remains being truncated by later activity, extensive furrows and modern drainage works.
- 9.1.4 Although dating evidence was not recovered, stratigraphically the Group 1 and Group 2 features are earlier than the medieval/post-medieval ridge and furrow field systems that were identified across the Site. Group 1 and Group 2 therefore represent earlier evidence at the Site, perhaps relating to prehistoric or Romano-British activity.
- 9.1.5 The archaeological features comprised scattered pits, a gully and two ditches. Pit **[1017]** was the only feature containing charcoal, and this may have functioned as a small fire pit or a waste disposal pit. The features identified in the Site may represent the truncated and fragmentary remains of field systems or enclosure on the periphery of a nearby settlement. Recent geophysical survey outside the limits of HS2 Phase One identified two nearby settlements of probable late prehistoric date (Stratascan 2015; Figure 3). The south-western limits of the CIR Site overlap with the Stratascan survey area. Three potential magnetic anomalies lay within the CIR limits but were not further identified during the top/subsoil strip. Just c.10m to the south-west of the Site a cluster of curvilinear and sub-circular anomalies may represent a small settlement (HER ref. MWA20538). A further cluster, comprising rectilinear and sub-circular enclosures with internal roundhouses was identified c.250m to the south-west of the Site, and may represent a substantial settlement (HER ref. MWA20532). Group 1 gullies **[1005]**, **[1010]** and **[1012]** extended to the south beyond the Site's limit of excavation, and may extend into the area of MWA20538. The archaeological remains uncovered during CIR in area C32098 may therefore represent prehistoric field systems, enclosure and pitting related to these settlements.
- 9.1.6 In addition to the possible prehistoric settlements identified by the Stratascan (2015) geophysical survey, the wider landscape surrounding the Site contains sporadic evidence for prehistoric activity. This includes a 90m long pit alignment (HER ref. MWA30406; MOLA 2017; Egan and Atkins 2017) and likely associated ditch (HER ref. MWA3048) located 1.2km south-east of the Site, which may have been in use until the middle Iron Age. Evidence for two phases of prehistoric settlement have been identified c.700m to the south-east of the Site, comprising a rectilinear enclosure and curvilinear enclosures. The settlement lies just south of the known

findspot of Iron Age and Roman coins (HER ref. MWA763 and MWA765). Reportedly, the settlement itself also produced fragments of Roman pottery, although little detail is available (HER ref. MWA19204). It appears, therefore, that the settlement activity may have continued into the Roman period. Archaeological evaluation c. 20m to the north of this settlement carried out under site code 1C18NFCAR uncovered a ditch containing Roman pottery, which may have demarcated the boundary of the settlement.

- 9.1.7 The CIR has also provided archaeological evidence for ridge and furrow, confirming the medieval/post-medieval open field agricultural systems that were previously recorded at the Site in LiDAR and hyperspectral surveys.
- 9.1.8 The archaeological remains uncovered during the CIR is in agreement with the evidence uncovered during trial trench investigation within the wider area (C32039). Out of the 73 total trenches in C32039, trial trench investigation identified archaeological remains in 11, comprising pits, gullies, ditches and quarrying evidence.
- 9.1.9 The site lies within an area whose archaeological potential is not well understood. Therefore, the results of the CIR, although undated and fragmentary, indicate archaeological activity that pre-dates the medieval/post-medieval ridge and furrows, possibly indicating prehistoric or Romano-British field systems.
- 9.1.10 The sheep/goat remains recovered from pit [1014] are suitable for radiocarbon dating and may help determine the phase of activity of their deposition. However, no further material suitable for radiocarbon dating was recovered during construction integrated recording at Southam, and datable artefacts were not recovered from archaeological features.
- 9.1.11 Further analysis of the faunal remains will only benefit the interpretation of the site if the phasing can be narrowed down. With improved dating, the collection of biometric and sex data could contribute to broader understandings of sheep/goat husbandry.
- 9.1.12 No further investigation is required from the charred plant remains, and they are not suitable for radiocarbon dating.
- 9.1.13 The contribution of the results of the construction integrated recording to the delivery of the GWSI: HERDS Specific Objectives as detailed in the Fieldwork Change Control sheet (Document no.: 1EW03-FUS-EV-FRM-CS07_CL24-000008) is considered below.

Table 5 Contribution to Specific HERDS Objective

Specific Objective	Contribution
KC21: Assess the evidence for regional and cultural distinctiveness along the length of the route in the Romano-British period, with particular regard to the different settlement types encountered along the route	The Construction Integrated Recording at Southam did not identify evidence for Romano-British settlement, and only very limited evidence for any archaeological activity. This is likely to indicate an absence of occupation in this area, although it must be noted that the widespread ridge and furrow systems throughout area C32098 may have disturbed archaeological deposits.

9.1.14 The construction integrated recording contributes to the additional GWSI: HERDS objective:

Table 6 Contribution to additional HERDS objective

Herds Objective	Proposed further work
KC47: Test and develop geophysical survey methodologies	The interpretation of the geophysical survey results was tested during the trial trench evaluation. The subsequent programme of Construction Integrated Recording identified further archaeological features. In order to refine future methodologies, a comparison of the actual findings with the raw survey data could provide useful feedback in identifying subtle responses which may indicate archaeological features.

9.1.15 Although ridge and furrows were identified during construction integrated recording at Southam, providing evidence for medieval open field agriculture, these do not have the potential to contribute to additional GWSI: HERDS objectives such as KC35 or KC40.

10 Consideration of Results in their Wider Context

10.1.1 These archaeological works have identified a small number of archaeological features. Although they are undated, they may provide truncated and fragmentary evidence for field systems and pitting related to later prehistoric or Romano-British settlement sites. Two nearby settlements of probable late prehistoric date have been identified by geophysical survey in the Site's surroundings, outside the limits of HS2 Phase One (Stratascan 2015). A cluster of curvilinear and sub-circular anomalies were located c.10m to the south-west of the Site, perhaps representing a small settlement (HER ref. MWA20538). A large cluster of rectilinear and sub-circular enclosures with internal roundhouses was also identified by geophysical survey c.250m to the south-west of the Site, which may represent a substantial settlement (HER ref. MWA20532). The archaeological remains uncovered during CIR at the Site are in keeping with the known archaeological record found in the wider area, which is characterised by prehistoric and Romano-British rural settlements and field systems.

