ARCHAEOLOGICAL DESK BASED ASSESSMENT

Hillingdon Water Sports Facility and Activity Centre (HWSFAC), Broadwater Lake, Moorhall Road, Harefield, UB9 6PE

JAC 28557
Hillingdon WSFAC,
UB9 6BB
September 2023

rpsgroup.com

Quality Management

Version	Status	Authored by	Reviewed by	Approved by	Review date
1		S Blatherwick			22.3.23.
2		S Blatherwick	R Masefield	R Masefield	5.7.23.
3		S Blatherwick	R Masefield	R Masefield	6.9.23.

File/Model Location

Document location:	S:\Archaeology\Archaeology Jobs\28000-28999\28557 - Hillingdon Sailing Facility and Activity Centre\Reports\DBA\230607 - JAC 28557 - Hillingdon WSF - Archaeological desk-based assessment.docx
Model / Appendices location:	

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London Borough of Hillingdon (LBH)

EXECUTIVE SUMMARY

This archaeological desk-based assessment has been prepared by RPS on behalf of London Borough of Hillingdon.

The subject of this assessment is the Site of the proposed Hillingdon Watersports Facility and Activity Centre (HWSFAC) in the London Borough of Hillingdon.

In accordance with central and local government 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, August 2020), the Applicant has commissioned RPS to undertake this archaeological desk-based assessment.

In terms of relevant designated archaeological assets, no World Heritage Sites, Scheduled Monuments, Registered Parks and Gardens, Historic Battlefield, or Historic Wreck Sites occur within or in close proximity to the Site.

A search of the Greater London, Buckinghamshire and Hertfordshire HERs indicates that the eastern edge of the Site is located within the Colne Valley Archaeological Priority Area.

The archaeological character of the area is dominated by the significance of possible in situ Palaeolithic and Mesolithic evidence around and to the south of Three Ways Wharf area in Uxbridge. Elsewhere demonstrates less activity in these periods, and the whole area seems to have more limited activity during the later prehistoric periods, but with isolated pockets of activity occurring. Roman activity was likely focussed on any river crossing that existed at Uxbridge, and activity here may well have continued into the early Medieval period. During the Medieval period Uxbridge grew in importance and size, but there were also a number of farms, manors and mills along the length of the River Colne. Activity during the post-Medieval period was concentrated along the canal, where it was largely industrial in nature.

Quick-sand deposits are recorded on part of the Site.

The results of that industrial activity are visible on the Site with Site walk-over showing massive truncation from sand and gravel extraction and heavy industrial impact and re-working of the ground. The remnants of Sand & Gravel works infrastructure are also visible.

Huge impacts caused by both the extensive mineral extraction and associated infrastructure would suggest that the below ground archaeological potential of the Site is generally Low to Negligible although SI works show the presence of alluvial deposits on the Site.

As such it is consider that the LPA could require some archaeological recording secured placing a suitable worded planning condition on any consent that is granted.

The final decision regarding this rests with the LPA and their Archaeological Planning Advisers.

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1 INTRODUCTION AND SCOPE OF STUDY

1.1 This document provides an Archaeological Desk-based Assessment (DBA) for the Site known as the proposed Hillingdon Watersports Facility and Activity Centre (HWSFAC) in the London Borough of Hillingdon (Figure 1).

1.2 This DBA has been prepared by RPS on behalf of the London Borough of Hillingdon in relation to the creation of a new water sports and activity centre on land at Broadwater Lake, which lies to the north of Moorhall Road and west of South Harefield, which is referred to as "the Site" within this report. The Site – circa 79.95 hectares- is currently occupied by a mixture of lakes, hardstanding and woodland and includes a single small dwelling. The lakes were created from historic gravel extraction.

1.3 The report has been prepared by Simon Blatherwick, Technical Director (Heritage) of RPS to provide the archaeological background to the Site.

1.4 Consultation responses from the London Borough of Hillingdon's Archaeological Planning Adviser at the Greater London Archaeological Advisory Service (GLAAS) indicated that the 750m 'buffer search area' for HER data was appropriate.

1.5 The report addresses below ground archaeology only with Built Heritage addressed in a separate document.

1.6 In accordance with central and local government 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, August 2020), the Applicant has commissioned RPS to undertake this below ground archaeological desk-based assessment.

1.7 Due to the location of the Site, the following HER's have been searched to provide the archaeological background data;

- Greater London Historic Environment Record (Figure 2b)
- Buckinghamshire Historic Environment Record (Figure 2c)
- Hertfordshire Historic Environment Record (Figure 2d)

1.8 In terms of designated archaeological assets, no World Heritage Sites, Scheduled Monuments, Registered Parks and Gardens, Historic Battlefield, or Historic Wreck Sites occur within the Site. A number of Designated Assets are recorded within the Historic Environment Records (HER) Search Area (Figure 2a). Built Heritage assets are addressed in a separate Built Heritage assessment.

1.9 The Designated Assets data records the Scheduled Monument of 'Mound with ditch and outer bank 200ft (60m) S of Savay Farm' (National List Entry Number: 1006945) circa 650m south of the southern limits of the Site. This is located in the parish of Denham, Buckinghamshire. No information regarding this feature is available on the National List entry and the Reason for Designation is described as 'Not currently available for this entry'.

1.10 The Buckinghamshire HER Data provides the following information;

- Mound with ditch and outer bank 200ft (60m) S of Savay Farm. Now appears a circular ditched mound with an outer bank on the west only, but the completed line of the outer bank contains sarsen stones, visible under dry conditions. The position is odd for any kind of prehistoric sepulchral monument. It may, in fact be the foundations of a medieval tower. Never excavated. Diameter, about 40' across ditch, about 75' across completed outer bank.

1.11 Due to its location (circa 650m south of the southern limits of the Site) this asset is not considered further in the assessment. There will be no development effects on it as a result of existing built form and tree cover between the Site and the Scheduled Monument.

1.12 The GLHER Data provides entries specific to the Site (GLHER Data see below) and indicates that the eastern edges of the Site are located within the Colne Valley Archaeological Priority Area (APA), Primary Reference Number: 78417.

1.13 The APA guidance for the borough was updated between in 2013 so has not been "tiered" in accordance with recent Historic England (2016) APA Guidelines Historic England.

1.14 The Buckinghamshire HER shows HER Number 0265000000 - MBC7 (Site Name Denham) immediately adjacent to the western boundary of the Site.

1.15 The HER Data is provided at Figures 2a to 2d inclusive.

Scope of Study

1.16 To compile the baseline assessment, the following actions have been undertaken;

- Consultation with the Archaeological Adviser to the London Brough of Hillingdon;
- A search of the Buckinghamshire, Greater London and Hertfordshire Historic Environment Records databases;
- An examination of national and local planning policies in relation to heritage assets;
- A map regression exercise looking at the cartographic evidence for the Site;
- An examination of available topographical evidence;
- An inspection of geological sources (maps/borehole logs/trial-pit data) available for the Site;
- A review of the results of archaeological field work undertaken within the vicinity of the Site;
- A Site walk-over;
- An assessment of existing impact on the Site;
- An assessment of relevant published and unpublished sources; and
- Review of archaeological Research Agendas and Frameworks for Greater London in relation to archaeological assets;

1.17 The Chartered Institute for Archaeologist's Standard and Guidance for historic environment desk-based assessment (2020) sets a "standard" for desk-based assessment as follows:

> Desk-based assessment will determine, as far as is reasonably possible from existing records, the nature, extent and significance of the historic environment within a specified area. Desk-based assessment will be undertaken using appropriate methods and practices which satisfy the stated aims of the project, and which comply with the Code of conduct and other relevant regulations of CIfA. In a development context desk-based assessment will establish the impact of the proposed development on the significance of the historic environment (or will identify the need for further evaluation to do so), and will enable reasoned proposals and decisions to be made whether to mitigate, offset or accept without further intervention that impact.

1.18 The "Definition" of an assessment is given as:

> Desk-based assessment is a programme of study of the historic environment within a specified area or site on land, the inter-tidal zone or underwater that addresses agreed research and/or conservation objectives. It consists of an analysis of existing written, graphic, photographic and electronic information in order to identify the likely heritage assets, their interests and significance and the character of the study area, including appropriate consideration of the settings of heritage assets and, in England, the nature,

extent and quality of the known or potential archaeological, historic, architectural and artistic interest. Significance is to be judged in a local, regional, national or international context as appropriate.

1.19 This desk-based assessment comprises an examination of evidence on the Greater London Historic Environment Record (HER) and other sources, together with the results of a comprehensive historic map regression exercise.

1.20 This document draws together the available archaeological, topographic and land-use information in order to clarify the archaeological potential of the Site and to consider the need for design, civil engineering, and archaeological solutions to the archaeological potential identified.

1.21 The document has been completed with reference to current national guidelines, as set out in the;

- Chartered Institute for Archaeologists 'Standard and guidance for historic environment desk-based assessment' (CIfA 2020)
- Historic England documents 'Management of Research Projects in the Historic Environment' (Historic England 2015a)
- Historic Environment Good Practice Advice in Planning' (Historic England 2015b&c); and
- the local guidance in the Greater London Archaeological Advisory Service (GLAAS) 'Guidelines for Archaeological projects in Greater London' (Historic England, 2015d).

1.22 The scope of this desk-based assessment has been agreed with the London Borough of Wandsworth's Archaeological Planning Adviser at the Greater London Archaeology Advisory Service (GLAAS).

Limitations

1.23 In any desk-based assessment a degree of uncertainty is attached to the baseline data sources. This includes:

1.24 The Historic Environment Records (HER) can be limited because it often depends on "random" opportunities for research, fieldwork and discovery;

- Lack of dating evidence for sites;
- Documentary sources are rare before the medieval period and many historic documents are inherently biased; and
- The extent of truncation caused by previous development impacts and landscaping works cannot be fully ascertained.

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), and it was last updated in 2021. The NPPF is supported by the National Planning Practice Guidance (NPPG), which was published online 6th March 2014, with the guidance on Conserving and Enhancing the Historic Environment last updated 23 July 2019. (https://www.gov.uk/guidance/conserving-and-enhancing-the-historic-environment).

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 to 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 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 positively identified as having a degree of significance meriting consideration in planning decisions. They include designated heritage assets (as defined in the NPPF) and assets identified by the local planning authority during the process of decision-making or through the plan-making process.

2.7 Annex 2 also defines *Archaeological Interest* as a heritage asset which holds or potentially could hold evidence of past human activity worthy of expert investigation at some point.

2.8 A *Designated Heritage Asset* comprises a: World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area.

2.9 *Significance* (for heritage policy) 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* 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. 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.

2.13 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.

Regional Planning Policy

The London Plan (The Spatial Development Strategy for London) – March 2021

2.14 The relevant Strategic Development Plan framework is provided by the London Plan. Policy relevant to archaeology at the Site, includes 'Policy HC1 Heritage conservation and growth'. This sets out the following;

> 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 reuse

2.15 Supporting paragraphs include the following;

7.1.1 London's historic environment, represented in its built form, landscape heritage and archaeology, provides a depth of character that benefits the city's economy, culture and quality of life. The built environment, combined with its historic landscapes, provides a unique sense of place, whilst layers of architectural history provide an environment that is of local, national and international value. London's heritage assets and historic environment are irreplaceable and an essential part of what makes London a vibrant and successful city, and their effective management is a fundamental component of achieving good growth. The Mayor will develop a London-wide Heritage Strategy, together with Historic England and other partners, to support the capital's heritage and the delivery of heritage-led growth.

7.1.9 Understanding of London's archaeology is continuously developing with much of it yet to be fully identified and interpreted. To help identify sites of archaeological

interest, boroughs are expected to develop up-to-date Archaeological Priority Areas for plan-making and decision-taking. Up-to date Archaeological Priority Areas (APAs) are classified using a tier system recognising their different degrees of archaeological significance and potential as presently understood. Tier 1 APAs help to identify where undesignated archaeological assets of equivalent significance to a scheduled monument – and which are subject to the same policies as designated assets – are known or likely to be present.

7.1.10 Across London, Local Plans identify areas that have known archaeological interest or potential. The whole of the City of London has high archaeological sensitivity whilst elsewhere the Greater London Archaeological Priority Area Review Programme is updating these areas using new consistent London-wide criteria.
Each new APA is assigned to a tier:
• Tier 1 is a defined area which is known, or strongly suspected, to contain a heritage asset of national significance, or which is otherwise of very high archaeological sensitivity.
• Tier 2 is a local area with specific evidence indicating the presence, or likely presence, of heritage assets of archaeological interest.
• Tier 3 is a landscape-scale zone within which there is evidence indicating the potential for heritage assets of archaeological interest to be discovered.
• Tier 4 (outside APA) covers any location that does not, on present evidence, merit inclusion within an Archaeological Priority Area.
• Other APAs which have not yet been reviewed are not assigned to a tier.

7.1.11 Developments will be expected to avoid or minimise harm to significant archaeological assets. In some cases, remains can be incorporated into and/or interpreted in new development. The physical assets should, where possible, be made available to the public on-site and opportunities taken to actively present the site's archaeology. Where the archaeological asset cannot be preserved or managed on site, appropriate provision must be made for the investigation, understanding, recording, dissemination and archiving of that asset, and must be undertaken by suitably qualified individuals or organisations.

Local Planning Policy

Hillingdon Local Plan

2.16 The Site is located within the London Borough of Hillingdon.

2.17 Local Plan: Part 1 Strategic Policies (Adopted November 2012)

2.18 Hillingdon Local Plan contains the following relevant policies;

Policy HE1: Heritage
The Council will:
1. Conserve and enhance Hillingdon's distinct and varied environment, its settings and the wider historic landscape, which includes:

- Historic village cores, Metro-land suburbs, planned residential estates and 19th and 20th century industrial areas, including the Grand Union Canal and its features;

- Designated heritage assets such as statutorily Listed Buildings, Conservation Areas and Scheduled Ancient Monuments; Registered Parks and Gardens and historic landscapes, both natural and designed;
- Locally recognised historic features, such as Areas of Special Local Character and Locally Listed Buildings; and
- Archaeologically significant areas, including Archaeological Priority Zones and Areas.

2. Actively encourage the regeneration of heritage assets, particularly those which have been included in English Heritage's 'Heritage at Risk' register or are currently vacant.

3. Promote increased public awareness, understanding of and access to the borough's heritage assets and wider historic environment, through Section 106 agreements and via community engagement and outreach activities.

4. Encourage the reuse and modification of heritage assets, where appropriate, when considering proposals to mitigate or adapt to the effects of climate change. Where negative impact on a heritage asset is identified, seek alternative approaches to achieve similar climate change mitigation outcomes without damage to the asset.

Implementation of Policy HE1: how we will achieve this
The Council will seek to:
1. Ensure appropriate specialist advice and guidance is available, by preparing character appraisals, management plans and design guidance for its designated areas and historic assets, in partnership with the local community, guided by the Conservation Forum and where possible, aided by English Heritage.

2. Regularly review and update its web based Historic Environment Record (HER) and designations as required, and update character appraisals and management plans for conservation areas, ensuring national and local interest groups, and residents are consulted.

3. Pro-actively manage heritage assets, including those considered “At Risk” by English Heritage, working with heritage groups and partners where appropriate, to ensure buildings and structures such as those at Eastcote House Gardens, RAF Uxbridge and Breakspear House are repaired and reused.

4. Promote the borough’s heritage by continuing to ensure that it is included in the London Open House event; to improve the interpretation of historic assets, such as Manor Farm, Ruislip; and to recognise local schemes of exceptional quality or innovation by, for example, applying for Civic Trust and Green Apple Awards.

5. Include more specific guidance relating to historic buildings and other conservation matters, in the Hillingdon Local Plan: Part 2- Development Management Policies and supporting guidance contained within the forthcoming Heritage Strategy Supplementary Planning Document, together with the relevant Area Action Plans.

6. Where the loss of a heritage asset is justified, ensure that there will be a commitment to recording the structure and to disseminating this information to enable increased

understanding of the heritage asset. Copies of these documents will, where appropriate, be deposited with local libraries and the Greater London Historic Environment Record (HER).

2.19 The Local Plan defines Archaeological Priority Areas (APAs) as;

Areas of particular archaeological importance or vulnerability in the Borough which have been identified by the Council with the advice of English Heritage. In Archaeological Priority Areas (APAs) these areas the Council's policies and proposals for archaeological sites will apply. Advice from the Greater London Archaeological Advisory Service will be sought on planning applications affecting such areas and further research and site investigation may be required.

2.20 The Local Plan defines Archaeological Priority Zones (APZs) as;

The boundaries of Archaeological Priority Zones are designated on the Policies Map. These are areas where there is potential for significant archaeological remains, Archaeological Priority Zones (APZs) and planning applications within these areas must be accompanied by an archaeological assessment and evaluation of the site, including the impact of the proposed development.
Saved UDP Policies include;

- BE1 Development within archaeological priority areas, and
- BE3 Investigation of sites of archaeological interest and protection of archaeological remains.

LOCAL PLAN PART 2 DEVELOPMENT MANAGEMENT POLICIES

2.21 The Local Plan Part 2 Development Management Policies contains Policy DMHB 7 Archaeological Priority Areas and Archaeological Priority Zones. This states;

The Council, as advised by the Greater London Archaeological Advisory Service, will ensure that sites of archaeological interest within or, where appropriate, outside, designated areas are not disturbed. If that cannot be avoided, satisfactory measures must be taken to mitigate the impacts of the proposals through archaeological fieldwork to investigate and record remains in advance of development works. This should include proposals for the recording, archiving and reporting of any archaeological finds.

2.22 Supporting paragraphs includes the following information;

5.24 An Archaeological Priority Area (APA) is an area, designated by the Council to protect buried archaeological remains from the adverse affects of development. All applications in APAs are referred to the Greater London Archaeological Advisory Service (GLAAS) which is part of Historic England's London office.

5.25 The Council has also designated a number of Archaeological Priority Zones (APZs) through its Local Plan. APZs are used as a tool for identifying the potential need for archaeological assessment and consultation with GLAAS at the pre-application stage rather than necessarily asserting that archaeology will take priority. This means that larger sites such as those APZs at Heathrow are highlighted so that archaeology can be considered in advance of an application.

5.26 APAs and APZs will be regarded by the Council as a material consideration when determining planning applications. Applicants submitting proposals for development in

these areas will be expected to assess the archaeological implications of these proposals, submitting where appropriate, a desk based assessment with their planning application. Ground workings should not take place without appropriate archaeological investigation and the recording and archiving of archaeological remains, all of which should be carried out to meet the requirements of GLAAS.

3 GEOLOGY AND TOPOGRAPHY

Geology

3.1 A Phase 1 (Geo-Integrity, 2022) & Phase 2 (Geo-Integrity, 2023) Site Investigation report has been reviewed for this Site.

3.2 Geo-Integrity (2022) report that reference to the British Geological Survey website and Sheet 255 Beaconsfield indicates that the site is underlain by Worked Out Ground, Alluvium, Shepperton Gravel and Newhaven Chalk. They also report that there are two historical boreholes located on the site, that were put down by Affinity Water in 2013. Both found Alluvium and Shepperton Gravel to depths ranging from 3.50m bgl to 6.0m bgl with Chalk beneath that to a maximum depth of 76.50m below ground level. Groundwater depth in both boreholes was encountered at between 1.20 and 1.80m bgl.

3.3 Geo-Integrity (2023) provides the following Summary of Ground Conditions Encountered;

> Concrete hardstanding was encountered across the majority of the eastern side of the site and part of the proposed activity field at the southern end of the site, associated with the historic gravel extraction activities. The lateral extent of concrete is shown on the hardstanding plan within Appendix A.
>
> Made Ground soils were also encountered across the entire site from ground level and underlying the hardstanding down to depths between 1.00m and 2.00m bgl, however some areas encountered locally deeper Made Ground including BH3 and BH4 down to depths of 2.45m and 3.45m bgl which were located along the eastern side of the site.
>
> Reworked soils were located locally along the northern boundary becoming thicker westwards. These reworked natural gravels were encountered down to depths ranging between 2.45m and 3.25m bgl interpreted to reflect the infilling processes which was noted on the historical OS maps from 2001.
>
> The first natural soil encountered is a consistent layer of Alluvium which is present across the entire site. Alluvium was encountered down to depths ranging between 1.30m and 4.50m bgl. this was underlain by a consistent medium dense to dense granular layer of superficial gravel known as the Shepperton Gravel Member down to depths ranging between 6.10m and 8.00m bgl.
>
> The superficial gravels were underlain by structureless chalk comprising layers of gravelly silt (Grade Dm) and silty gravel (Grade Dc) down to the base of the exploratory holes in excess of 15.00m bgl.

3.4 The Geo-Integrity (2023) logs and hard-standing plan are provided at Appendix 1. Alluvium is recorded in BH1, BH2, BH3, BH4, BH6, BH7, BH8, BH9, TP1, TP11, TP12, TP13 & TP14.

3.5 RPS preliminary review of the available historic mapping and information held by the BGS indicates that a large proportion of the site has previously been subject to gravel quarrying during the mid to late 20th century. The BGS data also suggests that parts of site that now exist as dryland have been created by landfill across areas of previous quarrying.

Topography

3.6 Topographic Survey has not been seen as part of this assessment. Site visit indicated that the Site is largely flat landscape with large bodies of open water.

4 ARCHAEOLOGICAL / 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	-	1,800 BC
Bronze Age	1,800	-	600 BC
Iron Age	600	-	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 Site and the archaeological/historical background of the general area, and, in accordance with NPPF, considers the potential for any as yet to be discovered archaeological evidence on the Site.

