

ARCHAEOLOGICAL DESK BASED ASSESSMENT

Land at Yarnton Way, Belvedere

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Land at Yarnton Way,
Belvedere
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EXECUTIVE SUMMARY

- Land at Yarnton Way, Belvedere has been assessed for its below ground archaeological potential.
- The proposed development will not impact on any designated archaeological assets.
- The study site is not located within a locally defined Archaeological Priority Area nor are there any non-designated heritage assets located within the study site on the GLHER.
- This assessment has considered a low to moderate archaeological potential at the site for Mesolithic flintwork at great depth underlying a peat sequence. A generally low archaeological potential is considered for all other past periods of human activity, although traces of ephemeral marshland activity or prehistoric trackways at depth cannot entirely be discounted. The site's historic location within the Erith Marshes is indicative of a high geoarchaeological and palaeoenvironmental potential for associated alluvial and peat deposits. If present, any archaeological remains would most likely be of a local significance, although it is possible that large quantities of Mesolithic flintwork indicative of seasonal campsites, or prehistoric trackways, could be considered of a regional significance. The two existing gasholders at the site could be considered of a local heritage interest given their historic value.
- Modern development impacts are likely to have been severe within the footprint of Modern development associated with the construction of the existing gasholders and associated structures, generally located within northern and eastern parts of the site.
- Overall, given the site's likely modest archaeological potential, it is considered unlikely that the proposed development of the site would impact upon any highly significant archaeological assets which might preclude the development of the site. Further information regarding foundation design and depth, as well as contamination information, will be required to enable a discussion with the Borough's archaeological advisor pertaining to the scope of further archaeological work. The design and depth of foundations, as well as other groundworks, will be key to understanding the potential impacts upon the underlying sequence, whilst it is considered likely that contamination will be present due to the site's historic use as a gas depot and any works and/or sampling will be subject to a health and safety review.
- As remains of a high significance are not anticipated, it is suggested that this assessment is sufficient to support a planning application at the site and that further work could be secured by an appropriate planning condition attached to the granting of planning consent.

Contents

EXECUTIVE SUMMARY	I
1 INTRODUCTION AND SCOPE OF STUDY	4
2 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK	5
National Planning Policy	5
Local Planning Policy	6
Relevant National and Local Designations	9
3 GEOLOGY AND TOPOGRAPHY	10
Geology	10
Topography	10
4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE	11
Timescales used in this report.....	11
Introduction	11
Early Prehistoric – Palaeolithic.....	11
Later Prehistoric – Mesolithic, Neolithic, Bronze Age & Iron Age	12
Roman	13
Anglo-Saxon/Early Medieval & Medieval	13
Post Medieval & Modern (including map regression exercise)	13
Undated Evidence	14
Negative Evidence.....	15
Assessment of Significance	15
5 SITE CONDITIONS, THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL ASSETS	17
Site Conditions	17
Proposed Development.....	17
Review of Potential Development Impacts on Archaeological Assets	17
6 SUMMARY AND CONCLUSIONS	19

Figures

Figure 1: Site Location

Figure 2: HER Plot (Data from Greater London HER)

Figure 3: 1596 Symonson's Map of Kent

Figure 4: 1769 Andrews & Dury Map of Kent

Figure 5: 1797-1801 Hasted Map of the Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington

Figure 6: 1843 Erith Parish Tithe Map

Figure 7: 1865 Ordnance Survey (1:2500)

Figure 8: 1909 Ordnance Survey (1:2500)

Figure 9: 1945 Aerial Photograph

Figure 10: 1957 Ordnance Survey (1:1250)

Figure 11: 1964 Ordnance Survey (1:1250)

ARCHAEOLOGICAL DESK BASED ASSESSMENT

Figure 12: 1980 Ordnance Survey (1:1250)

Figure 13: 2003 Aerial Photograph

Figure 14: 2020 Aerial Photograph

Figure 15: Site Layout as Existing

Figure 16: Proposed Development

1 INTRODUCTION AND SCOPE OF STUDY

- 1.1 This below ground archaeological desk-based assessment has been researched by Alex Slater, prepared by James Archer, and approved by Robert Masefield of RPS Heritage on behalf of Bellway Homes Ltd (London Partnerships).
- 1.2 The subject of this assessment, also known as the study site, is land at Yarnton Way, Belvedere. The site is approximately 3.46ha in extent and is centred at TQ 49231 79323 (Fig. 1) within the administrative area of the London Borough of Bexley.
- 1.3 Bellway Homes Ltd (London Partnerships) has commissioned RPS Heritage to establish the archaeological potential of the site and to provide guidance on ways to address any archaeological constraints identified.
- 1.4 In accordance with relevant policy and guidance on archaeology and planning, and in accordance with the 'Standard and Guidance for Historic Environment Desk-Based Assessments' (Chartered Institute for Archaeologists October 2020), this assessment draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the site.
- 1.5 This desk-based assessment comprises an examination of evidence on the Greater London Historic Environment Record (GLHER), and other sources, and includes the results of a comprehensive map regression exercise.
- 1.6 This assessment thus enables relevant parties to assess the archaeological potential of various parts of the site and to consider the need for design, civil engineering, and archaeological solutions to the archaeological potential identified.

2 PLANNING BACKGROUND AND DEVELOPMENT PLAN FRAMEWORK

- 2.1 National legislation regarding archaeology, including scheduled monuments, is contained in the Ancient Monuments and Archaeological Areas Act 1979, amended by the National Heritage Act 1983 and 2002, and updated in April 2014.
- 2.2 In March 2012, the government published the National Planning Policy Framework (NPPF), which was most recently revised in July 2021. The NPPF is supported by the National Planning Practice Guidance (NPPG), which was published online 6th March 2014 and has since been regularly updated.
- 2.3 The NPPF and NPPG are additionally supported by three Good Practice Advice (GPA) documents published by Historic England: GPA 1: The Historic Environment in Local Plans; GPA 2: Managing Significance in Decision-Taking in the Historic Environment (both published March 2015). The second edition of GPA3: The Setting of Heritage Assets was published in December 2017.

National Planning Policy

- 2.4 Section 16 of the NPPF, entitled 'Conserving and Enhancing the Historic Environment' provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets. Overall, the objectives of Section 16 of the NPPF can be summarised as seeking the:
- Delivery of sustainable development;
 - Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment;
 - Conservation of England's heritage assets in a manner appropriate to their significance; and
 - Recognition that heritage makes a contribution towards our knowledge and understanding of the past.
- 2.5 Section 16 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 194 states that planning decisions should be based on the significance of the heritage asset and that the level of detail supplied by an applicant should be proportionate to the importance of the asset and should be *no more than sufficient* to review the potential impact of the proposal upon the significance of that asset.
- 2.6 *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).
- 2.7 Annex 2 also defines *Archaeological Interest* as a heritage asset which holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
- 2.8 A *Nationally Important Designated Heritage Asset* comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.
- 2.9 *Significance* is defined as: The value of a heritage asset to this and future generations because of its heritage interest. This interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

- 2.10 *Setting of a heritage asset* 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. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.
- 2.11 In short, government policy provides a framework which:
- Protects nationally important designated Heritage Assets;
 - Protects the settings of such designations;
 - In appropriate circumstances seeks adequate information (from desk based assessment and field evaluation where necessary) to enable informed decisions;
 - Provides for the excavation and investigation of sites not significant enough to merit *in-situ* preservation.
- 2.12 The NPPG reiterates that the conservation of heritage assets in a manner appropriate to their significance is a core planning principle, requiring a flexible and thoughtful approach. Furthermore, it highlights that neglect and decay of heritage assets is best addressed through ensuring they remain in active use that is consistent with their conservation. Importantly, the guidance states that if complete, or partial loss of a heritage asset is justified, the aim should then be to capture and record the evidence of the asset's significance and make the interpretation publicly available. Key elements of the guidance relate to assessing harm. An important consideration should be whether the proposed works adversely affect a key element of the heritage asset's special architectural or historic interest.
- 2.13 Additionally, it is the degree of harm, rather than the scale of development, that is to be assessed. The level of 'substantial harm' is considered to be a high bar that may not arise in many cases. Essentially, whether a proposal causes substantial harm will be a judgment for the decision taker, having regard to the circumstances of the case and the NPPF. Importantly, harm may arise from works to the asset or from development within its setting. Setting is defined as the surroundings in which an asset is experienced and may be more extensive than the curtilage. A thorough assessment of the impact of proposals upon setting needs to take into account, and be proportionate to, the significance of the heritage asset and the degree to which proposed changes enhance or detract from that significance and the ability to appreciate it.
- 2.14 In considering any planning application for development, the planning authority will be mindful of the framework set by government policy, in this instance the NPPF, by current Development Plan Policy and by other material considerations.

