making sense of heritage

A453 Widening Scheme
M1 Junction 24 to A52 Nottingham
Strip, Map and Record
Sites 1-3, 7, 9a, 9b and 12

Archaeological Post-excavation Assessment Report
and Proposed Publication Synopsis

Ref: 86083.03
September 2013

archaeology

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Archaeological Post-excavation Assessment Report and Proposed Publication Synopsis

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Summary

Wessex Archaeology was commissioned by Laing O'Rourke Infrastructure to undertake archaeological investigations in advance of the upgrading of the A453 between Junction 24 of the M1 and the A52 near Clifton, Nottingham (from NGR 448231 328125 in the southwest to NGR 453834, 333324 in the northeast).

The Scheme has previously been subject to evaluation by desk-based assessment, fieldwalking, geophysical survey, trial trenching and mitigation by excavation.

The work comprised a 'Strip, Map and Record' investigation at seven separate sites based on the results of previous evaluation surveys; an ongoing Watching Brief will be reported separately.

This Assessment Report summarises the results of the Strip, Map and Record investigations and assesses the evidence, its potential for further analysis and publication.

The Strip, Map and Record revealed archaeological remains in the northeastern section of the Scheme, in Nottinghamshire (Sites 7 and 12); although only Site 7 included closely datable, significant remains. The other sites (1, 2, 3, 9a and 9b) did not contain any archaeological remains. No further work is warranted on Sites 1, 2, 3, 9a, 9b or 12. However, Site 7 is of significance and warrants further analysis and publication, and the revealed boundary ditch at Site 12 warrants a short mention in the publication of Site 28 from this Scheme.

Site 7 represents the remains of a Middle Iron Age enclosed settlement; probably a component of an extended landscape of contemporary fields and settlements. Additional stratigraphic analysis is unlikely to enhance interpretation of the site, but further pottery and environmental analysis may provide data that allow more detailed interpretation of the nature, development and decline of activity at the site.

It is proposed that a final report of the results should be submitted for publication in the *Transactions of the Thoroton Society of Nottinghamshire*.

The project archive has been compiled into a stable, fully cross-referenced and indexed archive. It is currently held at the offices of Wessex Archaeology in Sheffield, under the project code **86083**, and will be transferred to the Nottingham City Museum Service in due course under accession number **NCMG 2013-9**.

A453 Widening Scheme
M1 Junction 24 to A52 Nottingham

Strip, Map and Record
Sites 1-3, 7, 9a, 9b and 12

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The fieldwork was supervised by Sam Fairhead, assisted by John Buttery, Linzi Harvey, Charles Hay, Chris Hirst, Mike Keech, Phillip Maier, Andrew Reid, Phil Roberts, Kirsty Squires, Ashley Tuck, Matt Weightman and Dane Wright.

The report was compiled by Sam Fairhead and Andrea Burgess with illustrations by Chris Swales.

The artefacts were assessed by Rachael Seager Smith. The environmental samples were processed by Steve Winterton and assessed by Sarah Wyles. Soils and sediments were assessed by Nicki Mulhall and David Norcott.

The project was managed for Wessex Archaeology by Andrew Norton.

A453 Widening Scheme
M1 Junction 24 to A52 Nottingham

Strip, Map and Record
Sites 1-3, 7, 9a, 9b and 12

Archaeological Post-excavation Assessment Report and Proposed Publication Synopsis

1 INTRODUCTION

1.1 Project background

1.1.1 Wessex Archaeology was commissioned by Laing O'Rourke Infrastructure (hereafter 'the Client') to undertake archaeological investigations in advance of the upgrading of the A453 between Junction 24 of the M1 and the A52 near Clifton, Nottingham (from NGR 448231 328125 in the southwest to NGR 453834 333324 in the northeast; hereafter 'the Scheme'; **Figure 1**).

1.1.2 The Scheme has previously been subject to evaluation by desk-based assessment, fieldwalking, geophysical survey, trial trenching and mitigation by excavation (ULAS 2006, 2007a-c; Stratascan 1993, 2007; Wessex Archaeology 2013).

1.1.3 University of Leicester Archaeology Services (the 'Consultant') produced a design brief (ULAS 2012) requiring:

- a 'Strip, Map and Record' investigation at seven separate sites based on the results of previous evaluation surveys and,
- a 'Watching Brief' from junction 24 of the M1 to Ratcliffe-on-Soar power station and from the northern end of Barton Lane to Millhill Spinney.

1.1.4 A Written Scheme of Investigation (WSI) was prepared by Wessex Archaeology (2012) and was approved by the Client and the Consultant.

1.1.5 This Assessment Report summarises the results of the Strip, Map and Record investigations and assesses the evidence, its potential for further analysis and publication. It has been compiled in accordance with MAP2 guidelines (English Heritage 1991).

1.1.6 Sections of the remainder of the Scheme are currently subject to archaeological monitoring during construction. No significant archaeological sites or finds have been identified to date. The results of the Watching Brief will be reported separately.

1.2 The Sites

1.2.1 The sites for investigation by the Strip, Map and Record technique are summarised in **Table 1** below and located on **Figures 1-3**.

1.2.2 Sites 1-3 were located at the southwestern end of the Scheme (**Figure 2**). The sites all lay on the southern side of the A453, between junction 24 of the M1 and the river Soar, within the county of Leicestershire.

1.2.3 Sites 7, 9a, 9b and 12 were located towards the northeastern end of the Scheme (**Figure 3**). These lay on the southern side of the A453, between Thrumpton and Clifton, within Nottinghamshire.

Table 1: Summary of sites for Strip, Map and Record investigation

Site no	Area	NGR	Description	Previous evaluation
1	1218m^2 692m^2	448622, 328531 448516, 328432	Flint scatter and features	Geophysical survey Fieldwalking
2	1854m^2 626m^2	448271, 328169 448425, 328338	Prehistoric features	Geophysical survey
3	740m^2 6215m^2	448740, 328628 449000, 328824	Iron Age, Roman, Saxon site	LIDAR analysis Fieldwalking Geophysical survey Trial trenching
7	9411m^2	453215, 332742	Cropmark enclosures	Geophysical survey
9a	3942m^2 1917m^2 6566m^2	452454, 331925 452559, 332047 452698, 332220	Glebe Farm Roman villa and cropmarks	Geophyscal survey Trial trenching
9b	1550m^2	452950, 332469	Glebe Farm cropmarks and prehistoric features	Geophyscal survey Trial trenching
12	2585m^2	453816, 333302	Geophysical anomalies	Geophysical survey

1.2.4 The underlying geology of the Scheme comprises Mudstone of the Branscombe Mudstone Formation overlain by alluvium, river terrace gravels, or the gravel and clays of Thrussington Member Diamicton (British Geological Survey online 1:50,000).

2 ARCHAEOLOGICAL BACKGROUND

2.1 Introduction

2.1.1 In the 30 years since the A453 improvements were first added to the National Trunk Road Programme there have been numerous archaeological studies, including desk-based assessments. These have since been collated into a single study and the following information is summarised from the detailed cultural heritage assessment (ULAS 2007c) and the design brief (ULAS 2012).

2.2 Prehistoric and Roman

2.2.1 The Scheme lies close to the confluence of the rivers Soar and Trent, an area utilised for settlement throughout the prehistoric periods; flint artefacts and cropmarks are common in this area. A fortified Iron Age site was located at Brands Hill and several nearby Roman sites have Iron Age origins.

2.2.2 There is a dense pattern of settlement sites from the Roman period along the Trent Valley, which tend to be identified initially through the presence of cropmarks and pottery scatters. Cropmarks of sub-rectangular enclosures are found in the area around the Scheme, possibly indicating settlement, industry or farming. More substantial remains are

known from the scheduled monuments in the vicinity: Glebe Farm Roman Villa (ref. SM35602; 250m south of the Scheme), Red Hill Roman complex (ref. NT141; 1.25km north of the Scheme), and Lockington Villa and settlement (refs LE140, LE126;900m to the north of the Scheme).

2.3 Anglo-Saxon

2.3.1 All of the villages adjacent to the Scheme appear in the Domesday Book (of AD1086) and are likely to have an Anglo-Saxon origin; the nearest sites with clear evidence for Anglo-Saxon activity lie between the Radcliffe-on-Soar power station and the M1.

2.4 Medieval, post-medieval and modern

2.4.1 The Trent Valley provided fertile, arable land for agriculture during the earlier part of the medieval period, but some of this land reverted to pasture during the population declines of the 14th century. Extensive cropmarks of the remnants of ridge and furrow agriculture are visible through the valley, but it is not clear whether this dates to the medieval or post-medieval periods.

2.4.2 Nearby post-medieval sites reflect the growing industrialisation of the Trent Valley. Roads, mines, tramways, quarries and mills lie in close proximity to the Scheme, as well as the Ratcliffe-on-Soar power station, built in the 1960s.

2.5 Recent investigations in the area

2.5.1 The archaeological potential of the Scheme was evaluated by fieldwalking, geophysical survey and trial trenching (ULAS 2007a-b; Stratascan 1993, 2007). A mitigation excavation has been completed at Site 28 (Wessex Archaeology 2013) and a Watching Brief is currently underway.

Site 1

2.5.2 Late Neolithic to Early Bronze Age flints have been found to the north of the A453 in the area of Site 1. Geophysical survey identified anomalies indicative of ploughing, ditches, pits and a possible bank (Stratascan 1993, 2007). It is possible that these features could extend south of the road. Alluvial deposits and palaeochannel deposits are present in this area (ULAS 2006) but evaluation trenching was not possible due to access issues.

Site 2

2.5.3 Geophysical survey north of the A453 identified a number of likely prehistoric features such as a ring ditch, pit alignment and ditches (Stratascan 1993, 2007). Again, it is possible that these could extend south of the road. Like Site 1 alluvial deposits and palaeochannel deposits are present in this area (ULAS 2006) and again, access issues precluded evaluation trenching.

Site 3

2.5.4 Large amounts of Romano-British and Saxon pottery and metalworking debris have been recovered from this area. Geophysical survey (ULAS 2007a) indicated an area of disturbance, possibly caused by road construction, a ditch and some pits in the western part of Site 3. Probable archaeological cut features were also identified in the eastern part of Site 3. Alluvial deposits and palaeochannel deposits are present in this area (ULAS 2006).

2.5.5 An evaluation by trial trenching revealed features corresponding with geophysical anomalies including a linear feature containing a sherd of Saxon pottery, undated pits and

ditches. The Strip, Map and Record areas at Site 3 expanded upon evaluation trenches 26-30 (ULAS 2007a).

Site 7

2.5.6 There are a number of cropmarked enclosures in this area. Geophysical survey failed to identify the cropmarks but did locate pit-like features and modern or ploughing features (Stratascan 2007).

2.5.7 Evaluation trial trenching did not identify any archaeological features in this area (ULAS 2007b). The Strip, Map and Record at Site 7 expanded upon the cropmark and evaluation area.

Sites 9a and 9b

2.5.8 Sites 9a and 9b lie near the Scheduled Monument of Glebe Farm Roman villa and cropmarks indicating Iron Age or Romano-British enclosures. Geophysical survey identified ploughing features, modern disturbance, ditches, pits and banks within the road corridor (ULAS 2007a).

