

Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement

Volume 4 Off-route effects map book

October 2015

SES3 and AP4 ES 3.4.2

Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement Volume 4 | Off-route effects map book

October 2015

SES3 and AP4 ES 3.4.2



High Speed Two (HS2) Limited has been tasked by the Department for Transport (DfT) with managing the delivery of a new national high speed rail network. It is a non-departmental public body wholly owned by the DfT.

A report prepared for High Speed Two (HS2) Limited:

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Contents

Mapping explanatory notes

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Map series name Map series description		
	These maps show the land potentially required during construction, the construction features, access	
CT of Construction Phase	requirements and infrastructure associated with construction of the Proposed Scheme. The maps also show the	
CT-o5 – Construction Phase	construction phase arrangements for public access using Public Rights of Way.	
	The base mapping shown on the maps is reflective of 2015 Ordnance Survey (OS) data.	
	These maps show permanent features, infrastructure, restored land, and areas for landscaping, screening and	
CT-o6 – Proposed Scheme	ecological mitigation associated with the Proposed Scheme.	
	The base mapping shown on the maps is reflective of 2015 Ordnance Survey (OS) data.	
CT-18 – Environmental Baseline	The Environmental Baseline maps display a range of environmental data layers.	

Mapping explanatory notes

Structure of the HS2 Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement

The Supplementary Environmental Statement 3 (SES3) and Additional Provision 4 Environmental Statement (AP4 ES) comprises:

- Non-technical summary (NTS). This provides a summary in non-technical language of the SES₃ (Part 1) and AP₄ ES (Part 2) and of any likely significant environmental effects, both beneficial and adverse, which are new or different to those reported in the High Speed 2 (HS₂) Phase One Environmental Statement (ES) submitted to Parliament in November 2013 in support of the hybrid Bill ('the Bill') for Phase One of HS₂ (hereafter referred to as 'the main ES') as updated by subsequent SES and AP ES documents;
- Volume 1: Introduction to the SES3 and AP4 ES. This introduces the supplementary environmental information and design changes included within the SES3 and amendments, which have resulted in the need to amend the Bill, within the AP4 ES. It also explains any changes to the scope, methodology, assumptions and limitations required for the environmental assessment;
- Volume 2: CFA reports and Map Books. These describe the supplementary environmental information and design changes included within the SES3 (Part 1) and amendments within the AP4 ES (Part 2). Any new or different likely significant environmental effects arising from these changes and amendments in each CFA, compared to those reported in the main ES, as updated by SES and SES2 documents (and SES3 for the AP4 amendments) are reported. The AP1, AP2 and AP3 amendments are also taken into account where relevant. In addition, the main local alternatives that have been considered are described, where relevant;
- Volume 3: Route-wide effects. This reports new or different likely significant route-wide effects arising from the supplementary environmental information and design changes included within the SES3 (Part 1) and amendments within the AP4 ES (Part 2) compared to those reported in the main ES as updated by SES and SES2 (and SES3 for the AP4 amendments). The AP1, AP2 and AP3 amendments are also taken into account where relevant;
- Volume 4: Off-route effects. This reports new or different likely significant off-route effects arising from the supplementary environmental information included within the SES₃ and an amendment within the AP4 ES compared to those reported in the main ES as updated by SES and SES₂ (and SES₃ for the AP4 amendment). The AP1, AP2 and AP3 amendments are also taken into account where relevant;
- Volume 5: Appendices and Map Books. This contains environmental information and associated maps in support of the other volumes of the SES3 and AP4 ES; and
- Glossary of terms and list of abbreviations. This contains any new or different terms and abbreviations used throughout the SES and AP ES reports, compared to those included in the main ES.

Copyright statements

Copyright statements are presented in the Data dictionary and definitions section at the front of the map book, due to limited space to include this on the individual maps themselves.

Ordnance Survey data

All maps produced as part of the SES₃ and AP₄ ES contain Ordnance Survey (OS) data. HS₂ Ltd use the most up to date mapping available, where possible, supplied by the OS and as such, we cannot be held responsible for any inaccuracies within this data.

As part of our licence conditions, all digital maps carry a watermark.

Chainage

Most of the maps presented as part of the SES3 and AP4 ES have a chainage value shown next to the alignment. Chainage is presented on the maps in black font, in the form of XX+YYY. E.g. 77+000 or 158+500.

Chainage (known as reference chainage) is referenced from Euston Station, which is 0+000, and the value presented is in metres. E.g. 77+000 refers to the point, 77,000m, or 77km, from Euston Station. Chainage values increase in intervals dependant on the map scale. For maps at 1:50,000 scale chainage is shown at 5km intervals. For maps at 1:25,000 scale chainage is shown at 1km intervals. For maps at 1:10,000, 1:5,000 and 1:2,500 scales, chainage is shown at 1km intervals.

Chainage has been included on the maps as a useful tool for comparing different map sets showing the different environmental themes or engineering plans, due to map sets having different scales and therefore showing different amounts of alignment on the map.

Map sheet layout

Each map in Volume 2 is presented twice, with the main ES map (published November 2013) on the left hand page and the SES3 and AP4 ES map on the right. For the CT-05 and CT-06 map series, the SES3 and AP4 ES map is annotated with different coloured clouds which highlight the areas of change. The coloured text box provides a brief description of the design change and amendment, and gives the SES3 and AP4 ES reference number. Only maps which have been amended as a result of the SES3 and AP4 ES are included within the map books. Other design changes which are within the existing limits of the Bill and do not result in new or different likely significant effects are also shown on the maps, but are not indicated by a cloud. The below table highlights the coloured clouds used, and their description.

Cloud / text box colour	Description
Blue	Design changes relating to the SES3 (Part 1 of each Volume 2 CFA report).
Red	Proposed amendments relating to AP4 (Part 2 of each Volume 2 CFA report).
Grey	Proposed amendments and design changes relating to previous APs and SESs, provided for reference.

Each Volume 5 map is annotated to describe the change to a receptor or significant effect, and to give the SES3 and AP4 ES reference number. For more detailed information about the SES3 and AP4 ES annotation, refer to the map series legend. Only maps which have been amended as a result of the SES3 and AP4 ES are included within the map book. Changes to receptors or significant effects relating to previous APs and SESs are also provided for reference.

Map orientation

The majority of the maps presented in these map books are presented with the railway alignment running horizontally across the page. The direction of travel to London would be following the alignment to the right hand side of the page, and the West Midlands to the left.

The exception to this, are map series LV-03 and LV-04, which present the alignment running from bottom to top of the page. This is to allow more of the modelled outputs to be shown at the appropriate map scale. In this instance, the direction of travel to London would be to the bottom of the page, and the West Midlands to the top.

Map books

In total there are 35 map books which make up the SES3 and AP4 ES, spread across volumes 2, 4 and 5. A list of the titles is provided below for reference.

Name	Name
Volume 2 Community forum area map book: CFA4 Kilburn (Brent) to Old Oak Common	Volume 2 Community forum area map book: CFA23 Balsall Common and Hampton-in-Arden
Volume 2 Community forum area map book: CFA5 Northolt Corridor	Volume 2 Community forum area map book: CFA24 Birmingham Interchange and Chelmsley Wood
Volume 2 Community forum area map book: CFA6 South Ruislip to Ickenham	Volume 2 Community forum area map book: CFA25 Castle Bromwich and Bromford
Volume 2 Community forum area map book: CFA7 Colne Valley	Volume 2 Community forum area map book: CFA26 Washwood Heath to Curzon Street
Volume 2 Community forum area map book: CFA8 The Chalfonts and Amersham	Volume 4 Off-route effects map book
Volume 2 Community forum area map book: CFA9 Central Chilterns	Volume 5 Technical appendices map book: Agriculture, forestry and soils
Volume 2 Community forum area map book: CFA10 Dunsmore, Wendover and Halton	Volume 5 Technical appendices map book: Air quality
Volume 2 Community forum area map book: CFA11 Stoke Mandeville and Aylesbury	Volume 5 Technical appendices map book: Community
Volume 2 Community forum area map book: CFA12 Waddesdon and Quainton	Volume 5 Technical appendices map book: Cultural heritage
Volume 2 Community forum area map book: CFA13 Calvert, Steeple Claydon, Twyford and Chetwode	Volume 5 Technical appendices map book: Ecology
Volume 2 Community forum area map book: CFA14 Newton Purcell to Brackley	Volume 5 Technical appendices map book: Land quality
Volume 2 Community forum area map book: CFA15 Greatworth to Lower Boddington	Volume 5 Technical appendices map book: Landscape and visual
Volume 2 Community forum area map book: CFA16 Ladbroke and Southam	Volume 5 Technical appendices map book: Socio-economics
Volume 2 Community forum area map book: CFA17 Offchurch and Cubbington	Volume 5 Technical appendices map book: Sound, noise and vibration
Volume 2 Community forum area map book: CFA18 Stoneleigh, Kenilworth and Burton Green	Volume 5 Technical appendices map book: Traffic and transport
Volume 2 Community forum area map book: CFA19 Coleshill Junction	Volume 5 Technical appendices map book: Water resources
Volume 2 Community forum area map book: CFA20 Curdworth to Middleton	Volume 5 Technical appendices map book: Cross-topic appendix 1 - Committed developments
Volume 2 Community forum area map book: CFA22 Whittington to Handsacre	



Supplementary Environmental Statement 3 and Additional Provision 4 Environmental Statement

Volume 4 Data dictionary and definitions

October 2015

Data dictionary and definitions

Legend features	Definition	Source	Copyright
the perimeter.		High Speed Two (HS2) Ltd	
Chainage	Chainage (known as reference chainage) is referenced from Euston Station, which is 0+000, and the value presented is in metres. E.g. 77+000 refers to the point, 77,000m, or 77km, from Euston Station. Chainage values increase in intervals dependant on the map scale. For maps at 1:50,000 scale chainage is shown at 5km intervals. For maps at 1:25,000 scale chainage is shown at 2km intervals. For maps at 1:10,000, 1:5,000 and 1:2,500 scale chainage is shown at 1km intervals.	High Speed Two (HS2) Ltd	
	Chainage has been included on the maps as a useful tool for comparing different map sets showing the different environmental themes or engineering plans, due to map sets having different scales and therefore showing differing amounts of alignment on the map.		
Colne Valley Regional Park	Boundary for the Colne Valley Park area.	Groundwork Thames Valley	© Groundwork Thames Valley
Community forum boundary	Unity forum boundary The Environmental Statement has been split into 26 sections called Community Forum Areas.		© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Construction traffic route	Public highways which may be used for HGV construction traffic.	High Speed Two (HS2) Ltd	
County boundary	County boundaries from Ordnance Survey boundary mapping.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Depot, station, headhouse or portal building	Extends to cover operational footprint of each depot and station and the footprint of each tunnel vent shaft and headhouse at surface level. Excludes any ancillary buildings associated with these structures.	High Speed Two (HS2) Ltd	
District/Borough boundary Ordnance Survey local authority boundary mapping.		Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Ditches – new	The proposed location and extent of drainage ditches.	High Speed Two (HS2) Ltd	
Ecological mitigation pond	Ponds whose primary function is to provide ecological mitigation. This could be a standalone pond or part of a wider wetland habitat creation plan.	High Speed Two (HS2) Ltd	
Electricity substation	Includes all auto-transformers and feeder stations.	High Speed Two (HS2) Ltd	
Engineering earthworks	Engineering (structural) earthworks which include railway slopes and crossings (roads etc.).	High Speed Two (HS2) Ltd	
Existing public right of way (PRoW)	See Public Rights of Way.	See Public Rights of Way.	See Public Rights of Way.
Existing watercourse	See Watercourse.	See Watercourse.	See Watercourse.
Grassed areas	Any other area grassed not included in landscaped earthworks or ecological habitat.	High Speed Two (HS2) Ltd	
Soft landscape design that can include any seeded areas for the		High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
Green belt	Green Belt geographical extents provided by 197 English Local Authorities for the 2007 year end.	Department for Communities and Local Government (DCLG)	Contains public sector information licensed under the Open Government Licence v1.0
Hedgerow habitat creation	planting for visual mitigation purposes.		
Historic landfill site	A historical (closed) landfill site is one where there is no PPC permit or waste management licence currently in force.	Environment Agency	Contains Environment Agency information © Environment Agency and database right.
HS ₂ Access road	Access road to HS2 infrastructure such as electricity substations, balancing ponds and maintenance access points to the railway.	High Speed Two (HS2) Ltd	
Land drainage area	Provision of land to attenuate or infiltrate overland flows at or beyond the HS2 railway boundaries; for example, where existing land drainage systems are altered by the HS2 works, where the existing landform is reshaped by landscape earthworks or where surface water from third party land is intercepted by the HS2 perimeter drainage system.	High Speed Two (HS2) Ltd	
Land potentially required during construction	Boundary defining the maximum possible extent of construction works required to build HS2 as far as the current level of design allows. This only covers surface works and includes all tunnel portals, vent shafts and headhouses, but does not apply to wholly tunnelled sections or to air rights. It also encompasses associated highway, access, drainage and utility works.	High Speed Two (HS2) Ltd	
Landscape earthworks	Landscape earthworks to provide permanent landscape, visual or acoustic mitigation.	High Speed Two (HS2) Ltd	
Landscape mitigation planting (scrub / woodland)	Screening planting, using woodland, for visual mitigation and landscape integration purposes.	High Speed Two (HS2) Ltd	
Listed building Grade I	Buildings and structures in England of special architectural or historic interest. In some instances the source data for individual buildings is grouped under a single grid reference, in these instances the data may have been interrogated further to identify addresses of individual buildings with Listed Building status so that these can be displayed individually on the map. The Listed Building data consists of approximately 375,000 standing structures. The information has been converted from paper records georeferenced to digital mapping. A small percentage of the data was manually located. The data is subject to continuous review and regularly updated as new structures are designated and positional accuracy improves.	Historic England	© Historic England 2015. Contains Ordnance Survey data © Crown copyright and database right 2015 The Historic England GIS Data contained in this material was obtained on 29 May 2015. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk.
Listed building Grade II*	Buildings and structures in England of special architectural or historic interest. In some instances the source data for individual buildings is grouped under a single grid reference, in these instances the data may have been interrogated further to identify addresses of individual buildings with Listed Building status so that these can be displayed individually on the map. The Listed Building data consists of approximately 375,000 standing structures. The information has been converted from paper records georeferenced to digital mapping. A small percentage of the data was manually located. The data is subject to continuous review and regularly updated as new structures are designated	Historic England	© Historic England 2015. Contains Ordnance Survey data © Crown copyright and database right 2015 The Historic England GIS Data contained in this material was obtained on 29 May 2015. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk.

