

Ealing Planning Context Report

Prepared for London Borough of Ealing

Document no: P1S-HS2-TP-REP-SS05_SL06-000001

Revision	Author	Reviewed by	Approved by	Date approved	Reason for revision
Rev01					
Rev02					Report Template updated only

Security classification: OFFICIAL

Handling Instructions: enter handling instructions here

Contents

Prefa	ce		2	
	Purpo	se	2	
	Status	5 2		
	Struct	ure	2	
1	Intro	duction to HS2	2	
	1.1	The HS2 Project	2	
	1.2	Control of Environmental Impacts	3	
	1.3	Controls in the Act	3	
	1.4	Environmental Minimum Requirements	5	
	1.5	Existing Legislation and Other Safeguards	8	
2	HS2 ir	n the London Borough of Ealing	9	
	2.1	Introduction	9	
	2.2	Permanent Works	9	
	2.3	Construction of the Proposed Scheme	11	
	2.4	Material Transfer Stockpile Areas	12	
	2.5	Demolition Works	12	
3	Lands	scape and Restoration Error! Bookman	k not defined.	
4	Sched	lule 17 Requests for Approval - ProgrammeError!	Bookmark not defined.	4
List o	f figure	es		
Figure	1: HS2	Route Map	2	
List o	f tables	s		
Table	1: Oper	rations or works requiring approval of plans and spec	cifications 4	
Table	2: Princ	cipal Construction Activity at the Different Compound	S 12	
Table	3: List c	of Demolition Works	12	

OFFICIAL

Page i

Preface

Purpose

This Planning Context Report provides an overview of HS2 works that will take place within London Borough of Ealing (the Borough) and a programme for making requests for approval under Schedule 17 to the High Speed Rail (London - West Midlands) Act 2017 ("the HS2 Act").

This report has been prepared in fulfilment of the requirements of paragraph 16 (1) (a) of Schedule 17 to the Act, which states:

A planning authority need not consider a request for approval under Part 1 [of *Schedule 17 to the Act] unless:*

a) The nominated undertaker has deposited with the authority a document setting out its proposed programme with respect to the making of requests under that Part to the authority

This document accordingly sets out the proposed programme for making requests under Schedule 17 to the HS2 Act. An updated six monthly programme will be provided each quarter. This document also meets the requirement of paragraph 9.2 of the High Speed Rail (London – West Midlands) Planning Memorandum (the "Planning Memorandum"), which states that the '... report is to include an indication of the location of the scheduled and non-scheduled works to which requests for approval are expected to relate.'

Status

This document is deposited for information only. It does not require the approval of the planning authority.

OFFICIAL

Structure

This document contains five sections:

Section 1: Introduction to HS2 - Describes in outline the HS2 project, summaries the planning regime and outlines obligations with respect to mitigation of environmental impacts.

Section 2: HS2 in London Borough of Ealing – Outlines the proposals within the Borough, and describes the permanent, preparatory and temporary works.

Section 3: Landscape and Restoration - Outlines landscape and restoration works proposed after construction.

Section 4: Programme for Requests for Approval under Schedule 17 - Sets out the programme for submission of requests for approval.

Section 5: Planning Context Report Plans - Construction and Operation -Illustrates the location of permanent and temporary works in the District.

1 Introduction to HS2

1.1 The HS2 Project

- 1.1.1 HS2 is the Government's proposal for a new, high speed north-south railway. The proposal is being taken forward in two phases: Phase One will connect London with Birmingham and the West Midlands and Phase Two will extend the route to Manchester, Leeds and beyond.
- 1.1.2 On 23rd February 2017 Royal Assent was granted for Phase One of HS2, which comprises of a new high speed railway between London and the West Midlands with stations at London Euston, Old Oak Common, Birmingham Interchange, and Birmingham Curzon Street. Figure 1 illustrates the Phase One route between London West Midlands and Phase Two proposals.

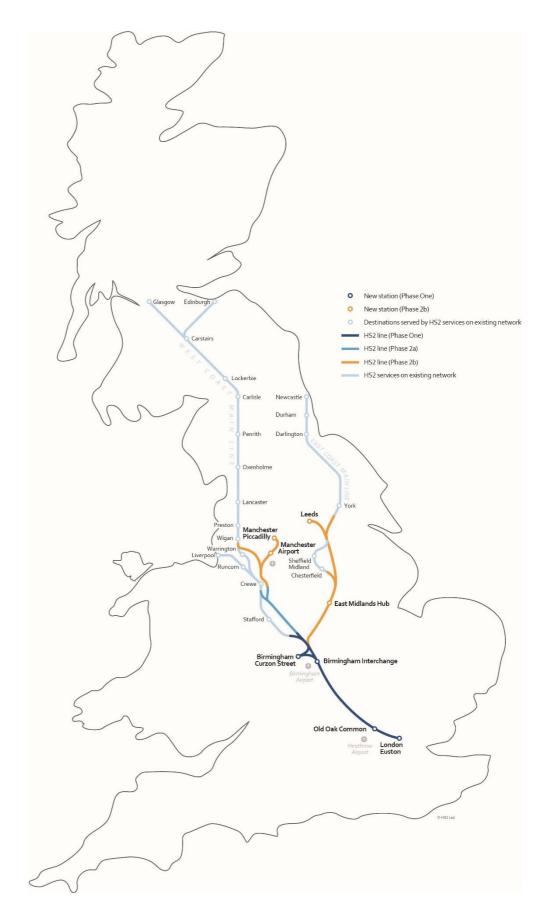


Figure 1: HS2 Route Map

1.2 Control of Environmental Impacts

- 1.2.1 The environmental impacts of the construction, maintenance and operation of HS2 will be controlled in three ways:
 - Controls within the HS2 Act such as approvals for designs and construction arrangements;
 - Policies, commitments and undertakings entered into outside of the Act, including the EMRs; and
 - Existing legislation, unless expressly or impliedly dis-applied or modified by the Act.
- 1.2.2 These controls are summarised below.

Environmental Statement

- 1.2.3 The HS2 Phase One Environmental Statement (ES) was published in November 2013. It has been supplemented by a number of additional volumes as further information has become available, and in light of proposed changes to the project¹.
- 1.2.4 The ES identifies the likely significant effects that will arise from the construction and operation of HS2 and identifies the range of mitigation measures that could be used to reduce or eliminate these effects. The assessment is based on a number of assumptions about design and construction practices.
- 1.2.5 As the project is taken forward to detailed design and construction there may be changes to assumed construction methods and design, subject to the requirements of the Act, the EMRs, and any approvals required from consent granting bodies, and in response to the requirements of any relevant Undertakings or Assurances.

1.3 Controls in the Act

The Planning Regime

1.3.1 Section 20 to the HS2 Act grants deemed planning permission under Part 3 of the Town and Country Planning Act 1990 ("the TCPA") for the works authorised by the HS2 Act. This permission is subject to the requirement that certain approvals need to be obtained from the relevant planning authorities under the planning regime

established by Schedule 17 to the Act. The conditions in Schedule 17 are enforceable by the planning authority in accordance with the TCPA.

1.3.2 The principal works authorised by the HS2 Act are described in Schedule 1 (the "scheduled works"). The descriptions in Schedule 1 to the HS2 Act set out the type of work and their location, for example:

Work No.1/1 – A railway (23.48 kilometres in length) partly in tunnel, commencing at a point 235 metres east of the junction of North Gower Street with Drummond Street passing north-westwards and terminating beneath a point 80 metres north-west of the bridge carrying Ickenham Road over the Marylebone to Aylesbury Railway. Work No. 1/1 includes shafts at Coburg Street, Mornington Street, Granby Terrace, Parkway, Adelaide Road, Alexandra Place, Canterbury Works and Greenpark Way, a station at Old Oak Common and a Crossover Box at Victoria Road.

- 1.3.3 The scheduled works must be constructed in the locations and to the levels relevant to each scheduled work shown on the deposited plans and sections (the 'Limits of Deviation'). The scheduled works may deviate vertically downwards from the levels shown to any extent, and may deviate upwards up to 3 metres subject to the upper limits defined for certain works such as stations, depots or shafts.
- 1.3.4 Section 2 to the HS2 Act authorises, within the Act limits, the construction and maintenance of a wide range of other development for the purposes of or in connection with the scheduled works, or otherwise for Phase One purposes. Section 2 also authorises, within the Act limits, the carrying out and maintenance of landscaping and other works to mitigate adverse effects of the construction, maintenance or operation of the works and to carry out and maintain works for the benefit or protection of land affected by the works.
- 1.3.5 Such ancillary works may be constructed within Act limits as defined on the deposited plans. The HS2 Act only grants deemed planning permission for the construction of works which are not scheduled works if they are with the scope of the ES that accompanies the HS2 Act.
- 1.3.6 Schedule 2 to the Act authorises further works, including surveys and investigation of land, support of buildings, works to trees, discharge of water, and temporary works to certain waterways.
- 1.3.7 Schedule 17 to the Act defines the detailed planning regime which will apply to the planning authority affected by works to construct and operate HS2.

¹ An Environment Statement has been published with the Additional Provision tabled by the Promoter in September 2014. In addition, Supplementary Environmental Statements and Additional Provision Environmental Statements were published and tabled by the Promoter in July 2015, September 2015, October 2015 and December 2015.

- 1.3.8 The planning regime under Schedule 17 is different to that of the TCPA. It differs from the TCPA process in how it defines the matters that require approval and the grounds that the planning authorities can have regard to in determining requests for approval. The grounds for the imposition of conditions and/or the refusal of Schedule 17 submissions are limited in comparison to the TCPA process. This is because the works already have deemed planning permission through the Act and there are other complementary controls imposed through the HS2 Act and EMRs.
- 1.3.9 Schedule 17 requires the nominated undertaker to submit the following details to planning authorities, for approval or agreement:
 - Plans and specifications of certain works;
 - Matters ancillary to development ("construction arrangements");
 - Road Transport (lorry routes);
 - Bringing into use; and
 - Site restoration schemes.
- 1.3.10 Planning authorities who have given the Secretary of State undertakings, as set out in the Planning Memorandum, with respect to the handling of planning matters under Schedule 17, have become 'qualifying authorities'. The main provisions of the Planning Memorandum are summarised in Section 1.51 below.
- 1.3.11 The Borough has become a qualifying authority.
- 1.3.12 In relation to qualifying authorities, the operations or works for which plans and specifications will be submitted for approval are identified in Table 1.

Table 1: Operations or works requiring approval of plans and specifications

PLANS AND SPECIFICATIONS	
BUILDING WORKS (paragraph 2 of Schedule 17)	The erection, construction or alteration of any building, other than a temporary building.
OTHER CONSTRUCTION WORKS (paragraph 3 of Schedule 17)	Road vehicle parks; Earthworks; Sight, noise or dust screens; Transformers, telecommunication masts or pedestrian accesses to railway lines; Fences or walls, and

OFFICIAL

Page 4

PLANS AND SPECIFICATIONS	
	Lighting equipment.
WASTE AND SPOIL DISPOSAL AND EXCAVATION (Paragraph 7 of Schedule 17)	Disposal of waste or spoil;
	Excavations of bulk materials from borrow pits.