2.5.9 Subsequent trial trenching confirmed the presence of undated linear features, probably boundary or drainage ditches, and not thought to be associated with the villa site. Strip, Map and Record works at Site 9a expanded upon evaluation trenches 23-25 and Site 9b expanded upon trenches 20-21 (ULAS 2007a).

Site 12

2.5.10 Cropmarks in this area were investigated by geophysical survey which identified possible ditches and pits (ULAS 2007a). A subsequent trial trench in this area did not identify any archaeological features. The Strip, Map and Record area at Site 12 expanded upon the cropmarks and trench 39 (ULAS 2007b).

3 METHODOLOGY

3.1 Aims and objectives

3.1.1 The aims and objectives of the investigations were:

- To mitigate the impact of the road scheme;
- to establish the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks;
- to excavate and record significant archaeological deposits, which will be affected by groundworks associated with the development;
- to integrate the results into the wider cultural and environmental context and with specific research aims; and,
- to analyse the site records, artefacts and ecofacts and produce an archive, report and publication of the results.

3.2 Fieldwork methodology

3.2.1 The investigations were conducted in accordance with the brief (ULAS 2012), WSI (Wessex Archaeology 2012) and with professional standards and guidelines (IfA 2008a-b, 2010).

3.2.2 The investigation areas (**Figures 2** and **3**) were located by means of a RTK GPS system and tied into the Ordnance Survey National Grid (to within 0.1m).

3.2.3 Topsoil and overburden was removed using a mechanical excavator fitted with a toothless ditching bucket, working under the supervision of an experienced archaeologist. Topsoil was removed in a series of level spits down to the level of the upper archaeological horizon, or the level of the natural geology, whichever was reached first.

3.2.4 The exposed surfaces were hand-cleaned where necessary to clarify the extent of revealed archaeological remains. Archaeological features and deposits were investigated and stratigraphically excavated by hand. A sufficient sample of each layer/feature type was excavated in order to establish the date, nature, extent and condition of the archaeological remains.

3.3 Recording

3.3.1 All archaeological features and deposits encountered were recorded using Wessex Archaeology's *pro forma* recording sheets and a continuous unique numbering system. A stratigraphic matrix was compiled to record the relationships between features and deposits.

3.3.2 All investigations were located in relation to the Ordnance Survey grid, and other plans, sections and elevations of archaeological features and deposits were drawn as necessary at 1:10, 1:20 and 1:50 as appropriate. All drawings were made in pencil on permanent drafting film.

3.3.3 The spot height of all principal features and levels was calculated in metres relative to Ordnance Datum, correct to two decimal places. Plans, sections and elevations were annotated with spot heights as appropriate.

3.3.4 Photographs were taken of all archaeological features to produce a photographic record consisting of 35mm monochrome prints and colour slides; digital images supplement the photographic record.

3.4 Specialist strategies

Artefacts

3.4.1 Finds were treated in accordance with the relevant guidance (UKIC 2001; MGC 1991; English Heritage 2005). All retained artefacts were, as a minimum, washed, weighed, counted and identified. Any artefacts requiring conservation or specific storage conditions were dealt with immediately in line with *First Aid for Finds* (Watkinson and Neal 1998).

Environmental

3.4.2 Bulk environmental soil samples for plant macro-fossils, small animal and fish bones and other small artefacts were taken from appropriate well-sealed and dated/datable archaeological deposits.

3.4.3 The collection and processing of environmental samples was undertaken in accordance with English Heritage guidelines (2011).

4 ARCHAEOLOGICAL RESULTS

4.1 Introduction

4.1.1 The excavations were carried out from November 2012 to February 2013, during some severe weather conditions, which hindered visibility and photographic recording (**Plate 1**).

4.1.2 The results of the investigations are summarised below with descriptions of significant features and contexts. Site locations are illustrated on **Figures 1-3**.

4.2 Sites 1 and 2

4.2.1 Soil stripping at Sites 1 and 2 revealed alluvial deposits beneath 0.4m of topsoil; Sites 1 and 2 were scheduled for 'fill' rather than 'cut' and the alluvium remained in situ. Following discussions with ULAS and NCC no further archaeological excavation was required in these areas. No archaeological features or finds were identified at this level.

4.3 Site 3

4.3.1 Excavation revealed 0.18m of topsoil overlying 0.33m of orange-brown silty sand subsoil and 0.18m of a dark brownish-grey sandy silt deposit (**Plate 2**). Natural geological deposits were encountered at approximately 0.69m below ground level and comprised patches of either yellow-brown compacted clay or sandy-gravel deposits.

4.3.2 The outlines of previous evaluation trenches were noted and one possible feature was investigated but determined to be natural. No archaeological features or finds were identified.

4.4 Site 7

Summary

4.4.1 The excavations revealed stratigraphic and artefactual evidence of two phases of activity at Site 7; an Iron Age settlement comprising a roundhouse, an enclosure ditch, a pit alignment, field boundaries, and post-medieval furrows. All of the features were cut into natural deposits (**Figure 4**).

Natural deposits

4.4.2 The natural geology of the site was mid brownish-red clay and it was typically encountered at 0.6m below ground level.

Iron Age Features

4.4.3 All of the pre-medieval features at Site 7 are believed to date to the Middle Iron Age and include a penannular gully positioned roughly in the centre of a square enclosure. A second enclosure extended to the southeast, beyond the area of excavation. Evidence of two or more sub-phases of activity were indicated by intercutting features but these could not be satisfactorily resolved at this stage.

<u>Roundhouse</u>

4.4.4 The penannular gully and associated features (**7162**) formed a 12m diameter roundhouse with a 3.4m-wide east-facing entrance and internal pits. Excavation revealed that two ring gullies were present in segment **7009**/**7011** with the narrower, shallower gully (**7009**) on the inside (**Figure 5**, **Plate 3**). Together the gullies formed a 0.8-1.1m wide feature and had average depths of 0.25m and 0.13m. It was not possible to determine whether these were originally contemporary features, the base of a single feature, or an episode of re-

definition of the roundhouse. The fills of ring gully segments **7009**, **7033** and **7065** each contained animal bone and Middle Iron Age pottery.

4.4.5 Six pits associated with the roundhouse did provide evidence of multiple sub-phases of activity in this area. Pit **7067** was cut through the ring gullies at the northern entrance terminus (**Figures 4** and **5**). It was 1.8m in diameter and 0.8m in depth with one fill containing burnt Middle Iron Age pottery. Pit **7045** lay within the entrance to the roundhouse; it was 1m in diameter, 0.37m deep and contained two fills. The upper fill contained Middle Iron Age pottery.

4.4.6 Inside the roundhouse, adjacent to the northern entrance terminus was pit **7037** which had been cut by pit **7035**. The earliest pit (**7037**) was 1.35m long, 0.5m and 0.16m deep and contained Middle Iron Age pottery. Pit **7035** was 0.9m long, 0.45m wide and 0.18m deep. Within the roundhouse, pit (**7062**) was c.2.6m in diameter and 0.35m deep with two fills, and had been cut by pit (**7060**) which was 1m in diameter and 0.35m deep with one fill (**Figure 5**). The fills of pits **7060** and **7062** contained Middle Iron Age pottery.

4.4.7 No evidence of a heat source was present within the roundhouse, but hearth **7114** was found 13m to the north. This oval pit was 1.05m by 0.6m and 0.19m deep. It contained a single dark grey-black fill (**7115**) which contained Middle Iron Age pottery and a flint flake. The underlying natural deposit displayed evidence of *in situ* burning. Only one other definite feature, pit **7026**, was recorded within the enclosure and its fill contained a flint flake.

Enclosures

4.4.8 The roundhouse was situated within an approximately 50m square enclosure formed by a large, deep ditch (**7163**). The ditch was typically 3.5m wide, but exceeded 4m in width in places. At its deepest the ditch was over 1.2m although it shallowed considerably along the western side of the enclosure due to truncation. Excavation revealed that the enclosure ditch contained four to six fills (**Figure 6**, **Plate 4**).

4.4.9 Animal bone and Middle Iron Age pottery was recovered from the fills of ditch segment **7019** and flint flakes and Middle Iron Age pottery were recovered from ditch segment **7107**, both located in the northern side of the enclosure. Pottery of the same date was also found in the fills of segments **7116** and **7136** in the southern side of the enclosure, segment **7152** in the eastern side, and **7127** at the southeast corner; the latter also contained fragments of fired clay.

4.4.10 A second enclosure, only partly revealed in the excavated area, lay on the eastern side of the main square enclosure. Ditches **7145** and **7135** formed the northern and southern sides of this enclosure respectively. In each case the ditch terminated prior to joining with the eastern side of the square enclosure, leaving a gap of approximately 4.5m. Ditches **7145** and **7135** were 1.5m to 1.7m wide and 0.39m to 0.44m deep (**Figure 7**). Middle Iron Age pottery and a burnt flint flake were recovered from the sole fill of ditch **7145**.

Pit alignment

4.4.11 Pit alignment **7164** comprised seventeen pits in a line oriented northwest to southeast (**Plate 5**). The alignment lay 2m from, and parallel with, the northern side of the enclosure and extended across the gap between the two enclosures. The pits varied between 0.2m and 0.3m in depth and were typically 1m in diameter (**Figure 8**, **Plates 6**-**7**). They contained a silty-sand deposit - distinct from the fills of the roundhouse and enclosure which typically contained silty-clays. Single flint flakes were recovered from the fills of pits **7024**, **7039** and **7079** and animal bone and Middle Iron Age pottery from pit **7156**.

Other features

4.4.12 A 25m-long gully (**7030**) lay 6m from, and parallel with, the pit alignment. It was 0.7m wide and 0.28m deep with a single fill similar in composition to those in the pit alignment.

4.4.13 In addition, a pit and posthole were recorded just beyond the southern side of the enclosure, both were undated.

Post-medieval features

4.4.14 The remains of post-medieval ridge and furrow agriculture were present in the form of furrows running north/south across the Site and truncating earlier features.

4.5 Sites 9a and 9b

4.5.1 Natural geological deposits of orange clay were encountered beneath 0.4m of topsoil. No archaeological features or artefacts were identified.

4.6 Site 12

Summary

4.6.1 A ditch and three small pits/postholes were identified cut into natural deposits (**Figure 9**). The ditch had been truncated by post-medieval furrows and a modern drain. Site 12 was scheduled for 'fill' and the revealed archaeological features were to remain preserved in situ.

General stratigraphy

4.6.2 The underlying natural geology was encountered beneath topsoil and subsoil layers at 0.4m below ground level. It comprised compacted orange clay.

Iron Age features

4.6.3 The dominant feature at Site 12 was ditch **12004** which appeared to define part of two sides of an enclosure, including a 3.5m-wide entrance. The ditch comprised two segments: a northeast to southwest aligned section, 22m long with a rounded terminus to the east and a second segment with an opposing terminus on the same alignment. The latter section was only recorded for 1.3m and could not be traced any further to the northeast. At its southwestern end, ditch **12004** turned though 90º onto a southeast to northwest alignment. This side of the possible enclosure shallowed gradually and the ditch petered out completely after 7m.

