

2 Site and Setting

Preface

There have been no changes to the Site boundary or the uses within the Site since the 2023 ES was prepared. This chapter has however been slightly simplified to reduce its length with supporting photographs provided in appendices.

2.1 Introduction

- 2.1.1 This chapter provides a description of the Site and its surroundings, including key features, and designations that may be affected by the Proposed Development. A full description of the baseline conditions relevant to the technical assessments is provided in each technical chapter (i.e. Chapters 7 to 10 and ES Volume II).

2.2 Site Location and Extent

- 2.2.1 The location and extent of the Site is shown on Figure 1.1. The Site boundary is shown on Figure 2.1. The planning application boundary drawing is provided in Appendix 5.1. The Site extends to 79.95ha.
- 2.2.2 The Site is located approximately 5km north of Uxbridge at Ordnance Survey (OS) National Grid Reference (NGR) TQ 04365 89669. South Harefield village lies to the east of the Site, immediately beyond the Grand Union Canal. Denham lies within walking distance to the south west of the Site.

2.3 Site History

- 2.3.1 Historically the Site comprised drained marshland adjacent to the River Colne until the 1960's when it started to be exploited for its underlying sand and gravel deposits. Processing of aggregate material occurred in the south eastern part of the Site now occupied by Broadwater Lake and its Peninsula. Appendix 2.1 provides historic photographs of the Site whilst it was in use as a quarry. Mineral extraction continued until the end of the 1990's. In October 2006, Broadwater Sailing Club (BSC) was granted planning permission to use the northern part of Broadwater Lake for a maximum of 50 boats at any one time.

2.4 Site Description

- 2.4.1 The Site includes Broadwater Lake and some adjacent land required for access and landscape works. The Site also includes the 'South Parcel', 'East Parcel' and 'Access Road' as shown on Figure 1.2.

Figure 2.1: Site Boundary



Broadwater Lake

- 2.4.2 The majority of the Site comprises Broadwater Lake (approximately 60ha), a large waterbody with a number of small islands bordered by trees and scrub (shown on Figure 2.2). The lake was created after the Site was used as a quarry for sand and gravel extraction between the 1960s and the 1990s. Broadwater Lake is the largest of four lakes within the Mid Colne Valley SSSI. The southern part of Broadwater Lake includes a Peninsula shaped landform (the 'Peninsula') which was formerly used as a gravel washing / processing plant with two silt lagoons and a landfill for inert quarry wastes. Various structures remain present on and in the vicinity of the Peninsula associated with the aggregate use including a weighbridge, aggregate hoppers, pad foundations and areas of hardstanding. An area of open water (referred to as the 'lagoon') is located to the east of the Peninsula.
- 2.4.3 The quarry is understood to have been decommissioned in 1992. The silt lagoon and areas of the Peninsula have since colonised with native broadleaf woodland comprised of pioneer and wetland species (alder, silver birch and willows).
- 2.4.4 A single storey club house and storage containers are located on the northern shore of the lake, which is used by BSC. The BSC has boat parking space for approximately 260 boats with three concrete slipways and three pontoons (one floating and two fixed) providing access to Broadwater Lake. BSC is accessed via the Access Road and has an area of unsurfaced parking.
- 2.4.5 The Site includes a brick and iron canal bridge / utility gantry across the Grand Union Canal. Broadwater Lake is not currently accessible to the public.

South Parcel

- 2.4.6 The South Parcel is immediately north of Moorhall Road and comprises a mixture of grassland, shrub, hedgerows and scattered trees. The South Parcel includes part of Moorhall Road and is bound by The River Garden pub to the south and Korda Lake to the north.