4.2 What follows comprises a review of known archaeological assets recorded on the Buckinghamshire, Greater London and Hertfordshire Historic Environment Records within a 750m radius of a central National Grid Reference (See Figures 2a to 2d).

4.3 Additional research provides further background to the Site.

4.4 Chapter 5 subsequently considers the site conditions and whether the proposed development will impact the theoretical archaeological potential identified below.

4.5 GLHER Data indicates that the eastern portion of the Site is located within the Colne Valley Archaeological Priority Area (APA).

4.6 The archaeological assessment prepared by CgMs Consulting (2013) for the London Borough of Hillingdon (to inform Hillingdon's Local Plan: Part 2 - Development Management Policies, Site Specific Allocations and Policies Map) included the following;

> 3.12.7 Records on the Buckinghamshire HER for a buffer area along the Buckinghamshire/ Hillingdon border stress the importance of the Three Ways Wharf area for Palaeolithic and Mesolithic material, with Palaeolithic and Mesolithic activity recorded at the Sanderson site on the other side of the River Fray to Three Ways Wharf, and at Denham, further south. A number of Medieval fisheries are also recorded along the length of the River Colne on the Buckinghamshire side. It could be anticipated that fisheries would have been present on the Hillingdon side as well.

3.12.8 The archaeological character of the area is dominated by the significance of possible in situ Palaeolithic and Mesolithic evidence around and to the south of Three Ways Wharf area in Uxbridge. Elsewhere demonstrates less activity in these periods, and the whole area seems to have more limited activity during the later prehistoric periods, but with isolated pockets of activity occurring. Roman activity was likely focussed on any river crossing that existed at Uxbridge, and activity here may well have continued into the early Medieval period. During the Medieval period Uxbridge grew in importance and size, but there were also a number of farms, manors and mills along the length of the River Colne. Activity during the post-Medieval period was concentrated along the canal, where it was largely industrial in nature.

3.12.9 The canal was constructed in the late 18th century and this encouraged industry to develop alongside it, particularly quarrying. This area has been heavily impacted by mineral extraction, with large sections of it, particularly in the north, now water-filled former quarry pits. Former quarry pits are likely to have no remaining archaeological potential. In the south there are also significant areas of water management. The floodplain setting has discouraged settlement and therefore any archaeological deposit may be better preserved, particularly if they are waterlogged or sealed beneath alluvium or peat. Uxbridge is likely to have undergone multiple phases of development, and each phase is likely to have caused severe, but localised disturbance to underlying deposits.

HER Data

GLHER Data (Figure 2a – Appendix 2)

4.7 The GLHER Data describes [78417] Colne Valley Archaeological Priority Area as follows

This APZ includes the APAs of Harefield North, West Drayton and parts of Uxbridge. The APA of West Drayton Station is immediately adjacent and Harefield South lies just to the east of the APZ extent. There are a few Palaeolithic findspots scattered throughout the area. The most significant site is that at Three Ways Wharf which produced evidence of in situ Palaeolithic and Mesolithic occupation. Other Palaeolithic and Mesolithic finds have been made in the area around Three Ways Wharf including bones and further Mesolithic flint scatters under peat layers to the south of Three Ways Wharf. Records on the Buckinghamshire HER for a buffer area along the Buckinghamshire/ Hillingdon border stress the importance of the Three Ways Wharf area for Palaeolithic and Mesolithic material, with Palaeolithic and Mesolithic activity recorded at the Sanderson site on the other side of the River Fray to Three Ways Wharf, and at Denham, further south. A Mesolithic occupation site and lithic working area have also been recorded at Dewes Pit with other scattered records in the northern half of the area. There is more limited evidence for Neolithic activity in the area with few findspots. There is also limited evidence for the Bronze Age, with a possible ring ditch and burial urns at Dewes Pit, and a field system in central Uxbridge as well as further ditches of possible Bronze Age-Iron Age date at Townmead School by West Drayton.

In the Colne Valley as a whole there is evidence for increased activity during the Neolithic and Bronze Age. There is very little recorded evidence for the Iron Age and Roman periods, with a few stray finds and a possible Roman causeway in the centre of Uxbridge. This is in line with limited evidence for these periods in the Colne Valley in general, though there is a slight increase in Roman activity. There is very limited

evidence for activity in the early medieval period throughout the whole area with just a spearhead found near Dewes Pit and the suggestion that settlement at Uxbridge began in this period.

A number of manors, parks and mill were listed in the Domesday survey. Into the medieval period a similar pattern as found in the rest of the Borough is repeated, with a number of manors and farmsteads becoming established and much of the land given over to agriculture. These farms included Dewes Farm, Baldwin's Hall farm, Northall Grange, Cowley Hall and a manor house at Beaudesert Mews. There were also a number of mills along the length of the River Colne including at Coppermill Lock, Ravenyng Mill, Cowley, Yiewsley and Thorney Mill. The Coppermill at Harefield (Coppermill Lock) was identified in the 2003 London Schedule Review as worthy of consideration for scheduling.

The Buckinghamshire HER records a number of fisheries along the Colne and fisheries can be anticipated on the Hillingdon side of the Colne as well. Rocque's 1754 map shows the landscape was made up of a mixture of open moors, enclosed fields, some enclosed parks, a few settlements including mills and dominated by the Colne and Fray Rivers.

The 1813 Harefield and 1825 Hillingdon Enclosure maps show a landscape of enclosed fields with few settlements and the land predominantly held by a few large landowners, even with the arrival of canals in the late 18th century. The Grand Union Canal initially did not have a huge impact, though a greater level of mineral extraction did start to develop. The landscape by the time of the 1866 Ordnance Survey remained predominantly agricultural, with a few quarries. Mineral extraction really started to have a significant impact from the 1920s and coupled with the extensive inter-war development that many existing settlements experienced meant that parts of the Colne Valley within Hillingdon, particularly the south, started to change in character.

The increased development around Uxbridge particularly can be seen in the 1945 aerial photograph. In the northern part of the APZ, continued mineral extraction up to 1960 and into the 1990s continued to change the area, especially as many of the former gravel pits were flooded to create lakes for recreational use. This is particularly noticeable on the 2010 aerial photograph. Significance of the APZ This APZ is particularly significant for remains dating from the prehistoric periods, particularly the early prehistoric. It could also provide information on the use and exploitation of riverine environments into the post-medieval period.

4.8 The GLHER Data provides the following entries specific to the Site;

- 114765 Normer Hillmain Road-cutting (Lower Palaeolithic Findspot)
- 117790 Moorhall Road (Post Medieval Waste Disposal Site). Site of landfill taken from British Geological Survey data supplied to the Environment Agency. It is not known whether this site was made or worked land, and the date of infill is unknown, although all of 19th/20th Century date. A digitised map showing the extent of each landfill site is also held.

4.9 The accuracy of the geo-referencing in the GLHER data entries specific to the Site may be variable.

4.10 The GLHER Data includes the following entries for assets adjacent to the Site which illustrate the range of archaeological evidence within the vicinity of the Site.

- 97325 Harefield (Palaeolithic Findspot).
- 97464 Moorhall Road (High Medieval Chapel). The Medieval settlement of Moorhall probably originated from farm building and a chapel. The chapel dated to the 13th Century and was a two storey building of flint rubble with stone dressings, and was restored in the 17th Century and later. The north wall had a 13th Century doorway at each level and there were eight lancet windows of varying sizes. In 1959 the building was a roofless ruin, and at some point after this is appears to have been demolished.
- 105217 Second World War Pillbox (Type Fw3/27). 6-sided concrete pillbox (probable type 27) with roofed blast wall to entrance with embrasure and two vertical concrete posts. 6-sided central well for LMG AA role. Wooden beam across. Square entrance to well on E side. Steps leading up to entrance on N side. The pillbox is in the back garden of a house on a new housing estate, and is described as an 'observation post' on the deeds. The owner does not like it in his garden, but has failed to get the authorities to demolish it. He has planted fast-growing creepers around it!
- 114491 Church Hill (Post Medieval Waste Disposal Site). Site of landfill taken from British Geological Survey data supplied to the Environment Agency. It is not known whether this site was made or worked land, and the date of infill is unknown
- 115199 Second World War Pillbox (Type Fw3/27). Six-sided concrete pillbox (probable type 27) with roofed blast wall to entrance with embrasure and two vertical concrete posts. 6-sided central well for LMG AA role. Wooden beam across. Square entrance to well on E side. Steps leading up to entrance on N side. The pillbox is in the back garden of a house on a new housing estate.(1). This could be a duplicate of 105217.
- 141917 Colne Valley (Palaeolithic Findspot). Description - Acheulian Handaxes. No further information available.
- 147866 Harefield (Mesolithic Findspot - Lithic Implement).
- 149021 Widewater Lock Cottage (Georgian Wall & Lock Keepers Cottage).
- 169817 Geotechnical Test Pit at Broadwater Gardens circa 100m east of the Site. A Geoarchaeological examination and analysis of peat deposits from two small trenches took place at Broadwater Gardens. The samples indicate organic sediments accumulating both around 9700 BP and 5000 BP (i.e.: early Mesolithic and Neolithic periods). No archaeological material was found in association with these sediments.
- 167358 Test Pit at Colne Valley Viaduct to the immediate south-west of the southern entrance to the Site. Thirty-three test pits were excavated along a 13KM stretch of the Colne Valley, between Denham (to the south) and Rickmansworth (to the north). The test pits were undertaken as part of the enabling works for High Speed Two Phase One. The fieldwork took place between December 2018 and June 2020. The test pit locations were selected to address various construction programme risks, including; rail alignment formation of the proposed Colne Valley Viaduct and associated piers, a haul road, satellite construction compounds, attenuation ponds, temporary earthwork storage stockpiles, flood compensation areas and ecological mitigation ponds, below-and above-ground services, and green landscaping. Following the conclusion of the field work, a geoarchaeological deposit model was created by the Archaeological Contractor, incorporating data from 140 borehole logs. Five distinct deposit formations were identified on the site; tertiary geological deposits in the form of Lambeth Group and Chalk head, Pleistocene gravels, Holocene alluvium, Holocene colluvium and modern made ground. No cut features were observed in any of the test pits. No artefacts pre-dating the post-Medieval period were recovered from the site.

Buckinghamshire HER Data (Figure 2b – Appendix 3)

4.11 The Buckinghamshire HER includes the following information;

- EBC16827. Watching brief carried out during groundworks for phase 2 of redevelopment of retirement village established that this part of the site had been considerably truncated previously. The only area without previous disturbance was towards the SE corner of the site
- EBC16312. Watching brief during geoarchaeological test pitting. Any archaeological deposits were likely to be buried 3m below the surface and were unlikely to be effected by proposed works. The machine deposits did not produce any significant artefactual or ecofactual deposits nor was any evidence of buried soil horizons discovered.
- EBC16567. Watching brief carried out during groundworks for phase 1 of redevelopment of retirement village established that 0.1m of made ground overlay 0.25m - 0.4m of subsoil. The natural geology was exposed only in isolated areas
- EBC17803. HS2 Remote sensing survey CH-004-007
- 0411900000. Grand Junction/Union Canal
- 82000000. Lower to Middle Palaeolithic flint artefacts found in road cutting on Normer Hill to the west of the Site
- 0564500000. Two nineteenth to twentieth century waterwheels at the Fisheries
- 0780500000. Square ditched enclosure within Northmoor Hill Wood, identified by LiDAR survey. A roughly square ditch is visible on LiDAR as an extant earthwork beneath trees. Possible moated site. Heavily-degraded linear bank visible as an earthwork within a possible moated site. May be structural remains of some sort. Area within the square ditch appears very uneven, suboval depression, possibly as a result of later quarrying adjacent to this bank. There are other quarry pits nearby.
- 0895300000 / 0895400000. Site of former gravel pit shown on twentieth century maps south of Weybeard's House
- 1218000000. Denham Film Studios, built 1935-6, in use until 1953 and partly demolished in 1981.

Hertfordshire HER Data (Figure 2c – Appendix 4)

4.12 The Hertfordshire HER includes the following information;

- 17319 - MHT17319. Cropmarks of possible pits and enclosures; worked flints have been found in this area. These cropmarks may be at least in part related to a post-medieval chalk pit and associated canal to the river. Several linear features in the eastern half of the field were investigated in 2012, and found to consist of gullies and ditches. A ditch and a gully contained one sherd each of late Bronze Age pottery but there was otherwise little to date the features
- EHT7117. Geophysical survey at Pynesfield, Tilehouse Lane, Rickmansworth. No further information available
- EHT7470. Geotechnical investigation at Pynesfield, Denham Way, Rickmansworth. 15 boreholes sunk across land between Denham Way and Tilehouse Lane, proposed for mineral extraction, found a consistent depth of topsoil above sand and gravel, which was more than 3m deep at the foot of the hill slope to the west, but only 0.2m at the eastern edge beside Denham Way. Beneath was the natural chalk
- EHT8291. Excavation at Pynesfield (off Tilehouse Lane), Maple Cross. No further information available

- EHT8388. Evaluation at Pynesfield, Denham Way, West Hyde, 2012. 81 evaluation trenches across the east side of the field between Tilehouse Lane and Denham Way revealed possible archaeology in 18 trenches
- EHT8507. Geo-physical Survey of about 131ha on the Hertfordshire section of the HS2 route, a block of land bounded by Chalfont Lane, Shire Lane and Denham Way. The results were 'dominated by natural responses relating to the undulating topography…and pitting in the chalk bedrock', but at the southern end of the area were anomalies which probably relate to a ditched enclosure. Anomalies at the northern end may be another enclosure, or natural features
- EHT8537. Strip, map and record at Land at Pynesfield (off Tilehouse Lane), Maple Cross, Rickmansworth. No further information available.

Post Medieval & Modern (including map regression exercise)

4.13 Early maps of the Site (Figure 3, 1754 John Rocque Map of Middlesex) show that the Site is located in what was known as Harefield Moor with the River Colne to the west and a tributary of the Colne (later to be canalised as the Grand Junction Canal) to the east. By the time of the 1811 Ordnance Survey Drawing (Figure 4) the tributary of the Colne has been canalised with the Site crossed by drainage ditches and field boundaries. The canal is not recorded as a heritage asset in the GLHER data although some of the canal side infrastructure is. The Buckinghamshire HER records;

- HER Number 0411900000 - MBC1 Site Name Grand Junction/Union Canal: Eighteenth to nineteenth century canal.

4.14 The 1813 Harefield Parish Enclosure Map (Figure 5) illustrates the land division with land appearing to be largely in the ownership of Sire Charles Barnes.

4.15 By the late C19th the 1896-1898 Ordnance Survey Map (Figure 8) shows the development of extractive industries with 'Cement, Lime & Brickworks established to the east of the Site but it is not until the 1970's (1974 Ordnance Survey Map, Figure 13) that extraction is shown on the Site. 'Sand & Gravel Works' are shown on the 1974 Ordnance Survey Map in the location of the proposed development (see below). The 'Sand & Gravel Works' include buildings and structures, the remnants of some of which are still visible on the Site (see Site Photographs - Appendix 5).

4.16 The 2022 Ordnance Survey Map (Figure 15) shows the Site has been subject to almost complete extraction / truncation.

Summary of Data

4.17 The information from the three HER databases provides further information regarding the archaeological potential of the vicinity of the Site / Colne Valley (CgMs 2013) and provides some evidence for Palaeolithic and later prehistoric material along with medieval and post-medieval activity. None of the HER's provide information relating to Roman activity. The canal to the east of the Site encouraged industry to develop alongside it, particularly quarrying.

4.18 As the CgMs (2013, 3.12.9) Assessment states;

> This area has been heavily impacted by mineral extraction, with large sections of it, particularly in the north, now water-filled former quarry pits. Former quarry pits are likely to have no remaining archaeological potential. In the south there are also significant areas of water management. The floodplain setting has discouraged settlement and therefore any archaeological deposit may be better preserved, particularly if they are waterlogged or sealed beneath alluvium or peat. Uxbridge is likely to have undergone multiple phases of development, and each phase is likely to have caused severe, but localised disturbance to underlying deposits.

4.19 The GLHER description of the Colne Valley Archaeological Priority Area includes;

> In the northern part of the APZ, continued mineral extraction up to 1960 and into the 1990s continued to change the area, especially as many of the former gravel pits were flooded to create lakes for recreational use.

Assessment of Significance (Designated Assets)

4.20 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.

4.21 There are no nationally designated archaeological assets recorded within the GLHER Search undertaken for this assessment that will be affected by the development proposals.

Assessment of Significance (Non-Designated Assets)

4.22 Archaeological Priority Areas are generally considered to be of Medium significance.

4.23 This assessment, taking into account the archaeological background and the huge impacts across the Site, caused by both the extensive mineral extraction and associated infrastructure and activity provides the following assessment.

Period:	Identified Archaeological Potential	Identified Archaeological Significance
Palaeo-environmental	Medium to Low	Low (Local)
Palaeolithic and Mesolithic	Negligible	Low (Local / Regional)
Neolithic, Bronze Age and Iron Age	Negligible	Low (Local / Regional)
Roman	Negligible	Low (Local / Regional)
Anglo-Saxon / Medieval	Negligible	Low (Local / Regional)
Post Medieval	Medium	Low (Local)

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

Site Conditions

5.1 Geo-Integrity (2022, 2) describe the Site as follows;

> 1.4 The main site was approximately 1.2km north to south and 600m east to west, being about 70 hectares in area. The majority of the site consists of the Broadwater Lake with associated island and a small area of land to the north that houses the Broadwater Sailing Club and car parking and the access track to this area, between the canal and the lake. Marker posts for a HP gas main were seen crossing the sailing club car park and land at this end of the site.
>
> The main area of land is in the southeast corner of the lake where access is gained via the trackway from Moorhall Road to the south. This area is entered from the southeast corner where there is a small bungalow and associated gardens, the trackway extends westward from there, past an old weighbridge, then turning northward up towards the end of the land promontory. Along the trackway on either side old concrete constructions can be seen, including pits and large raised gantries. There was also a small substation to the east of the trackway, about halfway up. There are many small pathways off the trackway that all lead to individual or multiple fishing locations. One of these pathways leads along the southern boundary of the site and the lake, towards the River Colne. To the south of this pathway were remnants of the Harefield Pit that were overgrown with young willow sapling and marked as dangerous because of quicksand.
>
> … on the main land area of the main lake there were a number of historical industrial remnants (such as weighbridge, hoppers and conveyor gantries, electricity sub-station).
>
> 4.8 Historically the site has been drained marsh land adjacent to the River Colne until the 1960's when it started to be exploited for its underlying sand and gravel deposits. Processing of this material occurred towards the southeast of the site, accessed from a trackway leading down to Moorhall Road to the site. Extraction continued until the end of the 1990's.

5.2 Site walk-over showed the remnants of the Sand & Gravel works infrastructure and also indicated that the Site (where not subject to truncation from sand and gravel extraction) had been subject to heavy industrial impact and re-working of the ground. Quick-sand deposits are also recorded on part of the Site.

Proposed Development

5.3 The proposed development (see Appendix 6) is described (Quod, 2023) as;

> Redevelopment of the site to create the Hillingdon Watersports Facility and Activity Centre including demolition of existing Broadwater Lake Sailing Club

(BSC) clubhouse at the north of the lake and erection of a building to be occupied by HOAC and BSC including changing facilities, meeting rooms, storage, Workshop and seasonal worker accommodation (sui generis), activity shelters; installation of pontoons and concrete slipways; boat shed; equipment storage huts (north of lake and at entrance); boat parking and racking areas; camping area; outdoor activity areas; ecological enhancement throughout the site; new pedestrian routes through the peninsula; landscaping including new woodland, dense vegetation screens and boundary treatment; new access and access road; localised dredging and land reclamation; relocation of existing sailing area and creation of floating and fixed islands within the lake; coach drop off and turning area; vehicle parking; cycle parking; and associated works.

5.4 The key components of the Development are set out in Appendix 6.

Review of Potential Development Impacts on Designated Archaeological Assets

5.5 It is considered that there will be no development impacts on nationally designated archaeological assets.

Review of Potential Development Impacts on Non-Designated Assets

5.6 The presence of alluvial deposits in the SI Logs indicates that there may be some development impacts on non-designated geo-archaeological assets.

6 SUMMARY AND CONCLUSIONS

6.1 The Site has been assessed for its below ground archaeological potential.

6.2 As identified by desk-based work, archaeological potential by period and the likely significance of any archaeological remains which may be present is summarised in table form below:

Period:	Identified Archaeological Potential and Significance:
Palaeo-environmental	Medium to Low / Local
Prehistoric	Negligible / Local
Roman	Negligible / Local
Anglo-Saxon / Medieval	Negligible / Local
Post Medieval	Medium / Local

6.3 HER data obtained for this assessment indicates that no designated archaeological assets are recorded as being on the Site.

6.4 GLHER Data indicates that the eastern portion of the Site is located within the Colne Valley Archaeological Priority Area (APA). Some non-designated assets are also recorded on the Site although the accuracy of the geo-referencing in the GLHER data entries specific to the Site may be variable.

6.5 The presence of alluvial deposits in the SI Logs indicates that there may be some development impacts on non-designated geo-archaeological assets.

6.6 As such it is consider that the LPA could require some archaeological recording secured placing a suitable worded planning condition on any consent that is granted.

