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Murphy's Plant Limited

### **Ollerton One Murphy Hub**

Archaeological Desk-Based Assessment



### wsp

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### **Executive summary**

WSP has been commissioned by Murphy's Plant Ltd to carry out an archaeological deskbased assessment (ADBA) in advance of proposed development at Newark Road, Ollerton. Nottinghamshire. The scheme comprises the extension of the Murphy's Plant Ltd construction site into agricultural fields to the east of the existing site. New office buildings, workshops, storage facilities, SUDS pond area and a fluvial control feature are proposed. This desk-based study assesses the impact on buried heritage assets (archaeological remains). Although above ground heritage assets (historic structures) are not discussed in detail, they have been noted where they assist in the archaeological interpretation of the site.

The site does not contain any nationally designated (protected) heritage assets, such as scheduled monuments or listed buildings.

There have been no previous archaeological investigations conducted within the site.

Buried heritage assets that may be affected by the proposals comprise:

- Y **Palaeolithic palaeoenvironmental remains**. Alluvial deposits are present adjacent to the floodplain of the stream within the site, which have the potential to preserve organic remains associated with the Palaeolithic period. These would likely be of low or medium heritage significance, depending on their nature and extent.
- Prehistoric archaeological remains. There is high potential for prehistoric remains to be located within the site, as a ring ditch (potentially a barrow) has been identified on aerial photography within the western (developed) part of the site, which may place the site within a prehistoric (likely Bronze Age) funerary landscape. The lack of previous archaeological investigations means that the nature, extent and location of activity during these periods are unknown. The heritage significance of any prehistoric remains would depend on their nature and extent.
- Y **Medieval to modern agricultural remains**. There is high potential for agricultural remains associated with the medieval to modern field systems to be present within the site. These would be of low heritage significance.
- Y **Medieval remains of the Wellow village pond and common**. The Nottinghamshire Historic Environment Record indicates that the Wellow medieval village pond and common run through the southern part of the site. Although these were not visible on the surface during the site visit or on LiDAR or aerial imagery, should these be present these remains would be of low heritage significance.
- Y **Modern remains associated with the mineral railway**. The route of a former mineral railway that would have serviced the Ollerton Colliery is located within the site. These remains are likely to be low significance.

Archaeological survival is likely high across the agricultural areas of the eastern half of the site, as these have remained undeveloped since at least the medieval period, and any

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remains present would likely be found at a shallow depth, below the current level of ploughing. The western half of the site will have likely low survival of archaeological remains where buildings are currently upstanding to medium survival of archaeological remains underneath the existing hardstanding areas for the car park and the driveways. The foundations of buildings and the topsoil strip that would have been undertaken to level the car park and driveway areas of the site will have truncated or removed archaeological remains in their footprint. Woodland planting and growth will have also truncated archaeological remains within its footprint.

The primary impact to potential archaeological remains would be the preliminary site-wide topsoil stripping and subsequent deeper construction works, such as the building foundations, ground levelling and ponds. These will truncate or completely remove any archaeological remains. Landscaping and road construction, as well as services, would partly or completely remove any surviving remains within their footprint.

In light of the uncertain archaeological potential of the areas of proposed impact, including the possibility of the ring ditch still being intact in the western part of the site, preliminary evaluation would be required. The pre-application advice concluded that the application should be accompanied by the results of geophysical survey for the two agricultural fields that make up the eastern part of the site as Stage 1 of this archaeological evaluation. This will help to determine the presence, nature, extent and significance of any archaeological remains present within the site and would then inform the Historic Environment team at the Local Planning Authority (LPA) (namely Newark and Sherwood District Council) as to whether further archaeological evaluation works would be required (in the form of trial trenching).

Any archaeological work would need to be undertaken in accordance with a Written Scheme of Investigation (WSI) setting out the scope and methodology for the work and approved by the local planning authority archaeological advisor in advance of the work.

### 1 Introduction

#### 1.1 Project background

1.1.1. WSP has been commissioned by Muphy's Plant Ltd to carry out an archaeological deskbased assessment (ADBA) in advance of a proposed development at Murphy's Plant Limited (Ltd), Ollerton, in Nottinghamshire (National Grid Reference/NGR 467065, 367040; Figure 1. The scheme comprises the extension of the Murphy's Plant Ltd construction site into agricultural fields to the east of the existing site. New workshops, storage facilities, SUDS pond area and a fluvial control feature are proposed.

#### 1.2 Scope

- 1.2.1. The report provides a baseline of known or possible buried heritage assets (archaeological remains including upstanding earthworks) within or immediately adjacent to the area of proposed development (hereafter the 'site'), which have been identified from a broad range of standard sources. Such assets are considered to have a degree of significance meriting consideration in planning decisions and include designated (protected) buried heritage assets and non-designated assets.
- 1.2.2. Professional expert opinion has been used to assess heritage significance, based on historic, archaeological, architectural or artistic interest, considering past ground disturbance which may have compromised survival.
- 1.2.3. This report deals solely with the archaeological implications of the development and does not assess the impact upon above ground heritage assets (i.e. designated and non-designated historic structures and conservation areas) except where buried parts of historic fabric are likely to be affected. Such assets on or in the vicinity of the site are discussed if they are relevant to the archaeological interpretation of the site, and direct physical impacts are noted. The report does not assess issues in relation to the setting of above ground heritage assets (e.g. visible changes to historic character and views), in line with pre-application advice given by Newark and Sherwood District Council (Application Ref: PREAPM/00223/23; see **Section** Consultations **3.2**).
- 1.2.4. An assessment of the impact on the significance of known buried heritage remains through possible changes to setting is only undertaken where there is sufficient information to establish the likely contribution of setting to heritage significance, and where the significance of the asset warrants this.
- 1.2.5. The assessment forms an initial stage of investigation and is required in relation to the planning process in order that the local planning authority (LPA) (namely Newark and Sherwood District Council) can formulate an appropriate response in light of the impact upon any known or possible heritage assets.

#### 1.3 Aims and objectives

- 1.3.1. The aim of this report is to assess the impact of the proposed development and to provide a suitable strategy to mitigate any adverse effects, if required, as part of a planning application to develop the site. The aim is achieved through four objectives:
  - $\Upsilon$  identify the presence of any known or potential buried heritage assets that may be affected by the proposals;
  - Υ describe the significance of such assets, in accordance with the National Planning Policy Framework (NPPF), considering factors which may have compromised asset survival, and if appropriate, where an asset's setting contributes to its significance;
  - $\Upsilon$  assess the likely impacts upon the significance of the assets arising from the proposals; and
  - $\Upsilon$  provide recommendations for further investigation and/or mitigation where required, aimed at reducing or removing completely any adverse effects.

#### 1.4 Key heritage constraints

- 1.4.1. The site does not contain any nationally designated (protected) heritage assets, such as scheduled monuments, listed buildings or registered parks and gardens.
- 1.4.2. The site shares its southern-most boundary with the Wellow Conservation Area (Figure 1).

### 2 Planning framework

### 2.1 Legislative background

#### **Scheduled Monuments**

- 2.1.1. Important archaeological sites (both above and below-ground remains) may be identified and protected under the *Ancient Monuments and Archaeological Areas Act 1979*. An application to the Secretary of State is required for any works affecting a Scheduled Monument. Prior written permission, known as Scheduled Monument Consent (SMC) is required from the Secretary of State for works physically affecting a scheduled monument. SMC is separate from the statutory planning process.
- 2.1.2. Development affecting the setting of a scheduled monument is dealt with wholly under the planning system and does not require SMC.
- 2.1.3. Geophysical prospection (including the use of a metal detector) on a scheduled monument requires consent from Historic England.

#### Listed Buildings and Conservation Areas

- 2.1.4. The Planning (Listed Buildings and Conservation Areas) Act 1990 sets out the legal requirements for the control of development and alterations which affect listed buildings or conservation areas (including buildings of heritage interest which lie within a conservation area). Grade I are buildings of exceptional interest. Grade II\* are particularly significant buildings of more than special interest. Grade II are buildings of special interest.
- 2.1.5. Arrangements for Handling Heritage Applications: Notification to Historic England and National Amenity Societies and the Secretary of State (England) Direction 2021, directs that in respect of applications for listed building consent, local planning authorities must consult Historic England for works; i) in respect of any Grade I or II\* listed building; and (ii) for relevant works in respect of any Grade II listed building. The National Amenity Societies must be consulted where the partial or complete demolition of a listed building is proposed.
- 2.1.6. Also protected and requiring listed building consent, even if they are not specifically referred to in a statutory listing description, are 'curtilage buildings'. These are any object or structure within the curtilage of a principal building (listed building) which, although not fixed to the principal building, forms part of the land and has done so before 1<sup>st</sup> July 1948 and which is treated as part of the principal building by virtue of section 1(5)(b) of the Act.

### 2.2 Planning policy

### **National Planning Policy Framework**

2.2.1. The National Planning Policy Framework (Ministry of Housing, Communities and Local Government, 2023) sets out the Government's planning policies for England and provides guidance for planning authorities and developers on the conservation and investigation of

heritage assets. The primary objective of the NPPF is to foster the delivery of sustainable development, not to prevent it.

- 2.2.2. The historic environment is specifically dealt with in section 16 of the NPPF. The policies set out in the NPPF should be interpreted and applied locally to meet local objectives. The NPPF is designed to provide a clear framework to make sure that heritage assets are conserved or enhanced in a manner that is proportionate with their significance.
- 2.2.3. The NPPF sets out the importance of assessing the significance of heritage assets that may be affected by a proposal. Paragraph 200 of the NPPF states that local planning authorities, when determining applications, should require the applicant to "describe the significance of any heritage assets affected, including any contribution made by their setting". Paragraph 194 goes on to state that "the level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance".
- 2.2.4. Heritage assets are defined in Annex 2 of the NPPF as "a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including local listing)." Annex 2 also defines significance as "the value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting". Setting is defined as "the surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve".
- 2.2.5. Paragraph 203 of the NPPF states that local planning authorities should consider the following when determining planning applications:
  - Υ "the desirability of sustaining and enhancing the significance of heritage assets and putting them to viable uses consistent with their conservation;
  - Y the positive contribution that conservation of heritage assets can make to sustainable communities including their economic vitality; and
  - Y the desirability of new development making a positive contribution to local character and distinctiveness".
- 2.2.6. Paragraphs 205 to 208 detail the notion that heritage assets can be harmed or lost through alterations, destruction, or from development within their setting. These paragraphs identify that this harm ranges from less than substantial to substantial. The emphasis should be on the conservation of designated heritage assets, regardless of whether any potential harm is considered to be substantial or less than substantial (paragraph 205). As a rule, the more important the heritage asset is, the greater the weight should be on its conservation. Assets of the highest significance are scheduled monuments, protected wreck sites, registered battlefields, Grade I and II\* listed buildings, Grade I and II\* registered parks and gardens, and World Heritage Sites (paragraph 206).

- 2.2.7. Paragraph 207 of the NPPF goes on to state that development consent should be refused where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, unless the application demonstrates that the proposed development will result in substantial public benefits that outweigh the harm or loss to the heritage asset. Where less than substantial harm is caused, this should also be weighed against the public benefits of the proposal.
- 2.2.8. With regard to applications concerning non-designated heritage assets 'a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset' (paragraph 209).

#### East Midlands regional policy

2.2.9. The overarching strategies and policies for the whole of the East Midlands are contained within the Government Office for the East Midlands 2009. The policies that deal with Cultural Heritage are reproduced in full, below:

### "Policy 26 – Protecting and Enhancing the Regions Natural and Cultural Heritage

Sustainable development should ensure the protection, appropriate management and enhancement of the Region's natural and cultural heritage. As a result the following principles should be applied:

the Region's internationally and nationally designated natural and historic assets should receive the highest level of protection;

damage to other natural and historic assets or their settings should be avoided wherever and as far as possible, recognising that such assets are usually irreplaceable;

unavoidable damage must be minimised and clearly justified by a need for development in that location which outweighs the damage that would result;

unavoidable damage which cannot be mitigated should be compensated for, preferably in a relevant local context and where possible in ways which also contribute to social and economic objectives;

there should be a net increase in the quality and active management of natural and historic assets across the Region in ways that promote adaptation to climate change, and an increase in the quantity of environmental assets generally; and

the Region's best and most versatile agricultural land should be protected from permanent loss or damage.

#### Policy 27 – Regional Priorities for the Historic Environment

The historic environment should be understood, conserved and enhanced, in recognition of its own intrinsic value, and its contribution to the Regions quality of life. Across the Region and particularly in areas where growth or regeneration is a

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priority, development should promote sensitive change of the historic environment. To achieve this, Local Planning Authorities should:

identify and access the significance of specific historic assets and their setting;

use characterisation to understand their contribution to the landscape or townscape in areas of change;

encourage the refurbishment and er-use of disused or under-used buildings of some historic or architectural merit and incorporating them sensitively into regeneration schemes;

promote the use of local building materials; and

recognising the opportunities for enhancing tourism attractions and for developing the potential of other areas and sites of historic interest as part of Green Infrastructure, having regard to potential impacts on biodiversity."

#### Local planning policy

2.2.10. The Newark and Sherwood Core Planning Strategy (Newark and Sherwood District Council, 2019) outlines the following policy in relation to the Historic Environment:

"Core Policy 14 Historic Environment

Newark & Sherwood has a rich and distinctive historic environment and the District Council will work with partners and developers in order to secure:

The continued conservation and enhancement of the character, appearance and setting of the District's heritage assets and historic environment, in line with their identified significance as required in national policy:

- Designated assets and environments comprising Listed Buildings (inclusive of the protected views of and across Southwell's principal heritage assets), Conservation Areas, Registered Historic Parks and Gardens, and Scheduled Monuments. When considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation. The more important the asset, the greater the weight should be. Where adverse impact is identified there should be a clear and convincing justification, including where appropriate a demonstration of clear public benefits;
- Non-designated heritage assets including buildings of local interest, areas of archaeological interest and unregistered parks and gardens or as identified on the relevant Historic Environment Record or identified in accordance with locally agreed criteria. In weighing applications that affect directly or indirectly non designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.

The preservation and enhancement of the special character of Conservation Areas including that character identified through Conservation Area Character Appraisals which will form the basis for their management. Important open spaces and features identified through the Conservation Area Appraisal process will be protected through subsequent allocation in the Allocations & Development Management DPD;

Positive action for those heritage assets at risk through neglect, decay, vacancy or other threats where appropriate; and

The protection of Historic Landscapes including the Historic Battlefield at Stoke Field, the Sherwood Forest Heritage Area and the Historic Landscape around Laxton. A sustainable future for Laxton will be sought, which preserves and enhances its Open Field System and culture, the built and natural environment which sustain it, including the Historic Landscape around Laxton, and the institutions which manage it. This will be achieved by working in partnership with the Court Leet, the Crown Estates and the Parish Council. Appropriate new development which facilitates these aims will be supported.'

