



**DALCOUR
MACLAREN**



Written Scheme of Investigation for Archaeological Works

Client: Countryside Properties

Project: 204341 - CTP001 - Drakelow Powerstation

Date: September 2022



Project Details

Project Name	CTP001 - Drakelow Powerstation
Scheme Number	204341
Report Number	004

Prepared by	
Name	Beki Jones MCIfA

Approved by	
Name	Dave Hodgkinson MCIfA

Contents

1	Introduction.....	5
1.2	Circumstances of the Scheme.....	6
1.3	Requirement for Archaeological Works.....	7
1.4	Archaeological Mitigations	8
2	Background.....	10
2.1	Site Location and topography.....	10
2.2	Geology	10
2.3	Archaeological and Historic Background.....	11
2.4	Previous Archaeological Works on Site and within Immediate Vicinity	13
2.5	Recent Archaeological Investigations (2009 to present)	14
2.6	LiDAR and Aerial Photo.....	15
2.7	Potential	15
3	Aims and Objectives	17
3.2	Regional Research Frameworks.....	17
4	Fieldwork Methodology.....	19
4.1	General Methodology	19
4.2	Monitoring and Liaison.....	19
4.3	Staffing and Standards.....	19
4.4	Geophysical Survey.....	20
4.5	Intrusive Archaeological Works.....	23
4.6	Finds and Artefacts.....	26
4.7	Selection and Retention.....	27
4.8	Treatment of Treasure.....	28
4.9	Human Remains.....	28
4.10	Environmental Archaeology.....	29
4.11	Post Excavation and Reporting.....	30
4.12	Archive Preparation, Deposition and Dissemination	30
4.13	Post-Excavation and Updated Project Design.....	31
5	Health and Safety.....	32
6	Outreach and Community Engagement	33
	Bibliography.....	34

Drawings

Figure 1	Site Location
Figure 2	Zones of Archaeological Potential
Figure 3	Development Phases
Figure 4	Area for Geophysical Survey
Figure 5	Area to be subject to Trial Trenching
Figure 6	Location of Listed Buildings on Site

1 Introduction

- 1.1.1 Dalcour Maclaren have been commissioned by Countryside Properties (hereafter referred to as 'the Client') to prepare a Written Scheme of Investigation (WSI) for a programme of archaeological works in support of development on land at the former Drakelow Power Station, Drakelow, South Derbyshire, nearest postcode DE15 9UH (National Grid Reference: SK 24308 20389) (Figure 1).
- 1.1.2 The proposed scheme (ref: DMPA/2020/1460) comprises the development of up to 2,239 dwellings, including a retirement village; an employment park; two local centres comprising retail, leisure, services, community and employment uses; public open spaces; a new primary school; associated landscaping and infrastructure comprising car parking, roads and drainage measures; and the refurbishment of the Listed stables and cottages (Figure 2).
- 1.1.3 The archaeological works are required to investigate, record and fully understand the known archaeological resource ahead of redevelopment in accordance with advice received by the Derbyshire County Archaeologist, as such Condition 35. Archaeology was attached to the planning decision (ref: DMPA/2020/1460), which states that:
- 1.1.4 On approval of the Outline Planning Application, Condition 35 was imposed in relation to Archaeology. This requires:-
- a. *No demolition/development shall commence in each phase until a Written Scheme of Investigation has been submitted to and approved by the Local Planning Authority in writing for that phase. The scheme shall include an assessment of significance and research questions; and*
 - i. *The programme and methodology of site investigation and recording*
 - ii. *The programme for post investigation assessment*
 - iii. *Provision to be made for analysis of the site investigation and recording*
 - iv. *Provision to be made for publication and dissemination of the analysis and records of the site investigation*
 - v. *Provision to be made for archive deposition of the analysis and records of the site investigation*
 - vi. *Nomination of a competent person or persons/organisation to undertake the works set out within the Written Scheme of Investigation.*

- b. *No demolition/development shall take place within a phase other than in accordance with the Written Scheme of Investigation approved under condition (a).*
- c. *The development within a phase shall not be occupied until the site investigation and post investigation assessment has been completed for that phase in accordance with the programme set out in the Written Scheme of Investigation approved under condition (a) and the provision to be made for analysis, publication and dissemination of results and archive deposition has been secured.*
- d. *Unless otherwise agreed in writing with the Local Planning Authority any historic or archaeological features not previously identified which are revealed within a phase when carrying out the development hereby permitted shall be retained in-situ and reported to the Local Planning Authority in writing within two working days. Works shall be halted in the area/part of the building affected until provision has been made for the retention and/or recording in accordance with details submitted to and approved in writing by the Local Planning Authority.*

1.2 Circumstances of the Scheme

- 1.2.1 The planning application for the development of the former Drakelow Power Station (ref: 9/2015/1030) was consented under earlier local plans and national planning policy. The original planning application was supported by an environmental statement produced in 2009 and since then the Derbyshire Local Plan has been established and the National Planning Policy Framework (NPPF, 2021) has been updated.
- 1.2.2 In light of these changes, there are no further planning requirements or design changes above and beyond as a result of new local planning policy and national planning policy and the planning condition is still extant. The conditions are being discharged under a new permission ref: DMPA/2020/1460.
- 1.2.3 Consultations between Dalcour Maclaren and the Derbyshire County Archaeologist, have confirmed that the site of the former Drakelow Power station in the south of the Site, the current industrial park to the east, the housing development in the northeast of the Site and the adjacent 'triangle' of land, do not require any further archaeological intervention due to extensive disturbance through construction and the completion of previous archaeological evaluations prior to development.
- 1.2.4 Works that have been undertaken to partially discharge the condition include archaeological evaluations comprising an initial geophysical survey followed by trial trenching in the northeast of the Site and the 'triangle' area

immediately to the west. These evaluations have led to the discovery of agricultural activity from the Roman period which is considered to be of local significance; however, these discoveries do not constitute a significant change to the baseline conditions of the Site and therefore the archaeological condition, which requires a geophysical survey followed by archaeological trial trenching, is still extant and there is no requirement for more extensive archaeological evaluations or preservation in-situ, at this current stage, other than what is outlined within the condition.

1.3 Requirement for Archaeological Works

1.3.1 Following a review of the archaeological baseline data, the site was divided into specific zones based on the archaeological potential of each area and used to inform the archaeological response to each zone over the course of the development. The zones were determined based on the information available at the time and may change in light of future modifications to the development phasing, land-use or in light of results from programmes of archaeological investigation.

1.3.2 Plan 2 shows the specific zones across the whole of the site. These do not reflect the phases of development and some phases may contain areas of different archaeological potential.

Zone A

1.3.3 The site of the demolished Drakelow Hall, which may contain the remains of a multi-phased building. The area has been subject to extensive disturbance; however, the remains of the building may have been sufficiently robust to survive post-demolition development. Archaeological investigations in this zone could comprise appropriate geophysical survey and trial trenching to inform the need for further archaeological mitigation.

Zone B

1.3.4 Agricultural Land. An area of undeveloped land in the north of the site. Archaeological investigations in similar locations have identified the presence of prehistoric and Romano-British agricultural activity and settlement. Archaeological investigations in this zone should comprise geophysical survey and trial trenching.

Zone C

1.3.5 Areas of extensive modern industrial development, former rail lines and storage areas. The Zone contains the site of Drakelow Mill, buildings of which were still extant prior to the establishment of the Power Station. There is an unknown potential for the survival of archaeological remains in this Zone. Prior to undertaking any archaeological works, a review of

development proposals (including remediation and site formation processes) and Site Investigation data should be undertaken to determine the need for and scope of any further archaeological works.

Zone D

- 1.3.6 Power Station Site. The construction of the Power Station will have removed all archaeological deposits. No further works required.

Zone E

- 1.3.7 Phase 1 Development. Land within this location has been subject to archaeological mitigation. No further works required.
- 1.3.8 Specifications for archaeological works are presented in section 4.

1.4 Archaeological Mitigations

- 1.4.1 A geophysical survey is defined as 'non-intrusive and non-destructive techniques to determine the presence or absence of anomalies likely to be caused by archaeological features, structures or deposits, as far as reasonably possible, within a specified area or site on land, in the inter-tidal zone or underwater. Geophysical survey determines the presence of anomalies of archaeological potential through measurement of one or more physical properties of the subsurface' (CIfA 2014a).
- 1.4.2 An archaeological evaluation is defined as 'a limited programme of non-intrusive and/or intrusive fieldwork which determines the presence or absence of archaeological features, structures, deposits, artefacts or ecofacts within a specified area or site on land, inter-tidal zone or underwater. If such archaeological remains are present field evaluation defines their character, extent, quality and preservation, and enables an assessment of their significance in a local, regional, national or international context as appropriate' (CIfA, 2014).
- 1.4.3 An archaeological excavation is defined as 'a programme of controlled, intrusive fieldwork with defined research objectives which examines, records and interprets archaeological deposits, features and structures and, as appropriate, retrieves artefacts, ecofacts and other remains within a specified area. The records made, and objects gathered during the fieldwork, are studied and the results of that study published in detail appropriate to the project design' (CIfA 2014b).
- 1.4.4 The Written Scheme of Investigation has been developed following guidance and best practice presented within the following documents:
- Code of Approved Conduct for the Regulation of Arrangements in Field Archaeology, Chartered Institute for Archaeologists: Reading (CIfA 2014c);

- Standards and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials, Chartered Institute for Archaeologists: Reading (CIfA 2014d);
- Standards and Guidance for Archaeological Watching Brief, Chartered Institute for Archaeologists: Reading (CIfA 2014e);
- Preserving Archaeological Remains: Decision-Taking for Sites under Development, Historic England: London (Historic England 2016);
- Management of Research Projects in the Historic Environment (MoRPHE), Historic England 2015.

2 Background

2.1 Site Location and topography

- 2.1.1 The proposed development is on land off Walton Road, near the former Drakelow Power Station, Drakelow, South Derbyshire. The Site is partially located on land formerly occupied by the Drakelow Power Station and agricultural land. The Site also encompasses land currently occupied by a small residential development in the northeast with an industrial complex located adjacent. The Site is located to the east of the northeast – southwest flowing River Trent.
- 2.1.2 The Site is bounded by the River Trent to the north-west, the National Forest freight railway to the north-east, Walton Road to the south-east (which is included in the application boundary) and the site of the former Drakelow C power station to the west, now demolished.
- 2.1.3 The Site covers an area of 109.48 hectares (ha) and was formerly occupied by Drakelow power station A and B. Much of the central area of the Site is currently occupied by factory facilities comprising manufacturing units, offices and car parks.
- 2.1.4 The topography of the Site is relatively flat with levels rising from 53m AOD to 62m AOD when moving southwest along the River Trent. In the east of the Site, levels fall from 63m AOD to 51m AOD in the north near the River Trent. Near the centre of the Site within a wooded area, levels rise to 63m AOD.