6.7 The final decision regarding this rests with the LPA and their Archaeological Planning Advisers.

Sources Consulted

General

British Library

Greater London Historic Environment Record

Buckinghamshire Historic Environment Record

Hertfordshire Historic Environment Record

London Metropolitan Archives

The National Archive

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/

Historic England: Greater London Archaeological Priority Areas - https://historicengland.org.uk/services-skills/our-planning-services/greater-london-archaeology-advisory-service/greater-london-archaeological-priority-areas/

Portable Antiquities Scheme – www.finds.org.uk

Bibliographic

CgMs, 2013 (Final, August 2013), London Borough Of Hillingdon, Archaeological Desk-based Assessment: Stage 1 Report

CgMs, 2014 (Revision v2- January 2014), London Borough Of Hillingdon, Archaeological Desk-based Assessment: Stage 2 Report

Chartered Institute for Archaeologists Standard & Guidance for historic environment desk-based assessment 2020.

Geo-Integrity, 2023, Mace Group & Hillingdon Borough Council Phase II Geotechnical and Geo-Environmental Report, Hillingdon Outdoor Activity Centre, Broadwater Lake, Moorhall Road, Harefield, UB9 6PE

Geo-Integrity, 2022, Phase I Environmental Hillingdon Outdoor Activity Centre Desk Study Report, Broadwater Lake,, Moorhall Road, Harefield, UB9 6PE

Gibbard, 1994, The Pleistocene History of the Lower Thames Valley

Grant, M J et al, 2014, 'A palaeoenvironmental context for Terminal Upper Palaeolithic and Mesolithic activity in the Colne Valley: Offsite records contemporary with occupation at Three Ways Wharf, Uxbridge' published in Environmental Archaeology

Historic England, 2019, Piling and Archaeology: Guidance and Good Practice

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

Historic England, 2017, Historic Environment Good Practice Advice in Planning: 3 The Setting of Heritage Assets December

Historic England, 2016, Archaeological Priority Area Guidelines

Historic England, 2015a Management of Research Projects in the Historic Environment

Historic England, 2015b, Historic Environment Good Practice Advice in Planning: 1 The Historic Environment in Local Plans

Historic England, 2015c, Historic Environment Good Practice Advice in Planning: 2 Managing Significance in Decision-Taking in the Historic Environment

Historic England, 2015d, Guidelines for Archaeological Projects in Greater London,

Lewis J S C, with Rackham J, 2011, Three Ways Wharf, Uxbridge: a Late glacial and Early Holocene hunter-gatherer site in the Colne valley. MoLA Monograph Series 51

Ministry of Housing Communities & Local Government, 2021, National Planning Policy Framework

MoLAS/English Heritage, 2000, Archaeology of Greater London

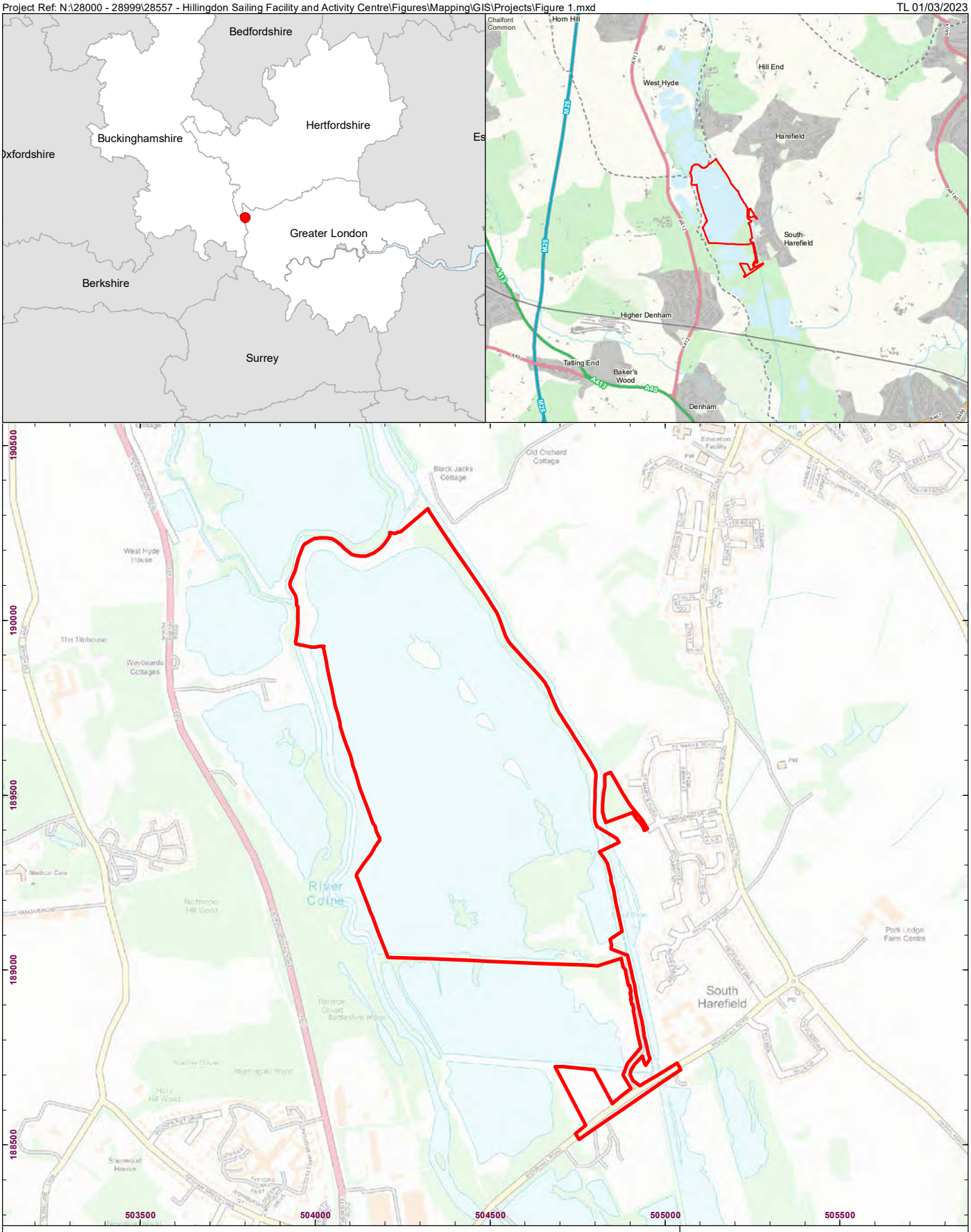
Museum of London 2015, A strategy for researching the historic environment of Greater London

Museum of London, 1998, Archaeology in Greater London 1965-90: a guide to records of excavation by the Museum of London

Quod, 2023, Hillingdon Water Sports Facility and Activity Centre, Scoping Report - February

Wymer, J, 1999, The Lower Palaeolithic Occupation of Britain 2 volumes

FIGURES



Site Boundary

N

0 200 400m

Scale at A4: 1:15,000

MAKING COMPLEX EASY

Figure 1

Site Location

TL 01/03/2023

1080256
BLACK JACK'S COTTAGE

1080190
65 AND 67, HIGH STREET

1080193
130-136, HIGH STREET

1080194
140, HIGH STREET

1080113
MANOR COURT

1192852
THE WHITE HORSE PUBLIC HOUSE

1358364
ALMSHOUSES

1358363
CHURCH OF ST MARY

1061377
AUSTRALIAN WAR MEMORIAL

1061378
ENTRANCE ARCHWAY TO THE HAREFIELD AUSTRALIAN MILITARY CEMETERY

1192887
CHURCH GARDENS NURSERY
NURSERY COTTAGE

1080272
GARDEN WALLS TO EAST AND SOUTH OF CHURCH GARDENS NURSERY COTTAGE

1080221
PARK LODGE FARMHOUSE

1080085
WIDEWATER LOCK COTTAGE

1162235
DENHAM FILM STUDIOS

1332700
SAVAY FARM, THE SAVAY

1193753
BRIDGE AT SAVAY FARM

1332701
BARNS, AT THE SAVAY, TO THE SOUTH OF THE HOUSE

1124458
GATE COTTAGE

Legend

Site Boundary

750m Search Radius

Designated Heritage Assets:

Listed Buildings

Grade

I

II*

II

Conservation Areas

Black Jacks and Copper Mill Lock

Copper Mill Lock

Harefield Village

Widewater Lock

Registered Parks and Gardens

DBC10202 Broadwater Park

DLO32929 Harefield Place

Scheduled Monuments

DBC7194 Mound with ditch and outer bank 200ft (60m) S of Savay Farm

Non-designated Heritage Assets:

Locally Listed Buildings

N

0 100 200m

Scale at A3: 1:15,000

MAKING COMPLEX EASY

Figure 2a

Designated Heritage Assets Plot

Project Ref: N:\28000 - 28999\28557 - Hillingdon Sailing Facility and Activity Centre\Figures\Mapping\GIS\Projects\Figure 2.mxd

TL 22/03/2023

104465
109750
147866
100594
141917
141152
133192
103639
102466
142343
109869
168208
130734
126916
137370
132532
163998
169244
137370
172666
107067
97325
159041
148007
114491
156104
149788
143016
141747
118796
112570
166979
111350
150517
121878
98243
100759
171303
114242
162948
157215
123722
111079
104453
170972
132239
170807
114765
169817
160280
160280
169817
116708
117790
115199
105217
128707
106063
104609
97464
149021
150696
144728
167358
111416
155042
147438

West Hyde
Harefield
Knightscote Farm
Higher Denham
Denham
Denham Golf Club
River Colne
Sayay Lake
Lower Lodge
Middle Lodge
Old Rectory Lodge

Legend

- Site Boundary
- 750m Search Radius

Non-designated Heritage Assets:

- GLHER HER Record (point)
- GLHER HER Record (linear)
- GLHER HER Record (polygon)

GLHER Archaeological Priority Areas

- Colne Valley
- Harefield North
- Harefield South

Previous Archaeological Work:

- GLHER Event Record (point)
- GLHER Event Record (polygon)

N

0 100 200m

Scale at A3: 1:15,000

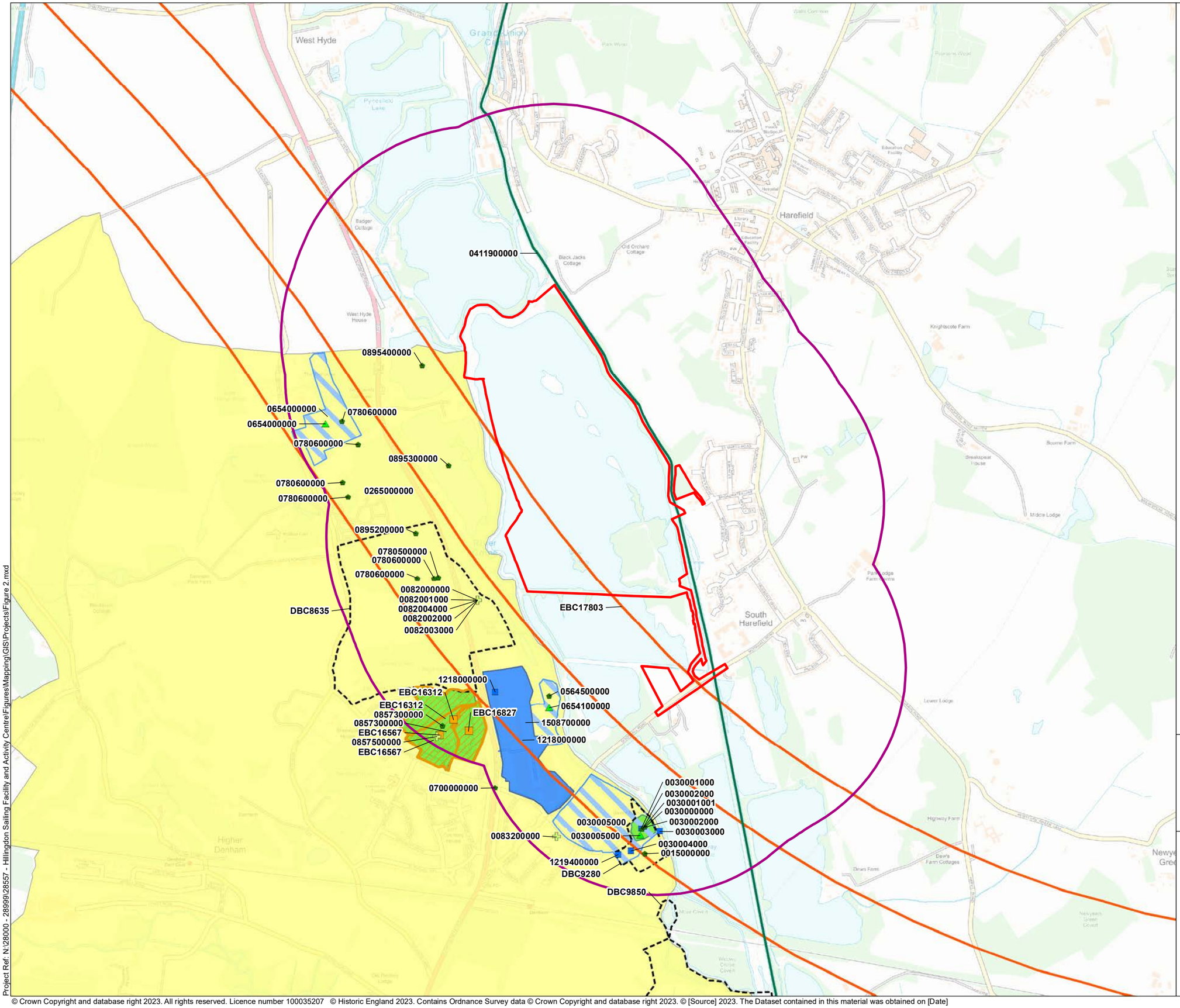
MAKING COMPLEX EASY

Figure 2b

Greater London Historic Environment Record Plot

Project Ref: N:\28000 - 28999\28557 - Hillingdon Sailing Facility and Activity Centre\Figures\Mapping\GIS\Projects\Figure 2.mxd

TL 22/03/2023



Legend

- Site Boundary
- 750m Search Radius

Non-designated Heritage Assets:

Buckinghamshire HER Record (point)

- Monuments
- Findspots
- Buildings
- Land
- Buckinghamshire HER Record (linear)

Buckinghamshire HER Record (polygon)

- Buildings
- Landscape
- Monuments
- Place

Previous Archaeological Work:

- Buckinghamshire Event Record (point)
- Buckinghamshire Event Record (linear)
- Buckinghamshire Event Record

N

0 100 200m

Scale at A3: 1:15,000

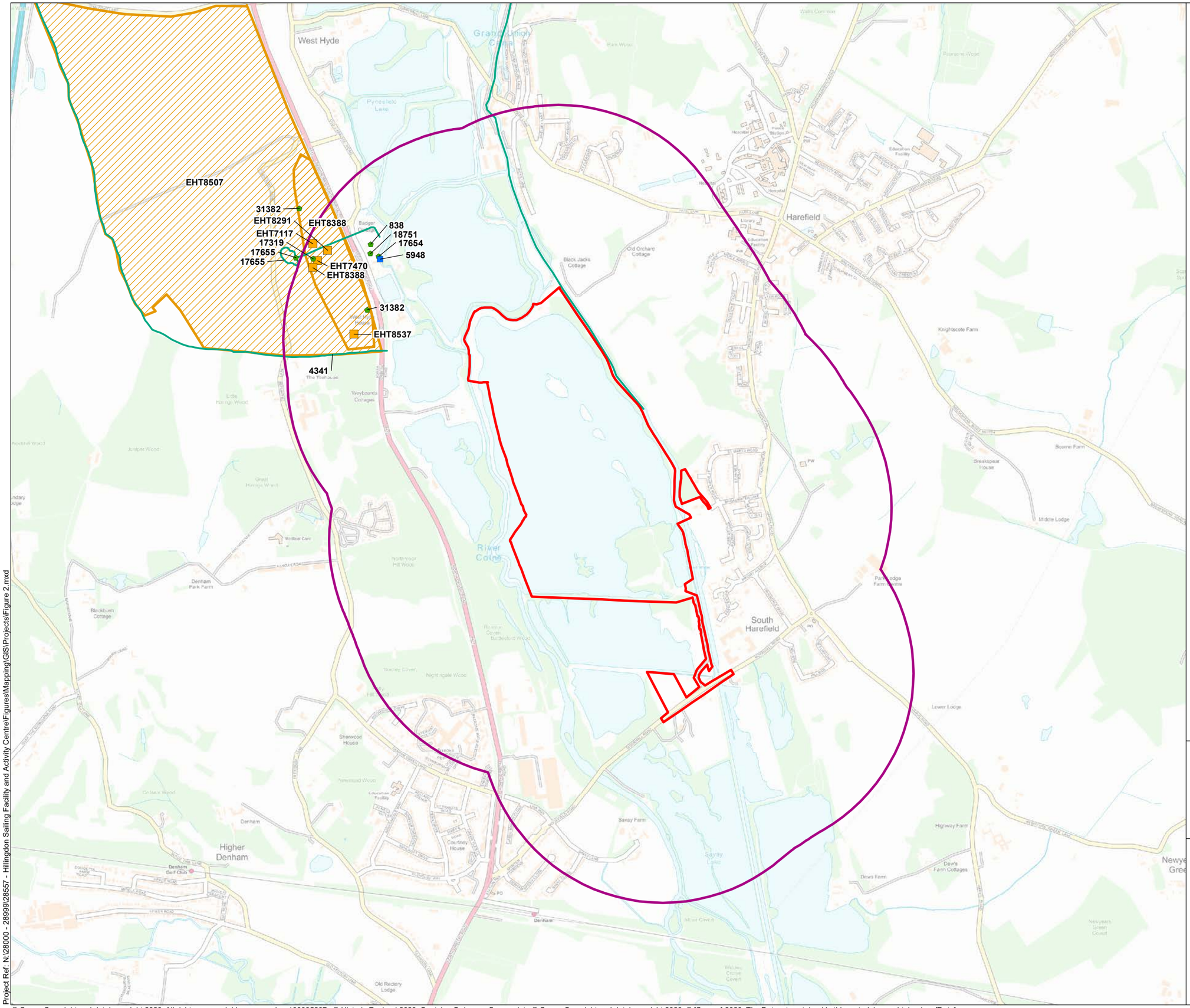
MAKING COMPLEX EASY

Figure 2c

Buckinghamshire Historic Environment Record Plot

Project Ref: N:\28000 - 28999\28557 - Hillingdon Sailing Facility and Activity Centre\Figures\Mapping\GIS\Projects\Figure 2.mxd

TL 22/03/2023



Legend

- Site Boundary
- 750m Search Radius

Non-designated Heritage Assets:

Hertfordshire HER Record (point)

- Monuments
- Buildings
- Hertfordshire HER Record (linear)

Previous Archaeological Work:

- Hertfordshire Event Record (point)
- Hertfordshire Event Record (polygon)

N

0 100 200m

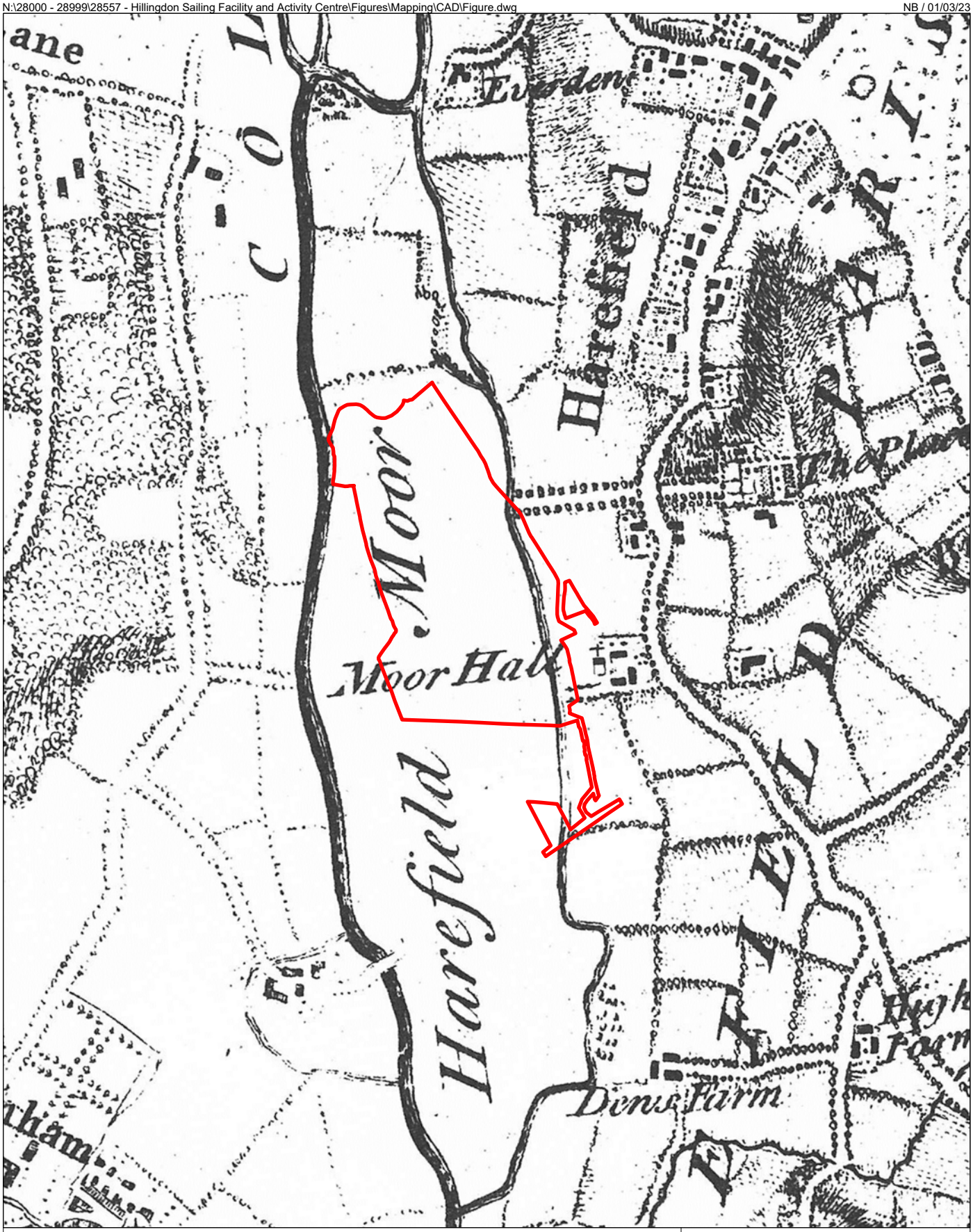
Scale at A3: 1:15,000

MAKING COMPLEX EASY

Figure 2d

Hertfordshire Historic Environment Record Plot

Project Ref: N:\28000 - 28999\28557 - Hillingdon Sailing Facility and Activity Centre\Figures\Mapping\GIS\Projects\Figure 2.mxd