10.1.2 The CIR has provided archaeological evidence for ridge and furrow, which confirms the extent of medieval/post-medieval open field agriculture that was previously recorded at the Site in LiDAR and hyperspectral surveys, as well as within the nearby land parcels C32039, C32026 and C32027.

10.1.3 The results of the CIR do not address the specific GWSI:HERDS objective KC21 identified in the FCCF Form A, as the archaeological features are undated and fragmentary. However, they contribute to the additional GWSI:HERDS objective KC47.

11 Scheme Impacts

11.1.1 The Site will be impacted by the construction of a temporary soil storage bund and permanent landscape earthworks. The construction of these features will remove archaeological remains within the Site. The CIR has appropriately investigated and recorded those remains and successfully mitigated the construction impacts.

12 Evaluation of Methodology Used

12.1.1 The CIR comprised an area measuring 0.72ha. It was initially stripped under archaeological supervision by a 20-tonne tracked excavator with toothless ditching bucket, followed by investigation of archaeological levels by hand, with cleaning, examination and recording both in plan and section.

12.1.2 A sample of each feature was initially excavated, and if this was not sufficient to characterise the features they were more fully excavated. In some cases the entire feature was excavated, although in these cases dating evidence was not recovered. Identified archaeological features included undated scattered pits, gullies and ditches, and medieval/post-medieval furrows which is consistent with the remains identified during the test trench investigation (where archaeological features were recovered from Trenches 30, 34, 36 and 39). The CIR methodology was a suitable method of excavation in this context.

12.1.3 Features identified by geophysics, LiDAR and hyperspectral surveys were mostly present and recorded during the CIR, with some variations to alignment and location. Some additional archaeological features were identified, which had not been detected during previous surveys.

12.1.4 The CIR was able to address the aims of fieldwork as set out in the Fieldwork Change Control Form for construction integrated recording at Southam, Archaeological Recording Change No. FCCF Form A006 (1EW03-FUS-EV-FRM-CS07_CL24-000008).

13 Statement of Archaeological Potential

13.1.1 The GWSI: HERDS seeks to expand our knowledge of both known and unknown archaeological sites through dedicated research aims and objectives.

13.1.2 The archaeological works within this part of the Southam Cutting have revealed small scale human activity of an unknown date and with limited potential to contribute to the GWSI:HERDS objectives for the Site.

13.1.3 The animal bone assemblage can be used (if necessary) to provide samples for radiocarbon dating which could provide a date range for the Site.

14 Publication and Dissemination Proposals

14.1.1 Publication of the results of this fieldwork will be undertaken in a method and at an appropriate time as determined by HS2 Ltd.

15 Archive Deposition

15.1.1 The site archive comprises both physical and digital records. In total, there are 181 entries for archiving. Of these, 11 are ceramic fragments, six are charcoal fragments, 313 are animal bone fragments, and 175 are digital records comprising the digitized paper archive, registers and photos. Sample flots are retained in Polythene gripseal finds bags and appropriately labelled. All finds were treated in line with the guidelines detailed in First Aid for Finds.

15.1.2 Site records comprise a total 49 A4 paper sheets which contain the context, sample and finds data recorded on site as well as associated registers. In addition to this, 124 high resolution photograph files were taken. A total of two A3 permatrace drawing sheets are also included in the site archive. This information is presented below in Table 7. All of the paper records have been digitized and imported into an excel database, and all digitally collected spatial recording has been cleaned and assembled. The paper archive has been scanned for deposition with Archaeological Data Service (ADS).

Table 7 Summary of site records

Archive component	Total no of pages.	Format
Context sheets	32	Original A4 paper version and scanned .pdf documents
Sample sheets	6	Original A4 paper version and scanned .pdf documents
Photograph registers	5	Original A4 paper version and scanned .pdf documents
Drawing registers	2	Original A4 paper version and scanned .pdf documents
Context registers	2	Original A4 paper version and scanned .pdf documents

Finds register	1	Original A4 paper version and scanned .pdf documents
Sample register	1	Original A4 paper version and scanned .pdf documents
Drawing sheets	2	Original A3 permatrace paper version and scanned .pdf/tiff documents
Photographs	124	.jpg files

15.1.3 Final deposition of the archive will be determined by HS2 Ltd.

16 Acknowledgements

16.1.1 The Connect Archaeology would like to acknowledge the input of the following specialist contributions to this report:

- Jamie Walker – Pottery Assessment
- Joshua Toulson – Animal Bone Assessment
- Diane Alldritt– Environmental Assessment

17 Bibliography

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Chartered Institute for Archaeologists (CIfA). (2014). <i>Standard and guidance for archaeological excavation.</i>	CIfA 2014b
Connect Archaeology 2017 – Health and Safety Policy	
Cultural Heritage GIS Standard	HS2-HS2-GI-STD-000-000010
HS2 protocols for Intra- and Inter-project Communication	IMS 12.1.1
HS2 Community Relations Strategy	IMS 11.1.1
HS2 Technical Standard: Generic Written Scheme of Investigation: Historic Environment Research and Delivery Strategy Po3 (GWSI: HERDS)	HS2-HS2-EV-STR-000-000015
HS2 Technical Standard: Cultural Heritage GIS Specification	HS2-HS2-GI-SPE-000-000004
HS2 Technical Standard Specification for Historic Environment Investigations	HS2-HS2-EV-STD-000-000035
Egan, S and Atkins, R 2017 Pit alignment and middle Saxon open-ground cemetery	Egan and Atkins 2017

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AWH – Fieldwork Change Control Form A for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire	1EW03-FUS-EV-FRM-CS07_CL24-000008
AWHf Project Plan for a Trial Trench Evaluation at Southam Warwickshire (AC320)	1EW03-FUS-EV-REP-CS07_CL24-007847
AWHi Survey Report for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire (AC320)	1EW03-FUS_CNA-EV-REP-CS07_CL24-000053
AWHh Fieldwork Report for Trial Trench Evaluation at Southam, Warwickshire (AC320)	1EW03-FUS_CNA-EV-REP-CS07_CL24-000027
CONNECT Method Statement and Risk Assessment Construction Integrated Recording, Southam North, Southam Cutting, Warwickshire	1EW03-FUS_CNA-HS-MST-CS07_CL24-000003
HS2 Central - NIT2 Final Report for Geophysical Magnetometer Survey at Windmill Hill Spinney and Starbold Farm, Ladbroke Cutting; West Southam, Southam Embankment; Hill Farm, Southam Cutting; and Thorpe Bridge, Leamington Road Embankment, Warwickshire (AC320/6)	1EW03-FUS-EV-REP-CS07_CL24-007768
HS2 Phase One Environmental Statement and Supplementary Environmental Statements	ES 3.5.2.16.4, ES 3.5.2.16.5, ES 3.5.2.16.6, ES 3.5.2.16.7
HS2 Technical Standard: Route wide soil resources plan	HS2-HS2-EV-STD-000-000008
Stratascan 2015, Geophysical Survey Report Stoneythorpe, Warwickshire, Report J8420	Stratascan 2015