- 1.3.13 In relation to qualifying authorities, development must be carried out in accordance with matters ancillary to development (construction arrangements) approved by the relevant planning authority (paragraph 4 of Schedule 17).
- 1.3.14 Schedule 17 enables the Secretary of State to make class approval for construction arrangements, except in relation to construction camps (paragraph 5 of Schedule 17). A class approval was made by the Secretary of State on 24th March 2017, following consultation with the planning authorities affected, for the following generic construction arrangement matters: handling of re-usable spoil and topsoil; storage sites; site screening; artificial lighting; suppression of dust; road mud control measures. The approval of construction camps is not included in the class approval.
- 1.3.15 Where lorry movements exceed 24 per day to and from a construction site, the lorry route must be approved (paragraph 6 of Schedule 17) by the relevant qualifying authority.
- 1.3.16 The relevant qualifying authority approves a bringing into use request for approval (paragraph 9 of Schedule 17), for most scheduled works, apart from any which are below ground, and maintenance depots. The purpose of bringing into use requests is to ensure that appropriate mitigation has been incorporated, and no such work can be brought into use without such approval.
- 1.3.17 A site restoration scheme will be submitted for agreement with the relevant planning authority in accordance with paragraph 12 of Schedule 17.
- 1.3.18 The planning authority must have regard to statutory guidance issued by the Secretary of State in accordance with paragraph 26 of Schedule 17 to the HS2 Act.

Other Consents in the Act

1.3.19 In addition to the planning regime described above, Schedules 4 and 33 to the HS2 Act contain provisions setting out the protections to be provided for various bodies with statutory responsibilities likely to be affected by the works.

Schedule 4 - Accesses to highways affecting traffic

1.3.20 To control the impact of constructing new or altering existing accesses onto the local road network, local highway authorities have an approval role. For the opening of an access onto, or the alteration of, a road at a place shown on the deposited plans the works must be carried out in accordance with plans and specifications approved by the highway authority. In addition the local highway authority may require the access to be moved elsewhere within the Act limits where that is reasonably capable of being done. If an access is required at a location other than that shown on the deposited plans, the consent of the highway authority is required, subject to its approval of plans and specifications.

Schedule 4 - Stopping up, diversion and interference with the highway

1.3.21 During construction the temporary closure, diversion or interference with highways will be required. In order to address local impacts the Act provides for highway authority input. Where a highway is specified within the Act, the nominated undertaker must consult the highway authority about the exercising of the powers before doing so. Where the powers are to be exercised in relation to a highway not specified within the Act the nominated undertaker must obtain the consent of the highway authority.

Schedule 33 - Highways

- 1.3.22 Part 1 of Schedule 33 requires the nominated undertaker in exercising the powers in the Act in relation to highways to have regard to the potential disruption of traffic and to seek to minimise such disruption so far as reasonably practicable, and gives highway authorities rights of approval over various matters concerning details of the works affecting highways.
- 1.3.23 Additional controls are contained in Schedule 4. Where the nominated undertaker constructs a new or alters an existing highway, the construction or alteration must be completed to the reasonable satisfaction of the highway authority, who shall certify that fact in writing to the nominated undertaker.
- 1.3.24 Where the nominated undertaker constructs or realigns a highway that is constituted or comprises a carriageway, it must be carried out in accordance with plans, sections and specifications approved by the highway authority.

Schedule 33 - Water

1.3.25 The construction of HS2 will have impacts on inland waterways and land drainage, flood defences, water resources and fisheries. In order to address these impacts the Act includes a range of controls for the relevant authorities.

- 1.3.26 The impacts on inland waterways are addressed in Part 4 of Schedule 33, this gives the Canal and River Trust the power to approve plans and specifications for works affecting waterways for which it is responsible.
- 1.3.27 Part 5 of Schedule 33 states that before beginning to construct any "specified work" (in the main, those affecting drainage, flood storage and flood defence, the flow or purity of water and conservation of water resources), the nominated undertaker will submit plans, including method statements, for the works to the Environment Agency or local drainage authorities (i.e. lead local flood authorities, or internal drainage boards) for approval. Works will be constructed in accordance with the approved plans.
- 1.3.28 The Environment Agency or local drainage authorities may, amongst other matters, make conditions requiring the nominated undertaker at its own expense to construct such protective works as are reasonably necessary to safeguard any drainage work against damage or to ensure its efficiency for flood defence purposes is not impaired during the construction of the specified works.
- 1.3.29 These provisions have effect instead of the normal consenting regime which would apply, for example, under the Land and Drainage Act 1991, or the Environmental Permitting Regulations 2010.

Schedule 33 - Other Controls

1.3.30 Protective provisions also include the requirement for consultations and agreements from statutory utilities undertakers.

Schedule 18 - Listed Buildings

- 1.3.31 The HS2 Act disapplies the normal controls requiring conservation area consent and listed building consent under the Planning (Listed Building and Conservation Areas) Act 1990, for the demolition, alteration or extension of listed buildings and unlisted buildings. The disapplication applies to the extent specified in Schedule 18 to the Act.
- 1.3.32 In recognition of the removal of the requirement for listed building consent, heritage agreements have been entered into between the nominated undertaker, Historic England and relevant local authorities. These agreements require approvals to detailed method statements in relation to the works subject to the disapplication of the normal listed building controls.

1.4 Environmental Minimum Requirements

1.4.1 There are a variety of control mechanisms and mitigation strategies outside of the HS2 Act. These are captured in the EMRs.

- 1.4.2 The EMRs are a suite of documents that have been developed in consultation with local authorities and other relevant stakeholders. The nominated undertaker is contractually bound to comply with the controls set out in the EMRs, through the Development Agreement with the Secretary of State.
- 1.4.3 The controls contained in the EMRs, along with powers contained in the HS2 Act and the Undertakings given by the Secretary of State, will ensure that impacts which have been assessed in the ES will not be exceeded, unless any new impact or impacts in excess of those assessed in the ES:
 - results from a change in circumstances which was not likely at the time of the ES²;
 - would not be likely to be environmentally significant³;
 - results from a change or extension to the project, where that change or extension does not itself require environmental impact assessment (EIA) under either (i) article 4(1) of and paragraph 24 of Annex 1 to the EIA Directive⁴; or (ii) article 4(2) of and paragraph 13 of Annex 2 to the EIA Directive⁵; or
 - would be considered as part of a separate consent process (and therefore further EIA if required).
- 1.4.4 In addition to general principles, the EMRs comprise:
 - a number of specific requirements, including that the nominated undertaker will
 use reasonable endeavours to adopt mitigation measures that will further reduce
 any adverse environmental impacts caused by HS2, insofar as these mitigation
 measures do not add unreasonable costs to the project or unreasonable delays
 to the construction programme;
 - the undertakings and assurances given to Parliament and petitioners by the Secretary of State during the passage of the High Speed Rail (London – West Midlands) Bill (the Bill); and
 - the Code of Construction Practice, Planning Memorandum, Heritage Memorandum, and Environmental Memorandum.

Undertakings and Assurances

1.4.5 During the passage of the Bill through Parliament, the Secretary of State entered into a range of undertakings and assurances. The HS2 Act Register of Undertakings and

Assurances contains all the undertakings and assurances given to petitioners and to Parliament before and during the passage of the Bill. The register forms part of the EMRs and as a result the nominated undertaker is contractually bound to deliver them.

Code of Construction Practice

- 1.4.6 The Code of Construction Practice (CoCP) is Annex 1 of the EMRs. It sets out specific details and working practices in relation to site preparation (including site investigation and remediation, where appropriate), demolition, material delivery, excavated material disposal, waste removal and all related engineering and construction activities.
- 1.4.7 The CoCP sets out the measures that nominated undertaker and contractors are required to implement in order to limit disturbance from construction activities, as far as reasonably practicable:
 - General requirements related to community relations, hours of work, pollution incident control and security, etc;
 - Agriculture, forestry and soils;
 - Air quality;
 - Cultural heritage;
 - Ecology;
 - Ground settlement:
 - Land quality;
 - Landscape and visual;
 - Noise and vibration;
 - Traffic and transport; and
 - Water resources and flood risk.
- 1.4.8 Local Environmental Management Plans (LEMPs) will be prepared for each local authority area.

² i.e. a situation that could not reasonably have been anticipated at the time of the ES.

³ This covers all effects (both positive and adverse) where those effects are simply of no environmental significance.

⁴ 2011 consolidated EIA Directive (2011/92/EU).

⁵ Broadly, this would not allow those changes or extensions to the project which would give rise to adverse environmental effects within the EIA.

Ealing Planning Context Report
Document no: P1S-HS2-TP-REP-SS05_SL06-000001

Revision: Rev02

- 1.4.9 The LEMPs will include a number of specific measures by topic, as relevant to each local authority area. The LEMPs will build on the general environmental requirements contained in the CoCP and will set out how the project will adapt and deliver the required environmental and community protection measures within each relevant local authority area.
- 1.4.10 The nominated undertaker and/or its contractors will engage with the local communities, local authorities and other stakeholders in order to develop the LEMPs.

Planning Memorandum

1.4.11 The Planning Memorandum is Annex 2 of the EMRs. It sets out in detail the responsibilities and requirements in relation to planning matters for those authorities that choose to become qualifying authorities. It also sets out requirements for the nominated undertaker in the implementation of Schedule 17 of the HS2 Act.

Heritage Memorandum

1.4.12 The Heritage Memorandum is Annex 3 of the EMRs. It provides a framework for the nominated undertaker, Historic England, local authorities and other stakeholders to work together to ensure that the design and construction of Phase One is carried out with proper regard to the historic environment.

Planning Forum

- 1.4.13 The HS2 Phase One Planning Forum was established to help co-ordinate and secure the expeditious implementation of the planning provisions in the Act. The primary objectives and functions of the Planning Forum are:
 - To prepare notes on related matters, which will set out standards and practices to be followed by those implementing the planning regime.
 - To consider common design items for certain structures associated with the railway (such as bridges, acoustic barriers or retaining walls).
- 1.4.14 The Planning Forum has a number of sub-groups:
 - Highways Subgroup;
 - Environmental Health Subgroup;
 - Heritage Subgroup; and
 - Flood Risk and Drainage Subgroup.

Environmental Management System

- 1.4.15 As part of the sustainability policy, the nominated undertaker will develop an environmental management system (EMS) in accordance with BS EN ISO 14001. The EMS provides the process by which environmental management, both within its organisation and in relation to its operations, is undertaken to ensure the relevant findings of the ES are addressed through the construction phase.
- 1.4.16 The nominated undertaker will require each of its main contractors to have an EMS certified to BS EN ISO14001. Their EMS will include roles and responsibilities, together with appropriate control measures and monitoring systems to be employed during planning and constructing the works for all relevant topic areas. Where the lead contractor is a joint venture, the EMS will be certified to cover the activities of the joint venture.

