

High Speed Rail (West Midlands - Crewe)
Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

Volume 2: Map book

CA2: Colwich to Yarlet

February 2019



## **High Speed Rail (West Midlands - Crewe)**

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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.

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







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Map series name	Map series description
	These plans show the land potentially required during construction, the construction features, access
CT-o5 – Construction Phase	requirements and infrastructure associated with construction of the Proposed Scheme. The plans also show the
C1-05 - Collistroction Filase	construction phase arrangements for public access using Public Rights of Way.
	The base mapping shown on the plans is reflective of 2017 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 plans is reflective of 2017 Ordnance Survey (OS) data.
IV as Dhatamantages	Photomontages illustrating the Proposed Scheme during construction and/or operation for significantly affected
LV-o1 – Photomontages	viewpoints.
	Maps showing the viewpoint locations from which the Proposed Scheme has been assessed to give rise to
LV-o3 – Construction Phase Significantly Affected Viewpoints	significant effects during the construction phase. (All significant and non-significant photomontage locations are
	shown).
	Maps showing the viewpoint locations from which the Proposed Scheme has been assessed to give rise to
LV-04 – Operational Phase Significantly Affected Viewpoints	significant effects during the operational phase. (All significant and non-significant photomontage locations are
	shown).
	SV-o5 presents the direct operational noise impacts and likely significant effects of the scheme.
CV of Operational Noise and Vibration Impacts and Likely Cignificant Effects	The SV-05 figure series necessarily contains a large amount of information relating to the operational noise and
SV-05 – Operational Noise and Vibration Impacts and Likely Significant Effects	vibration assessment. It is designed to communicate visually the assessment process from the prediction of
	impacts to the determination of likely residual significant effects. The corresponding text is included in Vol2.

#### Mapping explanatory notes

#### Structure of the HS2 Phase 2a Supplementary Environmental Statement 2 and the Additional Provision 2 Environmental Statement

This map book is part of the suite of documents that make up the Supplementary Environmental Statement 2 (SES2) and the Additional Provision Environmental Statement 2 (AP2 ES) for Phase 2a of the proposed High Speed Two (HS2) rail network between the West Midlands and Crewe.

The SES2 and the AP2 ES are separate documents. However, they are bound together and presented in a number of volumes as described below:

- Non-technical summary (NTS). This provides a summary in non-technical language of the SES2 (Part 1) and the AP2 ES (Part 2). It presents a summary of any likely residual significant environmental effects (i.e. effects that are likely to remain after mitigation measures are put in place), both beneficial and adverse, which are new or different to those reported in the Environmental Statement (ES) submitted to Parliament in July 2017 in support of the hybrid Bill for Phase 2a of HS2 ('the main ES'), as amended by SES1 and, where relevant, AP1 ES;
- Glossary of terms and list of abbreviations. This contains any new or different terms and abbreviations used throughout the SES2 and the AP2 ES, which are not already explained in the main ES or SES1 and AP1 ES;
- Volume 1: Introduction to the SES2 and the AP2 ES. This introduces the supplementary environmental information and changes to the design and construction assumptions included within the SES2 and amendments within the AP2 ES. The report explains the environmental impact assessment (EIA) process that has been applied;
- Volume 2: Community area reports and map books. These report the supplementary environmental information and changes to the design and construction assumptions included within the SES2 (Part 1), amendments within the AP2 ES (Part 2) and any new or different likely significant environmental effects arising from these changes or assumptions and amendments in each community area. These effects are compared to those reported in the main ES, as amended by SES1 (and by SES2 for AP2). The AP1 amendments are also taken into account where relevant. The maps relevant to each community area are provided in separate Volume 2 map books and should be read in conjunction with the relevant community area report;
- Volume 3: Route-wide effects. This describes any new or different likely significant environmental effects arising at a route-wide level from the supplementary environmental information and changes to the design and construction assumptions included within the SES2 (Part 1) and the amendments within the AP2 ES (Part 2) compared to those reported in the main ES, as amended by SES1 (and by SES2 for the AP2 amendments). The AP1 amendments are also taken into account where relevant; and
- Volume 5: Appendices and map books. These contain supporting environmental information and associated maps.

A Volume 4: Off-route effects report was produced as part of the main ES. A separate Volume 4 has not been produced as part of the SES2 and AP2 ES. Any new or different significant effects arising from the AP2 amendments are reported in the most relevant Volume 2 community area report.

Certain reports and maps containing background information and data (BID) have been produced, which do not form part of the SES2 and AP2 ES. These documents are available online at www.gov.uk/hs2.. The BID documents and maps present background survey information and other relevant background material.

#### 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 SES2 and the AP2 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.

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#### Chainage

Most of the maps presented as part of the SES2 and the AP2 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. 192+000 or 239+500.

Chainage (known as reference chainage) is referenced from Euston Station, which is 0+000, and the value presented is in metres. E.g. 192+000 refers to the point, 192,000m, or 192km, from Euston Station. Chainage values increase in intervals dependant on the map scale. For maps at 1:50,000 scale chainage is shown at 2km intervals. For maps at 1:20,000, 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 July 2017) on the left hand page, where relevant, and the SES2 and the AP2 ES map on the right. For the CT-05 and CT-06 map series, the SES2 and the AP2 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 SES2 and the AP2 ES reference number. Only maps which have been amended as a result of the SES2 and the AP2 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 SES2 (Part 1 of each Volume 2 report).
Red	Proposed amendments relating to the AP2 ES (Part 2 of each Volume 2 report).
Grey	Proposed design changes and amendments relating to SES1 changes and AP1 amendments, provided for reference.

SES changes and AP amendments (now referred to as SES1 changes and AP1 amendments) were denoted in the SES and AP ES documents and maps as follows: SES-ooX-ooX or AP-ooX-ooX. In order to clearly distinguish between SES1 and SES2 changes and AP1 amendments, references in the SES2 and AP2 ES documents and maps relating to SES1 changes and AP1 amendments are now denoted as follows: SES1-ooX-ooX or AP1-ooX-ooX.

Each Volume 5 map is annotated to describe the change to a receptor or significant effect, and to give the SES2 and the AP2 ES reference number. For more detailed information about the SES2 and the AP2 ES annotation, refer to the map series legend. Only maps which have been amended as a result of the SES2 and the AP2 ES are included within the map book.

Further details on the approach to mapping is set out in Section 6 of Volume 1 of the SES2 and AP2 ES.

#### 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 Crewe to the left.

The exception to this, are map series LV-o3 and LV-o4 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 Crewe to the top.

#### Map books

In total there are 16 map books which make up the SES2 and the AP2 ES, spread across volumes 2 and 5. A list of the titles is provided below for reference.

Name
Volume 2: Map book — CA1: Fradley to Colton
Volume 2: Map book – CA2: Colwich to Yarlet
Volume 2: Map book — CA3: Stone and Swynnerton
Volume 2: Map book — CA4: Whitmore Heath to Madeley
Volume 2: Map book — CA5: South Cheshire
Volume 5: Map book – Agriculture, forestry and soils (AG-01, AG-02, AG-04)
Volume 5: Map book — Air quality (AQ-01)
Volume 5: Map book – Community (CM-o1)
Volume 5: Map book — Committed developments (CT-13)
Volume 5: Map book – Cultural heritage (CH-01, CH-02, CH-03)
Volume 5: Map book — Ecology - designated sites (EC-01)
Volume 5: Map book – Landscape and visual (LV-00, LV-02, LV-07, LV-08)
Volume 5: Map book – Socio-economics (SE-o1)
Volume 5: Map book – Sound, noise and vibration (SV-01, SV-02, SV-03, SV-04)
Volume 5: Map book – Traffic and transport (TR-03, TR-04, TR-08)
Volume 5: Map book – Water resources (WR-05, WR-06)



High Speed Rail (West Midlands - Crewe)
Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

Data dictionary and definitions

## Data dictionary and definitions

Legend features	Definition	Source	Copyright
1km Airborne sound study area	This defines the area within which operational airborne sound impacts of the scheme have been quantitatively assessed. This area is defined as within 1km of surface sections of the route in rural areas and within 500m of surface sections of the route in urban areas.	High Speed Two (HS2) Ltd	
5m contours	A contour line showing points of equal elevation (height) above a reference level, such as mean sea level and therefore gives indication of the topography, showing valleys and hills, and the steepness of slopes. Spaced at intervals of 5m.	High Speed Two (HS2) Ltd	
Area of Outstanding Natural Beauty (AONB)	An Area of Outstanding Natural Beauty (AONB) is an area of high scenic quality which has statutory protection in order to conserve and enhance the natural beauty of its landscape. AONB landscapes range from rugged coastline to water meadows to gentle lowland and upland moors. Natural England has a statutory power to designate land as Areas of Outstanding Natural Beauty under the Countryside and Rights of Way Act 2000.	Natural England	© Natural England copyright 2018
Balancing pond	The proposed location and extent of balancing ponds for drainage attenuation and infiltration. Outer boundary represents the perimeter.	High Speed Two (HS2) Ltd	
Borrow Pit	Area excavated to provide material for construction purposes.	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. 192+000 refers to the point, 192,000m, or 192km, 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.  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.	High Speed Two (HS2) Ltd	
Committed developments – SV Only	This informs the assessment of the future baseline.  Committed consents are unimplemented but committed developments or Local Plan development allocations that are likely to be largely built out prior to commencement of the Proposed Scheme.  Cumulative development is unimplemented but committed developments or Local Plan development allocations that are likely to be largely built out during implementation of the	High Speed Two (HS2) Ltd	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

Legend features	Definition	Source	Copyright
	Proposed Scheme and give rise to potential cumulative effects, when considered alongside the Proposed Scheme.		
Community area boundary	The Environmental Statement has been split into 5 sections called Community Areas.	High Speed Two (HS2) Ltd	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
Construction compounds	See Main construction compound and Satellite construction compound.	High Speed Two (HS2) Ltd	
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 and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
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 and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
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	
Engineering earthworks: Cutting	Cuttings created in the construction of the railway and associated works such as highways.	High Speed Two (HS2) Ltd	
Engineering earthworks: Embankment	Embankments created in the construction of the railway and associated works such as highways.	High Speed Two (HS2) Ltd	
Envisaged measures further reducing noise effects	Other environmental features e.g. landscaping: These lines represent environmental mitigation features provided for reasons other than noise mitigation which also reduce sound levels from the Proposed Scheme to the surrounding environment. These features are not placed specifically to reduce or remove a likely significant noise effect. Examples include landscaping and visual mitigation earthworks (non-engineering earthworks).  Engineering e.g. cuttings: These lines represent engineering features which reduce sound levels from the Proposed Scheme to the surrounding environment but are not placed specifically to reduce or remove a likely significant noise effect. Examples	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
	include cuttings and safety barriers on viaducts which are not close to sensitive receptors.		
Envisaged mitigation to avoid / reduce significant noise effects	Landscaping and/or fence barriers: These lines represent the envisaged mitigation provided specifically to reduce sound levels from the Proposed Scheme at sensitive receptors in order to reduce or remove likely operational significant noise effects. Examples include noise fence barriers or earth bunds (non-engineering earthworks) acting as noise barriers. These features are labelled with the height of the top of the barrier/bund above rail level.  Engineering e.g. cuttings: These lines represent engineering	High Speed Two (HS2) Ltd	
	features of the route which reduce sound levels from the Proposed Scheme at potentially significant sensitive receptors. These features, therefore, serve a material purpose in reducing or avoiding likely significant noise effects. Examples include engineering cuttings near to sensitive receptors. These features are labelled with the height of the top of the feature above rail level.		
Existing buildings	Extent of buildings derived from Ordnance Survey MasterMap data.	Ordnance Survey	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
Existing contours	Lines depicting land heights to show topography.	Ordnance Survey	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
Existing inland water	See Water body.	See Water body.	See Water body.
xisting Public Right of Way (PRoW)	See Public Rights of Way.	See Public Rights of Way.	See Public Rights of Way.
xisting watercourse	See Watercourse.	See Watercourse.	See Watercourse.
xisting woodland	See Woodland.	See Woodland.	See Woodland.
Existing woodland and tree belts	A dataset showing large areas of trees that are likely to have an impact on whether the scheme is visible during construction and vegetation. It was used in the ZTV as part of the base models.	High Speed Two (HS2) Ltd	
Extent of land potentially required during construction for mitigation planting	Areas of land outside the main works identified for the planting of woodland, grassland mitigation.	High Speed Two (HS2) Ltd	
Grassed areas	Any other area grassed not included in landscaped earthworks or ecological habitat.	High Speed Two (HS2) Ltd	
Grassland habitat creation	Soft landscape design that can include any seeded areas for the purpose of creating grassland except for the engineering earthworks.	High Speed Two (HS2) Ltd	
Ground-borne noise or vibration impact	Buildings at which an operational ground-borne sound or vibration impact is predicted from the Proposed Scheme.	High Speed Two (HS2) Ltd	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.

Legend features	Definition	Source	Copyright
Ground-borne sound & vibration study area (highly sensitive non-residential)	This defines the area within which direct operational ground-borne sound and vibration impacts of the scheme at highly sensitive non-residential receptors have been quantitatively assessed. This area is defined as within 200m of the route.	High Speed Two (HS2) Ltd	
Ground-borne sound & vibration study area (residential and non-residential)	This defines the area within which direct operational ground- borne sound and vibration impacts of the scheme at residential and non-residential receptors have been quantitatively assessed. This area is defined as within 85m of the route.	High Speed Two (HS2) Ltd	
Hedgerow habitat creation	Ecological mitigation to provide new hedgerow 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	
HS2 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	
L <sub>pAFmax</sub> exceeds 6odB façade	Assessment locations where the predicted value of $L_{pAFmax}$ is 60 dB or greater having applied a façade correction of +2.5 dB to the predicted free field value.	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	
Local placement of surplus excavated material (local placement area)	An area of land already required for construction of the scheme to be used for the permanent placement of surplus excavated materials, which will subsequently be restored for agricultural use.	High Speed Two (HS2) Ltd	
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	

Legend features	Definition	Source	Copyright
Non engineering earthworks: Cutting	Cuttings created in the construction of landscape features and mitigation measures.	High Speed Two (HS2) Ltd	
Non engineering earthworks: Embankment	Embankments created in the construction of landscape features and mitigation measures.	High Speed Two (HS2) Ltd	
Operational airborne sound impacts at buildings	The buildings shown on SV-o2 and SV-o5 are colour-coded according to the magnitude of the predicted noise impacts of the Proposed Scheme. Noise impacts are calculated by comparing the sound levels predicted if the Proposed Scheme did not go ahead with those if it did (details of this process can be found in Volume 5: Appendix SVoo1-ooo of the main ES). Panel B on SV-o5 contains a key showing the colours used with the corresponding impact categories. The impacts presented are the greatest (i.e. worst-case) of the impacts predicted for daytime and night-time.	High Speed Two (HS2) Ltd	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
Photomontage location	Shows the locations from which verifiable photomontages have been produced. The locations are based on a fully surveyed point.	High Speed Two (HS2) Ltd	
Potential additional noise insulation (triggered by maximum sound levels at night)	This represents dwellings which would potentially be provided with noise insulation due maximum sound levels from the Proposed Scheme (further information regarding assessment criteria can be found in Volume 5 Appendix SV-001 of the main ES).	High Speed Two (HS2) Ltd	
Potential additional noise insulation (triggered by WHO Night Noise Guidelines Interim Target)	This represents dwellings which would potentially be provided with noise insulation due to noise from the Proposed Scheme exceeding the World Health Organization (WHO) night noise guidelines interim target (further information regarding assessment criteria can be found in Volume 5 Appendix SV-001 of the main ES).	High Speed Two (HS2) Ltd	
Potential noise insulation (triggered by Noise Insulation Regulations 1996)	This represents dwellings which would potentially qualify for noise insulation under the Noise Insulation (Railways and Other Guided Transport Systems) Regulations 1996 (further information regarding assessment criteria can be found in Volume 5 Appendix SV-001 of the main ES).	High Speed Two (HS2) Ltd	
Proposed tree planting	A dataset showing proposed planting that may have an impact on whether the scheme is visible during construction and operation. It was used in the operation year 15 ZTV.	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 (PRoW)	Public rights of way are highways which can be used for the following purposes:  - Footpaths - pedestrians only - Bridleways - pedestrians, cyclists and equestrians		© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you

Legend features	Definition	Source	Copyright
	- Restricted byways - as bridleways plus non-motorised vehicles - Byways open to all traffic. Definitive Map data supplied by surveying authorities.	Staffordshire County Council	with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.  © Staffordshire County Council
		Cheshire East Council	© Cheshire East 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	
Railway systems compound	Represents railway systems compounds which facilitate installation, testing and commissioning of the railway systems, including track, overhead line equipment, communications and signalling equipment and traction power supply.	High Speed Two (HS2) Ltd	
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	
Significantly affected viewpoint	This dataset shows the locations of the visual receptors from which the schemes visual impact has been assessed and shows whether or not the impact is significant or non-significant during construction and operation.	High Speed Two (HS2) Ltd	
Sound contours (SV-05)	The sound levels from the Proposed Scheme (expressed as L <sub>pAeq,T</sub> and representing sound from the new railway only) are presented at two sound levels: 40 dB L <sub>Aeq,T 23:00 to 07:00</sub> and 55 dB L <sub>Aeq,T 23:00 to 07:00</sub> . The corresponding daytime levels (L <sub>Aeq,T 07:00 to 23:00</sub> ) are shown in Panel A of SV-05.	High Speed Two (HS2) Ltd	
Stopped-up PRoW	Public rights of way that will be closed due to construction of the scheme.	High Speed Two (HS2) Ltd	
Storage / prefabrication / laydown areas	Storage, prefabrication or laydown areas.	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 materials during construction.	High Speed Two (HS2) Ltd	
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	

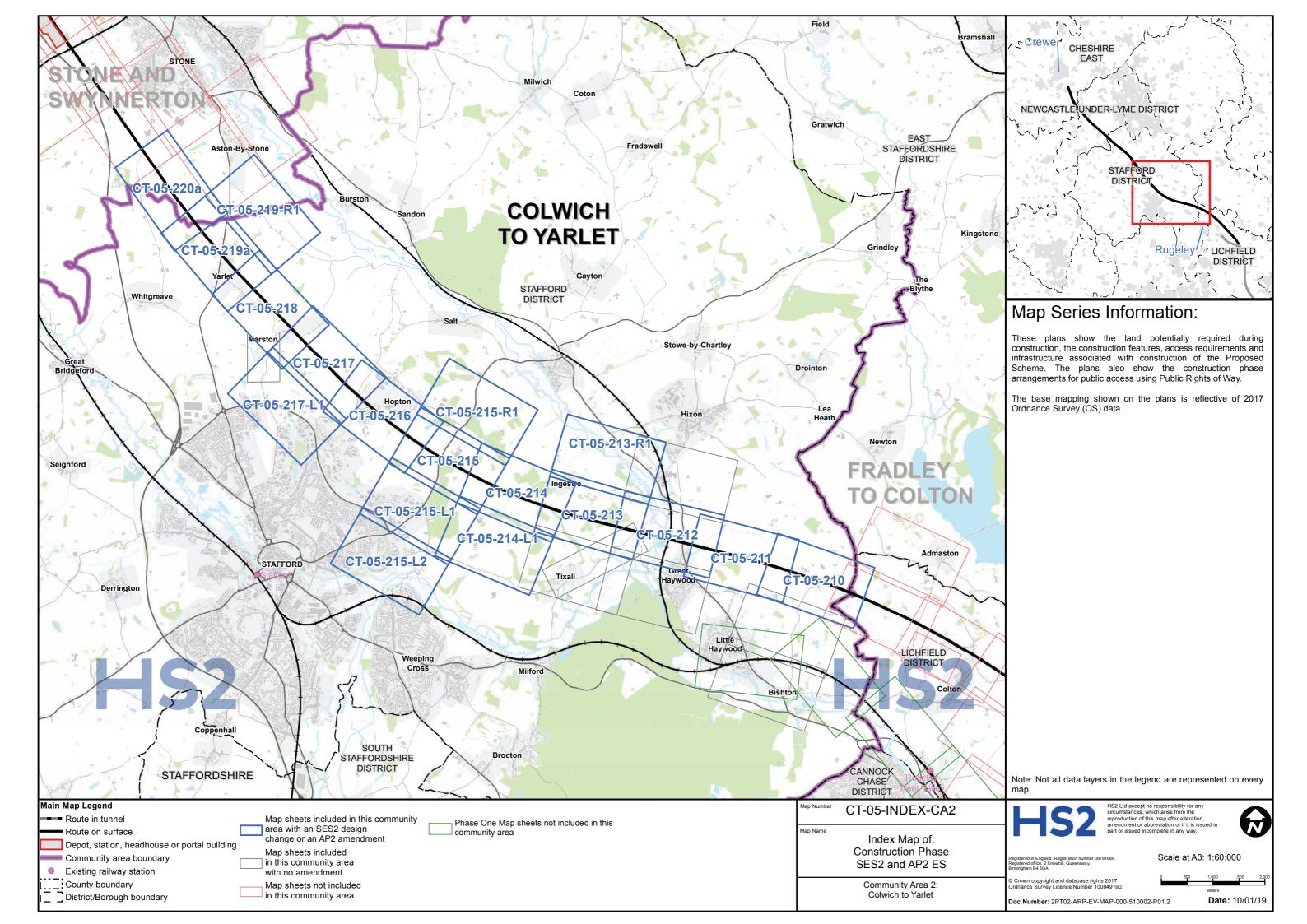
Legend features	Definition	Source	Copyright
Temporary replacement community facility	Area of land for the provision of a temporary replacement community facility, such as a playground, community centre or activity centre, whilst construction works are in progress.	High Speed Two (HS2) Ltd	
Temporary workers accommodation	Temporary accommodation for workers during the construction period.	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	Any mass of water having definite hydrological, physical, chemical and biological characteristics.	Ordnance Survey	© Crown copyright and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
Watercourse	Any channel through which water flows, can be natural or manmade. They are split into two categories (main rivers or ordinary watercourses) in England and Wales for regulation purposes.	Environment Agency	© Environment Agency copyright and/or database right 2018. 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 and database rights 2017 OS 100049190. You are permitted to use this data solely to enable you to respond to, or interact with, the organisation that provided you with the data. You are not permitted to copy, sub-licence, distribute or sell any of this data to third parties in any form.
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	