Local Planning Policy

London Plan

- 2.15 The proposed development has been assessed against relevant policies in the London Plan (March 2021). Chapter 7 'Heritage and Culture' contains relevant policies. Of particular relevance to archaeological sites within Greater London is policy HC1 as follows:

Policy HC1 Heritage conservation and growth

- A. Boroughs should, in consultation with Historic England, local communities and other statutory and relevant organisations, develop evidence that demonstrates a clear understanding of London's historic environment. This evidence should be used for identifying, understanding, conserving, and enhancing the historic environment and heritage assets, and improving access to, and interpretation of, the heritage assets, landscapes and archaeology within their area.**

- B. Development Plans and strategies should demonstrate a clear understanding of the historic environment and the heritage values of sites or areas and their relationship with their surroundings. This knowledge should be used to inform the effective integration of London’s heritage in regenerative change by:**
- 1. setting out a clear vision that recognises and embeds the role of heritage in place-making**
 - 2. utilising the heritage significance of a site or area in the planning and design process**
 - 3. integrating the conservation and enhancement of heritage assets and their settings with innovative and creative contextual architectural responses that contribute to their significance and sense of place**
 - 4. delivering positive benefits that conserve and enhance the historic environment, as well as contributing to the economic viability, accessibility and environmental quality of a place, and to social wellbeing.**
- C. Development proposals affecting heritage assets, and their settings, should conserve their significance, by being sympathetic to the assets’ significance and appreciation within their surroundings. The cumulative impacts of incremental change from development on heritage assets and their settings should also be actively managed. Development proposals should avoid harm and identify enhancement opportunities by integrating heritage considerations early on in the design process.**
- D. Development proposals should identify assets of archaeological significance and use this information to avoid harm or minimise it through design and appropriate mitigation. Where applicable, development should make provision for the protection of significant archaeological assets and landscapes. The protection of undesignated heritage assets of archaeological interest equivalent to a scheduled monument should be given equivalent weight to designated heritage assets.**
- E. Where heritage assets have been identified as being At Risk, boroughs should identify specific opportunities for them to contribute to regeneration and place-making, and they should set out strategies for their repair and re-use.**

London Borough of Bexley

- 2.16 The site is located within the administrative area of the London Borough of Bexley, which has adopted its Local Plan in April 2023. This document contains the following relevant planning policy:

POLICY SP6 Managing Bexley’s heritage assets

1. The Council will manage Bexley’s heritage and archaeological assets, whilst seeking opportunities to make the most of these assets; including adapting to and mitigating the effects of climate change. This will enhance the local sense of place and support the revitalisation and development of the borough, including promoting the visitor economy. This will be achieved by:

- a. promoting the borough’s heritage assets, such as Lesnes Abbey, Danson Mansion, Hall Place and Gardens, Crossness Beam Engine House and Red House;**
- b. reviewing the status of existing and identifying new heritage and archaeological assets;**
- c. applying the NPPF and London Plan requirements for development proposals affecting heritage assets to conserve and enhance the significance of heritage assets, their settings, and the wider historic environment, and the requirements to protect assets from**

development that is likely to adversely impact on the significance, integrity, character or appearance of those assets or their settings;

d. protecting the internal features of Council owned non-designated heritage assets where they contribute to the asset's significance; and,

e. supporting historic restoration schemes through partnership working and seeking funding to enhance and use heritage and archaeological assets in an appropriate and sympathetic manner.

POLICY DP14 Development affecting a heritage asset

Impact on asset or setting

1. Development proposals with the potential to directly or indirectly impact on a heritage asset or its setting should meet NPPF requirements to describe the significance of the asset and demonstrate how the proposal conserves or enhances the significance of the asset.

2. Development proposals on sites with existing heritage assets, particularly listed or locally listed buildings, should incorporate those assets. Outline applications will not generally be acceptable for developments that include heritage assets.

Change of use

3. Any development proposal to alter or change the use of a heritage asset will need to conserve or enhance that asset; proposals must demonstrate how the change will support the building's preservation and future maintenance. Development proposals should restore, re-use and incorporate heritage assets, wherever possible. Proposals must demonstrate that the new use would not adversely affect the fabric of the building.

Demolition

4. There is a general presumption against any proposal for development that demolishes a heritage asset in part or whole, including locally listed buildings.

5. Proposals to demolish buildings within Conservation Areas will be considered with regards to the NPPF approach to determining harm and will generally be refused unless it can be demonstrated that the development proposal would enhance the special character of the area; demolition will not be approved until consent for the replacement building is agreed.

Listed buildings

6. Any proposed alteration must have regard for conserving or enhancing the special character of the building, both internally and externally. Replacement materials should be like for like or, where this is not possible or not preferable, should be compatible with the existing character of the building, either by sympathetically matching or contrasting.

Non-designated heritage assets

7. Any proposed alteration to a non-designated heritage asset, including locally listed buildings, structures and landscapes, must have special regard to the asset's contribution to the streetscape.

8. Any proposed alteration to a non-designated heritage asset, including locally listed buildings, structures and landscapes, should conserve the particular characteristics that justify its identification. Conservation areas

9. Proposals for development within Conservation Areas must have due regard to the area appraisal and management plan in terms of design, use, and any other element identified as relevant.

Archaeological evidence

10. Development proposals should be assessing the archaeological potential of sites and then retaining, in situ, archaeological evidence within sites, wherever possible. Where archaeological evidence cannot be retained, the appropriate levels of archaeological investigation and recording should be undertaken prior to the redevelopment of the site.

Relevant National and Local Designations

- 2.17 In terms of relevant designated heritage assets, as defined above and as shown on Figure 2, no designated World Heritage Sites, Scheduled Monuments, Historic Battlefield sites or Historic Wreck sites lie within the vicinity of the study site.
- 2.18 Archaeological Priority Areas are defined locally by the London Boroughs and are categorised by the Greater London Historic Environment Record according to their archaeological potential and significance into Tiers, with Tier 1 being most significant. Tier 1 APAs include heritage assets of national significance (a Scheduled Monument or equivalent), Tier 2 APAs indicate the presence or likely presence of heritage assets of archaeological interest and Tier 3 APAs refer to landscape zones of archaeological interest (Booth & Kidd 2016). The site is not located within an Archaeological Priority Area as defined by the London Borough of Bexley.
- 2.19 In line with relevant planning policy and guidance, this desk based assessment seeks to clarify the site's archaeological potential and the need or otherwise for additional mitigation measures.

3 GEOLOGY AND TOPOGRAPHY

Geology

- 3.1 The solid geology of the London area is shown by the Institute of Geological Sciences (IGS 1979) as London Clay deposits forming the London Basin. Overlying the London Clay is a series of gravel terraces deposited during periods of glacial and inter-glacial conditions (Bridgland 1996).
- 3.2 Further detail is provided by the British Geological Survey (BGS Online 2023), which shows the underlying bedrock geology at the study site as Thanet Sands, overlain in turn by alluvial deposits associated with the River Thames to the north.
- 3.3 Whilst there is no site-specific geotechnical data available, a number of boreholes are recorded to the north of the site by the British Geological Survey (BGS Online 2023) within the area of the former Erith Marshes. These boreholes signified a general underlying sequence comprising of a topsoil, overlying peaty clay, which in turn overlies peat deposits, a silty clay, and then river terrace gravels.

Topography

- 3.4 The study site is generally level at c.3m Above Ordnance Datum (AOD). The nearest natural watercourse to the study site is the River Thames which is located circa 1.5km to the north of the site and then loops southwards circa 1.5km to the east of the site. The site is located within an area of the former Erith Marshes and various drainage channels are recorded within the area on historic maps. Remnants of these former channels appear to survive within the central part of the site.

4 ARCHAEOLOGICAL AND HISTORICAL BACKGROUND WITH ASSESSMENT OF SIGNIFICANCE

Timescales used in this report

Prehistoric

Palaeolithic	900,000 -	12,000 BC
Mesolithic	12,000 -	4,000 BC
Neolithic	4,000 -	2,500 BC
Bronze Age (including Chalcolithic)	2,500 -	800 BC
Iron Age	800 -	AD 43

Historic

Roman	AD 43 -	410
Saxon/Early Medieval	AD 410 -	1066
Medieval	AD 1066 -	1485
Post Medieval	AD 1486 -	1799
Modern	AD 1800 -	Present

Introduction

- 4.1 This chapter reviews the available archaeological evidence for the study site and the archaeological/historical background of the study site and surrounding area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the study site prior to any assessment of any later development or below ground impacts.
- 4.2 What follows comprises a review of known archaeological assets within a 1km radius of the study site (Fig. 2), also referred to as the study area, held on the Greater London Historic Environment Record (HER), together with a historic map regression exercise charting the development of the study area from the 16th century onwards until the present day.
- 4.3 In general, the majority of HER records within the study area comprise evidence for former marshland alluvial and peat deposits across the northern half of the study area, with various Modern structures also recorded. There is limited evidence for human activity pre-dating the Modern period within the study area.
- 4.4 The map regression exercise demonstrates that the site remained located within the Erith Marshes during the Post Medieval and early Modern periods before construction of the existing gasholders and associated structures in the mid-20th century.
- 4.5 Chapter 5 subsequently considers the site conditions, later development and below ground impacts, and whether the proposed development is likely to impact archaeological assets and potential archaeological assets identified below.

Early Prehistoric – Palaeolithic

- 4.6 No Palaeolithic artefacts are recorded within the study area on the GLHER. The presence of Palaeolithic material can be notoriously difficult to predict and is typically dependent upon the

presence of an appropriate underlying geology sequence (such as terrace gravels or brickearth), as well as suitable topography and access to nearby resources and water. Overall, given the paucity of evidence from the nearby area, the archaeological potential at the site for the Palaeolithic period is considered to be low.