Management of Construction Traffic

- 1.4.17 The HS2 Routewide Traffic Management Plan (RTMP) describes the principles and objectives for the management of transport, highways and traffic during the delivery of the works. It codifies the discussions held with the highway authorities along the HS2 Phase One route via the Highway Subgroup to the Planning Forum and takes into account the best practice used during the delivery of similar large construction projects.
- 1.4.18 The RTMP document will be supplemented with a series of Local Traffic Management Plans (LTMPs) along the route. LTMPs will set out the full range of local controls, significant works programmes for highways and other appropriate matters.
- 1.4.19 Regular local Traffic Liaison Group (TLG) meetings have been established with local highway authorities so that matters such as LTMPs and site specific traffic management schemes can be reviewed prior to submission or approval and the implementation of schemes reviewed and other monitoring reported, along with other matters of interest discussed and co-ordinated.

Excavated Material & Waste Management

1.4.20 Measures to reduce potential impacts from waste management are described in section 15 of the CoCP. An integrated design approach has been developed to use excavated material to satisfy the fill material requirements wherever reasonably practicable. This approach will reduce the need for imported materials and reduce the amount of excavated material requiring off-site disposal. This includes reuse of all topsoil and agricultural subsoil as close to the point of excavation as practicable.

Revision: Rev02

1.4.21 All waste generated from the design, construction and operation will be managed in accordance with the waste hierarchy. This places waste prevention as the preferred option at the top, followed by reuse, recycling and other recovery, with landfill disposal at the bottom as the last resort. Information Paper E3 provides further detail.

Management of Noise and Vibration

- 1.4.22 The nominated undertaker will obtain consents under Section 61 to the Control of Pollution Act 1974, which will include noise limits and vibration limits where relevant and site specific management and mitigation requirements for noise and vibration, both on and off site.
- 1.4.23 In relation to the control of construction noise and vibration, Information E23 provides further detail. Information Papers E20, E21 and E22 provide further detail on operational noise from the railway.
- 1.4.24 Noise and vibration monitoring will be carried out at different times during the lifetime of the railway. Where noise and vibration performance deviates from expected conditions, actions will be taken as described in Information Paper F4.

1.5 Existing Legislation and Other Safeguards

1.5.1 Unless a piece of existing legislation is expressly or impliedly dis-applied or modified by the HS2 Act, it will continue to apply. For example, environmental permits in relation to discharges will still be required and the Control of Pollution Act 1974 (COPA) will continue to apply.

Oversite Development

- 1.5.2 The HS2 Act does not grant approval for any oversite development. Consent for any such development will be applied for and determined through normal planning processes. However, the HS2 Act does authorise works to enable future oversite development, for example the construction of additional foundations or deck structures.
- 1.5.3 The HS2 Act also puts in place requirements in respect of the environmental assessment of oversite development. It defines the circumstance where the planning application for such development proposed to replace a building demolished or substantially demolished for HS2 must be accompanied by an environmental impact assessment.

Safety and Security

- 1.5.4 HS2 will create a railway designed, built and operated with world-class health, safety and security standards. All HS2 infrastructure will be designed in accordance with appropriate standards and policies for public safety. The following are some key design principles that will be applied:
 - Adoption of hostile vehicle mitigation and blast resilient glazing and facades where appropriate;
 - Application of Crime Prevention Through Environmental Design principles across all of the HS2 network but with particular emphasis on all publicly accessible spaces;
 - Selection of vandal-resistant materials and designs;
 - Appropriate use of surveillance systems and lighting;
 - Integration of natural way-finding into designs to configure spaces that are easy to navigate and use of signage that is clean and unambiguous.

2 HS2 in the London Borough of Ealing

2.1 Introduction

- 2.1.1 In Ealing the route extends from Old Oak Common Lane in the east, to a point near Rabournmead Drive in the west. (Please note that approximately 2.9kmof the route formerly in Ealing is now within the boundary of Old Oak and Park Royal Development Corporation (OPDC) between Old Oak Common Lane and Hanger Lane). For an overview of that part of the route, please refer to the context report for OPDC (P1S-HS2-TP-REP-S0004-000001).
- 2.1.2 The route runs in tunnel through the London Borough of Ealing. The northern tunnel passes through a section of the London Borough of Brent to the west of Hanger Lane.
- 2.1.3 The line of route is predominately within a suburban area and includes the areas of Park Royal, Perivale, West Acton, and Northolt.
- 2.1.4 The largest business park in London is located at Park Royal, to the north and south of the route, with large areas of light industry and commercial use. This is similar to the developments found in the section of route in Perivale. The open areas of Horsenden Hill and Sudbury golf course lie to the north of the route, as does Perivale Wood. Ealing golf course is located to the south of the route, adjacent to Western Avenue.
- 2.1.5 The Grand Union Canal runs in an east to west direction through the area and crosses the route at the Kelvin Industrial Estate. The River Brent also flows through the area and crosses the route in the vicinity of the Manhattan Business Park.
- 2.1.6 HS2 will run broadly parallel and beneath the London Underground Central line. Hangar Lane, Perivale, Greenford and Northolt London Underground stations and the Greenford Network Rail station on the Acton to Northolt Line are located within the area.
- 2.1.7 The A40 Western Avenue runs in an east to west direction through the area immediate south of the route. The A4127 Greenford Road runs in a north to south direction and crosses the route between Perivale and Northolt.

2.2 Permanent Works

Northolt Tunnel

2.2.1 The Northolt tunnel is approximately 13.5km in overall length between the Victoria Road crossover box and the West Ruislip portal. The tunnel starts at the western end of the Victoria Road crossover box, located within the boundaries of OPDC and runs west for 2.4km before entering the London Borough of Ealing. It then travels for approximately 6.8km in tunnel within the London Borough of Ealing. The tunnel continues west for 4.3km before reaching the West Ruislip portal.

Westgate Ventilation Shaft

- 2.2.2 This ventilation shaft will be located approximately 430m west of Hanger Lane and south of Westgate, within an existing car park. The ventilation shaft will be used for tunnel ventilation and to provide emergency access from surface to track level.
- 2.2.3 The ventilation shaft design will be rectangular and approximately 35m long by 20m wide, with a depth from road level of approximately 38m. The key features of this ventilation shaft will include:
 - A permanent fenced compound, which will contain:
 - A shaft headhouse building approximately 44m by 17.5m and approximately 14.7m above existing ground level, providing access to the tunnels. The materials and finishes will be subject to detailed design;
 - an area of hardstanding to the north, east and west of the headhouse building to provide access for maintenance and for the emergency services; and
 - drainage attenuation and fire protection water tanks, located under the area of hardstanding.
 - Access from the A40 Western Avenue via the A4005 Hanger Lane and Westgate.
- 2.2.4 The construction of this section will be managed from the Westgate ventilation shaft main compound.
- 2.2.5 The works will be carried out in broad phases starting with site clearance and enabling works; ventilation shaft construction; tunnelling, internal works to the shafts and chambers, stair and lift core; headhouse construction; railway installation works comprising ventilation shaft and headhouse fit-out; and landscaping and planting.
- 2.2.6 Utilities may require protection and/or diversion as part of these works.

Green Park Way Ventilation Shaft

- 2.2.7 The ventilation shaft will be located on vacant land within an existing business park, east of the A4127 Greenford Road on the northern side of the London Underground Central line.
- 2.2.8 The shaft will be rectangular, approximately 41m by 26m, with a depth below ground level of approximately 38m. The shaft will be used for tunnel ventilation and providing emergency intervention from surface to track level. The key features of the ventilation shaft will include:
 - A permanent fenced compound, which will contain:
 - A headhouse building approximately 38m by 26.5m and approximately 17.5m high, providing access to the tunnels. The materials and finishes will be subject to detailed design;
 - an express feeder auto-transformer station (EFATS) for HS2 traction power. This will be located immediately to the north of the ventilation shaft headhouse with dimensions of 70m in length, 40m in width with height of approximately 5m above existing ground level;
 - an area of hardstanding around both the headhouse and express feeder auto-transformer station to provide access for maintenance and the emergency services; and
 - o drainage attenuation and fire protection water tanks located under the area of hardstanding.
 - Access from the A4127 Greenford Road via Green Park Way and Rockware Avenue.
- 2.2.9 Construction of this section will be managed from the Green Park Way ventilation shaft main compound.
- 2.2.10 The works will be carried out in broad phases starting with site clearance and enabling works; followed by temporary realignment of the existing railway adjacent to the shaft location for the duration of the works to allow construction of the shaft; ventilation shaft construction; tunnelling; removal of tunnel boring machines; internal works to the shafts and chambers, stair and lift core; headhouse construction; installation of an express auto-transformer station adjacent to the ventilation shaft; reinstatement of the existing railway to its original alignment; shaft and headhouse fit-out; and landscaping and planting.
- 2.2.11 No demolitions are required for these works.

Mandeville Road Ventilation Shaft

- 2.2.12 The ventilation shaft at Mandeville Road will be located on an existing railway cutting slope approximately 150m east of the A312 Mandeville Road, on the northern side of the London Underground Central line. The shaft will be rectangular, approximately 35m long by 20m wide, with a depth from the top of the cutting of approximately 43m. The shaft will be used for tunnel ventilation and providing emergency intervention from surface to track level. The key features of the ventilation shaft include:
 - A permanent fenced compound, which will contain:
 - A headhouse building, approximately 36m by 17.5m. It will be provide access to the tunnels. In addition there are two single storey sections (containing mechanical and electrical equipment) attached to the northern edge of the headhouse, one 8m by 18m and one 8m by 26m. The headhouse and associated structures will extend to approximately 6.5m above the top of the railway cutting. Materials and finished will be subject to detailed design;
 - an area of hardstanding to the north of the headhouse to provide access for maintenance and the emergency services;
 - drainage attenuation and fire protection water tanks located under the area of hardstanding; and
 - Access from the A312 Mandeville Road.
- 2.2.13 Construction of this section will be managed from the Mandeville Road ventilation shaft main compound.
- 2.2.14 The works will be carried out in broad phases starting with site clearance and enabling works; followed by Mandeville Road junction improvements at the compound entrance; building demolition; ventilation shaft construction; internal works to shafts and chambers, stair and lift core; headhouse construction; ventilation shaft and headhouse fit-out; and landscaping and planting.
- 2.2.15 Areas of planting have been identified in this location to provide visual screening and habitat reinstatement.

Greenford Station Passing Loop

2.2.16 A twin track passing railway loop will be constructed adjacent to the existing Wycombe Single line (Acton & Northolt Line) to the west of Greenford station and approximately 520m west of Green Park Way ventilation shaft, to support the movement of excavated material. The works involve the realignment of the existing

single track northwards and the installation of the two temporary new sidings approximately 500m long within the existing railway area.

2.2.17 This track and the new sidings are required from an early stage during the construction phase for regulating excavated material trains waiting for a train path on the Great Western Main Line from West Ruislip railhead and vice versa. The new sidings will be removed prior to the HS2 operational phase.

