Appendix 6.1

OUTLINE CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

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Outline Construction Environmental Management Plan

Hillingdon Water Sports Facility Activity Centre

November 2025

Q2200454

Contents

1 Introduction

1.1 Purpose

1.1.1 This Outline Construction Environmental Management Plan (CEMP) accompanies a detailed planning application for development proposals known as the 'Hillingdon Water Sports Facility and Activity Centre' (HWSFAC) at Broadwater Lake, Moorhall Road, Harefield, Uxbridge, UB9 6PE (the 'Site'). The proposals are subsequently referred to as the 'Development'. The Site location is shown on Figure 1.1 and is within the administrative boundary of London Borough of Hillingdon (LBH). LBH are also the applicant for the planning application ('Applicant').

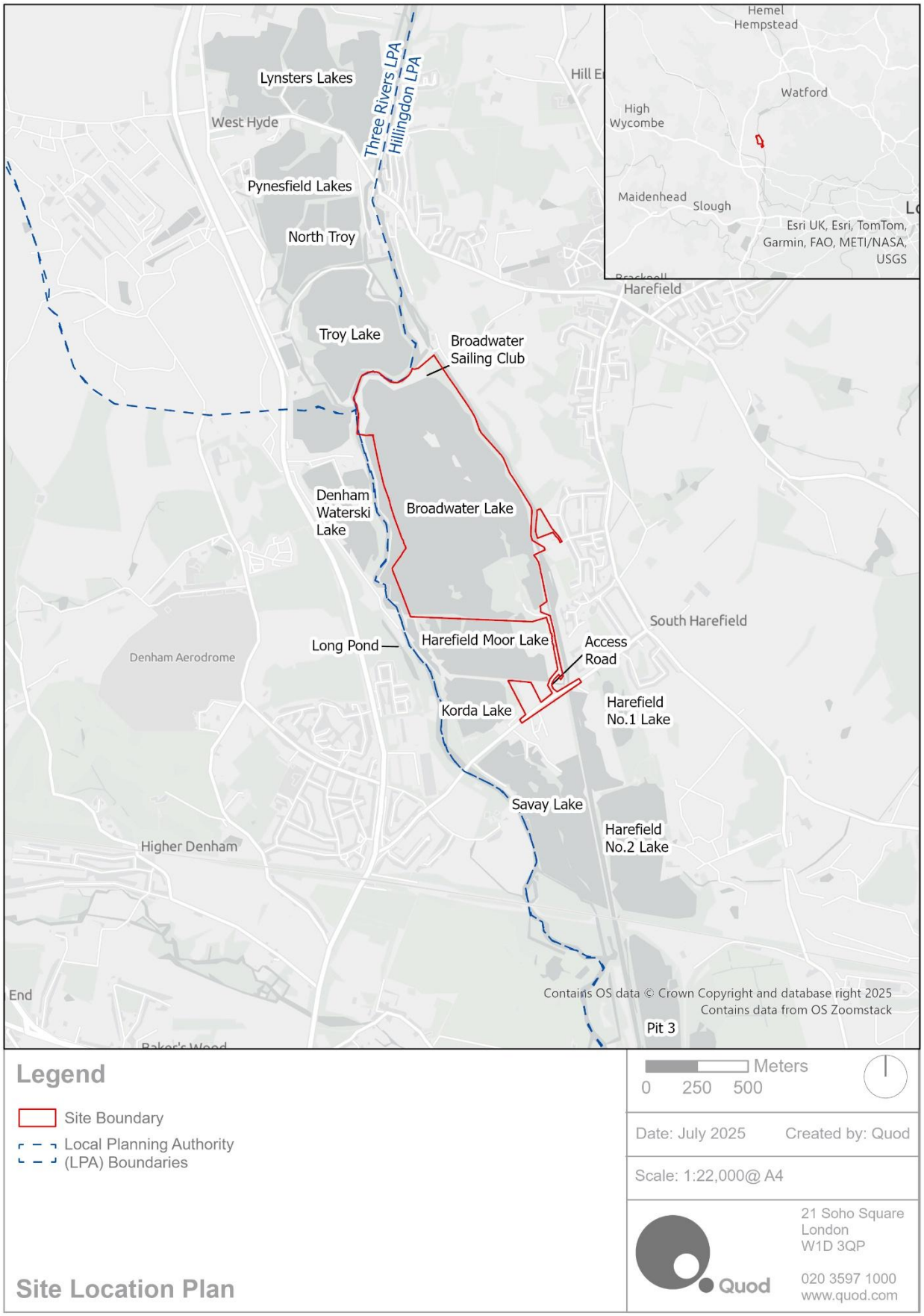
1.1.2 The purpose of the Outline CEMP is to provide a framework of measures and commitments from which a detailed CEMP (or CEMPs) will be developed to avoid, minimise or mitigate environmental effects associated with the construction stage of the Development. The construction stage of the Development is assumed to include site preparation, enabling works, demolition and construction activities. It is expected that the preparation of a detailed CEMP would be required by a condition to any planning permission granted and updated once a contractor is appointed.

1.1.3 Measures included in the Outline CEMP would be further developed once the Principal Contractor is in place and once further details are known about construction methods, phasing and programme. The detailed CEMP would be agreed with LBH prior to construction works commencing. The detailed CEMP would be developed in consultation with LBH and key stakeholders, including NE and the EA.

1.1.4 Contractors would be required to adhere to the approved detailed CEMP, relevant legislative controls, construction health, safety and environmental standards and other relevant good practice.

1.1.5 The Outline CEMP has been informed by the EIA process and has been prepared within input from the specialists contributing to the Environmental Statement (ES) that accompanies the planning application.

Figure 1.1: Site Location



1.2 Structure of this Document

1.2.1 This Outline CEMP is structured as follows:

- Chapter 2: Site and Development;
- Chapter 3: The Proposed Development;
- Chapter 4: Construction Environmental Management;
- Chapter 5: General Construction Management Measures;
- Chapter 6: Communication and Engagement;
- Chapter 7: Environmental Control and Mitigation Measures; and
- Chapter 8: Monitoring and Reporting.

1.2.2 The Outline CEMP is accompanied by Annex 1: Construction Logistics Plan (CLP) – this is a detailed CLP which would be agreed with LBH and TfL.

1.3 Basis of the Outline CEMP

1.3.1 The Outline CEMP has been informed by the following documents relating to the Development proposals:

- The HWSFAC ES (July 2025) and supporting appendices including Flood Risk and Sequential Assessment, Groundwater Risk Assessment and Outline Mitigation, Ecological and Management Plan (MEMP);
- Planning application drawings, Design and Access Statement, Landscape Strategy and other submitted documents; and
- Technical reports submitted with the planning application including Noise Assessment, Transport Assessment, Air Quality Assessment, Archaeological Desk-Based Assessment.

1.4 Update of the Outline CEMP

1.4.1 It is envisaged that the Outline CEMP will be reviewed and updated at the following project stages:

- During and after determination of the planning application in consultation with key stakeholders;
- In tender documents – to ensure that provision is made within tenders for management and control of the environmental effects of construction and to ensure that roles and responsibilities are allocated and suitably defined;
- In contract documents following appointment of the Principal Contractor; and
- As required during construction as part of the Site Environmental Management System (EMS), e.g. through further engagement with regulatory bodies.

2 Site and Development

2.1 Site Location

2.1.1 The Site is located in the administrative boundary of London Borough of Hillingdon and is approximately 5km north of Uxbridge town, within the Colne Valley Regional Park and Green Belt. South Harefield village lies to the east of the Site, beyond the Grand Union Canal.

2.1.2 The Site is in close proximity to the boundaries of Buckinghamshire Council (adjacent to the west boundary of the Site) and Three Rivers District Council (adjacent to the northern boundary of the Site) as shown on Figure 1.1. The planning application boundary of the Site is shown on Figure 2.1. The nearest postcode to the Site is UB9 6PD and the National Grid Reference is TQ 04365 8969.

2.1.3 A description of the Site is provided in Chapter 2: Site and Setting of the ES.

Figure 2.1: Site Boundary Plan

2.2 Surrounding Sensitivities

Nature Conservation

2.2.1 The Site includes Broadwater Lake which is the largest of the four lakes within the Mid Colne Valley SSSI, the other lakes are: Tilehouse South Lake, Korda Lake and Harefield Moor Lake. This SSSI extends to 147.73ha and is designated principally due to its importance to breeding wetland birds and over-wintering water birds. Ruislip Woods National Nature Reserve (NNR) and SSSI is approximately 1.4km east of the Site. Harefield Pit geological SSSI is approximately 210m north east of the Site. Old Park Wood SSSI and Old Rectory Meadows SSSI are approximately 870m north and 1.69km south west of the Site respectively.

2.2.2 Local Nature Reserves (LNRs) within 1km of the Site include Northmoor Hill Wood LNR (280m west) and Denham Country Park LNR (940m south). The Site is within the Mid Colne Valley Site of Importance for Nature Conservation (SINC), designated for its biodiverse wetland habitats. Parcels of ancient woodland are approximately 95m west of the Site adjacent to the North Orbital Road.

Water Resources and Flood Risk

2.2.3 The Site comprises Broadwater Lake; and is bound to the east by the Grand Union Canal, to the north and west by the River Colne and to the south by another water body - Harefield Moor Lake. Bathymetric surveys of the lake show that it is generally around 1 to 3m deep, with areas of shallower water and islands present. Broadwater Lake is located over, and likely is in continuity with the Mid-Chilterns Chalk Groundwater Body. Affinity Water currently extract water from boreholes on-Site for drinking water supplies.

2.2.4 Environment Agency Flood Maps for Planning[i] show identify that Broadwater Lake and adjacent land within 50m is at high risk of fluvial flooding (Flood Zone 3). The majority of the peninsula is in Flood Zone 1 and the Access Road is in Flood Zone 2.

Ground Conditions and Contamination

2.2.5 British Geological Surveys and recent site investigations indicate that the Site is underlain by Worked Out Ground, Alluvium, Shepperton Gravel Chalk.

2.2.6 The main risk of potential contamination sources at the Site comes from its industrial history as a gravel pit between the 1960's and 1990's and landfilling that occurred on the Site between 1993 and 2004. Records indicate that there is a historic landfill on the eastern side of the peninsula. Land within the Site has been highly worked and as such Made Ground is found across the Site.

Archaeology and Built Heritage*

2.2.7 The Site is located on the western fringes of (and partly within) the Colne Valley Archaeological Priority Area, with recognised potential for early prehistoric finds and palaeo-environmental remains. The closest Scheduled Monument is a Mound with ditch and outer back south of Savay Farm approximately 550m south of the Site.

2.2.8 Black Jacks and Copper Mill Lock Conservation Area is located immediately north of the Site. The Site is partly within the Widewater Lock Conservation Area in its south eastern extent. Harefield Village Conservation Area is approximately 250m east of the Site. Broadwater Park, Grade II registered park and garden, is approximately 375m south west of the Site. The Grade II listed Harefield Place RPG is located approximately 525m east of the Site. There are two listed buildings in close proximity to the Site; Widewater Lock Cottage (Grade II listed building) located immediately east of the Access Road on Moorhall Road. Denham Film Studios (Grade II listed building) is approximately 400m south west of the Site.

2.2.9 The canal bridge / utility gantry within the Site over the Grand Union Canal (Bridge 179) is likely to date from the late 19th century and is a non-designated heritage asset. The locally listed Black Jacks Cottage is in close proximity to the northern boundary of the Site.

Noise and Air Quality*

2.2.10 Existing noise levels at the Site are influenced by HS2 construction works, activities associated with BSC, angling, unauthorised uses at the Site and helicopters from Denham Aerodrome. Noise levels at the Site will be subject to some change once HS2 is completed and operational. Noise sensitive receptors include a small number of residential properties adjacent to the Site boundary and Access Road. Other receptors include residential properties in South Harefield and boats using the Grand Union Canal.

2.2.11 The Site is not located within an Air Quality Management Area (AQMA). The closest AQMA is Hillingdon AQMA approximately 1.2km south of the Site, which is identified as having poor air quality, owing to exceedances of the annual mean nitrogen dioxide (NO_2) and the 24-hour mean particulate matter (PM_{10}) objectives.

Transport and Access*

2.2.12 The Site is accessed from Moorhall Road to the south of the Site via a simple priority junction with no right hand turn lane. The Access Road is a single carriageway, unadopted road. The Site currently has no formal parking arrangements for any existing users. Informal parking for BSC is located on hardstanding at the north of the Site and can accommodate approximately 45 parked cars.

2.2.13 Two bus stops are located south west of the Access Road on Moorhall Road served by route 331 which provides a connection to Denham railway station, approximately 1.2km to the south west.

2.2.14 A Public Right of Way (PRoW) (U74) runs adjacent to the eastern Site boundary which forms part of the Colne Valley Trail and London Loop. There are no pedestrian or cycling facilities on the Access Road. An informal footpath is present on the west side of Broadwater Lake.

3 The Proposed Development

3.1.1 The Proposed Development is designed to provide a replacement water sports and outdoor activity facility to one which formerly operated at Dews Lane, Harefield. The proposals are known as the 'Hillingdon Water Sports Facility and Activity Centre' (HWSFAC).

3.1.2 A full description of the Proposed Development is provided in Chapter 5: Description of the Development. The main components of the Development are as follows:

- Use of part of Broadwater Lake for sailing with other water-based recreational activities restricted to the eastern channel. Use of Broadwater Lake for sailing by BSC would continue.
- Localised dredging of the lake in the eastern channel to create depths suitable for sailing and generate material for land reclamation to create a platform for storing and launching boats from the peninsula into the eastern channel. One island would also be removed and two islands altered;
- New buildings including a two storey Main Building (including changing facilities, meeting and training rooms, storage, and seasonal worker accommodation), an Equipment Store and Workshop, Energy Centre and activity shelters;
- New pontoons (2 no.) and slipways (2 no.);
- Areas for boat storage, car and cycle parking, and coach drop off and turning;
- Low-level facilities for outdoor land based activities;
- Camping area;
- Demolition of the existing BSC club house and removal of associated car/boat parking (this will be re-provided at the peninsula in the south of the Site);
- Improvements to the Access Road from Moorhall Road;
- A range of ecological mitigation and enhancement measures and boundary treatment; and
- Utility connection under Grand Union Canal using HDD methods.

3.1.3 A long-term management programme for the Site is also proposed, including monitoring programme.

3.2 Construction Stage Works

3.2.1 This section provides an overview of key stages and construction activities with further details provided in Chapter 6: Construction of the ES.

Consents, Licences and Permits

3.2.2 The Development proposals will be subject to planning permission and associated conditions, although other consents and licences will be sought for works. This may include (but not be limited to):

- NE consent to works within the SSSI - in order to ensure that the NE Consent is adhered to, a Permit to Work system must be implemented for the construction phase of the development. Each issued Permit must reference the relevant NE Consent. No works shall proceed without a valid Permit to Work being in place. If any works are found to be occurring without the activity being covered by a Works Permit, works will cease and an investigation undertaken by the Construction Manager;

- Environmental Permits – likely to apply to land reclamation, the re-use of dredged material and some works on the peninsula; and

- Drainage Consents and Flood Risk Activity Permit – for any works within 8m of the River Colne; and

- Relevant permissions from Grand Union Canal for HDD.

Environmental surveys and investigations

3.2.3 Surveys and investigations will be undertaken prior to construction in line with recommendations presented within ES Chapter 7: Biodiversity, Chapter 8: Water Resources and Flood Risk and Chapter 9: Ground Conditions and Contamination of the ES. These will include:

- Pre-demolition safety and asbestos survey of remnant site buildings and structures – this will be undertaken on any structures that are to be removed as part of the Proposed Development to identify Asbestos Containing Materials (ACM) requiring regulated removal off-site by specialist licensed contractors;
- Further intrusive site investigation and lake sediment sampling;
- Updated ecological surveys (where necessary); and
- Water quality monitoring.

Enabling Works

- Fencing / hoarding to provide visual screening, protect trees, ecological sensitive features, PRoW users, and other users of the access road etc.
- Installation of a 2m visual and acoustic fence around the wet woodland on the Peninsula, slightly inset behind the tree line before commencement of the main works on the peninsula and before the bird breeding season.
- Installation of construction compounds, site offices, welfare facilities and parking/laydown areas.
- Improvement works to the Access Road (between the lake and Moorhall Road) to an adoptable standard.
- Utilities removal/diversion and upgrade as required including HDD under the Grand Union Canal to provide new utility connections.

Enabling Works – In-Lake Works

- Implementation of mitigation (submerged willow planters and floating reedbeds) prior to dredging and the main construction works to minimise ecological effects.

- Localised dredging of the eastern channel.
- Land reclamation and beach creation using dredged materials (subject to testing).

Demolition and Construction

- Construction of HWSFAC buildings and facilities at the Peninsula, pontoons/slipways, landscaping, car parking, internal access roads and boundary treatments.
- Demolition of BSC and associated landscape works.

3.3 Construction Site Logistics

3.3.1 Schedules and plans to be prepared by the Principal Contractor will show an overview of the logistics plan for construction.

3.3.2 Welfare facilities will be provided on-site. Given the nature of the development there may be several contractors on site at any given time. It is likely that each contractor will have their own accommodation site set ups. Each temporary site should include site offices and site welfare facilities. These should include canteens, toilets and washrooms with hot water; drying/changing rooms; and a first aid post, as appropriate. No overnight accommodation will be allowed.

3.4 Construction Access

3.4.1 Access to the Site during the construction stage will be from the south. Annex 1 provides a CLP which must be agreed with LBH and TfL prior to commencement.

3.5 Construction Plant and Equipment

3.5.1 All key static plant and equipment (e.g., hoists, power distribution units, diesel storage tanks etc.) will identified on site logistics drawings to form part of a detailed Construction Method Statement (CMS).

3.5.2 The Principal Contractor will be required to complete a 'Register of Plant & Equipment and Statutory Certification' within their Health & Safety 'Method Statement' prior to works commencing on-site.

3.6 Construction Programme and Phasing

3.6.1 The indicative delivery programme for the Development is estimated to be approximately 16 months. Enabling works are anticipated to commence in the second quarter ('Q2') of 2026 and overall construction works to be complete by the start of 2028, subject to securing planning permission and other consents and licences.

3.6.2 The overall construction of the Development is programmed to take place continuously over the 16-month period, albeit at different levels of intensity. Careful consideration of the spatial phasing and the timing of works has been a significant consideration of the programme development due to the ecological sensitivity factors with the presence of sensitive ecological receptors present within the Site and the surrounds. Critically, in-lake land reclamation and dredging will only be undertaken within the months of September as this is the least sensitive period for both breeding and over-wintering birds. Table 3.1 shows the timing of works for construction.

Table 3.1: Timing of Works

Works	Timing Principle
Demolition of existing Broadwater Sailing Club (BSC) buildings	September only
Vegetation clearance on the Peninsula	Outside the breeding bird season (September to end February)
All other works on land	All year-round, no timing restraints (may require breeding bird checks)
Works within Broadwater Lake (outside the eastern channel) including island removal and alteration.	September only
Vegetation clearance in the lake (eastern channel)	Outside the breeding bird season only (September to end February)
Eastern channel – dredging, initial land reclamation	September R
All other works in the eastern channel (on existing and reclaimed land)	No timing restraints
Placement of floating habitats and tern rafts anywhere in Broadwater Lake (including the southern bird refuge area)	All year (very short-term intermittent temporary disturbance only of waterbirds)

4 Construction Environmental Management

4.1 Introduction

4.1.1 This section sets out the key roles and responsibilities during the construction stage of the Development.

4.1.2 All works are to be carried out in compliance with the Construction (Design and Management) Regulations 2015 (CDM Regulations), other current legislation and guidance, and Employers Requirements (to be defined by the Employer, LBH). The CDM Regulations require a Principal Designer and Principal Contractor to be in place.