2.2 Geology

- 2.2.1 The British Geological Survey (BGS) (2021) maps bedrock deposits on the Site as comprising mudstone of the Mercia Mudstone Group, deposited during between the Early Triassic Epoch and Rhaetian Age (c. 251.902 - 201.3 million years ago). The south of the Site is mapped as comprising sandstone deposits of the Edwalton Member (237 - 227 million years ago) and mudstone of the Gunthorpe Member (247.2 - 237 million years ago).
- 2.2.2 The BGS maps superficial deposits on the Site as comprising river terrace deposits of sand and gravel and alluvium, deposited during the Quaternary period and the Holocene (Ibid).
- 2.2.3 Previous Site Investigation works have recorded that development Phase 2 of the Site is underlain by Made Ground, which in turn is underlain by River Terrace Deposits (RTD) and Mercia Mudstone Group (MMG). Borehole logs from previous investigations indicate that the RTD are relatively shallow. Alluvium is present in the north of the site adjacent to the River Trent, and

also runs south to north through the Site in a seam, adjacent to Darklands Brook (Waterman, 2008).

2.3 Archaeological and Historic Background

- 2.3.1 Many of the resources, specifically the Derbyshire Records Office, which under normal circumstances would be consulted, are currently closed due to the Covid-19 pandemic. Information is currently being held at these resources and is not readily available online, therefore other online resources have been consulted to gather the required information.
- 2.3.2 The historical and archaeological background has been adapted from the Drakelow Park: Environment Statement (Waterman, 2009) and used in conjunction with online resources, archaeological reports and the Derbyshire Historic Environment Record as available via heritage gateway.

Prehistoric (Up to AD 42)

- 2.3.3 The Trent valley and its tributaries were important corridors for human activity and movement since the prehistoric period as outlined in Howard's 2005 study of the Geoarchaeology of the Trent Valley and various programmes of archaeological work undertaken regionally along the Trent.
- 2.3.4 HER records within the surrounding area of the Site comprise a middle Bronze Age socket spearhead that was found with part of the original wooden shaft within the socket (MDR2521). This find was recorded on the west bank of the River Trent over 1km to the south west of the Site.

Roman (AD 43 – AD 410)

- 2.3.5 Archaeological investigations took place within the north eastern corner of the Site in 2014 ahead of the development of land for residential purposes. These investigations comprised an initial geophysical survey followed by trial trenching, which recorded the presence of a Roman enclosure (EDR4387).
- 2.3.6 Additionally, the HER records a possible Roman road c. 780m southwest of the Site which is thought to run between Ibstock (Leicester) and Ryknield Street (Staffordshire) (MDR11325). This has led to the suggestion that much of the prehistoric cropmarks identified in the area of this asset may actually relate to the Roman road (Waterman, 2009).
- 2.3.7 Approximately 1.5km to the south of the former Drakelow Powerstation, the HER records several cropmarks that have been identified on aerial photographs (27501; 2512). The cropmarks comprise a double ditched enclosure, a rectangular enclosure, and linear features, which have been interpreted as a possible Roman fort or marching camp (27501; 2512).

Early Medieval (AD 410 – AD 1066)

- 2.3.0 There are, as of yet, no recorded early medieval assets within the Site and evidence is largely attested by place-names.
- 2.3.1 Drakelow was reportedly first recorded in 942 AD as the Old English '*Drachan Llawen*', meaning Dragon's Mound, in a grant of land made by King Edward (Mills, 2011; MDR2605).
- 2.3.2 The sole early medieval record on the Derbyshire HER comprised an Anglo-Saxon jar/bowl (MDR2606). The find is dated to c. 550 AD and was found over 800m to the west of the Site. Domestic finds are often associated with areas of habitation and the presence of this Anglo-Saxon jar/bowl may allude to the existence of an early medieval settlement on the Derbyshire side of the River Trent.

Medieval (AD 1066 – AD 1540)

- 2.3.3 Drakelow later appears in the Domesday Book as 'Drachelawe-Hedcote', in the hundred of Walecros and the county of Derbyshire, comprising four ploughlands, 12 acres of meadow and 2.5 woodlands. It had a recorded population of 3 households in 1086, putting it in the smallest 20% of settlements recorded in the Domesday Survey (Open Domesday).
- 2.3.4 The HER records the possible deserted medieval village of Drakelow as occurring within the Site (MDR2605). The HER notes that there was no evidence of desertion recorded within the vicinity of Drakelow House which is located near the north eastern boundary of the Site on the southern side of Walton Road. The nature and extent of the deserted medieval village is uncertain although it is recorded that there was a chapel present in AD 1185.
- 2.3.5 The Drakelow estate is recorded from circa 1200. The original manor house is thought to have been located within a square enclosure, to the west of the Site. The house had fallen into a ruinous state by the 16th century and was replaced by Drakelow Hall in the mid-16th century. The hall was subject to a number of phases of rebuilding and, by the 20th century, retained little of its 16th century structure.
- 2.3.6 To the south west of the site of Drakelow Hall, the HER records a record within the Site which comprise the site of fishponds (MDR9008). The HER states that these fishponds, which have subsequently been destroyed during the construction of Drakelow Powerstation, may have been associated with the medieval settlement.
- 2.3.7 Outside the site boundary, the HER records earthworks to the immediate east of the Site on the southern side of Walton Road. These earthworks comprise the remains of a medieval moated site, square in form with a

diameter of 40m and with a ditch 2-3m wide that still contains water on three sides (MDR7092).

- 2.3.8 To the east of this moated site are two HER records for medieval ridge and furrow earthworks (MDR7125; MDR7126). Ridge and furrow earthworks of a possible medieval/ post-medieval date were also recorded in the north eastern corner of the Site during archaeological work in 2014 (EDR4387; Clements, 2014).

Post-Medieval & Modern (AD 1540 to Present)

- 2.3.9 The grounds of Drakelow Park were considerably extended in the late 18th century and it is believed that Humphry Repton, the landscape architect, advised Sir Nigel Gresley on the landscaping, during the extension. During the 19th century, a number of formal parterres were added around the Hall and outbuildings.
- 2.3.10 The 1884 first edition Ordnance Survey (OS) map of Drakelow shows the extended Drakelow Park. The Site area is shown, divided into two areas by a north-east to south-west aligned woodland belt. Enclosed fields lay to the north of the woodland which extended as far as the railway. To the south, the Site was made up of parkland with scattered trees bearing the legend 'Drakelow Park'. The first edition map shows Drakelow Hall to the west of the wooded belt comprising the hall, stables and outbuildings. A circular formal garden lay immediately to the east of the hall.
- 2.3.11 The Gresleys remained at Drakelow until 1931; after a number of abortive transactions the estate was sold and the main house was pulled down. In 1948, the southern half of the Site was acquired by the Electricity Authority under compulsory purchase powers. Stations A, B and C of Drakelow Power Station were built during the 1950s and early 1960s. Extensive gravel extraction was carried out to the south-west of the Site, in the 1960s, which may have extended into its western edge. Phased decommissioning of the power station occurred between the mid-1980s and 2004. The 1955 OS map shows that Drakelow Hall had been obliterated by sidings and tracks, crossing the Site, which connected the power station to the mainline railway at the northern Site boundary.

2.4 Previous Archaeological Works on Site and within Immediate Vicinity

- 2.4.1 Three previous archaeological desk-based assessments (DBA) were undertaken in 1995 (EDR 3462), 2004 and 2005 (EDR 3074) on land at the former Drakelow Power Station, of which only the 2004 DBA's results have been made available online. This report covered the southwestern extent of the Site and concluded that the area had been impacted by the construction

of the power station and associated gravel extraction (Waterman, 2009). In 2008, a DBA was undertaken at Drakelow Park which identified prehistoric and Roman potential in areas not impacted by modern development (EDR 2673).

- 2.4.2 An archaeological watching brief was undertaken in October 2007 by Birmingham Archaeology at Drakelow Ponds, c. 1km to the southwest of the Site. During the archaeological monitoring it was established that there were no archaeological features, deposits or horizons identified and there was no artefactual material predating the modern period, due to previous remodelling of the Trent riverbank (Charles, 2007).
- 2.4.3 An archaeological assessment at Drakelow Power Station in 2008 comprised a borehole and test pit survey and concluded that the archaeological potential of the site was significantly reduced due to gravel extraction and the construction of the former power station (EDR 2748).
- 2.4.4 To the extreme south of the Site at three locations to the north, east and southeast of Walton-on-Trent, archaeological trial trenching was undertaken and revealed evidence of an Early Neolithic feature containing Neolithic pottery and post-medieval ridge and furrow (Tinsley, 2009).
- 2.4.5 In July 2008, a detailed survey of the listed buildings within the Site was undertaken by Anthony Short and Partners and included an assessment of the sunken garden terrace (List entry 1311251) and stable block (List entry 1096454). The results of the survey found that both buildings were in a condition satisfactory for retention (Waterman, 2009); however due to the antiquity of the survey, the buildings may have since deteriorated.
- 2.4.6 Later archaeological evidence comprises Drakelow Park, Drakelow Hall and the deserted medieval village of Drakelow, all of which are recorded within the Site boundaries. The environmental statement concludes that these remains have been significantly affected, and likely removed, by the construction of modern development on the Site (Waterman, 2009).

2.5 Recent Archaeological Investigations (2009 to present)

- 2.5.1 The Site and the wider surrounding area have been subjected to further archaeological reports and evaluations which, in some cases, has subsequently led to the discovery of previously unknown archaeological finds and features.
- 2.5.2 A geophysical survey was undertaken in June 2014 (Prestige, 2014) in the northeast of the Site, covering c. 6.7 hectares (ha) and providing evidence for a former field boundary and a possible enclosure.