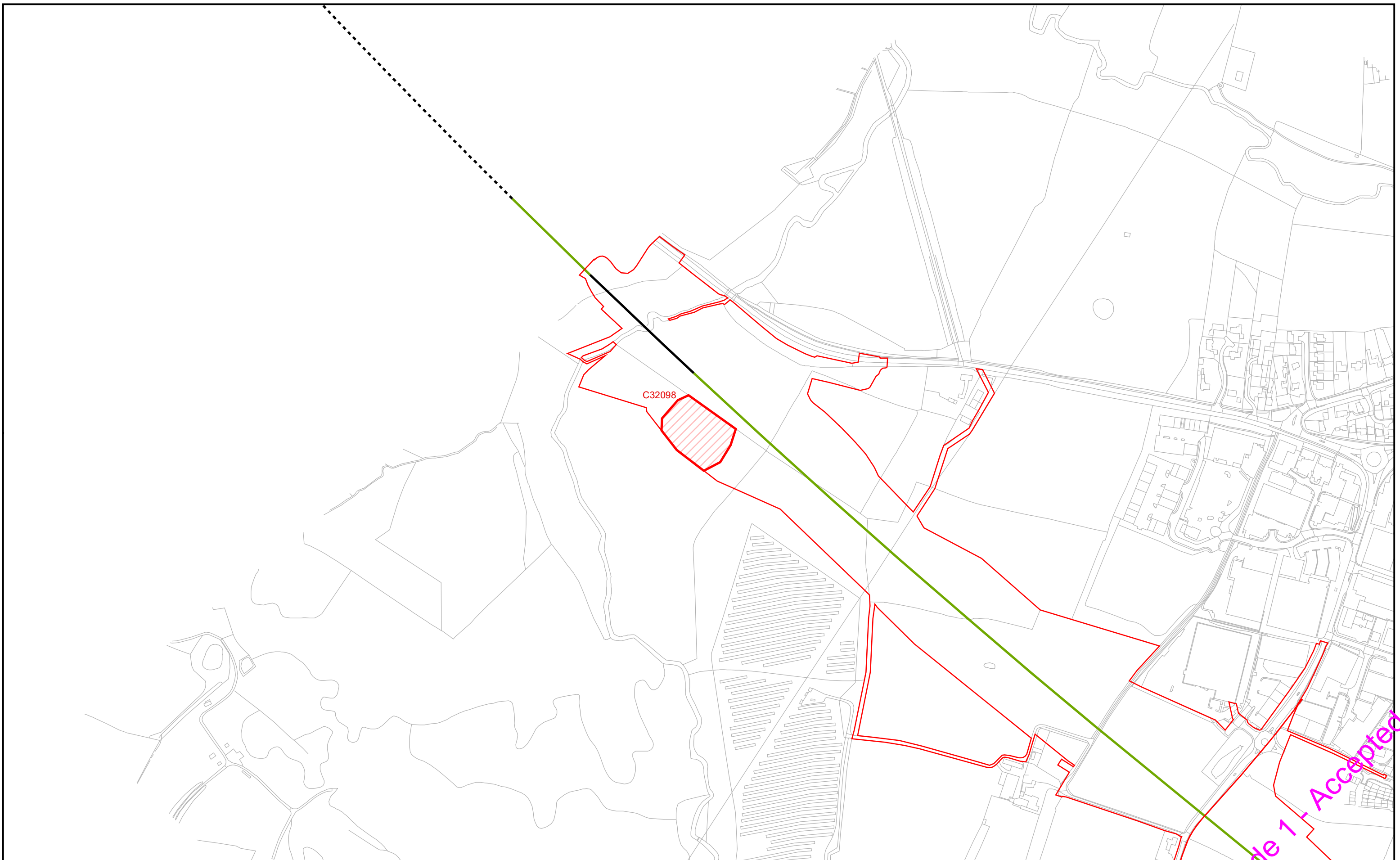
18 Glossary of Terms

- BGS British Geological Survey
- CFA Community Forum Area
- ClfA Chartered institute for Archaeologists
- CoCP Code of Construction Practice
- EMR Environmental Minimum Requirements
- ES Environmental Statement
- GIS Geographical Information Systems
- 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

- NGR National Grid Reference
- PDF Portable Document Format
- RTK Real Time Kinematic

19 Appendices

19.1 Appendix 1: Figures



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- Legend**
- LLAU/CCB
 - Cutting
 - Embankment
 - Green Tunnel
 - Viaduct
 - Southam North (Monitoring)



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High Speed Two

FIGURE 1
Site Location

AWHi - Fieldwork Report for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire (AC320)