East Parcel

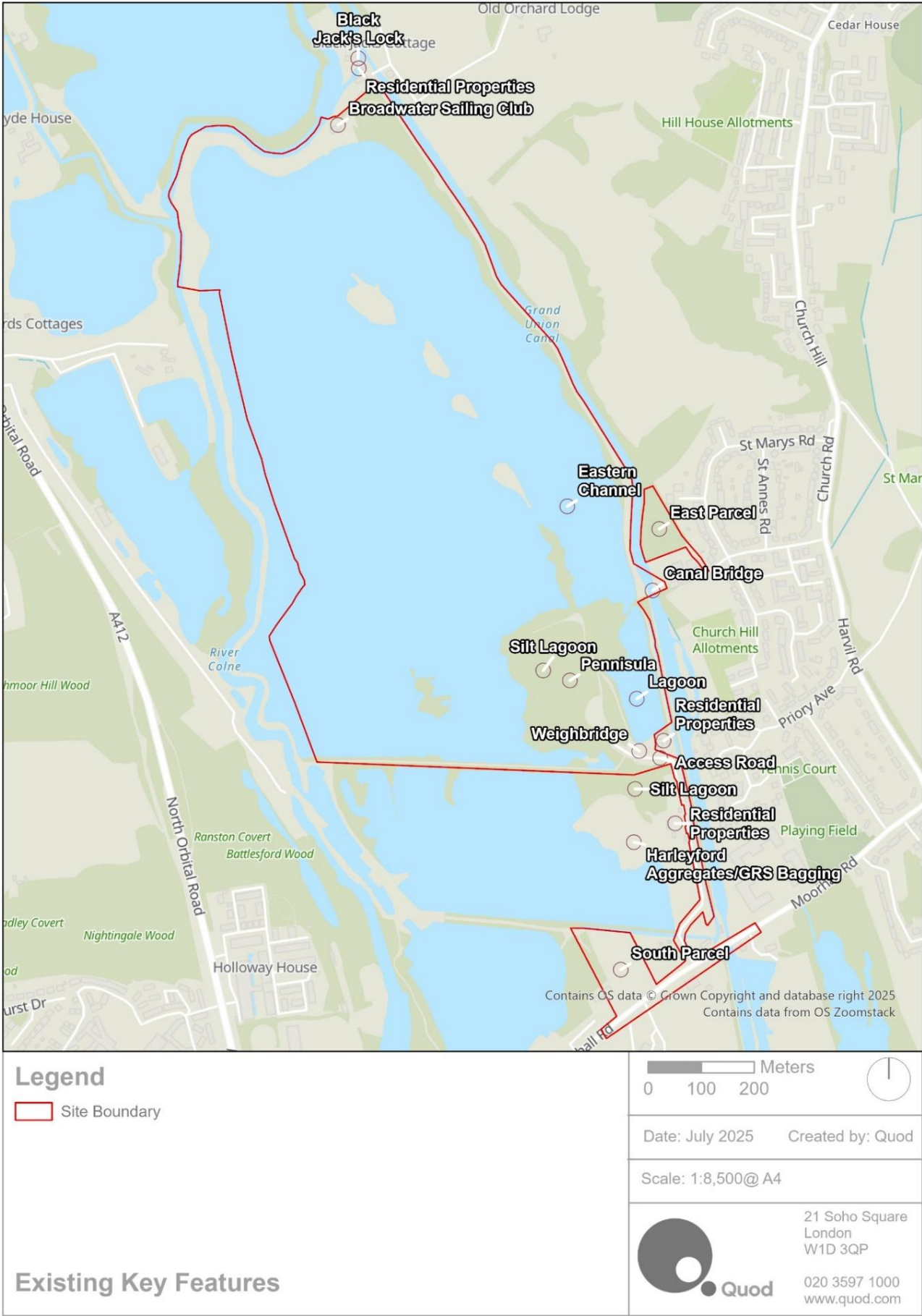
- 2.4.7 The East Parcel comprises an area of woodland bound by the Grand Union Canal to the west, a logistics site (Mayling Transport) to the south and residential properties in Harefield to the east.

Access Road

- 2.4.8 The Site includes an unnamed and unmade Access Road which connects Moorhall Road with Broadwater Lake and extends along the eastern side of the lake. Existing businesses operate to the west of the Access Road including a construction material wholesaler and an aggregates plant and supplier.
- 2.4.9 The Access Road is a single carriageway unmade road which is shared by existing uses of Broadwater Lake (including BSC and anglers), adjacent businesses and residential properties located off the Access Road.

- 2.4.10 Figure 2.2 shows key features within the Site and the surroundings and Appendix 2.2 provides photographs of the Site. A description of existing Site uses is provided in Section 2.6.

Figure 2.2: Key Features



2.5 Surrounding Uses

- 2.5.1 Broadwater Lake is bound to the east by the Grand Union Canal and London Loop / Colne Valley Public Right of Way, to the north, east and west by the River Colne and to the south by Harefield Moor Lake. The HS2 Colne Valley Viaduct and Tilehouse South Lake are located to the west of Broadwater Lake. Tilehouse North Lake is used by Denham Waterski Club) and Troy Lake to the north is used by Rickmansworth Sailing Club.
- 2.5.2 Korda Lake is south of Broadwater Lake and (together with part of Broadwater Lake), forms part of the Broadwater Lake Nature Reserve which is managed by Hertsmere and Middlesex Wildlife Trust. There are no PRoWs within the Site although informal footpaths are present along the east bank of the River Colne.
- 2.5.3 Two residential properties (bungalows) are located immediately to the south of the Peninsula adjacent to the Site boundary (4 Moorhall Road). Three residential properties are located adjacent to the Site, west of the Access Road including No's 1 and 2, and Barn Farm. Moor House is located adjacent to the Site boundary, east of the Access Road on Moorhall Road. A small number of motorhomes are also sited off the Access Road which are treated as residential receptors. Canal boats moor in the Grand Union Canal to the east of the Site. Jack's Mill Bed and Breakfast and Swan Cottage are located approximately 100m north of the northern Site boundary, adjacent to Black Jack's Lock.
- 2.5.4 Other residential properties are located within South Harefield less than 100m to the east of the Site (beyond Grand Union Canal), Harefield village 900m to the north east of the Site and Denham Garden Village 900m south west of the Site.
- 2.5.5 Land to the south of the Site, immediately west of the Access Road is used by GRS Bagging, a construction material wholesaler, and Harleyford Aggregates (sand and gravel processing and supplier).
- 2.5.6 Denham Aerodrome is approximately 700m west of the Site and includes a single landing / taking off strip and aeroplane parking. The aerodrome is in private use and many aviation related businesses including flight training, aerial filming and helicopter charter regularly fly over and in close proximity to Broadwater Lake.
- 2.5.7 Wyatts Covert Caravan and Motorhome Club Campsite is approximately 500m west of the Site adjacent to the Northmoor Hill Wood Local Nature Reserve. The campsite includes 50 pitches, reception, and associated hardstanding.
- 2.5.8 Land adjacent to the western boundary of the Site is currently subject to construction works associated with the HS2 Colne Valley Viaduct. Construction of the Colne Valley Viaduct was completed in Q4 2024, although HS2 is not expected to be operational until the 2030s. The Colne Valley Viaduct is a railway bridge stretching more than 3.4km across the lakes between Hillingdon and the M25 and crosses the south western corner of the Mid-Colne Valley SSSI. Once complete, the Colne Valley Viaduct will be around 10m above the surface of the lakes and the River Colne and will have a series of arches up to 80m long. Further information on HS2 is provided in Section 2.8.

