

# HS2 Context Report Prepared for Birmingham City

May 2017



# **Table of Contents**

Ta	ble of Contents
	eface
	Purpose
	Status
	Structure
	Other Relevant Documents
1	Introduction to HS2
	The HS2 Project
	Control of Environmental Impacts
	Environmental Minimum Requirements
	Existing Legislation and Other Safeguards1
2	HS2 in Birmingham City1
	Introduction1
	Permanent Works
	Preparatory and Temporary Works2
3	Landscape and Restoration2
4	Schedule 17 Requests for Approval — Programme
5	Planning Context Report Plans – Construction and Operation3
An	nex 1 – Signposting

# **Preface**

# **Purpose**

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

The 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. 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.

#### **Structure**

This document contains three sections:

#### Section 1: Introduction to HS2

Describes in outline the HS2 project, summarises the planning regime and outlines obligations with respect to mitigation of environmental impacts.

#### Section 2: HS2 in Birmingham City

Outlines the proposals within the City, 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 City.

## **Other Relevant Documents**

To understand the full background to the HS2 proposals and to the planning regime under which requests for approval are to be made, reference should be made to the following documents:

- The HS<sub>2</sub> Act;
- The HS2 Environmental Statement; and
- The High Speed Rail (London West Midlands) Environmental Minimum Requirements ("the EMRs").

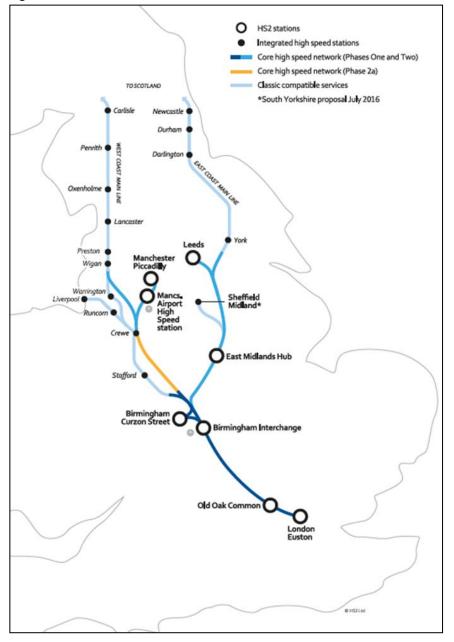
Annex 1 signposts these and other relevant documents.

# 1 Introduction to HS2

# The HS<sub>2</sub> Project

- 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.
- 1.2 On 23<sup>rd</sup> 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



# **Control of Environmental Impacts**

- 1.3 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.
- 1.4 These controls are summarised below.

#### **Environmental Statement**

1.5 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 project<sup>1</sup>.

- 1.6 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.
- 1.7 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.

#### Controls in the Act

#### The Planning Regime

- 1.8 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.
- 1.9 The principal works authorised by the HS2 Act are described in Schedule 1 (the "scheduled works"). The descriptions in

<sup>&</sup>lt;sup>1</sup> 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.

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 northwestwards and terminating beneath a point 80 metres northwest 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.

- 1.10 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.
- 1.11 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.
- 1.13 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.
- 1.14 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.
- 1.15 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.
- 1.16 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.

- 1.17 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.
- 1.18 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.
- 1.19 The City has become a qualifying authority.
- 1.20 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  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.

- 1.21 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).
- 1.22 Schedule 17 enables the Secretary of State to make a 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 24<sup>th</sup> 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.

- 1.23 Where lorry movements exceed 24 to/from a construction site, the lorry route must be approved (paragraph 6 of Schedule 17) by the relevant qualifying authority.
- 1.24 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.
- 1.25 A site restoration scheme will be submitted for agreement with the relevant planning authority in accordance with paragraph 12 of Schedule 17.
- 1.26 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

1.27 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

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

1.29 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

- 1.30 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.
- 1.31 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.
- 1.32 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

1.33 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.
- 1.34 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.
- 1.35 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.
- 1.36 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.
- 1.37 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

1.38 Schedule 33 – Protective provisions also include the requirement for consultations and agreements from statutory utilities undertakers.

#### Schedule 18 – Listed Buildings

- 1.39 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.
- 1.40 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.

# **Environmental Minimum Requirements**

- 1.41 There are a variety of control mechanisms and mitigation strategies outside of the HS2 Act. These are captured in the EMRs.
- 1.42 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.
- 1.43 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 ES<sup>2</sup>;
  - would not be likely to be environmentally significant<sup>3</sup>;

- 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 Directive<sup>4</sup>; or (ii) article 4(2) of and paragraph 13 of Annex 2 to the EIA Directive<sup>5</sup>; or
- would be considered as part of a separate consent process (and therefore further EIA if required).
- 1.44 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

<sup>&</sup>lt;sup>2</sup> i.e. a situation that could not reasonably have been anticipated at the time of the ES.

<sup>&</sup>lt;sup>3</sup> This covers all effects (both positive and adverse) where those effects are simply of no environmental significance.

<sup>4 2011</sup> consolidated EIA Directive (2011/92/EU).

<sup>&</sup>lt;sup>5</sup> Broadly, this would not allow those changes or extensions to the project which would give rise to adverse environmental effects within the EIA.

• the Code of Construction Practice, Planning Memorandum, Heritage Memorandum, and Environmental Memorandum.

#### **Undertakings and Assurances**

1.45 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**

- 1.46 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.
- 1.47 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.
- 1.48 Local Environmental Management Plans (LEMPs) will be prepared for each local authority area.
- 1.49 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.
- 1.50 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

1.51 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

1.52 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.

#### **Environmental Memorandum**

1.53 The Environmental Memorandum is Annex 4 of the EMRs. It provides a framework for the nominated undertaker and representatives of the National Environment Forum to work together to ensure that the design and construction of the HS2 Phase One is carried out with due regard for environmental considerations.

#### Planning Forum

1.54 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).
- 1.55 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**

1.56 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.

1.57 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

- 1.58 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.
- 1.59 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.
- 1.60 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

- 1.61 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.
- 1.62 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

1.63 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.
- 1.64 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.
- 1.65 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.

# **Existing Legislation and Other Safeguards**

1.66 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**

1.67 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.

1.68 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

- 1.69 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 Birmingham City

#### Introduction

- 2.1 The HS2 route in the City commences at the Birmingham and North Warwickshire administrative boundary at Birmingham Road, continuing west through Castle Bromwich, Bromford and Washwood Heath before entering the eastside of the City, and terminating at the new Curzon Street Station (CSS) sited adjacent to the existing Moor Street Station. The section of the route in the City is approximately 11 km in length.
- 2.2 CSS will broadly occupy land from the Digbeth Branch Canal in the east to Moor Street Queensway at its western extent and between Curzon Street and the Rugby and Birmingham line.
- 2.3 Section 5 of this report illustrates the location of works in the City. This section describes the permanent, preparatory and temporary works in the City.
- 2.4 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.

#### **Permanent Works**

## Water Orton cutting and Park Hall Nature Reserve

- 2.5 The route heads generally west towards the city centre into the Castle Bromwich and Bromford area. The route will enter into the Water Orton cutting, approximately 700m in length and up to 18m deep, from the City and North Warwickshire Borough administrative boundary to the Park Hall escarpment, passing beneath the B4118 Birmingham Road via the Water Orton Road overbridge.
- 2.6 An area of woodland and grassland planting to the north of the B4118 Birmingham Road will replace habitat lost in the nature reserve. A balancing pond, to receive drainage from the western end of the cutting, and associated access tracks adjacent to the Water Orton Road embankment will also be provided.
- 2.7 The route will then continue west along the Water Orton Road embankment, which extends approximately 70m in length from the Water Orton cutting to the adjacent viaduct abutments and up to 6m high for the railway.

#### River Tame viaduct to Castle Bromwich retained cut

2.8 The route continues west from the Water Orton Road embankment, onto the River Tame viaduct. The viaduct will be approximately 78om in length with the main deck of the structure being up to approximately 10m above ground level,

- in order to cross the River Tame at Park Hall nature reserve. The west end of the viaduct will be accessible for maintenance via Tameside Drive.
- 2.9 The route will pass over Plants Brook and the Dunlop Channel following the realignment of the River Tame through Park Hall nature reserve. Flood storage replacement areas will be excavated and side slopes regraded to tie back into existing ground levels through the nature reserve.
- 2.10 The route continues along the Park Hall retained fill and Langley Wood embankment earthworks, approximately 600m in length and adjacent to the south side of the Birmingham and Derby line. From this point the route will enter into the Castle Bromwich retained cutting, approximately 700m in length, before descending into tunnel within the Castle Bromwich Business Park.
- 2.11 There will be three balancing ponds with associated access tracks, two north of the Birmingham and Derby line and one at the eastern end of the Castle Bromwich Business Park.
- 2.12 An auto-transformer station will be located at the eastern end of Castle Bromwich Business Park with maintenance access taken from the highway improvements installed on Tameside Drive.

#### **Bromford Tunnel**

2.13 From the east tunnel portal to the boundary up to Washwood Heath rolling stock maintenance depot will comprise a 2.9km twin-bore tunnel i.e. two adjacent tunnels: one tunnel will run west towards CSS; the second will run east towards Water Orton and the Delta Junction. The track level will be up to 37m below ground level with cross-passages connecting the two bores, approximately every 38om.

# Washwood Heath rolling stock maintenance depot

- 2.14 A rolling stock maintenance depot and network control centre will be located at Washwood Heath, at land west of the A4040 Bromford Lane and the River Tame and south of the Birmingham and Derby line, close to the west portal of the Bromford tunnel. The site will be approximately 1.6km long and 400m wide.
- 2.15 Key design features of the site will include (described east to west):
  - a gatehouse at the site's main access taken from a realigned Wolseley Drive;
  - operational buildings which will include a depot switching station and three smaller ancillary buildings;
  - two stabling yards, with stabling track of up to 420m long where trains will be stabled overnight;

- the realignment of the existing Network Rail Duddeston Down Through Track to allow the route to pass under the Washwood Heath rail overbridge;
- three balancing ponds, to take drainage outfalls, located between Wolseley Drive and Common Lane;
- the permanent diversion of Washwood Heath Brook into a new channel and outfall to the River Tame;
- a maintenance shed, approximately 25om long, 12om wide and 14m high, to include workshops where all mechanical examinations and maintenance will take place;
- two-storey office, control room, training centre, crew facilities located west of the maintenance shed and approximately 130m long, 21m wide and 14m high;
- a network control centre building approximately 6om long, 38m wide and 10.5m high, located in the western part of the site;
- adjacent to the two main tracks, two depot entrance and egress tracks from the west of the depot (to receive trains from and dispatch trains to CSS); and
- a foul sewer diversion.

## Stechford and Aston line to B4114 Saltley viaduct

- 2.16 After Washwood Heath depot, the route will pass under the existing Stechford and Aston railway line. Part of this existing line will be replaced by a new Washwood Heath rail overbridge with associated access for Network Rail maintenance, taken from Aston Church Road.
- 2.17 The route will then pass under a replaced Aston Church Road overbridge that will also accommodate the existing Birmingham and Derby railway line. Permanent utility diversions along Aston Church Road will be undertaken, including gas mains, high voltage electricity cables, water mains, combined and surface water sewers and telecommunication cables.
- 2.18 The route continues through the western edge of Saltley
  Business Park before passing over the Grand Union Canal on
  the new Saltley canal underbridge to carry the route over the
  Grand Union Canal. The route will then continue on a new,
  longer viaduct to replace the existing B4114 Saltley Viaduct.
  Underground electricity, telecommunication cables and sewer
  works will also be undertaken.
- 2.19 Associated works in this section include the realignment of the River Rea Overflow Channel to the east of the Grand Union Canal for approximately 67om, of which approximately 38om will be open channel and the rest an enclosed culvert. In addition, there are two balancing ponds, one approximately

50m north of B4114 Saltley viaduct and one 300m south with access from the Network Rail Signalling Centre.

#### **Duddeston Mill Road to Curzon Street Station**

- 2.20 After passing Saltley Viaduct the route continues south after crossing over the Birmingham and Derby railway line. A new bridge at Duddeston Mill Road allows the diversion of the existing tracks to allow for the Duddeston Junction viaduct, which will carry the route over the existing line.
- 2.21 The route continues on a further viaduct, known as Curzon Street No.1 viaduct and crosses over part of the Freightliner Terminal Depot before crossing the River Rea and an area of industrial land off Erskine Street. The route continues on Curzon Street No.2 viaduct and crosses the Birmingham and Bushbury railway line, also known as the Cross-City line.
- 2.22 Continuing west, the route passes over St James' Place and the A4540 Lawley Middlewayon Curzon Street No.3 viaduct, approximately 16m above ground level. While still on Curzon Street No.3 viaduct, from St James' Place, the twin-track railway will start to fan out to create the approach tracks into the proposed Curzon Street station, crossing the Digbeth Branch Canal and lock, approximately 11m above ground level. This section will also include the provision of the Curzon Street auto-transformer station, on the south side of Curzon Street, near the Curzon Circle. This area will also feature a permanent three storey car park that will provided as replacement car

- parking at West Midlands Fire Service headquarters on the site of the existing off-site two storey car park at St James' Place.
- 2.23 This section will include three balancing ponds, one approximately 50m south of Duddeston Mill Road near to the existing Network Rail Signalling Centre, one off Erskine Street, and one to the south of Curzon Street No.3 viaduct.

#### **Curzon Street Station**

- 2.24 CSS will be constructed over three main levels: a lower concourse accessed from the east of the station (New Canal Street), a middle platform level accessed from both the upper and lower concourses, and an upper concourse accessed at the west of station, at street level from Moor Street Queensway. There will be seven platforms on the middle platform concourse.
- 2.25 The lower eastern entrance will be beneath the platforms, close to the vehicular drop off point and the existing Grade I Listed former Curzon Street Station building. The upper station concourse at the western end will extend east for approximately 300m over the platforms. Lifts, stairs and escalators will carry passengers either down from the higher western concourse, or up from the lower eastern entrance, to the platforms.

# **Preparatory and Temporary Works**

- 2.26 Building and preparing the railway for operation will comprise the following general stages:
  - advance works, including: site investigations; site surveys; preliminary mitigation works; preliminary enabling works;
  - diverting utilities
  - civil engineering works, including: establishment of construction compounds;
  - site preparation and enabling works including demolition, site clearance; main earthworks and structural works;
  - railway installation works, including: infrastructure installation; connections to utilities; and changes to the existing rail network;
  - site restoration; and
  - system testing and commissioning.

## **Primary Utility Works**

- 2.27 Numerous utilities will need to be diverted for the works, the principal works and diversions in the City include the diversion of:
  - a permanent diversion of a National Grid gas distribution main at Castle Bromwich Business Park;

- a permanent new electricity supply and telephone cable to the Castle Bromwich auto-transformer station;
- a permanent realignment of underground Western Power low voltage electricity cables, crossing under the route, on the east side of Castle Bromwich Business Park, for a length of approximately 1.9km;
- a permanent realignment of a sewer, south of the route, approximately 25om. These pipes are affected by the proposed River Tame realignment and excavation of a balancing pond;
- permanent works within Park Hall nature reserve will include a permanent diversion of National Grid overhead power line, over an approximate 1.4km, generally 175m to the south of the route;
- permanent works within Park Hall nature reserve will include a permanent diversion of one Esso fuel pipe line, 300mm diameter, over a length of approximately 500m, approximately 10m to the north of the route;
- four telecommunication cables and two 11kv high voltage electricity cables that pass under B4114 Saltley Viaduct, following the alignment of the road in an east to west direction for approximately 24om. A temporary service bridge will be installed to carry the cables over the Birmingham and Derby line during bridge reconstruction works;

- a 1.8m diameter sewer, for approximately 38om in length within Network Park industrial estate;
- a 2.8m diameter sewer, for approximately 24om in length within Saltley Business Park;
- a 450mm diameter surface water sewer, for approximately 80m in length, in an east to west direction to the south-west of Aston Church Road;
- a 525mm diameter combined sewer, for approximately 110m in length, southwest of Aston Church Road within Saltley Business Park;
- a 675mm diameter combined sewer, for approximately 23om in length, southwest of Aston Church Road within Saltley Business Park;
- a 400mm diameter medium pressure gas main, a 400mm diameter water main and telecommunication cables that currently pass under Aston Church Road bridge. These will be diverted from the existing bridge onto the new Aston Church Road overbridge;
- nineteen existing 11kv high voltage electricity cables will be decommissioned and removed and replaced by a diversion, approximately 1.5km long, which will run from Duddeston Mill Road, along Pembroke Way, Clayton Road, Washwood Heath Road, Adderley Road and Cranby Street to the new Aston Church Road overbridge;

- a 825mm diameter combined sewer approximately 53om in length parallel to the Birmingham and Derby line;
- a 600mm diameter high pressure gas main, for approximately 390m in length, along A47 Heartlands Parkway from near Nechells Gas Holder to north of the Birmingham and Derby line in Saltley;
- a 2.7m diameter sewer, approximately 400m in length along Inkerman Street;
- a 1.8m diameter surface water sewer, which will be permanently diverted to the west of Duddeston Mill Road;
- telecommunications cables under Bartholomew Street, for approximately 350m in length;
- a 1.1m diameter sewer under Bartholomew Street, for approximately 310m in length, and
- a 1.1m diameter diameter water mains to pass under Freeman Street, Park Street and Fazeley Street, ranging in distances from approximately 26om to 525m in length.