Community Forum Area CFA16
Ladbroke & Southam
Published

HS2 Scale at A3: 1:5,000

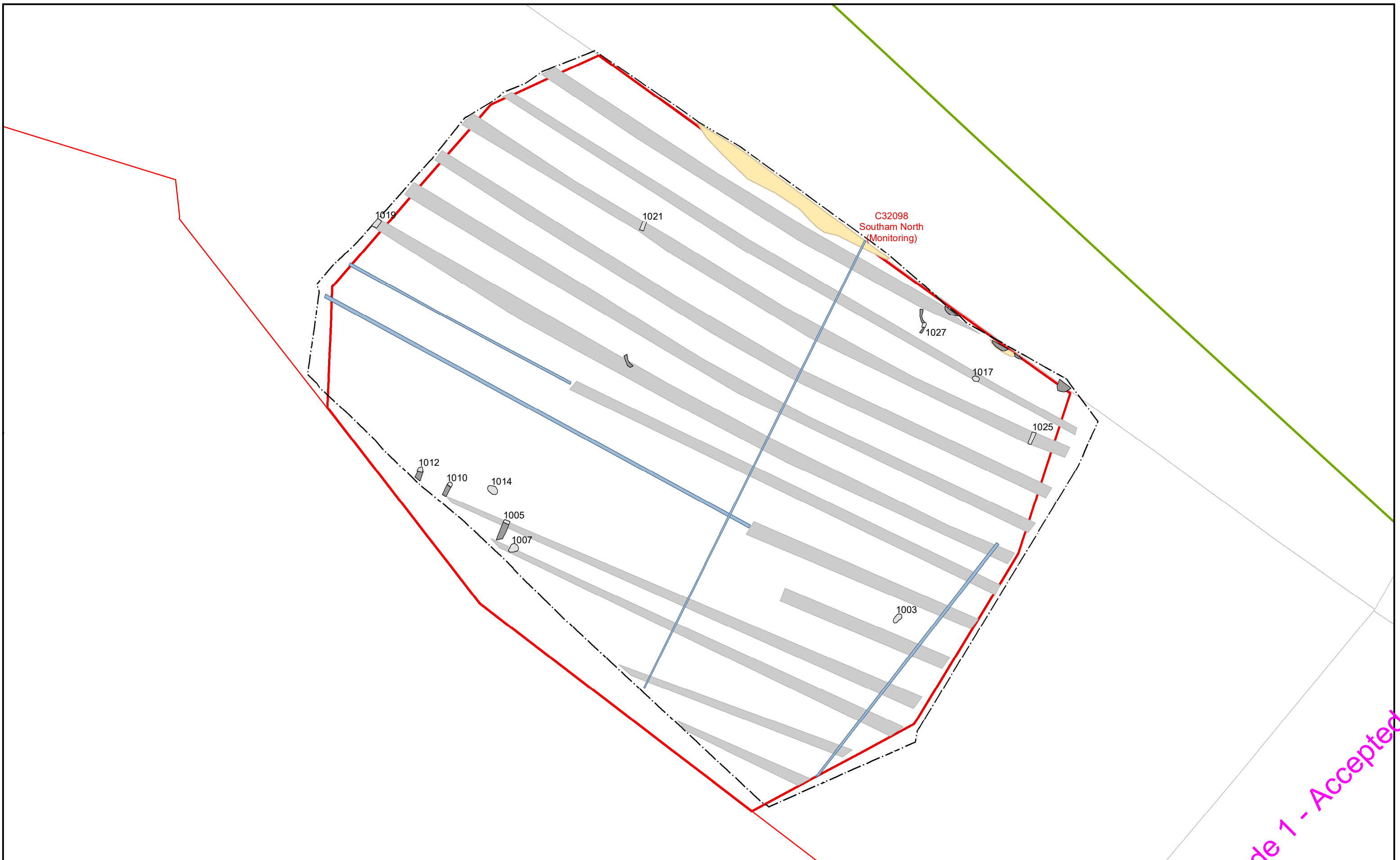
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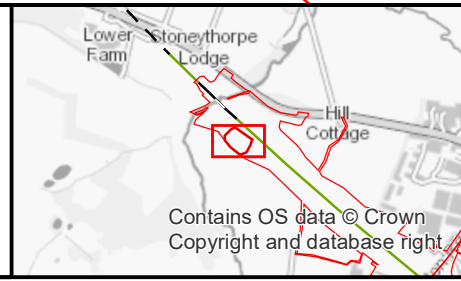
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Legend	
	LLAU/CCB
	Cutting
	Southam North (Monitoring)
	Pre Ex
	Feature
	Field Drain
	Furrow
	Deposit
	Limit of Excavation



High Speed Two

FIGURE 2
Plan of Site

AWHi - Fieldwork Report for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire (AC320)

Community Forum Area CFA16
Ladbroke and Southam
Published

HS2 Scale at A3: 1:500

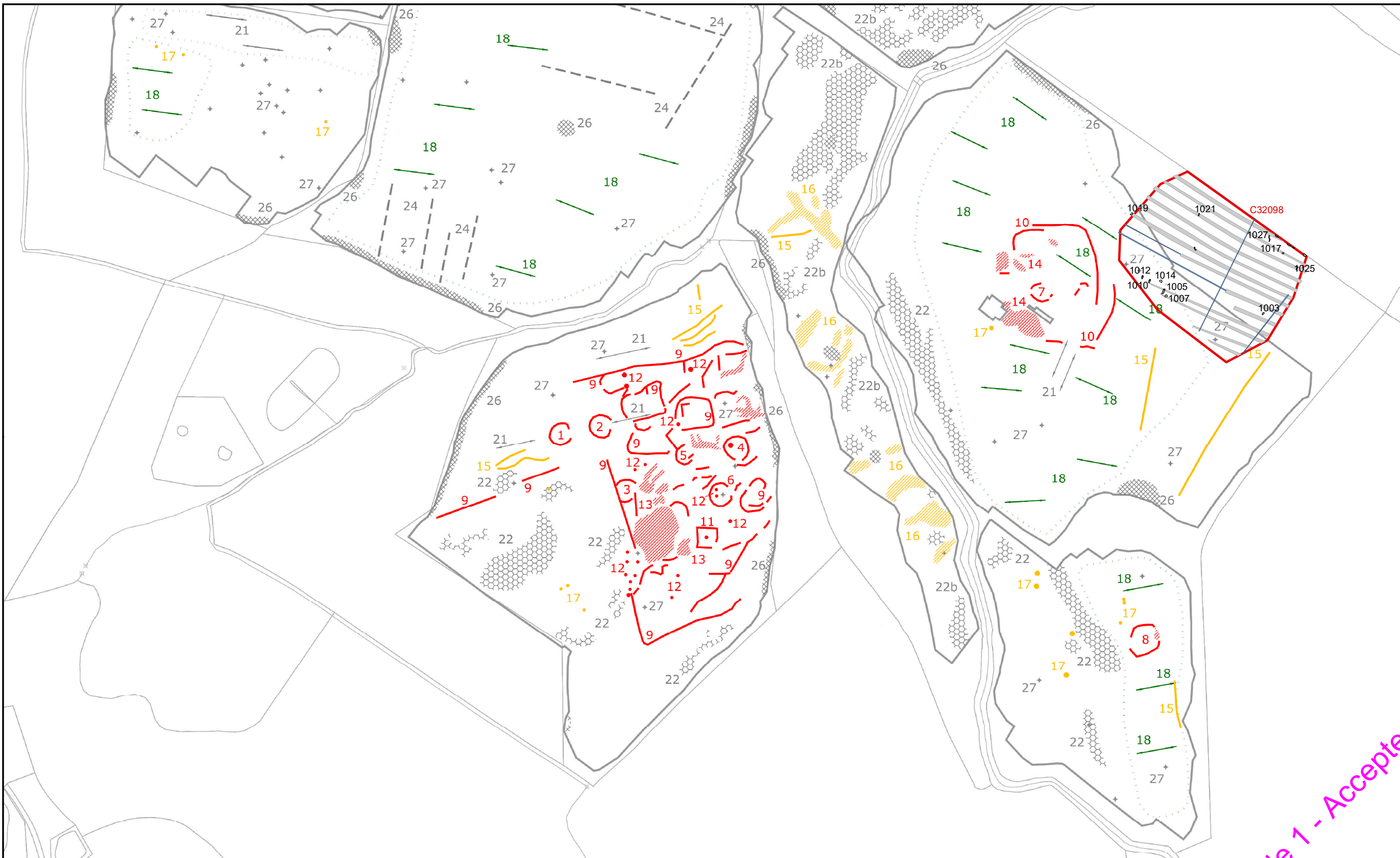
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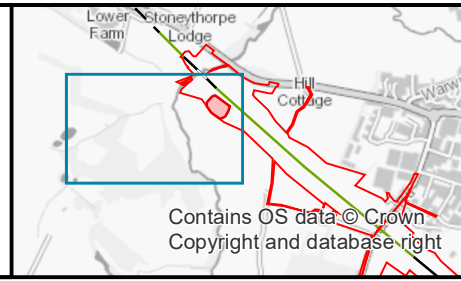
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Legend	
	Magnetic spike
	Linear anomaly
	Medieval/post-medieval - ploughing
	Medieval/post-medieval - ridge and furrow
	Possible archaeology - negative anomaly - bank or earthwork
	Possible archaeology - positive anomaly - cut feature
	Probable archaeology - negative anomaly - bank or earthwork
	Probable archaeology - positive anomaly - cut feature
	Amorphous magnetic variation
	Magnetic disturbance
	Southam North (Monitoring)
	Pre Ex
	Feature
	Field Drain
	Furrow



