HS₂ Context Report

Prepared For Chiltern District

May 2017



Table of Contents

Ta	ble of Contents	3
Pr	eface	4
	Purpose	4
	Status	4
	Structure	4
	Other Relevant Documents	4
1	Introduction to HS2	5
	The HS2 Project	5
	Control of Environmental Impacts	6
	Controls in the Act	6
	Environmental Minimum Requirements	. 9
	Existing Legislation and Other Safeguards	11
2	HS2 in Chiltern District	12
	Introduction	12
	Permanent Works	12
	Preparatory and Temporary Works	14
3	Landscape and Restoration	17
4	Schedule 17 Requests for Approval – Programme	18
5	Planning Context Report Plans – Construction and Operation	19
Ar	nex 1 – Signposting	58

Preface

Purpose

This Planning Context Report provides an overview of HS2 works that will take place within Chiltern District (the District) 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 Chiltern District

Outlines the proposals within the District, 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.

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:

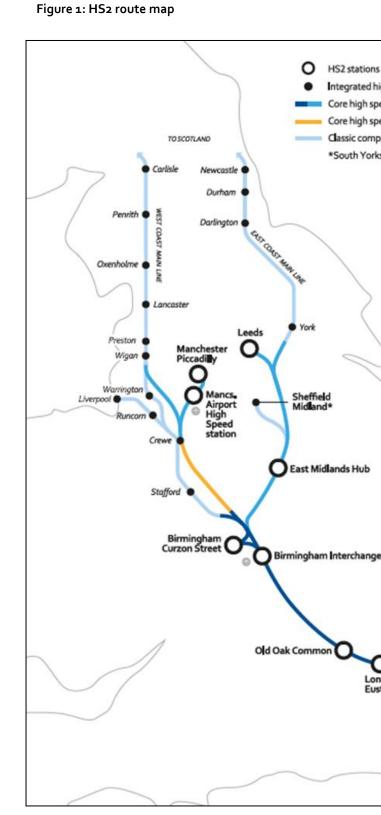
- The HS₂ Act;
- The HS₂ Environmental Statement; and
- The High Speed Rail (London West Midlands) Environmental Minimum Requirements ("the EMRs").

Annex 1 signposts these and other relevant documents.

1 Introduction to HS2

The HS₂ 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 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.





- Integrated high speed stations
- Core high speed network (Phases One and Two)
- Core high speed network (Phase 2a)
- Classic compatible services
- *South Yorkshire proposal July 2016

)		
		5
n ens	5]
	/	

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 HS₂ Act, including the EMRs; and
 - Existing legislation, unless expressly or impliedly dis-applied or modified by the HS₂ 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 project¹.
- 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.

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

- 1.10 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.
- 1.12 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.
- 1.13 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.
- 1.14 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.
- 1.15 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.
- 1.16 Schedule 17 requires the nominated undertaker to submit the following details to planning authorities, for approval or agreement:
 - Plans and specifications of certain works;

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.

- Matters ancillary to development ("construction arrangements");
- Road Transport (lorry routes);
- Bringing into use; and
- Site restoration schemes.
- 1.17 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.
- 1.18 The District has become a qualifying authority.
- 1.19 In relation to qualifying authorities, the operations or works for which plans and specifications will be submitted for approval are identified in Table 1.

1.20 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 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.

- 1.23 Where lorry movements exceed 24 to/from a construction site per day, the lorry route must be approved (paragraph 6 of Schedule 17) by the relevant gualifying 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

1.28 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

1.29 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 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).

1.44 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
- 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.

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.

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 Chiltern District

Introduction

- 2.1 The HS2 route is 18.5 km in length in the District. The route enters the south east of the District at its boundary with Three Rivers District to the east of the M25, between junctions 16 and 17, and to the south of Chalfont Lane. The route is in tunnel for approximately 15.8 km, before entering the South Heath cutting and leaving the District as it enters Aylesbury Vale District approximately 200 metres to the south east of the proposed Bowood Lane overbridge.
- The main elements of HS2 works in Chiltern District are: 2.2
 - the Chiltern tunnel and a small section of the south portal headwall;
 - four ventilation shafts and one intervention shaft and their associated head house buildings and equipment;
 - the Chiltern tunnel north portal, its associated cutting and buildings; and
 - the South Heath cutting and its associated road realignments and accommodation overbridges.
- 2.3 Section 5 of this report illustrates the location of works in the District. This section describes the permanent, preparatory and temporary works in the District.
- As the project is taken forward to detailed design and construction there may be changes to 2.4 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

Chiltern Tunnel and South Portal

- 2.5 The route approaches Chiltern District in the Chiltern tunnel south portal cutting which will be approximately 300m long and up to 30m deep. At this point the railway will be continuing towards the porous portal, which will be approximately 200m long. The porous portal will allow the micro pressure waves produced by the 'piston effect' of the train moving through the tunnel, which can result in noise as the train exits the tunnel, to be controlled and kept at a level which does not affect the surrounding area.
- Before passing under the M25, the railway will pass through the bored tunnel portal (headwall), 2.6 which marks the start of the Chiltern District. The railway will then enter the twin bored Chiltern tunnel and continue north-westwards for approximately 15.8km (excluding porous portal length) underground at a depth of up to approximately 60 metres (ground level to tunnel crown).
- 2.7 The works for both the Chiltern tunnel south cutting and portal and tunnel headwall fall within both Three Rivers District and Chiltern District. In addition to the bored tunnel portal (headwall), the following works, including landscaping, take place within Chilterns District:

- landscape earthworks to the south-west of the route from north of Bridleway DEN/3 up to approximately 100m east of the M25, to provide visual screening of the railway from the surrounding areas;
- an approximately 550m² hard-standing area will be provided next to the tunnel portal building for maintenance and emergency access and egress from the tunnel;
- realignment of Bridleway CSP/44, from the east side of the M25 and south of Chalfont Lane bridge, around the western side of the Chiltern tunnel south portal and cutting;
- a temporary realignment of the overhead lines to the eastern side of the M25 and new permanent underground alignment with new sealing end towers; and
- a realignment of the access to the gypsy/traveller site on Chalfont Lane to the west of the M25 to enable the temporary M25 slip roads to be constructed.
- 2.8 The Chiltern Tunnel will broadly follow the route of the A413 northwards from the south portal. The Chiltern Tunnel will have four ventilation shafts and one intervention shaft.

Chalfont St Peter Vent Shaft

- 2.9 The Chalfont St Peter vent shaft will be located approximately 50m to the west of Chesham Lane and to the south of Ashwell's Farm. The vent shaft is required to provide pressure relief from the tunnels and a dedicated intervention point and access for emergency services. Key features of the vent shaft are:
 - a permanent fenced compound, which will surround the following features:
 - a shaft headhouse building, which will be approximately 48m by 22m and approximately 4m high. It will provide access to the tunnels, approximately 54m to the tunnel crown below, and will contain fans and related equipment to control smoke in the event of a fire.
 - chillers and chiller plant within the compound which will occupy an approximately 13m by 8m area and be approximately 3m in height.
 - an area of hard-standing next to the headhouse building, which will be approximately 550m², will allow for maintenance and emergency access and egress from the tunnel.
 - below ground drainage tanks and utility connections will also be provided for firefighting and tunnel buildings drainage; and land-drainage areas to the east and south of the vent shaft headhouse.
 - a short access road connecting the vent shaft compound to Chesham Lane.
 - landscape earthworks curving along the northern and western side of the vent shaft compound to integrate it into the landscape.
 - an area of grassland habitat creation along the eastern boundary of the vent shaft compound mitigating the potential loss of great crested newt habitat.

Chalfont St Giles Vent Shaft

- 2.10 The Chalfont St Giles vent shaft, which is required to provide pressure relief from the tunnels, tunnel cooling equipment (chillers) and accompanying electrical switchgear (chiller plant) and a dedicated intervention point and access for emergency services, will be located in an open field approximately 300m south-west of Upper Bottom House Farm. Key features of the vent shaft are:
 - a permanent fenced compound, which will surround the following features:
 - a shaft headhouse building, which will be approximately 41m by 27m and approximately 4m high. It will provide access to the tunnels, approximately 35m below, and will contain fans and related equipment to control smoke in the event of a fire.
 - an area of hard-standing next to the headhouse building, which will be approximately 550m², will allow for maintenance and emergency access and egress from the tunnel.
 - an express auto-transformer station which will be approximately 5m high.
 - below ground drainage tanks and utility connections will also be provided for fire fighting and tunnel buildings drainage, and land drainage areas to the north and south of the vent shaft headhouse.
 - permanent widening of Bottom House Farm Lane generally along the south side, to achieve a 4m wide road, including the provision of passing bays to allow for permanent access to the vent shaft compound. Improvement works will be carried out to the junction of Bottom House Farm Lane with the A413 Amersham Road.
 - landscape earthworks located at the north side of the vent shaft compound to integrate it into the landscape.

Amersham Vent Shaft

- 2.11 Amersham vent shaft, which is required to provide pressure relief from the tunnels and a dedicated intervention point and access for emergency services, will be located in the isolated parcel of land at the junction of the A404 Whielden Lane and the A413, south of Amersham Hospital. Key features of the vent shaft are:
 - a permanent fenced compound, which will surround the following features:
 - a shaft headhouse building, which will be approximately 41m by 27m and approximately 4m high. It will provide access to the tunnels, approximately 46m below, and will contain fans and related equipment to control smoke in the event of a fire, chillers and accompanying chiller plant.
 - an area of hard-standing next to the headhouse building, which will be approximately 550m², will allow for maintenance and emergency access and egress from the tunnel.

- below ground drainage tanks and utility connections will also be provided for fire fighting and tunnel buildings drainage; and
- land drainage areas to the east and south of the vent shaft headhouse.
- realignment of an existing cycleway along A404 Whielden Lane.

Little Missenden Vent Shaft

- 2.12 Little Missenden vent shaft, which is required to provide pressure relief from the tunnels and a dedicated intervention point and access for emergency services, will be located south of Keeper's Lane adjacent to the A413. Key features of this vent shaft are:
 - a permanent fenced compound, which will surround the following features:
 - a shaft headhouse building, which will be approximately 41m by 27m and approximately 4m high It will provide access to the tunnels, approximately 38 m below, and will contain fans and related equipment to control smoke in the event of a fire.
 - an area of hard-standing next to the headhouse building, which will be approximately 550m², will allow for maintenance and emergency access and egress from the tunnel.
 - an auto-transformer station which will be approximately 45m by 25m and approximately 5m high.
 - below ground drainage tanks and utility connections for fire fighting and tunnel buildings drainage.
 - land drainage areas on the eastern side of the vent shaft headhouse.
 - landscape earthworks curving along the access road and the northern side of the vent shaft compound to integrate it into the landscape.

Chesham Road Intervention Shaft

- 2.13 The Chesham Road intervention shaft, which is required to provide a dedicated intervention point and access for emergency services, will be located south of the B485 Chesham Road, adjacent to Annie Bailey's public house and restaurant and will include:
 - a permanent fenced compound, which will surround the following features:
 - an auto-transformer feeder station
 - an area of hard-standing next to the headhouse building, which, will allow for maintenance and emergency access and egress from the tunnel.
 - below ground drainage tanks and utility connections for fire fighting and tunnel buildings drainage.
 - A headhouse building.

Chiltern Tunnel North Portal to boundary with Aylesbury Vale District

- 2.14 Beyond the Chesham Road vent shaft the railway continues north-westwards for approximately 1.1km before emerging at the Chilterns tunnel north portal and continuing in to the South Heath Cutting. These works are described below.
- 2.15 The Chilterns tunnel north portal porous structure and associated cutting will be approximately 200m long and up to 16m deep and will also include:
 - a realignment of a 400kV overhead electricity line to the west of South Heath which includes the replacement of two pylons with one taller pylon.
 - an area of hardstanding, approximately 550m², allowing for the maintenance and emergency access and egress from the tunnel and associated portal buildings and substations.
 - a new access road from Frith Hill will provide permanent access to the Chiltern tunnel north portal for maintenance and emergency access to the tunnel portal building during operation.
 - a realignment of footpath GMI/13 around the north, west and south of the portal structure and an associated drainage balancing pond.
 - a balancing pond adjacent to the A413 Missenden bypass and an associated realigned drainage channel running from the railway to the pond.
 - noise barriers located to the north of the porous portal and the South Heath cutting.
- 2.16 The railway then continues in to the South Heath cutting which is approximately 3km long and in places 16m deep. Works associated with the South Heath cutting will integrate with those at the portal and consist of:
 - a continuation of the noise barriers to the north of the cutting up to the point where Leather Lane crosses the railway.
 - an overbridge providing connectivity for Footpath GMI/12.
 - an area of grassland habitat creation to the west of the route just north of the Footpath GMI/12 overbridge.
 - noise fence barriers at the base of the cutting on the eastern side of the route, either side of Footpath GMI/2 accommodation overbridge.
 - a land drainage area located to the east of the route with an associated access road from Potter Row.
 - landscape earthworks and planting on the east side of route, from north of Mulberry Park Hill to Hammondshall Farm.
 - an overbridge approximately 6.5m above existing ground level providing an offline replacement of Footpath GMI/2 and access for Strawberry Hill Farm.

- noise mitigation earthworks will be located to the east side of the route from north of the Footpath GMI/2 overbridge up to Leather Lane, along Hammondshall Farm.
- a new overbridge north of Great Missenden approximately 4m above existing ground level, carrying Leather Lane over the route.
- The installation of the South Heath midpoint Autotransformer station, to the north of the overbridge on Leather Lane.
- a new overbridge east of Cottage Farm, approximately 1m above existing ground level, providing an offline replacement of a farm access.
- a new overbridge south of Bowood Lane, approximately 1m above existing ground level, carrying Footpath TLE/2 over the route (TLE/2 becomes WEN/38 on the west side of the route) and providing accommodation access.
- a land drainage area south of Bowood Lane to the west of the route.
- a new overbridge south of Strawberry Hill Farm, approximately at ground level, carrying Bowood Lane over the route.

Preparatory and Temporary Works

- 2.17 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

- 2.18 Numerous utilities will need to be diverted, the principal works and diversions in this area include:
 - At the Chiltern tunnel south portal there will be a temporary realignment of the overhead lines to the eastern side of the M25 and new permanent underground alignment with new sealing end towers. The new sealing end towers will transfer the high voltage lines in to the undergrounded section.

 The extension to the Chiltern tunnel to the northwest means that at the north portal, a localised diversion of the present overhead lines will be required. A permanent realignment of the 400kv lines, slightly to the south of the existing alignment will take place. With a taller tower replacing two existing towers.

Worksites and Compounds

- 2.19 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.
- 2.20 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.
- 2.21 The construction compounds for carrying out the Chiltern South cutting and portal works are located in Three Rivers District.

Table 2: Compound name and construction activity

Compound	Principal activities
Chalfont St Peter vent shaft satellite compound	Civil engineering works associated with the Chalfont St Peter vent shaft and associated mitigation.
	Rail systems installation work at the Chalfont St Peter vent shaft site including headhouse fit out.
Chalfont St Giles vent shaft satellite compound	Civil engineering works associated with the Chalfont St Giles vent shaft and associated mitigation. Rail systems installation work at the Chalfont St Giles vent shaft site Including headhouse fit out
Amersham vent shaft satellite compound	Civil engineering works associated with the Amersham vent shaft and associated mitigation. Rail systems installation work at the Amersham vent shaft site Including headhouse fit out
Little Missenden vent shaft satellite compound	Civil engineering works associated with the Little Missenden vent shaft and associated mitigation.

Compound	Principal ac
	Rail system: shaft site In
Amersham vent shaft satellite compound	Civil engine shaft and as
	Rail system: site Includin
Chesham Road shaft satellite compound	Civil engine shaft and as
	Rail system: site Includin
Chiltern tunnel north portal satellite compound and Chiltern tunnel north portal satellite rail systems compound;	Installation engineering
systems compound,	Installation overhead lir
Chiltern tunnel north portal access road satellite compound	Construct th Chiltern tun
Leather Lane overbridge satellite compound	Manage the earthworks cutting and
Bowood Lane overbridge satellite compound (On boundary with Aylesbury Vale District Council)	Manage the Dean Viadu and its asso

Roadheads and Material Transfer Areas

- 2.22 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:
 - Each of the shafts in the District
 - At the Chiltern North tunnel portal
- 2.23 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.

ctivities

ns installation work at the Little Missenden vent ncluding headhouse fit out

eering works associated with the Amersham vent associated mitigation.

ns installation work at the Amersham vent shaft ng headhouse fit out

eering works associated with the Chesham Road associated mitigation.

ns installation work at the Chesham Road shaft ng headhouse fit out

of the Chiltern tunnel north portal and g works for the cutting.

of rail systems, portal buildings and fit out of ine equipment.

the temporary access road from the A413 to the nnel north portal.

e civil engineering earthworks, landscape and mitigation associated with the South Heath associated overbridges.

e civil engineering earthworks for the Wendover Jct (in adjacent Aylesbury Vale District Council) ociated approach embankments and earthworks.

Demolition Works

2.24 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
Pylons in proximity to the M25 which will be replaced	In proximity to M25
Two pylons associated with the overhead line realignment	Chiltern South portal
one residential building and four associated outbuildings at one property	Mulberry Park Hill, located off Potter Row

Archaeology

- 2.25 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.
- 2.26 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).
- 2.27 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

2.28 Geological investigations and intrusive site investigations (involving boreholes and trial pits) will be undertaken where necessary, to inform the detailed design. Some geotechnical investigation has also already been undertaken within the Chiltern district.