## **Worksites and Compounds**

2.28 Construction of the HS2 route 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 activity:

- civil engineering works, such as earthworks, tunnelling and construction and erection of bridges and viaducts; and/or
- railway installation works, such as laying ballast or slabs and tracks, and/or installing power supply and communications features.
- 2.29 Construction of the route 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. In addition, there will also be smaller site compounds for some utilities works.

Table 2: Compound name and construction activity

Compound Name	Principal Construction Activity
Water Orton Road Overbridge	Satellite construction compound for works associated with Water Orton road overbridge, EWC ecology mitigation.
River Tame Viaduct	Satellite construction compound for works associated with River Tame viaduct, EWC, utilities
Plants Brook Underbridge	Satellite construction compound for works associated with Plants Brook Underbridge, EWC, utilities, ecology
Dunlop Carrier Channel	Satellite construction compound for works

Compound Name	Principal Construction Activity
Culvert	associated with; Dunlop Carrier channel, EWC, utilities, ecology
Bromford Tunnel West (East)	Main construction compound for works associated with; Bromford Tunnel west portal, EWC, demolition, earthworks.
Bromford Tunnel West Portal (Central)	Satellite construction compound for works associated with; Bromford Tunnel west portal, EWC demolition, earthworks.
Bromford Tunnel West (West)	Satellite construction compound for works associated with; Bromford Tunnel west portal.
Washwood Heath Rail Overbridge	Satellite rail systems; not part of Main Work Civil requirements and will be required later.
Aston Church Road (West)	Satellite construction compound for works associated with; Aston Church Road overbridge.
Aston Church Road Overbridge (East)	Satellite construction compound for works associated with; Aston Church Road overbridge, EWC, demolition.
Saltley Viaduct (West)	Satellite construction compound for works associated with; Saltley viaduct.
B4114 Saltley Viaduct Satellite (East)	Satellite construction compound for works associated with; Saltley viaduct, EWC, demolition, Grand Union Canal bridge works.
Curzon Street No1 Viaduct	Satellite construction compound for works associated with; Duddeston Mill Road bridge, EWC, utilities, demolition.
Freightliner	Satellite construction compound for works associated with; Freightliner clearance and storage.

Compound Name	Principal Construction Activity
Curzon Street No2 Viaduct	Satellite construction compound for works associated with; Curzon Street No2, EWC, utilities.
Curzon Street No3 Viaduct - Station Approach	Satellite construction compound for works associated with; Curzon Street No3 Viaduct, EWC, Lawley Middleway highway.
Curzon Street Station	Main construction compound for works associated with; Curzon Street station, EWC, utilities, exhumations.

# **Roadheads and Material Transfer Stockpile Areas**

- 2.30 The following road heads will be used for the storage and loading and unloading of bulk earthworks material which is moved to and from the site on public highways:
  - Land south of Curzon Street, Eastside (Roadhead Ref: 175)
  - Land west of Dudderston Mill Road (Roadhead Ref: 173)
  - Land north of Drews Lane, Washwood Heath (Roadhead 171 & 172)
  - Land south of the Birmingham & Derby Line & Blenheim Way, Castle Vale (Roadhead Ref: 168)
- 2.31 Additional temporary stockpile sites may be required during work on particular elements of the route and will be adjacent to the works within the existing area of land required for construction.

#### **Demolition Works**

2.32 The buildings and structures that will need to be demolished are listed in Table 3.

Table 3: List of structures to be demolished

Description of structure	Location
16 Freeman Street, Birmingham (previously Fox and Grapes Pub) / Park Str	Curzon Street Station
Curzon Gateway (student accommodation, 3 structures)	Curzon Street No.3 Viaduct
Unit 1 and Unit 2 Lawford Terrace	Curzon Street No.3 Viaduct
Car Spares Distribution Ltd	Curzon Street No.3 Viaduct
Lawford House	Curzon Street No.3 Viaduct
Midlands Cab Spares and Repairs	Curzon Street No.3 Viaduct
Car park off St James Place	Curzon Street No.2 Viaduct
Freighliner - (2 Structures)	Curzon Street No.2 Viaduct
Freightliner - (7 Structures)	Curzon Street No.1 Viaduct
J Nicklin and Sons Ltd (3 structures)	Curzon Street No.1 Viaduct
Arya Samaj Vedic Mission	Curzon Street No.1 Viaduct
Canopy structure located off Dollman Street	Curzon Street No.1 Viaduct
Handy Concrete (M J Gallagher)	Curzon Street No.1 Viaduct
Duddeston Mill Road (4 Structures)	Duddeston Junction Viaduct

Units 10 - 13, Network Park	Saltley Retained Fill
Units 14-16, Network Park	Saltley Retained Fill
Unit 17, Network Park	Saltley Retained Fill
City Metals	Saltley Retained Fill
Car Wash (Office & car port)	Saltley Retained Fill
Unit 1 & 2 Pennine Way, Saltley Business park	Saltley Retained Fill
Unit 4, Dorset Road, Saltley Business Park	Saltley Retained Fill
Unit 3 Dorset Road, Saltley Business Park	Saltley Retained Fill
Unit 5, Dorset Road, Saltley Trading Estate	Saltley Retained Fill
Unit R, Dorset Road, Saltley Business Park	Saltley Retained Fill
Unit 6, Dorset Road, Saltley Business Park	Saltley Retained Fill
Unit 5, Cumbria Way, Saltley Business Park	Saltley Retained Fill
Cargo Express Heartland House, Unit 1, Aston Church Road, Saltley Business Park	Saltley Retained Fill
Taroni (Various temporary cabins/carports/outbuildings)	Aston Church Road Overbridge
St Modwen & Network Rail - Heartlands Parkway (10 structures)	Washwood Heath Brook Diversion
Cemex (16 Structures)	Washwood Heath Retained Cut
149 - 127 Common Lane	Washwood Heath Brook Diversion

151-157 Common Lane	Washwood Heath Brook Diversion
UK Mail (Express House, 5	Bromford Tunnel West Portal
structures)	
British Car Auctions (5 structures)	Bromford Tunnel East Portal
Units 15 - 20, Haywards Industrial	Bromford Tunnel East Portal
Park	
Units 12 - 14 a, Haywards Industrial	Bromford Tunnel East Portal
Park	
Units 7 - 11, Haywards Industrial	Bromford Tunnel East Portal
Park	
IBA Site - Veolia Recycling	Bromford Tunnel East Portal

# Archaeology

- 2.33 HS2 Ltd has sought to design the railway and to approach the task of construction in ways that reduce the impact on archaeological remains, as far as is reasonably practicable.
- 2.34 In accordance with the requirements of Heritage
  Memorandum and Code of Construction Practice, the
  nominated undertaker will develop an integrated investigation
  programme to deliver all archaeological works identified in the
  ES and as developed during the detailed design process. The
  programme will set out the key stages of investigation, for
  example:
- detailed desk-based assessment (where appropriate to inform location specific mitigation);

- field evaluation (where appropriate to inform location specific mitigation); and
- location specific mitigation (for example preservation in situ or archaeological excavation).
- 2.35 The investigation programme will be developed in light of, and in conjunction with, the overall construction programme and will be reviewed and updated, as necessary. The programme will aim to undertake as much of the work as possible in advance of any construction activities.

# **Geotechnical Investigations**

2.36 Geological investigations and intrusive site investigations (involving boreholes and trial pits) will be undertaken where necessary, to inform the detailed design.

# 3 Landscape and Restoration

- 3.1 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. Where possible, screen planting will be incorporated into the design along new embankments or cuttings in order to provide a combination of landscape integration, visual screening, and or ecological habitat connectivity.
- 3.2 New areas of woodland will be created along the route. This includes woodland to compensate for the loss of habitat and new planting to help integrate HS2 into the surrounding landscape. Certain areas of grassland will be created specifically to compensate for habitat loss resulting from the scheme.
- 3.3 Upon completion of construction works, land that is not required for 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 as far as possible to its pre-existing condition. This will include reinstatement of field boundaries and hedgerows where

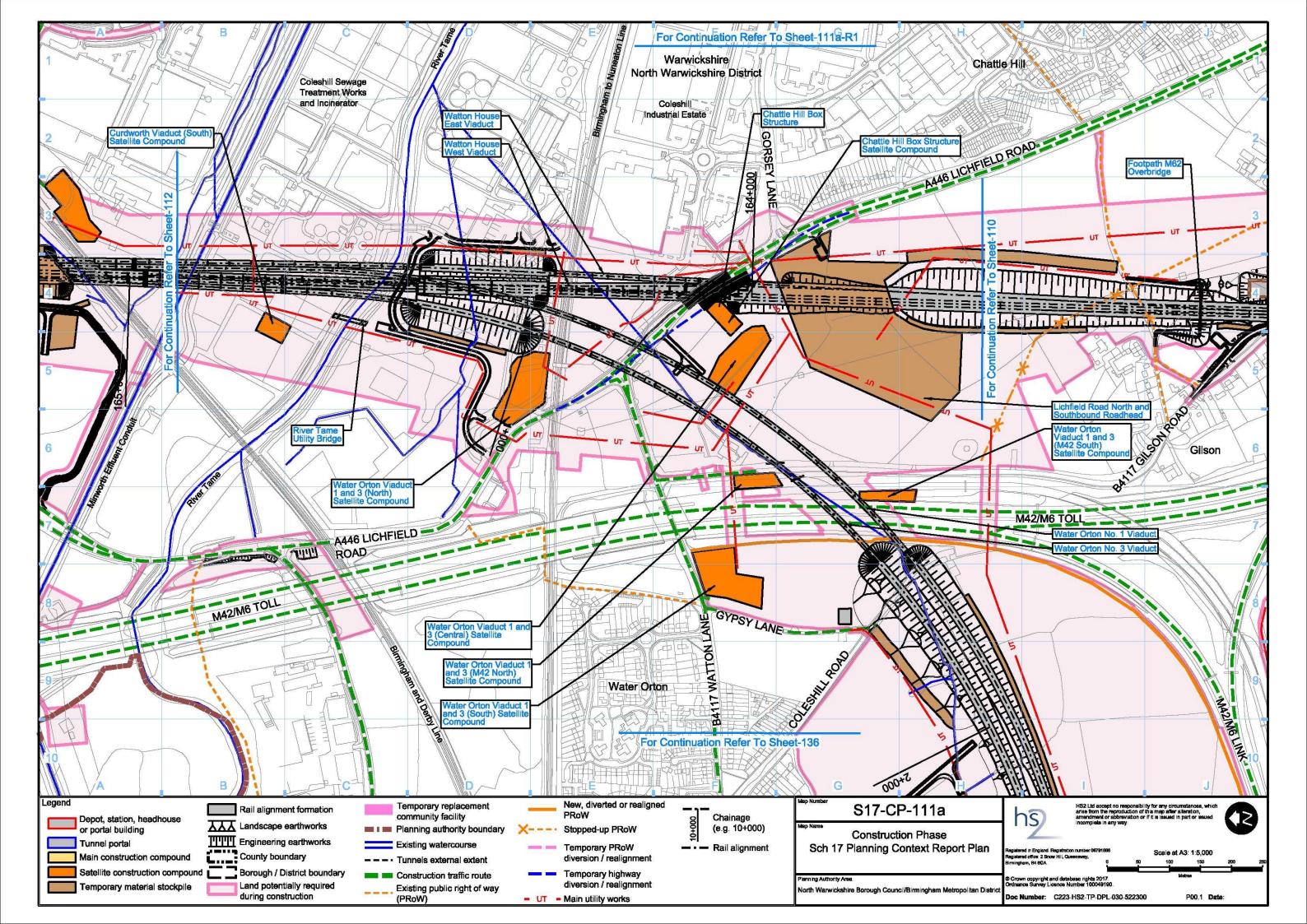
possible. Hedgerows will be used to replace existing hedgerows removed during construction, to mitigate the impacts on wildlife or to create new visual screens. Any new planting, grassland and habitat creation will be maintained to ensure they become established and are properly maintained.

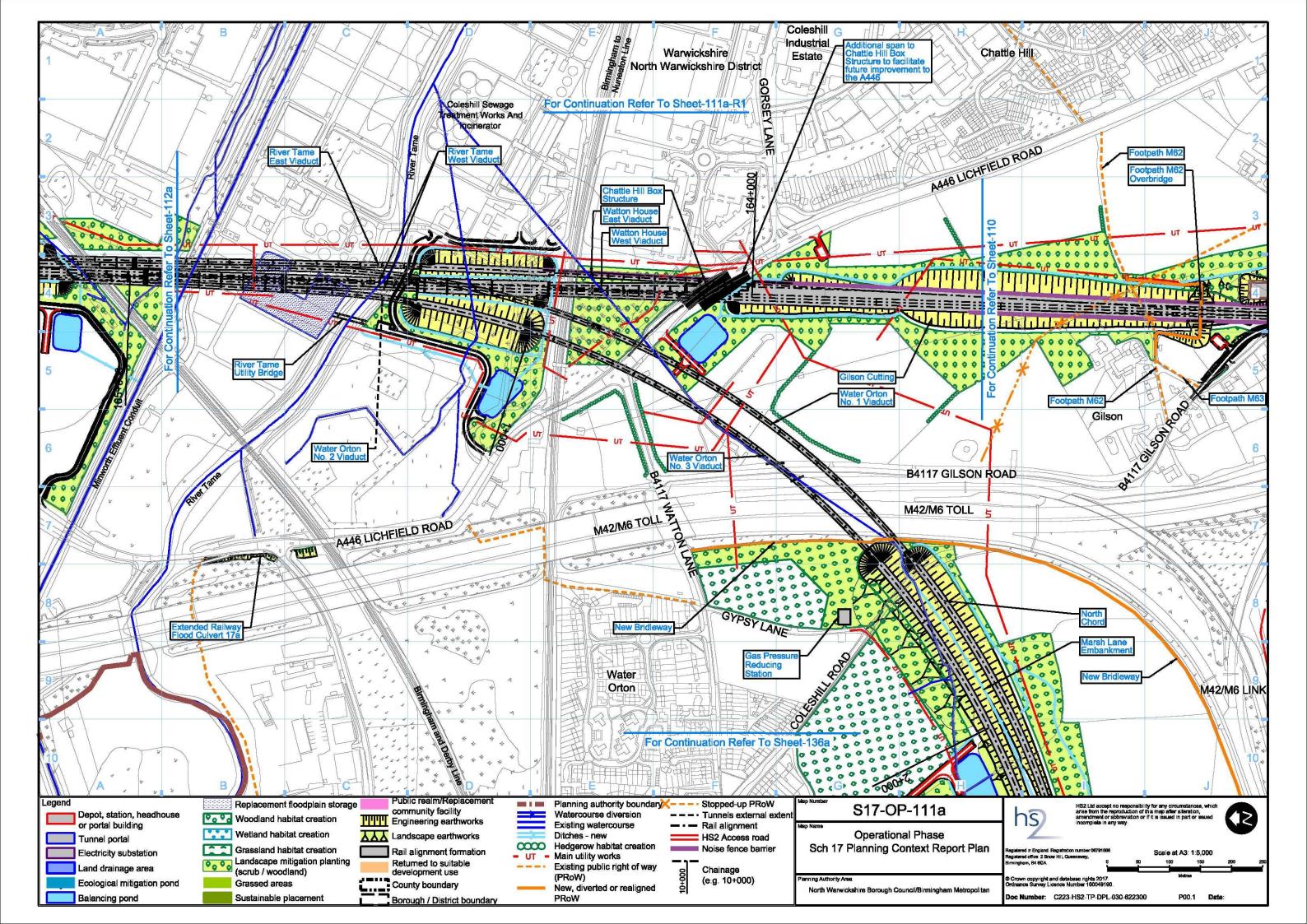
# 4 Schedule 17 Requests for Approval – Programme