2.3 Construction of the Proposed Scheme

- 2.3.1 The construction of HS2 within the London Borough of Ealing will broadly follow the following programme:
 - Advance works: site investigations, preliminary mitigation works, preliminary enabling works and utility works;
 - Engineering works: establishment of construction compounds, site preparation and enabling works, main earthworks and structure works;
 - Construction of tunnels by tunnel boring machine (TBM);
 - Construction of ventilation shafts and headhouses;
 - Railway installation works: establishment of construction compounds, railway infrastructure installation, fit-out of tunnels, ventilation shafts or other buildings, connections to utilities, changes to the existing railway network;
 - Site restoration and
 - Railway testing and commissioning.

Primary Utility Works

2.3.2 Numerous utilities will need to be diverted for the works, the principal works and diversions in this area are listed under separate headings below.

Westgate Ventilation Shaft

- Permanent realignment of two Thames Water mains at Hanger Lane east bridge;
 a surface water drain at Hanger Lane east bridge;
 and a clean water trunk main at Westgate bridge;
- Permanent realignment of a Thames Water sewer Westgate bridge/Manhattan Business Park:

- Permanent realignment of Cadent Gas gas distribution mains on the bridge at Hanger Lane east bridge; at Westgate Road; and in the road adjacent to the railway on Western Avenue;
- Permanent realignment of water mains, located on Hanger Lane east bridge;
 Hanger Lane east bridge/Twyford Abbey Road; and Hanger Lane east bridge/Western Avenue; and
- Permanent new power supply, water and drainage to the Westgate ventilation shaft.

Green Park Way Ventilation Shaft

 No diversions of existing utilities will be required. However, the Green Park Way ventilation shaft will require the permanent installation of power, water and drainage supply.

Mandeville Road Ventilation Shaft

- Permanent realignment of a Thames Water sewer at Mandeville Road;
- Permeant realignment of a water main owned by Affinity Water, which runs from Mandeville Road pumping station, east of Badminton Close, to Mandeville Road;
- Re-provision of the existing Affinity Water pumping station; and
- Permanent new power supply, water and drainage at Mandeville Road ventilation shaft.
- 2.3.3 It should be noted that the description of the assets above (i.e. vent shaft, headhouses), may change due to further design work.

Worksites and Compounds

- 2.3.4 Construction of the Proposed Scheme will require engineering works along the entire length of the route, and within land adjacent to the route. This will comprise two broad types of engineering work:
 - civil engineering works, such as earthworks and erection of bridges and viaducts;
 ventilation shafts and headhouses and/or
 - railway installation works, such as laying ballast or slabs and tracks, and/or installing power supply and communications features.

- 2.3.5 Construction of the Proposed Scheme will be subdivided into sections, each of which will be managed from compounds. The compounds will act as the main interface between the construction work sites and the public highway, as well as performing certain other functions. Compounds will either be main compounds or satellite compounds, which are generally smaller. Some compounds will be used for civil engineering works and others for railway installation works, and in some cases for both.
- 2.3.6 In the London Borough of Ealing, there will be three main compounds.
- 2.3.7 Main compounds will be used for core project management staff and will contain, in general:
 - Space for the storage of bulk materials (aggregates, structural steel and steel reinforcement);
 - Space for the receipt, storage and loading/unloading of excavated material either onto or off the site;
 - An area for the fabrication of temporary works equipment and finished goods;
 - Fuel storage;
 - Plant and equipment storage;
 - Office space for management staff, limited car parking for staff and site operatives, and welfare facilities; and
 - Necessary operational parking.

Table 2: Principal Construction Activity at the Different Compounds

COMPOUND	PRINCIPAL CONSTRUCTION ACTIVITY
Westgate Ventilation Shaft Main Compound	 Construction of the ventilation shaft and headhouse; Support and provide worker welfare facilities; Railway installation works, and Utility works.
Green Park Way Ventilation Shaft Main Compound	 Dismantling of the TBM; Construction of a ventilation shaft, express feeder auto-transformer station and modifications to the existing railway lines; Support and provide worker welfare facilities; Railway installation works, and Utility works.
Mandeville Road Ventilation Shaft Main Compound	 Construction of the ventilation shaft and headhouse Support and provide worker welfare facilities;

OFFICIAL

COMPOUND	PRINCIPAL CONSTRUCTION ACTIVITY
	Railway installation works, andUtility works.

2.3.8 No worker accommodation is currently planned to be included in these worksites.

2.4 Material Transfer Stockpile Areas

2.4.1 A temporary material stockpile will be placed on land immediately east of the River Brent north of the London Underground line. This area will be used for materials handling and storage during construction.

2.5 **Demolition Works**

2.5.1 The buildings that will need to be demolished are listed in the table below.

Table 3: List of Demolition Works

DESCRIPTION	LOCATION
Residential property and associated outbuildings (garage)	41 Mandeville Road
Residential property and associated outbuildings (garage)	39 Mandeville Road
Pumping station and associated office building (owned by Affinity Water)	East of Badminton Close

3 Landscape and Restoration

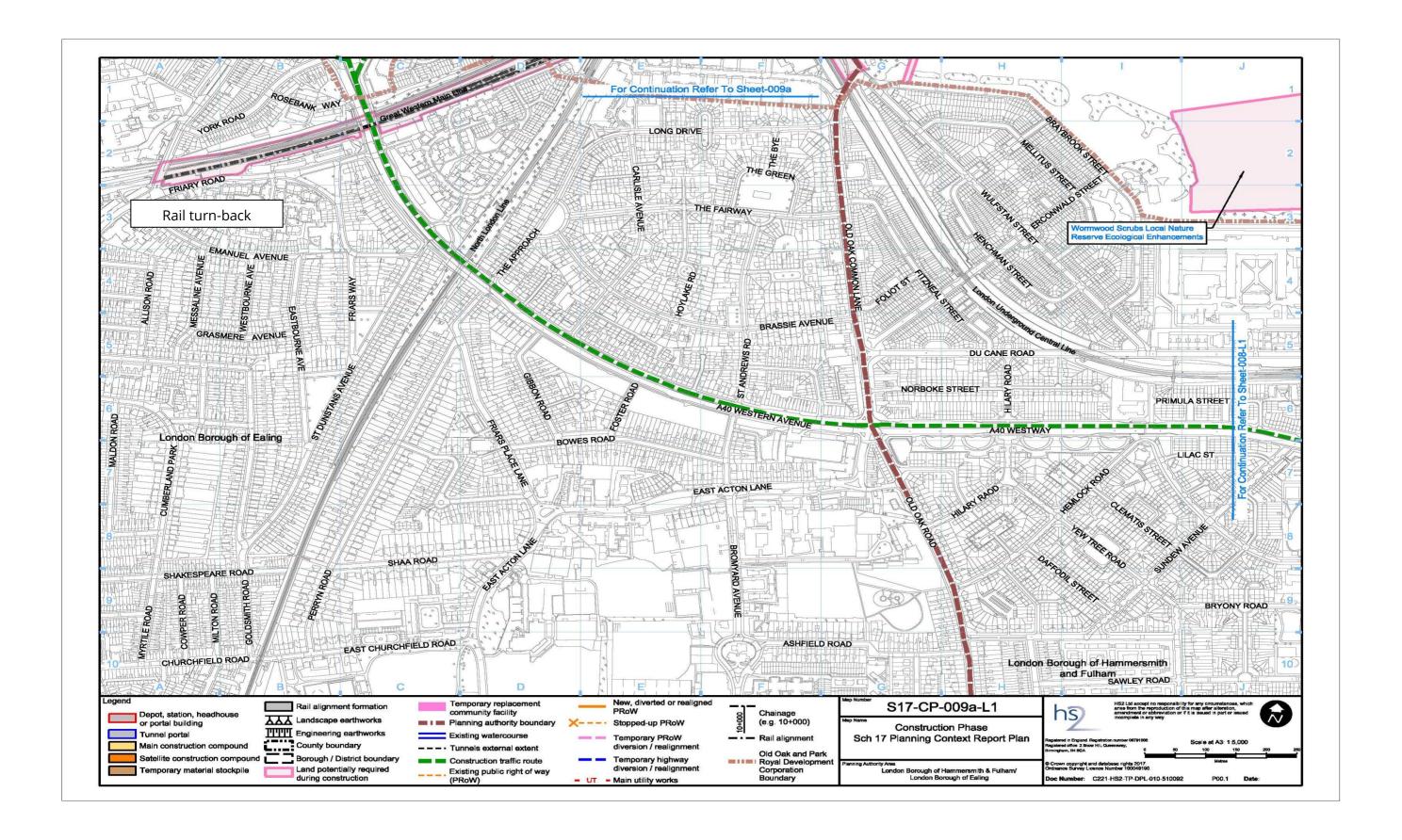
- 3.1.1 Different landscape types will be incorporated into HS2 works at various stages of the project. Some early landscape works may be proposed for example new planting to compensate for the loss of prior habitat or to help integrate HS2 into the surrounding landscape. Planting and landscape techniques will be used for different purposes for example to visually screen the railway, new structures or to reduce railway noise.
- 3.1.2 Upon completion of construction works, land that is not required for the operation of the railway will be restored. At this early stage of the design of the project, the presumption is that land would be restored to its pre-existing condition. Any new planting, or habitat creation will be maintained to ensure they become established and are properly maintained.

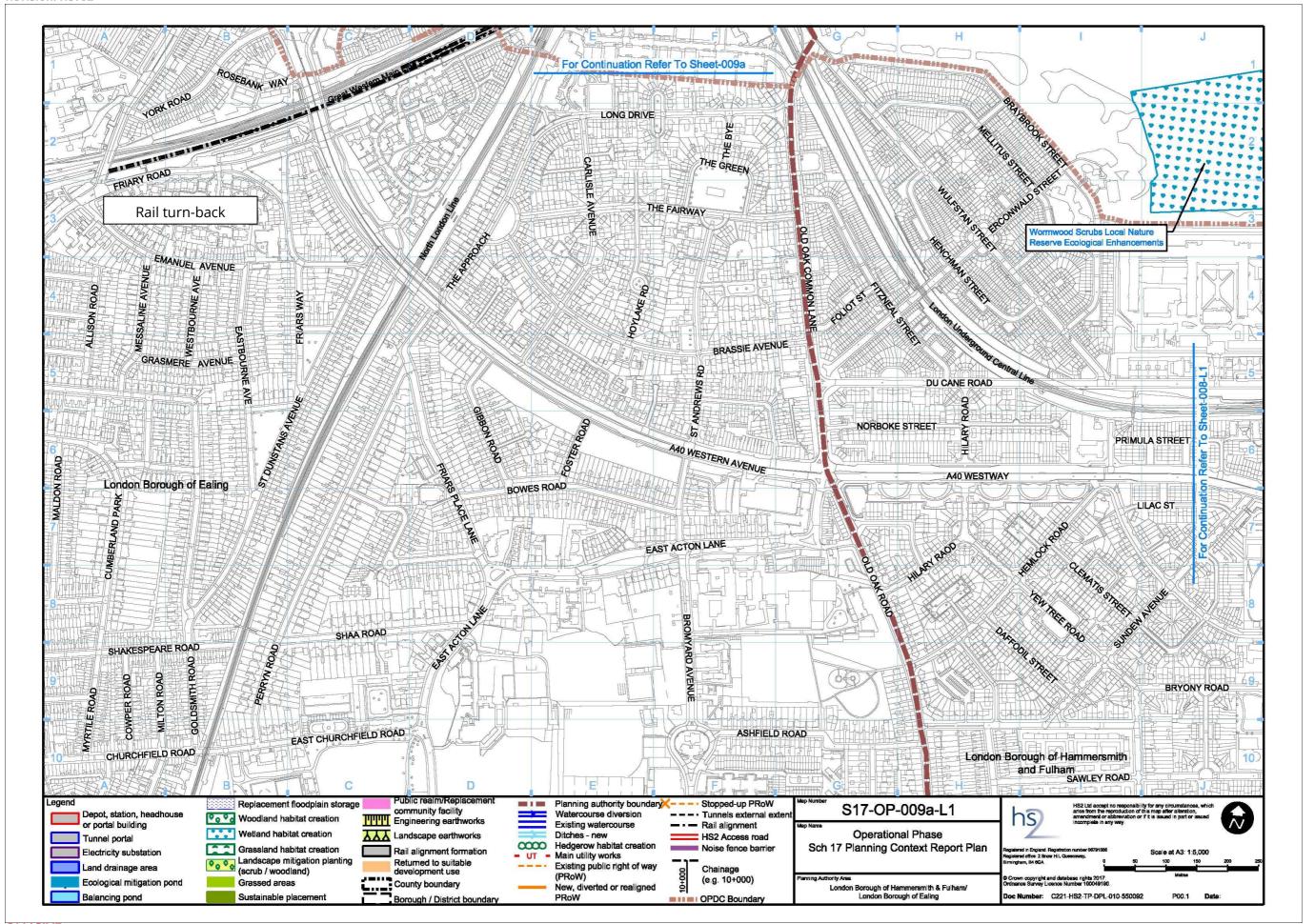
4 Schedule 17 Requests for Approval – Programme

