

East Midlands Gateway Phase 2 (EMG2)

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ENVIRONMENTAL STATEMENT

Technical Appendices

Appendix 12H

Archaeological Mitigation Strategy

June 2026

12

The East Midlands Gateway Phase 2
and Highway Order 202X and The East Midlands Gateway
Rail Freight and Highway (Amendment) Order 202X

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EAST MIDLANDS GATEWAY PHASE 2, LEICESTERSHIRE ARCHAEOLOGICAL MITIGATION STRATEGY

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Phase 2, Leicestershire
Archaeological Mitigation
Strategy
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Contents

1	INTRODUCTION AND PROJECT BACKGROUND	4
	Introduction	4
	Topography and Geology	4
	Archaeological Background	5
2	SCOPE OF WORKS AND ITS AIMS AND OBJECTIVES	14
	Scope of Works	14
	Objectives	14
3	METHOD STATEMENT	15
	Detailed Excavation and Recording	16
	Archaeological Monitoring and Recording (Watching Brief)	19
	Recording Systems	20
	Report and Archive	21
	Archaeological Protection Works	24
	Public Outreach	24
	Provisional Programme	25
	Monitoring	25
4	GENERAL SITE REQUIREMENTS	26
	Archaeological Contractor	26
	Copyright	26
	Variations	26
5	HEALTH AND SAFETY CONSIDERATIONS	27

Figures

Figure 1. Site Location

Figure 2. Mitigation Area A

Figure 3. Mitigation Area B

Figure 4. Mitigation/Trial Trenching Area C

Figure 5. Mitigation Areas D & E

1 INTRODUCTION AND PROJECT BACKGROUND

Introduction

- 1.1 RPS Consulting has been commissioned by SEGRO to prepare and agree a specification for a programme of archaeological mitigation to accompany a Development Consent Order (DCO) application for the Scheme of proposed development known as East Midland Gateway Phase 2 (Figure 1). The programme of archaeological mitigation will be focused in two principal areas of the proposed development, namely EMG2 Main Site (Grid Ref: SK 4607 2475) and EMG1 Works (Grid Ref: SK 4693 2737).
- 1.2 This project design and specification details the overarching scope and methodology for the implementation of a programme of archaeological mitigation based on the results of a comprehensive programme of archaeological evaluation previously undertaken at the EMG2 Main Site and EMG1 Works (see Section 1.9-1.81). The archaeological works are to comprise of a programme of trial trenching and mitigation (i.e. detailed excavation and archaeological monitoring and recording), in addition to a programme of archaeological protection works to ensure the ongoing preservation *in-situ* of specific archaeological remains. This Archaeological Mitigation Strategy (AMS) forms the basis for the appointment of a suitably qualified and experienced archaeological contractor to implement the programme of mitigation fieldwork required, and to enable appropriate Method Statements to be produced and submitted for approval with the Local Planning Authority in accordance with the provisions of this scheme of works.

Topography and Geology

- 1.3 The solid geology of the southern part of the Main EMG2 Site to the east Diseworth is shown by the British Geological Society (BGS 2025) as predominantly consisting of Gunthorpe Member - Mudstone, with multiple fault lines resulting in narrow outcrops of Gunthorpe Member siltstone and Diseworth Sandstone also being present. Superficial deposits are present within the northern half of the Scheme consisting of Glaciofluvial Deposits and Oadby Member deposits, with narrow isolated head deposits present in the northwest and southeast of the study site infilling potential dry valleys.
- 1.4 The EMG1 Works element of the Scheme overlies a solid geology consisting of Tarporley Siltstone Formation - siltstone, mudstone and sandstone. Superficial deposits in this area are limited to localised outcrops of head and Eagle Moor Sand and Gravel Member deposits.
- 1.5 In proximity of Junction 24A of the M1 Edwalton Member mudstone deposits are recorded, with a mix of superficial head, Egginton Common Sand and Gravel Member, and Wanlip Member sand and gravel.
- 1.6 In the vicinity of Diseworth the Scheme is located in an area of south facing, gentle rising ground, with the southern Scheme boundary associated with the 60m-65m contour, and the northern boundary associated with the 85m-90m contour. The highest point within the Scheme lies at 93m above Ordnance Datum (aOD) and is associated with a trig point located adjacent to Hyam's Lane in the northeast corner of the Scheme.
- 1.7 In relation to the EMG1 Works, the Scheme slopes - at first gently and then steeply - upwards from approximately 35-38m aOD up to just over 90m aOD to the west, where the Scheme abuts the plateau upon which East Midlands Airport is situated. The east-west slope is cut by a steep-sided valley draining from the plateau in a northerly direction, and the village of Lockington is sited to the north, where this valley reaches the Trent flood plain. This small valley creates a fairly steep east and west facing gradients within the general trend of the north-facing slope.

- 1.8 The course of the River Trent is located approximately 2km to the north of the Scheme.

Archaeological Background

- 1.9 The following information is derived from the 2025 RPS Archaeological Desk-Based Assessment.

Previous Archaeological Investigation – EMG1 Works

- 1.10 In order to support a Development Consent Order (DCO) application for the construction of the EMG1 development, a detailed programme of archaeological investigation was undertaken between July 2014 and September 2017. The first stage of archaeological investigation comprised the production of an archaeological desk-based assessment which identified the site of the EMG1 Works to have a potential for below-ground archaeological remains dating to the Prehistoric and Roman periods.
- 1.11 A programme of geophysical survey was undertaken across the majority of the EMG1 Works site to support production of above Desk-Based Assessment, with a second smaller phase of geophysical survey undertaken at a later date. The survey demonstrated the presence of anomalies of likely, probable, and possible archaeological interest. The archaeology detected includes several enclosure complexes; at least one of these relates to human occupation with ring gullies of round houses identified within the enclosure. Some of the other enclosures may have served an agricultural function and may be relatively modern. In addition, strongly magnetised anomalies were identified within the western part of the Scheme. These are identified as World War II dispersal pens associated with the RAF Castle Donington (HER ELE9184, SK 4715 2744; ELE9978, SK 4633 2701).
- 1.12 A programme of archaeological fieldwalking was also undertaken within multiple fields (HER ELE9976, SK 4670 2714; ELE10604, SK 4571 2691; ELE11875, SK 4612 2695). This exercise solely recovered material dating from the 16th century onwards indicative of historical agricultural manuring practices (HER MLE23598, SK 4726 2734; MLE23476, SK 4668 2705; MLE27438, SK 4690 2761).
- 1.13 A LiDAR and woodland survey were also undertaken. Interpretation of LiDAR data revealed the presence of former field boundaries, including the parish boundary between Lockington-Hemington and Kegworth, along with areas of ridge and furrow, the most prominent of which lay within the western part of the EMG1 Works. The woodland survey focussed predominantly on King Street Plantation and the wooded area commonly referred to as 'The Dumps'. The survey confirmed the presence of ridge and furrow and a pre-19th century arable field underlying the woodland; these features were also clearly visible in the LiDAR data (HER ELE9977, SK 4637 2713).
- 1.14 Multiple phases of targeted trial trenching were subsequently undertaken at the EMG1 Works. The initial phase of trial trenching was undertaken in Autumn 2014, consisting of 79 trial trenches. The evaluated areas were recorded as containing a dispersed scatter of enclosure complexes and ditched field systems. These probably had an agricultural function and were recorded as dating to the Late Iron Age and early Roman periods. A small group of contemporary roundhouses were the only substantial evidence for domestic occupation. The only evidence for activity pre-dating the Late Iron Age derived from a scatter of residual artefacts. In addition, eight trenches were dug to characterise the underlying geoarchaeological deposits, and to evaluate the local palaeoenvironmental potential of the EMG1 Works. None of the geoarchaeological trenches contained features capable of assisting with the reconstruction of the ancient environment, such as buried ground surfaces, peat deposits or palaeochannels containing organic-rich fills (HER ELE9185, SK 4715 2744).

- 1.15 Between the summer of 2016 and the summer of 2017, a further 179 evaluation trenches were excavated at various locations around the development area. This phase of trenching was designed to establish the spatial limits of the areas of archaeological interest already identified, in addition to a number of anomalies detected during the second phase of geophysical survey. This phase of trial trenching generally supported the findings from the earlier investigations confirming that the majority of remains recorded dated to the Iron Age and Romano-British periods. The earliest features uncovered were a probable Bronze Age burnt mound deposits. No significant concentrations of remains were detected beyond the limits of the area revealed by geophysical survey (HER ELE10567, SK 4713 2743; ELE10606, SK 4556 2693).
- 1.16 In 2015, a single trench measuring 30m by 30m excavated as part of geotechnical investigative works was archaeological monitored. The trench was excavated in the area of the proposed rail freight interchange. No finds or features of archaeological interest were recorded.
- 1.17 Between December 2016 and September 2017 an extensive programme of archaeological mitigation was undertaken at the EMG1 Works in the form of 14 separate open excavation areas. The earliest evidence of human activity consisted of worked flints potentially dating to the Mesolithic or Early Neolithic periods. The majority of the excavation areas show signs of activity associated with the Iron Age, with recorded features consisting of pit alignments, roundhouse ring gullies, enclosure ditches and field system remains. At least six discrete enclosures were discovered across the landscape, with field boundaries of Iron Age date recorded at a number of the other sites. Three of the excavation areas show signs of concerted activity in the Romano-British period relating to enclosures and the remains of field system.
- 1.18 Archaeological mitigation at the EMG1 Works also took the form of preservation *in-situ*. It was agreed that two groups of archaeological features would be preserved *in-situ* under the proposed landscape bund bounding the EMG1 Works to the north and west. These features consisted of ditches and possible enclosures dating to the Iron Age referred to as Site A and Site B. A third group of archaeological features in the eastern part of the EMG1 Works located in Field 40 adjacent to the M1 motorway had been incorporated within the agreed programme of archaeological excavation, although it was ultimately determined that development would not need to take place in this location. As such, the archaeological features in this location consisting of possible Iron age enclosures were retained *in-situ* within existing farmland.

Previous Archaeological Investigation – EMG2 Main Site

- 1.19 In May 2022, a geophysical survey of the EMG2 Main Site was undertaken to support the production of the archaeological desk-based assessment. Anomalies of archaeological origin were identified to the north of Hyam's Lane in the form of long linear ditched features and partial and full enclosures. Anomalies of agricultural origin in the form of former field boundaries, ridge and furrow ploughing were also recorded in this area. Due to modern contamination, the survey results to the south of Hyam's Lane were of a lower quality, although multiple anomalies of undetermined origin were noted as being present (HER ELE12290, SK 4611 2505). The form of the enclosure and long linear features identified suggest they could be Iron Age or Roman in date.
- 1.20 Subsequent programme of evaluation was undertaken between September and October 2022. The resulting fieldwork included the excavation of 388 trial trenching (HER ELE12393, SK 4615 2489), the fieldwalking of twenty individual fields (HER ELE12392, SK 4615 2489), and geoarchaeological monitoring of geotechnical site investigations (Her ELE12394, SK 4596 2510). As a result of these investigations, it was noted that the earliest archaeological features recorded were pits and ditches of Iron Age or Roman date, with such features principally concentrated in two areas: immediately north of Hyam's Lane in the centre of the site; and in proximity to the south of Hyam's Lane at the western edge of the site. Limited features of a similar date were found in the western part of the Scheme, while the remaining features encountered across the Scheme were

dated to the Post-Medieval or Modern periods and considered of limited interest. The geoarchaeological assessment did not identify any deposits of significance.

