



**High Speed Rail (London – West Midlands)
Act 2017**

HS2 Ltd

London Borough of Hillingdon

**Creation Of Five Gravel Islands To Provide Nesting
Opportunities For Water Birds Within Broadwater
Lake**

Schedule 17 Plans and Specifications

Written Statement for Information

HS2 Consent Reference: LBH.PS.10033

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1 Introduction

Background Information

Table 1: Schedule 17 Address Details and Description of Works

Site	Details
Scheme	High Speed Two
Applicant	High Speed Two (HS2) Limited
Applicant Address	<i>c/o Agent:</i> ALIGN JV Align Compound South Portal Chalfont Lane WD3 9XN
Site Address	Within the south-eastern corner of Broadwater Lake in the London Borough of Hillingdon. The works are located at; X (Easting): 504487, Y (Northing): 189287; X (Easting): 504455, Y (Northing): 189262; X (Easting): 504482, Y (Northing): 189257; X (Easting): 504491, Y (Northing): 189239; X (Easting): 504464, Y (Northing): 189236;
Description	Plans and Specifications submission under Schedule 17 to the High Speed Rail (London – West Midlands) Act 2017 for works comprising: <i>The creation of five gravel islands on the south-eastern corner of Broadwater Lake to provide nesting opportunities for water birds.</i>

Terms of Reference

- 1.1.1 This Written Statement is compiled in accordance with the High Speed Two (HS2) Phase 1 Planning Memorandum and Planning Forum Notes (PFNs) as required by the planning regime established under Schedule 17 of the High Speed Rail (London – West Midlands) Act 2017 ('the Act').
- 1.1.2 This statement provides the London Borough of Hillingdon with information to assist with the determination of the Plans and Specifications submission under Schedule 17, in relation to the above description of works.

- 1.1.3 The information in this Written Statement is provided for information to assist in determining the request for approval. It is not for approval.

Introduction to High Speed 2

- 1.1.4 Phase One of HS2 will provide a dedicated high speed rail service between London, Birmingham and the West Midlands. It will extend for approximately 230km (143 miles). Just north of Lichfield, high speed trains will join the West Coast Main Line for journeys to and from Manchester, the North West and Scotland.
- 1.1.5 For further information on HS2 and the route through London Borough of Hillingdon please refer to the Planning Context Report for London Borough of Hillingdon, deposited with the Council by HS2 Ltd.

High Speed Rail (London – West Midlands) Act 2017

- 1.1.6 The Act provides powers for the construction and operation of Phase 1 of High Speed Two. HS2 Ltd is the nominated undertaker in relation to the works subject to this Plans and Specifications submission.
- 1.1.7 Section 20 to the Act grants deemed planning permission for the works authorised by it, subject to the conditions set out in Schedule 17. Schedule 17 includes conditions requiring the following matters to be approved or agreed by the relevant LPA.
- Construction arrangements (including large goods vehicle routes);
 - Plans and specifications;
 - Bringing into use requests; and
 - Site restoration schemes.
- 1.1.8 This is therefore a different planning regime to that which usually applies in England (i.e. the Town and Country Planning Act) and is different in terms of the nature of submissions and the issues that the LPAs can have regard to, in determining requests for approval.
- 1.1.9 Schedule 17 of the Act sets out the grounds on which the LPA may impose conditions on approvals, or refuse requests for approval.
- 1.1.10 This Written Statement includes information supporting the Plans and Specifications submission in relation to the matters outlined in **Table 2** below.

Table 2: Schedule 17 Plans and Specifications Submission Details

Site	Details
Plans and Specifications (permanent works)	<ul style="list-style-type: none"> • Building works of the Gravel Islands • Fencing

- 1.1.11 The works to which this application relates, and the cumulative impact of the works in conjunction with other HS2 development, have been assessed and re compliant with paragraph 1.1.3 (bullet point 2) of the HS2 Phase 1 Environmental Minimum Requirements General Principles¹.

Code of Construction Practice

- 1.1.12 HS2 Ltd as the nominated undertaker is contractually bound to comply with the controls set out in the Environmental Minimum Requirements (EMRs). The EMRs include the HS2 Code of Construction Practice (CoCP).
- 1.1.13 The works subject to this request for approval of Plans and Specifications will be undertaken in accordance with the Code of Construction Practice, and with the Class Approval issued by the Secretary of State (March 2017)².