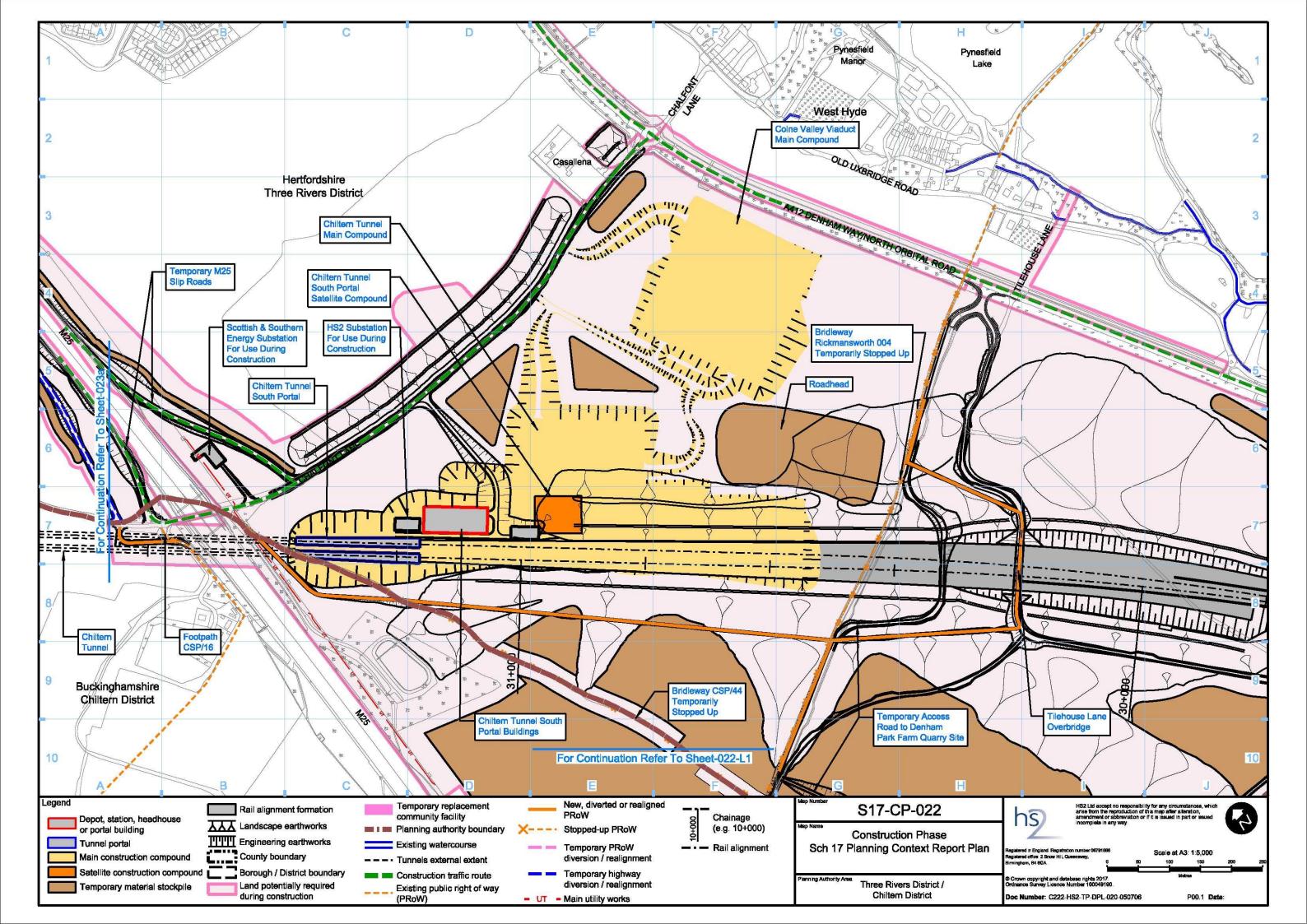
3 Landscape and Restoration

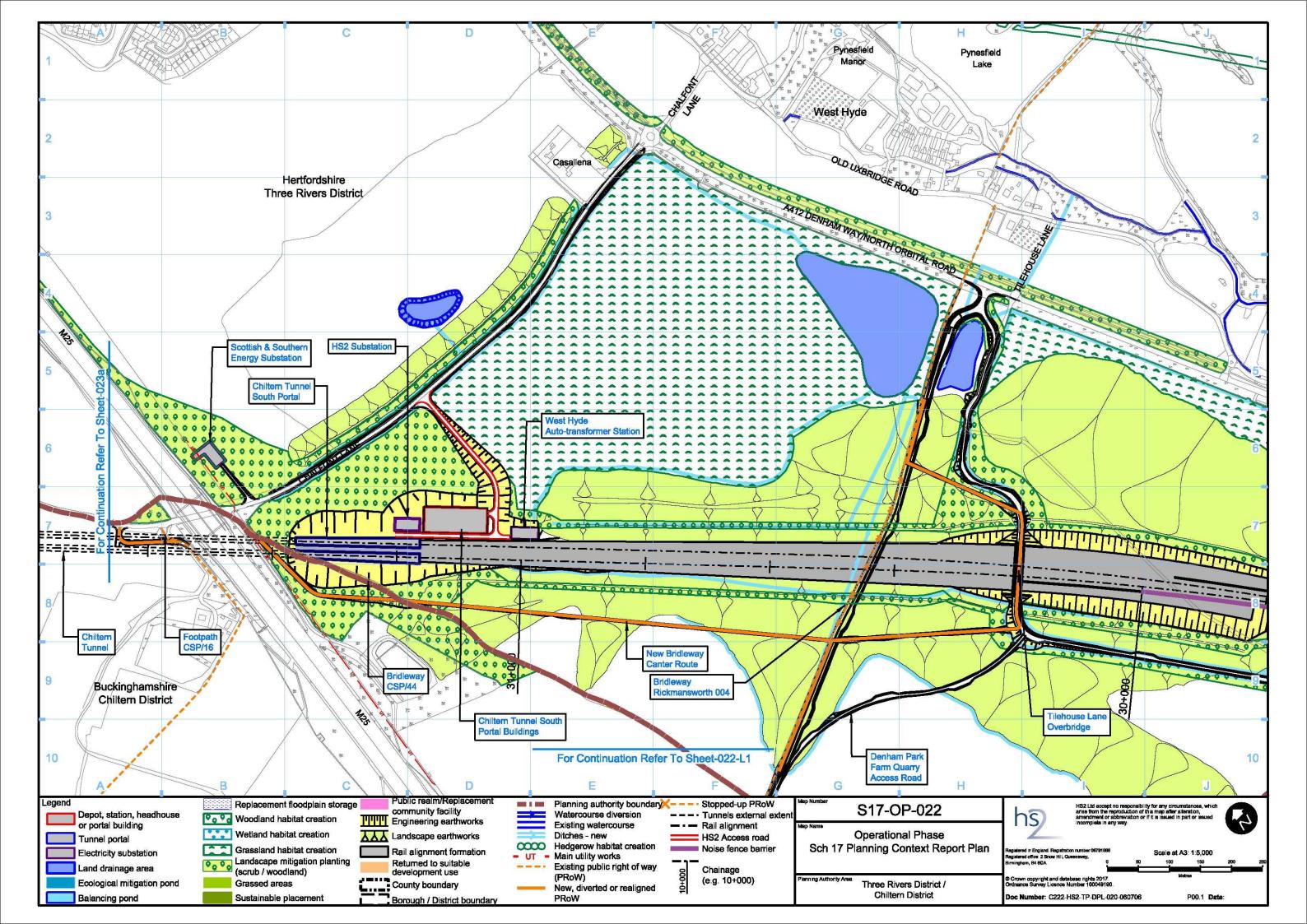
- 3.1 Different landscape types will be incorporated into HS2 works at various stages of the project. Some early landscape works may be proposed – for example new planting to compensate for the loss of prior habitat or to help integrate HS2 into the surrounding landscape. Planting and landscape techniques 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.

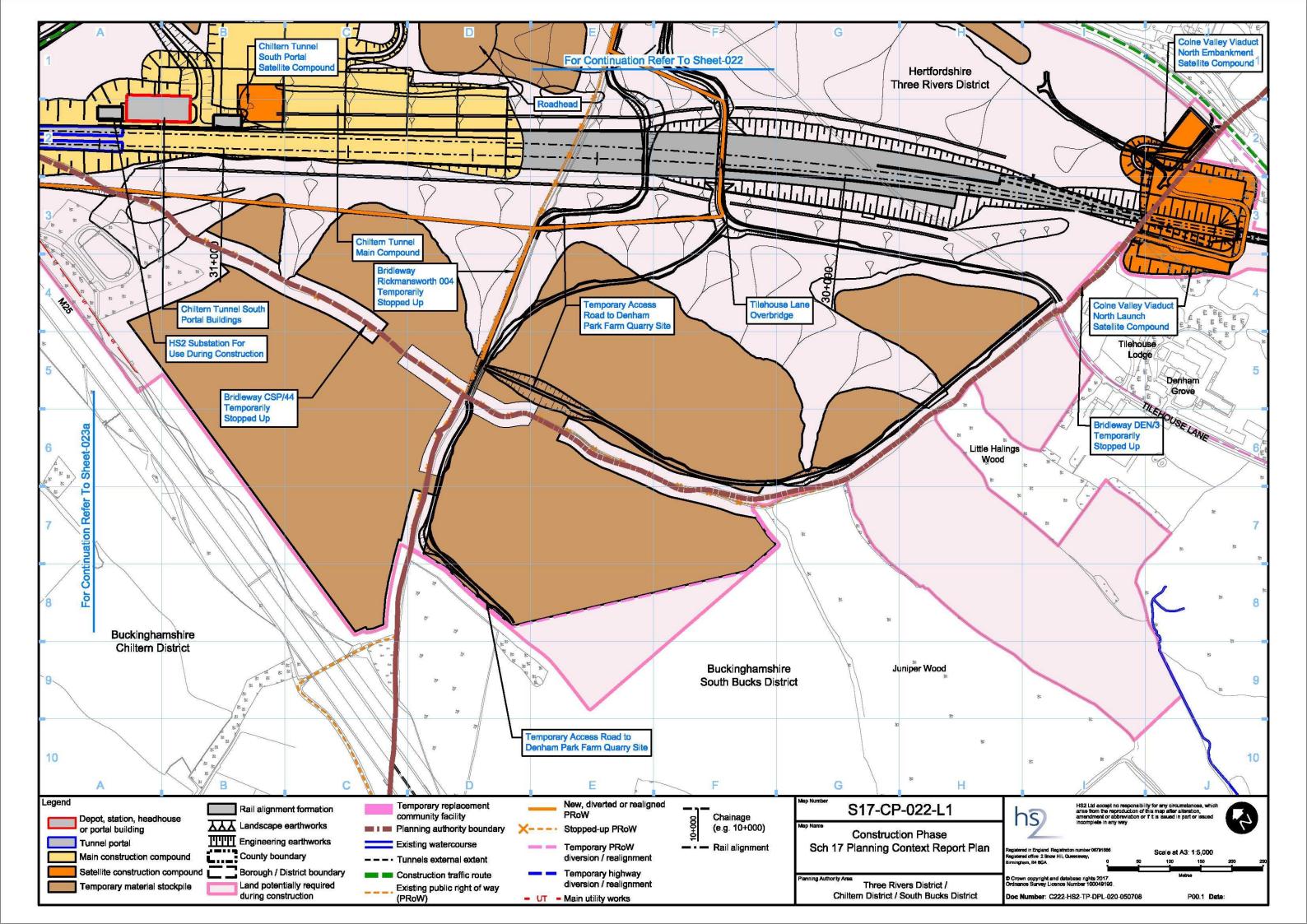
4 Schedule 17 Requests for Approval – Programme

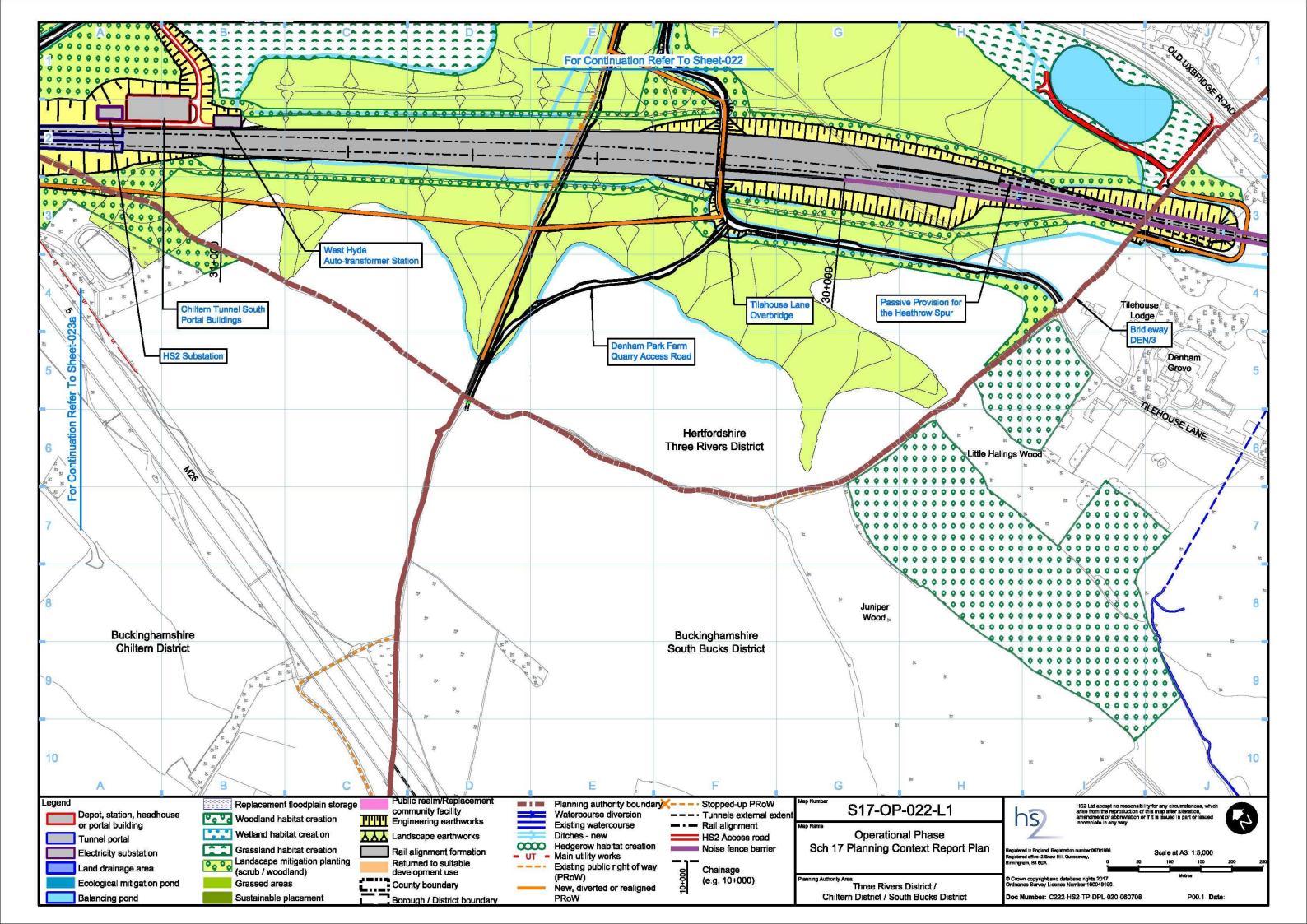
Requests for Approval		.017 qu	uartei	ſS	20	18 qu	arter	S	2019	quar	ters	2	2020 q	uarte	rs	2021 quarters				20	022 qu	Jarters		2023 quarte	ers		2024	4 qua	arters	20	5	20	Jarte	arters			
	1	2	3	4	1	2	3	4	1 2	2 3	3 4	1	2	3	4	1	2	3	4	1	2	3	4	1 2 3		,	1	2	3 4	1	2	3	4	1	2	3	4
Plans & Specifications																																					
Works associated with any permanent Chalfont Lane/Shire Lane Works																															·						
Habitat creation at Chalfont St Peter Vent Shaft																																					
Habitat creation at South Portal for Badger Set creation																																					
Chiltern Tunnel South Portal cutting and earthworks and porous portal structures																																					
Chalfont St Peter Vent Shaft (Earthworks/Headhouse)																																				ļ	
Works to Bottom House Lane																																					
Chalfont St Giles Vent Shaft (Earthworks/Headhouse/Transformer)																																					
Amersham Vent Shaft (Access/Earthworks/ Headhouse)																																					
Little Missenden Vent Shaft (Access/Earthworks/ Headhouse/ Transformer)																																					
Chesham Vent Shaft (Earthworks/Headhouse/ Transformer)																																					
Chiltern tunnel North Portal earthworks/portal buildings and porous portal/landscape mitigation earthworks and midpoint autotransformer feeder station																																					
Mitigation planting and ponds to the south and north of the South Heath Cutting																																					
South heath cutting and culverts																																				<u> </u>	
GMI/12 Overbridge and Leather Lane overbridge and approach ramps																																					
Cottage farm overbridge																																				 	_
South Heath ATS															\parallel															\square						ļ	
Bowood Lane Overbridge																																					
Bringing into use																																					
Lorry routes																																	\square			 	
Class approval																																				L	

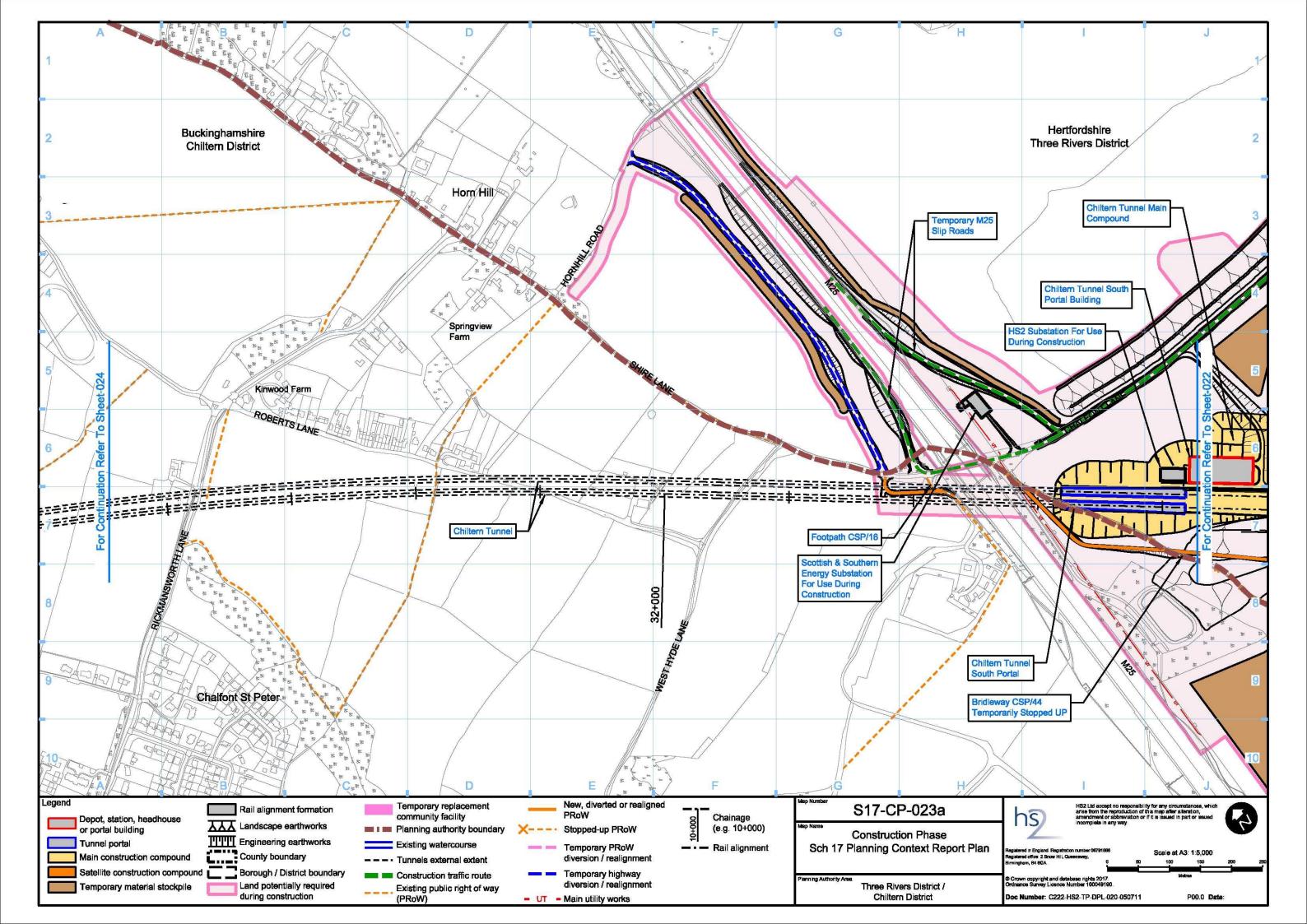
5 Planning Context Report Plans – Construction and Operation