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FIGURE 3
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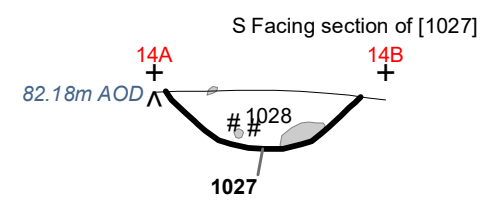
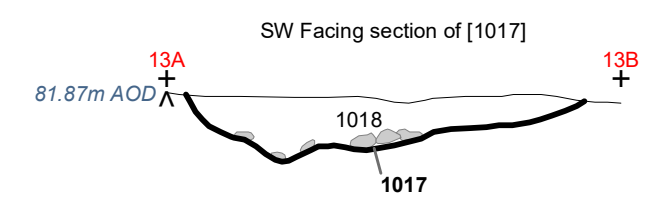
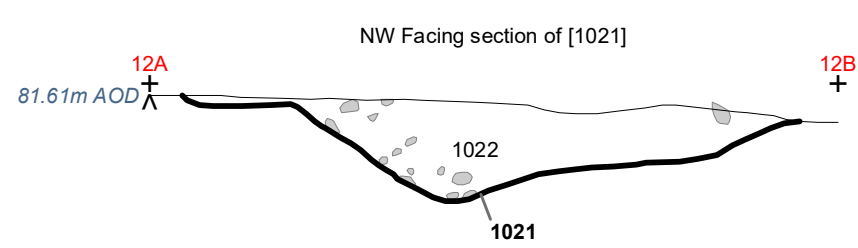
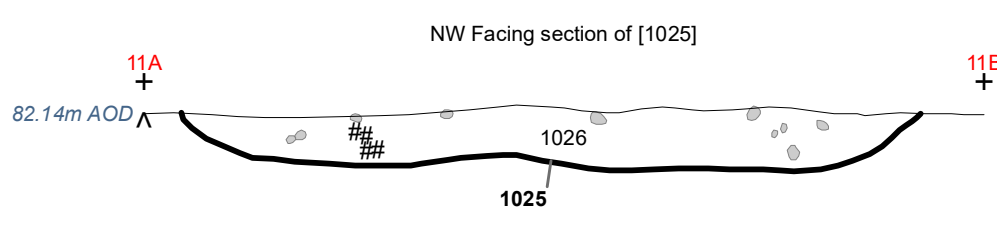
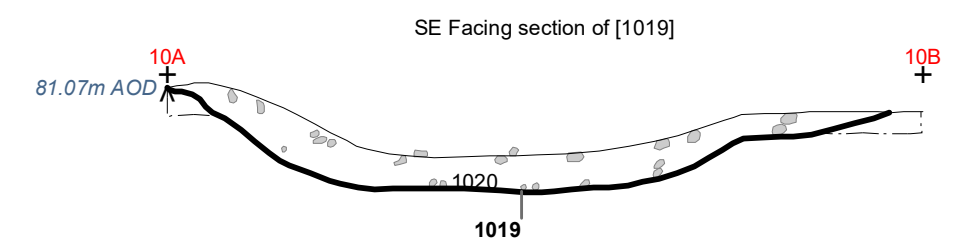
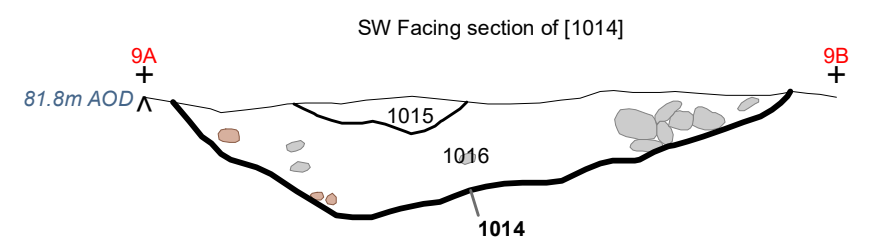
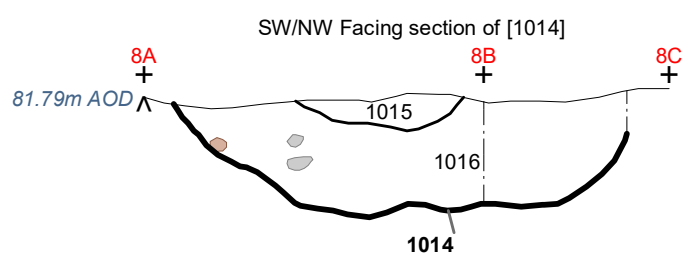
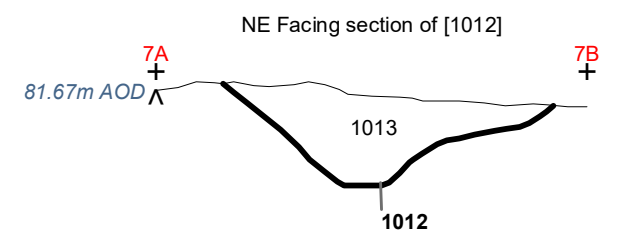
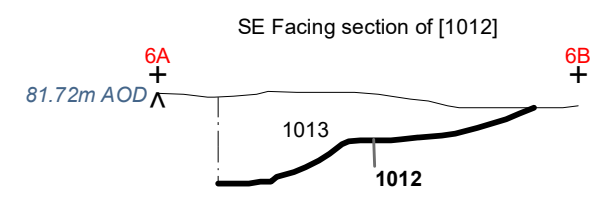
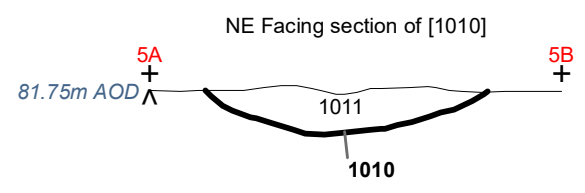
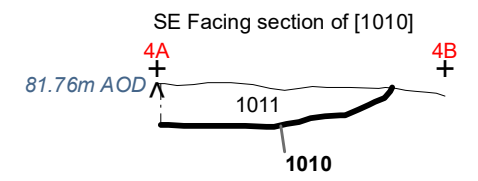
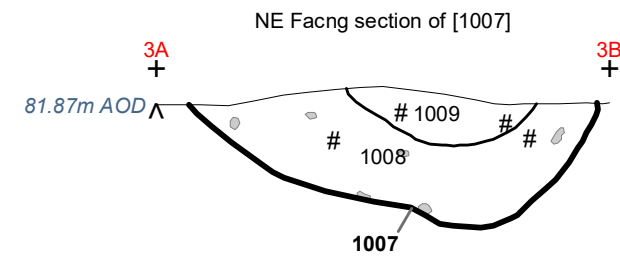
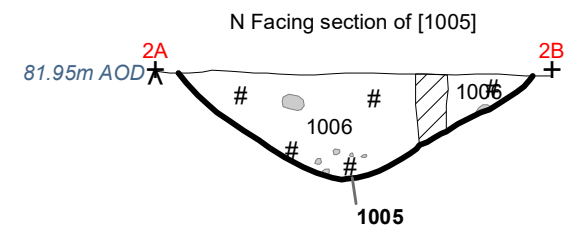
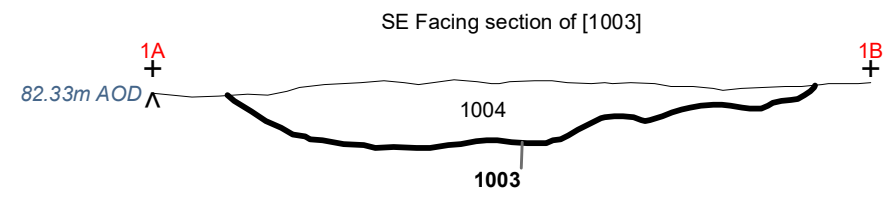
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0 10 20 30 40 Metres