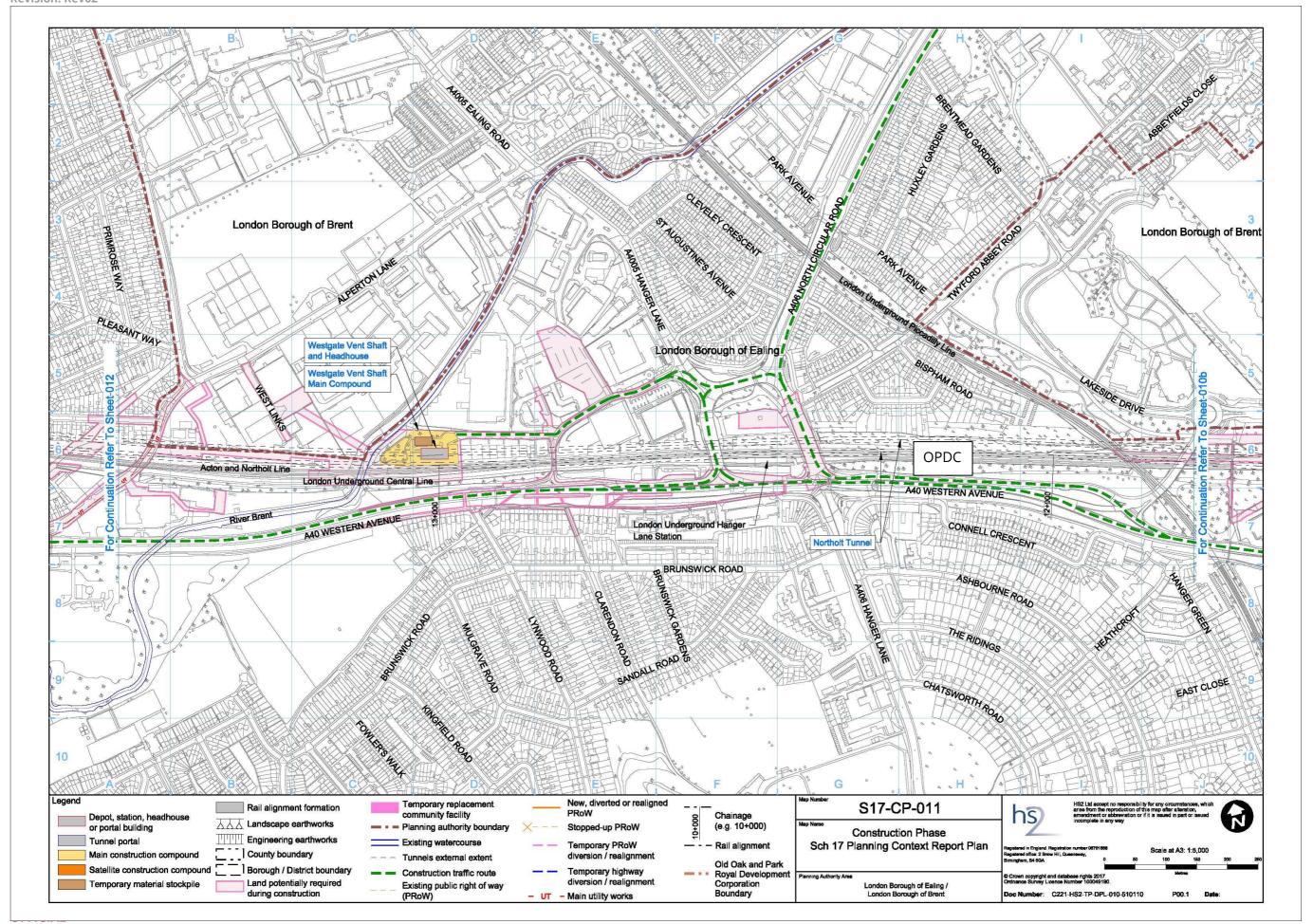
Requests for Approval	2016 quarters				2017 q	varter	'S	2018 quarters				2019 quarters				20	20 qu	arters	i	20	021 q	varter	5	2	022 qı	varter	rs	2	023 qı	varter	5	20	024 qu	arters	5	20	025 qu	arter:	5	20	2026 quarter			
	1	2 3	4	. 1	. 2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Plans and Specifications	255	-81		HE				9 126	100		1121		-01		155		2.00	100						- 1/2			s- 1/s		13				171			112		-0	771					
Westgate Ventilation Shaft																																												
Green Park Way Ventilation Shaft				82																							. 9			83			81											
Green Park Way EFATS	8	36					S		80			100			8			- 60						- 2			100						- 8		. 30				- 12	9				
Mandeville Road Ventilation																																												
Shaft		- 0		9												-	- 5		- 1					-		5 9																		
Bringing into Use	-			200					200																									200										
Work No. 1/54 - A temporary realignment of the Wycombe																																												
Single Line (o.81 kilometres in length)																																												
Work No. 1/54A – A railway siding (0.72 kilometres in length	38			5			5							8	58		8			8 97	2			*									2											
Work No. 1/60 - A realignment of a railway siding (o.30 kilometres in length) at West Ruislip																																												
Station	8.5																		35																									
Restoration Schemes												475						475						470									475											
TBC																																			T					I				
Lorry Route Approval	100	0.	34	<i>0</i> %	8. 8		20 1	X 3V	70	, k	- 63	30	85	3.5	20	W5	3.5	35	8.		- 10		3.0	- 35		8 X	3 38	Ö		- 50	Ů.		- 20	170		5/3	- 55	- 8	700	-	. 0	- 3		
ES Lorry Routes Submission																																												
Section 50				500																																								
N/A															0																													
Construction Arrangements	;																																											
Class Approval													T						T																							1		

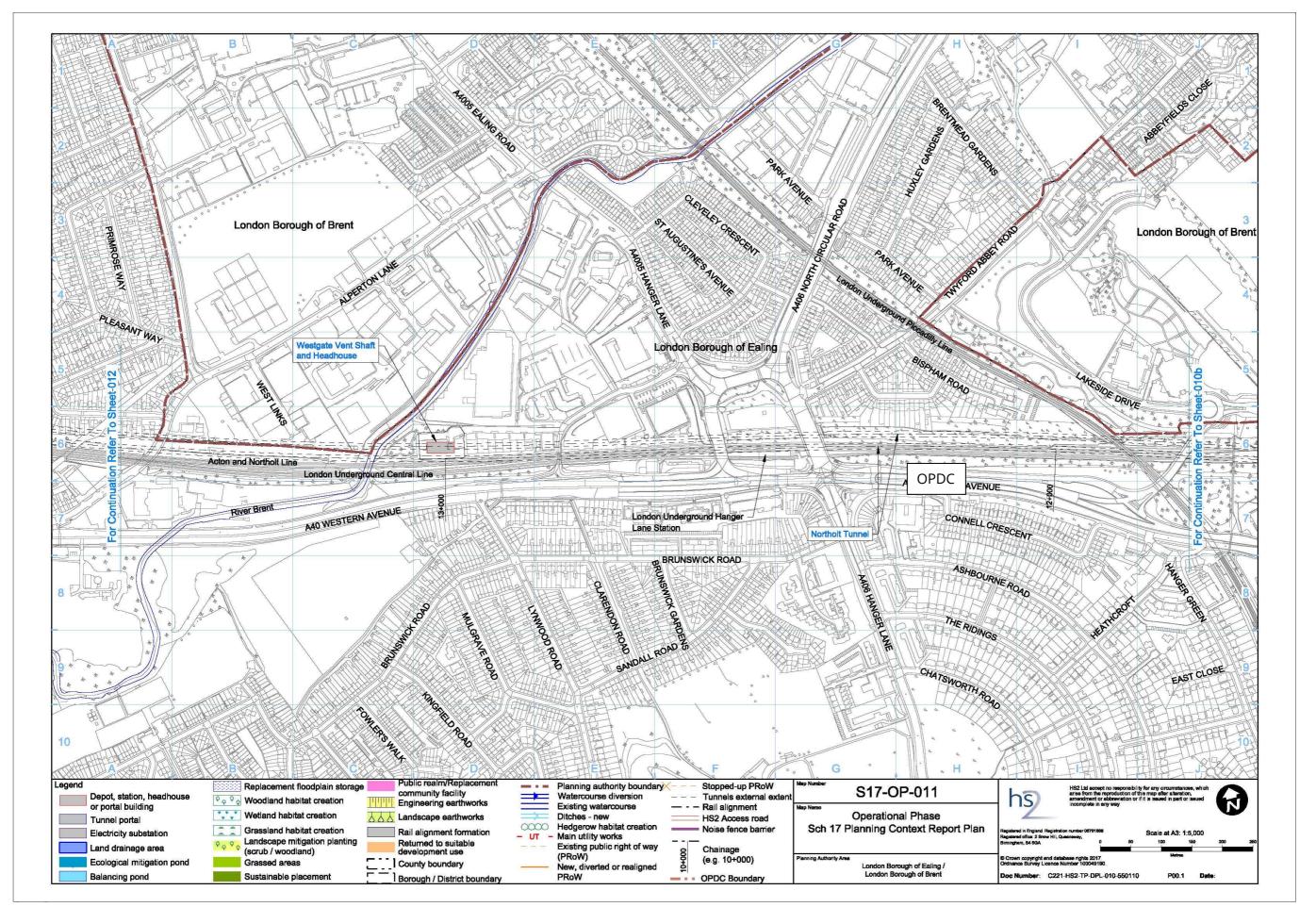
5 Planning Context Report Plans – Construction and Operation