#### 2.3 Heritage sector guidance

2.3.1. The assessment has been carried out in accordance with the requirements of the National Planning Policy Framework/NPPF (MHCLG 2021, 2018) and to standards specified by the Chartered Institute for Archaeologists (CIfA Dec 2020a, 2020b) and Historic England (Historic England 2015, 2017).

#### **Historic England Guidance**

2.3.2. Historic England Good Practice Advice (GPA) 2 – Managing Significance in Decision-taking (March 2015) emphasises the requirement to have knowledge and understanding of the significance of heritage assets likely to be affected by the development and that the "first step for all applicants is to understand the significance of any affected heritage asset and, if relevant the contribution of its setting to its significance" (paragraph 4). This information is also useful to the local planning authority in pre-application engagement with an applicant and ultimately in decision making (paragraph 7).

#### **Research Framework**

- 2.3.3. In addition to the policy and guidance detailed above, all archaeological works on the site will be conducted with full consideration of Research and Archaeology Revisited: a revised framework for the East Midlands (Knight, Vyner, & Allen, 2012), which covers the modern counties of Derbyshire, Leicestershire, Lincolnshire, Northamptonshire, Nottinghamshire and Rutland, together with the unitary authorities of Derby, Leicester and Nottingham.
- 2.3.4. Research frameworks provide an updated overview of current understanding, through the synthesis of information from a range of sources such as the HER, and reports from planning-led investigations. An agreed Research Agenda sets questions and areas of

research where knowledge gaps are identified and allow planning-led projects to contribute effectively to public understanding.

2.3.5. This assessment (and all fieldwork resulting from recommendations within) will take into consideration the general themes of the Research Framework, and specific chronological themes where appropriate.

#### **Chartered Institute of Archaeologists**

2.3.6. The baseline study has been undertaken in accordance with guidance published by the Chartered Institute for Archaeologists (CIfA), specifically the standard and guidance for historic environment desk-based assessment (CIfA, 2020).

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### 3 Methodology and sources

#### 3.1 Desk-based assessment

- 3.1.1. In order to determine the archaeological potential of the site, a broad range of standard documentary and cartographic sources, including results from any archaeological investigations in the site and a 1km radius study area around it were examined in order to determine the likely nature, extent, preservation and significance of any known or possible buried heritage assets that may be present within or adjacent to the site.
- 3.1.2. The table below provides a summary of the key data sources. Occasionally there may be reference to assets beyond this study area, where appropriate, e.g., where such assets are particularly significant and/or where they contribute to current understanding of the historic environment.

Source	Data	Comment
Historic England	National Heritage List (NHL) with information on statutorily designated heritage assets	Statutory designations (scheduled monuments; statutorily listed buildings; registered parks and gardens; historic battlefields) can provide a significant constraint to development.
Nottinghamshire County Council	Historic Environment Record (HER)	Primary repository of archaeological information. Includes information from past investigations, local knowledge, find spots, and documentary and cartographic sources
Historic England	National Record of the Historic Environment (NRHE)	National database maintained by Historic England. Not as comprehensive as the HER but can occasionally contain additional information. Accessible via the heritage gateway website. This was consulted for the site and its immediate vicinity only.
Local Planning Authority	Conservation area	An area of special architectural or historic interest the character or appearance of which it is desirable to preserve or enhance.
British Geological Survey (BGS)	Solid and drift geology digital map; online BGS geological borehole record data.	Subsurface deposition, including buried geology and topography, can provide an indication of potential for early human settlement, and potential depth of archaeological remains.

#### Table 3-1 – Data sources consulted

Source	Data	Comment
Groundsure	Ordnance Survey maps from the 1 <sup>st</sup> edition (1860–70s) to present day	Provides a good indication of past land use and impacts which may have compromised archaeological survival. Provides an indication of the possible date of any buildings on the site.
Nottinghamshire Archives	Historic maps (e.g. Tithe, enclosure, estate), published journals and local history	Baseline information on the historic environment.
Historic England Cambridge University Britain from Above Historic Environment Scotland	Digital aerial photograph archives	Cropmarks formed by moisture variations due to subsurface features can indicate the presence of archaeological remains. Aerial photographs can also sometimes provide information on ground disturbance.
Environment Agency	Lidar	Analysis of LiDAR data can reveal undulations in the ground that indicate the presence of archaeological features not visible on the ground or on aerial photographs.
Internet	Web-published local history; Archaeological Data Service	Many key documentary sources, such as the Victoria County History and local and specialist studies are now published on the web and have been used to inform the archaeological and historical background. The Archaeological Data Service includes an archive of digital fieldwork reports.

3.1.3. Figure 2 shows the location of known historic environment features within the study area, as identified by the sources above, the site visit, or during the course of research for this assessment. These have been allocated a unique 'assessment' reference number (A1, 2, etc.), which is listed in a gazetteer at the back of this report and is referred to in the text. Where there are a considerable number of listed buildings in the study area, only those within the vicinity of the site (i.e. within 50m) are included, unless their inclusion is considered relevant to the study. Distances quoted in the text are approximate (within 5m).

#### 3.2 Consultations

- 3.2.1. WSP submitted a pre-application advice request relating to the proposed extension to and re-development of the Murphy's Plant Ltd complex (Application Ref: PREAPM/00223/23). The consultation responses concluded that the application should be accompanied by an Archaeological Desk-based Assessment that includes the results of the geophysical survey for the two agricultural fields that make up the eastern part of the site. The consultees highlighted that a ring ditch and linear feature has been noted within the western part of the site, and that the eastern half of the site was formerly part of the medieval open field system around Ollerton and appears largely undisturbed.
- 3.2.2. On 12/12/2023, Ursilla Spence, Archaeology Leader at Nottinghamshire County Council, was consulted on her views on the scope of works for the desk-based assessment. Ursilla has passed the details onto Matthew Adams who is currently covering the LPA advisory role for archaeology for Newark & Sherwood District Council. We are yet to receive further response at the time of writing.

#### 3.3 Site visit

3.3.1. The assessment included a site visit carried out on the 13<sup>th</sup> of December 2023 in order to determine the topography of the site and existing land use, the nature of the existing buildings, identify any visible heritage assets (e.g. structures and earthworks), and assess factors which may have affected the survival or condition of any known or potential assets. The visit focussed predominantly on the agricultural fields to the east of the Murphy's Plant Ltd complex. No archaeological features were noted, apart from the earthworks associated with the former railways that run along the boundaries of the agricultural fields (see Section 4.6).

#### 3.4 Assessing archaeological potential

3.4.1. Section 5 presents an assessment of archaeological potential for each chronological period, based on the archaeological and historical background of the area, its geology, topography and hydrology, the likelihood for evidence of past activity, and considering past disturbance which may have affected survival. For example, the site may have high potential for activity of a particular period, but with low survival. Section 5 also includes professional opinion on likely heritage significance, where there is low to moderate, or higher, potential for remains to be present. Where potential is low, heritage significance is not assessed, as this implies that remains from the period are not present.

#### 3.5 Assessing heritage significance

3.5.1. The NPPF defines significance as 'The value of a heritage asset to this and future generations because of its heritage interest. That interest may be historic, archaeological, architectural or artistic.' The determination of the significance is based on statutory designation and/or professional judgement against these values (they are also identified in Historic England *Statements of Heritage Significance* (2019).

- 3.5.2. Each asset is evaluated against the range of criteria listed above on a case-by-case basis. Unless the nature and exact extent of buried archaeological remains within any given area has been determined through prior investigation, significance is often uncertain.
- 3.5.3. In relation to significant known heritage assets, where feasible and warranted, the assessment considers the contribution which the historic character and setting makes to the overall significance of the asset.
- 3.5.4. The table below gives examples of the significance of designated and non-designated heritage assets.

Heritage asset description	Significance
World Heritage Sites	Very High
Scheduled Monuments	High
Grade I Listed Buildings	
Grade II* Listed Buildings	
Grade II Listed Buildings with exceptional qualities in fabric, historical association, and/or association/group value with heritage assets of high significance	
Protected Wrecks	
Registered Battlefield	
Conservation Areas containing very important (Grade I / II*) listed buildings	
Grade I and II* Registered Parks and Gardens	
Protected heritage landscapes (e.g. ancient woodland or historic hedgerows, heritage Sites of Special Scientific Interest)	
Burial grounds	
Non-designated heritage assets (above ground structures, landscape, townscape, buried remains) of national importance.	
Grade II Listed Buildings which can be shown to have qualities in their fabric or historical association of regional importance only	Medium
Conservation Areas containing primarily Grade II listed or Locally Listed Buildings	
Grade II Registered Parks and Gardens	
Locally Listed Buildings	
Non-designated heritage assets (above ground structures, landscape, townscape, buried remains) of regional importance.	

#### Table 3-2 – Significance of heritage assets

Heritage asset description	Significance
Non-designated heritage assets (above ground structures, landscape, townscape, buried remains) of local importance.	Low
Item with no significant heritage value or interest	Negligible
Heritage assets that have a clear potential, but for which current knowledge is insufficient to allow significance to be determined.	Uncertain

#### 3.6 Assessing harm

3.6.1. Professional judgement is used to consider the impact (the magnitude of change) of future development on the significance a known heritage assets. This is assessed in NPPF terms as 'no harm', 'less than substantial harm', 'substantial harm' or 'total loss of significance'.

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### 4 Historic Environment baseline

#### 4.1 Site location

- 4.1.1. The site is located at the Murphy's Plant Ltd. Ollerton, on Newark Road, Nottinghamshire (NGR 467065, 367040: Figure 1). The site is bounded by Newark Road on its western boundary, and by woodland on the south-western, south-eastern and northern boundaries. The woodland areas follow the line of former railway tracks and embankments that demarcate the site from the wider landscape.
- 4.1.2. The site has two distinct land uses, with a curving piece of woodland in the centre that follows the former railway (with the former railway bridge) demarcating the current Murphy's Plant Ltd to the west of the woodland and the agricultural fields to the east of this woodland (**Plates 4-1 to 4-3**).
- 4.1.3. The site falls within the historic parish of Boughton, which lay within the county of Nottinghamshire prior to being absorbed into the administration of Ollerton and Boughton parish in the 20<sup>th</sup> century.
- 4.1.4. Within the site there is a stream that demarcates the two agricultural fields on the eastern part of the site and runs into the village of Wellow. This could be associated with the Boughton Dyke, approximately 50m to the north of the site. There are a number of streams and watercourses that run through the wider landscape, likely linked to the watercourse of the River Trent that is located approximately 15km to the east of the site, and smaller tributaries of this such as the River Maun approximately 1km to the west of the site and the Gallow Hole Dyke, approximately 1.5km to the south of the site.



Plate 4-1 - Eastern agricultural field, facing north-east (WSP, 2023)

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Plate 4-2 - Stream running between the two agricultural fields, facing north (WSP, 2023)



Plate 4-3 - Western agricultural field of the site, facing east (WSP, 2023)

### 4.2 Topography

- 4.2.1. Topography can provide an indication of suitability for settlement, and ground levels can indicate whether the ground has been built up or truncated, which can have implications for archaeological survival (see **Section 4.7**).
- 4.2.2. At the time of writing, there has been no topographic survey undertaken. The site sits relatively flat, with the edges of the site sitting at approximately 50m above Ordnance Datum (aOD) and falling towards the stream to approximately 40m aOD (Topographic Map 2023).

#### 4.3 Geology

- 4.3.1. Geology can provide an indication of suitability for early settlement, and potential depth of remains.
- 4.3.2. The bedrock geology of the site is split into three parts across the site (**Figure 3**). The western part of made up of Chester Formation Sandstone, with the majority of the eastern section being formed of Retford member Mudstone. There is a small piece of Taporley Siltstone Formation that has been identified along the eastern border of the site. Superficial deposits in the form of Alluvium run along the length of the stream and floodplain within the centre of the site, running north-east to south-west through the site.
- 4.3.3. There have been no geotechnical investigations undertaken within the site at present. There have been no historic boreholes undertaken within the site, although there have been three undertaken within an area located approximately 75m to the south of the site (SK66NE24-26; Figure 3). The borehole logs indicate that the investigations comprised machine excavation through to 2.14 metres below ground level (mbgl) before being borehole drilled beyond that point. Ripple drift geology was recorded in the layers above 2.14m (exact depths and thicknesses not recorded) and it is believed that this comprises alluvial deposits that are indicative that the boreholes are within the floodplain of the adjacent stream. Historic mapping (see Figures 4 7) would support this. The works also identified the bedrock geology of siltstone and sandstone at approximately 3 metres below ground level (mbgl) across all 3 boreholes.
- 4.3.4. Another historic borehole, **SK66NE57 (Figure 3**), located approximately 310m to the south of the site, identified brown sandy clay that contained organic deposits between 1.3 and 2.3 mbgl.

### 4.4 Overview of past archaeological investigations

4.4.1. There have been no previous archaeological investigations undertaken within the site. However, there have been intrusive archaeological investigations undertaken within the study area. The closest of these comprises trenched evaluation works undertaken approximately 550m to the west of the site, at Wellow Road, Ollerton (A12b) (Pre-Construct Archaeology, 2014). These works identified no archaeological features, and only small amounts of post-medieval and modern artefacts were recovered. There have also been

evaluation works undertaken at Maltkiln Close (**A13b**), approximately 720m to the west of the site, which also did not identify any archaeological features (Allen Archaeology Ltd, 2020).

- 4.4.2. Although there have been several archaeological investigations undertaken within the Wellow Conservation Area in the south of the study area, these have only recovered modern features that are of negligible archaeological interest (A4, A6, A8 and A9).
- 4.4.3. Geophysical survey has also been undertaken over Jordan's Castle, located 600m to the south-east of the site, to identify the medieval ringwork located within the grounds of the Scheduled Monument (A16a-b).
- 4.4.4. The results of these investigations, along with other known sites and finds within the study area, are discussed by period, in **Section 4.6** below. The date ranges below are approximate.

### 4.5 LiDAR and aerial photographs

- 4.5.1. LiDAR, Google Earth and historic oblique and vertical aerial imagery have been analysed for the purposes of the report (not replicated). No additional archaeological features have been identified on the site that have not been previously identified on the HER and/or on historic mapping (See **Section 4.6**).
- 4.5.2. Historic England online aerial photographs identified one historic image that covers the north-western part of the site (not replicated)<sup>1</sup>. No archaeological features have been identified from analysis of this photograph. Cambridge University Collection of Aerial photographs also identified one photograph covering the site, which shows the ring ditch (A1b; Plate 4-4) that has is recorded by the HER within the footprint of the current Murphy Plant complex. It does not identify any further archaeological features within the agricultural fields that comprise the east of the site<sup>2</sup>.

<sup>1</sup> <u>https://historicengland.org.uk/images-books/archive/collections/aerial-photos/record/EPW050239</u>
<sup>2</sup> <u>https://www.cambridgeairphotos.com/location/abo67/</u>

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#### Plate 4-4 - 'Cropmarks, 0.75 mile E of Ollerton' (CUCAP, 1960, photo number: ABO67)

4.5.3. Further aerial photographs have been detailed on the National Collection of Aerial Photography website, but these have not yet been digitised and they were not accessible at the Nottinghamshire Archives during the archive visit for this assessment. The Britain from Above website, which features images from the Aerofilms collection dating from between 1919 to 2006, did not have any aerial photographs covering the site.