4.6.4 The ditch was fairly uniform in depth at 0.5m, but varied from 2.3m to 2.6m in width (**Figure 10**, **Plate 8**). It had a single fill (**12011**) which contained Late Iron Age pottery.

4.6.5 Three possible pits or postholes were recorded in the vicinity of the ditch but these could not be dated and may belong in a later phase.

Post-medieval and modern features

4.6.6 The remains of post-medieval furrows and a modern drain crossed the site from north to south.

5 ARTEFACTUAL EVIDENCE

5.1 Introduction

5.1.1 Approximately 3.5kg of finds were recovered, but only pottery occurs in any quantity. All the artefacts have been quantified (number and weight of pieces) by material type within each context; this information is summarised in **Table 2**. All material types were also scanned on a context by context basis, to assess their date, range and condition. The pottery has provided the only dating evidence for the sites and is of Middle Iron Age date (broadly *c.*350–50BC) for Site 7 and an Iron Age date (*c.*700BC–AD50) for Site 12.

Table 2: Artefact totals by material type

	Site 7		Site 12	
Material	**Count**	**Weight (g)**	**Count**	**Weight (g)**
Pottery	195	3403	12	31
Animal bone	63	33	-	-
Fired clay	4	68	-	-
Flint	7	45	-	-

5.2 Pottery (Site 7)

5.2.1 As part of this assessment, the sherds from each context were sub-divided into broad fabric groups based on the principal inclusion types (e.g. sandy ware, quartzite-tempered ware) and quantified by the number and weight of pieces present. A breakdown of the assemblage by ware type is shown in **Table 3**. Spot-dates, used to inform the stratigraphic phasing, were then assigned to each fabric group and to the context as a whole.

Table 3: Site 7 pottery fabric types, quantified by number and weight of sherds

Fabric	Count	Weight (g)
Sandstone-tempered ware	90	1933
Sandy ware	64	1111
Quartzite-tempered ware	35	295
Grog-tempered ware	5	23
Rock-tempered ware	1	41
Totals	195	3403

5.2.2 The assemblage survives in excellent condition and was recovered from twenty separate deposits in at least fifteen different interventions. Pieces are generally large and only slight surface abrasion and edge damage are apparent. The mean sherd weight is 17.4g and could have been higher as numerous fresh breaks were noted during recording. However, diagnostic sherds were scarce, only three rims and six externally-expanded base fragments being present. Many of the context groups were therefore dated on fabric and stylistic grounds alone.

5.2.3 Within these limitations, the whole assemblage is considered to be of Middle Iron Age date, predominantly falling within the East Midlands Scored ware tradition (Elsdon 1992),

which typifies the ceramics of the area for much of the last four centuries of the 1st millennium BC (broadly *c.*350-50BC; Knight 2002, 133-135).

5.2.4 The fabrics (**Table 3**) are comparable with those from other sites in the region (Knight 1992; McSloy forthcoming a-c), predominantly sandy with occasional sandstone/metasandstone or quartzite inclusions, probably derived from the Trent Valley floodplains, while fabrics containing grog/argillaceous material are also well known in the area and may be from sources located on the Mercia Mudstone marl clays (McSloy forthcoming b and c). Two of the three recognisable forms are externally scored and consist of a small jar with a simple, slightly inturned but unelaborated rim from roundhouse gully **7033** and a round-shouldered jar with a simple, upright, finger-impressed rim found in boundary ditch segment **7116**. Comparable forms are also known from High Thorpe (McSloy forthcoming b, nos. 9, 11 and 12). The third vessel, a thick-walled, round-shouldered jar/bowl with a slightly everted rim and unaltered surfaces, was found in the primary fill of boundary ditch segment **7127**. This vessel is substantially complete although no base sherds were recovered. Overall, approximately 40% of the sherds exhibit the deep oblique/vertical external scoring characteristic of the East Midlands Scored ware tradition, with particularly large groups, all in sandstone-tempered wares and derived from just one or two vessels each, from ring gully **7009** (31 sherds, 671g) and pit **7045** associated with the roundhouse (26 sherds, 829g).

5.2.5 Comparison with other broadly contemporary assemblages from the area (e.g. Knight 1992; McSloy forthcoming a-c) also indicates the exceptional preservation of ceramics on Site 7; these contemporary groups could only muster mean weights of between 5.1g and 9.6g, although they were considered to be in 'good' condition. Approximately 10% of the Site 7 assemblage also carries traces of sooty residues, mainly on the exterior surfaces, although one or two examples of internal residues were also noted.

5.3 Pottery (Site 12)

5.3.1 The only artefacts from this area are twelve sherds (31g) of pottery found in fill **12011** in ditch **12004**. All are slightly abraded, plain body sherds with unaltered surfaces and made in a range of sandy, quartzite-tempered fabrics. As such, none of the pieces are closely datable within the later prehistoric period, although an Iron Age date (c.700BC – AD50) might be considered most likely.

5.4 Animal bone

5.4.1 Most of the bone fragments were recovered by hand during the normal course of excavation, with an additional small quantity retrieved from the environmental sample residues. Bone preservation is extremely poor and only the most robust skeletal elements have survived in a recognisable form.

5.4.2 Bone was recovered from eight separate contexts including the fill of roundhouse gully **7162** and enclosure ditch **7163**. The assemblage has been significantly affected by the acid soil conditions and is biased in favour of robust elements such as teeth. Tooth enamel is the most durable calcified tissue in the mammalian skeleton largely because it has a very low organic (i.e. H^2O) content in comparison to other calcified tissues such as bone and collagen, which means that it is relatively stable in the burial environment. Burnt bone, of which there is a small quantity from the fill (**7034**) of roundhouse terminus **7033**, is also more stable than un-burnt bone because the organic component is lost when bone is heated.

5.5 Fired clay

5.5.1 The four pieces of fired clay were all found in the primary fill (**7131**) of enclosure ditch segment **7127**, associated with pottery of Middle Iron Age date. All are featureless fragments made in a slightly sandy, grog-tempered fabric and probably derive from an oven or hearth lining.

5.6 Flint

5.6.1 Struck flint flakes were found in the pit alignment pits **7024**, **7039** and **7079** and enclosure ditch segment **7107** (contexts **7103** and **7106**) without other associated finds, as well as in hearth **7114** and enclosure ditch segment **7145**, where they were associated with Middle Iron Age pottery. Most survive in crisp, fresh condition although one, from enclosure ditch segment **7145** has been burnt. Although likely to be of later prehistoric date, none of these pieces can be more closely dated within this period.

6 ENVIRONMENTAL EVIDENCE

6.1 Introduction

6.1.1 A total of fifteen bulk samples were taken from a range of Iron Age features at Site 7. These were processed for the recovery and assessment of charred plant remains and wood charcoal. A monolith was taken through enclosure ditch **7152**.

6.2 Charred plant remains

6.2.1 Bulk samples were processed by standard flotation methods; the flot retained on a 0.5mm mesh, residues fractionated into 5.6mm, 2mm and 1mm fractions and dried. The coarse fractions (>5.6mm) were sorted, weighed and discarded. The flots were scanned under a x10–x40 stereo-binocular microscope and the preservation and nature of the charred plant and wood charcoal remains noted in **Table 6** in **Appendix 1**. Preliminary identifications of dominant or important taxa are noted below, following the nomenclature of Stace (1997) for wild plants, and traditional nomenclature, as provided by Zohary and Hopf (2000, Tables 3, page 28 and 5, page 65), for cereals.

6.2.2 The flots were generally smaller than average and there were low numbers of roots and modern seeds that may be indicative of stratigraphic movement and the possibility of contamination by later intrusive elements. Charred material comprised varying degrees of preservation.

6.2.3 Moderate to high quantities of cereal remains were recovered from pits **7062**, **7067** and **7035** (associated with the roundhouse) and enclosure ditch **7075**. These included grain fragments of barley (*Hordeum vulgare*) and fragments of grain and glume bases of hulled wheat, emmer or spelt (*Triticum dicoccum/spelta*).

6.2.4 Weed seeds were recorded in moderately high numbers in the samples from pit **7035** and enclosure ditch **7135**. These included seeds of vetch/wild pea (Vicia/Lathyrus sp.), oat/brome grass (*Avena/Bromus* sp.), clover/medick (*Trifolium/Medicago* sp.), goosefoot (*Chenopodium* sp.), docks (*Rumex* sp.), black bindweed (*Fallopia convolvus*) and bedstraw (*Galium* sp.). The weed seeds are typical of species indicative of arable habitats, such as field margins, and grassland.

6.2.5 Fragments of hazelnut shell (*Corylus avellana*) were noted in the sample from hearth **7114**.

6.2.6 The assemblages are similar to those of general settlement waste recorded from other Iron Age sites in the area, such as Margidunum, Cropwell Wolds, Saxondale and High Thorpe along the A46 (Cotswold/Wessex Archaeology 2011) and Gamston (Moffett 1992), as well as from Site 28 along the A453 (Wessex Archaeology 2013).

6.3 Wood charcoal

6.3.1 Wood charcoal was noted from the flots of the bulk samples and is recorded in **Appendix 1**, **Table 6**. Wood charcoal was retrieved in a moderately large quantity from pit **7035**.

6.4 Sediments

6.4.1 A single monolith sample (sample no 17) was taken from a south-facing section of boundary ditch segment **7152**. The monolith was cleaned prior to recording and standard descriptions used, (following Hodgson 1997) including Munsell colour, texture, structure and nature of boundaries (**Appendix 1**, **Table 7**).

7 STATEMENT OF POTENTIAL

7.1 Summary

7.1.1 The Strip, Map and Record has revealed archaeological remains in the northeastern section of the Scheme, in Nottinghamshire (Sites 7 and 12), although only Site 7 included closely datable significant remains. The other sites (1, 2, 3, 9a and 9b), mainly at the southwestern end of the Scheme, did not contain any archaeological remains.

7.1.2 No further work is warranted on Sites 1, 2, 3, 9a, 9b or 12. However, Site 7 is of significance and warrants further analysis and publication. The results from Site 12 should be incorporated into the publication of Site 28 of the Scheme (Wessex Archaeology 2013).

7.2 Stratigraphic evidence

Site 7

7.2.1 The archaeology of Site 7 is relatively straightforward and additional stratigraphic analysis is unlikely to enhance its interpretation. Further artefactual and environmental analysis may, however, provide data that allow more detailed interpretation of the nature, development and decline of activity at the site.

7.2.2 No additional stratigraphic evidence can be obtained from the evaluation trial trenching at Site 7 and further analysis of those archives is not warranted. However, the results of mitigation excavations at Site 28 (1.1km northeast of Site 7) will provide a local context for discussion. Site 28 is thought to have been continuously occupied from at least the Late Iron Age to the 3rd century AD; its earlier phases include an enclosure and burial that may be contemporary with Site 7.

7.2.3 Finally, further analysis will also re-consider the previous cropmark and geophysical survey interpretations in order to determine whether any potential continuations of dated and phased features from Site 7 can now be identified. This may allow consideration of the site in a wider landscape context.

Site 12

7.2.4 The stratigraphic evidence from Site 12 combines with the results of previous geophysical surveys to reveal part of a (probably) Late Iron Age enclosure. No further work is required

on the archive or pottery from this site but the results warrant a short note within the publication of Site 28 which lies only 350m away and may be contemporary.