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Legend	
	Bone
	Stone
	Field drain
	Deposit
	Cut
	Limit of Excavation
	Charcoal
	Section
	Level

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FIGURE 4

AWHi – Fieldwork Report for Construction Integrated Recording at Southam North, Southam Cutting, Warwickshire (AC320)

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FIGURE 4

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0 0.25 0.5 0.75 Meters

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19.2 Appendix 2: Plates



Plate 1: Pit [1003], looking NW



Plate 2: Ditch [1005], looking N



Plate 3: Pit [1007], looking SW



Plate 4: Terminus of gully [1010], looking NW



Plate 5: Terminus of gully [1010], looking SW



Plate 6: Terminus of ditch [1012], looking NW

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PLATES 1-6

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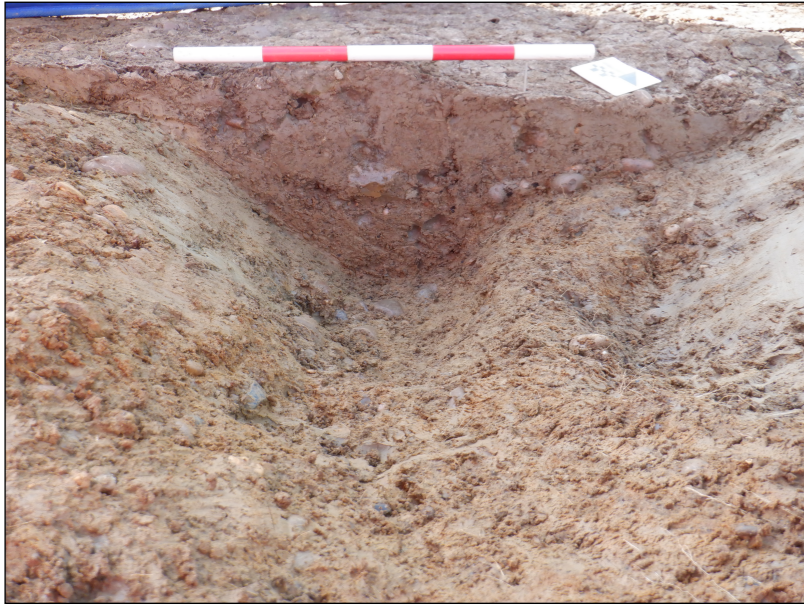


Plate 7: Terminus of ditch [1012], looking SW



Plate 8: Pit [1014] with in-situ animal bones, looking NE



Plate 9: Pit [1014] with in-situ animal bones, looking SE



Plate 10: Pit [1014] with in-situ animal bones, looking NE



Plate 11: Pit [1017], looking NE



Plate 12: Furrow [1019], looking NW

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PLATES 7-12

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Plate 13: Furrow [1021], looking E



Plate 14: Furrow [1025], looking SE



Plate 15: Gully [1027], looking SW



Plate 16: Gully [1027], looking N



Plate 17: Modern truncation (1031), looking NW



Plate 18: Post-excitation shot of Area C32098, looking W

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PLATES 13-18
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19.3 Appendix 3: Context List