Schedule 17 Statutory Guidance

- 1.1.14 The Schedule 17 Statutory Guidance issued by the Secretary of State (November 2023)³ provides guidance to all planning authorities determining requests for approval under Schedule 17 to the Act. Paragraph 20 of the Statutory Guidance states that planning authorities should not through the exercise of Schedule 17 seek to modify controls already in place such as the Environmental Minimum Requirements, other controls in the Act such as those under Schedule 4 or 33, or existing legislation.

¹

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/618074/General_principles.pdf

² <https://www.gov.uk/government/publications/high-speed-rail-london-west-midlands-act-2017-class-approval>

³ <https://www.gov.uk/government/publications/high-speed-rail-london-to-west-midlands-act-2017-schedule-17-statutory-guidance/high-speed-rail-london-west-midlands-act-2017-schedule-17-statutory-guidance>

Structure of Written Statement

1.1.15 This Written Statement is structured as follows:

- A description of the location and main characteristics of the area in which the works will be carried out is provided in **Section 2**;
- **Section 3** describes the main works being undertaken in the area, as set out in Schedule 1 of the Act, and those that are the subject of this Schedule 17 Plans and Specifications submission;
- The design approach and rationale for the works which are the subject of this Schedule 17 Plans and Specifications submission are described in **Section 4**;
- **Section 5** summarises the pre-submission consultations that were undertaken, including a list of the consultees, dates, attendees at meetings and a brief summary of the outcome of these discussions;
- A high-level programme for the works and how they fit into the wider programme for other works in the area, as set out in Schedule 1 of the Act, is provided in **Section 6**; and
- **Section 7** identifies any other main consents, or known forthcoming consents associated with the works.

2 Site Location and Characteristics

Site Location

- 2.1.1 The five Gravel Islands would be located on the south-eastern corner of Broadwater Lake and are located approximately 350m east of the Colne Valley Viaduct and the River Colne. The site is within the administrative boundary of the London Borough of Hillingdon.
- 2.1.2 Broadwater Lake is a large water body previously formed by gravel extraction and sits within the Colne Valley, which comprises the river valley floor of the River Colne to the north-west of London.
- 2.1.3 Broadwater Lake forms part of the Mid- Colne Valley Metropolitan Site of Special Scientific Interest (SSSI) and Site of Importance for Nature Conservation (SINC). It is designated primarily for its significant ornithological interest, particularly breeding woodland and wetland birds and its numbers of wintering wildfowl.
- 2.1.4 The lake supports a large number of waterbirds. Wintering birds include Shoveler, Pochard, Great Crested Grebe, Cormorant, Gadwall, Tufted Duck, Wigeon, Teal, Goldeneye, Smew and Coot. It also plays an important role in the wider landscape, situated just over 10 km from the South West London Waterbodies Special Protection Area and Ramsar site which support similar species.
- 2.1.5 Within the surrounding area of the Colne Valley, the landform comprises a mixture of dense and in some places ancient woodland; large open water bodies associated with former mineral working as well as a number of small and intermediate watercourses, including the Grand Union Canal (GUC). The land use comprises several small businesses and secondary centre retail establishments. There are also several small settlements including Harefield, South Harefield, Denham and West Hyde. Associated with the large open waterbodies there are considerable recreation pursuits, particularly with walking, fishing, sailing, waterskiing and canoe/rowing.

Surrounding Highway Network

- 2.1.6 Access to the site will be via an access track off Moorhall Road. Moorhall Road connects the villages of Harefield and South Harefield to Denham. The eastern end of Moorhall Road has a 30 miles per hour speed limit.

3 Description of the Works

Introduction

- 3.1.1 This Written Statement supports the Schedule 17 submission for the approval of plans and specifications for the creation of five Gravel Islands on the south-eastern corner of Broadwater Lake. The purpose of the Gravel Islands is to create a series of islands for nesting birds, which is identified in the HS2 Phase One Environmental Statement (ES) as ecological mitigation for the Colne Valley Viaduct.
- 3.1.2 The Plans and Specifications submitted for approval are listed in the pro-forma accompanying the application. A summary of the proposed works for approval is provided in Section 3.2 below.
- 3.1.3 Section 3.3 summarises the indicative mitigation relevant to the works being submitted in accordance with paragraph 7.5.2 of the Planning Memorandum.
- 3.1.4 Sections 3.4 – 3.6 provide information on other aspects of the works to assist in understanding the context of planned construction methodology and how EMR controls apply to the works being submitted for approval. The information in Sections 3.4- 3.6 is not for approval under Schedule 17.