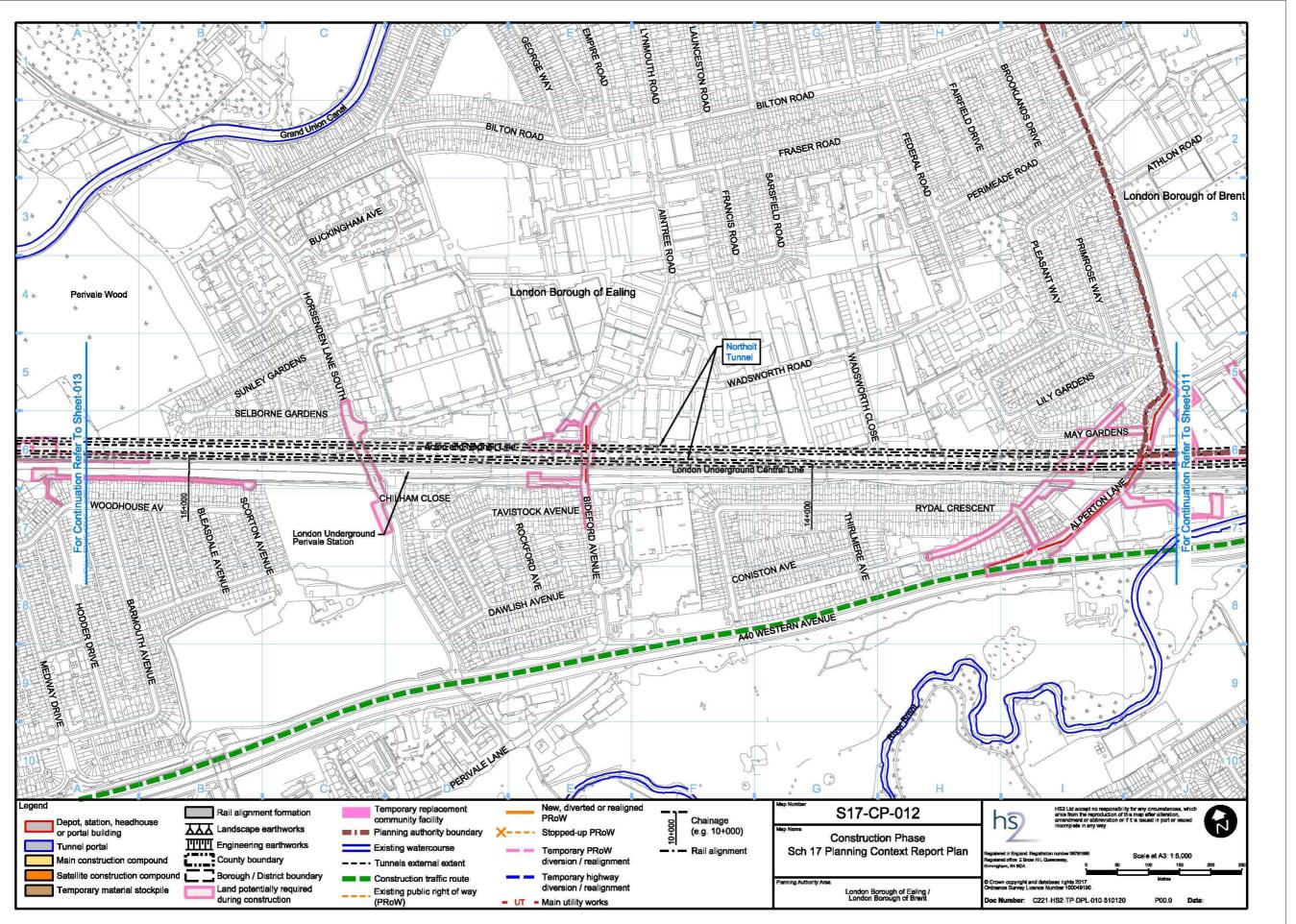
- 5.1.1 The construction and operational plans that are attached to this report reflect the original intent when the ES was compiled and does not take into consideration the latest designs. It should be noted that there may be some design changes to the future submissions where information may differ due to the further detail and assessments undertaken.
- 5.1.2 The proposed lorry routes for Green Park Way Vent Shaft worksite and the Westgate Vent Shaft worksite will be the same as shown in the construction plans below. The lorry route for Mandeville Road Vent Shaft worksite may be different to the construction plan below, as further detailed assessments as the assumed route may not satisfy road safety considerations.