Prehistoric

- 1.21 The earliest evidence of human activity in the study area derives from an Upper Palaeolithic Cheddar point found during fieldwalking in advance of the construction of the Derby Southern bypass in the early 1990s (HER MLE7622, SK 468 286), c1km to the north of the EMG1 Works. Dating from the recolonisation of Britain, then the north-western peninsula of mainland Europe, during the Late Glacial Interstadial c.13-12000 radio-carbon years BP, several such implements have been typically found in caves at Cresswell Crags on the Derbyshire- Nottinghamshire border.
- 1.22 The Trent valley flood plain continued in use during the Mesolithic period. Approximately 300m further west of the Palaeolithic find referred to above, six Mesolithic flint blades and three blade cores were found during the excavation of a barrow site in 1954 (HER MLE7094, SK 464 287). A loose concentration of Mesolithic activity was discovered during fieldwalking north-east of Green Spot Wood, c1km northeast of the Scheme (HER MLE7096, SK 481 288).
- 1.23 A Mesolithic bladelet core was found during test pitting 100m from the EMG1 Works (HER MLE23597, SK 4715 271).
- 1.24 A Neolithic axe from west of Warren Farm was found in 1988 located c1.2km to the north of the Scheme at the EMG1 Works (HER MLE7291, SK 467 291).
- 1.25 Excavation at a further location, approximately 1.5km north of the EMG1 Works, recorded 64 pits, some forming a rough circle, probably for a light palisade, containing late Neolithic flintwork, as well as a barrow with an early Bronze Age cremation burial (HER MLE4688, SK 470 291). A similar late Neolithic/early Bronze Age pit circle appears to be noted from cropmarks identified from air photographs slightly further west and c1.5km north of the EMG1 Works (HER MLE4686, SK 466 290). In addition, fieldwalking to c1.25km to the northeast of the EMG1 Works recovered late Neolithic/early Bronze Age flint material (HER MLE9715, SK 476 282).
- 1.26 Several isolated Neolithic artefacts have been recorded within the 2km study area. The closest artefact recovered was a Neolithic polished stone axe head, found within a garden c200m to the west of the EMG2 Main Site (HER MLE17368, SK 4552 2448). A Neolithic arrowhead was recovered c1.3km to the north of the EMG2 Main Site (HER MLE23596, SK 4651 2675), while a Neolithic flint flake was recovered c1.3km to the southeast of the EMG2 Main Site (HER MLE7293, SK 478 237).
- 1.27 Pottery and worked flint thought to be Late Neolithic or Early Bronze Age in date were recovered during archaeological investigations at Gimbrow Farm, c1.9km to the northwest of the EMG2 Main Site (HER MLE9672, SK 437 256).
- 1.28 A Bronze Age barrow cemetery comprising up to eleven mainly ploughed-out barrows is recorded c1.5km to the north of the EMG1 Works (HER MLE4687, SK 466 290), with two further ring ditches are noted close to this (MLE9847, SK 466 288). Multiple suspected Bronze Age barrows are recorded in the same vicinity in this northern part of the study area (HER MLE4681, SK 468 286; MLE4689, SK 464 292; MLE9705, SK 468 291; MLE9706, SK 468 290; MLE9707; SK 471 291; MLE9710, SK 462 290; MLE18119, SK 470 283; MLE20577, SK 469 290; MLE20578, SK 468 289; MLE20579, SK 468 289).
- 1.29 An additional ring ditch is recorded south of Warren Farm c1.25km to the northeast of the EMG1 Works (HER MLE4712, SK 476 287). Ring ditches and barrows are also recorded from further west near Hemington Hole, c1.5km northwest of the EMG1 Works (HER MLE5933, SK 463 287; ELE9712, SK 464 289; MLE9846, SK 463 289). A barrow which lay approximately 1.25km to the north of the EMG1 Works was excavated in 1954 (HER MLE4708-9, SK 464 287). Traces of a

cremation were found, associated with a small bronze knife, two flint knives, a flint arrowhead and possible Beaker pottery.

- 1.30 Aerial photographic analysis has identified a possible Bronze Age, or later, pit alignment c1.5km to the northwest of the EMG2 Main Site (HER MLE18843, 1519442, SK 462 289). A pit circle and pit alignment have also been identified in proximity (HER MLE23975, SK 4640 2880).
- 1.31 Place name evidence suggests the presence of a Bronze Age burial mound in the vicinity of Gimbro Farm c1.5km to the northwest of the EMG2 Main Site, although no physical evidence for such a feature has yet been identified (HER MLE4461, SK 441 256).
- 1.32 A cropmark of a rectangular enclosure, generally thought to be of Prehistoric origin, is recorded c2km southwest of the Scheme (HER MLE5934, SK 444 230).
- 1.33 Several groups of heat affected stones, thought to be potentially associated with ploughed out Bronze age burnt mounds, were identified during a programme of evaluation, c1.3km to the north of the Scheme (HER MLE23595, SK 4663 2672).
- 1.34 The best known example of Bronze Age remains from the study area is the Lockington Hoard, which was located approximately 2km north of the EMG1 Works, where a barrow was identified by geophysics and subsequently excavated in the 1980s, in advance of the construction of the Derby Southern bypass (HER MLE6034, SK 470 291). Flint artefacts, some Neolithic, pottery and a cup-marked stone were noted, although no human remains were found, and the hoard was discovered on the line of the northern side of the palisade close to where it converged with the later ring ditch. It comprised two inverted Beaker vessels, two gold armlets of c. 2100-1700 BC and a copper dagger of c2200-1900 BC.
- 1.35 A concentration of activity, interpreted as occupation activity dated generally to the Late Prehistoric period, has been identified within the northeast study area, approximately 1.8km from the current the EMG1 Works development (HER MLRE4657, SK 483 284; MLE9704, SK 481 281; MLE22233, SK 4799 2831; MLE22234, SK 4812 2855; MLE22237, SK 4836 2861).
- 1.36 A Prehistoric flint core was found near Lockington c2km to the north of the Scheme (HER MLE20409, SK 467 273).

Iron Age & Roman

- 1.37 The programme of archaeological evaluation at the EMG1 Works identified five concentrations of archaeological features within the current Scheme. Two areas were identified for archaeological excavation, Area 6 located in former Field 6 in the western part of the Scheme, and Area 41 located in former Field 41 located centrally within the EMG1 Works. Three areas were subject to preservation *in-situ*: Site A and B underneath the existing landscape bund; and those remains located in Field 40 adjacent to the M1 in the eastern part of the Scheme which was not subsequently subject to development.
- 1.38 In Area 6 the recorded archaeology consisted of a pit alignment pre-dating a P-shaped ditched enclosure. The P-shaped enclosure was associated with other curvilinear sub-enclosures (HER MLE21672, SK 4712 2745). Within Area 41 the features encountered consisted of a central boundary ditch from which several associated rectangular enclosure ditches extended of various sizes. Internal features within these enclosures were minimal. The features in Area 6 and 41 were principally Iron Age in date, although some of the later features in Area 41 may represent activity extending into the Roman period.
- 1.39 In relation to the preservation *in-situ* Site B trial trenching indicated the presence of a possible enclosure associated with several pits and gullies containing Roman pottery. Site A appeared to contain a boundary ditch also of Roman date. Area 40 was identified as contained a set of parallel

ditches for a probable trackway and a small number of associated ditches, all of Roman date (HER MLE21673, SK 4742 2742).

- 1.40 The remaining mitigation works at The EMG1 Works were split between the EMG1 Works, within 1km to the west of the Scheme, and the Kegworth Bypass c1.2km to the east of the Scheme. The majority of the excavation areas at the EMG1 Works show signs of activity in the Iron Age, with recorded pit alignments, roundhouse ring gullies, enclosure ditches and field systems. A limited number of Roman enclosures and field systems were encountered as well (HER MLE21674, SK 4589 2730; MLE21675, SK 4619 2713; MLE21676, SK 4614 2661; MLE23592, SK 4574 2714; MLE23593, SK 4612 2751). The investigations on the Kegworth Bypass identified several Iron Age roundhouses and associated animal pens, ditches and pits.
- 1.41 Archaeological investigations within the Scheme at the proposed EMG2 Main Site initially consisted of a programme of geophysical survey, fieldwalking (HER MLE29017, SK 4607 2511) and geoarchaeological analysis. Subsequent trial trenching within the Scheme was undertaken between September and October 2022. The resulting fieldwork included the excavation of 388 trial trenching (HER ELE12393, SK 4615 2489). As a result of these investigations, it was noted that the earliest archaeological features recorded were pits and ditches of Iron Age or Roman date, with such features principally concentrated in two areas: immediately north of Hyam's Lane in the centre of the site; and in proximity to the south of Hyam's Lane at the western edge of the site. Limited features of a similar date were found in the western part of the Scheme (HER MLE28592, SK 4577 2487; MLE28593, SK 4592 2498; MLE28594, SK 4617 2509; MLE29018, SK 4597 2480).
- 1.42 Evidence for Iron Age settlement and land utilisation comes from a site north of Ratcliffe Lane, c2km north of the EMG1 Works, a Scheduled Monument comprising cropmarks of numerous ring ditches, probably representing round houses, along with trackways, overlapping enclosures and pit alignments indicative of a late Iron Age settlement (NHLE 1003565, HER SK 47990 29387; MLE4670, SK 479 292). There is no intervisibility between the Scheme and the Scheduled Monument, nor any known historical associations. Further evidence has been identified nearby for contemporary activity (HER MLE24021, SK 4810 2907; MLE24022, SK 4810 2887; MLE22763, SK 4842 2888). Heavily truncated linear ditches were excavated c1.6km to the north of the EMG1 Works, which may indicate land utilisation in the vicinity of the settlement (HER MLE7292, SK 478 291).
- 1.43 Immediately east of the Scheme, geophysical survey has identified a possible ring ditch or house gully, likely to indicate a round house, within the Scheme immediately to the east of M1 Junction 24, although subsequent trial trenching produced no archaeological features (HER MLE9703, SK 477 276).
- 1.44 An Iron Age enclosure has been recorded c2km to the north of the Scheme (HER MLE4705, SK 467 293).
- 1.45 Iron Age remains within the study area are recorded within the low-lying part of the study area, c1.25km west of the EMG1 Works, including pottery recorded from a watching brief south of Hemington (HER MLE4698, SK 457 278), where the 1937 findspot of a gold stater is also recorded (HER MLE6517; SK 452 275).
- 1.46 A review of the HER data indicates that activity dating to the Iron Age occurs at intervals within the study area, with multiple focal points of activity for this period being noted. Geophysical survey and associated intrusive investigation have identified two Iron Age enclosures as being present c1.8km to the north of the EMG2 Main Site (HER MLE21681, SK 4680 2703; MLE23594, SK 4673 2668), while two enclosures recorded with associated pits and ditches c1.5km to the east of the site appear to represent the remains of an Iron Age farmstead (HER MLE21678, SK 4841 2593; MLE21948, SK 4815 2587; MLE23765, SK 4816 2594). At Gimbro Farm, c1.1km to the west of

the Scheme, archaeological investigation found field systems, an enclosure and a four-post structure all dating to the Iron Age period (HER MLE5931, SK 442 253), compared to more limited evidence for Iron Age occupation activity being recorded c1.8km to the northwest of the Scheme (HER MLE23591, SK 4555 2711).