4.2 Management Structure

4.2.1 Overall responsibility for environmental issues and compliance with consents/permissions relating to the Development will lie with the Principal Designer and Principal Contractor appointed for construction. Individual responsibilities will be delegated throughout the management team relating to the co-ordination of inspection, monitoring or reporting.

4.2.2 The Principal Contractor will have the central role in managing Safety, Heath, Environment and Quality (SHEQ) issues during enabling and construction activities. The Principal Contractor and all sub-contractors will be required to implement the environmental management and control measures set out within this CEMP.

4.2.3 The Principal Contractor will be responsible for advising the Employer (LBH) of material changes to method statements or the planned construction work as these may result in changes to the CEMP or require additional consultation with statutory consultees. The Contractor is also responsible for implementing good environmental practice on site, in line with their own EMS.

4.3 Project Roles and Responsibilities

4.3.1 Key roles and responsibilities during the construction phase in managing environmental impacts will likely include the following:

- **Construction Manager** - The Project Manager will act as a central point of contact between LBH, the Principal Contractor, key stakeholders, the local community and other third parties. It is anticipated that a Project Manager will be confirmed once the Contractor has been appointed;
- **Principal Contractor** – The Principal Contractor will be responsible for management, co-ordination and implementation of the CEMP. It will be their responsibility to ensure that all staff, sub-contractors and site workers are aware of the CEMP. The Principal Contractor will have responsibility for ensuring that the CEMP and associated documentation are kept up to date along with details of specific permits etc. It will be the Principal Contractor's responsibility to ensure that construction works are undertaken in compliance with all relevant and current legislation applicable at the time of the works. The Principal Contractor will be registered with the Considerate Constructors Scheme (CCS);

- **Environment Manager** – An Environment Manager will be identified by the Principal; Contractor with responsibility for the overall management of environmental aspects on site. The Environment Manager will be required to ensure the detailed CEMP is adhered to and that environmental legislation and best practices are complied with, and environmental mitigation and monitoring measures identified are implemented. The Environment Manager will oversee environmental monitoring on-site and carry out regular environmental site inspections, reporting and responding to any incidents or non-compliance. The Environment Manager will liaise with relevant regulatory bodies (including Natural and other third parties as appropriate. The Environment Manager (or Environmental Clerk of Works) would also oversee compliance with the CEMP. The Environment Manager would also be responsible for training, and the management of environmental and ecological risks during construction including for example, management of protected species, surface water management, groundwater, pollution, air quality and noise;
- **Ecological Clerk of Works (ECW)** – Responsible for management of the risks to habitats on-site and off-site (where appropriate), protection of designated features of the SSSI, protected and notable species and other ecologically important features. The ECW will be responsible for ecological monitoring;
- **Health and Safety Manager** – Responsible for the monitoring and controlling of health and safety compliance and related rules and regulations on-site; and
- **Liaison Officer** – A Stakeholder Construction Liaison Group will be set up by the Project Manager and LBH prior to construction and will continue through until completion (and potentially beyond). The Liaison Group would involve representatives from key stakeholders including LBH, NE and EA. A Liaison Officer will be appointed to lead discussions with local groups and communities, and also act as the primary point of contact should there be any queries or complaints.

4.3.2 The above roles and responsibilities are indicative and will be confirmed in the detailed CEMP. However, an Environment Manager and ECW must be in place.

4.3.3 Relevant specialists will be employed, if necessary, during the project to undertake specialist monitoring, undertake surveys and advise the construction staff.

4.3.4 The sub-contractors for the entirety of the Development will work to and adhere to the Principal Contractor's CEMP in the same way.

4.3.5 A full contact list containing names, job titles and contact numbers of the project team members, shall be produced and maintained.

4.4 Environmental Management System

4.4.1 The Principal Contractor shall operate an EMS which meets the requirements of ISO 14001 and is assessed by a UKAS Accredited Certification Body (or suitable equivalent). The certificate will be included as an appendix to the document when a contractor is appointed.

4.4.2 It will be the Principal Contractor’s responsibility to ensure that construction works are undertaken in compliance with all relevant and current legislation application at the time of the works.

4.5 Training and Awareness

4.5.1 For successful implementation of the CEMP, it is essential that all people working for, or on behalf of, the Contractor who have responsibility to undertake work activities (that have the potential to cause significant environmental impacts) are appropriately trained and are competent to fulfil their designated roles within the Development, where appropriate, this will include holding a registration with relevant recognised competence schemes.

4.5.2 The Principal Contractor shall undertake specific environmental training for personnel with environmental responsibilities under the Principal Contractor's EMS. They will identify the training needs of personnel, ensure appropriate training is provided and maintain correct and up-to-date records of attendance at all training, including tool box talks.

4.5.3 The Principal Contractor will ensure that personnel are fully aware of the sensitivity of the Site and the potential impacts to the Mid-Colne Valley SSSI, ecology, water quality, and other environmental and human receptors. The Principal Contractor and all sub-contractors will require that all site workers demonstrate an appropriate awareness of these sensitivities, environmental risks, legal obligations and the procedures to be followed in the event of an incident.

4.5.4 Training will be in place and will include, but will not be limited to:

- **Site Induction** – Construction will be required to attend a site induction course before commencing work on-site, which includes a briefing on the site sensitivities, the CEMP and minimising environmental effects, waste management and responding to environmental emergencies.
- **'Toolbox talks'** - toolbox talks will be provided for site operatives to maintain awareness on environmental topics and to advise personnel of changing circumstances as work progresses. Toolbox talks will cover specific environmental topics relating to a particular location or activity. Toolbox talks will be undertaken prior to specific activities to which they relate and after nonconformities and complaints.

4.5.5 A record of competence and training will be included as an Appendix to the CEMP which will be maintained throughout the Development and updated by the Project Manager.

4.6 Emergency Procedures and Incident Reporting

4.6.1 The Contractor shall develop and implement measures to control the risk of pollution due to construction works, materials and extreme weather events. This shall include a Pollution Incident Control Plan, as part of the EMS, which recognises the risk of pollution from construction activities and presents pro-active management practices to ensure that any pollution incident that may occur, such as a diesel spillage, is minimised as far as reasonably practicable, controlled, reported to relevant parties and remediated. The Pollution Incident Control Plan shall define the criteria for implementing the relevant measures.

4.6.2 The detailed CEMP will set out measures to manage the risk of pollution incidents. These are expected to include

- statement of appropriate information to be provided in the event of any incident such as a spillage or release of a potentially hazardous material;

- notification of appropriate emergency services, authorities and personnel on the construction site;
- notification of relevant statutory bodies, environmental regulatory bodies, local authorities and local water and sewer providers of pollution incidents, where required;
- preparation of maps showing the locations, together with address and contact details, of local emergency services facilities such as police stations, fire authorities, medical facilities and other relevant authorities;
- ensure that site drainage plans and flood risk management plans are available on site and are kept up to date;
- ensure that pollution shut off valves are used in compounds with formal drainage;
- ensure staff competence and awareness in implementing plans and using pollution response kit;
- provision of contact details for the relevant authorities, such as the EA (EA), and the persons responsible on the Site and the working areas and within the Principal Contractors' organisation for pollution incident response; and
- provision of contacts with a competent spill response company which can be contacted at short notice for an immediate response (where appropriate).

4.6.3 The Principal Contractor shall consult with the relevant organisations when preparing the local pollution incident response measures, e.g. emergency services, EA, NE, utilities companies and LBH emergency planning and pollution control functions).

4.6.4 The Principal Contractor shall establish and maintain effective arrangements to investigate and provide reports on any potential or actual significant pollution incidents as appropriate.

4.6.5 Appropriate training on emergency procedures and incident reporting will be provided.

5 General Construction Management Measures

5.1 Introduction

5.1.1 This section sets out general construction management measures that will be in place during the construction stage of the Development and included in detailed CEMP / CMS.

Construction Timing and Programme

5.1.2 The timing of works is sensitive due to the designated features of the SSSI and has been developed by the project ecologist. A description of the proposed construction programme and phasing will be included in a detailed CMS once Contractors are appointed. Where appropriate, detailed CMS would be agreed with LBH in consultation with other stakeholders where appropriate.

Working Hours

5.1.3 Construction working hours on the Site will be as follows:

- 07:00 – 18:00 hours weekdays;
- 07:00 – 13:00 hours Saturday; and
- No working on Sundays or Bank Holidays.

5.1.4 Construction work which gives rise to noise that is audible at the construction area boundary will be restricted to:

- 08:00 – 18:00 hours weekdays; and
- 08:00 – 13:00 hours Saturday

5.1.5 HGV movements will be restricted as far as reasonably possible so as to avoid peak traffic flow periods (i.e., from 08:00-09:00am and 17:00-18:00pm).

5.1.6 Where on-site works are to be conducted outside the core working hours, they will comply with the limits and controls detailed in the CEMPs, and any other restrictions agreed with the relevant authorities. During winter months, work would not continue during hours of darkness.

Consents, Permits and Licences

5.1.7 The Principal Contractor will be responsible for any consents, permissions or licences necessary for the construction works that are not already secured by the Employer or discharged by planning condition.

5.1.8 A register of consents etc. will be maintained, to include all consents applied for and secured, details of expiry dates, conditions and commitments that must be adhered to and

all related correspondence. The Principal Contactor should ensure that this is kept up to date.

SSSI Works Consent

5.1.9 The Development would be subject to planning permission which should control the works. The requirements and procedures for any additional consents (i.e. for activities in the SSSI not already covered by the planning permission) will be agreed with NE before works commence. These would be set out in the detailed CEMP.

5.2 General Site Management Measures

Site Security

5.2.1 The following general measures will be implemented:

- Site boundaries will be secured when not in use using fencing and locks on gates;
- Potentially hazardous materials will be secured (e.g., fuel outlets will be locked);
- Plant and equipment will be immobilised overnight;
- Infra-red site security cameras may be used in appropriate locations; and
- The security of neighbouring sites must taken into consideration.

General Good Housekeeping Measures

5.2.2 Good housekeeping will be maintained on-site and on access routes and construction areas kept clean and tidy. Other measures will include:

- Clear access routes with appropriate signposting;
- Wheel cleaning facilities being made available for use to remove mud or debris from vehicles;
- Visual inspections of hoarding, plant, equipment and material storage areas for leaks or spills;
- Toilet facilities will be kept clean; and
- Open fires will be prohibited at all times.

Control of Lighting

5.2.3 The use of temporary works lighting will be minimised in terms of frequency and duration wherever possible. Security and task lighting will be limited and of short duration. The following measures will be employed to minimise effects on residents and wildlife:

- Confine lighting to the task area (using horizontal cut-off optics and zero floodlight tilt angles);
- Orientate plant, task and area lighting away from dwellings and sensitive habitats;
- Use lower power security lighting where possible (and ensure minimal horizontal/vertical light spill);
- Observe a curfew when practicable; and

- Use of site cabins etc. to provide shielding of lighting from beyond the working area.

5.2.4 Particular attention shall be paid to the potential for light spill beyond the Site and effects on ecological sensitive receptors. When lighting is used it will be visually checked from and necessary adjustments made to ensure its visibility and intensity is reduced to a minimum.

Control of Noise and Vibration

5.2.5 Contractors will be required to implement Best Practicable Means (BPM) to minimise noise and vibration effects at the Site. Acoustic barriers will be in place prior to works commencing. In-lake works would be timed to minimise disturbance to wintering birds (see Table 3.1).

5.2.6 A noise and vibration monitoring protocol will be in place to ensure compliance with any acoustic commitments and consents and to enable action upon potential breaches quickly and efficiently.

Hoarding and Fencing

5.2.7 The following measures will be implemented:

- Suitable site hoarding to demarcate the construction areas will be installed by the contractor in agreement with the Employer;
- A site boundary fence will be erected during the construction stage to provide visual screening during the construction works;
- Access for HS2, BSC and emergency vehicles will be maintained as required;
- Permanent fencing will be erected around areas of quicksand identified to address health and safety concerns and to prevent any unauthorised access;
- The location and design of hoarding or fencing will be developed with input from the ECW;
- Fencing / barriers will be installed at the start of enabling works at the boundary of wet woodland on the peninsula to protect the habitat from accidental damage;
- Mammal gates/access will be provided as appropriate;
- The extent and height of hoarding or fencing at a particular location will be selected to maintain effective security and achieve appropriate noise attenuation and visual screening; and
- Hoarding will be maintained in good condition.

Waste Management

5.2.8 In order to control the waste generated during site preparation and construction, the contractor(s) will separate the main waste streams on-site, prior to transport to an approved, licensed third party waste facility for recycling or disposal. A Site Waste Management Plan will be prepared by the contractor(s), which will be included in the detailed CEMP. The SWMP specify the waste streams which would be monitored, and targets set with regards to the waste produced, including any re-use and recycling of materials. The SWMP will be finalised with specific measures to be implemented prior to the start of construction. All

waste to be removed from the Site will be undertaken by fully licensed waste carriers and taken to licensed waste facilities.

5.3 Method Statements

5.3.1 The Contractor will set out the procedures to be followed for operations in a CMS(s) which will address health, safety, site security and the environmental issues associated with demolition, in-lake works and construction. Activities a detailed CMS will be identified using a risk-based approach. As a minimum, CMS will be prepared for site preparation, dredging and land reclamation, construction activities and re-instatement of the BSC site.

5.3.2 CMS will be prepared by the relevant Contractor in consultation with the Environment Manager, ECW and other specialists as appropriate.

5.3.3 CMSs should include a review of the environmental risks and commitments, so that appropriate control measures are developed and included within construction processes. Specific environmental control measures, should also be defined as appropriate.

5.3.4 CMS should be approved by regulatory bodies where appropriate.

6 Communication and Engagement

6.1 Overview

6.1.1 The Principal Contractor will be required to set out communication protocols in the detailed CEMP to ensure that relevant stakeholders are kept informed of construction progress and any issues arising. This will help to establish lines of communication should any stakeholders wish to raise issues regarding the construction works. The communication protocols should also establish appropriate relations between contractors to each area, the Employer, and with local residents and businesses.

6.1.2 The detailed CEMP should include the measures set out below.

6.2 Stakeholder Construction Liaison Group

6.2.1 The Employer/Project Manager will set up a Stakeholder Construction Liaison Group. It is envisaged that the Liaison Group would involve representatives from key stakeholders including LBH, NE, EA and Affinity Water.

6.2.2 The Employer/Project Manager will engage with other interested parties, such as Colne Valley Regional Park, Canal and Rivers Trust, Herts and Middlesex Wildlife Trust, BSC and angling groups, as deemed appropriate. A Liaison Officer will be in place.

6.3 Internal Communication

6.3.1 Environmental information will predominantly be communicated by ensuring that all relevant parties have a copy of the detailed CEMP and/or ensure all relevant parties have access to the CEMP. This will be effective as the CEMP will detail all the relevant environmental information.

6.3.2 Environmental risk information detailed deemed relevant to the workforce will be communicated through inductions and training.

6.3.3 A register of all internal environmental communication will be compiled and a process will be implemented to ensure that all actions are dealt with accordingly. All relevant internal communications will be stored for the duration of the works and will be made available for audit by an external representative.

6.4 External Communication

6.4.1 The Principal Contractor will be required to set out principles of external communication in the detailed CEMP. This should include consultation with regulatory bodies with regard to the environmental aspects of the Site, as required, to include LBH, NE and the EA.

6.4.2 The Principal Contractor should commit to providing a Liaison Officer, who will be the first line of response to resolve issues of concern or complaints take reasonable steps to engage with local residents during works. Occupiers of neighbouring properties should be informed in advance of works taking place.

6.4.3 Site boards outlining information on the project and forthcoming works will be erected at the entrance to the Site and at other key locations around the Site. Site contact numbers and e-mail addresses will be displayed as appropriate, along with the complaint's procedure.

6.5 External Complaints Procedure

6.5.1 The Principal Contractor will be required to set out an external complaints procedure in the detailed CEMP. The Principal Contractor will be required to take action to address the cause of the concern and give feedback to explain what action has been taken where appropriate. If action cannot be taken, the Principal Contractor should attempt to identify alternative mechanisms for addressing concerns. The Environment Manager should be kept informed of any justified complaints so they can develop mitigation measures if necessary.

7 Environmental Control and Mitigation Measures

7.1 Introduction

7.1.1 This section sets out the environmental control and mitigation measures to be implemented during the construction stage of the Development, topic-by-topic. Each topic is dealt with independently however, there it is recognised that there are areas of overlap between topics.

7.1.2 The measures included below should be reviewed and updated as appropriate by the Principal Contractor once more certainty is available on construction methods.

Table 7.1: Overview of control and mitigation measures

Issues / Effects		Control / Mitigation Measure
1)	Water Resources and Flood Risk	
A	Pollution of surface water and groundwater due to deposition of spillage of soils, sediment, oils, fuels or other construction chemicals, or through uncontrolled site run-off	**General:** ▪ The Contractor will obtain all necessary approvals for the works from the relevant regulatory body or statutory undertaker, which could affect any surface water or groundwater resource, including planning conditions, Environmental Permit, Flood Risk Activity Permit and SSSI Assent. ▪ The Contractor will ensure that surface water and groundwater control measures are set out in the Contractor's EMS, to include the measures below and included in the Flood Risk Assessment, Groundwater Risk Assessment and Lake Management Plans (as relevant). ▪ Works will be implemented in accordance with all legal and permitting requirements. ▪ The Contractor will comply with relevant Guidance for Pollution Prevention (GPPs) and BPM. **Other Measures:** ▪ The Contractor shall protect watercourses and associated land drainage within or adjacent to the Site to ensure appropriate working conditions at all times. ▪ Use of self-bunded refuelling facilities (or sufficient secondary containment with impermeable base and sides), provision of spill kits, well maintained/certificated plant and equipment, use of biodiesel only. ▪ Self-bunded facilities to be used for the storage of and chemicals/potentially contaminative materials during construction, including paints, lubricants, solvents etc. ▪ No on-site mixing of concrete.

Issues / Effects	Control / Mitigation Measure
	▪ All washing down of vehicles and equipment will take place in designated areas only and wash water will be prevented from passing untreated into waterbodies. ▪ No discharge of construction runoff into the lake or groundwater (e.g., via soakaways). ▪ Cut-off ditches and/or geotextile silt-fences will be installed around excavations, exposed ground and stockpiles to prevent the uncontrolled release of sediments from the Site. ▪ Silty water abstracted during excavations will be discharged to settlement tanks or siltbusters as appropriate. Only clean run-off will be permitted to discharge to ground. A temporary discharge consent will be agreed with EA prior to the commencement of works, if necessary. ▪ Sediment traps to be in place on all surface water drains which could be affected by construction. ▪ Provision of suitable facility to contain/remove and potential contaminated liquids, storage of materials and equipment at least 10m from the lake margin and 50m from any boreholes and in Flood Zone 1 and away from highlighted groundwater flood risk areas. ▪ Protect / cover stockpiles so that materials are not blown or washed away; ▪ No use of herbicides or pesticides; ▪ Contaminated soil will be identified by ground investigation prior to construction and either treated on-site and reused or removed and disposed of off-site by a licensed waste disposal operator at a correctly licensed waste depot. Contaminated water will be removed from the Site by tanker and disposed of at a suitably licensed location. ▪ No excavation of any areas associated with former regulated or potential unregulated waste activities. No removal of any concrete cover over these locations. Provision of a suitably designed/specified impermeable barrier over these areas (e.g., clay) and appropriate overlying clean cover to prevent new pathways to terrestrial areas including connected groundwater.