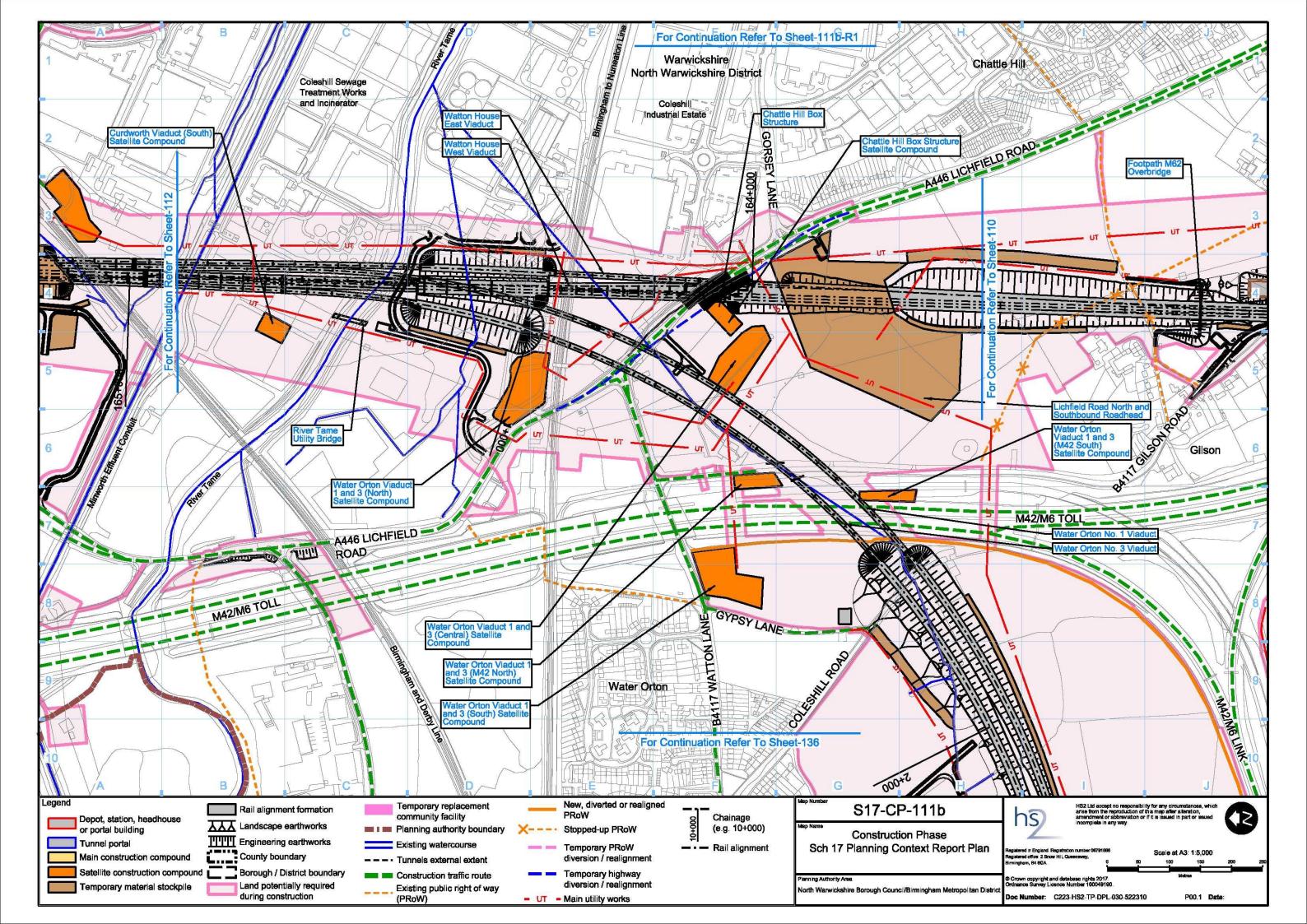
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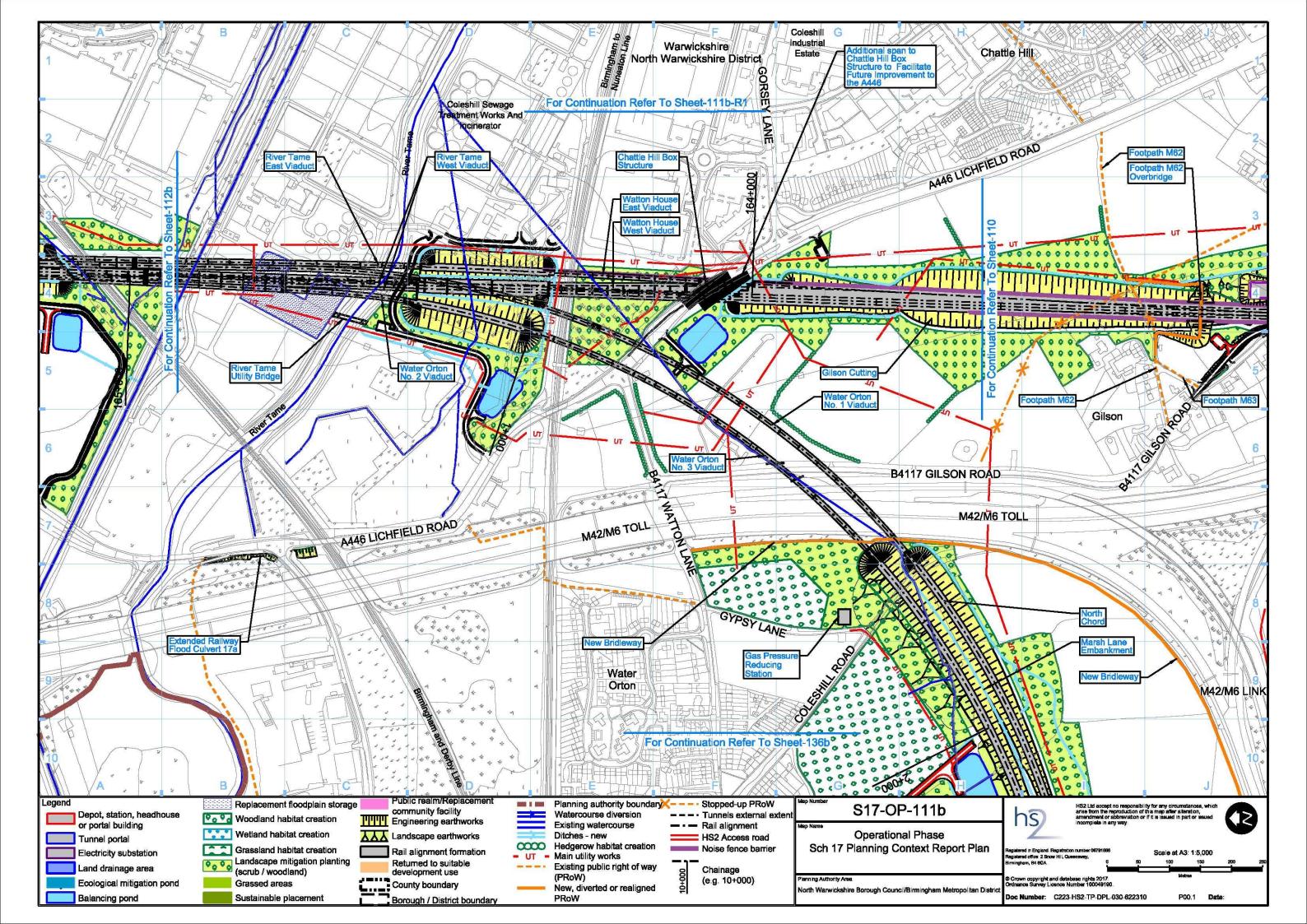
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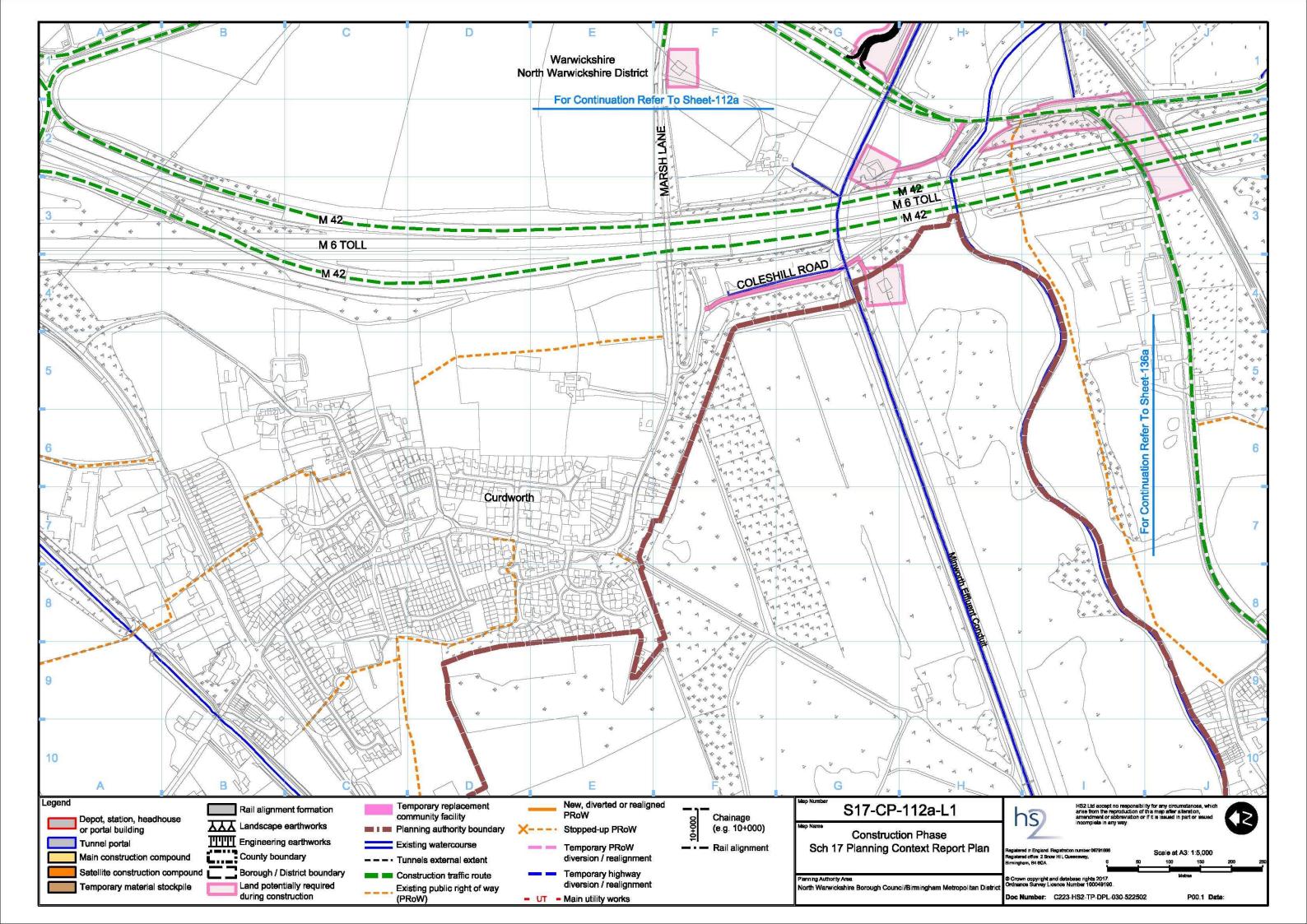
5 Planning Context Report Plans – Construction and Operation