Legend features	Definition	Source	Copyright
	and positional accuracy improves.		
Listed building Grade II	Buildings and structures in England of special architectural or historic interest. In some instances the source data for individual buildings is grouped under a single grid reference, in these instances the data may have been interrogated further to identify addresses of individual buildings with Listed Building status so that these can be displayed individually on the map. The Listed Building data consists of approximately 375,000 standing structures. The information has been converted from paper records georeferenced to digital mapping. A small percentage of the data was manually located. The data is subject to continuous review and regularly updated as new structures are designated and positional accuracy improves.	Historic England	© Historic England 2015. Contains Ordnance Survey data © Crown copyright and database right 2015 The Historic England GIS Data contained in this material was obtained on 29 May 2015. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk.
Main construction compound	Main Construction Compounds in which main contractors offices and welfare facilities will be located.	High Speed Two (HS2) Ltd	
Main utility works	Represents all new major utility installations (included in the hybrid Bill) and also modifications to existing utilities required to construct the scheme. Includes water, electricity, telecommunications and gas.	High Speed Two (HS2) Ltd	
New, diverted or realigned PRoW	New, realigned or diverted Public Rights of Way (PRoW).	High Speed Two (HS2) Ltd	
Noise fence barrier	Denotes fence-style barriers provided as part of the noise mitigation measures. Note that other noise barriers have also been included in the form of landscaping and engineering cuttings - see the SV map series for more detail on noise mitigation.	High Speed Two (HS2) Ltd	
Public realm/Replacement community facility	Public realm: Specifically provided to show areas to be used for public realm. This layer is mainly associated with station sites and is to be used to indicate general areas for designed soft and hard landscaping. Replacement community facility: Area of land for the provision of a permanent replacement community facility, such as a playground, community centre or activity centre.	High Speed Two (HS2) Ltd	
Public Rights of Way	Public rights of way are highways which can be used for the following purposes: - Footpaths - pedestrians only - Bridleways - pedestrians, cyclists and equestrians - Restricted byways - as bridleways plus non-motorised vehicles - Byways open to all traffic. Definitive Map data supplied by surveying authorities (i.e. county councils, London Boroughs and metropolitan borough councils in the West Midlands).	Buckinghamshire County Council Birmingham City Council Coventry City Council City of Westminster Hertfordshire County Council London Borough of Brent London Borough of Camden London Borough of Ealing London Borough of Hammersmith & Fulham London Borough of Hillingdon Northamptonshire County Council Oxfordshire County Council Royal Borough of Kensington & Chelsea Solihull Metropolitan Borough Council Staffordshire County Council	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015. This map is based upon Ordnance Survey material with the permission of Ordnance Survey on behalf of the Controller of Her Majesty's Stationary Office © Crown Copyright. Unauthorised reproduction infringes Crown Copyright and may lead to prosecution or civil proceedings. Buckinghamshire County Council Licence No. 100021529, 2012. Copyright Buckinghamshire County Council. © Copyright Coventry City Council

Legend features	Definition	Source	Copyright
		Warwickshire County Council	© Northamptonshire County Council
Rail alignment	Longitudinal geometry of the tracks consisting of a series of straights and curves.	High Speed Two (HS2) Ltd	
Rail alignment formation	The space required to accommodate the railway infrastructure which typically includes the tracks, overhead line equipment, drainage, lineside access paths and cable routes for electrification and communication systems.	High Speed Two (HS2) Ltd	
Registered park or garden	Parks and Gardens of special historic interest. Supplied by Historic England. Of the 1,590 Registered Parks and Gardens, over 91% were captured against the 1:10,000 Ordnance Survey Raster product. 135 records are potentially subject to movement under Positional Accuracy Improvement (PAI) improvements.	Historic England	© Historic England 2015. Contains Ordnance Survey data © Crown copyright and database right 2015 The Historic England GIS Data contained in this material was obtained on 29 May 2015. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk.
Replacement floodplain storage	Provision of storage to replace floodplain occupied by the Proposed Scheme. Equivalent storage is provided for events up to the 1 in 100 (1%) annual probability event with an allowance for climate change.	High Speed Two (HS2) Ltd	
Returned to suitable development use	Post construction land will be reinstated to enable potential future development.	High Speed Two (HS2) Ltd	
Route in tunnel Route on surface	Represents the proposed route of HS2, split into route on surface and tunnelled sections.	High Speed Two (HS2) Ltd	
Satellite construction compound	Represents satellite construction compounds which serve local works for major construction elements within a main contract.	High Speed Two (HS2) Ltd	
Scheduled monument	A schedule has been kept since 1882 of monuments considered to be of national importance by the government. The current legislation, the Ancient Monuments and Archaeological Areas Act 1979, supports a formal system of Scheduled Monument Consent for any work to a designated monument. The Scheduled Monument layer consists of approximately 22,380 monuments tied into the Ordnance Survey. The majority of these are fixed; however, a small number of records may be updated as digital positional accuracy improves. The data is subject to continuous review and regularly updated as new monuments are designated.	Historic England	© Historic England 2015. Contains Ordnance Survey data © Crown copyright and database right 2015 The Historic England GIS Data contained in this material was obtained on 29 May 2015. The most publicly available up to date Historic England GIS Data can be obtained from HistoricEngland.org.uk.
Stopped-up PRoW	Public rights of way that will be closed due to construction of the scheme.	High Speed Two (HS2) Ltd	
Sustainable placement	Sustainable placement: the on-site placement for disposal of surplus excavated material to avoid causing environmental effects (e.g. transport) that would otherwise be associated with the off-site disposal of that material. "On-site" in this context means within the land required for the purposes of the Proposed Scheme and "off-site" means external land (or landfill site) which is not specifically required for the purposes of the Proposed Scheme.	High Speed Two (HS2) Ltd	
Temporary highway diversion / realignment	Indicative temporary highway diversion layouts during the construction phase.	High Speed Two (HS2) Ltd	
Temporary material stockpile	Represents temporary stockpiling of topsoil, subsoil and other excavated materials to be used for reinstatement purposes, and also stockpile areas for managing movement of excavated	High Speed Two (HS2) Ltd	

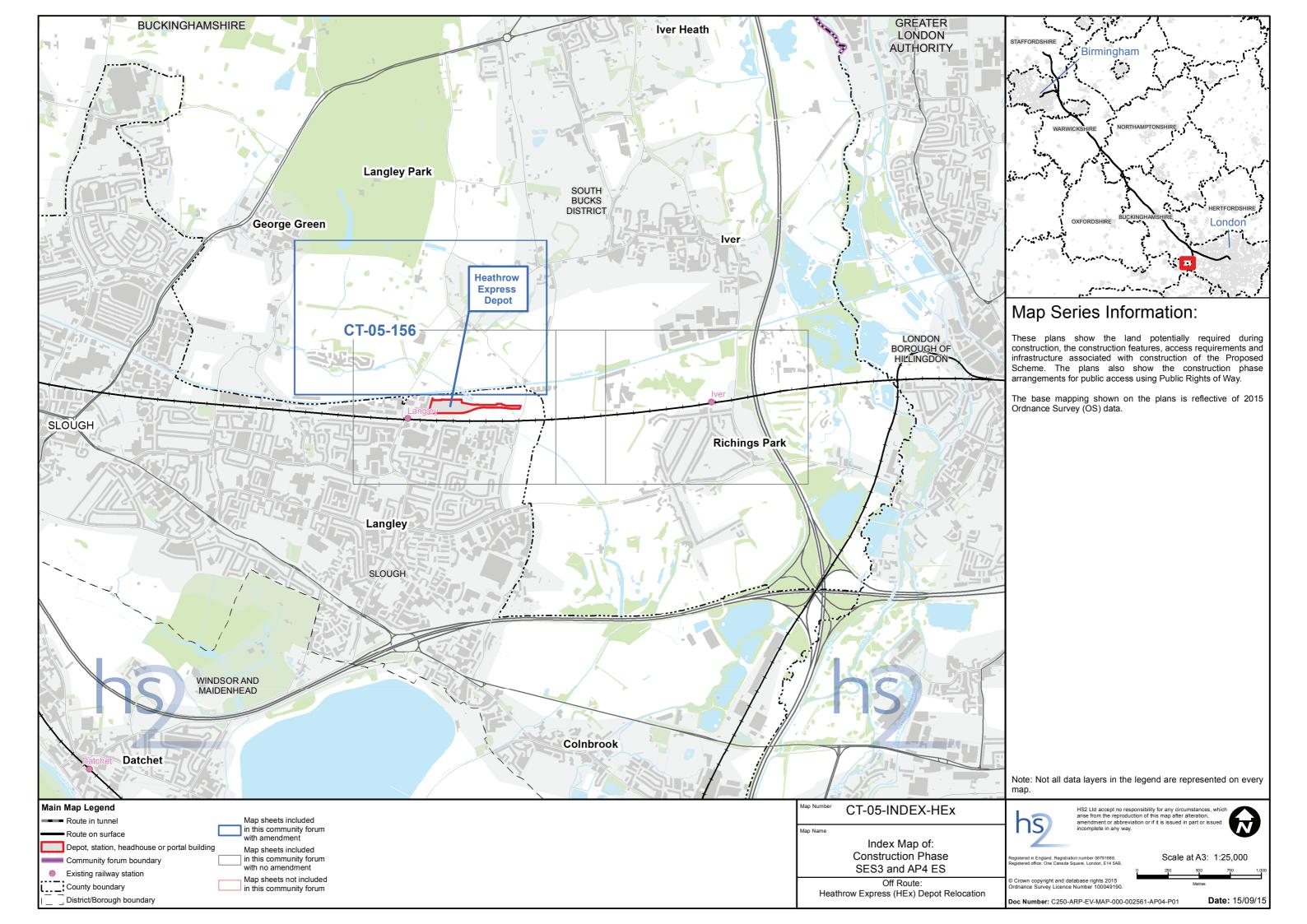
Legend features	Definition	Source	Copyright
	materials during construction.		
Temporary PRoW diversion / realignment	Indicative temporary diversions to public rights of way as a result of construction of the scheme. These will vary depending on construction phase and local conditions.	High Speed Two (HS2) Ltd	
Temporary replacement community facility	Area of land for the provision of a temporary replacement community facility, such as a playground, community centre or activity centre, whilst construction works are in progress.	High Speed Two (HS2) Ltd	
Tunnel portal	The footprint of a tunnel portal.	High Speed Two (HS2) Ltd	
Tunnels external extent	The external excavated extent of each tunnel bore.	High Speed Two (HS2) Ltd	
Water body	Based on Ordnance Survey Vector Map District.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Watercourse	The Detailed River Network (DRN) is the only large-scale, accurate and fully attributed digital river centreline covering England and Wales.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Watercourse diversion	Includes rivers, streams, ditches and other open channels, diversions to these, together with any new culverts required.	High Speed Two (HS2) Ltd	
Wetland habitat creation	Ecological mitigation area to provide new wetland habitat creation, enhancements to existing areas and areas for ecological management. This level does not include screening planting for visual mitigation purposes.	High Speed Two (HS2) Ltd	
Woodland	Woodland areas derived from Ordnance Survey mastermap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Woodland habitat creation Ecological mitigation area to provide new woodland planting, connectivity enhancements to existing areas and areas for ecological management. This level does not include screening planting for visual mitigation purposes.		High Speed Two (HS2) Ltd	