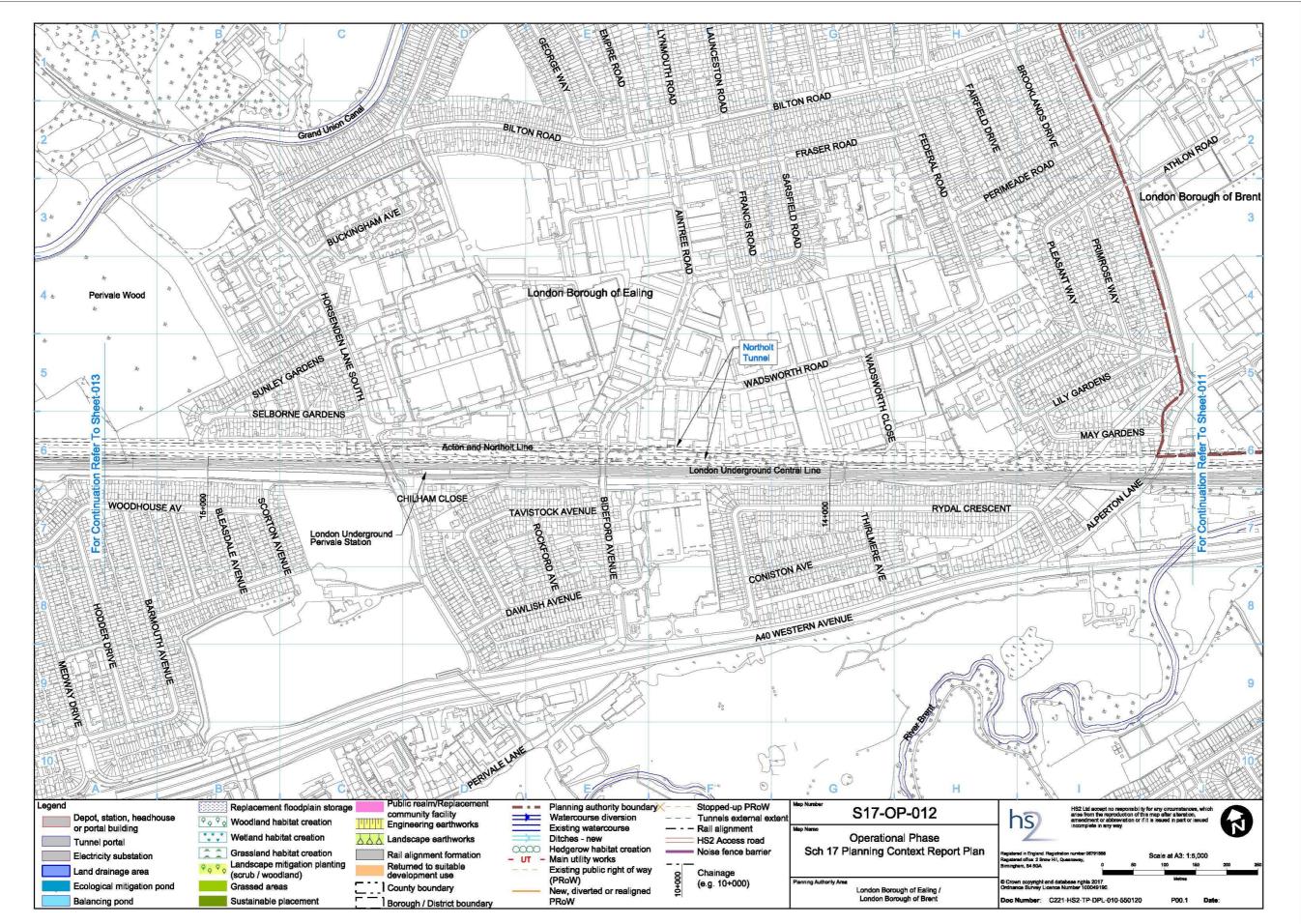


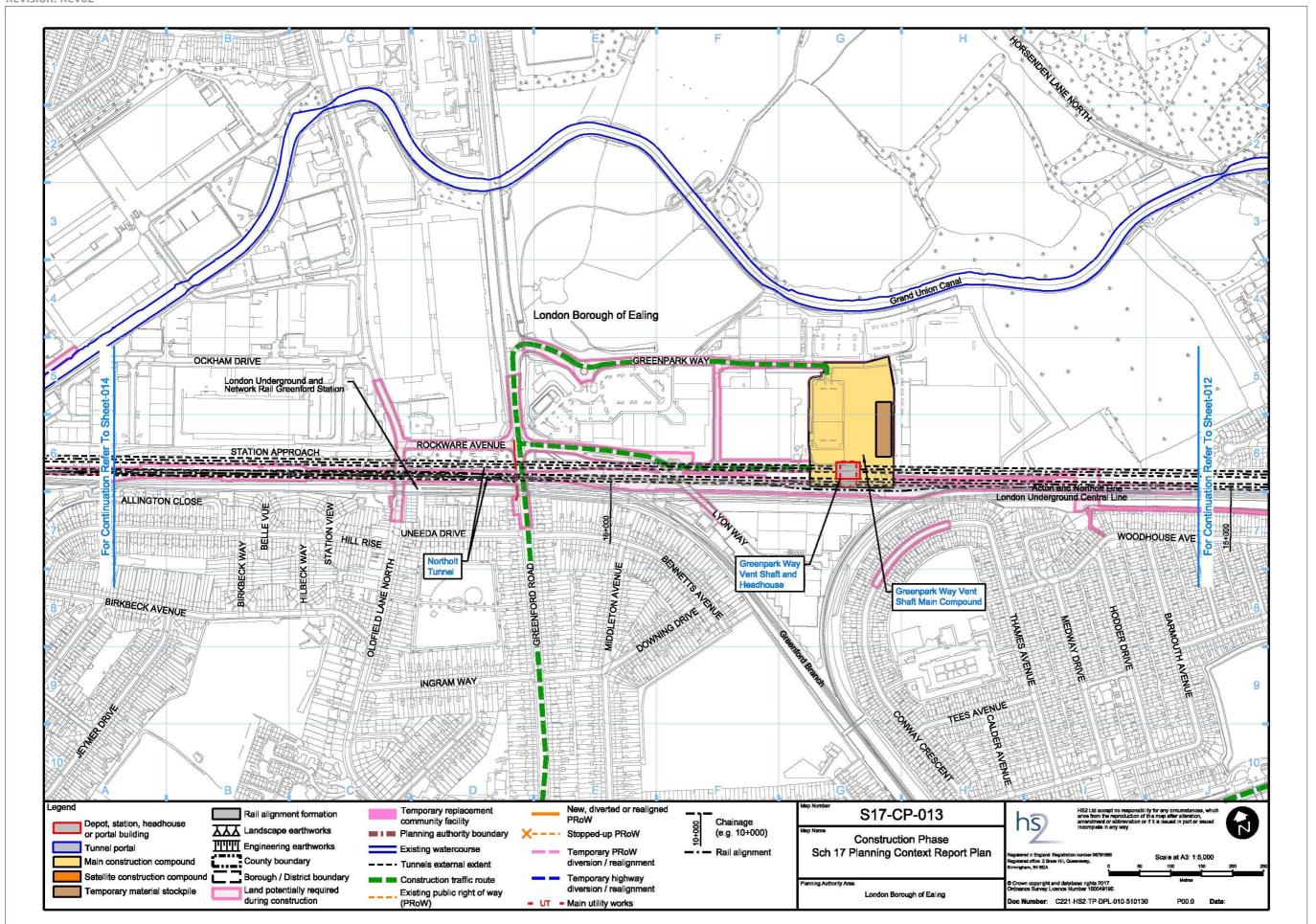


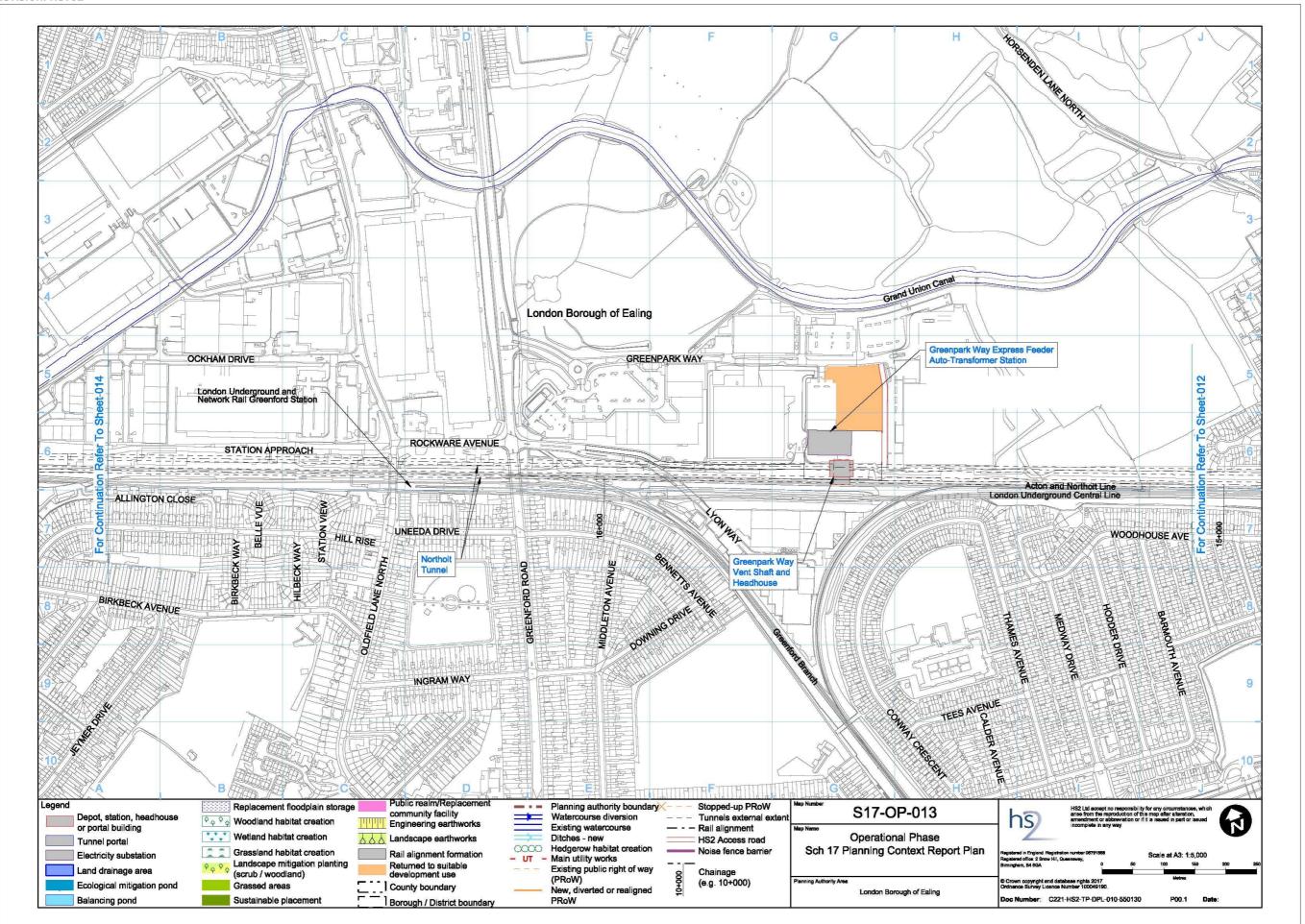


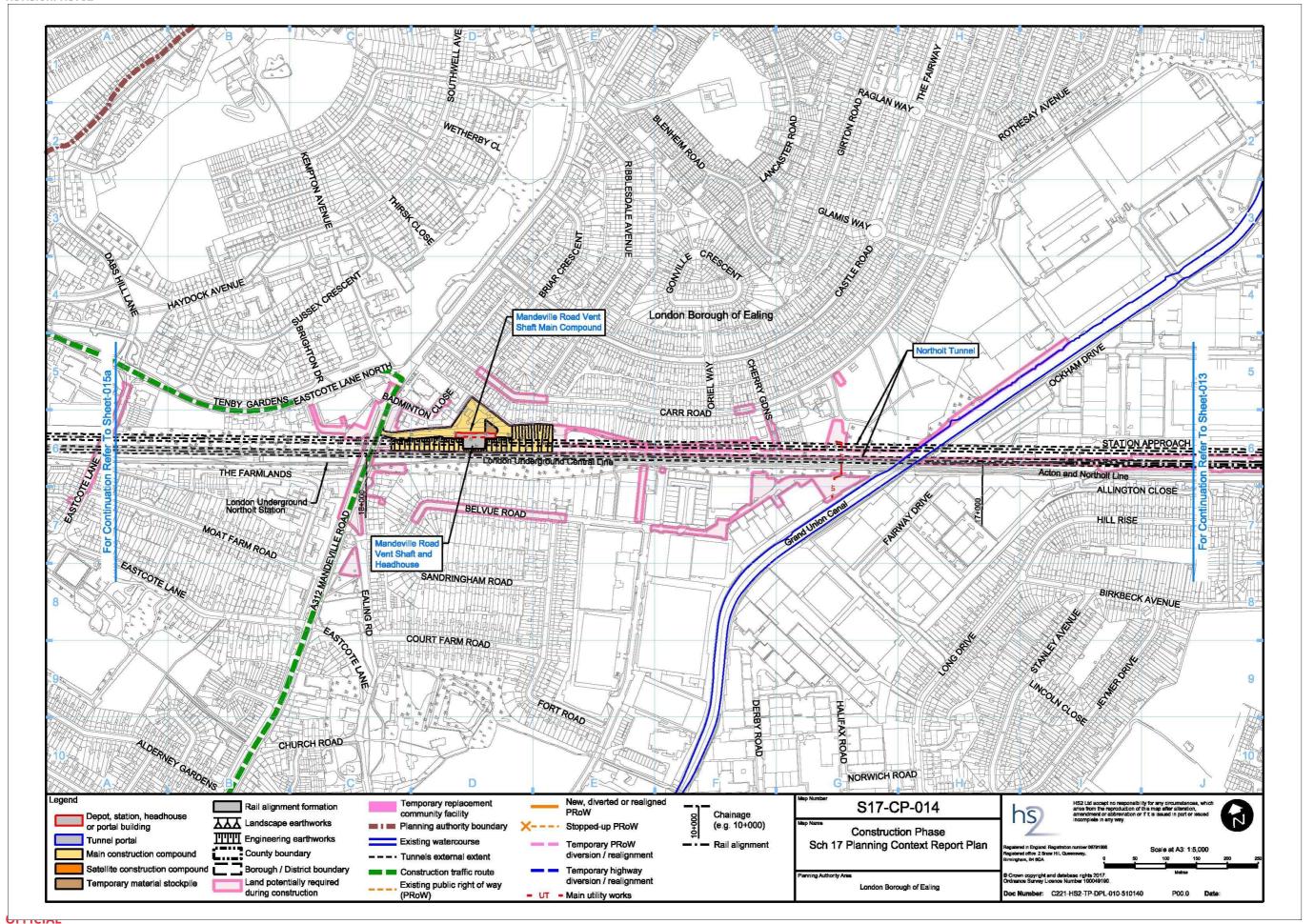


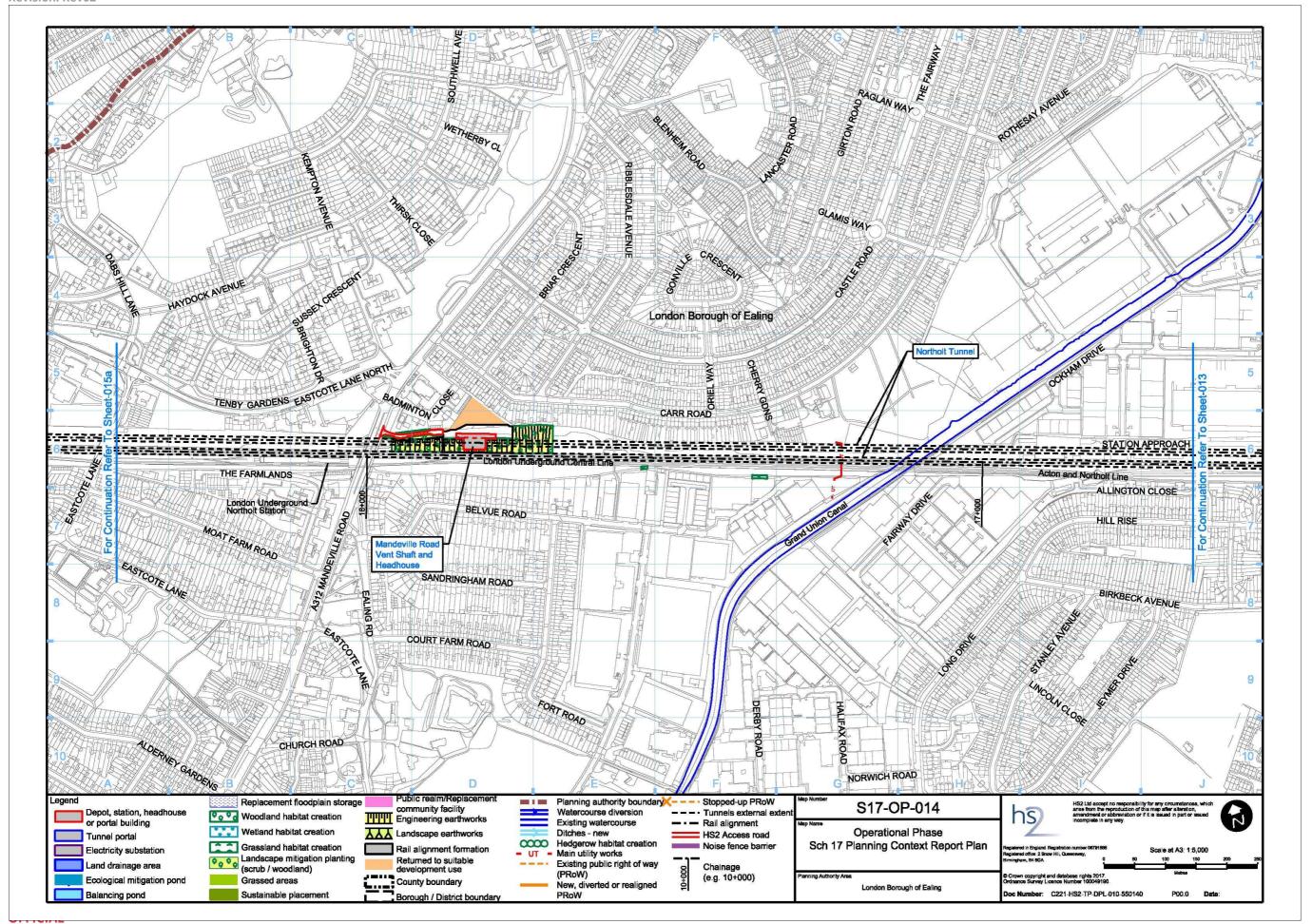


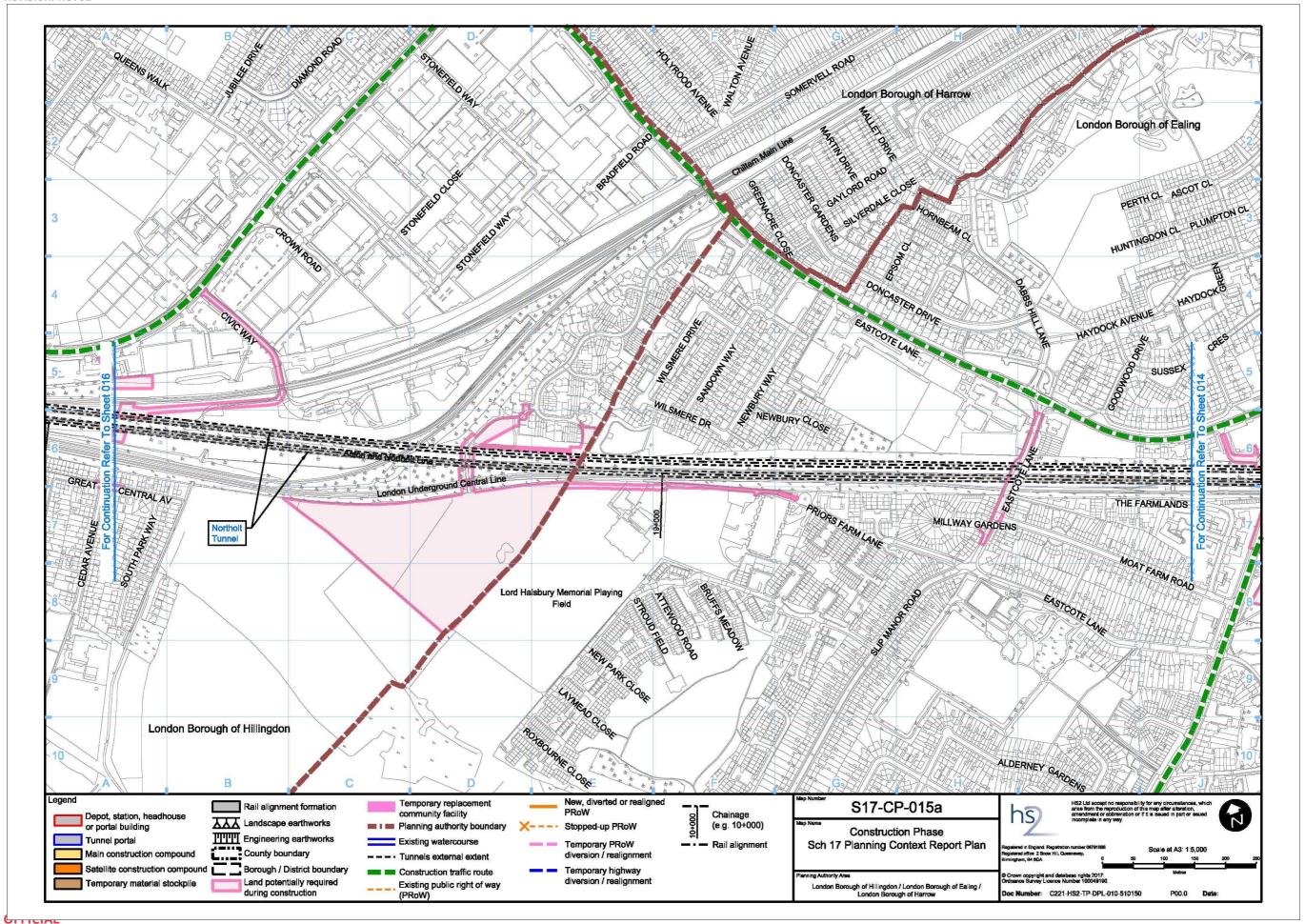


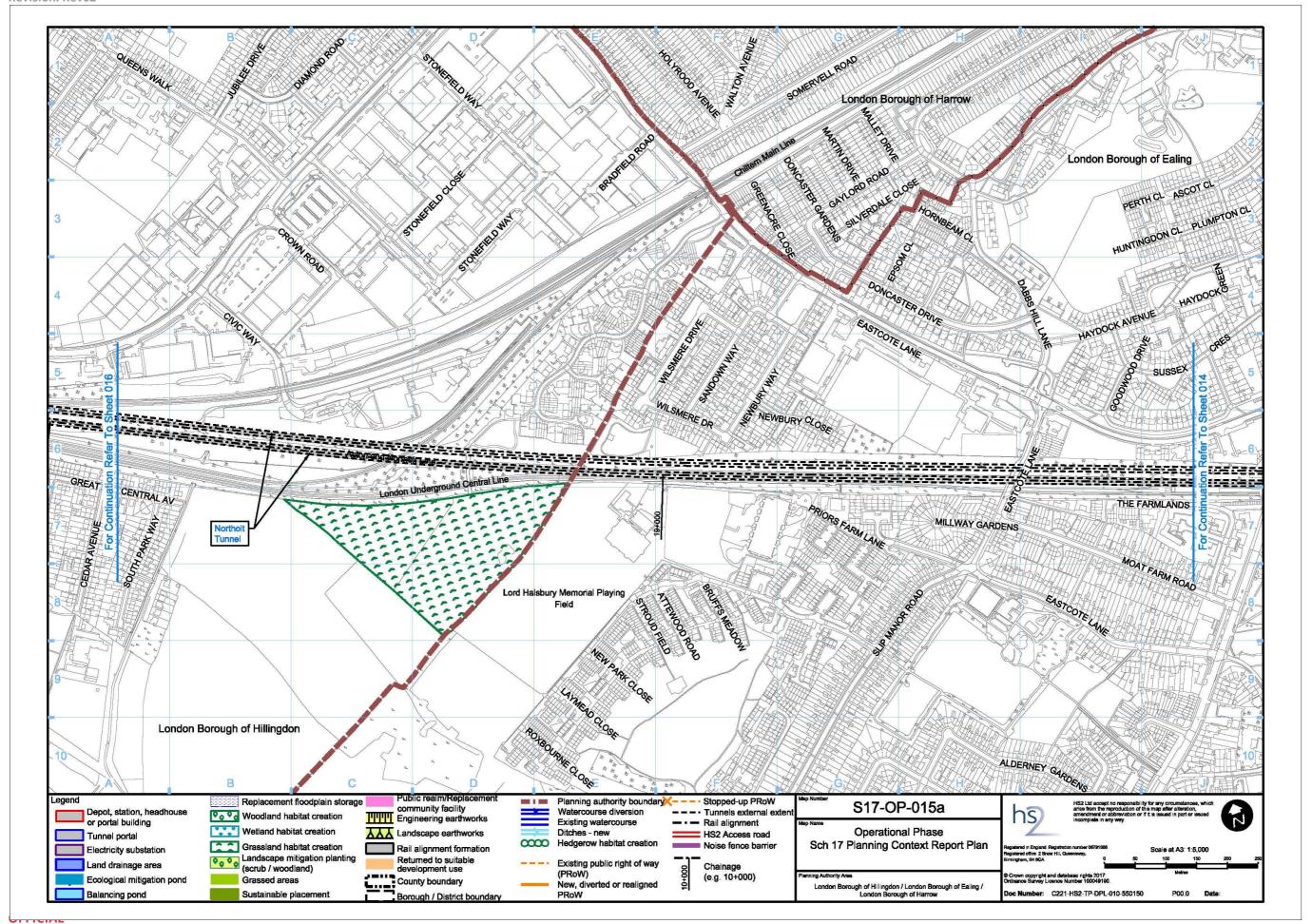












Annex 1: Signposting

DOCUMENT	LINK
High Speed Rail (London – West Midlands) Act 2017	http://www.legislation.gov.uk/ukpga/2017/7/contents/enacted
Schedule 17 Fee Regulations	http://www.legislation.gov.uk/uksi/2017/223/contents/made
Schedule 17 Appeal Regulations	http://www.legislation.gov.uk/uksi/2017/227/contents/made
High Speed Rail (London – West Midlands) Environmental Minimum Requirements	https://www.gov.uk/government/publications/environmental- minimum-requirements
	https://www.gov.uk/government/publications/high-speed-rail- london-west-midlands-bill-register-of-undertakings-and- assurances
Schedule 17 Statutory Guidance	https://www.gov.uk/government/publications/high-speed-rail- london-to-west-midlands-act-2017-schedule-17-statutory- guidance
Phase One Information Papers	https://www.gov.uk/government/collections/high-speed-rail- london-west-midlands-bill#information-papers
Phase One – Planning Forum Notes	https://www.gov.uk/government/publications/planning- forum-notes
Phase One Environmental Statement	https://www.gov.uk/government/collections/hs2-phase-one- environmental-statement-documents
	https://www.gov.uk/government/collections/additional- provision-september-2014
	https://www.gov.uk/government/collections/supplementary- environmental-statement-and-additional-provision-2-july-2015
	https://www.gov.uk/government/collections/supplementary- environmental-statement-2-and-additional-provision-3- september-2015
	https://www.gov.uk/government/collections/supplementary- environmental-statement-3-and-additional-provision-4- october-2015
	https://www.gov.uk/government/collections/supplementary- environmental-statement-4-and-additional-provision-5- december-2015