10 Landscape & Visual Impact Assessment

Preface

This preface highlights the new and amended information that has been included within this chapter since the 2023 ES:

- **Section 7.3: Methodology** - 'Consultation' section has been updated to more clearly evidence compliance with the scoping opinion. A summary is provided of additional post-application consultation. Clarification has been provided to explain how the visualisations comply with industry standard methods.
- **Section 7.4: Baseline Conditions** – This section has been updated to include clarification of how the landscape and visual receptors taken for further assessment have been determined, the value and susceptibility of each visual receptor and viewpoint is now included to justify their sensitivity. The value of each landscape receptors is included with reference to the criteria given in the methodology. Provide the baseline scenario for the visual receptors and their associated value on which the assessment has been based. Clarify how the landscape and visual effects would change over time with reference to the identified assessment scenarios.
- **Sections 7.6 and 7.8: Assessment of Effects –**
  - The assessment has been updated to include the revised Proposed Development drawings and plans.
  - The assessment includes: more rationale for the levels of significance to justify how some receptors with the same sensitivity and levels of magnitude have been assessed as having different levels of significance, and specific effects for each identified landscape receptors to justify the magnitude with reference to scale, geographic extent, duration, and reversibility.
- **Section 10.7: Cumulative Effects:**
  - An assessment of the cumulative landscape impacts is now provided.
  - The combined effect of the cumulative schemes in the cumulative visual assessment is also provided.

10.1 Introduction

10.1.1 This chapter was prepared by Chartered Landscape Architects, Colour and presents an assessment of the likely significant effects of the Proposed Development on landscape character and visual amenity of the Proposed Development. Mitigation measures are identified, where appropriate, to avoid, reduce or offset any significant adverse effects identified and / or enhance likely beneficial effects. The nature and significance of the likely residual effects are reported.

10.1.2 The chapter considers the temporary landscape and visual effects during construction that will arise from the presence of construction plant, construction compounds, temporary access routes, earthworks and stockpiles in the landscape and views. Effects will also arise from construction activity including dredging, construction and from the removal of localised

areas of existing vegetation. Permanent landscape and visual effects during operation will arise from the presence of altered landforms, water bodies, buildings, parking areas, recreational equipment and planting in the landscape and views.

10.1.3 This chapter is informed by the 'Landscape Strategy' that supports the planning application and is provided as Appendix 5.2. Details of the landscape proposals will be required to come forward in accordance with the Landscape Strategy. Proposed landscape and ecological mitigation masterplans are available in Appendix 10.2 and Chapter 5: Description of Development. Further figures which support the assessment are provided in Appendix 10.3.

10.1.4 The chapter is supported by the following appendices:

- Appendix 10.1: Relevant Planning Policy and Designations;
- Appendix 10.2: Proposed Landscape and Ecological Masterplans;
- Appendix 10.3: Figures;
- Appendix 10.4: Baseline Photographs of Site from key viewpoints;
- Appendix 10.5: Accurate Visual Representations (AVRs) and visualisations;
- Appendix 10.6: Arboricultural Impact Assessment by RSK 2023;
- Appendix 10.7: Arboricultural Impact Assessment Addendum by Landmark 2025.

Competence

10.1.5 This chapter was prepared by Peter Owens, a Chartered Member of the Landscape Institute (CMLI) with over 30 years' experience in practice and of Landscape & Visual Impact Assessment. Peter is a Master of Landscape Design (MLD), a Chartered Member of the Landscape Institute (CMLI), a Member of the Urban Design Group and Fellow of the Royal Society of Arts & Manufactures (FRSA).

10.1.6 Peter became an Expert Panel Member of DesigNE in 2021 and a Design Review Panel (South West) member in 2022. A key focus of these reviews is landscape character, fit and opportunities for ecological enhancement. Key experience includes review of the LVIA for the London 2012 Olympics Whitewater Canoe Slalom in the Lee Valley, recently for the approved Gravesham Leisure Centre, in the Kent Greenbelt and authorship of complex riverside urban regeneration sites at Quayside West and Malmo Quays in Newcastle Upon Tyne, 2019 and 2021 respectively.

10.2 Legislation, Planning Policy and Local Guidance

10.2.1 This section, together with Appendix 10.1, highlights key legislation, planning policy and local guidance of relevance to the LVI5A.

Legislation Context

10.2.2 Nationally important landscapes, including National Parks and Areas of Outstanding Natural Beauty, have protection through law. There are no nationally important landscapes within a 3km radius of the Site.

Planning Policy

National

10.2.3 National planning policy in relation to landscape is contained within the National Planning Policy Framework (NPPF)[1]. The following policies are of most relevance to this LVIA:

- Chapter 13 - Protecting Green Belt Land;
- Chapter 15 - Conserving and Enhancing the Natural Environment; and
- Chapter 16 - Conserving and Enhancing the Historic Environment

Regional

10.2.4 The Site lies within the London Metropolitan Green Belt. The London Plan[2] (March 2021) is relevant to the Site.

Local

10.2.5 Relevant policies from the LBH Local Plan, comprising Part 1 – Strategic policies (Adopted November 2012) and Part 2 – Development Management Policies and Site Allocations and Designations (Adopted January 2020) are provided in Appendix 10.1.

10.2.6 The Site lies within the Colne Valley Regional Park (CVRP) which was established in 1967 to preserve areas suitable for leisure, recreation and conservation to the west of London, between Rickmansworth and Staines. Further details are provided in Appendix 10.1 and in the Baseline Conditions section with respect to landscape character of the CVRP.

10.2.7 The objectives of the CVRP, as stated by the Colne Valley Park Community Interest Company (CVPCIC), are as follows:

"To maintain and enhance the landscape, historic environment and waterscape of the park in terms of their scenic and conservation value and their overall amenity.

To safeguard the countryside of the Park from inappropriate development. Where development is permissible, it will encourage the highest possible standards of design.

To conserve and enhance biodiversity within the Park through the protection and management of its species, habitats and geological features.

To provide opportunities for countryside recreation and ensure that facilities are accessible to all.

To achieve a vibrant and sustainable rural economy, including farming and forestry, underpinning the value of the countryside.

To encourage community participation including volunteering and environmental education. To promote the health and social well-being benefits that access to high quality green space brings."

10.3 Assessment Methodology

Guidance

10.3.1 This assessment has been undertaken in accordance with the following guidance:

- 'Guidelines for Landscape and Visual Impact Assessment Third Edition' (2013) (GLVIA3) published by the Landscape Institute and the Institute of Environmental Management and Assessment[4]; and
- Visualisations produced were in accordance with the Landscape Institute's 'Technical Guidance Notes 06/19' (17 September 2019)[5] and 'Visual Representation of Wind Farms Guidance, Version 2.2' produced by Scottish Natural Heritage (SNH) for the production of panoramas in baseline photography. The methodology used is presented in Appendix 10.8. The level of detail provided in the visualisation (photomontage) was agreed with LBH and ranged from AVR 0 (annotation locating the proposal on a base photograph) to AVR 3 (fully rendered model fitted into the 5view).

Consultation

Pre-Application Consultation

10.3.2 Table 10.1 summarises key comments raised by consultees of relevance to this assessment during pre-application meetings and / or communication exchanges and how the assessment has responded.

Table 10.1: Consultation Response Summary

Consultee and Comment	Response relevant to the LVIA
LB Hillingdon (Planning) September 2022	
An initial masterplan was presented at a pre-application meeting. More ecologically and landscape driven information was requested.	Embedded mitigation within the landscape masterplan was developed (see Section 10.5 of this chapter).
LB Hillingdon (Landscape and Planning) 16 March 2023	
A 'work in progress' ecologically driven landscape masterplan, Zone of Theoretical Visibility (ZTV) study and proposed viewpoints for visual analysis and viewpoints for Accurate Visual Representation (AVR) study was presented by Greengage (project ecologist) and Colour. LBH requested that an LVIA was requested as part of the planning application as the Site is located within Metropolitan Greenbelt. The viewpoint location of 3 no. fully rendered AVRs was agreed.	A full LVIA has been undertaken as agreed with LBH. Fully rendered AVRs have been produced and are included in Appendix 10.5.

Consultee and Comment	Response relevant to the LVIA
Natural England Meeting (16 March 2023)	
A 'work in progress' ecologically driven landscape masterplan was jointly presented by Colour with Greengage (project ecologist).	Further information on engagement with Natural England is provided in Chapter 7: Biodiversity.
Natural England Meeting (2 March 2023)	
A meeting was held on Site with Natural England officers to discuss and review the baseline conditions with the ecologically driven landscape masterplan. Opportunities for habitat enhancement and construction mitigation were discussed.	Details of habitat enhancement and construction mitigation is presented in the Embedded Scheme Mitigation Section Chapter 7: Biodiversity.
Broadwater Sailing Club (Spring 2023)	
Liaison undertaken between BSC and the Applicant	Requirements of the relocated BSC were confirmed such as agreement on co-location with the watersports and activity centre, requirements of a 'sailing triangle' on the lake and boat parking numbers.
Hillingdon Outdoor Activity Centre (Spring 2023)	
Liaison between the former HOAC facility and the Applicant	Requirements of the relocated watersports and activity centre facility were confirmed. This formed the brief of elements to be included within the landscape masterplan.
Greater London Authority (15 May 2023)	
The latest iteration of the ecologically driven landscape masterplan was jointly presented by Colour with Greengage (project ecologist). The scheme was positively received from ecological and social perspectives whilst the need to retain openness of the Greenbelt was highlighted.	The masterplan has been developed accordingly with minimal intervention of new elements within the landscape visible from key receptor locations and the presence of open water maintained.
Hertfordshire and Middlesex Wildlife Trust (21 June 2023)	
The latest iteration of the ecologically driven landscape masterplan was jointly presented by Colour with Greengage (project ecologist).	The package of ecological enhancement measures incorporated within the masterplan so as to improve the existing condition of the Site are described in Section 10.5 of this chapter and Chapter 7: Biodiversity.

EIA Scoping Opinion

10.3.3 A request for a Scoping Opinion was submitted on behalf of the Applicant to LBH by Quod on 23 February 2023. An EIA Scoping Report (the 'Scoping Report') accompanied the request (Appendix 3.2). A Scoping Opinion was issued by the LBH on 19 May 2023 (Appendix 3.3) which included comments from statutory consultees. Table 10.2 summarises key comments raised by consultees of relevance to this assessment by the EIA Scoping Opinion and how the assessment has responded to them.

Table 10.2: EIA Scoping Opinion Response

Consultee and Comment	Response
Arup (on behalf of LBH)	
The Landscape and Visual Impact Assessment (LVIA) should propose measures to reduce visual impact during construction and detail how the Main Building would be 'visually sensitive'.	See section 10.5
Impacts should be assessed using visualisations produced in accordance with the Landscape Institute Technical Guidance Note 06/19.	See Appendix 10.5
Impacts upon sensitive recreational visual receptors of walking routes, cycle networks and residential receptors need to be considered within the visual assessment and effects reported as appropriate in the ES. The list of viewpoints should be reviewed in light of these sensitive visual and townscape receptors.	See Section 10.6
Plans and figures submitted with the planning application, which show the outline and detailed proposals, should be referred to within the assessment.	See Appendix 10.3
Mitigation measures should be incorporated into the Proposed Development, where possible, to prevent, reduce or compensate for any potential adverse effects on the landscape and visual amenity, which may occur during the construction or operational phase. Mitigation measures should be informed by the LVIA. The mitigation section of the LVIA should detail primary measures embedded in the design, construction practices and potential secondary measures to avoid and reduce impacts. Details should be provided on the location and size of areas	See section 10.5

Consultee and Comment	Response
committed to as part of the over-compensation for trees lost and list the species to be planted. The proposed design and materiality should be justified, and it should be demonstrated that the local character and sensitivities have been considered.	
LBH Urban Design Officer (Landscape and Visual)	
The EIA needs to include a thorough evaluation of the landscape character identifying its inherent attributes. The landscape character assessment will form the preliminary stages of the LVIA with assessment of the sensitivity of the Site and its robustness to change that are derived from the landscape value of the Site. It should be demonstrated that the scale and extent of development within the Site are sensitive to the location and designed to avoid or minimise adverse impacts on the designated areas. Further, an LVIA should form part of the EIA. While it has been demonstrated with photos that there are only two open views of the Site shown on Figure 10.A3.2 with the ZTV. These are View no. 7 PROW south of Denham, View no. 3 from Public Right of Way (PROW) off Merle Avenue south west of Harefield. The LVIA should also include a viewpoint form the Old Orchard Pub. These three viewpoints should be worked up to show visualisations of the scheme in accordance with Landscape Institute's guidance note TGN 06/19 Visual Representation of development proposals Table 1 Visualisation and produce visualisations of Type 2-4.	This chapter includes assessment of local landscape character and AVRs in accordance with GLIVIA3. In response to a detailed testing exercise with AVRs, the revised masterplan was amended so as to minimise potential visual impact (further information is set out in Chapter 4: Alternatives).
The LVIA should propose measures to reduce visual impact during construction and detail how the Main Building would be 'visually sensitive'.	These measures are included under 'Embedded Mitigation'.
Impacts should be assessed using visualisations produced in accordance with the Landscape Institute Technical Guidance Note 06/19.	AVRs undertaken accordingly.
The HS2 Colne Valley Viaduct would be the greatest change to the landscape and visual baseline and should be considered appropriately in all assessment scenarios and viewpoints.	The Colne Valley Viaduct is now complete and therefore considered within appraisal of the landscape and visual baseline.

Consultee and Comment	Response
Impacts upon sensitive recreational visual receptors of walking routes, cycle networks and residential receptors need to be considered within the visual assessment and effects reported as appropriate in the ES. The list of viewpoints should be reviewed in light of these sensitive visual and townscape receptors.	Sensitive viewpoints were generated with a bias towards recreational routes and those of greatest local and regional importance.
Plans and figures submitted with the planning application, which show the outline and detailed proposals, should be referred to within the assessment.	Chapter 5: Description of the Development and supporting appendices, plus Appendix 5.2.
Mitigation measures should be incorporated into the Proposed Development, where possible, to prevent, reduce or compensate for any potential adverse effects on the landscape and visual amenity, which may occur during the construction or operational phase. Mitigation measures should be informed by the LVIA. The mitigation section of the LVIA should detail primary measures embedded in the design, construction practices and potential secondary measures to avoid and reduce impacts. Details should be provided on the location and size of areas committed to as part of the over-compensation for trees lost and list the species to be planted. The proposed design and materiality should be justified, and it should be demonstrated that the local character and sensitivities have been considered.	Section 10.5: Embedded Scheme Mitigation sets out how proposals have been sensitively designed to minimise visual impact. Alternatives and the design evolution are set out in Chapter 4: Alternatives. The revised proposals greatly reduce the landscape and visual effects compared to the 2023 Scheme as demonstrated in this chapter.
The ES should include an assessment of the impacts on any land in the area affected by the development which qualifies for conditional exemption from capital taxes on the grounds of outstanding scenic, scientific, or historic interest. An up-to-date list is available at www.hmrc.gov.uk/heritage/lbsearch.htm.	There would be no likely significant effects on heritage assets therefore this has been scoped out of the ES with agreement from LBH.
Canal and River Trust	
Following an initial meeting with the applicant, it is our understanding that revisions for the canal boundary, to include soft landscaping provision / enhancements, such as hedges, are proposed in lieu of the fencing and this would form part of any future submission. The Trust consider this approach would be preferable and are happy to	From a safeguarding perspective the eastern Site boundary should be secure. It would be a combination of fences and hedges to be designed in detail sensitively with biodiversity, local landform, existing tree roots and visual

Consultee and Comment	Response
discuss these proposals further with the applicant / developer as the scheme progresses.	amenity. The details will be controlled by planning condition(s).

Post Application Consultation

10.3.4 Table 10.3 presents the comments raised by consultees to the 2023 ES and how the Proposed Development and the assessment has responded to them.

Table 10.3: Post Application Consultation

Consultee and Comment	Response relevant to the LVIA
LBH Planning (Arup on behalf of LBH Planning)	
Arup provided an Initial Review Report (IRR) of the 2023 ES (date December 2023), on behalf of LBH, which included a series of clarifications and potential further information requests in relation to the 2023 ES Chapter 10: Landscape and Visual Impact Assessment.	A detailed response to the IRR is provided in Appendix 3.5: ES Review Response.
LBH Urban Design and Landscape Officer Comments (21 December 2023)	
Significant increase in building footprint and volume which affects the openness of the Green Belt. The buildings should be reduced and amalgamated into one building and more appropriate for the context.	An assessment of Green Belt is included within the Planning Statement. The footprint of the buildings has been reduced and consolidated as far as practicable. In addition, the height and location of buildings have been amended subsequent to detailed testing to avoid and minimise potential views from the agreed most sensitive viewpoints. All buildings are now positioned on existing hard standing. Further details of the revisions to the 2023 Scheme are provided in Chapter 4: Alternatives. The revised proposals have also significantly reduced the footprint areas for car parking, boat storage and focuses on repurposing existing hard standing.
Insufficient information has been provided for a full assessment of the landscape proposals. Revisions are sought on the submitted information	A full description of the revised proposals is provided in Chapter 5: Description of the Development with supporting drawings

Consultee and Comment	Response relevant to the LVIA
to reduce the amount of hardstanding for access road infrastructure, boat parking and car parking with improvements to the current landscape proposals: a. More details of the existing condition / areas of hardstanding to determine whether removal of surfaces and rubble would enhance the existing ecology / landscape character or detrimentally disturb an existing habitat; b. Hard surfacing drawing, including the materiality of road, car parking space, boat parking, footpaths and archery surface. It needs to be demonstrated that the hard surfacing areas are minimised and located in areas with existing hard surfacing. Permeable materials should be used wherever possible; c. Proposals for the two nearby parcels consisting of a grassland field and a small parcel of hawthorn woodland) separate to the main Site but in the same ownership; d. Specification and scaled drawings of all the play equipment, including the high ropes, low ropes, air line and giant swing facilities, showing any footings required; e. Any earthworks required for the caving activity or equipment required showing the extent of the works; f. Location of the swales; g. Details of the entrance gates; h. Tree pit details; i. Lighting proposals; j. Details of the bird hides, with scaled drawings and any foundations required; k. All elements shown on the landscape drawing indicated in the key, this especially relates to the landscape masterplan; l. The species and genus of all the proposed planting;	provided in Appendix 5.1. The LVIA has been updated to reflect the revised proposals. a. The existing hardstanding cannot be removed due to potential for creating contamination pathways to groundwater and Broadwater Lake (see Chapter 9: Ground Conditions and Contamination for further details; b. The Landscape Strategy (LS) (Appendix 5.2) includes drawings showing the extent of the existing hard standing and proposed hard surfaces elsewhere on Site. As can be seen, proposed 'hard' uses such as buildings, vehicle movement and parking are predominantly confined to the existing hard surface; c. There are no proposals for these parcels of land; d. The high ropes zip line and big swing included in the 2023 Scheme are no longer included in the Proposed Development. All outdoors activities equipment will be below the woodland treeline. Detailed specification and scaled drawings of all other play equipment will be secured via a planning condition; e. 'Caving' is a non-intrusive above ground activity undertaken in a 'stack' of plastic tubes placed on the existing surface between trees; f. The Site is permeable with no swales required – refer to the drainage strategy (Appendix 8.1) for more information; g. Gate details provided on boundary strategy plans within the LS; h. Refer to the LS;

Consultee and Comment	Response relevant to the LVIA
m. A better placemaking approach to the arrival space near the Main Building. The proposals show a large area of hard surfacing for a turning circle which could be improved with a one way system around the trees eliminating the need for the large turning circle with the re-arrangement of the car parking to make more efficient use of land. The barbecue structure is an excessive structure that could be replaced with a temporary Gazebo with landscape improvements to the anchorage; n. Demonstration that the proposed tree planting in areas of existing hard standing will be provided with tree pits to allow the trees to thrive; o. Revised location for proposed trees planted too close to one another. All trees should be planted to allow sufficient space to reach maturity; p. Tree planting in the middle of the rows of boat parking; q. Pedal Kart track to be re-located to the Activity Area which has an existing hard standing. This would make this area more multi-purpose while allowing more landscape to be left undisturbed and potentially require less acoustic fencing; r. Where acoustic fencing is not required provide barriers of woven willow to ensure birds remain undisturbed; and s. Re-align the entrance road near the Main Building to the west rather than the east of the tree group. This would reduce the amount of hardstanding and create a better continuum of trees in this area. **Car parking, access road and boat parking** The Proposed Development will provide approximately 82 car parking spaces across the site with coach parking spaces. t. It is considered the car parking arrangement could be configured to be more land efficient. Particularly, in the southern part of the site	i. Lighting proposals are provided in the lighting strategy submitted with the planning application; j. Details of the bird hides are provided in Chapter 5: Description of Development; k. The landscape masterplan in Appendix 10.2) is fully keyed with detailed areas presented Chapter 5: Description of Development; l. The planting strategy includes species, size and density information genus of proposals within the LS; m. Full redesign of the arrival space near the Main Building has been undertaken to create a more inviting, sensitive and ergonomic arrival; n. Indicative details of tree planting on areas of existing hard standing is shown within the LS. These are based on the principle of creating raised platers from large fragments of waste concreate formed into walls. No tree pits would penetrate the existing hard surface; o. Full redesign of planting and trees has been undertaken as shown in the LS2; p. Boat parking numbers have been reduced to 214 no. and the area required greatly decreased with a rack system. The layout is more responsive to the setting without the need for extensive aisles with trees; q. Pedal Karting has been omitted from the scheme; r. Iterative development of the acoustic fencing with the ecologist has been undertaken and woven willow incorporated where feasible with damp soil and good light conditions; and s. The new masterplan avoids this issue.