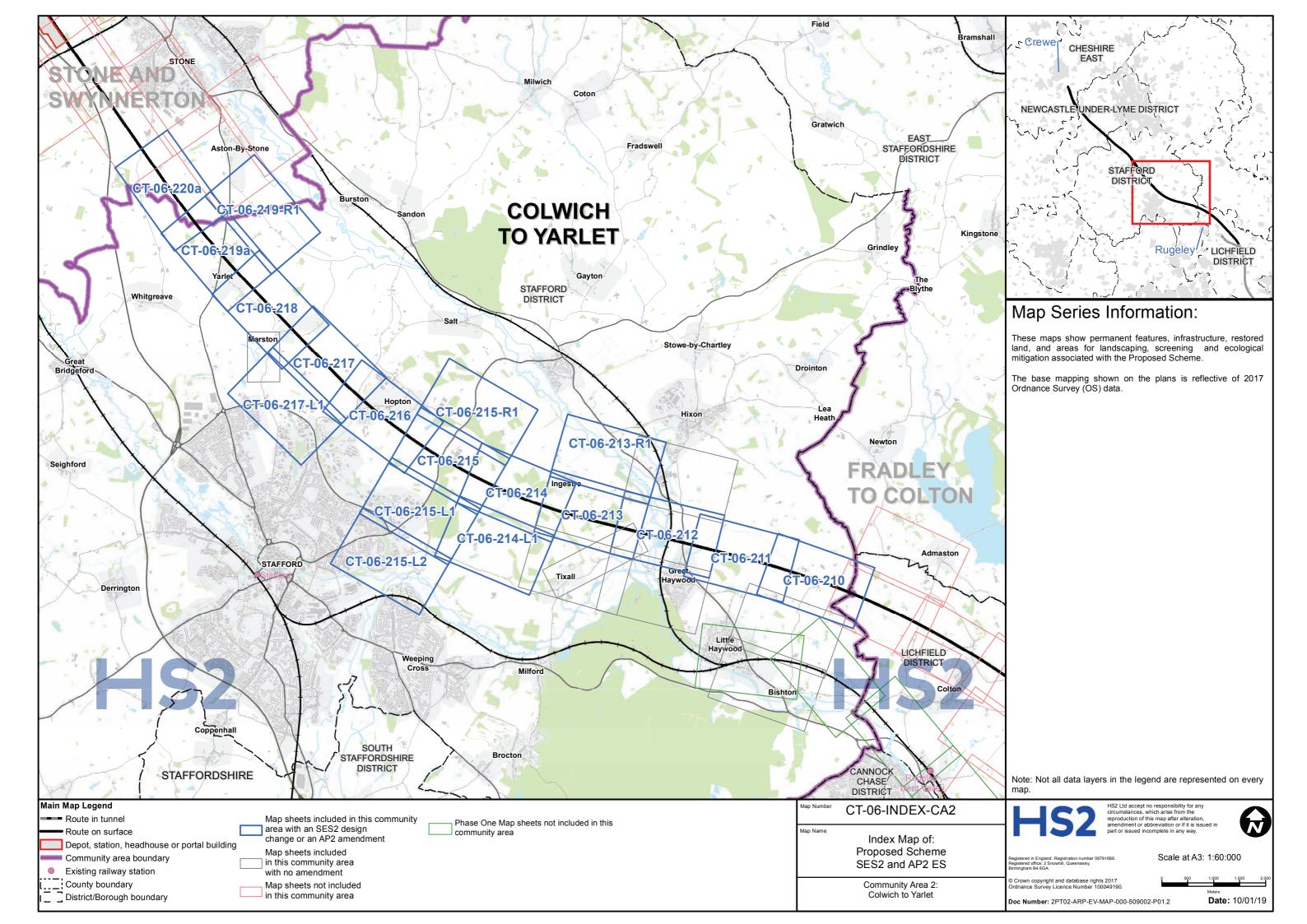


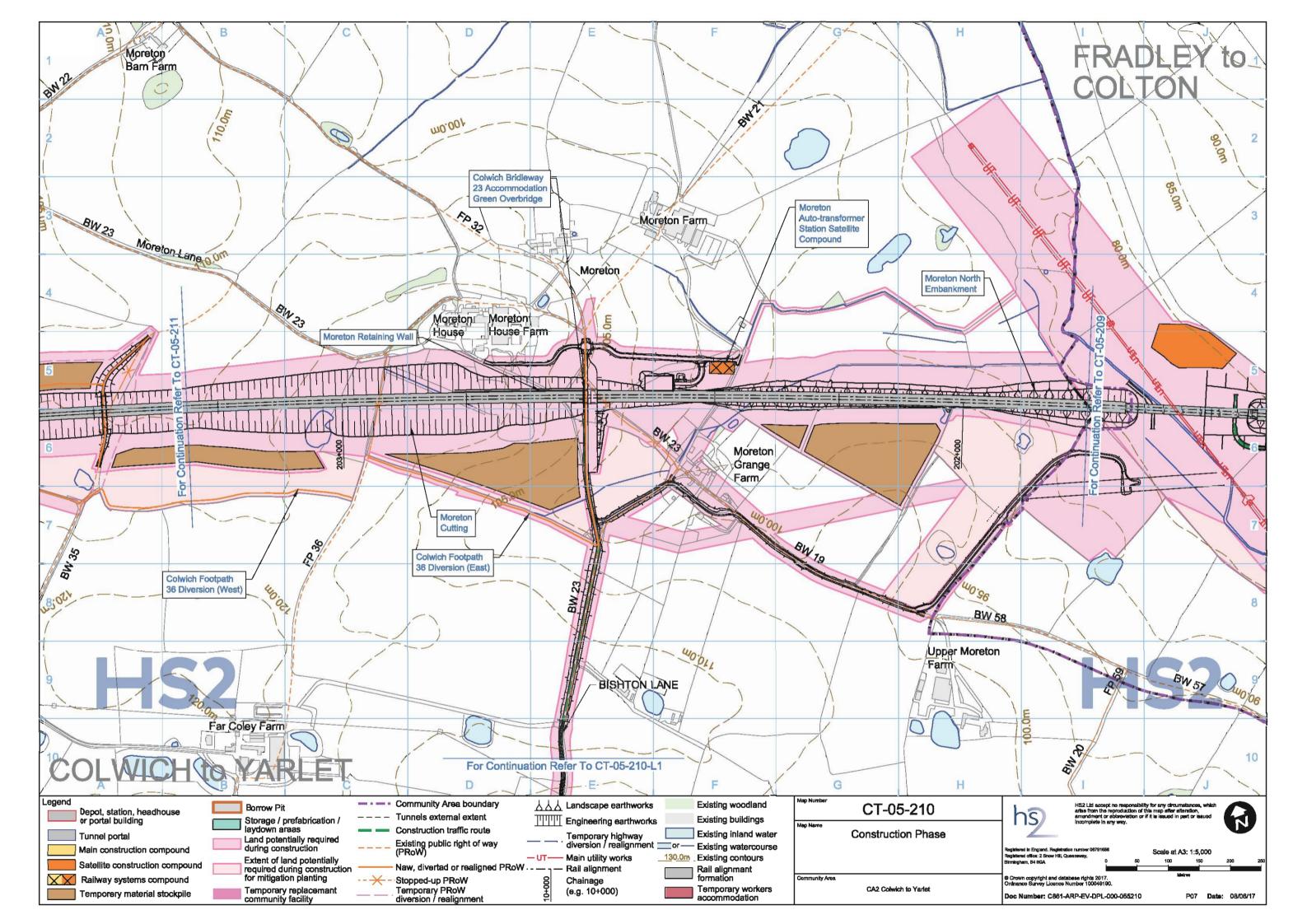
# High Speed Rail (West Midlands - Crewe) Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

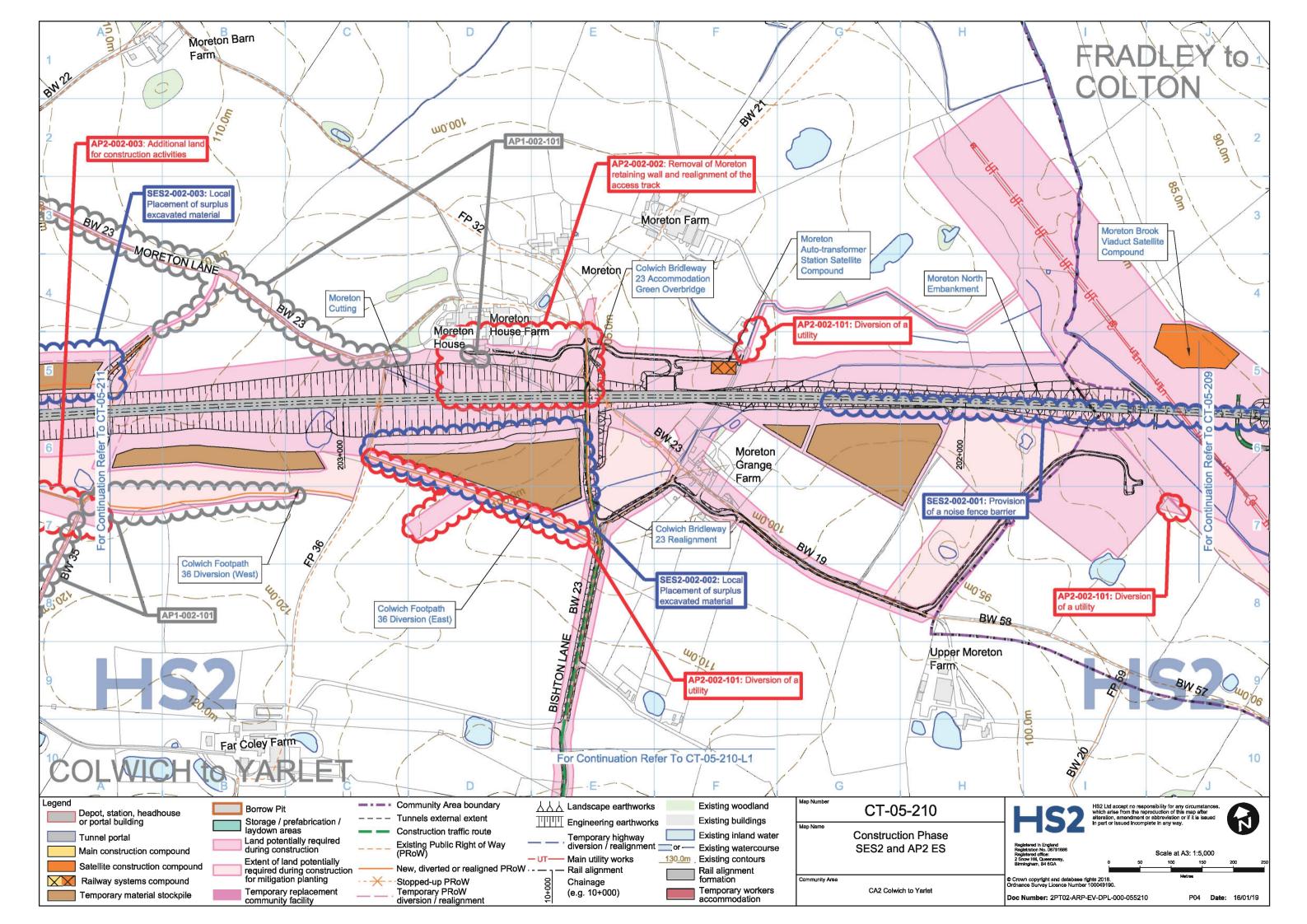
CT-05 - Construction Phase

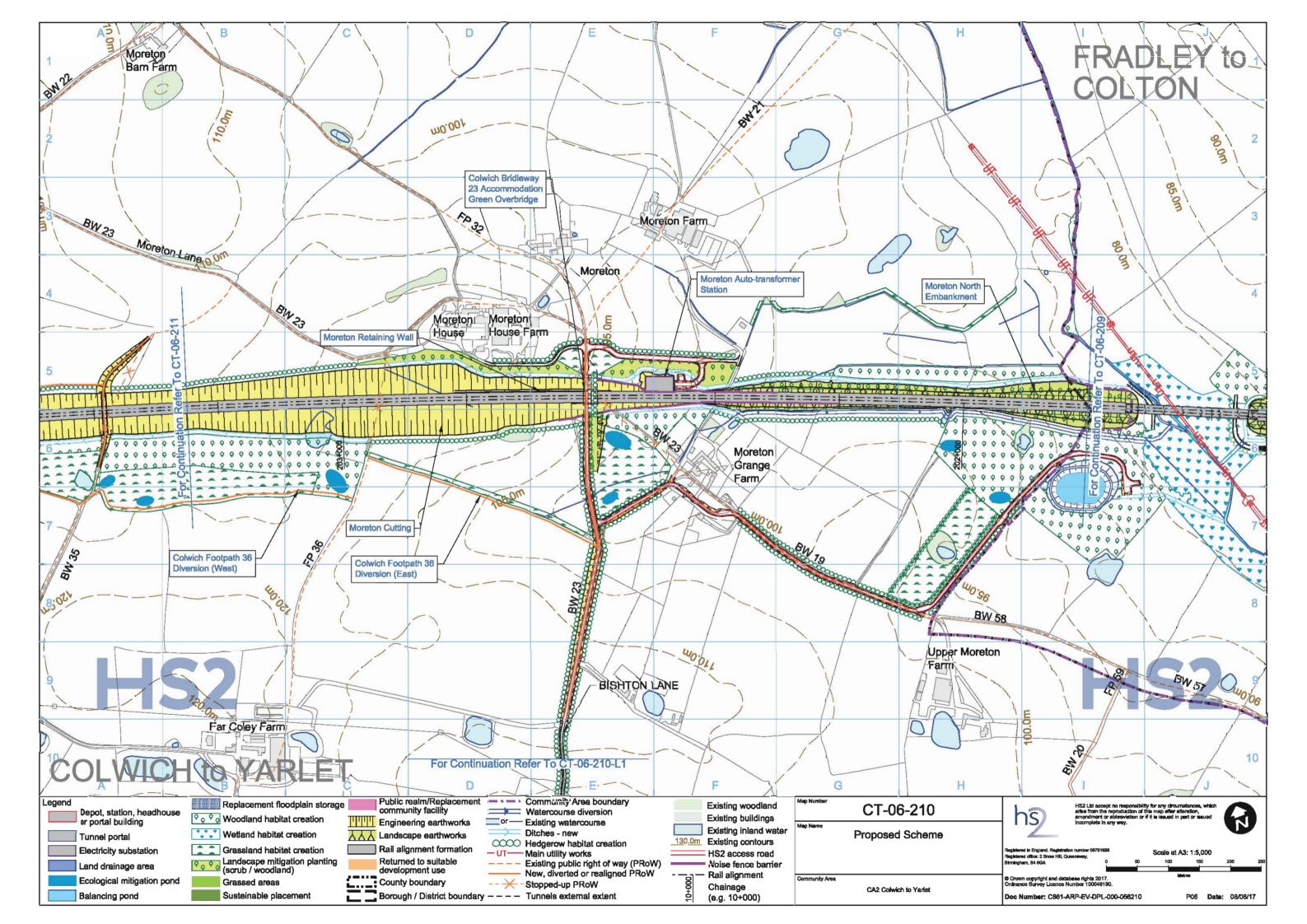
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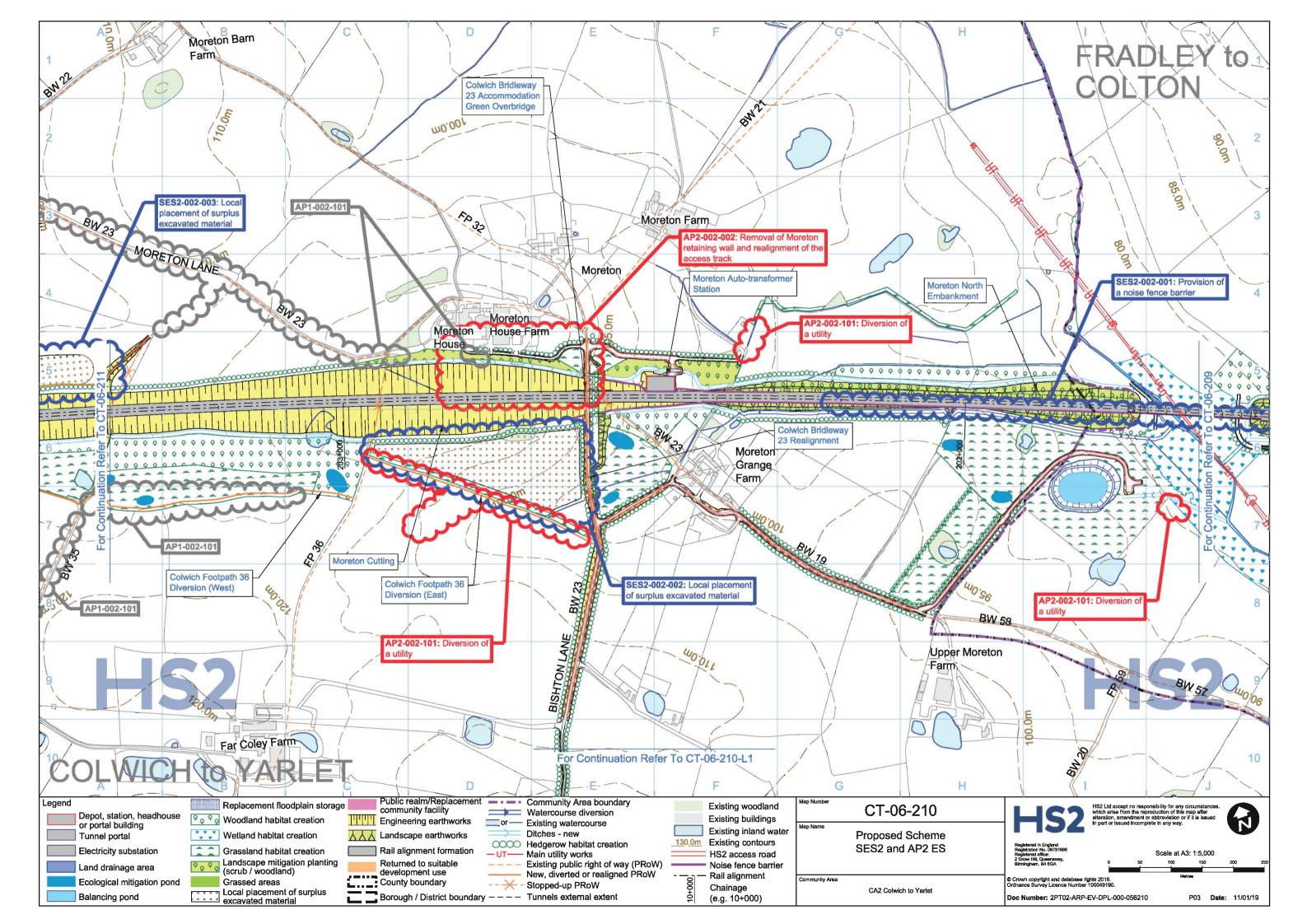