- 2.5.3 The results of this survey were followed by an archaeological trial trench evaluation in July 2014, undertaken by the Museum of London Archaeology (MOLA) in the northeastern corner of the Site prior to the development of land for residential purposes (EDR 4387). Ridge and furrow earthworks of a medieval/ post-medieval date were identified as well as a possible Roman enclosure in the eastern corner of the site (Clements, 2014).
- 2.5.4 Within the surrounding area approximately c. 285m to the east of the Site, a programme of archaeological trial trenching was undertaken which did not reveal any archaeological features within the site but did lead to the recovery of a single sherd of 15th-17th century pottery (Black, 2017).
- 2.5.5 In 2018, a written scheme of investigation (WSI) was produced by MOLA for a geophysical survey and archaeological trial trench excavation on land adjacent to the evaluation in 2014, although these reports are currently unpublished.

2.6 LiDAR and Aerial Photo

- 2.6.1 Available LiDAR models and aerial photos predominantly show the extent of the previous development of the Site, with potential shallow remains of ridge and furrow evident in the southern and south-eastern undeveloped enclosed fields. No obvious features of potential archaeological interest were identified.

2.7 Potential

- 2.7.1 Previous desk-based reports addressing the Site and projects within the surrounding area, have all identified archaeological potential within their specific area boundaries. However, it becomes apparent with the fieldwork that physical evidence of this potential, in most cases, has not been found.
- 2.7.2 The environmental statement found the north western area of the Site, alongside the River Trent, to have potential for paleoenvironmental remains contained within alluvial deposits, due to the high level of anaerobic preservation (Waterman, 2009).
- 2.7.3 Results of a test pitting and borehole survey at the site of the former Drakelow Powerstation (EDR 2748), confirmed that the potential for archaeological remains has been greatly reduced due to modern development within the Site.
- 2.7.4 There remains a potential for the presence of prehistoric finds, cropmarks and settlement features, some of Roman date, as recorded in the wider area. Remains of this nature are considered to be typical of the archaeology encountered within the Trent Valley (Waterman, 2009).

- 2.7.5 Since the submission of the Environmental Statement in 2009 archaeological investigations in the north eastern corner of the Site, which was still part of the enclosed field system visible on historic OS maps from 1882, revealed evidence of medieval to post-medieval ridge and furrow and an enclosure dating to the Roman period (EDR 4387).
- 2.7.6 From around 800 BC onwards, the Trent Valley experienced an increase in agricultural and pastoral activity that expanded beyond the floodplain (Howard, 2005: 100). Given the agricultural nature of the northern region of the Site, that has not been subjected to high levels of disturbance, this area remains a focus for archaeological and paleoenvironmental potential, as there may be archaeological features considered to be of local significance.

3 Aims and Objectives

3.1.1 The purpose of the requested archaeological work is to investigate the archaeological resource, and, should archaeology be present, to gain a full understanding of its character, date, form and function. The general aims of the archaeological excavation are to:

3.1.2 The general aims of the archaeological investigation and recording are to:

- determine the presence or absence of buried or upstanding archaeological remains within the proposed development site;
- determine the character, date, extent and distribution of any archaeological deposits revealed as well as their potential significance;
- determine levels of disturbance to any archaeological deposits from plough damage or from any other agricultural/industrial practices or later building activities;
- sufficiently investigate and record all deposits and features of potential archaeological interest within the areas to be disturbed during the current development;
- fully excavate, record and understand the archaeology present;
- determine the relationship of the revealed archaeological deposits with those previously excavated;
- disseminate the results of the fieldwork through an appropriate level of recording.

3.2 Regional Research Frameworks

3.2.1 The current work and all future work will consider existing and developing research frameworks from the following source the East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands (Knight et al, 2012).

3.2.2 The following research objectives have been deemed relevant to the scheme and will be considered throughout the programme of archaeological works:

- Contribute to the enhancement of the Historic Environment Record in the East Midlands in relation to the description, dating and list of sites and finds;
- Evaluate the research potential of the Pleistocene and Holocene palaeo-environments of the region, with a focus on river gravel contexts;
- Gain a greater understanding of the movement of people and the production and exchange of artefacts throughout history;

- Understand the role of rivers as movement corridors, sources of power and socio-political boundaries;
- Ascertain the development of agriculturally based settlements and their spatial organisation, and;
- Identify all forms of early medieval rural settlements with particular attention to sites where Roman and medieval settlements are juxtaposed.

4 Fieldwork Methodology

4.1 General Methodology

- 4.1.1 A scheme of archaeological work has been designed in order to satisfy the stated objectives of the project and actively contribute to the wider research objectives of the East Midlands, as set out under Section 3 above.
- 4.1.2 Development Phase 2 contains the site of Drakelow Mill, buildings of which were still extant prior to the establishment of the Power Station. Despite this development phase having largely been truncated up to 4.50m below ground level during marl extraction and development of the Power Station, there is an unknown potential for the survival of archaeological remains within this area. Prior to undertaking any archaeological works, a review of development proposals (including remediation and site formation processes) and Site Investigation data should be undertaken to determine the need for and scope of any further archaeological works.
- 4.1.3 As outlined in the introduction, archaeological works will be undertaken at the Site of the former Drakelow Hall (Phase 3 of construction) and the agricultural land in the northwest (Phase 4 of construction), the first stage of works will be undertaken at a scale of 100% geophysics, where ground conditions allow, and 4% trial trench evaluation (subject to the results of the geophysical survey).

4.2 Monitoring and Liaison

- 4.2.1 Dalcour Maclaren will liaise closely with the Client, the Approved Archaeological Contractor and the Derbyshire County Archaeologist throughout the course of the Scheme, with multiple on-site meetings to ensure that the works are undertaken as per the methodology outlined within this Written Scheme of Investigation and to inform key decisions.
- 4.2.2 Dalcour Maclaren will ensure that the Approved Archaeological Contractor will make all elements of the Site archive and records are available for inspection at any reasonable time during the programme of archaeological work or the post-excavation assessment/ analysis by the Client, the Derbyshire County Archaeologist and/or any other approved, designated representative of a key stakeholder.

4.3 Staffing and Standards

- 4.3.1 All archaeological work will be undertaken by Dalcour Maclaren under the direction of Beki Jones MCIfA. Dalcour Maclaren are a Registered Archaeological Organisation (RAO) with the ClfA. All Dalcour Maclaren staff will adhere to the Code of Conduct of the ClfA and the standards and codes of conduct of the ClfA will be adhered to at all times.

- 4.3.2 The project will be directly managed by Dalcour Maclaren, on behalf of the Client, by a full Member of the Chartered Institute for Archaeologists or an archaeologist of equivalent standing.
- 4.3.3 The Derbyshire County Archaeologist shall be notified of the Approved Archaeological Contractor and will receive a list of the relevant specialists for their approval prior to works commencing.
- 4.3.4 In advance of the fieldwork Dalcour Maclaren will ensure that all reasonable measures have been taken to identify any constraints and will obtain information from the Client on the presence of services, any ecological constraints, the presence of Public Rights of Way, the presence of contaminated land or any other risks to health and safety.
- 4.3.5 Dalcour Maclaren will use external specialists during the fieldwork, if required. Specialists include, but are not limited to:
- Nick Daffern – Palaeoenvironmental, geoarchaeological assessment
 - Rupert Birtwhistle – Lithics
 - Bryn Leadbetter – Animal Bone
 - Mike Wood – medieval to post-medieval artefacts
 - Dr. David Griffiths – Roman Pottery

4.4 Geophysical Survey

- 4.4.1 A 100% Geophysical Survey of suitable ground within development Phases 3 and 4, forms the initial phase archaeological evaluation works required by the LPA. The total area to be investigated at the Site of the former Drakelow Hall is c.16.9 ha and the total area of the agricultural land to be evaluated is c.13.4 ha (Figure 4). In phase 3 the south-eastern extent of the development area is largely concrete surface and built over, the potential for surveying this will be reviewed at the commencement of this phase.
- 4.4.2 The purpose of the geophysical survey is to determine the presence/absence of archaeological features. The results of the survey will inform the requirement for and scope and location of a subsequent programme of archaeological evaluation by trial trenching.
- 4.4.3 The geophysical investigation will be undertaken as follows:
- 4.4.4 A temporary grid system will be established over the site and marked out using wooden pegs or canes. The location of the grid will be set out using a RTK GPS system theoretically accurate to some 0.01m and referenced to OS co-ordinates.

- 4.4.5 Dependent on phase and ground obstructions the data will be collected by one of the following means:
- 4.4.6 **Cart System:** Data will be collected using a cart carrying four paired Bartington magnetic sensors. Each data point is geographically referenced using an on board Trimble RTK survey grade GPS system. Readings will be taken at 0.125m centres along traverses 1.0m apart.
- 4.4.7 **HandHeld:** Data will be collected using Bartington Grad 601-2. The instrument consists of two paired sensors and readings are logged at 0.25m centres along traverses 1.0m apart across 30m grids. The collection of data at 0.25m centres provides an appropriate methodology balancing cost and time with resolution as per Historic England guidelines.
- 4.4.8 **Sensors:** Two sensors mounted 1m vertically apart and very accurately aligned to nullify the effects of the earth's magnetic field. Readings relate to the difference in localized magnetic anomalies compared with the general magnetic background.
- 4.4.9 The readings are logged consecutively into a data logger which in turn is downloaded onto a portable computer whilst on site. At the end of the geophysical survey, data will be transferred for processing and presentation.
- 4.4.10 In the location of the former Drakelow Hall and gardens, a Ground Penetrating Radar (GPR) survey may be more appropriate.
- 4.4.11 Ground penetrating radar systems transmit an electromagnetic wave into the ground and record the time delay and amplitude of reflections from buried features. Reflections occur from changes in conductivity or dielectric permittivity.
- 4.4.12 Electromagnetic waves are increasingly attenuated as frequency increases and, therefore, lower frequencies provide greater penetration into the subsurface. However, the longer wavelengths associated with lower frequencies reduce the resolution of buried features. Typical frequencies chosen for archaeological prospection are around 500 and 200 MHz.
- 4.4.13 Should GPR be utilised data will be acquired using an Utsi Electronics Groundvue 3A cart mounted system (or similar) with a 400MHz shielded antenna with positional information derived from a wheeled encoder. A dielectric constant of 10 will be used in the field to set up the instrument and view data. The value is for display purposes only and does not affect the recorded data. A value in nanoseconds (ns) will be chosen for the time sweep (two way GPR signal travel time) in order to balance potential depth of penetration and resolution, as best suited to ground conditions.