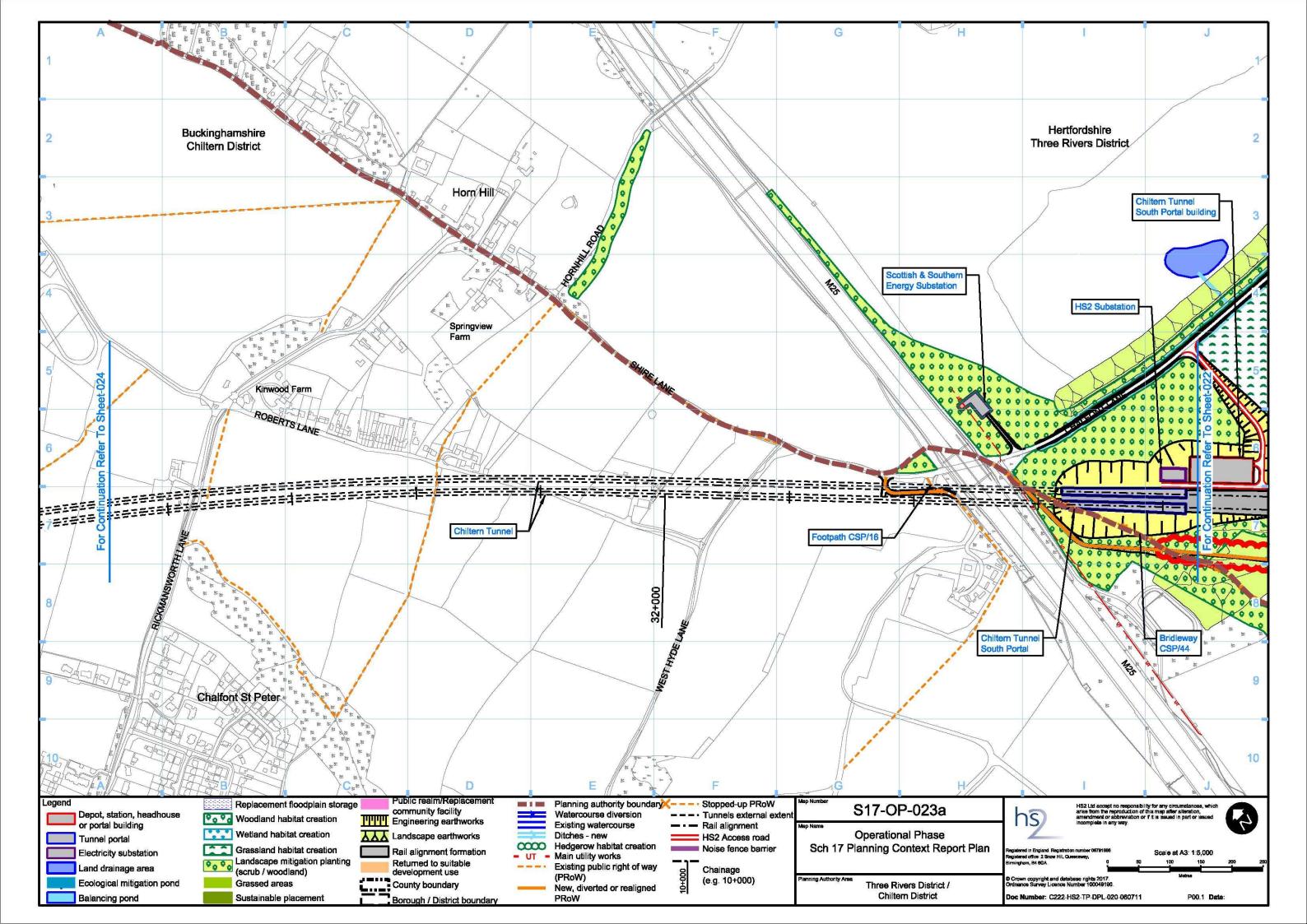


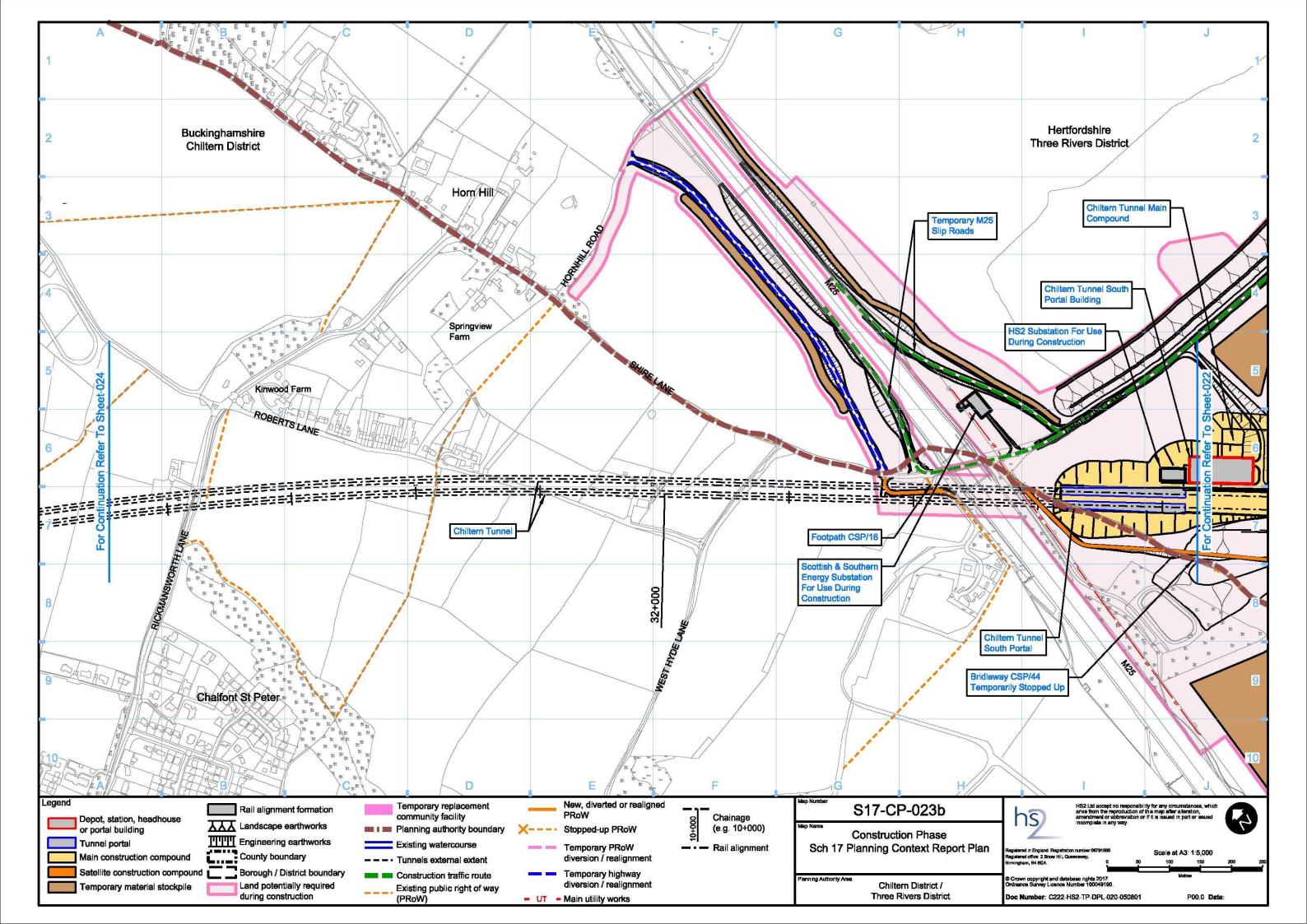


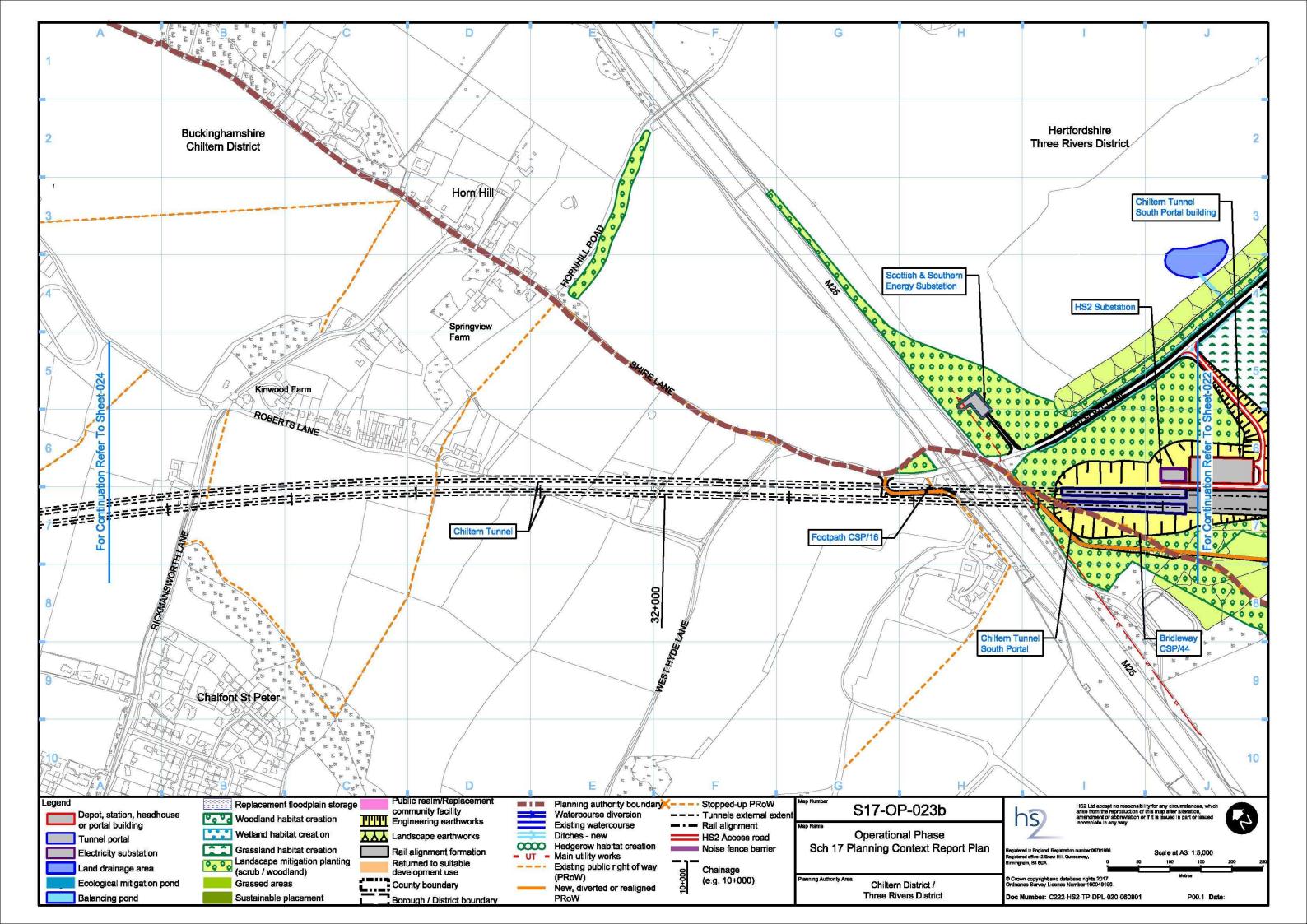


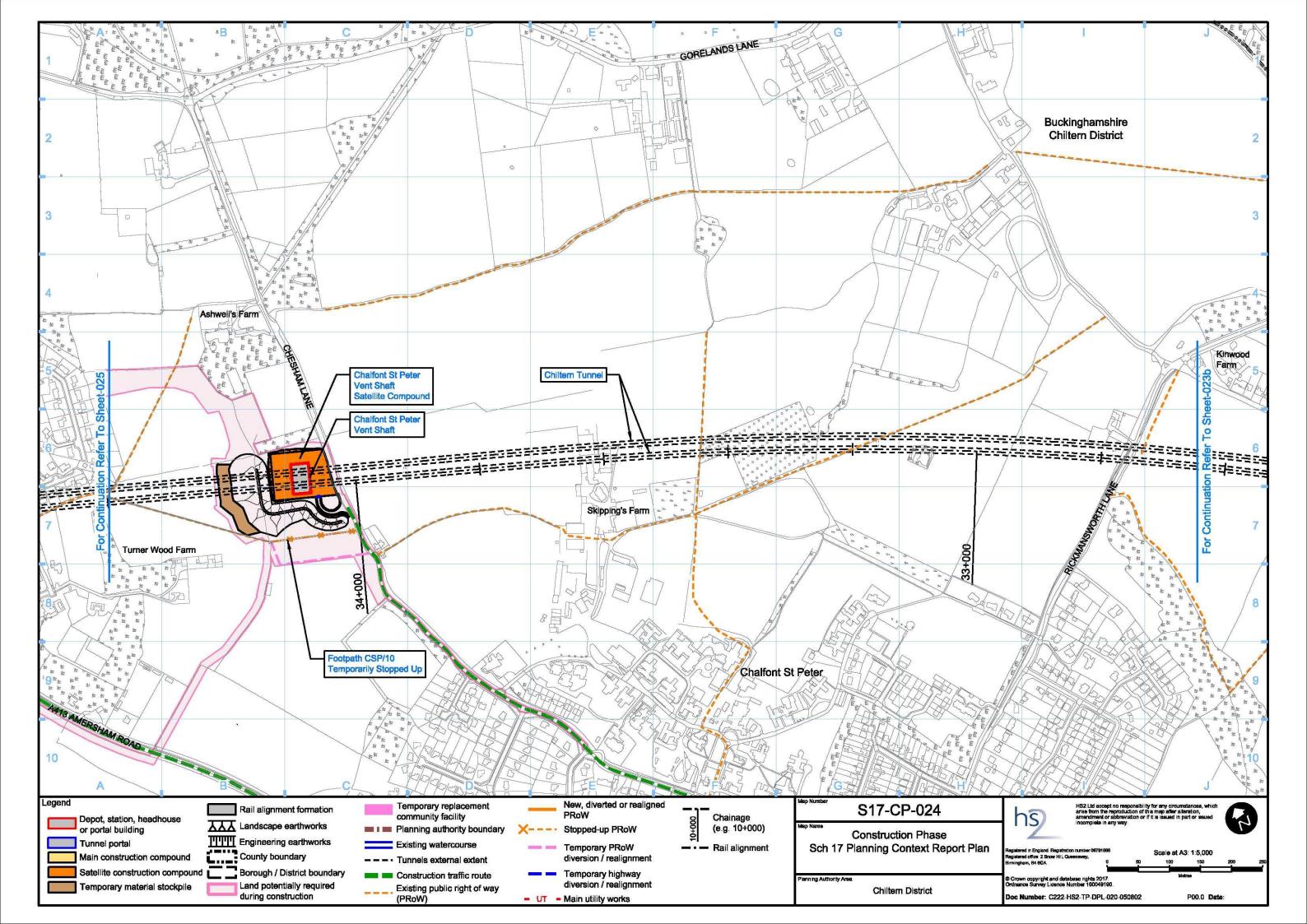


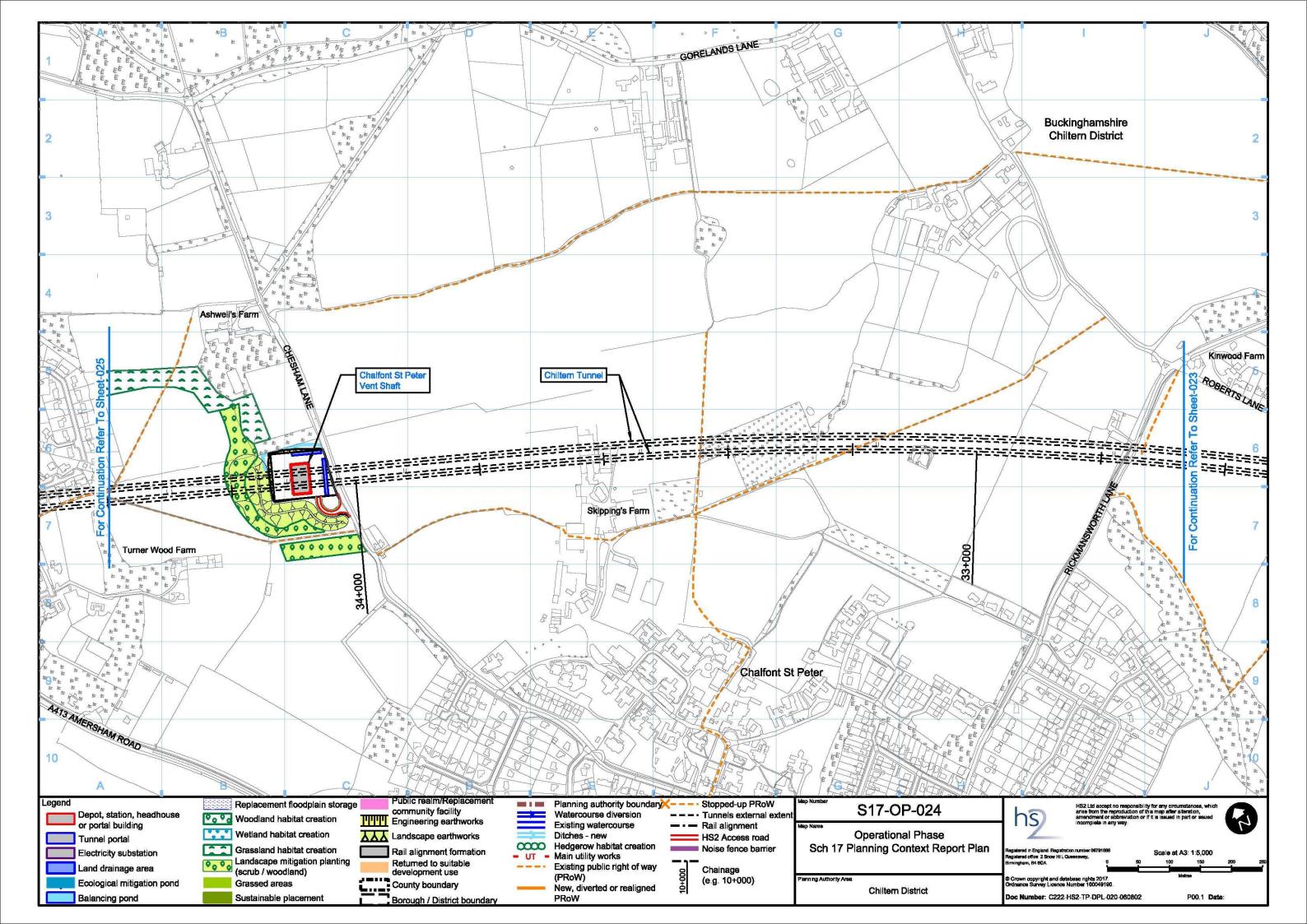


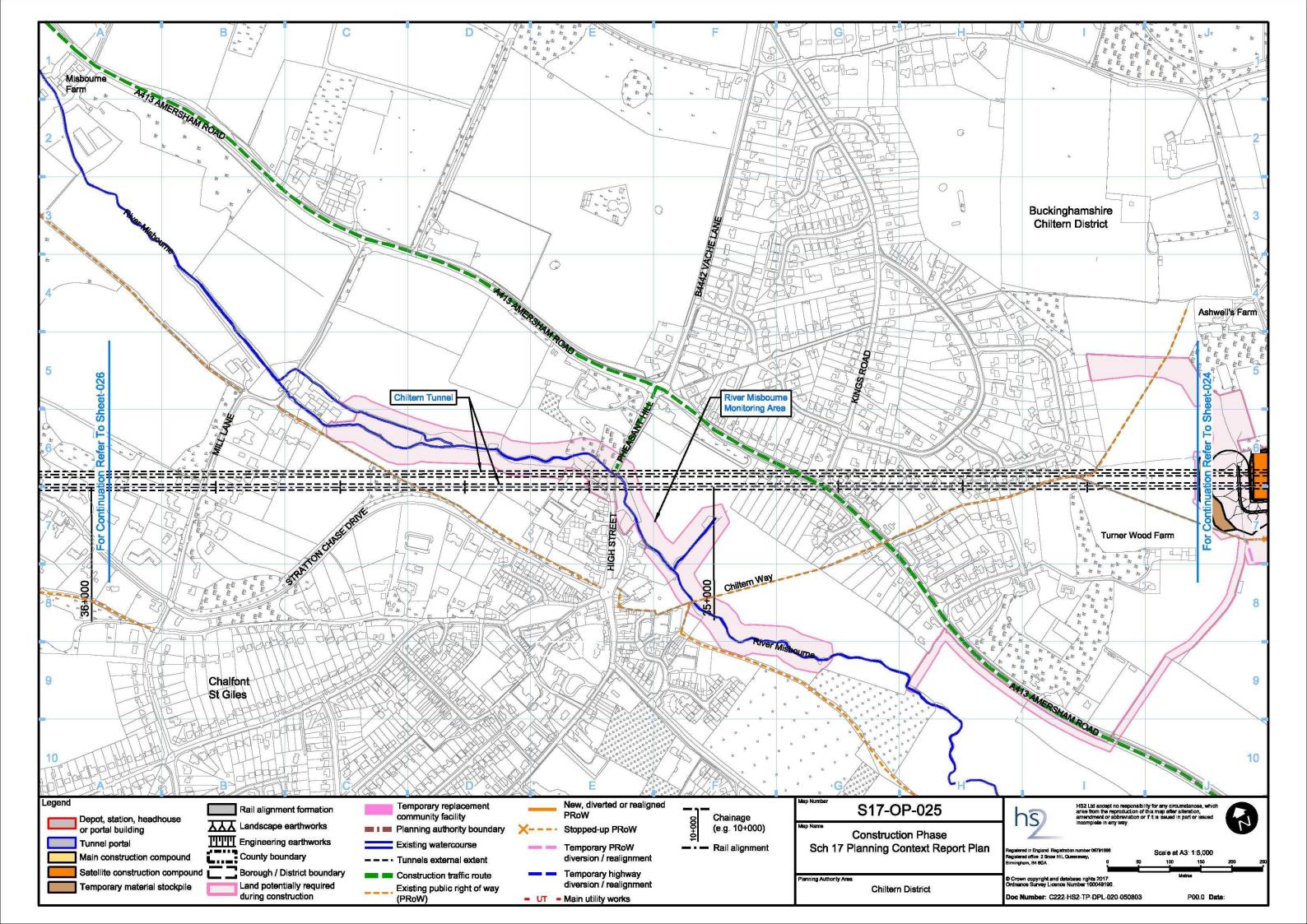


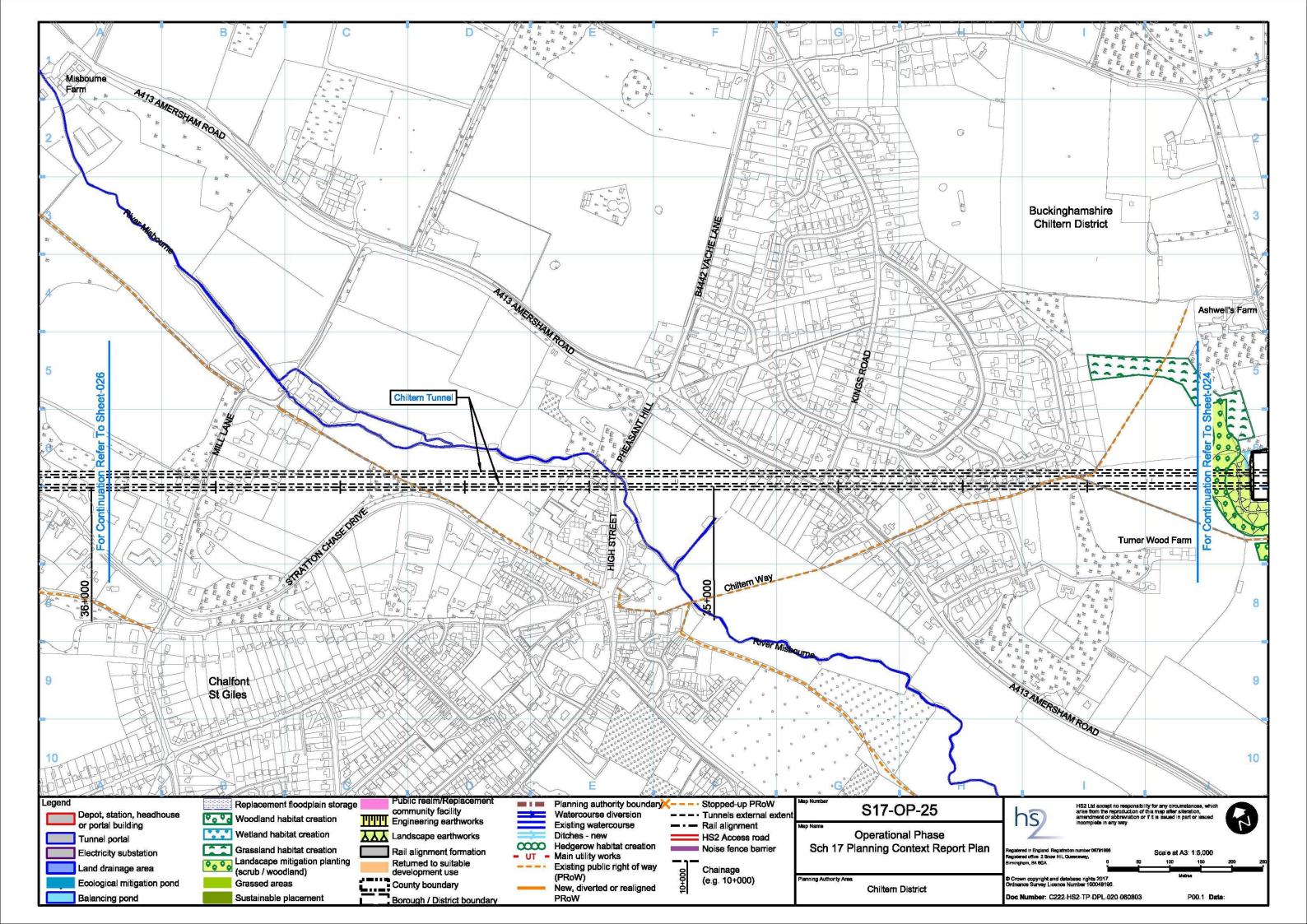


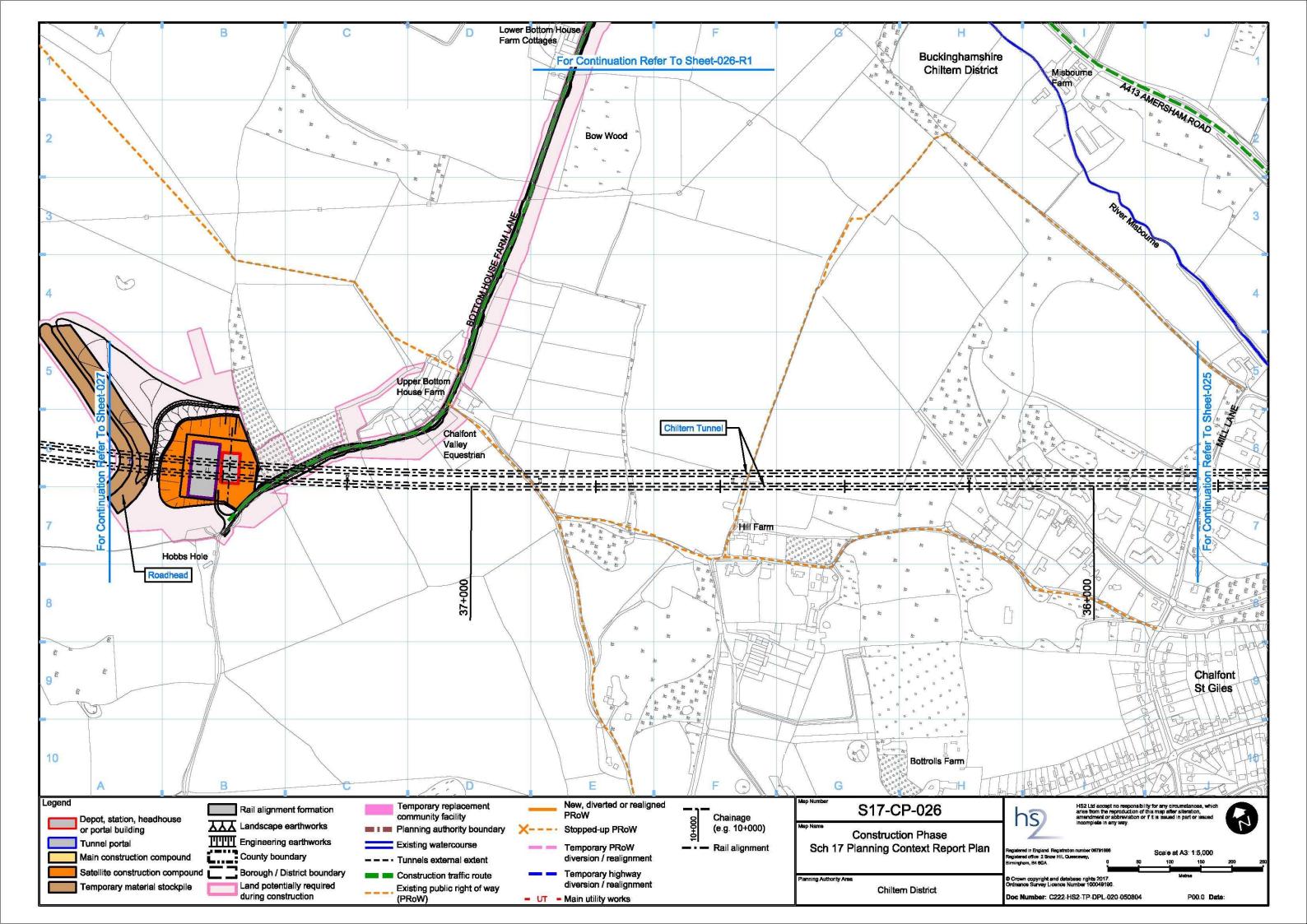


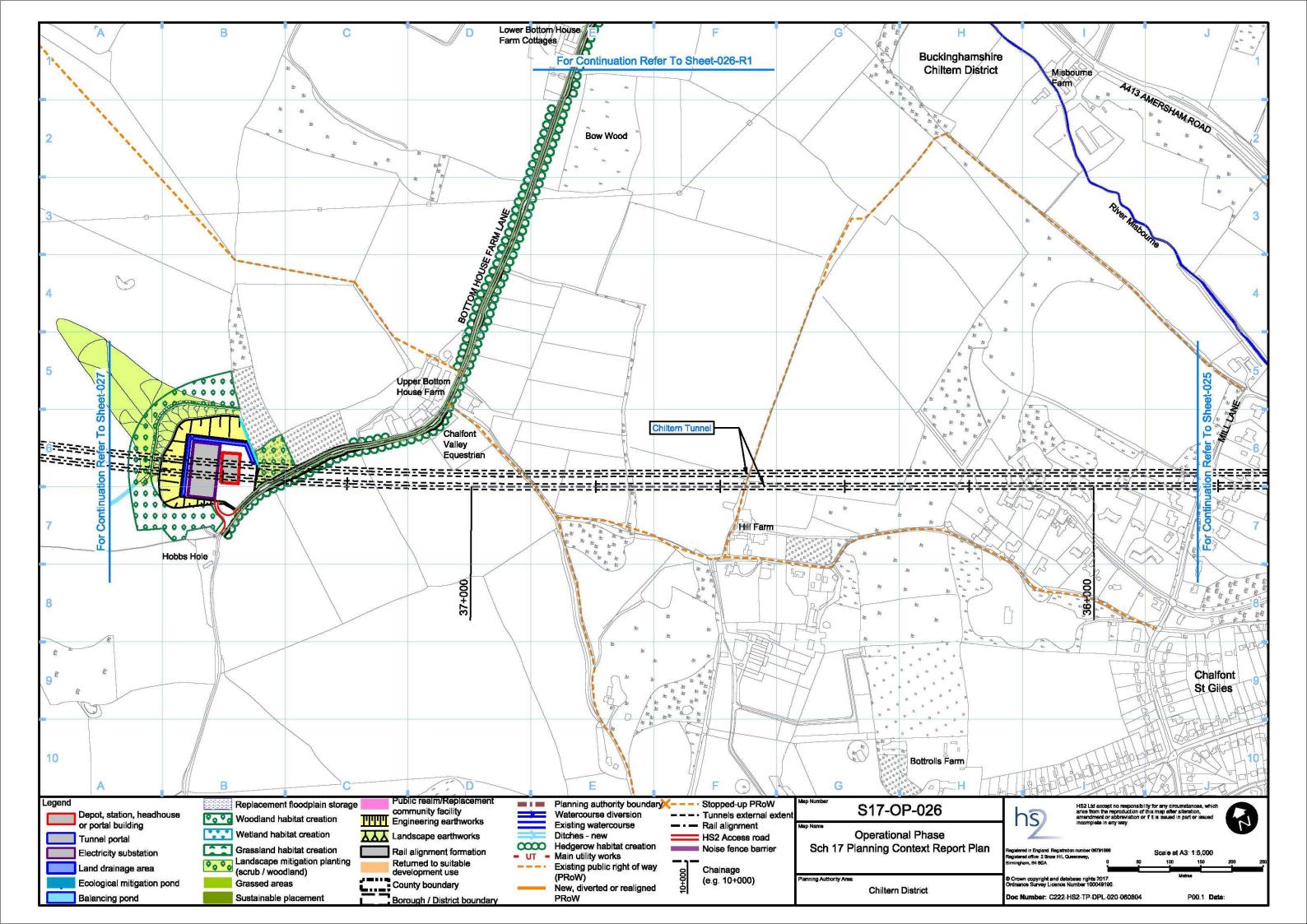