- 1.47 A geophysical survey undertaken c1.3km to the west of the Scheme recorded a series of anomalies that could represent Iron Age or Roman occupation activity (HER MLE27289, SK 4530 2747; MLE27290, SK 4526 2727).
- 1.48 The Bulwarks Scheduled Monument is located approximately 5km to the southwest of the EMG2 main Site. The asset represents the remains of a large univallate Iron Age hillfort originally 23.5 acres, but which has been reduced by quarrying. Sections across the hillfort defences have identified that the original palisade was replaced by a rampart and ditch, outside which was a counterscarp bank. A modern geophysical survey within the Scheduled area has identified twenty possible structures within the hillfort interior (NHLE 1003606, HER MLE4399, SK 40535 23223). There is a limited degree of intervisibility at a distance between the EMG2 Main Site and the asset.
- 1.49 Isolated sherds of Iron Age pottery have been found between 500m and 1km to the southeast of the Scheme (HER MLE6519, SK 469 240; MLE6518, SK 469 240).
- 1.50 The Iron Age settlement described previously c2km to the north of the EMG1 Works continued in use through the early Roman period, evidenced by pottery extending from the early/mid-first century to the mid-second century AD. Two sherds of pottery are recorded from an excavation in the northern part of the study area (HER MLE9724, SK 472 294).
- 1.51 Previous archaeological investigation has identified a Roman villa and associated enclosure located approximately 2km to the northeast of the Scheme (NHLE 1003567, SK 48257 29355). Following their identification the remains were subject to scheduling. There is no intervisibility between the Scheme and the Scheduled Monument, nor any known historical associations.
- 1.52 Roman pottery has also been recorded c2km north of the EMG1 Works (HER MLE5915, SK 465 293) and c1.25km north of the EMG1 Works (HER MLE8051, SK 464 287), and a possible tessellated pavement was noted close by potentially indicating a further high-status occupation site (HER MLE8052, SK 460 287). Pottery and a belt fitting are also recorded from a site at Hemington c1.25km west of the EMG1 Works (HER MLE8139, SK 455 277). Further contemporary pottery concentrations (HER MLE8049, SK 486 280) adjacent to the course of a postulated Roman road (HER MLE4658, SK 487 264) is recorded approximately 1.8km to the east of the Scheme. Roman sherds have also been recovered c500m to the southeast of the Scheme (HER MLE8057, SK 469 240).
- 1.53 A Roman road is postulated within the Scheme, on the basis of the place-name 'King Street Plantation', and the relative straightness of the parish boundary which runs through it in a north-east to south-west direction (HER MLE4636, SK 468 271), although no trace of such a feature has been identified during past investigations at the EMG1 Works. A possible road is recorded approximately 2km to the east of the Scheme (HER MLE4658, SK 487 264).
- 1.54 A possible Roman ditch was found c1.4km to the north of the EMG2 Main Site during a programme of archaeological evaluation (HER MLE23769, SK 4569 2686).
- 1.55 A hoard of 85 Roman coins, in proximity to a spread of Roman pottery, has been recorded c900m to the south of the EMG2 Main Site (HER MLE8407, SK 454 235), while several sherd of Roman pottery have been found between 500m and 1km to the southeast of the Scheme (HER MLE8056, SK 470 234; MLE8057, SK 469 240). A number of non-specified Roman artefacts have been recovered near Ash Spinney, c1.5km to the southeast of the Scheme (HER MLE8055, SK 478 237).

Anglo-Saxon/Early Medieval & Medieval

- 1.56 Place name evidence suggest the location of a possible Early Medieval meeting place c300m to the north of the Scheme (HER MLE15726, SK 465 256).
- 1.57 The historic settlement of Diseworth, located to the west of the Scheme, is recorded within the Domesday Survey of 1086 as a small settlement containing 12 households, supported by 7 plough teams (Open Domesday 2025). The HER defines the historic core of the settlement as being located c250m to the west of the Scheme boundary (HER MLE5936, SK 451 244). The Church of St. Michael located centrally within Diseworth, c350m to the west of the Scheme, is likely to have been originally constructed in the 10th century AD (HER MLE11188, SK 453 245), while earthworks associated with a Medieval manorial site are located at the western end of the village c800m west of the Scheme (HER MLE4759, SK 448 244). A recent archaeological watching brief at Clements Gate, approximately 250m to the west of the Scheme, recorded multiple pits and postholes in association with a range of domestic artefacts, relating to Medieval settlement occurring within the historic core of the settlement (HER MLE22825, SK 4553 2455).
- 1.58 The 12th century Church of All Saints and associated churchyard is located c2km to the southeast of the Scheme (HER MLE11367, SK 482 233; MLE21834, SK 4537 2452). Archaeological investigations close to the church have found evidence for contemporary Medieval occupation (HER MLE20842, SK 4795 2354), as well as a Medieval clay lamp (HER MLE16476, SK 479 234).
- 1.59 Several features of archaeological interest lie immediately outside of the EMG2 Main Site boundary to the southwest. A small area of agricultural ridge and furrow earthworks were surveyed in 2010 (HER MLE23740, SK 4568 2451), while an upstanding earthwork mound 30-40ft in diameter representing the remanence of a possible windmill mound located in proximity to the ridge and furrow and could be roughly contemporary (HER MLE4744, 315417, SK 457 246).
- 1.60 The historic settlement of Long Whatton is located, at its closest, c800m to the southeast of the Scheme (HER MLE5937, SK 477 235). The most significant archaeological features are the two Scheduled Monuments at Long Whatton associated with moated enclosures, flood banks and fish ponds located approximately 1.2km to the southeast of the Scheme (NHLE 1008550, SK 48263 23462; 1008551, SK 47831 23861, SK 47862 23720; MLE4726, SK 478 237; MLE4727, SK 478 238; MLE4728, SK 478 237; MLE4742, SK 482 234; MLE10288, SK 478 236). The rectangular moated site measures approximately 30m by 35m including a bank less than 0.5m high on the eastern side, and a bank up to 8m wide and 0.75m high on the north side. The ditches measure 7m-8m wide and are about 1m deep. The adjoining fishpond lies on the north side of the moat and measures approximately 30m x 12m. The whole system was fed by a small tributary stream on the western side of the site which flows north to the Whatton Brook. The larger of the two moated sites is situated at the top of the valley and measures 55m by 50m in overall dimensions including the outer banks extant on the eastern and northern sides and measuring 4m wide. The moat ditch is an average of 8m wide and has a very silted appearance, giving a present depth of about 1m. There is no meaningful intervisibility between the Scheme and the Scheduled Monuments, nor is there any known historical associations.
- 1.61 Other historic settlement dating to the Medieval period within the study area include Hemington c1.6km to the west of the Scheme (HER MLE4673, SK 455 280). The HER records several features dating to this period within the village consisting of a possible embanked enclosure (HER MLE28280, SK 4558 2819), fish pond (HER 4699, SK 456 278), as well as postholes, a linear feature and wall at Hemington House (HER MLE20217, SK 457 277; MLE24175, SK 4567 2780).
- 1.62 The Scheduled Medieval Hemington Chapel (NHLE 1005087, SK 45696 27794) is located approximately 1km to the northwest of the Scheme. There is no intervisibility between the monument and the Scheme, nor is there any known historical associations.

- 1.63 The historic settlement of Castle Donnington is located 2km to the west of the Scheme (HER MLE5956, SK 446 273). The Medieval Enclosure Castle at Castle Donnington Scheduled Monument is located c2km to the west of the Scheme (NHLE 1011608, SK 44857 27562). The monument occupies the northern end of a prominent sandstone spur of land to the north of the planned medieval town. The documentary record indicates the construction of the castle in the mid-12th century in the form of an enclosure castle surrounded by a moat and an outer ditch on the south-east side. It was later destroyed by order of King John in 1215 and then rebuilt later in the 13th century. By the 16th century the castle had fallen into disrepair. The Scheduled area has been incorporated into urban environment of the Castle Donnington, although features such as the castle moat can still be observed. There is no intervisibility between the monument and the Scheme, nor is there any known historical associations.
- 1.64 The Scheduled Monument of Medieval Settlement Remains Immediately East of The Wymeshead (NHLE 1018359, SK 48996 26368) located approximately 2.2km to the west of the Scheme is associated with the historic settlement of Kegworth (HER MLE4637, SK 487 266). The monument includes the remains of former Medieval settlement representing areas of abandonment caused by the shifting and expansion of settlement northwards to form the present town of Kegworth. The remains take the form of a series of earthworks and buried features principally centred upon two hollow ways or main thoroughfares through the settlement which survive as linear depressions. There is no intervisibility between the monument and the Scheme, nor is there any known historical associations.
- 1.65 The core of the Medieval settlement at Lockington and associated manor house are located c500m to the north of the Scheme (HER MLE4707, SK 46 27; MLE7624, SK 467 280).
- 1.66 Ariel photographic analysis has recorded a possible Medieval moated enclosure c1.2km to the south of the Scheme (HER MLE4733, SK 459 233). The base of a Medieval ceramic vessel was found close to the location of the cropmark in 1987 (HER MLE20310, SK 459 233).
- 1.67 There is a documentary reference to the presence of a bridge near Long Whatton in the 13th century, which the HER locates c600m to the south of the Scheme (HER MLE4738, SK 466 237).
- 1.68 The possible site of a Medieval water mill is located c1km to the west of the Scheme (HER MLE4628, SK 43 24), while possible Medieval settlement earthworks are recorded c750m to the north of the Scheme (HER MLE20574, 1517775, 18843, SK 467 284).
- 1.69 Evidence for ridge and furrow earthworks has been recorded c2km to the north of the Scheme (HER MLE23763, SK 4556 2728), close to where a Medieval stone mortar was recovered (HER MLE6907, SK 4556 2728). The surviving and former remains of Medieval ridge and furrow, and agricultural evidence in general, is recorded on the HER at regular intervals across the northern study area (HER MLE4678, SK 468 286; MLE4710, SK 460 279; MLE4722, SK 477 291; MLE28282, SK 4744 2837; MLE28286, SK 4744 2837; MLE28287, SK 4508 2835; MLE28289, SK 4619 2853; 315231, SK 46280 27930; 1517678, SK 47520 27833; 1517692, SK 47447 28369; 1517740, SK 46194 28536; 1517758, SK 46899 28633).
- 1.70 A Medieval lead seal was found c1.9km to the east of the Scheme (HER MLE6903, SK 483 260).

Post-Medieval & Modern

- 1.71 During the Post-Medieval and Modern periods, the Scheme is likely to have remained within the agricultural hinterland of Diseworth and Lockington. Localised evidence for potential Post-Medieval ridge and furrow agricultural features have been identified within the northwest part of the proposed EMG2 Main Site based on a review of the available LiDAR data.

- 1.72 The earliest cartographic sources to depict the study area in a reasonably level of detail is Prior's 1779 Map of Leicestershire which indicates that the Scheme was located in open ground to the northeast of the settlement Diseworth and southeast of Lockington.
- 1.73 The 1779 Lockington Enclosure Map indicates that by the late 18th century that the EMG1 Works is located within an area associated with multiple enclosed agricultural field parcels.
- 1.74 The 1796 Diseworth Enclosure Map confirms that the proposed EMG2 Main Site is now located either side of Hyam's Lane with regular large field parcels located either side of the lane. Several smaller field parcels are located adjacent to Hyam's Lane, or within the southwest corner of the Scheme.
- 1.75 The 1815 Ordnance Survey Drawing confirms that the study is located within agricultural ground immediately to the northwest of Diseworth and southeast of Lockington, although the depiction of the field parcels is more generic than the earlier mapping. The 1849 Lockington Tithe map confirms the contemporary agricultural character of the areas of the EMG1 Works which located beyond those areas depicted on the 1779 Lockington Enclosure Map.
- 1.76 The 1883-87 Ordnance Survey map indicates that the field parcels within the Scheme as a whole have been subject to further sub-division with a substantial number of smaller regular square or rectangular field parcels. The density of this pattern is notable to the northwest and southeast of Hyam's Lane within the proposed EMG2 Main Site. No distinctive topographic features are depicted. The layout of the Scheme remains unaltered between 1903 and 1955.
- 1.77 Castle Donnington airfield, located a short distance to the northwest of the Scheme, was initially in operation use during the latter part of the First World War, and was then subsequently in use as a Bomber Station between 1942 and 1946 (HER MLE15963, SK 453 261). A contemporary World War II military depot is record c100m to the north of the EMG1 Works, not partially located underneath the modern road network. The depot was dismantled during the post-war period (HER 1517688, SK 47063 28344).
- 1.78 The location of a Star Fish World War II bombing decoy is recorded within the southeast part of the EMG2 Main Site (HER MLE24466, 1412071, SK 4650 2470). The site walkover did not identify any features which could be associated with this asset.
- 1.79 By 1967 the key change to the Scheme has been the construction of the M1 motorway and A50 which falls within the main linear elements of the Scheme boundary. By 1975 the modern road network now incorporated within the Scheme increases further.
- 1.80 By 2008 within the proposed EMG2 Main Site a number of the internal field boundaries have been removed increasing the size of a number of the field parcels. A Mill Mound is depicted immediately beyond the southwest study boundary. The modern road within the Scheme as a whole continues to grow including the construction of the A453. The layout of the Scheme remains principally unaltered between 2006 and 2011.
- 1.81 By 2022 the consented development at the EMG1 Works has been constructed. Within the northern part of the Scheme associated with the EMG1 Works extensive construction works have taken place in order to construct a landscape bund along the northwest and eastern boundary, filter beds in the western part of the EMG1 Works, and railway and associated container hub. The only area within the EMG1 Works not impacted by groundworks is a teardrop area of land on the eastern side of the EMG1 Works adjacent to the M1 motorway.