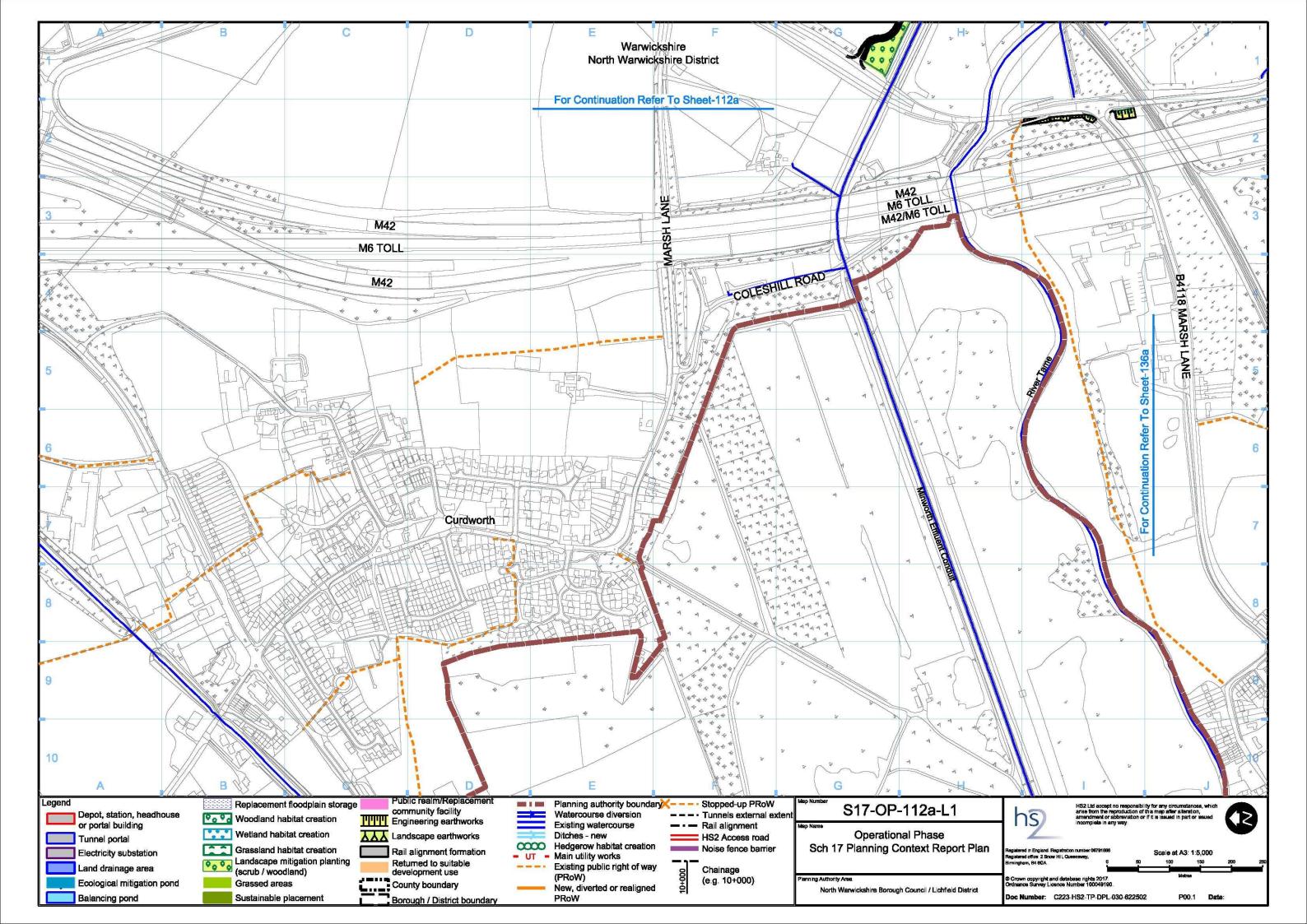


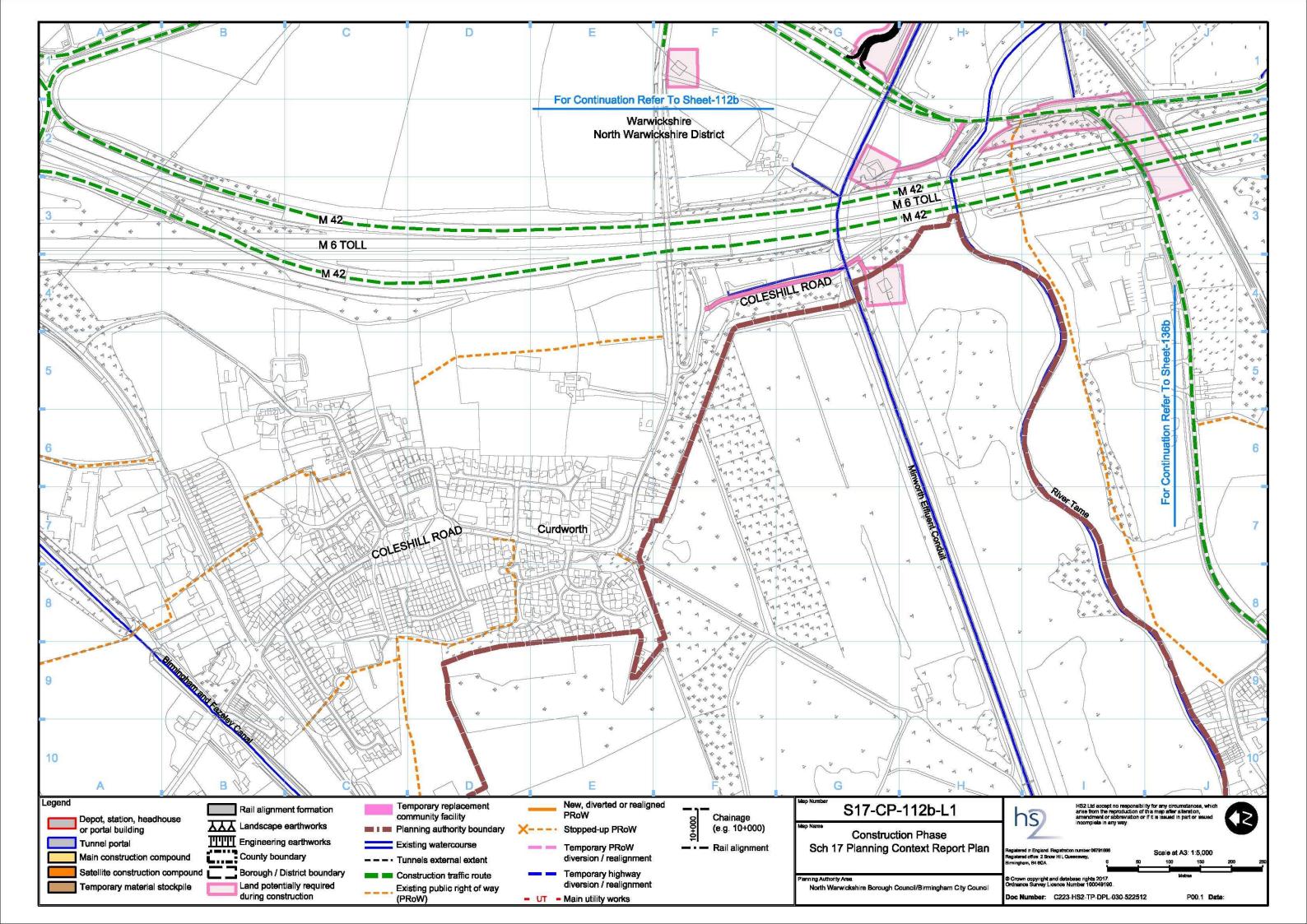


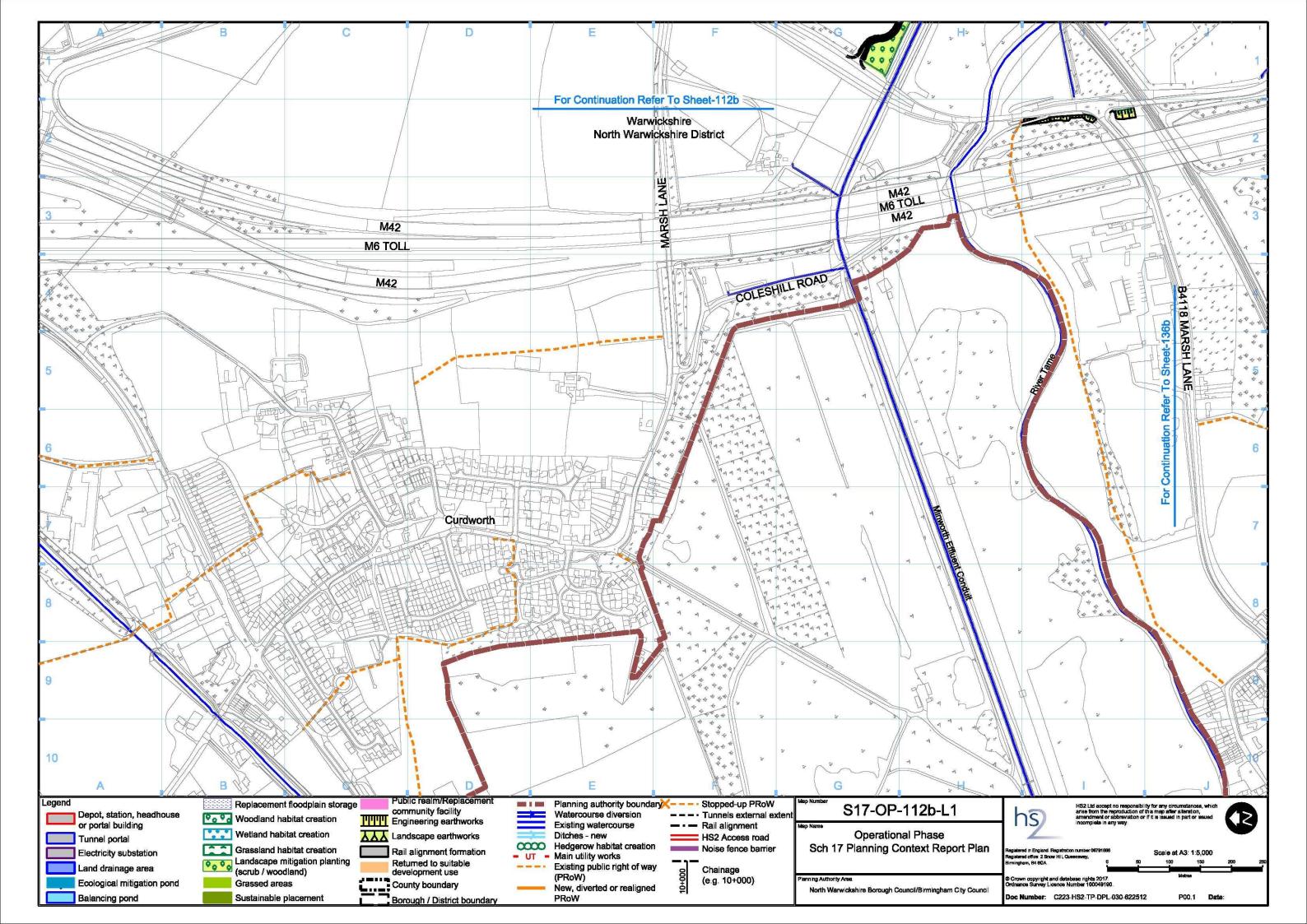


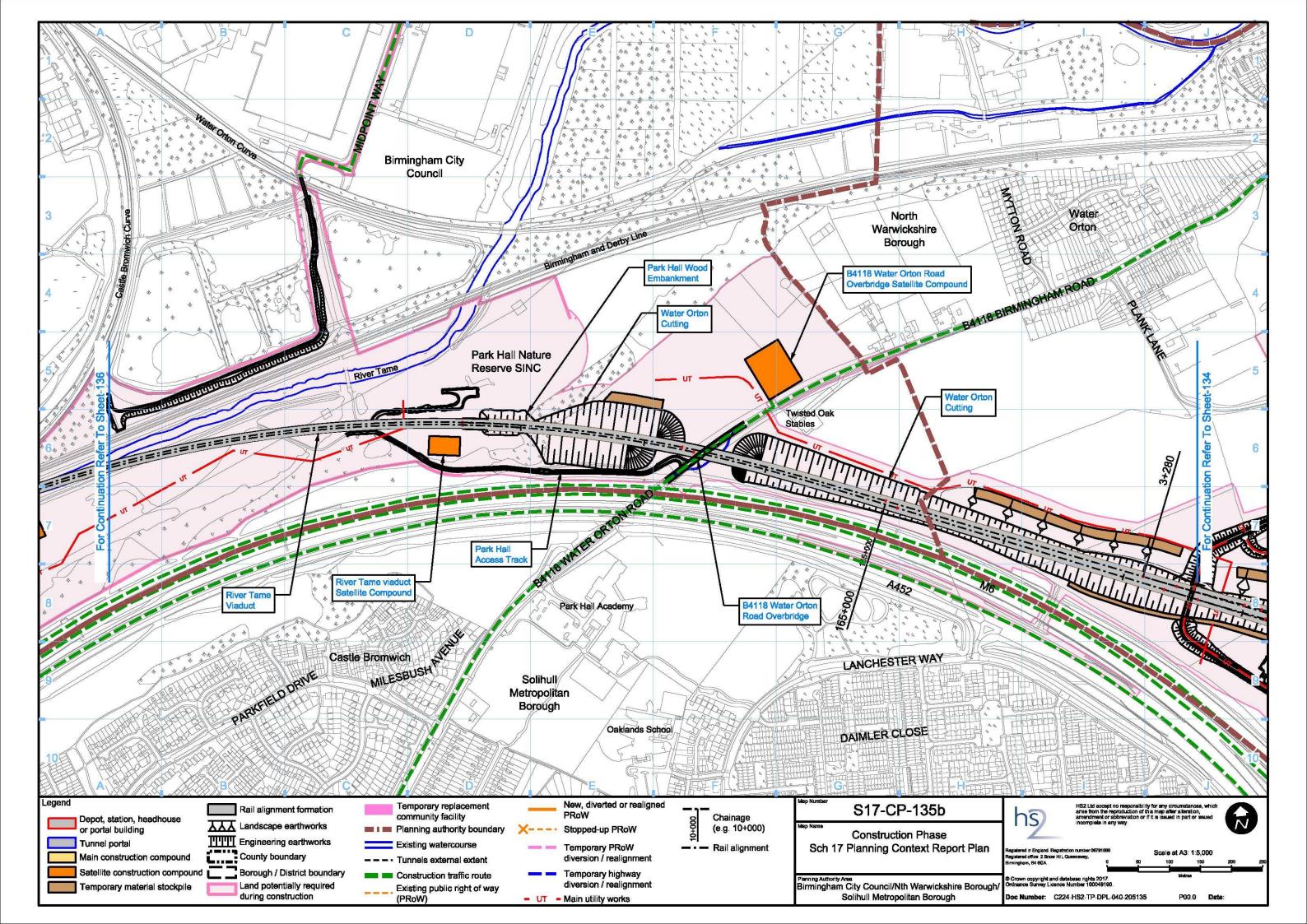


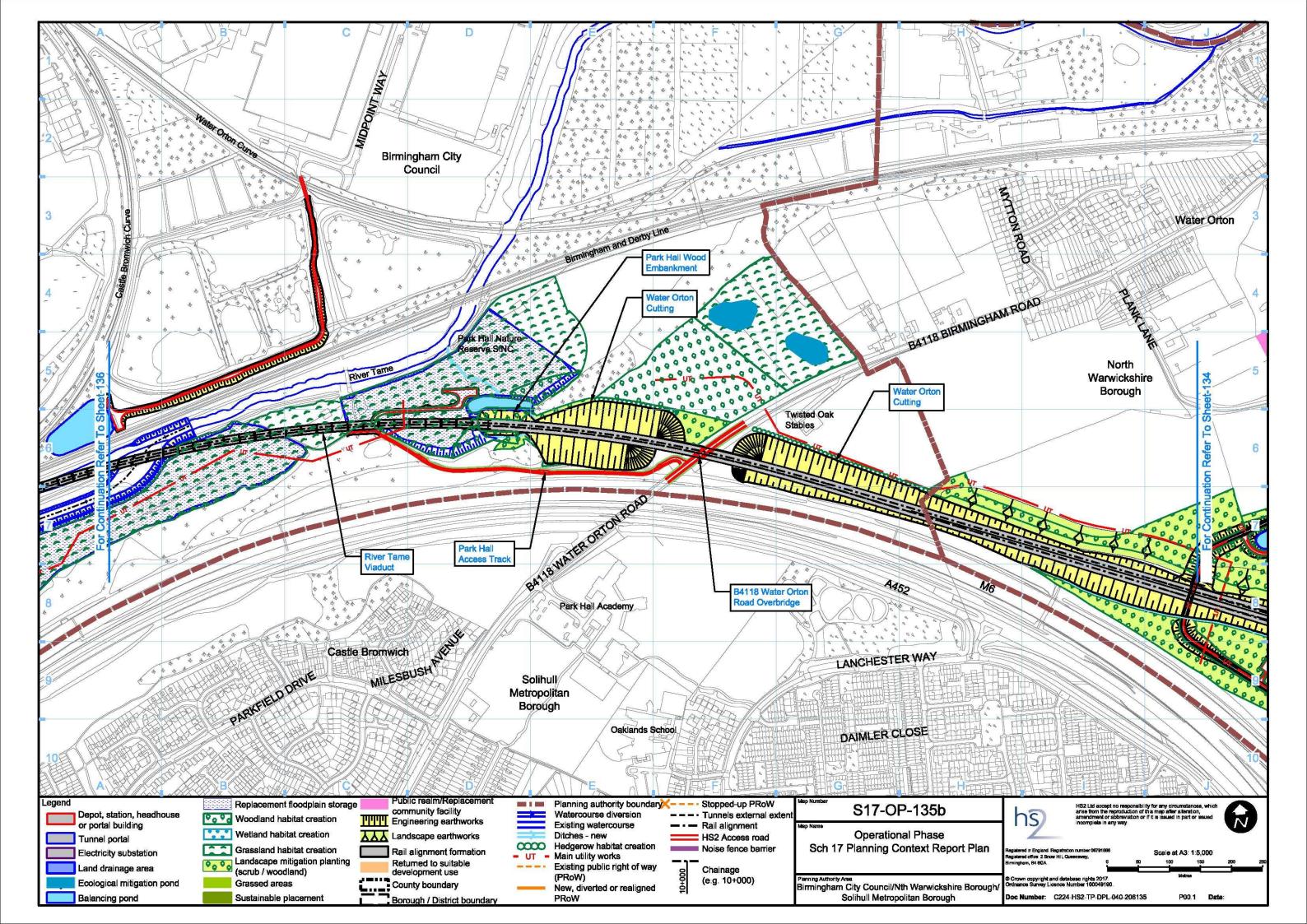


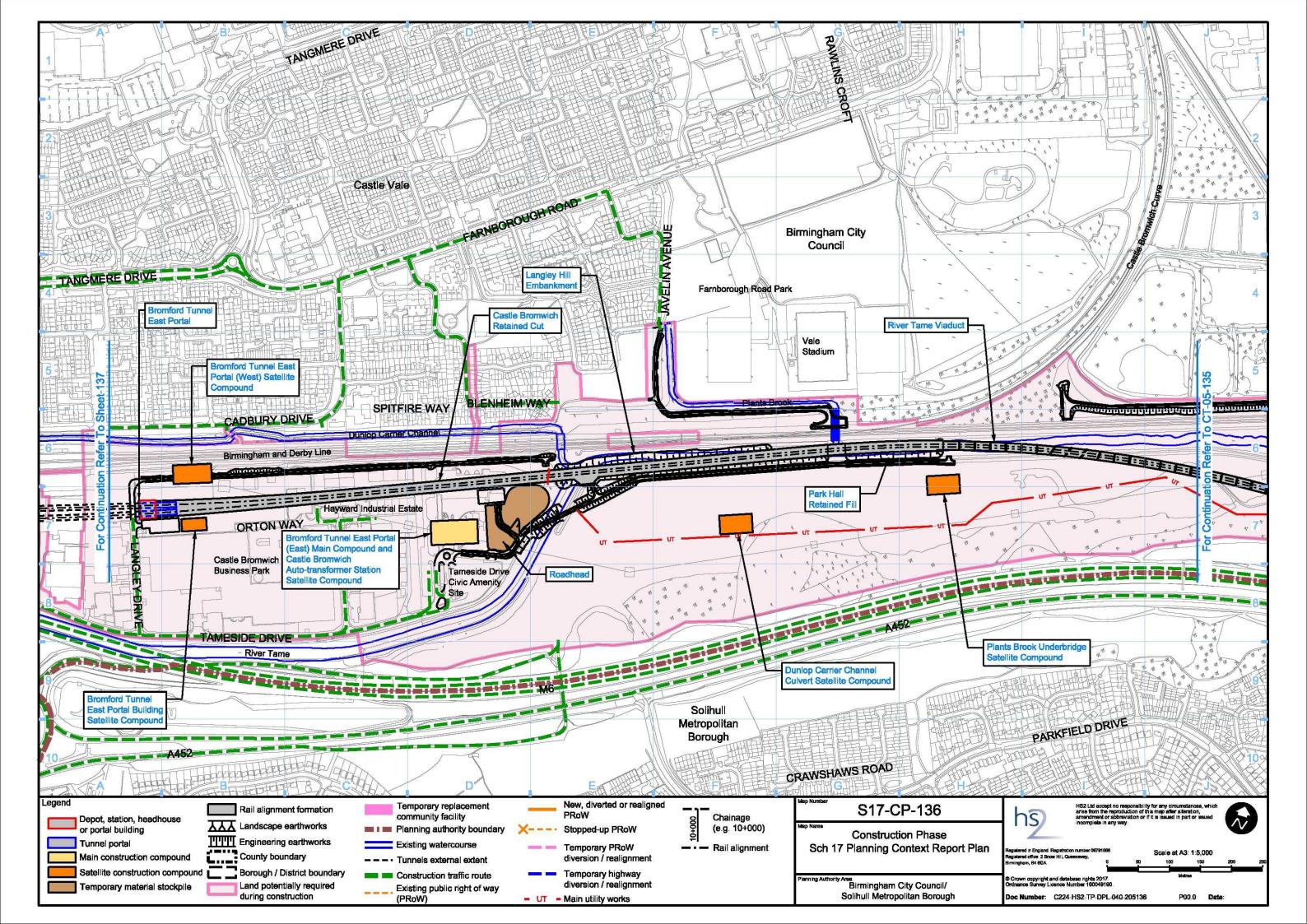