Site Boundary (approximate)

N

0 200 400m

Scale at A4: 1:20,000 (approximate)

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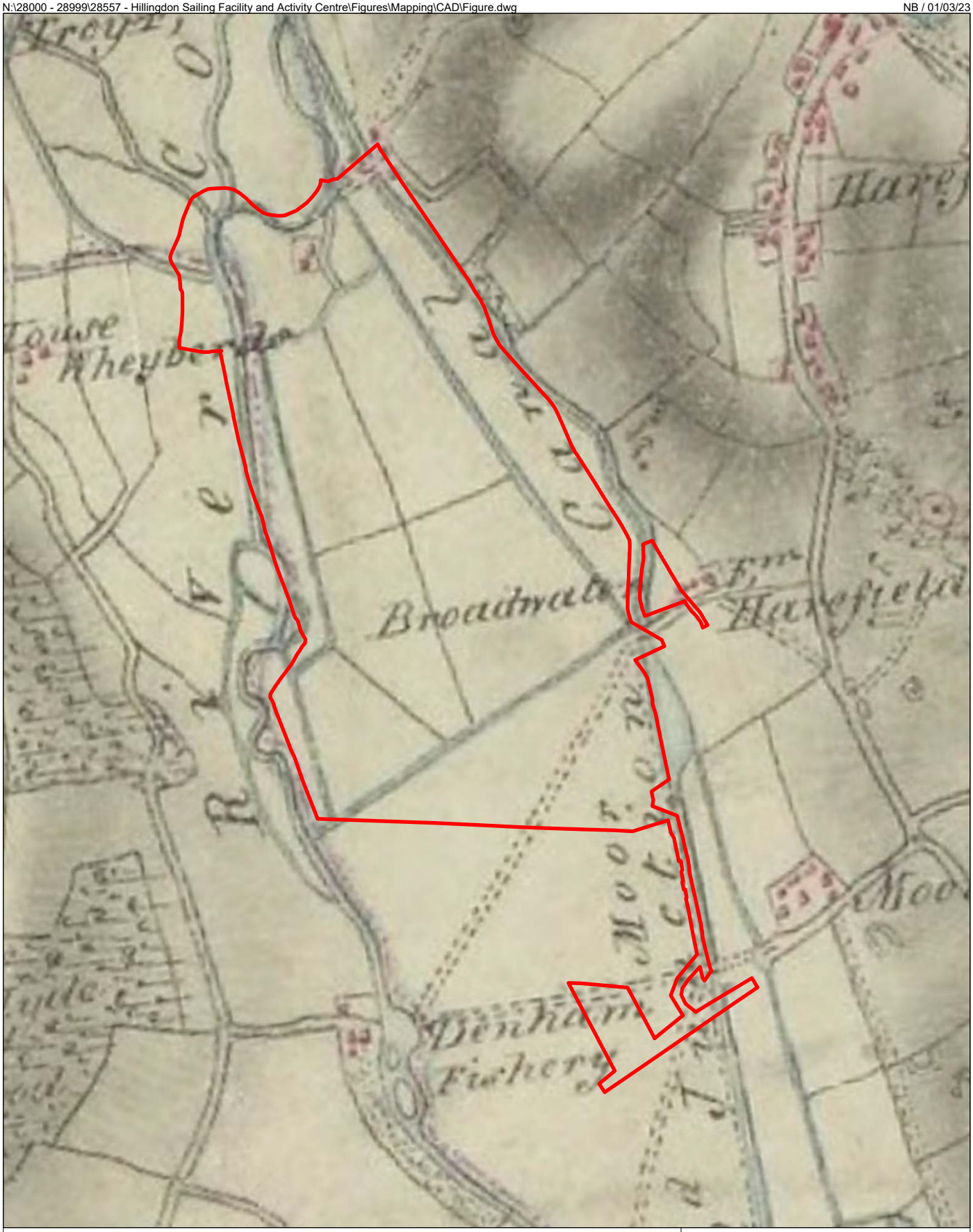
Figure 3

1754 John Rocque Map of Middlesex



Site Boundary (approximate)

N

0 100 200m

Scale at A4: 1:10,000
(approximate)

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Figure 4

1811 Ordnance Survey Drawing

Site Boundary (approximate)

N

0 100 200m

Scale at A4: 1:10,000 (approximate)

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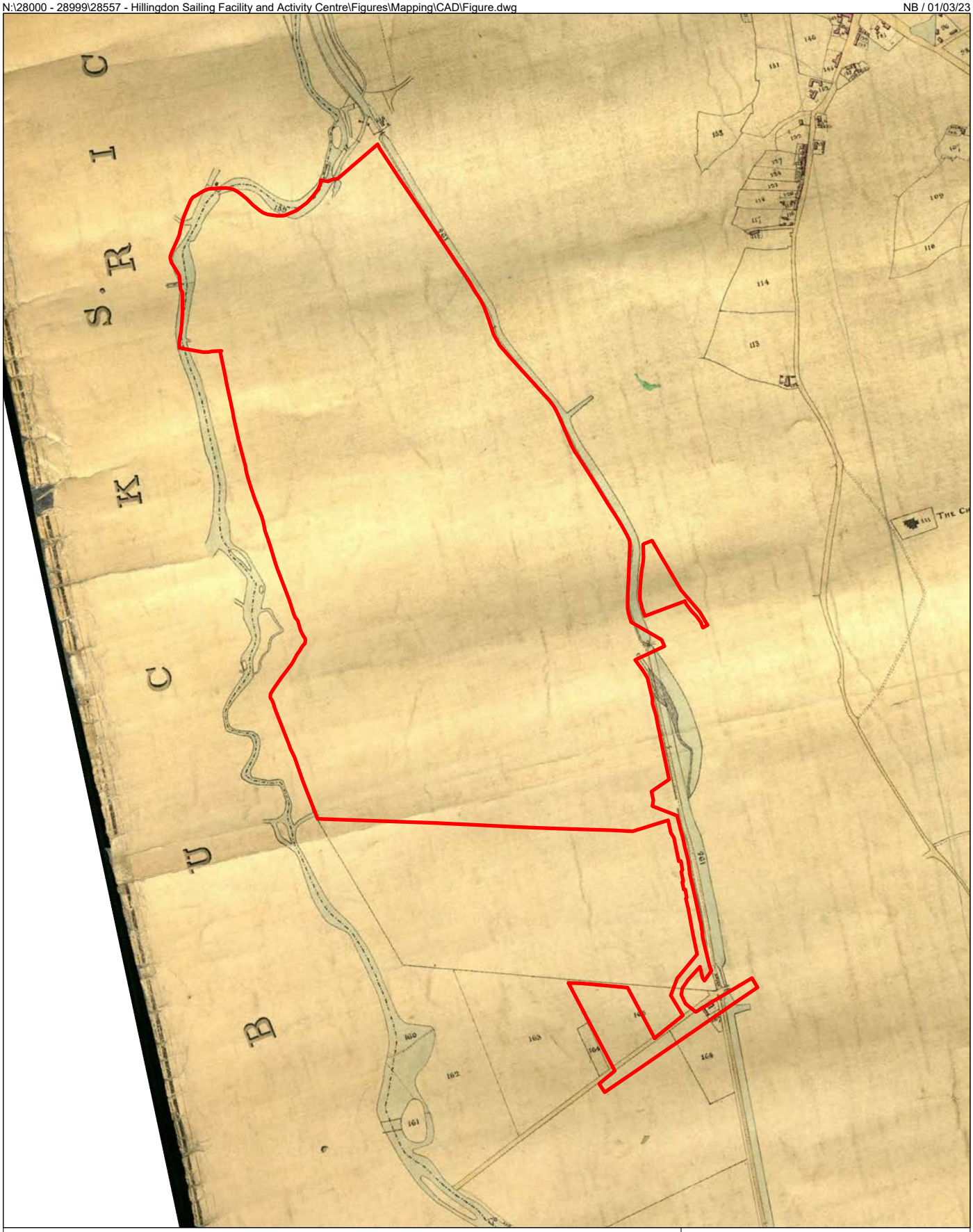
Figure 5

1813 Harefield Parish Enclosure Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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Figure 6

1845 Harefield Parish Tithe Map

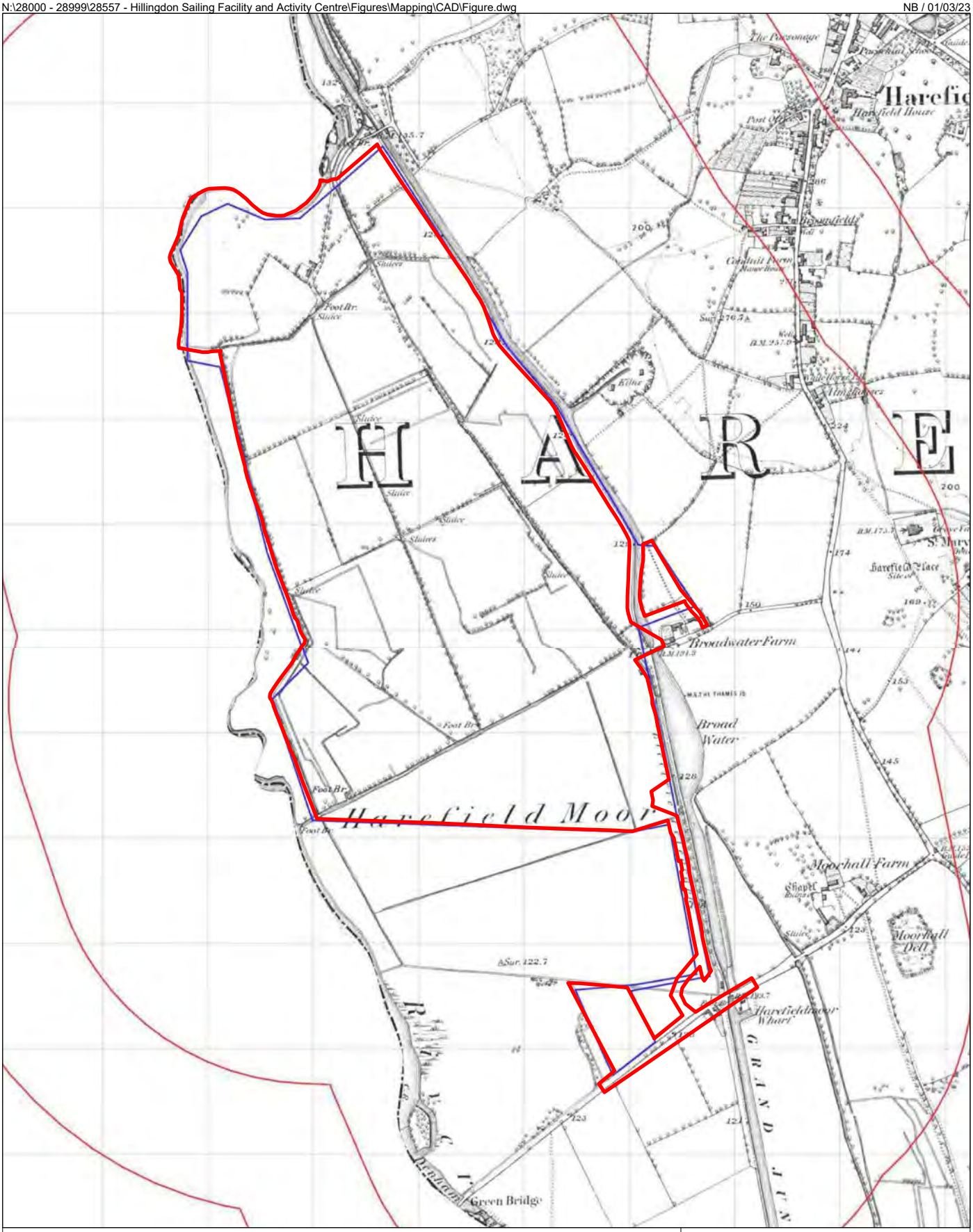

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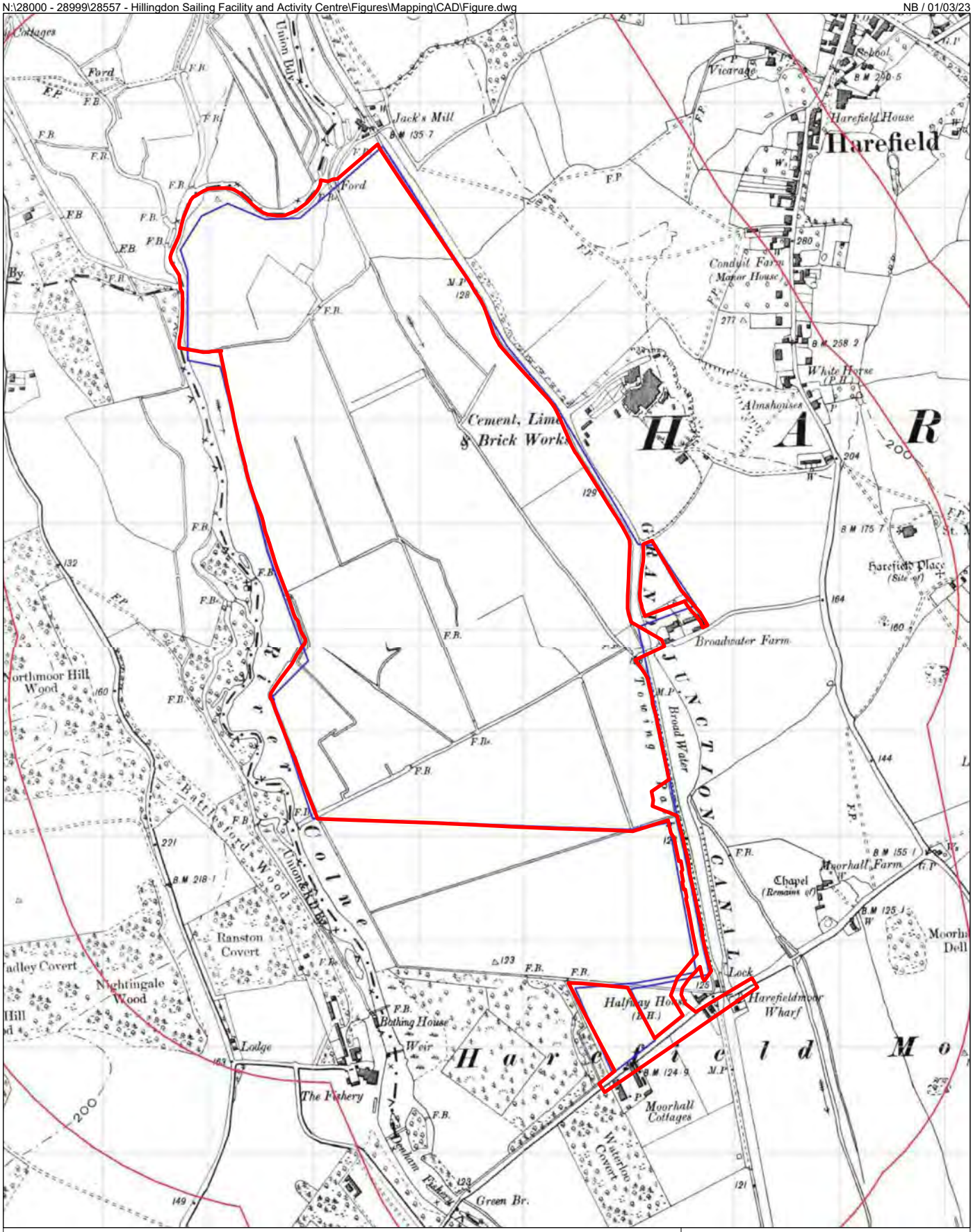
Figure 7

1865 Ordnance Survey Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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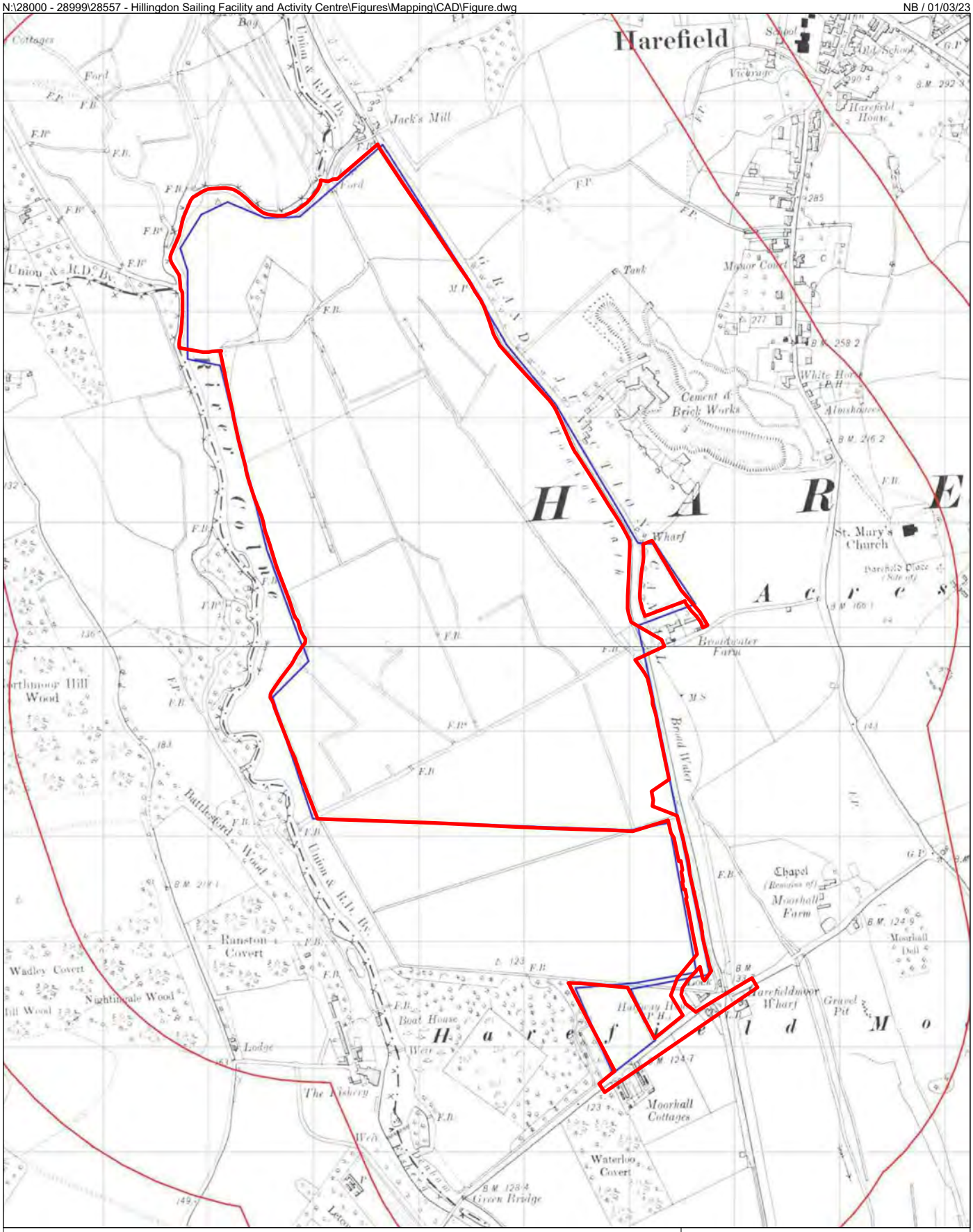
Figure 8