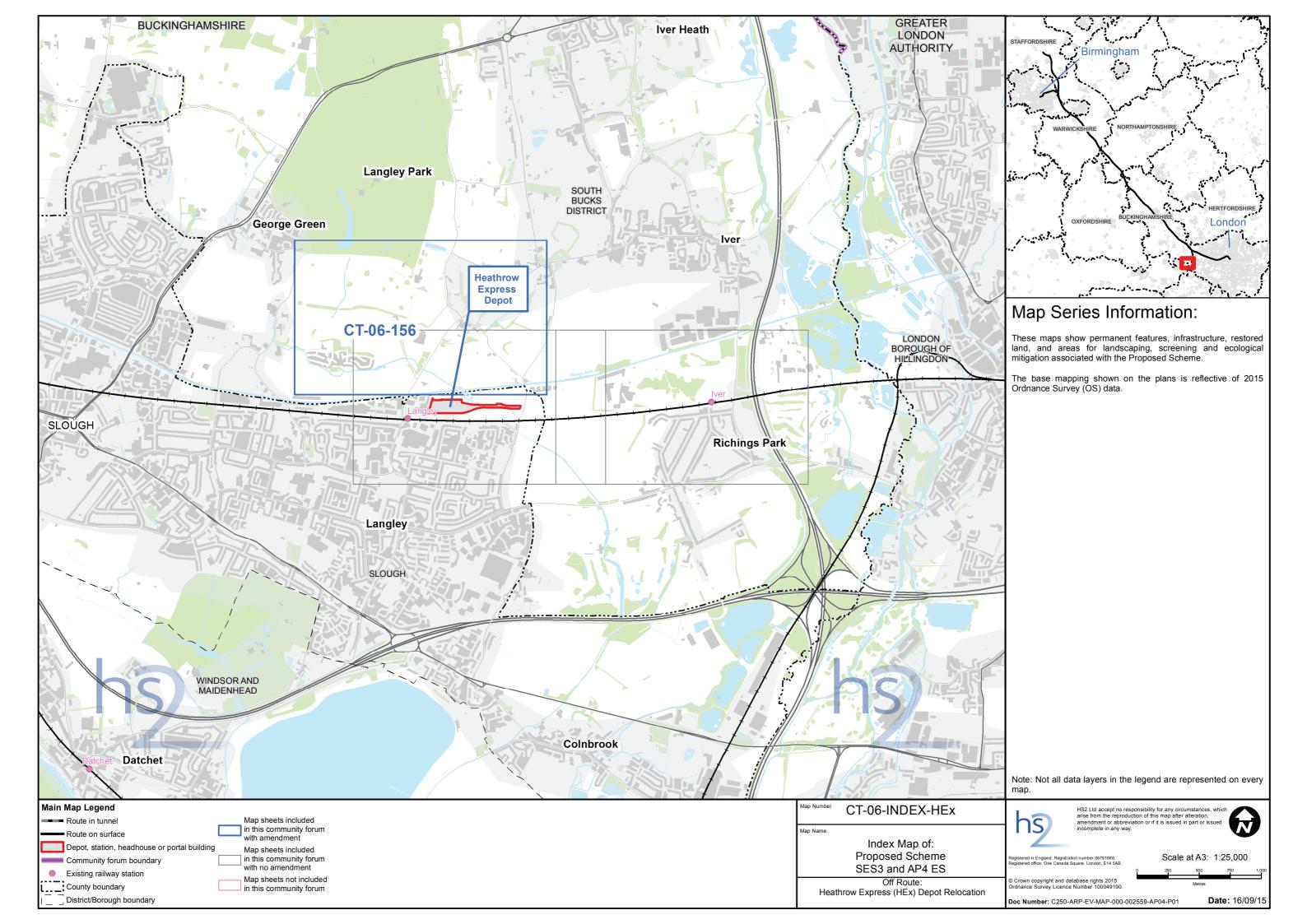


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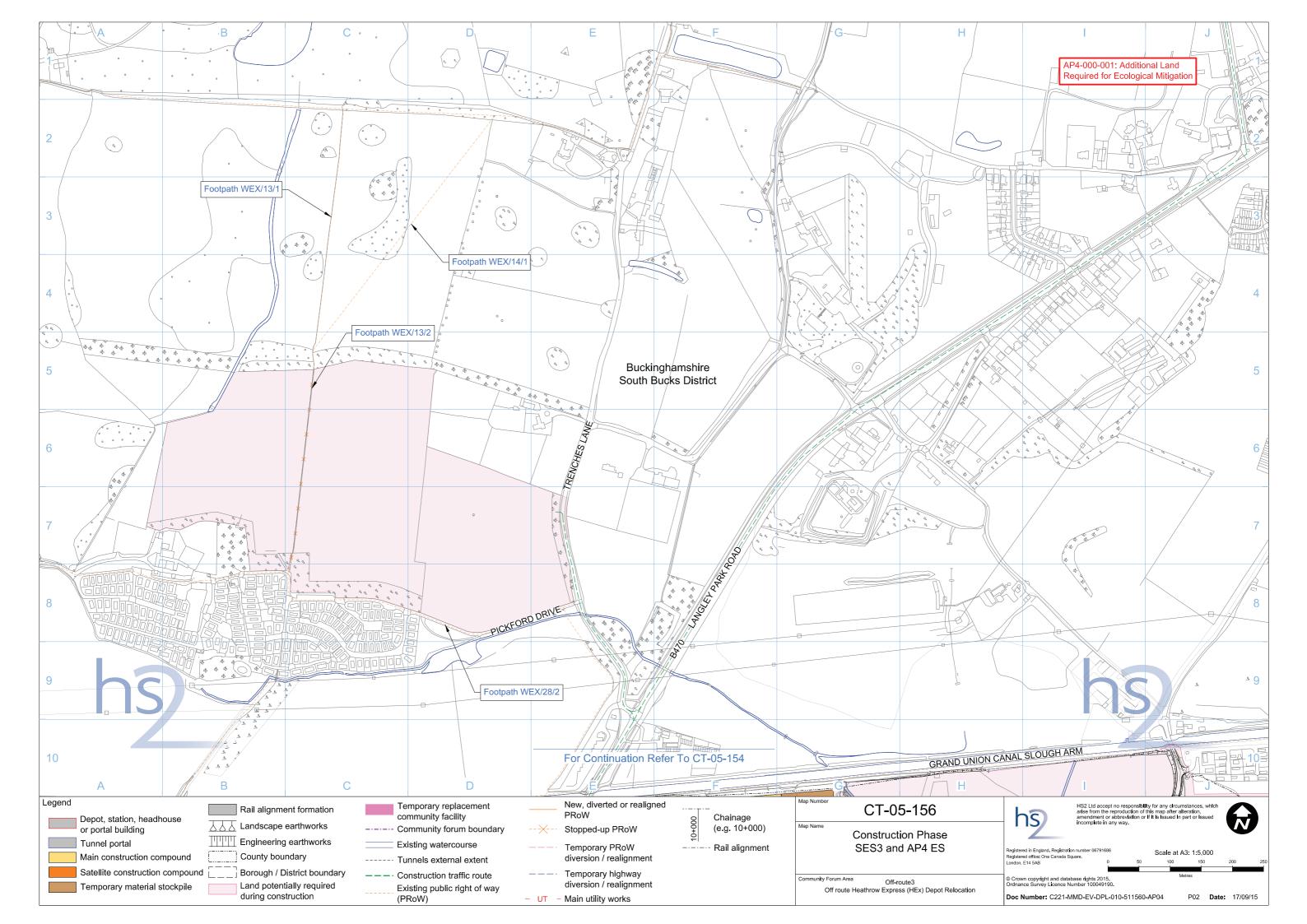
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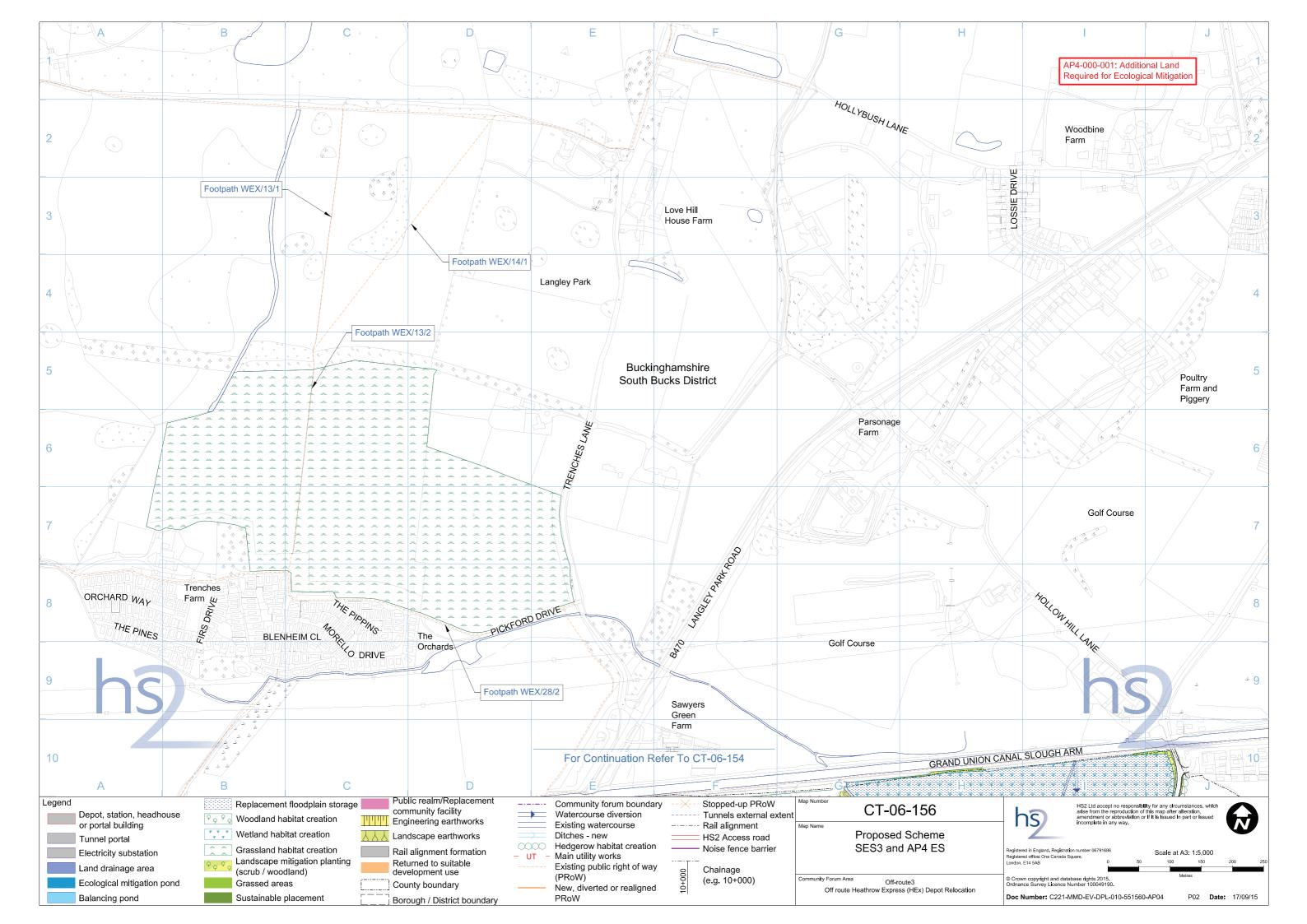