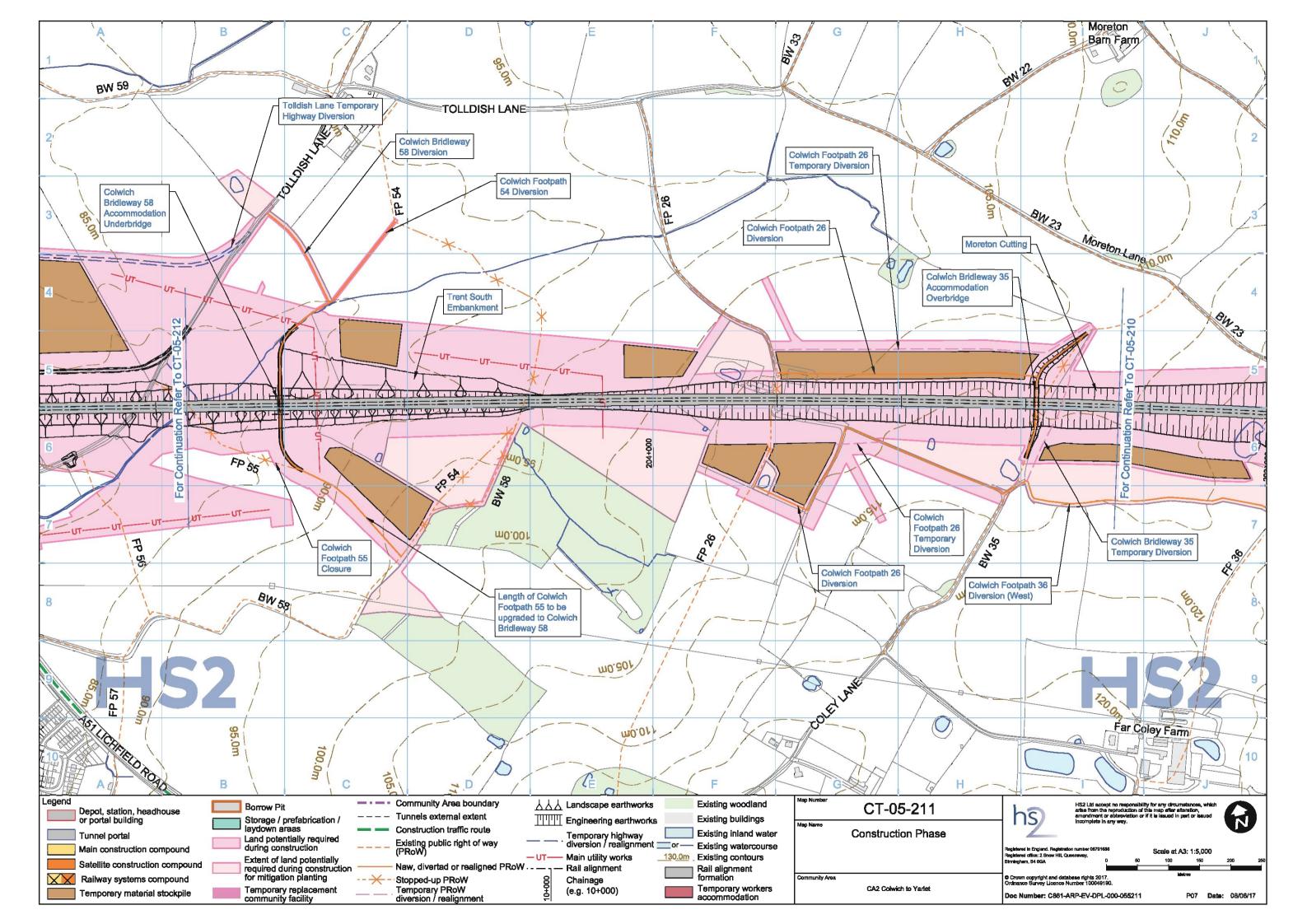


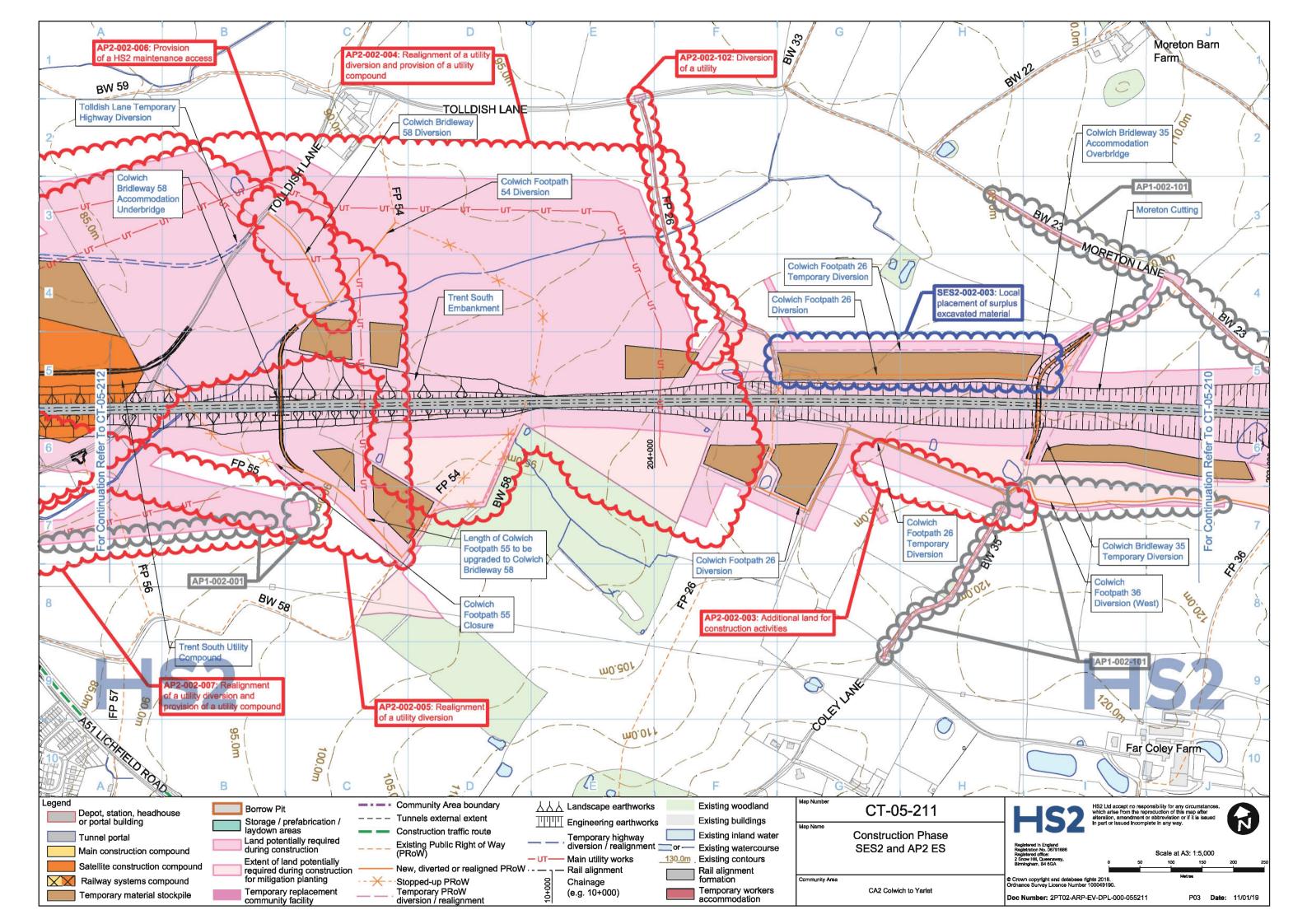


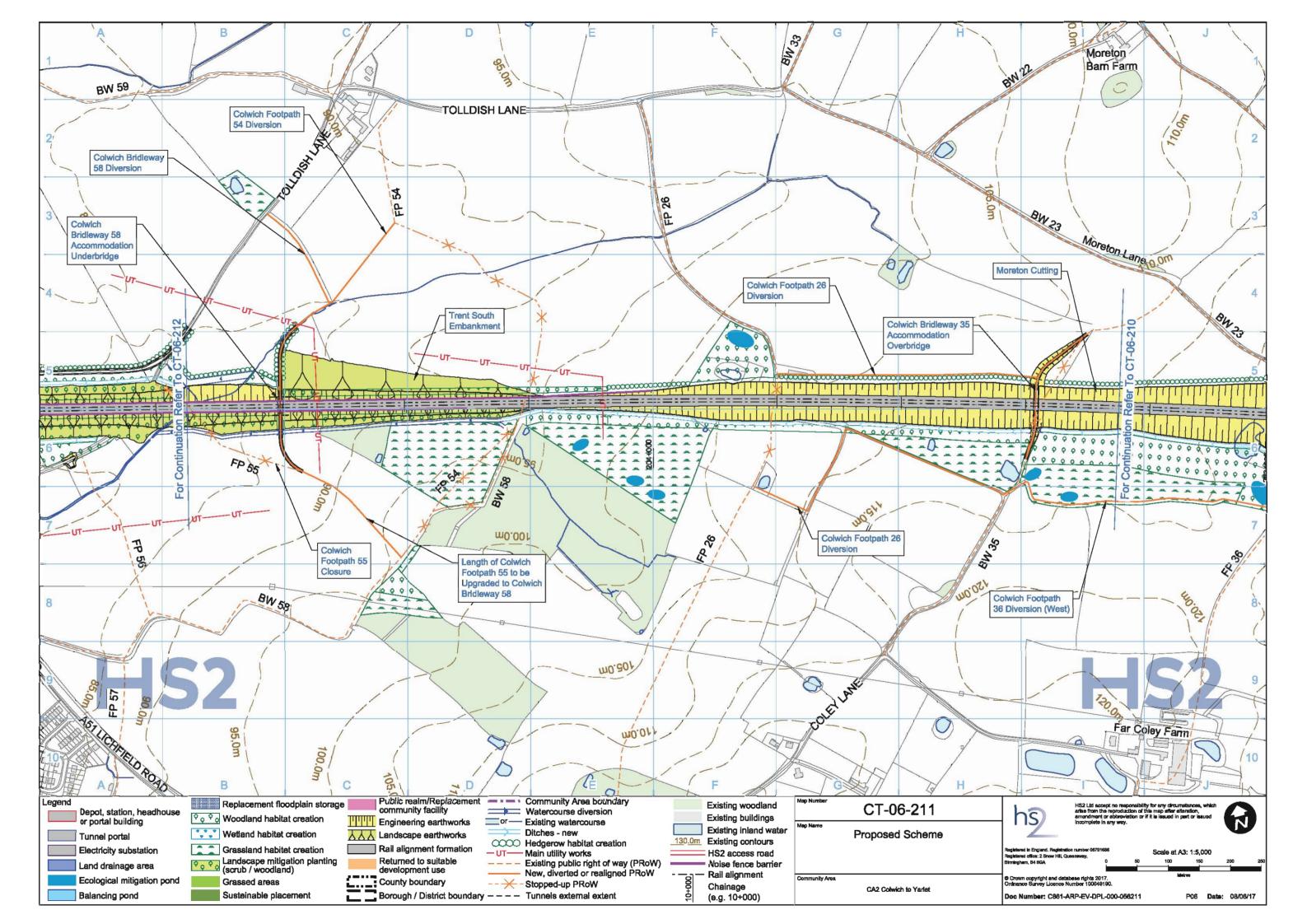


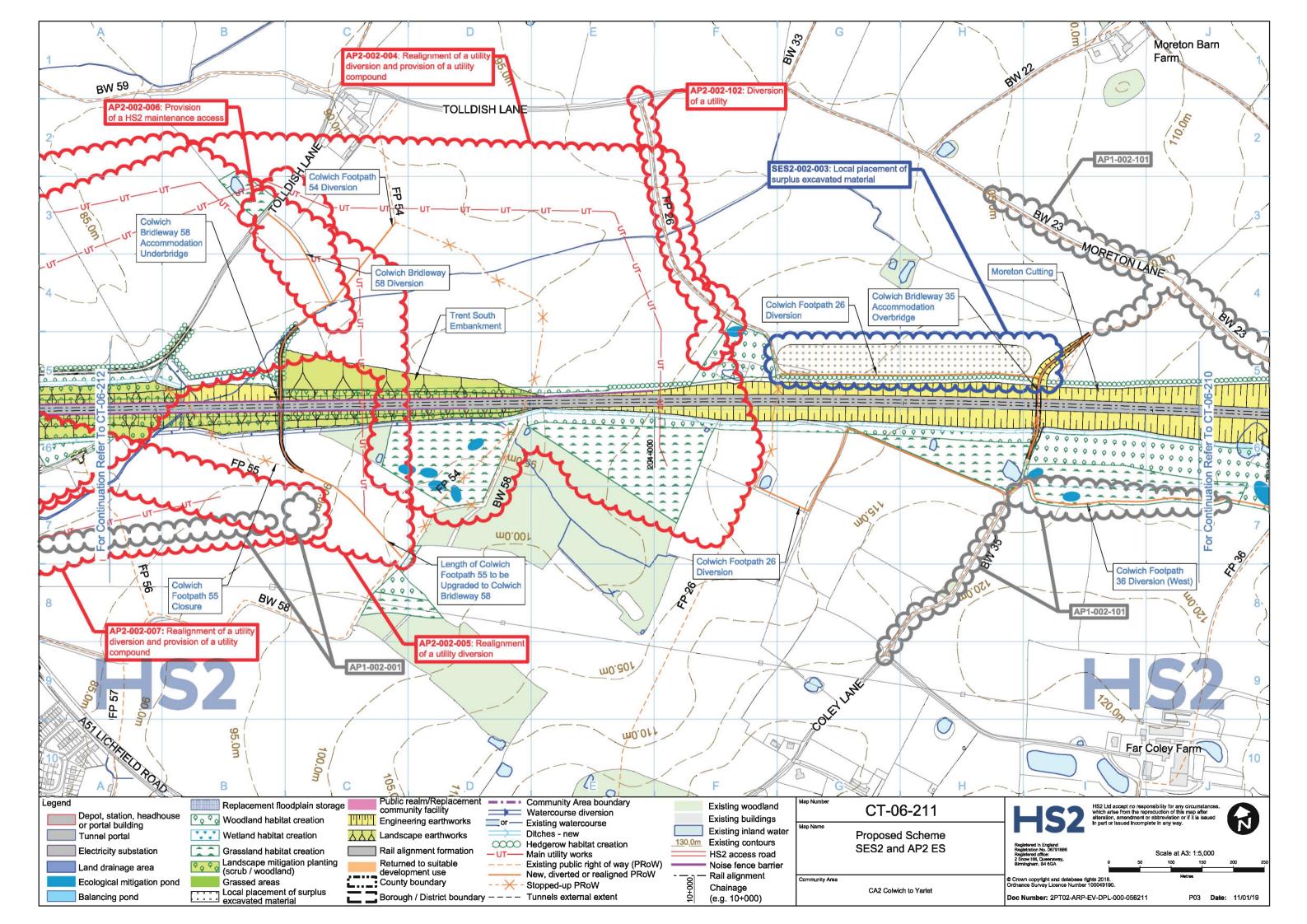


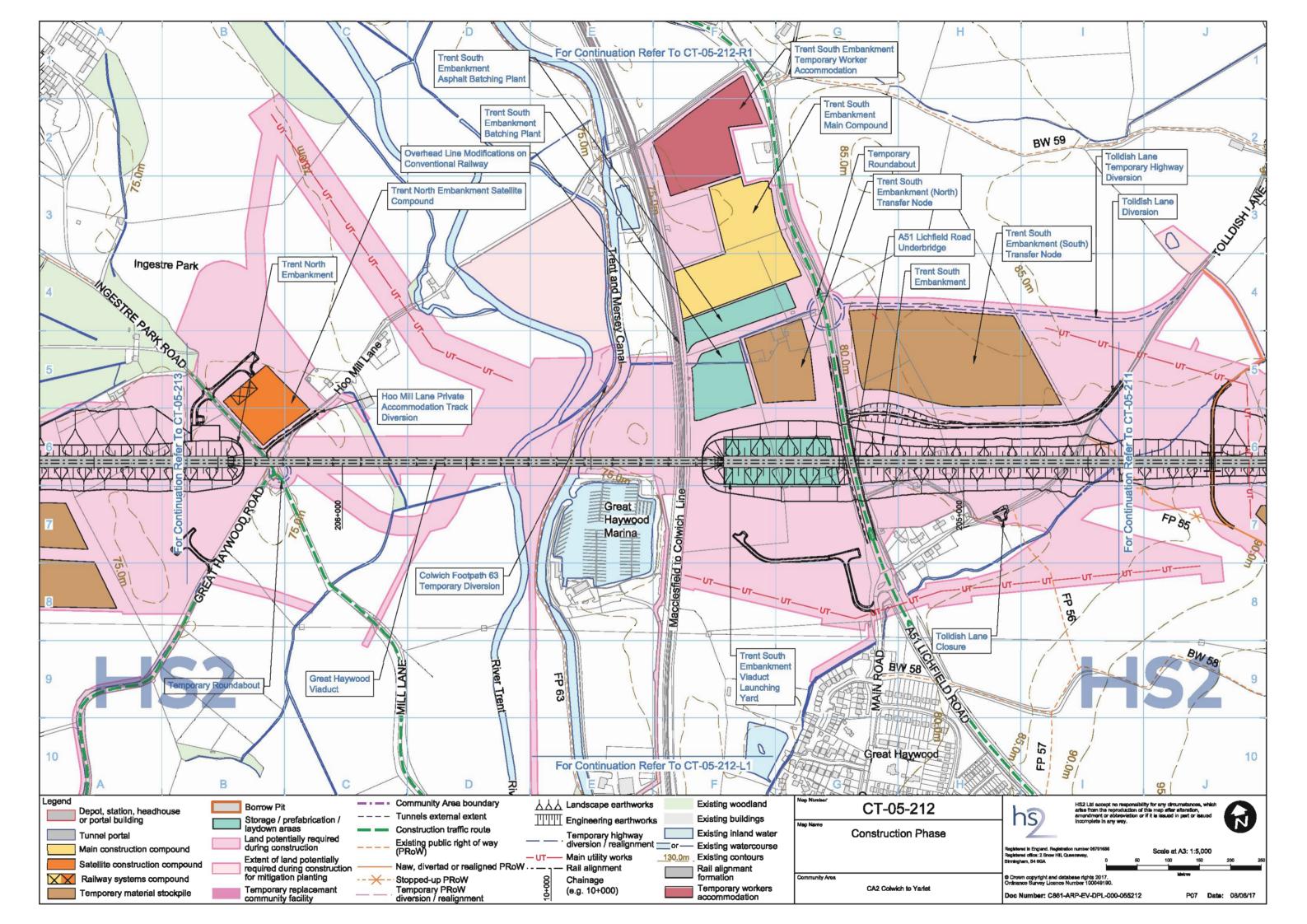


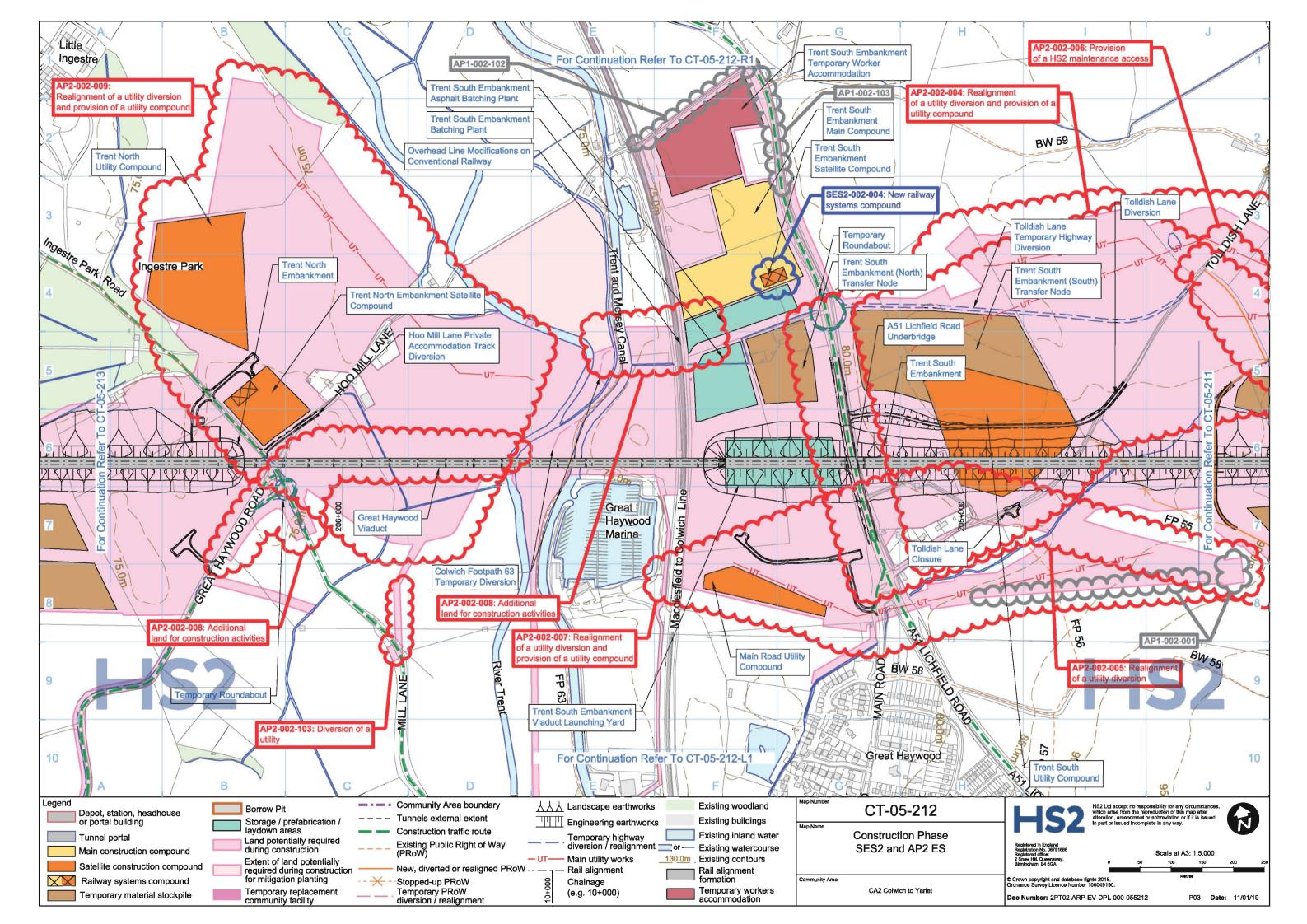