Later Prehistoric – Mesolithic, Neolithic, Bronze Age & Iron Age

- 4.7 The systematic sampling of sandy lower alluvium deposits at depth below the peat levels was undertaken during construction work along Bronze Age Way at the eastern edge of the 1km study area in the 1990s (HER Ref: ELO2738 and RPS Clouston 1997). This identified scattered areas of late Mesolithic flintwork and burnt flint, indicating a series of seasonal campsites sited near to braded channels of the Thames, likely to take advantage of the seasonal resources available in the riverine environment.
- 4.8 A Mesolithic to early Neolithic crested blade was found at Norman Park c.750m to the north east of the study site during archaeological test pitting (HER Ref: MLO71430, TQ 4978 7983).
- 4.9 Further finds during the Bronze Age Way work included an early Neolithic carinated bowl found in an area c.1.2km to the south east of the study site (RPS Clouston 1997).
- 4.10 Archaeological works at Church Manorway c.1km to the east of the study site have identified large timbers dating to the early Neolithic period which were posited as the remnants of a possible timber trackway through the marshland (HER Ref: MLO99178, TQ 50492 79438). A further trackway, dated to the Middle Bronze Age and constructed using woven panels, was recorded during work along Bronze Age Way c.1.3km to the south east of the study site (RPS Clouston 1997).
- 4.11 The GLHER records no evidence for human activity dating to the Iron Age in the study area.
- 4.12 Much of the northern half of the study area would have been located within marshland during the prehistoric periods, associated with the Thames floodplain. Various archaeological works across this area have repeatedly identified evidence for alluvial and peat deposits. The nearest of these to the study site are located at Abbey Wood Road c.600m to the south west (HER Ref: MLO66284, TQ 48639 79076), at the former Belvedere Football Ground c.350m to the south east (HER Ref: MLO75298, TQ 4963 7911), at Imperial Way c.500m to the north east (HER Refs: MLO99174, TQ 49625 79709; MLO71431, TQ 4971 7975; MLO77912, TQ 4986 7970; MLO98214, TQ 49976 79554), at Thamesmead c.800m to the north (HER Ref: MLO99168, TQ 48702 80406), and at the East Thamesmead Business Park c.800m to the north west (HER Ref: MLO99166, TQ 48589 79797). These alluvial and peat sequences, as well as environmental evidence for preserved woodland and marshland landscapes, have generally been dated from the late Mesolithic through to the early Iron Age, with apparent concentrations of alluvial and peat accumulation during the Bronze Age.
- 4.13 It is likely that the site's location within an area of marshland associated with the Thames floodplain would have made it an unsuitable location for occupation activity at this time, although seasonal exploitation of marshland resources may have occurred within the area of the site. Such activity is likely to have left only ephemeral traces in the archaeological record. It is possible that similar finds such as at Bronze Age Way to the east could be present underlying the site, including Mesolithic flintwork and prehistoric marshland trackways, however any such evidence is usually found sporadically throughout marshland areas and was demonstrated to be located at great depth during the work along Bronze Age Way. Overall, the archaeological potential at the study site is likely to be generally low to moderate for Mesolithic flintwork finds at depth below any peat deposits should the sandy lower alluvial layer be present. A generally low potential is considered for the presence of remains associated with human activity dating to the Neolithic, Bronze Age or Iron Age periods,

although the possible presence of trackways and ephemeral traces of human activity cannot be entirely discounted.

- 4.14 The study site's historic marshland location, as well as the results of nearby archaeological and geoarchaeological works, suggest that the site may retain a high geoarchaeological and palaeoenvironmental potential for evidence of the prehistoric landscape and environment. The site's historic use as a gas depot will have most likely led to the contamination of the below ground sequence and it is possible that the quality of environmental samples could have been impacted by this.

Roman

- 4.15 The GLHER contains no monument records dated to the Roman period within the 1km study area and the site is located c.4km to the north east of the Roman road between London and Canterbury (Margary 1955). It is likely that the site was located within marginal land within the Thames floodplain during the Roman period and therefore a low archaeological potential can reasonably be suggested for this period at the site.

Saxon/Early Medieval & Medieval

- 4.16 No archaeological remains or finds of Saxon date have been recorded within the vicinity of the study site.
- 4.17 The Domesday Survey of 1086 records the nearest early Medieval estate to the study site at Lessness, which is thought to have been focused in an area circa 950m to the south of the study site (Open Domesday Online 2023). The estate comprised of 68 households and the associated land comprising arable ploughlands, meadows, woodland, and three fisheries.
- 4.18 A network of river wall defences was observed in the late 19th century which included an embankment recorded on the GLHER within the area of Belvedere Station c.200m to the east of the study site. The GLHER has suggested a Medieval date for this embankment although it seems possible that it could also have been Post Medieval (HER Ref: MLO8431, TQ 4950 7920).
- 4.19 Further records for Medieval activity within the nearby area are limited to a 14th century dagger found at Belvedere c.800m to the south west of the study site (HER Ref: MLO26434, TQ 5000 7900).
- 4.20 Overall, the study site is likely to have remained within marginal marshland during the Saxon and Medieval periods which would have been unsuitable for occupation or settlement activity. The area may have been utilised for its marshland resources from the early Medieval estate at Lessness to the south, however this is likely to have left only ephemeral traces in the archaeological record. Therefore, a generally low archaeological potential is considered at the study site for the Saxon and Medieval periods.

Post Medieval & Modern (including map regression exercise)

- 4.21 A number of the HER records within the study area refer to Post Medieval and Modern archaeological remains which are not discussed in detail here unless relevant to the study site.
- 4.22 During the later Post Medieval and Modern periods, our understanding of settlement, land-use and the utilisation of the landscape is enhanced by cartographic and documentary sources, which can give additional detail to data contained within the HER.
- 4.23 The earliest such cartographic source is the 1596 Symonson Map of Kent (Fig. 3) which shows the site within land to the north of settlement at *Lesnes*, and to the south of the River Thames. An area

of water channels labelled as the Great Breach is shown on the plan. Whilst the site's location relative to these channels is unclear, it is likely that the site remained within an area of marshland at this time.

4.24 The 1769 Andrews & Dury Map of Kent (Fig. 4) further shows the study site located within the Erith Marshes. The southern edge of the marsh is roughly marked by the line of a road which corresponds with the modern Gilbert Road c.100m to the south of the study site. A similar situation is shown on a late 18th to early 19th century Hasted plan (Fig. 5).

4.25 The 1843 Erith Parish Tithe Map (Fig. 6) is the first detailed plan of the site. It shows the site located across three open land parcels recorded as follows by the associated Tithe Award:

Land Parcel	Landowner	Occupant	Description	Land Use/Cultivation
157	Thomas Gilbert	Thomas Gilbert	Leg Marsh	-
158	Thomas Gilbert	Thomas Gilbert	Five Acres	-
161	Thomas Gilbert	Thomas Gilbert	Ten Acre Marsh	Grass

4.26 A similar situation is shown by the 1865 Ordnance Survey plan (Fig. 7), with the only change shown as minor alterations to those land boundaries within the site. The railway had been constructed to form the site's southern boundary by this time.

4.27 No significant change is shown within the site itself by 1909 (Fig. 8) although development is shown to the immediate east and also to the south across the railway. It appears that the east-west internal boundary within the site was depicted as a channel or drainage ditch by this time.

4.28 The existing gasholders and associated structures were constructed at the northern and eastern parts of the site by 1945 (Fig. 9). The majority of the site appears to remain characterised as open grassland likely representing former areas of marshland. The former internal land division boundaries within the site are shown as drainage channels.

4.29 A short railway branch linking the gasholders to the railway to the south is shown on a 1957 Ordnance Survey plan (Fig. 10), which is located within the south west and north west parts of the site. That railway siding had been removed by 1964 (Fig. 11), when minor internal boundary changes were also made. Minor alterations are shown to the structures along the eastern site boundary.

4.30 Further gas depot structures and the demolition and extension of existing structures is shown within the eastern part of the site by 1980 (Fig. 12). Many of these structures have since been demolished and vegetation and overgrowth has been cleared from the south western and central areas of the site (Figs. 13-15).

4.31 Overall, historic mapping demonstrates that the site remained located within the Erith Marshes during the Post Medieval and early Modern periods before construction of the existing gasholders and associated structures in the mid-20th century. Therefore, aside from remains associated with known modern development and likely marshland drainage schemes and channels, the archaeological potential of the study site for the Post Medieval and Modern periods at the site is considered to be low. The existing gasholders may be considered as a local heritage asset due to their historic interest.

Undated Evidence

4.32 Two undated possible ditches or channels were identified at the former Belvedere Football Ground on Lower Road c.350m to the south east of the study site (HER Ref: MLO75296, TQ 4971 7909).

4.33 A 19th century reference to a dome-shaped mound covered with trees in Belvedere Park is recorded on the GLHER c.800m to the south east of the study site (HER Ref: MLO9951, TQ 498 787).

Negative Evidence

- 4.34 Numerous instances of archaeological investigations within the study area have identified no evidence for archaeological remains or have only identified evidence for the prehistoric marshland and alluvial sequence in the northern half of the study area. These includes works to the north west of the study site (HER Refs: ELO6122, ELO6300, ELO7279) and also to the north east (HER Refs: ELO7741, ELO14327, ELO14557, ELO98).