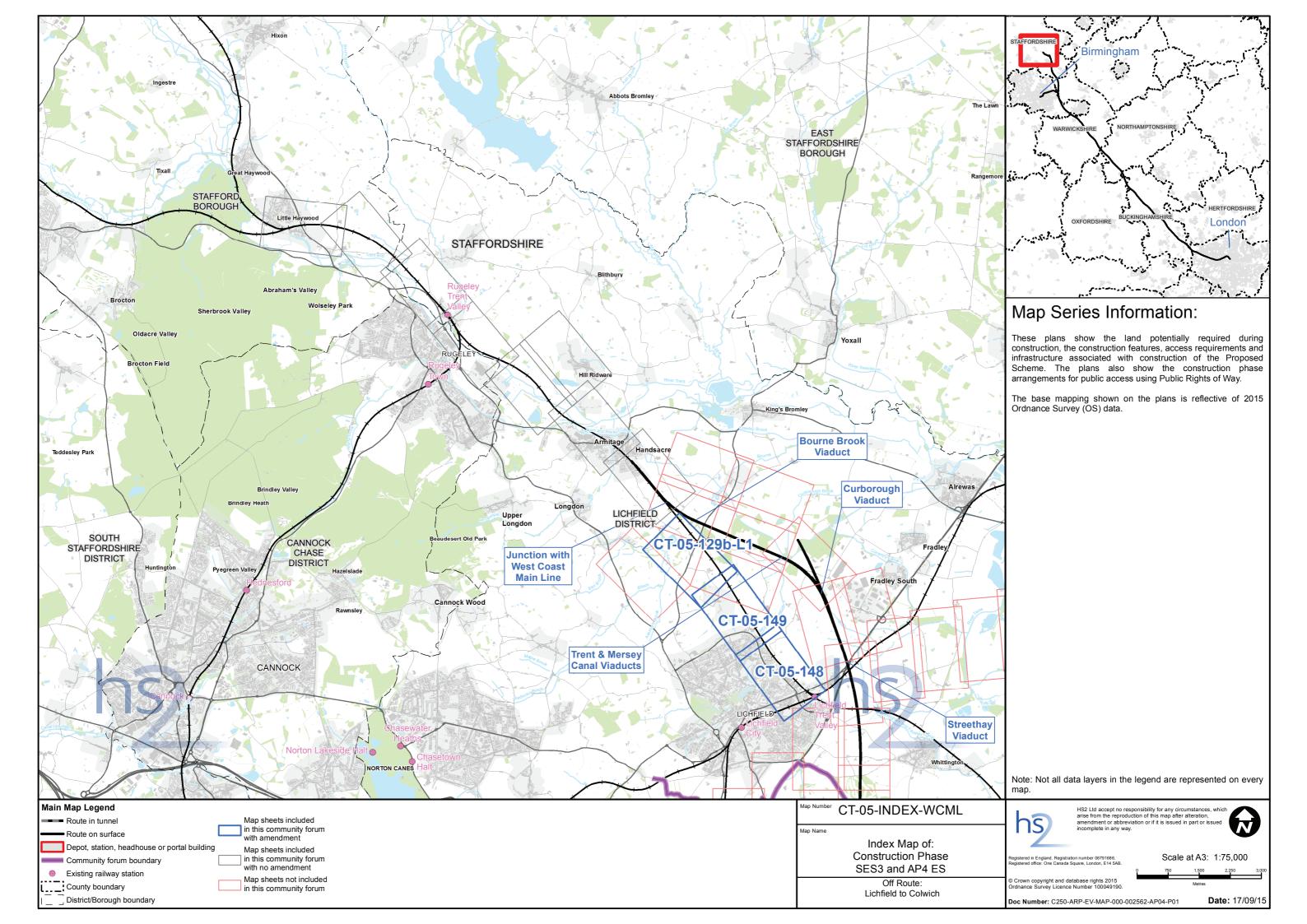


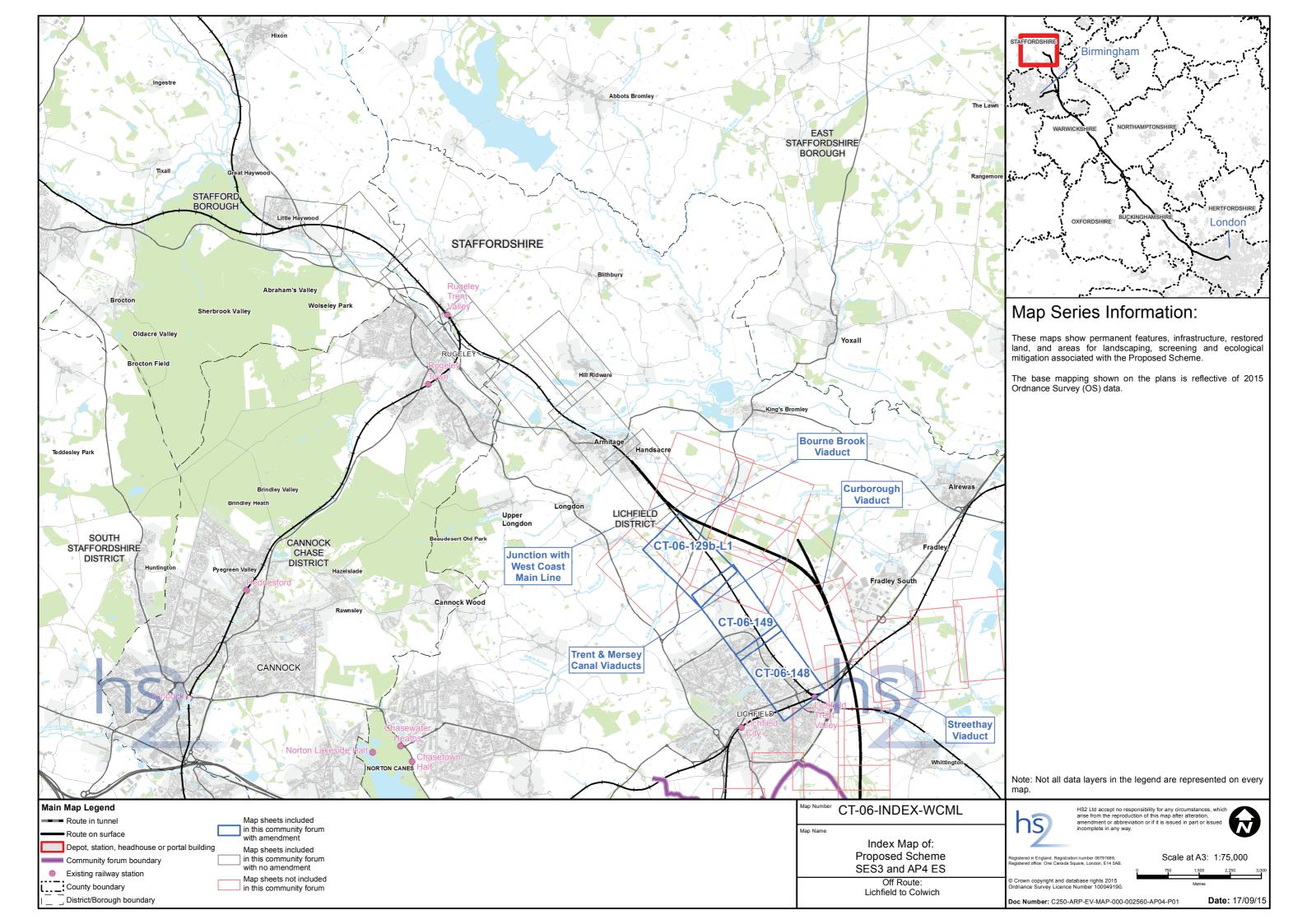


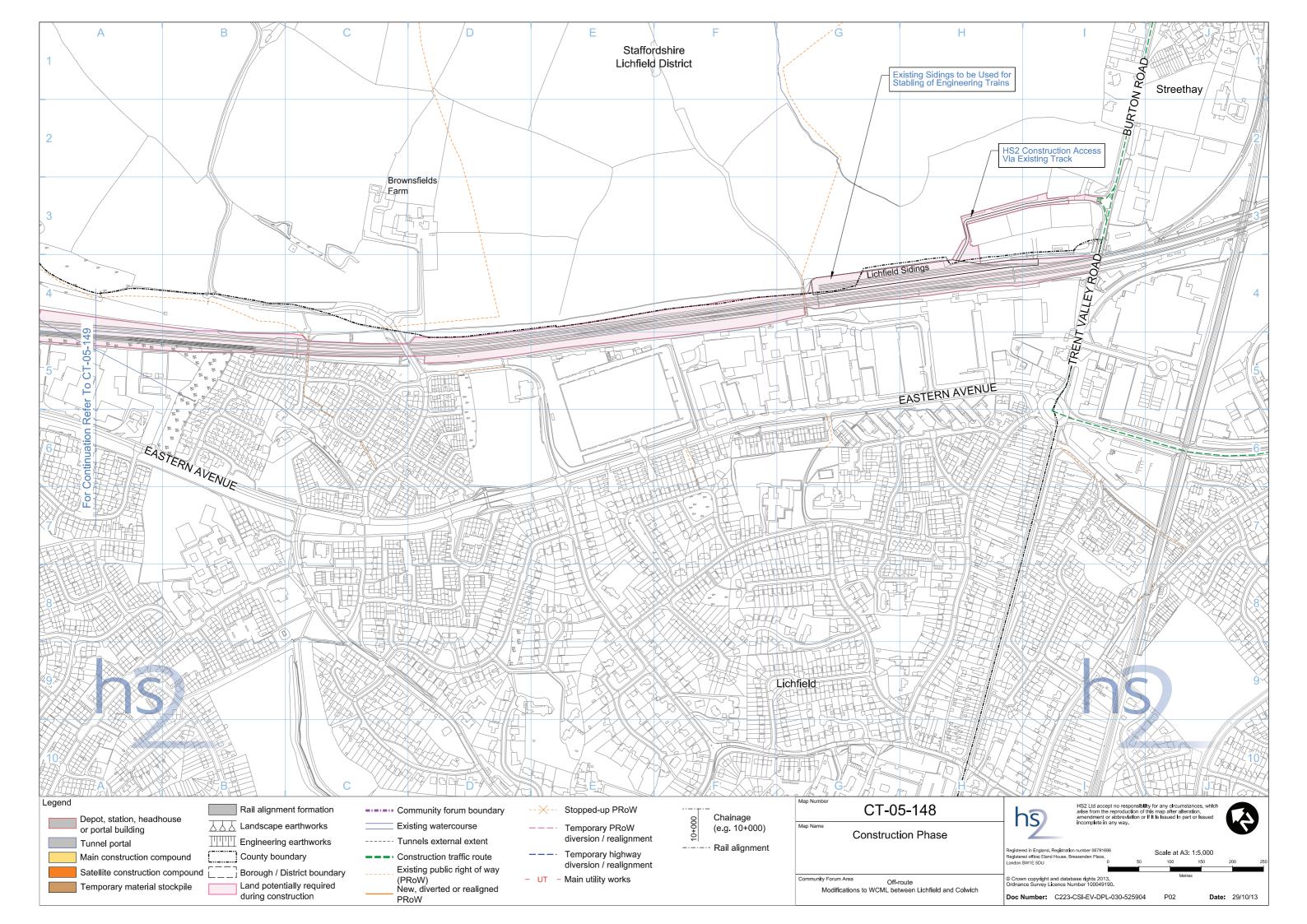


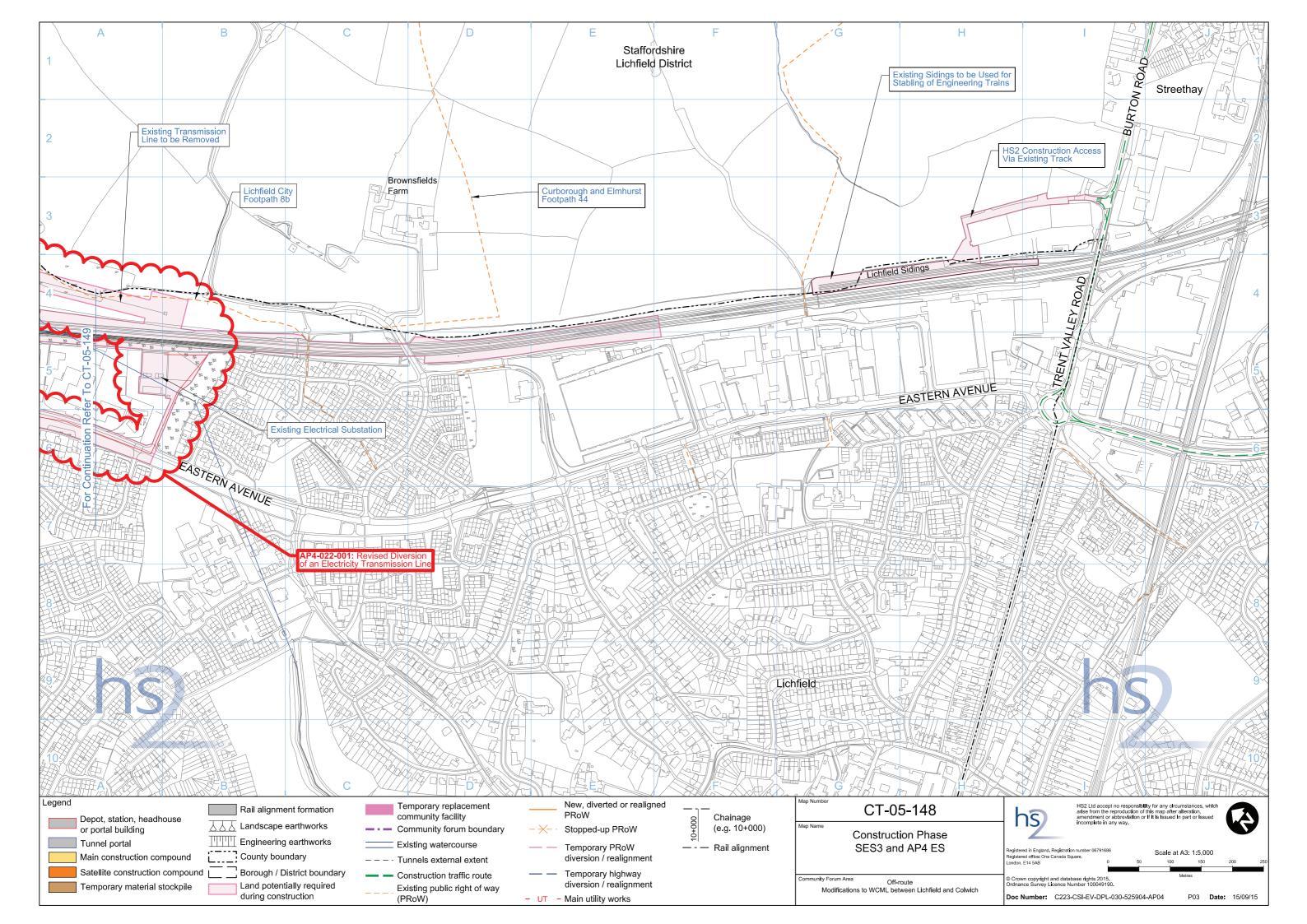