2.6 Existing Site Uses

- 2.6.1 The Site, including Broadwater Lake, is currently used for sailing, fishing and other informal uses and this forms an important part of the baseline condition. A description of these uses and their nature, frequency and timing is provided in Table 2.1. Figure 2.3 provides an indication of the extent of these existing uses across the Sites.

Table 2.1: Existing Site Uses

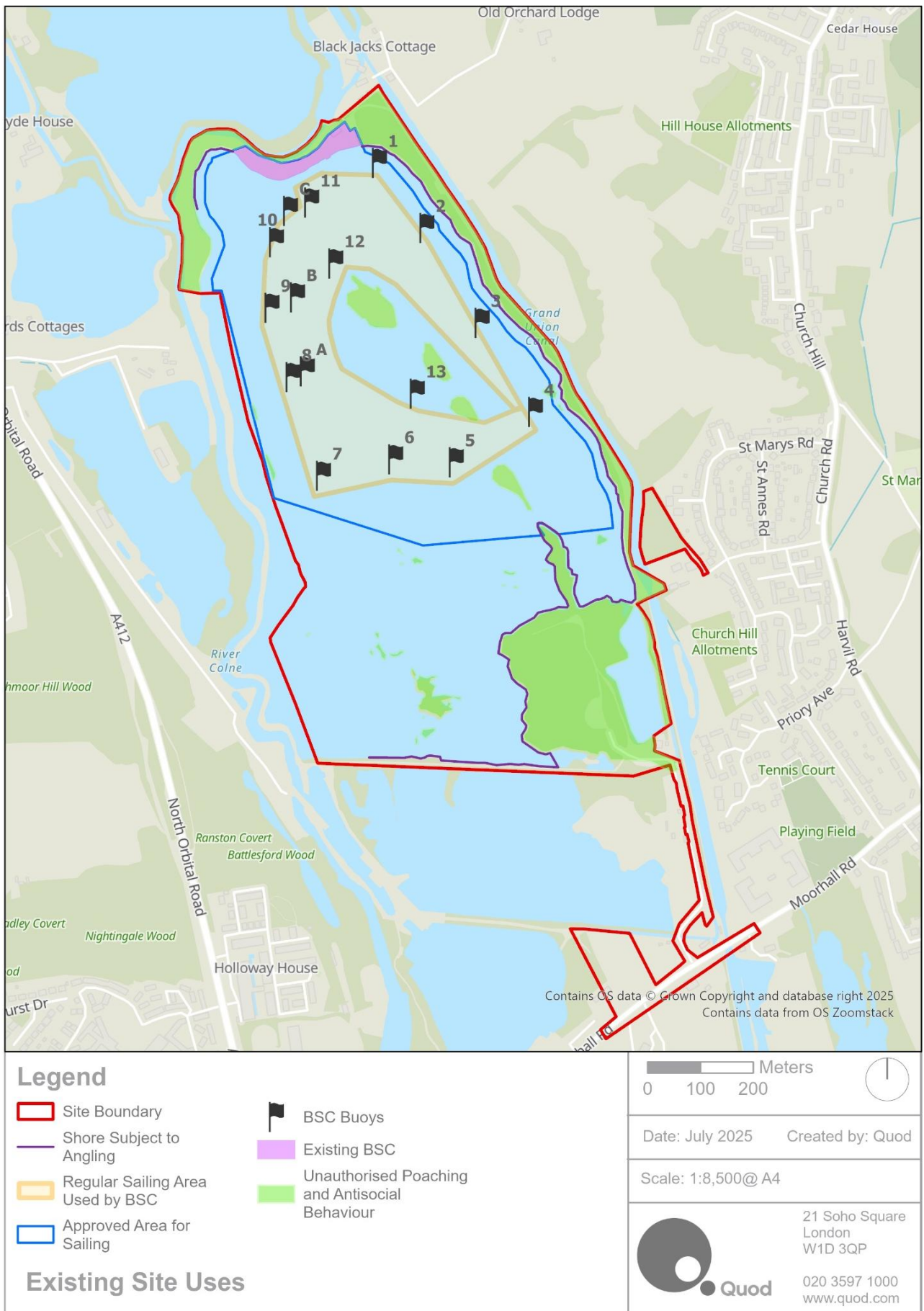
Use	Nature of Use
Sailing	Members: BSC currently has approximately 180 members.
	Access: Members and visitors access the BSC from Moorhall Road via the Access Road on the eastern side of the lake.
	Facilities: <ul style="list-style-type: none"> ▪ Single storey clubhouse (150m²) and three containers used for storage; ▪ Boat parking for approximately 200 dinghies; ▪ 3 concrete slipways; ▪ 3 floating pontoons; and ▪ An unsurfaced parking area for approximately 45 vehicles.
	Sailing Area: Sailing is restricted to dinghies (up to 16 feet) in the northern part of the lake only as shown on Figure 2.3 (total area is 33.3ha). The southern area of the lake is kept as an undisturbed area for wildfowl. Dinghies are not allowed to sail within 20m of the lake shore and no more than 50 boats (100 people) are allowed to sail on the lake at any one time. The sailing area and use of boats are secured through the BSC planning permission (ref: 2382Y/86/739 and 2382Z/86/1291) and lease Dated 16 October 2006. Figure 2.3 provides an indication of the actual area used by BSC for sailing as informed by Strava data (a fitness tracking app).
	Nature of Use: BSC currently use Broadwater Lake all year as follows: <ul style="list-style-type: none"> ▪ All Year: Members are allowed to sail 365 days per year from one hour after dawn to one hour before dusk (typical use 2 to 3 boats); ▪ Saturdays: Saturday afternoon Junior Sailing and Family Sailing, May through end September approximately 12:00 to 18:00 (typically 15 to 20 boats plus motorised safety boat); ▪ Sundays: Sailing race series from approximately 08:30 to 14:00 throughout the year, with race starts at 10:00 and 11:45 (typical use is 20 to 25 boats); and ▪ Saturdays and Sundays: Sailing Class Opens and Club Regattas are held on various Saturdays and Sundays during the year, with race starts after 10:00 (up to 50 boats). Club sailing and social events are also organised and held on various Saturdays and / or Sundays during the year. ▪ Wednesdays:

Use	Nature of Use
	<ul style="list-style-type: none"> ▪ Morning informal race series during the winter months (October to March), race start at 11:00 often followed by members lunch (typically 20 to 25 boats); ▪ Afternoon informal race series during summer months (April to September), with race start at 17:00 (typically 15 to 20 boats); and ▪ Evening race series during 'summer months' with race start at 19:00 (typically 20 to 25 boats).
Angling	Broadwater Lake is currently used by the Gerrards Cross & Uxbridge District Angling Society and the British Carp Study Group. There are currently eight angling pitches on the lake shore although up to 10 anglers use the lake at any time. The shoreline of Broadwater Lake currently used for angling is shown on Figure 2.3. The lake is closed for angling between 15 March and 15 June.
Other uses	<p>The Applicant is aware of anecdotal evidence of the following unauthorised uses at the Site:</p> <ul style="list-style-type: none"> ▪ Poaching of deer, ducks and geese, and carp and pike from the lake; ▪ Dog and leisure walking; ▪ Open water swimming; ▪ Camping; ▪ Fly tipping; ▪ Timber harvesting; and ▪ Fires

2.6.2 The western shore and adjacent habitat of Broadwater Lake is managed by Hertfordshire and Middlesex Wildlife Trust. This lies outwith the Site boundary.

2.6.3 HS2 Ltd has occasional access to the Site for surveyors during the construction period of with prior approval.

Figure 2.3: Existing Site Uses



2.7 Environmental Sensitivities

- 2.7.1 Figures 2.4 and 2.5 identify the key environmental designations and sensitivities within the Site and in the local area. The following sections provide an overview of the key sensitivities and designations with further information provided in ES Chapters 7 – 10. Where topics are scoped out of the ES (as indicated by * in the following sections), further information on baseline conditions can be found in the EIA Scoping Report (Appendix 3.2) or in the supporting planning documents.

Nature Conservation

- 2.7.2 The Site includes Broadwater Lake which is the largest of the four lakes within the Mid Colne Valley SSSI, the other lakes are: Tilehouse South Lake, Korda Lake and Harefield Moor Lake. This SSSI extends to 147.73ha and is designated principally due to its importance to breeding wetland birds and over-wintering water birds. Ruislip Woods National Nature Reserve (NNR) and SSSI is approximately 1.4km east of the Site. Harefield Pit geological SSSI is approximately 210m north east of the Site. Old Park Wood SSSI and Old Rectory Meadows SSSI are approximately 870m north and 1.69km south west of the Site respectively.
- 2.7.3 Local Nature Reserves (LNRs) within 1km of the Site include Northmoor Hill Wood LNR (280m west) and Denham Country Park LNR (940m south). The Site is within the Mid Colne Valley Site of Importance for Nature Conservation (SINC), designated for its biodiverse wetland habitats. Parcels of ancient woodland are approximately 95m west of the Site adjacent to the North Orbital Road.