- 4.4.14 Data will be collected from scans recorded along parallel traverses separated by 0.25m. The data captured along each traverse will be logged to an internal disk drive to allow further processing and analysis.
- 4.4.15 Ground penetrating radar data will be analysed using REFLEX v8 software (or similar, depending on the Archaeological Contractors Licence). Each traverse will be analysed as an individual profile to allow a manual assessment of anomalies. In addition, profiles across each survey area will be combined and processed in order to create time slices showing the variation in reflector amplitude at various depths. The following processing will be carried out on GPR data captured:
- 4.4.16 background removal - improves the appearance of the data by removal of strong horizontal bands,
- 4.4.17 gain - increased with time in order to amplify weaker reflections from deeper features,
- 4.4.18 bandpass filtering - lowers noise by the removal of energy below 200MHz and above 800MHz.

Reporting and Archiving

- 4.4.19 The report for the survey will comprise a written section describing the background to the survey, the methodologies used and a discussion of the results. The text will be illustrated using plots of the results using CAD to overlay the results and interpretations over the base mapping. The format for these drawings will either be A3 or A1 depending on the size and configuration of the survey areas.
- 4.4.20 Processing of the data will be carried out using the specialist software *Anomaly* and *GeoSub* and occasionally *Geoplot*, (*Reflex*, where appropriate with GPR). This can emphasize various aspects contained within the data, but which are often not easily seen in the raw data. Basic processing of the magnetic data involves 'equalising' the background levels with respect to adjacent traverses (Zero mean traverse). 'Despiking' is very occasionally performed to remove the anomalies resulting from small iron objects often found on agricultural land, however this practice is not favoured as it creates a 'false' dataset. Once the basic processing has levelled the background it is then possible to carry out further processing including de-stagger and interpolation to emphasize the archaeological or man-made anomalies.
- 4.4.21 The presentation of the CAD drawings will include:
- A general location plan;
 - Detailed site location showing the grid position;

- Grey scale plots of the minimally processed and processed data;
- Interpretation plot showing anomalies identified.
- (For GPR) Colour plots derived as TIF files. Anomalies are abstracted using colour coded points, lines and polygons.

4.5 Intrusive Archaeological Works

Trial Trenching

- 4.5.1 Archaeological Evaluation by Trial Trenching is required and would be informed upon by the initial Geophysical Survey results. The Evaluation trenching will be undertaken on the site of the former Drakelow Hall (Phase 3 of construction) and the agricultural land in the northwest (Phase 4 of construction), at a 4% sample size for trial trenching (dependent on the results of the Geophysical Survey) (Figure 5). Archaeological trial trenching at the site of the former Drakelow Hall will comprise 75 trenches (measuring 1.8m x 50m). Archaeological trial trenching on the agricultural land in the northwest of the Site will comprise 60 trenches (measuring 1.8m x 50m).
- 4.5.2 The archaeological Evaluation is intended to provide an appropriate data set to allow for the full characterisation of the proposed development area to be established. The archaeological Evaluation will consist of an appropriate number of trenches, situated to maximise the potential recovery of archaeology. Discussions regarding any potential contingency will be undertaken with the client and the planning archaeologist prior to excavations commencing.
- 4.5.3 The trenches will be placed to best characterise the potential of the Site with their orientation and placement being designed to best capture linear features, regardless of their orientation as well as any clusters of activity; and in avoidance of live services, obstructions or disturbed ground.
- 4.5.4 The final sampling strategy and location of trenches would be agreed with and submitted for approval to the Derbyshire County Archaeologist before commencement of works.
- 4.5.5 The Evaluation will be undertaken using a mechanical excavator fitted with a toothless ditching bucket to maximise the chance for identification of archaeological remains, should they be present. All mechanical works will be monitored by a suitably experienced archaeologist who will control the level excavated to and stop machining at the top of the first potentially significant archaeological horizon, or the top of the natural substrate, whichever is higher.
- 4.5.6 Machine excavation will be undertaken in spits no greater than the maximum depth of the deposit. All surfaces in section and plan will be cleaned to

maximise the identification of archaeological features or deposits. Should archaeological features or deposits be exposed these will be investigated by hand to retrieve artefactual material and environmental samples, as well as to determine the character, significance and date of the archaeology and recorded as per the methodology outlined from section 4.5.14 below.

- 4.5.7 Once this has been completed a mechanical excavator will then be used to help reached the next level where the strategy will be repeated. This methodology will continue to the top of the natural substrate or limit of development intrusion, whichever is higher.
- 4.5.8 Prior to backfilling, all deposits, including the trench sides will be again inspected for artefactual material to ensure that finds are recovered from as many contexts as possible regardless of date.

Strip, Map and Sample Excavation (if required)

- 4.5.9 Any required archaeological excavation, sampling and recording implemented across the proposed development would be informed upon by the initial Geophysical Survey and Trial Trenching results. Any further mitigation works will be consulted upon with the Client and the archaeologist for Derbyshire County Council prior to commencement.
- 4.5.10 Areas for further archaeological mitigation will be identified based upon the results of the geophysical survey and trial trenching but would be subject to the same methodology as outlined from section 4.5.14 below.
- 4.5.11 The Appointed Archaeological Contractor will undertake all soil excavation using a c. 20 tonne mechanical excavator fitted with a toothless ditching bucket to maximise the chance for identification of any archaeological remains.
- 4.5.12 Top- and subsoils will be stored upon Terram or similar geotextile to act as protection for the ground surface and to prevent soil mixing.
- 4.5.13 The mechanical strip will be undertaken to the top of the first potentially significant archaeological horizon or the natural substrate, whichever is higher. This will be determined by a suitably experienced archaeologist who will monitor and control all works. Once exposed, all surfaces will be inspected and potential features/deposits excavated to retrieve artefactual and ecofactual material, as well as to determine their character, significance and date.

Sampling

- 4.5.14 Archaeological features will be sampled sufficiently to characterise, date them, understand their relationships and determine their significance. Features are to be sample excavated as follows;

- All early prehistoric features will be 100% excavated;
- All structural features (e.g. postholes and hearths), burials, industrial features (e.g. ovens and kilns) etc. will be 100% excavated;
- Other discrete features (e.g. pits) of late prehistoric or late date will be excavated to a minimum of 50% based on the potential for the recovery of important material or ecofactual assemblages;
- Features of possible natural origin (e.g. variations in the geology) will be excavated until a full characterisation of the feature type, profile, fill and any other characterisations have been demonstrated adequately;
- Linear features (e.g. ditches and gullies) will be excavated to a minimum of 10% or until a full understanding of the feature is ascertained. All intersections will be sampled to establish relationships and a higher percentage of excavation will occur in areas of potential domestic activity;
- Occupational layers will be excavated to a minimum of 50% with a higher percentage for prehistoric layers as required to gain a full understanding of the various functions and variations.

4.5.15 Measures will be taken to protect particularly significant, valuable or sensitive archaeological remains from exposure, accidental damage and/or theft.

4.5.16 Archaeological deposits and features will be recorded according to accepted professional standards and the standards of the Appointed Archaeological Contractor who will be a ClfA Registered Archaeological Organisation. Sufficient data will be recorded to allow for a full characterisation of the context and its relationships to be made and allow for future studies to query and compare the dataset with confidence.

4.5.17 Archaeological contexts will be recorded and numbered individually on pro-forma context sheets with all relevant data such as drawings, photographic images, finds, environmental samples, height values and any other information cross-referenced. In addition, a further, more general record of the work comprising descriptions and discussions of the archaeology is to be maintained as appropriate. Context sheets are to be primarily filled in by the archaeologist excavating the feature/deposit.

4.5.18 All features will first be recorded in plan using a GPS unit with sub-centimetre accuracy with each point recorded in relation to the OSGB36 geod model, this plan will also provide a three-dimensional geo-referenced visual representation on the archaeology present.

- 4.5.19 This pre-excavation plan will be used to formulate an appropriate excavation methodology and allow for discussions on prioritisation to be undertaken between Dalcour Maclaren, the Client and the Derbyshire County Archaeologist as appropriate. Once features have been excavated, they will be recorded again using a GPS unit under a separate project file with all features recorded to sub-centimetre accuracy and coded to an internal database that records feature type, context number, associated drawing numbers and any other feature specific information that may be relevant. In addition, features that require more detailed illustration will be undertaken by hand in relation to a feature specific geo-referenced baseline and drawn at an appropriate scale on polyester based drafting film and labelled in relation to a site-specific drawing register.
- 4.5.20 Hand-drawn sections will be done to an appropriate scale, primarily 1:10. Likewise, plans of archaeological features will be drawn at a suitable scale to record them in detail. If appropriate a larger site plan will be produced at a scale between 1:100 and 1:1,250 to show the location of monitored works, if required, this plan would indicate the boundaries of the excavated area, the site grid and location and numbers of any smaller detailed plans and sections produced along with any other appropriate information. All plans will be accurately related to the National Grid.
- 4.5.21 All plans and sections will be levelled in respect to AOD. All levels taken are to be clearly labelled on all drawings with any calculations and final height values provided and cross referenced with a site-specific level register.
- 4.5.22A complete digital photographic record of the work is to be kept. All images are to be taken using a digital SLR camera with a suitable megapixel resolution. The photographic record is to be regarded as part of the site archive and digital files will be appropriately filed, saved, labelled, and cross-referenced in relation to a site-specific photography register.
- 4.5.23The complete site archive, including finds and palaeoenvironmental samples, will be kept securely throughout the fieldwork and during all post-excavation activities.
- 4.5.24 All deposits and features will be recorded according to accepted professional standards with sufficient data being recorded to allow for a full characterisation of a context and its relationships to be made and allow for future studies to query and compare the dataset with confidence.

4.6 Finds and Artefacts

- 4.6.1 All artefacts recovered during the archaeological mitigation are the property of the landowner/Client. They will be suitably bagged, boxed and marked in accordance with the Standards and Guidance for the Collection,

Conservation and Research of Archaeological Materials (ClfA 2014d), and the Standard and Guide to Best Practice for Archaeological Archiving in Europe (Perrin et al. 2014).