1896-1898 Ordnance Survey Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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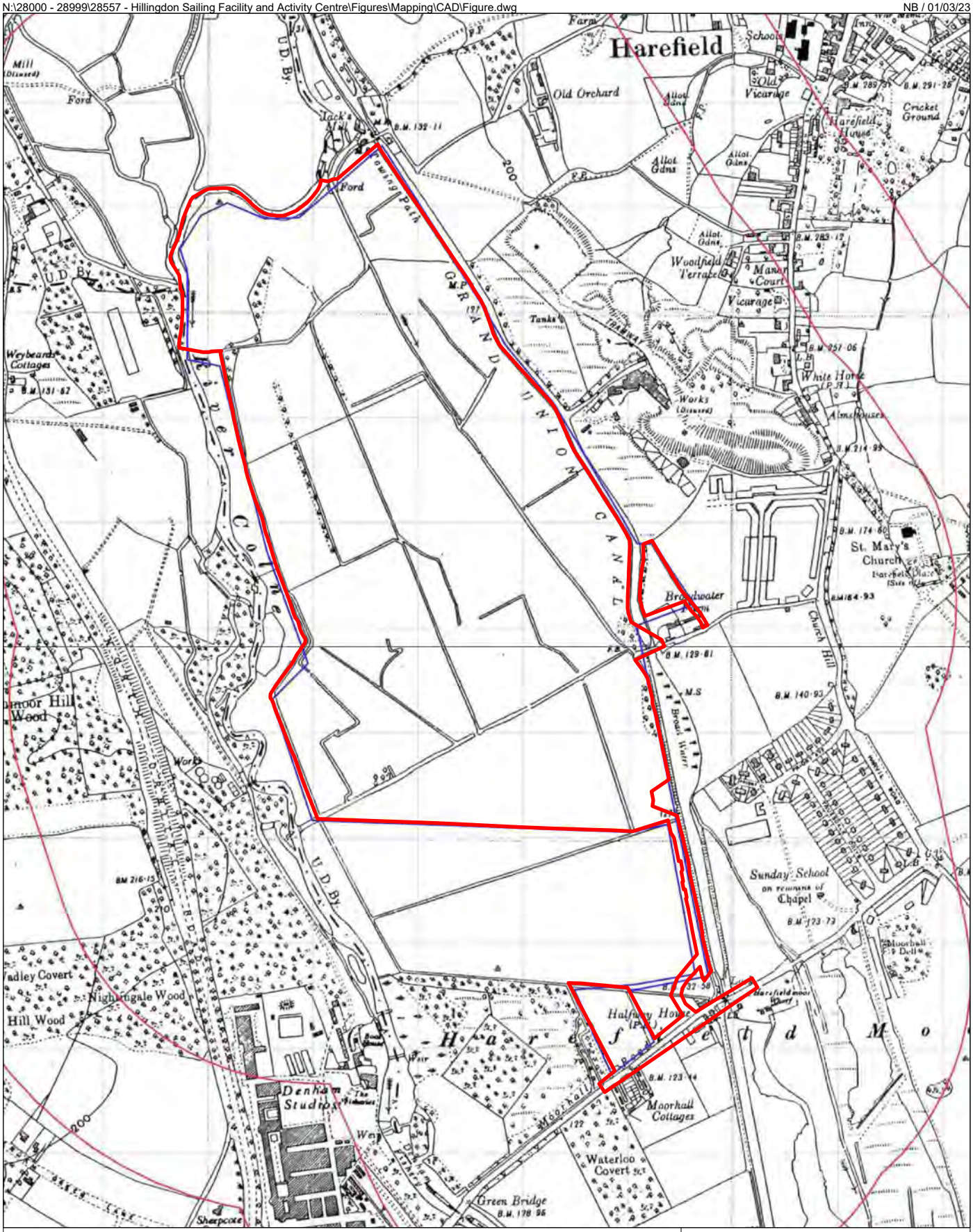
Figure 9

1912-1913 Ordnance Survey Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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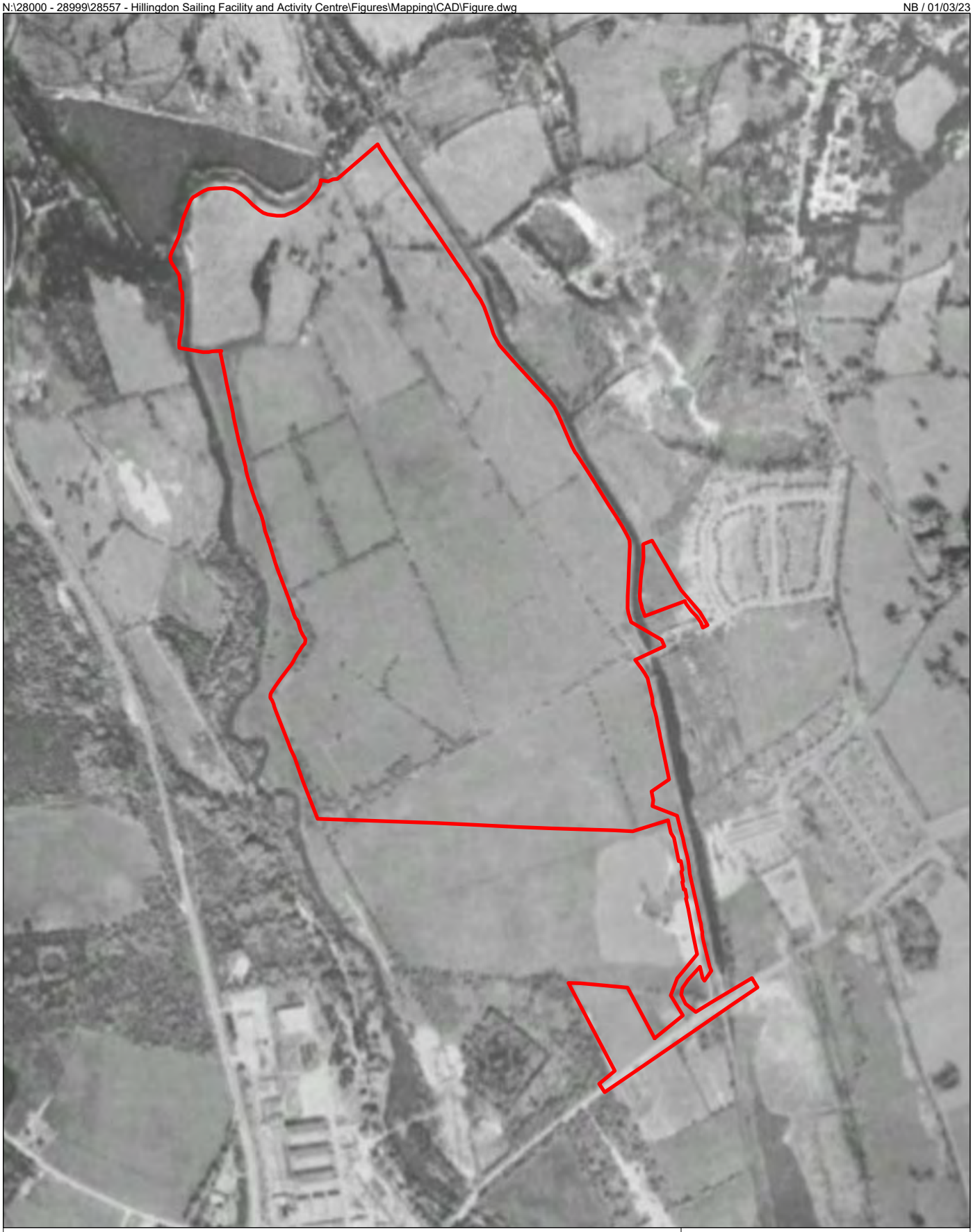
Figure 10

1935-1938 Ordnance Survey Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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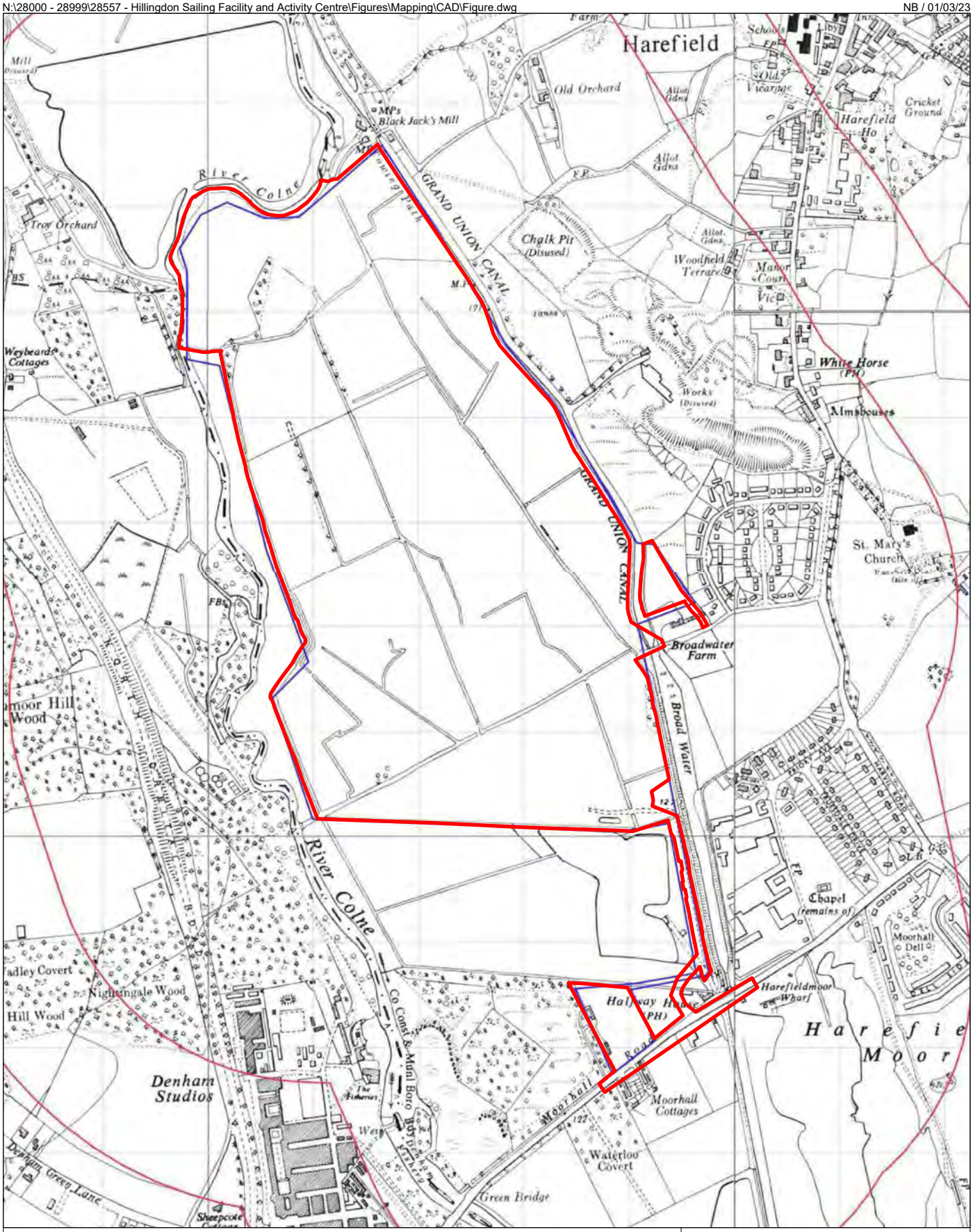
Figure 11

1945 Aerial Photograph



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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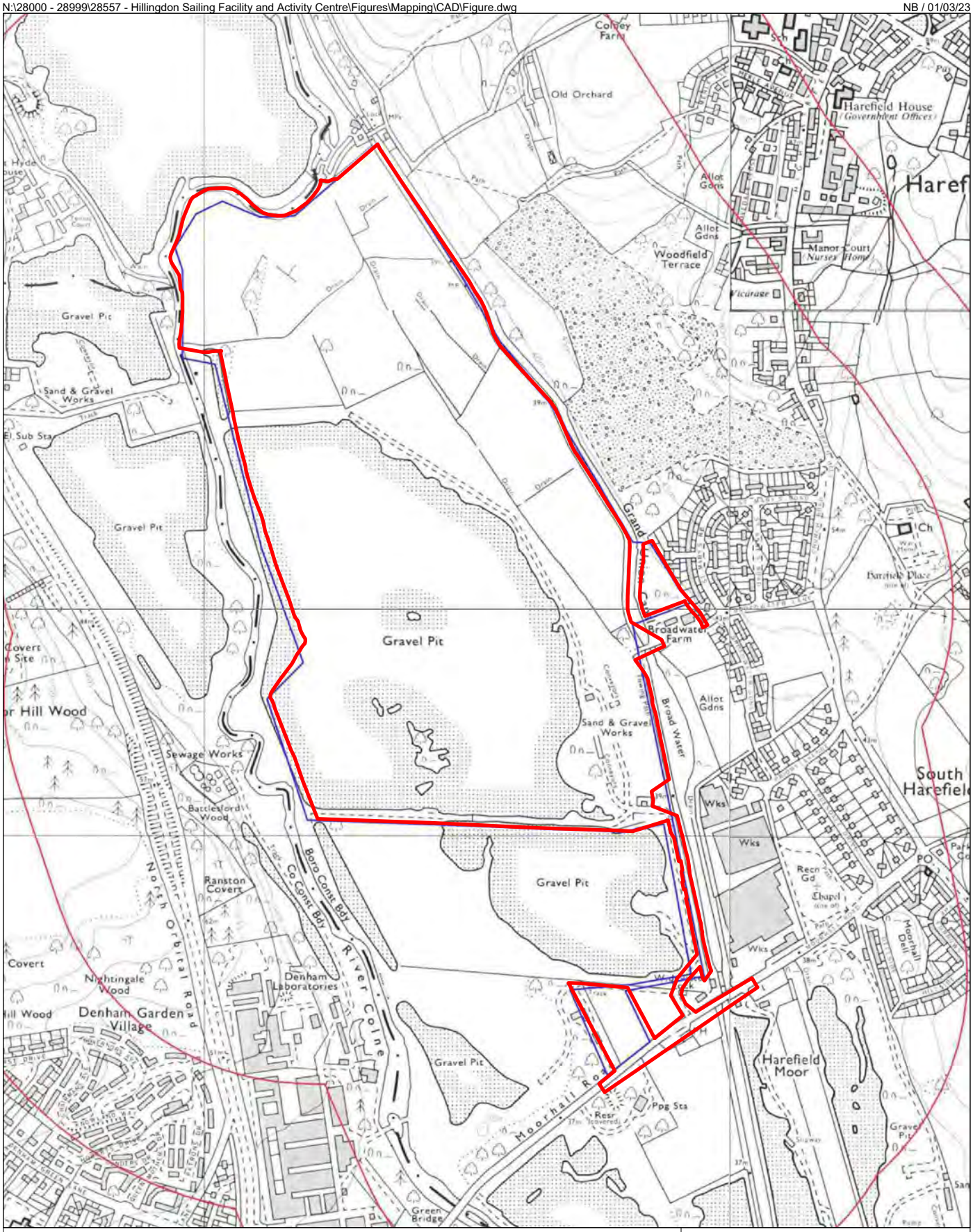
Figure 12

1960 Ordnance Survey Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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Figure 13

1974 Ordnance Survey Map

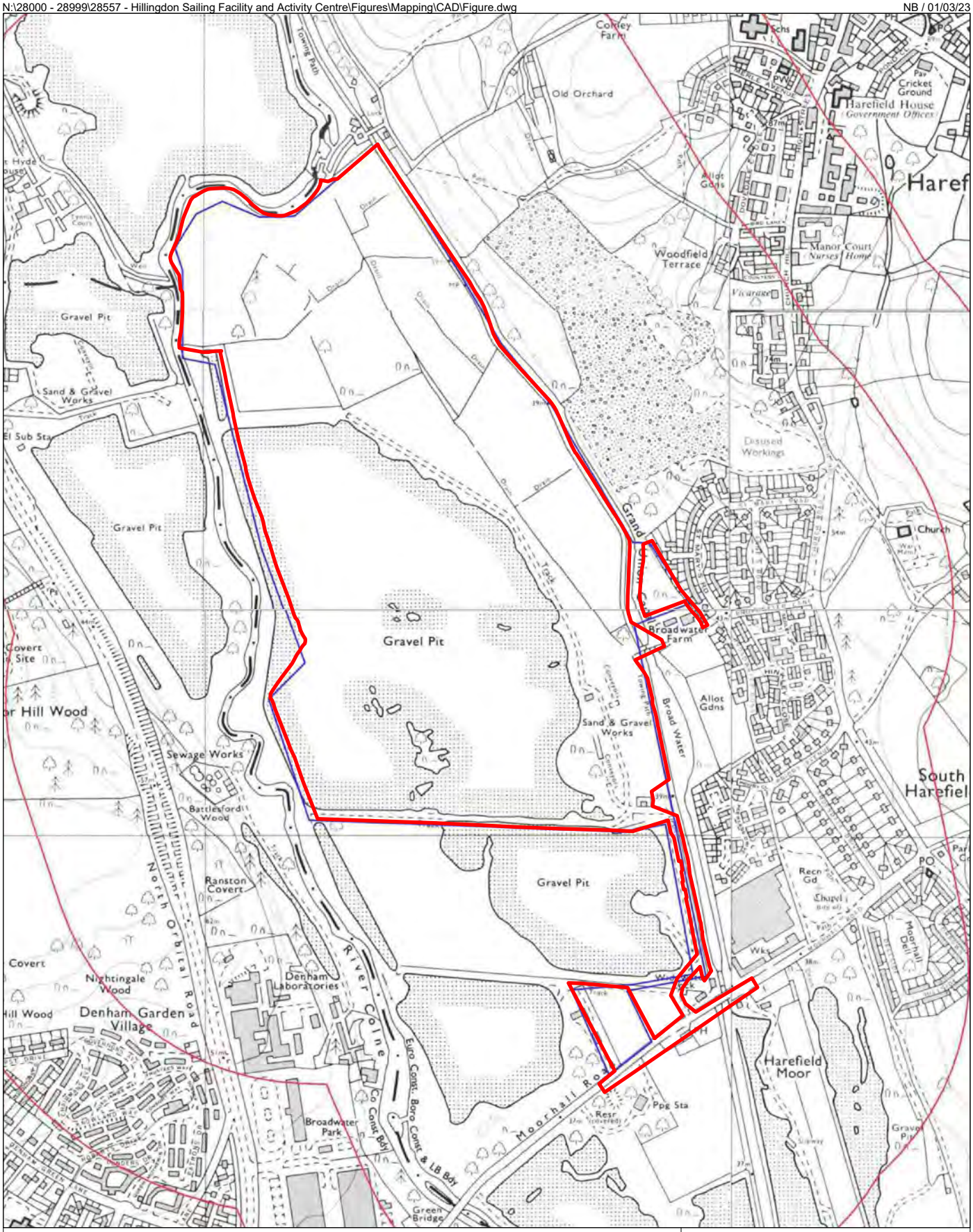

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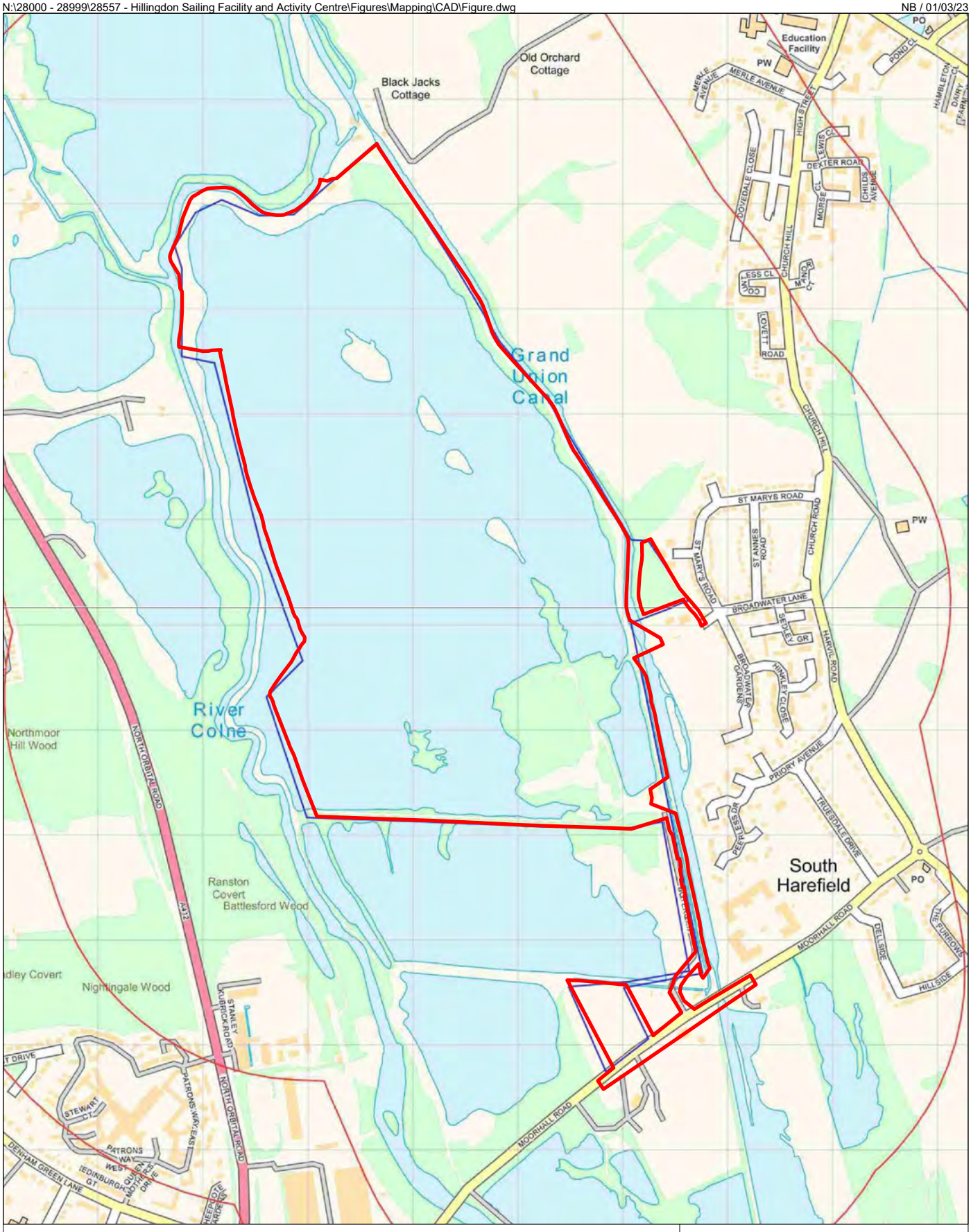
Figure 14