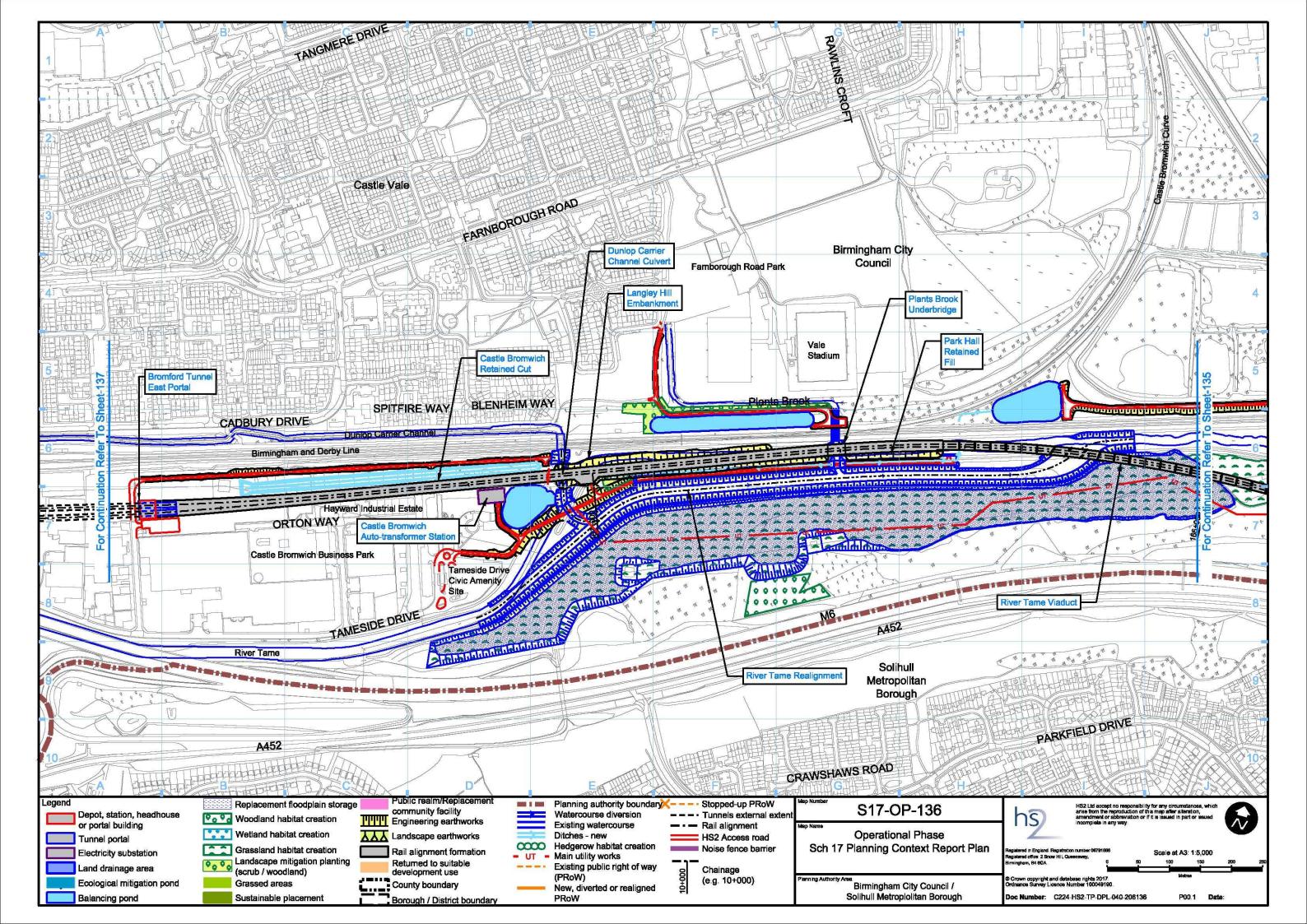


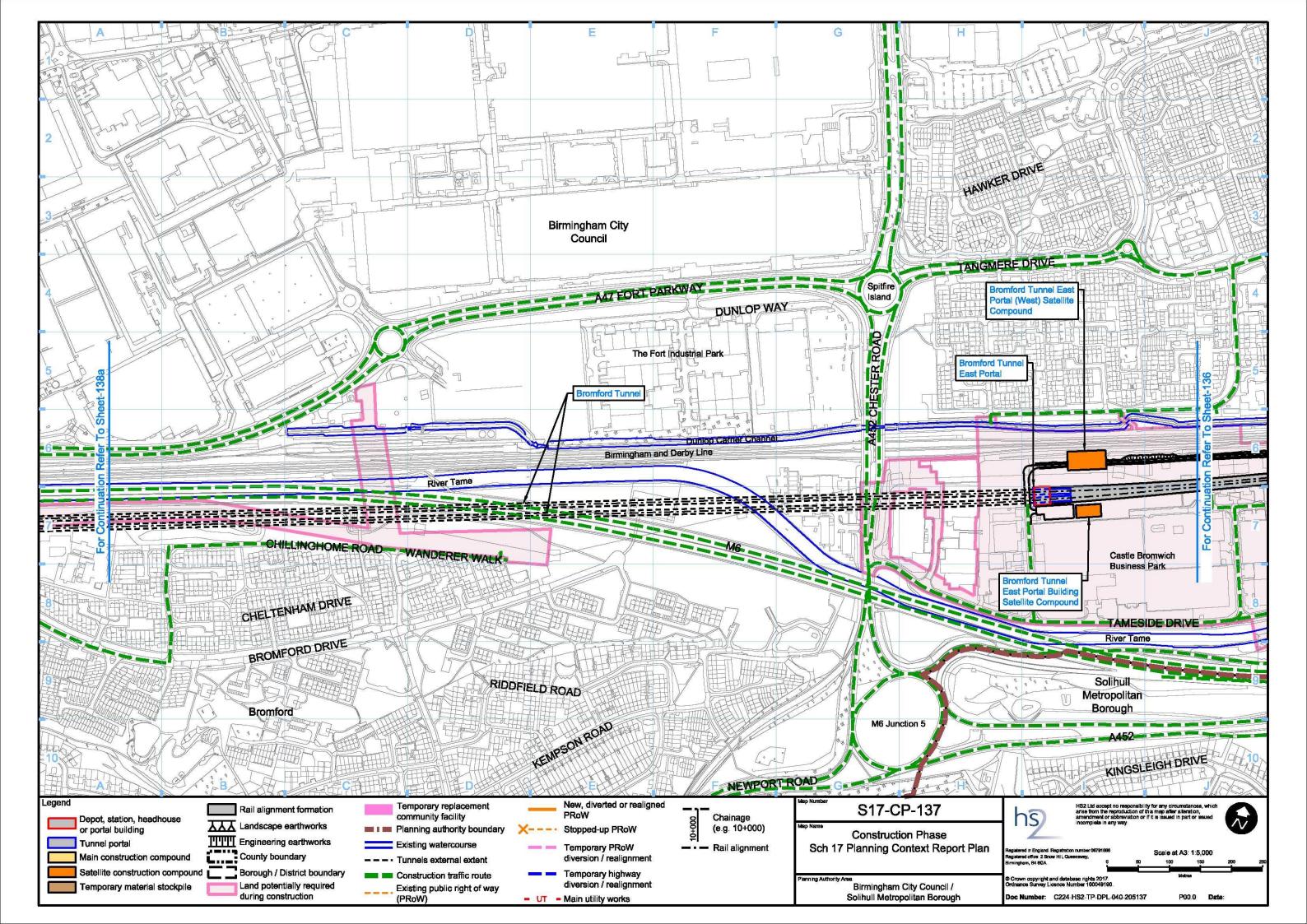


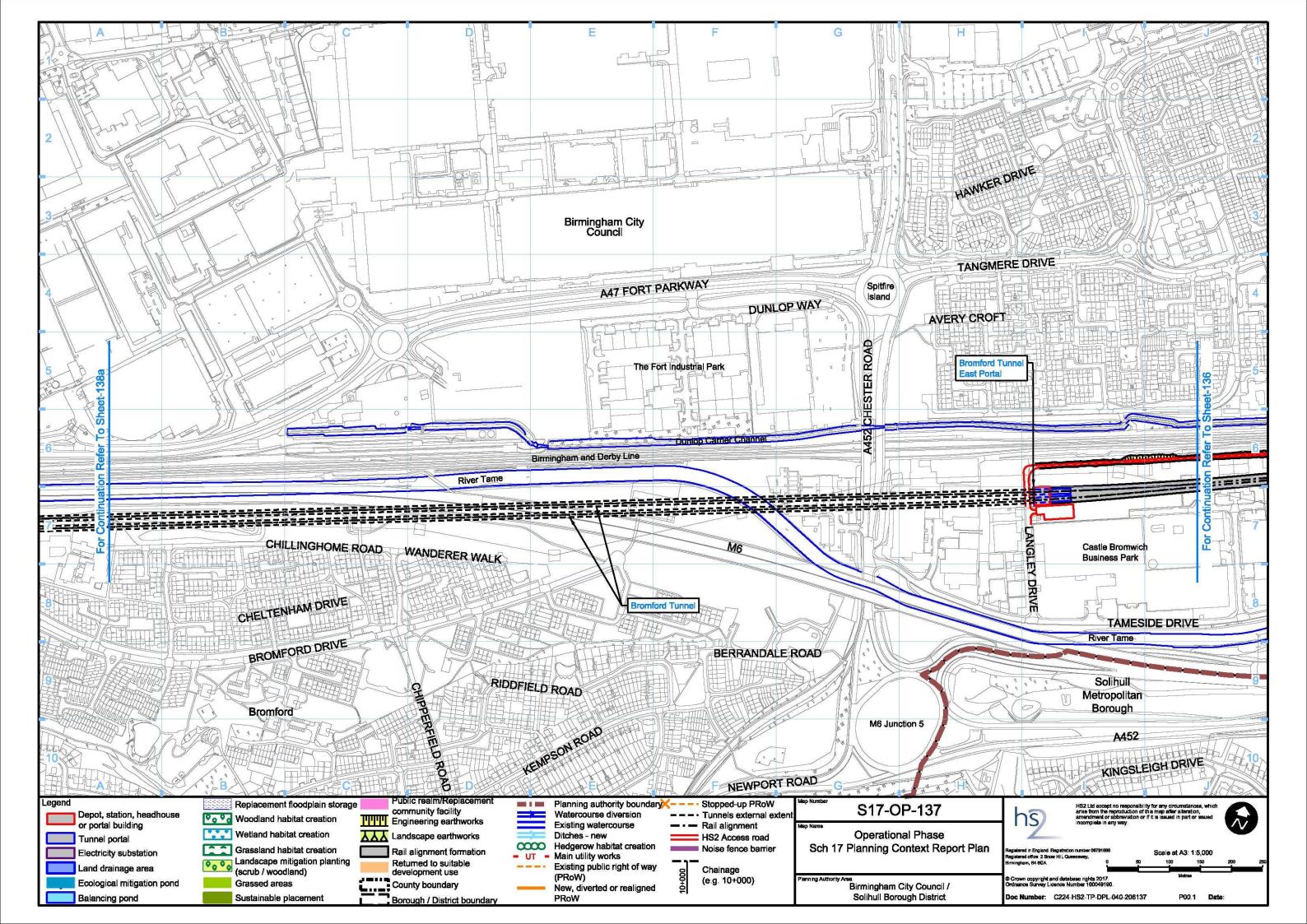


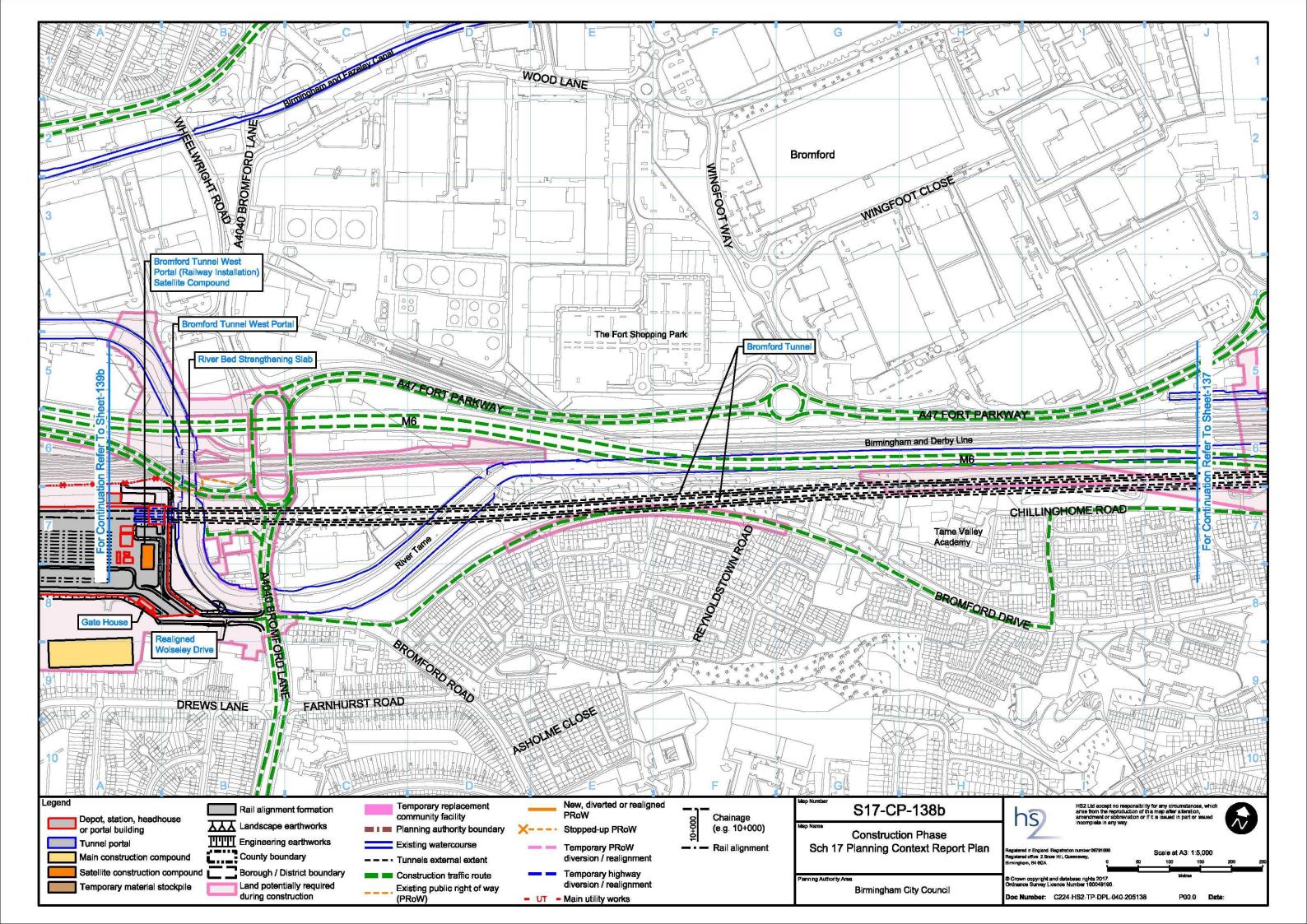


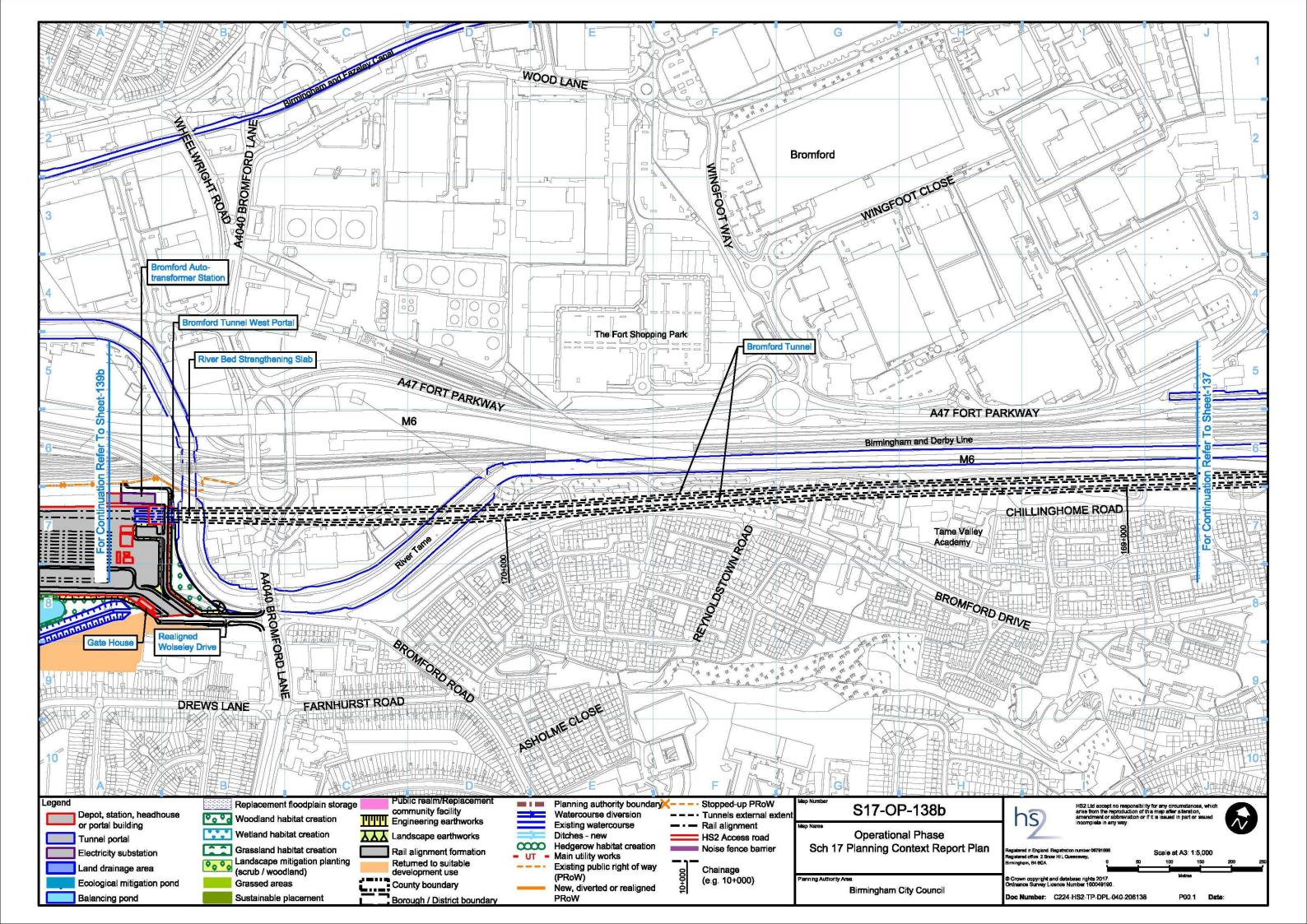


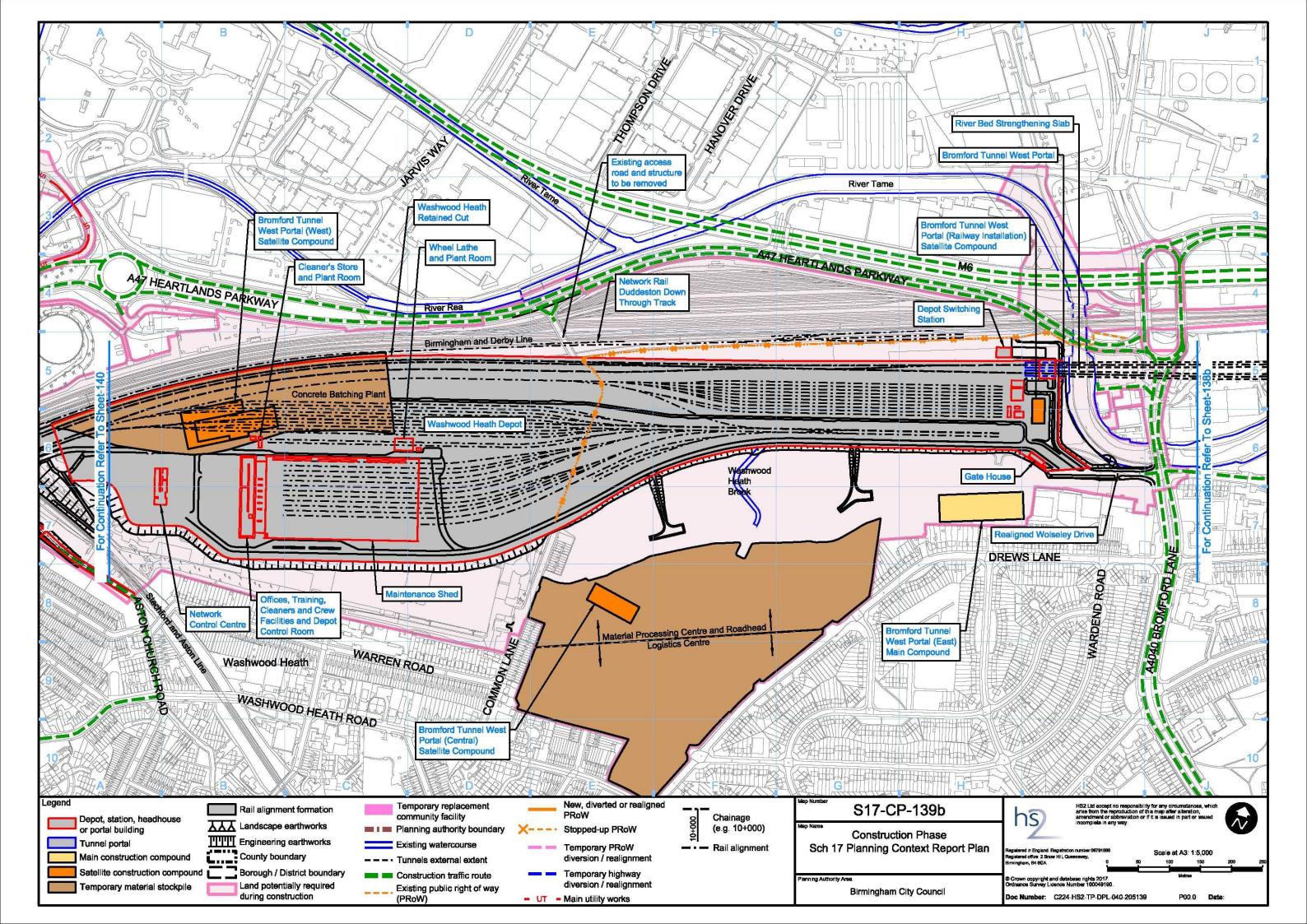