- 4.6.2 All artefacts revealed will be recovered regardless of date so that the provisional dating of as many contexts as possible can be ascertained, as in line with Historic England guidance (2015). In circumstances where the quantity of finds present preclude total recovery then a representative sample will be taken, and this noted on the context sheet.
- 4.6.3 Any finds that are considered potentially significant will be provided a unique registered artefact identification number, as provided by a site-specific registered artefact register. The location of the item will be recorded in three dimensions and marked on any relevant drawings as appropriate before being lifted. Also, if required, the item will be photographed, and an appropriate specialist will be on hand to ensure the object is lifted and transported in the most stable and suitable fashion to stop any potential degradation.
- 4.6.4 On completion of the project, modern material, unstratified remains and objects that have been assessed as having no obvious grounds for retention will be discarded after a period of six months, unless there is a specific request to retain them (and subject to the collection policy of the relevant depository and the ClfA selection and retention toolkit if adopted by the local depository).
- 4.6.5 The primary archive records will clearly state how all artefact assemblages have been recovered, sub-sampled and processed.

4.7 Selection and Retention

- 4.7.1 A selection and retention strategy will be created following the ClfA and Historic England Toolkit for Selecting Archaeological Archives (2019).
- 4.7.2 Archaeological materials recovered from the Site that are most relevant and useful to the interpretation of the Site will be kept for long-term storage.
- 4.7.3 Archaeological material that is considered to be most relevant to the interpretation of the Site will likely include remains / finds that contribute to the wider regional research objectives of the project.
- 4.7.4 These objectives include findings that contribute to palaeo-environmental studies of the region, the development of settlements and the role of rivers throughout history (Watt, 2011; Knight et al, 2012). These objectives are further defined and discussed in more detail in section 3.2 of this report.
- 4.7.5 It is anticipated that the question of selection and retention of material finds be addressed continually during the course of the archaeological project.

- 4.7.6 Decisions on the significance of finds archives will be supported by the recommendations/ assessments of suitably qualified specialists and the Derbyshire County Archaeologist (Derby Museums, 2012).
- 4.7.7 A final agreement will be reached during the deposition of the overall Site archive.

4.8 Treatment of Treasure

- 4.8.1 Finds 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, Client and the Derbyshire County Archaeologist. A treasure receipt (obtainable from either the Finds Liaison Officer (FLO) or the Department for Digital, Culture, Media and Sport (DCMS) website) will be completed and a report submitted to the Coroner's Office and the FLO within 14 days of understanding that the find is treasure. Failure to report within 14 days of discovery is a criminal offence.
- 4.8.2 The treasure receipt and report will include the date and circumstances of the discovery in addition to the identity of the finder (will be assigned as the Appointed Archaeological Contractor) and the location of the find in relation to Ordnance Survey.

4.9 Human Remains

- 4.9.1 In the unlikely event that human remains, both inhumations and/or cremations, are exposed during the course of the archaeological investigations then all works are to cease immediately, and the local police and coroner informed. The area will be screened from view and discussions will be held with the Client and the Derbyshire County Archaeologist on options for their appropriate preservation in situ or for their removal in accordance with professional standards and guidelines once the antiquity of the remains has been suitably proven.
- 4.9.2 If it is decided that removal of the remains is the most appropriate option, a Ministry of Justice Licence will be required (in accordance with Section 25 of the Burial Act 1857) before the remains can be lifted. The need for a Ministry of Justice Licence applies to both inhumation and cremated remains. The application for a Licence will be made by Dalcour Maclaren.
- 4.9.3 The Approved Archaeological Contractor will have an appropriately qualified and experienced osteoarchaeologist available to supervise the excavation and removal of any human remains (where this is necessary) from the site.

4.10 Environmental Archaeology

- 4.10.1 The strategy and methodology for the sampling of deposits will be in accordance with English Heritage (Now Historic England) Centre for Archaeology Guidelines "Environmental Archaeology – A guide to the theory and practice of methods, from sampling and recovery to post-excavation" (2011).
- 4.10.2 All samples will be assigned a unique identification number accompanied with an appropriate sample form that will provide justification for sampling, the research questions which could be addressed and the methodologies to be employed to ensure that the appropriate techniques are used to maximise potential.
- 4.10.3 Where deposits are dry, bulk samples for the recovery of charred plant remains, small bones and finds, will be taken from sealed and datable features such as pits, ditches, hearths, and floors. Each context will be sampled in isolation. The size of the sample is expected to be in the range of 40-60 litres per context or 100% of smaller contexts.
- 4.10.4 Samples will not be taken from the intersection of features or where context horizons are not fully defined.
- 4.10.5 Mollusc samples of two litres each will be taken vertically from appropriate sections to investigate the changes of vegetation through time.
- 4.10.6 Where deposits are wet, waterlogged, or peaty, monoliths will be taken along cleaned vertical surfaces for the retrieval of pollen, diatoms, ostracods, and foraminifera. The numbers to be taken will be agreed with the Client and the Derbyshire County Archaeologist. Where bulk samples are to be taken a minimum of 20 litres will be taken from visible layers or spits for the retrieval of plant macro remains and insects.
- 4.10.7 Environmental samples from dry deposits will normally be processed by floatation following the fieldwork and the residues will be sorted to retrieve small bones, small finds and charcoal that has not floated. Environmental samples from wet deposits will normally be sent to specialists for processing in laboratory conditions.
- 4.10.8 Should suitable material be recovered, scientific dating will be undertaken to further investigate and date the archaeological asset and contribute to the characterisation and understanding of the resource's context. Scientific dating techniques will include radiocarbon dating and dendrochronology, where relevant, as outlined by Historic England.
- 4.10.9 The strategy outlined above will be informed upon by the features and deposits present and will be reviewed by an appropriately qualified

palaeoenvironmental specialist and where appropriate, geoarchaeological specialist.

- 4.10.10 Where guidance is relevant the appropriate English Heritage (Now Historic England) papers will be followed (EH 2005; 2006; 2007 & 2011).

4.11 Post Excavation and Reporting

- 4.11.1 Upon completion of the archaeological fieldwork, Dalcour Maclaren, in cooperation with the Approved Archaeological Contractor, will produce a post-excavation assessment report that will interrogate the quality, quantity, character and potential of the archaeology recovered. The Post Excavation report will identify and specify the need for further analysis of material with the view of producing a final report, which addresses regional research objectives for wider dissemination/publication.
- 4.11.2 A draft of this assessment document will be supplied to the Client for comment in the first instance. Once approved by the Client, a copy of the report will be provided to the Derbyshire County Archaeologist to ensure their satisfaction and, in cooperation with the Client, determine the need and scope of any further post-excavation assessment and/or analysis.
- 4.11.3 At the assessment stage of post-excavation, further external specialists will only be called upon if the nature of the archaeological resource cannot be adequately determined without their input.

4.12 Archive Preparation, Deposition and Dissemination

- 4.12.1 The archive will be retained by the Approved Archaeological Contractor, Dalcour Maclaren or the Client until a suitable depository for the archive can be identified in cooperation with the Derbyshire County Archaeologist.
- 4.12.2 The site archive will include all project records and cultural material produced by the archaeological mitigation and will be prepared and deposited in accordance with Guidelines for the Preparation of Excavation Archives for Long Term Storage (Brown 2011), Procedures for the Deposition of Archaeological Archives from Derbyshire at Derby Museums (2012), Preparation and A Standard Guide to Best Practice for Archaeological Archiving in Europe (Perrin et al 2014), with any variation agreed with the Derbyshire County Archaeologist.
- 4.12.3 The Approved Archaeological Contractor will use a unique site code during the course of the archaeological fieldwork and will be referenced through post-excavation reporting, on all documents, artefacts and any other items that may be associated with the project.

- 4.12.4 An accession number will be requested from the Derby Museum prior to the commencement of the fieldwork. The Site archive will be deposited and make reference to that unique accession number.
- 4.12.5 The Approved Archaeological Contractor will register the works with the Online Access to the Index of archaeological investigationS (OASIS). A digital copy of the archaeological report and any appropriate associated documentation from the archive will be made available upon its completion.
- 4.12.6 Should the results warrant it, a summary of the work, in addition to the findings from the wider archaeological works across the Scheme, will be compiled and submitted to an appropriate local journal and any relevant journals agreed with the Stakeholders.
- 4.12.7 In the unlikely event that no archaeology be revealed, then the final report will be provided to the local HER and uploaded to OASIS.

4.13 Post-Excavation and Updated Project Design

- 4.13.1 Should archaeological remains be encountered during the works that merit further analysis, an Updated Project Design (UPD) will be produced to include the revision of research aims and schedule of the project and where relevant details of specialists, as per ClfA's Standards and Guidance (2014a).
- 4.13.2 The details of further analysis will be presented in the UPD. Drafts of the assessment document and the UPD will be supplied to the Client for comment in the first instance. Once the scope of the UPD is agreed with the LPA via its archaeological advisor, the work will be carried out to completion as set out in the agreed UPD. This will include the relevant stages of analysis, the final archive report, publication (typically in Derbyshire Archaeological Journal) and deposition of the archive with Derby Museum and Art Gallery.

5 Health and Safety

- 5.1.1 The Approved Archaeological Contractor will prepare a site-specific risk assessment and method statement outlining the potential health and safety.
- 5.1.2 All site staff will have an appropriate level of training to enable them to carry out fieldwork safely and appropriate personal protective (PPE) clothing will be worn by all staff of the Approved Archaeological Contractor and any visitors to Site at all times.
- 5.1.3 All staff will assist the Client in maintaining the site in a safe condition. Hazards will be appropriately identified and managed, including identification of buried and above ground services/utilities.
- 5.1.4 The Approved Archaeological Contractor will abide by the Client's health and safety methodology as well as abiding by any other site-specific and task-specific risk assessments and toolbox talks which may be provided/undertaken. Once on site, these documents will be assessed, and any variations will be highlighted and added to the appropriate assessment. These will be re-evaluated periodically during the course of the fieldwork to make sure that they remain consistent to the site-specific risks.
- 5.1.5 If there is conflict between the Client's risk assessment and that of the Approved Archaeological Contractor, then the Client's will take priority, unless it is perceived to be placing the staff of the Approved Archaeological Contractor at greater risk.
- 5.1.6 In addition to the risk assessment and method statement, where appropriate a COSHH assessment will also be undertaken.
- 5.1.7 All members of staff of the Approved Archaeological Contractor and any visitors will be required to be inducted and sign these documents on first arrival to site to show that they have read and understood the contents and any variations will be communicated as required.
- 5.1.8 The Client will be asked to provide all information reasonably obtainable on contamination and the location of live services before the archaeological works commence.