### 4.6 Archaeological and historical background

#### Prehistoric (800,000 BC-AD 43)

4.6.1. The Lower (800,000–250,000 BC) and Middle (250,000–40,000 BC) Palaeolithic saw intermittent, perhaps seasonal Hominin occupation of Britain as the climate alternated between long cold (glacial) and short warm (interglacial) stages. The Upper Palaeolithic was the last of the Old Stone Age periods (40,000–10,000 BC), spanning the last glacial cycle of the Pleistocene (the British Devensian). The archaeology of the Upper Palaeolithic is characterised by new stone-working techniques, the use of bone and other materials, art and anatomically modern humans (*Homo sapiens sapiens*). After the last glacial maximum (c. 20,000 BC), the Devensian ended with the improved climatic conditions of the Holocene (c. 10,000 BC), and the environment changed from steppe-tundra to birch and pine woodland. It is probably at this time that what is now England saw continuous human occupation. Erosion has removed much of the Palaeolithic land surfaces and finds are typically residual. A single asset dating to the Palaeolithic is recorded within the study area,

comprising worked flints identified within garden soil approximately 915m to the west of the site (**A36b**). It is, however, likely that these were not *in situ* and likely came from an imported soil.

- 4.6.2. The British Geological Survey (BGS 2023) identified alluvial deposits that are associated which runs within the centre of the site. Organic waterlogged deposits such as these that include peat have the potential to yield information on early prehistoric populations through palaeoenvironmental evidence. Palaeolithic evidence in Nottinghamshire has been well studied at the sites of Cresswell Crags, approximately 14km to the north-east of the site, and at Farndon at approximately 20km to the south-west of the site, and therefore there is broad potential for Palaeolithic activity to be located in the site (Howard, 2020).
- 4.6.3. The Mesolithic hunter-gatherer communities of the postglacial period (10,000–4000 BC) inhabited a still largely wooded environment. The river valleys and coast would have been favoured in providing a predictable source of food (from hunting and fishing) and water, as well as a means of transport and communication. Evidence of activity is characterised by flint tools rather than structural remains. There are no known sites or finds dated to this period within the study area.
- 4.6.4. The Neolithic (4000–2200 BC), Bronze Age (2200–800 BC) and Iron Age (800 BC–AD 43) are traditionally seen as the time of technological change, settled communities and the construction of communal monuments. Farming was established and forest cleared for cultivation. An expanding population put pressure on available resources and necessitated the utilisation of previously marginal land.
- 4.6.5. The site sits within the Trent Valley floodplains (the River Trent being located approximately 15km to the east of the site). The Trent Valley has been identified as being a central marker for later prehistoric settlement, due to the rich fertile lands and accessibility to natural resources. Cropmarks identified across Nottinghamshire have highlighted that there is the development of numerous dispersed settlements and farms with enclosed field-systems at this time, with one of the key sites being at Holme Pierrepoint approximately 30km to the south of the site (Willis, 2020).
- 4.6.6. The National Mapping Programme (NMP) of Nottinghamshire, carried out between July 1993 and January 1997<sup>3</sup> has identified a ring ditch and linear feature within the south-western part of the site, within the footprint of the current Murphy's Plant Ltd complex (A1b; Plate 4-5). Although the form or function of this ring ditch is uncertain, as it has only been identified through cropmark evidence, there is a possibility that it could have comprised the remains of a prehistoric barrow. Barrows were monumental earth or stone-built structures suitable for funerary practices in the later prehistoric periods, with the peak of barrow

<sup>&</sup>lt;sup>3</sup> https://archaeologydataservice.ac.uk/archives/view/NMP/

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construction being in the Bronze Age. This potentially places the site within a Bronze Age funerary landscape.



### Plate 4-5 - Western part of the site, facing north-east. This is where the ring ditch (A1b) has been identified via the National Mapping Programme (WSP 2023)

- 4.6.7. There have been no definitive prehistoric features identified elsewhere within the site extents. Within the wider study area, a Bronze Age arrowhead and worked flints have been identified approximately 915m to the west of the site (A36b), as well as a flint scraper (A29) identified within Wellow Conservation Area (A40), approximately 650m to the south of the site.
- 4.6.8. There have been no prehistoric archaeological features identified during previous intrusive archaeological investigations within the wider Study Area. However, there has been a general lack of archaeological investigations within the Study Area, and therefore current understanding of the prehistoric periods is limited. It is possible that the fertile nature of the land in the Trent valley, with easy accessibility to natural resources, would have been attractive to prehistoric populations.

#### Roman (AD 43-410)

- 4.6.9. The site lies at some distance from major Roman settlements and the known established Roman road network. The nearest major known Roman settlement in the Newark district is a roadside settlement at Brough, approximately 18km to the south-east of the site (NHLE: 1003479). There has been one Roman rural settlement identified approximately 6km to the north-east of the site at Gleadthorpe Farm, where excavations of cropmarks revealed ditches and trackways dating to the period (Allen, *et al.*, 2018).
- 4.6.10. Margary's route network identifies the route of the Fosse Way (Route 5) running approximately 18km to the south-east of the site, and the route of Ryknield Street (Route

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18) runs over 25km to the west of the site, with the more minor Catcliffe to Oldcoates road (Route 189) running approximately 19km to the north of the site. There is a minor Roman road that has been tentatively located along the route of the A614 from Ollerton to Gunthorpe, approximately 1.9km to the west of the site (Pre-Construct Archaeology, 2014).

- 4.6.11. Features have been identified through the National Mapping Programme that have tentatively been identified as a Roman Marching Camp approximately 270m to the west of the Site (A32). Google Earth imagery from 2017 (not reproduced) identifies two rectangular features within this field, although no internal features or entranceways of note are apparent. Roman marching camps would have been temporary/semi-permanent bases for military activity in the Roman period, subdivided internally in the same format across the country and bounded by an earthen rampart.
- 4.6.12. It is unlikely such military activities extended within the bounds of the site, as marching camps tended to be enclosed and only temporarily occupied. Apart from some Roman tegula and pottery identified at Boughton (A15), approximately 870m to the north-east of the site, there have been no other Roman archaeological features identified in the study area. It is likely that the site and its environs formed part of an agricultural landscape during this period, as it is set well away from known roads and permanent settlements.

#### Early medieval (AD 410-1066)

- 4.6.13. Following the withdrawal of the Roman army from England in the early 5<sup>th</sup> century AD the whole country fell into an extended period of socio-economic decline. In the East Midlands, trade during this time is thought to been facilitated by the main water networks (especially the River Trent) and included imported goods like pottery. As a result of this trade, the East Midlands became a large and powerful early medieval kingdom. In the 9<sup>th</sup> and 10<sup>th</sup> centuries, the Saxon Minster system began to be replaced by local parochial organisation, with formal areas of land centred on nucleated settlements served by a parish church. Manorial estates within the study area that are mentioned in Domesday Book of 1086 (see below; 4.6.14 and 4.6.17) would have included principal settlements around a parish church.
- 4.6.14. The site would have been situated in the parish of Boughton during the early medieval period, which only contained 8 households by the time of the Domesday Book in 1086 (Powell-Smith, 2023). It is therefore likely that the landscape was not widely occupied in the early medieval period, and more likely settlement was located closer towards the historic core of Ollerton, approximately 3km to the west of the site. This contained 15 households by 1086 and therefore would likely have been settled in the early medieval period (Powell-Smith, 2023).
- 4.6.15. Nottinghamshire and Derbyshire have been highlighted as being sparse in evidence of any early medieval activity from the results of previous archaeological investigations. This could be due to settlement patterns being much more localised, or the way the land was exploited on the sandstones was different in comparison to other lower-lying counties in the East Midlands region (Vince, 2006).

4.6.16. This is reflected in the lack of evidence identified within the site or study area dating to the early medieval period. It is likely that the site was part of an agricultural, rural landscape at this time.

#### Medieval (AD 1066-1540)

- 4.6.17. During this period the site would have been situated within the parish of Boughton within the Hundred of Bassetlaw in 1086. The parish only contained 8 households by the time of the Domesday Book in 1086 (Powell-Smith, 2023). It is therefore likely that the landscape was not widely occupied at the start of the medieval period, although 15 households have been identified closer to the historic core of Ollerton, approximately 3km to the west of the site (Powell-Smith, 2023). Although not all medieval settlement comprised nucleated villages, other forms are under-recorded and poorly understood in the region (Lewis, 2006).
- 4.6.18. Sherwood Forest is known as one of the most famous medieval deer parks and royal forests in England, and its eastern extents are located approximately 4km to the west of the site. First recorded in 958AD and meaning 'the woodland belonging to the shire', it became a royal hunting forest by the time of Domesday and by the 1200s the forest covered about 100,000 acres, which was a fifth of the entire county (Nottinghamshire County Council, 2023).
- 4.6.19. Closer to the site itself, there have been a number of medieval features identified including Wellow Deer Park (approximately 10m to the east of the site; A17), which was gifted by King Henry in 1229 to Jordan Foliot. King Henry granted some of the royal deer from Sherwood Forest to be moved to the park, to the north of the castle ringwork. Foliot, who also owned Wellow and Grimston Manors at this time, then founded Jordan's Castle (his manor estate; NHLE: 1010916) in 1252 within the grounds of the deer park. Geophysical survey (A16a-b) has identified numerous features including platforms, banks, ditches, a moat, a motte and trackway within the Scheduled area of the castle, as well as ponds, holloways, banks and ditches in the wider Wellow Deer Park. The castle complex has since been overlain by ridge and furrow and would have been bounded by earthworks and woodland to enclose his royal manor complex.
- 4.6.20. Within the village of Wellow, an earthwork has been identified known as the Scheduled Monument of 'Gorge Dyke' (A3a and A3b). 'Wellow' means an enclosure near a spring or stream (The University of Nottingham, 2023). Gorge Dyke is likely the enclosure referred to, with the western boundary of the enclosure aligning with a little stream that runs in Wellow (which is the same stream that continues into the site), constructed in the 11<sup>th</sup> century. Sources suggest that Wellow was founded with this enclosure by displaced people following the foundation of Rufford Abbey and the desertion of Crastell and Grimston medieval settlements (Trick, Wright, & Creighton, 2016). There are two sides of this enclosure (now Scheduled) that are still visible in the landscape and provide part of the northern and eastern boundaries of the current village of Wellow.
- 4.6.21. Within the enclosed settlement, there have been medieval building platforms identified as well as the Grade II\* Listed Church of St Swithin, the original foundations of which date to

the 12<sup>th</sup> century (**A44a**). It has been subject to multiple phases of alteration over the succeeding centuries, with a restoration by Ewan Christian in 1868 and another restoration in 1968. The south-west tower is the oldest part of the current church, dating to the 12<sup>th</sup> century, with the nave and chancel being added in the 14<sup>th</sup> and 19<sup>th</sup> centuries respectively (Historic England, 2017).

4.6.22. In conjunction with the developing settlement at Wellow, there would have likely been a medieval village green and pond within the village. This has been identified as potentially running through the southern part of the site (A1c). However, there was no visual evidence of these features during the site visit, and analysis of LiDAR data and historic aerial photographs and modern satellite imagery does not indicate the presence of depressions or undulations which would suggest the presence of such features (Plate 4-6).



### Plate 4-6 - Southern edge of the site, looking towards the village of Wellow, facing south-east. No archaeological evidence of the pond or common is present in this area (WSP, 2023)

- 4.6.23. It is likely that the site would have been situated outside the principal areas of settlement during the medieval period and would have likely been part of a medieval agricultural field system. During the site visit, there was no visual evidence of ridge and furrow or other medieval agricultural features or finds, and analysis of LiDAR data and historic aerial photographs and modern satellite imagery does not indicate the presence of the typical undulations which would suggest the presence of such features.
- 4.6.24. However, given that there were agricultural fields identified on the Boughton Enclosure Map of 1787, it is likely that that the site would have been agricultural and rural in nature in the medieval period.

#### Post-medieval (AD 1540-1900)

- 4.6.25. During this period the site remained within a predominantly rural agricultural landscape and part of the parish of Boughton, apart from the south-westernmost corner of the site, which is located within the parish of Ollerton. The 1821 Map of the Township of Boughton indicates that the site was occupied by a number of agricultural fields of varying sizes at this time, with the stream running north-east to south-west through the site (**Figure 4**). A turnpike road ran adjacent to the western boundary of the site and cut through part of the south-westernmost point of the site.
- 4.6.26. Wellow and Boughton became settlement centres in the 19<sup>th</sup> century in this landscape, with the Boughton Tithe Map of 1846 and the Wellow Tithe map of 1845 indicating that the historic cores of the villages had been developed by this time. There had also been sporadic farmstead and tenement plots that had been erected across the landscape, including in Plot 436 on the Boughton Tithe Map of 1846 which is adjacent to the site and contains 'Two tenements and part of a yard' (**Figure 5**).
- 4.6.27. The Boughton Tithe Map of 1846 indicates that there have been some shifting field boundaries and changes in land ownership (Figure 5). However, the site continued to be utilised for agricultural purposes, with both pastural and arable farming taking place at this time. The stream is still running through the site, and there have been some public footpaths added running predominately north to south across the site.
- 4.6.28. By the First Edition Ordnance Survey Map of 1898-1900, there had been the development of the Lancashire, Derbyshire, and East Coast Railway that ran east to west along the northern boundary of the site (**Figure 6; Plate 4-7**). Originally the Newark and Ollerton Railway was authorised in 1887 to connect the mineral-bearing lands near Ollerton with the Great Northern Railway mainline. However, this was never built and instead Arkwright commissioned the Lancashire, Derbyshire and East Coast railway to connect coalfields in Derbyshire and Nottinghamshire with Warrington and a new port on the Lincolnshire coast.



Plate 4-7 - Railway line that runs along the northern boundary of the site, facing north-east (WSP, 2023)

- 4.6.29. The First Edition Ordnance Survey Map of 1898-1900 also shows White House Farm in place of the tenement plots that had been identified on the Boughton Tithe Map of 1846.
- 4.6.30. A single non-designated post-medieval asset, in the form of a boundary stone, is recorded on the site's eastern boundary (A1b) by the HER, having been identified during metal detecting. The stone, recorded as being flat-bottomed and inscribed on the main face with 'WV', is not thought to have been found in situ and was not visible during the site visit.

#### Modern 1900 to present

4.6.31. During the first half of the twentieth century period, the site continued to be part of an agricultural field system. The 1915 Parish Map of Boughton indicates that this field pattern was maintained during the first half of the century (Figure 7). However, by this time the Ollerton Colliery had been constructed, approximately 380m to the north-west of the site (A37). Experimental boreholes were undertaken between 1915 and 1921 in order to identify minerals in a demanding market during World War I, and the mines began to be sunk in 1923 (and were completed by 1926). During World War II, the Home Guard had an ammunition store and training hut at the colliery. It was known as a place to experiment with

new mechanisms and generating electricity. The site stopped producing coal in 1994 and was officially closed in 1995<sup>4</sup>.