Assessment of Significance

- 4.35 Existing national policy guidance for archaeology (the NPPF as referenced in section 2) enshrines the concept of the ‘significance’ of heritage assets. Significance as defined in the NPPF centres on the value of an archaeological or historic asset for its ‘heritage interest’ to this or future generations.
- 4.36 No relevant nationally significant designated heritage assets as defined in the NPPF are recorded within, or within the vicinity of, the study site.
- 4.37 The site is not located within an Archaeological Priority Area as defined locally by the London Borough of Bexley. Additionally, there are no non-designated archaeological assets recorded within the study site by the GLHER.
- 4.38 Based on current evidence, a low to moderate archaeological potential is considered at the study site for evidence of Mesolithic flintwork at great depth underlying the site. A generally low archaeological potential has been identified for all other past periods of human activity at the study site, although traces of ephemeral marshland activity or prehistoric trackways at depth cannot entirely be discounted. In addition, the site has a high palaeoenvironmental potential given its historic marshland location. The existing gasholders may be considered as a local heritage asset due to their historic interest.
- 4.39 The significance of any currently unknown archaeological remains which may be present would be derived from their evidential value and contributions that could be made towards local research agendas. It is possible that extensive quantities of Mesolithic flintwork remains indicative of seasonal campsites could contribute towards regional agendas. Whilst considered unlikely to be present, should prehistoric marshland trackways be present at depth within the site, these would make a regional research contribution.
- 4.40 Whilst it is possible that archaeological remains could be present within the site, on the basis of the above, any remains, should they occur on the study site, would in the context of the Secretary of State’s non-statutory criteria for Scheduled Monuments (DCMS 2013) most likely be of local significance. If present, possible Mesolithic flintwork indicative of seasonal campsites, or prehistoric trackways, could be considered of regional significance.
- 4.41 As identified by desk based work, archaeological potential by period and the likely significance of any archaeological remains which may be present within the study site is summarised in table form below:

Period:	Identified Archaeological Potential and Likely Significance (if present):
Palaeolithic	Low potential, Low (Local) Significance;
Mesolithic	Low to moderate potential for flintwork at great depth underlying the alluvial peat sequence should the sandy lower alluvium be present, Low to Medium (Local to Regional) Significance; High potential for geoarchaeological/palaeoenvironmental evidence, likely to be of Negligible to Low Significance depending on the extent of historic contamination;
Neolithic & Bronze Age	Low potential for evidence related to human activity (although evidence for trackways or ephemeral traces of human activity cannot be entirely discounted).

ARCHAEOLOGICAL DESK BASED ASSESSMENT

	generally Low (Local) Significance (although evidence for marshland trackways could be considered of Medium Significance); High potential for geoarchaeological/palaeoenvironmental evidence, likely to be of Negligible to Low Significance depending on the extent of historic contamination
Iron Age	Low potential for evidence related to human activity, Low (Local) Significance; High potential for geoarchaeological/palaeoenvironmental evidence, likely to be of Negligible to Low Significance depending on the extent of historic contamination
Roman	Low potential, Low (Local) Significance;
Saxon & Medieval	Low potential, Low (Local) Significance;
Post Medieval & Modern	Low potential (likely to be entirely invested in evidence of marshland consolidation, drainage schemes, land division, and 20 th century gas depot structures), likely to be of Negligible to Low (None/Local) Significance; Existing gasholders may be considered a local heritage asset due to their historic interest.

5 SITE CONDITIONS, THE PROPOSED DEVELOPMENT & REVIEW OF POTENTIAL DEVELOPMENT IMPACTS ON ARCHAEOLOGICAL ASSETS

Site Conditions

- 5.1 The study site currently comprises a former gasholder site, bordered to the north by Yarton Way and to the south by the railway. Residential development is shown to the east with commercial development to the west. The site itself comprises the two extant gasholders, remnant structures and hardstanding, and areas of cleared land (Fig. 15).
- 5.2 Modern development, demolition and redevelopment on the site associated with the gas depot since the mid-20th century is likely to have had a cumulative negative archaeological impact within the footprint of development. This is generally focused within northern and eastern areas of the site.
- 5.3 The excavation of drainage channels within the site will have had a negative archaeological impact on pre-existing archaeological remains if present within the excavation footprint.

Proposed Development

- 5.4 The study site is proposed for residential development with associated landscaping and car parking (see Figure 16).

Review of Potential Development Impacts on Archaeological Assets

- 5.5 The proposed development will not impact on any designated archaeological assets.
- 5.6 The study site is not located within a locally defined Archaeological Priority Area nor are there any non-designated heritage assets located within the study site on the GLHER.
- 5.7 This assessment has considered a low to moderate archaeological potential at the site for Mesolithic flintwork at great depth underlying a peat sequence. A generally low archaeological potential is considered for all other past periods of human activity, although traces of ephemeral marshland activity or prehistoric trackways at depth cannot entirely be discounted. The site's historic location within the Erith Marshes is indicative of a high geoarchaeological and palaeoenvironmental potential for associated alluvial and peat deposits. If present, any archaeological remains would most likely be of a local significance, although it is possible that large quantities of Mesolithic flintwork indicative of seasonal campsites, or prehistoric trackways, could be considered of a regional significance. The two existing gasholders at the site could be considered of a local heritage interest given their historic value.
- 5.8 Modern development impacts are likely to have been severe within the footprint of Modern development associated with the construction of the existing gasholders and associated structures, generally located within northern and eastern parts of the site.
- 5.9 Overall, given the site's likely modest archaeological potential, it is considered unlikely that the proposed development of the site would impact upon any highly significant archaeological assets which might preclude the development of the site. Further information regarding foundation design and depth, as well as contamination information, will be required to enable a discussion with the Borough's archaeological advisor pertaining to the scope of further archaeological work. The design

and depth of foundations as well as other groundworks, will be key to understanding the potential impacts upon the underlying sequence, whilst it is considered likely that contamination will be present due to the site's historic use as a gas depot and any works and/or sampling will be subject to a health and safety review.

6 SUMMARY AND CONCLUSIONS

- 6.1 Land at Yarnton Way is under consideration for residential development with associated landscaping and hardstanding. Therefore, in accordance with relevant government planning policy and guidance, a desk based assessment has been undertaken to clarify the below ground archaeological potential of the study area.
- 6.2 In terms of relevant designated heritage assets, no designated World Heritage Sites, Scheduled Monuments, Historic Battlefield sites or Historic Wreck sites lie within the vicinity of the study site.
- 6.3 The site is not located within an Archaeological Priority Area as defined by the London Borough of Bexley.
- 6.4 As identified by desk based work, archaeological potential by period and the likely significance of any archaeological remains which may be present within the study site is summarised in table form below:

Period:	Identified Archaeological Potential and Likely Significance (if present):
Palaeolithic	Low potential, Low (Local) Significance;
Mesolithic	Low to moderate potential for flintwork at great depth underlying the alluvial peat sequence should the sandy lower alluvium be present, Low to Medium (Local to Regional) Significance; High potential for geoarchaeological/palaeoenvironmental evidence, likely to be of Negligible to Low Significance depending on the extent of historic contamination;
Neolithic & Bronze Age	Low potential for evidence related to human activity (although evidence for trackways or ephemeral traces of human activity cannot be entirely discounted), generally Low (Local) Significance (although evidence for marshland trackways could be considered of Medium Significance); High potential for geoarchaeological/palaeoenvironmental evidence, likely to be of Negligible to Low Significance depending on the extent of historic contamination
Iron Age	Low potential for evidence related to human activity, Low (Local) Significance; High potential for geoarchaeological/palaeoenvironmental evidence, likely to be of Negligible to Low Significance depending on the extent of historic contamination
Roman	Low potential, Low (Local) Significance;
Saxon & Medieval	Low potential, Low (Local) Significance;
Post Medieval & Modern	Low potential (likely to be entirely invested in evidence of marshland consolidation, drainage schemes, land division, and 20 th century gas depot structures), likely to be of Negligible to Low (None/Local) Significance; Existing gasholders may be considered a local heritage asset due to their historic interest.

- 6.5 Modern development impacts are likely to have been severe within the footprint of Modern development associated with the construction of the existing gasholders and associated structures, generally located within northern and eastern parts of the site.
- 6.6 Overall, given the site's likely modest archaeological potential, it is considered unlikely that the proposed development of the site would impact upon any highly significant archaeological assets which might preclude the development of the site. Further information regarding foundation design and depth, as well as contamination information, will be required to enable a discussion with the Borough's archaeological advisor pertaining to the scope of further archaeological work. The design and depth of foundations as well as other groundworks, will be key to understanding the potential impacts upon the underlying sequence, whilst it is considered likely that contamination will be present due to the site's historic use as a gas depot and any works and/or sampling will be subject to a health and safety review.

- 6.7 As remains of a high significance are not anticipated, it is suggested that this assessment is sufficient to support a planning application at the site and that further work could be secured by an appropriate planning condition attached to the granting of planning consent.

Sources Consulted

General

British Library
Greater London Historic Environment Record
The National Gas Archive (National Grid)
The National Archive

Internet

Bombsight – <http://bombsight.org/#17/51.49200/-0.03924>
British Geological Survey – <http://www.bgs.ac.uk/discoveringGeology/geologyOfBritain/viewer.html>
British History Online – <http://www.british-history.ac.uk/>
Domesday Online – <http://www.domesdaybook.co.uk/>
Historic England: The National Heritage List for England – <http://www.historicengland.org.uk/listing/the-list/>
Portable Antiquities Scheme – www.finds.org.uk

Bibliographic

Batchelor, C.R. *Middle Holocene environmental changes and the history of yew woodland in the Lower Thames Valley* 2009

Booth, P and S. Kidd. *Greater London Archaeology Priority Area Guidelines*. Historic England. 2016

Bridgland, D. *Quaternary River Terrace Deposits as a Framework for the Lower Palaeolithic Record (In Gamble and Lawson)* 1996

British Geological Survey *British Regional Geology London and the Thames Valley Fourth Edition* 1996

Brown, J. *London Railway Atlas* 2009

Chartered Institute for Archaeologists Standard & Guidance for historic environment desk based assessment 2014, revised 2020

DCMS *Scheduled Monuments and Nationally Important Non-Scheduled Monuments* 2013

Department of Communities and Local Government *National Planning Policy Framework* 2012 (revised February 2019)

Department of Communities and Local Government/Department of Culture Media and Sport/English Heritage *National Planning Practice Guidance* 2014 (revised 2019)

Gibbard *Pleistocene History of the Lower Thames Valley* 1994

Greater London Archaeological Advisory Service *Guidelines for Archaeological Projects in Greater London* April 2015 unpublished document

Hasted, E *The History and Topography of Kent* 1797

Historic England *Archaeological Priority Area Guidelines* July 2016 unpublished document