6 Outreach and Community Engagement

- 6.1.1 Due to the scale of the programme of archaeological works proposed ahead of the development of such a large transport scheme and the Trent Valley having a high potential for archaeological and environmental remains, plans will be put in place to allow for public outreach/engagement with residents within South Derbyshire.
- 6.1.2 The public outreach and engagement with the local communities can be approached in numerous ways including preparing talks for local history groups, outreach in local schools, site open days and tours and volunteering opportunities to get involved in the archaeological excavations.
- 6.1.3 The ongoing Covid-19 pandemic and Site conditions may mean that some methods of community engagement are more suitable than others; however, discussions will be held with local groups within Derbyshire to gauge interest and organise events for public outreach and community engagement.
- 6.1.4 Following liaison with the LPA archaeological advisor and local groups/schools, agreement will be made by the Client for outreach and community engagement, with discussions held with the Client and the appointed archaeological contractor to determine the scope and scale of the plans for outreach/ engagement.

Bibliography

British Geological Survey (2021). Geology of Britain Viewer, <https://mapapps.bgs.ac.uk/geologyofbritain/home.html>

Brown, D. H. (2011) Archaeological Archives: A Guide to Best Practice in Creation, Compilation, Transfer and Curation, Archaeological Archives Forum.

Charles, M. (2007) Drakelow Ponds, Burton-upon-Trent, Derbyshire: An Archaeological Watching Brief, 2007. Birmingham: Birmingham Archaeology. <https://doi.org/10.5284/1036012>

ClfA. (2014a) Standards and Guidance for an Geophysical Survey, Chartered Institute for Archaeologists, Reading

ClfA. (2014b) Standards and Guidance for an Archaeological Excavation, Chartered Institute for Archaeologists, Reading

ClfA. (2014c) Code of Approved Conduct for the Regulation of Arrangements in Field Archaeology, Chartered Institute for Archaeologists, Reading.

ClfA. (2014d) Standard and Guidance for the Collection, Documentation, Conservation and Research of Archaeological Materials, Chartered Institute of Field Archaeologists, Reading.

ClfA. (2014e) Standards and Guidance for an Archaeological Watching Brief, Chartered Institute of Field Archaeologists, Reading.

ClfA. (2014f) Standard and guidance for the archaeological investigation and recording of standing buildings or structures, Chartered Institute of Field Archaeologists, Reading.

ClfA & Historic England (2019). Toolkit for Selecting Archaeological Archives, https://www.archaeologists.net/sites/default/files/downloads/selection-toolkit/SelectionToolkit_Full.pdf

ClfA. (2020) Standards and Guidance for an Archaeological Evaluation, Chartered Institute for Archaeologists, Reading.

Clements, P. (2014) Archaeological trial trench evaluation of land at Walton Road, Drakelow, Derbyshire, July 2014. Northampton: MOLA Northampton. <https://doi.org/10.5284/1037993>

Derby Museums (2012). Procedures for the Deposits of Archaeological Archives from Derbyshire at Derby Museums.

English Heritage. (2005) Guidance for Best Practice for Treatment of Human Remains Excavated from Christian Burial Grounds in England, English Heritage, London.

English Heritage. (2007) *Understanding the Archaeology of Landscapes: A Guide to Good Recording Practice*, English Heritage, Swindon.

English Heritage. (2011) *Environmental Archaeology: A Guide to the Theory and Practice of Methods, from Sampling and Recovery to Post-Excavation*, English Heritage, London.

Highways Agency (2007) *Design Manual for Roads and Bridges, Volume 11, Section 3, Part 2*, <http://www.standardsforhighways.co.uk/ha/standards/dmrb/vol11/section3/ha20807.pdf>

Historic England. (2015). *Management of Research Projects in the Historic Environment: The MoRPHE Project Managers Guide*, Historic England, Swindon.

Historic England. (2016) *Preserving Archaeological Remains: Decision Taking for Sites under Development*, Historic England, Swindon.

Knight, D., Vyner, B. & Allen, C. (2012). *East Midlands Heritage: An Updated Research Agenda and Strategy for the Historic Environment of the East Midlands*. Nottingham: University of Nottingham and York Archaeological Trust.

Mills, A. D. (2011). *Key to English Place-Names*, <http://kep.n.nottingham.ac.uk/>

National Planning Policy Framework (2019), revised 19 February 2019, available: <https://www.gov.uk/government/publications/national-planning-policy-framework--2>.

Perrin, K et al. (2014) *A Standard and Guidance to Best Practice for Archaeological Archiving in Europe*, EAC Guidelines 1, Europae Archaeologia Consilium: Namur.

Prestige, O. J. (2014) *Walton Road, Drakelow, Derbyshire*. Stratascan Geophysical & Specialist Survey Services. <https://doi.org/10.5284/1050001>

Tinsley, A. (2009) *Edingale to Drakelow Gas Pipeline: Report on an Archaeological Evaluation*. Archaeological Research Services. <https://doi.org/10.5284/1016769>

Waterman. (2008) *Phase 1 Land Quality Assessment, Drakelow Park, Burton Upon Trent*, Waterman. Birmingham, unpublished planning document

Waterman (2009) *Environmental Statement Vol 1 Chapter 12 Archaeology and Cultural Heritage*.

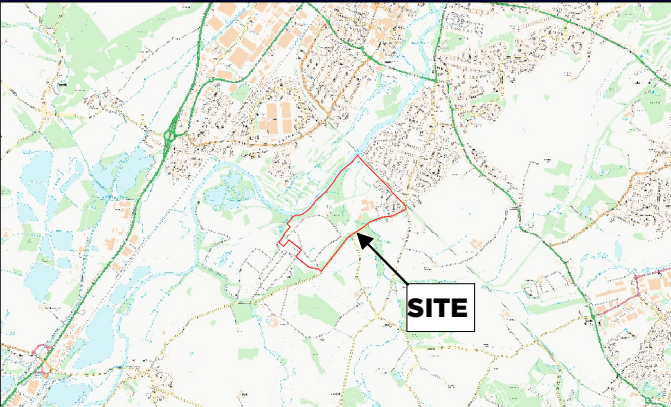
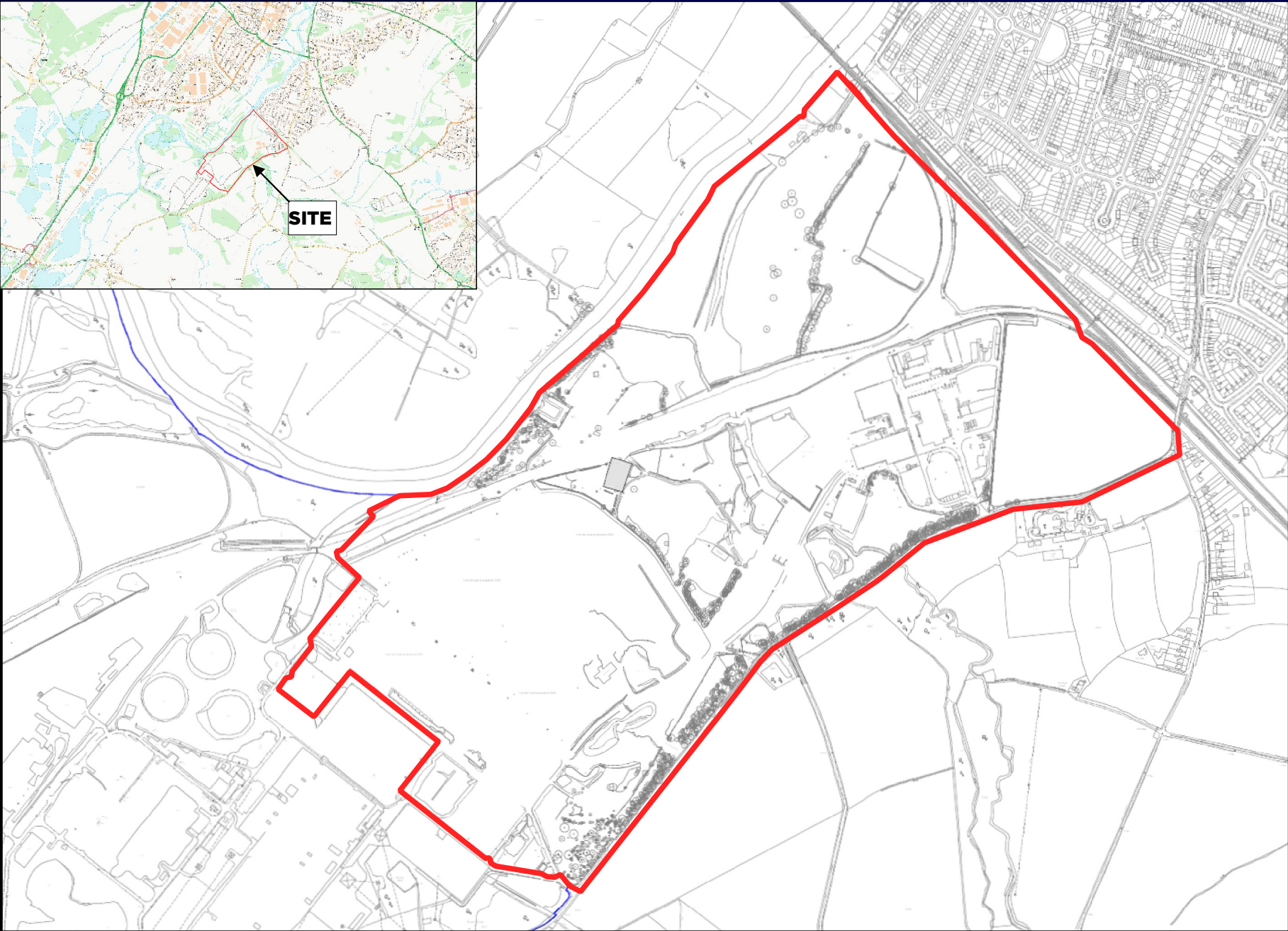
Watt, S. (2011). *The Archaeology of the West Midlands: A Framework for Research*. University of Birmingham, Oxbow Books.