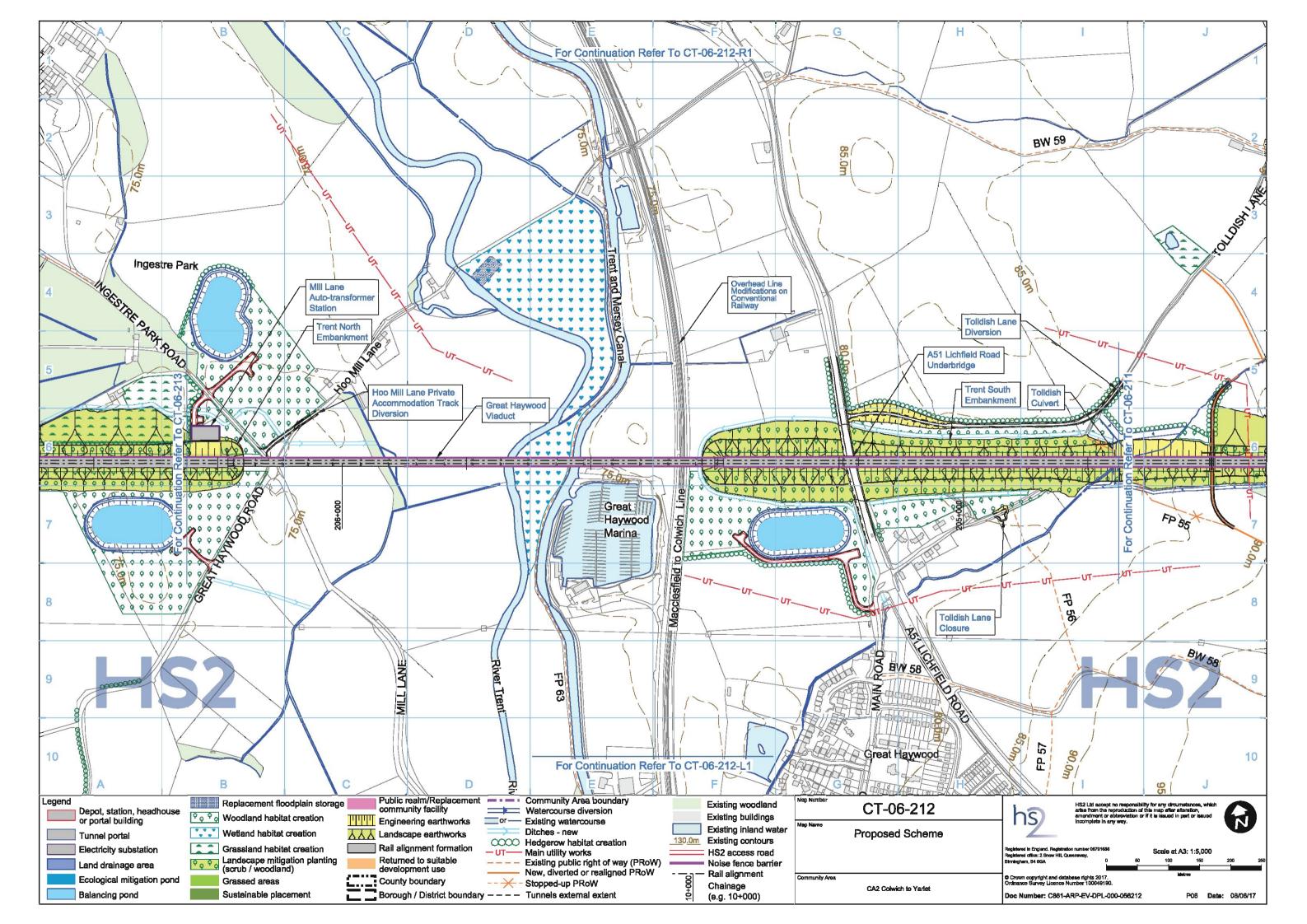


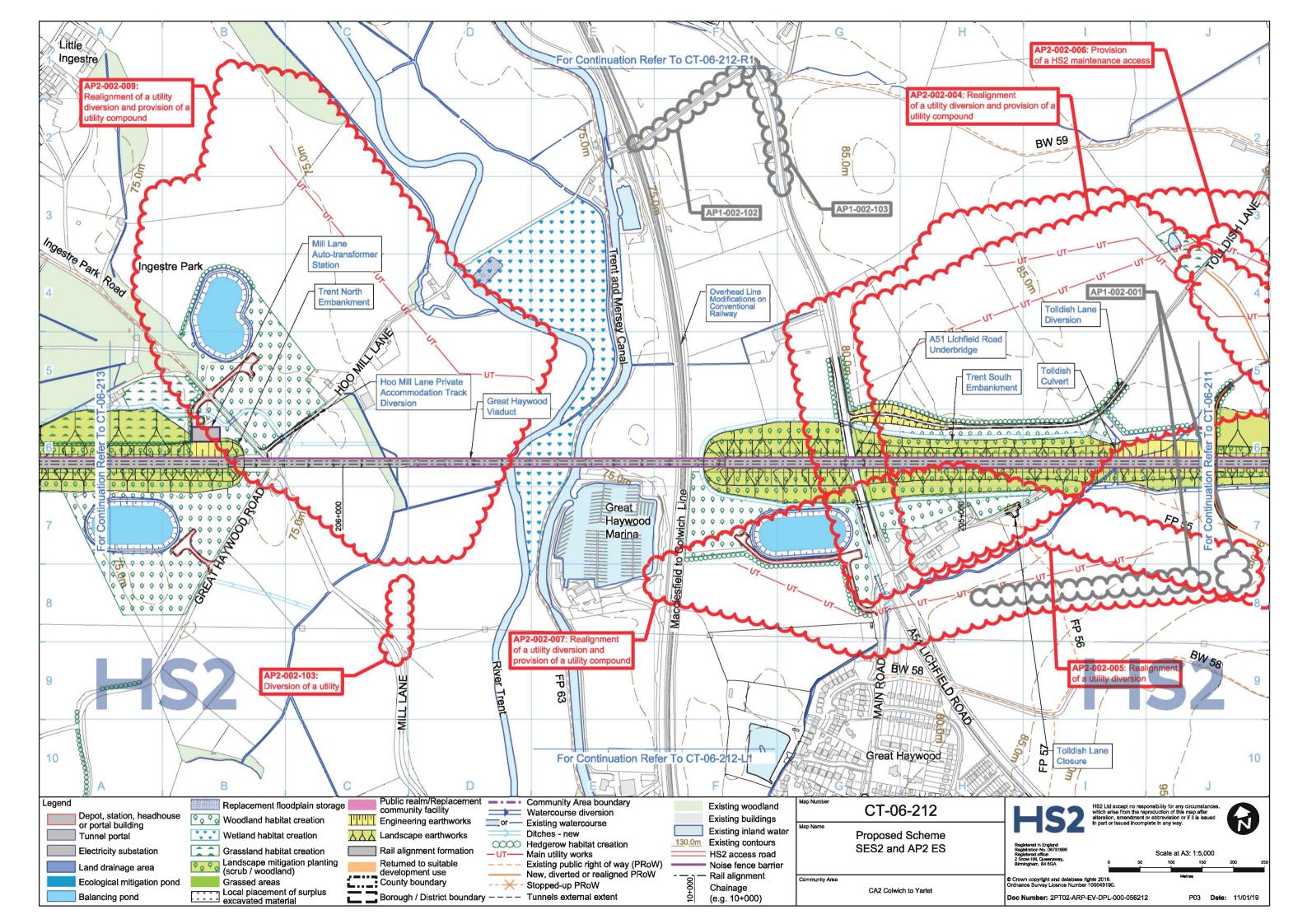


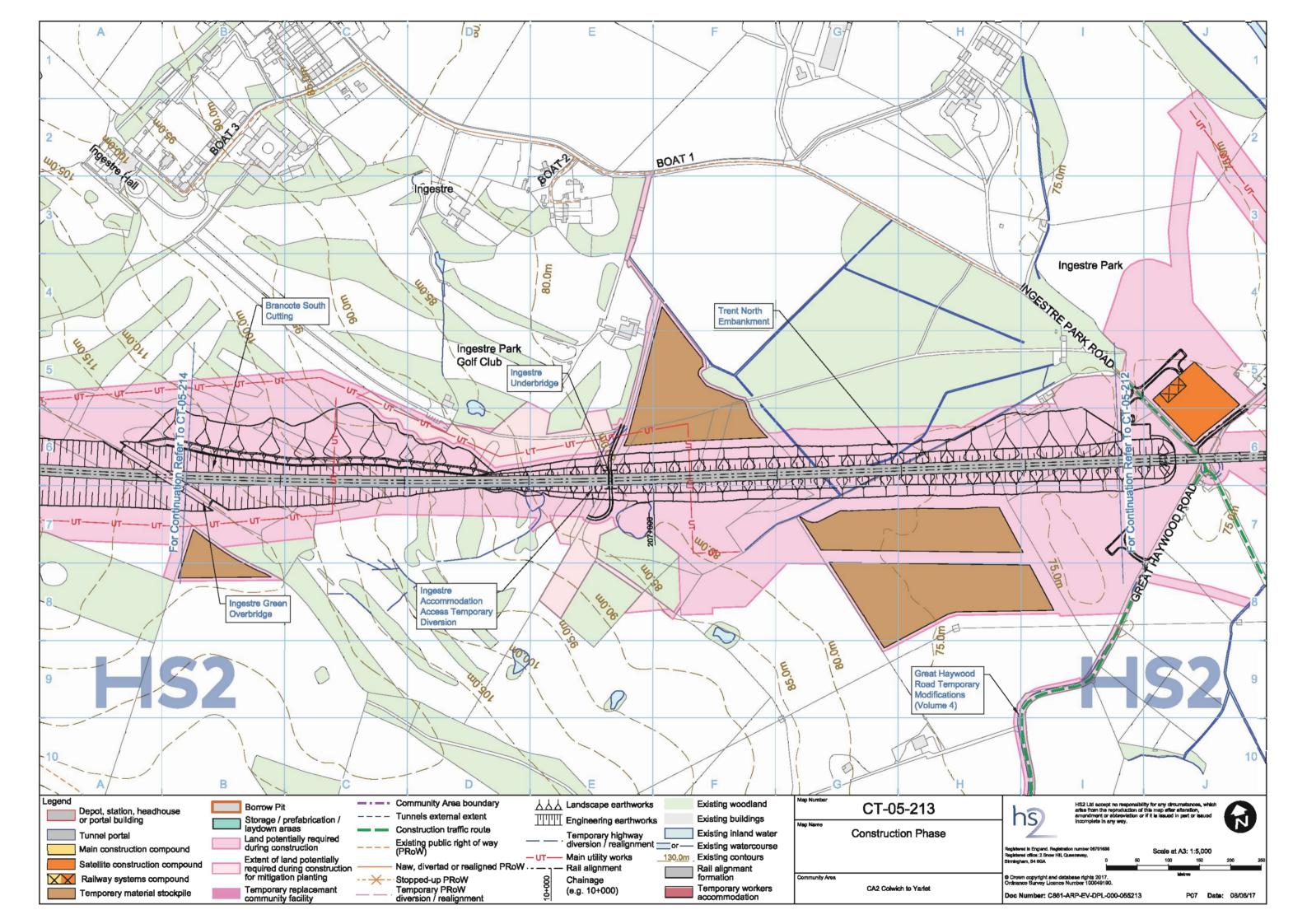


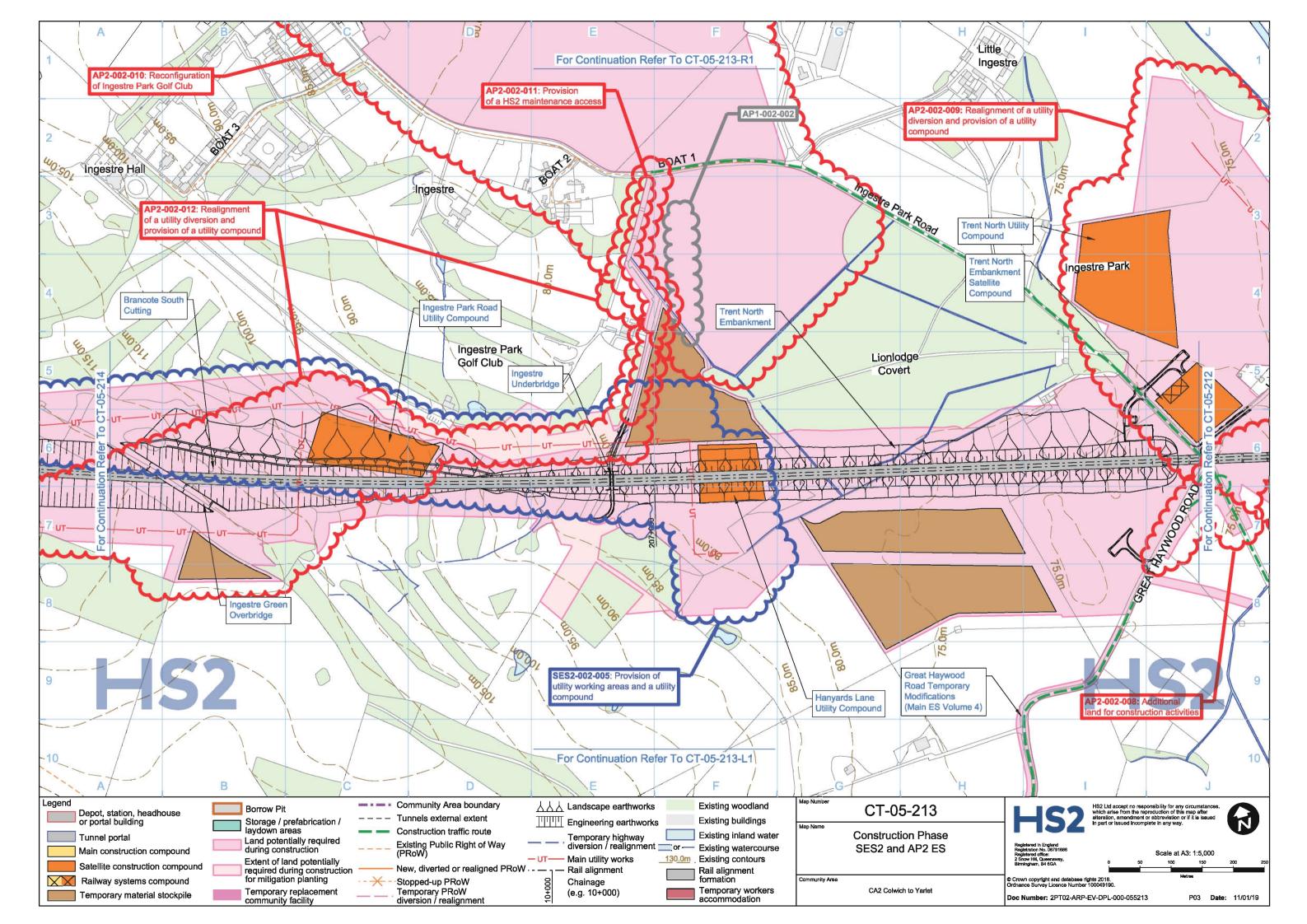


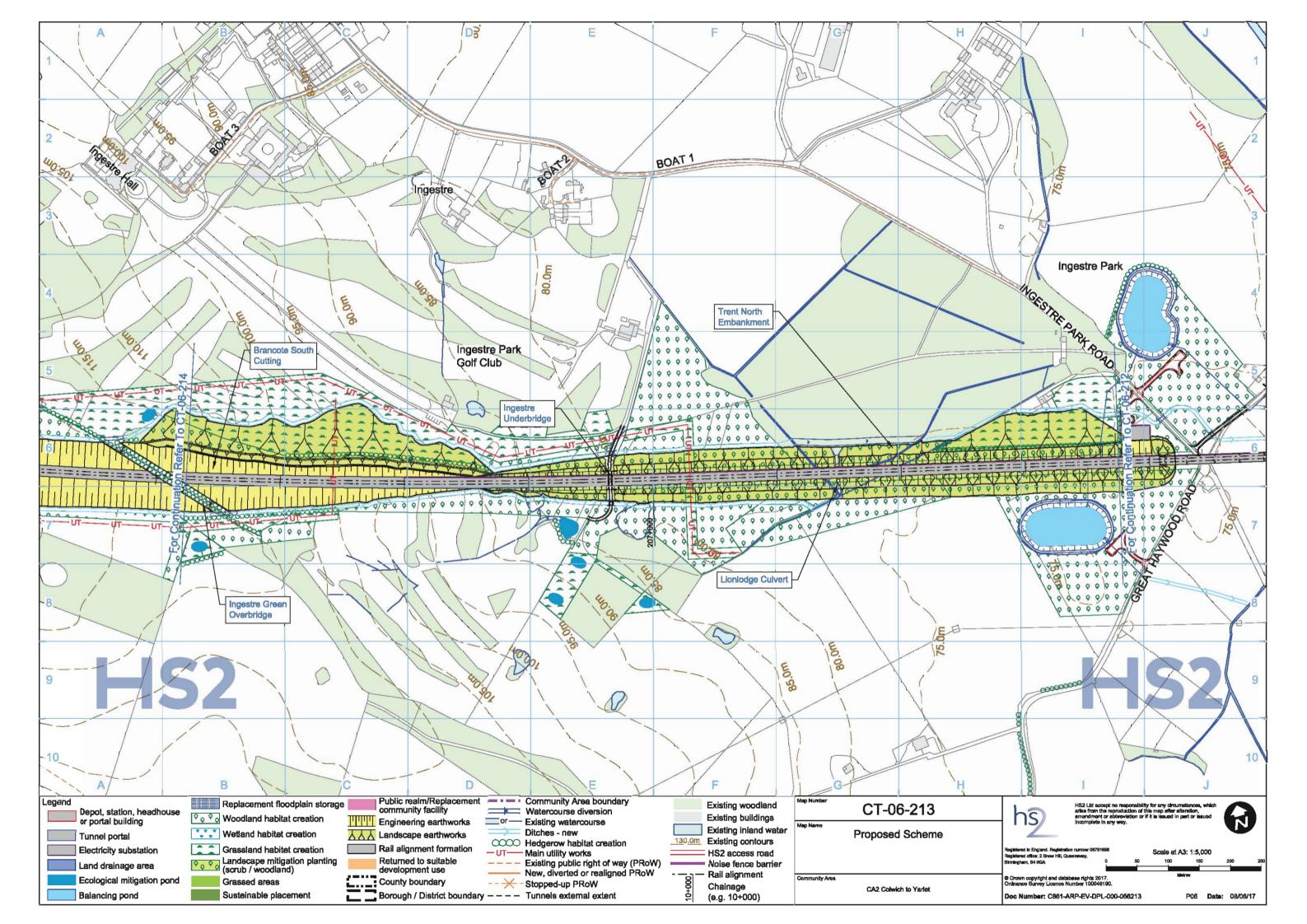


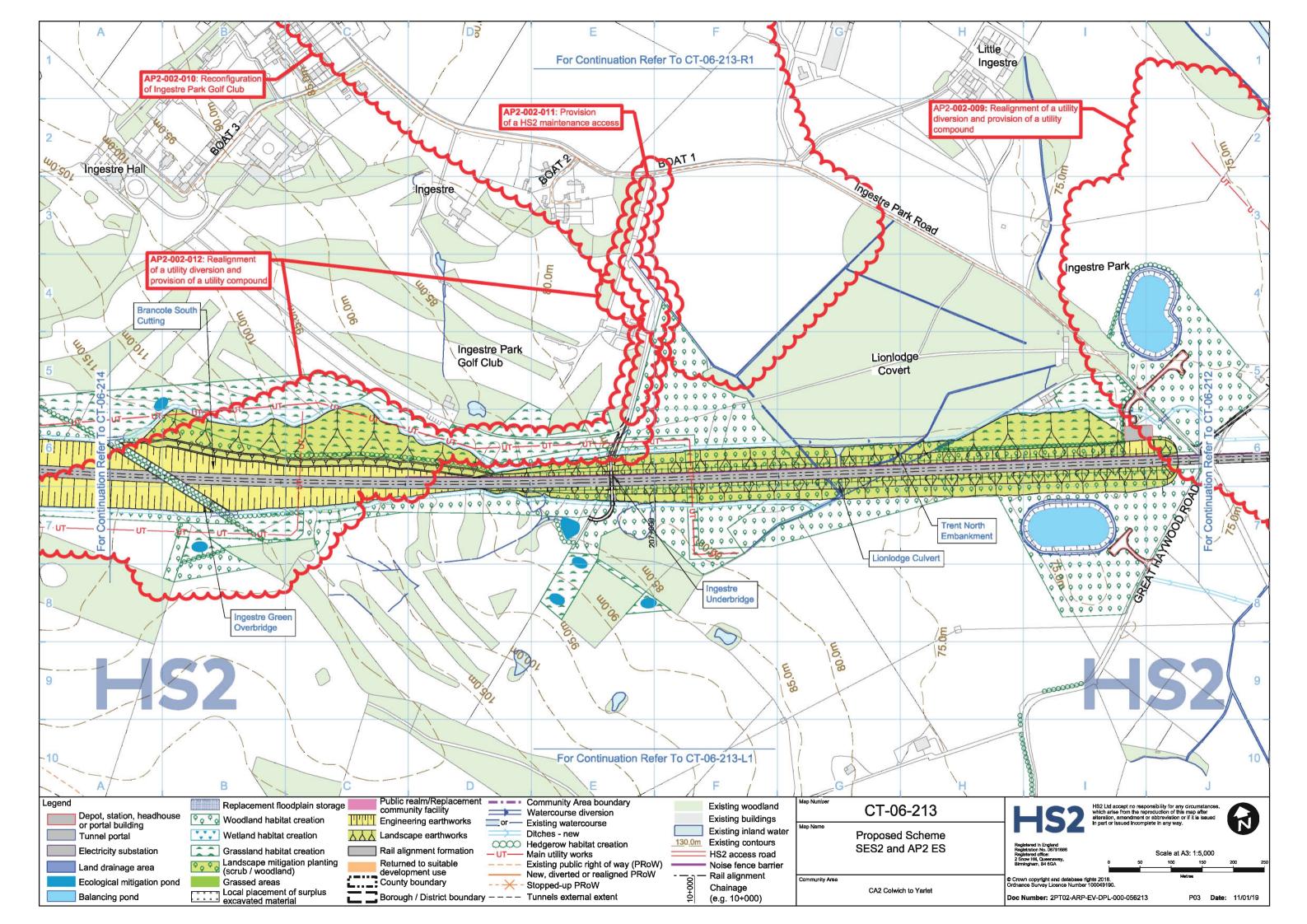