Issues / Effects		Control / Mitigation Measure
		▪ Advanced construction and use of SuDS features to support the management of construction surface water runoff and discharge of this to Broadwater Lake only when at an acceptable water quality standard.
B	Risk of increased turbidity / sediment disturbance from dredging and land reclamation activities	▪ Adoption of suitable established working method for dredging/re-use of sediment in SSSIs (e.g., use of long-reach excavators on pontoons and use of barges to extract/move and deposit dredged sediment from donor to pre-established receptor sites) will minimise the amount of lake-bed disturbance, water quality deterioration and duration of works. ▪ A detailed method statement will be prepared and agreed with relevant stakeholders prior to commencement informed by appropriate options appraisal. ▪ Dredging and land forming activities will be controlled by GPS and CAD controlled activities. This will prevent over-deepening/unnecessary excavation and therefore prevent any new pathways between lakebed dredging and groundwater from forming (also as this is believed to be already in hydrological continuity). ▪ Turbidity curtains or bubble curtains will be used around each area of lake dredging/in-lake works to prevent dispersion of turbid water into adjacent parts of the lake. Turbidity within and outside of these features would be continuously monitored. They would only be removed when turbidity returns to levels (e.g., baseline turbidity) agreed with relevant stakeholders (e.g. EA, NE and Affinity Water).
C	Risks to groundwater quality from construction activities	▪ Implementation of works in accordance with all legal and permitting requirements. ▪ No excavation of areas associated with former regulated or potential unregulated waste activities and no removal of any concrete cover over these locations, unless otherwise agreed with relevant authorities. ▪ Provision of a suitably designed/specified impermeable barrier over these areas (e.g., clay) and appropriate overlying clean cover to prevent new pathways to terrestrial areas including connected groundwater.

Issues / Effects		Control / Mitigation Measure
		▪ Monitoring stations or boreholes should be protected from physical damage. If boreholes are decommissioned the Contractors shall follow good practice for decommissioning redundant boreholes and wells.
D	Risks to groundwater quality from piling	▪ Site-specific Piling Risk Assessment in line with EA technical guidance.
E	Risk to Affinity Water public water supply boreholes	▪ Agreement of Dredging Method Statement and Piling Risk Assessment with EA and Affinity Water prior to these works commencing.
F	Risk of accidental pollution through spillages / incidents	▪ The detailed CEMP will set out specific measures in relation to spillage prevention and response. This will be disseminated to relevant site employees and associated training and equipment provided. On-site provisions will be made to contain a serious spill or leak through the use of spill kits, booms, bunding and absorbent material.
G	Risk to water environment from foul water	▪ Site welfare facilities would be appropriately managed, and all foul waste disposed of by an appropriate contractor to a suitably licenced facility.
H	Risk to construction workers due to flood risk	▪ Construction areas will be managed to avoid increasing flood risks on-site or off-site. ▪ Ensure flood warning systems are in place that utilise real-time monitoring data, including signing up to the EA's Floodline Service to provide timely alerts and notifications to relevant stakeholders, including residents, emergency services, and local authorities. These systems should have clear protocols for issuing warnings and instructions for appropriate actions. ▪ Agree suitable flood safe egress routes in advance and a Flood Evacuation Plan with the LLFA and EA. ▪ Relocation of vehicle fuel and other materials that may cause water contamination from lower lying parts of the Site or off-Site, in the event of an appropriate flood warning; ▪ No compounds/excavated/dredged material or vehicles or materials will be stored in Flood Zones 2 or 3.

Issues / Effects		Control / Mitigation Measure
		▪ No works will occur within 8m of the River Colne unless authorised under a Flood Risk Activity Permit (FRAP). This could include demolition works at the BSC Clubhouse and habitat enhancements in this northern area of the lake shore. ▪ No disturbance/modification to any bank levels / fluvial defences associated with the River.
I	Risk to Groundwater from HDD Drilling	▪ HDD is a very common technique for the installation of sub-surface service connections, and the risks associated with it are well understood. Based on industry experience, planned design and skilled execution by a suitably qualified and competent HDD contractor, the risks are minimised. ▪ A Breakout Management Plan should be put in place by the HDD contractor to assess the risks posed by potential breakouts of drilling fluid (bentonite). The Breakout Management Plan should incorporate the following measures: ▪ Drilling suspension protocols; ▪ Breakout containment strategies; ▪ Fluid removal and clean-up procedures, and; ▪ Incident recording and reporting. ▪ No refuelling of plant machinery associated with the HDD process will occur within the vicinity of any watercourse, including the Grand Union Canal or the Eastern Channel.
2)	Ground Conditions and Contamination	
A	Potential for risks from excavation, construction (human health, groundwater, ecological and built receptors)	▪ Ground investigation works will be undertaken prior to commencing construction. Results will be reviewed by the appointed contractor(s), including any additional investigation or mitigation measures beyond the measures stated below. ▪ A small area of concrete hardstanding material to be removed from the north-eastern peninsula area. All other areas of existing hardstanding will remain in-situ to act as a low permeability cover layer over landfilled areas of the peninsula. ▪ Pre-demolition asbestos survey of remnant site buildings and structures will be undertaken on any structures that are to be removed as part of the proposed Development to identify Asbestos

Issues / Effects	Control / Mitigation Measure
	Containing Materials (ACM) requiring regulated removal off-site by specialist licensed contractors. ▪ Environmental Permits will be required to cover the works associated with the Proposed Development and are likely to include; Waste Framework Directive (EPR Schedule 9 – Waste operations and materials facilities), the Landfill Directive (EPR Schedule 10 – Landfill), Mining Waste Directive (EPR Schedule 20 – Mining waste operations) and Groundwater activities (EPR Schedule 22 – Groundwater activities). ▪ General good construction working practices would be implemented such as dust suppression, including potentially contaminated dusts, (damping down), perimeter fencing around excavations, covering stockpiled materials. ▪ Appropriate stockpile segregation, locations and containment measures would be implemented to minimise the exposure of surface water and groundwater from potentially impacted runoff. ▪ A discovery strategy for managing and dealing with unexpected / unforeseen contamination that may be encountered during construction phase works. This may require additional site investigation, sampling risk assessment and remediation to ensure the protection of the identified receptors. ▪ All construction workers would be required to wear PPE to prevent dermal contact, inhalation or ingestion. Appropriate site hygiene facilities will be put in place and the presence of contaminants, and the associated risks will be explained to ground workers before they begin work. ▪ Fuel storage on-site would be carried out under best practice, i.e., integrally bunded containers (as set out under Water Resources and Flood Risk); ▪ Management of water that collects on Site or within excavations would be implemented. ▪ Appropriate management plan for polluting substances that are being brought on Site and used as part of the construction process would be implemented. This is to include any site won materials (Broadwater Lake sediment) that are proposed to be re-used in land reclamation. ▪ Appropriate management plan for sediments in surface water runoff generated in construction area and laydowns would be implemented.

Issues / Effects		Control / Mitigation Measure
		▪ Appropriate management plan of accidental leakage and / or spillage incidents of oils / hazardous substances would be implemented. ▪ A Remediation Strategy (RS) will be prepared and will detail mitigation and monitoring measures required to ensure that the Site is suitable for the proposed end uses. ▪ A discovery strategy will form part of the RS which will detail the works and remedial measures required where any unforeseen grossly contaminated soils or groundwater are encountered. Where the discovery strategy identifies grossly contaminated soils which are unable to meet re-use criteria, these materials are to be removed from site by a suitably licensed waste carrier to an appropriately licensed waste facility. ▪ A Remediation Verification Report will be prepared to present evidence and verify that the works set out within the RS have been completed. ▪ Piling design and construction works will be completed following the preparation of a Piling Risk Assessment. ▪ Dredging works across Broadwater Lake will be progressed within a turbidity curtain to restrict the potential for wider scale migration of sediments, turbidity and suspended solids across other parts of Broadwater Lake. ▪ The Environmental Manager will regularly record compliance in a log book. The CEMP will detail the frequency.
B	Potential for risks from Unexploded Ordnance (UXO)	▪ In line with Stage 1 UXO Assessment, Stage 2 Detailed Risk Assessment for UXO to be undertaken or EOD Engineer on-site supervision of intrusive works.
C	Geotechnical / land stability risks	▪ Remedial measures to address land stability to be implemented as required including temporary works and likely ground improvement (shoring of excavations, dig and replace, piling mats etc). ▪ Mitigation for compressible and unstable ground will be designed and implemented in accordance with guidance presented in CIRIA C572 BRE FB75 and BS 6031:2009.

Issues / Effects		Control / Mitigation Measure
D	Potential risks to the water environment from piling	▪ CFA piling methods will be used during the piling of any building foundations to limit the potential for the mobilisation of shallow contamination within made ground into underlying natural strata and the groundwater. ▪ A Piling Risk Assessment will be undertaken to identify the risks posed by piling at the Site, and mitigation measures included to offset any potential risks and protect sensitive identified receptors.
3)	Biodiversity	
A	General Measures	▪ All works to be undertaken in accordance with relevant consents, licences and permits. ▪ All works to be undertaken in accordance with relevant legislation including The Wildlife & Countryside Act (1981), The Eels (England and Wales) Regulations 2009 and the Protection of Badgers Act 1992. ▪ Works will be timed to avoid or minimise effects. The timing of works will be subject to agreement with LBH and NE and will be in accordance with the programme set out in the HWSFACE ES or otherwise agreed. ▪ Detailed Method Statements to be agreed with LBH/NE/EA prior to works commencing, as deemed appropriate. ▪ Mitigation and enhancement measures will be installed first, before any works at the peninsula commence in accordance with a detailed CMS (i.e., installation of submerged willow planters and floating reedbeds, visually screened refuge areas around the lake). ▪ Fencing will be installed at the woodland on the peninsula to minimise visual disturbance, site-workers entering the woodland and risks of accidental damage.
B	Woodland and Trees	▪ Areas to be retained will be protected throughout the construction works. ▪ Barriers such as Heras fencing will be installed to demarcate the root protection area (RPA) of trees to be retained. ▪ No heavy machinery or ground works will be allowed to be undertaken within this protection area.

Issues / Effects		Control / Mitigation Measure
		▪ Barriers demarking the RPAs will be regularly monitored by an appointed member of the site team. to ensure they are still standing and in the right areas.
C	Black Poplar	▪ Black poplars to be identified / marked and protected from disturbance during development works.
D	Standing water bodies and groundwater: Lake, pond	▪ Construction and dredging works to be undertaken in accordance with agreed Method Statements ▪ Measures to minimise pollution risks to be implemented (see Water Resources and Flood Risk) and appropriate monitoring undertaken.
E	Bats	▪ European Protected Species Licence(s) will be sought for roosts affected by the Development and mitigation will be implemented provided per the licence requirements (typically comprising sensitive timing of works, protection of retained roosts during construction, and provision of compensatory bat boxes for any lost roosts on suitable trees). ▪ High quality commuting and foraging habitat retained on-site will be protected from damage through the use of protective fencing. ▪ Construction works will be undertaken during daylight hours. Should any artificial lighting be required this should follow the Bat Conservation Trust and Institute of Lighting Professionals guidelines1. ▪ Any artificial lighting required during construction will be installed so as to not cause unnecessary light spill onto the retained sensitive habitats (e.g., woodland and trees). This will be achieved through directing the lights away from these areas and use of hoods and shields to avoid unnecessary spill onto high value habitats.
F	Woodland breeding birds	▪ Construction adjacent to the woodland will be visually and acoustically screened to avoid visual and noise disturbance of the breeding bird populations.

[1] ILP & BCT, (2018); Bats and Artificial Lighting Guidance Note. ILP & BCT.

Issues / Effects		Control / Mitigation Measure
		▪ Removal of any trees (outside defined woodland areas only), buddleia scrub and cherry laurel will be undertaken outside the nesting bird season (March to September inclusive). ▪ Should vegetation removal be required during March to August, this will only be undertaken after a systematic check of the vegetation has been completed by a suitably qualified ecologist. If no active nests are identified, then clearance can commence. Should vegetation clearance works take more than two days, then a nesting bird check should be undertaken every 48 hours by a suitably qualified ecologist. ▪ Should an active nest be identified, then a buffer of at least 5m will be left around the nest and all works within that buffer avoided until the young have fledged. Regular monitoring of any active nests will be undertaken on a weekly basis by a suitably qualified ecologist to identify when the young have fledged.
G	Wintering birds (lake)	▪ Construction affecting the lake would be timed to avoid or minimise adverse impacts as far as practicable (as defined by a detailed CMS). ▪ Construction on the peninsula along the water edge would be screened (using hoarding /screens) to avoid visual and noise disturbance of the wintering bird populations.
H	Breeding birds (lake)	▪ Construction affecting the lake would be carefully planned and timed to avoid or minimise adverse impacts as far as practicable (as defined by a detailed CMS). ▪ Construction on the peninsula along the water edge and adjacent to the lagoon would be screened using hoarding /screens to minimise disturbance.
I	Badger	▪ If intrusive works with machinery cannot be avoided within 30m of the existing outlier sett onsite, a licence will be gained to temporarily close the sett during the active construction phase within the vicinity of the set. The temporary closure measures would be removed once the risk of collapse of the tunnels is no longer present. ▪ During construction, holes, trenches and ditches within the Site will be covered at night or where not practicable a means of escape will be installed to allow badgers or other mammals to exit. This will avoid unnecessary injury and reduce the potential for fatality.

Issues / Effects		Control / Mitigation Measure
J	Hedgehog	▪ If any hedgehogs are encountered during vegetation clearance in September or October, these would be translocated safely away from site activities to areas of suitable habitat. ▪ Clearance of scrub and grass, if allowed to grow long, will be cut to 20cm height in the first instance and then reduced to ground level 24 hours later, to allow any creatures potentially present to vacate the area of their own accord. ▪ Fencing around the site should have gaps to allow small mammals to traverse the site without getting trapped. ▪ During construction works, deeper excavations should be covered overnight where practicable. Where this is not feasible, ramps will be provided, or excavations profiled to provide hedgehogs and other small mammals a means of escape.
K	Reptiles	▪ Where vegetation clearance is required, staged clearance will be undertaken within the suitable reptile habitat, as follows: ▪ Vegetation will be cleared by cutting 300mm in the first instance, with cuttings removed, followed by clearance to ground level a minimum of 24 hours later. The second phase will be supervised by the ECoW. ▪ Habitat clearance will be completed in September and October outside the bird breeding season but during the active reptile season (April -October) on dry days when the temperature is over 9oC. The vegetation will be trimmed in one direction only and towards areas of retained suitable habitat so that any reptiles present can escape to safety without being exposed to predators.
L	Invertebrates	▪ Clear demarcation of areas that are to be retained with minimal disturbance to the buffers. ▪ Avoidance of disturbance of invertebrate overwintering habitats, (e.g., soil, leaf-litter, under bark) as far as practicable ▪ Trees that are cut in the retained areas would be left as dead-wood with a mixture of standing (2-3m high) and boughs and trunks on the ground; ▪ In advance of site clearance, protective fencing is installed to protect retained and/or ecologically sensitive habitats and their associated buffer zones to ensure that they are not subject to accidental damage (to be determined on a phase-by-phase basis).

Issues / Effects		Control / Mitigation Measure
M	Otter	▪ Ecologist checks of potential holt features prior to commencement of construction, and prior to any disturbance or demolition of the features. Checks every 3 months of active development areas for signs of otters.
N	Fish	▪ The use of the turbidity barriers during dredging and other water quality measures (as defined under Water Resources and Flood Risk) to minimise effects.
O	Aquatic Invertebrates	▪ The use of turbidity barriers during dredging and other water quality measures (as defined under Water Resources and Flood Risk) measures to minimise effects.
P	Risks to ecology from Invasive Non-Native Species (INNS), disease and pathogens (biosecurity)	▪ Prior to any works taking place, the presence and extent of INNS will be re-confirmed through survey. ▪ Preparation of an INNS Management Plan which will set out procedures for avoiding the accidental spread of INNS recorded as present at the Site (e.g., Japanese knotweed, giant hogweed and signal crayfish) or introduction of new INNS to the Site whilst undertaking the planned works (i.e. species listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). ▪ A treatment programme for Japanese knotweed (identified as present on-site) will be put in place prior to the commencement of construction works, in which the species will be removed via chemical or mechanical operations. The method used will depend upon speed of eradication required. The area should be fenced off approximately 7m away from the visible edge of the stand and signed to avoid further spread. ▪ Clearance of invasive buddleia will be undertaken to facilitate construction works, and to remove buddleia from woodland areas. ▪ In the event that any future infestations of INNS are identified prior to and or during the development process, exclusion zones will be established around them and the ECoW contacted for advice, as required. ▪ Appropriate signage in the site offices warning of the presence of INNS and identifying the necessary areas.

Issues / Effects		Control / Mitigation Measure
		▪ Biosecurity best practice measures will be implemented to reduce and minimise the risk of spreading invasive non-native species, diseases and pathogens during construction (even if invasive non-native species are not apparent). INNS can be spread in a variety of ways, for example in water, on clothing, equipment or other materials. ▪ A suitably qualified person will be responsible for biosecurity of the operational area including ensuring that Check, Clean, Dry principles are followed. This involves checking and cleaning equipment, clothing and footwear before leaving the Site, using hot water where possible. This should then be dried as some species can live for over 2 weeks in damp conditions; ▪ Ensuring that staff, contractors and visitors are aware of INNS, what biosecurity measures they are required to do when arriving and leaving the site. ▪ Ensuring sites have the appropriate equipment and designated areas for biosecurity. ▪ Areas of infestation to be fenced off from other operational areas (if practicable). ▪ No material shall be taken from areas of infestation (unless for disposal at a suitably licenced facility). ▪ Making use of facilities provided on the site to clean footwear/equipment. ▪ All vehicles must use designated access routes. ▪ Keeping access to a minimum and avoiding areas that are known to be infested with invasive species. ▪ No treatment measures, such as herbicide treatment, to take place in these areas without prior agreement with the EA or the supervision of an appropriately experienced individual.
Q	Potential damage to trees and other vegetation to be retained.	▪ Land / vegetation clearance will be limited to the minimum necessary for the works. ▪ The findings of the pre-construction tree survey and RSK Arboricultural Impact Assessment accompanied by Arboricultural Method Statements, where construction works are likely to affect trees, will be taken into account by the Contractor(s). ▪ Additional surveys may be required during enabling works, site clearance and construction phase as advised as necessary by the arboricultural specialist.

Issues / Effects		Control / Mitigation Measure
		▪ Where works in close proximity to retained trees cannot be practically avoided, these works will be undertaken in accordance with current best practice, defined in British Standard (BS) 5837: 2012 Trees in relation to design, demolition and construction – Recommendations (Ref 10) and National Joint Utilities Group (NJUG) Guidelines for the Planning, Installation and Maintenance of Utility Apparatus in Proximity to Trees. ▪ All necessary protective fencing will be installed prior to the commencement of any site clearance or construction works. ▪ Any site offices, welfare units, and storage areas must respect the trees and their RPA, shown in pink on the supplied plans. These should be sited outside tree protection areas. ▪ The fenced area will form a Construction Exclusion Zone and must remain undisturbed for the duration of construction works unless approved works are required within it, such as removal of hard surfaces or installation of boundary treatments. Such works should be undertaken under arboricultural supervision and in line with an approved method statement. All site operatives should be made aware of the need to respect the fencing, and signage should be affixed to every third panel to ensure it is not moved. ▪ Service runs and installation of utility cables also need to respect trees and their root protection areas. If any conflicts are highlighted, then the advice of either a consultant arboriculturist or the council Arboricultural Officer should be obtained.
R	Visual intrusion of hoarding and site works	▪ Site compounds will be kept tidy where practical, at all times. ▪ Construction areas will be laid out to minimise adverse impacts arising from temporary structures, construction activities and lighting and kept tidy (where practical). ▪ Hoardings will be erected around the area of construction works, for reasons of creating a visual barrier to construction activities, as a safety measure, to prevent access to the general public and to minimise bird disturbance. ▪ Hoarding on the north facing elevations of the main building and around working areas of the Site should be designed to minimise visual impacts (e.g., recessive green or camouflage).