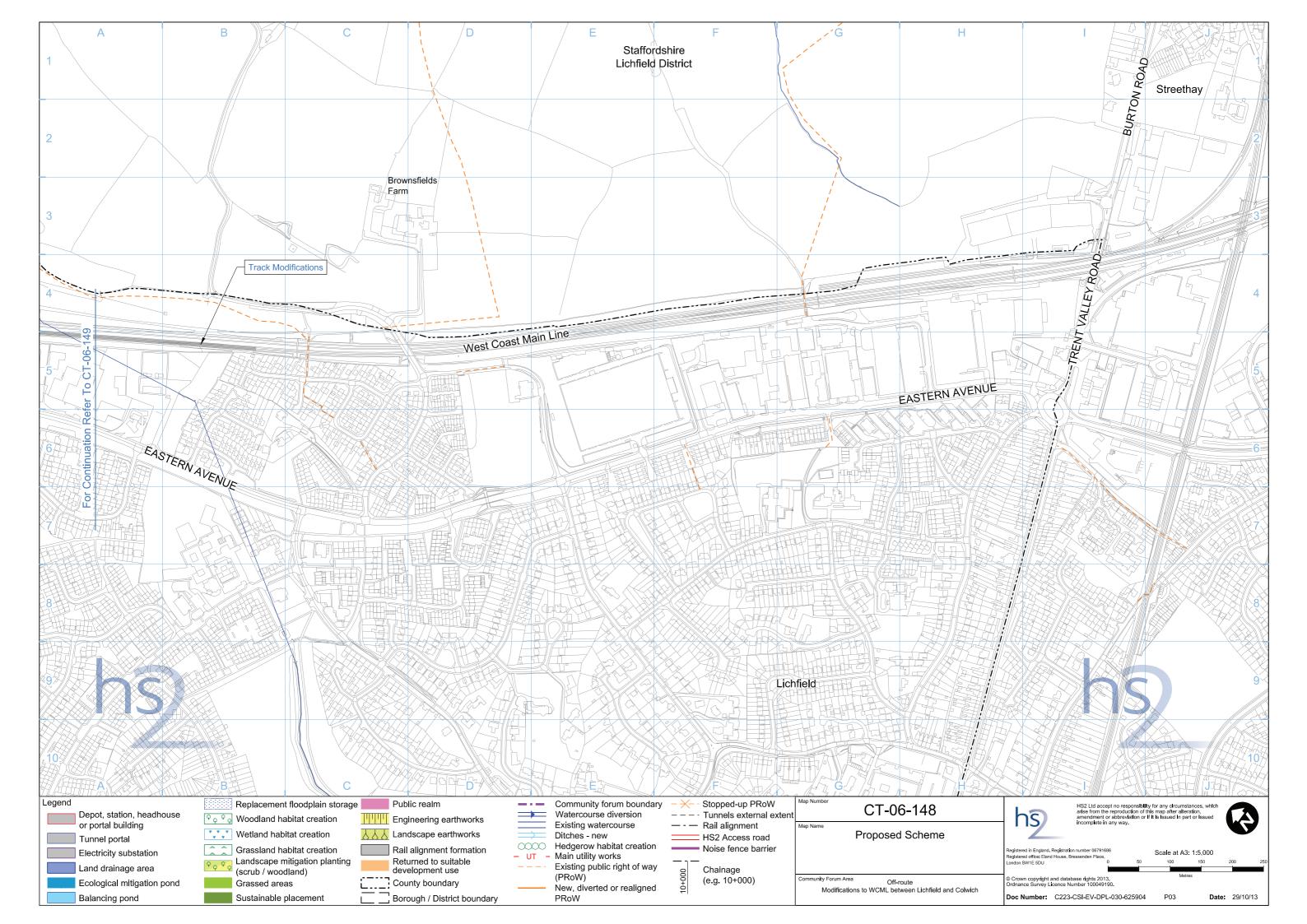


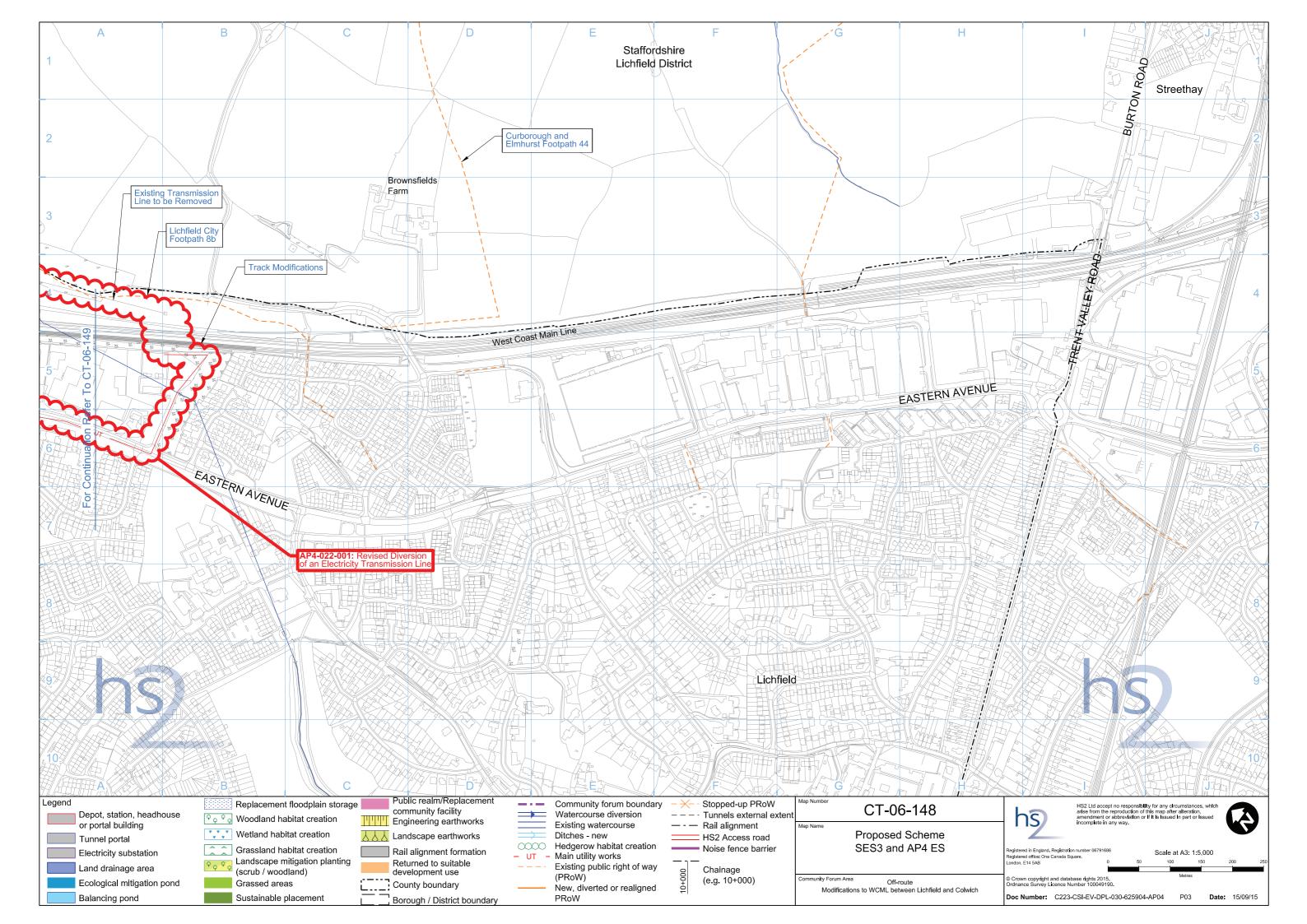


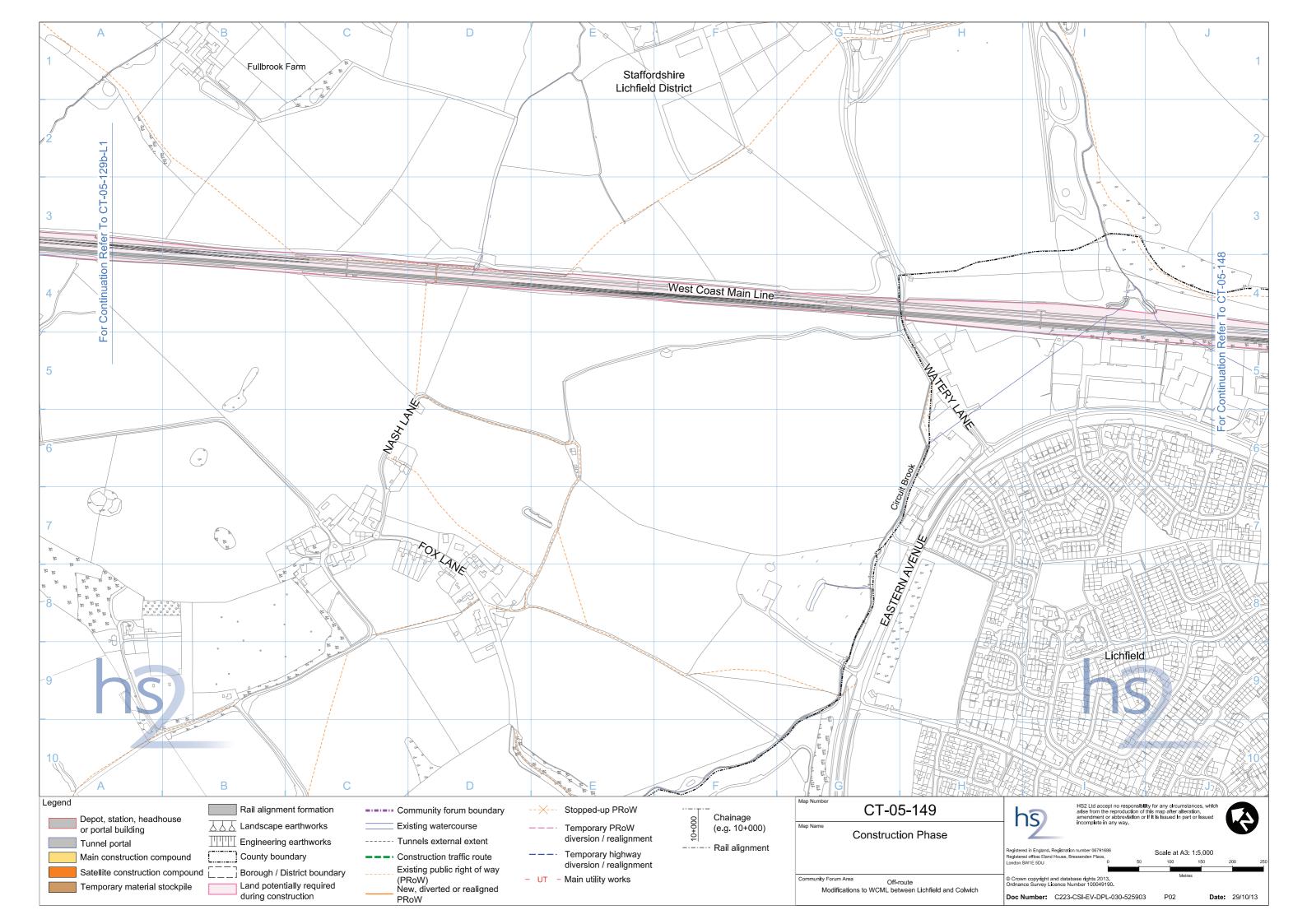