Consultee and Comment	Response relevant to the LVIA
near the entrance. The car parking in this area should be revised to eliminate duplicate access roads with car parking edging the access road. This approach would allow more space for landscaping; u. The scheme proposes 400 boat parking spaces. This is 105 spaces more than the existing BSC and former HOAC site combined. Justification for the significant increase is required as the hard surfacing impacts the landscape character of the site and ecological potential; and v. It would be helpful to see views of the model shown in the Design and Access statement of the entrance and car parking areas. **Boundary Treatments** w. The need for a site boundary along the Grand Union Canal is accepted. The canal edge is a sensitive location along a sustainable transport route and tranquil PROW. Therefore, a thorny hedge with layered hedge would be more in keeping with the landscape character; and x. Should it be demonstrated that a full Euroguard fence is required, the precise location should be shown in more detail. It should be demonstrated that the fence footings will not impact existing boundary planting roots. Planting proposals to fill gaps in the boundary planting are also needed with approximate locations of gaps. **Bins and bike stores** y. Both the bin and bike stores add further structures within the landscape to the variety of small buildings and three large buildings proposed. Accordingly, it is considered that all the bin and cycle stores should be accommodated within the building footprints of the proposed buildings. Where bins stores and cycle shelters are unavoidable these should be designed with green roofs.	**Car parking, access road and boat parking** t. Car parking numbers have been reduced including EV charging, blue and brown badge. All is located on existing hard standing, access arrangements made more efficient; u. Boat storage capacity has been significantly reduced to 214 no. with triple level racking systems for dinghies widely implemented; and v. Views of the building and context are included within Haverstock's DAS. **Boundary Treatments** w. A hybrid fence and planted solution is proposed which makes the most of existing dense planting with new planting where light levels permit; and x. Foundations of sections of fence would be micro-sited between tree roots. **Bins and bike stores** y. These are now shown within the landscape masterplan with details presented within the architectural package.

Consultee and Comment	Response relevant to the LVIA
Views z. The LVIA demonstrate that views of the site are limited due to the existing woodland and hedgerow planting combined with the topography of the area. However, there remain views of the Main Building and boat parking from the Lake within the site, the Old Orchard pub car park and from two viewpoints along Public Rights of Way (PROWs) View 3 and 7. The most visually obvious element of the scheme is the large Main Building fronted with boat parking. The reduction in the building mass, with further planting down the middle of the boat parking rows and along the Main Buildings frontage would help to mitigate these views.	**Views** z. The revised landscape masterplan and building proposals have greatly reduced potential visibility of building further such that only a very small portion of the roof of the Main Building would be visible between existing vegetation from the Old Orchard Inn car park (further details are provided later in this chapter).
LB Hillingdon Planning, Urban Design and Landscape Officers Meeting (9 October 2024 & December 2024)	
Two meetings were held with officers to discuss the revised proposals and the associated landscape and visual effects of the revised scheme, the revised landscape masterplan and updated AVRs of the reduced scheme were presented and discussed. The response to residual comments follows	Updated AVRs are provided in Appendix 10.5.
The majority of the landscape is managed for ecology. However, the entrance road, car park, space between the two buildings, multi-functional grass area and sensory garden should be designed to uplift and enhance the landscape. Concern is raised that; ▪ The car park has no tree planting and would create a large expanse of hard surfacing; ▪ No roadside tree planting is proposed to draw people into the Site to the Main Buildings; ▪ Encouraging people into the sensory garden would disturb the birds; and ▪ Retain trees around the proposed buildings that may not be appropriate to the design of these areas.	▪ In terms of design comments, as can be seen from the revised site masterplan: ▪ The car park has been reduced in scale and is proposed on existing hard standing to limit the impact on the existing tree cover. The car parking is also surrounded by existing trees; ▪ New tree planting is proposed along the access road from Moorhall Road and new tree planting is proposed close to the access route on Site; ▪ The sensory garden would be very low key with very limited access, in a location selected to limit the

Consultee and Comment	Response relevant to the LVIA
	disturbance to birds following guidance from ecologists; and ▪ For screening, ecological and landscape reasons, the intention is to minimise tree loss. Management is proposed to trees close to the buildings such as coppicing, pollarding and crown lifting so that structurally they are sound and visually appropriate in terms of sightline.
A detailed design of the areas outside of the ecology areas is needed.	The LS describes how proposals have been developed for the entire landscape of the Peninsula and 'wilding' of the existing Broadwater Sailing Club site. From an ecological perspective it is essential that interventions to the wider Site and Priority Habitats in particular are kept to the absolute minimum.
Clarification required regarding the surface material surrounding the dinghy Storage and kayak storage;	The principal dinghy and kayak storage area is located on made ground with a compacted gravel surface over seeded with low growing native grasses and wildflowers. Racks are located on grasscrete paving overseeded with grass-free wildflower seed mix.
Image of the dinghy and kayak racks;	An image is presented within the LS.
Clarification required around the boundary treatment along the canal;	A 1.8m high weldmesh fence is proposed between the existing track and the canal running north up to Edlin Bridge over the canal. It would be micro-sited to avoid existing tree roots and wherever possible located behind existing vegetation it and the towpath. Beyond that, the boundary consists of 1.2m high dry hedging with bramble / ivy planting alongside and overgrowing where light permits, 1.5m high hazel hurdle fence combined with dry hedging, and dense and robust existing vegetation along towpath, providing sufficient deterrence against entry. For further information refer to Colour drawing

Consultee and Comment	Response relevant to the LVIA
	HWSFAC-COL-00-XX-DR-L-1210 - Boundary Treatment Plan
Clarification required for the proposals for the area on the east side of the canal shown in the pre-application;	This area will be management for woodland enhancement.
Clarification required around proposals for the canal bridge.	No works are now proposed to this canal bridge.
LB Hillingdon Planning, Urban Design and Landscape Officers Meeting (17 September 2025)	
A meeting was undertaken with a focus on design attended by the client and design team including Colour. Key issues raised by the Planning team of relevance to the LVIA included : a. Reducing the scale and massing of buildings; b. A clearer presence of the building front door on approaching from the south	Responses have been : a. Revised architectural proposals leading to a lowering of the tallest point on the building roof and with a resultant reduction in the extent of visibility splay as shown by the update ZTV. This is predicted to lead to the loss of potential glimpsed views of the building from viewpoint 03, the Hillingdon Trail; and near complete avoidance of priority woodland. b. A small loss of existing trees to in the southwest of the new building footprint, all of which can be adequately mitigated with tree planting elsewhere on Site (refer to Appendix 10.7: Arboricultural Impact Assessment Addendum by Landmark 2025);

Summary of Assessment Scope

10.3.5 As agreed with LBH, the LVIA has assessed the potential significant direct and indirect effects of the Proposed Development on landscape character and visual amenity. This has been assessed at construction as well as operational stages in Winter as to represent a worst-case scenario for visual permeability with minimal vegetation cover.

10.3.6 Further 'testing' AVRs were produced in the Summer months of 2024 for of the height and location of the Main Building. Trees were in full leaf but footpaths in greatest use and at a time of year when the activity centre would be in use. These are presented within Appendix 10.5.

10.3.7 The LVIA includes a thorough evaluation of the landscape character identifying its inherent attributes. The landscape character assessment forms the preliminary stages of the LVIA with assessment of the sensitivity of the Site and its robustness to change that are derived from the landscape value of the Site.

10.3.8 The Zone of Theoretical Visibility (ZTV) study and field study was undertaken to establish where views or part views of elements of the Proposed Development may be experienced from.

Non-Significant Effects

10.3.9 Temporary effects of less than three months, most aspects of ecological mitigation and enhancement infrastructure and land-based (woodland) activity infrastructure, were scoped out of further assessment of this ES. This is primarily due to their scale and location. This includes the landscape and visual effects of:

- Small scale ecological mitigation and enhancement;
  - Installation of habitat creation measures within the south west Bird Refuge;
  - Construction of bare gravelly beaches - 200mm below Summer water level for macro-invertebrates;
- Management of existing trees;
- Artificial caving – this would be set within and between existing trees, none of good quality on the existing concrete surface. They would comprise above ground stacked and interconnected plastic pipes and cover approximately 25 x 30m (750m²) area. Any foundations would be hand dug if within Root Protection Zones (RPZ);
- Acoustic fences - Vegetated acoustic fences will be very limited in extent around the Peninsula woodland and will offer vertical habitats of native species on both sides; designed iteratively with the project ecologist;
- Construction plant and equipment - The short-term presence of construction paraphernalia such as cranes, excavators or dredging barges has been scoped out.

10.3.10 The effect of views at night are not predicted to be significant as:

- The facility is daytime and would only operate during spring / summer months (1 April – 31 September) when artificial lighting is least conspicuous with light afternoons;
- The primary sensitive visual receptors are users of PRoWs who are unlikely to be active during the hours of darkness;
- The only likely reason for light in the hours of darkness would be from seasonal staff accommodation which could be readily controlled or contained within workshops; and
- The Site lighting strategy is controlled to minimise ecological impact.

Study Area

10.3.11 Guidance is provided by GLVIA3 on the area of landscape that needs to be covered in assessing landscape effects, referred to in the Guidance as a “Study Area” (para. 5.2 page 70):

"The study area should include the Site itself and the full extent of the wider landscape around which the Proposed Development may influence in a significant manner. This will usually be based on the extent of Landscape Character Areas likely to be significantly affected either directly or indirectly. However, it may also be based on the extent of the area from which the development is potentially visible, defined as the Zone of Theoretical Visibility, or a combination of the two."

10.3.12 An initial ZTV study was run for the taller, more exposed Main Building of the initial application Proposed Development without the screening barriers of intervening vegetation as shown on Figure 10.A3.2 at the end of this section. This initial ZTV study defined those areas where the screening barriers would be required (Figure 10.A3.3) and the ZTV rerun for the updated scheme as a Screened Zone of Theoretical Visibility (SZTV) on Figure 10.A3.4.

10.3.13 The extent of Study Area as a means of appropriately assessing effects on landscape character was thus determined, by the following:

- Landscape effects - Potential effects on the landscape resources of the Site within the Site boundary only as proposals are fully contained within the Site; and
- Visual effects – Assessing the changes to the Site's landscape from beyond, the visual analysis was limited to a 3km radius of the Main Building. This was defined as a result of the limited scale of the Main Building in association with local topography with the screening and filtering contribution of the dense framework of existing woodland and tree lined field boundaries that would prevent most outward views and potential visual impacts.

Establishing Baseline Conditions

10.3.14 The current landscape and visual current and future baseline was established through a combination of:

- Desk analysis of mapping information and published landscape character assessments;
- LiDAR digital terrain modelling of the wider study area;
- ZTV analysis software;
- Panoramic viewpoint photographs taken at 1.6m above ground level with a fixed lens digital SLR camera with a 50mm lens in accordance with GLVIA3 guidance during Winter for visualisation. Visits were on 9 March 2023 for viewpoint 03, and 24 March 2023 for viewpoint 15;
- Summer photography was taken on the 12 June 2024 using the same criteria for information and testing of the building location on-site;
- Preparation of AVR views through computer modelling of proposals from the three viewpoint locations identified and agreed with LBH;
- An Arboricultural Survey and Impact Assessment by RSK Biocensus was undertaken 23 February 2023 with further detail provided in a follow up survey in April 2023 subsequent to the clearance of invasive Buddleia from the Site (Appendix 10.6). This survey included all islands and woodland groups around the perimeter of Broadwater Lake;

- A secondary Arboricultural Survey and Impact Assessment was undertaken by Landmark Trees in August 2024 to focus more detail in the areas of potential development on the Peninsula. This report is included within Appendix 10.7;
- Site surveys of the Site and setting were undertaken by the Colour LVIA team on foot and by vehicle on:
  - 13 November 2020;
  - 14 June 2021;
  - 7 March 2023;
  - 24 March 2023;
  - 1 May 2024;
  - 24 July 2024; and
  - 30 June 2025.

Assessing Likely Significant Effects

10.3.15 From the GLVIA3 guidance, the determination of landscape and visual sensitivity warrants consideration of landscape value and the susceptibility of the landscape receptor to the type of change proposed; and the value of views identified and the sensitivity of visual receptors to the type of change proposed. It is advised that there should be a reliance on professional judgement rather than the results of potentially complex, predetermined formulae and matrices. GLVIA3 also stresses that the approach to the assessment needs to be proportionate to the scale of the development being assessed and the nature of the likely effects. This approach has been followed in undertaking this appraisal, with matrices being used to methodically assist initial assessment.

Cumulative Effects

10.3.16 The principal cumulative impact would be from the future operation of the HS2 railway line along the CVV with the periodic movement of high-speed trains. The viaduct was modelled and assessed as part of the baseline verified panoramic view as the basis for AVRs.

Determining Effect Significance

10.3.17 The receptor sensitivity, magnitude of impact descriptors and significance criteria used for the assessment are set out below, firstly for the appraisal of landscape and then visual effects.

Sensitivity of Landscape Receptors

Susceptibility to Change of Landscape Receptors

10.3.18 The sensitivity of a receptor is first defined by its susceptibility to change. This is defined as the ability of the landscape receptor (whether it be the overall character or quality / condition of a particular landscape type or area, or an individual element and / or feature, or particular aesthetic and perceptual aspects) to accommodate the Proposed Development without undue consequences for the maintenance of the baseline situation and / or the achievement of landscape planning policies and strategies (see paragraph 5.40 of GLVIA3).

10.3.19 Susceptibility is combined with landscape value to determine the overall sensitivity of a landscape receptor or receptor landscape to the type of change proposed as explained in Table 10.4.

Table 10.4: Criteria for the Assessment of Susceptibility to Change

Level	Typical Criteria
High	Key characteristics of the landscape are highly vulnerable to change. The nature of the development would result in a significant change in character.
Medium	Some of the key characteristics of the landscape are vulnerable to change. Although the landscape may have some ability to absorb some development, it is likely to cause some change in character.
Low	Few of the key characteristics of the landscape are vulnerable to change. The landscape is likely to be able to accommodate development with only minor change in character.
Negligible	Key characteristics of the landscape are robust and would not be adversely affected by development.

Landscape Value

10.3.20 Assessment of value is concerned with the relative value attached to different landscapes by society. A consideration of value at the baseline stage informs judgements on the level of effects. Landscapes can be valued by different people for different reasons connected to a range of factors including landscape quality (condition), scenic quality, rarity, representativeness, conservation interests, recreation value, perceptual aspects and associations (see GLVIA3 3 Box 5.1 for definitions).

10.3.21 This can be recognised at a local, regional or national or international scale. Table 10.5 explains how criteria are applied to arrive at an appraisal of landscape value for the project.

Table 10.5: Criteria for the assessment of landscape value

Value	Typical criteria	Typical scale	Typical examples	Typical Capacity for Change
High	High Importance, Quality, Condition and Rarity. Non or limited potential for substitution	International, National	World Heritage Site, National Park, National Landscape, Areas of Outstanding Natural Beauty, Registered Parks and Gardens	None or limited
Medium	Medium Importance or Reasonably Good	Regional, Local	Special Landscape Area, Areas of Great Landscape Value, Areas of Landscape	Change possible without harm

Value	Typical criteria	Typical scale	Typical examples	Typical Capacity for Change
	Quality, Condition and Rarity. Some potential for substitution		Importance, Local Nature Reserve, Local Wildlife Site Or Undesignated but valued e.g. demonstrable of use	
Low	Low Importance, Quality, Condition and Rarity	Local	Areas identified as having some redeeming feature or features and possibly identified for improvement. Areas identified for recovery	Change could be beneficial

Landscape Sensitivity

10.3.22 As noted above, landscape sensitivity combines judgements on the susceptibility of landscape receptors to change of the type proposed, with the value attached to the landscape. Generally, a higher sensitivity will be ascribed to landscapes which have a high value, and which are highly susceptible to change, and vice versa. However, as GLVIA3 (para. 5.46) recognises, these relationships are complex, particularly when considering change within or adjacent to designated landscapes.

10.3.23 For the purposes of this appraisal, landscape sensitivity is defined through the application of the typical criteria set out in Table 10.6.

Table 10.6: Criteria for the Assessment of Landscape Sensitivity

Level	Typical Criteria
High	An area of particular distinctive sense of place, in good condition, or highly valued for its scenic quality and / or landscape / townscape with low tolerance to change of the type identified.
Medium	An area with a clearly defined sense of place and / or character in moderate condition; an area valued at a local or regional level. An area that is partially tolerant of change of the type identified.
Low	An area with a weak sense of place, or low-quality landscape character, in poor condition, often not valued for its scenic quality. An area, which is tolerant of substantial change of the type, identified.

Magnitude of Landscape Impacts

10.3.24 Criteria for the assessment of the magnitude of landscape impacts are set out in Table 10.7.

Table 10.7: Criteria for the Assessment of Magnitude of Landscape Impacts

Level	Typical Criteria
High	▪ Total loss / major change to key features or perceptual aspects of the baseline and / or the addition of new features considered to be totally uncharacteristic of the receiving landscape. ▪ Impacts would be of a large scale influencing several landscape character types / areas. ▪ Impacts would be long term and / or irreversible.
Medium	▪ Partial loss / change to key features or perceptual aspects of the baseline and / or the addition of new features that may be prominent but not necessarily be considered to be substantially uncharacteristic of the receiving landscape. ▪ Impacts would be at the scale of the landscape character type / area within which the proposal lies. ▪ The impacts would be medium term and/or partially reversible.
Low	▪ Minor loss / alteration to key features or perceptual aspects of the baseline and / or the addition of new features that may not necessarily be considered to be uncharacteristic of the receiving landscape. ▪ Impacts would be at the level of the immediate setting of the Site. ▪ Impacts would be short term and/or reversible.
Negligible	▪ Very minor loss / alteration to key features or perceptual aspects of the baseline and / or the addition of new features that are not uncharacteristic with the surrounding landscape - approximating the ' no change' situation. ▪ Impacts would be at the Site level, within the development site itself. ▪ Impacts would be very short term and / or reversible.
None	▪ No loss or alteration to the key characteristics / features - ‘no change’.