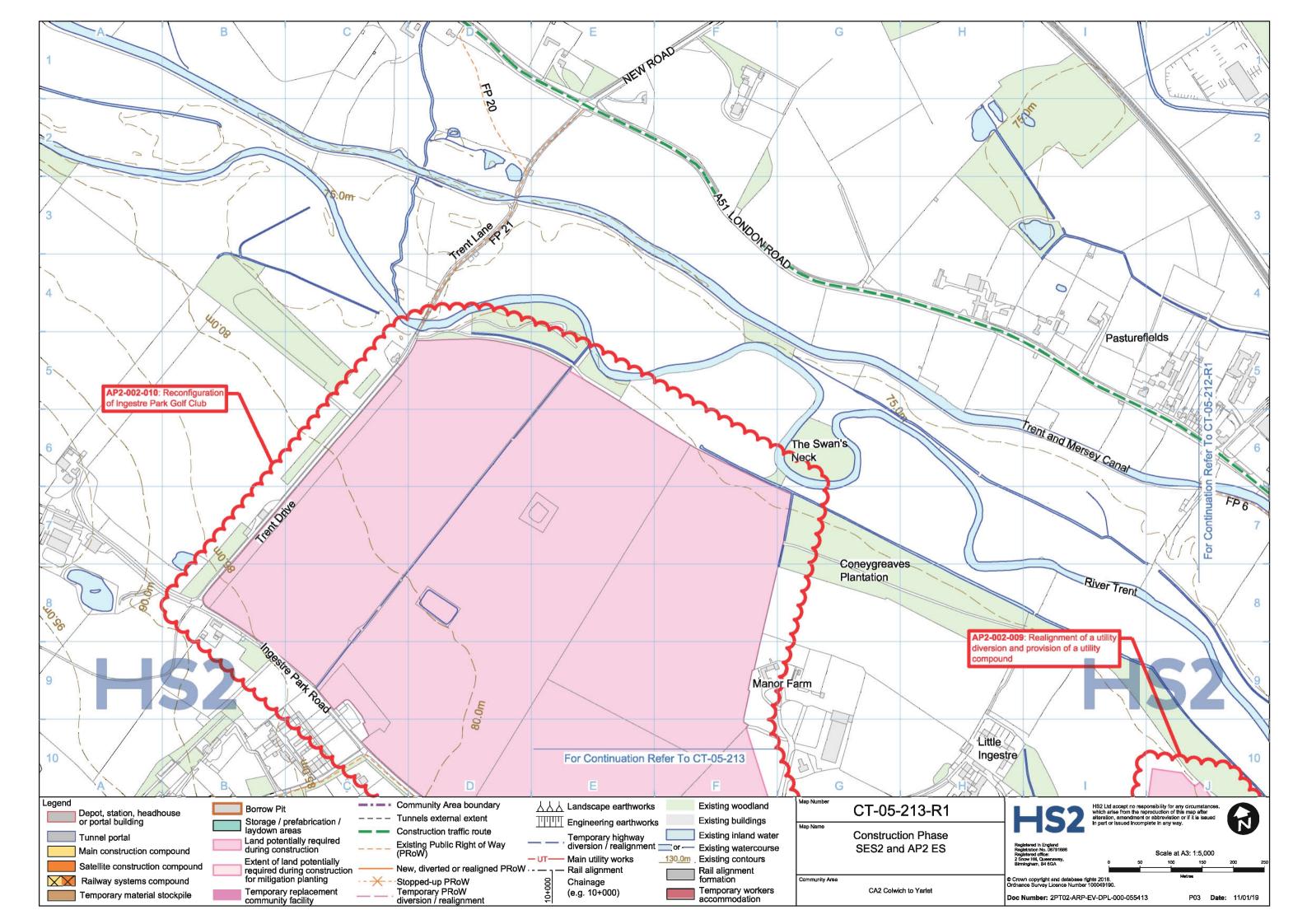




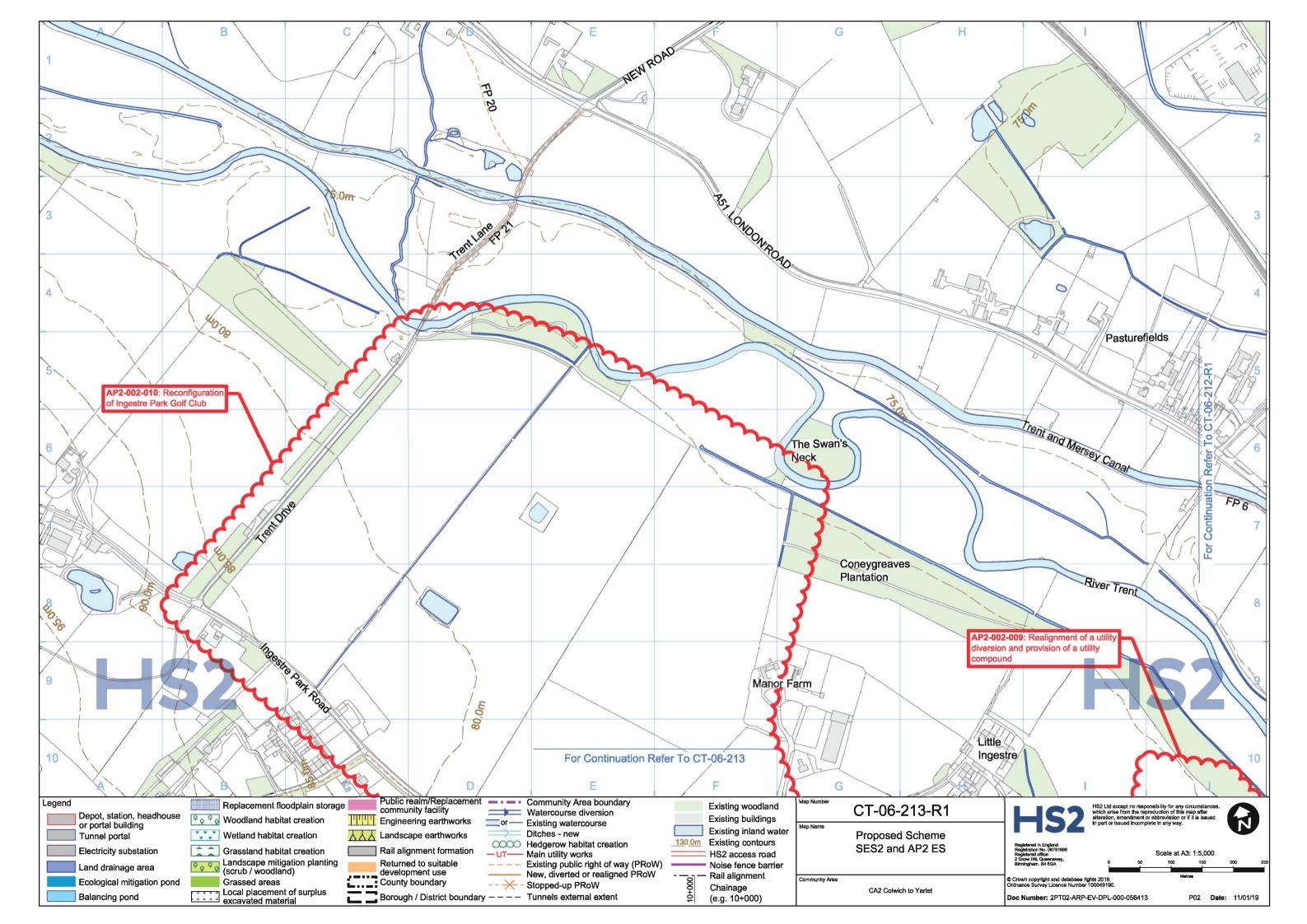


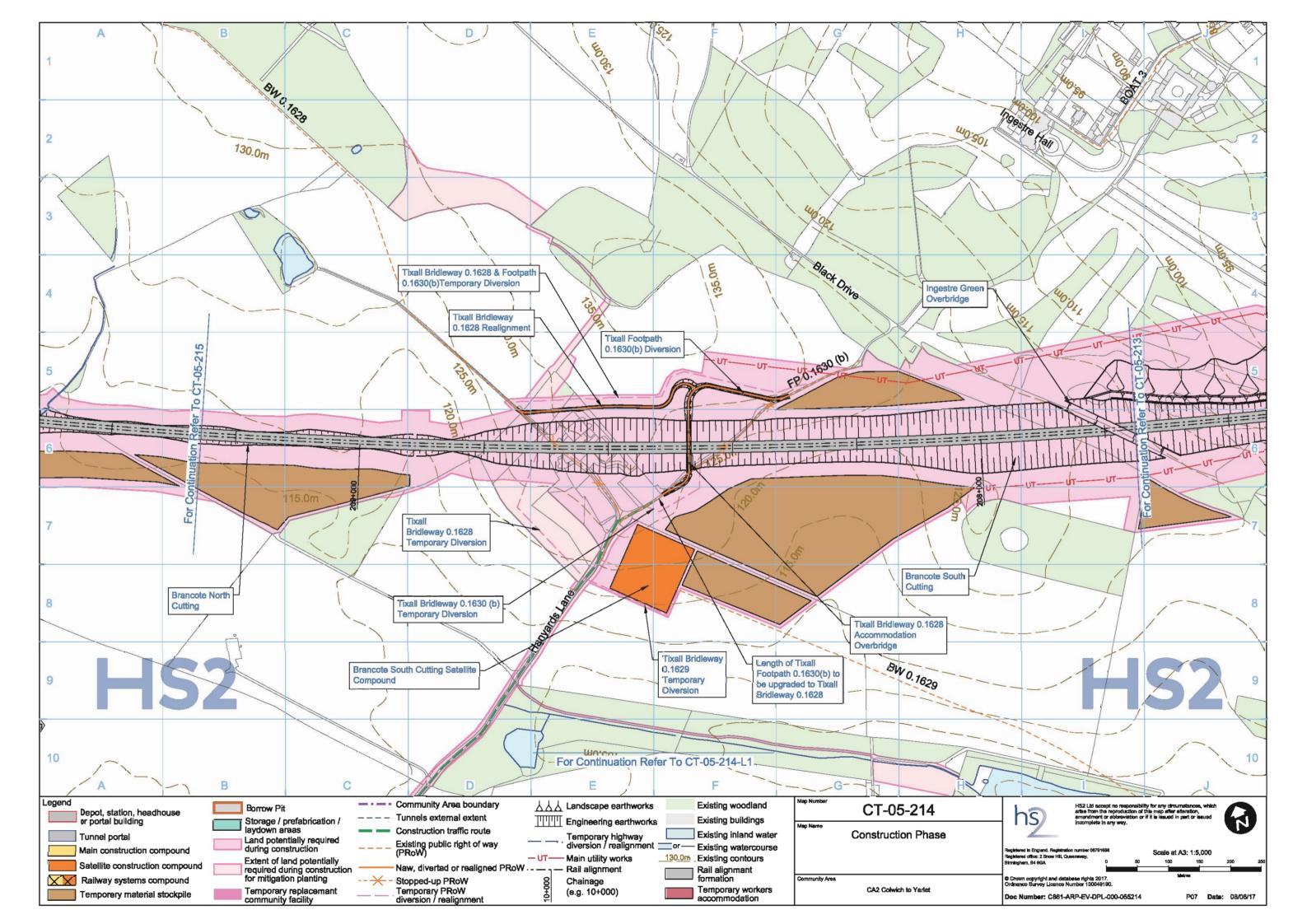


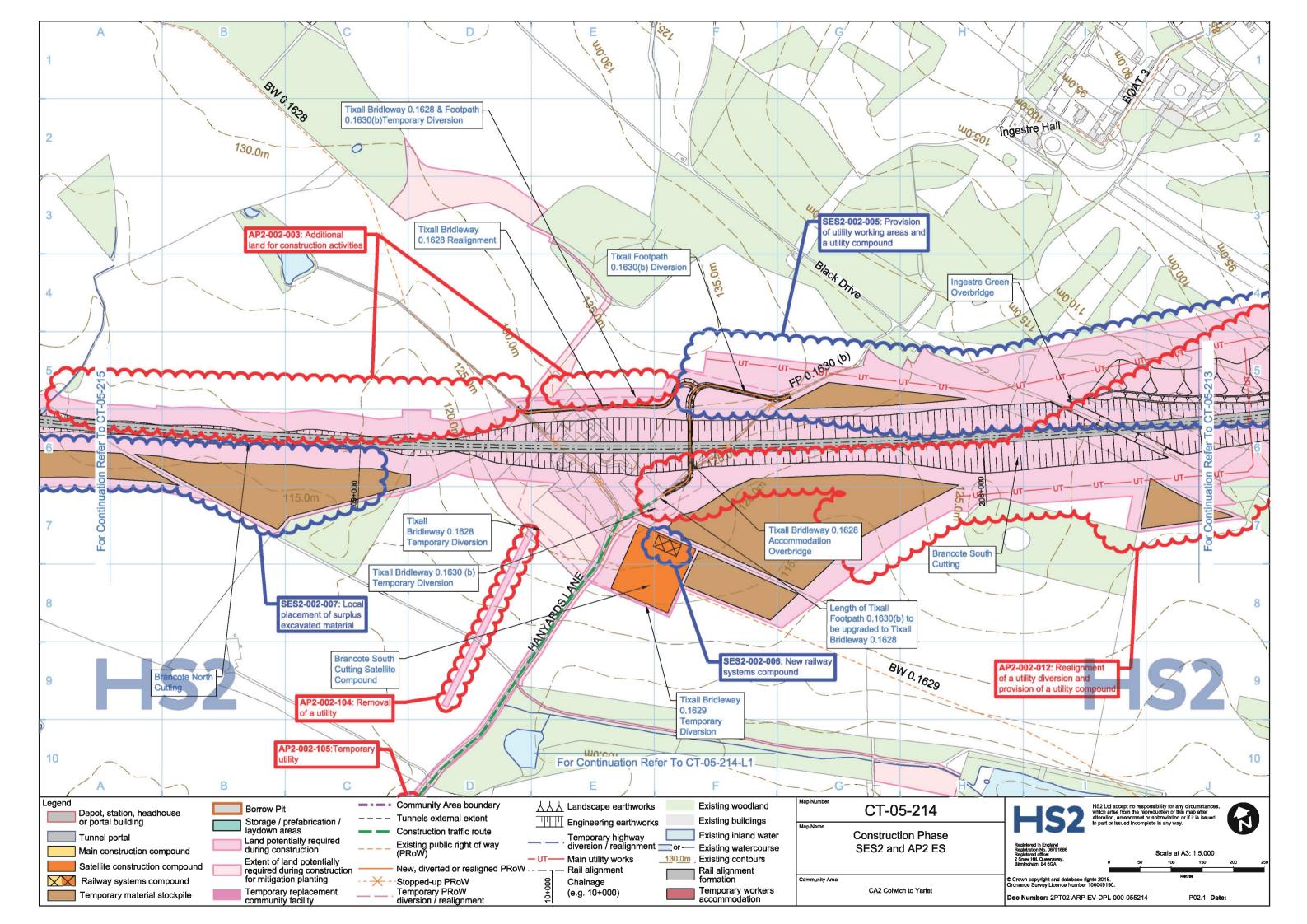
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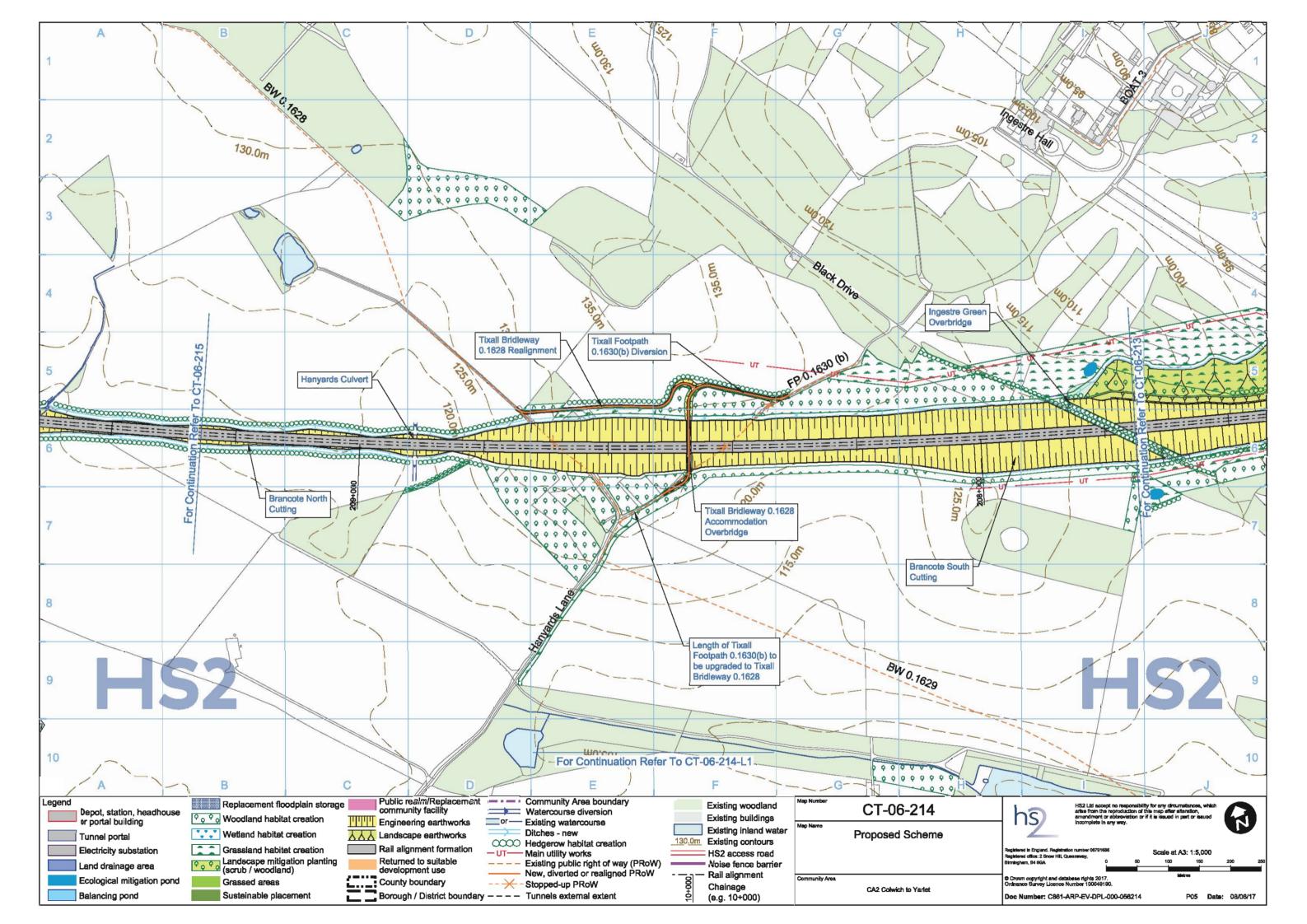