7.3 Artefactual evidence

7.3.1 The investigations produced a small finds assemblage with no items of particular intrinsic interest. Chronological evidence from the pottery suggests that all the features from Site 7 are of Middle Iron Age date. The range of material culture is very restricted, with only the pottery present in any quantity. Further analysis of the pottery fabrics could provide more detailed evidence for the sources of supply and the position of this settlement within its local and regional supply networks although the full potential of this is limited by the scarcity of diagnostic sherds.

7.3.2 No further work is required on the pottery from Site 12.

7.3.3 The animal bone, struck flint and fired clay assemblages from Site 7 are all too small to warrant any further comment.

7.4 Environmental evidence

7.4.1 The charred plant remains have the potential to provide limited information to assist in determining the nature of the settlement, the local environment, species range, crop-processing and any local agricultural techniques during the Iron Age period. These plant assemblages would provide a comparison with other sites of a similar period in the vicinity.

7.4.2 The wood charcoal offers only very limited potential to obtain detailed information on the range of species present and the management and exploitation of the local woodland resource during the Iron Age due to the paucity of remains recovered from the majority of the samples. No further work is recommended on this material.

7.4.3 The sediments offer very limited potential for microfossil analysis from this deposit to provide detailed vegetational information due to preservation factors and the nature of the sediment i.e. water movement through sandy soil. No further work is recommended on the sediments from the monolith sample.

8 RESEARCH AIMS

8.1 Reappraisal of the project aims

8.1.1 The five aims of the project were:

- To mitigate the impact of the road scheme;
- To establish the character, extent and date range for any archaeological deposits to be affected by the proposed groundworks;
- To excavate and record significant archaeological deposits, which will be affected by groundworks associated with the development;
- To integrate the results into the wider cultural and environmental context and with specific research aims; and,
- To analyse the site records, artefacts and ecofacts and produce an archive, report and publication of the results.

8.1.2 Each of these aims have been progressed during the investigation and assessment process and all are considered achievable for Site 7.

8.1.3 The extent, date, character, condition, significance and quality of the archaeological remains within the Strip, Map and Record sites has been investigated and assessed. The pottery and environmental assemblages offer potential for further clarifying and refining the character and significance of Site 7.

8.2 Updated aims

8.2.1 The significance and potential of the archaeology of the Trent Valley has been appraised in two recent research agendas (Cooper 2006, Knight *et al.* 2012) that provide a framework for updating the project aims, with specific reference to aims above.

8.2.2 Site 7 has potential to address to the following regional research aims:

- To enhance knowledge of rural Iron Age and Romano-British settlements and landscapes through further analysis and the publication of the Site (Research Objective 5H regarding the investigation of the landscape context of rural settlements; Knight *et al*. 2012, 79);
- To contribute to the investigation of linear boundary systems (ditches and pit alignments) in the Trent Valley through further analysis and publication (Research Objective 4F regarding the investigation of intra-regional variations in the development of fields and linear boundary systems; Knight *et al*. 2012, 65);
- To contribute information to the broader study of variations in socio-economic status of settlements in the 1st millennium BC through publication (Research Objective 4E regarding the evidence for the evolution of settlement hierarchies; Knight *et al*. 2012, 64).

9 RECOMMENDATIONS

9.1 Summary

9.1.1 The archaeological investigations and post-excavation assessments established that Site 7 represents the remains of a Middle Iron Age enclosed settlement; probably a component of an extended landscape of contemporary fields and settlements.

9.1.2 Further work is required in order to fully understand the nature of the occupation and activity at Site 7 and to consider the results in an appropriate local and regional context. It is recommended that, in addition to general research, further analysis is required on the pottery and charred plant remains. This will result in the preparation of illustrated text to be submitted for publication in the *Transactions of the Thoroton Society of Nottinghamshire*.

9.1.3 It is recommended that this analysis is conducted in conjunction with the detailed analysis and publication of Site 28.

9.1.4 The archaeology of Site 12 does not require any further analysis but, due to its proximity and possible contemporary use, the site should be included and discussed within the Site 28 publication.

9.2 Stratigraphic and other archaeological evidence

9.2.1 The results of previous desk-based assessments, cropmark interpretations and geophysical surveys covering Site 7 should be reviewed and incorporated where relevant. The results of the investigations at Site 28 should also be considered.

9.2.2 Additional research regarding similar and/or nearby archaeological sites should be carried out sufficient to place the results in an appropriate local and regional context.

9.3 Pottery

9.3.1 Further work will be required on the pottery; despite the scarcity of diagnostic sherds, full fabric and form analysis should be carried out.

9.3.2 As part of the final publication, the pottery should been considered in its feature groups and in relation to other assemblages from contemporary sites in the area.

9.3.3 No further analysis is proposed for any of the other material types. However, all should be considered in their feature groups and the comments made in this report modified and augmented as required, and used for publication.

9.4 Charred plant remains

9.4.1 It is proposed to analyse the charred plant remains from pits **7062** and **7067**, gully **7035** and ditch **7135**. The samples proposed for analysis are indicated with a 'P' in the analysis column of **Table 6** in **Appendix 1**.

9.5 Publication

9.5.1 Site 7 is of sufficient significance to warrant publication in a regional journal in order that the results are disseminated to a wide audience. It is proposed that the *Transactions of the Thoroton Society of Nottinghamshire* is the most appropriate journal for this purpose.

Table 4: Details of proposed publication

Description	No words	No pages
Introduction, background, method	450	0.5
Results	900	1
Artefacts	900	1
Environmental remains	450	0.5
Discussion	900	1
Bibliography	900	1
Site location and plan		0.5
Sections x 6		1
Plate of site		0.5
Pottery illustrations x 5		0.5
Total	4500	7.5

9.5.2 The publication report will comprise a fully illustrated account of the investigations, including a summary background to the project, methodology, results and discussion.

9.5.3 It is proposed that, in accordance with the journal's Notes for Contributors, the article will be about 4,500 words in length, equating to approximately five pages of text at 900 words per page, and two to three pages of illustrations comprising three drawings, one plate and five pottery illustrations.

9.5.4 Details of the journal's requirements for articles are available online at <http://www.thorotonsociety.org.uk/publications/tts/notesforcontributors.pdf>

10 RESOURCES AND PROGRAMME

10.1 Named project team

Regional manager	Andrew Norton MIfA
Project manager	Andrea Burgess MIfA
Main author	Sam Fairhead
Artefacts	Rachel Seager Smith
Environmental	Sarah Wyles
Illustrator	Ken Lymer

10.2 Task list

10.2.1 The proposed tasks and durations are tabulated below and illustrated on a Gantt Chart in **Appendix 2**.

Table 5: Publication tasks

Task	Description	Grade	Days
1	Review archaeological evidence	PO	1
2	Research local and regional context	PO	1
3	Detailed pottery analysis and report	SPO	4.5
4	Review other artefacts and report	SPO	0.5
5	Extract charred plant remains (4 samples)	EO	1.5
6	Analyse and report charred plant remains	SPO	2.5
7	Prepare publication report	PO	2
8	Site illustrations	PO	3
9	Prepare pottery illustrations (up to 5 vessels)	SPO	1
10	Collate and finalise publication report	PM	1
11	QA and submit to journal	PM	2
12	Publication	Pages	8
13	Archive preparation and deposition	PO	0.5

10.3 Management structure

10.3.1 Wessex Archaeology operates a project management system. The team is headed by a Project Manager, who assumes ultimate responsibility for the implementation and execution of the project, and the achievement of performance targets (academic, budgetary or scheduled).

10.3.2 The Project Manager will define and control the scope and form of the post-excavation programme and will have a major input into the writing of the publication report. The Project Manager may delegate specific aspects of the project to other key staff, who will both supervise others and have a direct input into the compilation of the report. They may also undertake direct liaison with external consultants and specialists who are contributing to the publication report, and the museum named as the recipient of the project archive.

10.4 Performance monitoring and quality standards

10.4.1 The Project Manager will ensure that the report meets internal quality standards as defined in Wessex Archaeology's guidelines. The overall progress and quality will be monitored internally by the Quality and Publications Manager.

10.4.2 Communication between all team members will be facilitated by project meetings at key points during the project.

10.4.3 In addition to internal monitoring and checking, quality standards will be maintained by internal and/or external academic advisers, as appropriate. These referees will appraise the academic quality of the report prior to the submission of a draft publication text to the Consultant and Curator for approval.

10.5 Programme

10.5.1 The analysis programme will commence immediately on approval of the proposals by the Consultant and Curator. Subject to instruction by the Client, it is anticipated that a draft publication text and illustrations would be available by the end of **November 2014**. Subject to approval it is anticipated that the finalised text and illustrations can be submitted to the editor of the *Transactions of the Thoroton Society of Nottinghamshire* prior to the editor's final submission date of the end of September; subject to acceptance by the editor it is anticipated that the article would be published in the 2015 volume of the Journal.

10.5.2 The finds and archive will be prepared and deposited with the Nottingham City Museum Service on completion of the analysis programme; it is anticipated that this will take place by the end of **February 2015**. The Consultant and Curator will be informed when the archive has been deposited.

10.5.3 Wessex Archaeology understands that submission of the article to the editor of the journal for publication and deposition of the finds and archive will represent the completion of the programme of archaeological work.

11 ARCHIVE STORAGE AND CURATION

11.1 Museum

11.1.1 It is recommended that the project archive resulting from the excavation be deposited with Nottingham City Museum Service. The Museum has agreed in principle to accept the project archive on completion of the project, under the accession code **NCMG 2013-9**. Deposition of any finds with the Museum will only be carried out with the full agreement of the landowner.

11.2 Preparation of archive

11.2.1 The complete site archive, which will include paper records, photographic records, graphics, artefacts, ecofacts and digital data, will be prepared following the standard conditions for the acceptance of excavated archaeological material by Nottingham City Museum Service, and in general following nationally recommended guidelines (Society for Museum Archaeologists 1995; IfA 2009; Brown 2011; ADS 2013).

11.2.2 All archive elements will be marked with the site/accession code, and a full index will be prepared.

11.3 Discard policy

11.3.1 Wessex Archaeology follows the guidelines set out in *Selection, Retention and Dispersal* (SMA 1993), which allows for the discard of selected artefact and ecofact categories which are not considered to warrant any future analysis. Any discard of artefacts will be fully documented in the project archive.

11.3.2 The discard of environmental remains and samples follows nationally recommended guidelines (SMA 1993; 1995; English Heritage 2011).

11.4 Security copy

11.4.1 In line with current best practice (e.g. Brown 2011), on completion of the project a security copy of the written records will be prepared, in the form of a digital PDF/A file. PDF/A is an ISO-standardised version of the Portable Document Format (PDF) designed for the digital preservation of electronic documents through omission of features ill-suited to long-term archiving.

12 COPYRIGHT

12.1 Copyright

12.1.1 This report, and the archive generally, may contain material that is non-Wessex Archaeology copyright (e.g. Ordnance Survey, British Geological Survey, Crown Copyright), or the intellectual property of third parties, which we are able to provide for limited reproduction under the terms of our own copyright licences, but for which copyright itself is non-transferrable by Wessex Archaeology. Users remain bound by the conditions of the Copyright, Designs and Patents Act 1988 with regard to multiple copying and electronic dissemination of the report.