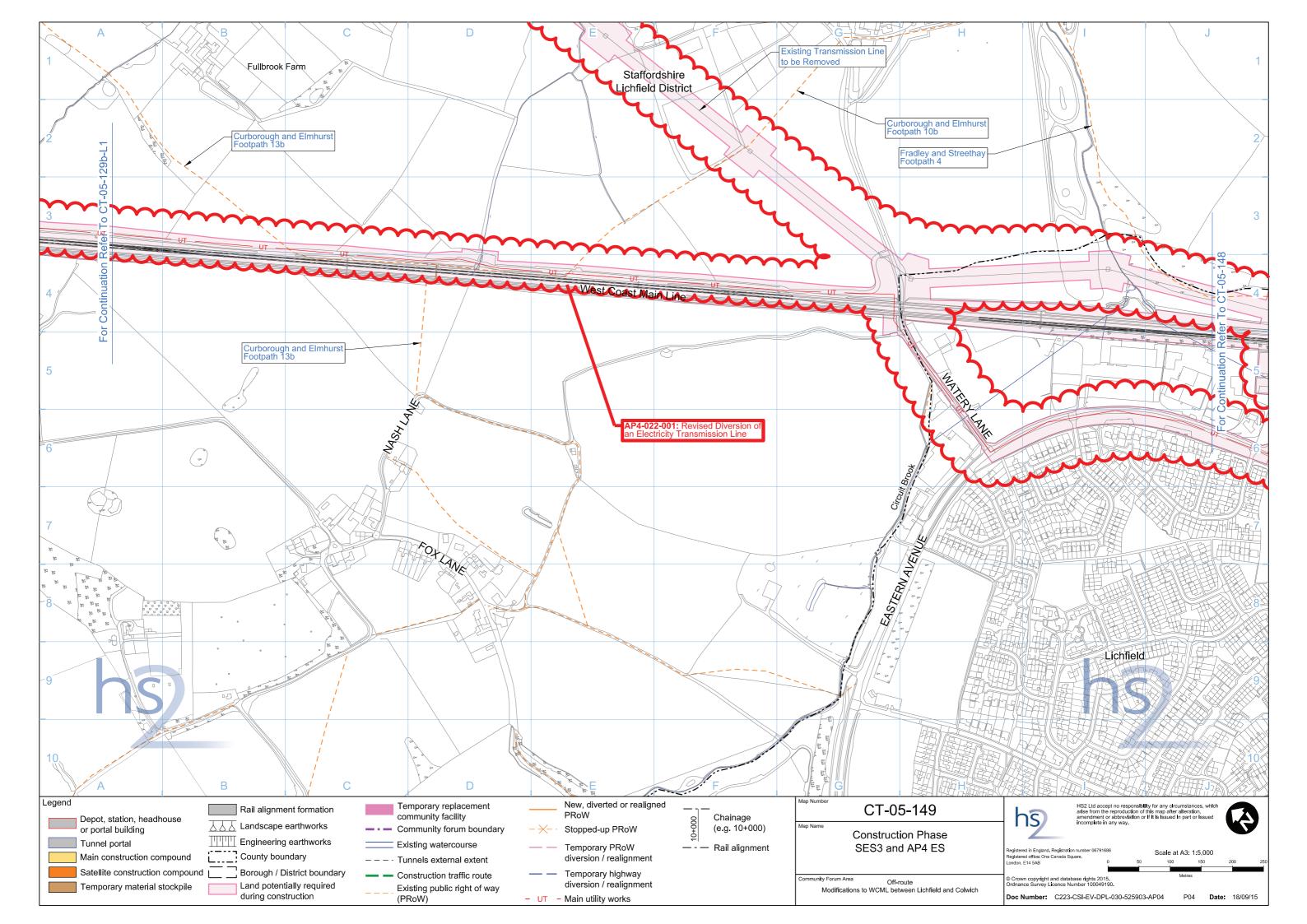


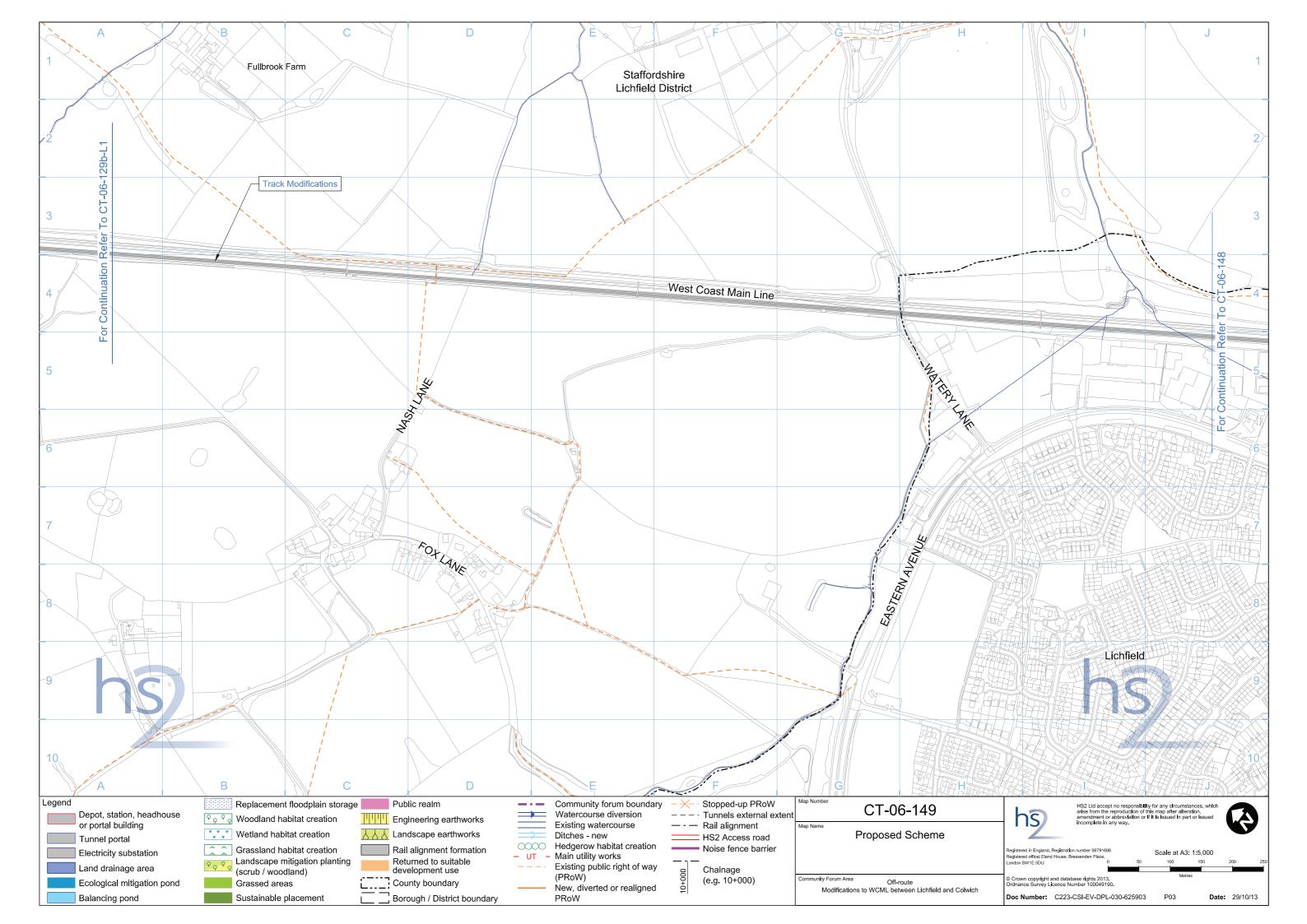


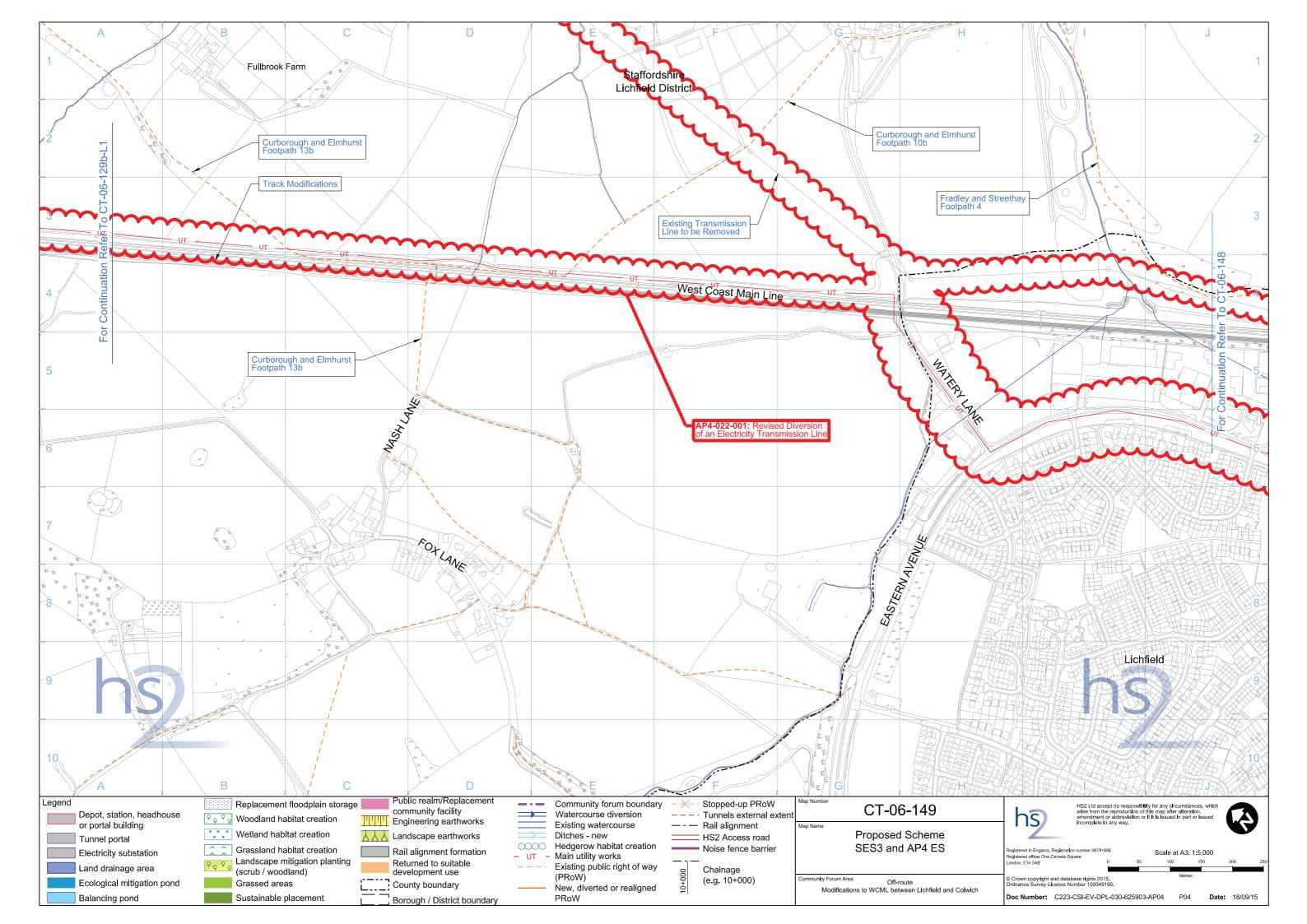


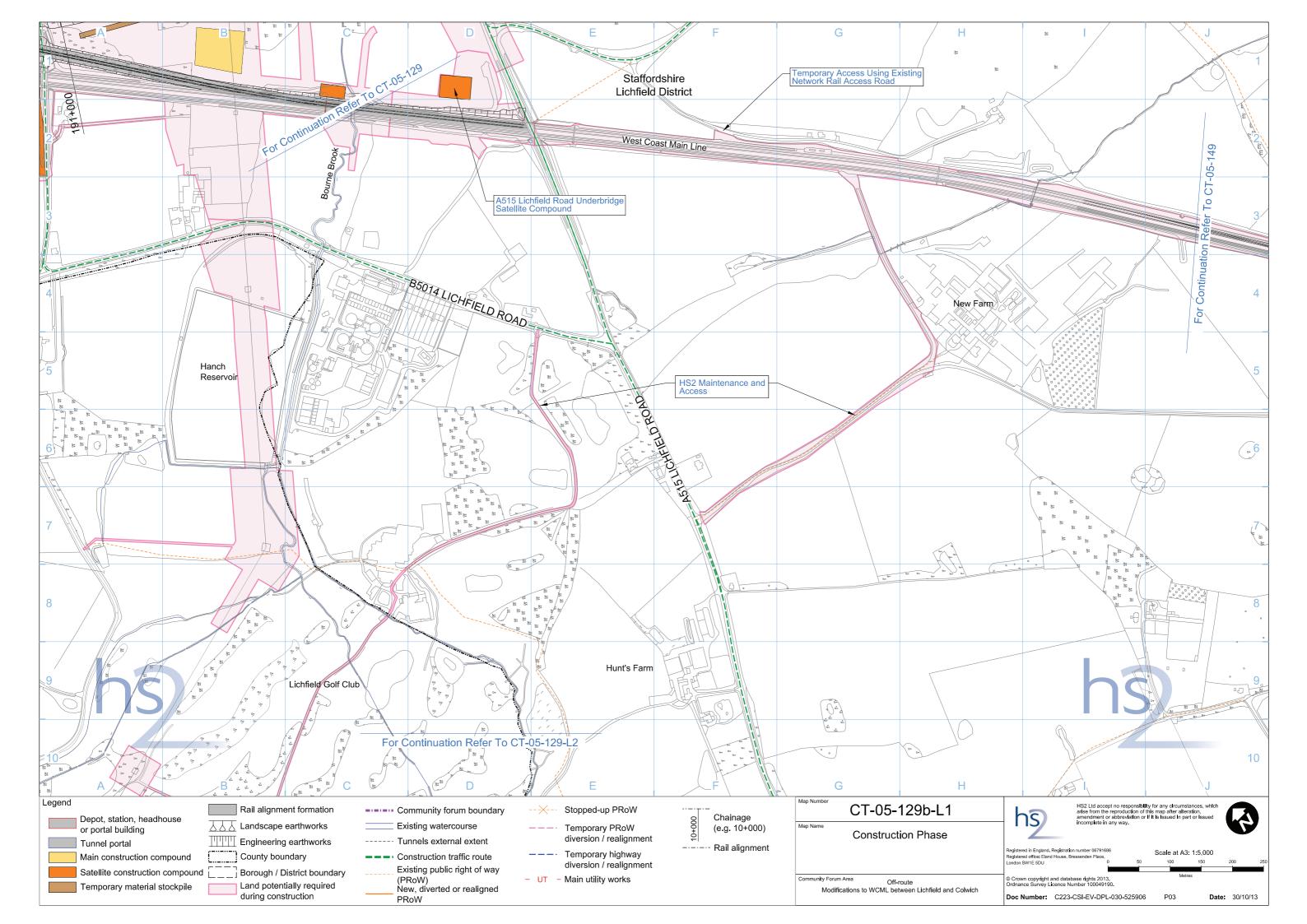