Significance of Landscape Effects

10.3.25 The significance of predicted landscape effects are determined by considering the sensitivity of landscape receptors with the magnitude of impact on them from the Proposed Development. This methodology assigns them a level on a scale as set out in Table 10.8.

Table 10.8: Criteria for Determining the Level of Landscape Effects

Level	Typical Criteria
Major	The development, without mitigation measures, will have a substantial impact on the environment in comparison to the baseline.
Moderate	The development, without mitigation measures, will have a noticeable impact on the environment in comparison to the baseline.

Level	Typical Criteria
Minor	The development, without mitigation measures, will have a small impact on the environment in comparison the baseline.
Negligible / no impact	The development, without mitigation measures, will have little or no impact on the environment in comparison with the baseline.

10.3.26 Informed professional judgement is then used to determine whether the effects are adverse, beneficial or neutral.

10.3.27 The matrix provided in Table 10.9 has been used to initially assess the relationship between sensitivity and magnitude of impact for each receptor to reach the level of effect, however this approach can be too formulaic in some instances (as noted in GLVIA3). This approach has therefore been used alongside a more detailed consideration of each effect with notes / descriptions provided where required as set out in Table 10.9.

Table 10.9: Assessment of Significance of Effect relative to Sensitivity of Receptor and Magnitude of Impact

Sensitivity of receptor	Magnitude of Impact			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible / No Impact
Medium	Major	Moderate	Minor	Negligible / No Impact
Low	Moderate	Minor	Minor	Negligible / No Impact

Sensitivity of Visual Receptors

10.3.28 Visual receptors include the public or community at large, residents, people visiting promoted landscapes or attractions, people passing through on roads or non-vehicle forms of recreation.

Susceptibility of visual receptors to change

10.3.29 The susceptibility of different visual receptors to changes in views and visual amenity is mainly a function of:

- The occupation or activity of people experiencing the view at particular locations; and,
- The extent to which their attention or interest may therefore be focused on the views and the visual immunity. They experience at particular locations.

10.3.30 The visual receptors most susceptible to change are generally likely to include:

- Residents at home;

- People, whether residents or visitors, who are engaged in outdoor recreation, including use of public rights of way, whose attention or interest is likely to be focused on the landscape and on particular views;
- Visitors to heritage assets, or to other attractions, where views of the surroundings are an important contributor to the experience;
- Communities where views contribute to the landscape setting enjoyed by residents in the area.

10.3.31 Travellers on road, rail or other transport routes tend to fall into an intermediate category of moderate susceptibility to change. Where travelling involves recognised routes, awareness of views is likely to be higher.

10.3.32 Visual receptors likely to be less sensitive [as per GLVIA3] to change include:

- People engaged in outdoor sport or recreation, which does not involve or depend upon appreciation of views of the landscape; and
- People at their place of work, whose attention may be focused on their work or activity, not on their surroundings, and where the setting is not important to the quality of working life (although there may be an occasional case where viewpoints are an important contributor to the setting and quality of working life).

Sensitivity of Visual Receptors

10.3.33 Judgments are also be made about the value attached to the views experienced. This takes account of:

- Recognition of the value attached to particular views, example in relation to heritage assets, or through planning designations; and
- Indicators of the value attached to views by visitors, for example through appearances in guidebooks or on tourist maps, provision of facilities for their enjoyment (such as parking places, sign boards an interpretive material close brackets and references to them in literature or art.

10.3.34 The function of susceptibility and value with types of viewers, the numbers, and duration of the view contributes to defining the sensitivity of a visual receptor.

10.3.35 For the purposes of this appraisal, visual sensitivity is defined through the application of the typical criteria set out in Table 10.10.

Table 10.10: Criteria for the Assessment of Visual Sensitivity

Level	Typical Criteria
High	Viewers with proprietary interest and / or prolonged viewing opportunities and / or who have a particular interest in their visual environment, for example residents, visitors to protected landscapes, users of outdoor recreational facilities / routes whose interest would be focussed on the landscape.

Medium	Viewers with a moderate interest in their visual environment for example those travelling through / past on transport routes, users of outdoor recreational facilities / routes whose interest is not primarily focussed on the landscape.
Low	Viewers with passing or momentary interest in their everyday surroundings, for example motorists or people at their places of work whose attention is focussed on other activities and are therefore less susceptible to change.

Magnitude of Visual Impacts

10.3.36 Criteria for the assessment of the magnitude of visual impacts is derived from Table 10.11.

Table 10.11: Criteria for the Assessment of Magnitude of Visual Impacts

Level	Typical Criteria
High	Total loss / major change to views and / or the addition of new features that would be incongruous, very prominent, and/or would greatly contrast with the existing view. Full, open views, experienced at a location or for the majority of a journey. The views would be close, direct and / or totally occupied by the development.
Medium	Partial loss / change to views and / or the addition of new features that would be prominent, and / or would contrast with the existing view. Partial views, experienced for part of a journey or activity. The views would be middle distance, partially oblique and / or partially occupied by the development.
Low	Minor loss of / change to views and / or the addition of new features that would not be prominent, and / or would not contrast with the existing view. Glimpsed views, experienced for a small part of a journey or activity. The views would be distant, oblique and / or only a small part of the view would be occupied by the development.
Negligible	Very minor loss of / change to views and / or the addition of new features that are unlikely to be readily perceived. Very brief glimpsed views. The views would be very distant, very oblique and / or only a tiny part of the view would be occupied by the development.
None	Barely discernible alteration to views and / or the addition of new features that would be almost imperceptible - ' no change' situation. Views are not possible.

10.3.37 Magnitude can vary greatly due to differing seasonal or weather conditions, changes in light at different times of the day, and whether a development is seen against the background of the sky or the landscape. The appraisal takes into account a worst-case scenario.

10.3.38 The following terminology is used when describing the duration of effects:

- Short term: 6 months - 1 year
- Medium term: 1 - 2 years
- Long term: 2 - 10 years

10.3.39 Reversibility is an evaluation of the ability and practicality of an effect being reversed in for example a lifetime. As an example, housing is considered permanent however elements of the construction procedures and compound of the contractors can eventually be reduced, removed and land restated.

10.3.40 The following terminology is used when describing approximate distance between the viewer and the proposals.

- Local: up to 1km from the centre of development – in this case the Main Building.
- Medium: 1 - 3.5km from the centre of development.
- Long distance: over 3.5 - 7.5km from the centre of development.

10.3.41 The number of viewers or users who experience the view are factors in making a judgement of significance. The terminology used are:

- Low - very few people experience the view, or the view is rarely experienced.
- Medium - a moderate number of people experience the view, often.
- High – many people experience the view, frequently.

Significance of Visual Effects

10.3.42 Predicted effect is initially assessed by considering the sensitivity of visual receptors with the magnitude of impact on them from the Proposed Development as shown in Table 10.12.

Table 10.12: Assessment of Significance of Effect relative to Sensitivity of Receptor and Magnitude of Impact (change)

Sensitivity of receptor	Magnitude of Impact (change)			
	High	Medium	Low	Negligible
High	Major	Major	Moderate	Negligible / No Impact
Medium	Major	Moderate	Minor	Negligible / No Impact
Low	Moderate	Minor	Minor	Negligible / No Impact

10.3.43 This approach can however be too formulaic in some instances (as noted in GLVIA3), therefore this has been used alongside a more detailed consideration of the significance of each effect with notes or descriptions provided by Table 10.13 below.

10.3.44 Informed professional judgement is then used to determine whether the effects are beneficial, adverse or neutral.

Table 10.13: Criteria for Determining the Significance of Visual Effects

Level	Typical Criteria
Major	The Proposed Development, without mitigation measures, will have a substantial impact on the environment in comparison to the baseline.
Moderate	The Proposed Development, without mitigation measures, will have a noticeable impact on the environment in comparison to the baseline.
Minor	The Proposed Development, without mitigation measures, will have a small impact on the environment in comparison the baseline.
Negligible / no impact	The Proposed Development, without mitigation measures, will have little or no impact on the environment in comparison with the baseline.

Assumptions and Limitations

10.3.45 Assumptions and limitations relevant to the assessment are set out below:

- The ZTV study of the proposed building and thus visual impact assessment was limited to a 3km (approximately 2 miles) radius as it was observed locally that buildings of a similar order of scale to the proposed Main Building were barely discernible;
- Photography for AVRs and visual appraisal was undertaken prior to the principal screening effects of leaves on trees so as to provide a Winter view 'worst-case' scenario of the landscape in terms of potential impacts;
- All photography was taken when conditions were good, but in considering future potential visual impacts, it should always be noted that when visibility is more hazy, less clear views would be experienced;
- Photographs were not taken from the following predicted potential viewpoints for the following reason:
  - VP08 Colne Valley Trail. The shard of potential visibility was very slim and threaded through approximately 1.5km of existing vegetation. It is therefore highly unlikely that there would be any views of proposals; and
  - VP 11 Old Shire Lane Circular Walk. This was not accessible due to the PRoWs being either closed as a result of the construction of HS2. The location is not however deemed significant as the location would be to the west of HS2 and any potential views into the Site either screened or dominated by the railway infrastructure.

- Within the previously submitted application, AVR baseline photographs were taken prior to the completion of the HS2 Colne Valley Viaduct (CVV). The LVIA included 'future baseline' AVRs that included modelling of the CVV. These views are now used as baseline views and considered acceptable for three principal reasons:
  - Significant testing of visual impacts has been undertaken, with AVRs shared to the satisfaction of the LBH Planning team;
  - Relocation of buildings to a position that is likely to be barely perceptible from the identified sensitive viewpoints; and
  - Two years of intervening tree and shrub growth both on the Site peninsula and off site will have resulted in increased screening of the Proposed Development.
- It should be noted that AVRs represent a worst-case scenario in that:
  - Photographs demonstrate Winter views and therefore greater potential visibility of proposals than in the Summer months when vegetation is in leaf. To illustrate the Summer impact, these are however also provided;
  - AVRs with the CVV (HS2 viaduct) included do not include proposed HS2 landscape mitigation. This includes small islands with expected installation is October 2025; and
  - Over time, vegetation on the Site and in the surrounding landscape will grow and therefore further reduce the impact of any potential views due to filtering and screening. These are appraised at years 1 and 15.
- For assessment, it has been assumed that approximately 500m^2 of photovoltaic panels are proposed on the south facing roof planes of the Main Building which would not be visible from the north where potential views would be experienced from. They have therefore not been scoped into the visual impact assessment;
- Existing sailing activities associated with the existing BSC, (which could populate the lake with a maximum of 50 no. craft at any single event) were not present during field assessment. These craft would have a highly noticeable effect on landscape character experienced throughout the year, with more intense activity in clearer weather and when wind conditions are suitable. Had sailing been present, baseline views would appear 'less natural' and the addition of the proposed building of less impact; and
- Water-based activities such as rafting, kayaking and dragon boat racing have not been included within the visual impact assessment as their nature is entirely reversible, scale deemed to be small and durations of operation too brief to be significant at a Site or study area scale. In addition, the baseline activity situation includes sailing which is more noticeable than the aforementioned additional activities.

10.4 Baseline Conditions

Landscape

10.4.1 The hierarchy of landscape receptors requiring assessment consist of the Thames Valley NCA at a regional level, the Colne Valley Park and the Colne Valley: Rickmansworth to Uxbridge LCA at a local level. These were judged not only to be the most relevant landscape assets that the application could influence but also by implication these

overarchingly include wider elements such as the Colne Valley, the River Colne and Grand Union Canal.

10.4.2 The Colne Valley: Rickmansworth to Uxbridge LCA was found to be the most recent guidance and therefore considered to appropriately represent all the key aspects of the many other LCAs. The summary and strategies proposed within this LCA are therefore assessed against the Proposed Development. For thoroughness, other LCAs are also reviewed within this section.

10.4.3 Landscape assets of the Site itself are receptors to be assessed against.

Landscape Character Areas

10.4.4 The Colne Valley is the first significant area of semi-natural landscape experience west of London. Its value as a landscape was recognised in the formation of the Colne Valley Regional Park (CVRP) within which the Site lies.

10.4.5 At a national level the Colne Valley lies in the wider Natural England 'National Character Area Profile 115 : Thames Valley' (2012)[7] and describes the landscape as follows:

'…includes the Colne Valley'

'The River Thames provides a unifying feature through a very diverse landscape of urban and suburban settlements, infrastructure networks, fragmented agricultural land, historic parks, commons, woodland, reservoirs and extensive minerals workings'.

'Although there is virtually no undisturbed land in the NCA, parts are valued for their relative tranquillity. The area's natural beauty and royal history have created a haven on the doorstep of central London, a place to escape, relax, exercise, explore and have fun. Its 1,000 km of rights of way, waterbodies and green space, all provide recreation opportunities and access to nature for a population of around 1.4 million, as well as to visitors from inner London and beyond.'

10.4.6 This National Character Area's (NCA) Statements of Environmental Opportunities are highly aligned for the Proposed Development:

- *'SEO 2: Plan for the landscape-scale enhancement of the area's extensive gravel workings and other open waterbodies …for their important habitats and recreation facilities, and for their geological interest.*
- *SEO 3: …promote the incorporation of best practice environmental measures into any new development.*
- *SEO 5: Develop the recreational, educational and commercial tourism opportunities offered by public access to – and engagement with – the historic buildings and landscapes in the area, such as Hampton Court Palace, Windsor Castle and the Royal Botanic Gardens at Kew, for their contribution to a sense of place and to people's enjoyment and understanding of the area.'*

10.4.7 As a result of its highly varied character, established juxtaposition of urban development, transport infrastructure, green and blue infrastructure it is considered that there is a low susceptibility to change and overall, the NCA is judged of low sensitivity.

10.4.8 At a local level, there are many Landscape Character Assessments (LCAs), produced by different organisations that all cover aspects of relevance but with common themes as summarised at the end of this section.

10.4.9 The South Bucks District Landscape Character Assessment[8] includes two LCAs which are shown on a diagram in Appendix 10.3:

- LCA 26.3 The Colne Valley Floodplain bounding the River Colne to the western boundary; and
- LCA 22.2 Chalfont St Peter Mixed Use Terrace within 100m of the western Site boundary.

10.4.10 Key characteristics of the varied landscape of LCA 26.3 The Colne Valley Floodplain within the study area include:

- Flat, wide lowland floodplain, with very little topographic variation, on alluvium and loamy / clayey floodplain soils, with naturally high groundwater levels;
- Dominated by rough grazing and pasture, interspersed with arable fields and paddocks. Predominantly geometric field patterns, enclosed by low hedgerows;
- Tree cover is sparse and largely confined to field boundaries. Small ancient woodlands are occasionally found in the north, close to settlement;
- Three small settlements… Elsewhere settlement density is low, comprising isolated farmsteads and occasional small, nucleated hamlets;
- Gravel extraction has shaped the landscape, with former gravel pits restored into a string of water bodies. A network of meandering rivers and streams, occupy the floodplain, and the River Colne runs largely along the east boundary. These provide a valuable wildlife resource and recreational opportunity;
- Fields are a mix of pre 18th century irregular and 20th century regular enclosures;
- Grade II listed historic parkland located at Denham Place, north of Denham, a late 17th century country house surrounded by an 18th century landscaped park;
- Transport corridors cut the landscape including the M25, M40, which have a strong visual and audible influence. Screening earthworks are associated with these in places. Two railway lines also cross the area;
- The area lies within the Colne Valley Regional Park and a well-established network of public rights of way exists;
- Intermittent long views are afforded across open fields and across the Colne Valley; however, views are often interrupted by roads. Extensive views towards this landscape from the adjacent Hillingdon District; and
- Roads and pylons fragment an otherwise simple landscape and generate a discordant and busy character. Away from these areas, pockets of tranquillity remain associated with water and woodland.

10.4.11 As a result of its low tranquillity, often poor condition and low susceptibility to change, overall this LCA is judged to be of medium sensitivity.

10.4.12 Key characteristics of the also varied LCA 22.2 Chalfont St Peter Mixed Use Terrace within the study area include:

- An elevated and large-scale landscape, …contrasted with areas of undulating landform. Along with a mosaic of land cover and land uses this creates a highly varied landscape;
- …with medium to large scale, geometric arable fields., interspersed with smaller scale rough grazing, often more evident on slightly undulating landform;
- Dense, mature woodland blocks dominate the area in the south;
- …varying degrees of openness and enclosure. Broadleaved woodland predominates, much of which is ancient semi natural woodland;
- Cut by a major transport corridor, the M25 which generates local visual and audible impacts. Smaller rural roads link settlement;
- Smooth open arable fields are often emphasised by gappy field boundaries. Panoramic vistas across these fields and to the Colne Valley, contrast with enclosed views along hedged lanes and within woodland; and
- A highly varied and diverse landscape, which has been influenced strongly by development, and fragmented by electricity pylons and the M25, which transect the landscape. Away from these areas, pockets of rural tranquillity and naturalness have been maintained.

10.4.13 As a result of its varied condition, varied tranquillity and varied low to high susceptibility to change depending on location, overall, this LCA is judged of medium sensitivity.

10.4.14 The Colne Valley Landscape Partnership (CVLP) ran from 2019 to September 2022 with the purpose of preserving and enhancing the landscape for people and wildlife within the CVP as captured in CVLP's four key aims that emphasise:

'Biodiversity value

i. To restore and strengthen the landscape character and its visibility, focusing on key habitats intrinsic to the landscape, providing resilience and the ability to sustain the landscape in the long term.

Community access and heritage

ii. To reconnect local communities with the landscape's heritage, raising awareness of the Colne Valley to a wider range of people through learning activities, information and interpretation resources, cultural events and volunteering.

Stewardship

iii. To invest in skills to enable the stewardship, at grass roots level, of the landscape based on a specialised and locally specific Volunteer and Training Plan.'

Safeguarding long term management

iv. To create a robust, active and effective partnership for managing the landscape beyond the life of the Landscape Partnership scheme.'

10.4.15 The CVLP prepared 'Colne Valley – Landscape on the Edge - Landscape Conservation Action Plan'[9] in March 2018 which contains the Colne Valley Landscape Character Assessment and describes the Colne Valley Regional Park with the typical classification of Regional Parks as:

'areas of land preserved on account of their natural beauty, historic interest or recreational use, covering a region which crosses several administrative boundaries. They are identified jointly by local authorities and do not have the status or legislative-backing afforded to National Parks and Areas of Outstanding Natural Beauty.

The Colne Valley Regional Park covers an area of countryside to the west of London amounting to 112km2 or 43 square miles. It was established in 1965. It is estimated that it attracts at least 2 million visitors each year. The vision for the Regional Park is: "The Colne Valley Park will be a sustainable network of high quality countryside, villages, green spaces and other amenities that provide a regionally significant destination for recreational and cultural pursuits. The Colne Valley Park will be a pleasant environment in which people live, work and play that also supports thriving farming & forestry and a rich range of wildlife. The Green Infrastructure of the Colne Valley Park and the built landscape of West London will blend in an integrated manner." Defra's Natural Environment White Paper recognises places such as the Colne Valley as being capable of fulfilling valued economic and social as well as environmental objectives. Defra's catchment-based approach provides greater prominence for the Colne Valley as a spatial concept which transcends local government boundaries. The All London Green Grid, recognises the Colne Valley as an integral part of the capital's strategic open space network.'