Historic England (formerly English Heritage) *Conservation Principles, Policies and Guidance for the Sustainable Management of the Historic Environment* 2008 (new draft 2017)

- Historic England Historic Environment *Good Practice Advice in Planning: 1 The Historic Environment in Local Plans* July 2015 unpublished document
- Historic England Historic Environment *Good Practice Advice in Planning: 2 Managing Significance in Decision-Taking in the Historic Environment* July 2015 unpublished document
- Historic England Historic Environment *Good Practice Advice in Planning: 3 The Setting of Heritage Assets* December 2017 unpublished document
- Historic England *Understanding Historic Buildings. A Guide to Good Recording Practice.* 2016
- IEMA, IHBC, and ClfA, *Principles of Cultural Heritage Assessment in the UK*, July 2021
- Margary I. D. *Roman Roads of Britain* 1955
- Mills, A.D. *A Dictionary of British Place Names* 1991
- Mills, A.D. *A Dictionary of London Place Names* 2010
- MOLA *The Research Framework for London Archaeology* 2002
- MoLAS/English Heritage *The Archaeology of Greater London: An Assessment of archaeological evidence for human presence in the area now covered by Greater London* 2000
- RPS Clouston *Bronze Age Way (formerly Erith/Thamesmead Spine Road Phase 4 Archaeological Investigations* 1997
- Ward, L. *The London County Council Bomb Damage Maps 1939-1945*, 2015
- Weinreb, Hibbert, Keay & Keay (eds.) *The London Encyclopaedia 3rd Edition* 2008
- Wymer *The Lower Palaeolithic Occupation of Britain 2 volumes* 1999

Cartographic

- 1596 Symonson's Map of Kent
- 1769 Andrews & Dury Map of Kent
- 1797-1801 Hasted Map of the Hundred of Little and Lesnes and the Hundred of Dartford and Wilmington
- 1798 Hasted Plan
- 1799 Ordnance Survey Drawing
- 1801 Faden's Map of Kent
- 1826 Survey Maps of North Kent
- 1843 Erith Parish Tithe Map
- 1865 Ordnance Survey (1:2500)
- 1897 Ordnance Survey (1:2500)
- 1909 Ordnance Survey (1:2500)
- 1920 Ordnance Survey (1:2500)
- 1945 Aerial Photograph
- 1957 Ordnance Survey (1:2500)
- 1957 Ordnance Survey (1:1250)
- 1964 Ordnance Survey (1:1250)

1980 Ordnance Survey (1:1250)

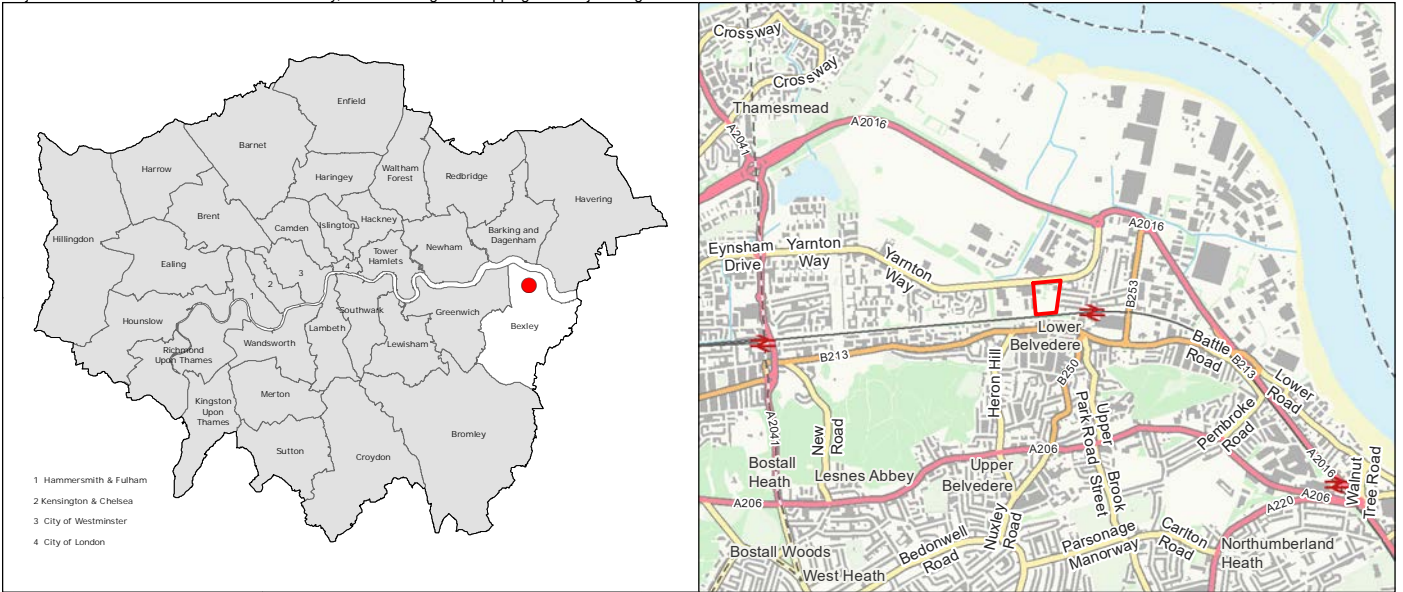
2003 Google Earth Image

2010 Google Earth Image

2020 Google Earth Image

FIGURES





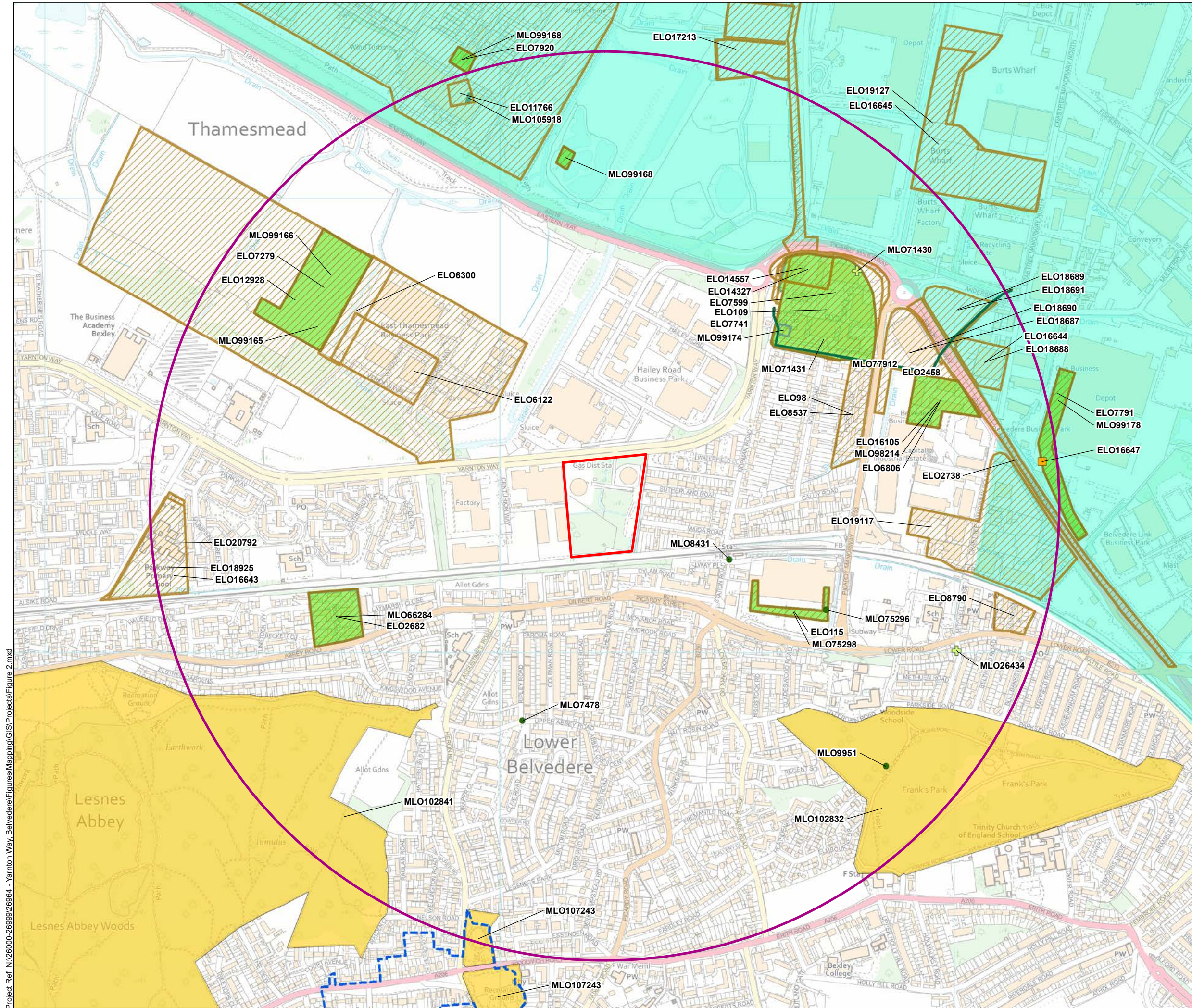
 Site Boundary



0 50 100m
Scale at A4: 1:4,000



Figure 1
Site Location



- Legend**
- Site Boundary
 - 1km Site Radius
 - Designated Heritage Assets:**
 - Conservation Area**
 - Woolwich Road, Upper Belvedere
 - Non-designated Heritage Assets:**
 - HER Record (linear)
 - HER Record (point)**
 - + Findspot
 - Monument
 - HER Record (polygon)**
 - Monument
 - Historic Parks and Gardens
 - Archaeological Priority Area**
 - DLO36895 AHAP 1 Thameside
 - Previous Archaeological Work:**
 - Event Record (linear)
 - Event Record (point)
 - Event Record (polygon)