1987-1989 Ordnance Survey Map



Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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Figure 15

2022 Ordnance Survey Map

Site Boundary

N

0 100 200m

Scale at A4: 1:10,000

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Figure 16

2022 Google Earth Image

NB 16/03/2023

Legend

Site Boundary

LiDAR DATA

Source:
Environment Agency

Data Type: DTM

Resolution: 1m

Date Captured:
14.12.2020 - 21.02.2021

Processing:
Multi-direction Hillshade overlaid on simple Local Relief Model

N

0 100 200m

Scale at A3: 1:8,000

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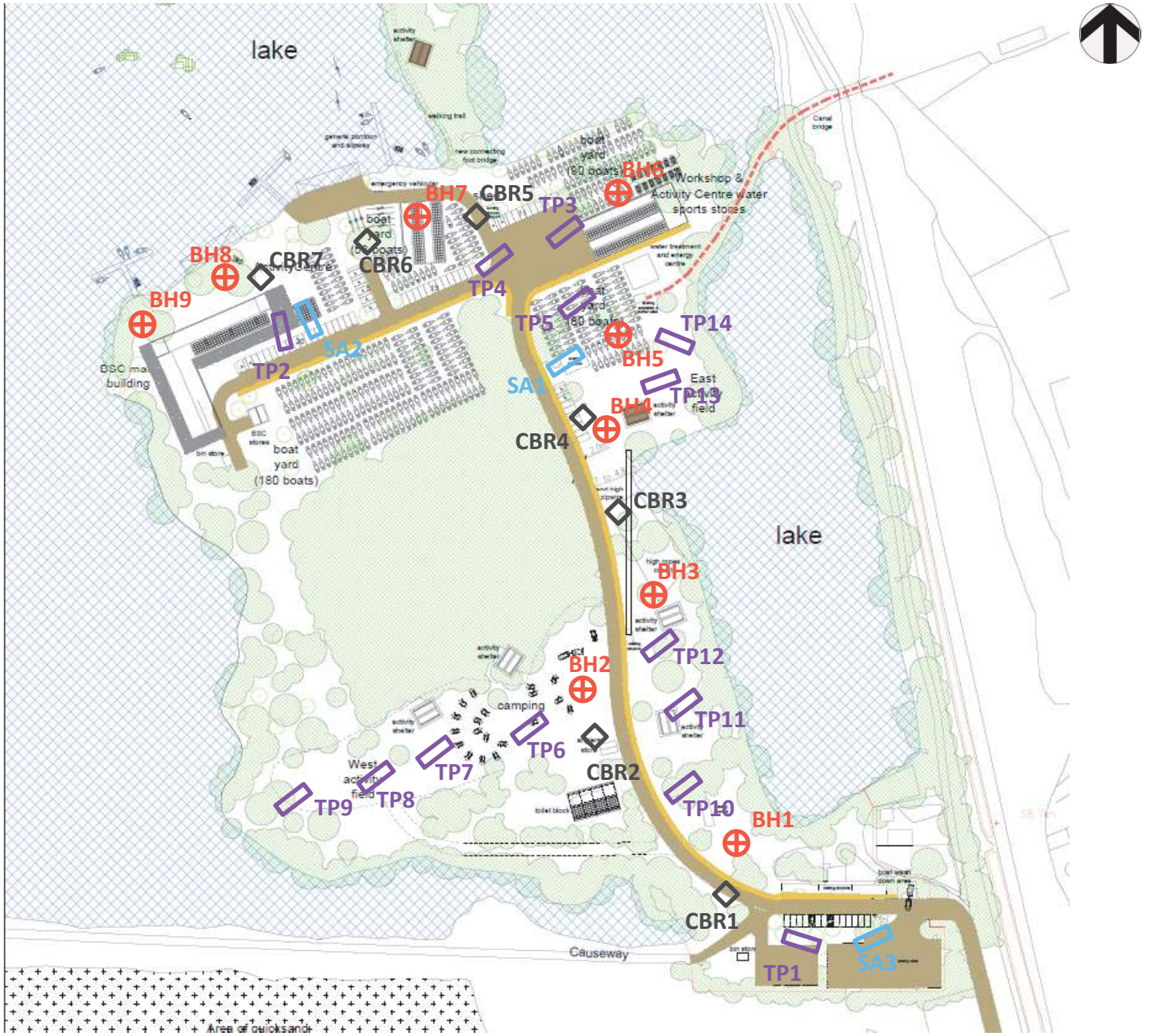
Figure 17

LiDAR Plot

Project Ref: N:\28000 - 28999\28557 - Hillingdon Sailing Facility and Activity Centre\Figures\Mapping\GIS\Projects\LiDAR.mxd

APPENDICES

Appendix 1 Geo-Integrity Data



Key

- Cable Percussive Boreholes
- Soakaway Pits
- Trial Pits
- Plate Load Test

GEO INTEGRITY

4 Church Street
Maids Moreton
MK18 1QE

Tel:- 01280 816409
Mob:- 07858 367 125
www. geo-integrity.co.uk

Exploratory Hole Location Plan

SITE:- Broadwater Lake, Harefield

JOB NO.:- 23-01-21

CLIENT:- Mace Group and Hillingdon Borough Council

Drawn	Checked
LA	MB

Scale: Not To Scale, for indicative purposes only

GEO INTEGRITY
www.geo-integrity.co.uk
info@geo-integrity.co.uk
01280 816409

Site
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE

Borehole Number
BH 1

Machine : Dando 3000
Method : Cable Percussion

Casing Diameter
150mm to 15.0m

Ground Level (mOD)
39.39

Client
Mace

Job Number
23-01-21

Location (Handheld GPS)
504807.9 E 189071.93 N

Dates
16/02/2023

Project Contractor
Geo-Integrity

Sheet
1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					39.29	0.10 (0.20)	TARMAC		
0.10-0.20	D								
0.10-0.30	B				39.09	0.30 (0.20)	MADE GROUND Loose dark brown silty sandy GRAVEL. Gravel is flint, brick, quartz, ash and coal		
					38.89	0.50 (0.50)	MADE GROUND CONCRETE SLAB		
0.80-0.90	D								
0.80-1.00	B				38.39	1.00	MADE GROUND Loose brown black slightly clayey silty sandy GRAVEL. Gravel is fine to coarse concrete, brick, flint and glass		
1.00-1.10	D								
1.00-1.10	D								
1.00-1.20	B								
1.20-1.65	SPT N=4			1,1/1,1,1,1			ALLUVIUM Very soft dark brown black slightly gravelly organic CLAY with peat horizons		1
1.20-1.65	B					(1.10)			
2.00-2.45	SPT N=24			3,4/5,5,6,8	37.29	2.10	SHEPPERTON GRAVEL MEMBER Medium dense to dense dark grey sandy GRAVEL		1
2.00-2.45	B	2.00		Water strike(1) at 2.10m, rose to 1.57m in 20 mins.		(0.90)			
3.00-3.45	SPT(C) N=25			1,4/4,5,7,9	36.39	3.00	SHEPPERTON GRAVEL MEMBER Medium dense to dense orange brown slightly sandy fine to coarse GRAVEL. Gravel is fine to coarse sub-angular to sub-rounded flint and quartz		
3.00-3.45	B	3.00	2.10						
4.00-4.45	SPT(C) N=29			2,3/4,7,9,9					
4.00-4.45	B	4.00	1.80			(3.10)			
5.00-5.45	SPT(C) N=20			2,3/4,4,5,7					
5.00-5.45	B	5.00	2.25						
6.00	D				33.29	6.10	UPPER CHALK Structureless off-white CHALK comprising slightly gravelly SILT (Grade Dm)		
6.30-6.40	D								
6.40-6.70	B								
7.00-7.45	SPT(C) N=0			1/					
						(2.90)			
8.00-8.10	D								
8.50-8.95	SPT N=4			1,1/1,1,1,1					
8.50-8.95	B	8.00	4.10						
					30.39	9.00	UPPER CHALK Structureless off-white CHALK comprising silty GRAVEL (Grade Dc)		
9.50-9.60	D								
10.00-10.45	SPT N=10			1,2/2,2,3,3					

Remarks

Scale (approx)
1:50

Logged By
LA

Figure No.
23-01-21.BH 1

AGS

www.geo-integrity.co.uk
info@geo-integrity.co.uk
01280 816409

Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 1

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 39.39	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504807.9 E 189071.93 N	Dates 16/02/2023	Project Contractor Geo-Integrity	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
11.00-11.10	D	11.00	5.40						
11.50-11.95	SPT N=14			3,3/3,3,4,4		(6.00)			
12.50	D	12.00	6.10						
13.00-13.45	SPT N=21			3,4/4,5,5,7					
14.00-14.10	D								
14.50-14.95	SPT N=31			4,4/6,8,8,9					
14.90-15.00	D	12.00	6.00		24.39	15.00	Complete at 15.00m		

Remarks

Scale (approx)	Logged By
1:50	LA

Figure No. 23-01-21.BH 1

GEO INTEGRITY
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info@geo-integrity.co.uk
01280 816409

Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 2

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 39.58	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504744.01 E 189115.55 N	Dates 17/02/2023	Project Contractor Geo-Integrity	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-0.20 0.10-0.30	D B					(0.60)	MADE GROUND Loose brown silty sandy GRAVEL. Gravel is fine to coarse sub-angular to sub-rounded brick, concrete, flint and ash		
					38.98	0.60			
0.60-0.70 0.60-1.00	D B					(0.40)	MADE GROUND Loose beige gravelly SILT. Weathered concrete with gravels of flint, brick and concrete		
					38.58	1.00			
1.20-1.65 1.20-1.65	SPT(C) N=4 B			2,4/1,1,1,1		(0.65)	MADE GROUND Very soft beige brown silty sandy gravelly slightly organic CLAY. Gravel is concrete, flint and brick		
					37.93	1.65			
1.80-1.90 1.80-2.00 2.00-2.45	D B B						ALLUVIUM Very soft dark brown grey silty slightly organic CLAY. Occasional peat horizons		
3.00-3.45	B					(2.80)			1
4.00-4.45	SPT N=5			1,1/1,1,1,2					
					35.13	4.45			1
4.50-4.60 4.50-4.95	D B	5.00	3.70	Water strike(1) at 4.50m, rose to 3.60m in 20 mins.			SHEPPERTON GRAVEL MEMBER Medium dense to dense beige brown sandy GRAVEL. Gravel is fine to coarse flint and quartz		
5.00-5.45	SPT(C) N=36			3,5/8,9,9,10					
						(2.55)			
6.00-6.10	D								
6.50-6.95	SPT(C) N=9			3,3/2,2,2,3					
6.90-6.95	B	6.40	4.20		32.58	7.00	UPPER CHALK Structureless off-white CHALK comprising gravelly SILT. Gravels are fine to coarse chalk and flint (Grade Dm)		
7.20-7.30	D	7.60	4.50						
8.00-8.45	SPT N=25			1,3/5,5,7,8		(2.00)			
9.00-9.10	D	9.00	5.00		30.58	9.00	UPPER CHALK Structureless off-white CHALK comprising silty GRAVEL. Gravel is coarse chalk (Grade Dc)		
9.50-9.95	SPT N=19			2,3/4,4,5,6					

Remarks

Scale (approx)	Logged By
1:50	LA

Figure No.
23-01-21.BH 2

AGS

www.geo-integrity.co.uk
info@geo-integrity.co.uk
01280 816409

Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 2

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number
Dando 3000	150mm to 15.0m	39.58	Mace	23-01-21
Method : Cable Percussion	**Location** (Handheld GPS) 504744.01 E 189115.55 N	**Dates** 17/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.50-10.60	D	10.00	6.30						
11.00-11.45	SPT N=19			3,4/4,5,5,5					
12.00-12.10	D	12.00	6.00			(6.00)			
12.50-12.95	SPT N=24			1,3/5,5,6,8					
13.50-13.60	D								
14.00-14.45	SPT N=29			2,4/6,6,8,9					
14.00-14.45	B	14.00	6.35						
14.90-15.00	D								
					24.58	15.00	Complete at 15.00m		

Remarks

Scale (approx)	Logged By
1:50	LA

Figure No. 23-01-21.BH 2

AGS

GEO INTEGRITY
www.geo-integrity.co.uk
info@geo-integrity.co.uk
01280 816409

Site
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE

Borehole Number
BH 3

Machine : Dando 3000
Method : Cable Percussion

Casing Diameter
150mm to 15.0m

Ground Level (mOD)
40.95

Client
Mace

Job Number
23-01-21

Location (Handheld GPS)
504753.63 E 189171.17 N

Dates
20/02/2023

Project Contractor
Geo-Integrity

Sheet
1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.30)	CONCRETE			
0.20-0.30	D				40.65	0.30	MADE GROUND medium dense brown sandy GRAVEL. Gravel is fine to coarse flint, quartz and concrete			
0.50-1.00	B									
1.20-1.65	SPT(C) N=23			3,4/4,6,6,7		(2.15)				
1.20-1.65	D									
2.00-2.45	SPT(C) N=25			3,3/5,5,7,8						
2.00-2.45	D									
					38.50	2.45	ALLUVIUM very soft dark brown slightly gravelly organic silty CLAY			
2.80-3.30	B									
3.00-3.45	SPT N=3			0,1/0,1,1,1		(1.05)				
3.00-3.45	D									
					37.45	3.50	SHEPPERTON GRAVEL MEMBER Medium dense to dense grey brown slightly sandy GRAVEL Gravel is fine to coarse sub-rounded. Gravel is flint and quartz			
4.00-4.45	SPT(C) N=29			4,5/6,6,8,9						
4.00-4.45	D									
4.50-5.00	B								1	
5.00-5.45	D	5.00	4.25	Water strike(1) at 4.90m, rose to 4.60m in 20 mins.					1	
5.00-5.45	SPT(C) N=36			4,6/7,9,9,11		(3.70)				
6.00-6.10	D									
6.50-6.95	SPT(C) N=27			4,5/6,6,7,8						
6.50-6.95	D	6.50	4.00							
					33.75	7.20	UPPER CHALK Structureless off-white CHALK comprising gravelly SILT (Grade Dm)			
7.50-7.60	D									
8.00-8.45	SPT N=17			2,2/3,3,5,6						
8.00-8.45	D	8.00	4.20							
9.00-9.10	D					(3.80)				
9.50-9.95	SPT N=20			2,2/4,5,5,6						
9.50-9.95	D	9.50	4.50							

Remarks

Scale (approx)
1:50

Logged By
LA

Figure No.
23-01-21.BH 3

AGS

www.geo-integrity.co.uk
info@geo-integrity.co.uk
01280 816409

Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 3

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 40.95	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504753.63 E 189171.17 N	Dates 20/02/2023	Project Contractor Geo-Integrity	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.50-10.60	D									
11.00-11.45	SPT N=24			4,4/5,6,6,7	29.95	11.00	UPPER CHALK Structureless yellow brown CHALK comprising silty GRAVEL (Grade Dc)			
11.00-11.45	D	11.00	4.50							
12.00-12.10	D									
12.50-12.95	SPT N=25			3,4/5,6,6,8						
12.50-12.95	D	12.50	4.50			(4.00)				
13.50-13.60	D	13.00	4.50							
14.00-14.45	SPT N=29			3,5/6,7,7,9						
14.00-14.45	D									
14.50-15.00	B									
15.00-15.45	SPT N=33			4,5/7,8,8,10	25.95	15.00	Complete at 15.45m			
15.00-15.45	D									

Remarks

Scale (approx)	Logged By
1:50	LA

Figure No. 23-01-21.BH 3

AGS

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info@geo-integrity.co.uk
01280 816409

Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 4

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 39.35	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504742.13 E 189228.83 N	Dates 21/02/2023	Project Contractor Geo-Integrity	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.10-0.20	D					(0.30)	CONCRETE		
					39.05	0.30	MADE GROUND Loose brown slightly sandy GRAVEL. Gravel is fine to coarse flint, brick, quartz and coal		
0.50-1.00	B								
1.20-1.65	SPT(C) N=25			3,3/5,6,6,8					
1.20-1.65	D								
						(3.15)			
2.00-2.45	SPT(C) N=25			3,4/5,5,7,8					
2.00-2.45	D								
3.00-3.45	SPT N=4			3,3/3,0,0,1					
3.00-3.45	D								
					35.90	3.45	ALLUVIUM Very soft brown silty organic CLAY with occasional peat		
4.00-4.45	SPT N=31			3,5/6,8,8,9		(1.05)			
4.00-4.45	D								1
					34.85	4.50	SHEPPERTON GRAVEL MEMBER Medium dense to dense grey brown slightly sandy GRAVEL. Gravel is fine to coarse flint and quartz		1
				Water strike(1) at 4.60m, rose to 4.35m in 20 mins.					
5.00-5.45	SPT(C) N=26			2,4/5,5,8,8					
5.00-5.45	D	5.00	4.80						
						(2.50)			
6.00-6.50	B								
6.50-6.95	SPT(C) N=9			3,4/2,2,2,3					
6.50-6.95	D	6.50	5.00						
					32.35	7.00	UPPER CHALK Structureless off-white yellow CHALK comprising silty GRAVEL. Gravel is fine to coase chalk and flint (Garde Dc)		
7.50-7.60	D								
8.00-8.45	SPT N=19			2,3/3,3,6,7					
8.00-8.45	D	8.00	5.00						
8.50-9.00	B								
9.50-9.95	SPT N=25			2,2/4,6,6,9					
9.50-9.95	D	9.50	5.00						
9.50-9.95	D								

Remarks

Scale (approx)	Logged By
1:50	LA

Figure No.
23-01-21.BH 4

AGS

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 4

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 39.35	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504742.13 E 189228.83 N	Dates 21/02/2023	Project Contractor Geo-Integrity	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.50-10.60	D								
11.00-11.45	SPT N=29			3,3/6,6,8,9		(8.00)			
11.00-11.45	D	11.00	5.00						
12.00-12.10	D								
12.50-12.95	SPT N=27			3,3/5,6,6,10					
12.50-12.95	D	12.50	5.50						
13.50-13.60	D	13.00	5.80						
14.00-14.45	SPT N=29			3,4/5,7,7,10					
14.00-14.45	D	13.00	6.00						
15.00-15.45	SPT N=29			3,3/6,6,8,9	24.35	15.00	Complete at 15.45m		
15.00-15.45	D								

Remarks

Scale (approx)	Logged By
1:50	LA

Figure No.
23-01-21.BH 4

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 5

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm 15.0m to 15.0m	Ground Level (mOD) 39.44	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504742.11 E 189290.21 N	Dates 22/02/2023	Project Contractor Geo-Integrity	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
						(0.30)	CONCRETE		
					39.14	0.30			
						(0.20)	MADE GROUND Loose dark brown slightly clayey silty GRAVEL. Gravel is concrete, flint and occasional peat		
0.50-0.60	D	1.20	0.80		38.94	0.50	SHEPPERTON GRAVEL MEMBER Dense grey brown slightly sandy GRAVEL. Gravel is fine to coarse flint, quartz and sandstone		
1.20-1.65	SPT(C) N=6			1,3/1,1,2,2					
1.20-2.00	B	3.00	1.80						
1.70-1.80	D	4.00	1.90						
2.00-2.43	SPT(C) 50/280			7,11/6,11,15,18		(3.50)			
2.50-2.60	D	5.00	2.20						
3.00-3.37	SPT(C) 50/220			10,11/15,18,17,0					1
3.50-3.60	D	6.50	5.50						
				Water strike(1) at 4.00m, rose to 3.00m in 20 mins.	35.44	4.00	SHEPPERTON GRAVEL MEMBER Dense grey brown slightly sandy GRAVEL with traces of alluvium. Gravel is fine to coarse flint and quartz		1
4.00-4.45	SPT(C) N=8			2,1/1,2,2,3					
4.50-4.60	D	8.00	3.00						
5.00-5.45	SPT(C) N=20			3,4/4,4,5,7					
6.00-6.10	D	9.50	5.50			(4.00)			
6.50-6.95	SPT(C) N=17			3,3/3,4,5,5					
7.00-7.10	D	11.00	4.90						
8.00-8.45	SPT(C) N=24			3,5/5,5,7,7	31.44	8.00	UPPER CHALK Structureless off-white CHALK comprising gravelly SILT. Gravel is chalk and flint		
8.00-9.00	B	12.50	9.80						
9.00-9.10	D	14.00	12.00						
9.50-9.95	SPT(C) N=14			2,2/2,3,4,5					

Remarks

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Figure No.
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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 5