Works for Approval

- 3.1.5 The relevant scheduled works as set out under Schedule 1 of the Act to which this Schedule 17 submission relates are:
- *Work No. 2/1 - A railway (19.27 kilometres in length), partly on viaduct and partly in tunnel, commencing by a junction with Work No. 1/61 at its termination, continuing north-westwards and terminating at a point 530 metres north of the junction of footpath LMI/17/2 with footpath LMI/17/1;*
- Work No. 2/1 includes viaducts over Newyears Green Bourne, Harefield No.2 Lake, the Grand Union Canal, Savay Lake, Moorhill Road, Kroda Lake, Long Lake, the River Colne and the A412 Denham Way (North Orbital Road) and shafts at Chalfont St. Peter, Chalfont St. Giles, Amersham and Little Missenden.*
- 3.1.6 The works submitted for this Schedule 17 Plans and Specifications approval (under paragraph 2 and 3) consists of part of the ecological mitigation for Work No. 2/1, and comprises of the creation of five Gravel Islands on the south-eastern corner of Broadwater Lake to create a series of islands for nesting birds.

- 3.1.7 The requirement for the Gravel islands stems from the HS2 Phase One Environmental Statement (ES) (London West-Midlands Environmental Statement, Volume 2, CFA7 Colne Valley)⁴ which includes ecological mitigation areas that have been incorporated into the land required for construction of the Colne Valley Viaduct. This includes as outlined in paragraph 7.4.41 of the ES as follows:
- 'Broadwater Lake bird islands – several new gravel islands/rafts will be created in the south-eastern corner to provide nesting opportunities for water birds'.*
- 3.1.8 The ES paragraph 7.4.48 outlines that the *'The new bird islands within Broadwater Lake will provide replacement nesting habitat for terns, gulls and waterfowl should small numbers be disturbed from the south-west corner of Broadwater Lake, Korda Lake and Harefield Moor Lake'.*
- 3.1.9 The ES report does not specify the area or number of gravel islands required to mitigate for impacts although the area allocated in the Limits of Land to be Acquired or Used (LLAU) is ca. 0.8 ha.
- 3.1.10 The location for the mitigation habitat creation is shown within the ES Mapbook drawings CT-05-020 Construction Phase and CT-06-020 Proposed Scheme.

Buildings and/or structures

- 3.1.11 The development will comprise of 5 Gravel islands; five Gravel Islands in total comprised of 3 islands of 3m x 6m, and 2 islands of 3m x 3m, consisting of a gabion raft structure filled with gravel substrate, anti-predator fencing and terracotta/clay ridge tiles chick shelters, providing nesting habitat for Common Terns (*Sterna hirundo*) and Gulls. These will be secured to the bottom of the lake using concrete block anchors.
- 3.1.12 Examples of similar floating islands for wildlife are shown in Figures 3-1 and 3-2.

⁴ London West-Midlands Environmental Statement, Volume 2, CFA7 Colne Valley, Published November 2013



Figure 3-1 Example of a floating island for wildlife



Figure 3-2 Example of a floating island for wildlife

- 3.1.13 The target species for the gravel islands are Common Terns (*Sterna hirundo*), and Gulls, in particular Black-headed Gulls (*Larus ridibundus*). The Common Tern is a silvery-grey and white bird, with long tails, typically 31-35cm in length, with a 77-98cm wingspan, and approximately 90-150g. The Royal Society for the Protection of Birds (RSPB) lists this species as 12,000 breeding pairs in the UK, with an Amber conservation status. The Black-headed Gull is a silvery-grey and white bird, with a chocolate-brown head, typically 37-44cm in length, with a 94-110cm wingspan, and approximately 190-400g. RSPB lists this species as 140,000 breeding pairs in the UK.
- 3.1.14 These birds nest in poorly vegetated areas close to the edge of water, they readily adapt to artificial nesting areas such as floating rafts. The gravel substrate in nesting areas will aid vegetation suppression to create preferential conditions for chicks.



Figure 3-3 Common Tern *Sterna hirundo* and Black-headed Gull - *Larus ridibundus*
(Images from <https://www.rspb.org.uk/birds-and-wildlife/common-tern>)

- 3.1.15 The islands are less likely to support nesting waterfowl (ducks, geese, swans) as the gulls/terns would dominate. In line with the ES, only Gravel Islands are proposed rather than vegetated islands (which would be more likely to support nesting waterfowl), as it is considered that there is sufficient opportunity for nesting waterfowl at the existing vegetated islands on Broadwater Lake. Whereas the proposed gravel islands will provide new habitat for terns and gulls within Broadwater Lake.