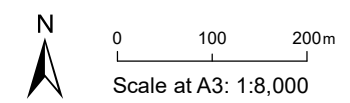
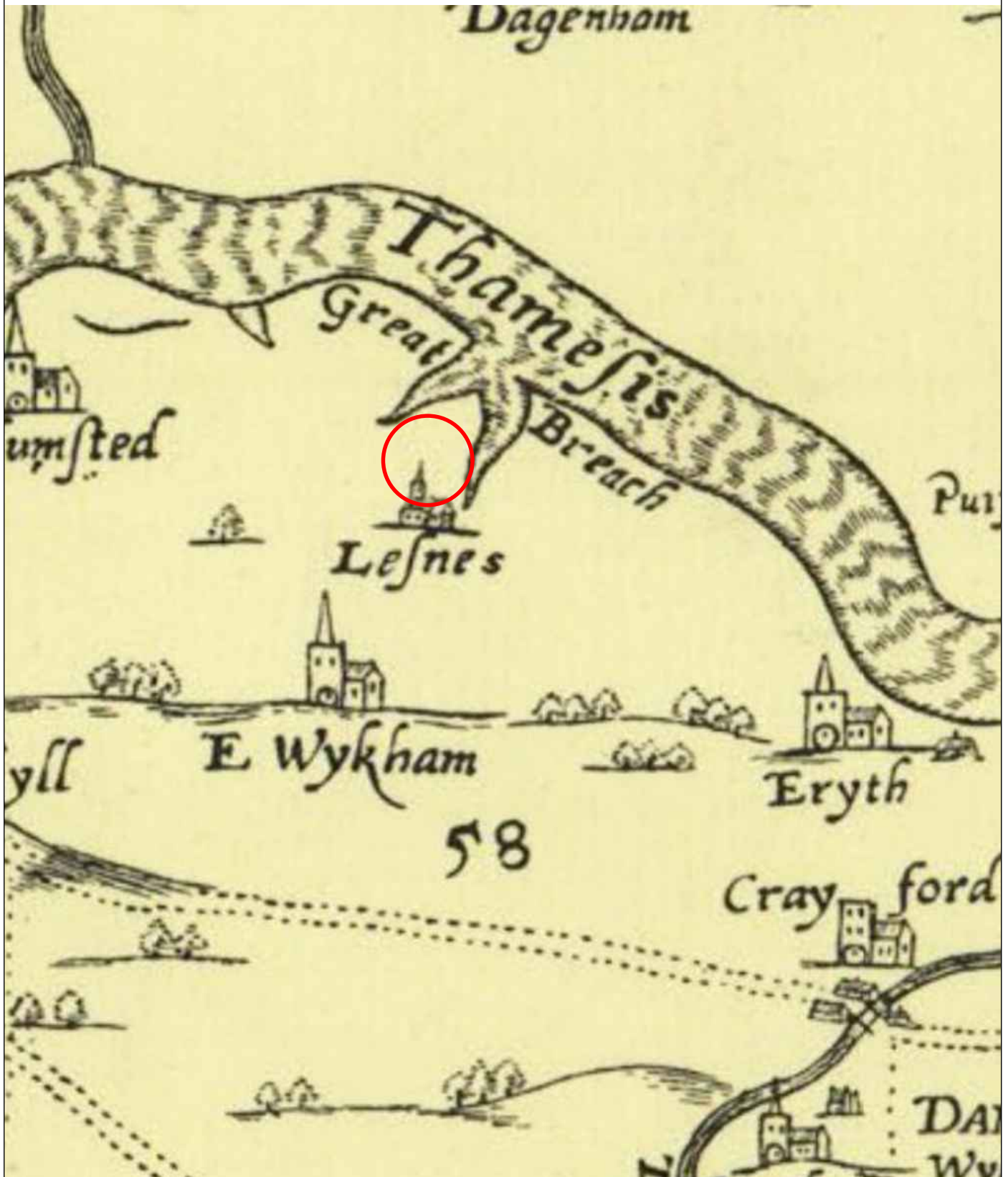



Figure 2
HER Data Plot
(data from GLHER)

Project Ref: N126000-268999/268964 - Yarnnton Way, Belvedere/Mapping/GIS/Projects/figure 2.mxd



 Site Boundary (approximate)




Not to Scale:
Illustrative Only



Figure 3

1596 Symonson's Map of Kent



 Site Boundary (approximate)




Not to Scale:
Illustrative Only



Figure 4

1769 Andrews and Dury Map of Kent



 Site Boundary (approximate)

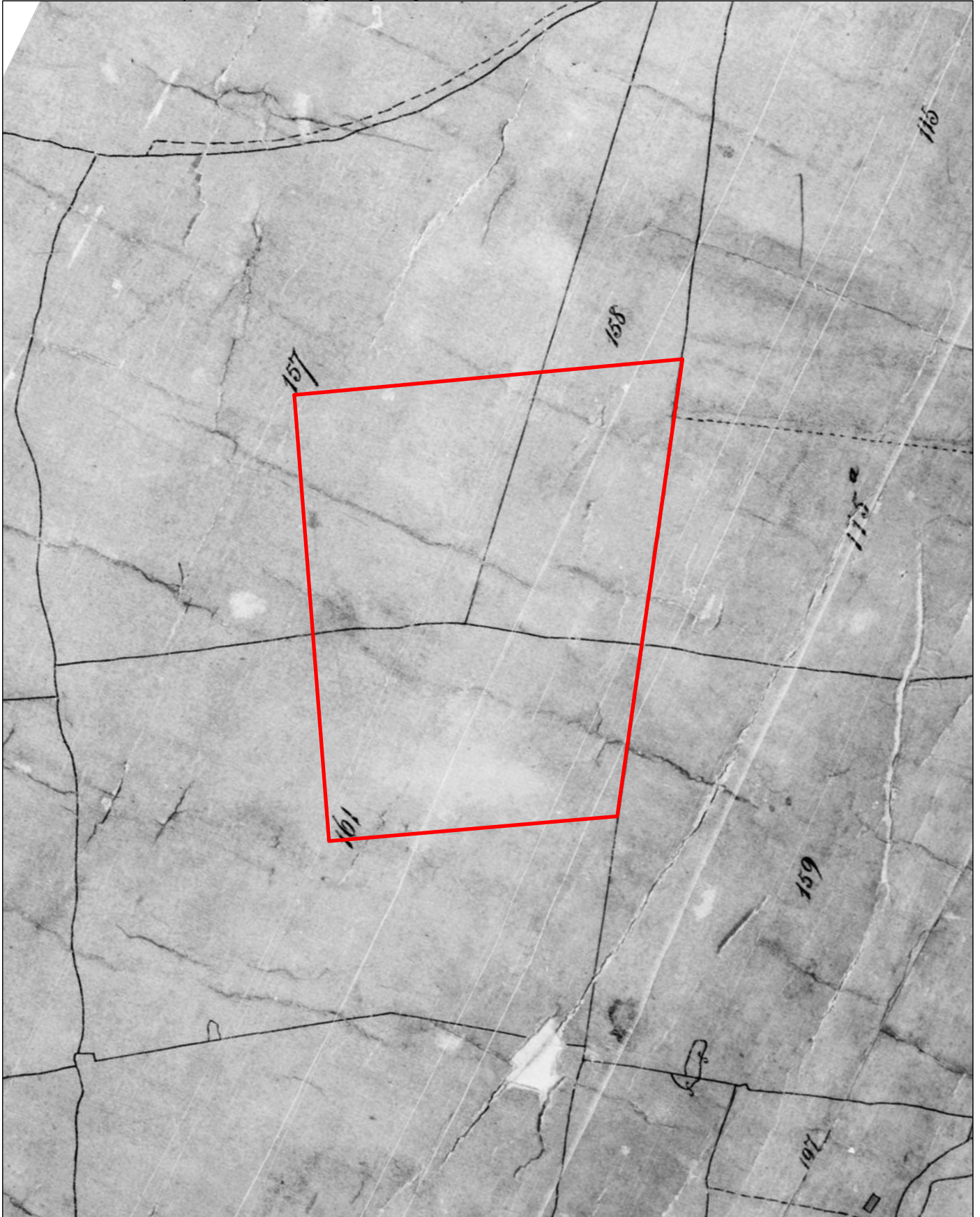



Not to Scale:
Illustrative Only



Figure 5

1797-1801 Hasted Map of the
Hundred of Little and Lesnes and the
Hundred of Dartford and Wilmington



 Site Boundary (approximate)