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm 15.0m to 15.0m	Ground Level (mOD) 39.44	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504742.11 E 189290.21 N	Dates 22/02/2023	Project Contractor Geo-Integrity	Sheet 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.00-10.10	D								
11.00-11.45	SPT(C) N=20			4,4/5,5,5,5		(7.00)			
12.00-12.10	D								
12.50-12.95	SPT(C) N=24			2,3/5,6,6,7					
13.00-13.10	D								
14.00-14.45	SPT(C) N=27			1,3/5,6,7,9					
15.00	D				24.44	15.00	Complete at 15.00m		

Remarks	Scale (approx)	Logged By
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	Figure No.	
	23-01-21.BH 5	

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Site
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE

Borehole Number
BH 6

Machine : Dando 3000
Method : Cable Percussion

Casing Diameter
150mm to 15.0m

Ground Level (mOD)
40.94

Client
Mace

Job Number
23-01-21

Location (Handheld GPS)
504730.87 E 189330.98 N

Dates
23/02/2023

Project Contractor
Geo-Integrity

Sheet
1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.30)	MADE GROUND TOPSOIL			
0.30-0.40	D	5.00	4.70		40.64	0.30	REWORKED GROUND Dense brown slightly sandy fine to coarse GRAVEL. is fine to coarse quartz and flint			
0.50-1.00	B	6.50	5.00							
1.20-1.65	SPT(C) N=30			3,6/6,6,9,9						
1.20-1.65	D	8.00	5.00			(2.30)				
2.00-2.45	SPT(C) N=26			4,5/6,6,6,8						
2.00-2.45	D	9.50	5.20							
					38.34	2.60	ALLUVIUM Very soft dark brown black organic CLAY			
3.00-3.45	SPT N=3			1,0/0,1,1,1		(0.85)				
3.00-3.45	D	11.00	5.20							
					37.49	3.45	SHEPPERTON GRAVEL MEMBER Dense light brown grey GRAVEL. Gravel is fine to coarse flint and quartz			
4.00-4.45	SPT(C) N=29			4,5/6,6,8,9						
4.00-4.45	D	12.50	5.00							
5.00-5.45	SPT(C) N=33			5,5/7,8,8,10		(3.15)				
5.00-5.45	D	13.00	5.00							
6.00-6.10	D	13.00	5.10							
6.50-6.95	SPT(C) N=28			3,6/6,6,8,8	34.34	6.60	UPPER CHALK Structureless off-white CHALK comprising gravelly SILT. Gravel is flint and chalk (Grade Dm)			
6.50-6.95	D									
7.50-7.60	D									
8.00-8.45	SPT N=19			2,3/3,5,5,6						
8.00-8.45	D									
9.00-9.10	D									
9.50-9.95	SPT N=23			2,4/4,5,7,7						
9.50-9.95	D									

Remarks

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Figure No.
23-01-21.BH 6

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 6

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number
Dando 3000	150mm to 15.0m	40.94	Mace	23-01-21
Method : Cable Percussion	**Location** (Handheld GPS) 504730.87 E 189330.98 N	**Dates** 23/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.50-10.60	D					(8.40)				
11.00-11.45	SPT N=26			3,4/5,5,8,8						
11.00-11.45	D									
12.00-12.10	D									
12.50-12.95	SPT N=29			3,3/5,7,8,9						
12.50-12.95	D									
13.50-13.60	D									
14.00-14.45	SPT N=26			3,4/5,5,8,8						
14.00-14.45	D									
15.00-15.45	SPT N=33			4,5/5,8,9,11	25.94	15.00	Complete at 15.45m			
15.00-15.45	D									

Remarks

Scale (approx)	Logged By
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Figure No. 23-01-21.BH 6

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 7

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 39.67	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504673.94 E 189305.85 N	Dates 24/02/2023	Project Contractor Geo-Integrity	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					39.57	0.10	MADE GROUND TOPSOIL		
						(0.20)			
0.20-0.30	D	4.00	3.80		39.37	0.30	MADE GROUND Soft brown silty gravelly CLAY. Gravel is fine to coarse brick, flint and coal		
							REWORKED GROUND Medium dense to dense light brown grey sandy GRAVEL. Gravel is fine to coarse flint and quartz		
1.20-1.65	SPT(C) N=26			2,2/5,5,8,8					
1.20-1.65	D	5.00	4.40			(2.15)			
1.65-2.00	D	6.50	4.80						
2.00-2.45	SPT(C) N=32			3,5/5,8,9,10					
2.00-2.45	D	8.00	4.80						
					37.22	2.45	ALLUVIUM Very soft dark brown organic silty CLAY. Horizons of peat throughout		
3.00-3.45	SPT(C) N=4			3,5/2,1,0,1					
3.00-3.45	D	9.50	5.00			(1.75)			1
4.00-4.45	D	11.00	5.20	Slow(1) at 4.00m, rose to 3.55m in 20 mins.					1
					35.47	4.20	SHEPPERTON GRAVEL MEMBER Medium dense to dense GRAVEL. Gravel is coarse rounded to sub-rounded flint		
4.00-4.45	SPT N=23			1,2/4,6,6,7					
5.00-5.45	SPT(C) N=29			3,3/6,6,8,9					
5.00-5.45	D	12.50	5.20			(2.00)			
6.00-6.10	D	12.50	5.40						
					33.47	6.20	UPPER CHALK Structureless off-white CHALK comprising silty GRAVEL. Gravel is chalk and flint (Grade Dc)		
6.50-6.95	SPT(C) N=11			2,2/2,3,3,3					
6.50-6.95	D	12.50	5.50						
7.00-7.50	B								
8.00-8.45	SPT N=18			3,3/3,4,5,6					
9.00-9.10	D								
9.50-9.95	SPT N=25			3,4/6,6,6,7					
9.50-9.95	D								

Remarks

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Figure No. 23-01-21.BH 7

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 7

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number
Dando 3000	150mm to 15.0m	39.67	Mace	23-01-21
Method : Cable Percussion	**Location** (Handheld GPS) 504673.94 E 189305.85 N	**Dates** 24/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.50-10.60	D					(8.80)			
11.00-11.45	SPT N=27			3,4/5,5,8,9					
11.00-11.45	D								
12.00-12.10	D								
12.50-12.95	SPT N=28			2,4/4,7,7,10					
12.50-12.95	D								
13.50-13.60	D								
14.00-14.45	SPT N=31			3,4/6,6,9,10					
14.00-14.45	D								
15.00-15.45	SPT N=35			4,4/6,8,10,11	24.67	15.00	Complete at 15.45m		
15.00-15.45	D								

Remarks

Scale (approx)	Logged By
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Figure No. 23-01-21.BH 7

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 8

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 41.29	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504595.54 E 189286.92 N	Dates 27/02/2023	Project Contractor Geo-Integrity	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20-0.30	D	4.00	3.60			(0.45)	MADE GROUND RED BRICK		
0.50-1.00	B	5.00	4.50		40.84	0.45	REWORKED GROUND Medium dense to dense light brown sandy GRAVEL. Gravel is fine to coarse flint and quartz		
1.20-1.65	SPT(C) N=19			3,3/3,5,5,6					
1.20-1.65	D	6.50	4.80			(2.45)			
2.00-2.45	SPT(C) N=27			3,4/6,6,7,8					
2.00-2.45	D	8.00	5.00						
3.00-3.45	SPT N=7			1,0/0,1,1,5	38.39	2.90	ALLUVIUM Very soft dark brown black green slightly gravelly organic CLAY (Peat). Gravel is fine to coarse flint		1
3.00-3.45	D	9.50	5.10						
				Water strike(1) at 3.60m, rose to 3.00m in 20 mins.		(1.55)			1
4.00-4.45	SPT(C) N=30			3,5/5,8,8,9					
4.00-4.45	D	11.00	5.30		36.84	4.45	SHEPPERTON GRAVEL MEMBER Dense medium to coarse GRAVEL. Gravel is fine to coarse flint and quartz		
5.00-5.45	SPT(C) N=32			4,5/5,8,9,10					
5.00-5.45	D	12.00	5.30			(2.35)			
6.00-6.10	D	12.00	5.50						
6.50-6.95	SPT(C) N=30			3,5/5,8,8,9					
6.50-6.95	D	12.00	5.60		34.49	6.80	UPPER CHALK Structureless off-white CHALK comprising gravelly SILT. Gravel is fine to coarse chalk and flint (Grade Dm)		
7.00-7.50	B								
8.00-8.45	SPT N=16			2,2/3,3,5,5					
8.00-8.45	D								
9.00-9.10	D								
9.50-9.95	SPT N=20			3,3/3,5,6,6					
9.50-9.95	D					(5.70)			

Remarks

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Figure No.
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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 8

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number
Dando 3000	150mm to 15.0m	41.29	Mace	23-01-21
Method : Cable Percussion	**Location** (Handheld GPS) 504595.54 E 189286.92 N	**Dates** 27/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
10.50	D								
11.00-11.45	SPT N=25			3,3/5,5,7,8					
11.00-11.45	D								
12.00-12.95	D								
12.50-12.95	SPT N=27			4,4/4,7,8,8	28.79	12.50	UPPER CHALK Structureless off-white CHALK comprising silty GRAVEL. Gravel is fine to coarse chalk and flint (Grade Dc)		
13.50-13.60	D					(2.50)			
14.00-14.45	SPT N=35			4,5/8,8,9,10					
14.00-14.45	D								
15.00-15.45	SPT N=37			4,5/6,9,10,12	26.29	15.00	Complete at 15.45m		
15.00-15.45	D								

Remarks

Scale (approx)	Logged By
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Figure No. 23-01-21.BH 8

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 9

Machine : Dando 3000 Method : Cable Percussion	Casing Diameter 150mm to 15.0m	Ground Level (mOD) 42.96	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504570.97 E 189263.99 N	Dates 28/02/2023	Project Contractor Geo-Integrity	Sheet 1/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
						(0.30)	MADE GROUND			
0.40-0.50	D	5.00	4.50		42.66	0.30	REWORKED GROUND Medium dense to dense GRAVEL. Gravel is fine to medium flint and quartz			
						(0.90)				
1.20-1.65	SPT N=23			2,5/5,6,6,6	41.76	1.20	REWORKED GROUND Medium dense GRAVEL. Gravel is coarse sub-rounded flint			
1.20-1.65	D	6.50	4.70							
2.00-2.45	SPT(C) N=25			3,5/5,5,7,8						
2.00-2.45	D	8.00	4.80			(2.05)				
3.00-3.45	SPT(C) N=14			3,4/4,5,4,1						
3.00-3.45	D	9.50	5.00		39.71	3.25	ALLUVIUM Very soft dark brown organic CLAY		1	
				Water strike(1) at 3.80m, rose to 3.40m in 20 mins.		(1.20)			1	
4.00-4.45	D	11.00	5.00							
4.00-4.45	SPT N=22			2,3/3,6,6,7	38.51	4.45	SHEPPERTON GRAVEL MEMBER Medium dense to dense GRAVEL. Gravel is coarse sub-rounded flint			
5.00-5.45	SPT(C) N=27			4,4/5,5,8,9						
5.00-5.45	D	12.00	5.20			(1.85)				
6.00-6.10	D	12.00	5.20							
					36.66	6.30	UPPER CHALK Structureless off-white CHALK comprising gravelly SILT. Gravel is fine to coarse chalk and flint (Grade Dm)			
6.50-6.95	SPT(C) N=30			3,5/5,8,8,9						
7.50-8.00	B	12.00	5.30							
8.00-8.45	SPT N=14			2,3/3,3,4,4						
8.00-8.45	D									
9.00-9.10	D									
9.50-9.95	SPT N=21			3,4/4,5,6,6						
9.50-9.95	D									

Remarks

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Figure No. 23-01-21.BH 9

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Site	Borehole Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	BH 9

Machine :	Casing Diameter	Ground Level (mOD)	Client	Job Number
Dando 3000	150mm to 15.0m	42.96	Mace	23-01-21
Method : Cable Percussion	**Location** (Handheld GPS) 504570.97 E 189263.99 N	**Dates** 28/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 2/2

Depth (m)	Sample / Tests	Casing Depth (m)	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water	Instr
10.50-10.60	D					(8.70)				
11.00-11.45	SPT N=31			3,5/6,8,8,9						
11.00-11.45	D									
12.00-12.10	D									
12.50-12.95	SPT N=27			4,4/5,5,8,9						
12.50-12.95	D									
13.50-13.60	D									
14.00-14.45	SPT N=33			3,5/7,7,9,10						
14.00-14.45	D									
15.00-15.45	SPT N=34			5,5/6,8,9,11	27.96	15.00	Complete at 15.45m			
15.00-15.45	D									

Remarks

Scale (approx)	Logged By
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Figure No. 23-01-21.BH 9

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 1

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.39	Mace	23-01-21
	Location (Handheld GPS) 504835.68 E 189033.61 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				39.34	0.05	MADE GROUND Loose dark brown clayey gravelly sandy SILT. Gravel is flint, brick, coal, ash and slag		
						MADE GROUND Loose brown orange silty sandy GRAVEL. Gravel is flint, ash, brick, quartz and slag		
					(0.75)			
0.50	D							
0.80	D			38.59	0.80	MADE GROUND Loose brown silty sandy cobbly slightly bouldery GRAVEL. Gravel is flint, quartz, slag, concrete with boulders of concrete		
					(0.70)			1
			Water strike(1) at 1.30m, fell to 2.10m in 5 mins.					
1.50	D			37.89	1.50	ALLUVIUM Very soft dark brown black grey silty slightly gravelly organic CLAY. Gravel is fine to coarse flint		
					(0.80)			
2.00	D							1
				37.09	2.30	Complete at 2.30m		

Plan

Remarks

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Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 1

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Site Broadwater Lake, Moorhall Road, Harefield, UB9 6PE			**Trial Pit Number** TP 2
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)** 40.67	**Client** Mace	**Job Number** 23-01-21
	Location (Handheld GPS) 504609.54 E 189281.43 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	MADE GROUND Loose dark brown clayey gravelly organic SILT. Gravel is brick, flint, concrete and quartz		
				40.47	0.20	MADE GROUND Loose light brown slightly silty gravelly SAND. Gravel is flint and quartz. Occasional boulders of concrete and brick		
0.50	D				(1.00)			
1.20	D			39.47	1.20	MADE GROUND Soft to firm brown grey silty sandy gravelly CLAY. Gravel is flint and brick		1
					(0.70)			1
1.90	D		Water strike(1) at 1.80m, rose to 1.70m in 5 mins.	38.77	1.90	Complete at 1.90m		

Plan

Remarks

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Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 2

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 3

Machine : JCb 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		40.60	Mace	23-01-21
	Location (Handheld GPS) 504714.7 E 189322.4 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	MADE GROUND Loose brown orange silty SAND AND GRAVEL. Gravel is fine to coarse flint, brick and concrete		
0.20	D			40.30	0.30			
					(1.30)	MADE GROUND Very dense weathered concrete comprising silty sandy GRAVEL. Gravel is fine to coarse brick, flint, slate, concrete and rare fragments of wood		
1.20	D							
			Refusal at 1.60m	39.00	1.60	Complete at 1.60m		

Plan

Remarks

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Scale (approx)	Logged By	Figure No.
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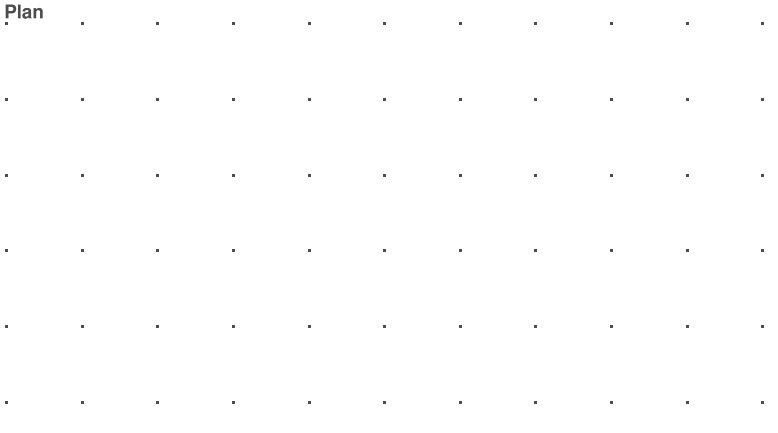
Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 4

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.91	Mace	23-01-21
	Location (Handheld GPS) 504696.86 E 189316.11 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.20	D			39.61	(0.30) 0.30	MADE GROUND Loose brown silty slightly clayey sandy GRAVEL. Gravel is fine to coarse flint, brick and ash		
0.75	D			38.91	(0.70) 1.00	MADE GROUND Loose grey gravelly sandy SILT. Gravel is fine to coarse flint and brick. Distinct hydrocarbon odour and significant staining		
1.20	D				(1.00)	MADE GROUND Loose grey silty sandy GRAVEL. Gravel is fine to coarse flint and brick with pieces of metal loose boulders of cement and brick. Distinct hydrocarbon odour and signifcant staining		
2.00	D			37.91	2.00	Complete at 2.00m		

Plan



Remarks

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Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 4

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Site Broadwater Lake, Moorhall Road, Harefield, UB9 6PE			**Trial Pit Number** TP 5
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)** 39.98	**Client** Mace	**Job Number** 23-01-21
	Location (Handheld GPS) 504710.04 E 189309.74 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
0.50	D				(1.00)	MADE GROUND Loose dark grey silty sandy GRAVEL. Gravel is fine to coarse flint, brick and slag with weathered concrete		
				38.98	1.00	Complete at 1.00m		

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Remarks

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Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 5

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 6

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.54	Mace	23-01-21
	Location (Handheld GPS) 504726.99 E 189118.96 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				39.49	0.05	MADE GROUND CONCRETE		
						MADE GROUND Dense light brown beige slightly clayey sandy gravelly SILT. (Weathered concrete)		
0.50	D				(1.05)			
			Water strike(1) at 1.00m.					1
				38.44	1.10	Complete at 1.10m		

Plan

Remarks

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Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 6

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 7

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.83	Mace	23-01-21
	Location (Handheld GPS) 504685.83 E 189099.52 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	CONCRETE		
				39.53	0.30	MADE GROUND Dense light brown beige slightly clayey sandy gravelly SILT. (Weathered concrete)		
0.50	D				(0.50)			
				39.03	0.80	Complete at 0.80m		

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Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 7

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 8

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.70	Mace	23-01-21
	Location (Handheld GPS) 504658.26 E 189095.62 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	MADE GROUND Soft light brown silty gravelly organic CLAY. Gravel is flint, concrete and brick		
0.10	D			39.50	0.20	MADE GROUND Dense light bron beige sandy gravelly SILT. Gravel is concrete, flint and brick (concrete matrix)		
0.50	D				(0.70)			
			Water strike(1) at 1.00m, fell to 1.20m in 20 mins.	38.80	0.90	MADE GROUND Loose orange brown silty sandy GRAVEL. Gravel is flint, quartz, sandstone and rare cobbles of concrete		1
					(0.70)			1
1.40	D			38.10	1.60	Complete at 1.60m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 8

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Site Broadwater Lake, Moorhall Road, Harefield, UB9 6PE			**Trial Pit Number** TP 9
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions**	**Ground Level (mOD)** 42.16	**Client** Mace	**Job Number** 23-01-21
	Location (Handheld GPS) 504621.91 E 189080.64 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
				42.11	0.05	MADE GROUND Soft dark brown silty sandy gravelly organic CLAY. Gravel is flint, brick and concrete		
					(0.65)	Loose light brown beige sandy gravelly SILT. Gravel is flint, concrete, brick in a matrix of weathered concrete		
0.50	D			41.46	0.70	MADE GROUND Soft to firm dark brown black green silty gravelly CLAY. Gravel is fine to coarse concrete, flint, slate, fragments of wood		
					(0.95)			
1.40	D			40.51	1.65	Complete at 1.65m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 9

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 10

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		40.15	Mace	23-01-21
	Location (Handheld GPS) 504776.78 E 189107.98 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.70)	CONCRETE		
				39.45	0.70			
0.80	D				(0.30)	MADE GROUND Soft to firm brown grey silty sandy gravelly CLAY. Gravel is fine to coarse flint, iron, brick and slag		
				39.15	1.00			
						Complete at 1.00m		

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Remarks

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Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 10

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 11

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.61	Mace	23-01-21
	Location (Handheld GPS) 504759.44 E 189133.45 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.50)	CONCRETE		
				39.11	0.50	MADE GROUND Loose grey orange brown silty sandy GRAVEL. Gravel is fine to coarse flint, bick, concrete and ash		
0.75	D				(0.40)			
				38.71	0.90	ALLUVIUM Very soft dark brown grey green organic silty slightly gravelly CLAY with peat		
1.20	D		Water strike(1) at 1.40m.		(1.20)			1
1.80	D							
				37.51	2.10	SHEPPERTON GRAVEL MEMBER Loose grey slightly silty sandy GRAVEL. Gravel is fine to coarse flint and quartz		
2.20	D				(0.20)			
				37.31	2.30	Complete at 2.30m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 11

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 12

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.55	Mace	23-01-21
	Location (Handheld GPS) 504756.27 E 189148.68 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.15)	CONCRETE		
				39.40	0.15	MADE GROUND Loose orange brown silty sandy GRAVEL. Gravel is fine to coarse brick, flint, concrete with occasional boulders of concrete		
					(0.95)			
0.80	D							
				38.45	1.10	ALLUVIUM Very soft dark brown black green grey organic silty slightly gravelly CLAY with peat roots and tree debris. Gravel is fine to coarse flint		1
			Water strike(1) at 1.20m.					
					(0.70)			
1.50	D							
				37.75	1.80			
					(0.10)	SHEPPERTON GRAVEL MEMBER Loose grey slightly silty sandy GRAVEL. Gravel is fine to coarse flint and quartz		
				37.65	1.90			
						Complete at 1.90m		