- 4.6.32. The modern settlement of Ollerton developed concurrently with the Ollerton Colliery, with workers housing being commissioned by Mitton, an agent for the Butterley Company who founded the colliery<sup>5</sup>.
- 4.6.33. The 1: 6-inch Ordnance Survey map of 1938 (not replicated) indicates that the mineral railway which served the colliery was constructed by this time within the site (A1d). The 1:25 inch Provisional Ordnance Survey Map of 1955 (Figure 8) indicates that railway would have bounded the eastern boundary, the south-western boundary and curved within the central part of the site. The mineral railway would have transported the coal from the Ollerton Colliery across the county and beyond. Although the railway tracks have been removed from the site (the date of the removal of these tracks is unknown), the earthwork banks and bridges that would have carried the railway tracks still visible today (Figure 2; Plates 4-8 to 4-11).



Plate 4-8 - Eastern boundary of the site, facing south-east. The tree line is the embankment for the former railway line (WSP, 2023)

<sup>&</sup>lt;sup>4</sup> <u>https://calmview.derbyshire.gov.uk/calmview/Record.aspx?src=CalmView.Persons&id=NCB007&pos=1</u> <sup>5</sup> ibid

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Plate 4-9 - Railway bridge on the eastern embankment in the south-eastern part of the site, facing east (WSP, 2023)



Plate 4-10 - Embankment of the railway line in the central part of the site, facing south-west (WSP, 2023)

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Plate 4-11 - Railway bridge and trackway leading from the fields to the Murphy's Plant Ltd complex, facing south-west (WSP, 2023)

4.6.34. The rest of the site continued to be agricultural in nature on the 1:25 inch Provisional Ordnance Survey Map of 1955 (**Plate 4-12**).



Plate 4-12 - Agricultural fields occupying the eastern part of the site, facing east (WSP, 2023)

- 4.6.35. A hosiery works is shown adjacent to the southern boundary of the White Farm on the 1955 map. The rest of the landscape continued to be predominately rural and agricultural, with the development of the villages of Wellow, Ollerton and Boughton continuing during the twentieth century. There were also brickworks and sewage disposal works constructed in the wider landscape in the mid-20<sup>th</sup> century, indicating a diversifying industrial landscape during this period.
- 4.6.36. After Ollerton Colliery became disused in 1995, the mineral railway running through the site was abandoned. Murphy's Plant Ltd has been based within the western half of the site for over 25 years, and their complex currently comprises multiple warehouse and storage units with external yards, an office building and associated car park<sup>6</sup>. The eastern part of the site has remained agricultural, split into two fields that are divided by the stream running through the centre. Woodland bounds the eastern and south-western boundaries of the site, as well as the embankments of the former railway line. The northern boundary of the railway continues to be operational.

#### 4.7 Factors affecting archaeological survival

- 4.7.1. Archaeological survival is anticipated to be varied across the site.
- 4.7.2. Where the existing Murphy's Plant Ltd buildings (approximately 10% of the site) are currently upstanding within the site there is likely to be low archaeological survival. For the purposes of this assessment, it is assumed that the brick-built office building has been constructed using strip foundations. These would typically extend to a depth of 1.0mgbl and are likely to have removed or truncated any archaeological remains present. The warehouses, outbuildings and smaller buildings around the site are assumed to have been built on concrete pad foundations. These would typically extend to a depth of between 0.60m and 2mbgl and are likely to have removed or truncated or truncated any archaeological remains present to the depth of construction.
- 4.7.3. The hardstanding for the car park and driveways associated with the plant (approximately 40% of the site) are likely to have truncated any remains locally to the depth of surfaces and from any stripping carried out prior to construction. The typical depth for hardstanding ranges between 0.1–0.2mbgl. There is the potential for archaeological remains, particularly deeper cut features such as ditches or pits, to survive beneath these depths.
- 4.7.4. The route of the former mineral railway that would have served the Ollerton Colliery curves across the site from south to north-west and along the northern and south-eastern boundaries of the site (approximately 10% of the site) during the 20<sup>th</sup> century. The railway was built onto embankments, so it is possible that the line didn't require substantial ground

<sup>6</sup> <u>https://murphyinollerton.co.uk/context/</u>

reduction and therefore may not have significantly impacted on archaeological remains. However, as is typical of modern railway embankment construction, it is possible that ground levelling and drainage installation was undertaken prior to the build-up of the embankments.

- 4.7.5. Further impact is derived from the woodland across the site (approximately 15% of the site) and the hedgerow running adjacent to the stream (approximately 5% of the site). Root action from trees can cause truncation of underlying remains to a depth of 1.5m, which would extend beneath the topsoil into the underlying natural deposits.
- 4.7.6. There are two agricultural fields used for pasture of sheep located in the eastern part of the site. It is unknown at this stage whether the ground for the embankments for the railway was taken from these agricultural fields to build the railway on a higher ground. If this is the case, there may have been a widespread topsoil strip that will have minimally impacted on the archaeological remains within the site. However, it is also possible that there are high levels of archaeological survival, that have only been minorly impacted from ploughing and pastural agricultural activities, as these fields have been maintained as such since at least the post-medieval period.

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#### 5 Statement of significance

#### 5.1 Palaeoenvironmental

5.1.1. The site has high potential for palaeoenvironmental remains. The site is located on the Trent floodplain. The alluvium may contain well-preserved (due to waterlogging) organic remains. Minerogenic deposits such as alluvial silts and clays have high potential for diatom preservation, the assessment of which can provide information on the salt or freshwater nature of deposits that would enhance interpretation of the past landscape. Peat deposits preserve pollen and floral and faunal macrofossils such as seeds, plant fragments, molluscs and occasionally ostracods. Organic material can also be dated by radiocarbon techniques, important for establishing the chronology for the depositional sequence. In combination with geoarchaeological assessment of the sediments, examination of pollen and diatoms can provide valuable information of contemporary local environmental conditions. Such remains have evidential value for the past environment in which prehistoric and later people lived, and would be of **low or medium** heritage significance, derived from archaeological value.

#### 5.2 Prehistoric

- 5.2.1. The site has high potential to contain prehistoric remains. A cropmark has been identified within the western part of the site that is likely a prehistoric ring ditch. Although there has been limited evidence in the wider landscape of prehistoric activity, this is likely due to a lack of archaeological investigations within the study area. Therefore, the nature and extent of prehistoric activity is not well understood, and there remains potential for the cropmark to have comprised a barrow, and the site therefore to have been located within the prehistoric (likely Bronze Age) funerary landscape. There have been some surface finds identified relating to prehistoric activity within the study area and therefore there is a possibility of identifying as yet unknown prehistoric archaeological features and finds within the site.
- 5.2.2. If present, such remains would be of **medium or high** significance, depending on preservation and extent, from derived from archaeological value.

#### 5.3 Roman

5.3.1. The site has low potential to contain Roman remains. The lack of past archaeological investigations limits an assessment of potential, although the site does appear to be located considerable distances away from the nearest Roman roads and known settlements. The tentative record of a Roman marching camp within the study area is noted, although further analysis of aerial and satellite imagery has not substantiated the feature's origin.

#### 5.4 Early medieval

5.4.1. The site has low potential to contain early medieval remains. There have been no archaeological features and finds dating to the period within the study area. It is likely that

the site was situated outside of the principal areas of settlement, within rural agricultural fields.

#### 5.5 Medieval

- 5.5.1. The site has high potential to contain medieval remains. The site is situated outside of the principal areas of settlement, in land that has been identified as agricultural fields. The Wellow medieval village pond and common may have run through the southern part of the site, although these were not visible on the site visit or apparent as earthwork features on LiDAR or aerial imagery. The Wellow Deer Park and Wellow village would have been the centres of activity during this period, and the fields within the site would have supported the agricultural practices of the local population.
- 5.5.2. Medieval remains would be of **low** significance, derived from archaeological and historical value.

#### 5.6 Post-medieval

- 5.6.1. The site has high potential to contain post-medieval remains. Historic mapping indicates that the site was part of an ever-evolving agricultural field system during the post-medieval period. There may be buried field boundaries within the site associated with these post-medieval field systems. The findspot of a post-medieval boundary stone is recorded at the site's eastern boundary although this is not considered to be an in-situ asset. Given this loss of context from its original roadside setting, the setting of this asset does not contribute to its significance.
- 5.6.2. Post-medieval remains would be of **low** significance, derived from archaeological and historical value.

#### 5.7 Modern

- 5.7.1. The site has high potential to contain modern remains. The mineral railway associated with the Ollerton Colliery runs through the site, along the eastern, south-western boundary and a curving railway running south to north-west through the central part of the site. The embankment earthworks and the railway bridges that would have served the mineral railway are still present on the site today. Given the closure of the colliery (and notably the demolition of the winding headstocks and associated infrastructure in 1994) resulting in loss of landscape context, the setting of this asset does not contribute to its significance.
- 5.7.2. Modern remains would be of **low** significance, derived from archaeological and historical value, with considerable documentary record of the mineral railway already existing through cartographic and literary sources.

#### 5.8 Significance of Archaeological Assets

5.8.1. Assets which would contribute to the research of regional frameworks (Knight, Vyner & Allen 2012 updating Cooper 2006) would be considered higher significance than assets

which may only minimally contribute to such research. Of specific but not exclusive research interest would be Prehistoric to modern remains relating to:

Development of funerary monuments and changing burial and memorial practices;

development of fields and field systems; and

wooden or brushwood trackways, roads, canals, tramways and railways (Knight, Vyner & Allen 2012: 136–9).

5.8.2. The known heritage resource of the site and study area as assessed indicates at least some potential for undiscovered prehistoric to post-medieval archaeological remains which would be of particular research interest in relation to:

wooden or brushwood trackways, roads, canals, tramways and railways; and development of fields and field systems.

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#### 6 Impact assessment

#### 6.1 Introduction

- 6.1.1. This section assesses the likelihood for the project to have an impact on the significance of buried heritage assets. Below ground impacts include anything that would cause ground disturbance, such as preliminary ground works, site strip, topsoil removal, demolition, remediation, landscaping, planting, excavation for basements, foundations, services, drainage and lighting.
- 6.1.2. Where appropriate, the terminology of the NPPF is used to assess the impact of the proposals on heritage assets whether substantial harm to or total loss of significance, less than substantial harm or no harm.
- 6.1.3. The setting of all identified non-designated assets is not considered to contribute to their significance, due to landscape change resulting in loss of context and our ability to understand the assets fully, and as such no impact upon their significance is anticipated from the Proposed Development.

#### 6.2 Outline of the proposals relevant to the assessment

- 6.2.1. The proposed development will comprise the extension of the Murphy's Plant Ltd complex. The elements of the draft site plan are summarised below and can be seen on Figure ... (Drawing Numbers: 117-GTH-04-ZZ-DR-A-1100; 117-GTH-04-ZZ-DR-A-1101; and 117-GTH-04-ZZ-DR-A-1102). At the time of writing, there were no further details relating to depths of structures confirmed.
- 6.2.2. At the time of writing and from the draft site plans consulted, it is assumed that the extents of the former mineral railway, although within the site boundary are located outside of the footprint of the development and will therefore not be physically impacted. The proposed road crossing in the centre of the site (at SK 66997 67108) will comprise the renovation of an extant agricultural access into the current fields to the east and will therefore not result in physical impact to the extant mineral railway asset.
- 6.2.3. On the western part of the site, which incorporates the area that is currently occupied by the Murphy's Plant Ltd, there will be some redevelopment of the complex which will include the demolition of existing buildings on the site and redevelopment of the complex:
  - $\Upsilon\,$  A proposed new office and training building;
  - Υ A number of other structures, their use is currently unknown (see numbered areas on the plans)
  - $\Upsilon$  Container preparation and storage
  - $\Upsilon$  Tunnel Boring Machine storage
  - Υ OLH Store
  - Υ Non-mechanical store
  - Υ Substation

- Y Quarantine and Safety and Survey areas
- Υ Car parking
- Υ Refuse/drop-off bays
- $\Upsilon$  A buffer zone on the boundary of the Kelsey Avenue housing estate which includes bund and planting
- Υ External seating
- 6.2.4. On the eastern part of the site, to the west of the stream, there are extensive proposals to expand the complex:
  - Y Two new workshops will be constructed near to the former bridge that's located in the eastern part of the site. Tarmac will be laid surrounding the workshops and linking the new part of the plant to the existing complex for vehicular and pedestrian access.
  - $\Upsilon$  A new training area
  - Υ Pipe storage
  - Υ PTS Storage
  - Υ Crane Area
  - Υ Plant Storage
  - Υ Idle Parking
  - $\Upsilon$  SUDS pond area the size and exact location to be determined.
- 6.2.5. To the east of the stream, a fluvial control feature is planned to be excavated, the size and exact location of which is to be determined. A training substation and training pylon area are going to be located in the southern part of this field.
- 6.2.6. The existing woodland boundaries and embankments are proposed to be retained. Furthermore, the hedgerows that are adjacent to the stream will be preserved as part of the works. Additional plantings will be added to the northern part of the scheme, to separate the scheme from the active railway line.

#### 6.3 Impact on buried heritage assets

#### **Preliminary Site Works**

- 6.3.1. Works carried out as part of the initial site set up, including preliminary site stripping and demolition, the installation of site fencing and welfare facilities, is assumed for the purposes of this assessment to cause ground disturbance to a maximum depth of 0.5mbgl in the western part of the site. This would likely only extend into the modern made ground and would have no archaeological impact.
- 6.3.2. It is assumed for the purposes of this assessment that topsoil would be removed across the eastern part of the site as part of the preliminary site works. Removal of topsoil is a potential impact as (in addition to the loss of any residual evidence it contains) it exposes any archaeological remains that may be present immediately beneath the topsoil. These may then be affected by the movement of vehicles and plant involved in construction activities, for example through rutting and compaction. In addition, it is possible that topsoil removal

without archaeological supervision may result in overstripping, which would have an impact upon archaeological remains located beneath the topsoil, or understripping, where archaeological features are concealed beneath a thin layer of topsoil but are then exposed and unprotected from subsequent construction activities.

#### Foundation/obstruction removal

6.3.3. There are buildings that are likely to be demolished in the eastern part of the site. The impact of demolition and the removal of other buried obstructions such as foundations would depend on the size and density of the existing intrusions, which is currently uncertain, but such work can have a considerable archaeological impact in disturbing adjacent remains.

#### Breaking out foundation slab

6.3.4. Breaking out of the existing foundation/floor slab for any demolished buildings would potentially have an impact, truncating or entirely removing any archaeological remains directly beneath the slab.

#### Terracing

6.3.5. The proposed terracing of the existing natural slope in order to create a level surface prior to construction, would entail 'cut and fill' with material excavated from the upper part of the slope and its redeposition on the lower part of the slope. Depending on the maximum depth of excavation, terracing would partially or completely remove any archaeological remains from the upper part of the slope, whilst any archaeological remains on the lower slope would be buried (and preserved) beneath the redeposited material.