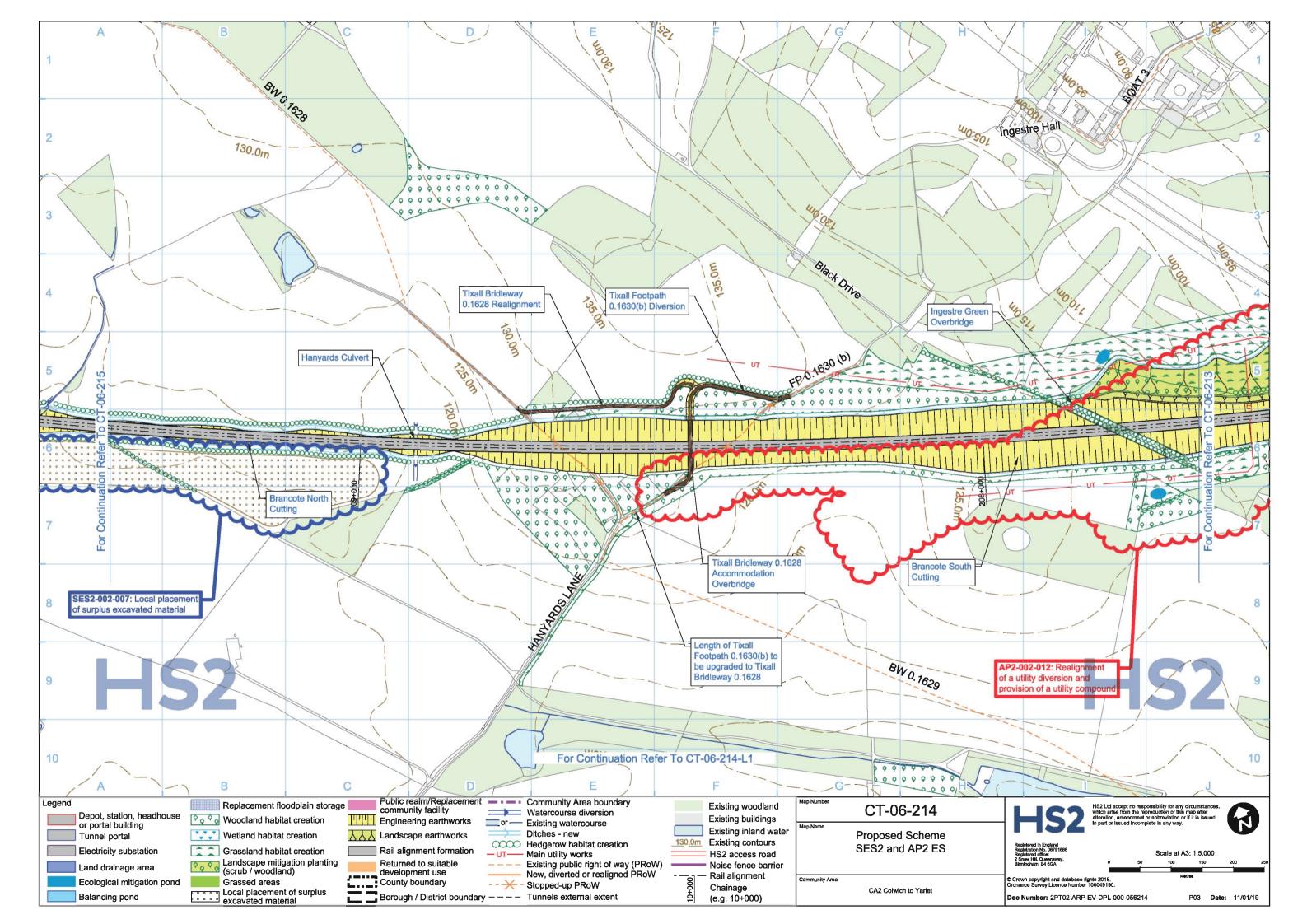


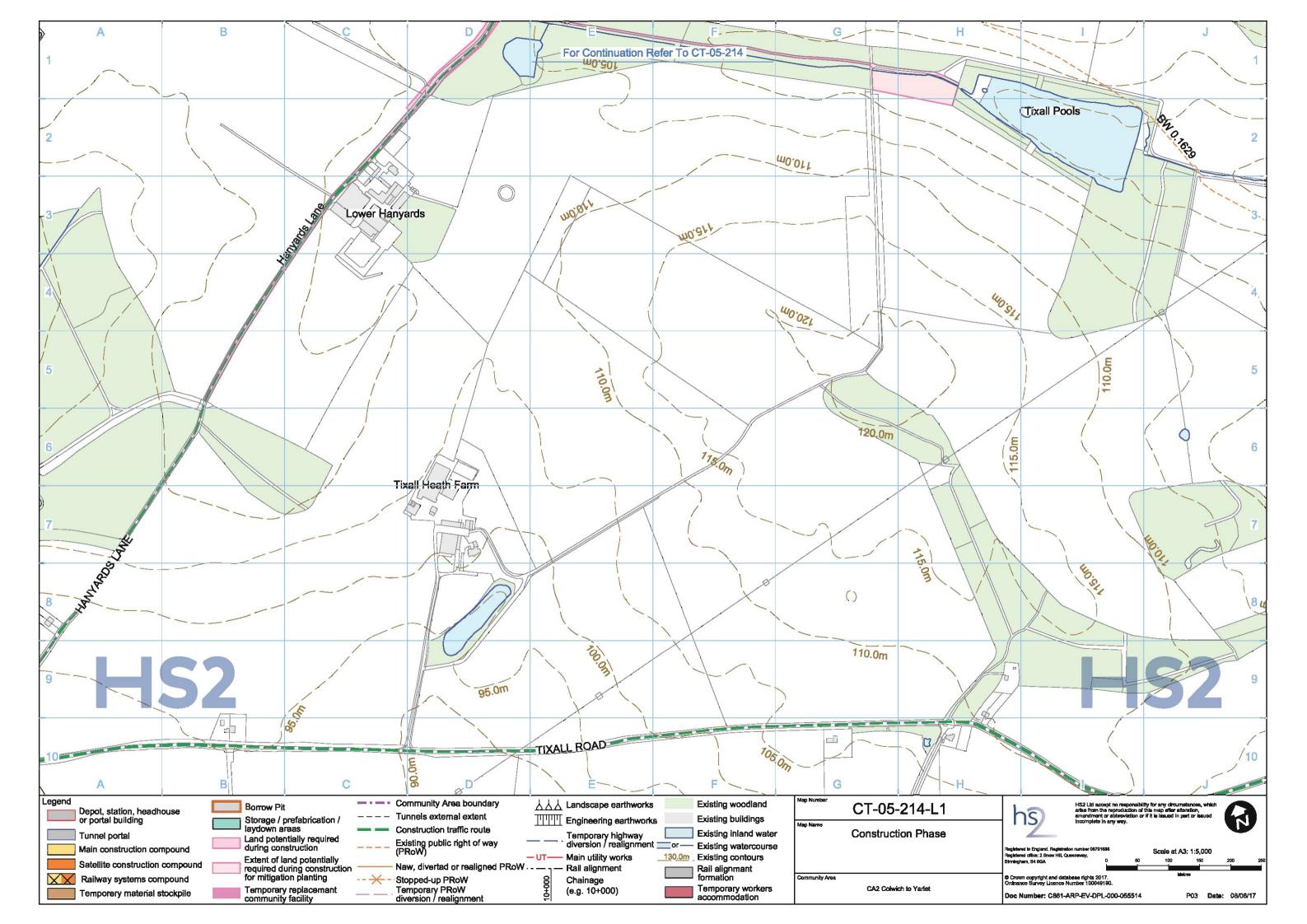


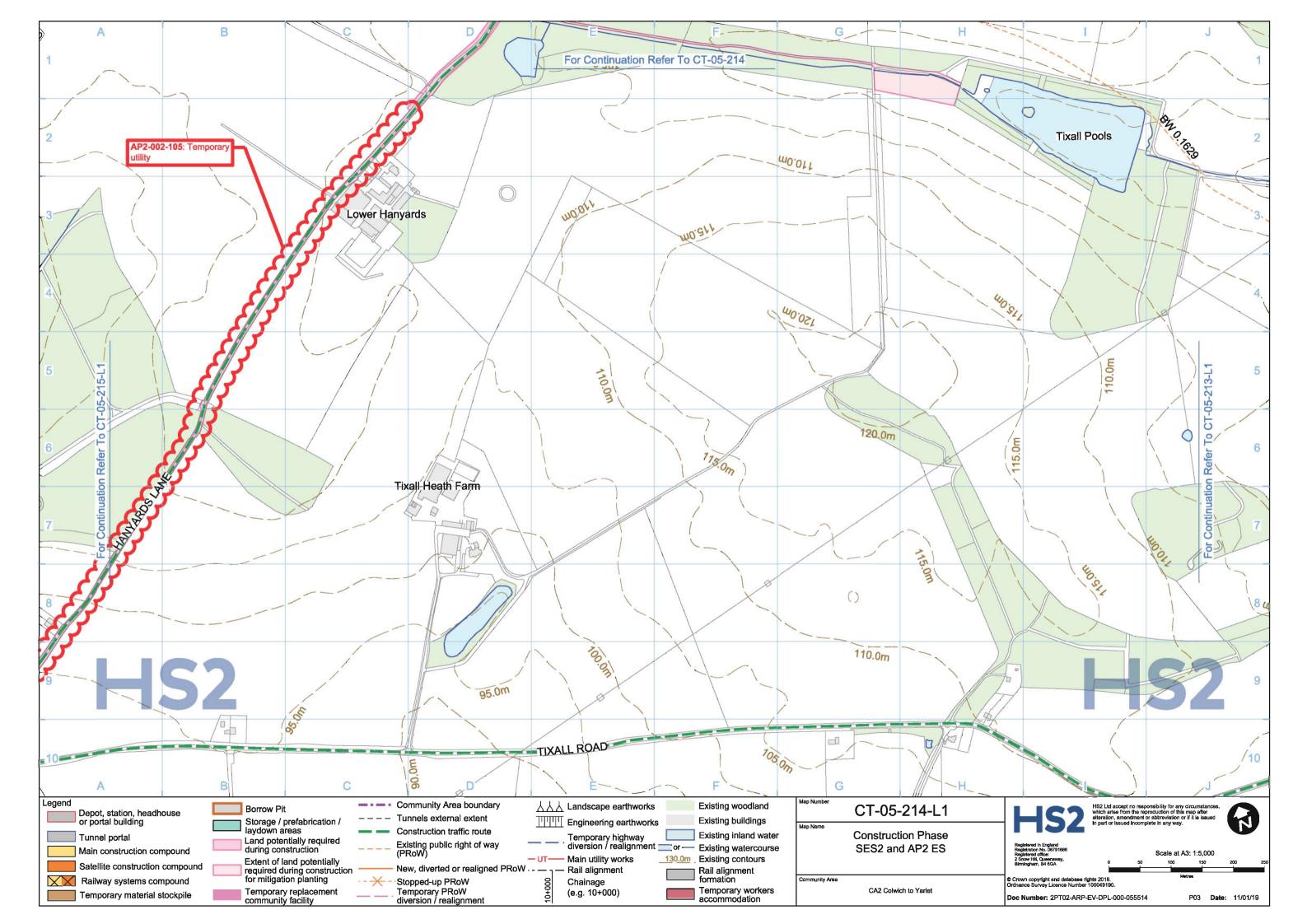


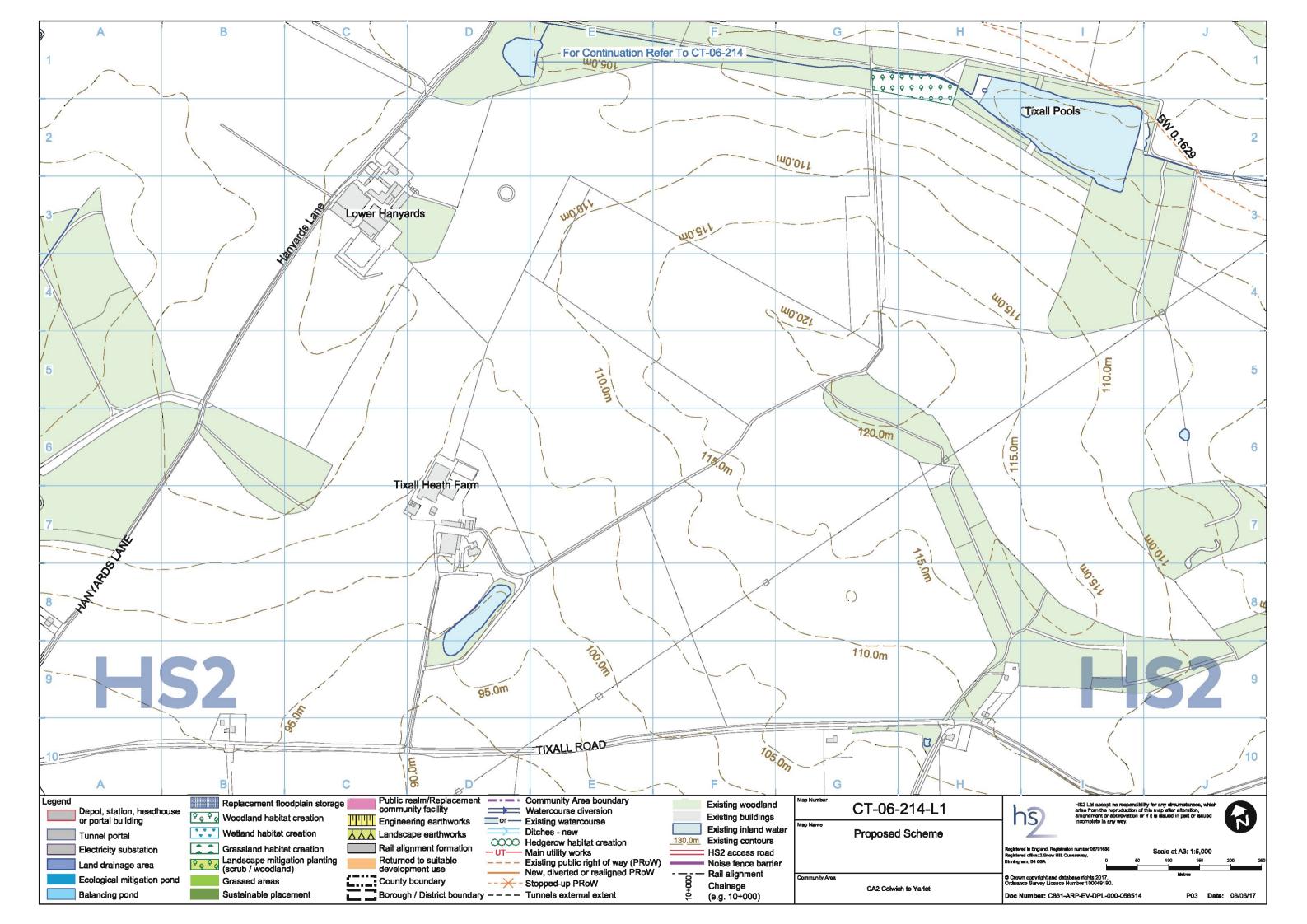


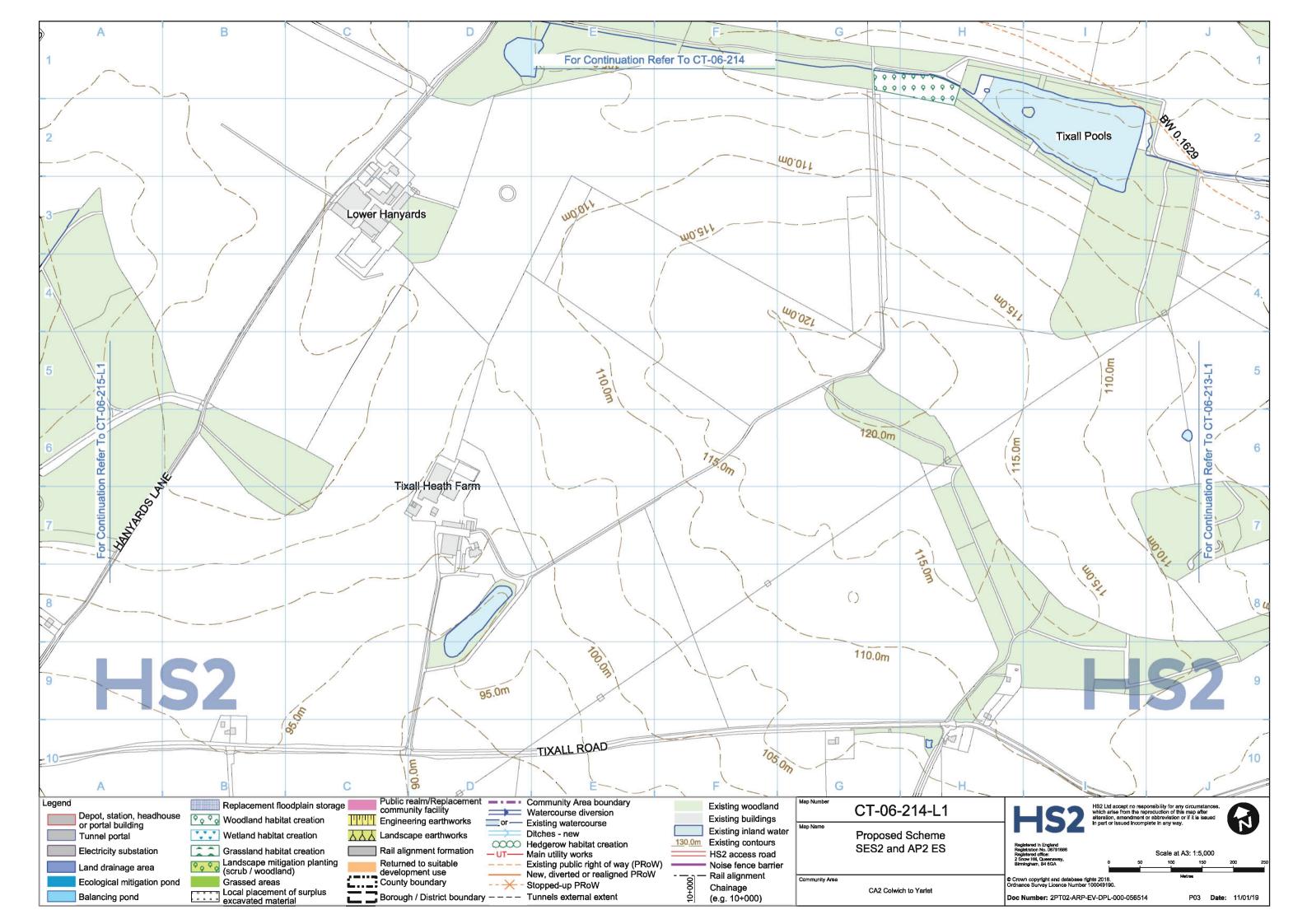