Plan

Remarks

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 12

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 13

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.52	Mace	23-01-21
	Location (Handheld GPS) 504761.42 E 189243.06 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.60)	CONCRETE		
				38.92	0.60	ALLUVIUM Very soft dark brown black grey organic silty slightly gravelly CLAY with peat and plat??? debris. Gravel is fine to coarse flint		
			Water strike(1) at 1.30m.		(0.70)			1
				38.22	1.30	SHEPPERTON GRAVEL MEMBER Loose grey slightly silty sandy GRAVEL. Gravel is fine to coarse flint quartz and chalk		
					(0.30)			
				37.92	1.60	Complete at 1.60m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.TP 13

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	TP 14

Machine : JCB 3CX Method : Trial Pit	Dimensions	Ground Level (mOD)	Client	Job Number
		39.47	Mace	23-01-21
	Location (Handheld GPS) 504752.33 E 189282.42 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.30)	CONCRETE		
				39.17	0.30	MADE GROUND Loose brown slightly clayey silty sandy GRAVEL. Gravel is fine to coarse flint, brick and concrete		
0.60	D				(0.50)			
				38.67	0.80	ALLUVIUM Very soft dark brown black grey green organic silty slightly gravelly CLAY with peat and plant debris. Gravel is fine to coarse flint		
			Water strike(1) at 1.20m.		(0.80)			1
1.40	D							2
			Water strike(2) at 1.50m, rose to 1.30m in 5 mins.					2
				37.87	1.60	SHEPPERTON GRAVEL MEMBER Loose grey silty sandy GRAVEL. Gravel is fine to coarse flint, quartz and chalk		
					(0.30)			
1.80	D			37.57	1.90	Complete at 1.90m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	lee Ashworth	23-01-21.TP 14

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Site	Trial Pit Number
Broadwater Lake, Moorhall Road, Harefield, UB9 6PE	SA 1

Machine : JCB 3CX Method : Trial Pit	Dimensions 0.60m x 1.50m x 1.50m	Ground Level (mOD) 39.39	Client Mace	Job Number 23-01-21
	Location (Handheld GPS) 504719.3 E 189280.9 N	Dates 15/02/2023	Project Contractor Geo-Integrity	Sheet 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	MADE GROUND Loose orange brown silty sandy GRAVEL. Gravel is flint and brick		
				39.19	0.20			
0.40	D				(0.40)	MADE GROUND Loose dark grey brown black silty sandy GRAVEL. Gravel is fine to coarse flint, ceramic, tarmac and brick		
				38.79	0.60			
1.00	D				(0.90)	POSSIBLE MADE GROUND/ALLUVIUM Very soft dark brown silty slightly gravelly organic CLAY. Gravel is flint and wood with frequent branches and roots		
1.40	D							
				37.89	1.50	Complete at 1.50m		

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Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.SA 1

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Site Broadwater Lake, Moorhall Road, Harefield, UB9 6PE			**Trial Pit Number** SA 2
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 0.60m x 1.30m x 0.65m	**Ground Level (mOD)** 42.74	**Client** Mace	**Job Number** 23-01-21
	Location (Handheld GPS) 504614.8 E 189285.19 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.20)	MADE GROUND Loose dark brown clayey gravelly organic SILT. Gravel is brick, flint, concrete and quartz		
				42.54	0.20			
0.50	D				(0.45)	MADE GROUND Loose light brown slightly silty gravelly SAND. Gravel is flint and quartz. Occasional boulders of concrete and brick		
				42.09	0.65	Complete at 0.65m		

Plan

Remarks

AGS

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.SA 2

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Site Broadwater Lake, Moorhall Road, Harefield, UB9 6PE			**Trial Pit Number** SA 3
Machine : JCB 3CX **Method :** Trial Pit	**Dimensions** 0.60m x 1.50m x 0.55m	**Ground Level (mOD)** 39.24	**Client** Mace	**Job Number** 23-01-21
	Location (Handheld GPS) 504844.26 E 189034.16 N	**Dates** 15/02/2023	**Project Contractor** Geo-Integrity	**Sheet** 1/1

Depth (m)	Sample / Tests	Water Depth (m)	Field Records	Level (mOD)	Depth (m) (Thickness)	Description	Legend	Water
					(0.50)	MADE GROUND Loose dark brown slightly clayey sandy gravelly SILT. Gravel is flint, slag, brick and coal		
0.50	D			38.74	0.50	Complete at 0.50m		

Plan

Remarks

Scale (approx)	Logged By	Figure No.
1:20	Lee Ashworth	23-01-21.SA 3

Appendix 2 GLHER Data

GLHER Monuments

PRN	Mon_Name	Period
97325	Harefield (Palaeolithic Findspot)	[17288] Palaeolithic
121878	Church Hillharefield (Medieval Village)	[17296] Medieval
123722	Harefield Church (Medieval Manor House & Moat)	[17296] Medieval, [17257] Post Medieval
126916	Church Hillharefield (Post Medieval Stable)	[17257] Post Medieval
147866	Harefield (Mesolithic Findspot - Lithic Implement)	[17262] Mesolithic, [17265] Neolithic
144728	Dewes Pit (Mesolithic Lithic Working Site)	[17262] Mesolithic
112570	Church of St Mary, Harefield (High Medieval Parish Church)	[17301] High Medieval, [17347] 12th Century, [17301] High Medieval, [17358] Late Medieval, [17380] 13th Century, [17358] Late Medieval, [17293] 14th Century, [17358] Late Medieval, [17256] Elizabethan, [17324] 15th Century, [17386] 16th Century, [17340] T
114242	Australian War Memorial (Early 20th Century War Memorial & Obelisk)	[17266] Early 20th Century
106063	High Stharefield (Medieval Quarry)	[17296] Medieval, [17257] Post Medieval
100594	14 High Street (Tudor Timber Framed House)	[17340] Tudor, [17289] Restoration
98243	St Marys Church (Mesolithic Findspot)	[17262] Mesolithic
137370	St Mary's Vicarage (Prehistoric Pit)	[17277] Prehistoric
149788	The White Horse Public House (Restoration Public House)	[17289] Restoration, [17367] Georgian, [17389] Late 17th Century, [17282] Early 18th Century, [17289] Restoration
149021	Widewater Lock Cottage (Georgian Wall & Lock Keepers Cottage)	[17367] Georgian, [17367] Georgian, [17314] Victorian, [17393] Mid 19th Century
148007	ST Mary's Vicarage (Medieval Findspot)	[17296] Medieval
111416	On the E Bank of the Grand Union Canal, Between Uxbridge and Harefield. (Second World War Pillbox)	[17295] Second World War
116708	14 High Street (Georgian Farmhouse)	[17367] Georgian, [17335] Mid 18th Century, [17314] Victorian, [17334] Late 19th Century
141747	Entrance Archway To The Harefield Australian Military Cemetery (Early 20th Century Arch)	[17266] Early 20th Century
141917	Colne Valley (Palaeolithic Findspot)	[17288] Palaeolithic
141152	Merle Avenue South Of (Post Medieval Waste Disposal Site)	[17257] Post Medieval
143016	Almshouses (Tudor Coat Of Arms, Almshouse & Plaque)	[17340] Tudor, [17386] 16th Century
142343	High Street, Harefield (Elizabethan Timber Framed House)	[17256] Elizabethan, [17285] Stuart, [17308] 17th Century, [17367] Georgian, [17314] Victorian, [17326] 19th Century, [17314] Victorian, [17395] Late 20th Century

105217	Second World War Pillbox (Type Fw3/27)	[17295] Second World War
104465	Park Lane (Post Medieval Waste Disposal Site)	[17257] Post Medieval
102466	Whelan's (Formerly The Crown and Sceptre) (Tudor Timber Framed Building & Public House)	[17340] Tudor, [17289] Restoration, [17266] Early 20th Century
103639	14 High Street (Tudor House)	[17340] Tudor, [17386] 16th Century, [17256] Elizabethan, [17285] Stuart, [17308] 17th Century
117790	Moorhall Road (Post Medieval Waste Disposal Site)	[17257] Post Medieval
150517	Harefield (Ditch of Uncertain Date)	[17369] Uncertain
150696	Moorhall Road (Post Medieval Waste Disposal Site)	[17257] Post Medieval
114491	Church Hill (Post Medieval Waste Disposal Site)	[17257] Post Medieval
114765	Normer Hillmain Road-cutting (Lower Palaeolithic Findspot)	[17318] Lower Palaeolithic
118796	Church Hillharefield (Medieval House)	[17296] Medieval
130734	Manor Court (High Medieval Findspot)	[17301] High Medieval, [17358] Late Medieval, [17347] 12th Century, [17380] 13th Century
132239	Church Gardens Nursery & Nursery Cottage (Elizabethan Outbuilding)	[17256] Elizabethan, [17285] Stuart, [17308] 17th Century, [17367] Georgian, [17279] Late 18th Century, [17338] Early 19th Century, [17274] Edwardian, [17395] Late 20th Century
128707	Dewes Pit? (Palaeolithic Findspot)	[17288] Palaeolithic
104453	Church Hillharefield (Post Medieval Manor House)	[17257] Post Medieval
104609	Recreation Ground (Medieval Farmhouse, Manor House & Moat)	[17296] Medieval, [17257] Post Medieval
100759	Church Gardens (Elizabethan Garden Wall)	[17256] Elizabethan, [17285] Stuart, [17308] 17th Century, [17256] Elizabethan, [17285] Stuart, [17308] 17th Century, [17256] Elizabethan, [17285] Stuart, [17308] 17th Century
97464	Moorhall Road (High Medieval Chapel)	[17301] High Medieval, [17332] Mid 20th Century
107067	St Mary's Vicarage (Roman Ditch)	[17260] Roman, [17390] Early Medieval
109750	Belhammonds (Restoration Landscape Park)	[17289] Restoration, [17266] Early 20th Century, [17367] Georgian, [17367] Georgian, [17332] Mid 20th Century, [17395] Late 20th Century
109869	Manor Court (Elizabethan Timber Framed Building)	[17340] Tudor, [17285] Stuart, [17386] 16th Century, [17308] 17th Century, [17367] Georgian, [17314] Victorian, [17326] 19th Century, [17367] Georgian, [17314] Victorian, [17326] 19th Century
147438	Savay Farm (Georgian Bridge)	[17367] Georgian, [17367] Georgian
115199	Second World War Pillbox (Type Fw3/27)	[17295] Second World War
111350	St Mary-the-Virgin Churchyard (Late Medieval Churchyard)	[17358] Late Medieval, [17293] 14th Century

111079	Harefield Place (Elizabethan Garden)	[17256] Elizabethan, [17274] Edwardian, [17256] Elizabethan, [17274] Edwardian, [17256] Elizabethan, [17274] Edwardian, [17256] Elizabethan, [17274] Edwardian, [17256] Elizabethan, [17274] Edwardian, [17266] Early 20th Century
132532	St Mary's Vicarage (Post Medieval Pit & Ditch)	[17257] Post Medieval, [17332] Mid 20th Century, [17367] Georgian, [17314] Victorian, [17326] 19th Century
133192	Manir Court (Medieval Construction Trench)	[17296] Medieval, [17296] Medieval

GLHER Events

PRN	Act_Name
169817	Geotechnical Test Pit at Broadwater Gardens
171303	Building Survey at Harefield Place
160280	Trial Trench at Broadwater Gardens
167358	Test Pit at Colne Valley Viaduct
168208	Watching Brief at Manor Court
166979	Desk Based Assessment at St Mary's Church
155042	Geophysical Survey at Dews Farm
156104	Watching Brief and Building Survey at The White House
170807	Field Observation and Trial Trench at Church Gardens
170972	Field Survey at Harefield Place
172666	Open Area Excavation at St Mary's Vicarage
169244	Desk Based Assessment at Dairy Farm
163998	Test Pit at Harefield House
157215	Watching Brief at Church Gardens
159041	Open Area Excavation at St Mary's Vicarage
162948	Watching Brief at Church Gardens

Appendix 3
Buckinghamshire HER Data

Buckinghamshire HER Records

PrefRef	Name	Period
564500000	THE FISHERIES,DENHAM	19th Century to Modern
1218000000	DENHAM FILM STUDIOS	Modern
1219400000	GATE COTTAGE, SAVAY LANE	19th Century
654000000	Durdent Court (formerly Tile House), Denham Green	19th Century to Modern
654100000	The Fishery	19th Century to 21st Century
30005000	Savay Farm	19th Century to Modern
857300000	Denham Garden Village	20th Century
857500000	Denham Garden Village	Unknown
895200000	NORTHMOOR HILL WOOD	19th Century
895300000	S OF WEYBEARDS HOUSE	20th Century
895400000	WEYBEARDS HOUSE	20th Century
700000000	Denham Green	Post-Medieval to Modern
82000000	N. ORBITAL RD, NORMER HILL	Lower Palaeolithic to Middle Palaeolithic
82001000	N. ORBITAL RD, NORMER HILL	Unknown
82002000	N.ORBITAL ROAD,NORMER HILL	Unknown
82003000	N. ORBITAL RD, NORMER HILL	Unknown
82004000	N.ORBITAL RD, NORMER HILL	Unknown
83200000	10 SAVOY LANE, DENHAM GREEN	Unknown
780500000	Northmoor Hill wood	Medieval
780600000	East of Durdent Court	Medieval to Post-Medieval
780600000	East of Durdent Court	Medieval to Post-Medieval
780600000	East of Durdent Court	Medieval to Post-Medieval
780600000	East of Durdent Court	Medieval to Post-Medieval
780600000	East of Durdent Court	Medieval to Post-Medieval
780600000	East of Durdent Court	Medieval to Post-Medieval
15000000	SAVAY FARM	Early Neolithic to Medieval
30000000	DENHAM DURDENT MANOR	Medieval to Post-Medieval
30001000	THE SAVAY (SAVAY FARM)	14th Century to 17th Century
30001001	THE SAVAY (SAVAY FARM)	16th Century to 17th Century
30002000	THE SAVAY (SAVAY FARM)	14th Century
30003000	BRIDGE OVER RIVER COLNE	18th Century

30004000	BARNS AT THE SAVAY	18th Century to Modern
411900000	GRAND JUNCTION/UNION CANAL	18th Century to 19th Century
1218000000	DENHAM FILM STUDIOS	Modern
857300000	Denham Garden Village	20th Century
265000000	DENHAM	Unknown
30002000	THE SAVAY (SAVAY FARM)	14th Century
1508700000	Broadwater Park, Denham	Unknown
30005000	Savay Farm	19th Century to Modern
654000000	Durdent Court (formerly Tile House), Denham Green	19th Century to Modern

Buckinghamshire Events

EvUID	Name	Organisati
EBC16312	Evaluation of Denham Garden Village, Denham	Oxford Archaeology
EBC16567	Watching brief	Thames Valley Archaeological Services (TVAS)
EBC16827	Watching brief	Thames Valley Archaeological Services (TVAS)
EBC17803	HS2 Remote sensing survey CH-004-007	High Speed Two (HS2) Limited
EBC17803	HS2 Remote sensing survey CH-004-007	High Speed Two (HS2) Limited
EBC16312	Evaluation of Denham Garden Village, Denham	Oxford Archaeology
EBC16567	Watching brief	Thames Valley Archaeological Services (TVAS)
EBC16827	Watching brief	Thames Valley Archaeological Services (TVAS)

Planning Notification Areas

DesigUID	Name	Notes	HERNo
DBC8635	Early Palaeolithic flint scatter, possibly a flint-working site	High importance. Area 37.57ha.	82000000

DBC9280	Medieval timber-framed manor house of Denham Durdent manor and undated earthwork mound	Captured in GIS 1994. Earthwork. High importance. Scheduled Monument 10006945. Area 3.21ha.	0015000000; 0030000000
DBC9850	17th, 18th and 19th century gardens of Denham Court	Area 88.88ha.	0437100000; 0214909000

Appendix 4 Hertfordshire HER Data

Hertfordshire HER Records

PrefRef	Name	Period
17319	DITCHES, PITS AND POSSIBLE ENCLOSURES, WEST HYDE, RICKMANSWORTH	Later Bronze Age
17654	SITE OF TROY MILL, OLD UXBRIDGE ROAD, WEST HYDE, RICKMANSWORTH	Post Medieval
17655	SITE OF POST-MEDIEVAL CHALK PIT & CANAL, OLD UXBRIDGE ROAD, WEST HYDE, RICKMANSWORTH	Post Medieval
18751	SITE OF TROY FARM, UXBRIDGE ROAD, WEST HYDE, RICKMANSWORTH	Post Medieval
241	GRAND UNION CANAL	Post Medieval
31382	POSSIBLE MEDIEVAL FEATURES, PYNESFIELD, WEST HYDE	Medieval
31382	POSSIBLE MEDIEVAL FEATURES, PYNESFIELD, WEST HYDE	Medieval
4341	SHIRE LANE, WEST HYDE, RICKMANSWORTH	Historic: period uncertain
5948	CONDUIT, OLD UXBRIDGE ROAD, WEST HYDE, RICKMANSWORTH	Twentieth Century
838	MANORIAL SITE OF LA TROY, WEST HYDE, RICKMANSWORTH	Medieval
17655	SITE OF POST-MEDIEVAL CHALK PIT & CANAL, OLD UXBRIDGE ROAD, WEST HYDE, RICKMANSWORTH	Post Medieval
241	GRAND UNION CANAL	Post Medieval
241	GRAND UNION CANAL	Post Medieval
4341	SHIRE LANE, WEST HYDE, RICKMANSWORTH	Historic: period uncertain

Hertfordshire Events

EvUID	Name	Organisati
EHT7117	Geophysical survey at Pynesfield, Tilehouse Lane, Rickmansworth, 2012	Stratascan
EHT7470	Geotechnical investigation at Pynesfield, Denham Way, Rickmansworth, 2010	D K Symes Associates
EHT8291	Excavation at Pynesfield (off Tilehouse Lane), Maple Cross, Rickmansworth, 2017	Archaeological Solutions Limited
EHT8388	Evaluation at Pynesfield, Denham Way, West Hyde, 2012	Thames Valley Archaeological Services
EHT8537	Strip, map and record at Land at Pynesfield (off Tilehouse Lane), Maple Cross, Rickmansworth - Extension to Area	Archaeological Solutions Ltd
EHT8388	Evaluation at Pynesfield, Denham Way, West Hyde, 2012	Thames Valley Archaeological Services
EHT8507	Fluxgate gradiometer survey at Tilehouse Lane, West Hyde, 2015-16	HS2

Appendix 5 Site photographs

Plate 1: Site Entrance

Plate 2: From Moorhall Road

Plate 3: Weighbridge at site entrance

Plate 4: Remnants of conveyor structure on main site

Plate 5: Remnants of industrial remains on main site

Plate 6: Remnants of industrial remains on main site

Plate 7: Remnants of industrial remains on main site

Plate 8: Evidence of industrial re-working of the Site

Appendix 6
Proposed Development drawings

Scale (metres)

0 10 20 30 40 50 100

lake

Pontoon

Slipway

Pontoon

Slipway

Pontoon

emergency vehicular access to foreshore

beach

Rowing / Boat shed

activity shelter no.1

rigging area

boat yard no.1 (287 boats)

accessible mini bus parking

BSC store

accessible mini bus parking

activity shelter no.2

Observation point

short term parking

short term parking

beach

French Barn

turning circle R11250

coach short term parking

Bird hide

accessible walking trail

boat yard no.2 (138 boats)

Main Building

The Anchorage

coach drop off / lay-by

bin store

Canal bridge

gravel access road

pumping station and energy centre

petal go kart track

Acoustic Fence

existing substation & buried cable

new substation

Workshop & Activity Centre water sports stores

disinfection & wash down area

archery area

Lowland mixed deciduous woodland (boggy woodland)

activity shelter no.3

coach lay-by

Bird hide

coach lay-by

activity shelter no.4

wildlife lagoon

activity shelter no.5

pond

toilet block

20

activity shelter no.6

Big swing

Zipline

Camping

Activity field

Muster Point

Bird hide

Caving

activity shelter no.7

High ropes circuit

25

Low ropes

Bird hide location

private residential bungalow

bin store

anglers store

15

disinfection & wash down area

existing weighbridge

gravel access road

secure gate

new path

Causeway

Area of Quicksand

secure gate

invertebrates habitat

Area of quicksand

HILLINGDON
LONDON

NOTES

REVISION	DATE	DESCRIPTION	BY
A	31.10.22	Updated in accordance with client comments	IE
B	13.02.23	Issued for Client approval	IE
C	27.02.23	Updated in line with HDC comments	IE
D	25.05.23	Amended as a result of the arboricultural survey	IE
E	19.06.23	Amended in line with HDC comments	IE

CLIENT

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STATUS FOR APPROVAL

PROJECT
Hillingdon Water Sports Facility and Activity Centre

DRAWING
BROADWATER LAKE MASTERPLAN

SCALE 1:500 | SHEET SIZE A0 | DRAWN BY | CHECKED BY | DATE 21.10.22

PROJECT NO. 3859 | DRAWING NO. (03)045 | REVISION E

MAKING
COMPLEX
EASY

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