DRAWINGS

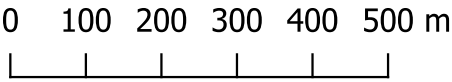
DRAKELOW POWER STATION

204341_Figure 1

SITE LOCATION PLAN



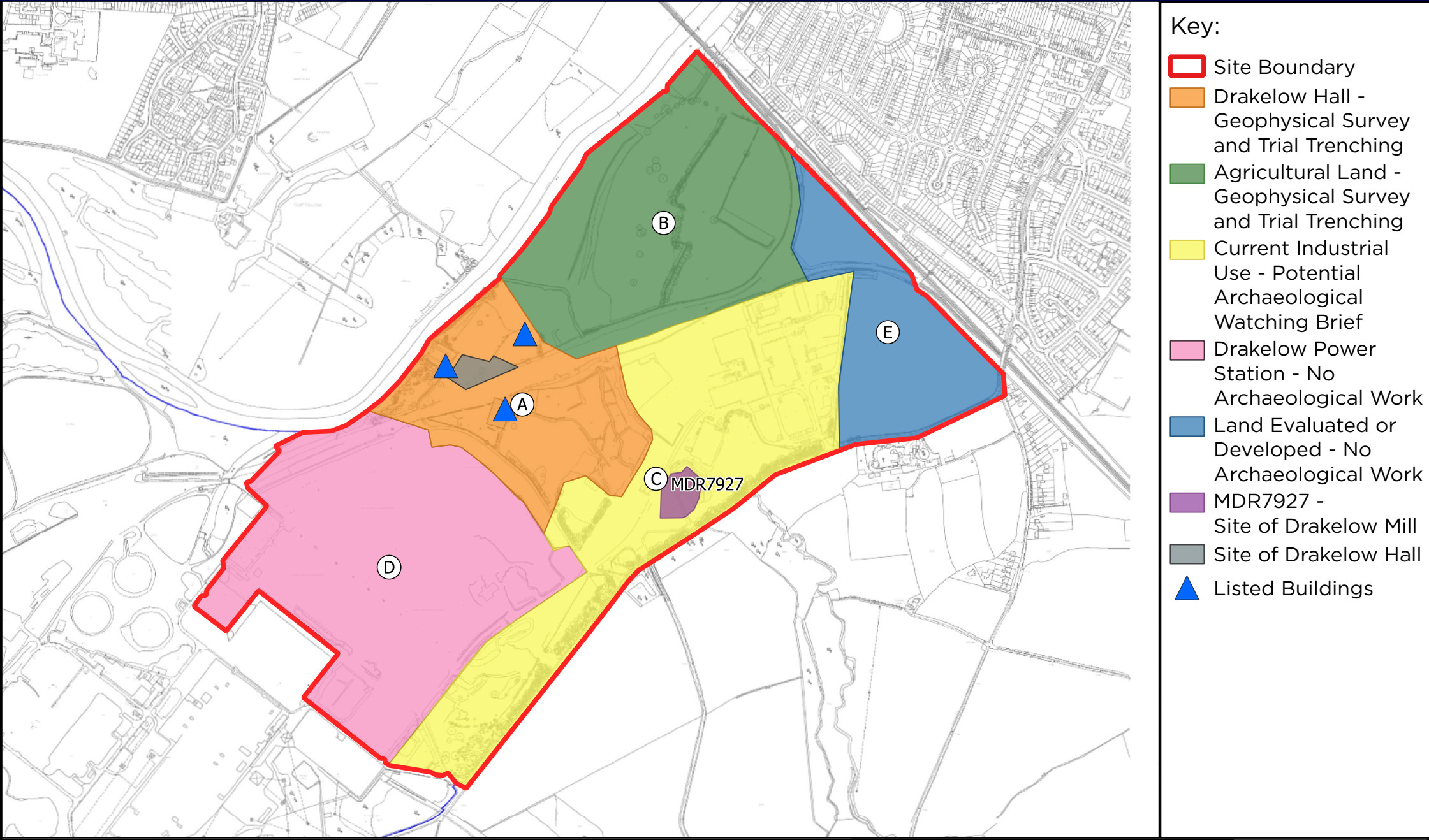
KEY
 SITE BOUNDARY



Created By: Beki Jones
 Created Date: January 7th 2021

Scale: 1 : 10,000



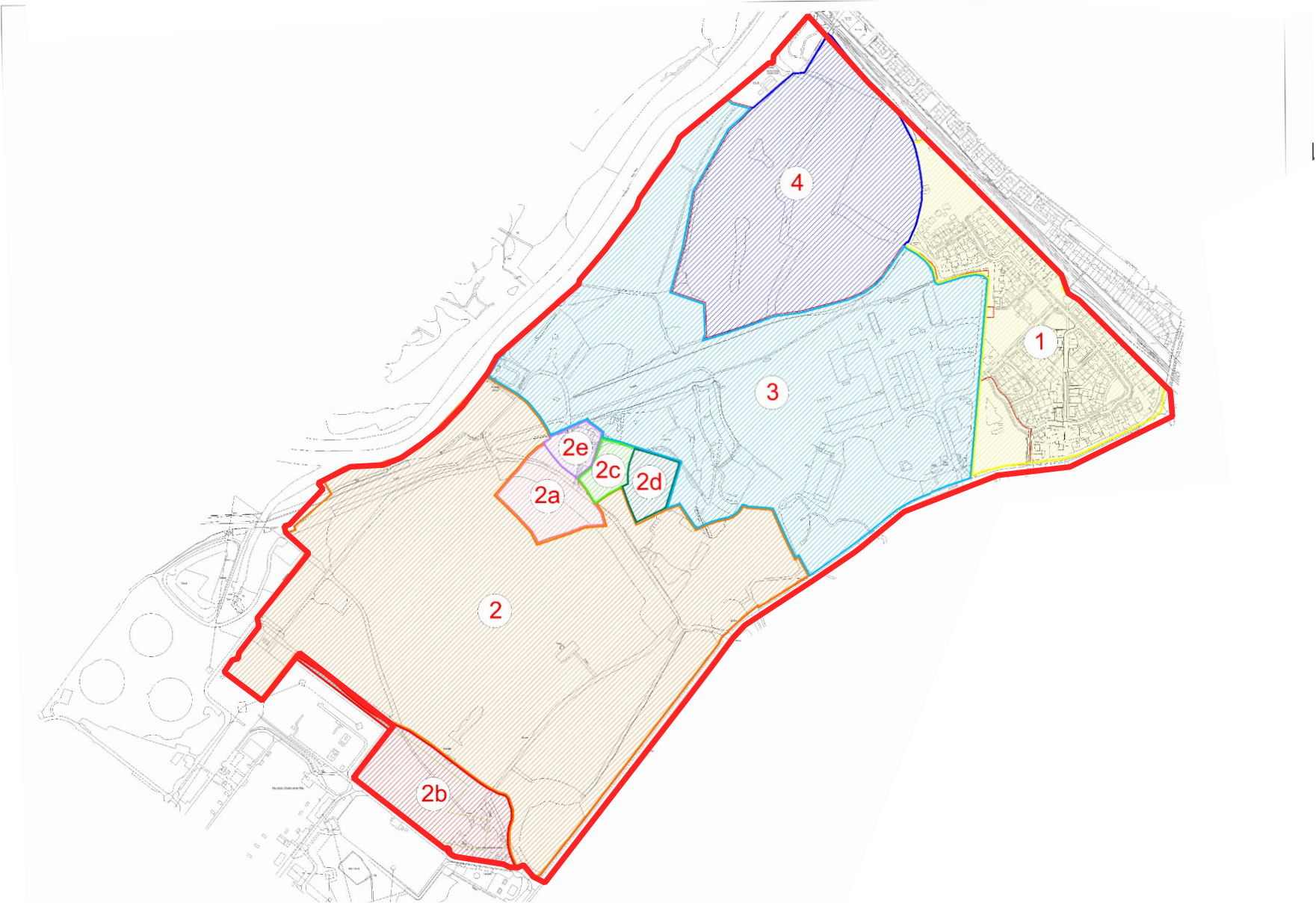


0 100 200 300 400 500 m

Created By: Immogen Lyons
Created Date: May 2021

Scale: 1 : 10,000





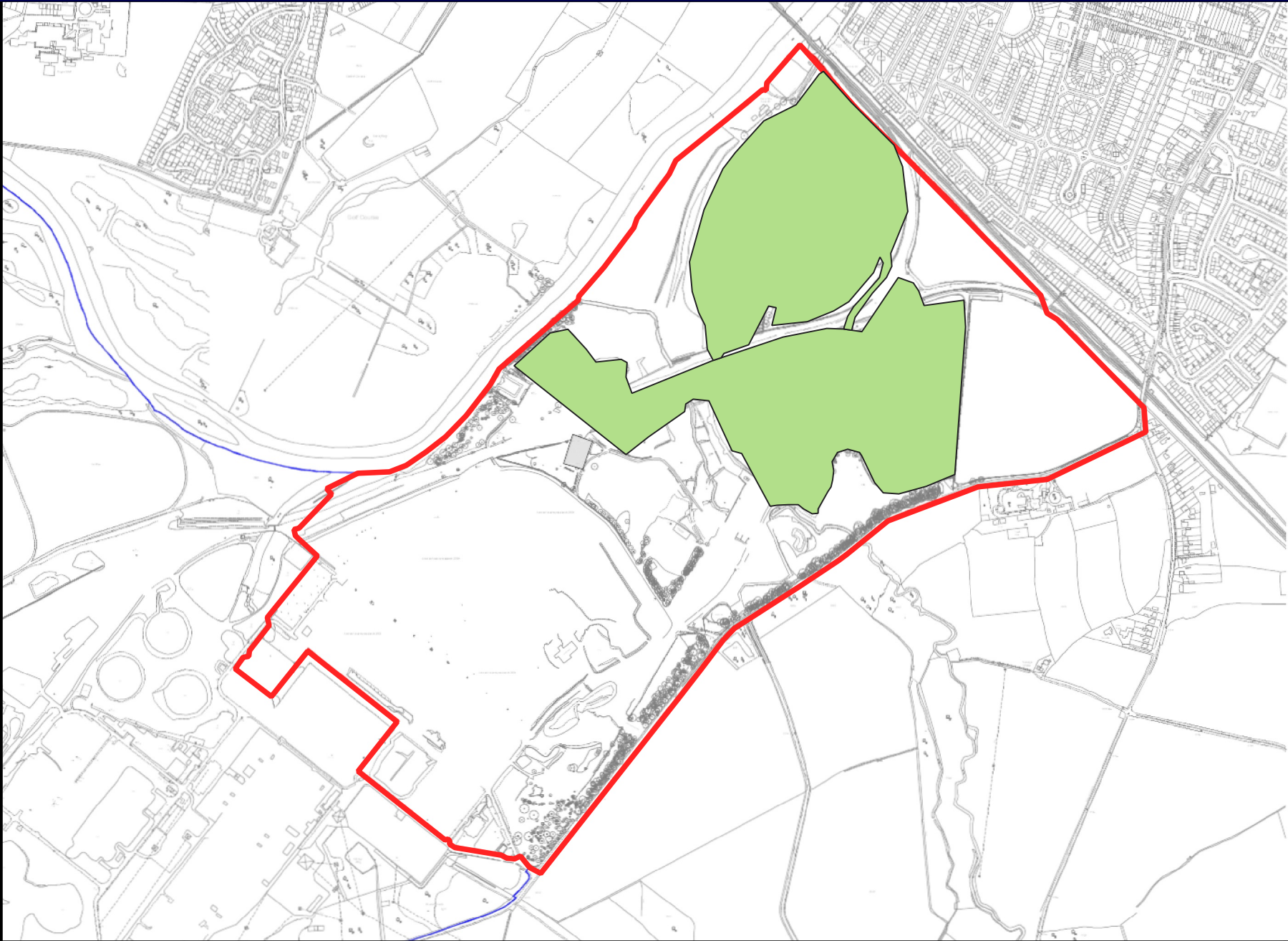
KEY
[Red outline box] SITE BOUNDARY



0 100 200 300 400 500 m

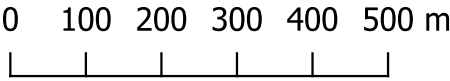
Created By: Beki Jones
Created Date: January 7th 2021
Scale: 1 : 10,000





KEY

-  SITE BOUNDARY
-  AREA FOR SURVEY