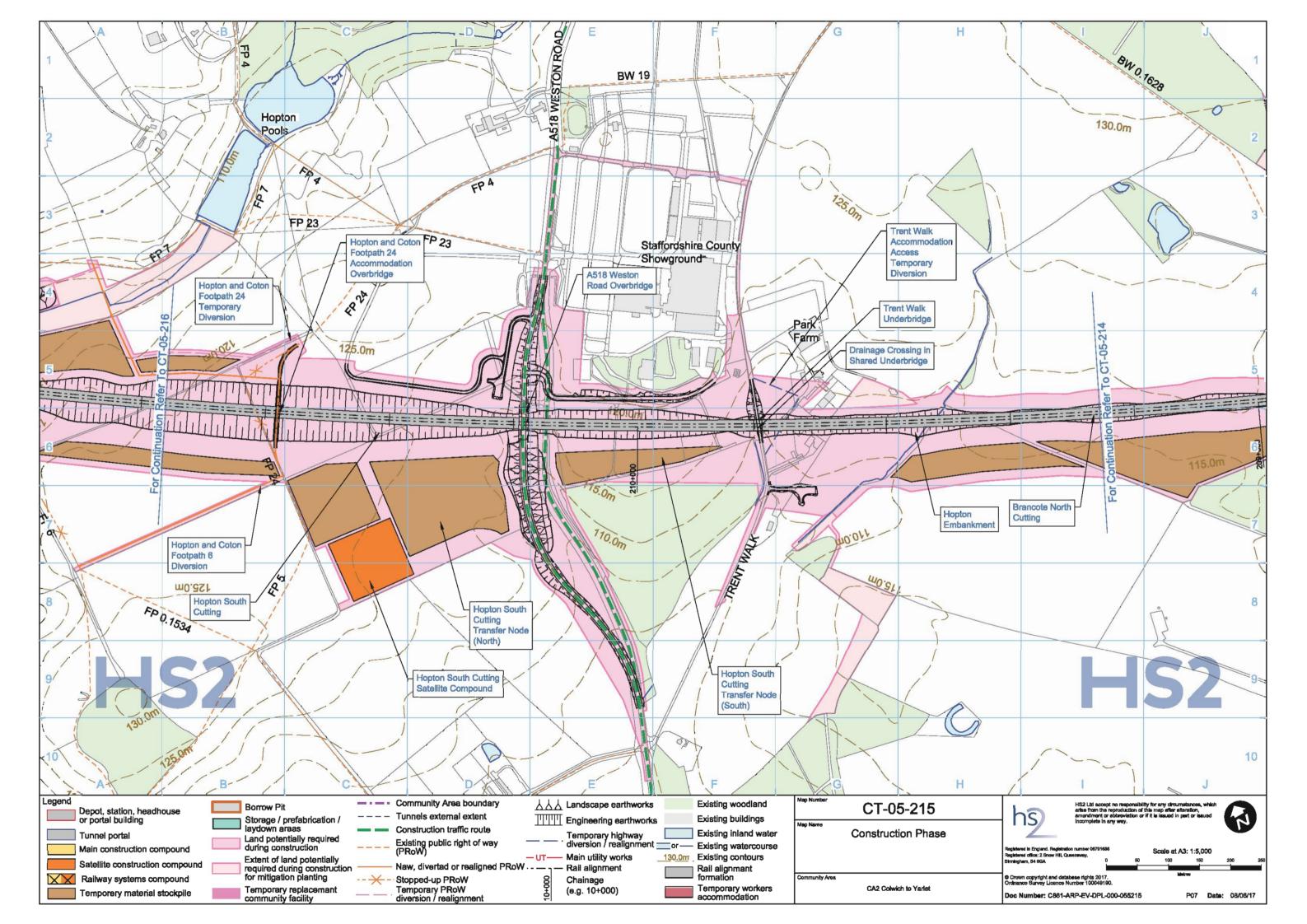


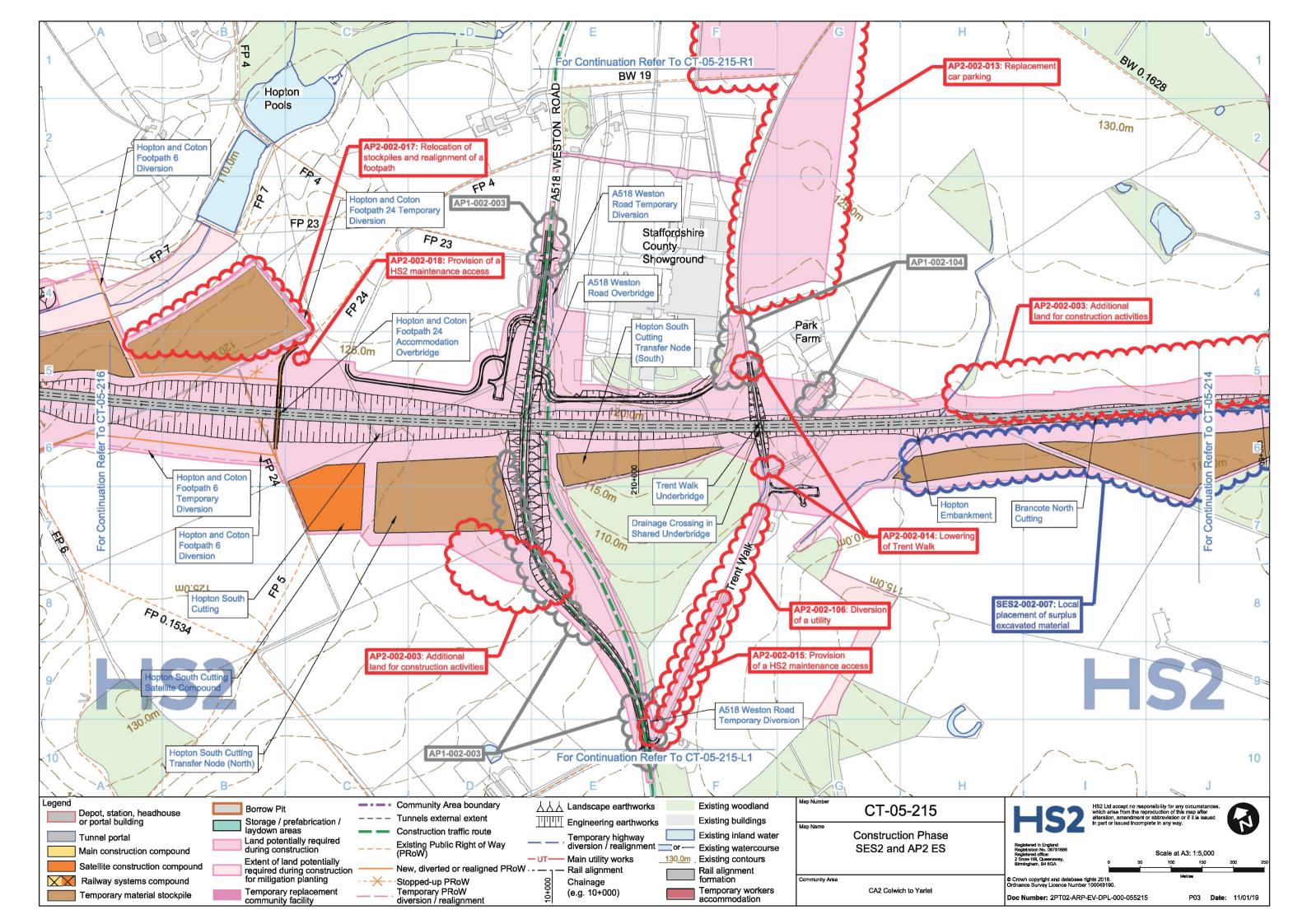


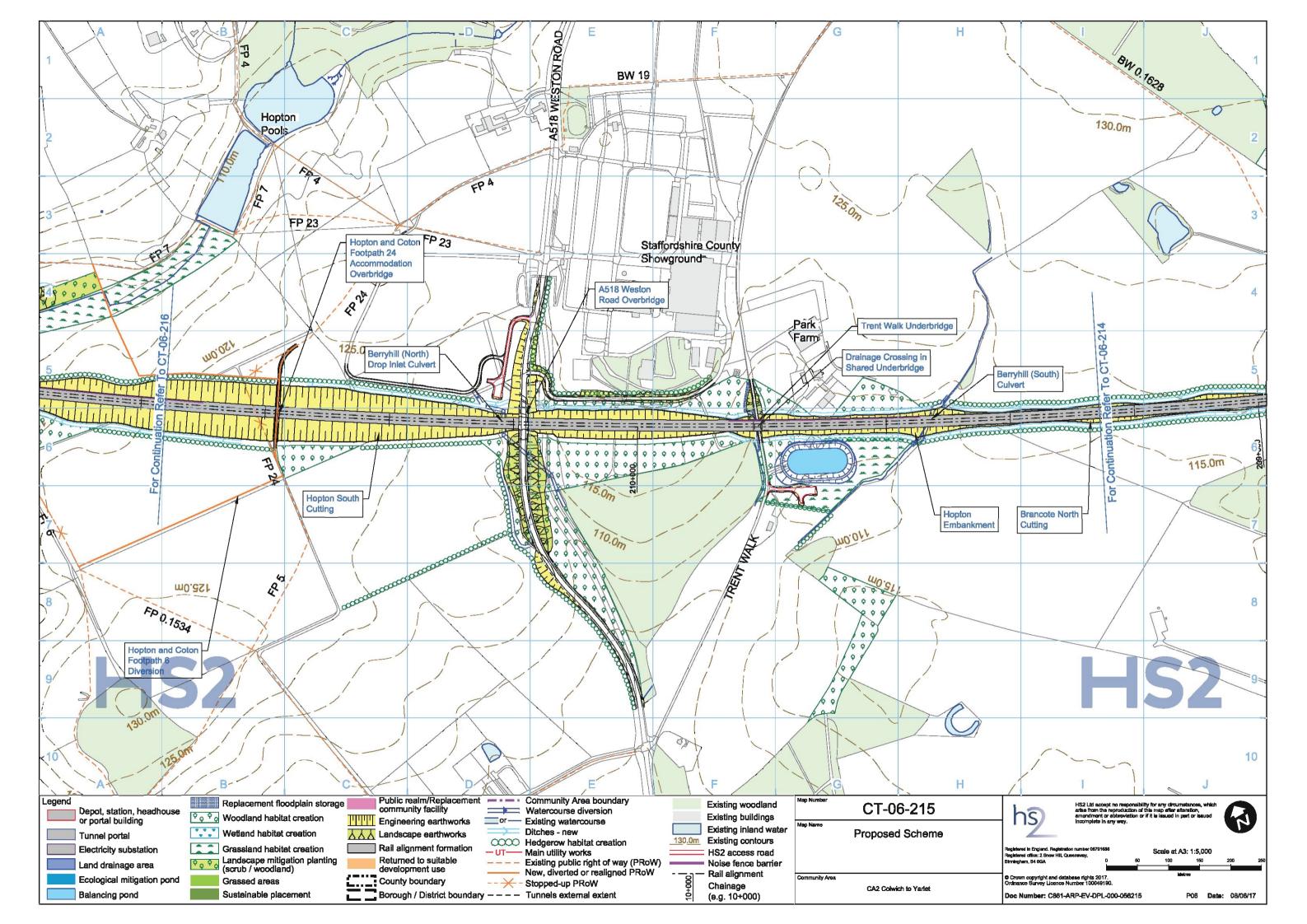


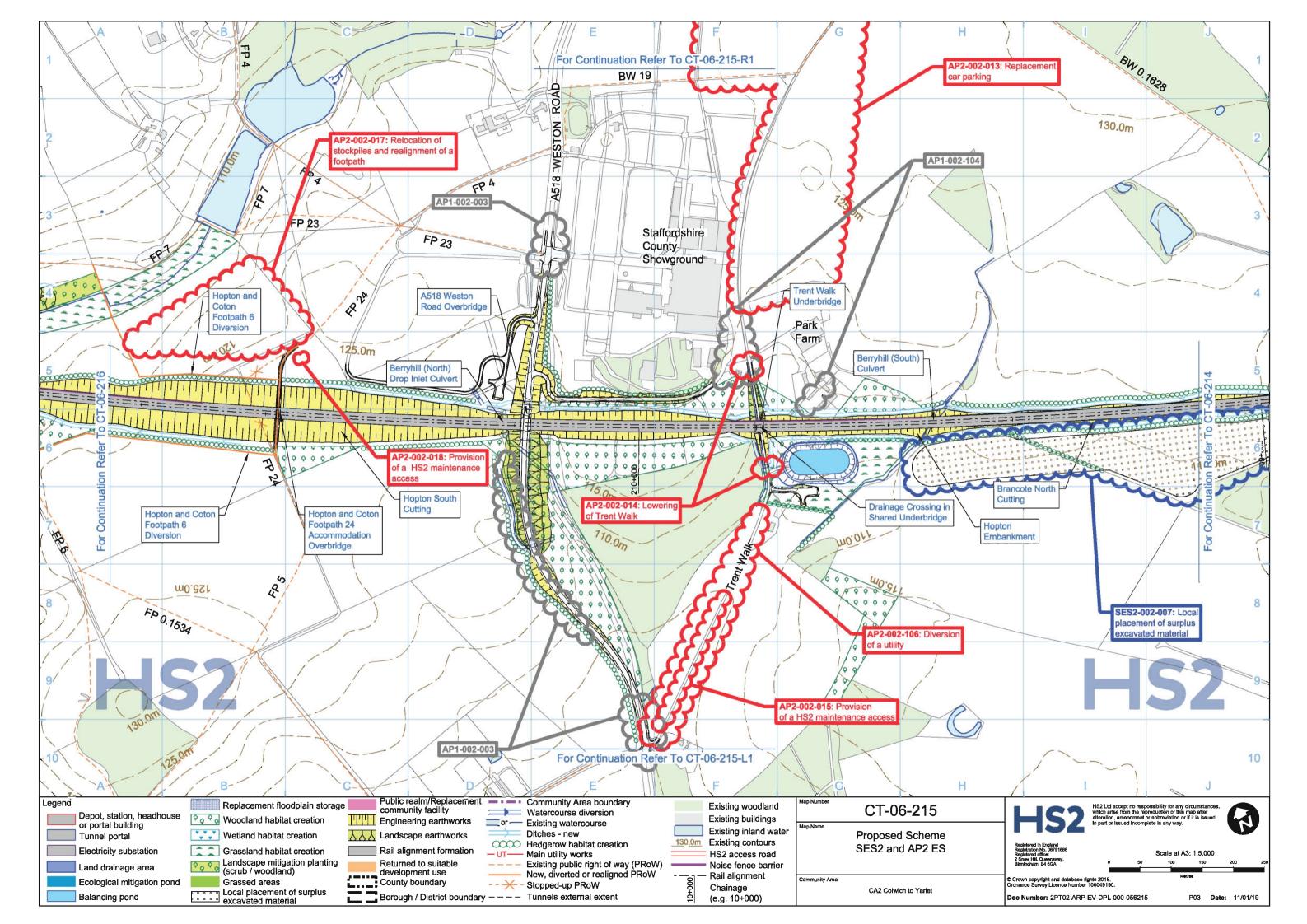




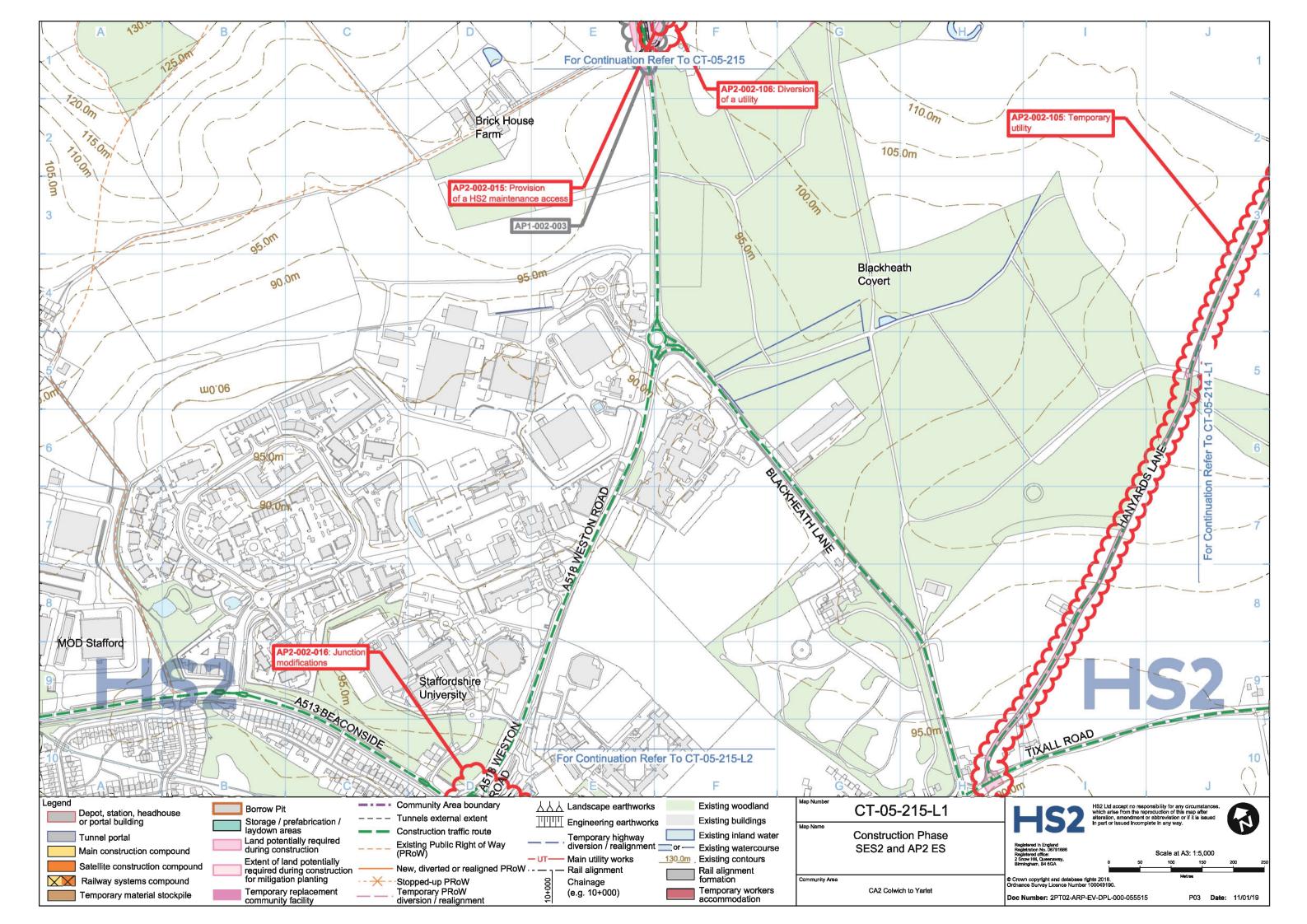




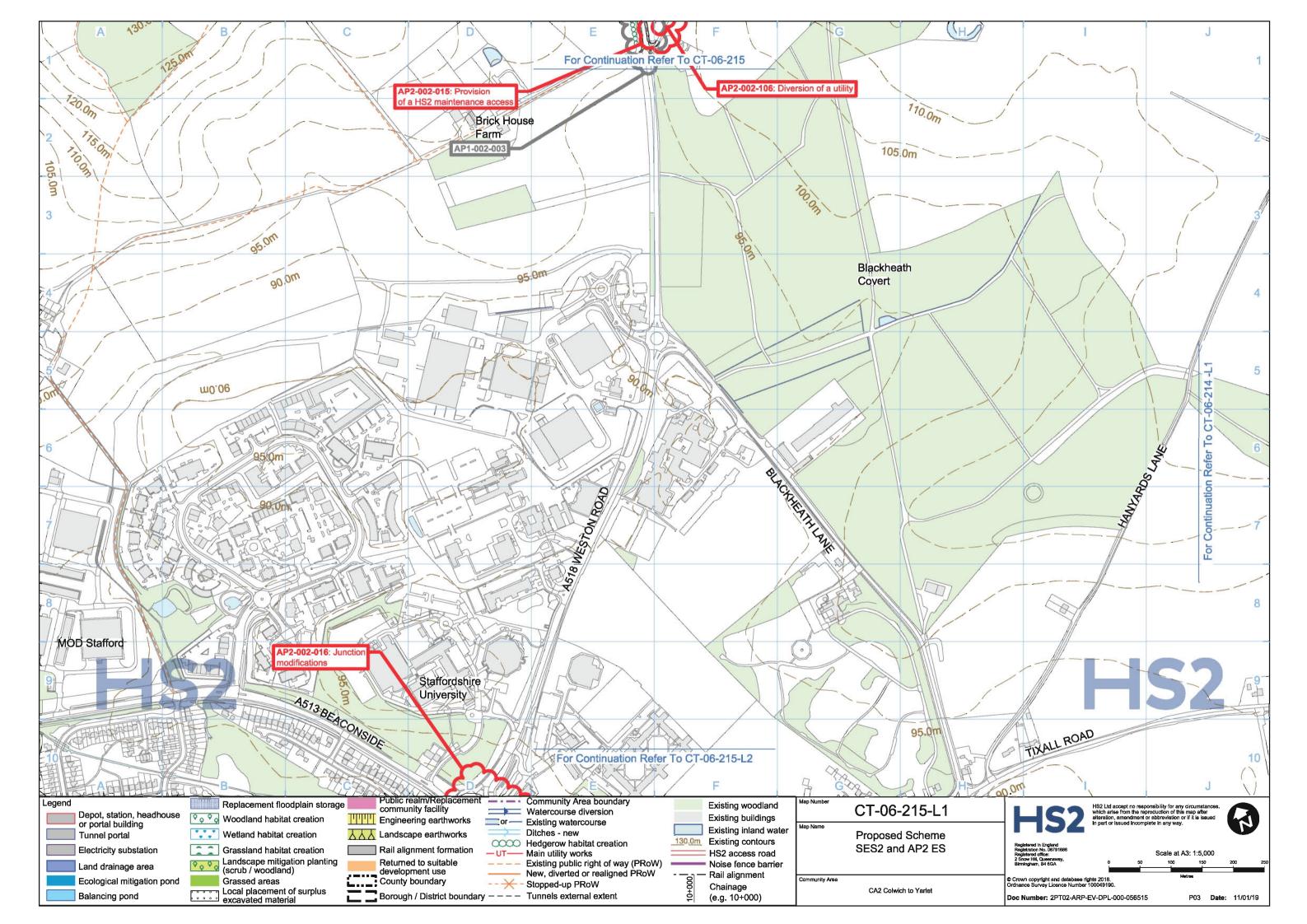