Water Resources and Flood Risk

- 2.7.4 The Site comprises Broadwater Lake; and is bound to the east by the Grand Union Canal, to the north and west by the River Colne and to the south by another water body - Harefield Moor Lake. Bathymetric surveys of the lake show that it is generally around 1 to 3m deep, with areas of shallower water and islands present. Broadwater Lake is located over, and likely is in continuity with the Mid-Chilterns Chalk Groundwater Body. Affinity Water currently extract water from boreholes on-site for drinking water supplies.
- 2.7.5 Environment Agency Flood Maps for Planning¹ show identify that Broadwater Lake and adjacent land within 50m is at high risk of fluvial flooding (Flood Zone 3). The majority of the Peninsula is in Flood Zone 1 and the Access Road is in Flood Zone 2.

Ground Conditions and Contamination

- 2.7.6 British Geological Surveys and recent site investigations indicate that the Site is underlain by Worked Out Ground, Alluvium, Shepperton Gravel Chalk.
- 2.7.7 The main risk of potential contamination sources at the Site comes from its industrial history as a gravel pit between the 1960's and 1990's and landfilling that occurred on the Site between 1993 and 2004. Records indicate that there is a historic landfill on the eastern side of the Peninsula. Land within the Site has been highly worked and as such Made Ground is found across the Site.