Issues / Effects		Control / Mitigation Measure
S	Risks of failure of landscape planting	▪ Appropriate management and maintenance of new planting and newly created habitats during the construction period.
T	Visual intrusion of lighting	▪ (see relevant measures under 'Light Pollution')
4)	Traffic and Transport	
A	Potential traffic congestion and disruption impacts on local community/road users and users of the Site.	▪ Construction Logistics Plan (Annex 1) sets out measures to manage construction traffic within Site and the surrounding area. The CLP will be agreed with TfL and LBH. ▪ Information about the works (i.e., nature, location, timetable of works, potential for traffic congestion) should be provided to local residents and public in advance of works commencing via environmental information boards; signs; and/or newsletters. ▪ Implementation of Travel Plan measures to reduce the volume of construction staff and employee trips.
B	Disruption to PRoW users including London Loop and navigational users of the Grand Union Canal	▪ Works to be programmed to minimise likely disruption. Information about the works to be provided in advance (as above).
C	Access to be maintained for existing users as appropriate.	▪ Contractor to ensure relevant residents and landowners are notified in advance of any impacts to access or potential localised congestion due to the works.
5)	Air Quality	
A	Dust emissions and associated effect on sensitive receptors (residents, ecological)	▪ Implementation of Dust Management Plan which includes measures as set out Appendix A6 of the Air Quality Assessment that accompanies the planning application in accordance with Table 7 of the GLA's SPG on The Control of Dust and Emissions During Construction and Demolition (GLA, 2014). The DMP should be prepared with input from the ECW.

Issues / Effects		Control / Mitigation Measure
		▪ The DMP should include appropriate monitoring procedures and programme taking into account the ecological sensitivities of the Site.
B	Construction related vehicle and plant emissions	▪ Implementation of Highly recommended measures as defined by Table 7 of the GLA's SPG on The Control of Dust and Emissions During Construction and Demolition (GLA, 2014).
6)	Noise and Vibration	
A	Noise disturbance effects on sensitive receptors (ecological) due to construction traffic, plant and activities	▪ Installation of a temporary noise barrier to the lagoon edge (to minimise noise disturbance to birds using the lagoon), once sufficient buddleia and scrub have been removed (during Sept 2023 – Feb 2024). ▪ Installation of a permanent acoustic screen around the woodland on the peninsula (to minimise noise disturbance to breeding woodland birds), prior to the commencement of the bird breeding season. Details of the design, installation methodology and timing of implementation to be agreed with LBH. ▪ Where feasible to do so, other site hoardings or noise screening barriers should be erected to reduce noise levels at the nearest receptors. ▪ Siting of works compounds away from the lake shoreline, lagoon and woodland. Acoustic barriers will be placed around noise and vibration generating plant. For any intermittent disturbing activities, consider generating constant masking noise. ▪ Limiting the nosiest activities to less-sensitive times of the day and outwith wintering / breeding bird seasons (where practicable).
B	Noise disturbance effects on sensitive receptors (human and ecological) due to construction traffic, plant and activities	▪ **Substitution** – where practicable, one or more of the proposed construction plant items are substituted for a quieter or lower vibration option. ▪ **Equipment siting** – when and where practicable, operational construction plant items will be located away from noise sensitive areas. ▪ **Screening** – site hoarding, site cabins and material stores will provide noise screening to low level sources of noise. Specific sources of noise will be enclosed or screened, where practicable,

Issues / Effects		Control / Mitigation Measure
		to further reduce noise. Inherent screening will also be achieved as buildings increase in height and the building envelope is completed. ▪ **Working methods** – where practicable, adjust working methods so that the number of concurrent noisy construction activities being undertaken is reduced. Completing activities close to the Site boundary quickly and efficiently. Shutting down noisy equipment when not in use. Starting up/shutting down vibratory compaction equipment away from vibration sensitive areas. ▪ **Hours of work** – working hours on Site will be agreed with the Council, with the standard hours of work adhered to as far as practicable. Any work outside of the agreed hours will be subject to prior agreement of, and/or reasonable notice to the Council, as appropriate. ▪ **Risk assessments and method statements** – incorporating noise and vibration control into the method statements at an early stage to capture the provision of appropriate mitigation measures. Preparation of risk assessments to inform relevant structural surveys in relation to construction vibration, if applicable. Toolbox talks to ensure workers are fully briefed on any adjustments to working practices in the interests of noise and vibration. ▪ **Community liaison** – Proactive links between noise management activities and community relations activities to keep local residents informed of periods of likely intensive construction activities, including changes to hours of work. Appointment of an Environment Manager to whom complaints/queries about noise and vibration can be directed, investigated and acted upon.
C	Vibration due to construction causing annoyance, damage or disturbance effects (human, ecological and built receptors)	▪ Use of BPM to minimise vibration generated by the works in order to minimise disturbance to residents and ecological receptors. ▪ Where residential NSRs are located within 100 m of the construction activities, the low amplitude vibration setting should be used where possible. Ideally, a non-vibratory solution should be utilised, if available. ▪ Engagement with local residents within 36 m of the vibratory works, to inform them of when the vibratory works will take place and how long they are likely to last, as well as any measures being taken to minimise vibration. ▪ Vibration monitoring at key receptors should be considered if the duration of works is likely to last for extended periods of time or in very close proximity to receptors.

Issues / Effects		Control / Mitigation Measure
7)	Waste and Materials	
A	Potential to impact on sensitive receptors (humans, wildlife and controlled waters) if not stored and managed appropriately.	The Contractor(s) will consider the objectives of sustainable resource and waste management and seek to use material resources efficiently, reduce waste at source, reduce waste that requires final disposal to landfill and apply the principles of the waste hierarchy. This would include, where reasonably practical, working towards a cut and fill balance for excavations/land reclamation; segregation of construction materials on-site for appropriate reuse, recycling and recovery, with landfill as a last resort. This would be achieved by a combination of measures, including: ▪ The Contractor will prepare and implement a SWMP and Materials Management Plan (MMP). The SWMP will identify opportunities for elimination, re-use or recycling of materials prior to disposal. The MMP will be drafted in advance of any construction works and used to manage the balance of cut and fill on-site in accordance with the CL:AIRE definition of waste (as appropriate). ▪ All waste transported off site will be delivered to appropriately licenced receivers of such materials; ▪ The Contractor will segregate construction waste to be reused and recycled where reasonably practicable; ▪ Where on-site re-use or recycling are not feasible, the contractor will identify opportunities through a recycling contractor or in external projects; ▪ “Duty of Care” requirements will be fulfilled by the Principal Contractor. ▪ Hazardous waste will be correctly labelled, shall not be mixed with non-hazardous waste, securely contained, and disposed of by a certified waste carrier for hazardous waste. ▪ Materials will be appropriately handled and stored throughout their lifecycle from delivery to inclusion, e.g., return surplus materials to storage. ▪ The types, quantities and final destination of waste generated during the construction phase would be identified, measured and recorded through SWMP.
B	Effects of waste on the surrounding environment	▪ Use of off-site pre-fabrication will be used, where reasonably practical, including the use of prefabricated structural elements, cladding units, mechanical and electrical risers and packaged plant rooms.

Issues / Effects		Control / Mitigation Measure
		▪ Burning of waste or unwanted materials will not be permitted on-site. ▪ All hazardous materials including chemicals, cleaning agents and solvent containing products to be properly sealed in sealed containers at the end of each day prior to storage in appropriately protected and bunded storage areas. ▪ Materials requiring removal from the Site will be transported using licensed carriers and records kept, detailing the types and quantities of waste moved and the destinations of this waste, in accordance with the relevant regulations.
8)	Historic Environment	
A	Potential disturbance/damage to non-designated geo-archaeological assets	▪ Works to be in accordance with appropriate planning conditions (as required by LBH/GLAAS).
B	Minimise general disruption/disturbance (noise) members of the public.	▪ Implementation of environmental control measures in detailed CEMP. ▪ Information about the works (i.e., nature, location, timetable of works, access restrictions) should be provided to interested parties, local residents and public in advance of works commencing via signs and/or newsletters/website.
C	Effect on access and recreational rights during works.	▪ Engagement with relevant interested parties and organisations to ensure access is available as appropriate to the stage of construction and affected party, e.g., HS2, businesses on access road, Herts and Middlesex Wildlife Trust, Canal and River Trust, BSC, angling groups and local residents.

8 Monitoring, Reporting and Review

8.1 Overview

8.1.1 The detailed CEMP will set out a programme of environmental monitoring to be implemented, before, during and after the constriction work. The programme should be defined to monitor the effectiveness of mitigation and in form modification should this be necessary. The following measures should be included.

8.2 Compliance Monitoring, Corrective Action and Management Review

8.2.1 Monitoring should include regular site inspections and audits and, where necessary, environmental monitoring and auditing against key parameters. The frequency of audits is to be defined by the Principal Contactor.

8.2.2 The scope of audits could include:

- Compliance with legislation, consents and licences.
- Environmental training.
- Environmental incidents.
- Environmental controls
- Waste management and resource use.

8.2.3 Non-Conformance Reports should be prepared and held on-site which include corrective actions required and follow up inspections as required.

8.2.4 Regular management reviews should take throughout the construction phase to evaluate ongoing effectiveness of the CEMP. Should deficiencies be identified during audits, the CEMP should be updated to ensure the document continues to fulfil its objectives.

8.2.5 The Environment Manager will be responsible for implementation of monitoring, review and adjustments to the CEMP or remedial action as required.

8.3 Environmental Monitoring Programme

Water Environment - Groundwater

8.3.1 A groundwater monitoring programme covering the enabling, construction and operational phases of the Development will be implemented.

8.3.2 The specific design and requirements of the groundwater monitoring program will be defined by suitably qualified hydrogeologists and/or environmental consultants with expertise in groundwater monitoring to ensure the program's effectiveness and compliance with applicable standards, which will be agreed with the EA, Thames Water and Affinity Water.

Surface Water

8.3.3 A suitable surface water monitoring programme covering the construction and operational phases will be developed and implemented as a planning condition.

8.3.4 The specific design and requirements of the surface water monitoring program will be defined by suitably qualified individual to ensure the program's effectiveness and compliance with applicable standards, which will be agreed with the EA, Thames Water and Affinity Water.

Flood Risk

8.3.5 A suitable flood risk monitoring programme covering the construction will be developed and implemented as a planning condition.

8.3.6 The Environmental Manager would be responsible for implementation of ecological monitoring, review and adjustments to the CEMP or remedial action as required.

SSSI Condition, Habitats and Species

8.3.7 Monitoring at the construction stage will be undertaken to monitor for evidence of success or failure to achieve the goals of the designed-in mitigation features. Monitoring would also be undertaken whether ecological effects predicted in the HWSFAC ES are accurate, or whether adaptive or remedial measures need to be implemented.

8.3.8 The ECW will be responsible for implementation of ecological monitoring programme in line with the final MEMP, review and adjustments to the CEMP or remedial action as required.

Annex 1

Rail
Marine
Infrastructure and Transport
Renewables

Project Title
Hillingdon Watersports Facility and Activity Centre

Report Title
Detailed Construction Logistics Plan

Document Reference:
3249/008/003

Prepared For
London Borough of Hillingdon

Date
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Status	Details of Amendments	Date	Checked	Approved
Draft		17/07/2025	WH	SB
For planning	Minor amendments	11/08/2025	WH	SB

CONTENTS

1.0 INTRODUCTION

1.1 Robert West has been appointed by the London Borough of Hillingdon (LBH) (the "applicant") to provide transport planning and highways advice in relation to the development proposals for Hillingdon Watersports Facility and Activity Centre (HWSFAC) Broadwater Lake, Moorhall Road, Harefield, UB9 6PE (hereafter referred to as "the site"), following the permanent closure of the former Hillingdon Outdoor Activity Centre (HOAC) at Dews Lane, Harefield.

1.2 This document is a detailed Construction Logistics Plan (CLP) which outlines details with respect to construction management and construction traffic management during the construction phase of the development. It is intended to establish the broader strategy for the construction of the development subject to further development beyond approval stage, which is expected to be secured by planning condition.

1.3 A principal contractor has not been appointed and therefore whilst the overall strategy is expected to be taken forward, some details of the CLP are expected to change between approval and construction.

1.4 The principal contractor will be responsible for complying with the CLP and will be responsible for ensuring that all sub-contractors conform to restrictions, mitigations and obligations contained within the CLP.

CLP objectives

i. Optimise the efficient delivery and collection of goods and materials to the site.

ii. Lower emissions by timing construction vehicle movements in off-peak hours where possible and avoiding congested routes.

iii. Enhance safety – improved vehicle and road user safety, especially along the site access road.

iv. Reduce congestion – reduced trips overall to the site.

v. Minimise disturbance to ecological receptors within the site caused by construction.

1.5 To support the realisation of this objective, several sub-objectives have been agreed and include:

i. Promote smarter operations that reduce the amount of vehicle trips required to the site (i.e. bringing multiple building materials from one supplier).

ii. The use of FORS accredited vehicles.

iii. Managing the on-going development and delivery of the CLP with construction contractors.

iv. Deliveries to be scheduled out of network peak hours where possible.

v. Avoid all Heavy Goods Vehicle (HGV) movements to avoid Harefield Village.

Site context

1.6 The site is rural in nature and is located to the south of Harefield on the outskirts of Greater London. The site falls within the Mid Colne Valley Site of Specific Scientific Interest (SSSI). The site is bound by the Grand Union Canal to the east, Moorhall Road to the south and the River Colne to the north and west. The site is accessed from Moorhall Road to the south of the site.

1.7 The site is currently occupied by Broadwater Sailing Club (BSC) and Gerrards Cross and Uxbridge Angling Society (GCUAS). It is noted there are a number of other users who have interest in the site, but do not permanently occupy the site or use the site on an ad-hoc basis.

Development proposals

1.8 LBH are the developer of the site and at this stage a principal contractor is not yet appointed. Once appointed site contact details for in and out of hours will be included in an updated version of the CLP.

1.9 A description of the development proposals are included below:

> *"Redevelopment of the site to create the Hillingdon Watersports Facility and Activity Centre including demolition of existing Broadwater Sailing Club (BSC) clubhouse at the north of the lake and erection of a building including changing facilities, meeting rooms, storage, Workshop and seasonal worker accommodation (sui generis), activity shelters; installation of pontoons and slipways; boat shed; equipment storage huts; boat parking and racking areas; camping area; outdoor activity areas; ecological enhancement throughout the site; pedestrian routes through the peninsula; landscaping including new woodland, dense vegetation screens and boundary treatment; access road; localised dredging and land reclamation; relocation of existing sailing area and creation of floating reedbeds within the lake; coach drop off and turning area; vehicle parking; cycle parking; and associated works.*

1.10 The proposed site masterplan is attached at Appendix A

1.11 The total site area is 79.95 hectares and there is 150 sqm gross internal area (GIA) of existing floorspace that is to be demolished. A total of 3,476 sqm (GIA) of floorspace is proposed

1.12 Site operation hours will be from Monday to Friday between 08:00 and 18:00. Site operation hours on Saturday will be between 08:00 and 13:00. No construction works will take place on Sunday or Bank holidays and the preceding Saturday and Sunday.

1.13 In line with LBH Guidance, construction work which gives rise to noise that is audible at the construction area boundary will be restricted to:

i. 08:00 – 16:00 weekdays

ii. 08:00 – 13:00 Saturday

1.14 No Temporary Traffic Management Orders (TTMOs) are anticipated throughout the construction phase of the development.

CLP structure

1.15 The CLP will set out the key methodology that the principal contractor will follow to manage construction traffic during the proposed phases of the development. This will include the scope of construction works and type of construction, the means by which construction vehicles will access the site, and mitigation proposed to reduce the impact of construction vehicles on the local highway network, road users and local residents.

1.16 The remainder of this report includes the following:

i. The context, considerations and challenges are outlined in Section 2.0.

ii. The construction programme and methodology are described in Section 3.0.

iii. The vehicle routing and access arrangements are explained in Section 4.0

iv. The strategies to reduce impacts are discussed in Section 5.0.

v. The estimated vehicle movements are included in Section 6.0.

vi. The programme for implementing, monitoring and updating the construction activity is outlined in Section 7.0.

2.0 CONTEXT, CONSIDERATION AND CHALLENGES

Policy context

2.1 This section of the CLP references policies that have been considered in the preparation of this document, which are as followed:

National policy

i. National Planning Policy Framework (NPPF) (December 2024).

ii. The Traffic Management Act.

iii. Designing for Deliveries, Freight Transport Association.

Regional policy

i. Delivering a Road Freight Legacy.

ii. The London Plan (March 2021).

iii. The Mayor's Transport Strategy (2018, updated 2022).

iv. Healthy Streets (2022).

v. The London Freight Plan (2019).

vi. Fleet Operator Recognition Scheme (FORS).

vii. Vision Zero.

Local policy

i. London Borough of Hillingdon Local Plan Part 1 – Strategic Policies (2012).

ii. London Borough of Hillingdon Local Plan Part 2 – Development Management Polices and Site Allocations and Designations (2020).

Local access by walking, cycling, public transport and local highway network

Walking

2.2 The pedestrian routes and facilities in the immediate vicinity of the application site are of mixed quality. The site access road leading to the site is paved with asphalt but is often covered in mud and dirt. No footways or street lighting are provided on the site access road. There are public footpaths that provide access to the site. These include the Grand Union Canal towpath to the east of the site, connecting to the Colne Valley trail and the Hillingdon trail.

2.3 The pedestrian routes within the wider area are in good quality and condition. The footways range in widths from approximately 1.2m to 2.5m wide. At the existing site access on Moorhall Road there is a dropped kerb crossing with tactile paving. There are footways present on both sides of Moorhall Road except for the north side of the carriageway, west of the site access. Street lighting is present at regular intervals on the surrounding roads and streets.

Cyclists

2.4 National Cycle Network (NCN) route six runs directly east of the site along the Grand Union Canal towpath. The route is predominantly traffic-free, passing through Uxbridge, West Hyde, Watford, Luton, Nottingham and Manchester and ultimately connects London and Lake District.

2.5 There are no designated local cycle routes within the vicinity of the site.

Buses

2.6 The nearest northbound and southbound bus stops are located on Moorhall Road, approximately 50m (less than a minute walk) to the southeast of the site access and are served by the 331 bus route. Additional bus stops are located on Harvil Road approximately 635m and 785m (eight to 10 minute walk) to the east of the site that are served by the U9 bus route.

2.7 A summary of the local bus services in the network peak hours are included in Table 2.1.

Bus Route	Destination	AM Hourly frequency
331	Belmont Road	3
	Ruislip Station	3
U9	Harefield Hospital	2-3
	Belmont Road	2-3

Table 2.1 Summary of bus services

2.8 There are a minimum of five bus services provided per hour travelling in each direction.

National rail

2.9 The nearest National rail station to the site is Denham station which is located approximately 1.2km to the southwest of the site. Denham station is served by Chiltern Railways. Typical Monday to Friday services includes one train per hour to London Marylebone and one train per hour to Gerrards Cross.