Fencing

- 3.1.16 Anti-predator fencing will be installed around the perimeter edge of each of the floating unit using Galfan gabion mesh. Gabion mesh will be cut at ramp locations to allow for free movement of common terns, the aperture size of the gabion mesh is

40mm x 40mm, these will be cut to open access at ramp locations on the islands to 150mm x 100mm sized gaps to allow movement of terns.

Construction Method

- 3.1.17 This section summarises the general construction methodology and the main temporary works arrangements. The arrangements described may alter, are for information and background only and do not form part of this request for approval.
- 3.1.18 The Gravel Islands would be a pre-made product that would be assembled at a launch area to create the islands. This would involve installing the fencing, gravel and chick shelters to the floating units, before being towed to the installation locations.
- 3.1.19 Delivering vehicles would reach the site via an access track from Moorhall Road. The delivery vehicles would consist of a flatbed van carrying a boat and a welfare vehicle that would be used to bring plants and materials up to the laydown area (point C on Figure 3-4). Materials would arrive on a wooden pallet and consist of gravel, the floating units and fencing.
- 3.1.20 The materials and plant would be moved from the laydown area to the build area by a telehandler. The area between the laydown area and the build area (between points B and C on Figure 3-4 has no hardstanding, as a result, track-mats would be provided along the route to protect the ground and ensure that it is a safe working area. Only the telehandler would be used along the access track. It would be used to facilitate the transportation of materials and equipment from the laydown area and facilitate the installation of the floating islands.
- 3.1.21 The build area and launch site are the closest location to Broadwater Lake and consist of a shallow entrance into the lake. A telehandler would unload the materials and equipment allowing the Gravel Islands to be assembled at the launch area. The telehandler would be used to move the boat to the edge of the water in order for the Gravel Island to be launched. The rafts would subsequently be manoeuvred into the water using the telehandler and towed by the boat into the agreed position of the Gravel Islands.
- 3.1.22 Figure 3-4 displays the site set up, including the lay down area and the launch site.



Point A – TQ 04594 89286– Works area/launch site of Tern Gravel Islands

Point B – TQ 04696 89308 – End of hard standing access

Point C – TQ 04799 89054 – Lay down area

Figure 3-4: Site set up of the Gravel Islands

Historic Environment

- 3.1.23 As set out within the HS2 Heritage Memorandum (part of the HS2 Environmental Minimum Requirements), a route-wide generic written scheme of investigation: Historic Environment Research and Delivery Strategy (GWSI: HERDS) has been prepared in consultation with Historic England (HE) and the local planning authorities along the route. It sets out the research framework and general principles for design, evaluation, investigation, recording, analysis, reporting and archive deposition to be adopted for the design development and construction.
- 3.1.24 The HS2 Heritage Memorandum also sets out how the historic environment (including heritage assets and their setting) will be addressed during design. The HS2 Environmental Memorandum sets out the approach to landscape and visual mitigation which takes account of the historic environment.

Built Heritage

- 3.1.25 The HS2 Heritage Memorandum also sets out how the historic environment (including heritage assets and their setting) will be addressed during design. The HS2 Environmental Memorandum sets out the approach to landscape and visual mitigation which takes account of the historic environment.

- 3.1.26 There are no heritage assets nearby to the proposed development and no impacts to the historic environment are anticipated from the development of the Gravel Islands.

Environmental Management During Construction

- 3.1.27 The Environmental Memorandum (part of the HS2 Environmental Minimum Requirements) sets out the arrangements for the management of environmental issues during construction and the Code of Construction Practice (CoCP) sets out specific details and working practices that apply. The CoCP is supported by Local Environmental Management Plans (LEMPs) which include specific measures by topic, relevant to each relevant local authority area. The LEMP relevant to the works subject to this Schedule 17 submission is the Local Environmental Management Plan for London Borough of Hillingdon and can be found here:
https://assets.publishing.service.gov.uk/media/63ecaead8fa8f5612c4f52f1/P1S-HS2-EV-PLN-S000-000006_C01_5.pdf
- 3.1.28 Environmental management arrangements during construction do not form part of this request for approval of Plans and Specifications under Schedule 17.
- 3.1.29 The construction of the Gravel Islands will not have a negative environmental impact on the surrounding areas; nor will it increase the risk of flooding. A Schedule 33 application and SSSI Assent request will be submitted to the Environment Agency and Natural England in parallel with this application.