### Foundations for buildings, substations and other buildings across the site

- 6.3.6. The foundation method for the buildings is not currently known; if standard strip/pad foundations are used, these would entail ground disturbance locally to the footprint of the foundations to an approximate depth of 1.0-1.5mbgl, which would partially truncate or remove entirely any archaeological remains present within their footprint.
- 6.3.7. Standard pad foundations would entail the removal of any archaeological remains locally within the footprint of each excavated pad to a typical depth of 1.0–1.5mbgl as assumed for the purposes of this assessment. It is likely that remains associated with the modern historic gardens will have likely been severely truncated where these foundations have been used. However, it is possible that the bases of deep cut archaeological features such as would remain intact beneath these impact levels, but their context could be lost.
- 6.3.8. If piled foundations for the new buildings are required, any archaeological remains within the footprint of each pile would be removed as the pile is driven downwards. The severity of the impact would therefore depend on the pile size, type and pile density. Where the piling layout is particularly dense, it is in effect likely to make any surviving archaeological

remains, potentially preserved between each pile, inaccessible in terms of any archaeological investigation in the future.

- 6.3.9. It is likely that if piles are required these would either be sheet piles or a secant pile wall to form the basement retaining structures. Augered piles/continuous flight auger (CFA) piles would minimise the impact upon possible archaeological remains whereas vibro-compacted piles may cause additional impact through vibration and deformation of fragile surrounding remains, in particular at the level of the water table.
- 6.3.10. The insertion of pile caps and connecting ground beams, along with the excavation of a pile guide trench, typically extend no more than 1.0-1.5mbgl and would remove any archaeological remains within the footprint of these works to this depth. It is possible that the bases of deep cut archaeological features such as the ring ditch identified in the western part of the site remain intact beneath these impact levels, but their context could be lost.

#### **Basements**

6.3.11. It is unknown at this stage if basements are proposed for the new buildings located on the site. However, if basements are constructed any archaeological remains would be entirely removed within its footprint. There may be additional impacts from piling beneath the basement (see above). It is assumed for the purposes of this assessment that the basement would be excavated following the insertion of the perimeter wall, and prior to the insertion of piled foundations.

#### **Road construction**

6.3.12. The proposed road layout can be seen in **Figure 9**. These will comprise the use of existing driveways as well as proposed access roads. Where existing hardstanding/driveways are being utilised, there'll be no impact to archaeological remains. It is assumed for the purposes of this assessment that any archaeological remains present within the footprint of the roads that are on currently undeveloped land would be severely truncated or entirely removed.

#### Service / utilities trenches/ drains

- 6.3.13. The proposed excavation of new service trenches and drains would extend to a depth of 1.0–1.5mbgl as assumed for the purposes of this assessment. This would entirely remove any archaeological remains within the trench footprint.
- 6.3.14. There are new training pylons proposed, the foundations of which would extend to a depth of 1.0–1.5mbgl as assumed for the purposes of this assessment. This would entirely remove any archaeological remains within the footprint of each pylon.

#### Planting

6.3.15. Ground intrusion from the proposed tree planting and subsequent root action is assumed for the purposes of this assessment to reach a depth of c 1.0–1.5mbgl. This would entirely remove or severely disturb any archaeological remains at the tree location.

#### SUDS and fluvial excavation areas

6.3.16. The depths and sizes of the proposed SUDS and fluvial excavation area are currently unknown. It is assumed that any archaeological remains in the footprint of the ponds would be severely truncated or entirely removed during these works.

#### Compression

- 6.3.17. The impact of compression from the placement of consolidation material upon archaeological remains located within and beneath the recorded alluvium deposit is uncertain. Whilst there has been some research there are no detailed data or formulae that can be applied to the site. Various factors are likely to influence the survival of archaeological remains under fill, including:
  - Y the structure and composition of the soils. Silt is more susceptible to compression than granular soils (Shilston and Fletcher 1996, 9), although with granular soils the additional stress is transferred to buried artefacts more directly and therefore the potential for damage is possibly higher (Sidell et al., 2004, 47). Peat can continue to deform under constant load after initial consolidation (Shilston and Fletcher 1996, 9).
  - Y aerobic conditions the introduction of oxygen into deposits that are no longer waterlogged can increase the deterioration of archaeological materials (de Beer and Matthiesen 2008, 67–81). However, the process of introducing fill material is unlikely to introduce such conditions to foreshore deposits.
  - $\Upsilon$  soil chemistry changes due to the nature of fill could lead to the deterioration of organic and other remains (Hopkins 2004, 63).
- 6.3.18. All buried environments are dynamic and it is generally accepted that preservation will be more likely if archaeological deposits and features are maintained in conditions as close as possible to the environment that has enabled them to survive in the first place.
- 6.3.19. The confining pressure afforded from soil surrounding a buried heritage asset would typically be about one-half of the vertical pressure applied, in this instance from construction materials installed above the alluvium layer. Consequently, certain types of materials may compress given the weaker confining pressure. For the purposes of this assessment it has been assumed that where archaeological remains within the foreshore contain voids and/or are made of porous/organic material (such as timber structures/objects such as wattle and peat), the loading compression predicted to occur is likely to cause some damage. Where such remains are solid, non-porous and inorganic without voids, such as metal, stone, flint, and brick, they are unlikely to be damaged. Whilst water in the alluvial deposits would be displaced, the deposits are likely to remain moist and anaerobic and there would therefore not be further deterioration to organic heritage assets from drying out.

#### 7 Conclusion and recommendations

#### 7.1 Conclusion

- 7.1.1. The site contains no designated heritage assets.
- 7.1.2. There have been no archaeological investigations undertaken within the site. There are two non-designated heritage assets recorded within the site from the Nottinghamshire HER, one being the possible prehistoric ring ditch (potentially indicating the former site of a barrow) recorded from aerial photos within the footprint of the Murphy Plant Ltd complex in the western part of the site and the second being the findspot of a boundary stone, which was not visible at the time of the site visit and is assumed to be no longer extant.
- 7.1.3. A further non-designated asset has been identified during this assessment, namely the Ollerton Colliery modern railway that runs along the eastern boundary as well as curving through the centre and along the south-western boundary of the site (**A1d**). However, the site plans for the works indicate that the embankments, which comprise the extant remains of the railway within the site, will be preserved.
- 7.1.4. There may also be as yet unrecorded remains that are present within the site.
- 7.1.5. Potential archaeological assets have been assessed as being of archaeological and, in some cases, historical interest in their capacity to inform local and regional research frameworks (Knight, Vyner, & Allen, 2012). Of specific but not exclusive research interest would be Prehistoric to modern remains relating to:

Development of funerary monuments and changing burial and memorial practices;

development of fields and field systems; and

wooden or brushwood trackways, roads, canals, tramways and railways (Knight, Vyner & Allen 2012: 136–9).

- 7.1.6. Archaeological survival is likely to be low to moderate across the areas that have been previously developed as part of the Murphy's Plant Ltd complex, to the west of the site. It is likely that the buildings will have truncated archaeological remains through their construction locally to the footprint. Where the car park and driveways are currently located, there is low potential for archaeological remains to have at least partly survived in their footprint, as the land was likely only levelled to a relatively shallow depth) for the topsoil strip prior to the construction of the complex.
- 7.1.7. As no topographical or geotechnical surveys have been conducted in the site, it is assumed that survival of archaeological remains in the agricultural fields and underneath the mineral railway embankments is high. Where the woodland and trees have been located this will have likely caused local truncation and disturbance to archaeological remains across the site. Within the agricultural fields, shallow impacts to archaeological remains will have occurred through ploughing practices.

7.1.8. The table below summarises the predicted impact of the proposed scheme on asset significance, prior to the implementation of a mitigation strategy agreed with the LPA Archaeological Advisor. As such the level of harm may be reduced following implementation of mitigation measures (which can include archaeological fieldwork (preservation by record) or mitigation by design (avoidance/preservation *in situ*).

Known or potential heritage	Heritage significance	Impact of proposals on asset significance
Low to moderate for paleoenvironmental remains	Low or medium (depending on nature and extent)	Preliminary soil stripping across the site, construction of new buildings and foundations, basements,
High potential for prehistoric remains	Medium or high (Depending on nature and extent)	landscaping and terracing, services/utilities, SUDS and fluvial excavation, and drainage. These would all reduce the asset significance
Modern remains relating to the former mineral railway for Ollerton Colliery	Low	to low / negligible.
High potential for post-medieval agricultural remains	Low	

#### Table 7-1 - predicted impacts on known or possible heritage assets prior to mitigation

#### 7.2 Mitigation recommendations

- 7.2.1. In light of the uncertain archaeological potential of the areas of proposed impact, including the possibility of parts of the recorded ring ditch still being intact in the western part of the site or associated features surviving within the site's eastern fields, preliminary archaeological evaluation works will be required. The pre-application advice concluded that the application should be accompanied by the results of geophysical survey for the two agricultural fields that make up the eastern part of the site as Stage 1 of this archaeological evaluation. This will help to determine the presence, nature and significance of any archaeological remains present within the site and would then inform the Historic Environment team at the LPA whether further archaeological evaluation works would be required (likely in the form of trial trenching).
- 7.2.2. No further work is recommended in relation to the former route of the mineral railway within the site boundary as it is not located within the footprint of the development proposals, although an entry in the Nottinghamshire HER should be made containing the information from this assessment, and the HER will be provided with the photographic records taken during the walkover survey as part of this assessment along with the accompanying geospatial information.

7.2.3. Any archaeological work would need to be undertaken in accordance with a Written Scheme of Investigation (WSI) setting out the scope and methodology for the work and approved by the local planning authority archaeological advisor in advance of the work.

# Appendix A

### Historic Environment gazetteer

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The table below represents a gazetteer of known historic environment sites and finds within the study area. Each entry has an assessment (A) reference number. The gazetteer should be read in conjunction with the historic environment features map.

Abbreviations:

- HER Historic Environment Record
- NHL National Heritage List

Assess. (A) ref.	Description	Period	HER / NHL ref.
A1a	Metal Detecting Find A boundary stone was possibly found within a field whilst metal detecting however it is not in its original position. The stone has a shallow and flat-bottomed base and the main face of the exterior is inscribed with 'WV'.	Post- medieval	HER ref. ENT3473 HER ref. MNT10755 HER ref. MNT26306
A1b	Linear Feature and Ring Ditch The Royal Commission on the Historical Monuments of England (RCHME) identified two short linear features and a small circular enclosure.	Unknown	HER ref. MNT10582
A1c	Village Green and Pond The pond and dam within the village green may be of medieval origin and may have been influenced by the Cistercian Abbey in Rufford. The village green appears on Sanderson's map of 1835.	Possible Medieval, Post- medieval	HER ref. MNT27143
A1d	Ollerton Colliery Modern Railway This railway would have served the Ollerton Colliery, running through the site. It joined up to the mainline railway on the northern boundary of the site.	Modern	-
A2a	<b>Field Observation at Wellow by Oswald</b> A field observation was carried out by AH Oswald in 1938. Triple ditches were noted running up the hillside and their formation suggested they were a field boundary. The triple ditch is visible on LIDAR.	Unknown	HER ref. ENT2725 HER ref. MNT5455

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Assess. (A) ref.	Description	Period	HER / NHL ref.
A2b	<b>Field Observation at Wellow by Seaman</b> A field observation was carried out by BH Seaman in 1974. It was noted that the triple ditch was confined to the wood and possibly related to old roads or erosion gullies.	Unknown	HER ref. ENT1472 HER ref. MNT5455
АЗа	Field Observation at George Dyke by Seaman A field observation was carried out on the earthwork of George Dyke by BH Seaman in 1974. It was noted that the remains of the earthwork comprise a broad ditch and an inner bank. Sections of the earthwork have been impacted by post-medieval and modern development. The north, north-east and south- east sections of the earthwork are manmade.	Medieval	HER ref. ENT2112
A3b	Earthwork to the East of Village A scheduled monument of the medieval earthwork of George Dyke. The village of Wellow was first referred to as Welhagh or Welhah in c.1278 which means a hedge/fence. The surviving earthwork surrounds the eastern section of the village.	Medieval	NHLE ref. 1003486 HER ref. MNT15065 HER ref. MNT4053
A4	Watching Brief at Billet Lane and Potter Lane A watching brief was carried out by Trent and Peak Archaeological Unit in 1994 during the installation of new water mains. No archaeological features were found.	N/A	HER ref. ENT1040
A5	Site Visit to Bridge over George Dyke Newark and Sherwood District Council carried out a site visit in 2007 during works to the bridge that carried the A616 over the George Dyke as timbers had been unearthed. The timbers were dated to the c. 20th century.	Post- medieval	HER ref. ENT4121 HER ref. MNT26999
A6	Archaeological Monitoring at Wellow House School Archaeological monitoring was carried out by Pre-Construct Archaeology in 2015. No significant archaeological remains were	Post- medieval	HER ref. ENT4668

Assess. (A) ref.	Description	Period	HER / NHL ref.
	identified however three pits contained post- medieval brick structures.		
A7	Field Observation in field adjacent to George Dyke	Unknown	HER ref. ENT2690
	A Brown carried out a field observation in 1991. Substantial remains were noted including the traces of buildings.		HER ref. MNT5417
A8	Watching Brief at Wellow	Unknown	HER ref. ENT3568
	A watching brief was carried out by John Samuels Archaeological Consultants (JSAC) in 1999 during groundworks. An undated linear		HER ref. MNT11257
	cut was found, and three fragments of post- medieval pottery were found in the topsoil.		HER ref. MNT11258
			HER ref. MNT11259
A9	Test Pit at Wellow	Medieval	HER ref.
	A test pit measuring 1.3m x 0.7m and 1.0m deep was dug by JSAC in 1994. It was located on the inner slope of the George Dyke and found ploughsoil along with a medieval pottery sherd.		ENT3624 HER ref. MNT11409
A10	Watching Brief at Walesby, Wellow and Boughton	N/A	HER ref. ENT1028
	A watching brief was conducted by Trent and Peak Archaeological Trust in 1993. No archaeological features were found.		
A11	Field Observation at Ollerton by Colquhoun	Unknown	HER ref.
	A field observation was carried out by FD Caolquhoun in 1974. Two linear features were found.		ENT2111 HER ref. MNT4052
A12a	Geophysical Survey of Land at Wellow Road	N/A	HER ref.
	Archaeological Project Service conducted a geophysical survey in 2013. It revealed one or two positive linear anomalies however it is unknown if they are of archaeological origin.		ENT4637
A12b	Trial Trench Investigation of Land at Wellow Road	Post- medieval,	HER ref. ENT4719