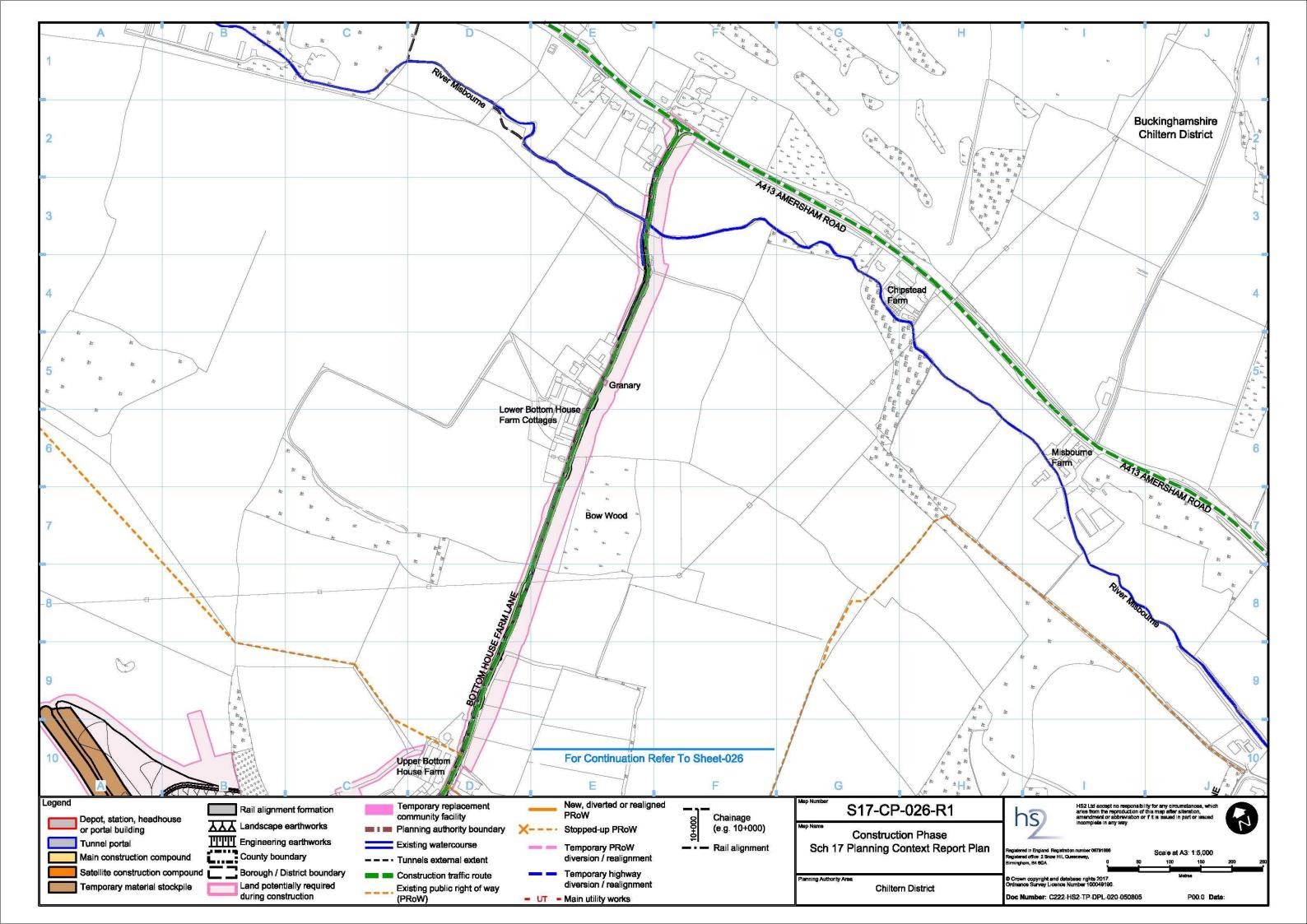


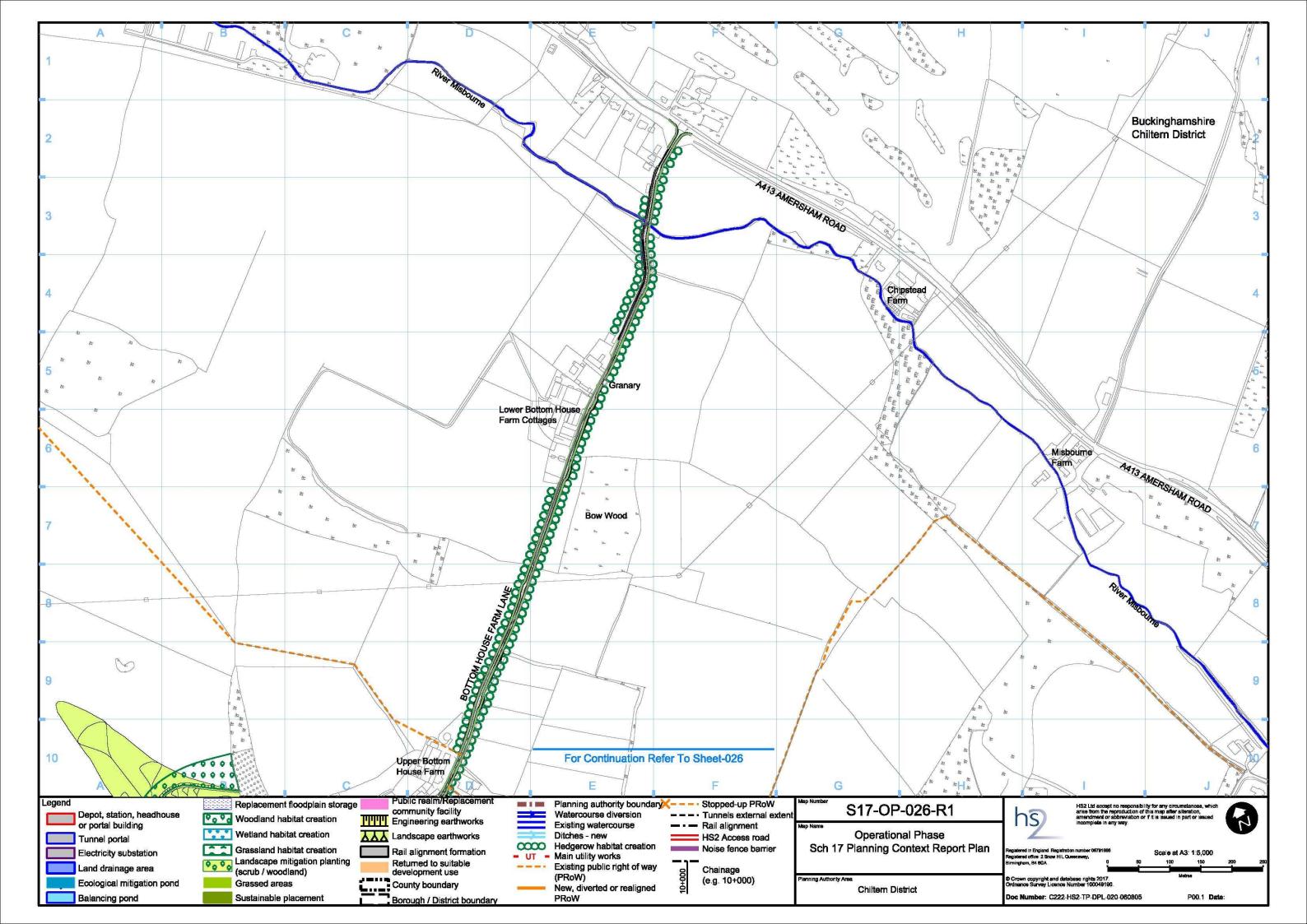


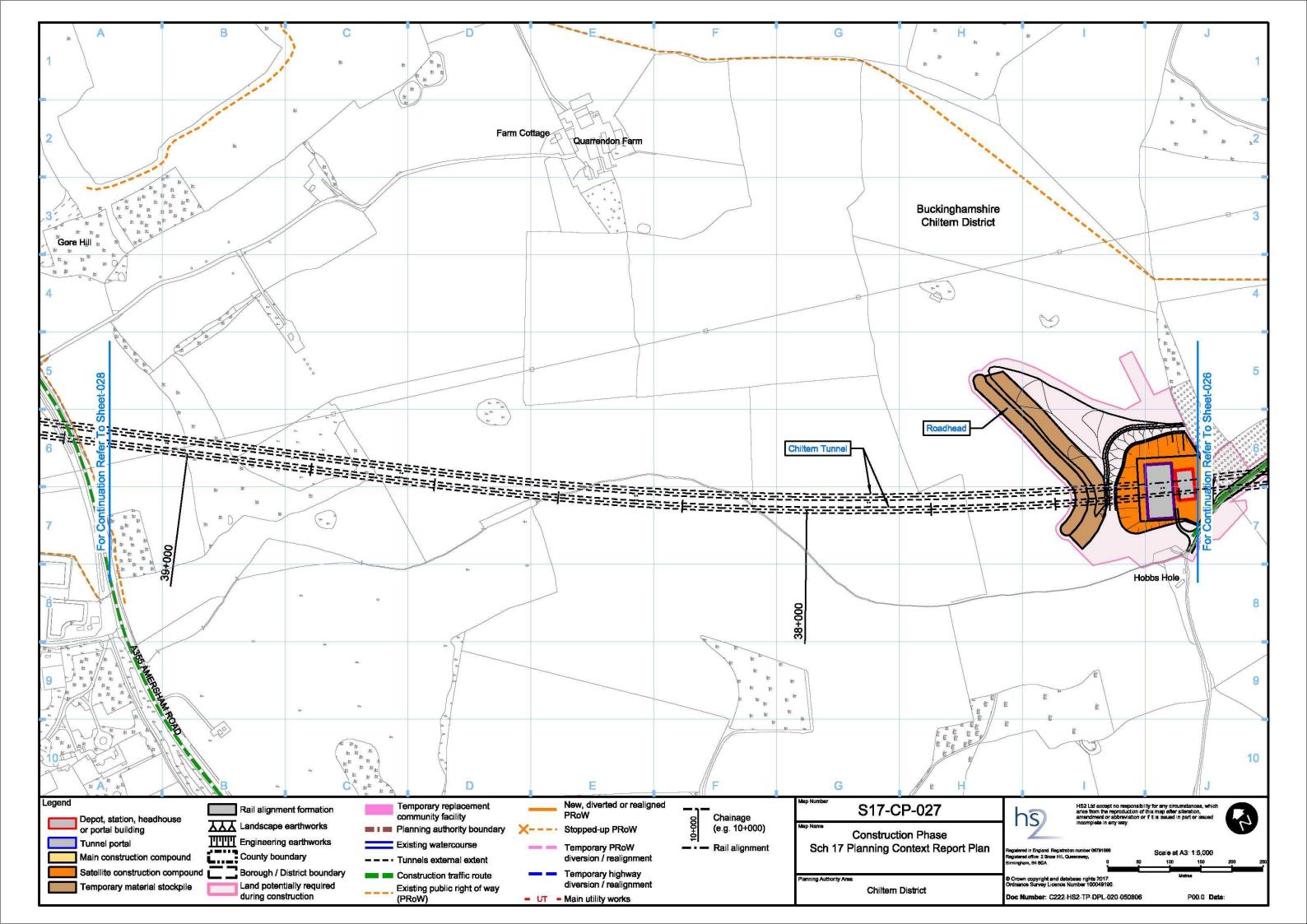


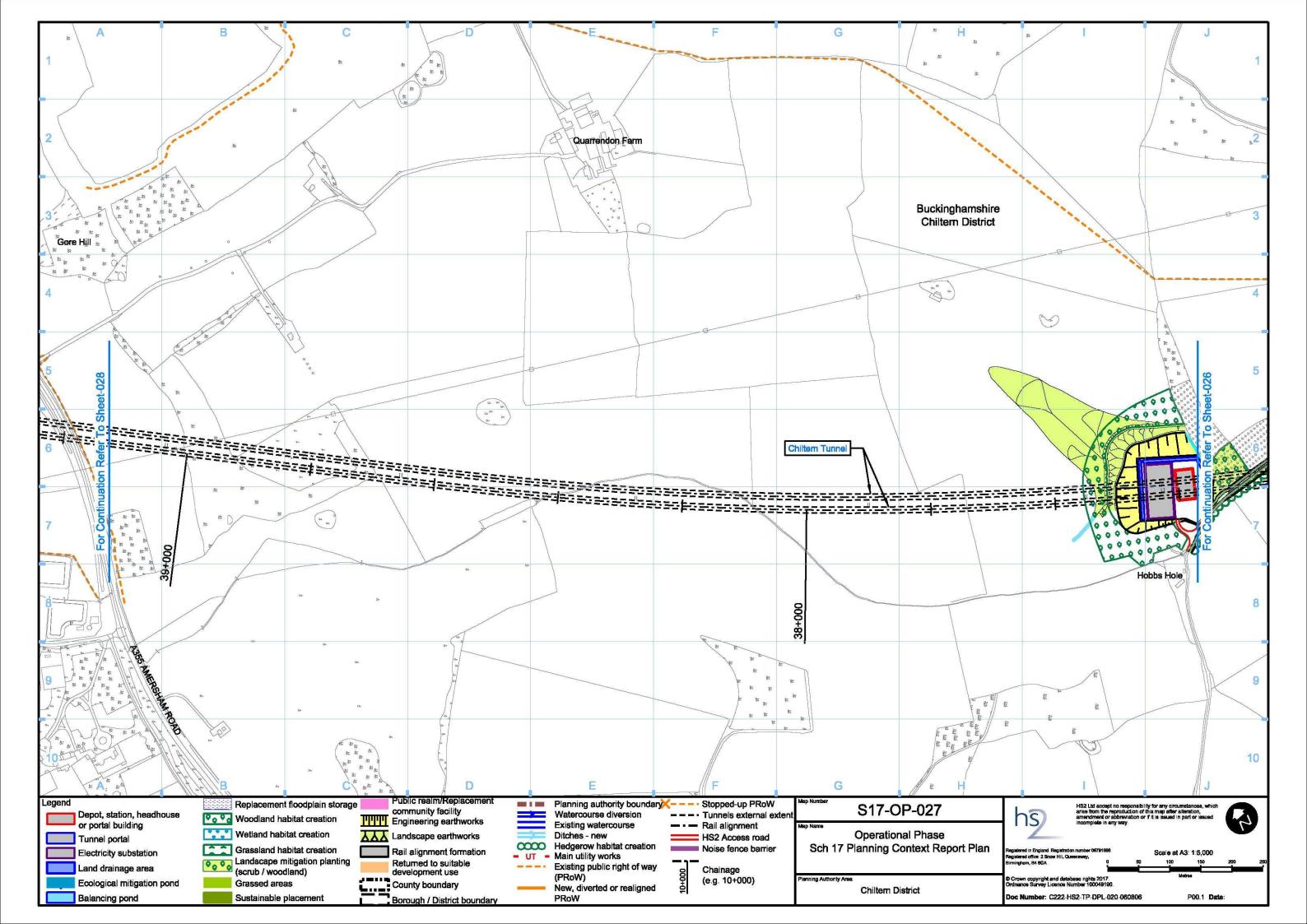


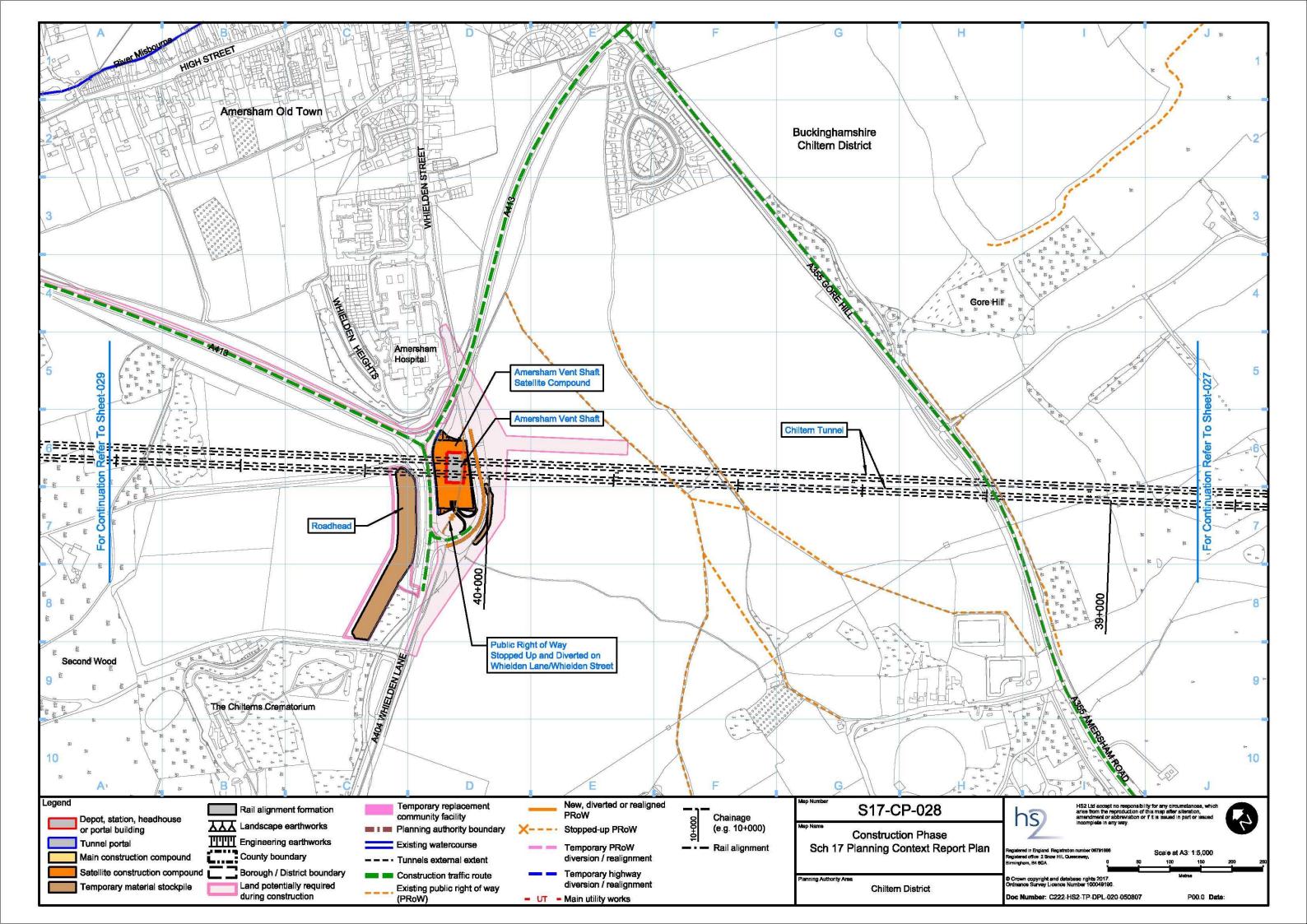


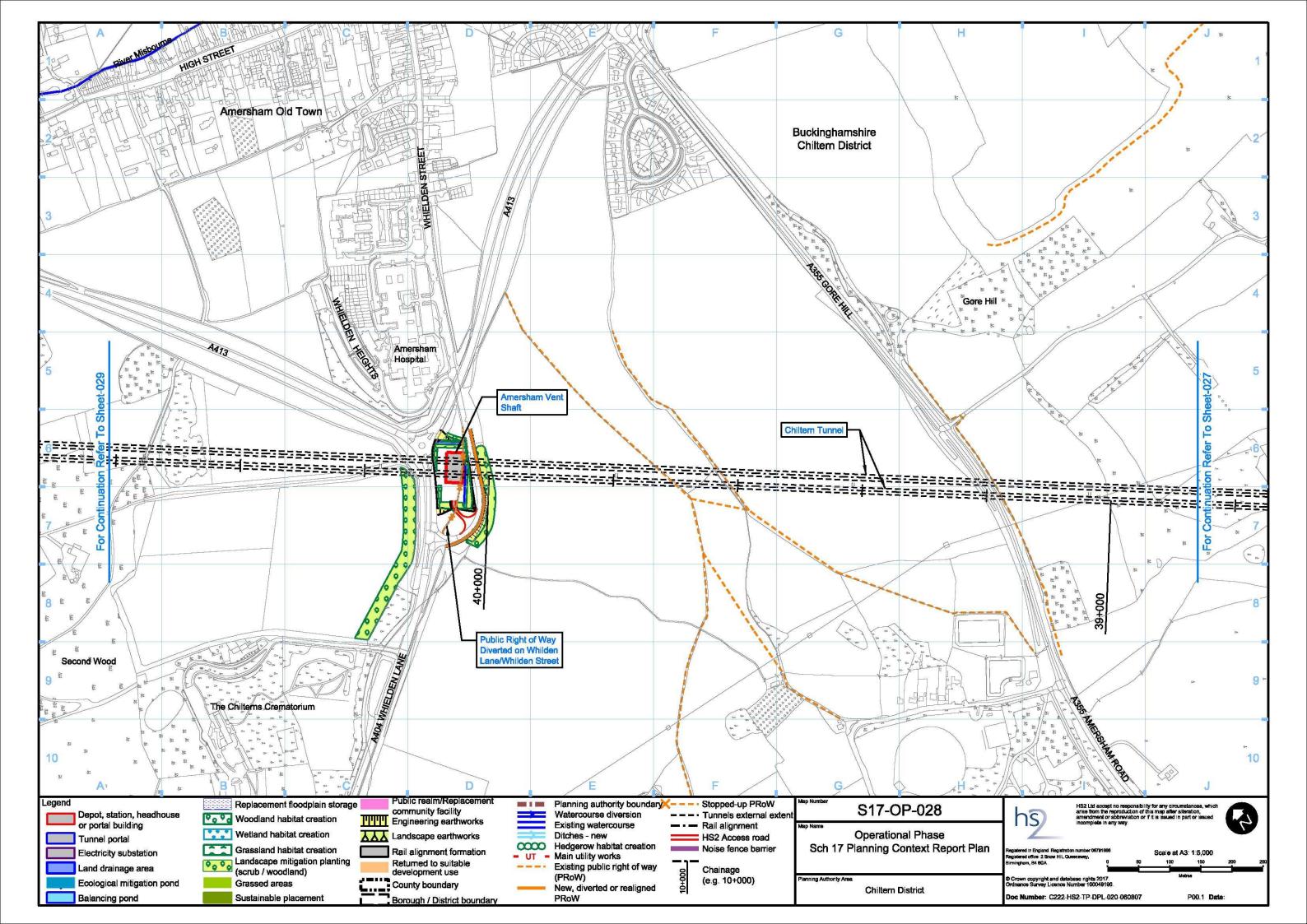


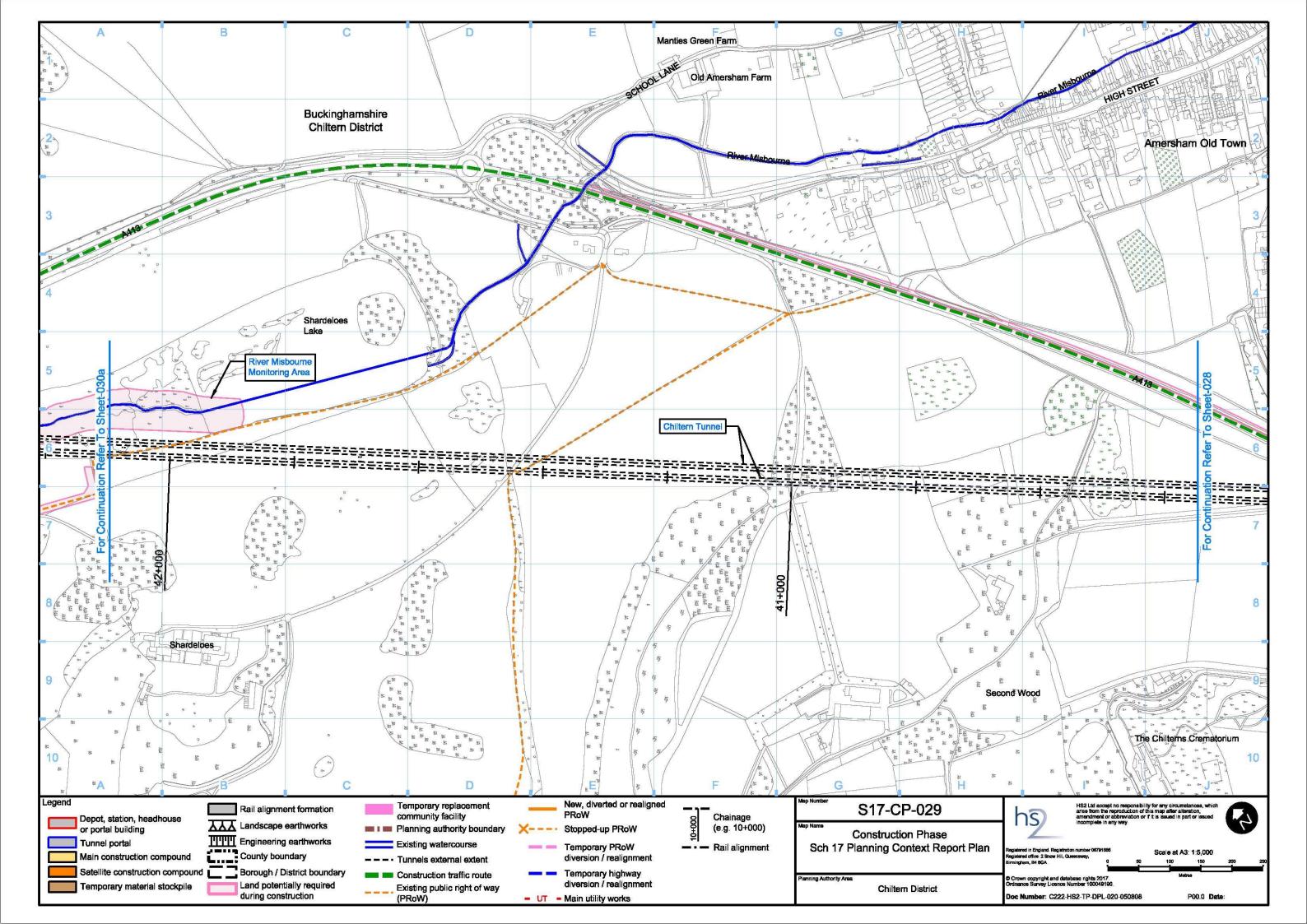


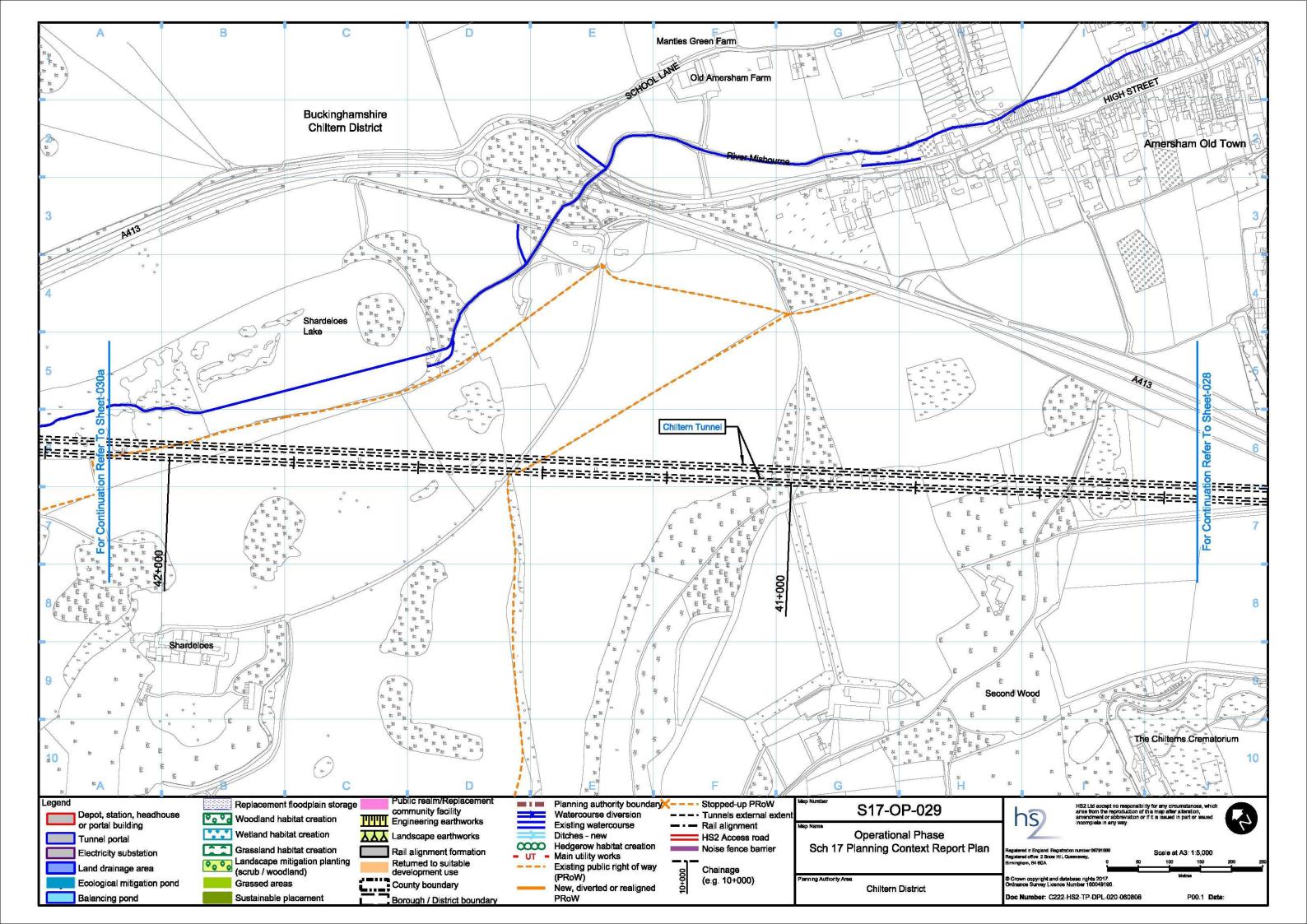