Table 8 Context list

Context	Context class	Type	Fill of	Cut by	Cutting	Length	Width	Depth	Description	Artefacts	Spot date
1000	Layer	Topsoil							Dark greyish brown sandy silt, friable with occasional charcoal, cobbles and stones		
1001	Layer	Subsoil							Mid greyish brown sandy silt, friable with occasional to frequent stones.	Pottery	Roman-modern
1002	Layer	Natural							Yellowish brown sand and gravel, firmly compacted.		
1003	Cut	Cut of pit				1.55m	1m	0.18m	Subcircular in plan with concave sides and flat base.		
1004	Fill	Fill of pit	1003			1.55m	1m	0.18m	Light yellow brown silty clay, soft compacted with moderate small subangular stones.		
1005	Cut	Cut of ditch				2m+	0.92m	0.27m	Linear in plan with gradual to moderate sloping sides and a concave base, running N-S.		
1006	Fill	Fill of ditch	1005			2m+	0.92m	0.27m	Yellowish brown silty clay, firmly compacted with small and medium sized rounded to sub-rounded pebbles.		
1007	Cut	Cut of pit				1.05m	1.05m	0.34m	Subcircular in plan with uneven sides and concave base.		
1008	Fill	Fill of pit	1007			0.80m	0.80m	0.20m	Mid brown silty clay, firmly compacted with occasional medium sized cobbles.		
1009	Fill	Fill of pit	1007	Furrow		0.43m	0.43m	0.12m	Dark greyish brown silty clay, firmly compacted with occasional charcoal flecks and very small stones.		
1010	Cut	Cut of gully terminus				0.61m+	0.74m	0.12m	Linear in plan with concave sides and flat base, running NE-SW.		

Context	Context class	Type	Fill of	Cut by	Cutting	Length	Width	Depth	Description	Artefacts	Spot date
1011	Fill	Fill of gully terminus	1010			0.61m+	0.74m	0.12m	Mid brownish grey silty clay, softly compacted with rare small subangular stones.		
1012	Cut	Cut of ditch terminus				0.84m+	0.88m	0.24m	Linear in plan with concave sides and flat base, running NE-SW.		
1013	Fill	Fill of ditch terminus	1012			0.84m+	0.88m	0.24m	Mid brownish grey silty clay, softly compacted with moderate small subangular stones.		
1014	Cut	Cut of pit				1.62m	1.12m	0.31m	Subcircular in plan with concave sides and flat base.		
1015	Fill	Fill of pit	1014			0.45m	0.50m	0.10m	Dark brown grey silty clay, friable compaction.		
1016	Fill	Fill of pit	1014			1.62m	1.12m	0.31m	Mid yellowish brown silty clay, softly compacted with moderate angular stones.	Animal Bone	
1017	Cut	Cut of pit				1.05m	0.84m	0.17m	Circular in plan with concave sides and flat base.		
1018	Fill	Fill of pit	1017			1.05m	0.84m	0.17m	Dark brown grey silty clay, softly compacted with frequent subangular stones, and flecks of charcoal.	Burnt bone, fired clay	Undated
1019	Cut	Cut of furrow				2m+	0.11m	0.37m	Linear in plan with gradually sloping sides and a flat base.		
1020	Fill	Fill of furrow	1019			2m+	0.11m	0.37m	Mid greyish brown sandy silt, with occasional to moderate cobbles/stones, and occasional charcoal flecks.		
1021	Cut	Cut of furrow				2m+	0.16m	0.25m	Linear in plan with uneven sides and concave base, running SW-SE.		
1022	Fill	Fill of furrow	1021			2m+	0.16m	0.25m	Mid greyish brown sandy silt, with friable compaction and occasional to moderate pebble inclusions and occasional flecks of charcoal.	Pottery	Roman-modern
1023	Cut	Cut of modern truncation				LOE	2.80m	0.40m	Circular in plan with steep sides, not fully excavated.		

Context	Context class	Type	Fill of	Cut by	Cutting	Length	Width	Depth	Description	Artefacts	Spot date
1024	Fill	Fill of modern truncation	1023			LOE	2.80m	0.40m	Dark greyish brown sandy and clay silt, firmly compacted with tarmac, brick and stone inclusions.	Pottery	Modern
1025	Cut	Cut of furrow				2m+	1.95m	0.15m	Linear in plan with gradually sloping sides and a flat base, running NW-SE.		
1026	Fill	Fill of furrow	1025			2m+	1.95m	0.15m	Mid greyish brown sandy silt, friable compaction with occasional pebbles and stones.		
1027	Cut	Cut of gully				4m+	0.52m	0.15m	Curvilinear in plan with moderately sloping sides and a concave base, running N-S curving to SE-NW		
1028	Fill	Fill of gully	1027	Furrow		4m+	0.52m	0.15m	Mid reddish brown sandy silt, moderately compacted with occasional pebbles and rare medium sized subangular stones.		
1029	Cut	Cut of modern truncation				LOE	0.68m	0.42m	Irregular in plan with steep sides and irregular base.		
1030	Fill	Fill of modern truncation	1029			LOE	0.68m	0.42m	Dark pinkish brown mottled with dark grey, silty clay firmly compacted, with brick, stone, plastic and metal inclusions.		
1031	Layer	Modern deposit				NFE	NFE	NFE	Dark grey modern building deposit with unfired clay, bricks, tarmac stones metal and plastic inclusions.	Pottery	19 th C-modern

19.4 Appendix 4: OASIS Form

OASIS ID (UID)	hs2conne2-506691
Project Name	HS2 Construction Integrated Recording at Southam North, Southam Cutting, C32098
Sitename	
Activity type	Archaeological Intervention
Project Identifier(s)	1C21SOUAM
Planning Id	
Reason For Investigation	Planning requirement
Organisation Responsible for work	HS2 Connect Archaeology
Project Dates	07-Mar-2022 - 29-Mar-2022
Location	Southam North, Southam Cutting, C32098 NGR : SP 40235 61352 LL : 52.2488826923343, -1.41207641282092 12 Fig : 440235,261352
Administrative Areas	Country : England County : Warwickshire District : Stratford-on-Avon Parish : Southam