Assess. (A) ref.	Description	Period	HER / NHL ref.
	Pre-Construct Archaeology carried out a trial trench investigation in 2014. Seven trenches were excavated, and only post- medieval/modern ceramic remains were found.	Modern	HER ref. ENT4667
A13a	Geophysical Survey of Land off Maltkin Close A geophysical survey was conducted by Pre- Construct Archaeology in 2019. No anomalies were identified.	N/A	HER ref. ENT4520
A13b	<b>Trial Trench Investigation at Maltkin Close</b> Allen Archaeology Ltd carried out a trial trench investigation in 2020. The four trenches revealed no archaeological remains.	N/A	HER ref. ENT4685
A14	<b>Field Observation at Ollerton and Boughton</b> AH Oswald conducted a field observation in 1939. A possible trackway visible as a ridge of gravel was noted.	N/A	HER ref. ENT2722 HER ref. MNT5452
A15	Field Observation at Boughton AH Oswald conducted a field observation in 1939. Various earthworks were noted and a Roman tegula tile was found.	Roman	HER ref. ENT2114 HER ref. ENT3354 HER ref. MNT4055 HER ref. MNT8501
A16a	Field Observation at Jordan's Castle A field observation was carried out on the scheduled monument in 1949 and it was noted that the central mound was roughly circular with a 6ft deep fosse across the scheduled monument.	N/A	HER ref. ENT2113 HER ref. MNT15066 HER ref. MNT4054 HER ref. MNT26883 HER ref. MNT26884

Assess. (A) ref.	Description	Period	HER / NHL ref.
A16b	Geophysical Survey at Jordan's Castle Pre-Construct Archaeology carried out a	Medieval	HER ref. ENT4040
	geophysical survey in 2005. Various features were recoded including ridge and furrow,		HER ref. MNT15066
	ditches, a hollow way, building platforms and the ringwork.		HER ref. MNT4054
			HER ref. MNT26883
			HER ref. MNT26884
			HER ref. MNT26879
			HER ref. MNT26880
			HER ref. MNT26881
			HER ref. MNT26882
			HER ref. MNT26885
A16c	Jordan Castle: ringwork, possible enclosures, pond and ridge and furrow	Medieval	NHLE ref. 1010916
	The scheduled monument includes the earthwork and buried remains of a ringwork dating probably to the early 13th century and adapted to a fortified manor house in the mid- 13 century. It also includes the possible enclosures, a pond and areas of ridge and furrow cultivation		HER ref. MNT15066
A16d	Jordan Castle Farmhouse	Post- medieval	HER ref. MNT21922
	An extant house built during the post-medieval period with a 270-acre mixed farm. Its name derives from the scheduled monument.		
A17	Wellow Park A medieval deer park first recorded in 1229 when King Henry gave a buck and eight fallow to stock the park. It is also visible on the Chapman Map of Nottinghamshire, 1774.	Medieval, Post- medieval	HER ref. MNT26703

Assess. (A) ref.	Description	Period	HER / NHL ref.
A18	Hollow Way An undated 'U' shaped earthwork identified on a ground photograph.	Unknown	HER ref. MNT7621
A19	A possible Clay Pit or Quarry Hollow An undated quarry or hollow that is 'U' shaped and was identified via a ground photograph.	Unknown	HER ref. MNT7622
A20	<b>Terraced Hollow</b> A low, irregular mound measuring 20m x 10m. It was identified on a ground photograph.	Unknown	HER ref. MNT7620
A21	<b>Ditch</b> A stretch of dyke in the south-east corner of Wellow Green.	Unknown	HER ref. MNT7626
A22	Large Terraced Area A large undated terraced area measuring 20m x 20m.	Unknown	HER ref. MNT7619
A23	<b>Possible Building Platforms</b> An uneven surface suggesting linear divisions that could possibly be building platforms. They were identified via a ground photograph.	Unknown	HER ref. MNT7627
A24a	Wellow Hall and Adjoining Stable Range A Grade II listed country house first built in 1700 and was later remodelled in the mid-18th century and early 20th century. It is now two properties with brick exteriors and hipped slate roofs. They are two storeys.	Post- medieval	NHLE ref. 1178727 HER ref. MNT17679
A24b	<b>Boundary Wall at Wellow Hall</b> A Grade II listed wall built in the 18th and 19th century. It is approximately 170m long and is constructed out of brick.	Post- medieval	NHLE ref. 1045612 HER ref. MNT17680
A24c	Garden at Wellow Hall	Post- medieval	HER ref. MNT26693

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Assess. (A) ref.	Description	Period	HER / NHL ref.
	The Sanderson's map of 1835 displays gardens at Wellow Hall.		
A25a	Honeysuckle Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT24818
A25b	Moat Farmhouse An extant farmhouse that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21924
A25c	The Hollies An extant building that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21923
A25d	<b>Turnpike Cottage</b> An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21811
A25e	<b>Corner House</b> An extant house that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT24190
A25f	The Old Vicarage An extant vicarage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21964
A25g	<b>Park House</b> An extant house that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21969
A25h	Garage Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21960
A25i	<b>Shadowlawn</b> An extant building that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21961

Assess. (A) ref.	Description	Period	HER / NHL ref.
A25j	<b>Keystone</b> An extant building that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT24807
A25k	<b>1 Eakring Road</b> An extant building that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21920
A25I	Maypole Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21962
A25m	The Red Lion Public House An extant public house that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT24591
A25n	Hawthorn Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21919
A25o	Sunnyside An extant house that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21926
A25p	Premises Occupied by A Riley An extant shop first built in the early 19th century. It is non-designated and was used by the grocer.	Post- medieval	HER ref. MNT21813
A25q	<b>Church Farmhouse</b> An extant farmhouse that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21967
A25r	White Horse Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21968
A25s	Sunny Side	Post- medieval	HER ref. MNT21970

Assess. (A) ref.	Description	Period	HER / NHL ref.
	An extant house that is non-designated. It was built during the post-medieval period.		
A25t	Lilac Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21966
A25u	Hazel Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT21921
A25v	Ashdale Cottage and Cuckstool Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT24465
A26	<b>Primitive Methodist Chapel</b> A non-designated chapel which was built in the mid-19th century in the Georgian tradition.	Post- medieval	HER ref. MNT25089 HER ref. MNT21959
A27a	Linear Bank An undated linear bank runs across the lawns of the houses with building platforms on the west side of Eakring Road.	Unknown	HER ref. MNT7618
A27b	Low Linear Bank An undated low linear bank measuring 7m wide. It is possible that it's a modern landscape feature.	Unknown	HER ref. MNT7624
A27c	The Maypole A post-medieval maypole that stands within the village green.	Post- medieval	HER ref. MNT21812
A28	<b>Ditch</b> The undated westerly branching arm of the Dyke identified via a ground photograph.	Unknown	HER ref. MNT7625

Assess. (A) ref.	Description	Period	HER / NHL ref.
A29	Bronze Age Flint Scrapper Findspot A Bronze Age flint scrapper was found at Wellow in 1980.	Bronze Age	HER ref. ENT2123 HER ref. MNT4069
A30	Brickworks and Buildings The Sanderson Map of 1836 displays a brickworks and its associated buildings	Post- medieval	HER ref. MNT15083 HER ref. MNT4083
A31a	Wellow Farm Cottage An extant cottage that is non-designated. It was built during the post-medieval period.	Post- medieval	HER ref. MNT22118
A31b	<b>Chailey House</b> A Grade II listed house built in the 1876 as the estate manager's house. It is designed in the gothic revival style and has a brick exterior with ashlar dressings and a 20th century tile roof. It has two storeys.	Post- medieval	NHLE ref. 1271779 HER ref. MNT17684
A32	Roman Marching Camp Aerial photography shows an enclosure and linear feature associated with the Roman marching camp.	Roman	HER ref. MNT25871 HER ref. MNT10592
A33a	<b>Possible Prehistoric Cropmarks</b> Aerial photography has identified two sides of an enclosure, a pit alignment and field boundaries possibly of prehistoric origin.	Possibly Prehistoric	HER ref. MNT8500
A33b	<b>Possible Prehistoric Settlement at Ollerton</b> Aerial photography has identified two sub- rectangular enclosures with one containing an internal division and part of a double ditched feature. These are of possible prehistoric origin.	Possibly Prehistoric	HER ref. MNT25872
A34a	<b>Pit Alignment</b> Aerial photography has identified a pit alignment of unknown origin.	Unknown	HER ref. MNT11211

Assess. (A) ref.	Description	Period	HER / NHL ref.
A34b	<b>Pit Alignment at Ollerton</b> Aerial photography has identified a pit alignment of unknown origin.	Unknown	HER ref. MNT10583
A35a	Maltkin House An extant house that is non-designated. It was built during the post-medieval period. It is two storeys with a brick exterior and hipped roof.	Post- medieval	HER ref. MNT22152
A35b	<b>1-6 Bottom Row Cottages</b> Extant cottages that are non-designated. They were built during the post-medieval period. They are two storeys with casement windows.	Post- medieval	HER ref. MNT22120
A35c	<b>D.G. Bates, Motor Engineers</b> An extant house that is non-designated. It was built during the post-medieval period. It is two storeys with a porch.	Post- medieval	HER ref. MNT24878
A35d	Wayside An extant house that is non-designated. It was built during the post-medieval period. It is two storeys with a Flemish bond exterior.	Post- medieval	HER ref. MNT22161
A35e	Westaways An extant house that is non-designated. It was built during the post-medieval period. It is two storeys.	Post- medieval	HER ref. MNT22160
A36a	Barbed and Tanged Arrowhead Findspot A Bronze Age arrowhead was found in a garden in Ollerton however it is likely that it came from an imported soil.	Bronze Age	HER ref. ENT2186 HER ref. MNT4101
A36b	Worked Flints Findspot Further finds of worked flint have been made in the garden, however it is unlikely that these came from an imported soil.	Prehistoric	HER ref. ENT3357 HER ref. MNT8509

Assess. (A) ref.	Description	Period	HER / NHL ref.
A37	<b>Site of Ollerton Colliery</b> An early 20th structure documented via photographs. It is first visible on the 1:10,000 scale Ordnance Survey map of 1955 and is removed by the 1:10,000 scale Ordnance Survey map of 2001.	Post- medieval	HER ref. MNT15992 HER ref. MNT6192
A38	New Ollerton Colliery Village New Ollerton was developed as a worker's village in the 1920s by the Butterley Company and had 832 houses by 1932. 50 more houses were built for the workers in 1941 when the Mines Department issues a licence.	Post- medieval	HER ref. MNT25087
A39a	Harrow Inn A non-designated house built during the post- medieval period.	Post- medieval	HER ref. MNT22686
A39b	Swingclear Cottage A non-designated house built during the post- medieval period. It has a rendered brick exterior and a concrete pantile roof.	Post- medieval	HER ref. MNT22720
A39c	West View Farmhouse A non-designated farmhouse built during the post-medieval period.	Post- medieval	HER ref. MNT22721
A40	Wellow Conservation Area Wellow was designated as a conservation area in 1978 with amendments made in 1993. It was designated due to its rich history as a medieval village.	Post- medieval	N/A
A41	Rock House and Adjoining Stable Range A Grade II listed house built in the 17th century and 19th century. It has two storeys with a timber frame and brick exterior and a pitched concrete tile roof.	Post- medieval	NHLE ref. 1178755 HER ref. MNT17681

Assess. (A) ref.	Description	Period	HER / NHL ref.
A42a	<b>Highfield House</b> A Grade II listed farmhouse built in the mid-18th century. It has two storeys with a brick exterior and a pantile roof.	Post- medieval	NHLE ref. 1045613 HER ref. MNT17682
A42b	House Opposite Highfield House A Grade II listed farmhouse built in the late 18th century. It has two storeys with a brick exterior and a steep pitched 20th century pantile roof.	Post- medieval	NHLE ref. 1045614 HER ref. MNT17683
A43	Farm House A Grade II farmhouse built in the late 18th century. It has two storeys and a brick exterior with a gabbled and hipped concrete tile roof.	Post- medieval	NHLE ref. 1302272 HER ref. MNT21814
A44a	Church of St Swithim A Grade II* parish church active between the 12th century and 15th century and was restored in 1878 and 1968.	Medieval, Post- medieval	NHLE ref. 1370185 HER ref. MNT15087 HER ref. MNT4087 HER ref. MNT9319 HER ref. MNT9320 HER ref. MNT9321
A44b	Tomb Slab At East End Of Church Of St Swithin A Grade II listed tomb slab dating to 1651. It is made out of ashlar.	Post- medieval	NHLE ref. 1178818 HER ref. MNT21592
A44c	Triple And Single Chest Tombs 2 Metres South Of Chancel At Church Of St Swithin A grade II listed triple chest tomb dating to 1803 and a single chest tomb dating to 1819. Both tombs are enclosed by a chamfered ashlar kerb.	Post- medieval	NHLE ref. 1260324 HER ref. MNT21591

Assess. (A) ref.	Description	Period	HER / NHL ref.
A45a	Lodge Farm House A Grade II listed farmhouse built in the late 18th century. It has two storeys and a brick exterior.	Post- medieval	NHLE ref. 1045611 HER ref. MNT17678
A45b	Farm buildings and Dovecote to Lodge Farm Non-designated structures associated with Lodge Farm House. They are constructed out of brick and have double pitched roofs. They possibly date to the 17th century.	Unknown	HER ref. MNT24440
A46	<b>Church Of St Paulinus</b> A Grade II listed church built in 1931 by Naylor, Sale and Woore for the Butterley Company. It has a brick exterior with ashlar and concrete dressings and a flat roof.	Post- medieval	NHLE ref. 1157053 HER ref. MNT18790