Figure 2.4: Environmental Sensitivities Map (1) - Nature Conservation

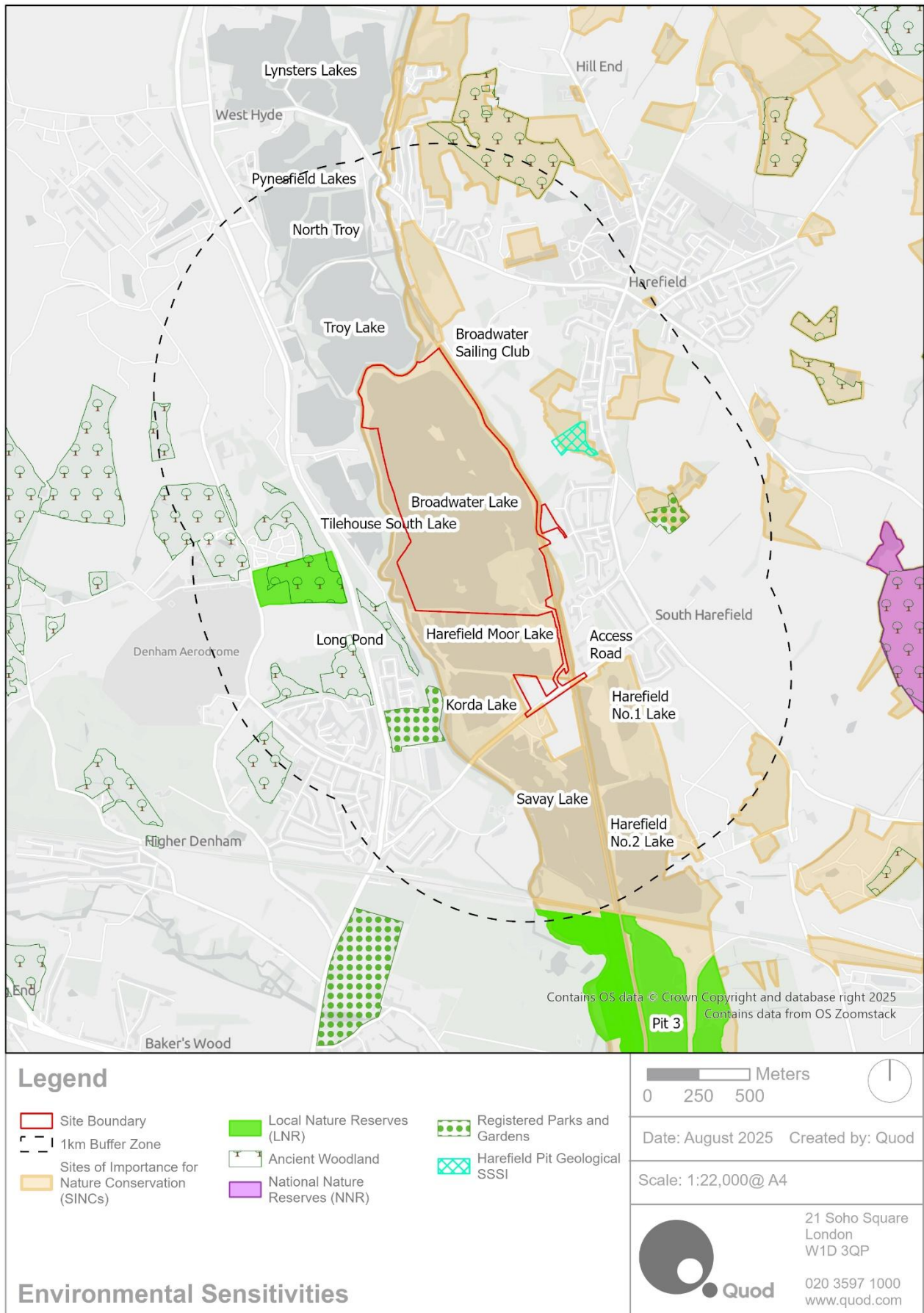
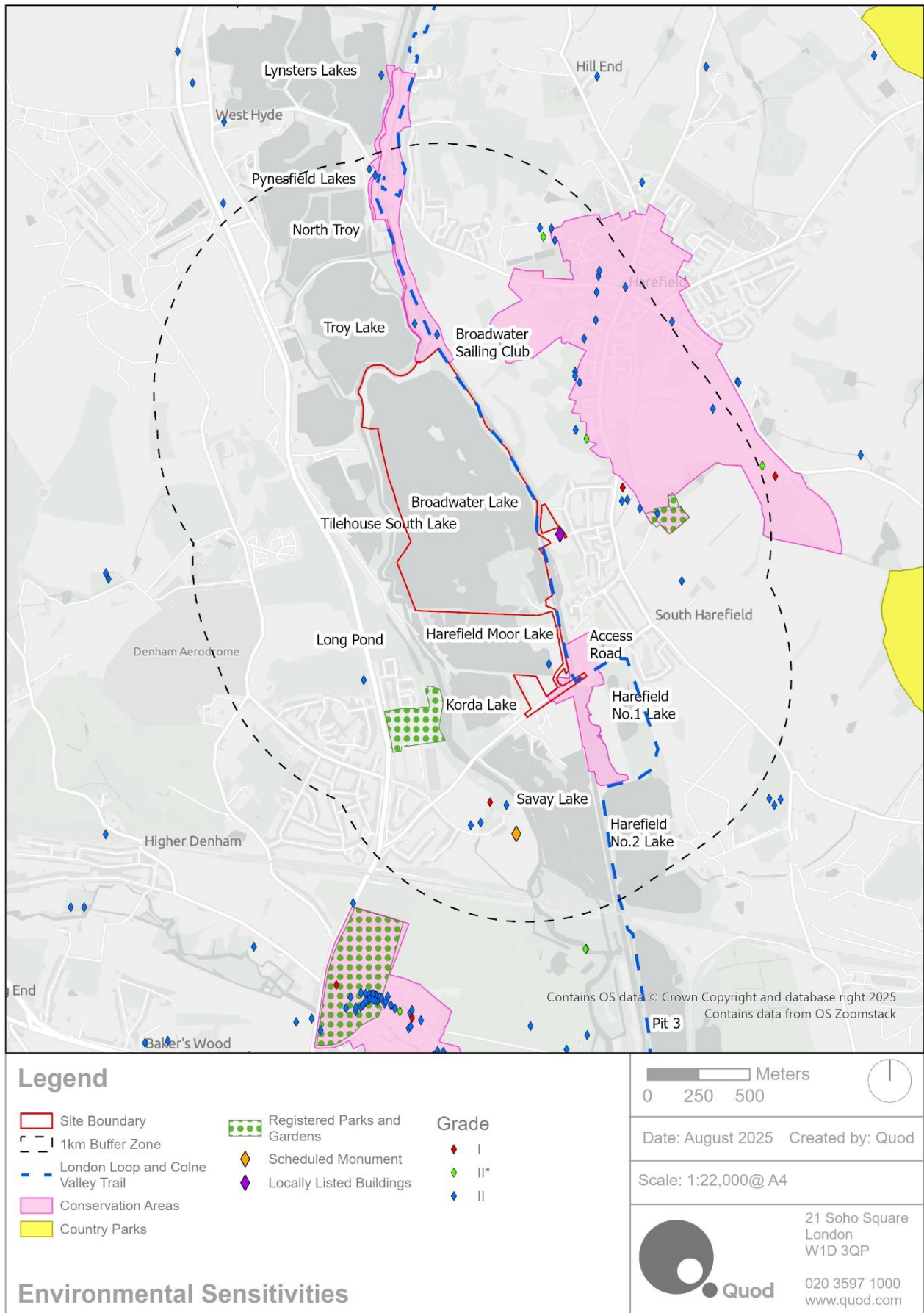


Figure 2.5: Environmental Sensitivities Map (2) - Other



Landscape and Visual

- 2.7.9 The Site is within the Green Belt although is not located within or close to any areas designated for landscape value. The Site is located within the National Character Area (NCA) 115 – Thames Valley. NCAs cover large areas that share similar landscape characteristics. At a local level, the Site is located in the ‘Valley Floor’ Landscape Character Area.