London Underground

2.10 The nearest London Underground stations to the site are West Ruislip and Ickenham which are located approximately 4km and 4.5km to the southeast of the site respectively (Approximately an 11 minute drive or 20 minute cycle). Ickenham station is the penultimate stop to the terminus of the Uxbridge branches of both the Metropolitan and Piccadilly line. West Ruislip station provides services towards Epping, Hainault and Woodford via Newbury Park.

2.11 Uxbridge station is also located 4.5km to the south of the site. Bus service 311 and U9 provide a direct connection from Uxbridge station to the site. Journey time is approximately 14 minutes**.**

Public Transport Accessibility Level (PTAL)

2.12 A PTAL assessment of the site was undertaken using the TfL WebCAT database. The PTAL value is classified in bands ranging from 1a to 6b where 1a is the lowest level of accessibility (i.e. very poor) and 6a is the highest level of accessibility (i.e. excellent).

2.13 The site has a PTAL rating of 1b indicating it has very poor access to the site by public transport. The PTAL map is shown in Figure 2.1.

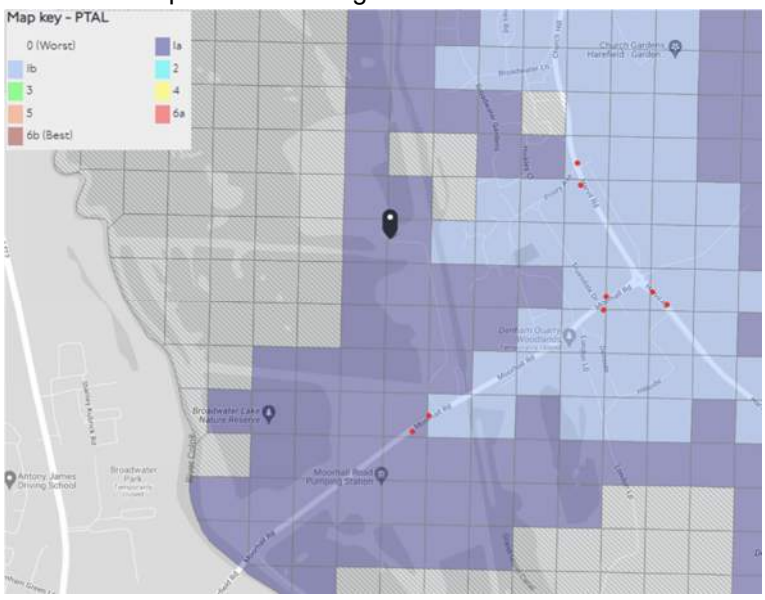

Figure 2.1: PTAL assessment

Local highway network

2.14 Moorhall Road is a two-way single carriageway subject to a 30mph speed limit at the site access located to the south of the site. The speed limit transitions into a 40mph speed limit approximately 180m west of the site access. Moorhall Road runs from the roundabout to the northeast of the site to the southwest of the site where the road transitions into Moorfield Road.

2.15 Within the immediate vicinity of the site along Moorhall Road there are double yellow line markings on both sides of the carriageway and central hatching in the middle of the carriageway. Additionally, there is a bus stop directly east of the site access road. There are no additional parking restrictions on Moorhall Road within the vicinity of the site.

The site and surrounding area

2.16 This section describes the existing Broadwater Lake site conditions, the surrounding public realm, and the accessibility of the site.

2.17 The site is located at Broadwater Lake, Harefield within LBH. The site is predominantly rural in nature and remotely located to the south of Harefield, near the border of Greater London and Buckinghamshire. The site is bound by the Grand Union Canal to the east, Moorhall Road to the south and the River Colne to the north and west.

2.18 The site is currently occupied by BSC and GCUAS. It is noted there are a number of other users who have interest in the site, but do not permanently occupy the site or use the site on an ad-hoc basis.

Context maps

2.19 In line with the Transport for London (TfL)/ Construction Logistics and Community Safety (CLOCS) guidance, the following plans have been produced in conjunction with this CLP:

i. Regional plan

ii. Local context plan

iii. Site boundary plan

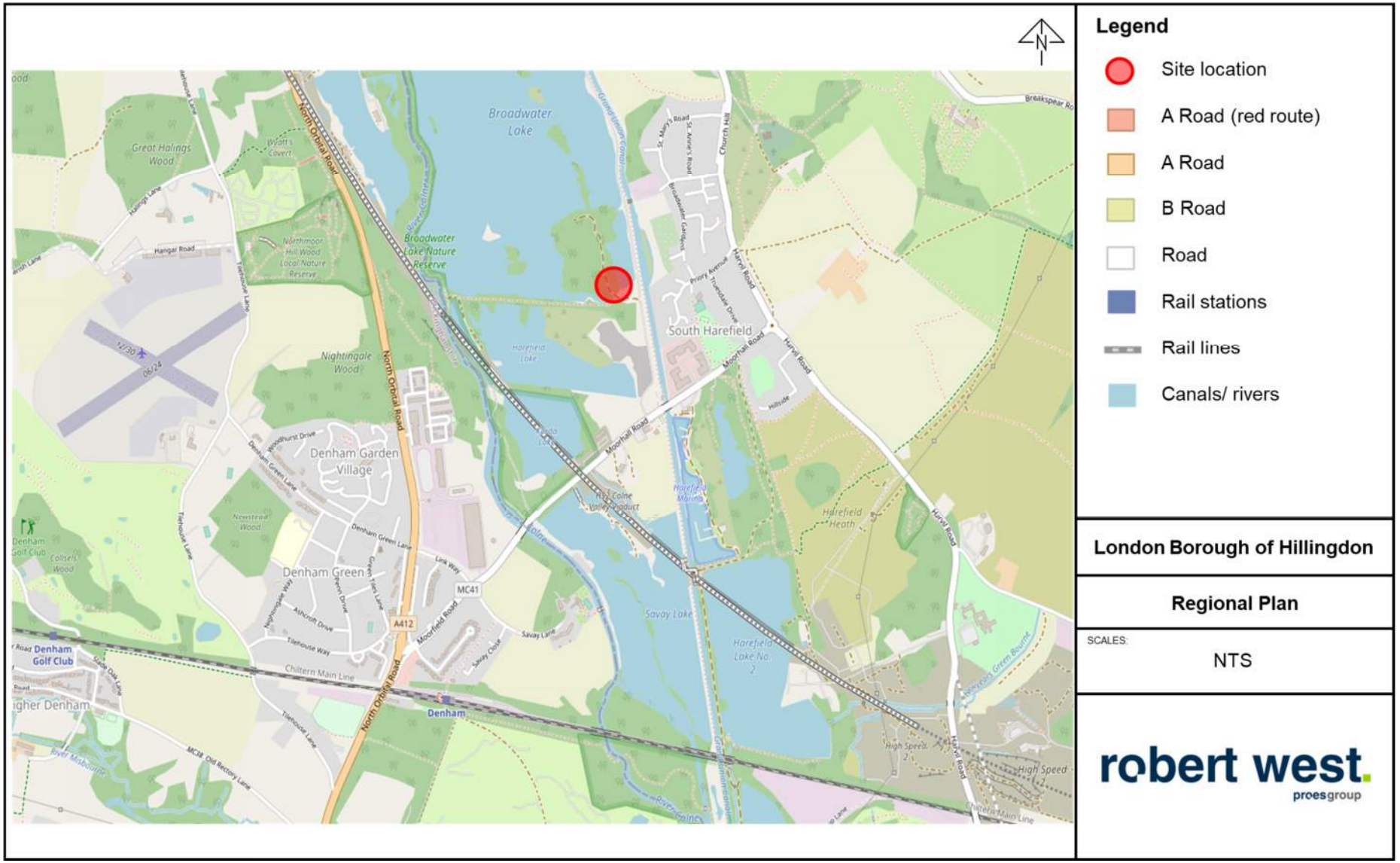

Figure 2.2: Regional plan

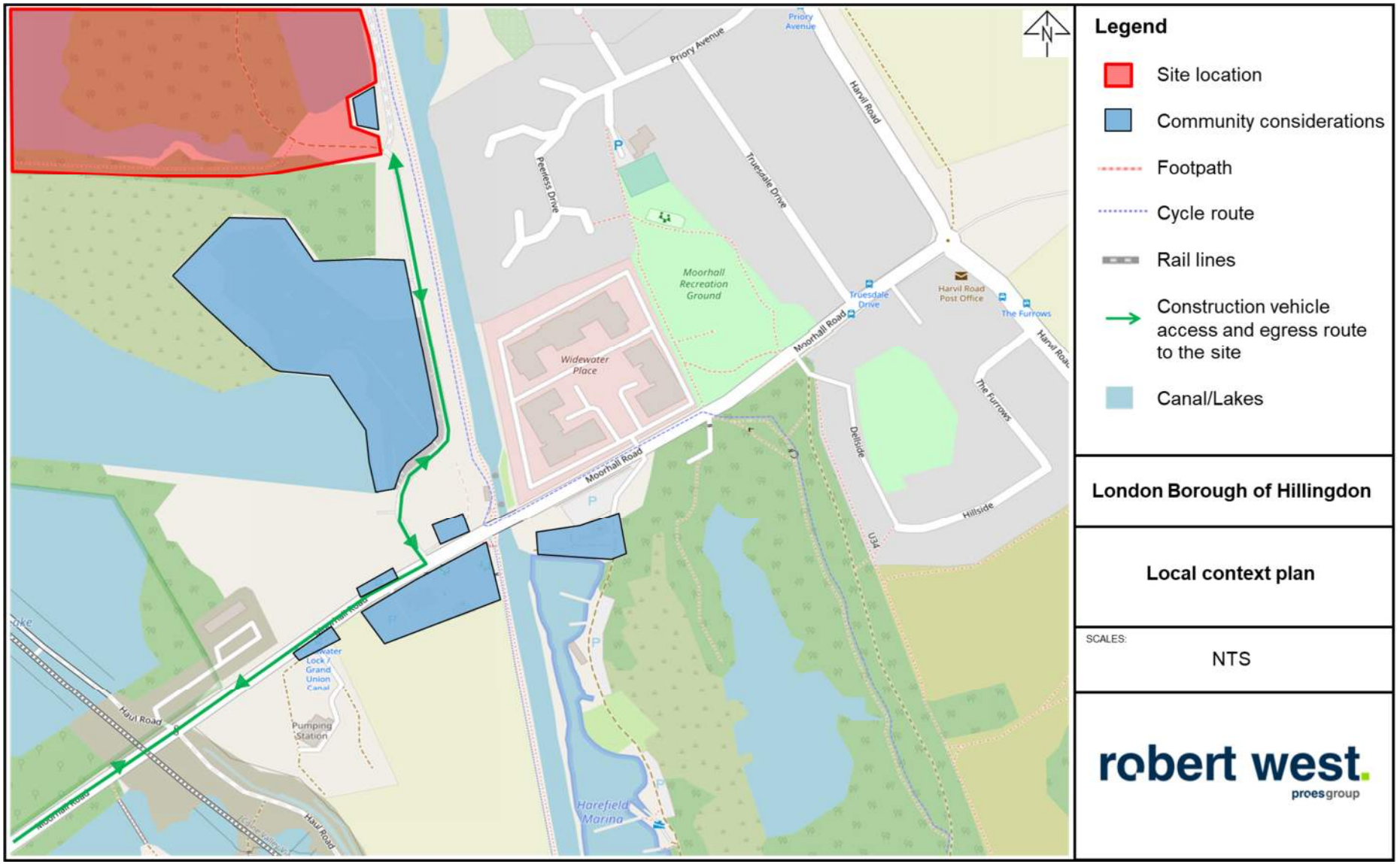

Figure 2.3: Local context plan

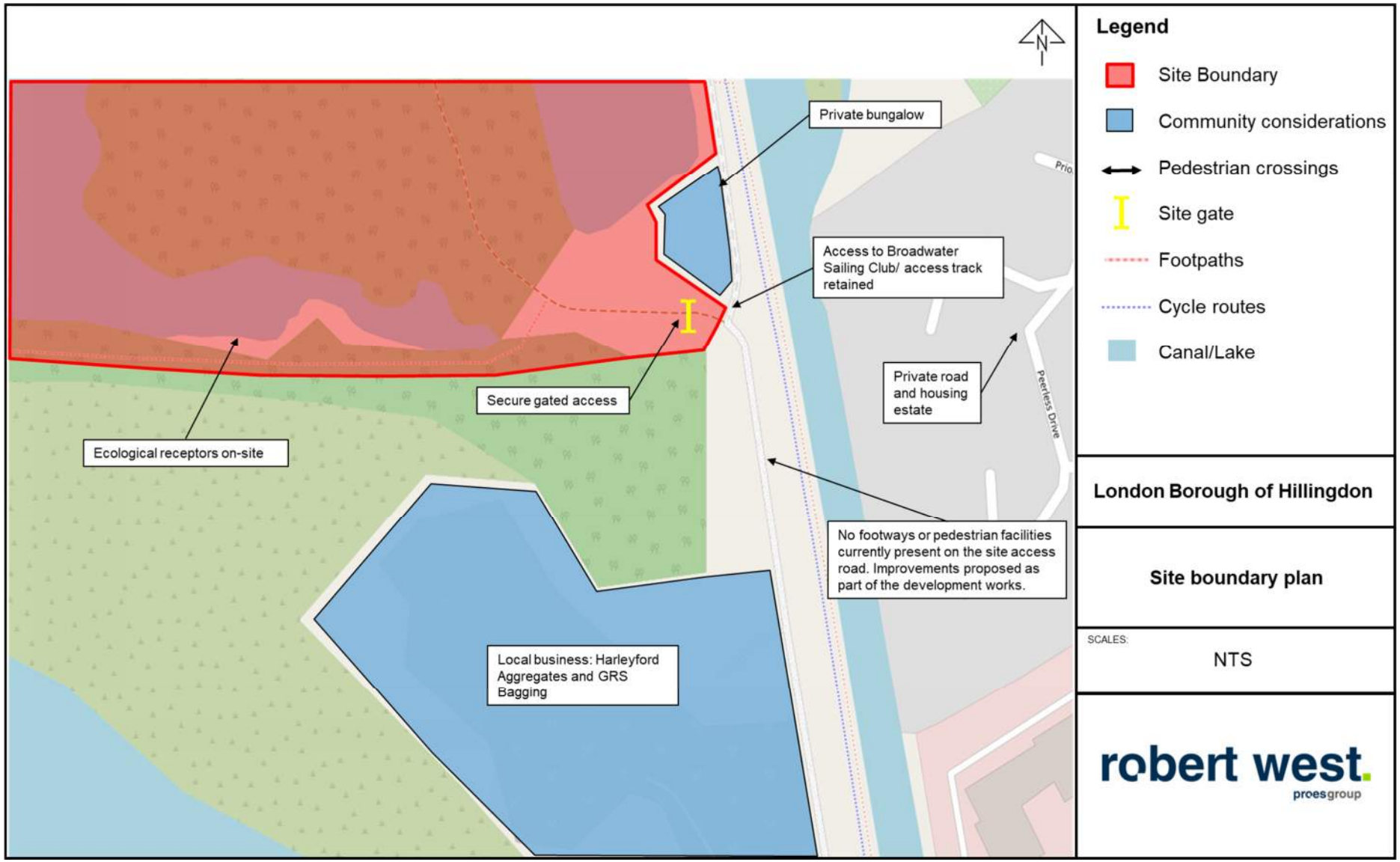

Figure 2.4: Site boundary plan

Considerations and challenges

2.20 The following consideration and challenges below have been identified. Measures to mitigate risks associated with the considerations and challenges identified are included below.

2.21 Broadwater Lake is accessed from a private access road via Moorhall Road to the south of the site. The access road comprises a carriageway that accommodates vehicular access to the site. Pedestrians utilise this access point, although no footways or pedestrian facilities are provided. Additionally, no street lighting present on the access road. Users have rights of access from the site access road. These include GRS Bagging, a construction material wholesaler, Harleyford Aggregates, a sand and gravel supplier, formal and semi-formal residential dwellings.

Access to Broadwater Lake and Broadwater Sailing Club

2.22 No access to the site south of Broadwater Lake will be permitted to the public throughout construction with the exception of permitted anglers and HWSFAC users towards the end of construction during temporary opening. Access for all users will be strictly controlled and hoarding will be erected at the site access to prevent any unauthorised access.

2.23 Access from the site access road to the existing Broadwater Sailing Club (to the north of Broadwater Lake) and the Grand Union Canal towpath (to the east of Broadwater Lake) will be maintained throughout construction. Access will only be restricted to the construction site to the south of Broadwater Lake.

Adjacent residential properties

2.24 There are formal and semi-formal residential dwellings along the site access road used for construction. Adjacent residents may be sensitive to any noise and vibration from the work.

2.25 To mitigate this, Council permitted construction working hours will be adhered to and the principal contractor will share information about the construction programme with the immediate neighbours via letters. The principal contractor will ensure the highest level of safety is maintained and full transparency achieved around potential noise and vibration. The correct Personal Protective Equipment (PPE) will be used at all times and considerate methods of construction such as auger piling will be used to minimise noise and vibration impacts.

2.26 Access to the residential dwellings will be maintained throughout construction. Residents will be informed by letter of the dates, times and details of any works occurring outside of access to their property. Contact details of a site contact will be made available to residents to further discuss any of the details associated with construction works.

Adjacent businesses

2.27 GRS Bagging and Harleyford Aggregates are adjacent businesses that share access from the site access road. Given the nature of the businesses, HGVs trips are generated. GRS Bagging and Harleyford Aggregates working hours are between 07:30-7:00, Monday to Friday and Saturday 07:00-12:00.

2.28 The principal contractor when appointed will be required to communicate with GRS Bagging and Harleyford Aggregates to cooperate and integrate deliveries as far as practically possible.

2.29 As part of the development proposals, highway improvements to the site access road are proposed. Upgrade works will take place from the bell mouth junction with Moorhall Road to the site access to Broadwater Lake.

2.30 To mitigate disruptions for GRS Bagging and Harleyford Aggregates deliveries, part of the upgrade works to the site access road will be undertaken in two halves which allows access to maintained. Only excavation and paving works will be required to upgrade the access road.

2.31 Alternatively, these work may occur outside of for GRS Bagging and Harleyford Aggregates operational times. If works are required outside of the proposed construction hours, the principal contractor will seek permission from the LBH to undertake these works.

2.32 The construction methodology of the site access road will be confirmed once a principal contactor has been appointed.

Canal users

2.33 Part of the main peninsula works of the construction programme; utilities installation is required. Utilities will be connected from the site to the east underneath the Grand Union Canal.

2.34 To minimise all impact on the Grand Union Canal and its users, Horizontal Directional Drilling (HDD) will be used to provide the utilities connections in to the site. This is a trenchless method used to install underground pipelines, cables, and conduits. It involves drilling a pilot hole along a predetermined path and then enlarging it to accommodate the desired pipe or cable, which is then pulled back through the enlarged hole. This technique produces no noise and minimises surface disruption making it ideal for environmentally sensitive areas and waterways.

2.35 Grand Union Canal users will be notified about works occurring on the canal by the LBH signage will be placed in prominent locations advising of the relevant dates and times.

Ecological sensitivity

2.36 The development site is located in a SSSI with many ecological receptors that need to be considered throughout construction. Significant measures will be taken to minimise disturbance during construction and on-going discussions are being held with Natural England to ensure this.

2.37 Careful consideration of the spatial phasing and timing has been at the heart of the programme development due to the ecological sensitivity factors with the presence of sensitive ecological receptors present within the site and the surrounds. A key example is the in-lake dredging as which is required to be undertaken during September only.