12.1.2 Wessex Archaeology retains full copyright of any report under the Copyright, Designs and Patents Act 1988 with all rights reserved; excepting that it hereby provides an exclusive licence to the Client for the use of the report by the Client in all matters directly relating to

the project as described in the specification. Any document produced to meet planning requirements can be copied for planning purposes by the Local Planning Authority.

Wessex Archaeology will assign copyright to the Client upon written request but retains the right to be identified as the author of all project documentation and reports as defined in the Copyright, Designs and Patents Act 1988 (Chapter IV, s.79).

13 REFERENCES

13.1 Bibliography

ADS, 2013, *Caring for Digital Data in Archaeology: a guide to good practice, Archaeology Data Service and Digital Antiquity Guides to Good Practice*

Brown, D.H., 2011, *Archaeological archives; a guide to best practice in creation, compilation, transfer and curation,* Archaeological Archives Forum (revised edition)

Cooper, N.J., (ed.), 2006, *The Archaeology of the East Midlands. An Archaeological Resource Assessment and Research Agenda.* Leicester Arch. Monograph No 13 <http://www.english-heritage.org.uk/publications/archaeology-east-midlands>

Cotswold/Wessex Archaeology, 2011, *A46 Newark to Widmerpool Improvements: Archaeological Assessment Report. Volumes 1-3.* Unpublished Client Report No. CWA_A46_PXA_ACC.v03

Elsdon, S.M., 1992, 'East Midlands Scored Ware', *Trans Leicestershire Archaeol. Hist. Soc.* 66, 83-91

English Heritage, 1991, *Management of Archaeological Projects 2 ('MAP2')*

English Heritage, 2005, *A Strategy for the Care and Investigation of Finds*

English Heritage, 2011, *Environmental Archaeology. A Guide to the Theory and Practice of Methods from Sampling and Recovery to Post-excavation* (2nd Edition)

Hodgson, J.M., 1997, *Soil Survey Field Handbook*, Soil Survey Technical Monograph 5

Institute for Archaeologists (IfA), 2008a, *Standard and Guidance for Archaeological Excavation*

Institute for Archaeologists (IfA), 2008b, *Standard and Guidance for Archaeological Watching Brief*

Institute for Archaeologists (IfA), 2009, *Standard and Guidance for the Creation, Compilation, Transfer and Deposition of Archaeological Archives*

Institute for Archaeologists (IfA), 2010, *Codes of Conduct*

Knight, D., 1992, Excavations of an Iron Age Settlement at Gamston, Nottinghamshire, *Trans. Thoroton Soc. Nottinghamshire 96*, 16–90

Knight, D., 2002, 'A regional ceramic sequence: Pottery of the First Millennium BC between the Humber and the Nene', in A. Woodward and J.D. Hill (eds) *Prehistoric Britain: The Ceramic Basis*, 119–42

Knight, D., Vyner, B. and Allen, C., 2012, *East Midlands Heritage. An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands* <http://www.tparchaeology.co.uk/east-midlands-research-strategy>

McSloy, E.R., forthcoming a, 'Late prehistoric pottery', in N. Cooke and A. Mudd, *The Archaeology of the A46 Newark to Widmerpool, Nottinghamshire*

McSloy, E.R., forthcoming b, 'High Thorpe: the late prehistoric pottery', in N. Cooke and A. Mudd, *The Archaeology of the A46 Newark to Widmerpool, Nottinghamshire*

McSloy, E.R., forthcoming c, 'Cropwell Wolds: the late prehistoric pottery', in N. Cooke and A. Mudd, *The Archaeology of the A46 Newark to Widmerpool, Nottinghamshire*

Moffett, L.C., 1992, 'The plant remains', in Knight, D., 'Excavations of an Iron Age Settlement at Gamston, Notts', *Trans. Thoroton Soc. Nottinghamshire* 96 16-90

Museum and Galleries Commission (MGC), 1991, *Standards in the Museum Care of Archaeological Collections*

Society of Museum Archaeologists (SMA), 1993, *Selection, Retention and Dispersal of Archaeological Collections, Society of Museum Archaeologists*

Society of Museum Archaeologists (SMA), 1995*, Towards an Accessible Archaeological Archive, Society of Museum Archaeologists*

Stace, C., 1997, *New flora of the British Isles* (2nd edition)

Stratascan, 1993, *A Report for Trent and Peak Archaeological Trust on a Geophysical Survey Associated with the Proposed Improvements of the A453, Nottingham (*and *Addendum No 1* to same)

Stratascan, 2007, *Geophysical Survey Report, A453 Clifton to J24 M1.* Unpublished Client Report No. J2311

United Kingdom Institute of Conservation (UKIC), 2001, *Excavated Artefacts and Conservation.* (United Kingdom Institute for Conservation, Conservation Guidelines No 1, revised)

University of Leicester Archaeological Services (ULAS), 2006, *A453 Widening M1 Junction 24 to A52 Nottingham Archaeological Desk-based Assessment.* Unpublished Client Report No. 2006-160

University of Leicester Archaeological Services (ULAS), 2007a, *An Archaeological Evaluation adjacent to the A453 from the M1 Junction 24 to the A52 at Nottingham.* Unpublished Client Report No. 2007-020

University of Leicester Archaeological Services (ULAS), 2007b, *A453 Widening M1 Junction 24 to A52 Nottingham, Phase 3 Evaluation*. Unpublished Client Report No. 2007-093

University of Leicester Archaeological Services (ULAS), 2007c, *A453 Widening M1 Junction 24 to A52 Nottingham, Cultural Heritage: Detailed Assessment*. Unpublished Client Report No. 2007-082 Rev 5

University of Leicester Archaeological Services (ULAS), 2012, *A453 Widening, M1 Junction 24 to A52 Nottingham, Design Brief for Archaeological Mitigation, Strip, Plan and Excavate and Archaeological Attendance and Recording*. Unpublished Client Report.

Watkinson, D. and Neal, V. (eds), 1998, *First Aid for Finds: practical guide for archaeologists.* United Kingdom Institute for Conservation of Historic & Artistic Works, Archaeology Section (3rd edition)

Wessex Archaeology, 2012, *A453 Widening, Nottingham, Leicestershire and Nottinghamshire. Written Scheme of Investigation for Strip, Map and Record*. Unpublished Client Report No. 86083.02

Wessex Archaeology, 2013, *Site 28. A453 Widening M1 Junction 24 to A52 Nottingham, Nottinghamshire. Archaeological Post-excavation Assessment Report and Proposed Publication Synopsis*. Unpublished Client Report No. 86081.01

Zohary, D. and Hopf, M. 2000, *Domestication of plants in the Old World: the origin and spread of cultivated plants in West Asia, Europe, and the Nile Valley* (3rd edition)

14 APPENDICES

Appendix 1: Environmental data

Table 6: Charred plant remains and charcoal

Feature	Context	Sample	Vol (L)	Flot size	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
Site 7: Iron Age													
Pit Alignment													
7024	7025	10	10	15	20	C	-	Indet. grain frags	C	*Vicia/Lathyrus*	1/2 ml	Coal	
7041	7042	11	10	25	15	-	C	Glume base frags	C	*Vicia/Lathyrus*	1/1 ml	Coal	
7117	7118	13	20	15	15	C	-	Indet. grain frags	-	-	1/1 ml	Coal	
Pits													
7045	7046	4	10	45	5	C	C	Indet. grain frag, glume bases	-	-	4/12 ml	Coal	
7060	7061	6	10	40	5	C	C	Indet grain frag, glume bases	B	*Vicia/Lathyrus, Avena/Bromus, Chenopodium*	2/5 ml	Coal	
7062	7063	7	10	25	15	C	A	Hulled wheat grain frags, glume bases	B	*Avena/Bromus, Galium*	3/3 ml	Coal	P
7067	7068	9	10	55	2	B	B	Barley and hulled wheat grain frags, glume base frags	C	*Avena/Bromus*	4/10 ml	Coal	P
Posthole													
7157	7158	16	5	35	5	C	-	Indet. grain frag	C	*Chenopodium*	5/3 ml	Coal	
Fire Pit													
7114	7115	18	3	50	5	-	-	-	B	*Corylus avellana* shell frags	5/10 ml	Coal	
Roundhouse Gully													
7089	7088	8	10	10	15	C	-	Indet. grain frags	-	-	1/2 ml	Coal	
Gully													
7035	7034	5	10	100	5	A	B	Barley and hulled wheat grain frags, glume base frags	A	*Avena/Bromus, Chenopodium, Trifolium/Medicago*	10/15 ml	Coal	P
Ditches													
7075	7071	1	30	45	5	B	B	Wheat grain frags, glume bases	C	*Avena/Bromus*	1/5 ml	Coal	

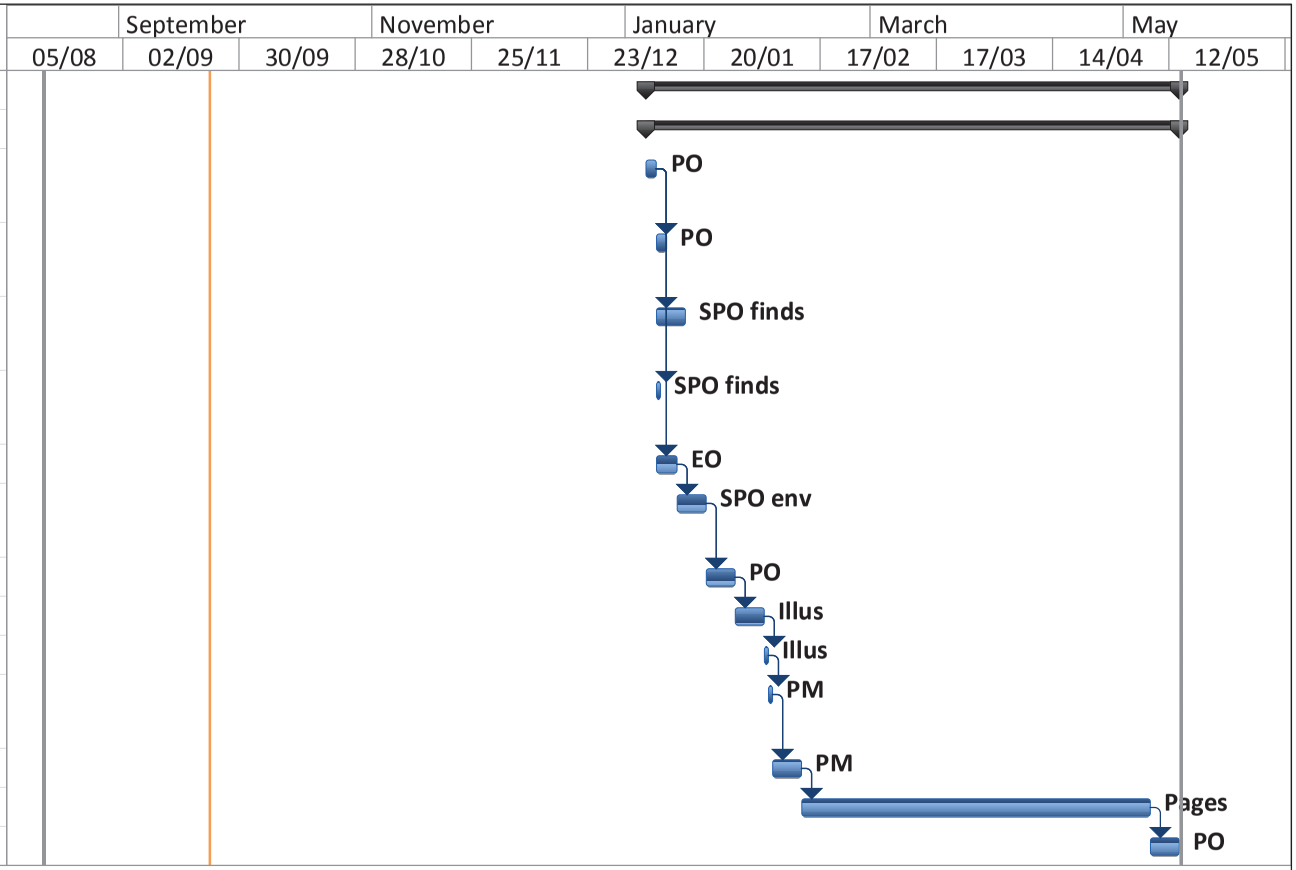
Feature	Context	Sample	Vol (L)	Flot size	Roots %	Grain	Chaff	Cereal Notes	Charred Other	Notes for Table	Charcoal > 4/2mm	Other	Analysis
7145	7144	12	30	30	10	C	C	Hulled wheat grain frags, glume bases	C	*Avena/Bromus, Vicia/Lathyrus*	1/2 ml	Coal	
7135	7133	14	30	40	5	C	C	Hulled wheat grain frags, glume bases	A	*Avena/Bromus, Rumex, Fallopia, Vicia/Lathyrus, Chenopodium*	1/5 ml	Coal	P
7127	7131	15	20	3	10	C	-	Hulled wheat grain frag	-	-	0/<1 ml	-	