Not to Scale:
Illustrative Only



Figure 6

1843 Erith Parish Tithe Map



 Site Boundary



0 10 20 30 40 50m
Scale at A4: 1:2,000



Figure 7

1865 Ordnance Survey Map



 Site Boundary

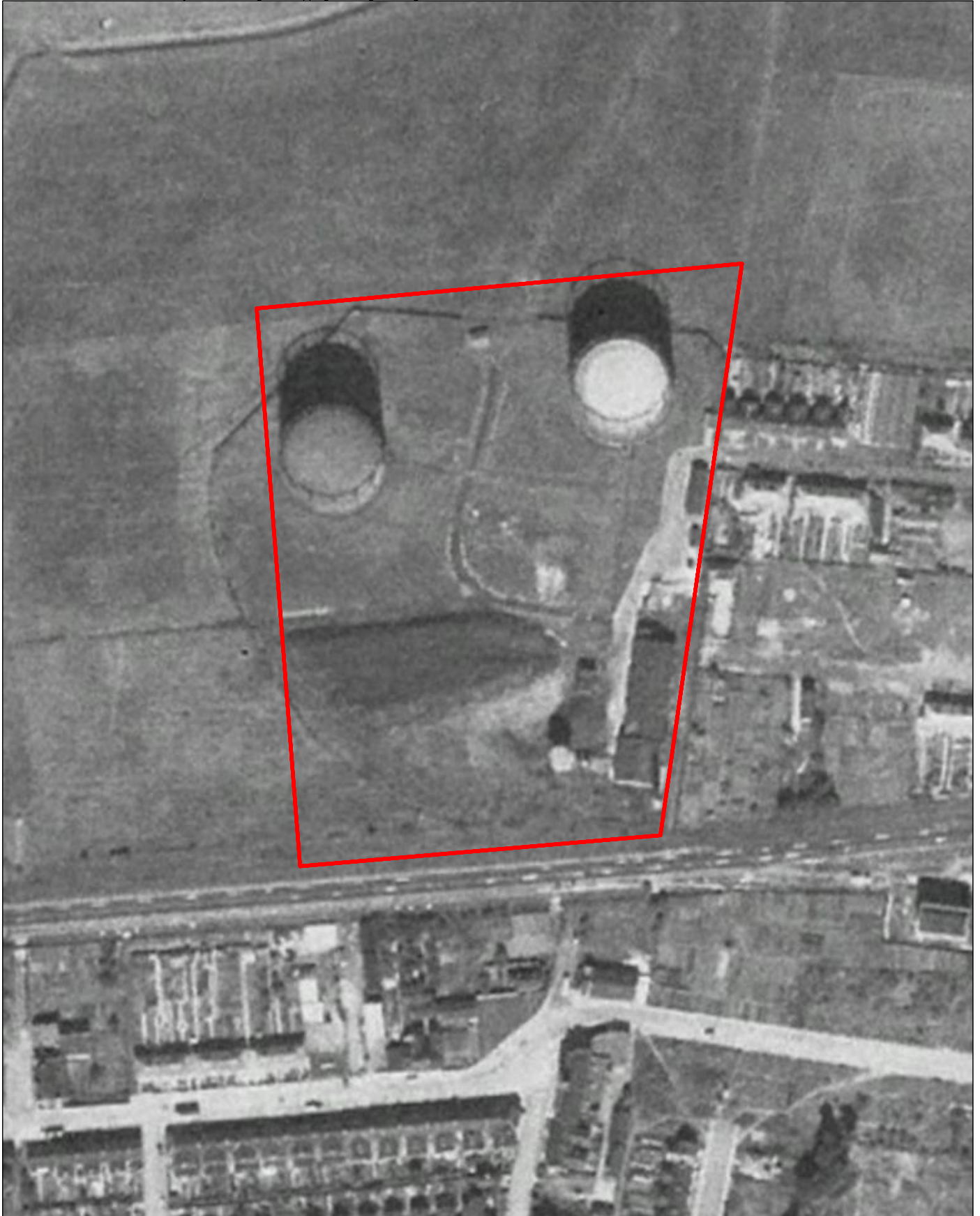


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Scale at A4: 1:2,000



Figure 8

1909 Ordnance Survey Map



 Site Boundary

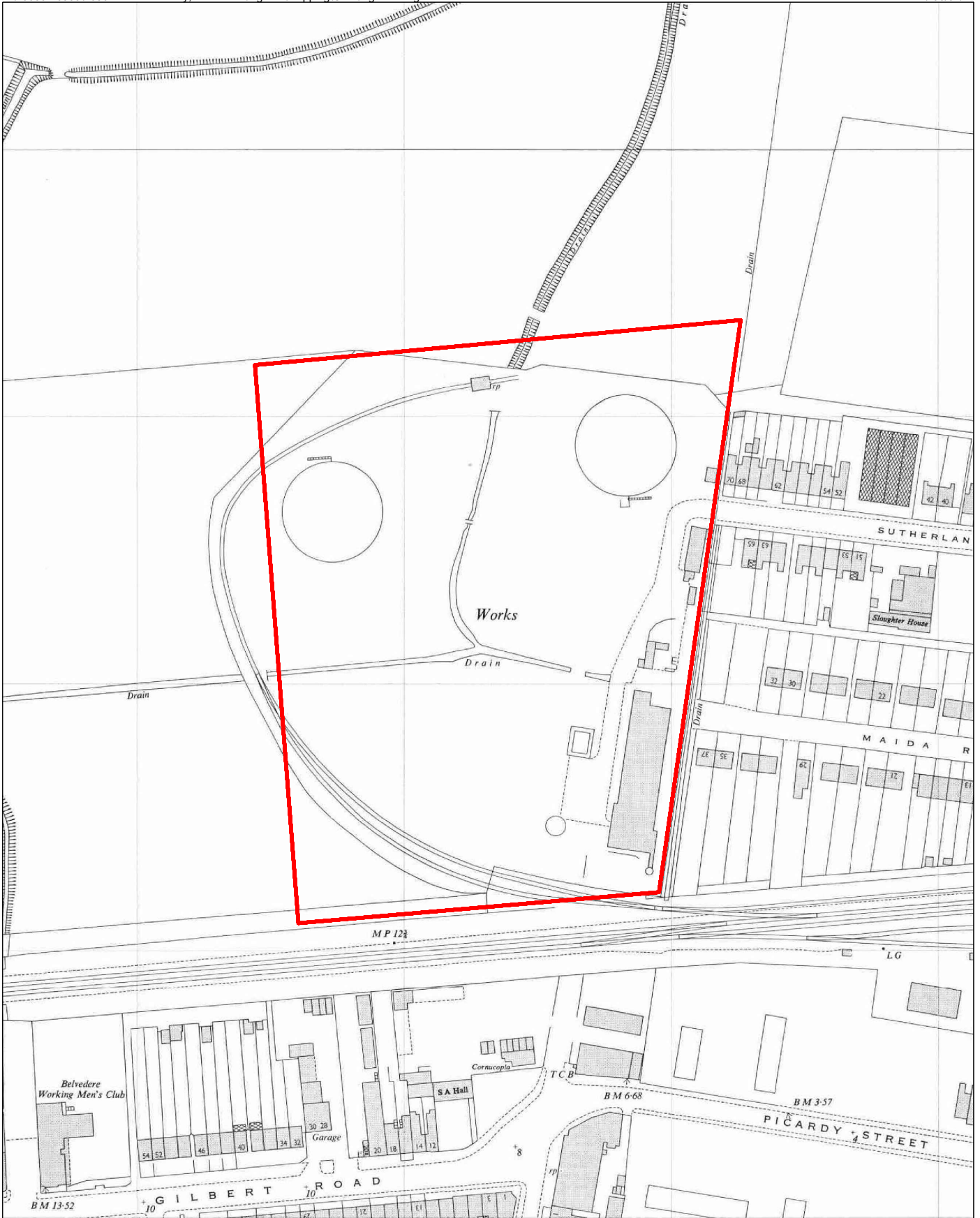


Not to Scale:
Illustrative Only



Figure 9

1945 Aerial Photograph



Site Boundary

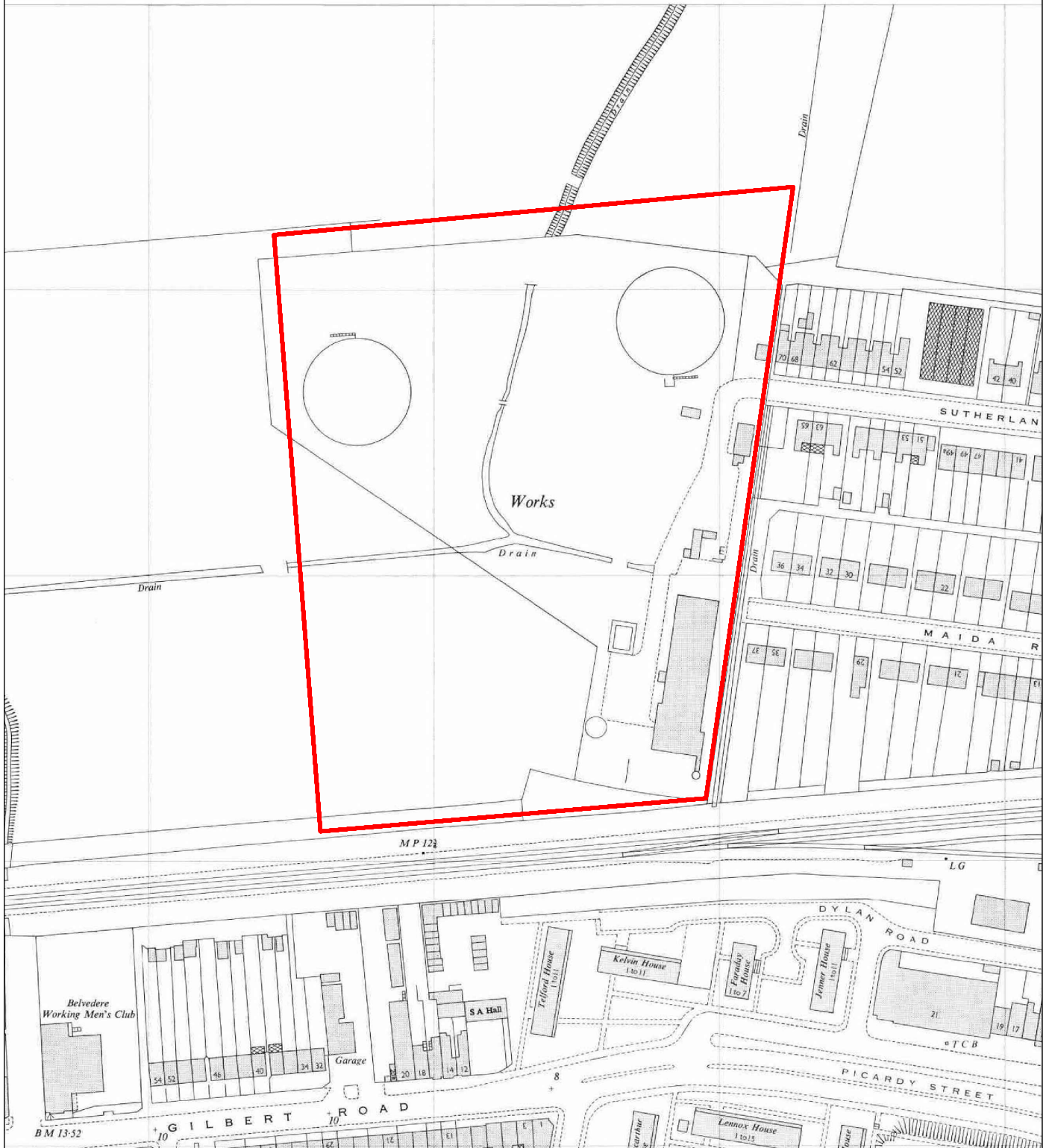


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Scale at A4: 1:2,000



Figure 10

1957 Ordnance Survey Map



 Site Boundary

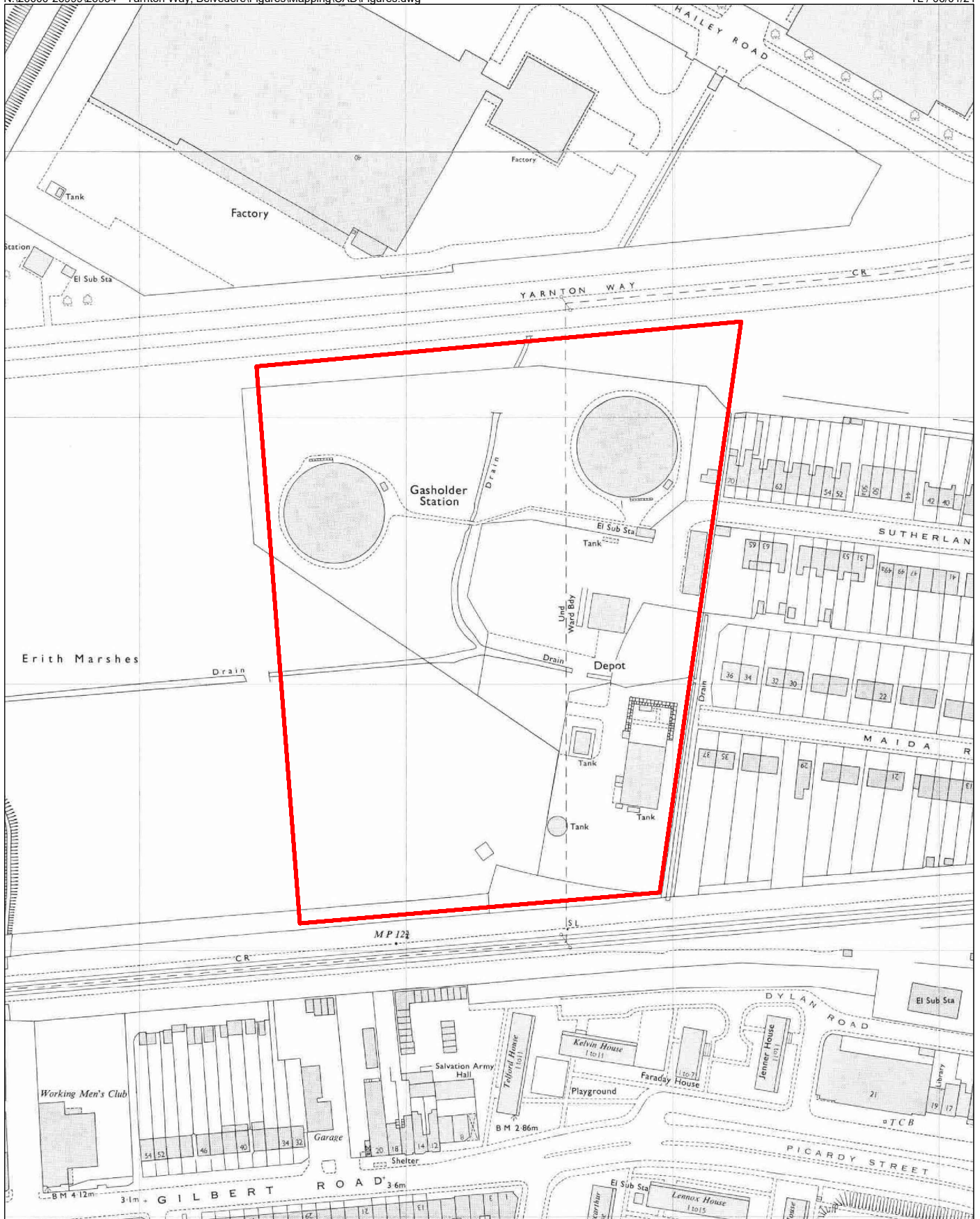


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Scale at A4: 1:2,000