2.38 A phased approach is to be undertaken in order to ensure an enabling works package which limits the impact and intensity of the works on the ecology of the site. As noted above, consideration has been given to the best time periods to undertake the works given the sensitive ecological receptors. The enabling works package upon its completion will provide screened areas of the site, reducing the visual impact of the construction works on the lake.

2.39 Methods of construction that minimise the impact on ecological receptors will be utilised throughout construction. This includes auger piling to minimise noise and vibration.

The River Garden

2.40 The River Garden is a public house located to the south of Broadwater Lake opposite the site access road to the site. The River Garden has an associated car park for 44 cars.

2.41 Under no circumstances parking on the local highway network will be permitted for contractors or visitors. This is including no parking along the site access road. This could result in contractors or visitors seeking to park within the River Garden car park.

2.42 To prevent contractor and visitor parking within external car parks the principal contractor will make clear as part of the site rules that car parking in the River Garden or other external car parks within the vicinity of the site will not be permitted. Any contractors found parking off-site may be dismissed by the site manager.

2.43 Appropriate car and cycle parking for contractors and visitors will also be provided on-site. Where possible access by public transport and other sustainable modes will be encouraged.

3.0 CONSTRUCTION PROGRAMME AND METHODOLOGY

3.1 The indicative construction programme is scheduled for approximately 19 months. Construction is anticipated to begin in May 2026 and be completed by December 2027, subject to securing planning permission and other consents and licences.

3.2 A principal contractor is not yet appointed and the construction scheduled is subject to variance once the appointed contractor has reviewed the programme.

3.3 Table 3.1 provides a summary of the anticipated construction schedule.

Construction stage	Start	End
1 – Enabling Works – Site Access Road	May-25	Aug-26
2 – Enabling Works – Site Preparation (Peninsula)	Sep-26	Sep-26
2a - Protection of ecological valuable habitats being retained (fencing and initial acoustic barriers).	Sep-26	Sep-26
2b - Install first main site cabin and toilets	Sep-26	Sep-26
2c - Mark out location of main construction compounds	Sep-26	Sep-26
2d - Clearance to facilitate siting of compounds and cabins under an ecological watching brief	Sep-26	Sep-26
2e - Removal of rubble heaps and waste under ecological watching brief (for reptiles)	Sep-26	Sep-26
2f - Installation of site compounds and facilities	May-26	Aug-26
3 – Enabling Works – In Lake Works	Sep-26	Sep-26
3a – Deployment of tern rafts, floating reedbeds and new buoys, artificial reefs and floating kingfisher fishing platforms	Sep-26	Sep-26
3b - Deployment of submerged tree planters to create partition between sailing area and south-west nature reserve	Sep-26	Sep-26
3c - Installation of kingfisher tunnels (lake banks)	Sep-26	Sep-26
3d – Dredge of eastern channel/island removal	Sep-26	Sep-26
3e – Beach creation	Sep-26	Sep-26
4- Initial Landscape Planting & Ecological Mitigation (On Land)	Nov-26	Dec-26
4a - Planting of new woodland area with shrubs	Nov-26	Nov-26
4b - Strengthening of boundary with canal towpath, creation of hedgehog highway / mammal gaps. Placement of bat boxes along access road and at peninsula.	Nov-26	Dec-26
5- Construction – Main Works on Peninsula	Sep-26	Aug-27
5a - Vehicle Parking	Sep-26	Oct-26
5b – Utilities Installation	Sep-26	Oct-27
5c - Toilet Block on camp site and Anglers Store	Oct-26	Feb-27
5d - Workshop	Sep-26	Feb-27
5e – Energy Centre	Sep-26	Sep-27
5f – Safety Equipment Shed and Boat Store	Sep-26	Apr-27
5g - Main Building	Sep-26	Aug-27
5k – Activity Shelters	Jul-27	Aug-27
5l – Fencing and Gates	Jul-27	Aug-27
5- Dismantaling of existing BSC facility	**Sep-27**	**Sep-27**

6 Landscape and Ecological Enhancements at former BSC Land	**Sep-27**	**Dec-27**

Table 3.1: Indicative construction programme

3.4 Site operation hours will be from Monday to Friday between 08:00 and 18:00. Site operation hours on Saturday will be between 08:00 and 13:00. No construction works will take place on Sunday or Bank holidays and the preceding Saturday and Sunday.

3.5 In line with LBH Guidance, construction work which gives rise to noise that is audible at the construction area boundary will be restricted to:

i. 08:00 – 16:00 weekdays

ii. 08:00 – 13:00 Saturday

3.6 The main components of the development proposals are:

i. Use of part of Broadwater Lake for sailing with other water-based recreational activities restricted to the eastern channel. Use of Broadwater Lake for sailing by BSC would continue. No motorised boats (electric engines only) would be used apart from for safety purposes.

ii. Localised dredging of the lake in the eastern channel to create depths suitable for sailing and generate material for land reclamation to create a platform for storing and launching boats from the peninsula into the eastern channel. One island would also be removed;

iii. New buildings including a two storey Main Building (including changing facilities, meeting and training rooms, storage, and seasonal worker accommodation), a Safety Equipment Store, Energy Centre and Workshop and activity shelters;

iv. Facilities for outdoor land based activities including pedal karting, caving, archery, low level ropes and zip-line, general activities and pond dipping;

v. New pontoons (2 no.) and slipways (2 no.);

vi. Camping area;

vii. Areas for boat storage, car and cycle parking, and coach drop off and turning;

viii. Dismantling of the existing BSC club house and removal of associated car/boat parking (this will be re-provided at the peninsula in the south of the site);

ix. Improvements to the unnamed access road from Moorhall Road;

x. Package of ecological enhancement measures, including habitat creation including new floating and fixed islands within the lake, new woodland dense vegetation screens and boundary treatment; and

xi. Long-term management of the wildlife and aquatic environment, including a monitoring programme.

3.7 Figure 3.1 below illustrates the indicative locations of the proposed construction compound on-site.

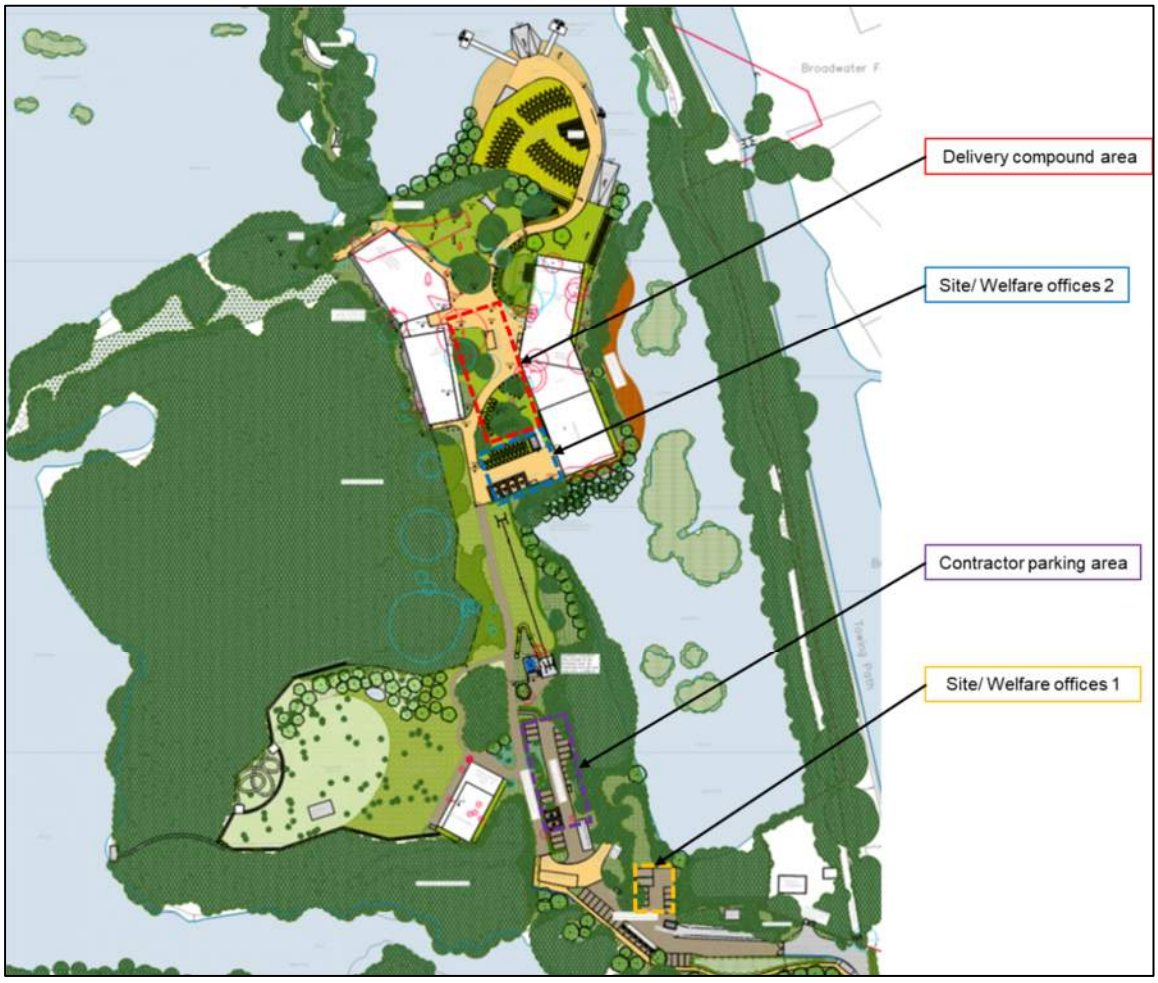

Figure 3.1: indicative construction site compound

Enabling works

Site access road improvements

3.8 Highway improvements to the site access road are proposed from the junction with Moorhall Road to the site access to Broadwater Lake approximately 400m to the north.

3.9 The access road will be constructed in two stages to minimise disruptions to Harleyford Aggregates operations. Access for residents will maintained at all times and access to the existing BSC site and the Grand Union Canal towpath will not be restricted.

3.10 Alternatively, these work may occur outside of for Harleyford Aggregates operational times. If works are required outside of the proposed construction hours, the principal contractor will seek permission from the LBH to undertake these works.

3.11 The construction methodology of the site access road will be confirmed once a principal contactor has been appointed.

3.12 During this phase construction materials will be delivered by rigid lorries, paving and roller HGVs will be required.

Site Preparation (Peninsula)

3.13 During site set up and preparation, ecological screening will be the first order of works, reducing the visual and acoustic impacts of the construction works on the lake. Noise and vibration monitoring equipment for the main site with remote monitoring will also be installed. Permanent fencing will be erected around areas of quicksand identified to address health and safety concerns and to prevent any unauthorised access. Welfare facilities compound and parking areas will be implemented to the southeast of the site, utilising existing hard standing.

In lake works

3.14 Implementation of mitigation (floating reedbeds) is required prior to dredging and the main construction works to minimise ecological effects.

3.15 Localised dredging of the lake will be undertaken. It is anticipated that a long-reach excavator can be manoeuvred into position on a suitably sized pontoon. The long-reach excavator will then proceed to dredge the gravels or island soils, lifting and removing from the water or islands, and place in a second receiving barge.

3.16 Land reclamation and beach creation using dredged materials will then be undertaken.

3.17 During the in lake works construction phase, limited construction vehicle trips are anticipated as materials dredged from the lake will utilised during this construction phase.

Main Works on Peninsula

3.18 Following completion of the in-lake works, the main works on the peninsula to proceed. The main works and peninsula phase will comprise installation of utilities and construction of HWSFAC

buildings and facilities, landscaping, vehicle and boat parking, internal access road fencing and gates.

Utilities

3.19 Enabling works to utilities and any further infrastructure and services required by the Proposed Development would be carried out.

3.20 HDD will be used to provide the utilities connections in to the site. This is a trenchless method used to install underground pipelines, cables, and conduits. It involves drilling a pilot hole along a predetermined path and then enlarging it to accommodate the desired pipe or cable, which is then pulled back through the enlarged hole. This technique minimises surface disruption, making it ideal for environmentally sensitive areas and waterways.

Construction of buildings

3.21 Building structures would only be constructed on the peninsula. For construction of the new buildings (including the Main Building, Boat Shed and Workshop), traditional masonry construction will be undertaken. Materials will include brick blocks with truss timber roofs, concrete and steel frames.

Piling and Substructure

3.22 Details of piling will be provided and subsequent stages of detailed design. Piling will be required for construction of the main building, workshop and boat shed. A Piling Risk Assessment will also be undertaken due to the sensitivities of the Site and groundwater. It is expected that the new buildings will require a pile diameter of 450mm, installed to an approximate depth of 10m below ground.

3.23 Once the piles have been formed, pile caps will be installed on top which will be made of concrete and likely reinforced. There are two options that can be employed for the sub-structure design which are still to be confirmed, these are:

i. Piles under pile caps, ground beams spanning between the pile caps and a suspended slab; and

ii. Piles under pile caps, and piles at 3m centres (TBC) under a suspended slab.

3.24 During piling operations, the use of reliable monitoring and data recording systems is fundamental and shall be in place. Following piling operations, the contractor shall conduct regular inspections and load tests on the piles to verify their integrity and load-bearing capacity which will then be

confirmed by the structural engineer.

Superstructure and roof construction

3.25 All the buildings on-site will have a ground floor concrete slab. The first-floor slab of the main building will be a reinforced concrete hollow core slab which will be further clarified upon progression of the detailed design.

3.26 The main building will be a typical traditional construction of brick and block cavity external walls, internal solid blockwork load bearing walls and timber framed pitched roofs finished with clay tiles. The roof framing to the large floor spans to the multi-purpose room, balcony area and social room will be an exposed metal frame and will be treated accordingly to withstand the wet climate / environment of which the building will be located.

3.27 The Boat Shed and Workshop are both of a similar construction. These will comprise a portal steel frame with single metal sheet roof decking and cladding panels supported on cladding support rails. As these are storage spaces they are not required to be insulated, although they will be detailed to reduce condensation. Insulation will be applied to the internal blockwork walls and ceilings of office and ancillary areas of these buildings instead to ensure suitable habitable working environments for those that will be working within the space for a short period of time. It is anticipated that this will comprise 2 x 100mm blockwork walls with cavity and insulation between.

Slipways

3.28 New slipways will be constructed in accordance with the detailed design information. The slipway will be constructed from in-situ reinforced concrete. In preparation for the concrete works, excavators will be used to form the desired profile of the ramp, assumed to be to falls of 1:10. The base of the slipway will be approximately 1.5m below the lowest recorded water level and so a small temporary cofferdam will be constructed from steel sheet piling or alternative temporary sheeting. This will allow for dewatering to facilitate construction of portion of ramp below the water level. The subbase to the ramp comprising of 150mm well type 1 will be laid and compacted onto which the concrete will be poured. The concrete slab will be approx. 250mm thick and reinforced with two layers of steel mesh. The slab will be cast in a single pour from bottom to top with tamped and raked finish. After approximately two-three days when the concrete is sufficiently cured the cofferdam can be flooded and temporary sheeting removed.

3.29 Alternatively, to reduce scope of temporary works the length of the ramp below the water level could be constructed from precast concrete cast in sections above ground level. These will be manoeuvred into place by suitable lifting plant.

3.30 The following construction vehicles and plant will be required during the main phase of construction:

i. A mobile crane will be required to lift roof trusses for the buildings.

ii. Deliveries of plant and materials such as bricks and steel beams by large rigid and articulated lorries.

iii. Concrete mixers and pumps will be required for laying concrete slabs where required.

iv. Large tippers will be required for the movements of aggregate and other material.

v. Skip lorries/ lorries will be required to deliver and collect skips to remove non-reusable waste from the site.

vi. Non reuseable materials will also be transported off site via barge along the Grand Union Canal to Powerday, Willesden Recycling Centre.

Dismantling of existing BSC Building

3.31 During the BSC dismantling and site clearance phase, pre-demolition surveys will initially be undertaken. Once the surveys are finished and the results collated and analysed, mobilisation will begin, and site hoarding will be erected and secured to the north of Broadwater Lake. Dismantling and site clearance of BSC will then take place. After demobilisation, ecological enhancement activities at the north of the site will be carried out. During this phase, limited HGV movements are expected. Skip lorries and tippers will be required to remove material from the dismantled BSC. Lorries will be required to remove chemical waste, including condensers with oil from the site and road tankers for sewage removal. Non reuseable materials will also be transported off site where possible via barge along the Grand Union Canal to Powerday, Willesden Recycling Centre

3.32 Only a small area of concrete hardstanding material to be removed from the north-eastern peninsula area. All other areas of existing hardstanding will remain in-situ to act as a low permeability cover layer over landfilled areas of the peninsula.

Future Ecological Enhancements

3.33 Ecological enhancements will occur towards the end of the construction phase. Limited HGV movements are expected during this phase. Full details of the proposed ecological enhancements are detailed in Chapter 5 of the Environmental Statement submitted as part of the planning application.

4.0 VEHICLE ROUTING AND SITE ACCESS

4.1 This section outlines the site access arrangements for construction vehicles, construction workforce and site visitors.

Construction vehicle routing

4.2 HGV routes have been identified in order to manage the arrival and departure of construction vehicles from the wider strategic road network and local highway network. This is to minimise the impact on existing road users, highway safety and capacity.

4.3 Figure 4.1 and Figure 4.2 illustrate wider and local construction vehicle routing to the site. HGVs are required to approach the site from Denham via the M25, M40, A40 or the A412. Once on the A412, HGVs will be required to turn then east onto Moorfield Road, continuing onto Moorhall Road until the site access road. Once at the site access junction HGVs will turn left onto the site access road proceeding to the site entrance. HGVs are not permitted to travel through Harefield village or via Copper Mill Lane under any circumstances. The principal contractor will make this clear to companies materials are sourced from and any appointed sub-contractors before appointment.

4.4 Light Goods Vehicles (LGVs) and cars will utilise the local highway network and are not restricted to permitted routes.