Key: A*** = exceptional, A** = 100+, A* = 30-99, A = >10, B = 9-5, C = <5; Analysis: P = plant,

Table 7: Monolith sediment descriptions and sub-samples taken

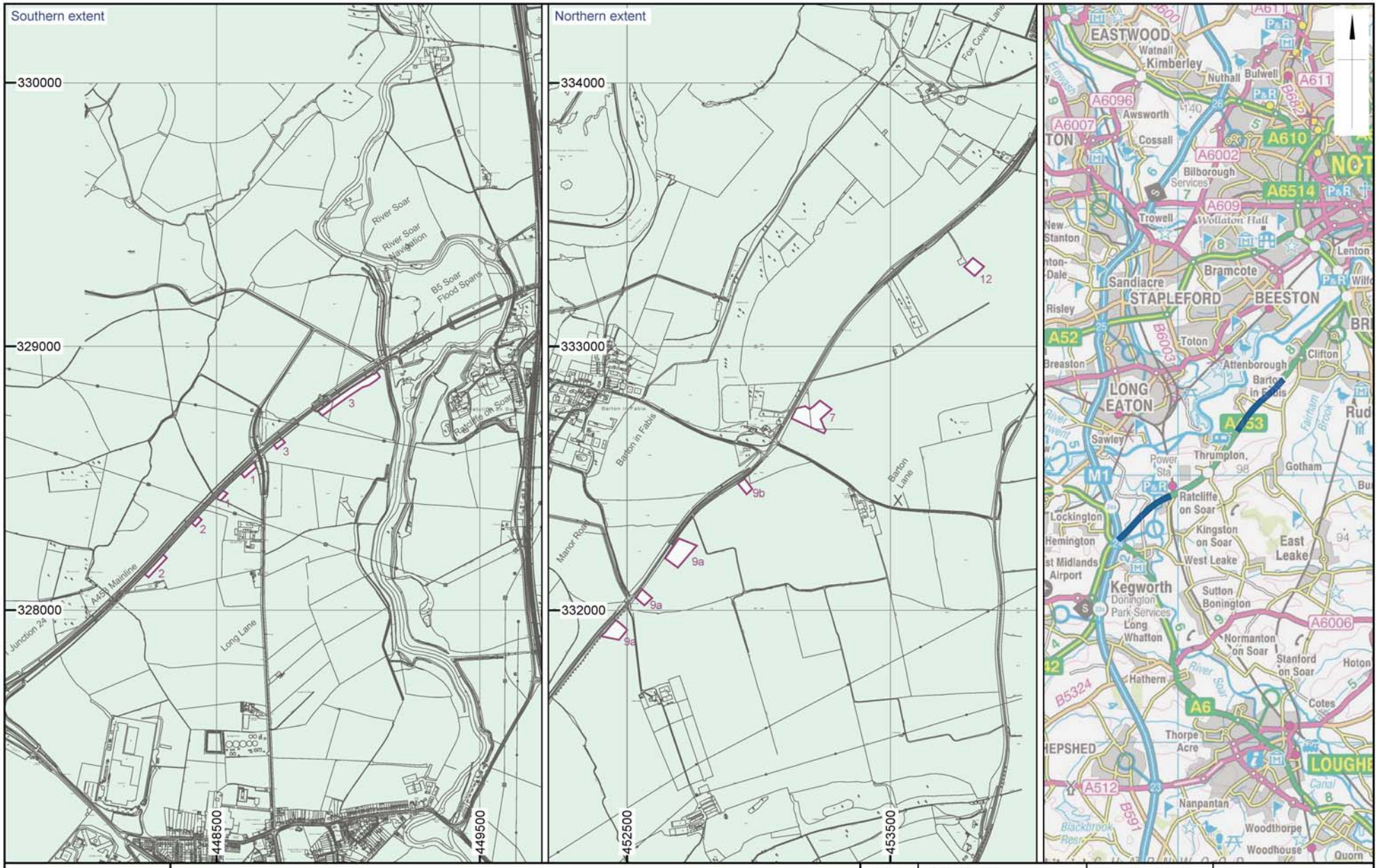
Feature:	**7152**	**Monolith:**	**17**	**Comments: South facing section of boundary ditch 7152**	
Height:	****m aOD**	**Site drwg:**	**1046**		
Depth (m)	**Pollen samples**	**Other samples**	**Context**	**Sediment description**	**Interpretation**
0.17-0.67			7148	5YR 3/3 dark reddish brown sandy loam. Fairly crumbly. 1% fine pores and rare visible rootlets. Sparse small rounded stones <0.5cm. Gradual boundary.	Ditch fill
0.67-1.13			7149	7.5YR 4/4 brown sandy loam. Slightly sandier that above with larger, more visible sand grains. 1% fine pores and rare visible rootlets. Sparse rounded pebbles <3cm. Gradual boundary.	Ditch fill
1.13-1.50			7150	7.5YR 4/4 brown sandy loam. Slightly paler than above but not a whole Munsell unit. Similar to above in structure with 1% fine pores and no visible rootlets. Moderate rounded pebbles <5cm towards the bottom of the profile.	Ditch fill

Task No	Task Name	Days
	A453 Post-Excavation Project	**127 days**
	Site 7/9/12 Analysis & Publication	
1	Review archaeological evidence	1
2	Research local and regional context	1
3	Detail pottery analysis and report	4.5
4	Review other artefacts and report	0.5
5	Extract charred plant remains	1.5
6	Analyse and report charred plant remains	2.5
7	Prepare publication report	2
8	Site illustrations	3
9	Pottery illustrations	1
10	Collate and finalise publication report	1
11	QA and submit to journal	2
12	Publication (Journal refereeing)	8
13	Archive prep and deposition	0.5



Project: A453 Site 7 9 12
Date: Mon 23/09/13

Task		External Milestone		Manual Summary Rollup	
Split		Inactive Task		Manual Summary	
Milestone		Inactive Milestone		Start-only	
Summary		Inactive Summary		Finish-only	
Project Summary		Manual Task		Deadline	
External Tasks		Duration-only		Progress	



Site location Area for strip, map and record

Date:	27/11/2012	Revision Number:	0
Scale:	Main graphic - 1:20000 @ A4	Illustrator:	CS
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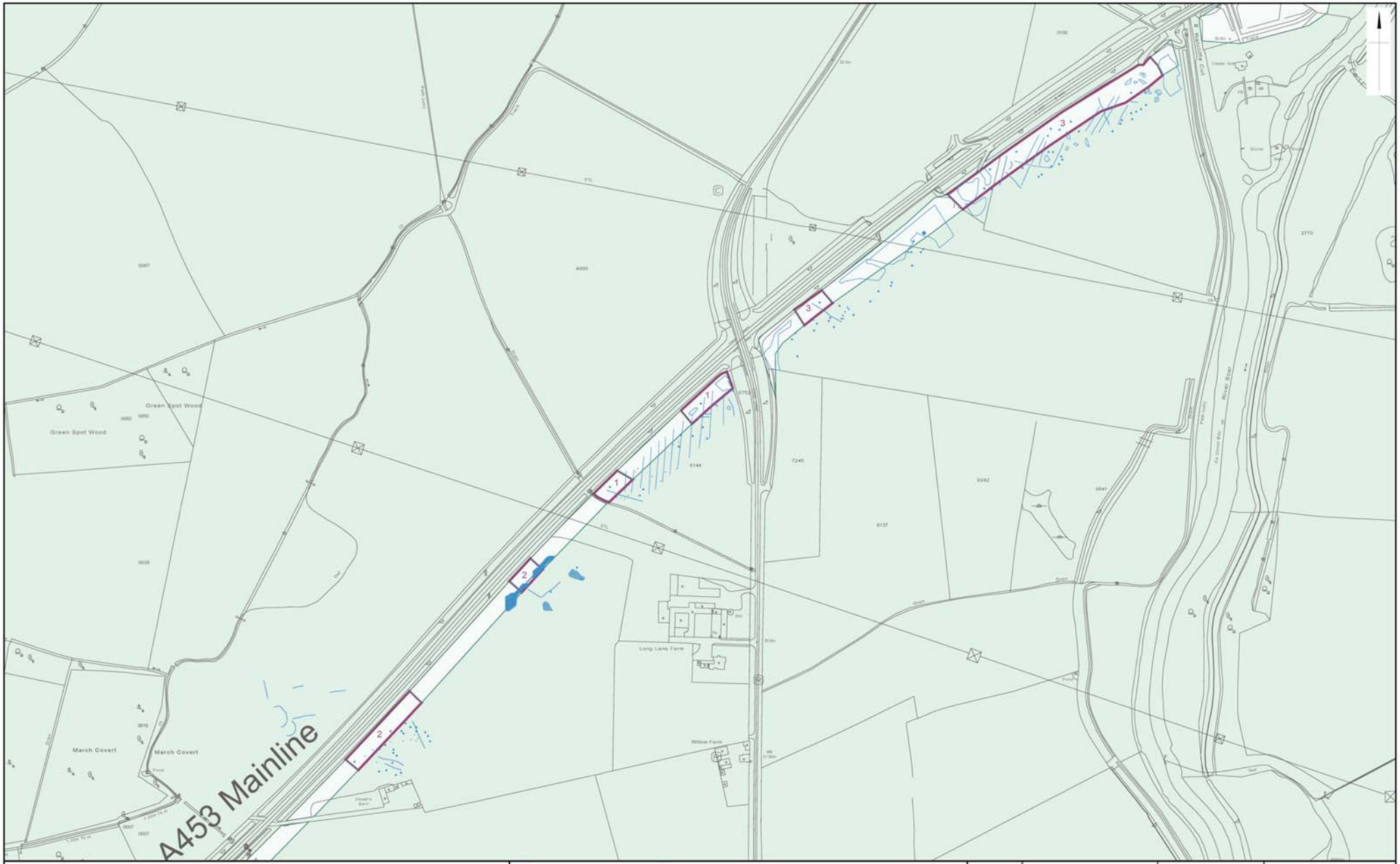
Location and plan of the Scheme