10.4.16 With an emphasis on landscape quality, recreation and the integration of the Green Infrastructure of the Colne Valley Park with the built environment leads to an overall medium susceptibility to change and medium sensitivity of the CVRP.

10.4.17 The CVLP LCA breaks the area down into a series of LCAs and physical landscape types as shown on figures 10.A3.5 and 10.A3.6 in Appendix 10.3.

10.4.18 The Site is located on the 'valley floor' of the CVLP LCA which includes:

- Valley sides;
- Undulating farmlands;
- Tributary valley; and
- River terrace.

10.4.19 To conclude, the Site is located within the Colne Valley: Rickmansworth to Uxbridge LCA which is succinctly described below:

'This character area comprises the valley floor and the sloping valley sides of the Colne Valley which stretches between Rickmansworth and Uxbridge with a north-south orientation. Open water lakes surrounded by often dense regenerated tree cover fill much of the valley floor and the sloping valley sides offer elevated views along and across the valley. The combination of open water, tree cover, open farmed and wooded valley sides and variations in topography give rise to high scenic quality in places.'

10.4.20 Due to the value placed on the landscape and recognition of high scenic value 'in places' this LCA is judged of medium susceptibility to change and of medium sensitivity.

10.4.21 In summary, the landscape character of the Site and immediate setting can be defined as a function of:

- Artificial water bodies created from previous gravel excavation some of which include islands;
- Public recreation including sailing activity and adjacent Grand Union Canal towpath with trails and footpaths further afield;
- Remnant areas of derelict hard standing and structures such as the weighbridge on Site from previous industrial uses;
- Waterside edges of naturally regenerated woodland of variable condition around the waterbodies;
- Visible biodiversity, predominantly birdlife with visual intensity generally observed towards the south west of the lake;
- A surrounding tight matrix of woodland blocks, strips, hedgerows and generally small fields around the Site on the valley floor, opening out to a larger arable and woodland pattern on valley sides and farmland above;
- Heavy infrastructure, generally screened by vegetation but most present in sound; including the M25, A412, M40 and HS2 which is currently under construction;
- The occasional building associated with the river and canal, scattered houses and ongoing minerals extraction and processing operations; and
- The River Colne which is generally hidden.

10.4.22 A detailed description of the physical components of the Site and setting follows.

Topography, waterbodies and watercourses

10.4.23 The Site lies between the 'natural' River Colne to the west and north and the Grand Union Canal along the eastern boundary. This juxtaposition of natural and manmade is typical of the physical structure of this landscape and combine to create a rich variety of water conditions.

10.4.24 The landscape of the wider study area is dominated by the broadly north to south running shallow valley of the River Colne which meanders through a series of waterbodies in the valley, to the west of the Grand Union Canal. The tributary valley of the River Misbourne connects in the south west. Raised undulating land bounds both sides of the Colne Valley. Topography is shown on Figure 10.A3.7.

10.4.25 Waterbodies are predominantly artificial, the remnants of past quarrying activities, semi-geometric in form, many separated by narrow strips of land yet few exhibiting islands as present at Broadwater Lake.

10.4.26 Bedrock geology is dominated by sedimentary London Clay mudstone, layered with alluvium, loamy and clayey soils, with naturally high groundwater. Sand and gravel deposits on top of the floodplain have been the focus of extensive mineral extraction pits across the Valley Park.

10.4.27 As shown on Figure 10.A3.8, the Site (Broadwater Lake) is one of a series of lakes on the valley floor that was formed by the infill of ground water into these extraction works, with a part of Broadwater Lake most recently working in the 1970's and 1980's to provide material for concrete for the M25. The pattern of water and land closely relates to the geological resource, methods and phases of working with a resultant cellular landscape comprised of a complex and seemingly irregular pattern of islands, Peninsulas and isthmuses of which the Site is typical.

10.4.28 The Site displays much evidence of its former industrial use as a gravel extraction works with extensive hard surfaces, significant visible disturbance of the original landform and concrete structures still present (as shown on Figure 10.A3.9). Land and water have also been shaped by the location of remnant concrete working surfaces and deposition of quarry waste material in addition to excavation. This has led to many crude edges to land and water that are suboptimal to terrestrial, aquatic and emergent vegetation.

10.4.29 Figure 10.A3.10 captures the Site's history of gravel extraction, subsequent gravel processing and landfilling. The extent of remnant concrete surface still present on the Peninsula from these past works is shown on this series of plans.

10.4.30 Furthermore, bathymetric survey of Broadwater Lake (Figure 10.A3.11) reveals a broadly north to south lakebed pattern created by excavation, location of mineral reserves and historic field pattern with resultant formation of rectilinear patterns in the landscape such as the shape of the lake and location of islands. This has been overlain with more random dumping and deposition of material, such as Island #7 which underwater survey found to be largely a pile of large concrete pieces.

Vegetation

10.4.31 Around the lake, the Site is almost entirely covered and surrounded by self-colonised mature vegetation, generally broadleaved and semi-natural woodland. Two arboricultural surveys supported by Arboricultural Impact Assessment (ArbIA) were undertaken for the Site) in accordance with criteria outlined in the British Standard BS5837:20121. The first was carried out by RSK Biocensus (Appendix 10.6) covers the full site with the second focusing on the Peninsula by Landmark Trees in 2024 (Appendix 10.7).

10.4.32 The aim was to:

- Identify the location species, quality and value of the trees;
- Categorise them in respect of their suitability for retention; and
- Identify the impacts of the Proposed Development on the arboricultural features present.

10.4.33 The tree survey categories apply the following definitions:

- 'A' - Trees of high quality and value able to make a substantial contribution to the Site. Every effort should be made to retain trees, and amendments to a proposed scheme should be identified in preference to tree removal;
- 'B' - Trees of moderate quality and value able to make a significant contribution to the Site. Where possible, amendments to a proposed scheme should be considered in preference to tree removal;

- ‘C’ - Trees of low quality and value in an adequate condition until new planting can be established; trees with impairments downgrading them from A or B category; OR young trees with a stem diameter of less than 150mm. The retention of trees may be advantageous in the short term, but they should not be seen as a constraint to development; and
- ‘U’ - Trees that have limited condition that will fail or die within 10 years and / or should be removed for reasons of arboricultural best practice.

10.4.34 The RSK ArbIA captures the wider lake with its shorelines and islands between the Peninsula and the existing BSC site, where there are tree groups which will not be impacted upon by the Proposed Development, other than colonised growth on island 07 which is to be removed.

10.4.35 There is a clear correlation between tree quality and substrate on the peninsula. Individual category B trees and tree groups (and a single category A tree) are located on ‘earth or within a former settlement tank whereas trees on the remnant concrete surfaces are predominantly category C, in poor condition having struggled to establish with limited growing substrate left by the former gravel extraction and processing works on-Site. Many of these pioneer trees have grown on this hard surface with a resultant shallow root system and latent instability of trees. In addition, there are large areas of invasive Buddleia which has been partly removed.

10.4.36 Further afield, the wider mosaic pattern of fields, woodland and water of the valley bottom as described above has a predominantly wooded character. This combines with the adjacent valley sides, tributary valley, undulating farmlands to the east and west possess many broadleaved woodland blocks and belts which are generally connected with hedgerows so as create a broader landscape pattern rich with trees and often enclosed as a result. This pattern includes woodland and tree planting associated with a number of golf courses in the area and is shown on Figure 10.A3.3.

10.4.37 The compounded filtering effects of the many layers of vegetation (without or with leaves) within this mosaic landscape (of field boundaries, riparian, incidental and woodland blocks) limits visibility and thus provides full screening within most of the landscape.

Settlement pattern

10.4.38 There is little settlement other than the occasional dwelling often related to canal or river on the valley floor. To the south east of the Site on the east side of the Grand Union Canal lies South Harefield which is connected by Church Hill to the larger village of Harefield with very little separation and 1.5km from the Site. Ickenham and West Ruislip at the western extent of the London conurbation are just beyond 3km from the Site to the south east. The settlement pattern is shown on Figure 10.A3.4.

10.4.39 Denham is situated less than 1.5km to the south west of the Site with the smaller settlement of Higher Denham 0.5km beyond.

10.4.40 A caravan park is located 0.5km to the west of the Site within dense woodland and famous former film studios, now Denham Grove just to the north of this on the A412 North Orbital Road.

10.4.41 The southern extent of the residential Maple Cross is 3km from the Site to the north / north west with West Hyde to the south of here, mainly on valley side but also extending on the valley floor.

10.4.42 A single residential property is located on the north side of the entrance gate at the southern extent of the lagoon to the south of the Eastern Channel. It is surrounded by existing vegetation.

Movement routes

10.4.43 The study area and its wider setting are strongly influenced by many movement routes of many modes. This characteristic has evolved over time and includes the historic lanes, canals, A roads, motorways, railways and an airstrip. The proximity of these equips the Site with valuable transport links to London and beyond:

- The Grand Union Canal linking London to Birmingham with its associated pedestrian tow path runs north south along the eastern Site boundary;
- A dense network of public footpaths, trails and bridleways in the study area (as shown on Figure 10.A3.4) including most notably:
  - The London Loop which shares a section with the Colne Valley Trail;
  - The Hillingdon Trail;
  - Old Shire Lane Circular Walk; and
  - South Bucks Way.
- Overland rail infrastructure runs east west through the southern portion of the study area with a station at Denham that includes an elevated footbridge;
- An elevated section of the HS2 rail link between London and Birmingham is currently under construction, running from the south east to the north west of the study area; and
- The hierarchy of road infrastructure within the area is dominated by:
  - The M25 London Orbital Motorway skirting the Site 3km to the west;
  - The A412 North Orbital Road just beyond the Site's western boundary;
  - The dual carriageway A40 Oxford Road 3km to the south and connecting the A412 with the M40 just outwith the study area;
  - A number of B roads connecting settlements; and
  - Older local country lanes.
- Denham Aerodrome lies adjacent to the north west of Denham.

Recreation

10.4.44 As would be expected of a natural resource so close to large populations, rural recreation has a major presence in the study area and is indeed one of the purposes of the Colne Valley Regional Park, which stretches for approximately 25km from Batchworth and Bury Lakes near Rickmansworth in the north to King George VI and Staines Reservoirs in the south. This is evidenced by land uses that include the following:

- The rights of way network including named promoted routes as above;

- Golf courses including two in Denham and the Uxbridge Golf Club off the Harvil Road to the south east;
- Watersports including the existing Broadwater Sailing Club on Site, the Rickmansworth Sailing Club on the lake to the north and Tilehouse Lake South (used by Denham Water Ski Club) to the west, all on the valley floor; and
- Numerous stables and informal equestrian activity.

Industrial legacy

10.4.45 As described in the specific components of the Site and setting, much of the current physical character of the CVRP was formed by its industrial past with the Grand Union Canal an arterial legacy of the Industrial Revolution, mills associated with the Colne River and more recently sand and gravel extraction and processing. Whilst most gravel pits are no longer operational, their mark has been left on the landscape through the creation of the lakes and dry depressions which are so typical of the area.

Summary

10.4.46 The hierarchy of landscape receptors requiring assessment consist of the Thames Valley NCA at a regional level, the Colne Valley Park and the Colne Valley: Rickmansworth to Uxbridge LCA at a local level which by implication overarchingly include wider elements such as the Colne Valley, the River Colne and Grand Union Canal.

10.4.47 All landscape components within the Site were deemed as important landscape receptors to be assessed at construction and operational stages.

10.4.48 The assessment and justification of value, susceptibility to change and consequent sensitivity of Landscape Receptors is shown in Table 10.14:

Table 10.14: Landscape Receptors

Landscape receptor	Landscape value	Susceptibility to change	Landscape sensitivity
Thames Valley NCA	**Medium** The river valleys including the Colne provide a unifying feature through very diverse urban and rural landscapes. A regional scale asset of medium importance with virtually no undisturbed land albeit parts valued for their relative tranquillity.	**Low** Due to the scale and variation of character, it is considered that there is a low susceptibility to change.	**Low** Due to the highly varied character overall.
Colne Valley Regional Park	**Medium** The CVRP is designated within the Metropolitan	**Medium** If working within the framework of the	**Medium** Landscape character can be described as

Landscape receptor	Landscape value	Susceptibility to change	Landscape sensitivity
	Greenbelt and of importance both as a green entity and through its usage and experiential qualities. A local scale asset of medium importance in reasonably good condition.	landscape structure, the landscape will be able to accommodate sensitive development without detriment to character.	moderate condition; it is valued at a local / regional level and tolerant of change of the type identified.
Colne Valley: Rickmansworth to Uxbridge LCA	**Medium** The LCA is designated within the Metropolitan Greenbelt and of importance both as a green entity and through its usage and experiential qualities. A local scale asset of medium importance in reasonably good condition.	**Medium** If working within the framework of the landscape structure, the landscape will be able to accommodate sensitive development without detriment to character.	**Medium** Landscape character can be described as moderate condition; it is valued at a local level and tolerant of change of the type identified.
Broadwater Lake	**Low - medium** Much is in poor condition due to its incidental formation through past excavation with remnant workings, exposed concrete surfaces and crude shoreline. There is much open water present within the Colne Valley within which Broadwater Lake forms just one. Rarity is therefore not an issue. The Site is however designated as a SSSI and therefore inherently valuable. Improvements and enhancements could be implemented. A local scale asset of medium importance in mixed condition.	**Low** The lake is the dominant feature of the Site however there are many bodies of open water within the Colne Valley and due to condition, there are significant opportunities for change through enhancement.	**Medium** Landscape character can be described as moderate condition; it is valued at a local / regional level and tolerant of change of the type identified.

Landscape receptor	Landscape value	Susceptibility to change	Landscape sensitivity
Islands within Broadwater Lake	**High - medium** The Site is designated as a SSSI therefore inherently valuable. Condition is however variable due to the formation process, yet islands are a valued entity within waterbodies of the CVRP. Local scale elements of high importance but variable condition. Opportunities exist to create more islands through remodelling the lake.	**Medium** There are a number of islands within the lake. It is noted that islands are absent from many bodies of open water within the Colne Valley. Islands provide important habitat; however, opportunities exist for reprovision and enhancement.	**High - medium** Distinctive quality and valuable yet opportunities for enhancement.
Shoreline of lake including Peninsula	**Low – medium** The Site is designated as a SSSI therefore inherently valuable. Much is however in very poor condition due to the formation process. Improvements and enhancements could readily be implemented. A local scale asset.	**Low - medium** Value is in the shaping of the lake, yet shorelines are rectilinear and lacking scenic quality with crudely formed edges resulting from minerals extraction activities and shaped by remnant concrete. Highly significant opportunities for enhancement.	**Medium** The shoreline would be tolerant of change.
Native woodland within the Peninsula	**High – medium** The rarest habitat on the Peninsula albeit with a lack of high-quality trees as identified in the ArbIA and grown out of the former gravel works slurry tank. A local scale asset.	**High** A woodland with little opportunity for development yet potential for enhancement through management.	**High** Low tolerance for change.
Incidental woodland and	**Medium**	**Medium**	**Medium**

Landscape receptor	Landscape value	Susceptibility to change	Landscape sensitivity
vegetation on Site	There is limited vegetation of this type of woodland which has developed on the periphery of the former gravel works site features such as hard standing and slurry tanks. The ArbIA identifies a lack of high-quality trees. A local scale asset.	Opportunities for enhancement through management or reprovision if required.	Tolerant of change.
Remnant hard surface with pioneer vegetation	**Low** Extensive areas of concrete surface from the gravel works with low quality vegetation including large areas of invasive Buddleia and Japanese Knotweed, both in the process of clearance. The surface has supressed root growth and leads to latent instability of trees. Vegetation does however play an important role in terms of screening waterbodies which has an important ecological role. Significant opportunities for enhancement. A local scale asset.	**Low** With a sensitive removal method and replanting, the landscape is likely to be able to accommodate change with minor changes in character.	**Low** Significant opportunities for enhancement through creation of new soft surfaces, planting associations, repurposing as new hard surfaces, reuse for reclamation and tree management.

Visual Baseline

10.4.49 The visual baseline appraisal is defined by the nature of the existing visual amenity of the area, seeking to establish the approximate extent of visibility from surrounding locations and receptors for study.

10.4.50 To identify the visual receptors taken for further assessment a ZTV analysis of the entire study area (Figure 10.A3.2) was undertaken to establish the extent and locations of receptors with potential visibility. Given that the Site sits within a valley, with higher ground to the east and west, the ZTV radius for testing was chosen to ensure that potential

receptors located along and above valley sides would be included. 3km was found to be the most appropriate radius.

10.4.51 This was first undertaken in 2023 and repeated in 2025 which showed a significantly reduced extent of potential visibility and confirmed that the viewpoint selection for was still valid. The original study was based on a finished floor level of 38.50m AOD and 10.88m maximum ridge height giving ZTV source height as 49.38m AOD. The revised proposals within this application are based on a finished floor level of 38.23m AOD and 10.5m maximum ridge height on two central parts of the building giving ZTV source height as 48.73m – a reduction of 0.65m. This reduction in height in tandem with a more screened location provides a dramatic reduction to what was already a very limited splay of potential visibility.

10.4.52 The ZTV identified shaded areas where visual receptors (people) potentially may experience effects of the proposal on views (GLVIA3). PRoWs, highways, residential properties, heritage assets and any other receptors from which the Proposed Development could potentially be visible were then overlaid onto the SZTV to identify an initial long list of potential visual receptors for site survey. 15 no. potentially sensitive locations were identified

10.4.53 Site visits were undertaken in March 2023 to each of these initial viewpoints to check or whether intervening screening by vegetation or buildings would prevent views and to identify alternative visual receptors where present. From this visit a representative series of photographic viewpoints was chosen and AVR panoramas taken to illustrate views towards the Proposed Development. Photographic sheets are shown in Appendix 10.5 to illustrate views from these receptors. The resultant locations were taken forward with their visual receptors as the principal viewpoints for further assessment.

10.4.54 Figure 10.A3.4 shows the ZTV is significantly reduced for the revised scheme. It demonstrates that the tallest element of the Main Building would potentially only be visible in short range views from:

- The woodland clearing around the building on the Peninsula;
- A narrow shard to the north west across Broadwater Lake;
- Small pockets of open land between woodland blocks along the eastern valley side west of Harefield and east of South Harefield; and
- A narrow shard south east of Moorhall Roads.

10.4.55 Medium range views were identified as potentially visible from:

- Small pockets of open land between woodland blocks west of Harefield and from the Uxbridge Golf Club along the eastern valley side; and
- Raised land associated with Denham railway station in the south west.

10.4.56 Long range views were identified as potentially visible from:

- A small pocket of land west of north of Ickenham / west of West Ruislip; and
- Open farmland on the valley side in the vicinity of West Hyde and Maple Cross.

10.4.57 In March 2023, LBH requested an additional location from the Old Orchard Inn car park (VP15) as a potentially open view of the Site could be experienced albeit from a commercial operation. It was agreed that of VP02 could be omitted from the towpath of the Grand Union Canal adjacent to the Site as any potential views would be heavily filtered by intervening vegetation. Visual desk studies and in the field in Summer 2024 demonstrated that VP15 would still be valid for this revised reduced application.

10.4.58 Discussing the potential visual impacts of an earlier iteration of the reduced scheme, at a subsequent meeting with LBH Planning and Urban Design officers (dated 9 October 2024), the scope for AVRs was reduced to only VP03 and VP15. These are studied in this baseline with the Denham Station VP07 omitted given the height of the Main Building being in the order of half of the height of the adjacent intervening trees which would entirely obscure the view from that viewpoint.