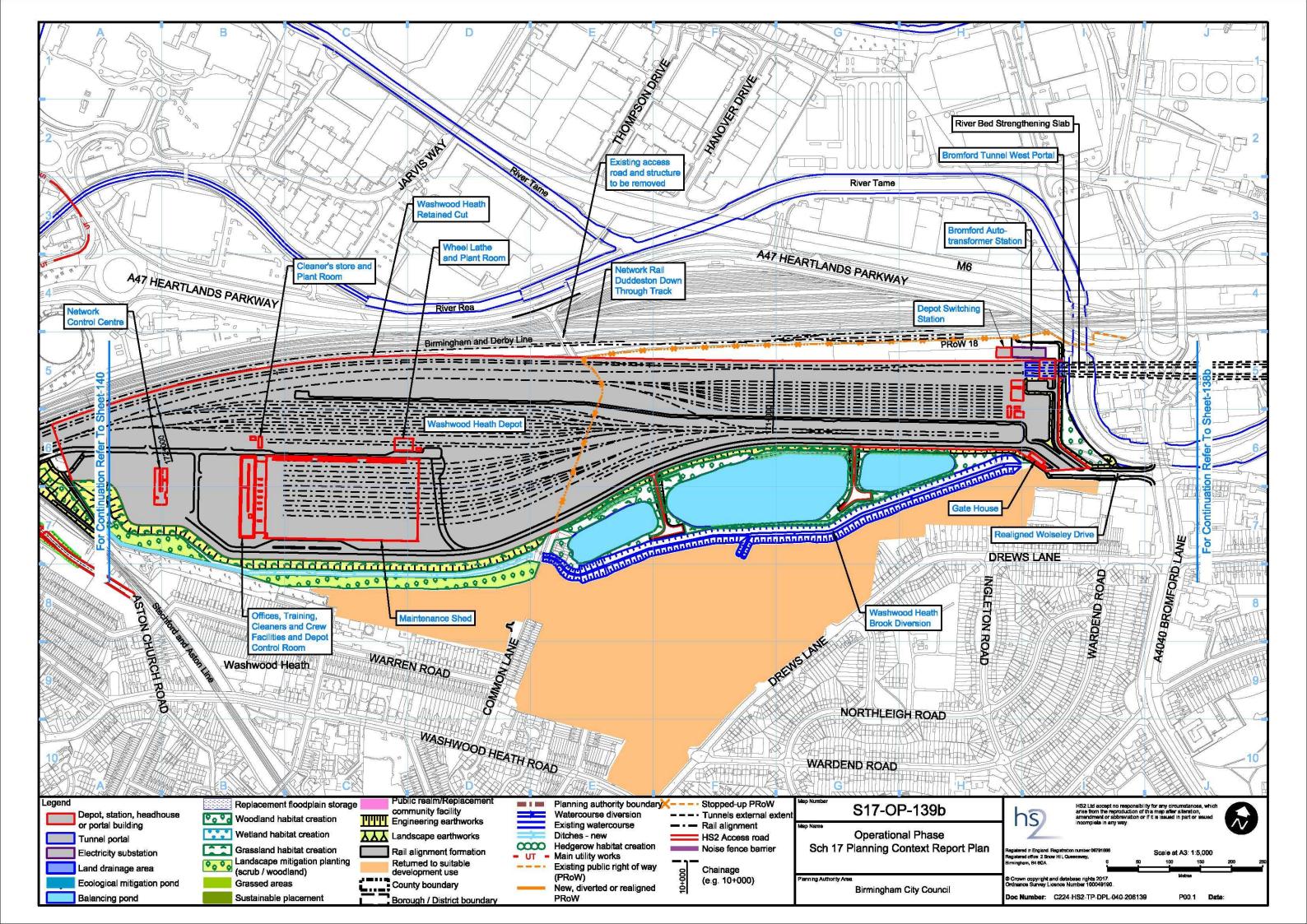


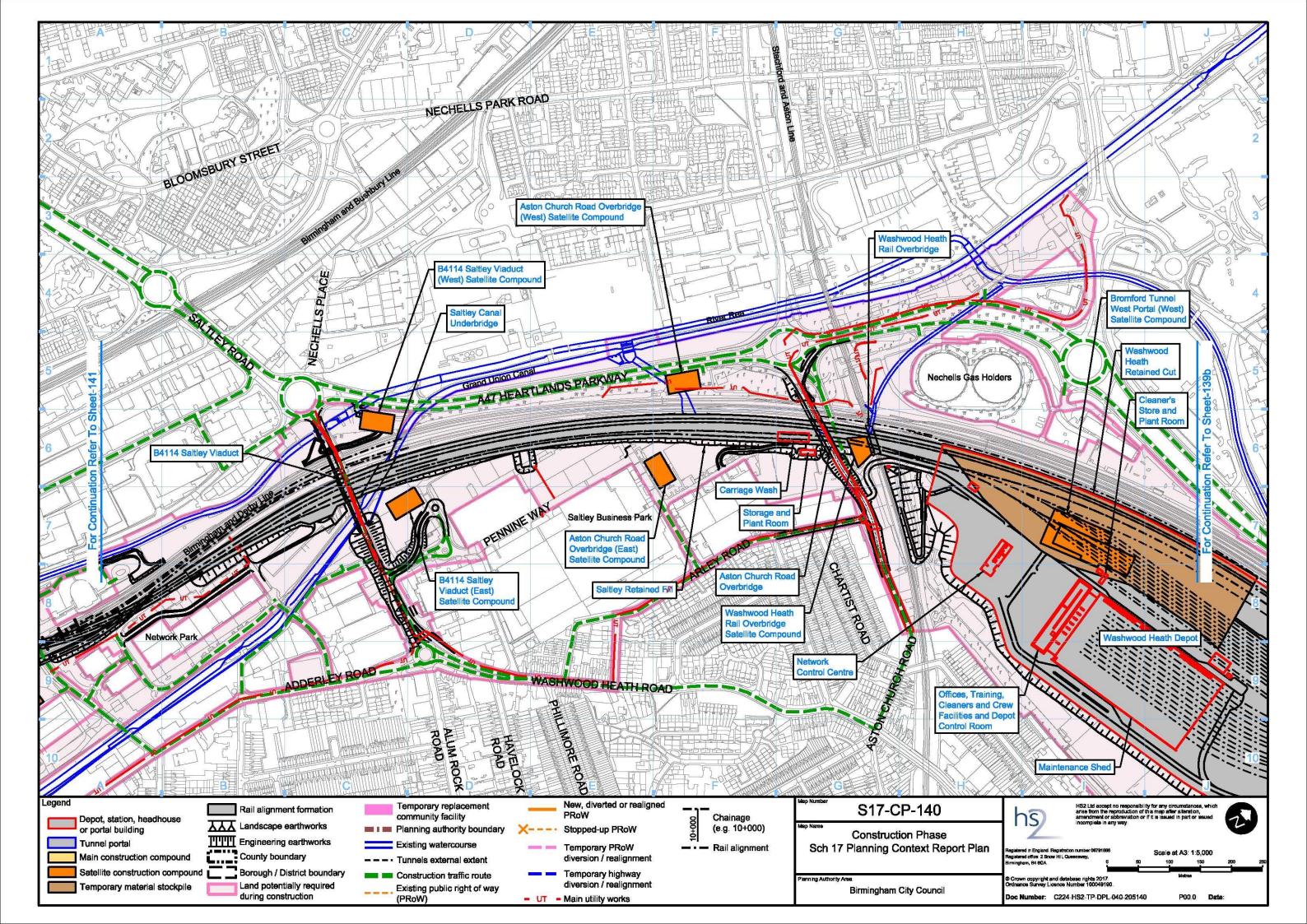


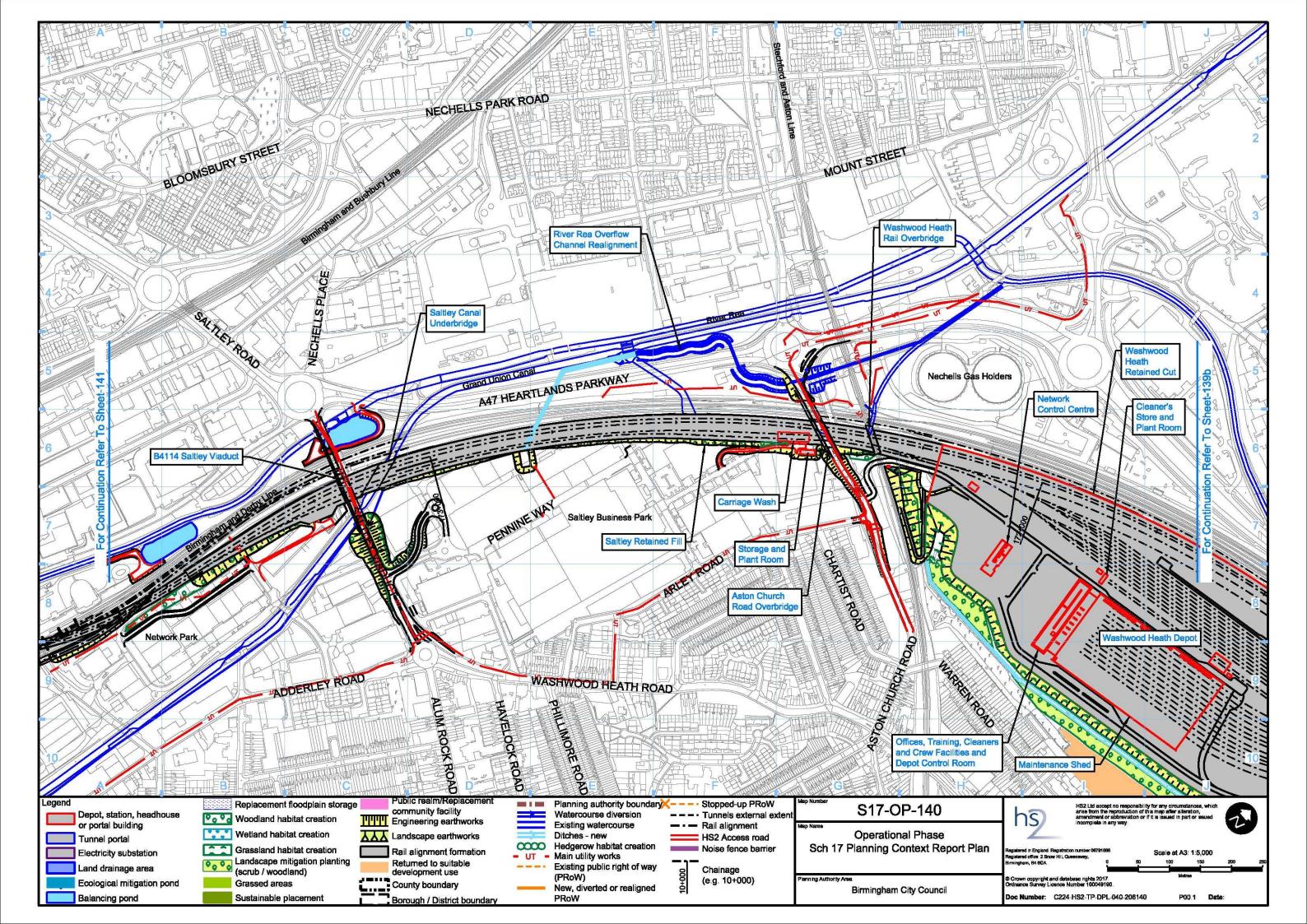


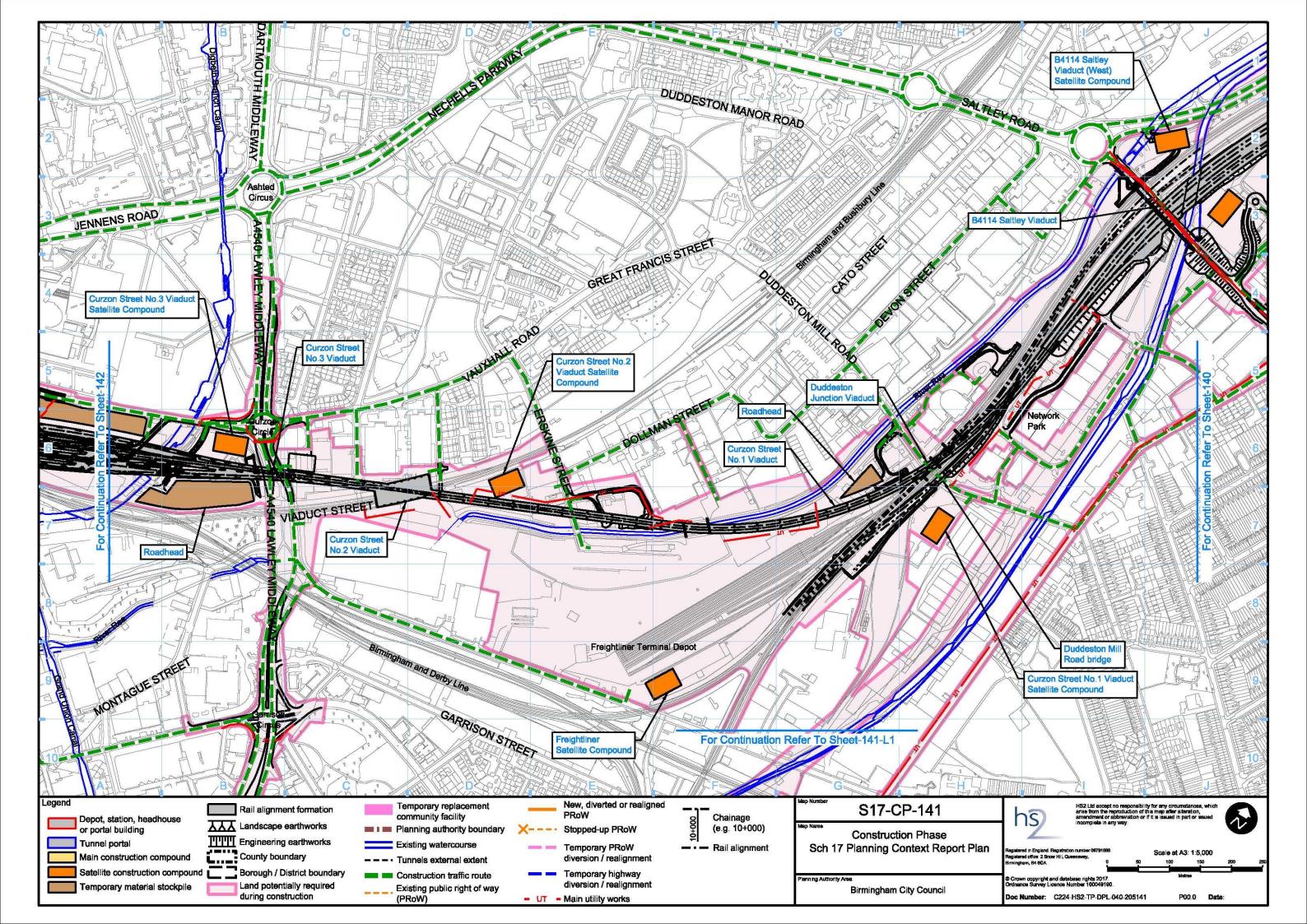


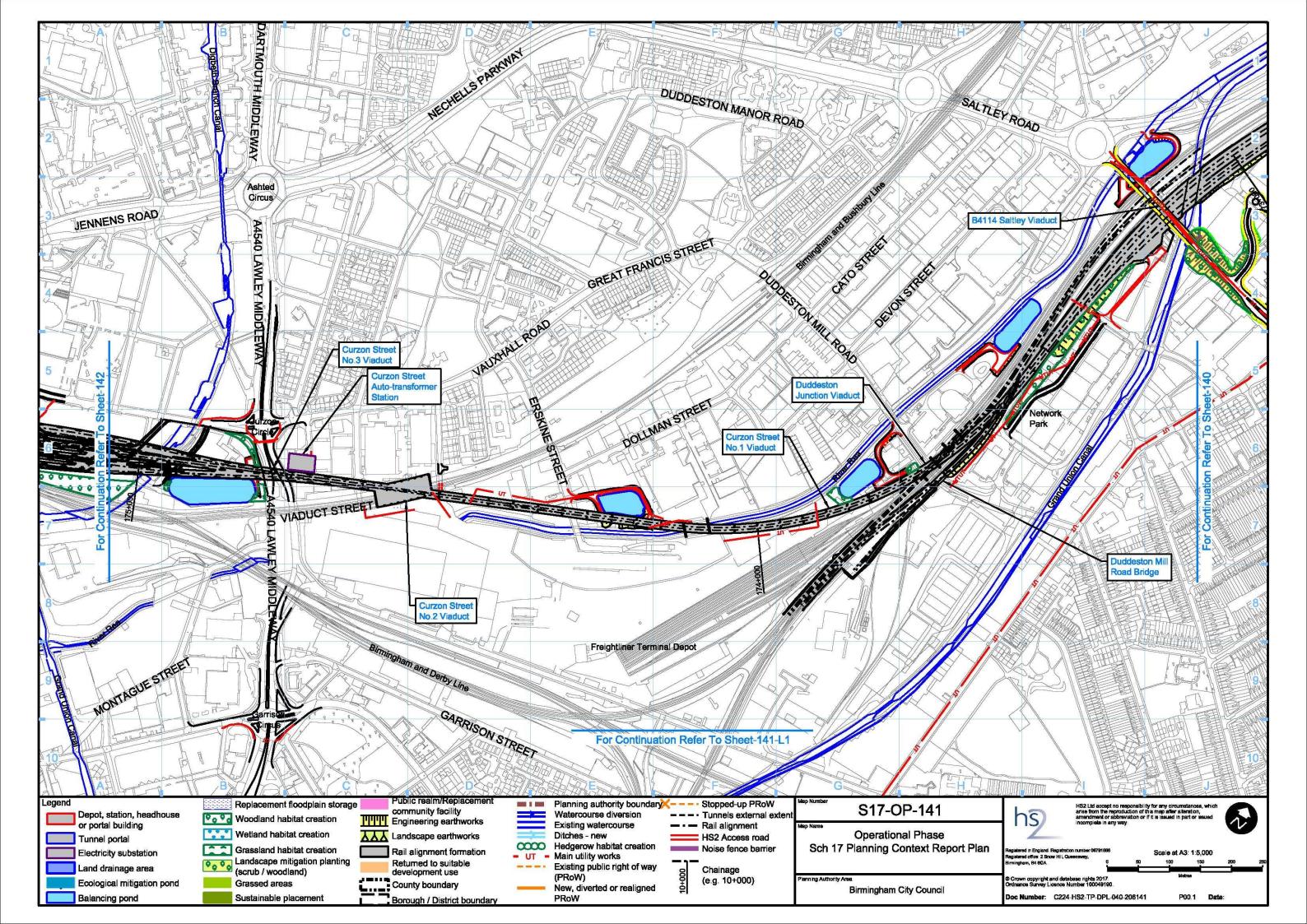


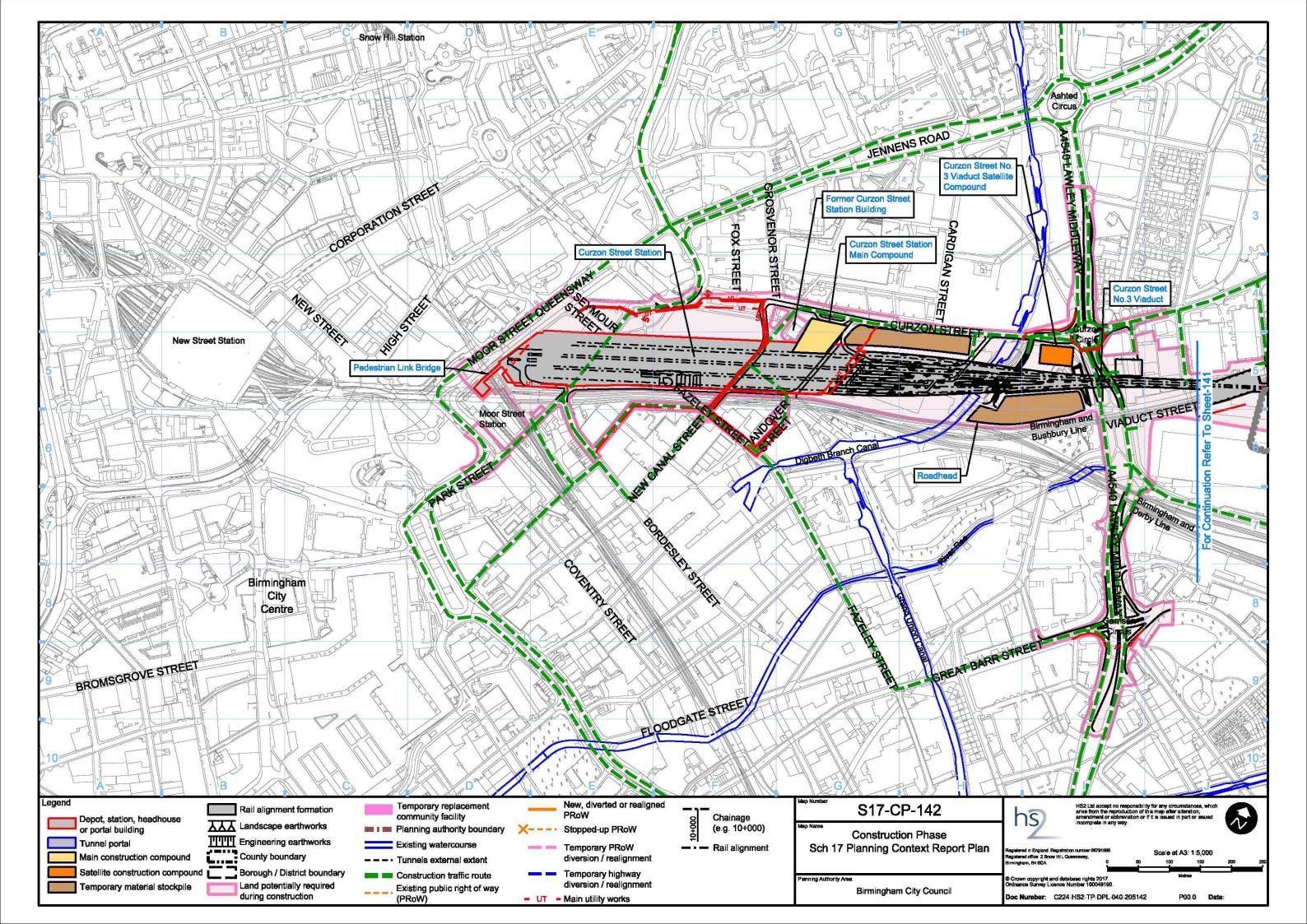