Figure 1



Area for intensive WB | Area for strip, map and record | Geophysical anomoly

Digital mapping provided by Client

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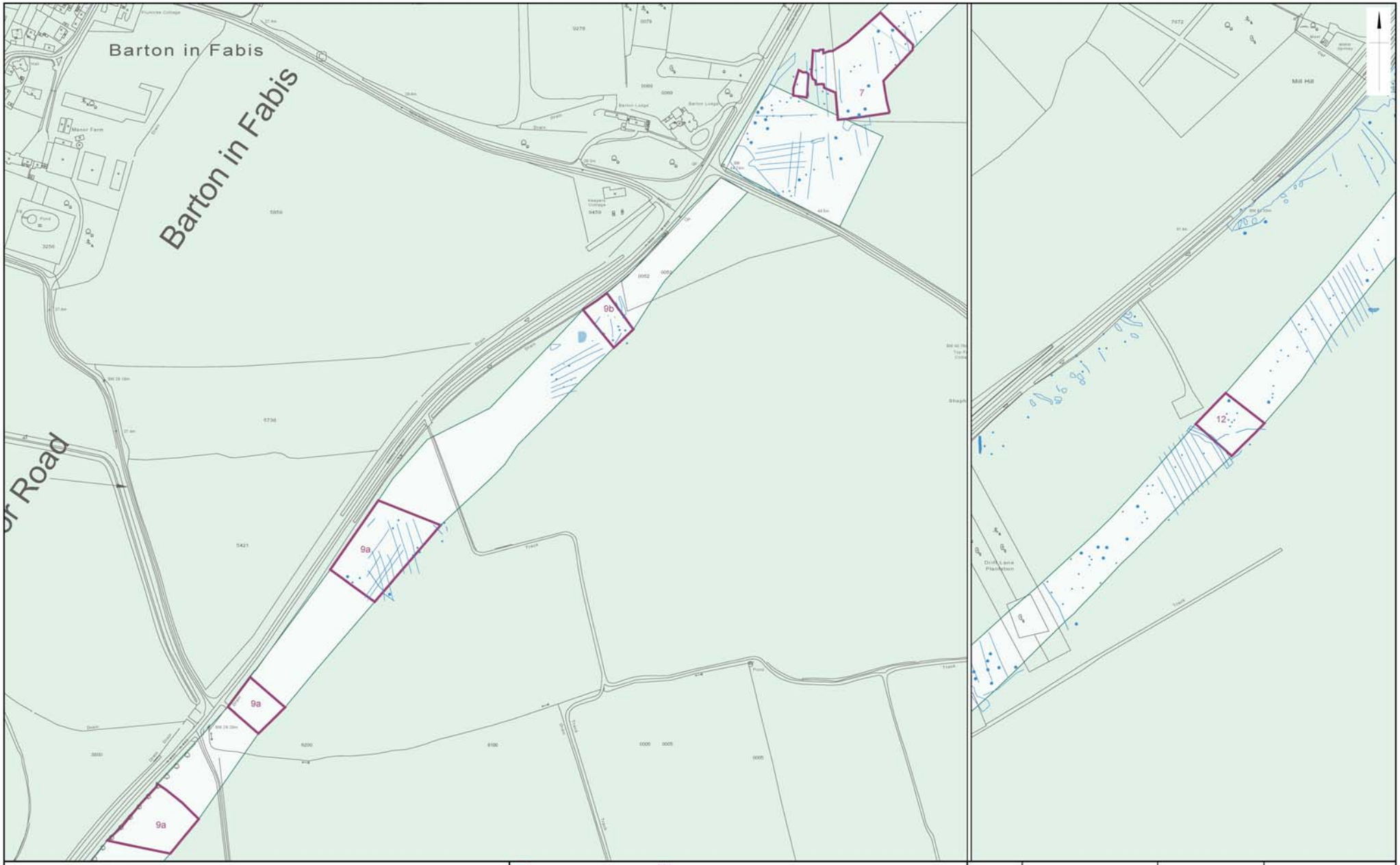
Location of Sites 1, 2 and 3 with geophysical survey

Figure 2



Area for intensive WB | Area for strip, map and record | Geophysical anomoly

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Location of Sites 7, 9a, 9b and 12 with geophysical survey

Figure 2

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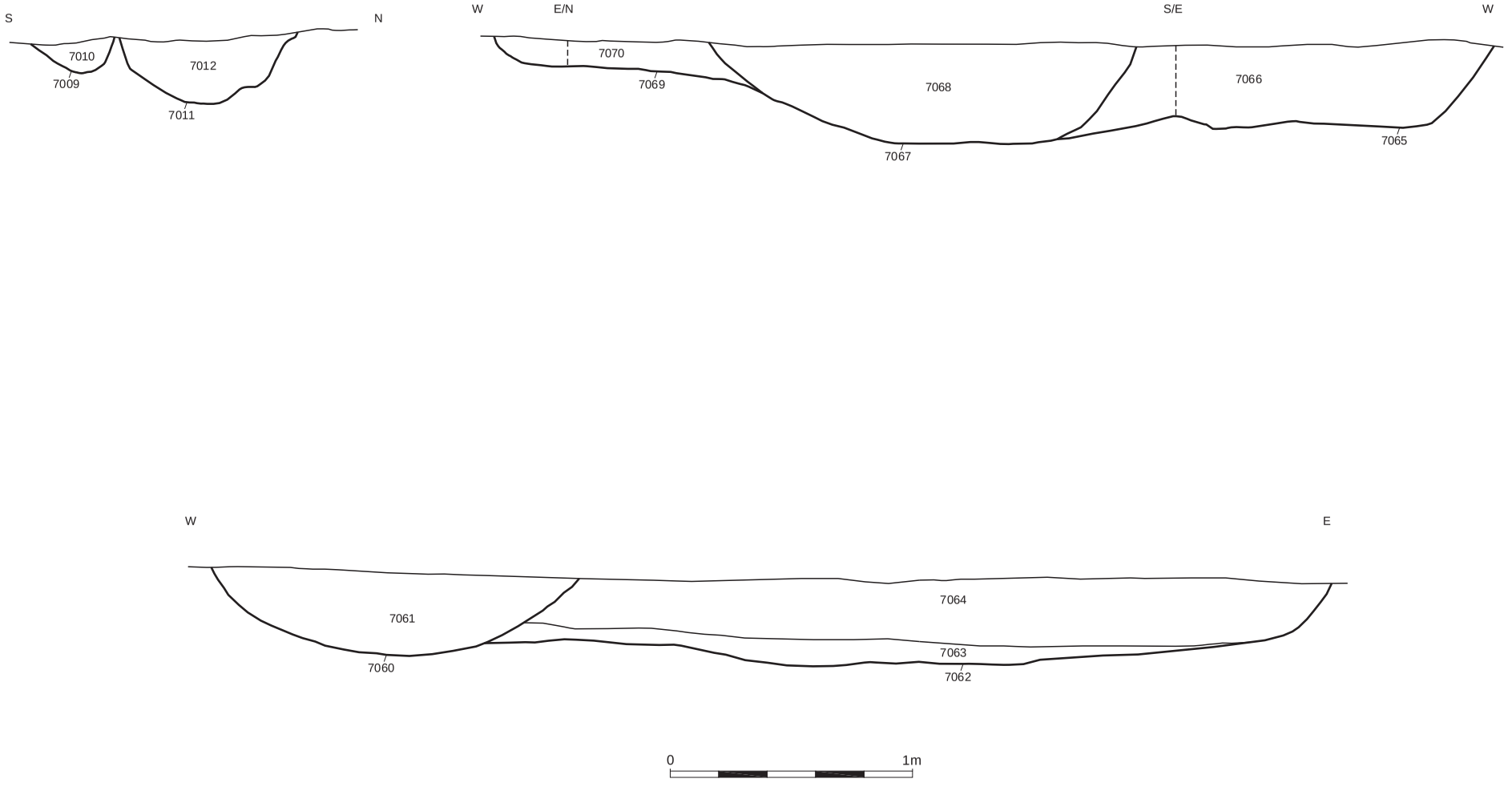
Plan of Site 7

Figure 4



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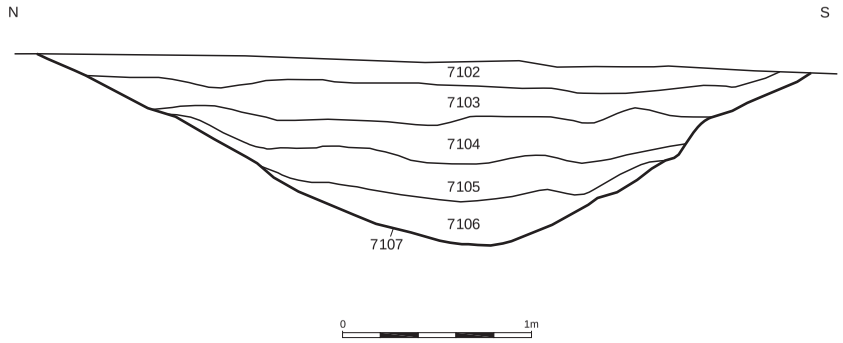
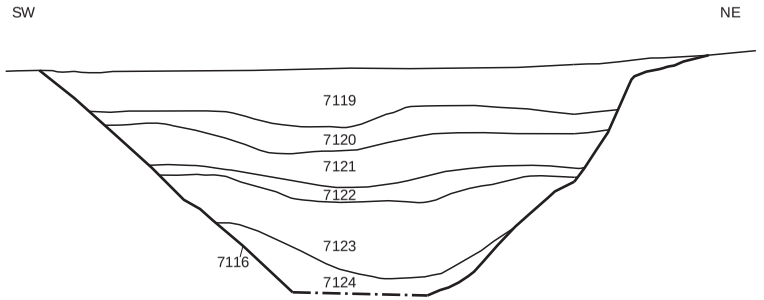
Site 7: Sections through roundhouse features 7162