4 Design Approach and Rationale

- 4.1.1 There are five Gravel Islands in total comprised of 3 islands of 3m x 6m, and 2 islands of 3m x 3m.
- 4.1.2 The Islands would be installed as near as practicable to the following locations detailed within **Table 3** all being located within the south-east corner of Broadwater Lake.

Table 3: Location of the five Gravel Islands

Jetties	Grid Reference
Island 1	X (Easting): 504487, Y (Northing): 189287
Island 2	X (Easting): 504455, Y (Northing): 189262
Island 3	X (Easting): 504482, Y (Northing): 189257
Island 4	X (Easting): 504491, Y (Northing): 189239
Island 5	X (Easting): 504464, Y (Northing): 189236

- 4.1.3 The Gravel Islands would use a gabion structure and rubberised coir, consisting of quartz gravel. The Gravel Islands would be fitted with anti-predator fencing, and ramps.
- Fencing would be installed at the perimeter edge of islands using Galfan gabion mesh.
 - Gabion mesh would be cut at ramp locations to allow for free movement of birds, the aperture size of the gabion mesh is 40mm x 40mm, these would be cut to open access at ramp locations on the islands to 150mm x 100mm sized gaps to allow movement of birds.
- 4.1.4 Chick shelters would be placed on top of the islands at a density of 2 shelters per 1m². This would be provided using terracotta/clay ridge tiles approximate dimensions being 457mm x 250mm x 100mm, weighing 5.4 kg each. Decoy Terns would be placed on the islands to encourage use by Common Terns and uptake of the islands for nesting.
- 4.1.5 The Gravel Islands would be secured by concrete block anchors to their designed locations. As a weighted anchor, there is less impact to lakebed, and use of smaller stone size allows for accretion of sediment within the interstitial spaces, which may provide habitat to be colonised by invertebrate communities.

5 Pre-submission Consultation

5.1.1 Pre-submission consultation with the Local Planning Authority, statutory consultees and other relevant stakeholders is summarised in **Table 4** below.

Table 4: Pre-submission Consultation with LPA and Statutory Consultees

Consultee Name	Consultation Date	Method of Consultation / Attended by	Summary of Consultation Outcome
Herts and Middlesex Wildlife Trust	18th April 2023	Virtual Meeting	Presentation of Gravel Islands and what the HS2 Environmental Statement (ES) requires HS2/ALIGN to deliver in terms of wetland habitat mitigation.
London Borough of Hillingdon	22 February 2024	Virtual Meeting	Confirmation that submission of Schedule 17 application will be required for Gravel Islands

6 Construction Programme

- 6.1.1

The works would take place after bird nesting season and preferably during low wind conditions. The earliest the installation would begin therefore will be approximately October 2024.
- 6.1.2

The program of works would take place in the following order:

1. Complete enabling works - channel access established and vegetation clearance where necessary

2. Build and install Gravel islands.

3. Apply and rake gravel evenly to 50mm layer over islands

4. Install anti-predator fencing, access ramps and shelters to islands.

5. Tow Islands to installation locations and secure using Concrete Block Anchors

6. Site exit works and make good the temporary access point.
- 6.1.3

The Gravel Islands installation would take place over a 10-day period and include the following activities outlined in Table 5. However, wind and weather conditions could be a limiting factor to the installation timeline. If this is the case, the Gravel Islands installation could be postponed until weather conditions are more appropriate to proceed due to health and safety requirements.

Table 5: Gravel Islands installation timeline

Week 1	Day 1	Day 2	Day 3	Day 4	Day 5
Site set up and deliveries of materials					
Gravel Island Rafts assembly					

Week 2	Day 6	Day 7	Day 8	Day 9	Day 10
Gravel Island Rafts assembly					
Island towing, install and Anchoring					
Site Demobilised					

7 Other Consents

7.1.1 Other main consents likely to be required for the works are summarised in **Table 6** below. Consent requirements may alter during design development and further consents not identified in **Table 6** may be required.

Table 6: Other Consent Requirements

Consent	Works Requiring Consent
HS2 Act, Schedule 33, Part 5	Works within a Water Resource, Flood Zone 3
Section 28, The Wildlife & Countryside Act 1981 SSSI Assent	Works within an SSSI
Schedule 17: Mitigation Paragraph 9 (4) (b)	The scheme consists of part of the ecological mitigation for Work No. 2/1, for which an application under Para 9 (4) (b) will be submitted
Section 61 Control of Pollution Act 1974 for noise from construction site	The Gravel Island construction work will be covered in Phase 10 of the Colne Valley Viaduct Section 61 application which will be submitted in July this year.