Archaeology and Built Heritage*

- 2.7.10 The Site is located on the western fringes of (and partly within) the Colne Valley Archaeological Priority Area, with recognised potential for early prehistoric finds and palaeo-environmental remains. The closest Scheduled Monument is a Mound with ditch and outer back south of Savay Farm approximately 550m south of the Site.
- 2.7.11 Black Jacks and Copper Mill Lock Conservation Area is located immediately north of the Site. The Grade II listed Black Jacks Cottage is in close proximity to the northern boundary of the Site. The Site is partly within the Widewater Lock Conservation Area in its south eastern extent. Harefield Village Conservation Area is approximately 250m east of the Site. Broadwater Park, Grade II registered park and garden, is approximately 375m south west of the Site. The Grade II listed Harefield Place RPG is located approximately 525m east of the Site. There are two listed buildings in close proximity to the Site; Widewater Lock Cottage (Grade II listed building) located immediately east of the Access Road on Moorhall Road. Denham Film Studios (Grade II listed building) is approximately 400m south west of the Site.
- 2.7.12 The canal bridge / utility gantry within the Site over the Grand Union Canal (Bridge 179) is likely to date from the late 19th century and is a non-designated heritage asset.

Noise and Air Quality*

- 2.7.13 Existing noise levels at the Site are influenced by HS2 construction works, activities associated with BSC, angling, unauthorised uses at the Site and helicopters from Denham Aerodrome. Noise levels at the Site will be subject to some change once HS2 is completed and operational. Noise sensitive receptors include a small number of residential properties adjacent to the Site boundary and Access Road. Other receptors include residential properties in South Harefield and boats using the Grand Union Canal.
- 2.7.14 The Site is not located within an Air Quality Management Area (AQMA). The closest AQMA is Hillingdon AQMA approximately 1.2km south of the Site, which is identified as having poor air quality, owing to exceedances of the annual mean nitrogen dioxide (NO₂) and the 24-hour mean particulate matter (PM₁₀) objectives.

Transport and Access*

- 2.7.15 The Site is accessed from Moorhall Road to the south of the Site via a simple priority junction with no right hand turn lane. The Access Road is a single carriageway, unadopted road. The Site currently has no formal parking arrangements for any existing users. Informal

parking for BSC is located on hardstanding at the north of the Site and can accommodate approximately 45 parked cars.

- 2.7.16 Two bus stops are located south west of the Access Road on Moorhall Road served by route 331 which provides a connection to Denham railway station, approximately 1.2km to the south west.
- 2.7.17 A Public Right of Way (PRoW) (U74) runs adjacent to the eastern Site boundary which forms part of the Colne Valley Trail and London Loop. There are no pedestrian or cycling facilities on the Access Road. An informal footpath is present on the west side of Broadwater Lake.

2.8 Future Use

- 2.8.1 Once operational, HS2 will influence the future baseline at the Site. Relevant information on HS2 has been obtained from the HS2 ES prepared in 2013², detailed design (Schedule 17¹) applications (Refs: 20/2227/FA³, 22/3611/HS2⁴, 19/3332/HS2⁵, 74320/APP/2019/3187⁶ and 73263/APP/2022/1497⁷), and the HS2 Local Environmental Management Plan (LEMP) for LBH⁸.
- 2.8.2 HS2 proposed mitigation measures to be implemented at or in the vicinity of Broadwater Lake which are listed in Table 2.2, and these are shown on Figure 2.6. A selection of detailed design drawings for HS2 (Schedule 17) is provided in Appendix 2.3.