Figure 5





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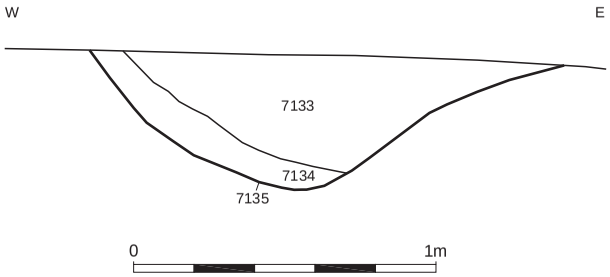
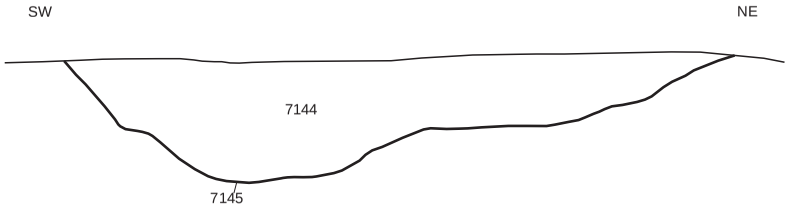
Site 7: Sections through enclosure ditch 7163

Figure 6





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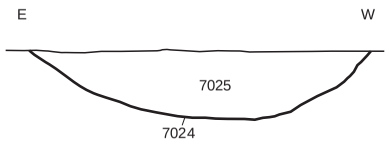
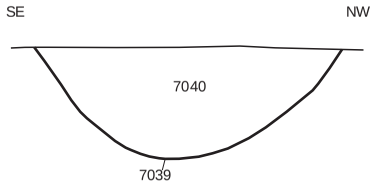
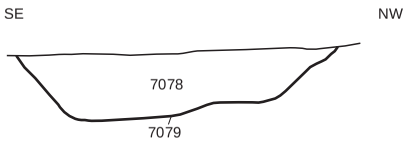
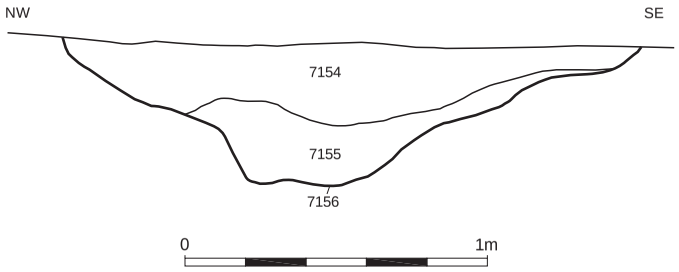
Site 7: Sections through enclosure ditches 7135 and 7145

Figure 7









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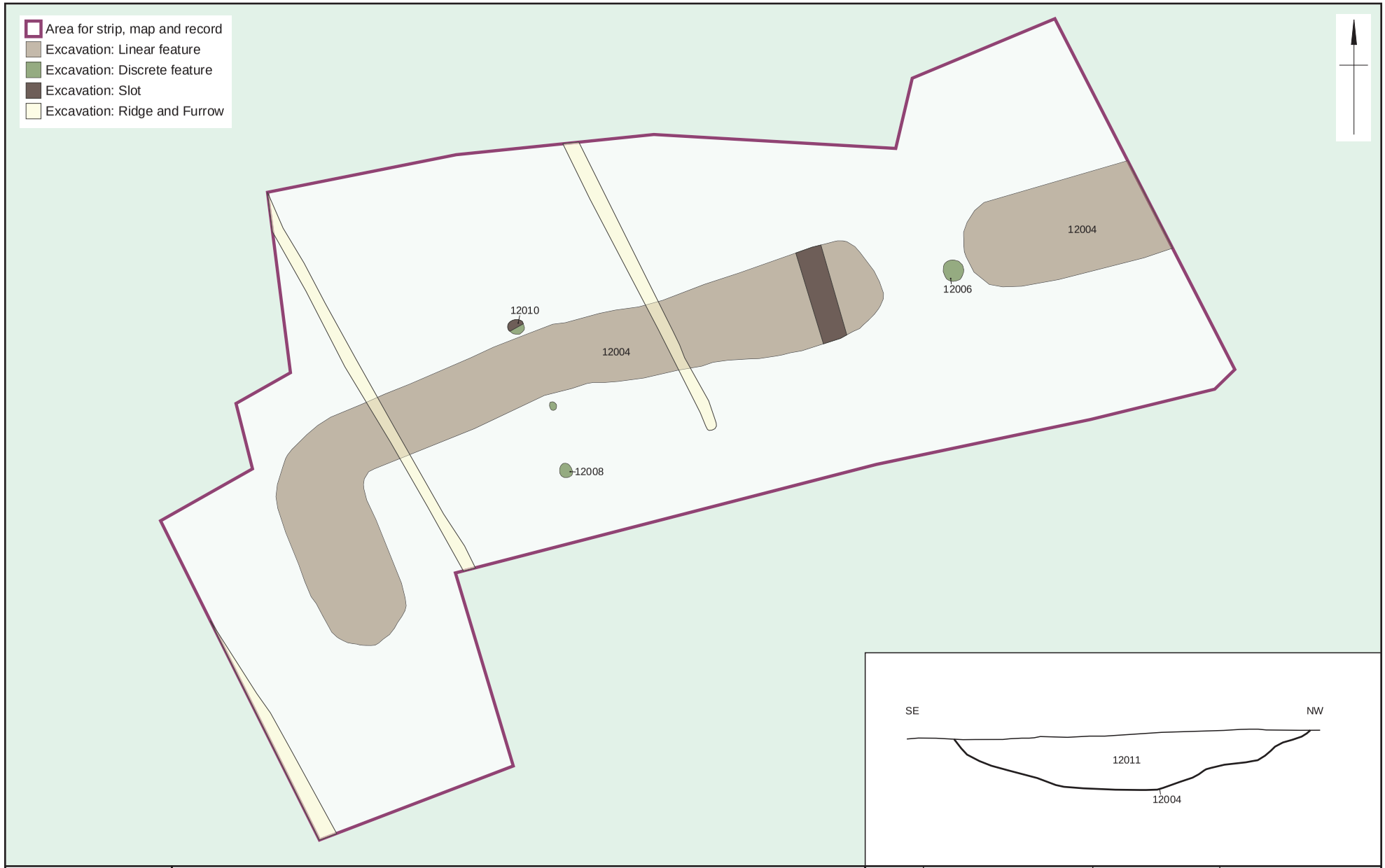
Site 7: Sections through pit alignment 7164, pits 7024, 7039, 7079 and 7156

Figure 8



Digital mapping provided by Client

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Plan of Site 12 and section through ditch 12004

Figure 9

Plate 1: General view of Site 7, showing typical ground conditions during excavations

Plate 2: Site 3: Soil profile

Date:	05/09/2013	Revision Number:	0
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Plate 3: Site 7: Roundhouse features, looking southeast

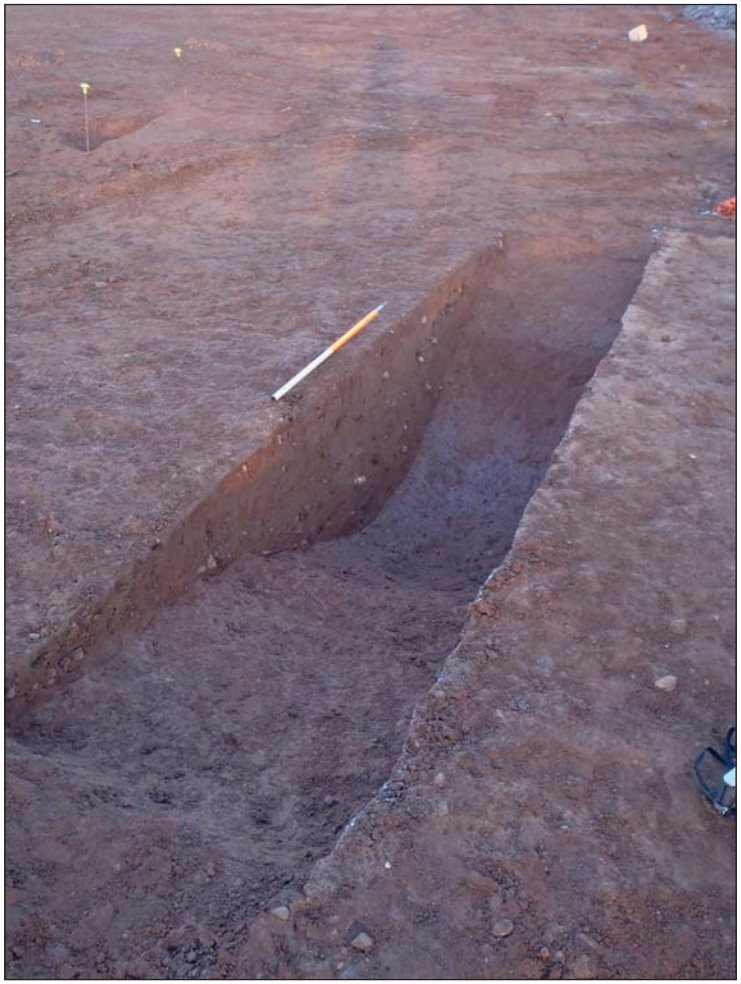

Plate 4: Site 7: Enclosure ditch segment **7075**, looking northeast

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Plate 5: Site 7: Pit alignment **7164**, looking northwest

Plate 6: Site 7: Pit **7024**, looking southeast

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Plate 7: Site 7: Pit **7079**, looking southwest

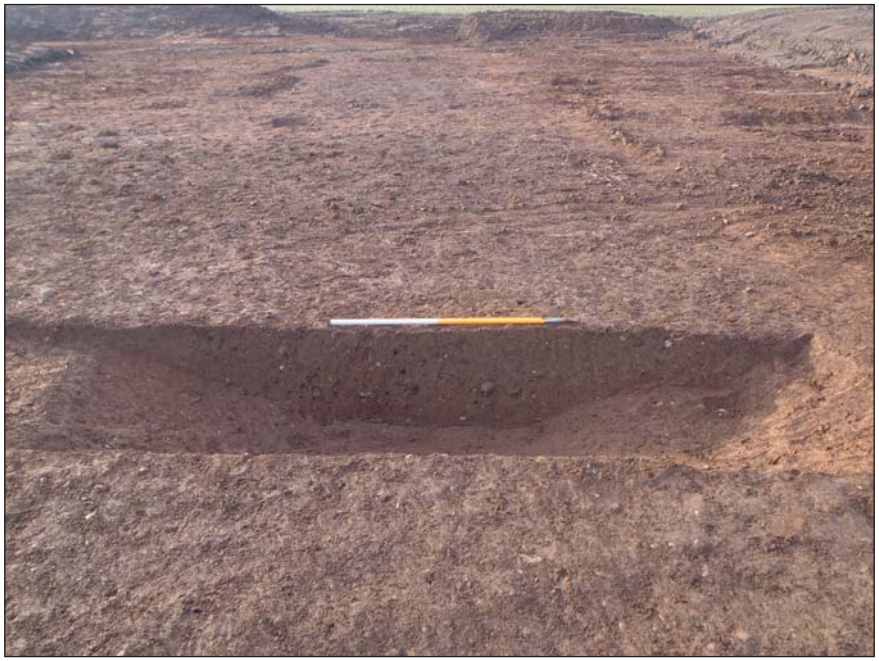

Plate 8: Site 12: Ditch **12004**, looking southwest

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