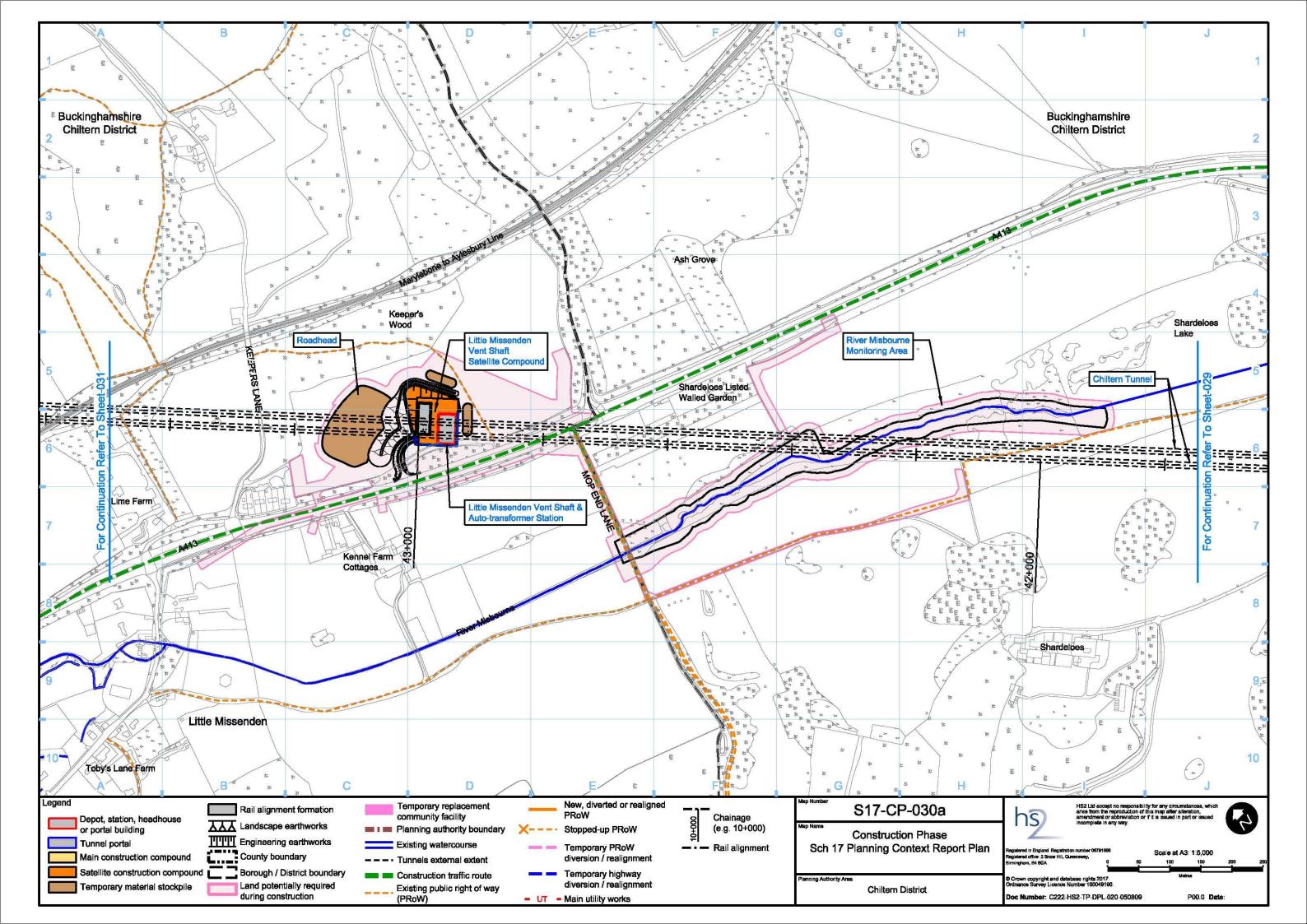


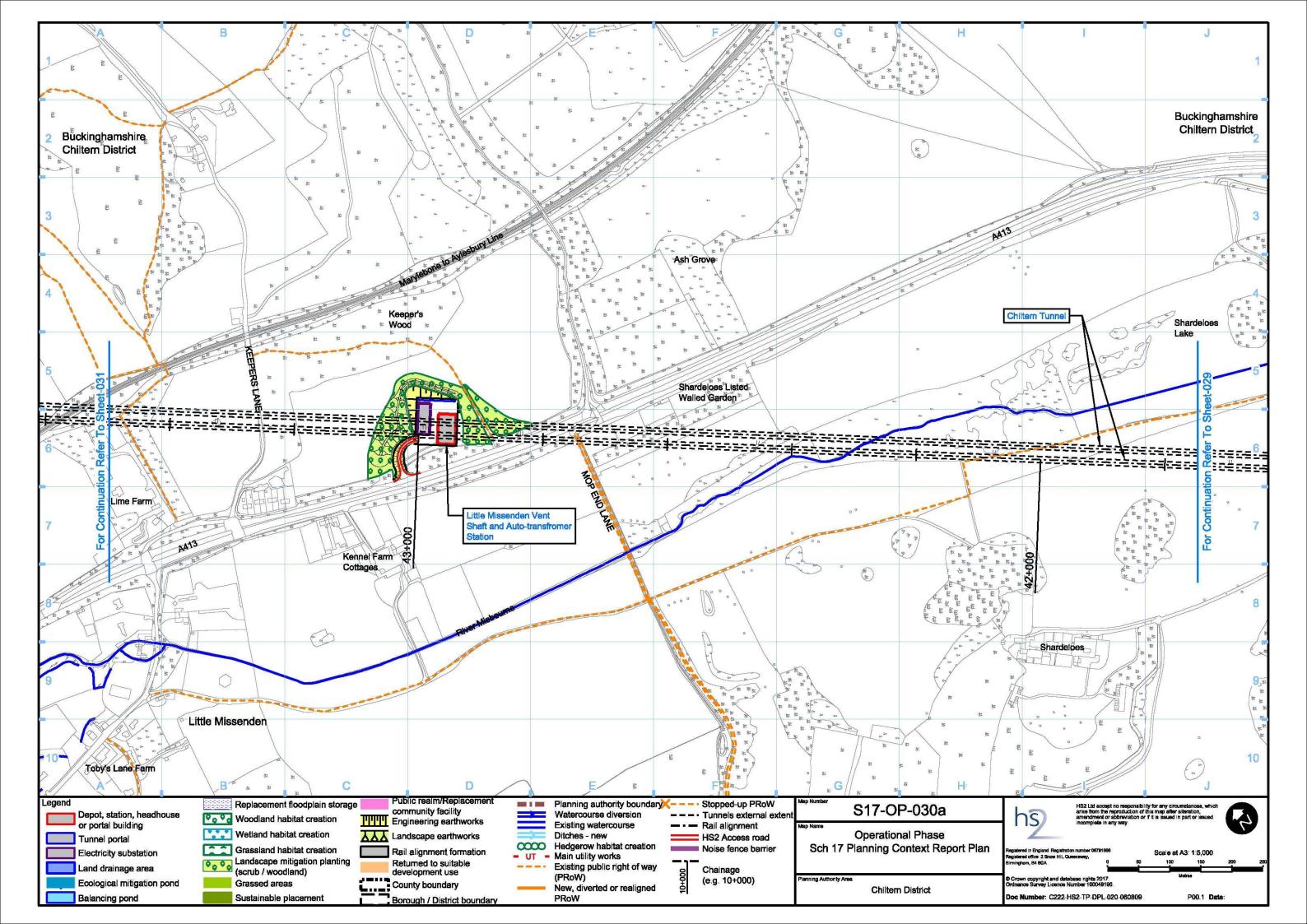


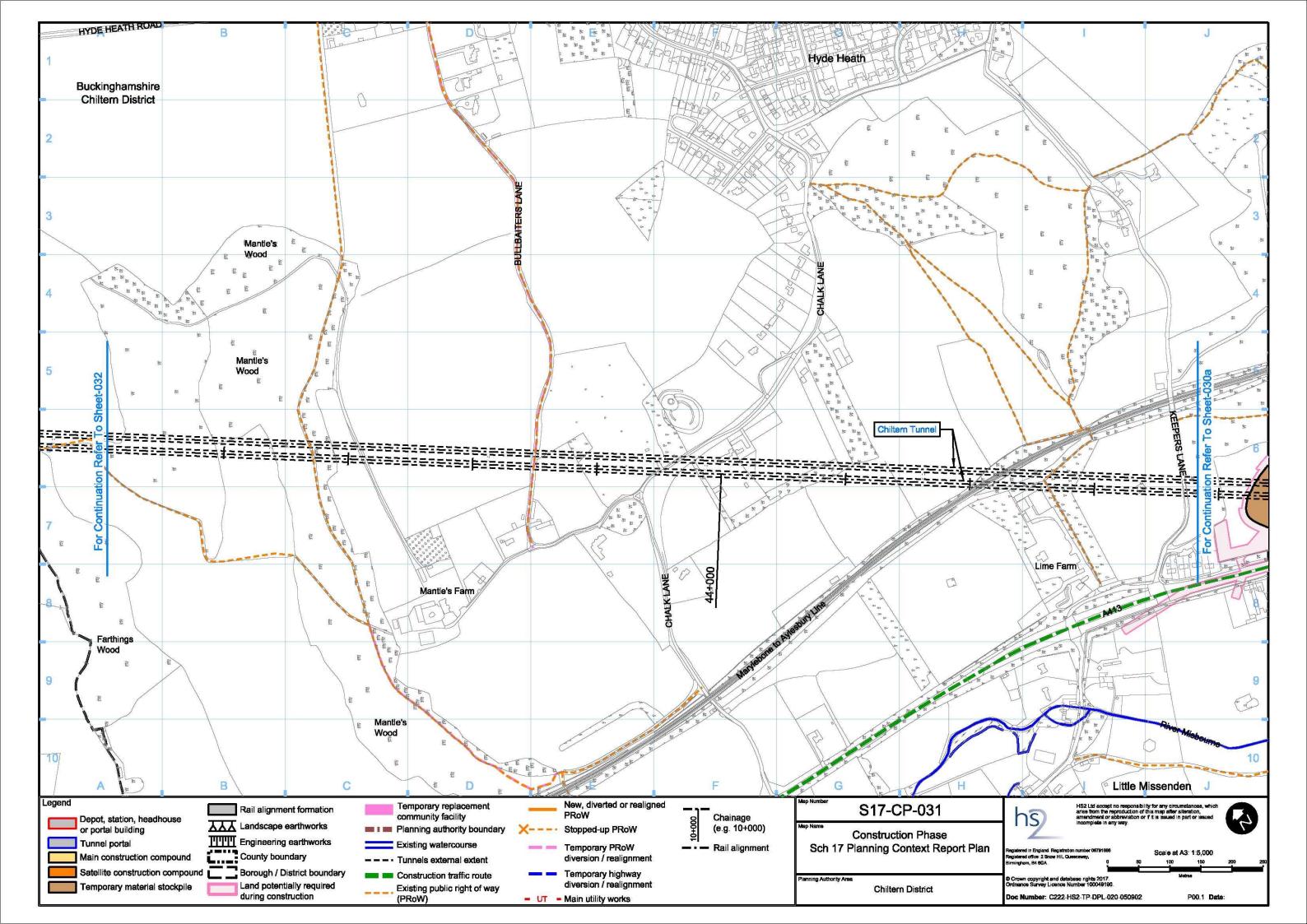


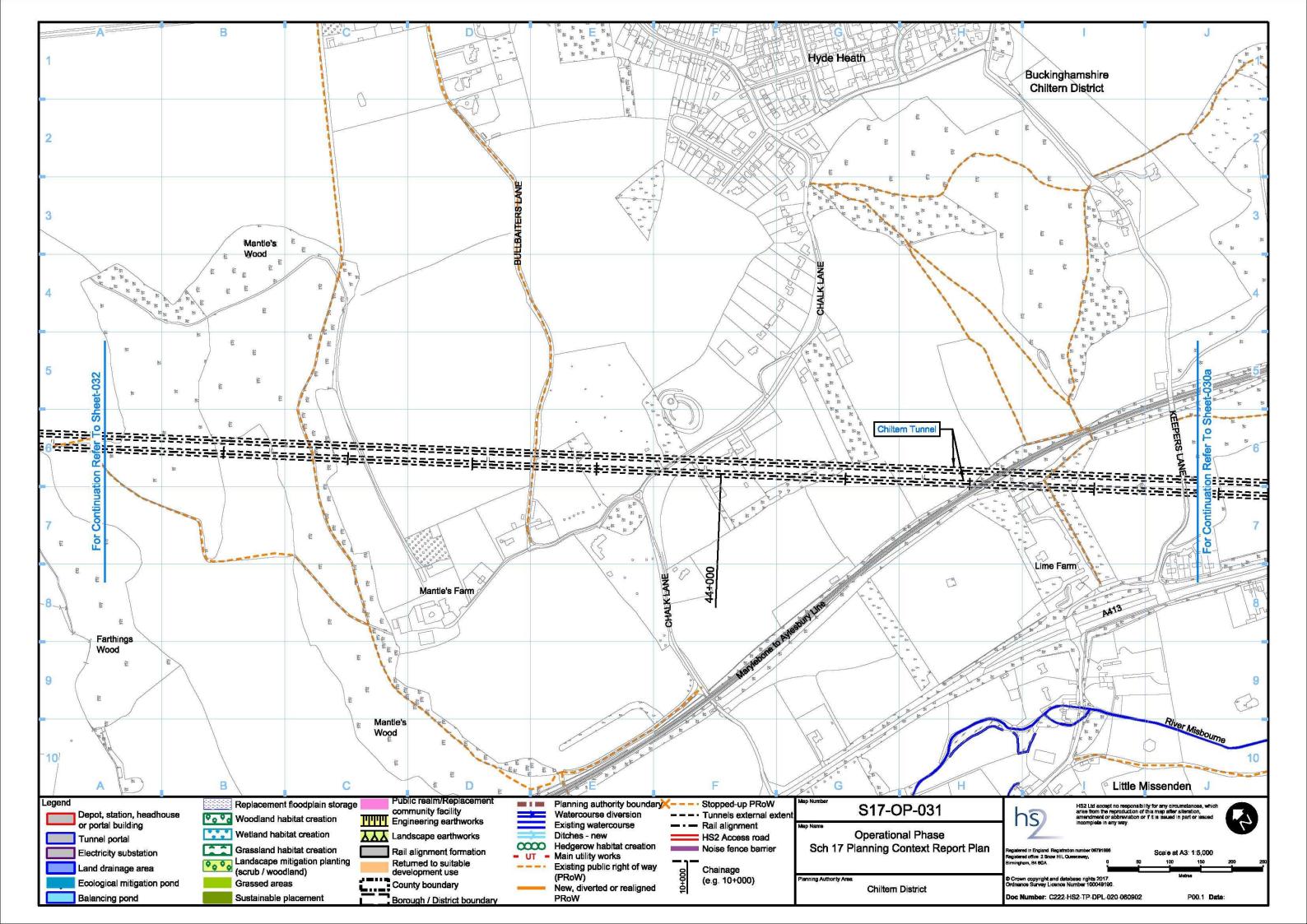


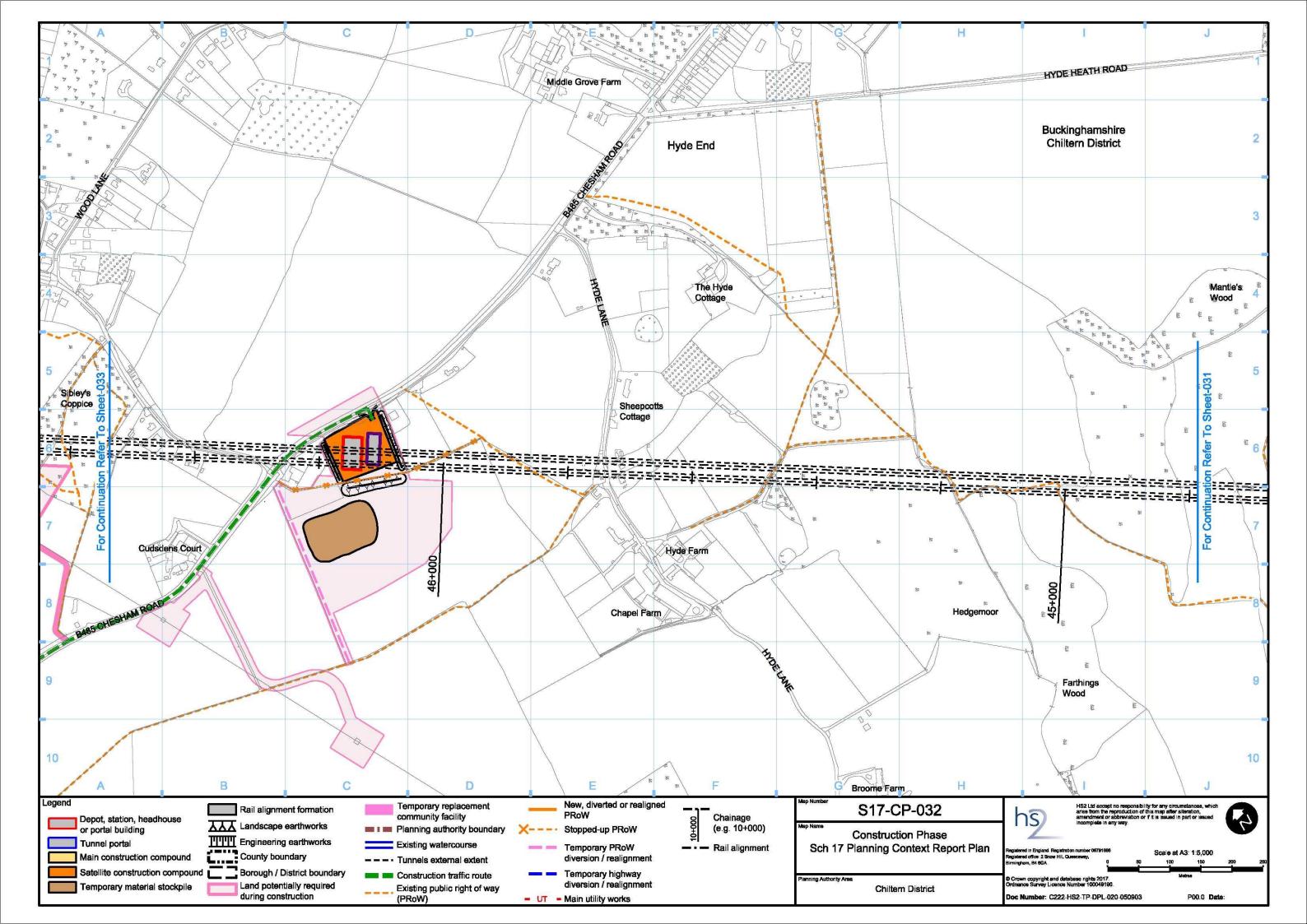


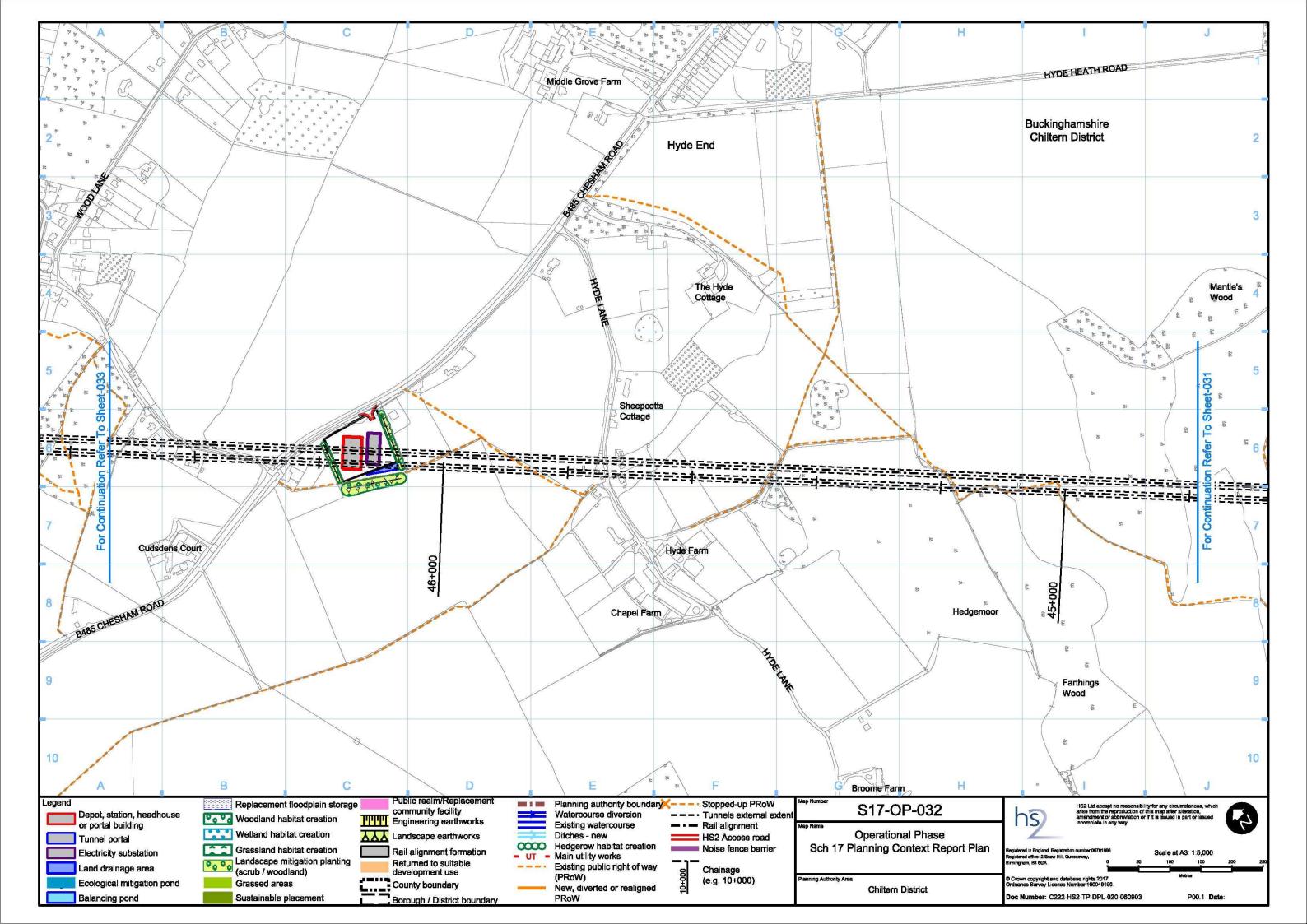


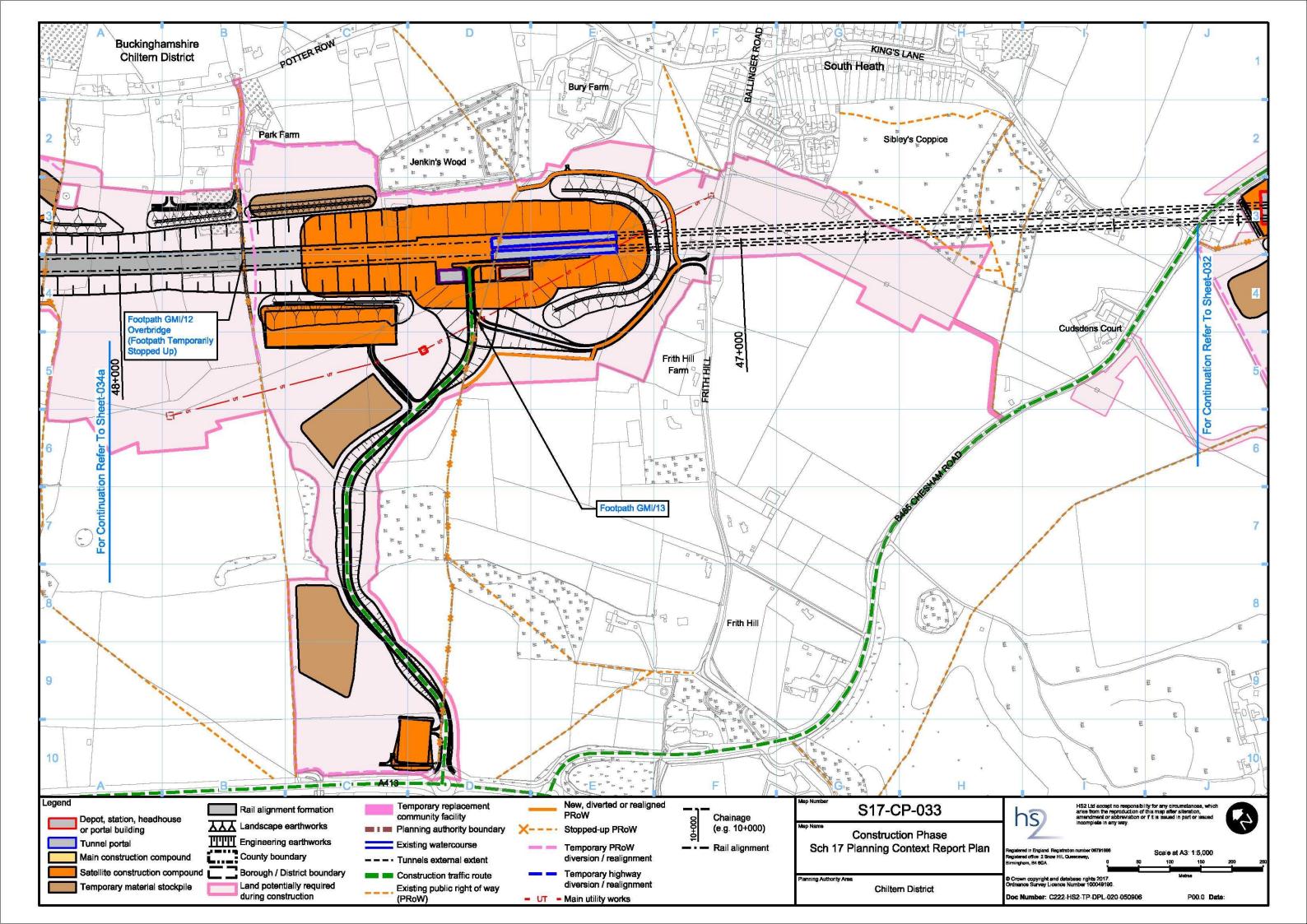


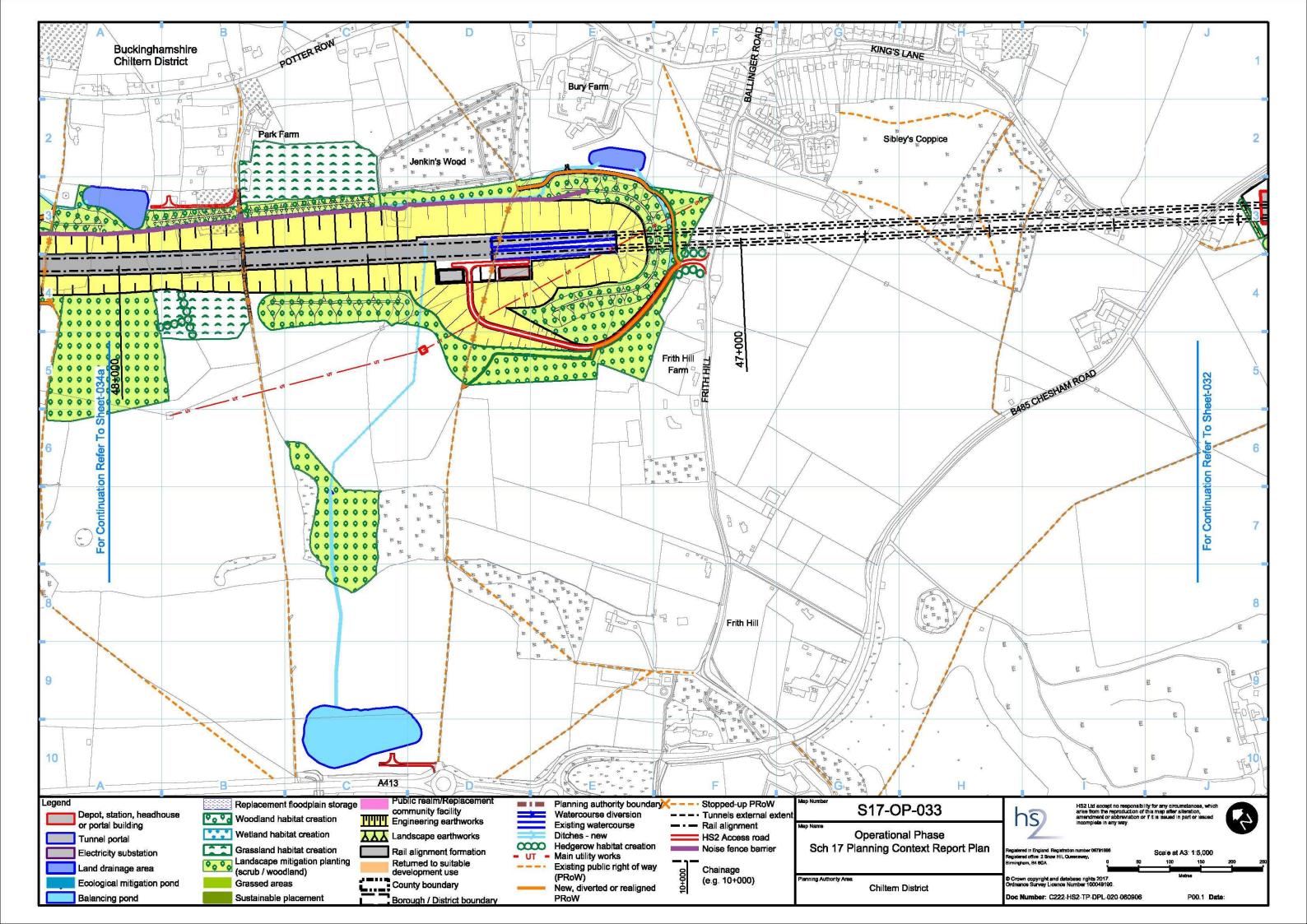


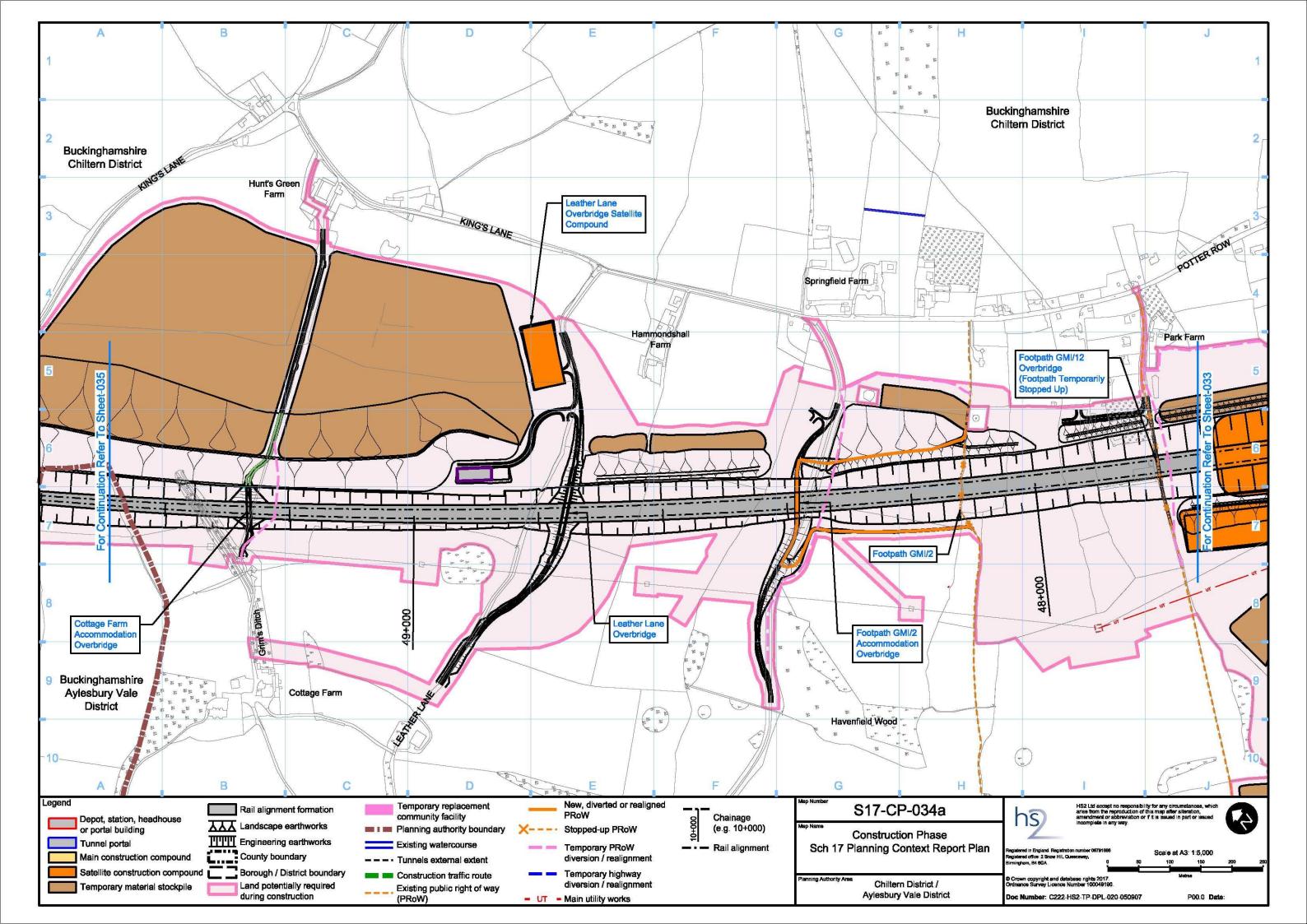