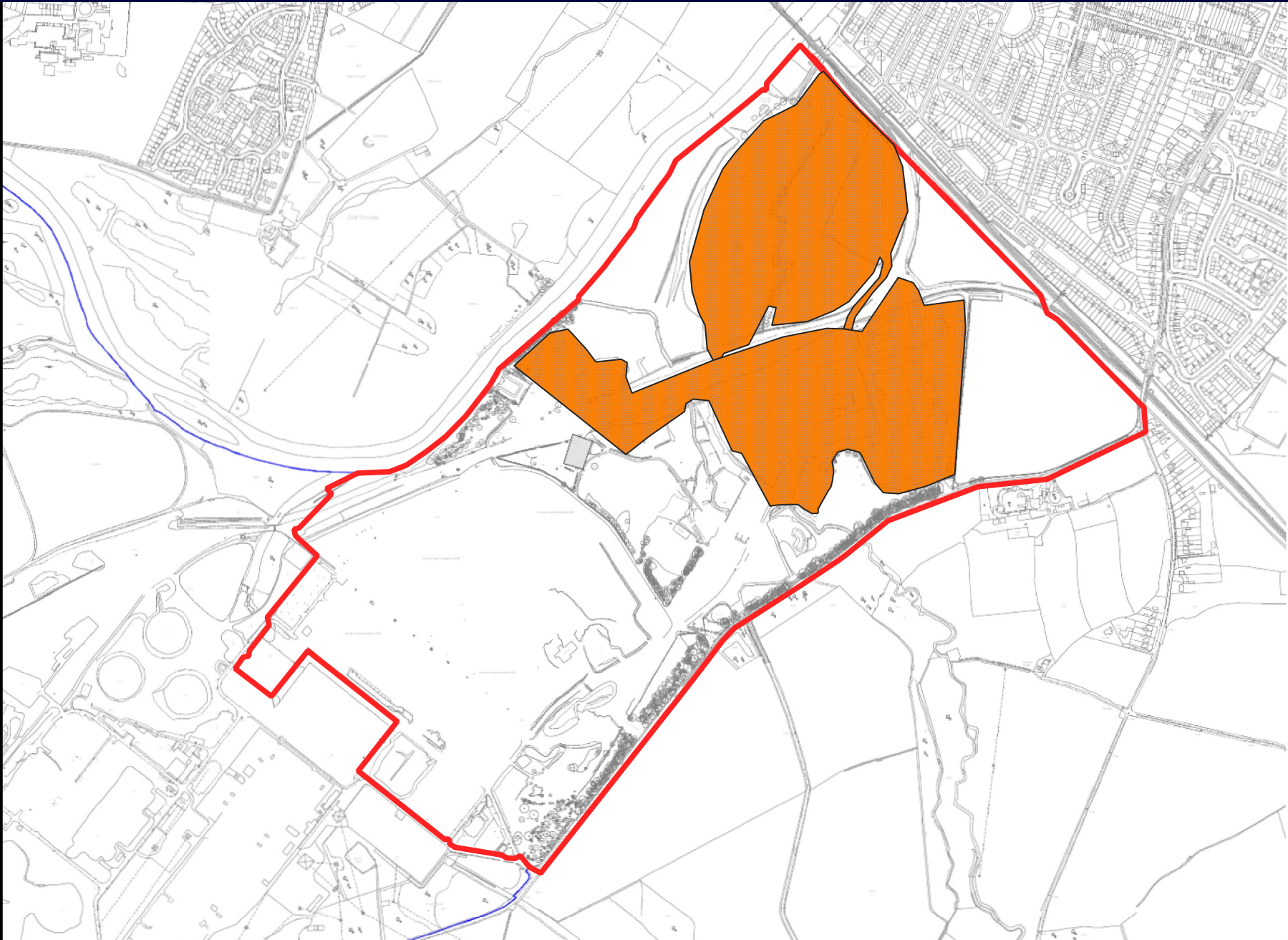


Created By: Beki Jones
Created Date: January 7th 2021

Scale: 1 : 10,000

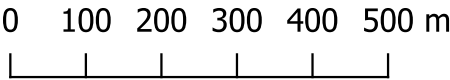


**DALCOUR
MACLAREN**



KEY

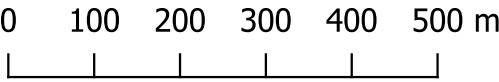
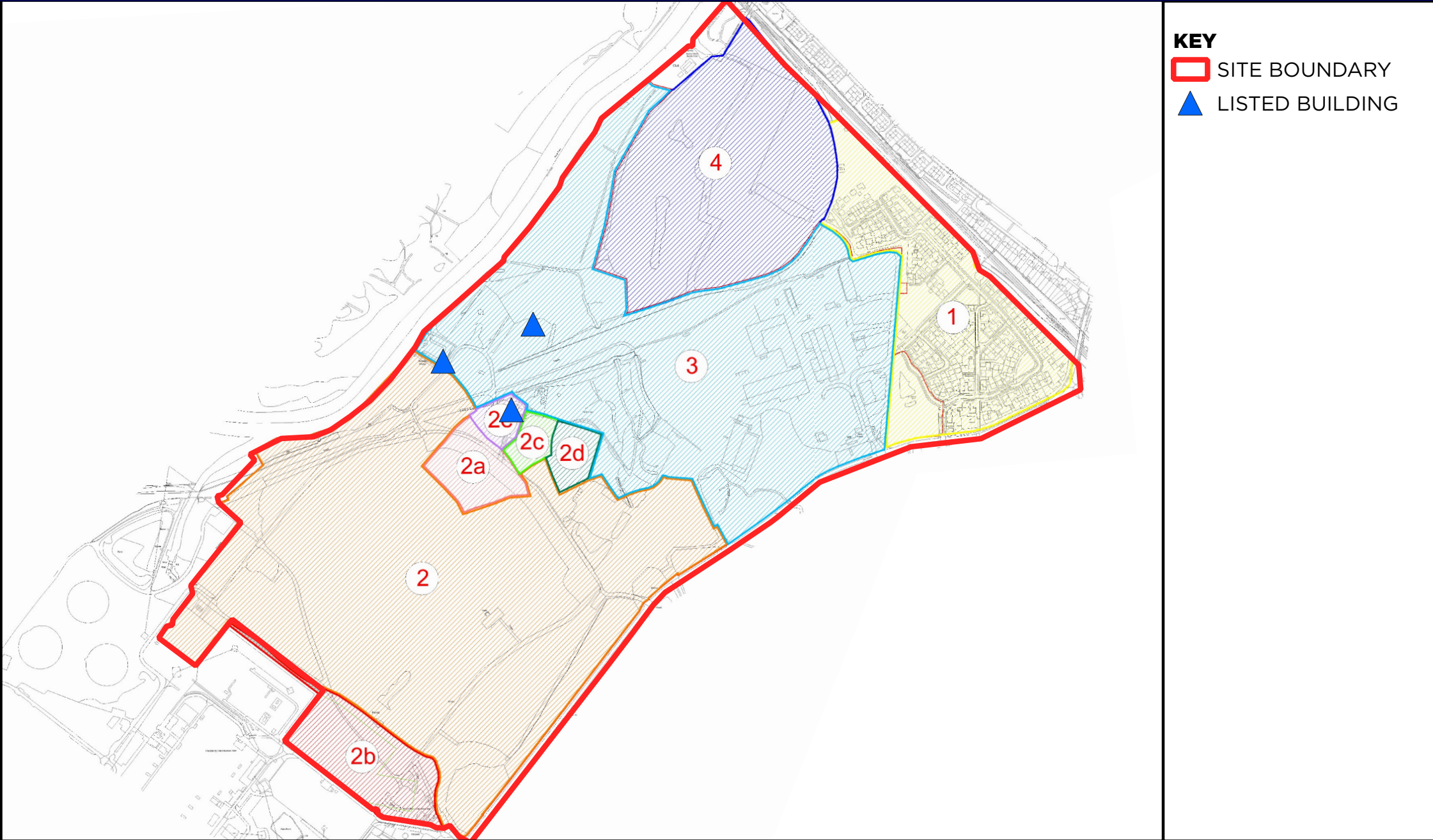
-  SITE BOUNDARY
-  AREA OF TRENCHING



Created By: Beki Jones
Created Date: January 7th 2021

Scale: 1 : 10,000





Created By: Beki Jones
Created Date: January 29th 2021

Scale: 1 : 8,000





**DALCOUR
MACLAREN**

Midlands

4 Bredon Court
Brockridge Park
Twynning
Gloucestershire GL20 6FF

T: 01684 217 703
E: info@dalcourmaclaren.com
E: EPTeam@dalcourmaclaren.com

dalcourmaclaren.com