10.4.59 In addition to the Winter views from these viewpoints, AVRs of Summer views (with the added screening effects of leaves on trees) were prepared to illustrate how proposals would appear in the months when there would be most viewers within the environment and the most activity on the lake.

10.4.60 The residual visual receptors assessed in detail and as potentially subject to visual effects were thus found to comprise:

- Viewpoint 03 - Users of Hillingdon Trail off Merle Avenue, Harefield and associated footpaths elevated on the valley side to the north east of the lake; and
- Viewpoint 15 - Visitors to the Old Orchard Inn, Harefield elevated on the valley side to the north east of the lake as viewed from the car park.

10.4.61 These two AVRs provide the focus for the Visual Impact Assessment (VIA) to identify any potential harm on visual receptors. It should be noted that AVRs represent a worst-case scenario as set out in ‘Assumptions and Limitations’ section.

Viewpoint 03 - Hillingdon Trail off Merle Avenue, Harefield

10.4.62 This is an open long view from the north east of Broadwater Lake and its islands from the Hillingdon Trail. The foreground is open semi-natural scrub and grassland with occasional trees which become denser in coverage around the shore of the lake. The ecologically managed low vegetation of islands closest to the viewer are clearly visible as is the emerging scrub and dense tree cover of other islands, in particular those extending north from the core area of the Site and beyond which where land is to be reclaimed with the proposed Main Building and waterside boat yard.

10.4.63 The skyline is formed of the west side of the wooded Colne Valley, framing of the Misbourne River tributary valley with wooded horizon beyond and the wooded east side of the Colne Valley.

10.4.64 Woodland generally appears to be semi-natural and broadleaved with numerous vertical Lombardy Poplars and conifers dispersed throughout that demonstrate extensive human intervention.

10.4.65 The linear CVV with its vertical concrete piers and horizontal deck is clearly visible albeit screened in places by sections of woodland beyond the lake and comfortably below the skyline.

10.4.66 During sailing days, the moving sails of sailing craft are a predominant kinetic feature within this view.

Summary Description:

- Local view less than 1km from the Site;
- Medium number of viewers experiencing the view often;
- High sensitivity with viewers who have a particular interest in their visual environment, users of routes whose interest would be focussed on the landscape; and
- Broadwater Lake is the primary subject of the view albeit the sense of the valley with the CVV strongly define character.

Viewpoint 15 - Old Orchard Inn car park, Harefield

10.4.67 This view is complex, albeit not dissimilar from Viewpoint 03, in that there is an open long view from the north east of Broadwater Lake from the car park of the Old Orchard Inn. Beyond the foreground of car park, verge and hedge the near distance includes a field currently under pasture, broadleaved woodland, Grand Union Canal with barges and towpath and the strip of woodland between canal and lake.

10.4.68 Stored boats of the existing BSC can be seen at the northern extent of the lake. Beyond the wooded western shore of the lake can very clearly be seen a completed elevated rising viaduct of HS2 beneath the skyline. Cranes and infrastructure associated with ongoing construction is also visible.

10.4.69 Again, the currently periodic ecologically managed low vegetation of islands closest to the viewer are clearly visible as is the emerging scrub and dense tree cover of other islands, in particular those extending north from the core area of the Site beyond which land is to be reclaimed with the proposed Main Building and waterside boat storage.

10.4.70 The skyline is formed of the west side of the wooded Colne Valley, framing of the CVV and the Misbourne River tributary valley with wooded horizon beyond and the wooded east side of the Colne Valley.

10.4.71 During sailing days, the moving sails of yachts are a predominant feature within this view.

10.4.72 On close inspection, the occasional building can be seen amongst the trees within this landscape.

Summary Description:

- Local - medium distance view of the Site and the Main Building;
- Medium number of viewers experiencing the view often;
- Medium - high sensitivity as the landscape is not the overriding subject of interest for viewers, but the view is one of the reasons for visiting the public house albeit enjoyed either from or over a car park; and

- An expansive view of the Colne Valley with Broadwater Lake a central element and CVV clearly visible as a thread through the landscape.

Non AVR views

10.4.73 The assessment and filtering process of the value, susceptibility and sensitivity of visual receptors from viewpoint locations is explained within Table 10.15. This includes the rationale for discounting those views not used for AVR study. As is clear, the majority of the study area would experience no views of the Site.

Summary of Visual Receptors and Sensitivity

10.4.74 The assessment of sensitivity of the component landscape receptors within the Site and the wider landscape setting is the function of their landscape value and susceptibility to change to the proposals is set out in Table 10.15. There are only two VPs (03 and 15) where potentially significant visual impacts may be experienced

Table 10.15: Visual receptors' susceptibility to change, value, sensitivity and requirement for detailed assessment by viewpoint

Location of visual receptor	Value	Susceptibility of visual receptors to change	Visual sensitivity
Existing specific locations of sensitive receptors			
VP01 – Walkers on the Grand Union Canal towpath east of Site. The view is also representative of users of canal boats, X (Easting) 504329, Y (Northing) 190313	**Medium** as it is a known feature in reasonably good condition but only a small section of a regional asset therefore not rare. This location is however a very limited portion of a longer route.	**Not taken forward** - the towpath is bounded to the west by mature vegetation which would heavily filter and screen any potential views of Broadwater Lake and the Site.	
VP02 – View from Grand Union Canal towpath east and into the Site. As above, the view can also be seen as representative of users of canal boats, X (Easting) 504656, Y (Northing) 189802	**Medium** as it is a known feature in reasonably good condition but only a small section of a regional asset therefore not rare. This location is however a very limited portion of a longer route.	**Not taken forward** as the Main Building will be heavily filtered or part screened by intervening vegetation and islands between the towpath and Broadwater Lake. A local view.	
VP03 - Users of Hillingdon Trail and associated footpaths elevated on the valley	**High** as the Trail is in reasonably good condition, of local importance and limited	**High** as viewers, being walkers, have a particular interest in	**High** as viewers, being walkers, have a particular interest in their visual

Location of visual receptor	Value	Susceptibility of visual receptors to change	Visual sensitivity
side to the north east of the lake. These are likely to be local residents and visitors. X (Easting) 504771, Y (Northing) 190261	potential for substitution. This location is however a very limited portion of a longer route.	their visual environment.	environment and the Hillingdon Trail is an important local route with strategic views of the Site in context with the Colne Valley.
VP04 & 05 – Users of PROW north of Park Lodge Farm Centre X (Easting) 505705, Y (Northing) 189608	**Medium** as an attractive footpath through fields in reasonable condition and of demonstrable use. This location is however a very limited portion of a longer route.	**Not taken forward** as in this local-medium distance view the Site appears screened by intervening vegetation of local woodlands.	
VP06 – Users of PROW south of Park Lodge Farm Centre X (Easting) 505705, Y (Northing) 188673	**Low** as a section of footpath in reasonable condition through a field but adjacent to a busy road.	**Not taken forward** as in this local-medium distance view the Site is screened by intervening dense vegetation.	
VP07 - Pedestrian users of the bridge over the railway at Denham station. X (Easting) 504180, Y (Northing) 187734	**Low** as users of the bridge are not there for enjoyment of the landscape but there would be an awareness at the arrival in Denham.	**Not taken forward** - the Site is screened by intervening dense vegetation and Main Building significantly lower than adjacent existing trees.	
VP08 – Users of the Colne Valley Trail	**High** as the Trail is in reasonably good condition, of local importance and limited potential for substitution. This location is however a very limited portion of a longer route.	**Not taken forward** - the Site is screened by dense woodland on the Peninsula and other intervening vegetation in this medium distance view.	
VP09 – Users of the PROW within	**Medium** as an attractive footpath through the golf course	**Not taken forward** - intervening vegetation on the golf course and surrounding the Site screen views of the Site.	

Location of visual receptor	Value	Susceptibility of visual receptors to change	Visual sensitivity
Uxbridge Golf Club, Holcot Road X (Easting) 506079, Y (Northing) 186942	in reasonable condition and of demonstrable use. This location is a very limited portion of a longer route.		
VP11 - Users of the Old Shire Lane Circular Walk	**Not taken forward** - this viewpoint was omitted as the route was closed due to HS2 construction to the east of the line. The value of the potential view was significantly degraded and dominated by HS2.		
VP12a - Users of the Old Shire Lane Circular Walk on east side of M25 north west of Site (bridge) X (Easting) 502166, Y (Northing) 192328	**Low** in this location due to the poor quality of the location as a result of the dominance of the M25. This location is of very limited extent as part of a longer route.	**Not taken forward** – this nearly long-distance elevated view is dominated by M25 in the foreground, HS2 plant in the middle distance and the Site barely discernible on the valley floor to the south east.	
VP12b - Users of the Old Shire Lane Circular Walk on east side of M25 north west of Site (footpath) X (Easting) 502272, Y (Northing) 192308	**Low / Medium** due to the background noise and proximity of the M25 despite the rural setting of this section of the Old Shire Lane Circular Walk. This location is of very limited extent as part of a longer route.	**Not taken forward** - near long distance view with HS2 plant in the middle distance and Site barely discernible.	
VP13 - Users of the PRoW to south west of Maple Cross X (Easting) 502558, Y (Northing) 192113	**Medium** as a pleasant public footpath in a rural setting adjacent to residential development. This location is of very limited extent as part of a longer route.	**Not taken forward** - the Site is barely discernible distance from this long-distance view.	
VP14 - Users of the Old Shire Lane Circular Walk south of Lynster's Farm X (Easting) 503197, Y (Northing) 191991	**Medium** as a pleasant public footpath in a rural setting adjacent to a farm. This location is of very limited extent	**Not taken forward** - the Site is heavily screened by intervening vegetation.	

Location of visual receptor	Value	Susceptibility of visual receptors to change	Visual sensitivity
	as part of a longer route.		
VP15 - Visitors to the Old Orchard Inn elevated on the valley side to the north east of the lake. X (Easting) 504603, Y (Northing) 190394	**Medium** as there is no status given to this location, but it is a strategic view of the Colne Valley with Broadwater Lake the focus.	**High** as the view of the landscape is an important part of the experience at this location albeit degraded by the CVV.	**Medium - High** as the landscape is not the overriding subject of interest for viewers, but the view is one of the reasons for visiting the public house albeit enjoyed either from or over a car park.
Other Visual Receptors			
Existing users of the lake	**Medium** as although users are engaged in other activities, primarily angling, the landscape setting is an important aspect of their experience.	**Not taken forward** - anglers focus will primarily be the lake, sailing with associated structures and storage is an existing use and there are only a limited number of anglers.	Existing users of the lake
Users of the Grand Union Canal towpath	**High** as an important recreational route.	**Not taken forward** - no open views due to intervening vegetation.	Users of the Grand Union Canal towpath
Users of other recreational routes	**High** as many routes are recognised and named.	**Not taken forward** - no open views due to intervening vegetation and landform and worst-case views assessed within AVR study.	Users of other recreational routes

Location of visual receptor	Value	Susceptibility of visual receptors to change	Visual sensitivity
Residential properties of South Harefield	**High** as people may have prolonged exposure	**Not taken forward** - No open views due to intervening vegetation and landform whilst worst case views are assessed within AVRs should local residents use the adjacent PROWs adjacent to VP03.	Residential properties of South Harefield
Existing property adjacent to Site entrance	**High** as people may have prolonged exposure	**Not taken forward** - very limited open views of buildings due to intervening vegetation.	Existing property adjacent to Site entrance
Road users	**Low** as the landscape isn't the receptor's prime focus.	**Not taken forward** - no open views due to intervening vegetation and less sensitive receptor.	Road users
Railway users	**Low** as the landscape is not the receptor's prime focus.	**Not taken forward** - limited open views due to intervening vegetation and less sensitive receptor.	Railway users
Future baseline receptors			
Users of HS2 travelling at speed through the landscape and viewing the landscape through transparent screens and maturing vegetation.	**Low** as the landscape isn't the receptor's prime focus and they are moving at speed.	**Not taken forward** - views of the landscape are both momentary and incidental to the purpose of viewers' use of this infrastructure.	Users of HS2 travelling at speed through the landscape and viewing the landscape through transparent screens and maturing vegetation.

Future Baseline for assessment of cumulative effects

10.4.75 In line with the EIA Regulations, the future baseline conditions without the Proposed Development have been set out below. These have been judged as far as natural changes from the baseline scenario can be assessed with reasonable effort on the basis of the

available environmental information, scientific knowledge and assuming no changes to ownership or maintenance operations:

- Although the CVV viaduct appeared materially complete at the last time of survey, there will be operational aspects with regular fast moving trains along the HS2 rail line that add to the continuous Colne Valley Viaduct modelled within AVRs;
- Completion of HS2 ecological and landscape mitigation which have been identified within a zone that will include floating islands (9 tern rafts) to the west of the Peninsula and woodland associated with earthworks between the rail line and western shore of Broadwater Lake;
- Continued operation of BSC on the Site with sailing activities on the water and routine management of the northernmost island; and
- Continued regeneration of vegetation on the gravel works including:
  - No control of invasive Buddleia on and beyond the hard standing to the more valuable native woodland; and
  - Continued failing of trees to mature with root systems stymied by the existing concrete hard surface.

10.4.76 The most significant of these influences on the future baseline would be the full completion and operation of the HS2 Colne Valley Viaduct with regular moving trains visible within the landscape. This is assessed in terms of cumulative visual effects through the use of AVRs and from a landscape perspective, this places a greater importance on the role of landscape receptors as 'natural' elements within the landscape.

10.5 Embedded Mitigation (Scheme Design and Management)

10.5.1 As described earlier, development of the masterplan has been ecologically, landscape and visually led with embedded mitigation at every step on the way during a highly complex and iterative multidisciplinary design process. This revised scheme has benefitted from the specialist input of a professional and international standard sailing expert. The approach to embedded mitigation was based on the following design principles:

- The key strategic move with this revised application has been to relocate access to the water from the west to the east of islands 6 and 8, the East Channel. This provides multiple benefits, particularly in terms of reduced ecological impact;
- Response to stakeholder objections by locating all built form proposals as far as practicable onto the remnant concrete surface of previously developed land thus significantly reducing the extent of made ground so as to:
  - Enlarge the undisturbed refuge area for water birds from 3.42 to 14.72 hectares;
  - Enable a net increase of open water; and
  - Minimise the visibility of proposed buildings from outwith the Site.
- Reduction in the height, volume and scale of the proposed Main Building with the single roof being reduced in area and broken into two component parts;
- Significant reduction in the extent and volume of dredging and creation of made land;
- Retention of existing trees as far as practicable;

- Impacts on priority woodland habitat have been effectively avoided, with only a minor 6 m² loss of native woodland canopy, which the project ecologist has confirmed is ecologically negligible. Woodland loss has been prevented through careful siting of boat storage and launch facilities, and any residual habitat impacts have been fully mitigated by creating new native woodland and associated habitat through a small area of land reclamation to the east of the Peninsula.; and
- Further development of ecological mitigation measures with relocation of facilities onto reclaimed land from the west of the Peninsula to the north and include a significant suite of in-lake ecological enhancements.

10.5.2 These principles were based on and responded to the following:

- Site surveying and an appraisal of landscape quality;
- Habitat condition and other ecological surveys which informed mitigation requirements and enhancements which now form part the landscape masterplan;
- Visual surveys and analysis with test modelling and field study;
- Arboricultural surveys and a tree management strategy for the longevity of trees with decision making based on condition, size, species, responses to proposed management, and the extent of root protection zones;
- Operational and safety requirements of watersports and land-based activities;
- Engineering requirements for sensitive reclamation of land, shaping and creation of islands;
- Highways engineering for road widths, swept paths and junction design; and
- Stakeholder feedback, including interim design responses to the 2023 Scheme.

Construction

10.5.3 Chapter 6: Construction provides a description of the likely construction activities. Effects resulting from construction works typically relate to reduced tranquillity with increased noise levels, increased traffic movements and visual effects associated with the enclosure of the Site with hoarding and views of construction compounds and plant.

10.5.4 During the construction phase, contractors will be required to apply good practice site measures in compliance with the Outline CEMP (Appendix 6.1). The Outline CEMP includes standard construction methods and that housekeeping will be maintained to keep a tidy site and minimise visual clutter during construction works and that the tree protection measures specified in the ArbIA will be implemented in line with BS 5837, 2012 Trees in Relation to Design, Demolition and Construction for woodland, tree groups and individual trees.

10.5.5 The duration of dredging and land reclamation would be significantly reduced as a result of the diminished requirements for both;

10.5.6 The potential visual impact of most dredging and land reclamation on both human and wildlife receptors would be significantly reduced through the concentration of works within the sheltered and enclosed Eastern Channel.

10.5.7 Tree management operations such as coppicing, pollarding and removal of unwanted vegetation would commence during the construction period. The timing of construction

operations and works to existing trees will be developed in liaison with the ecologist so as avoid potential harm to wildlife.

10.5.8 From a visual perspective, any external scaffolding, protective sheets and temporary lights (if required and permissible ecologically) around buildings under construction would be designed with context in mind. Visually, hoarding on the north facing elevations of the Main Building and around working areas of the Site should be a recessive green or camouflage so as not to draw attention from visual receptors on raised ground to the north east of the Site.

10.5.9 Designed temporary construction lighting would avoid visual intrusion for adjacent residential properties and recreational users, with input from ecologist.

10.5.10 Management and maintenance of new planting during the construction period would be incorporated and defined by planning condition.

Completed Development

10.5.11 Primary mitigation measures that are relevant to landscape and visual matters, are set out below under 'Avoidance', 'Mitigation' and 'Enhancement' in line with the mitigation hierarchy:

Avoidance

10.5.12 Demonstrating the iterative multidisciplinary nature of this project, so as to reduce ecological effects, the masterplan was iteratively shaped with ecological survey information and disturbance criteria so as to separate activity from ecology. On water, the parameters of disturbance were 100m between waterbirds and land, and 200m from activity on water. Shoreline activity was therefore excluded from the west and north west side of the Peninsula with access to the water from the channel east of islands 6 and 8 – a wooded screen on elevated landform. These moves enabled creation of a significantly enlarged wildlife refuge to the south west of the Lake;

10.5.13 On land, development and activity was located to avoid loss of most valuable habitats and landscape features, particularly native woodland on the Peninsula (other that 6m^2), woodland around the perimeter of the lake and islands. This will be achieved through:

- Demolition of the existing Broadwater Sailing clubhouse and associated low quality storage containers with restoration of this part of the Site to ecological habitat;
- Re-use of existing hard surfaces wherever possible;
- Locating the Main Building, Safety Equipment Store, Workshop, vehicle access route, car parking and coach turning circle on the existing remnant hardstanding to avoid tree and habitat loss;
- Reduction in the number of stored boats from 400 no. to 250, thus reducing the area required for land reclamation, avoiding any loss of open water and associated landscape and visual effects;
- Retaining and protecting the best condition, Category B trees on-Site as far as possible which provide visual screening. No Category A trees would be lost; and

- Use of a grass and wildflower sown surface to the boat storage and rigging area to help to absorb the proposal into the vista.