2 SCOPE OF WORKS AND ITS AIMS AND OBJECTIVES

Scope of Works

- 2.1 The scope of the works required at the post-consent stage of the Scheme are to comprise a programme of evaluation and mitigation comprising of the following works:
- Additional trial trenching to the south of Area C.
 - Detailed excavation of Areas A, B & C where previous phases of trial trenching have identified concentrations of Late Iron Age/Roman features.
 - Archaeological monitoring and recording of Area D, associated with the removal of part of the existing landscape bund in order to identify and record any archaeological remains that were previously preserved in-situ in this location.
 - Archaeological protection works associated with Area E in order that archaeological remains that were preserved in-situ in association the original EMG1 development, will remain undisturbed.

Objectives

- 2.2 The primary objectives of this archaeological evaluation and mitigation strategy are to mitigate the effect of development on surviving buried archaeological remains within the site through the implementation of further archaeological investigation and recording, analysis of the excavated data, publication of the results, deposition of an ordered project archive with an appropriate local museum for its long-term curation, and archaeological protection works.
- 2.3 The project should inform the development and implementation of local, regional and national research agendas with specific reference to the East Midlands Historic Environment Research Framework (2012).

Aims

- 2.4 The specific aims of the trial trenching will be to:
- clarify the presence/absence, extent, condition, nature, character, date and significance of any archaeological remains encountered;
 - Identify any artefacts relating to the occupation or use of the site; and
 - Undertake any palaeo-environmental investigation as appropriate;
- 2.5 The general aim of the archaeological mitigation programme is to preserve by record the archaeological evidence contained within the footprint of the development area, prior to damage by development, and investigate the origins, date, development, phasing, spatial organisation, character, function, status, and significance of the remains revealed, and place these in their local, regional and national archaeological context.
- 2.6 Supported by the implementation of a programme of protection works in association with Area E to prevent any damage to below-ground remains while construction groundworks are taking place, and ensuring the continued preservation in-situ of any archaeological remains present.

3 METHOD STATEMENT

- 3.1 In order that the investigation supplies information of the required quality, the Codes, Standards and Guidance issued by the Chartered Institute for Archaeologists (CIfA) form a requirement of this specification.
- 3.2 The following provides the methodology and sampling procedures that are to be implemented for the programme of archaeological works, as appropriate, to ensure the satisfactory investigation and record of matters of archaeological interest on the site.

Trial Trenching

- 3.3 The trial trenches will be located immediately to the south of Area C, as shown on Figure 4, consisting of five trenches measuring 30m by 1.8m in plan. The trial trenching will be supported by a 1% contingency sample. The contingency trenching will only be activated following agreement between the archaeological advisor to LCC and RPS, archaeological consultant to SEGRO.
- 3.4 All trenches will be accurately set out using a total station or GPS system prior to their excavation. All trenches will be excavated using a standard toothless ditching bucket fitted to an appropriate hydraulic tracked or wheeled machine, such as a JCB or 360° Hymac. The machine used will be powerful enough for a clean job of work and will be able to mound spoil neatly, a safe distance from the trench and excavation area edges. Spoil is to be stored on-site.
- 3.5 All machine work will be under archaeological supervision and will cease immediately if significant evidence is revealed.
- 3.6 Machine excavation is to be taken down to the top of 'natural' or the top of any archaeological level, whichever is the higher. In the event of significant archaeological deposits being encountered RPS and the local planning authority's archaeological advisor are to be informed immediately.
- 3.7 If the machine has to re-enter the trench, care will be taken to ensure that it does not damage underlying remains, particularly in soft ground conditions. The machine will not be used to cut arbitrary trial trenches down to natural deposits, without regard to the archaeological stratification and leaving a section record only.
- 3.8 Particular care will be taken not to damage any areas containing significant remains which might merit preservation in-situ. Such evidence would normally include deep or complex stratification, settlement evidence and structures. Such areas will be protected and not left open to the weather, or other forms of deterioration. Whilst investigation will not be at the expense of any structures, features or finds which might reasonably be considered to merit preservation, it is important that a sufficient sample is studied.
- 3.9 Stripped material will be visually examined for archaeological material.
- 3.10 Any human remains must be left in-situ, covered and protected. Removal can only take place under the terms of an appropriate Ministry of Justice (MoJ) licence and with due regard for environmental health regulations. Such removal must be in compliance with the Disused Burial Grounds Amendment Act 1981 (if appropriate).
- 3.11 Those trenches where visual inspection suggests the presence of features or possible features will, if necessary, be hand-cleaned to ensure features are properly defined and sufficient to produce a base plan.

- 3.12 Archaeological features should initially only be sampled sufficiently to characterise and date them. However, at least 50% (by plan area) of each post hole, 50% (by plan area) of each pit except where of a substantial size, and a 10% sample of each linear should be investigated. The intersections of features will be investigated so that their stratigraphic relationships may be recorded and understood. Care should be taken not to damage archaeological deposits through excessive use of mechanical excavation.
- 3.13 Different environmental sampling strategies will be employed according to established professional standards and research targets and the perceived importance of the strata under investigation, but will be implemented in accordance with the 2011 Historic England guidance (Environmental Archaeology. A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-excavation (second edition)). Bulk samples of a minimum of 40 litres, or less subject to feature sample size, will be taken for Medieval or earlier deposits for flotation for charred plant remains. Other bulk samples for small animal bones and other small artefacts will be taken from appropriate contexts.
- 3.14 In the unlikely event that any munitions or unexploded ordnance is uncovered, all works shall cease within the area and this will be fenced off. Its presence will be immediately reported to the local Police authority, RPS and the developer. No works will continue in the area until it has been made safe.
- 3.15 All trenches and spoil heaps will be scanned with a metal detector to assist in the recovery of dateable material. Spoil heaps will also be searched for pottery.
- 3.16 On completion of recording, trenches are to be backfilled with top and sub-soils reinstated in their appropriate sequence. No formal reinstatement of trenches will be required but backfilling will be done in a neat and tidy manner.

Detailed Excavation and Recording

- 3.17 Based on the results of the archaeological evaluation works to date, this has led to the identification of multiple areas within the Scheme that will require detailed excavation and recording prior to development. The results of the additional trial trenching to be undertaken immediately to the south of Area C will also be reviewed to establish if further extensions to Area C, or the identification of additional mitigation areas, will be required. This section therefore sets out the detailed excavation methodology that will be adopted.
- 3.18 Those areas of the Scheme that will be the subject to a programme of detailed excavation and recording is shown in Figures 1-4, all of which target concentrations of features dating to the Late Iron Age and Roman periods, and will comprise:
- Area A (1.46ha)
 - Area B (0.87ha)
 - Area C (1.38ha)
- 3.19 Should significant archaeological remains be identified within Areas A & C, and be demonstrated to continue beyond the extents of these areas as a result either of the initial site strip, it has been agreed that a supporting contingency should be in place to extent the area in question to further expose significant archaeological activity (Figs 2 & 4). In relation to Area A this contingency comprises Area A1 (0.59ha) and Area A2 (0.54ha). In relation to Area C this contingency comprises Area C1 (0.54ha). Any such extensions will be agreed following the complete strip of the core area and discussions between RPS and archaeological advisor to LCC. If the presence of archaeological features of significance declines as the strip of the contingency

area(s) progresses, then subject to further discussion between RPS and archaeological advisor to LCC, it will be agreed that the remaining part of the contingency area will not need to be stripped.

- 3.20 All topsoil and sub-soil will be stripped mechanically under archaeological direction. Care should be taken not to machine into archaeological features or deposits, but it is important that the archaeological level is reached and not still covered by overburden. Where potential structural remains may be encountered, further testing of the depth of adjacent overburden by hand will be implemented in order to help to ensure that appropriate levels have been reached without compromising any structural components. It is hoped that general hand cleaning can be kept to the minimum, so machine stripping needs to be well supervised and of a high quality.
- 3.21 During this operation all earthmoving and other vehicles will avoid travelling on the freshly stripped surface of the area of archaeological investigation.
- 3.22 Stripping will be carried out using a wide, toothless bucket. Machinery would be required to work back from one or several fronts, but not track over the surface exposed.
- 3.23 A site grid is to be established using an EDM or theodolite, and this is to be tied into the national grid, at the outset of the project.
- 3.24 Following stripping of overburden, priority will be given to the cleaning of features as required to produce a pre-excitation site plan. The stripped surface will be kept clean and free of loose spoil. Wherever possible spoil arising during hand-cleaning and hand-excitation will be stockpiled beyond the limits of excavation; where those limits are too distant to make off-site storage practicable then spoil will be stored on spoil-heaps set aside on areas of natural geology away from any archaeological features.
- 3.25 Areas containing particularly significant or sensitive archaeological remains should be protected, i.e. not left open to the weather.
- 3.26 Data-capture for site plans will be by electronic distance measurement, measured survey or a combination of these measures; data-capture for site plans will as standard be capable of reproduction at a scale of 1:100; more complex features or areas of complex archaeological remains will be recorded at greater resolution (for reproduction at 1:10, 1:20, or 1:50 as necessary). The site grid will be established relative to the Ordnance Survey National Grid and all levels taken will be relative to Ordnance Datum.
- 3.27 The archaeological team is to be structured to ensure that the hand-cleaning and planning operations run in close sequence. The initial site plan should be updated as new features become apparent.
- 3.28 All sampling of archaeological features is to be by hand unless otherwise agreed in advance by the local planning authority's archaeological advisor following on-site discussion.
- 3.29 The excavation strategy will be justified against the stated aims and objectives of the project and/or any other appropriate criteria. The site will be excavated stratigraphically. The various types of features and deposits revealed following the removal of non-significant overburden will be subject to the following sampling levels:
- any deposits relating to funerary/ritual activity (e.g., burials, cremations) and domestic/industrial activity (post-holes, hearths, floor surfaces/floor make-up deposits) will be investigated by removing a 100% sample of the deposit from each feature. Where appropriate, for instance where the stratigraphy is complex, single context planning will be used.
 - Non-structural pits will require a minimum of a 50% sample of the deposits from each feature unless the character, number or size of the pits makes this impractical. For instance, if a pit contains several intersections and re-cuts, it would not always be appropriate to half-section

it. In this situation, the archaeological contractor will consider 'quadranting' or single context planning. The strategy will need to be agreed with the Local Planning Authorities archaeological advisor. A 100% sample may be necessary should significant assemblages of finds be present;

- Non-structural post and stake-holes will require a minimum of 50% sample of the deposits from each feature to sufficiently clarify character, relationships and chronology;
- Non-structural linear cut features (e.g., ditches/gullies, paths/tracks) will require a minimum of a 10% to 20% sample of the deposits from each feature to clarify character, date and morphology. Intersections will be excavated and recorded to establish relative chronologies. Other minor linear features will also be sample excavated if appropriate to the understanding the site's character, date and morphology.