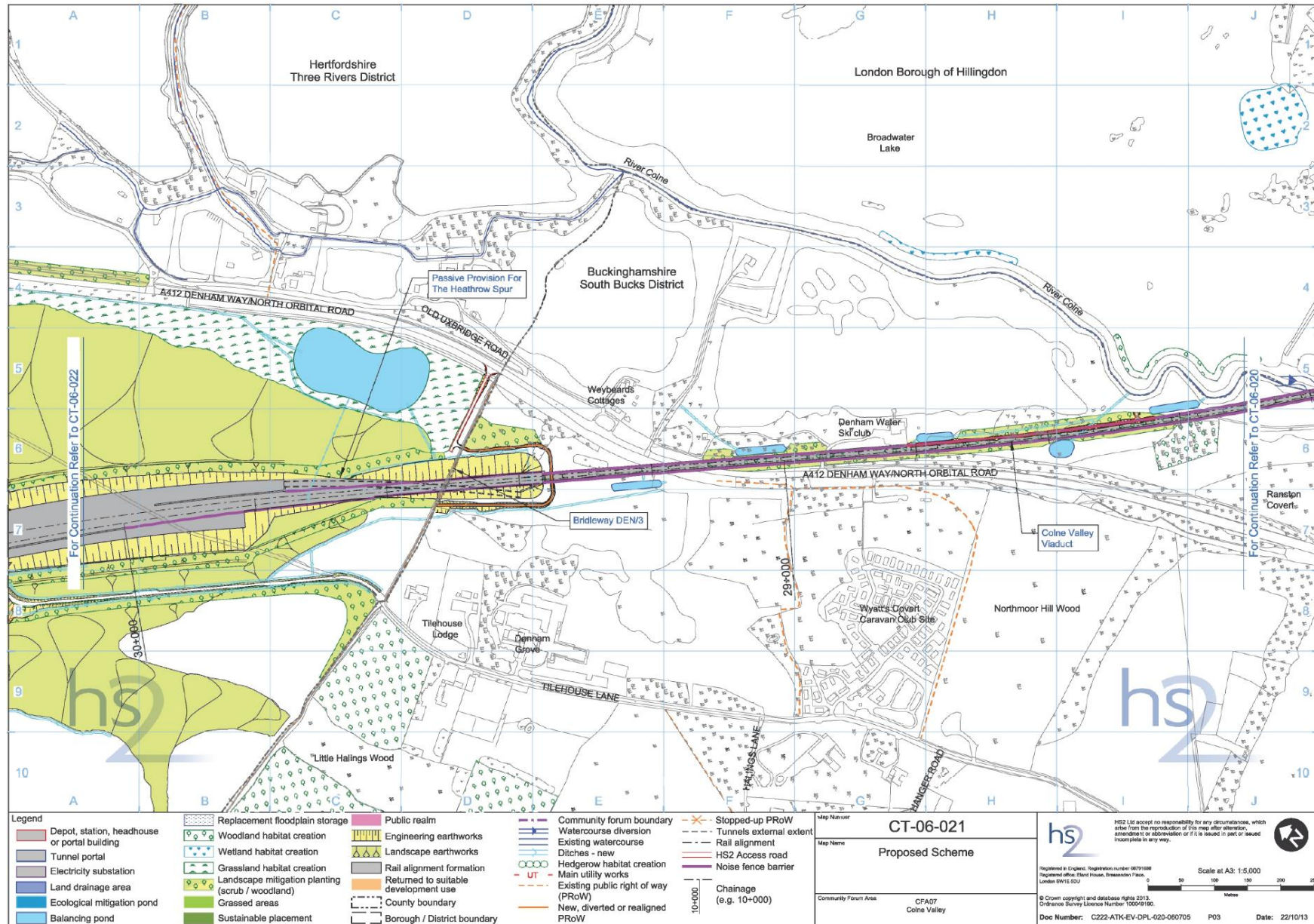
Table 2.2: HS2 Mitigation Measures

Mitigation type	Description of indicative mitigation
Broadwater Lake wetland creation area	Approximately 0.5ha of wetland vegetation will be created along the western shore approximately 400m north of where the viaduct will be constructed.
Broadwater Lake tree planting area	Approximately 0.5ha of willow and alder trees in the south west corner of the lake.
Broadwater Lake bird islands	Several new gravel islands / rafts will be created in the south eastern corner to provide nesting opportunities for water birds.
Noise fence barriers	Noise fence barriers will be implemented along the majority of the viaduct, reducing the risk of collision of bats.

- 2.8.3 The Applicant has engaged with HS2 to ensure that the mitigation outlined in Table 2.2 is delivered to fulfil its purpose to mitigate the effects of HS2. The 'Broadwater Lake bird islands' are located within the Site and therefore HS2 will require permanent access to the Site for the maintenance once installed.
- 2.8.4 Further details of the approach to HS2 in the ES is provided in Chapter 3: EIA Methodology.

¹ A Schedule 17 application refers to a request for approval submitted under Schedule 17 of the High Speed Rail (London-West Midlands) Act 2017.

Figure 2.6: HS2 Layout and Mitigation Proposals - Colne Valley Viaduct (extract from HS2 ES)



References

- ¹ Environment Agency (2025) Flood Risk Map. Available online at: <https://flood-map-for-planning.service.gov.uk/>
- ² Department for Transport and High Speed Two (HS2) Limited (2013), HS2 Phase One environmental statement: documents. Available online at: <https://www.gov.uk/government/collections/hs2-phase-one-environmental-statement-documents>
- ³ Buckinghamshire Council (2020), Planning application summary PL/20/2227/FA. Available online at: <https://pa.chilternandsouthbucks.gov.uk/online-applications/applicationDetails.do?keyVal=QDGPTUES0P000&activeTab=summary>
- ⁴ Buckinghamshire Council (2022), Planning application summary 22/3611/HS2. Available online at: <https://pa.chilternandsouthbucks.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=RJW31SESGBB00>.
- ⁵ Buckinghamshire Council (2019), Planning application summary 19/3332/HS2. Available online at: <https://pa.chilternandsouthbucks.gov.uk/online-applications/applicationDetails.do?activeTab=documents&keyVal=PYHC7SESHSP00>.
- ⁶ Align on behalf of HS2 (2019), Schedule 17 – indicative Mitigation Details. Available online at: https://planning.hillingdon.gov.uk/OcellaWeb/viewDocument?file=dv_pl_files%5C74320_APP_2019_3187%5C1MC05-ALJ-TP-REP-CS01_CL01-000007+-Indicative+Mitigation+Details.pdf&module=pl.
- ⁷ London Borough of Hillingdon Council (2022), High Speed Rail (London – West Midlands)- Schedule 17 – Planning work. Available online at: <https://planning.hillingdon.gov.uk/OcellaWeb/showDocuments?reference=73263/APP/2022/1497&module=pl>
- ⁸ London Borough of Hillingdon (2019), APP/HS2/7. Available online at: <https://planning.hillingdon.gov.uk/OcellaWeb/showDocuments?reference=74320/APP/2019/3187&module=pl>