# **Appendix B**

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British Geological Survey

Historic Environment Record

Historic England designation data

Nottinghamshire Archives

#### **CARTOGRAPHIC SOURCES**

Parish Map of Boughton 1821

Boughton Tithe Map of 1846

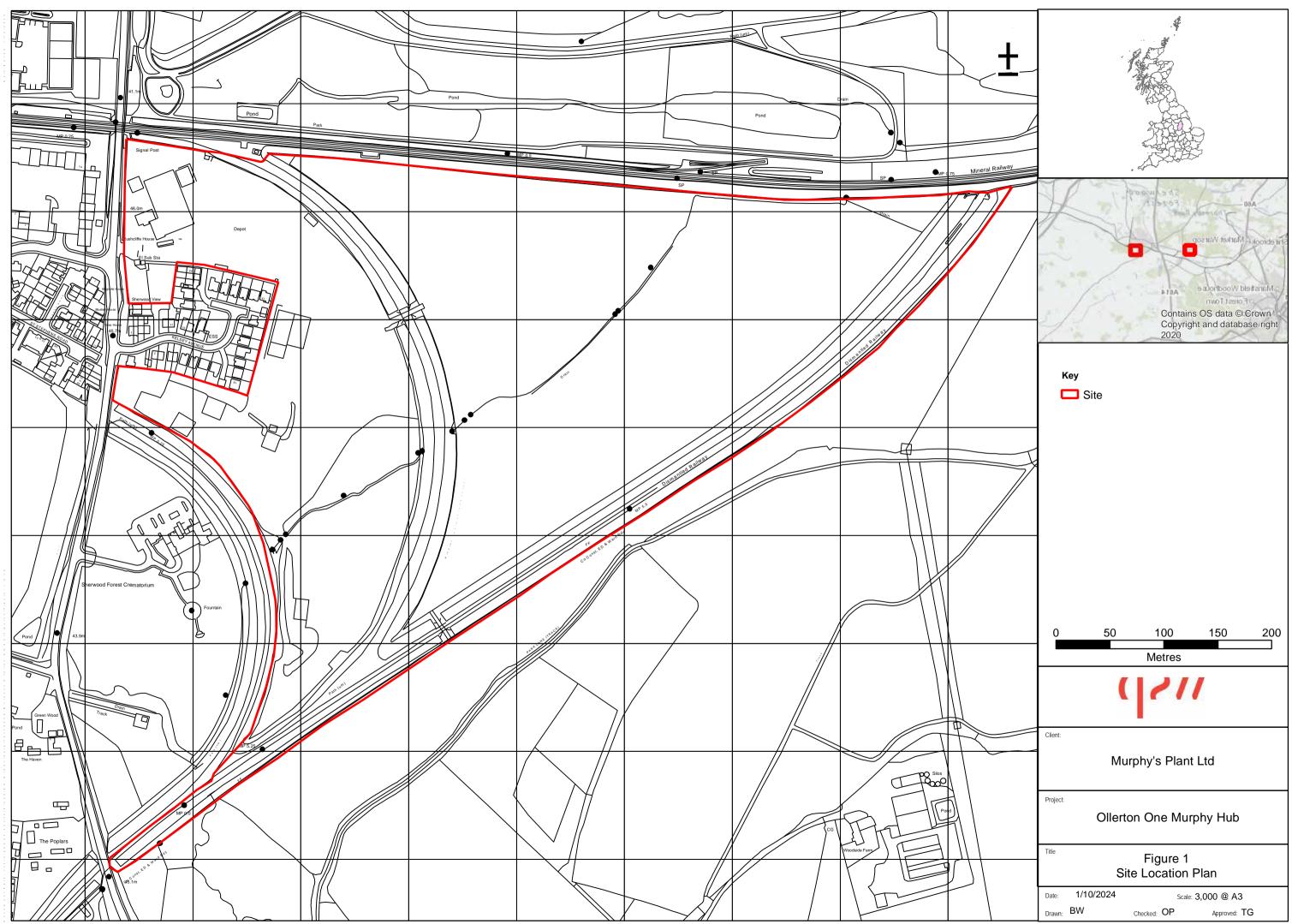
Parish Map of Boughton 1915

Ordnance Survey mapping from the 1st edition to the present day.

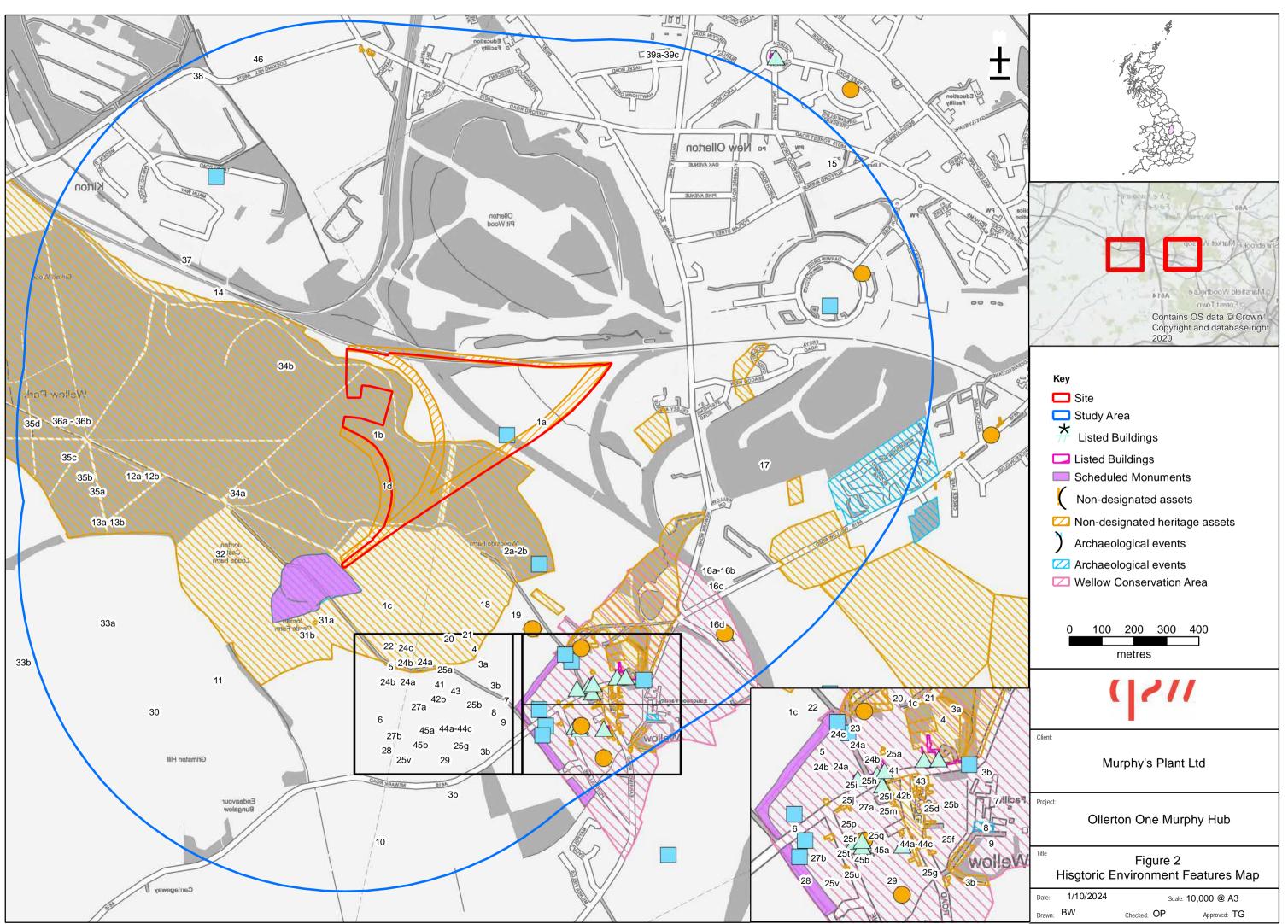
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# Appendix C

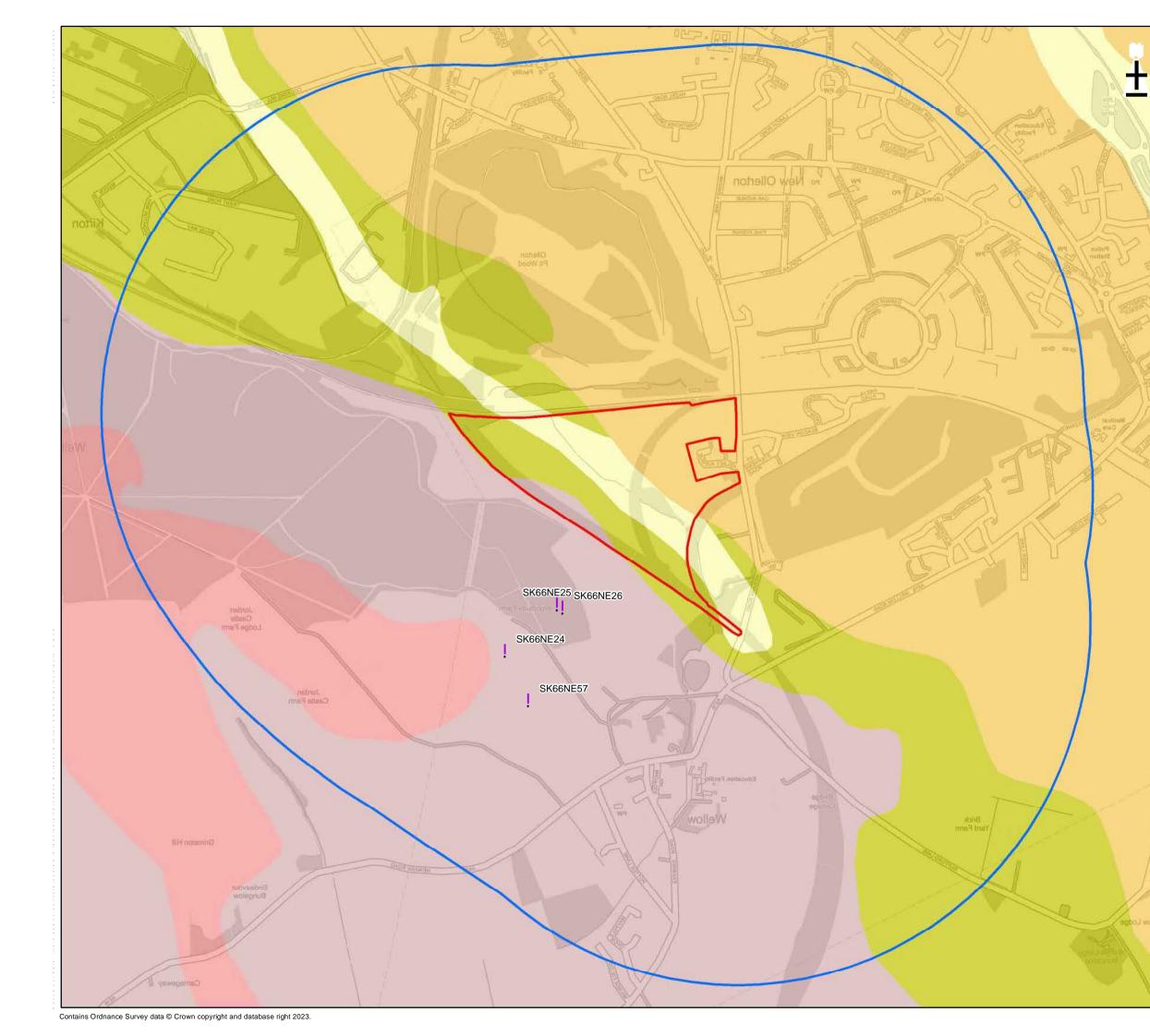
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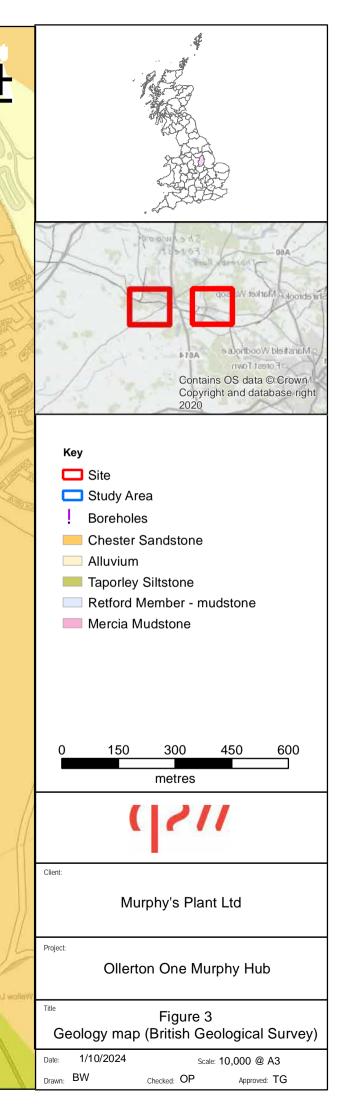


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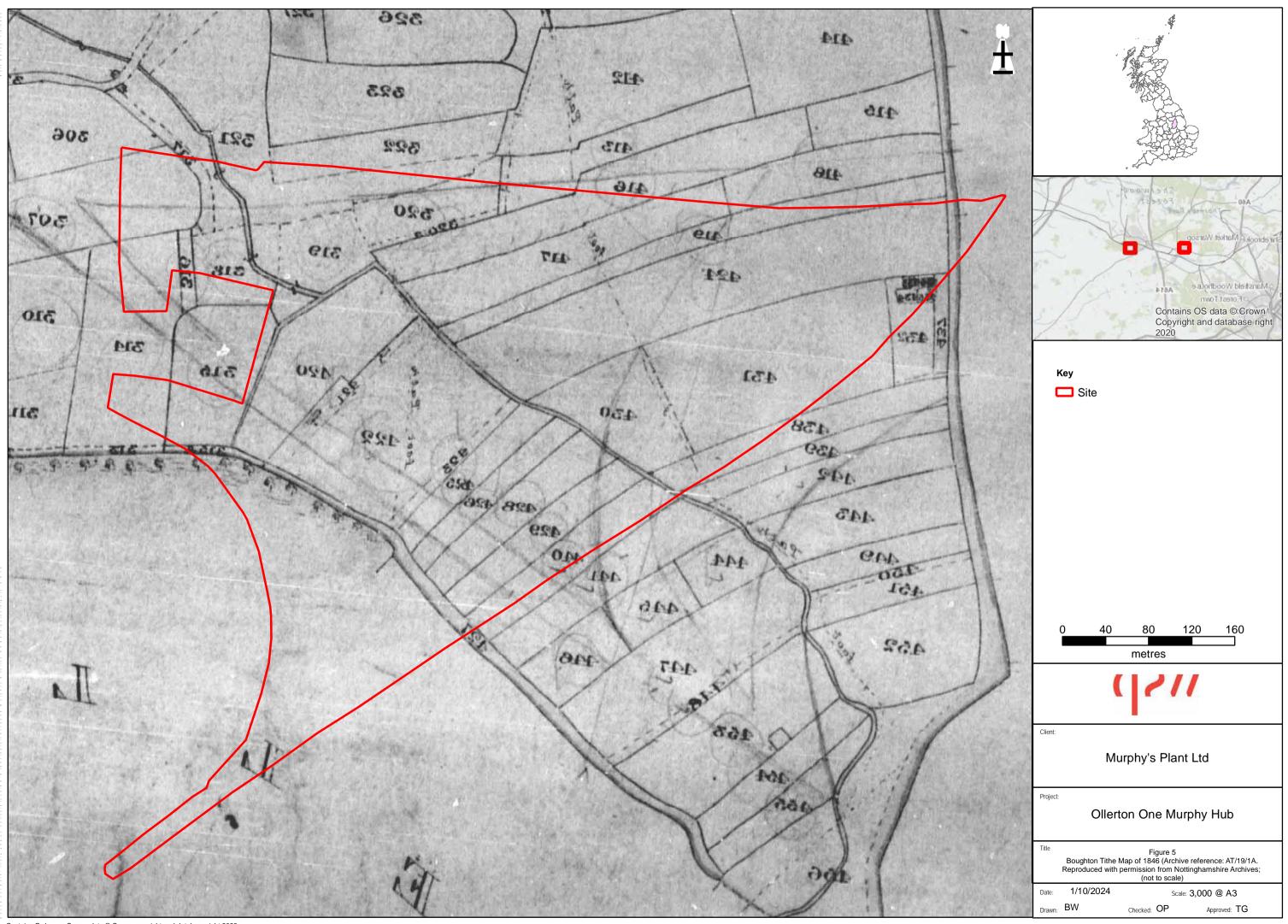
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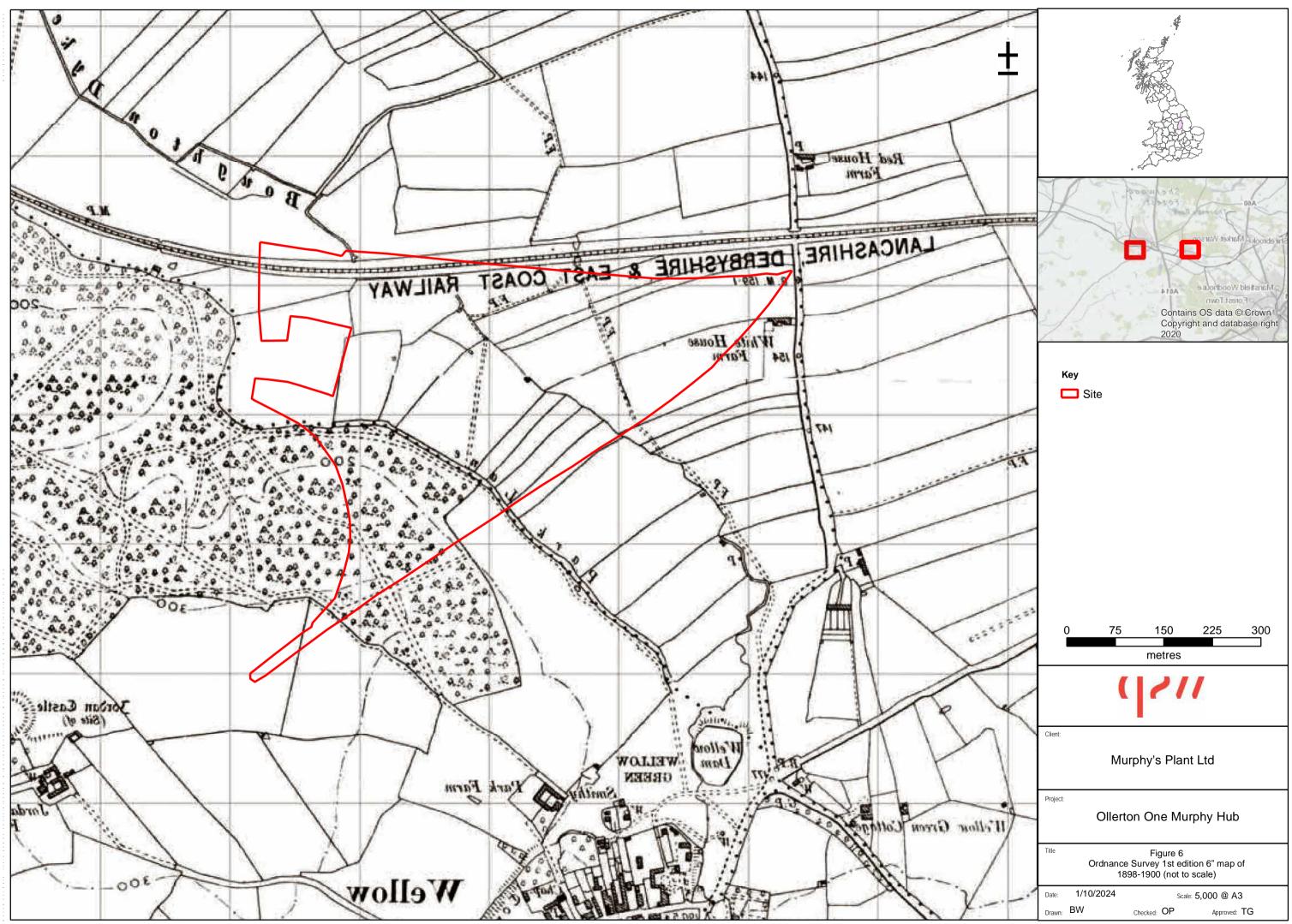