- 3.30 There may be cases when individual features do not merit these sampling levels. Any sampling variations would need to be approved in advance by the local planning authority's archaeological advisor following on-site discussion.
- 3.31 Any human remains encountered during the archaeological excavations will be archaeologically excavated in accordance with relevant Ministry of Justice (MoJ) licence and environmental health regulations. Such removal must be in compliance with the Disused Burial Grounds Amendment Act 1981 (if appropriate). In the event that such remains are exposed the site archaeologist shall inform the developer, RPS Consulting, local Environmental Health Officer and the local planning authority's archaeological advisor in order that appropriate measures can be taken for their recording and removal.
- 3.32 Where removal of human remains is necessary, the remains will be cleaned with minimal disturbance, prior to recording and removal. Investigation and excavation of human remains will be undertaken by, or under supervision of, suitably experienced specialist staff and in accordance with ClfA Guidelines ("Excavation and Post-excavation Treatment of Cremated and Inhumed Human Remains" Roberts, C & McKinley, J 1993 – IFA Technical Paper 13; "Guidelines to the standards for recording human remains" ed. Brickley, M & McKinley, J 2004 – IFA Paper 7). Assessment of excavated human remains will be undertaken in line with current English Heritage Guidelines ("Human Bones from archaeological sites: Guidelines for the production of assessment documents and analytical reports" Centre for Archaeology Guidelines 2004).
- 3.33 The excavation of any exposed inhumations, cremations and any other ritual, or possible ritual features or deposits, will be given priority in the excavation programme in order to limit the chances of deterioration of the feature and vandalism.
- 3.34 Treatment of treasure - Finds, discovered by the Archaeological Contractor, falling under the statutory definition of Treasure (as defined by the Treasure Act of 1996 and its revisions of 2002 and 2023) will be reported immediately to the relevant Coroner's Office, the landowner and the local planning authority's archaeological advisor. A Treasure Receipt (obtainable from either the FLO or the DCMS website) must be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding the find is Treasure. Failure to report within 14 days is a criminal offence. The Treasure Receipt and Report must include the date and circumstances of the discovery, the identity of the finder (put as unit/contractor) and (as exactly as possible) the location of the find. Where removal cannot be effected on the same working day as the discovery suitable security measures will be taken to protect the finds from theft.
- 3.35 In order to establish clearly dated stratigraphic sequences, artefacts will be recovered carefully from feature intersections. Where artefact assemblages are concentrated, the percentage of sampling will be increased to ensure maximum retrieval and recording of this material.

- 3.36 Spot dating of pottery will be implemented on a weekly basis and the results fed back to the site team to inform the on-going site investigation strategy.
- 3.37 Hand-recovery of artefacts will be supplemented by appropriate environmental sampling. This sampling will not normally be from feature intersections.
- 3.38 The sampling excavation strategy set out above will be reviewed continuously and, if necessary, amended in order to take account of changing circumstances. Any changes or amendments will be agreed with RPS Consulting and the local planning authority's archaeological advisor.
- 3.39 Deposits must be sampled for retrieval and assessment of the preservation conditions and potential for analysis of all biological remains. A strategy for the recovery and sampling of environmental remains from the site should be agreed with an appropriate specialist, in advance of the project (see Environmental Archaeology: A guide to the theory and practice of methods from sampling and recovery to post-excavation: English Heritage/Centre for Archaeology Guidelines 2011): the sampling strategy should include a reasoned justification for selection of deposits for sampling, and should be developed in collaboration with a recognised bio-archaeologist.
- 3.40 In the unlikely event that any munitions or unexploded ordnance is uncovered, all works shall cease within the area, and this will be fenced off. Its presence will be immediately reported to the local Police authority, RPS Consulting and the client. No works will continue in the area until it has been made safe.

Archaeological Monitoring and Recording (Watching Brief)

- 3.41 Area D (Figure 5) will be the subject of a programme of archaeological monitoring and recording (watching brief) while construction groundworks take place in this area, in order to identify and record any archaeological remains present.
- 3.42 The groundworks contractor on site will be notified by the developer of the need for archaeological monitoring and recording to be undertaken and the restrictions to their works outlined below. They will allow the site archaeologist access to their works for the purpose of recording archaeological remains. In some circumstances, if important archaeological remains are found, works may have to cease while archaeological recording/sampling is completed.
- 3.43 No groundworks within Area D are to be undertaken without the supervision of the site archaeologist, except by prior agreement with the monitoring archaeologist.
- 3.44 Modern overburden will be removed by mechanical excavator. The mechanical excavator will be used only for the removal of non-archaeologically significant material. All archaeological material will be excavated by hand. The site archaeologist will examine all exposed surfaces, cleaning as may be required.
- 3.45 Sample excavation of features will be undertaken in accordance with the procedures set out in paragraph 3.15 above. Appropriate samples will be taken for environmental analysis from dateable features.
- 3.46 In the event of particularly significant or complex discoveries being made, the site archaeologist will fence off the area of those remains. The developer, local authority's archaeological advisor and RPS Consulting will be informed of the discovery, its nature, and the period and the size of team required to investigate and record the deposits appropriately. No machines or contractors other than the site archaeologist shall work in the area until such time as recording has been completed. There will be a contingency for uninterrupted access to the area and for a team of further archaeologists to be brought in should all parties agree that the situation warrants it.

Recording Systems

- 3.47 All structures, deposits and finds are to be recorded according to accepted professional standards. The stratigraphy in any sections is to be recorded, even where no archaeological deposits have been identified.
- 3.48 The site archive will be so organised as to be compatible with other archaeological archives produced in Leicestershire. Individual descriptions of all archaeological strata and features excavated or exposed will be entered onto prepared pro-forma recording sheets. Sample recording sheets, sample registers, finds recording sheets, access catalogues, and photo record cards will also be used. This requirement for archival compatibility extends to the use of computerised databases.
- 3.49 A plan to indicate the location of the boundaries of the excavated area and the site grid is to be drawn at a scale of 1:1250. Plans to indicate the locations of archaeological features are to be drawn at a scale of 1:100, with more detailed plans and sections as necessary. Detailed plans shall normally be drawn at a scale of 1:20 or 1:50 and sections at a scale of 1:10 or 1:20 depending on the complexity of the feature. All detailed plans and sections are to be related to the 1:100 plans. All plans are to be related to the site grid.
- 3.50 All archaeological sections will be on drawing film and will include context numbers and OD spot heights for all principal strata and features.
- 3.51 All archaeological contexts are to be recorded individually on context record sheets. A further more general record of the work comprising a description and discussion of the archaeology is to be maintained as appropriate.
- 3.52 All digital photography will be high resolution uncompressed TIFF format with a minimum 20 megapixel image capture. Image capture, storage and metadata standards as set out in the English Heritage Guidance note on Digital Image Capture and File Storage (Draft) are to be followed. The photographic record is to be regarded as part of the site archive and will also include working shots to illustrate more generally the nature of the archaeological operation mounted.
- 3.53 The archaeological contractor shall allow project records to be inspected and examined at any reasonable time, during or after the excavation work by the local planning authority's archaeological advisor.
- 3.54 **Archive (including finds)** - all artefacts recovered during the excavations on the site are the property of the landowner. They are to be suitably bagged, boxed and marked in accordance with the United Kingdom Institute for Conservation, Conservation Guidelines nos. 2.
- 3.55 All identified finds and artefacts will be retained, although certain classes of building material can sometimes be discarded after recording if an appropriate sample is retained. No finds will, however, be discarded without the prior approval of the local planning authority's archaeological advisor.
- 3.56 Assessments of artefacts will be made by appropriately qualified named specialists.
- 3.57 All metal objects, other than late post medieval objects, will be X-rayed unless otherwise agreed with the local planning authority's archaeological advisor.
- 3.58 Treatment of treasure - finds discovered by the Archaeological Contractor falling under the statutory definition of Treasure (as defined by the Treasure Act of 1996 and its revision of 2002) will be reported immediately to the relevant Coroner's Office, the landowner and the local planning authority's archaeological advisor. A Treasure Receipt (obtainable from either the FLO or the DCMS website) must be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding the find as Treasure. Failure to report within 14 days is a criminal

offence. The Treasure Receipt and Report must include the date and circumstances of the discovery, the identity of the finder (put as unit/contractor) and (as exactly as possible) the location of the find. Where removal cannot be effected on the same working day as the discovery suitable security measures will be taken to protect the finds from theft.

- 3.59 All finds and samples will be treated in a proper manner and to the standards of the UK Institute of Conservators Guidelines. They will be exposed, lifted, cleaned, conserved, marked, bagged and boxed in accordance with the guidelines set out in the UK Institute for Conservation “Conservation Guideline No 2”. Appropriate guidelines set out in the Museums and Galleries Commissions “Standards in the Museum Care of Archaeological Collections (1991)” will also be followed.
- 3.60 On completion of the project, it is anticipated that the landowner will consent the deposition of artefacts and archive in a suitable repository agreed with the local planning authority’s archaeological advisor.

Report and Archive

- 3.61 All post-excavation procedures, archiving and report production (including publication as appropriate) will be in accordance with ClfA Standards and Guidance and the Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006.
- 3.62 Subject to the results produced by the archaeological works a full formal programme of Post Excavation assessment, analysis and publication works will be required.
- 3.63 Within 9 months of completion of excavation work on site the archaeological contractor will produce a MAP2 ‘**Post-Excavation Assessment Report**’. This report will include an ‘**Updated Project Design**’ to be agreed with the local planning authority’s archaeological advisor that sets out a programme of post excavation analysis through to completion of a ‘**Full Report**’ and ‘**Publication**’ of the findings. Copies will be provided to RPS Consulting, SEGRO and the local planning authority’s archaeological advisor.
- 3.64 The Archaeological Contractor may determine the general style and format of the ‘**Post-excavation Assessment Report**’ and the ‘**Full Report**’ but they must be completed in accordance with this specification. The reports must provide sufficient information and assessment to stand as a detailed report on the archaeological fieldwork for future research and to inform on further stages of the post excavation programme.
- 3.65 Reports that do not provide sufficient information or that have not been compiled in accordance with the relevant sections of this specification will be returned to the Archaeological Contractor for revision and resubmission.
- 3.66 The **Post-excavation Assessment Report** will contain as a minimum the following:
- 3.67 An **Abstract** summarising the scope and results of the archaeological investigation.
- 3.68 An **Introduction** including:
- the location of the site including a National Grid Reference for the centre sufficient to locate the site to 1m accuracy (e.g. TQ 55555 77777 or easting: 555555, northing: 177777);
 - an account of the background and circumstances of the work;
 - a description of the development proposals, planning history and planning reference together with the planning condition (where appropriate);
 - the nature of potential impacts arising from the proposals;
 - the scope and date of the fieldwork, the personnel involved and who commissioned it;
- 3.69 An account of the **Archaeological Background** of the development site including:

- geology, soils and topography;
 - any known existing disturbances on the site;
 - background archaeological potential of the site. This will include a summary of the known Historic Environment Record (HER) entries within 500m of the boundaries of the site (or wider where appropriate). The Historic Environment Record entries should be quoted with their full HER identifier;
 - summary of any previous phases of archaeological investigation at the development site;
 - any constraints on the archaeological investigation.
- 3.70 The **Methodology** employed during the investigation must be detailed in the report. Simply referring to the methodology outlined in the specification is not acceptable. Any aims and objectives specified in the specification will be included, as will any further objectives identified during the course of the investigation.
- 3.71 The report will include a quantification of the archive contents, their state and future location.
- 3.72 A description of the **Results** of the archaeological investigation. This description must include:
- the nature and depth of overburden soils encountered;
 - a description of the geological subsoil encountered across the site;
 - description of all archaeological features and finds encountered, their dimensions, states of preservation and interpretation;
 - heights related to Ordnance Datum will be provided for each feature and deposit.
 - For complex remains a Harris Matrix diagram will be provided
- 3.73 The **Finds** recovered during the course of the investigation will be described, quantified and assessed by artefact type within the report. The report will also indicate the potential of each category of artefact for further analysis and research. For each category of artefact, the report will describe the method of processing, any sub-sampling, conservation and assessment undertaken. Where appropriate local reference collections will be referred to for descriptive and analytical consistency. Any implications for future archive, conservation or discard of the artefacts will also be detailed.
- 3.74 The report will include a table showing the contexts, classes and quantity of artefacts recovered, together with their date and interpretation.
- 3.75 The report will include an assessment of the **Environmental** potential of the site. Details will be provided of any environmental sampling undertaken in connection with the fieldwork and the results of any processing and assessment of the samples. The report will describe the method of processing, any sub-sampling and assessment. Any potential for future analysis of the samples or environmental remains recovered from the investigation will be described. Implications for future archive, conservation or discard of environmental samples or remains will be detailed.
- 3.76 The report will include, as appropriate, tables summarising environmental samples taken, together with the results of processing and assessment.
- 3.77 Any results from the application of archaeological scientific techniques e.g. specialist dating will be included in the assessment report.
- 3.78 An **Interpretation** of the archaeology of the site. This will be a synthesis of the stratigraphic, finds and environmental results of the investigation and a consideration of the site in its wider context as appropriate. This section will be supported by a phased interpretative plan of the site, clearly showing the major areas and periods of archaeological activity.

- 3.79 The report will include an assessment of the results of the archaeological investigations and their potential to address both the original research aims and objectives of the project and any further research objectives identified during the course of the on-site and post excavation works.
- 3.80 The report will include a detailed proposal for any further analysis necessary on the project records, artefact and environmental assemblages to achieve the research potential of the site. A justification will be included for each analysis proposed.
- 3.81 The proposal will set out a timetable for completion of analysis and reporting, detailing all individual tasks to be completed, resources required, and the key personnel involved. The proposal will set out arrangements for monitoring of the post excavation process.
- 3.82 The report will include a synopsis of the proposed '**Full Report**' and '**Publication**' and identify the likely destination of the publication.
- 3.83 Figures - as a minimum the assessment report will include the following figures:
- 3.84 a site location plan tied into the Ordnance Survey at 1:1250 or in the case of larger sites at 1:2500. The plan will also include at least two National Grid points and show the site boundary;
- a plan at 1:1250, or a scale to be agreed with the local planning authority's archaeological advisor, showing the layout of the development groundworks clearly indicating the areas investigated. The plan will show significant archaeological features, coloured by phases or period as related to the development site. This plan will also include two National grid points;
 - plans of the features revealed in each of the investigation areas at a larger scale e.g. 1:20 or 1:50; such plans are to also illustrate areas of disturbance, change in subsoil and location of sections; The location of significant finds and samples taken will also be indicated;
 - relevant section drawings and soil trench profiles as appropriate;
 - illustrations and/or photographs of significant finds will be included where appropriate.
- 3.85 All report illustrations must be fully captioned and scale drawings must include a bar scale. Standard archaeological drawing conventions must be used. Plan and section illustrations must include the numbers of all contexts illustrated. North must be included on all plans. Sections must indicate the orientation of the section and the Ordnance Datum height of the section datum.
- 3.86 Black & White or Colour photographs will be included to illustrate the archaeology of the site, the development operations or the range of soil profiles encountered. All photographs will be appropriately captioned.
- 3.87 The report will be submitted to the local planning authority's archaeological advisor in digital format. The digital copy will be supplied for preference in .pdfa format (from within Adobe Acrobat v.5.0 or earlier) or alternatively in .rtf format (from within Microsoft Word for Windows 97 or earlier) accompanied by digital copies of images, plans and maps in .bmp, .tif or .jpg format.
- 3.88 **Publication** - A draft of the publication report will submitted to the local planning authority's advisor for initial comment/approval prior to completion and submission. Copies of the finalised publication report will be distributed to the Leicestershire HER, Historic England Archive, the client and RPS Consulting. A further copy of the publication report will be required to form part of the project archive. The Archaeological Contractor will be expected to produce a paper suitable for publication within 12-18 months of completion of work on site.
- 3.89 Details of the project are to be submitted to the OASIS (Online Access to the Index of Archaeological investigations) database, along with a digital version of the completed publication report, within 12-18 months of the completion of all archaeological site investigations.

- 3.90 **Archive Preparation & Deposition** - The site archive, to include all project records and cultural material produced by the project, is to be prepared in accordance with Guidelines for the preparation of excavation archives for long-term storage (UKIC 1990). Arrangements for the deposition of the site archive will be agreed in writing with the recipient museum.
- 3.91 The integrity of the site archive should be maintained. The archive of all records and finds must be prepared consistent with the principles set out in the Management of Research Projects in the Historic Environment (MoRPHE) English Heritage 2006. It will include all materials recovered (or the comprehensive record of such materials) and all written, drawn and photographic records relating directly to the investigations undertaken. It will be quantified, ordered, indexed and internally consistent. It will also contain a site matrix, a site summary and brief written observations on the artefactual and environmental data.
- 3.92 Prior to formal deposition of the archive, it will be required to be temporarily stored by the Archaeological Contractor in a suitable location and condition, such to ensure that no part of the archive will suffer degradation. The archive is to be deposited promptly with the receiving museum as and when their capacity to receive such is established, following which it will then become publicly accessible.
- 3.93 Any digital archive generated by the archaeological works will be compiled in accordance with the Archaeology Data Service (ADS) standards and guidelines. It will consist of:
- All relevant born-digital data (images, survey data, digital correspondence, site data collected digitally etc.); and;
 - Digital copies made of all other relevant written and drawn data produced and/or collected during fieldwork and as part of the subsequent post-excavation analysis phase.
- 3.94 The digital archive will be deposited with the ADS within three months of acceptance of the final report/publication.

Archaeological Protection Works

- 3.95 A programme of archaeological protection works, in association with Area E (Figure 5), will be put in place prior to the commencement of construction groundworks in order to prevent any accidental disturbance of archaeological remains in this area.
- 3.96 The archaeological protection measures will comprise:
- Instillation of a heras fenced perimeter around Area E for the duration of construction groundworks;
 - Provision of appropriate signage attached to the heras fencing to inform groundworkers of the function of the archaeological protection works;
 - Inclusion within the site induction material information relating to the presence and function of the archaeological protection area, and that no intrusive works or plant movements should be undertaken in this area.

Public Outreach

- 3.97 To accompany the detailed excavation and recording associated with Areas A & B there will be a programme of public outreach activities in order to better communicate the results of the archaeological mitigation to the general public. The programme of public outreach will comprise:
- An online 'dig diary' to be updated once a week providing both information on the history of the site and also updates from the dig team, special artefacts, etc.

- An archaeological talk to be held at a local venue to inform interested members of the public as to the results of the excavations.
- A visit to the local school (to be arranged in advance) to inform pupils of the results of the excavations.
- Site open day – a site open day will be arranged in order to provide interested members of the public to visit the archaeological excavations and be given a guided tour of the archaeological remains found.

Provisional Programme

- 3.98 Subject to the prior approval of this Specification, it is anticipated that the mitigation and protection works set out in this document shall be enacted immediately following and DCO consent order granted.

Monitoring

- 3.99 Reasonable access to the site is to be arranged for the local authority's archaeological advisor (or their representative), to make site inspections to ensure that the archaeological investigations are progressing satisfactorily.
- 3.100 Arrangements for this meeting will be made by RPS Consulting.
- 3.101 The local authority's Archaeological Advisor will be notified at least five working days prior to commencement of work on site

4 GENERAL SITE REQUIREMENTS

Archaeological Contractor

- 4.1 The Archaeological Contractor will be a ClfA Registered Organisation.
- 4.2 The field team deployed by the Archaeological Contractor will include only full time professional archaeological staff. All staff in supervisory positions should be members, at an appropriate level, of the ClfA.
- 4.3 The composition of the project team must be detailed and agreed in advance with RPS Consulting (this is to include any subcontractors).
- 4.4 The following statutory provisions and codes of practice are to be adhered to where relevant:
- all statutory provisions and by-laws relating to the work in question, especially the Health and Safety at Work etc Act 1974.
 - the ClfA Code of Conduct
 - the ClfA Code of Approved Practice for the Regulation of Contractual Arrangements in Field Archaeology
 - the Country Code