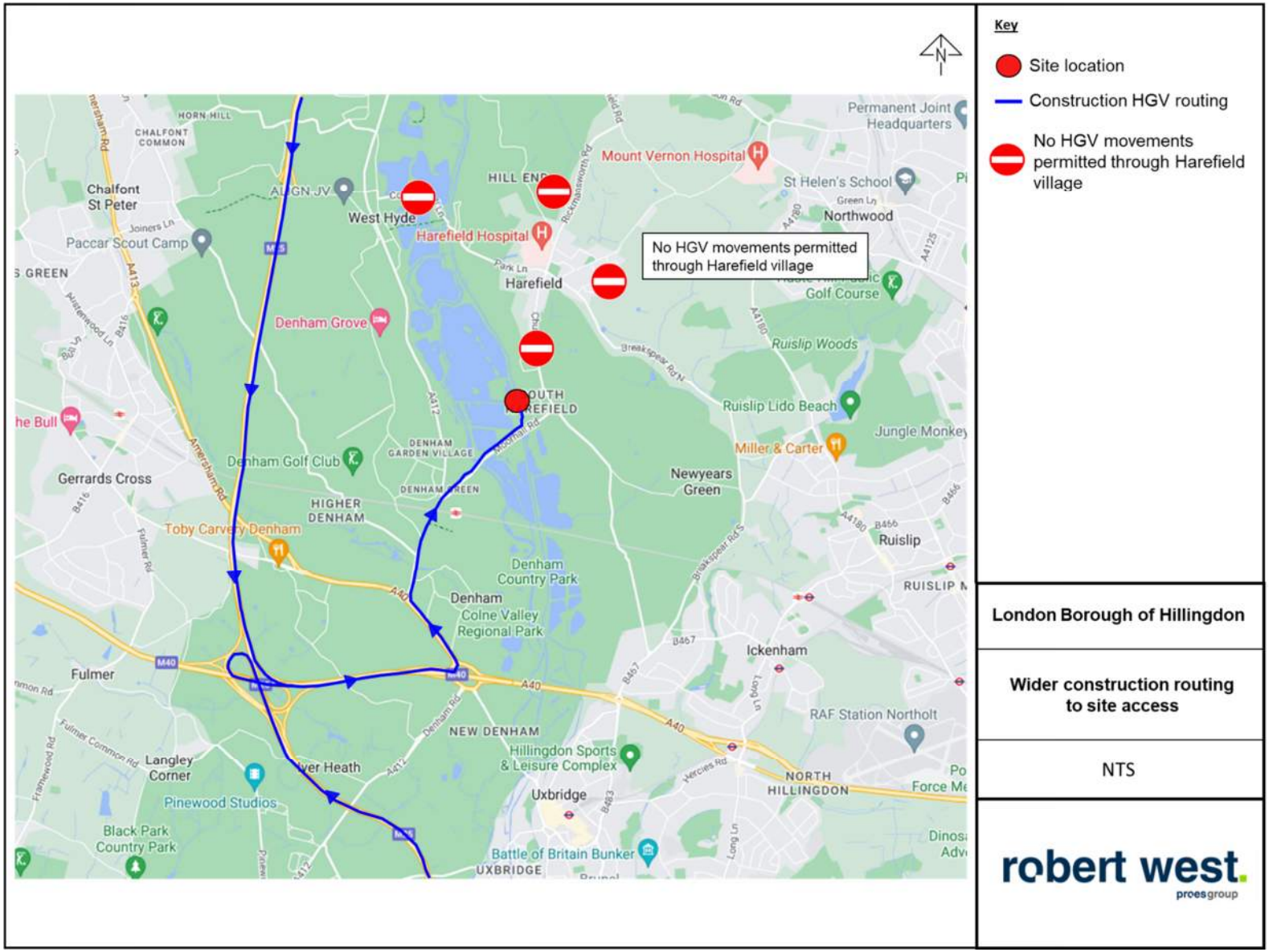

Figure 4.1: Wider construction vehicle routing to site

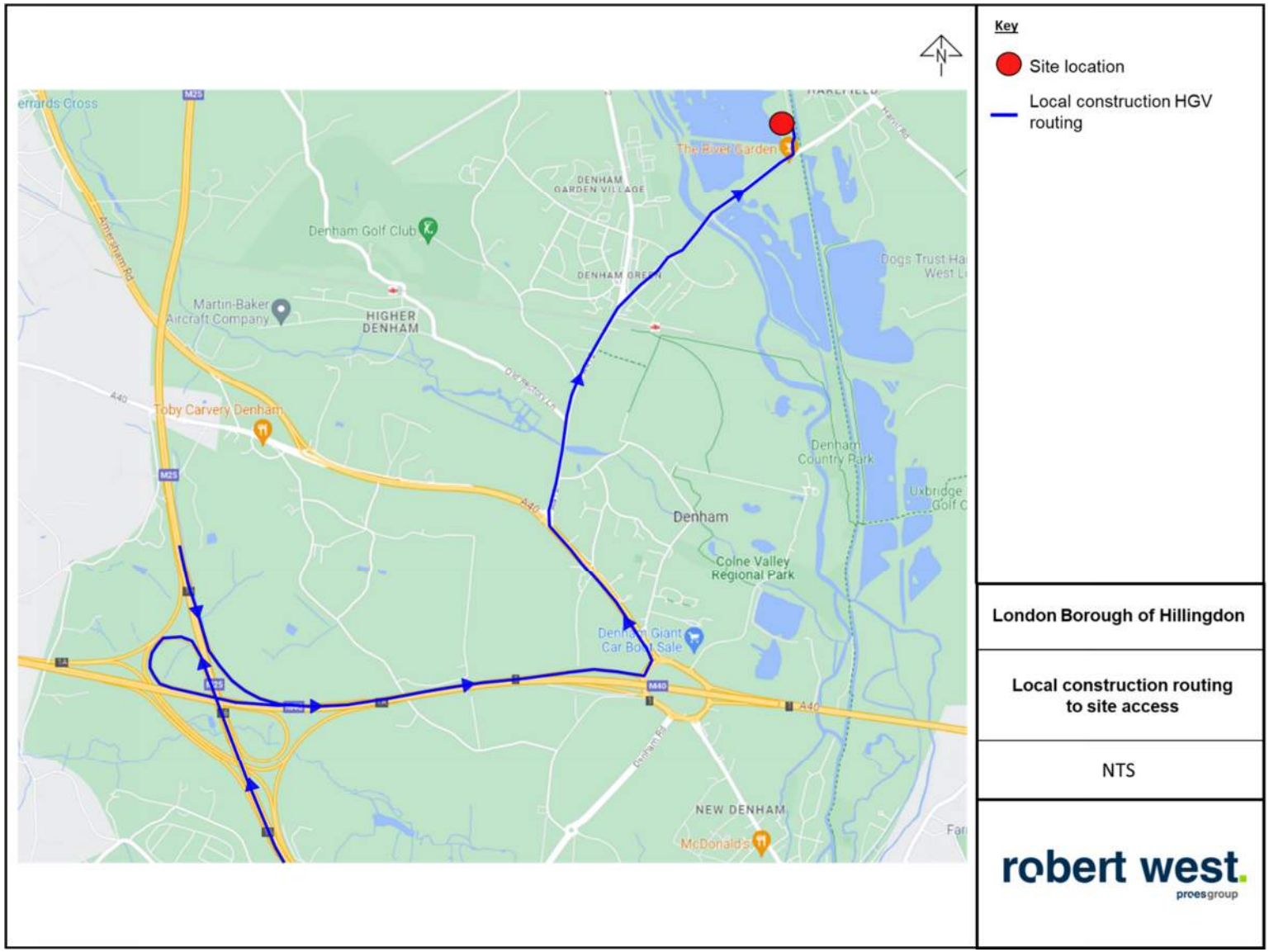

Figure 4.2: Local construction vehicle routing to site

Construction vehicle and deliveries

4.5 Construction vehicles will have a dedicated time of arrival slot that will be required to be pre-booked in with the site logistics manager. A gateman/ banksman will be present at the site access to check all construction vehicles and undergo any necessary vehicle checks. The gateman will prevent unauthorised access to the site.

4.6 The gateman/ banksman will also prevent any waiting or queuing of HGVs on the site access road waiting to enter the site. In the event that this occurs vehicles will either enter the site, be re-routed or asked to leave and be rescheduled.

4.7 All HGV movements will be restricted during the network peak hours (08:00-09:00 and 17:00-18:00).

4.8 All construction vehicles will load/ unload within the site boundary and preform turning manoeuvres within the site, preventing these movements on the local highway network or the site access road.

4.9 All vehicles leaving the site will be checked prior to alighting onto Moorhall Road ensuring no debris is taken off-site. Wheel washing facilities will be present at the site access to be used before construction vehicles leave the site.

Parking suspensions

4.10 No Temporary Traffic Management Orders (TTMOs) are required to facilitate construction.

Construction vehicles

4.11 The following construction vehicles are expected to travel to/ from the site:

i. Articulated lorries.

ii. Rigid lorries

iii. Mmobile cranes.

iv. Concrete mixers.

v. Excavators.

vi. Large tippers

4.12 The largest vehicle expected to travel to/from the site is a 16.5m articulated lorry.

4.13 Swept path analysis drawings of the largest vehicles expected to travel to the site are attached at Appendix C.

Construction worker and visitor parking

4.14 Car parking for contractors will be provided on-site within the secure site boundary. This will be located to the southeast of the site adjacent to the site entrance. Approximately 30 parking spaces will be provided.

4.15 Secure cycle parking will be provided on-site for construction worker personnel to the southeast of the site and take of cycling will be encouraged.

4.16 Under no circumstances parking on the local highway network will be permitted for contractors or visitors. This is including no parking along the site access road. Parking in the River Garden public house opposite the site access road will also not be permitted. Any contractors found parking off-site may be dismissed by the site manager.

5.0 STRATEGIES TO REDUCE IMPACTS

High impact site planned measures checklist	Committed	Proposed	Considered
Measures influencing construction vehicles and deliveries			
Safety and environmental standards and programmes	X		
Adherence to designated routes	X		
Delivery scheduling	X		
Re-timing for out of peak deliveries	X		
Re-timing for out of hours deliveries		X	
Use of holding areas and vehicle call off areas			X
Use of logistics and consolidation centres			X
Measures to encourage sustainable freight			
Freight by water		X	
Freight by rail			X
Material procurement measures			
DfMA and off-site manufacture			X
Re-use of material on site	X		
Smart procurement		X	
Other measures			
Collaboration amongst other sites in the area	X		
Implemented a staff travel plan		X	

Table 5.1: Measures influencing construction vehicles and deliveries

Measures influencing construction vehicles and deliveries

Safety and environmental standards and programmes

5.1 All contractor and sub-contractor vehicles arriving at the site will comply with sufficient safety measures and requirements relating to Work-Related Road Risk.

5.2 All vehicles and driver management practices will comply with the Fleet Operators Recognition Scheme (FORS) and CLOCS. FORS accreditation will be required by all sub-contracted transport/ haulage providers that the contractor intends to use.

5.3 A collision reporting system will be mandated to ensure all collisions and accidents involving the projects' vehicle and drivers are reported to the Project Manager and any relevant parties. The 'FORS Manager' reporting tool will be used; www.fors-online.org.uk.

Adherence to designated routes

5.4 Details of advisory routes to be used for journeys to and from the site for road operations are provided in Section 4.0. These access routes have been reviewed with respect to potential impacts, conflicts and hazards.

5.5 A copy of the final route plan will be given to all suppliers when orders are placed to ensure drivers are fully briefed on the required route to take. The suppliers will be made aware that these routes are required to be followed at all times unless agreed or alternate diversions are in place.

Delivery scheduling

5.6 A delivery management system will be used to control the volume of deliveries to the site. This system will work by defining the number of resources the site has and thus can service in 30 minutes intervals. It then limits the number of delivery bookings per half-hour to this defined capacity.

5.7 Sub-contractors and hauliers (if required) must be booked in a minimum of 48-hours in advance in order to allow the request to be reviewed and subsequently approved/ declined. The system can be accessed by completing a new user application form and submitting it, countersigned by the site manager or the delivery manager.

Re-timing for out of network peak hour deliveries

5.8 HGV deliveries will be scheduled outside of network peak hours (08:00-09:00 and 17:00-18:00). This is to avoid construction vehicles adding capacity to the local highway network, adding to any congestion during these hours. Scheduling HGV deliveries outside of network peak hours will

also reduce the risk of conflicts between HGVs and any vulnerable road users such as cyclists.

Re-timing for out of hours deliveries

5.9 Permission for out of hours deliveries will be sought by the principal contractor if required.

Use of holding and vehicle call off areas

5.10 The use of a holding area of vehicle call of area will be investigated by the principal contractor, if required.

Use of logistics and consolidation centres

5.11 The use of logistics and consolidation centres will be explored when a principal contractor is appointed, if required.

Measures to encourage sustainable freight

Freight by water

5.12 To reduce the overall number of HGV construction vehicle movements, waste transportation via barge along the Grand Union Canal is proposed. Powerday have a wharf at their Willesden Recycling Centre that could be utilised.

5.13 This will be confirmed on appointment of a principal contractor.

Freight by rail

5.14 The possibility of using the nearby rail lines to transport freight will be investigated by the principal contactor once appointed.

Material procurement measures

DfMA and off-site manufacture

5.15 DfMA and off-site manufacturing will not be required for the development other than deliveries for:

i. Prefabricated steel reinforced concrete.

ii. Concrete planks.

iii. Trusses.

iv. Pontoons.

v. The energy centre.

Re-use of material on site

5.16 Existing concrete and masonry on-site will be mined, crushed and reused to form concrete slabs for the build. Materials dredged from Broadwater Lake and gravel found on the peninsular will be used to form new islands within Broadwater Lake.

Smart procurement

5.17 Suppliers that use different modes of transport will be explored in the procurement stage, as well as sourcing local suppliers to contribute to the local economy. Also, opportunities to source materials from the same supplier(s) from sites in close proximity to the site will be explored.

Other measures

Collaboration amongst other sites in the area

5.18 The principal contractor will explore the possibility of coordinating with the HS2 site on Moorhall Road to the southwest if still operational when construction begins.

Implement a staff travel plan

5.19 On-site parking will be provided to eliminate contractor parking on the local highway network and the site access road. On-site parking provided includes secure cycle parking for contractors and visitors. Staff will be encouraged to use sustainable transport including the frequent bus services provided within the vicinity of the site.

6.0 ESTIMATED VEHICLE MOVEMENTS

6.1 This section of the CLP provides predicted levels of construction traffic in relation to construction works, deliveries, the construction workforce and visitors.

6.2 A contractor is not yet appointed and therefore construction vehicle volumes are subject to change. The final estimates of vehicles movements will be checked and confirmed by the contractor and will be included in a revised CLP.

6.3 The total number of HGV construction vehicles required during each construction phase is illustrated in Figure 6.1. Table 6.1 presents the monthly forecast of HGV trips during each construction phase.

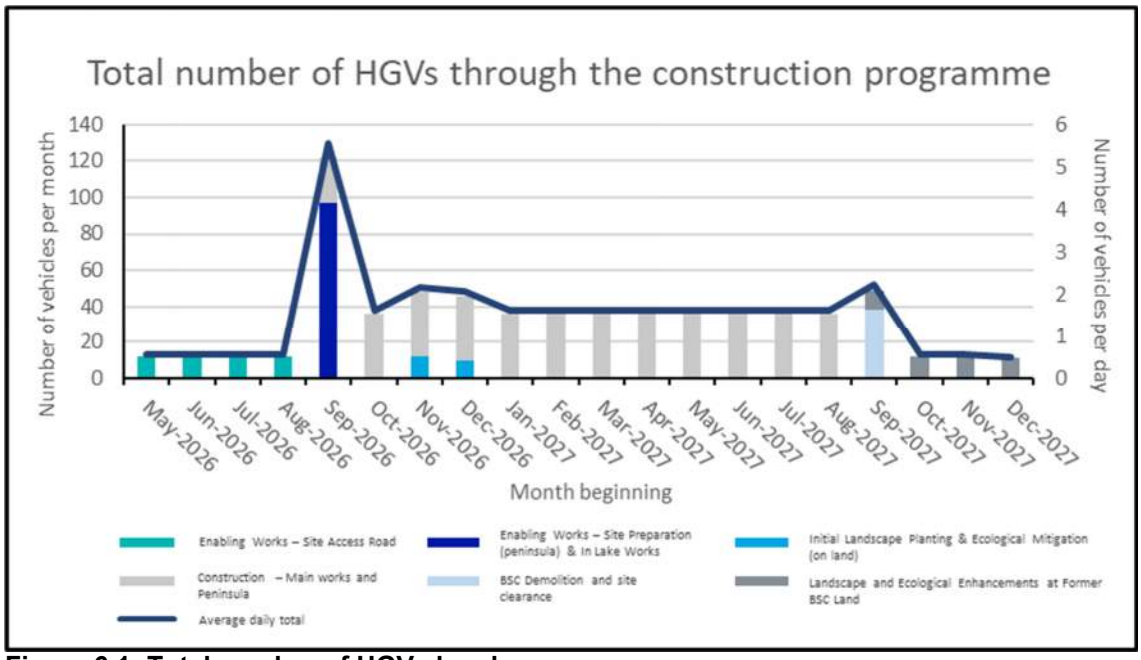

Figure 6.1: Total number of HGVs by phase

Construction phase	Period of stage	Average no. of trips (monthly)	Average no. of trips (daily)
Enabling works – Site Access Road	Q2 2026 - Q3 2026	12	1
Enabling works – Site preparation (Peninsula) & In Lake Works	Q3 2026 – Q3 2026	97	4
Initial Landscape Planting & Ecological Mitigation (on land)	Q4 2026 – Q4 2026	12	1
Construction – Main Works on Peninsula	Q3 2026 – Q3 2027	36	2
BSC Dismantaling and Site Clearance	Q3 2027 - Q3 2027	38	2
Landscape and Ecological Enhancements at Former BSC Land	Q4 2027 – Q4 2027	12	1
Peak period of construction	Q3 2026 – Q3 2026	122	6

Table 6.1 Monthly HGV trips by phase

6.4 A total of 672 HGV are estimated to be required throughout the entire construction phase. The peak construction period will be during Q3 2026 where up to 122 HGVs are expected to travel to the site each month with an average of six daily HGV trips.

6.5 In addition to HGV trips, LGV (light vans) and car trips to the site are expected daily throughout construction by contractors and visitors. During peak construction up to 30 van and car trips are expected daily. Outside of peak construction there is more likely to be between 15-20 van and car trips daily.

6.6 The site manager/ principal contractor will be responsible for coordinating deliveries. All deliveries will be scheduled outside of network peak hours (08:00-09:00 and 17:00-18:00).

7.0 IMPLEMENTING, MONITORING AND UPDATING

7.1 Once appointed, the construction logistics manager will be in charge of implementing the CLP. Their job description will include collecting data on:

i. Number of vehicle movements to the site; collected through a delivery booking-in system.

a. Total.

b. By vehicle type/ size/ age.

c. Time spent on site.

d. Consolidation centre utilisation.

e. Delivery/ collection accuracy compared to schedule.

ii. Breaches and complaints.

a. Vehicle routing.

b. Unacceptable queueing.

c. Unacceptable parking.

d. Supplier FORS accreditation.

e. Ultra-Low Emissions Zone (ULEZ) compliance.

iii. Safety.

a. Logistics-related accidents.

b. Record of associated fatalities and serious injuries.

c. Vehicles and operations not meeting safety requirements.

iv. Description of the contractor's handbook.

v. Description of the driver's handbook.