<p>Project Methodology</p>	<p>The program of Construction Integrated Recording at Southam North was carried out at lands required for the construction of the HS2 rail alignment at Southam Cutting as well as associated earthworks, temporary works and landscaping.</p> <p>Following the results of a trial trench evaluation (Site code: 1C20SOUTT; OASIS ID: hs2conne2-405592) at the site, an area measuring 0.73ha was selected for Construction Integrated Recording due to the potential for the survival of significant archaeological remains.</p> <p>A 360 degree excavation with a toothless grading bucket stripped the overburden to first archaeological deposit/geological interface under the direction of an archaeological operative. A pre-excavation survey was carried out and a sampling strategy was decided.</p> <p>Archaeologically features were hand excavated and bulk soil samples were recovered from targeted deposits. Fieldwork recording was carried out, including written record of individual contexts, hand-drawn and surveyed plans and sections, photography, and a site Harris Matrix.</p> <p>Surveyed data was recorded with Real Time Kinematic (RTK) Global Navigation Satellite System (GNSS) equipment referenced from permanent ground markers.</p> <p>Upon completion of the program of archaeological recording the site was returned to the main works contractor.</p>
<p>Project Results</p>	<p>A small number of archaeological features were identified during the programme of Construction Integrated Recording. These comprised undated gullies, pits, furrows and a land drain, indicating archaeological activity from at least the medieval period. All features are of an uncertain date, as datable material was not recovered. Medieval/post-medieval agricultural activities were indicated by the presence of numerous furrows.</p>

19.5 Appendix 5: Pottery assessment data

Table 9 Pottery assessment data

Context	Fabric Code	Function	NoSh	Wt	Period	Comments
1031	F999	B/T	2	284	19th-Mod	Possible drain pipe
1031	F999	Tile	1	11	19th-Mod	Yellow glazed whiteware plate
1024	F999	B/T	2	17	Mod	Printed design on cup
1001	F999	B/T	1	13	19th-Mod	Blue and white transfer ware
1001	F999	Tile	1	1	Mod	Blue and white glazed
1001	OX1	B/T	1	1	Roman-Mod	Oxidised body sherd
1001	OX1	B/T	1	3	Roman-Mod	Oxidised chip
1022	OX2	B/T	1	1	Roman-Mod	Oxidised chip, fairly fine
1022	CTP	B/T	1	4	18-19th	Clay pipe stem

19.6 Appendix 6: Animal bone assessment data

Table 10 Animal bones retrieved from hand excavation

Context	element	Number Present	Description	Size	Species	Preservation	Fragmentation
1016	Vertebrae	53	Vertebrae including cervical, thoracic and lumbar vertebrae from multiple sheep or goat.	Medium to small	Ovis/Capra	Very good	Low
1016	Sacrum	2	Two sheep or goat sacra.	Medium	Ovis/Capra	Good	Low
1016	Pelvis	3	Three pelvis sections; two from one sheep or goat and one from an additional sheep or goat.	Medium	Ovis/Capra	Good	Low
1016	Metatarsal	4	Four metatarsals with two sets probably from two sheep or goat. Larger set contains more significant wear on epiphyses	Medium	Ovis/Capra	Very good	Very low

Context	element	Number Present	Description	Size	Species	Preservation	Fragmentation
1016	Femur	3	Three femurs, two likely from one individual with the third from a second individual.	Medium	Ovis/Capra	Very good	Very low
1016	Tibia	4	Four tibiae likely from two individuals. Smaller set still contains some evidence of fusing on one epiphysis.	Medium	Ovis/Capra	Very good	Very low
1016	Scapula	5	Two sets of scapulae with significant damage to three of the bones. One fragment of scapula which likely is from one of the damaged bones.	Medium	Ovis/Capra	Good	Medium
1016	Calcaneum	2	Two calcaneus bones, likely from one individual	Small	Ovis/Capra	Very good	Very low
1016	Radius	4	Two sets of radii. One bone is missing an epiphysis	Medium	Ovis/Capra	Good	Medium
1016	Ulna	3	Three ulna, two likely from one individual and one from a second individual. Lower section of bones missing.	Medium	Ovis/Capra	Good	Medium
1016	Rib	87	87 assorted ribs. Many are missing their epiphysis, though it is clear all are from a medium sized mammal, likely sheep or goat.	Medium	Medium Mammal, likely Ovis/Capra	Good	Medium
1016	Astragalus	2	Two different sized astragalus, likely from different individuals.	Medium	Ovis/Capra	Medium	Very low
1016	Metacarpal	1	One metacarpal with a growth on the diaphysis. Distal epiphysis is missing.	Medium	Ovis/Capra	Medium	Medium
1016	Humerus	3	Three humerus bones, a set from one sheep or goat and an additional bone from another sheep or goat. Damage to epiphysis on all elements.	Medium	Ovis/Capra	Medium	Medium
1016	Mandible	3	One mandible with three teeth (M1, M2, M3) showing advanced dentine pattern, suggesting advanced age. Disease present on side of mandible. Two additional mandible fragments present in assemblage, also from sheep/goat.	Medium	Ovis/Capra	Good	Low

Context	element	Number Present	Description	Size	Species	Preservation	Fragmentation
1016	Maxilla	2	Two sections of sheep maxilla. Each fragment contains two molars. Both show advanced wear on their teeth.	Medium	Ovis/Capra	Poor	High
1016	Teeth	5	4 teeth show advanced wear, suggesting an older age at time of death. One tooth shows very little wear but is a permanent molar, suggesting it belonged to a young adult.	Small	Ovis/Capra	Good	Very low
1016	Misc.	86	86 small fragments of unknown bone. Lack of identifiable features prevents any level of diagnostic analysis.	Small	Ovis/Capra	Poor	High
1016	Long bone	4	4 long bone mammal diaphyses. Likely a sheep or goat.	Medium	Medium mammal	Medium	High
1016	Skull	15	Large section of the posterior of a sheep or goat skull. Remaining 14 fragments are miscellaneous skull pieces.	Medium	Ovis/Capra	Medium	High
1016	Metapodials	6	6 various metapodials from a sheep or goat.	Medium	Ovis/Capra	Good	Low
1016	Neonatal long bones	16	Various fragments of a neonatal sheep or goat skeleton. Evidence of lack of fusing on some bones, with most fairly fragmented.	Medium	Ovis/Capra	Poor	Medium

19.7 Appendix 7: Samples Retained

Table 11 Composition of Retents by weight (grams)

Sample number	Context number	Approx. sample vol (litres)	Residue weight (g)	Charcoal	Cereal Grains	Nutshell	Bone	Burnt Bone	Pottery	Ironstone	Fired Clay	Lithic	Glass	Iron
1	1015	5	497							1				
2	1016	40	4950				1			1				
3	1018	40	5892	1				1		3	3			
4	1013	40	6487							6				
5	1011	30	5719							4				
6	1008	40	11178							3				