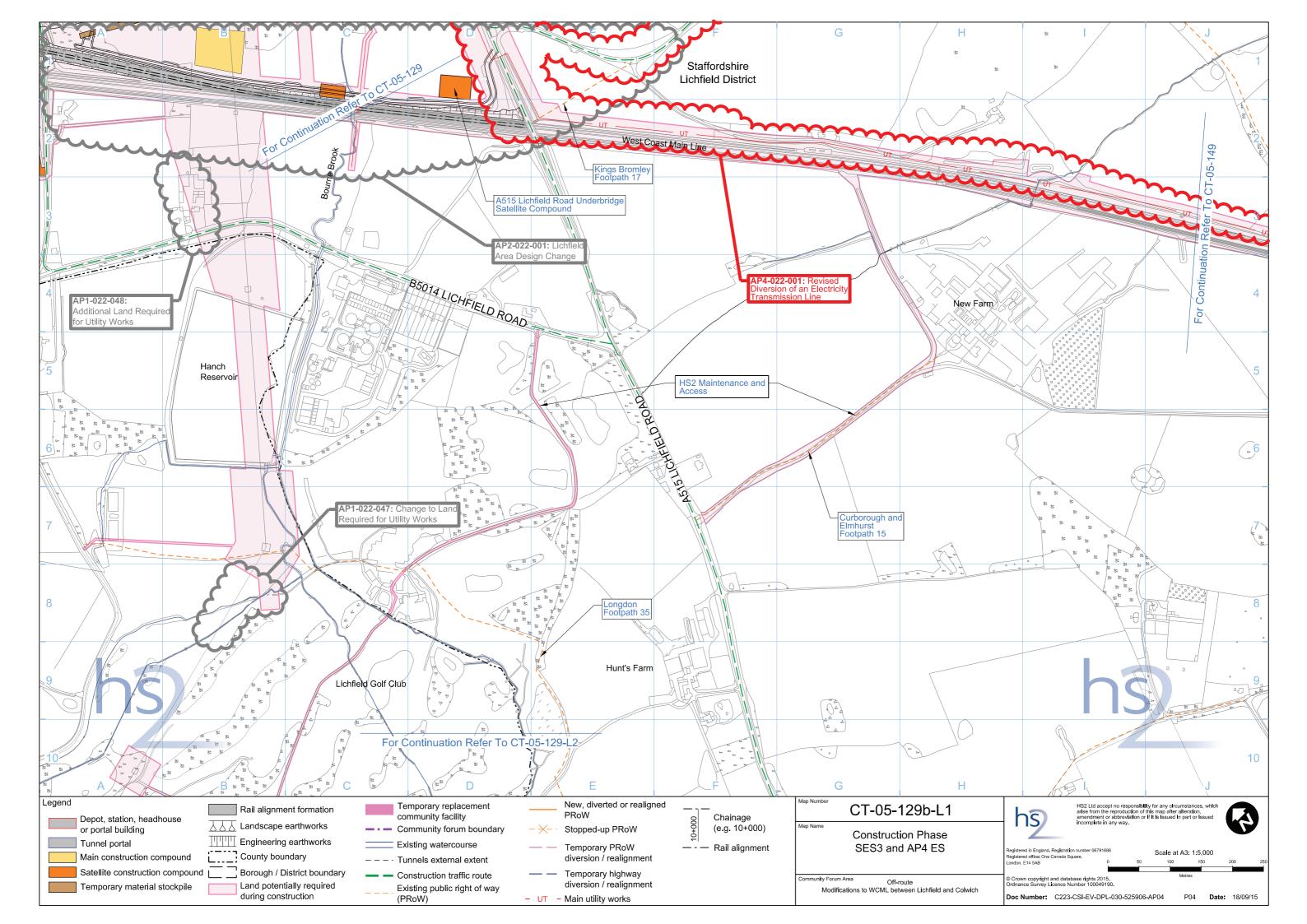


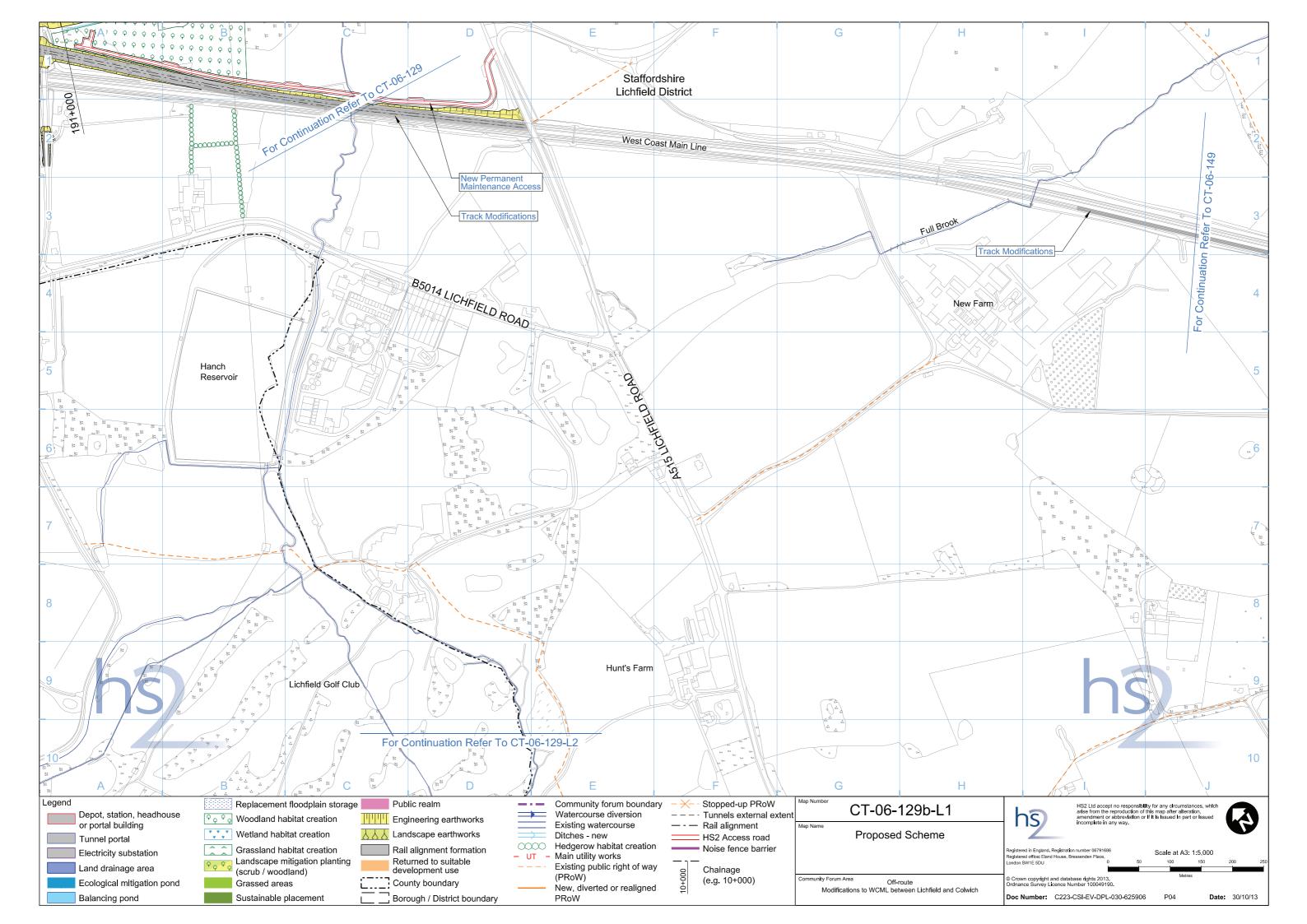


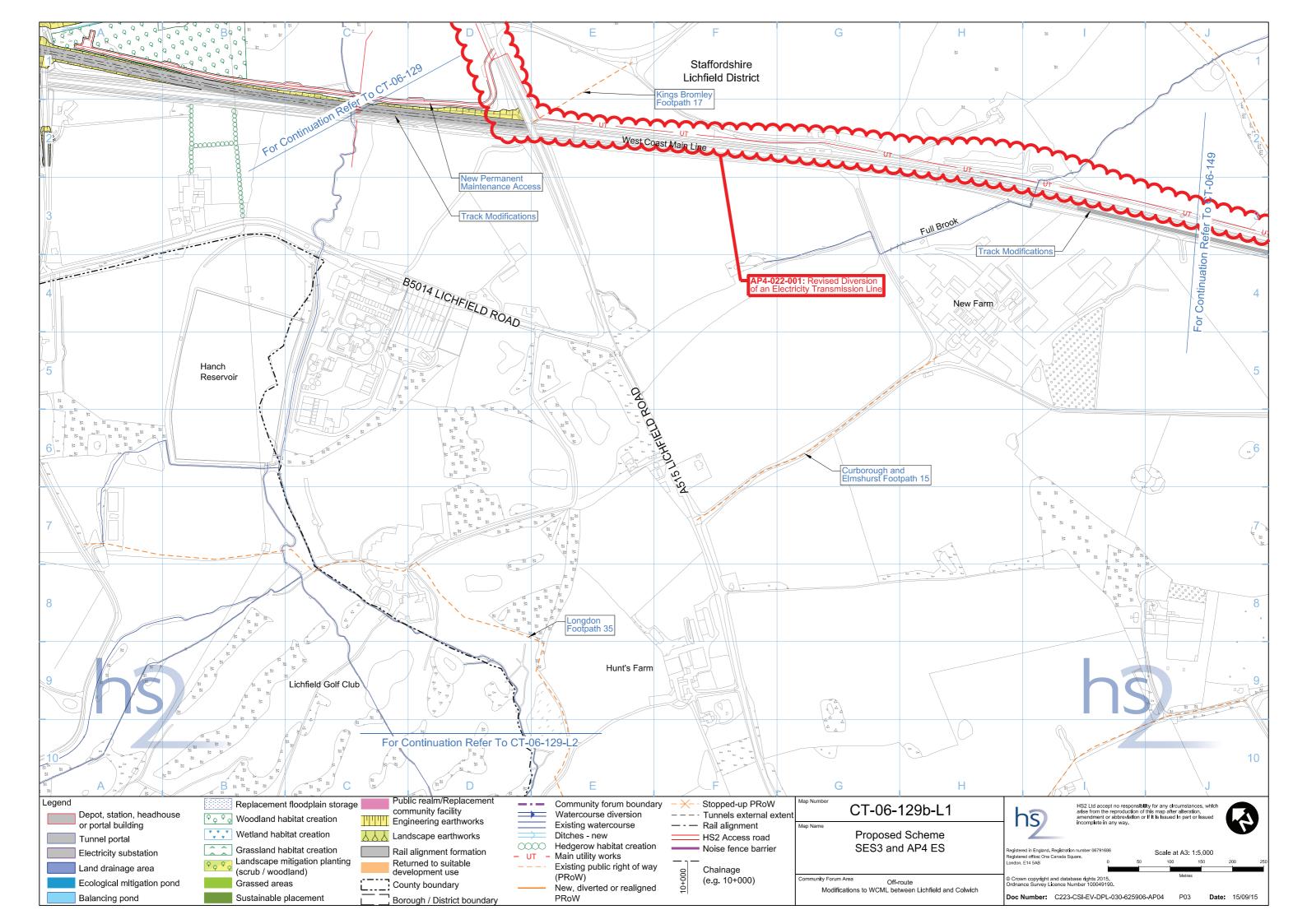


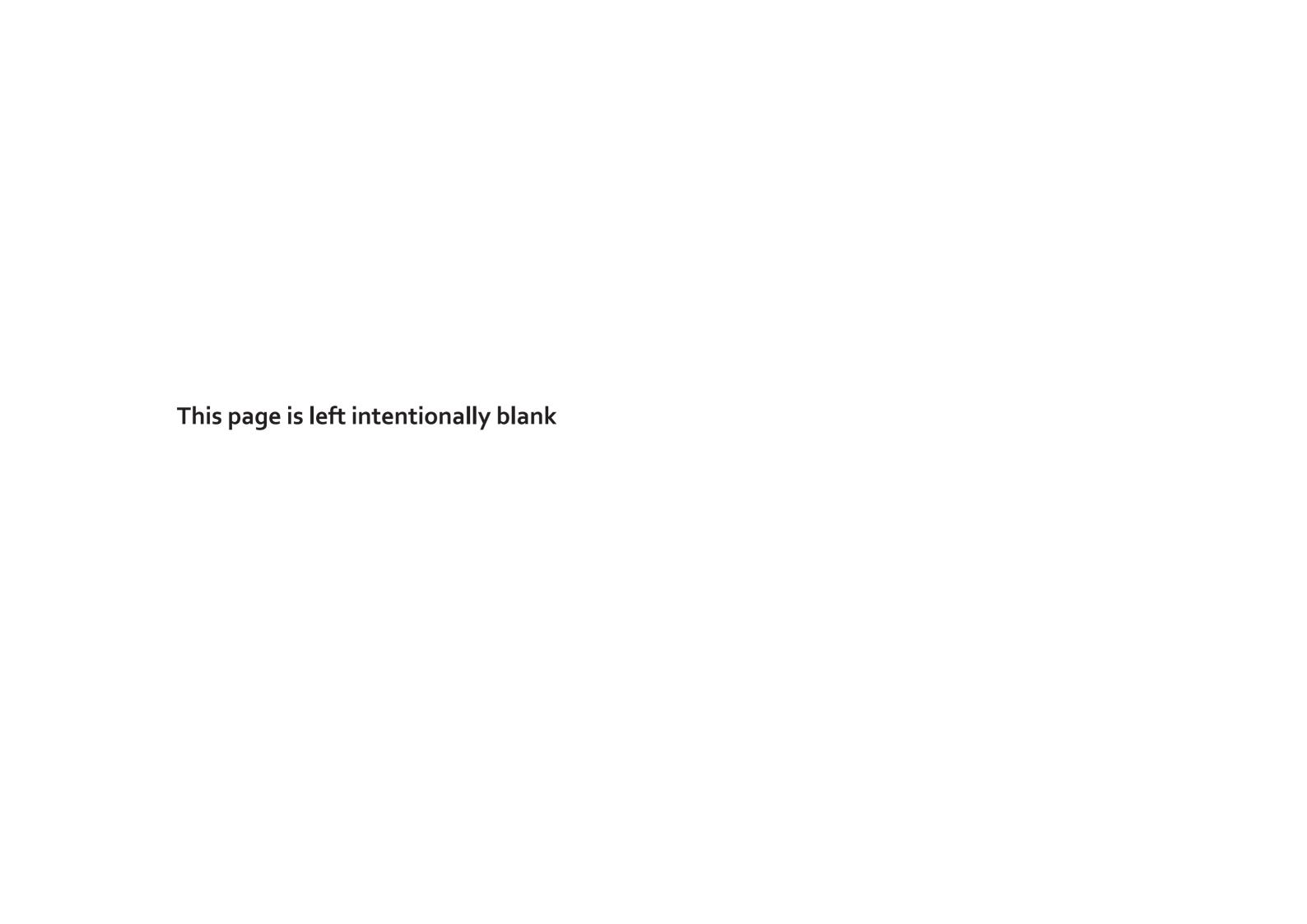