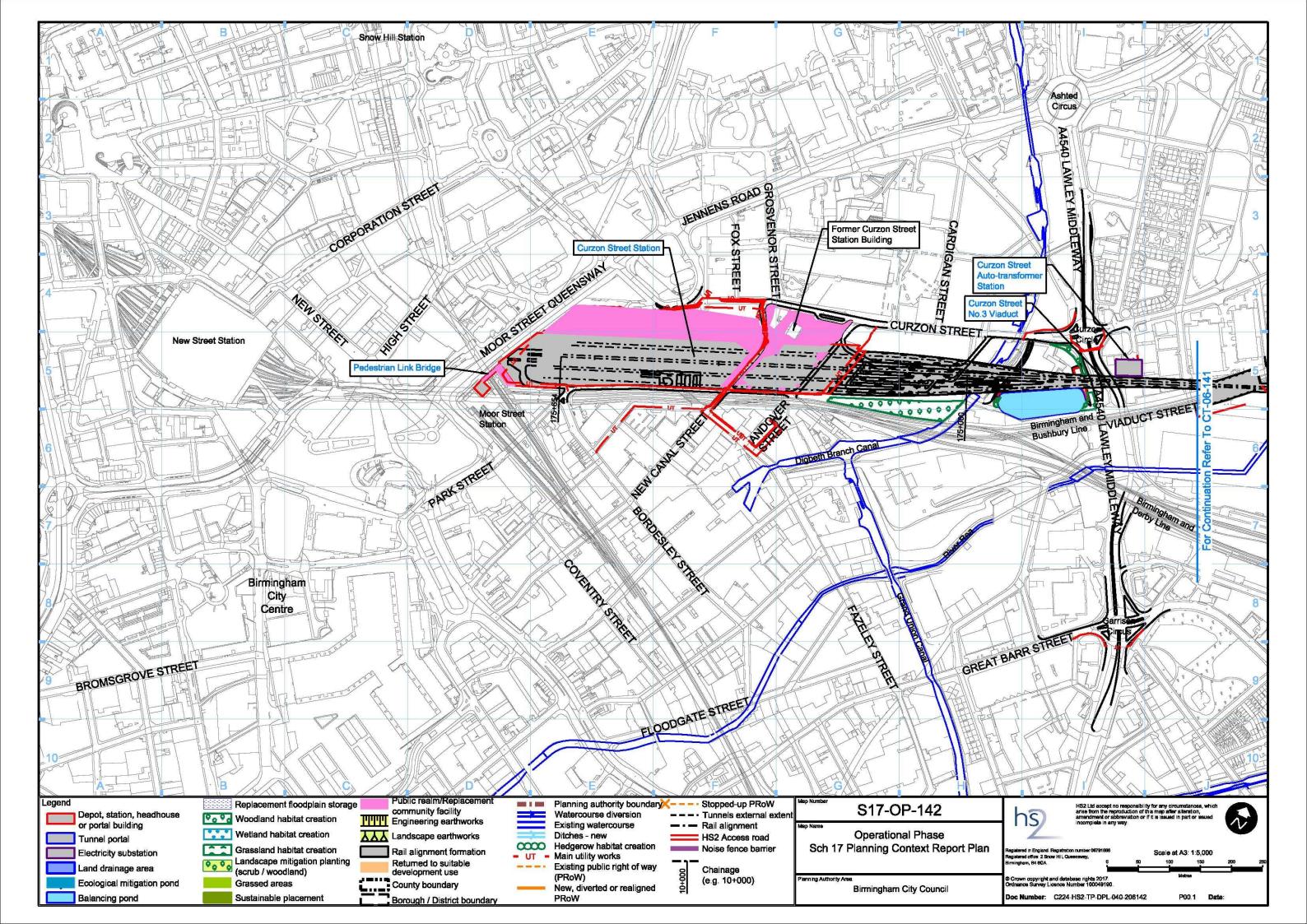


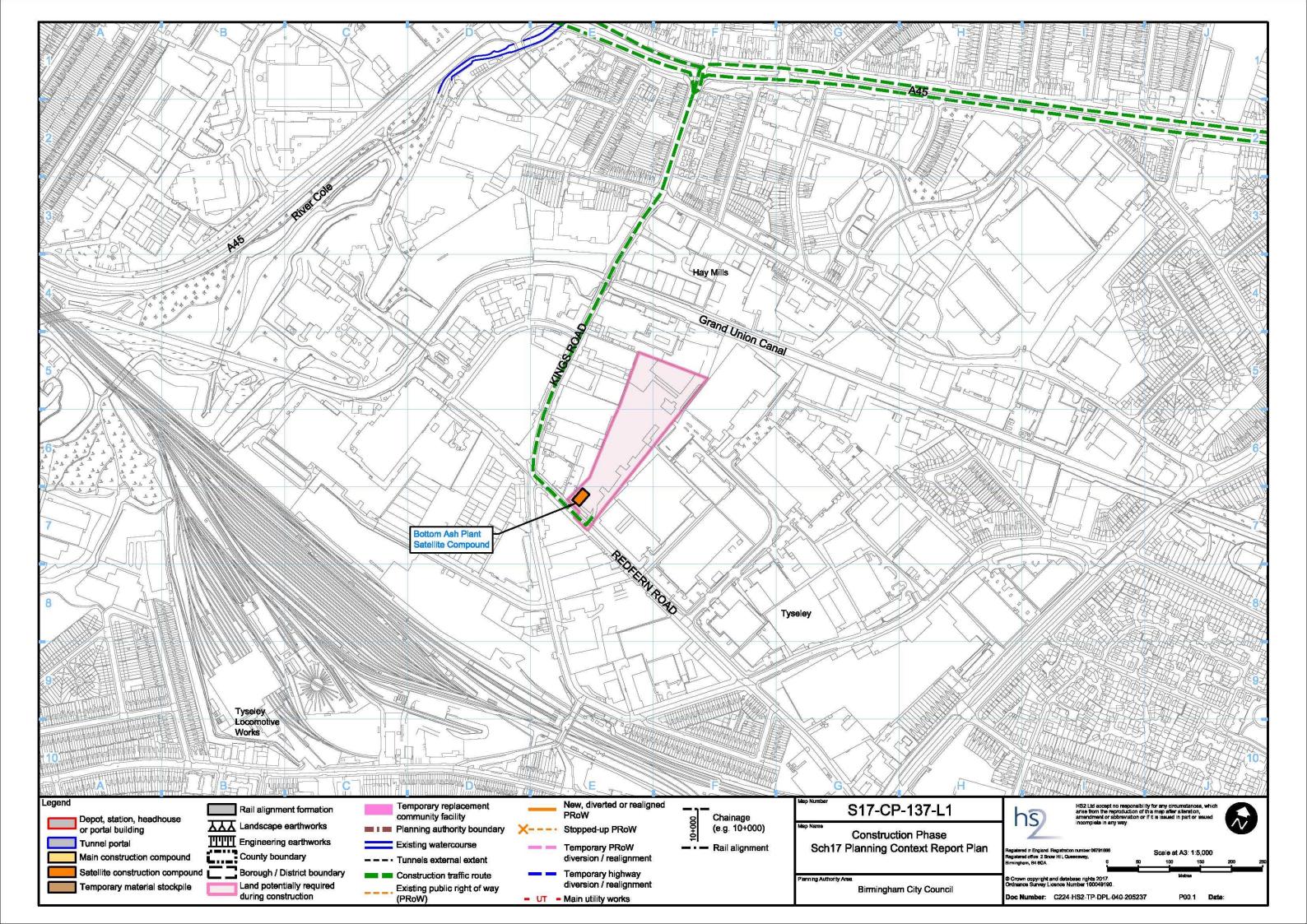


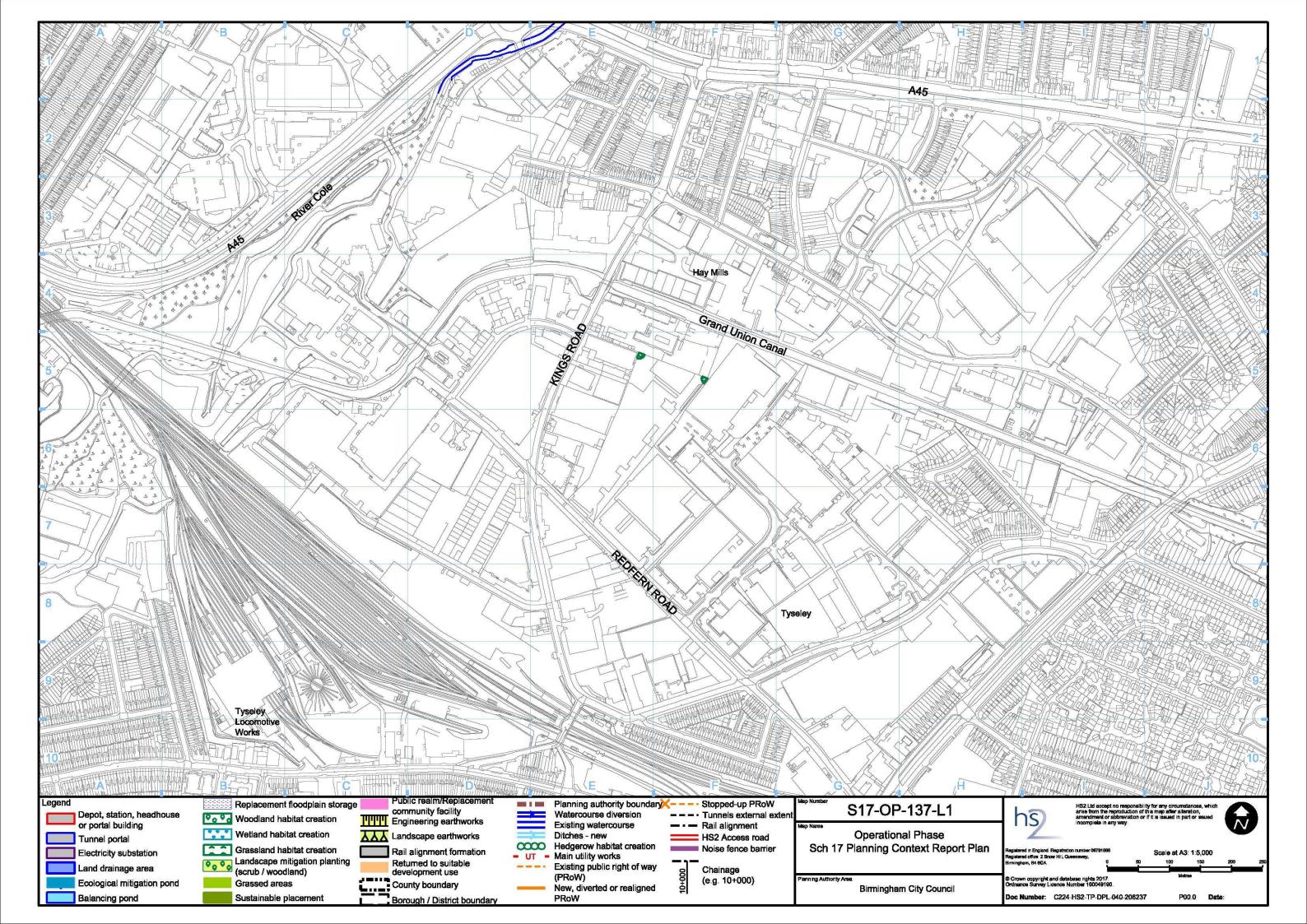


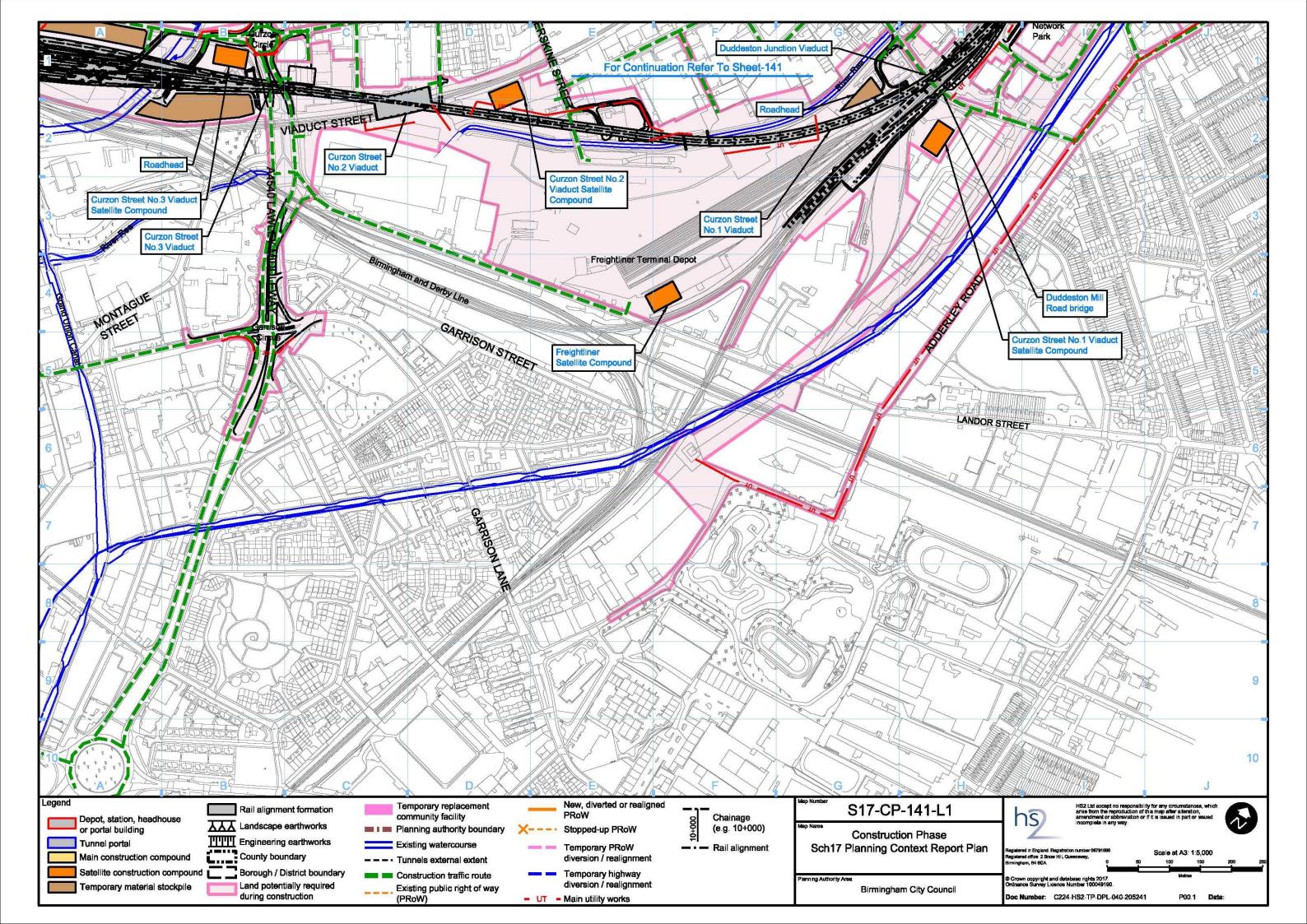


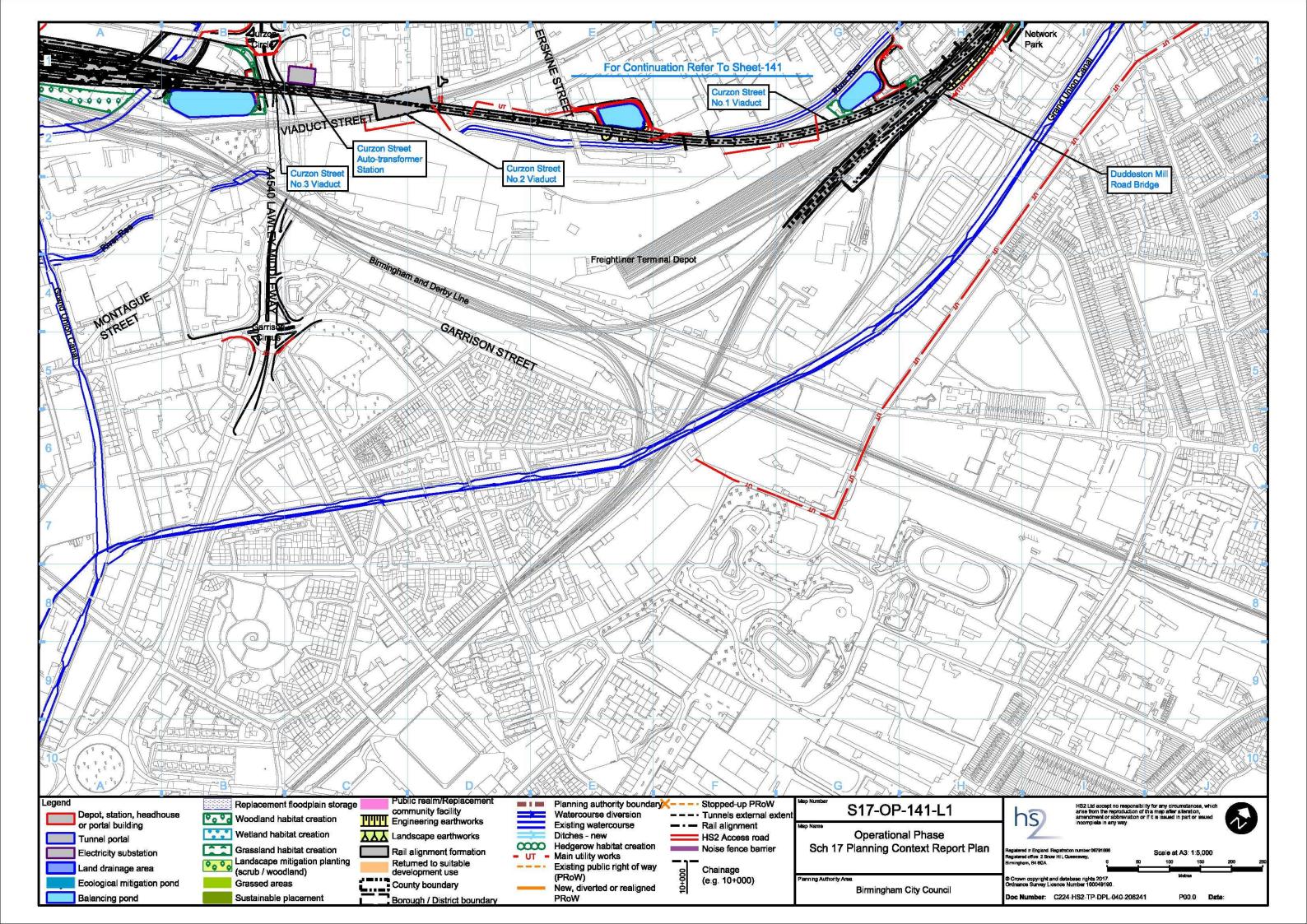












## Annex 1 – Signposting

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
Environmental William 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-

Document	Link
	provision-4-october-2015
	https://www.gov.uk/government/collections/supplementary-environmental-statement-4-and-additional-provision-5-december-2015