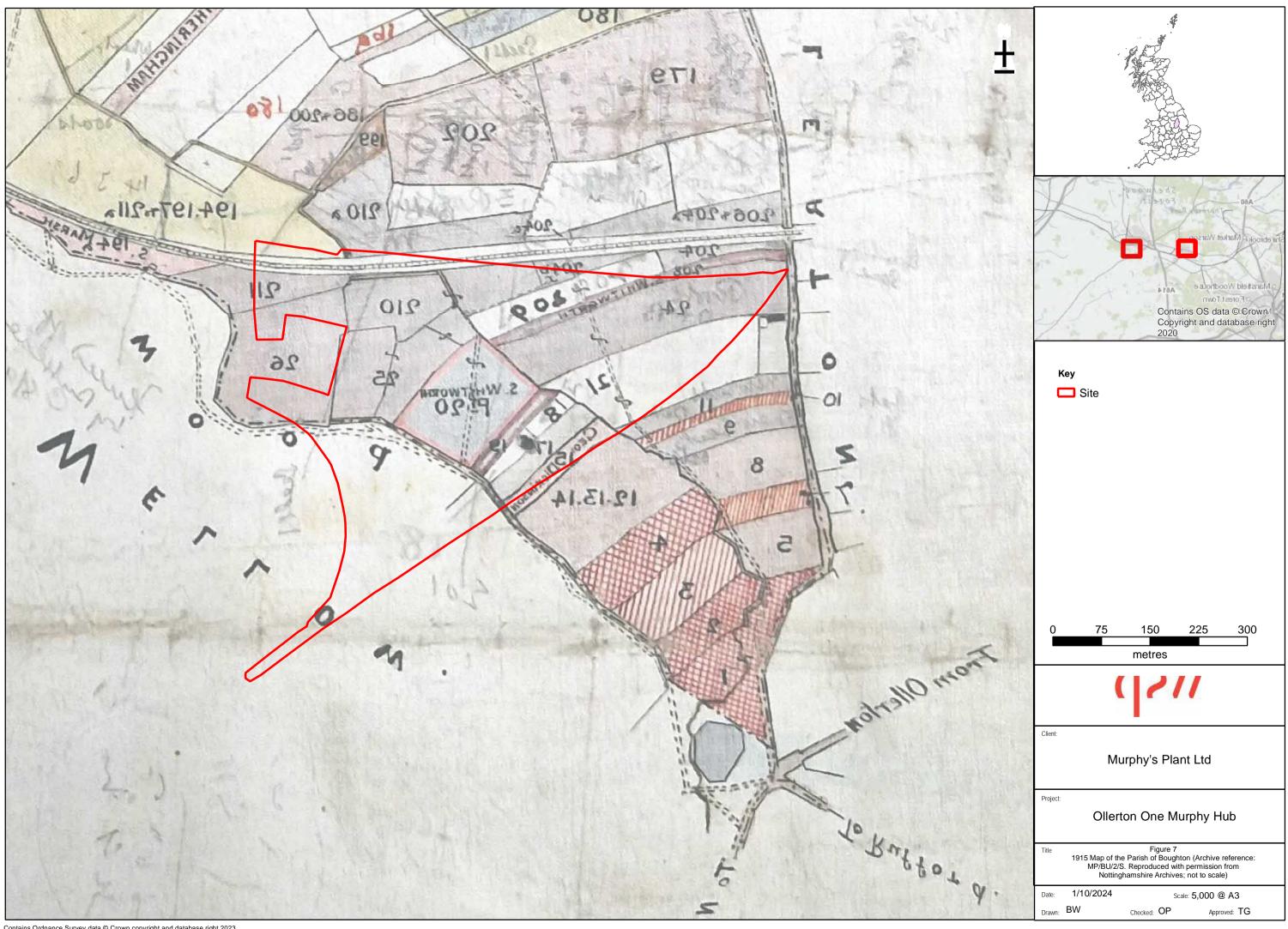


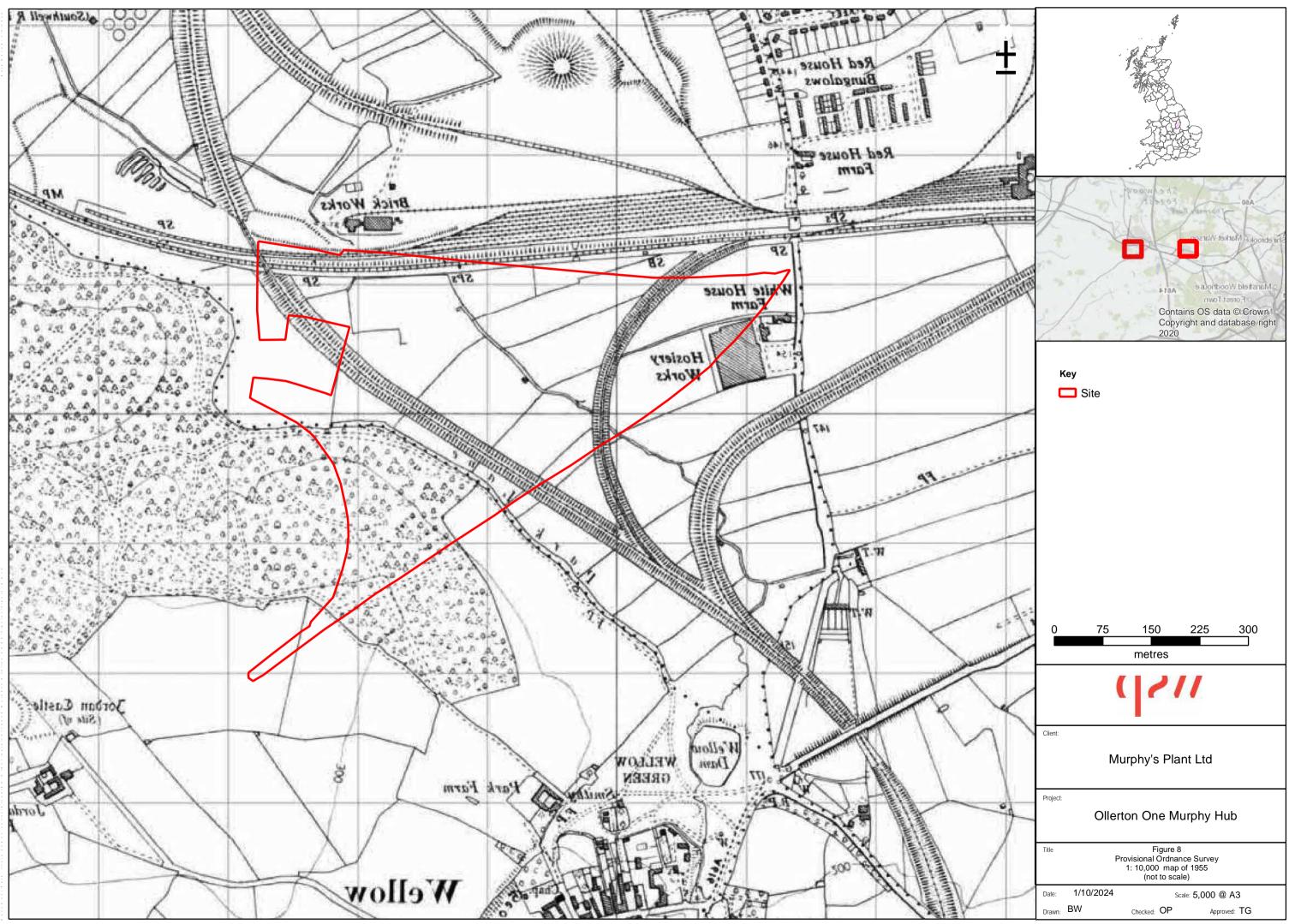


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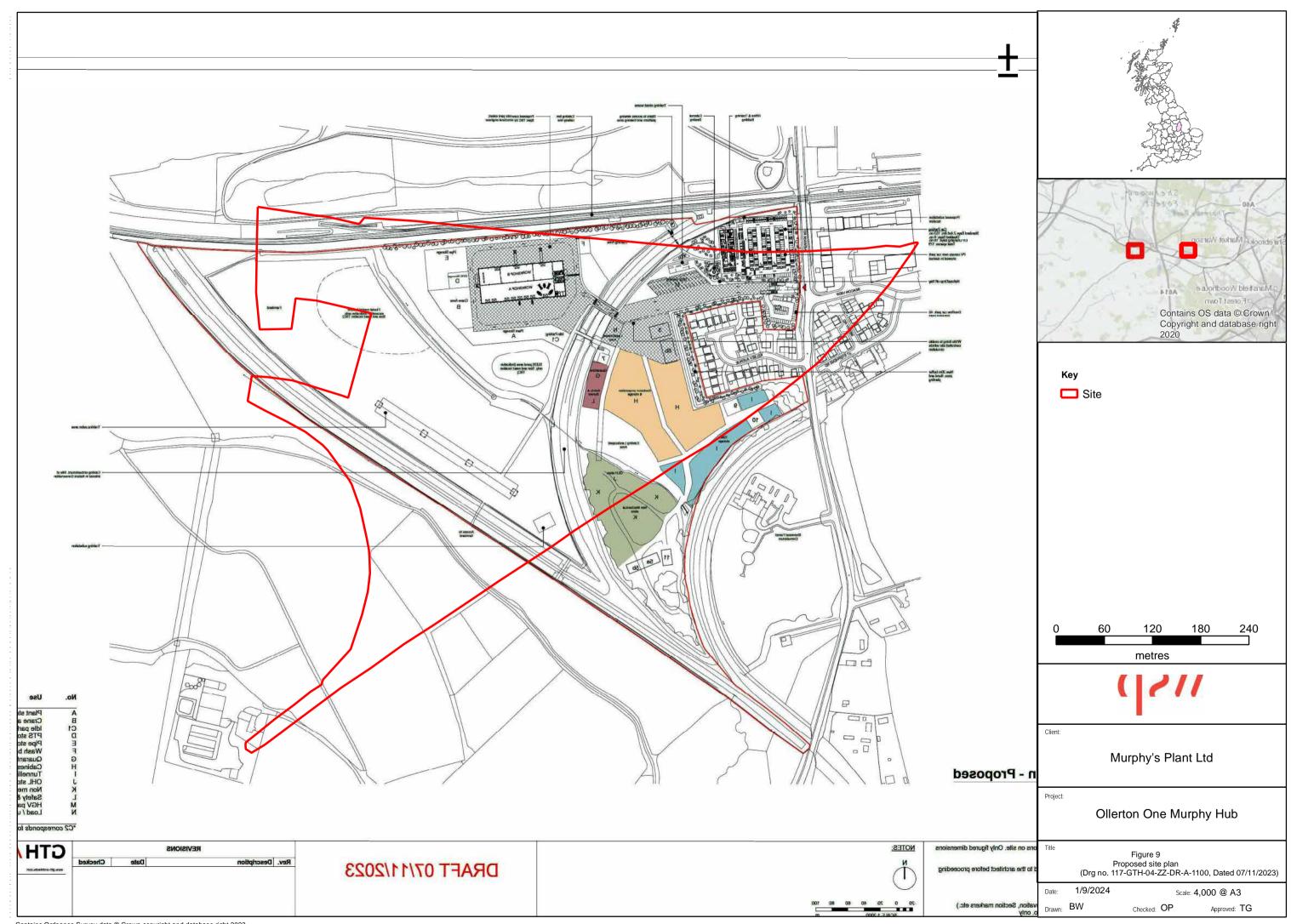


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