Appendix A – Site masterplan

The use of drawings by the Customer acts as an agreement to the following statements. The Customer must not use the drawings if it does not agree with any of the following statements:

All drawings are based upon site information supplied by third parties and as such their accuracy cannot be guaranteed. All features are approximate and subject to clarification by a detailed topographical survey, statutory service enquiries and confirmation of the legal boundaries. Do not scale the drawings. Figured dimensions must be used in all cases. All dimensions must be checked on site. Any discrepancies must be reported in writing to Colour-UDL before proceeding. All drawings are copyright protected. Refer to full Terms & Conditions at www.colour-udl.com

KEY

Site

- Application boundary
- Existing waterbody, sailing zone
- Buffer zone (no sailing)
- Wildlife refuge (no sailing)
- Existing woodland to be protected (exempt from use / access)
- Existing tree cover
- Existing native groundcover shrubs on top of existing hardstanding
- Exposed existing concrete hardstanding to be used as driveway, footpath, car parking and pedal karting track surface

Hardworks

- Vehicular Tarmac / Blacktop
- Pedestrian Tarmac / Blacktop
- Pedestrian coloured Tarmac / Buff
- Vehicular coloured Tarmac / Buff
- Grass-concrete paving (Grasscrete)
- Gravel surface with native wildflower overseeding for dinghy parking and rigging
- Wet-pour safety surface for fall protection around bouldering walls
- 2.0m high living acoustic barrier (Gramm EcoSoundBlok)
- 1.2m high chestnut paling fence
- 1.8m high V-mesh security fencing
- 1.2m high & 1.0m wide dry hedge with shrub planting alongside to close gaps in existing vegetation barrier;
- 1.5m high hazel hurdle panels attached to dry hedge

Softworks

- Native tree planting
- Willow planting in submerged planters
- Native hedge planting
- Native shrub planting
- Other neutral grassland seeding
- Lowland meadow seeding
- Woodland improvement planting

Rev	Amendments	Date	Drwn	Chkd
07	Entrance boat wash relocated	03.07.25	DB	PO
06	Updated to Client comments	03.07.25	DB	PO
05	Updated layout	16.06.25	DB	PO
04	Updated layout	20.11.24	TK	PO
03	Updated layout	04.11.24	TK	PO
02	Updated layout	01.10.24	TK	PO
01	First issue	26.09.24	TK	PO

Project
HWSFAC - Broadwater Lake

Drawing Title
Overall Landscape Masterplan

Project No.
2121

Scale @ A0
1:1500

Project Status
RIBA Stage 3

Drawing No.
HWSFAC-COL-00-XX-DR-L-1109

Revision
07

York 0190 49 25 888
London 0203 92 49 888
Newcastle 0191 24 24 224

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colour

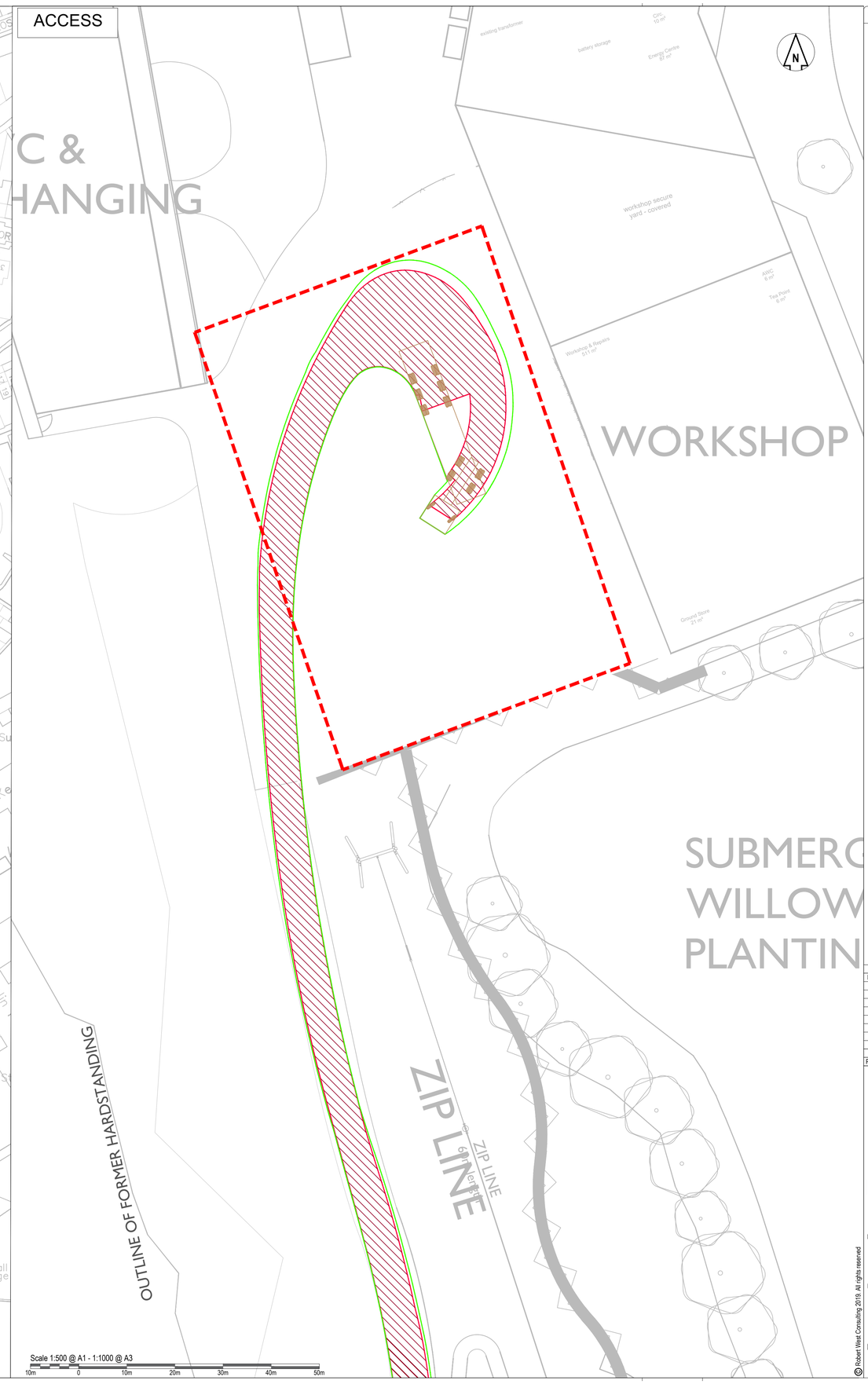
Appendix B – Swept path analysis

ACCESS

Scale 1:1000 @ A1 - 1:2000 @ A3

20m 0 20m 40m 60m 80m 100m

ACCESS



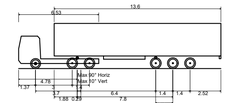
Scale 1:500 @ A1 - 1:1000 @ A3

10m 0 10m 20m 30m 40m 50m

DO NOT SCALE OFF THIS DRAWING

Key:

- Wheel track (Forward manoeuvre) Shows outer limit of wheel entirely within the carriageway. Not encroaching on any kerbs
- Wheel track (Reverse manoeuvre) Shows outer limit of wheel entirely within the carriageway. Not encroaching on any kerbs
- Body track - Shows the outer limit of body generally within carriageway, may overhang the verge when turning where necessary
- Compound Area



Max Legal Length (UK) Articulated Vehicle (16.5m)

Overall Length	16.500m
Overall Width	2.550m
Overall Body Height	3.681m
Min Body Ground Clearance	0.411m
Max Track Width	2.500m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	6.530m

Revision History

Rev	Comment	By	Chkd	Appr	Date

Current Revision

P01	PRELIMINARY	AA	WH	SB	11/08/2025

PRELIMINARY

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Project

HWSFAC

Drawing Title

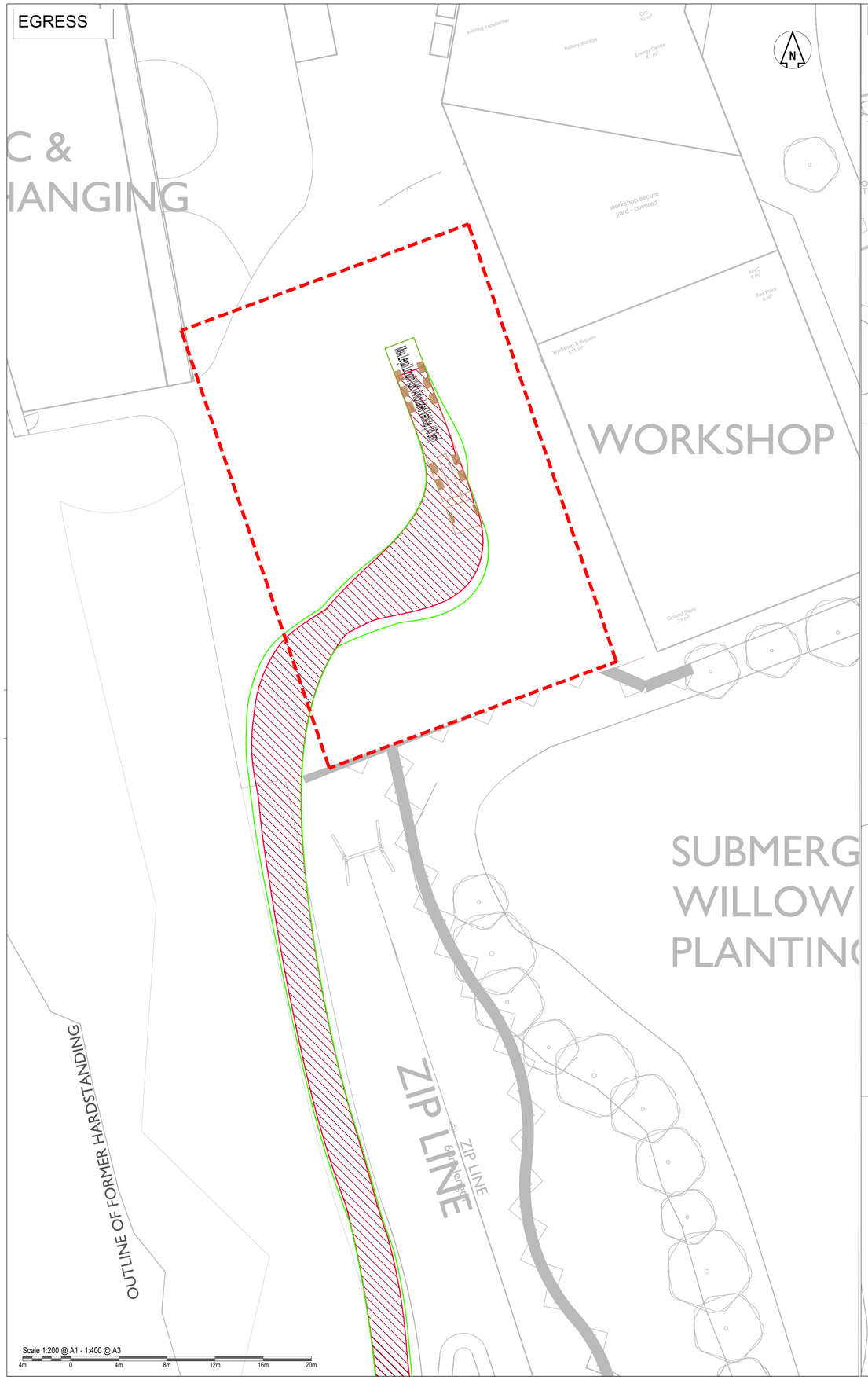
CONSTRUCTION PHASE
16,5m ARTICULATED VEHICLE - ACCESS
SWEPT PATH ANALYSIS

RWCL Internal Register reference: 3249-008

1:250 @ A1

3249-008-301-P01

EGRESS



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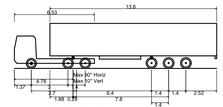

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PRELIMINARY

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Project

HWSFAC

Drawing Title

CONSTRUCTION PHASE
16,5m ARTICULATED VEHICLE - EGRESS
SWEPT PATH ANALYSIS

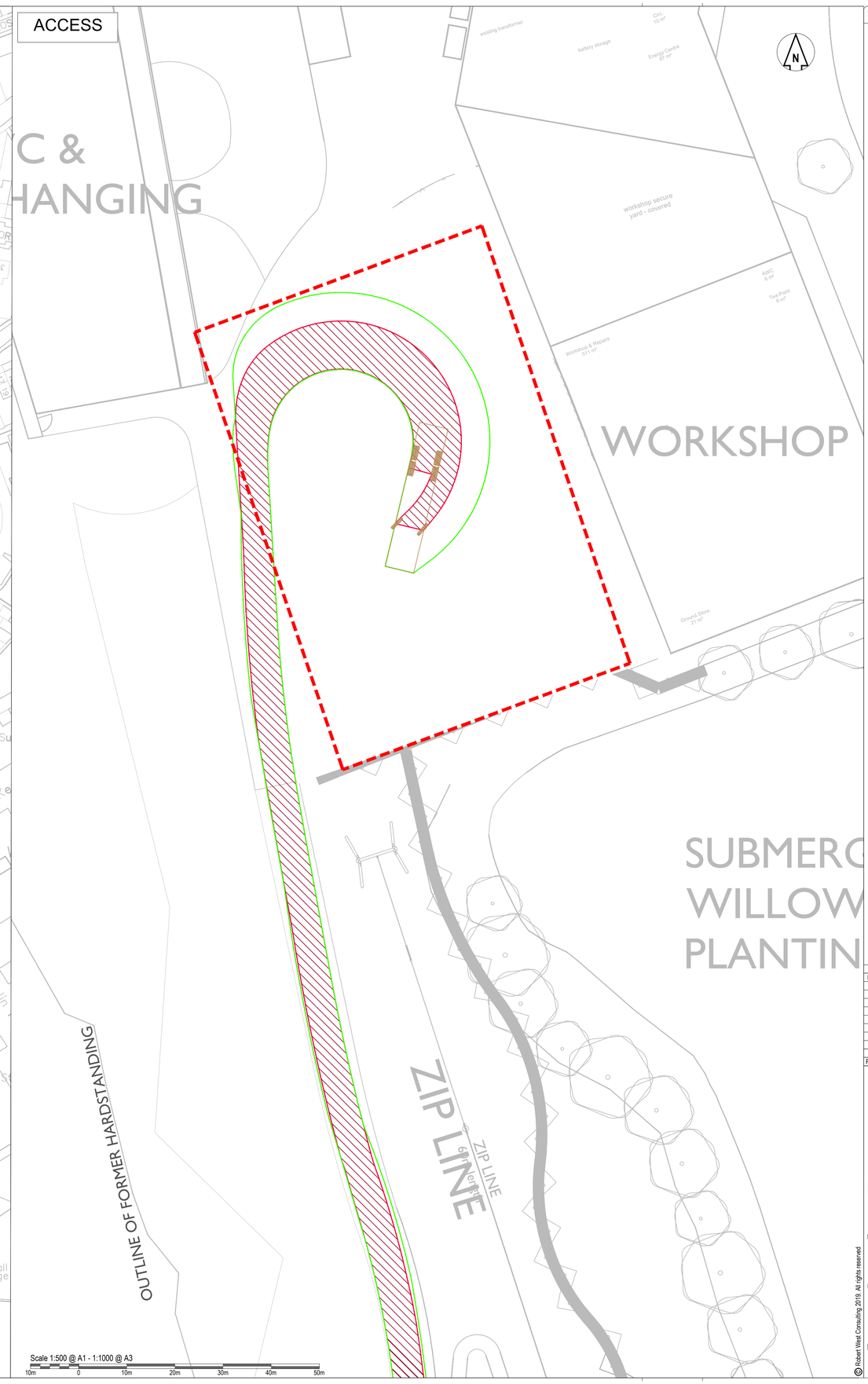
RWCL Internal Register reference: 3249 - 008

1:250 @ A1

3249-008-302 - P01

ACCESS

ACCESS



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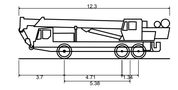
- Body track - Shows the outer limit of body generally within carriageway, may overhang the verge when turning where necessary
- Compound Area



Large Mobile Crane	
Overall Length	12.300m
Overall Width	2.430m
Overall Body Height	3.386m
Min Body Ground Clearance	0.590m
Track Width	2.430m
Lock to lock time	6.00s
Kerb to Kerb Turning Radius	10.000m

Revision History

Rev	Comment	By	Chkd	Appr	Date

Current Revision

P01	PRELIMINARY	AA	WH	SB	11/08/2025

PRELIMINARY

LONDON BOROUGH OF HILLINGDON

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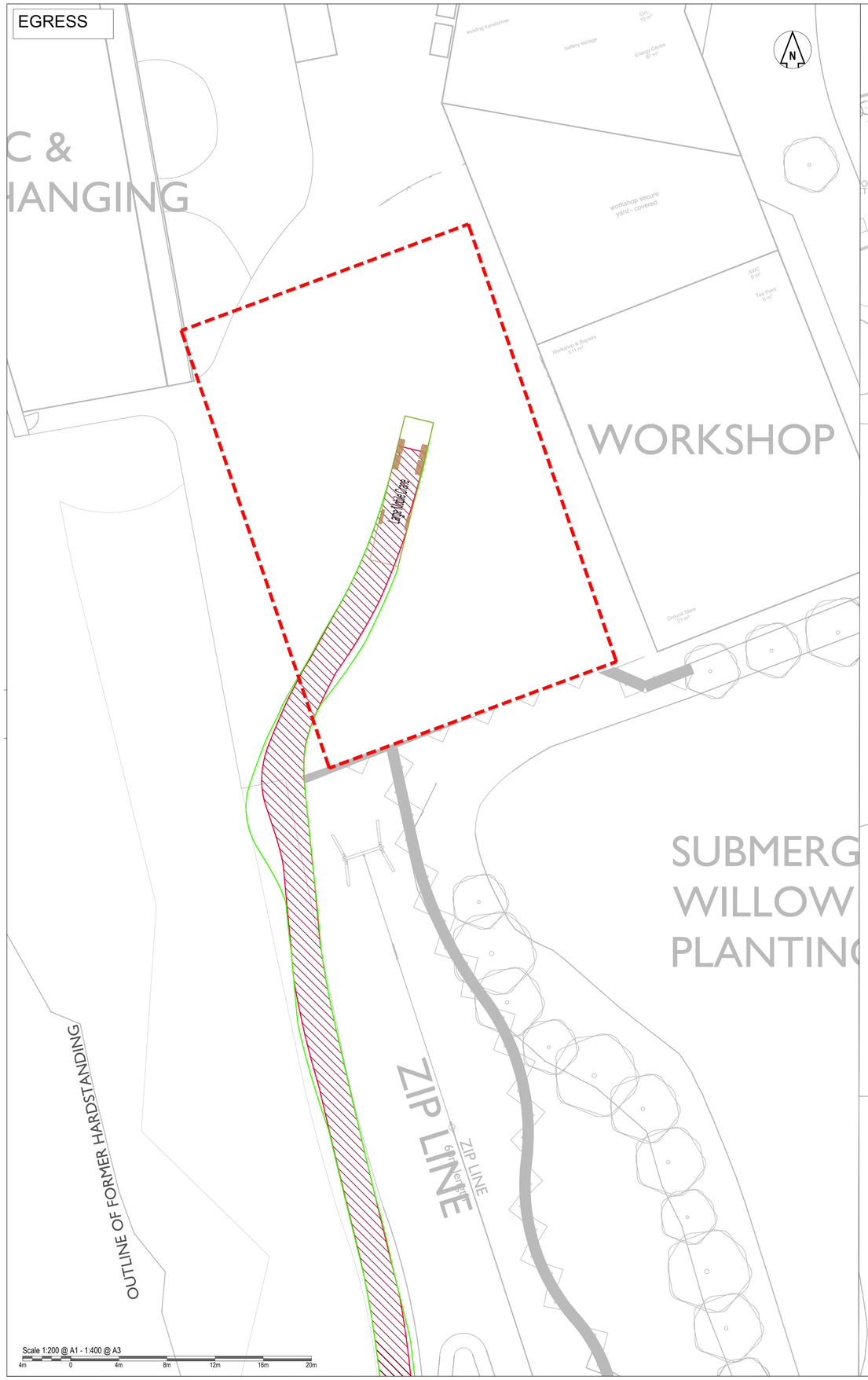
Project
HWSFAC

Drawing Title
CONSTRUCTION PHASE
LARGE MOBILE CRANE
SWEPT PATH ANALYSIS

RWCL Internal Register reference: 3249-008 As Shown @ A1

3249-008-303-P01

EGRESS

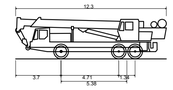


EGRESS

DO NOT SCALE OFF THIS DRAWING

Key:

- Wheel track (Forward manoeuvre) Shows outer limit of wheel entirely within the carriageway. Not encroaching on any kerbs
- Wheel track (Reverse manoeuvre) Shows outer limit of wheel entirely within the carriageway. Not encroaching on any kerbs
- Body track - Shows the outer limit of body generally within carriageway, may overhang the verge when turning where necessary
- Compound Area



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Project

HWSFAC

Drawing Title

CONSTRUCTION PHASE
LARGE MOBILE CRANE - EGRESS
SWEPT PATH ANALYSIS

RWCL Internal Register reference: 3249-008 As Shown @ A1

3249-008-304-P01