Figure 11

1964 Ordnance Survey Map



Site Boundary



0 10 20 30 40 50m
Scale at A4: 1:2,000



Figure 12

1980 Ordnance Survey Map



 Site Boundary



Not to Scale:
Illustrative Only



Figure 13
2003 Aerial Photograph



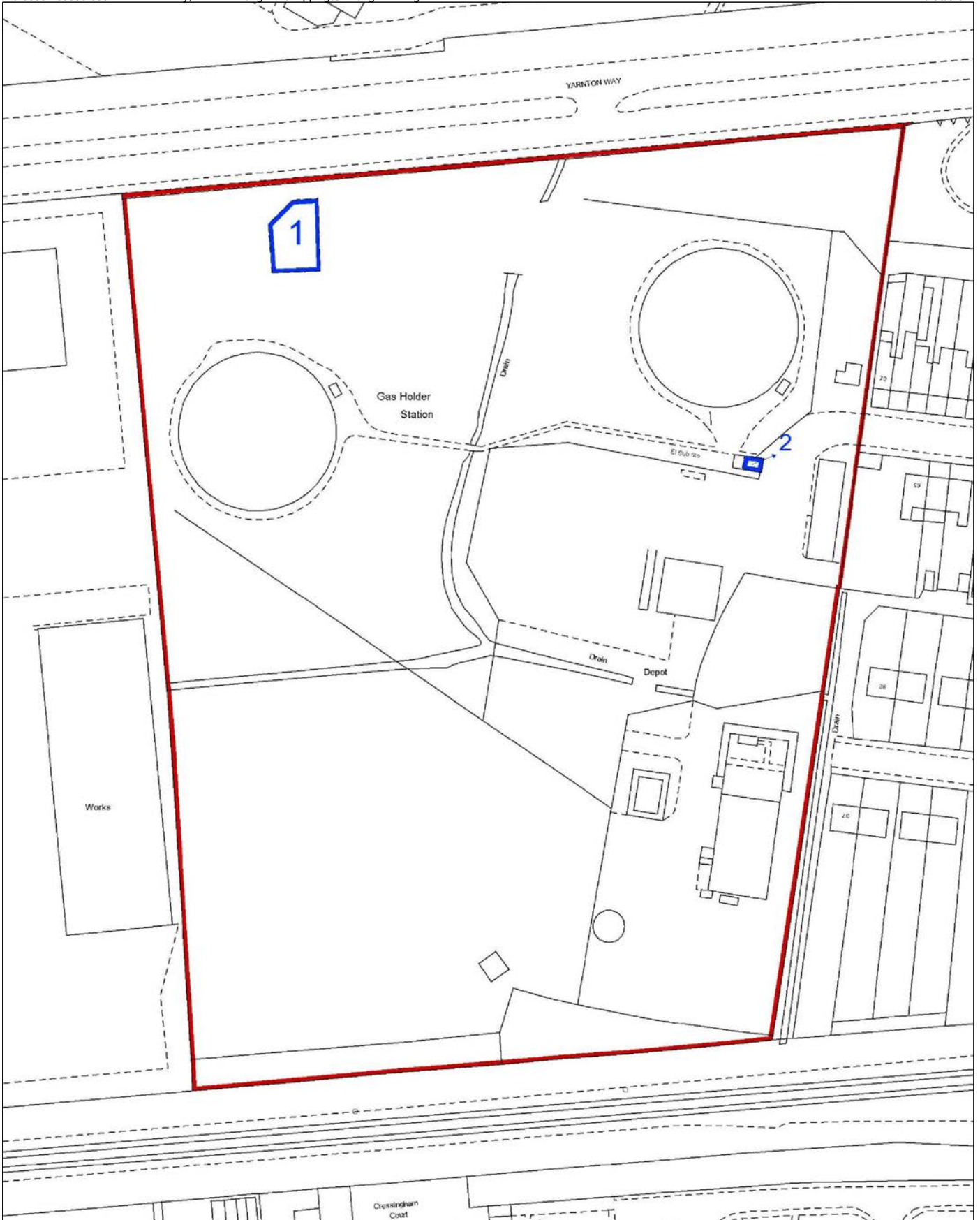
 Site Boundary



Not to Scale:
Illustrative Only



Figure 14
2020 Aerial Photograph



 Site Boundary



Not to Scale:
Illustrative Only



Figure 15
Site Layout as Existing



enouncement. Dimensions and areas are based on survey information provided by the client. This drawing is copyright © STOCKWOOL. All dimensions to be checked on site. Do not scale.

 Site Boundary



Not to Scale:
Illustrative Only



Figure 16
Proposed Development



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