On water:

- Use of floating reedbed islands (with undersides that fulfil an ecological role) rather than solid islands so as to avoid the loss of open water and associated landscape and visual impacts;
- In-lake planting in submerged planters comprising:
  - 35 no. east west along the south west refuge boundary;
  - 7 no. to create a visual screen between islands 06 and 08; and
  - 8 no. to form a shelf along the southern shore of land adjacent to the Workshop building.
- The extent of dredging has been restricted to the Eastern Channel with excavated material used to form the adjacent made land that has been shaped to align with the broadly north to south geometries of the Site and setting;
- The design incorporates the following avoidance measures to minimise the impact of the Main Building on landscape character and in views;
  - Siting on existing hardstanding surface surrounded by existing trees, woodland and tree groups;
  - Iterative testing of building location and height with visual barriers study (see LS) from VP 03 and 15 of 'dummy AVRs' with barriers of varying heights and locations on remnant concrete to establish the locations of minimal visibility for the location, orientation and height of the Main and supporting buildings. The height of the tallest part of the Main Building has been reduced from 49.38m AOD to 48.73m AOD and relocated so that all is comfortably below the adjacent tree line and to reduce wider outward visibility; and
  - Retention of key landscape features and visual screening components such as woodland group G25 which plays a vital screening role.

Mitigation

10.5.14 Material choices for building roof and elevations have been selected so as to be recessive, natural and visually fit into the semi-natural landscape. These are as follow:

Roof:

- Zinc seamed roof – terracotta / rust colour;
- Polycarbonate; and
- Flint stone wall:
- Concrete datum and window surrounds.

Other:

- Metalwork (Exposed structural elements, balustrades & gates) a terracotta / rust to match roof; and
- Composite window and door frames, exact RAL tbc – colour to match concrete / flint mortar - see strip elevations below:

- Use of a green appearing grass and wildflower sown surface to the boat storage and rigging area to help to absorb the proposal into the vista;
- Lighting will be designed in consultation ecologists, generally low level to reduce potential wider visual effects and generally not required due to the operating hours and seasons of the facility; and
- Boundary treatments have been designed as a combination of mild steel fences, traditionally laid hedges and dry hedges depending on light levels and tree roots.

Enhancement

10.5.15 The following measures designed to enhance the existing landscape are secured through the Outline MEMP:

- Clearance of invasive Buddleia encroachment on and potentially from the Site;
- Continued monitoring and treatment of other non-native invasive species such as Giant Knotweed and Japanese Knotweed;
- Management of existing woodland to improve its structural and species condition so as to improve for longevity and biodiversity. These operations include removal of unsafe and poor condition specimens, coppicing and pollarding;
- Creation of a new biodiverse species-rich landscape structure of trees, hedges and shrubs across the Site that takes a number of roles such as shaping activity areas, movement routes, car parking areas, screening sensitive ecological resources, offering shade and providing opportunities for education;
- Use of existing vegetation to screen waterbodies and offering new / enhanced habitat;
- Creation of new low fertility grassland habitats under boatyards and in parking areas; and
- Improvement of the vegetation and graded profile of the lake shoreline.

10.5.16 Embedded mitigation and enhancements are shown on the Landscape Masterplan in Appendix 10.2.

10.5.17 The MEMP (Appendix 7.4) provide a framework for ongoing management of the Site's landscape and ecological features, ensuring their long-term health and sustainability.

10.6 Assessment of Effects

10.6.1 The significance of landscape and visual effects of the Proposed Development are assessed against the respective baseline conditions within this section.

10.6.2 Geographically and in terms of scale, affected landscape receptors both on-Site and beyond the Site boundary and within the study area are explicitly identified within the Baseline Conditions section.

Reversibility of Landscape Effects

10.6.3 Of proposed activities that would potentially impact upon the landscape receptors at both the construction stage and for completed Proposed Development, there is a spectrum of reversibility.

10.6.4 Those elements and actions of inherent reversibility include:

- Construction ephemera;
- Landscape works; and
- Installation of tarpaulin shelters and woodland activities.

10.6.5 Actions with theoretical reversibility are considered to include:

- Dredging plant and equipment;
- Ecological mitigation measures such as floating reedbeds, acoustic fencing and planting;
- Installation of substrate filled submerged planters for tree planting; and
- Erection of activity shelters.

10.6.6 Actions of permanence are considered for:

- Reclamation of land; and
- Construction of new buildings.

Arboricultural Impact Assessment (AIA)

10.6.7 The Landscape Impact Assessment is informed by AIA from the specific aspect of trees. Two AIAs were undertaken, one by RSK Biocensus (Appendix 10.6) for the lake perimeter including islands whole site in April 2023 and a second by Landmark Trees (Appendix 10.7) focussing on the Peninsula and access drive from Moorhall Road with surveys between the 12th of October 2024 and the19th of August 2025. Both were stated to be in accordance with British Standards Institute: Trees in relation to design, demolition and construction BS 5837: 2012 HMSO, London. AIAs examine the impact of development on trees so as to guide design proposals and form part of the planning application through:

- Using topographical survey information;
- Mapping trees species, size, condition and value; and
- Calculate theoretical Root Protection Areas;
  - Categorising trees in respect of their suitability for retention;
  - Identifying the impacts of the development on the arboricultural features present; and
  - Advising on appropriate management and mitigation if required.

10.6.8 Of the wider site, other than the tree group on island 07 within the Eastern Channel which is to be removed so as to enable the increase in area of the south western refuge, no existing trees within were proposed to be removed. The loss this island would be overwhelmingly mitigated by the numerous trees proposed in submerged planters as outlined earlier.

10.6.9 On the Peninsula, the AIA concludes that there would be a positive impact on the existing tree resource resulting from the proposal provided certain recommendations are made:

There are individual trees and groups of trees on the property and adjoining land outside of the application boundary that are within close proximity to the development and need to be assessed. These are judged mostly as moderate and low-quality trees.

The report has assessed the impacts of the development proposals and concludes there would be at most a low impact on the resource: a small portion of trees will be removed or pruned to facilitate construction. Those removed have generally more collective than individual specimen value, such that their loss will be mitigated with new planting, bringing its own benefits to a relatively unmanaged resource: the area of new planting exceeds the area of canopy loss by a factor of 6. Similarly, though pruning here is to serve development, if undertaken to best practice, the scale envisaged should not be altogether untoward in an occupied site.

Whilst the default position is that structures be located outside the Root Protection Area* (RPA) of trees to be retained, there are some modest encroachments that could not be avoided in the design of the scheme. The report has demonstrated that the tree(s) can remain viable; the report also proposes a series of mitigation measures to improve the tree resource. A 30-year management plan from an ecology perspective will be undertaken by LBH once planning is granted. There is the opportunity for a routine woodland improvement management plan as well balancing the ecological value of dead / poor condition trees with overall woodland health and safety. The landscape masterplan indicates coppicing and pollarding of trees, particularly willows around proposed buildings, car parking and areas of primary pedestrian usage.

Notwithstanding the above assurances, the report sets out a series of recommendations prior and during construction that will ensure impacts to trees are minimised.

10.6.10 In terms of potential loss and gain of tree assets on the Peninsula and island 07, the AIA states:

- The following would be lost, comprising:
  - No Category A trees or tree groups;
  - 1 no. Category B trees and 6 m^2 tree group canopy;
  - 3 no. Category C trees and parts of 5 no. tree groups' canopy; and
  - 1 no. Category U trees and no tree groups.

- The following areas of tree canopy and number of specimens would be gained including:
  - 147 no. native specimen trees;
  - 28 no. orchard trees;
  - 250 no. willows (5 no. in each) within 50 no. submerged planters; and
  - 1,232 m2 native woodland planting
  - 10,646 m2 native shrub planting .

10.6.11 As can be seen numerically, there are considerably more trees and native shrubs being planted than would be lost.

Landscape Effects - Construction

10.6.12 Predicted effects of construction of proposed buildings, earthworks, ecological mitigation or infrastructure on the landscape receptors of the Site will be temporary and short term.

10.6.13 Taking into account embedded mitigation including the Outline CEMP measures, changes in the landscape resulting from construction operations activities would include:

- Dredging to create localised sailing depths, removal of island 07 (submerged construction spoil) to facilitate sailing within the Eastern Channel, creation of shallow submerged bays on island 02 and removal of invasive Giant Knotweed to create a shallow submerged shelf habitat on island 06 at the north eastern point of the Peninsula:
  - Previous submission: 47,356m^3; and
  - Current scheme: 7,094m^3;
- The process of creating new land to extend the Peninsula:
  - Previous submission: 16,114m^2; and
  - Current scheme: 2,884m^2.
- Localised earthworks within historic spoil on the Peninsula to achieve an accessible and safe landforms for movement, boat storage, car parking and internal access;
- Limited groundworks to the existing concrete surface so as to permit planting (772m^2) and grass seeding (1,576m^2). This entails a clean cover layer to the concrete (to allow drainage and prevent anaerobic conditions developing), imported topsoil, inoculation of soils with a locally appropriate mycorrhiza and planting;
- Loss of some existing scattered trees and trees within groups due to thinning for broader tree and woodland health through tree management (improvement) operation or being potentially unstable either with compromised root purchase on the remnant concrete or the fast growing and collapsing nature of some Willow species;
- The presence of construction vehicles, plant (likely to include small crane(s) for a short period of time), construction compounds and site offices; and
- Hoardings and screening.

10.6.14 Table 10.16 applies sensitivity of landscape receptors with the description and magnitude of impacts of construction activities so as to predict the significance of landscape effects at the construction stage.

Table 10.16: Landscape Effects – Construction

Landscape receptor	Landscape sensitivity	Magnitude and description of change (impact)	Significance of landscape effect
Thames Valley NCA	**Low**	**Negligible:** Due to the temporary nature of most construction actions within the Site over the short to medium term within a very	**Negligible adverse:** Impacts would be barely perceptible at the scale of the NCA, in lake construction very short

Landscape receptor	Landscape sensitivity	Magnitude and description of change (impact)	Significance of landscape effect
		controlled environment of limited extent given the very large scale of the NCA.	term and building construction short term.
Colne Valley Regional Park	**Medium**	**Negligible:** Due to the temporary nature of most construction actions within the Site over the short to medium term within a very controlled environment of limited extent given the much larger scale of the CVRP.	**Negligible adverse:** Impacts would be at site level in comparison with the scale of the LCA, in lake construction very short term and building construction short term.
Colne Valley: Rickmansworth to Uxbridge LCA	**Medium**	**Negligible:** Due to the temporary nature of most construction actions within the Site over the short to medium term within a very controlled environment of limited extent given the much larger scale of the LCA.	**Negligible adverse:** Impacts would be at site level in comparison with the scale of the LCA, in lake construction is very short term and building construction short term.
Open water of Broadwater Lake	**Medium**	**Low – medium:** Temporary dredging operations, land reclamation within the Eastern Channel and some edge profiling operations leading to controlled and limited disturbance of a small portion of the lake over a short duration of time with a 716m^2 minor increase in the area of open water.	**Minor adverse:** Although individual operations would be noticeable the duration of each would be very short and only a small mostly enclosed portion of the lake would be most affected.
Islands within Broadwater Lake	**High - medium**	Low – medium: Temporary and short-term operations to remove one small island 07 (296m2) reshape two to create shallow water including removal of invasive Giant Knotweed and installation of a total of fifty submerged planters of which: ▪ 35 no. east west along the south west refuge boundary; ▪ 7 no. to create a visual screen between islands 06 and 08; and	**Minor adverse** as operations would be locally noticeable at the scale of the islands. However, the duration of each operation would be very short-term.

Landscape receptor	Landscape sensitivity	Magnitude and description of change (impact)	Significance of landscape effect
		▪ 8 no. to form a shelf along the southern shore of land adjacent to the Workshop building. Theoretically reversible actions if required.	
Shoreline of lake including Peninsula	**Medium**	**Low:** Temporary and short-term earthworks leading to the loss of a section of shoreline for reclaimed land and reprofiling in some locations to create a more sensitive profile and plan form in places.	**Minor adverse:** Although at the time and in specific locations operations would be noticeable, the duration would be short-term and only a very small portion of the lake would be affected.
Native woodland within the Peninsula	**High**	**Low:** Loss of 19m^2 root protection zone and 6m^2 canopy due to construction within this area. Protected by fencing during building and infrastructure construction. Management operations would be undertaken to enhance the condition of woodland, aspects of which would be immediate such as thinning and removal of inappropriate species to improve the overall health and longevity of the woodland.	**Minor beneficial:** Management operations would start to improve the health of the woodland.
Incidental tree / scrub groups and vegetation on Site	**Medium**	**Low:** The would be a balance of removal of less healthy, potentially structurally unstable and a small number of inappropriately located trees and scrub groups for development; with temporary and short-term tree management operations such as thinning, coppicing and limited felling of existing trees and replanting of suitable species which would be of benefit. The net impact is considered positive given the continued removal of invasive Buddleia.	**Minor beneficial:** The net effect is judged to be of no impact on the baseline resource of predominantly poorer condition trees.

Landscape receptor	Landscape sensitivity	Magnitude and description of change (impact)	Significance of landscape effect
Remnant hard surface with scattered pioneer vegetation	**Low**	**Low:** Temporary short term and localised construction operations on the concrete to build up planting and grassed areas with repurposed concrete for edges, substrate of a layer of free draining fill, geotextile separator membrane and topsoil, planting operations. In addition, the existing hard surface will be used to locate proposed buildings, vehicle movement routes, and car parking. Impacts would include the loss of generally limited ground flora and some unstable semi-mature vegetation all which would be mitigated by the planting of new native trees of long-term benefit and stability.	**Minor adverse** Operations although locally noticeable would be short term and very localised.

Landscape Effects – Completed Development

10.6.15 The predicted effects of the Proposed Development once complete and operational would reduce from Year 1 to Year 15 as the implemented landscape and ecological mitigation works mature. This would strengthen and benefit both the local and wider landscape. These effects are set out below in Table 10.17.

10.6.16 Table 10.17 assesses and justifies the magnitude of impact on the landscape sensitivity of each receptor to judge the significance of potential landscape effect in operation. Effects are set out at Year 1 on completion and after Year 15 once the proposed landscape scheme has started to mature.

Table 10.17: Assessment of landscape effects – Completed Development

Landscape receptor	Landscape sensitivity	Magnitude and description of change	Significance of Landscape Effect – Yr 1	Significance of Landscape Effect – Yr 15
Thames Valley NCA	**Low**	**Low:** Given the large scale of the NCA in relation to the Site, any changes in the fabric of the overall landscape of the NCA would be negligible irrespective of duration and reversibility. The proposed enhancements of the ecological condition and woodland management of the former extraction site with an emphasis on recreation and educational opportunities align with SEO2, SEO3 and SEO5. Continued maturation of the landscape structure, ecological mitigation and enhancement measures would be of benefit to the wider natural resource.	**Negligible beneficial** Given the large scale of the NCA	
Colne Valley Regional Park	**Medium**	**Low:** Changes that include incorporation of upgraded sailing facilities, very minor intensification of sailing activities with HWSFAC (albeit the sailing area will be slightly reduced) in addition to the BSC baseline, reprovision and introduction of a limited number of sensitively located new recreational buildings, land activities and associated servicing, boat storage and car parking are all characteristic of the receiving landscape and fall within the aims of the CVRP and physical framework of the existing landscape structure. There would be enhancement of the baseline ecology and landscape with long term management secured. Continued maturation of the landscape structure, ecological mitigation and	**Negligible beneficial:** Given the scale of the CVRP.	**Minor beneficial:** As the new landscape structure and ecological features mature.

Landscape receptor	Landscape sensitivity	Magnitude and description of change	Significance of Landscape Effect – Yr 1	Significance of Landscape Effect – Yr 15
		enhancement measures would be of benefit to the wider natural resource. These would be of permanent but of low impact given the small size of the Site relative to the scale of the CVRP.		
Colne Valley: Rickmansworth to Uxbridge LCA	**Medium**	**Low:** There would be no change on the quiet country lanes of the LCA as access to the Site would be from Moorhall Road to the south. Scenic views across the valley would be protected through the embedded mitigation. There would be enhancement of the baseline valley floor ecology and landscape with long term management secured as aligned with the strategy for this LCA. New waterside grassland would be created. The former gravel extraction pit would be managed for ecology but allowing recreation with sensitive planning for increased informal recreational use of the area, ensuring sufficient provision of low-key parking and facilities, which reflect local vernacular and character. Changes in terms of the operation of the facility and its ecological stewardship can be seen as permanent but limited in scale to the Site, a small portion of LCA. Continued maturation of the landscape structure, ecological mitigation and enhancement measures would be of benefit to the wider natural resource.	**Negligible beneficial:** Given the scale of the LCA.	**Minor beneficial:** As the new landscape structure and ecological features mature.

Landscape receptor	Landscape sensitivity	Magnitude and description of change	Significance of Landscape Effect – Yr 1	Significance of Landscape Effect – Yr 15
Open water of Broadwater Lake	**Medium**	**Low:** Minor reshaping of the lake leading to a marginal increase in the area of open water area so as to provide the embedded mitigation of land reclamation, enhance lake edges for biodiversity, remove one island for sailing, reduce the area of two islands in ecologically sympathetic forms and install submerged planters for emergent trees for ecological mitigation. Likely permanent but changes could be seen as reversible in theory.	**Minor beneficial:** The area of open water would be increased and form of lake marginally improved – a small impact on the baseline.	**Moderate beneficial:** The richness of the lake with mature vegetation on new 'islands', the shoreline and floating reedbeds would be a noticeable improvement
Islands within Broadwater Lake	**High - medium**	**Low:** More open water would be created where island 07 was located and over time planting would develop a presence from the submerged planters with emergent willow that filter the boundary between sailing area and south west refuge. Lakes with complex features that are islands are few within the Colne Valley and therefore this would result in an increased presence as a valuable entity. Permanent.	**Minor adverse:** The lost island 07 is of little integrity (an old waste pile) in relation to sensitive shaping of islands 02 and 06, creating shallows.	**Moderate beneficial:** Maturing vegetation from submerged planters would be a noticeable benefit to this and the wider association of lakes, appearing as more islands within the Colne Valley.

Landscape receptor	Landscape sensitivity	Magnitude and description of change	Significance of Landscape Effect – Yr 1	Significance of Landscape Effect – Yr 15
Shoreline of lake including Peninsula	**Medium**	**Low:** Despite the loss of a small section of shoreline for the reclaimed land there are proposals to enhance the lake's shoreline elsewhere locally with a more sensitive vertical profile and horizontal. Changes in theory could be seen as reversible, but so as to achieve long term benefits are seen as permanent.	**Minor adverse:** Until vegetation establishes and matures along the shore	**Minor beneficial:** The richness of some of the shoreline improves with maturing vegetation and an improved profile in places.
Native woodland within the Peninsula	**High**	**Medium:** With development focused on the existing remnant concrete surface, native woodland which predominantly is located in the gravel works' former silt settlement tank is avoided Loss of 19m^2 root protection zone and 6m^2 canopy (0.03% of the total canopy) due to the building footprint. . Tree management would enhance the condition of woodland as both a landscape feature and contributor to landscape character which would enhance with maturation of the proposed landscape over time. The entirety of the native woodland would be managed.	**Minor beneficial:** Tree management would immediately provide a small improvement	**Moderate beneficial:** As the benefits of management develop into a noticeably better woodland structure
Incidental tree / scrub groups and vegetation on Site	**Medium**	**Medium:** Benefits of management on existing trees and replanting of new suitable species of native trees, shrubs, understorey and meadows. The scheme will enhance with maturation over time.	**Minor beneficial:** Vegetation pattern would benefit from the removal of Buddleia, managed remaining	**Moderate beneficial:** As the new planting establishes and the benefits of

Landscape receptor	Landscape sensitivity	Magnitude and description of change	Significance of Landscape Effect – Yr 1	Significance of Landscape Effect – Yr 15
		Significant areas of existing concrete where colonising vegetation struggles would be enhanced with imported topsoil that would also promote longevity of proposed trees. Long term management would be secured through the MEMP.	specimens and planting of new.	management develop into a noticeably better vegetation assembly and structure.
Remnant hard surface with scattered pioneer vegetation	**Low**	**Medium:** Significant opportunities for enhancement through over-planting and -seeding of areas of concrete surface, creating new soft surfaces and planting associations with longevity, repurposing as new hard surfaces and reuse for incidental construction of raised planters. The hard surface covers a significant portion of the Peninsula but a very small proportion of the overall Site.	**Minor beneficial:** There would immediately be a net improvement from the baseline.	**Moderate beneficial:** As the new landscapes mature overall improvement would increase.