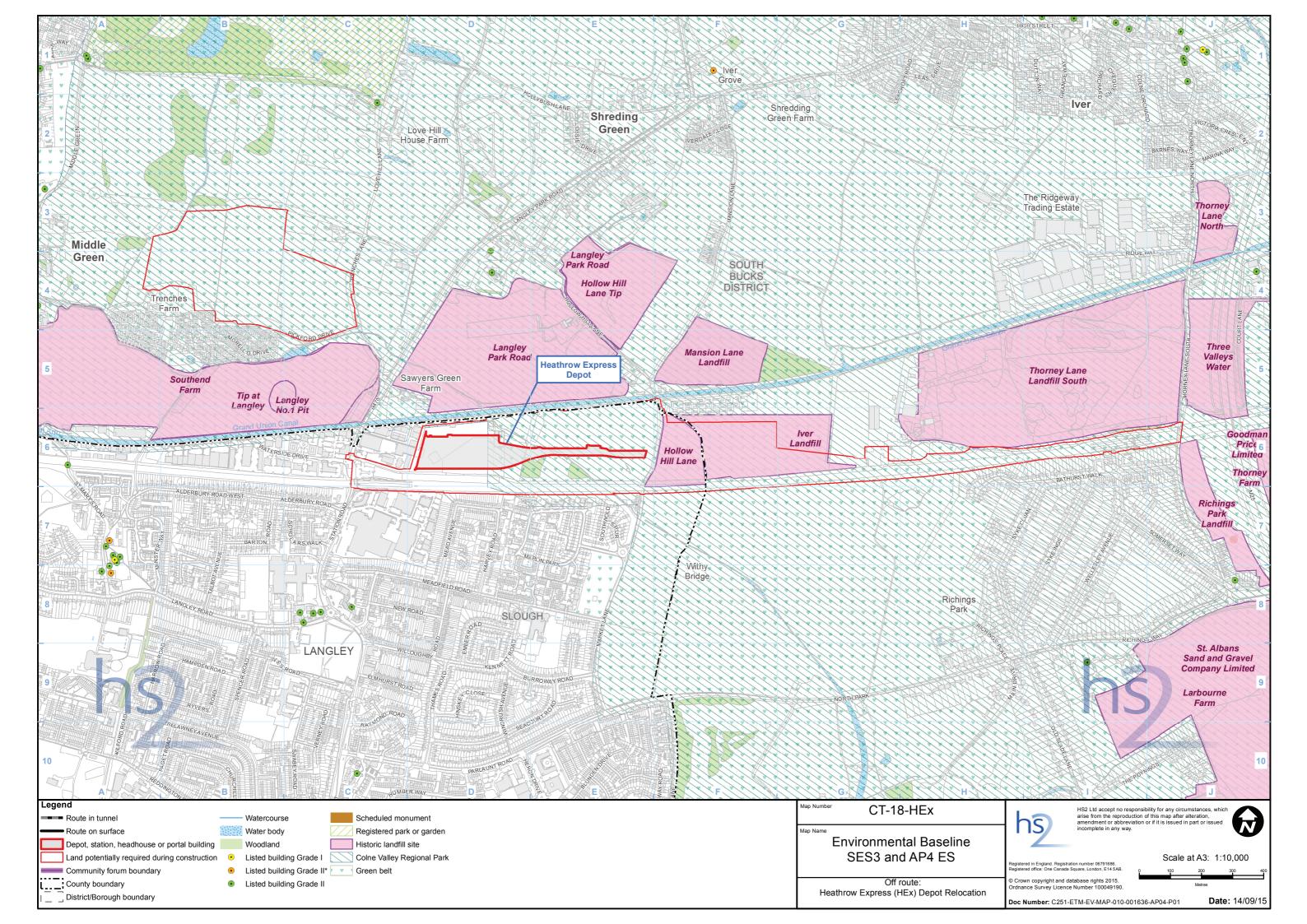


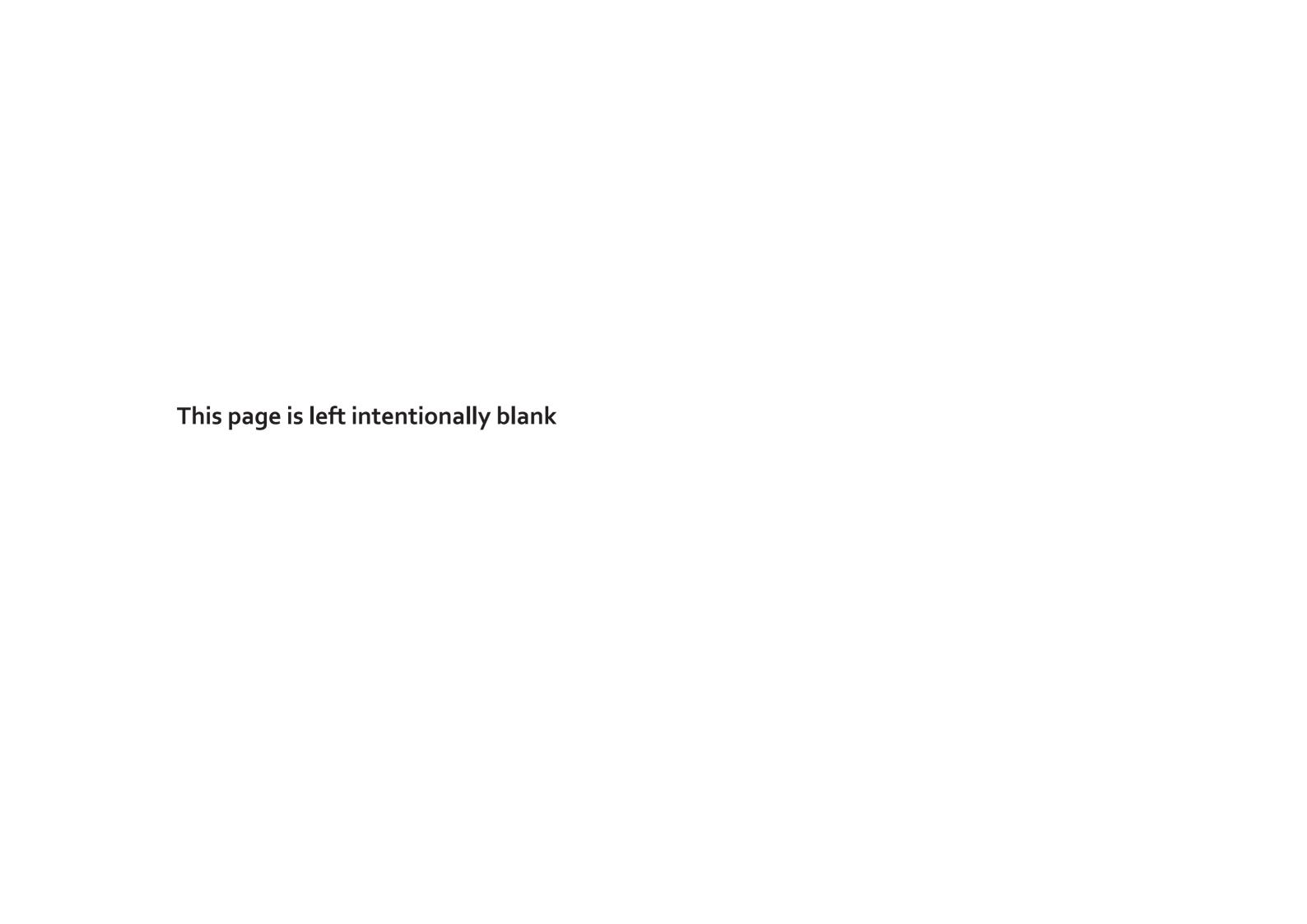
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