Copyright

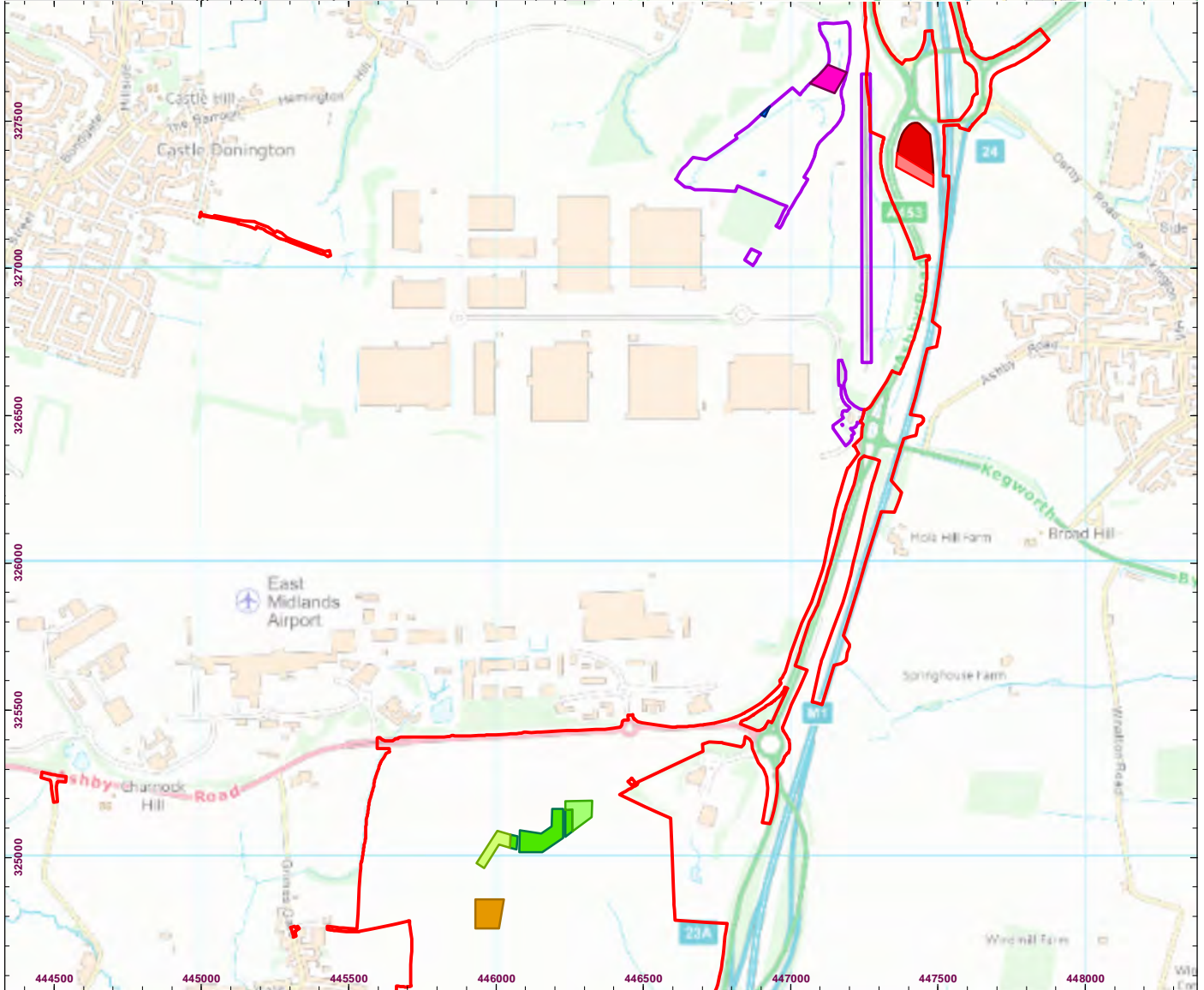
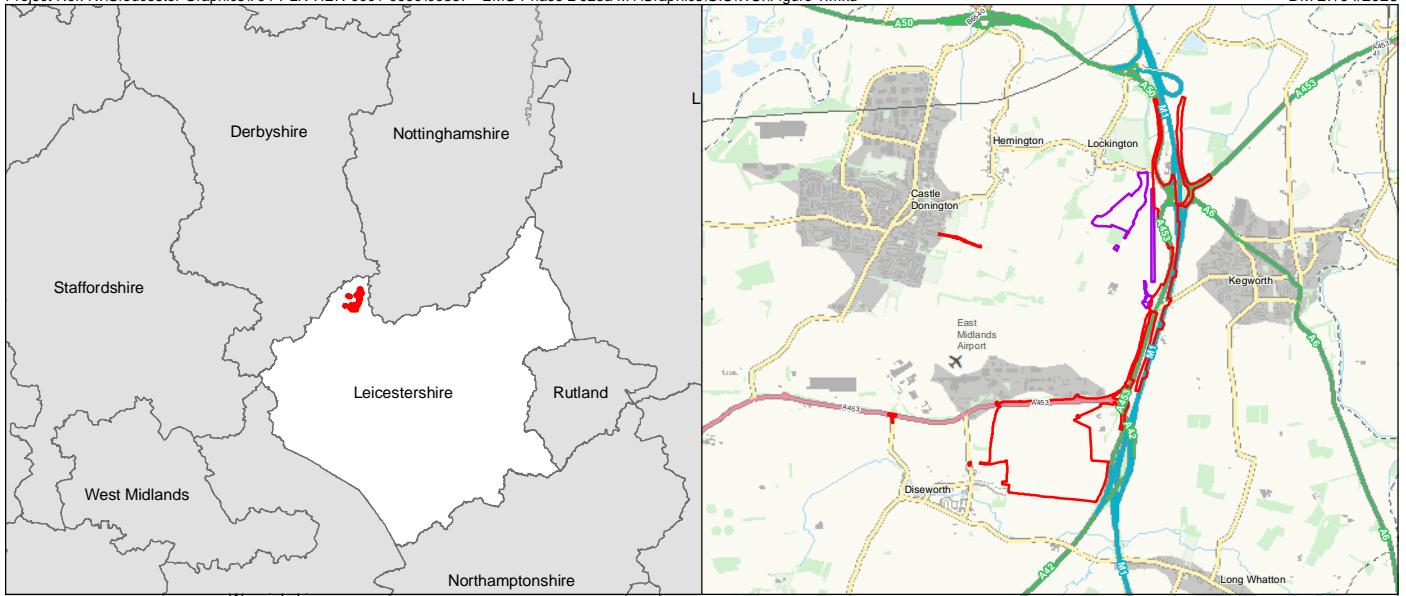
- 4.5 It is recognised that the copyright of written, graphic and photographic records and the evaluation reports rests with the originating body. However, RPS Consulting and their client require an agreement to facilitate the copying and use of any or all materials resulting from this project.

Variations

- 4.6 Variations to this Written Scheme of Investigation that the Archaeological Contractor may wish to make must be approved, in advance, by RPS Consulting, SEGRO and the local planning authority's archaeological advisor.

5 HEALTH AND SAFETY CONSIDERATIONS

- 5.1 All relevant health and safety regulations must be followed including, but not exclusively:
- The Health and Safety at Work Act (1974),
 - Management of Health and Safety at Work Regulations (1999),
 - Manual Handling Operations Regulations 1992 (as amended in 2002),
 - The Construction (Design and Management) Regulations (2007), and
 - The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations (1995).
- 5.2 A risk assessment will be prepared, and a copy will be sent to RPS Consulting and SEGRO prior to commencement of the contract. Where a site is operating under The Construction (Design and Management) Regulations (2007), all works will be implemented in accordance with a Construction Phase Plan prepared by the Principal Contractor.
- 5.3 Machinery will be kept away from unsupported edges and access routes will be supervised and controlled. Hi-visibility plastic mesh and warning notices will be installed as appropriate. Safety helmets and high visibility jackets are to be used by all personnel as necessary.
- 5.4 The client will supply all necessary information to the archaeological contractor concerning live services on the site. Where live services may be suspected, on the basis of this information, within the area of the site to be stripped, this area will be scanned with a CAT Scanner prior to and during topsoil and subsoil removal works. Extreme care will be taken to ensure that any services located are avoided.



- Draft EMG1 MCO Order Limits
- Draft EMG2 DCO Order Limits
- Area A (Figure 2)
- Area A1 (Figure 2)
- Area A2 (Figure 2)
- Area B (Figure 3)
- Area C (Figure 4)
- Area C1 (Figure 4)
- Area D (Figure 5)
- Area E (Figure 5)

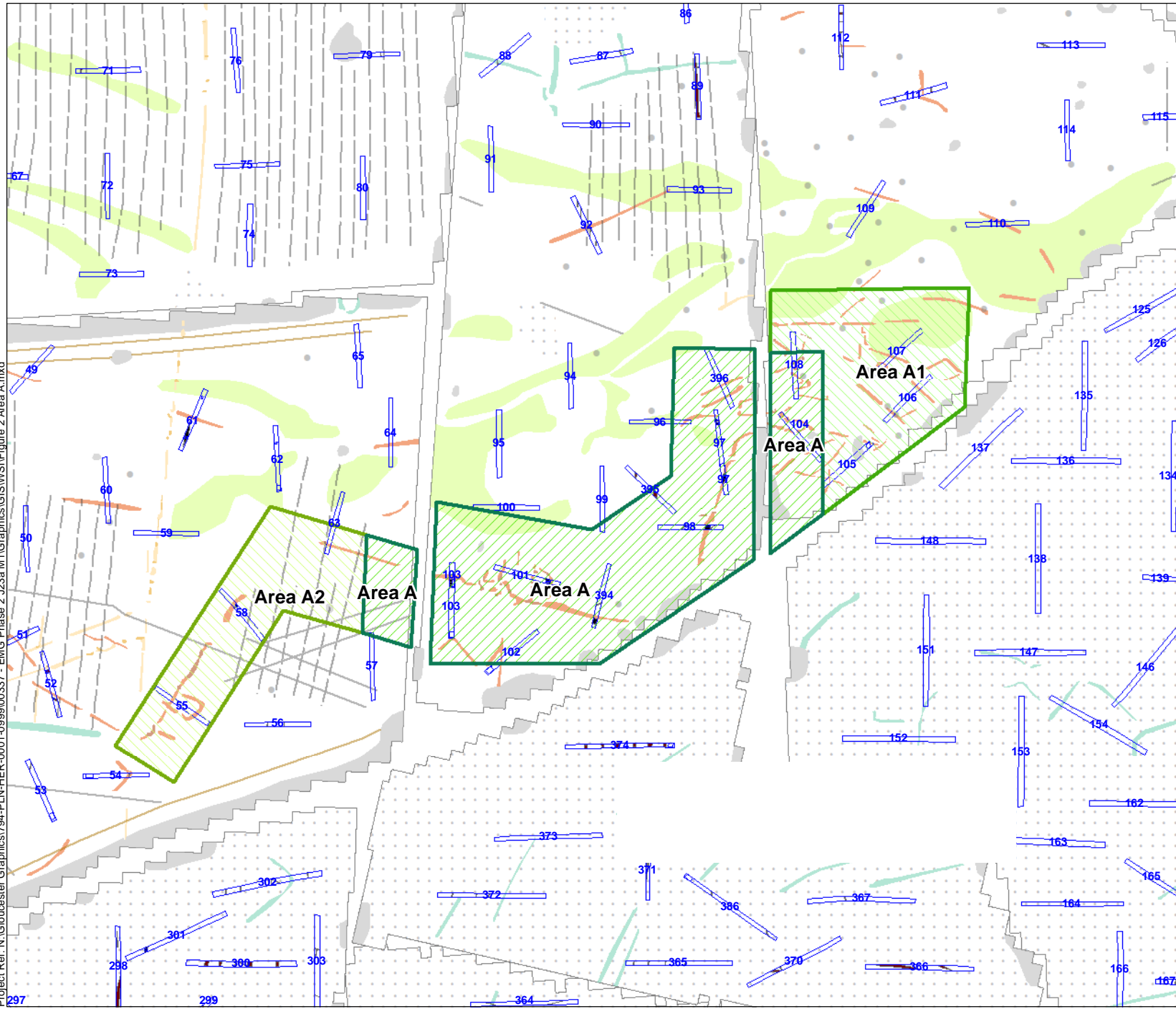


0 250 500m
Scale at A4: 1:22,000



Figure 1
Site Location

Project Ref: N:\Gloucester Graphics\794-PLN-HER-0001-09\99\00337 - EMG Phase 2 - J23a M1\Graphics\GIS\SW5\Figure 2 Area A.mxd



- Legend**
- Area A
 - Area A1
 - Area A2
 - TRENCH
 - ARCHAEOLOGY
 - IMPACTS
 - Ferrous (Strong/Line)
 - Agricultural (Trend)
 - Drainage Feature (Trend)
 - Ridge and Furrow (Trend)
 - Service
 - Agricultural (Strong)
 - Agricultural (Weak)
 - Archaeology Possible (Strong)
 - Archaeology Possible (Weak)
 - Ferrous/Debris (Spread)
 - Magnetic Disturbance
 - Natural (Spread)
 - Natural (Weak)
 - Undetermined (Weak)