Visual Effects – Construction

10.6.17 The process to identify visual receptors is in the Baseline Conditions section 10.4, leading to AVR locations that form representative VPs as set out in Table 10.18.

10.6.18 The table below appraises potential predicted effects of construction of proposed buildings, earthworks, ecological mitigation and infrastructure on the visual receptors of the Site and wider setting. These are all temporary with short term durations in each construction location.

Table 10.18: Summary of Visual Effects on Visual Receptors – Construction

Visual receptor	Visual sensitivity	Magnitude and Description of Impact	Significance of Visual Effect
Users of Hillingdon Trail and associated footpaths elevated on the valley side to the north east of the lake as represented by the location of VP03.	**High**	**Negligible:** Possible visibility of small cranes, highly limited in duration and extent within the vista as largely screened by intervening vegetation. The building would not be seen. Land reclamation would be predominantly screened. Dredging activities and installation of submerged planters from a barge type vessel, towing and anchoring of floating reedbeds would be visible for a short period of time.	**Negligible adverse:** Although there may be some visible activities, these would be of limited duration, extent, impact and on the environment in comparison with the baseline, particularly with all buildings predicted to be screened and all activity largely within the mostly enclosed Eastern Channel.
Visitors to the Old Orchard Inn elevated on the valley side to the north east of the lake as illustrated by VP15.	**Medium – high**	**Low:** All operations, particularly in water would only be visible for a short period of time and temporary. Land reclamation would be predominantly screened. Visibility of construction of a small fragment of upper parts of the proposed Main Building including possible small cranes, very limited in extent within the vista. Potential visibility of dredging activities and installation of submerged planters from a barge type vessel, towing and anchoring of floating reedbeds.	**Minor adverse:** Although in lake activities would be noticeable, they would be of limited duration in each location. With the Main Building predominantly screened and all activity largely within the mostly enclosed Eastern Channel there, overall there

Visual receptor	Visual sensitivity	Magnitude and Description of Impact	Significance of Visual Effect
			would be little effect on the baseline view.
Existing users of the lake	**Medium**	**Medium:** Short term and temporary views of dredging, shore formation and land reclamation within the lake, primarily within the mostly enclosed Eastern Channel. Construction of the Main Building would be mostly screened by intervening vegetation and away from most existing lake user activity.	**Minor adverse:** Although in lake construction activities would be noticeable, they would be of short duration and therefore only a small change to the baseline
Users of the Grand Union Canal towpath	**High**	**Low-medium:** Users of the towpath Installation of the fence and traditionally laid hedge would be the most noticeable operations, albeit short term. Predicted very limited highly screened and filtered glimpsed views of in lake activities and the building construction through existing vegetation and the proposed eastern boundary treatment.	**Minor adverse:** Construction of the fence and boundary treatment would be noticeable but of short duration. Early installation of the fence and hedge would further decrease the potential of views of construction within the Site.
Users of other recreational routes	**High**	**Negligible:** No predicted significant views were found with site analysis subsequent to ZTV study due to local intervening vegetation. There may be very limited occasional highly filtered glimpses predicted with short durations of construction zones within the lake and potentially the top of a crane above the woodland canopy.	**Negligible adverse:** Construction activities unlikely to noticeable through intervening vegetation and of short duration in each zone of construction.
Residential properties	**High**	**Low:** Likely very limited extent predicted of highly screened views through existing vegetation from some upper storey	**Negligible adverse:** Construction activities would be barely noticeable through intervening

Visual receptor	Visual sensitivity	Magnitude and Description of Impact	Significance of Visual Effect
		windows of short-term views of activities.	vegetation, of short duration in each zone of construction and from a very limited number of residential properties.
Existing property adjacent to Site entrance gate	**High**	**Medium:** Due to proximity. Short term and temporary views of construction of the building on the Peninsula to the north of the lagoon, planting works adjacent to the lagoon, installation of boundary fences and construction traffic entering the Site from the drive from Moorhall Road during set working hours. This existing house is however set behind existing vegetation.	**Minor-Moderate adverse:** Although construction traffic would be noticeable, the duration of operations would be limited and construction of buildings on the Peninsula screened and filtered by intervening vegetation. This could be reduced to **Minor adverse** through advanced buffer planting and installation of hoardings.
Road users	**Low**	**Low:** Possible very limited occasional glimpsed views of short-term lake operations or cranes through and above the pattern of existing vegetation.	**Negligible adverse:** As a functions of very limited highly filtered views and short-term construction activities from drivers and passengers moving on roads with views otherwise dominated by the road.
Railway users once HS2 is operational	**Low**	**Low:** Unlikely potential views of construction of the buildings through the pattern of existing vegetation. Some glimpsed views would be experienced in the short	**Negligible adverse:** Glimpsed views of construction activities over limited periods of time from some viewers at speed.

Visual receptor	Visual sensitivity	Magnitude and Description of Impact	Significance of Visual Effect
		term of in-lake construction, albeit at speed.	

10.6.19 In summary, no significant adverse visual effects are identified at the construction stage.

Visual Effects – Completed Development

10.6.20 The predicted visual effects of the Proposed Development once complete are extremely limited in extent and adversity and would reduce from the opening day in Year 1 to Year 15 as the landscape matures both on Site and in the surrounding landscape leading to increased screening and filtering effects.

10.6.21 The AVRs are presented with associated metadata in Appendix 10.5 and as per GLVIA3, this assessment should be read in association with the A1 prints of AVRs simultaneously with baseline effects.

Viewpoint 03 – Hillingdon Trail off Merle Avenue, Harefield

10.6.22 Users of the Hillingdon Trail are highly sensitive receptors from this medium distance open long view over Broadwater Lake with its islands and beyond down the wooded Colne Valley and Misbourne River tributary valley. Visualisation reveals that the Main Building, Workshops and Safety Equipment storage would be entirely screened by the compounded effects of intervening vegetation on islands within the lake, eastern shore of the lake and either side of the Grand Union Canal even in Winter.

10.6.23 The AVR also illustrates the addition of emergent vegetation appearing as small-scale islands within the lake, a floating reedbed and slight increase in the visible open water within the Eastern Channel due to the removal of island 07. Both of these features are in keeping with the lake's character.

10.6.24 Although not visible from this location, the presence of the boat storage area would not be incongruous given its grassed surface and the presence of BSC on the northern shore for many years.

10.6.25 Summer testing of the view when vegetation was in leaf (from a slightly adjusted location that avoided the intervening young tree), confirmed that buildings would be entirely screened from this viewpoint.

10.6.26 It should be noted that during the summer months when HWSFAC would be in operation, there are likely to be more sailing days with more moving sails of dinghies drawing the eye in comparison to the current activities of the BSC. However, only a portion of BWL is visible with a maximum of six sailing dinghies on the water at any single time, with most activity planned within the Eastern Channel, out of sight.

10.6.27 As with the current situation, during sailing days, the moving sails of craft would be a predominant feature within this view due to the colour of sails contrasting with the setting

and their movement. It is not deemed that the increased water-based activity arising from HWSFAC activities would significantly alter this perception.

10.6.28 Only a very small part of the Hillingdon Trail would experience very minor changes to views resulting from the presence of planting within the lake, which other than the floating reedbed would be barely perceptible in Year 1 given planters are submerged and planting stock effectively appearing as 'stakes' rather than 'bushy' trees. Islands with or without vegetation and the waterbirds that they attract are however positive distinguishing visual features of Broadwater Lake in comparison with neighbouring lakes. In addition, there would be a slight increase in the left to right breadth of view of open water due to removal of island 07 in the Eastern Channel.

10.6.29 Overall, the predicted visual effect at VP03 as a function of negligible visual impacts upon high sensitivity receptors and thus deemed of negligible beneficial effect as not only would there be very minor changes to views with the addition of features that are unlikely to be readily perceived, but these would be glimpsed from a very small portion of the Hillingdon Trail, with the proposed building occupying only a tiny part of the view in Winter only. These enhancements would consolidate over time as planting matures, its visual presence increases with associated increased likely birdlife leading to greater visual interest. A Minor beneficial effect is thus judged.

Viewpoint 15 – Old Orchard Inn car park, Harefield

10.6.30 This medium-high sensitivity view is complex as viewing the landscape is not the overriding purpose for receptors visiting the location. The long and panoramic view does however provide a secondary reason for visiting the public house, albeit the view is enjoyed either from, through or over the car park.

10.6.31 The open water of Broadwater Lake is the most dominant feature of this landscape and draws the eye as a highly attractive feature on a sunny day when reflecting the blue sky albeit the visual association between lake and western valley side is dissected in places by the linear albeit some might say elegant form of the CVV.

10.6.32 The Winter AVR from view 15 demonstrates that as a result of the embedded mitigation of the design process for the revised building's location and form, a small fragment of the eastern extent of roof and associated upper wall is predicted to be visible as would ultimately emergent vegetation within the lake. On planting, the emergent scrub and trees from submerged planters would be barely perceptible. The floating reedbed would be more noticeable but appear in keeping with vegetation within the lake. With maturation of in-lake scrub and trees as shown, they would be read in association with intervening woodland adjacent to the GUC and eastern lake shore. The subsidiary Workshop and Safety Equipment Store buildings made ground and boat storage areas would be entirely screened.

10.6.33 There would be no change to the depth of view of water towards the southern lake shore.

10.6.34 The proposed Main Building is of medium distance (1-3km) and the small fragment of roof, does not look out of place with other occasional buildings which can be seen amongst the trees within the wider landscape from this elevated view.

10.6.35 Beyond the wooded south western and western shore of the lake there would be no change to the clear wooded backdrop of the Colne Valley. There would also be no change to the large-scale character of this view beyond with its incorporation of the wooded Misbourne River tributary valley with wooded horizon beyond and CVV viaduct.

10.6.36 Just out of view at the northern extent of the lake, are stored boats of the existing BSC. These would be removed, relocated to the visible boatyard on the extended Peninsula and restored to a habitat mosaic of native grasslands, scrub and low vegetated landforms.

10.6.37 Summer testing of the view when vegetation was in leaf revealed buildings to be entirely screened.

10.6.38 In addition, during the summer months when HWSFAC is in operation, there are likely to be more sailing days with more moving sails of yachts drawing the eye in comparison to the current activities of the BSC. Only a portion of BWL is however visible and a maximum of six sailing dinghies on the water at any single time.

10.6.39 It is considered that the incorporation of the small fragment of building in the middle distance within this medium-high sensitivity landscape would lead to a negligible adverse impact for receptors at VP15 as in Winter the change to the existing view would be barely perceptible and in Summer the building would be completely screened.

10.6.40 With respect to Broadwater Lake the increase in the perceived extent of open water and proposed emergent vegetation is not judged to be prominent or contrast significantly with the baseline. Furthermore, islands and the waterbirds that they attract are positive distinguishing visual baseline features of Broadwater Lake. Taking the visual effect as a function of low-Minor beneficial visual impact upon medium-high sensitivity receptors, it is judged overall that the positive features that give Broadwater Lake its distinctiveness would be enhanced with a negligible to Minor beneficial effect.

10.6.41 Bringing together both sets of visual effects upon the visual receptors of the Old Orchard Inn carpark, the magnitude is considered to be negligible adverse on completion at Year 1 rising to minor benefit by Year 15 as it is unlikely that the fragments of roof would be noticeable and maturation of the proposed landscape and ecological mitigation features with associated likely birdlife would lead to greater visual interest, thus judged a Minor beneficial effect.

Other receptors

10.6.42 **Existing users of the lake** are BSC members and anglers. Experiences would include increased activity on the water at some times and an upgrading of existing BSC facilities to the new Main Building with reinstatement of habitat on the existing BSC site in associations with significant new planting in the lake and floating reedbeds.

Visual impacts are judged low as new elements would not contrast with the baseline and are not extensive, being limited by the lake and its surrounding waterside visual envelope. Buildings would be permanent but an upgrade on existing.

Effects are initially seen as Minor adverse as although some aspects of change would be noticeable when close up, the low water level nature of views and activities of users would be more focussed on the immediate water rather than backdrop of changes, which would

still be enveloped by trees. These would change to Minor beneficial once the landscape scheme matures on land, in the lake and floating as views would become visually more interesting.

10.6.43 **Users of the Grand Union Canal towpath** would predominantly experience heavily screened views into the Site through sections of new boundary fence and traditionally laid hedges.

Low visual impacts would be permanent from the linear extent of the towpath. These would be more the fence than Site facilities with effects softened over time by the matured hedge and adjacent planting.

Minor adverse effects as prior to maturation of the boundary hedge, the fence, albeit amongst trees would represent a small change to the baseline. This would lead to negligible adverse with vegetation growth. Screened sailing activities would be of little change to the baseline and non-moving infrastructure would not be noticeable.

10.6.44 **Users of other recreational routes** are not likely to experience views of proposed built elements as they would be heavily filtered or entirely screened by intervening vegetation. Any glimpses of ecological mitigation within the lake would be in keeping with the existing lake character. Changes would be permanent and reduce over time with maturing of intervening vegetation.

Negligible adverse effects are therefore predicted in the unlikely event the building is glimpsed.

10.6.45 **Of receptors within residential properties**, some upper storey windows on Merle Avenue at the south western extent of Harefield may possibly experience limited, part- screened and -filtered glimpsed views of a small fragment of upper built elements of the proposed Main Building and ecological mitigation measure, the latter being in keeping with the existing lake character.

Visual impact is therefore judged to be negligible as there may be very minor changes to views that are unlikely to be perceived reducing over time with continued growth of intervening vegetation. There are likely to be negligible adverse effects with little or no change in comparison with the baseline.

Negligible adverse visual effects as there is only predicted to be a very limited extent of highly screened views through existing vegetation from some upper storey windows. Over time with maturing of in lake vegetation these would be negligible beneficial effects.

10.6.46 **Residents of the existing property adjacent to the Site entrance gate** (which is set behind existing vegetation) are anticipated to experience noticeable, medium magnitude visual impacts due to proximity of increased activity with cars and coaches entering the Site during operating hours between April and September, some accessing the nearby proposed carpark. New boundary treatments would be more attractive than the existing. In addition, filtered and part screened views would be experienced of proposed buildings to the north of the Lagoon, through existing vegetation and further strengthened by fast growing native buffer planting and ecological and buffer planting around the lagoon. There would be no views into the property from the north and generally very limited inward possible views due to the pattern of existing and proposed vegetation.

On completion, visual effects are judged to be Moderate adverse as there would be a noticeable change until additional buffer planting matures, albeit for limited times during the year, reducing to minor to Moderate adverse as screening effects increase. As there would be the addition of new features that would be close and prominent albeit operation would only be active for a part of the year

Effective advance installation of buffer planting could further reduce effects to Minor adverse.

10.6.47 No significant views predicted for **road users**. There may however possibly be very limited occasional highly filtered glimpsed views through the pattern of existing vegetation towards a building and ecological mitigation measures that would sit comfortably within the baseline landscape, creating greater visual interest. As such no effect is predicted at year 1 leading to a negligible beneficial judgement for visual impact at year 15.

Visual effects are thus seen as negligible beneficial as a function of very limited highly filtered views potentially noticed by drivers and passengers moving on roads with views otherwise dominated by the road.

10.6.48 Once operational, some **railway users** on HS2, if close to east facing windows and looking at the landscape would experience glimpsed views at speed between blocks of existing intervening woodland of in-lake mitigation measures once vegetation matures from over 1.5km.

10.6.49 Negligible beneficial effect is predicted for such visual receptors at both Year 1 and 15.

Summary

10.6.50 As per 10.4.78, due to the proposals being unlikely to be widely visible, visual receptors represented by VP03 and VP15 were appraised in greatest detail. Table 10.19 summarises the visual effects from all receptors and how they are predicted to reduce in significance over time due to the screening effects of vegetation growth on-Site and in the wider landscape.

Table 10.19: Summary of Visual Effects – Completed Development

Visual receptor	Visual sensitivity	Magnitude of impact	Level of Visual effect – Year 1	Level of Visual effect – Year 15
Users of Hillingdon Trail and associated footpaths elevated on the valley side to the north east of the lake represented by the location of VP03.	High	Negligible	Negligible beneficial	Minor beneficial
Visitors to the Old Orchard Inn elevated on the valley side to the north east of the lake as illustrated by VP15.	Medium-high	Negligible	Negligible adverse	Minor beneficial

Visual receptor	Visual sensitivity	Magnitude of impact	Level of Visual effect – Year 1	Level of Visual effect – Year 15
Existing users of the lake	Medium	Low	Minor adverse	Minor beneficial
Users of the Grand Union Canal towpath	High	Low	Minor adverse	Negligible adverse
Users of other recreational routes	High	None	Negligible adverse	Negligible beneficial
Residential properties	High	Low	Negligible adverse	Negligible beneficial
Existing property adjacent to Site entrance gate	High	Low	Moderate adverse	Minor to Moderate adverse
Road users	Low	Low	Negligible	Negligible beneficial
Railway users	Low	Low	Negligible	Negligible beneficial

10.6.51 In summary, the only significant adverse visual effects are predicted to be moderate as experienced by residents of the existing property adjacent to the Site entrance gate at Year 1 without mitigation. These would diminish as intervening planting matures, noting that appropriate native planting in this area is generally fast growing. Effects could be reduced to minor-moderate by Year 15.

Additional Mitigation, Monitoring and Residual Landscape and Visual Effects

10.6.52 Very limited mitigation measures are considered to be potentially beneficial beyond those identified and described in Section 10.5, and Chapter 5: Description of Development and the Landscape Strategy.

10.6.53 As identified above, advance planting around the existing property are predicted to potentially reduced to Moderate adverse visual effect to minor-moderate, by Year 1.

10.6.54 To realise landscape proposals, it is important that detailed plans and specifications are produced by the project's Landscape Architect for approval by planning condition. These should form the basis of construction information to be undertaken by suitably qualified operatives or organisations at the appropriate times of year.

10.6.55 Monitoring of the proposed planting so as to ensure successful establishment would be undertaken through Landscape Architects' inspections and defects reporting through the first five years of planting. This should be governed by planning condition.

10.7 Cumulative Effects

Landscape Effects

10.7.1 It was determined that the only potential project which could give rise to cumulative effects in combination with the Proposed Development. The Colne Valley Viaduct is already constructed. Therefore the only elements likely to give rise to cumulative effects in combination with the Proposed Development would be operating trains along the Colne Valley Viaduct once the line is opened, and establishment of the associated approved landscape and ecological mitigation proposals.

10.7.2 The HS2 mitigation works in combination with the enhancements at Broadwater Lake would be of benefit to all associated character areas and the landscape resource of the Site itself (not significant).

Visual Effects

10.7.3 Cumulative AVRs are not presented in Appendix 10.5 as there would be no discernible change from the baseline (with modelled Colne Valley Viaduct) with the installation and maturing of the HS2 mitigation landscape and ecological proposals. Fast moving HS2 trains along the Colne Valley Viaduct would however be periodically visible once the railway is opened and inevitably draw the eye to the parts of the train not screened by the viaduct upstand.

10.7.4 The glimpsed Winter views of small fragments of the building roof from very limited locations, and maturing of in-lake vegetation are considered to be of negligible effect on existing visual receptors from representative viewpoints 03 and 15 both in their own right and in combination with periodic fast moving HS2 trains and the maturing of HS2 landscape mitigation along the rail corridor in association with the future growth of scrub, trees and woodland within the wider landscape over time.