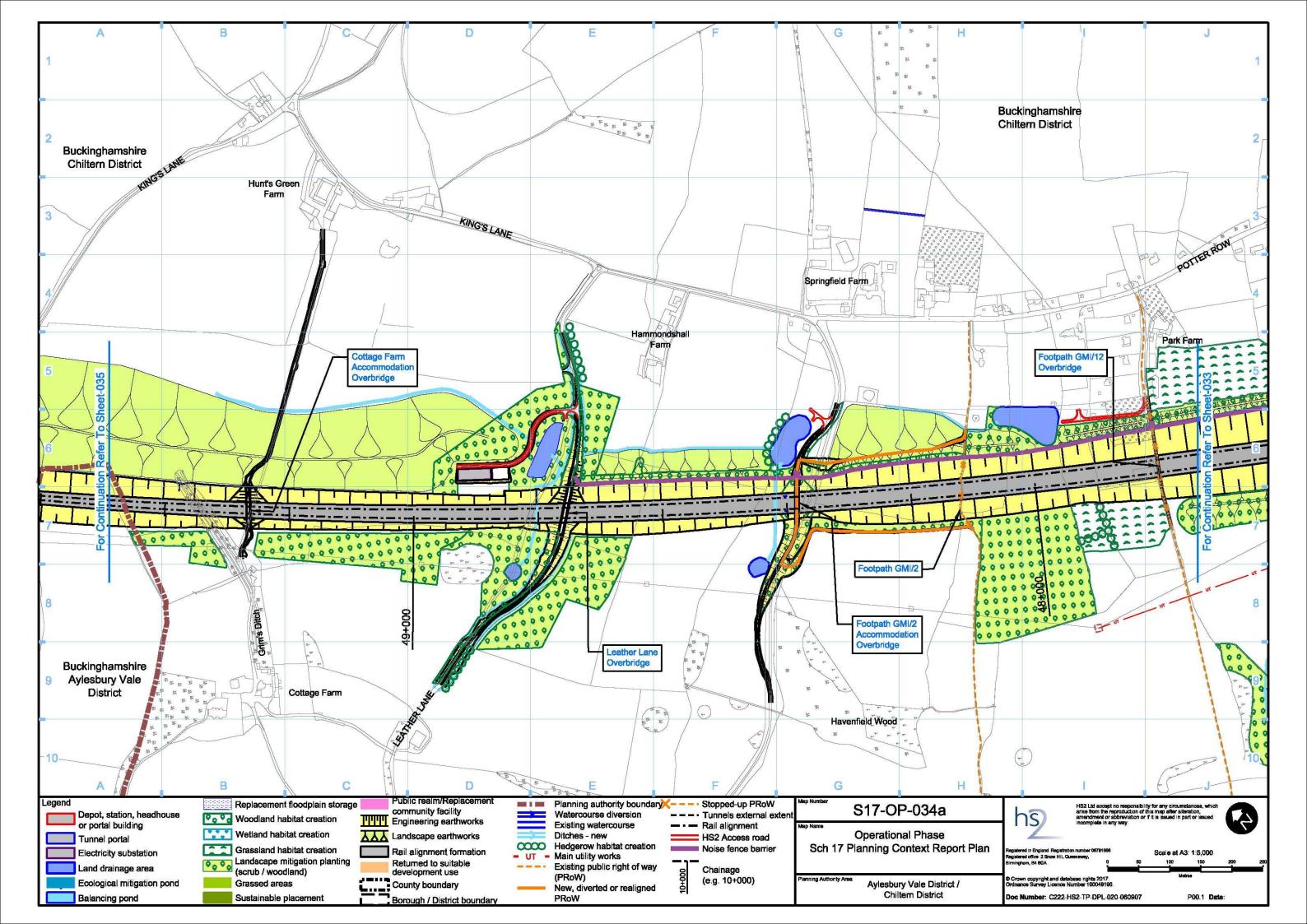


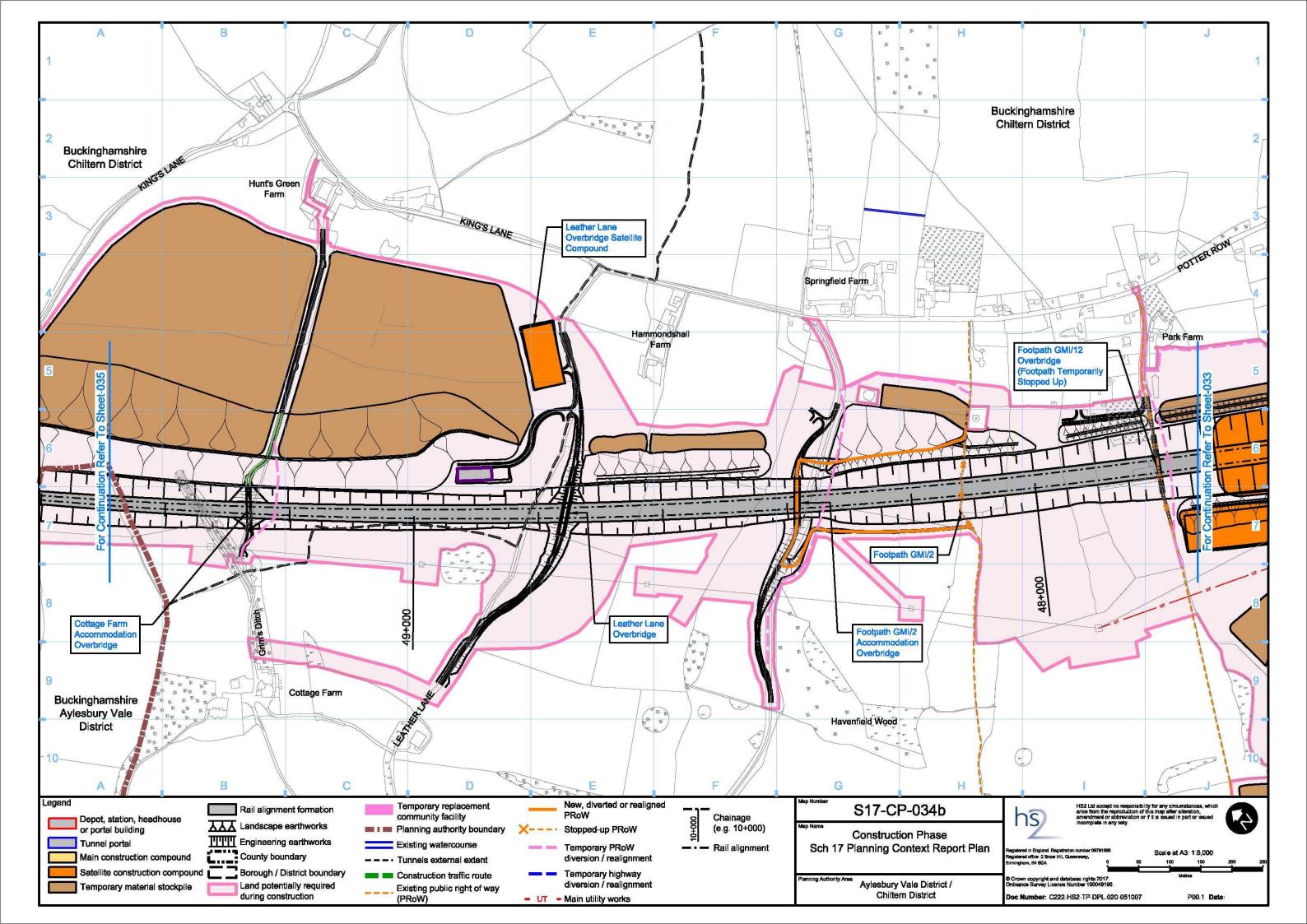


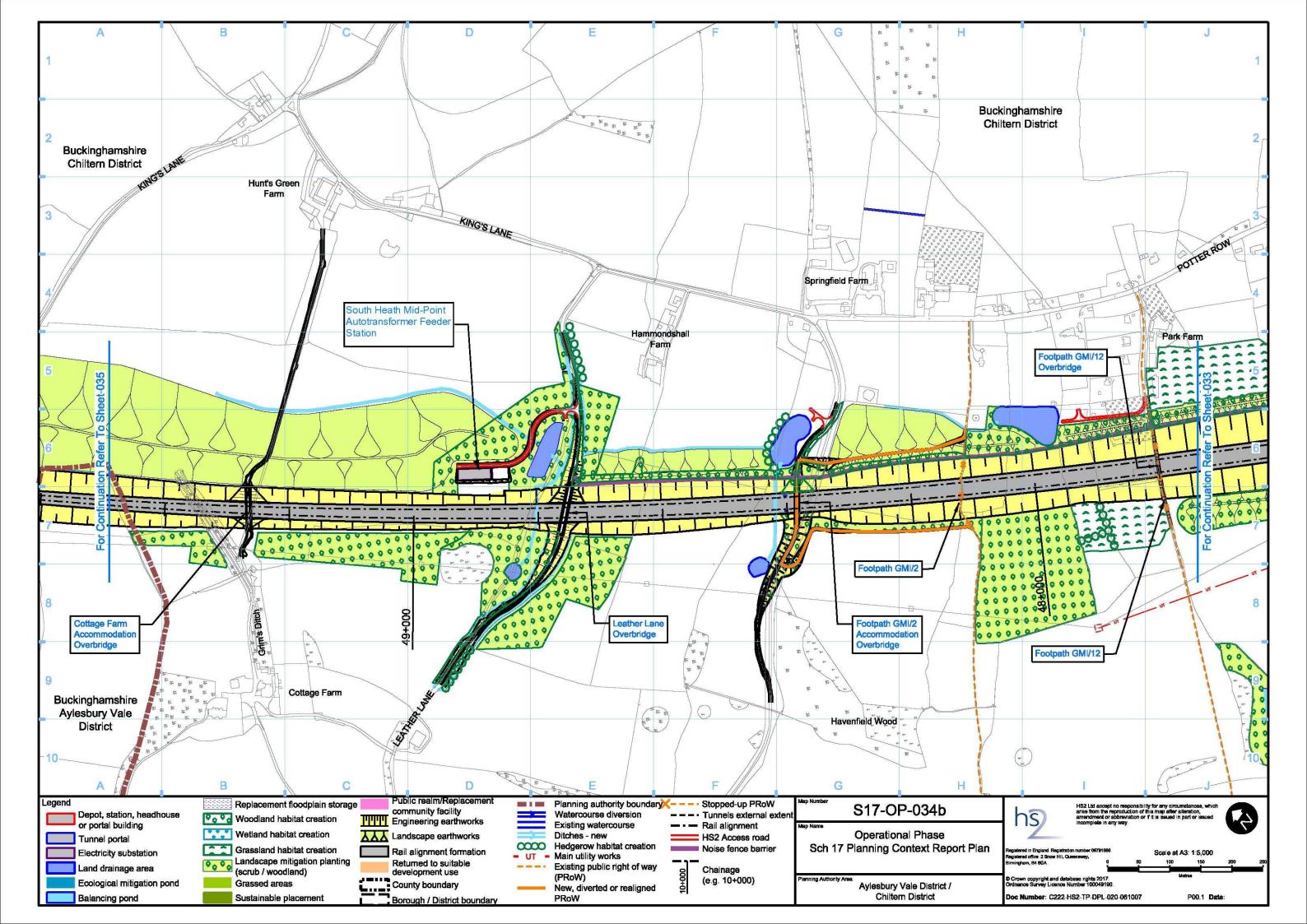


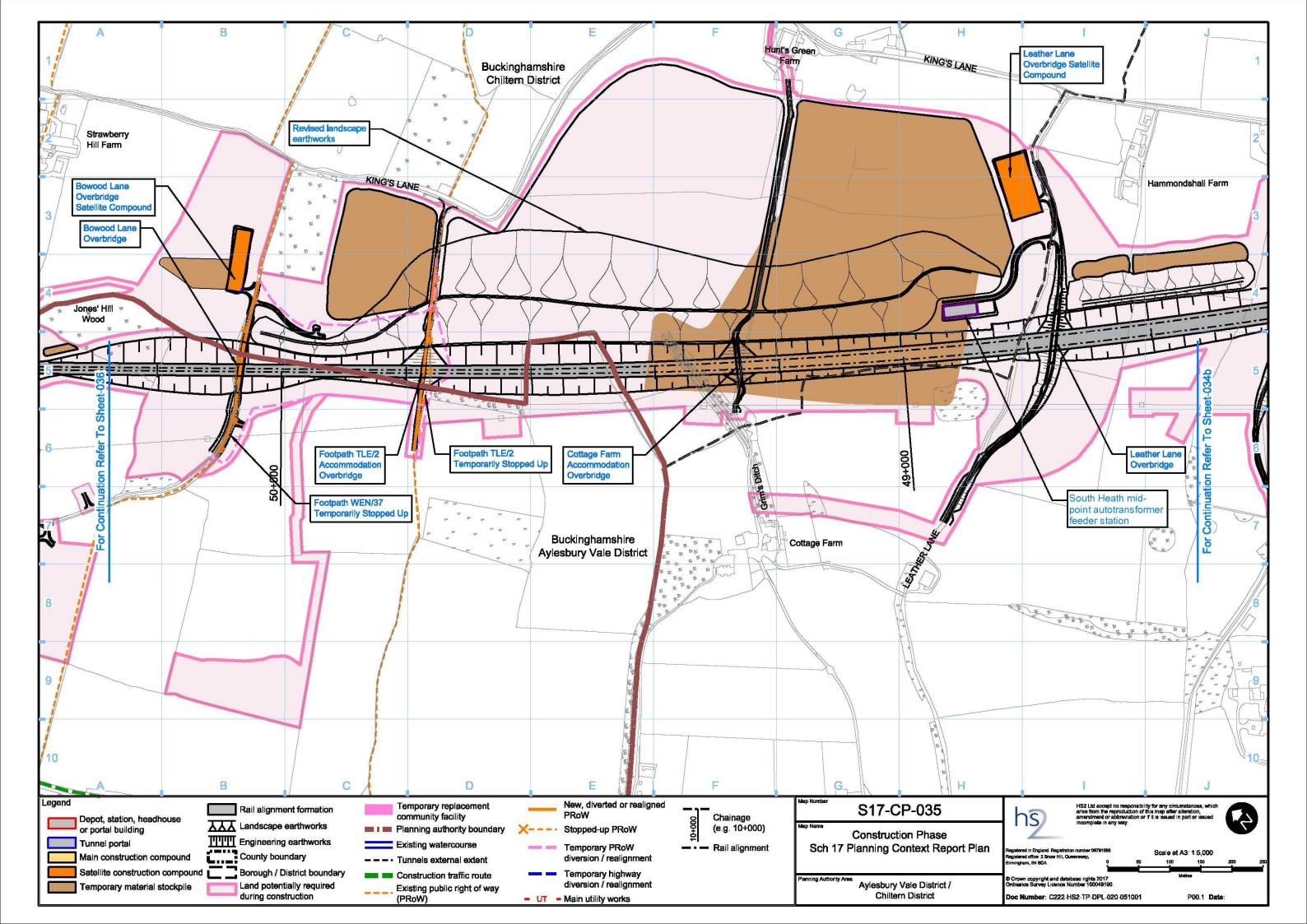


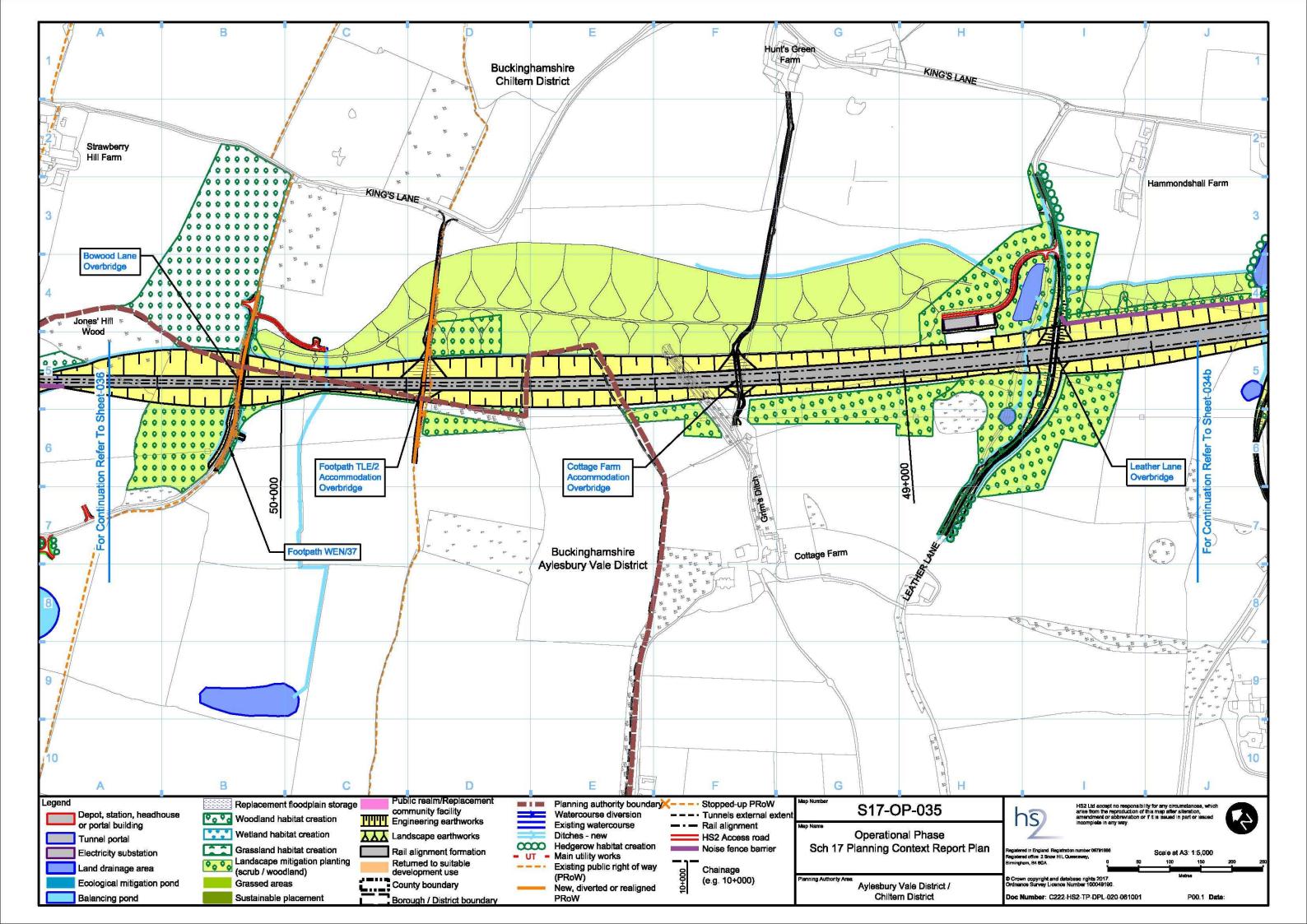


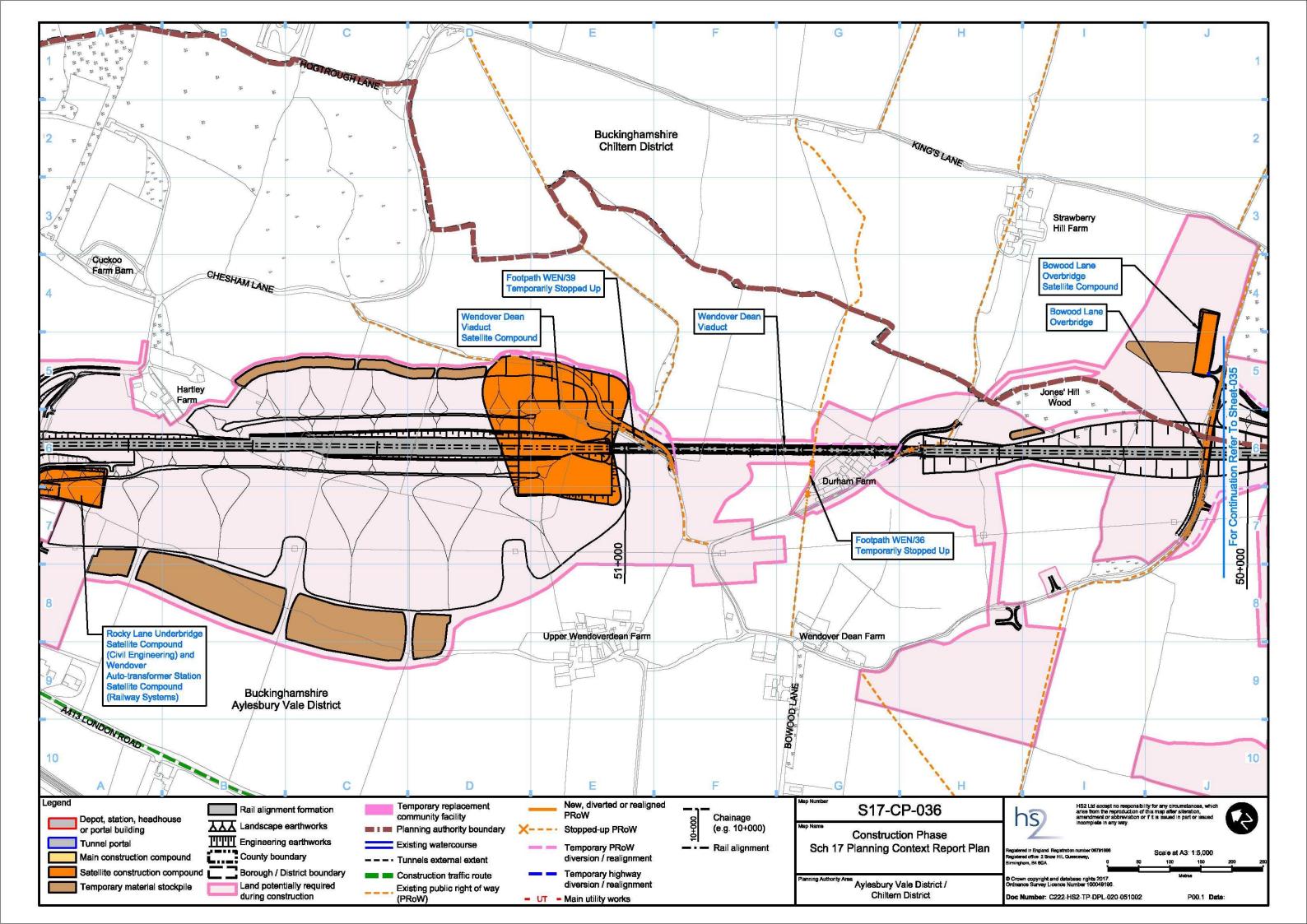


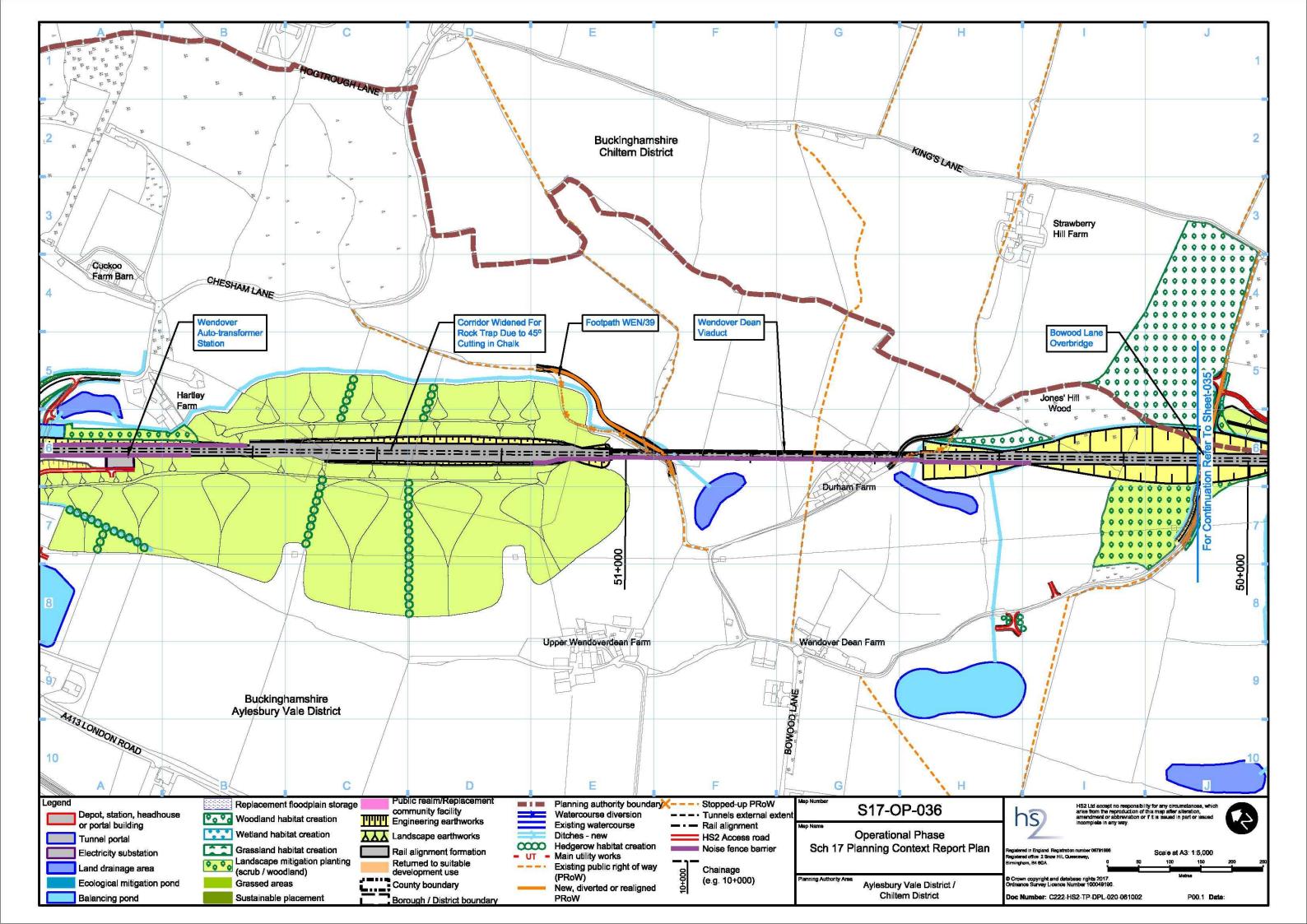












Annex 1 – Signposting

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
	https://www.gov.uk/government/publications/high-speed-rail-london-west-midlands-bill-register-of-undertakin
Schedule 17 Statutory Guidance	https://www.gov.uk/government/publications/high-speed-rail-london-to-west-midlands-act-2017-schedule-17-sthedule-1
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
	https://www.gov.uk/government/collections/supplementary-environmental-statement-2-and-additional-provisi
	https://www.gov.uk/government/collections/supplementary-environmental-statement-3-and-additional-provision
	https://www.gov.uk/government/collections/supplementary-environmental-statement-4-and-additional-provisi

gs-and-assurances
atutory-guidance
<u>-2-july-2015</u>
on-3-september-2015
on-4-october-2015
on-5-december-2015