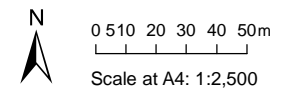
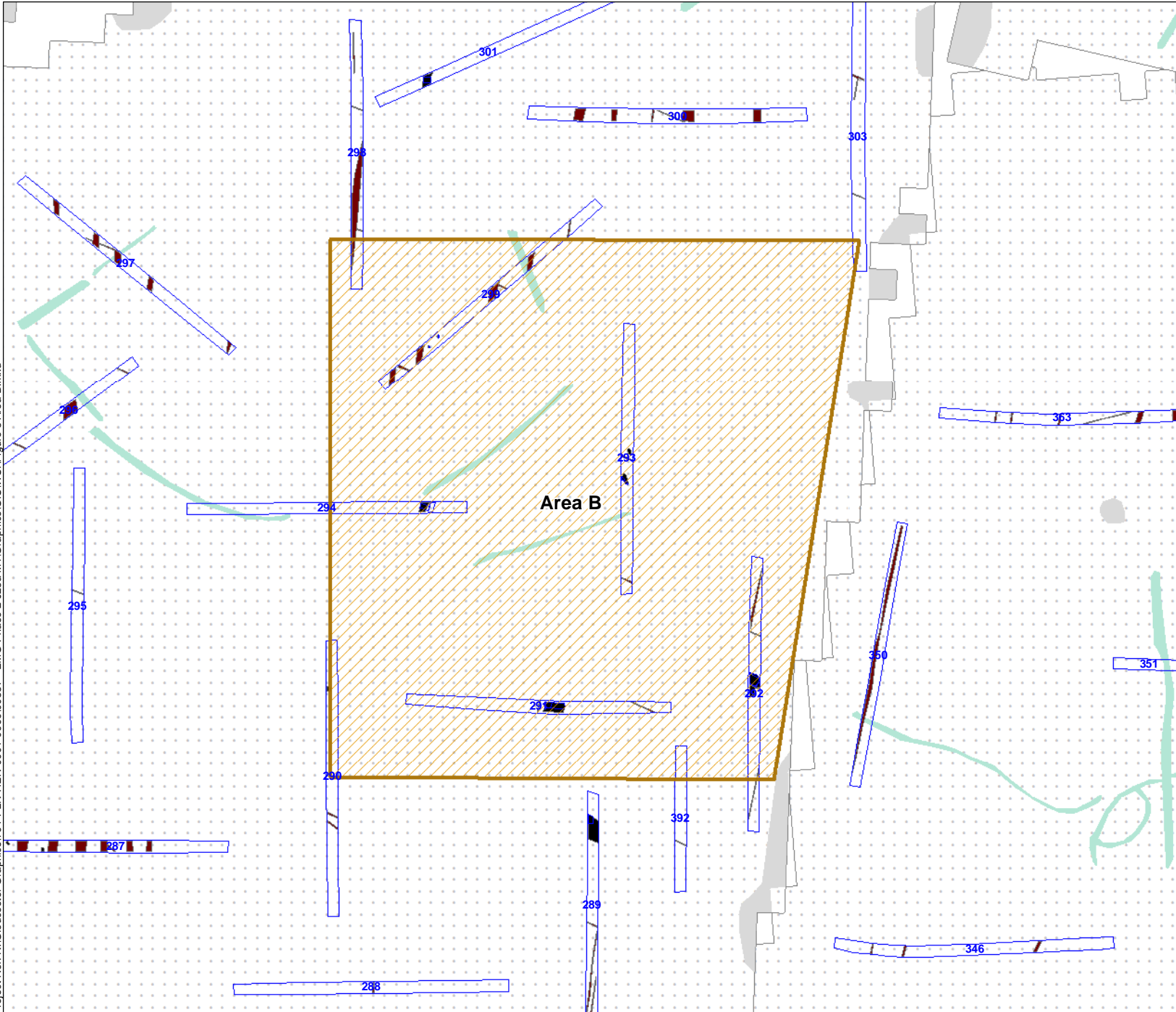


Figure 2
Mitigation Area A

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Legend

- Area B
- TRENCH
- ARCHAEOLOGY
- IMPACTS
- Ferrous (Strong/Line)
- Agricultural (Trend)
- Drainage Feature (Trend)
- Ridge and Furrow (Trend)
- Service
- Agricultural (Strong)
- Agricultural (Weak)
- Archaeology Possible (Strong)
- Archaeology Possible (Weak)
- Ferrous/Debris (Spread)
- Magnetic Disturbance
- Natural (Spread)
- Natural (Weak)
- Undetermined (Weak)

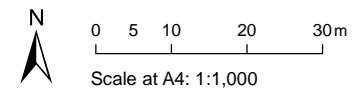
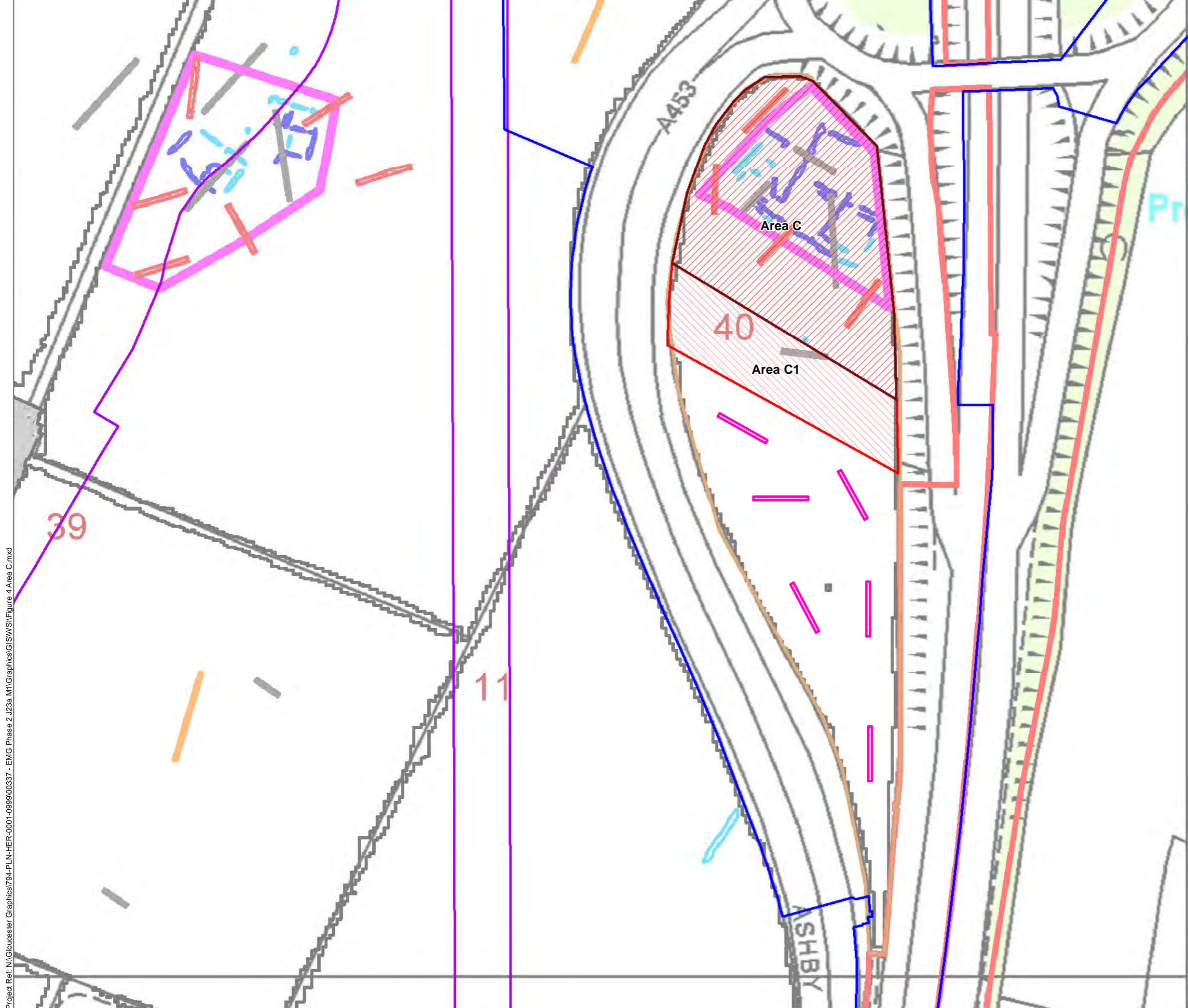


Figure 3
Mitigation Area B



Legend

- Draft EMG1 MCO Order Limits
- Draft EMG2 DCO Order Limits
- Area C
- Area C1
- Proposed Trenches

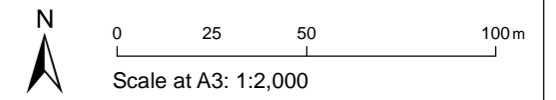
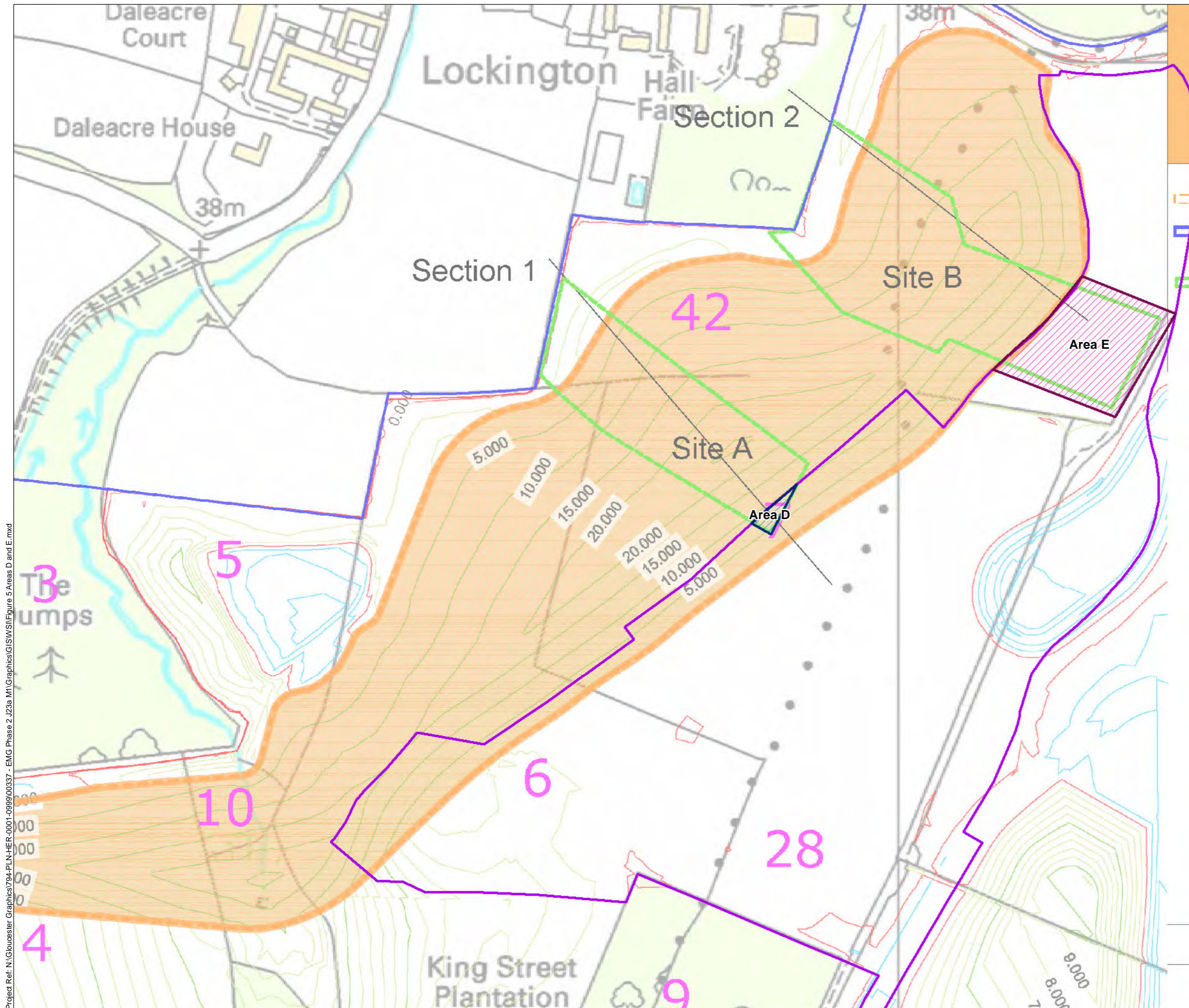


Figure 4
Mitigation/Trial Trenching Area C



Legend

- Draft EMG1 MCO Order Limits
- Draft EMG2 DCO Order Limits
- Area D
- Area E

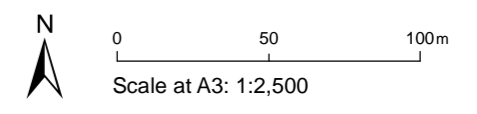


Figure 5
Mitigation Area D & E

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