10.7.5 As such it is concluded that there would be no cumulative effects of the Proposed Development with vistas that include moving trains and greater screening of the Colne Valley viaduct by trees.

10.8 Summary of Landscape and Visual Effects

10.8.1 The following Tables 10.20 and 10.21 summarise the landscape and visual effects at Year 1 and Year 15 with the steps of the process that led to judgements. Those that are moderate or major are considered to be significant.

Table 10.20: Summary of Landscape Effects

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
Construction							
Thames Valley NCA (Low)	Construction operations on the Site.	Impacts would be barely perceptible at the scale of the NCA, in lake construction very short term and building construction short term.	Negligible	Negligible adverse	N/A	None required	Negligible adverse (not significant)
Colne Valley Regional Park (Medium)	Construction operations on the Site.	Negligible adverse: Impacts would be at site level in comparison with the scale of the LCA, in lake construction very short term and building construction short term.	Negligible	Negligible adverse	N/A	None required	Negligible adverse (not significant)
Colne Valley: Rickmansworth to Uxbridge LCA (Medium)	Construction operations on the Site.	Negligible adverse: Impacts would be at site level in comparison with the	Negligible	Negligible adverse	N/A	None required	Negligible adverse (not significant)

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
		scale of the LCA, in lake construction is very short term and building construction short term.					
Open water of Broadwater Lake (Medium)	Operations within open water including dredging, the formation of made ground to remove one island for sailing and alteration of two islands for ecological mitigation leading to a net increase in the area of open water.	Temporary and short term.	Low-medium	Minor adverse	N/A	None required	Minor adverse (not significant)
Islands within Broadwater Lake (High-Medium)	Operations to remove one island for sailing, create two bays within another and shallows from the removal of invasive Giant Knot weed from a third.	Temporary and short term.	Low-medium	Minor adverse	N/A	None required	Minor adverse (not significant)
Shoreline of lake including Peninsula (Medium)	Earthworks leading to the loss of a section of shoreline for the reclaimed land and	Temporary and short term.	Low	Minor adverse	N/A	None required	Minor adverse (not significant)

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
	reprofiling in other location with a more sensitive profile and plan form in places.						
Native woodland within the Peninsula (High)	Tree management operation to enhance condition of woodland. Loss of 0.03% canopy area.	Temporary and short term.	Low	Minor beneficial	N/A	None required	Minor beneficial (not significant)
Incidental tree groups and vegetation on Site (Medium)	Removal of invasive Buddleia, felling of poorer condition specimens for development and management operations such as thinning, coppicing and felling of existing trees and replanting of suitable species.	Temporary and short term.	Low	Minor beneficial	N/A	None required	Minor beneficial (not significant)
Remnant hard surface with scattered pioneer vegetation	Construction operations to remove concrete surfaces would be intrusive but implemented under the guidance of a	Temporary, short term.	Low	Minor adverse	N/A	None required	Minor adverse (not significant)

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
(Low)	very controlled method statement. Impacts would be the loss of unstable semi-mature vegetation which would be mitigated by the planting of new native trees of long-term benefit and stability.						
Completed Development							
Thames Valley NCA (Low)	Alignment with SEO2, SEO3 and SEO5 with ecological enhancements and woodland management of a former extraction site with an emphasis on recreation and educational opportunities	Given the scale of the NCA, any impacts on the Site would be negligible.	Negligible	Negligible beneficial	Negligible beneficial	None required	Negligible beneficial (not significant)
Colne Valley Regional Park (Medium)	HWSFAC operating in addition to BWSC on the Site with ecological and landscape enhancements supported by long term management. Increased	Permanent and fully contained within the Site and minor given the scale of the CVRP.	Negligible	Negligible beneficial	Minor beneficial	None required	Minor beneficial (not significant)

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
	opportunity for recreation and education. All is characteristic of the receiving landscape and within the aims of the CVRP.						
Colne Valley: Rickmansworth to Uxbridge LCA (Medium)	Sensitive increase in recreation and improvement of ecology aligns with key strategies as does securing of long-term management.	Permanent and fully contained within the Site and minor given the scale of the LCA.	Low	Negligible beneficial	Minor beneficial	None required	Minor beneficial (not significant)
Open water of Broadwater Lake (Medium)	Minor reshaping of the lake leading to a minor increase in open water area and marginally more sensitive form.	Permanent. Increase of 716m^2 area of open water.	Medium	Minor beneficial	Moderate beneficial	None required	Moderate beneficial (significant)
Islands within Broadwater Lake (High-Medium)	Removal of one island, reshaping two and install underwater planters ultimately appearing as many islands within the Colne Valley assemblage of lakes.	Permanent. Localised	High-medium	Minor adverse	Moderate beneficial	Periodic landscape management operations	Moderate beneficial (significant)

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
Shoreline of lake including Peninsula (Medium)	Earthworks leading to the loss of a section of shoreline for the reclaimed land and reprofiling in other location with a more sensitive profile and plan form in places.	Small section of shoreline. Permanent and enhancing with maturation of proposed landscape over time.	Low	Minor adverse	Minor beneficial	Periodic landscape management operations	Minor beneficial (not significant)
Native woodland within the Peninsula (High)	Benefits of tree management to enhance the condition of woodland. Loss of 0.03% canopy area.	Permanent and enhancing with maturation of proposed landscape over time.	Medium	Minor beneficial	Moderate beneficial	Periodic landscape management operations	Moderate beneficial (significant)
Incidental tree / scrub groups and vegetation on Site (Medium)	Benefits of management on existing trees and replanting of new suitable species of native trees, shrubs, understorey and meadows.	Permanent improvement to struggling planting on derelict land that would enhance with maturation of proposed landscape over time.	Medium	Minor beneficial	Moderate beneficial	Periodic landscape management operations	Moderate beneficial(significant)
Remnant hard surface with	Benefits of tree management on existing trees and replanting of	Permanent improvement to derelict land and	Medium	Minor beneficial	Moderate beneficial	Periodic landscape	Moderate beneficial (significant)

Receptor (Sensitivity)	Changes	Geographic & Temporal Scale	Magnitude of Impact	Significance of Effect – Year 1	Significance of Effect – Year 15	Additional Mitigation and Monitoring	Significance of Residual Effect
pioneer vegetation (Low)	new suitable species of native trees, shrubs, understorey, native grassland and meadows on topsoil rather than concrete surface. Buildings and vehicle movement focussed on existing concrete.	enhancing with maturation of proposed landscape over time.				management operations	

Table 10.21: Summary of Visual Effects

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
Construction							
Users of Hillingdon Trail and associated footpaths elevated on the valley side to the north east of the lake in the location of **VP03**. (High)	Visibility of construction of small cranes involved with the buildings, possible, dredging activities and installation of ecological mitigation.	Short term and temporary. Highly limited in extent within the vista.	Negligible	Negligible adverse	N/A	None required	N/A
Visitors to the Old Orchard Inn elevated on the valley side to the north east of the lake as illustrated by **VP15**. (Medium – high)	Visibility of construction of the uppermost parts of the Main Building, possible small cranes, dredging activities and installation of ecological mitigation.	Short term and temporary. Highly limited in extent within the vista.	Low	Minor adverse	N/A	None required	N/A
Existing users of the lake (Medium)	Dredging, shore formation and land reclamation within the lake, primarily within the mostly enclosed Eastern Channel. Construction of the Main	Short term and temporary with short durations in each construction zone	Medium	Minor adverse	N/A	None proposed	N/A

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
	Building would be mostly screened by retained vegetation.						
Users of the Grand Union Canal towpath (High)	Installation of the fence and traditionally laid hedge would be the most noticeable. Glimpsed views of in lake activities and the building construction would be very limited and heavily screened by existing vegetation and the proposed eastern boundary treatment.	Adjacent to the entire eastern boundary of the Site, albeit only potential glimpses of the Site and a short-term operation.	Low	Minor adverse	N/A	Possible advance planting of the barrier hedge and installation of fence.	Minor adverse (not significant)
Users of other recreational routes (High)	No predicted significant views.	Very limited occasional filtered glimpses predicted with short durations of construction zones within the lake.	Low	Negligible adverse	N/A	None proposed	As Year 1 (not significant)
Residential properties (High)	Highly screened views through existing vegetation	Very limited occasional filtered glimpses predicted with short durations in	Low	Negligible adverse	N/A	None proposed	As Year 1 (not significant)

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
	from some upper storey windows.	each construction zone.					
Existing property adjacent to Site entrance (High)	Views of construction operations close to the house, around the lagoon, erection of boundary fence and construction traffic entering the Site.	Short term and temporary albeit adjacent to the property	Medium	Minor-Moderate adverse	N/A	Erection of hoardings and possible advance screening planting.	Minor adverse (not significant)
Road users (Low)	Possible occasional glimpsed views through the pattern of existing vegetation.	Very limited length of time with short durations in each construction zone	Low	Negligible adverse	N/A	None required	As Year 1 (not significant)
Users of other recreational routes (High)	No predicted significant views.	Very limited occasional filtered glimpses predicted with short durations of construction zones within the lake.	Low	Negligible adverse	N/A	None proposed	As Year 1 (not significant)
Completed Development							
Users of Hillingdon Trail and associated footpaths elevated	Floating reedbed and ecological mitigation in the lake.	Very small section of the Hillingdon Trail experiencing very	Negligible	Negligible beneficial	Minor beneficial	N/A	As Year 15 (not significant)

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
on the valley side to the north east of the lake in the location of **VP03**. (High)		minor changes within the vista.					
Visitors to the Old Orchard Inn elevated on the valley side to the north east of the lake as illustrated by VP15. (Medium – high)	Glimpsed views of a small fragment of roof and associated fragment of upper wall. Floating reedbed and ecological mitigation in the lake.	Permanent and limited in extent within the vista.	Low-medium	Negligible adverse	Minor beneficial	N/A	As Year 15 (not significant)
Existing users of the lake (Medium)	Increased activity on the water at some times and an upgrading of BSC built facilities within the new building and demolition with reinstatement of habitat on the site of existing buildings in associations with significant new planting on and around the lake with	Limited by the lake and its surrounding waterside visual envelope. Buildings would be permanent but and upgrade on existing.	Low	Minor adverse	Minor beneficial	None required	As Year 15 (not significant)

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
	new islands and floating reedbeds						
Users of the Grand Union Canal towpath (High)	Heavily screened views into the Site and new boundary fence with planting.	Permanent and from linear extent of towpath, any effects reducing over time with maturing of landscape.	Low	Minor adverse	Negligible adverse	N/A	Negligible Adverse (not significant)
Users of other recreational routes (High)	Most potential views of built elements would be entirely screened or heavily filtered by intervening vegetation. Ecological mitigation would be in keeping with the existing lake character.	Permanent with effects reducing over time with maturing of intervening vegetation.	None as barely discernible	Negligible adverse	Negligible beneficial	None required	Negligible beneficial (not significant)
Residential properties (High)	Some possible limited, part screened and filtered glimpse views of built elements of the proposal whilst ecological mitigation would be in keeping with the existing lake character.	Some upper storey windows on Merle Avenue at the south western extent of Harefield. Permanent with effects reducing over time with the maturing	Negligible	Negligible adverse	Negligible beneficial	N/A	Negligible beneficial (not significant)

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
		of intervening vegetation.					
Existing property adjacent to Site entrance gate (High)	Increased activity with cars and coaches entering the Site and accessing the adjacent proposed carpark. Erection of new boundary treatments. All would however be filtered by fast growing native buffer planting whilst views north would be enhanced with scenic ecological and buffer planting around the lagoon. There would be no views into the property.	Limited extent of possible views through the pattern of existing and proposed vegetation. Facility access would only be at certain times of the day and limited to the operational months of HWSFAC.	Medium	Moderate adverse	Minor to Moderate adverse	Possible advance planting of buffer planting	Minor to Moderate adverse (not significant)
Road users (Low)	No significant views predicted	Occasional potential glimpse - permanent with effects reducing over time with maturing of intervening vegetation.	Negligible	Negligible	Negligible beneficial	N/A	Negligible beneficial (not significant)
Railway users once HS2 is operational	In-lake mitigation measures once vegetation matures.	Occasional potential high-speed glimpse from over 1.5km -	Negligible as barely discernible	Negligible	Negligible beneficial	N/A	Negligible beneficial

Receptor (sensitivity)	Visual change	Geographic & temporal scale	Magnitude of change (impact)	Significance of effect – Year 1	Significance of effect – Year 15	Additional mitigation and monitoring	Significance of residual effect
(Low)		permanent with effects reducing over time with maturing of intervening vegetation.					(not significant)

Conclusion

10.8.2 Development of the Site masterplan was ecologically, landscape and visually led with the detailed input of an internationally recognised sailing expert to help fit sailing operations into a sensitive location. Embedded mitigation at every step was a highly complex and iterative multidisciplinary process to not only avoid and minimise harm to ecological, landscape and visual receptors, but to create benefits to the landscape of the Site and setting.

Landscape effects

10.8.3 Impacts on the landscape baseline are primarily the loss of a small island (07), the creation of a small area of made land for boat storage for access to the water and the loss of some poorly established vegetation on the existing remnant concrete on site.

10.8.4 This would be countered by an increase in the area of open water of Broadwater Lake, sensitive creation of two bays on an existing island (02), the creation of shallows through removal of invasive Giant Knotweed on island 06, transforming the existing Broadwater Sailing club to a resource for nature and a widespread planting strategy of native trees, shrubs and grasses. Maintenance and management of proposed and existing landscape assets would be provided by the London Borough of Hillingdon for 30 years

10.8.5 At a wider scale, these improvements align with the character, aims and objectives of the Colne Valley Regional Park, Colne Valley: Rickmansworth to Uxbridge LCA and Thames Valley NCA. Through improving the landscape of a former gravel pit and processing site, promoting biodiversity, recreation and education whilst also securing the long-term management this would lead to a negligible beneficial landscape effect given the hierarchy of scale between Site and NCA, CVRP and LCA.

10.8.6 At the construction stage, it is judged that the short term Minor adverse effects on landscape resources within the Site and negligible adverse effects on those outwith would be offset by the negligible and minor benefits to existing trees on site through management. On balance this is predicted to be a negligible adverse landscape effect.

10.8.7 For the completed development at Year 1, effects are judged to be of negligible benefit at the wider scale of NCA, CVRP and LCA levels rising to minor benefit after 15 years with maturation of the landscape.

10.8.8 Minor adverse effects at completion on Islands within Broadwater Lake and the shoreline including the Peninsula would mature to moderate and Minor beneficial respectively by Year 15.

10.8.9 In addition, the predicted Minor beneficial effects on the open water of Broadwater Lake, native woodland within the Peninsula, incidental tree / scrub groups and vegetation on Site and remnant hard surface with pioneer vegetation are expected to be of noticeable moderate benefit by Year 15 with the suite of permanent enhancements to the landscape receptors of the Site that would enrich the overall ecological status (as defined in Chapter 7: Biodiversity).

10.8.10 Overall, it is judged that proposals would lead to a Minor beneficial landscape effect on completion, leading to a moderate effect (significant) by Year 15 in that there would be a noticeable positive impact on the landscape in comparison with the baseline.

Visual effects

10.8.11 Subsequent to a series of thoroughly tested embedded masterplan and architectural mitigation measures, the location of the main- and supporting buildings were relocated from the west to the east side of islands 06 and 08. The resultant pattern of potential visibility was found to be remarkably limited within and restricted to a medium distance 3km radius study area, with only two locations of sensitive receptors found warrant full AVR studies and experience potential views of proposed building from elevated positions on the west facing side of the Colne Valley.

10.8.12 Due to extensive and tall intervening vegetation, visual impacts from most receptors during the construction stage would generally be negligible to Minor adverse, being temporary, short term and relate to a very small fragment of the overall vista for buildings and very limited duration operations within the lake. From the existing residential property adjacent to the Site entrance, effects are judged to be minor to Moderate adverse due to proximity but potentially reduced by advanced screening planting.

10.8.13 On completion, the visual receptors with the greatest potential adverse effects are considered to be the residents of the existing property adjacent to the Site entrance gate. These are judged to be noticeable, hence Moderate adverse effects but could be reduced to minor to Moderate adverse over time as planting grows and thickens and further reduced to Minor adverse with advanced buffer planting to boundaries.

10.8.14 Thereafter, users of the Grand Union Canal towpath are likely to initially experience Minor adverse effects from sections of new the boundary fence which would reduce to negligible adverse by year 15.

10.8.15 Existing users of the lake are likely to experience Minor adverse effects with the new shaping of parts of the lake on opening, but rapidly improving with vegetation growth, leading to a Minor beneficial effect significantly before Year 15.

10.8.16 VP15, viewers from the Old Orchard Inn car park is the only location predicted to be able to see small fragments of the proposed roof visible in combination with views of in lake planting, appearing as islands. This is judged to be a negligible adverse effect on completion leading to a Minor beneficial effect before Year 15 as islands within the lake are one of the main aspects that Broadwater Lake is notable for.

10.8.17 Building proposals are highly unlikely to be seen Users of Hillingdon Trail and associated footpaths elevated on the valley side to the north east of the lake in the location of VP03.

10.8.18 Finally, the potential effects on residential properties, users of other recreational routes and roads are highly unlikely to see the proposed building, but may see some of the in lake works from very limited locations. As such potential albeit unlikely negligible adverse effects would lead to negligible beneficial effects on Year 15 with maturing of in lake vegetation if visible.

10.8.19 Once operational, passengers on HS2 trains are likely to experience negligible effects which would become a negligible benefit by Year 15 with glimpsed views of mature vegetation within Broadwater Lake.

10.8.20 Overall, although there may be short term temporary views of construction activities, such as cranes above the woodland canopy and sections of boundary fence along the Grand Union Canal towpath through woodland, it is judged that there would be no significant adverse visual effects resulting from the Proposed Development. Taking a worst-case perspective, visual effects are therefore deemed to be Minor adverse at Year 1 leading to Negligible beneficial by Year 15.

Cumulative effects

10.8.21 There are judged to be no significant adverse cumulative landscape or visual effects and once completed any potential adverse effects on visual receptors are most likely to diminish with maturing mitigating planting that form part of the scheme and the woodland structure of the surrounding landscape.

Summary

10.8.22 Testament to the embedded mitigation and based on the Environmental Statement's definition that residual effects after mitigation should be at least moderate to be significant, The LVIA concludes that the only significant effects would be Moderate beneficial and experienced by the following landscape receptors on site :

- Native woodland within the Peninsula;
- Incidental tree / scrub groups and vegetation on Site;
- Remnant hard surface with pioneer vegetation.

10.8.23 Bringing together the conclusions of the assessment of landscape and visual effects in considering the Metropolitan Green Belt as a receptor both spatially and visually, it is judged that there would no significant spatial impact of the Proposed Development. This conclusion is based on the existing use of the Broadwater Lake for recreation, its isolation cannot be seen as an extension of urban settlement nor would it contribute to coalescence of urban areas given an Urban Greening Factor of 0.96. Furthermore, with the construction focussed on previously developed and remnant concrete hard surface in combination with landscape enhancements thereon and the wider Peninsula, it could be seen as enhancement both of 'grey belt' and with landscape receptors enhanced overall and negligible adverse visual effect of no harm to openness.

10.8.24 Overall it is therefore concluded that the Proposed Development would not only be acceptable in both landscape and visual terms but would lead to an enhancement of the existing landscape structure and character with assured long term landscape management and maintenance by the London Borough of Hillingdon with associated highly significant benefits on social value and the safeguarding of ecology within the Broadwater SSSI.