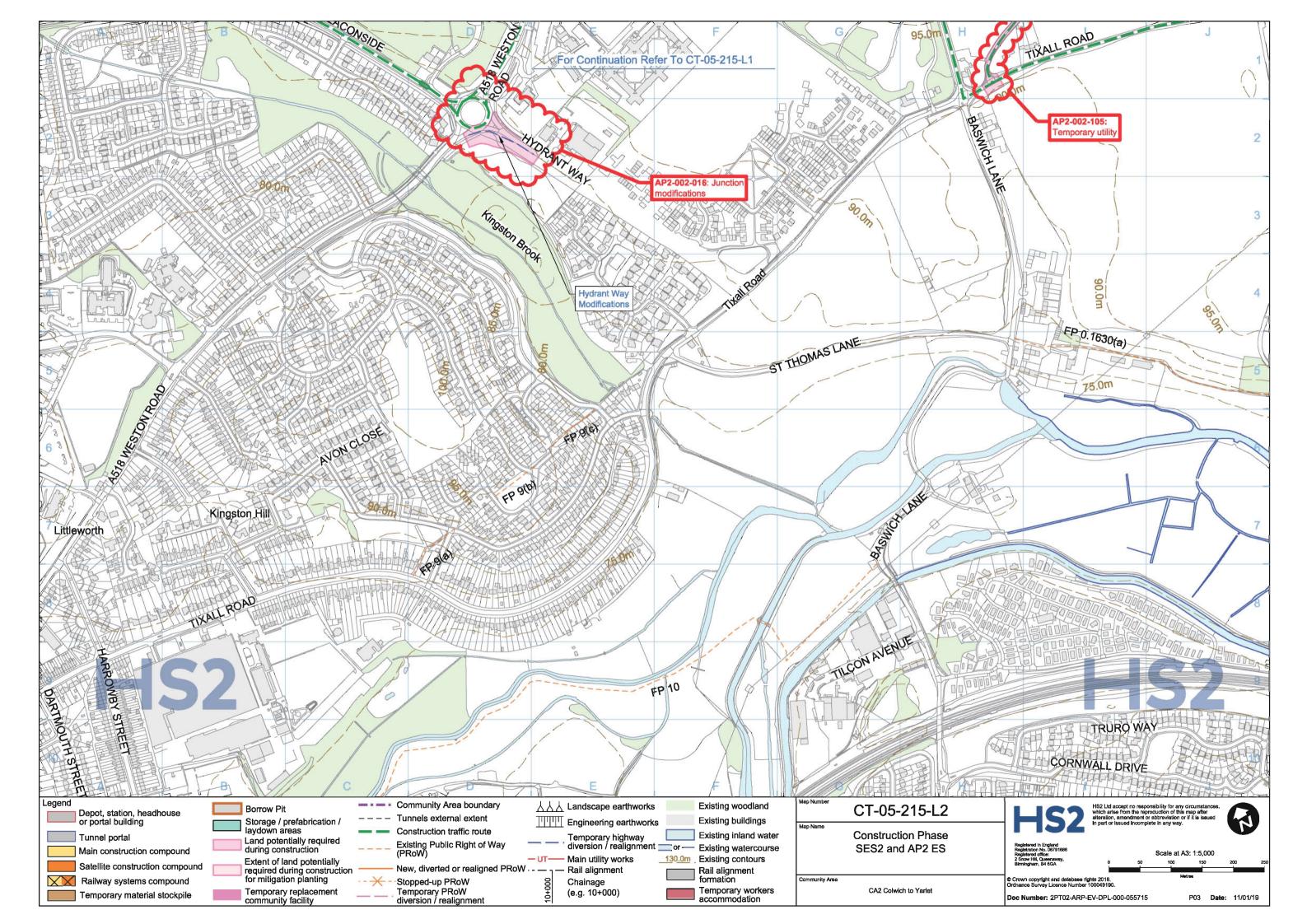




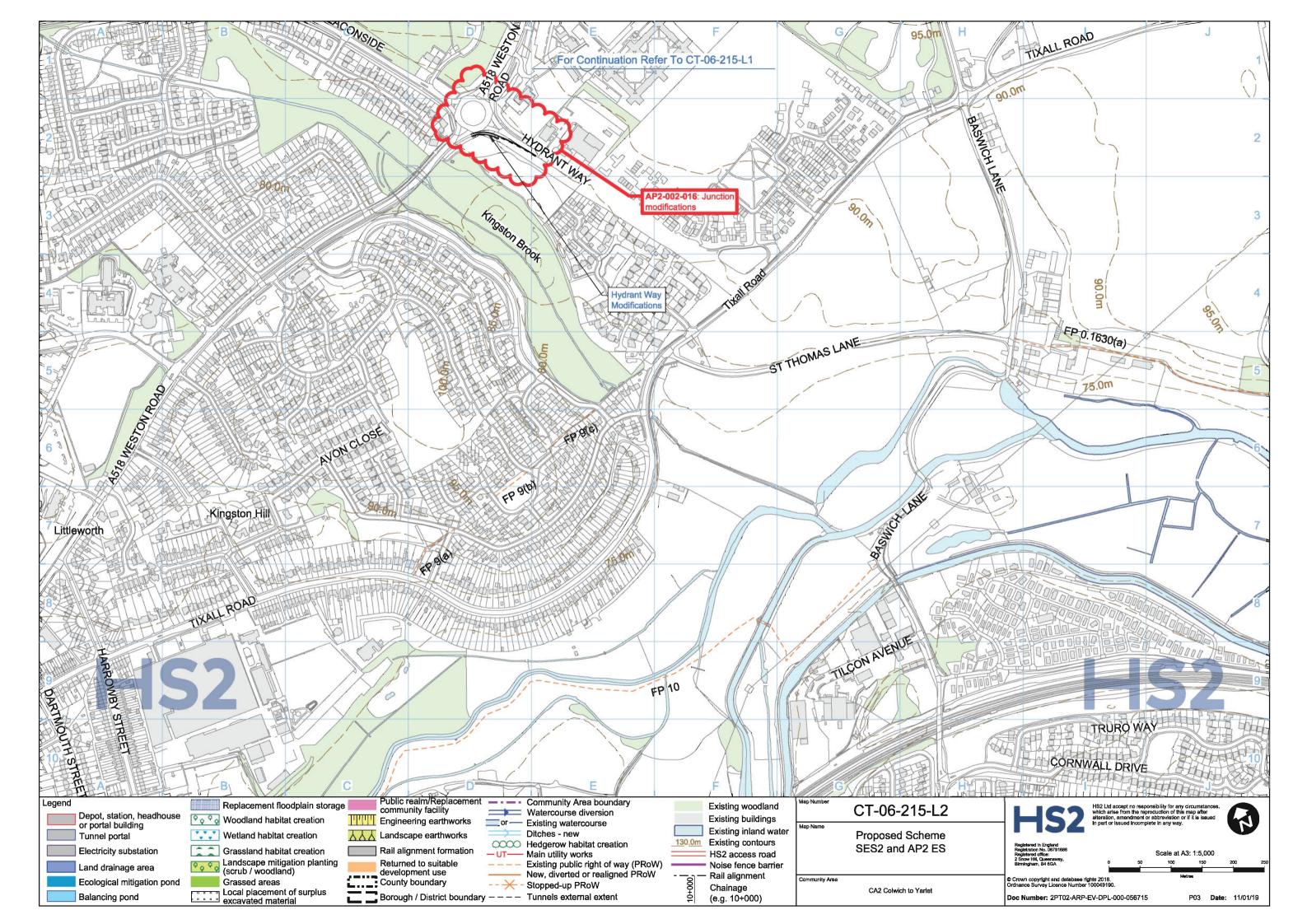




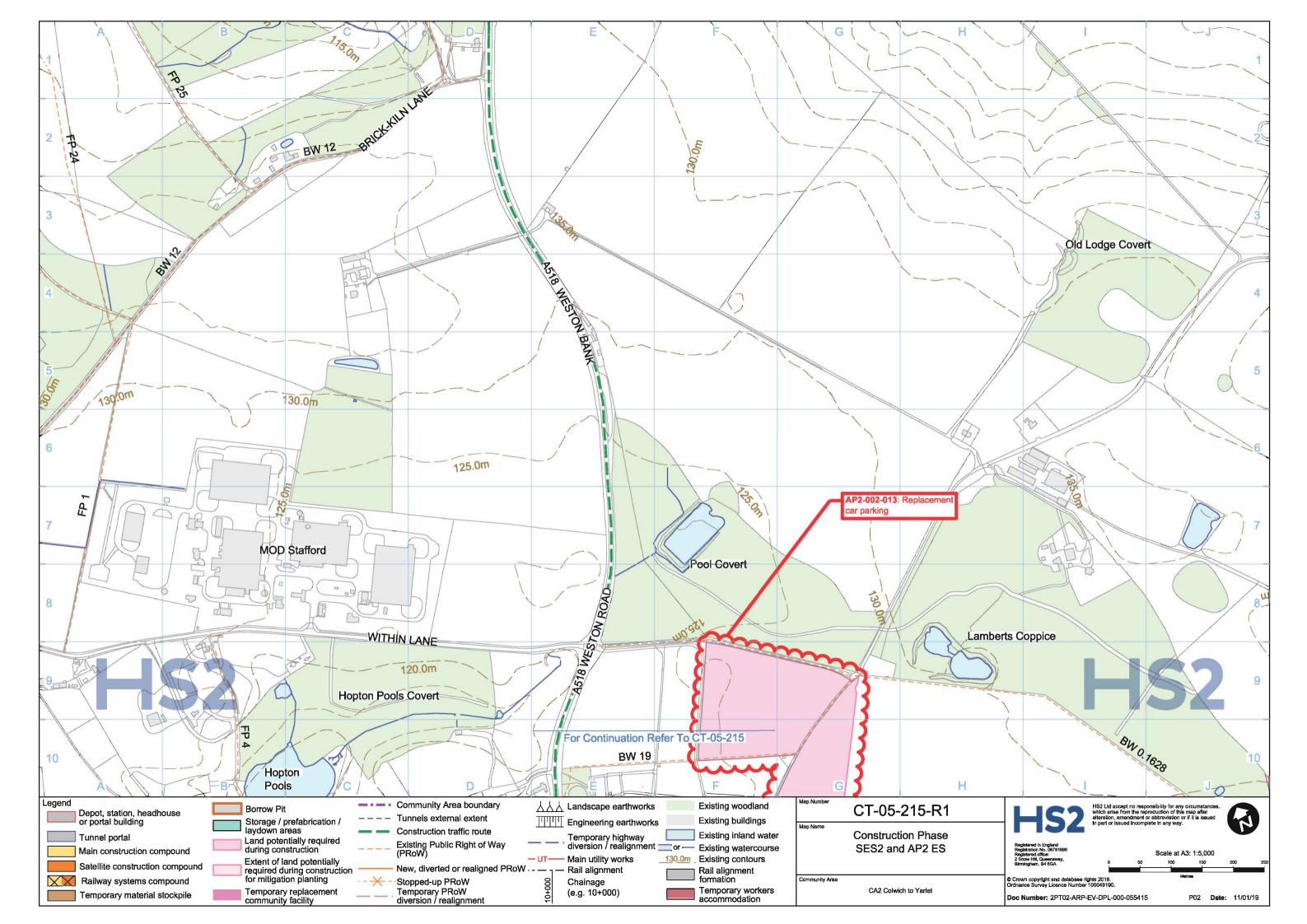




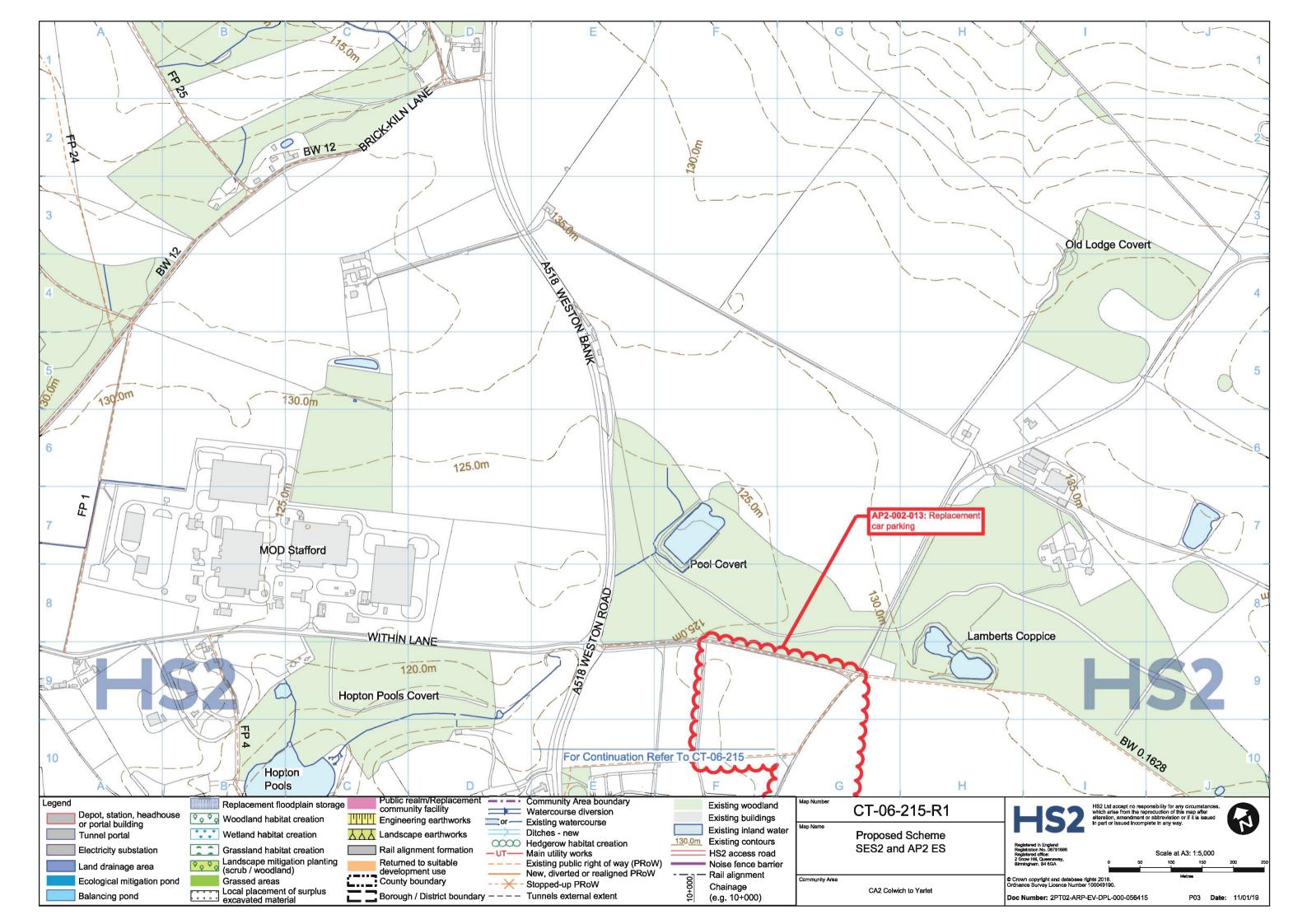


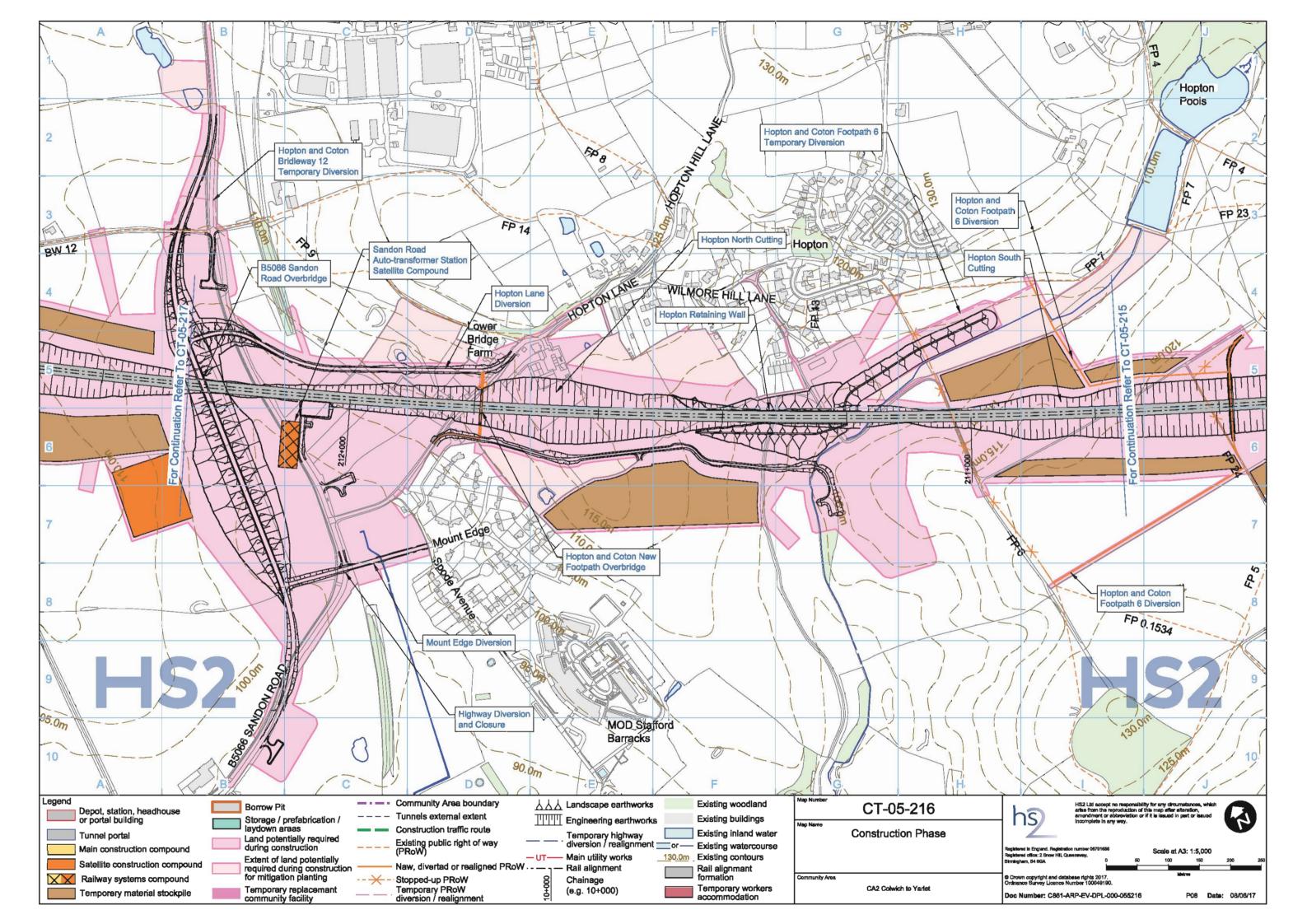


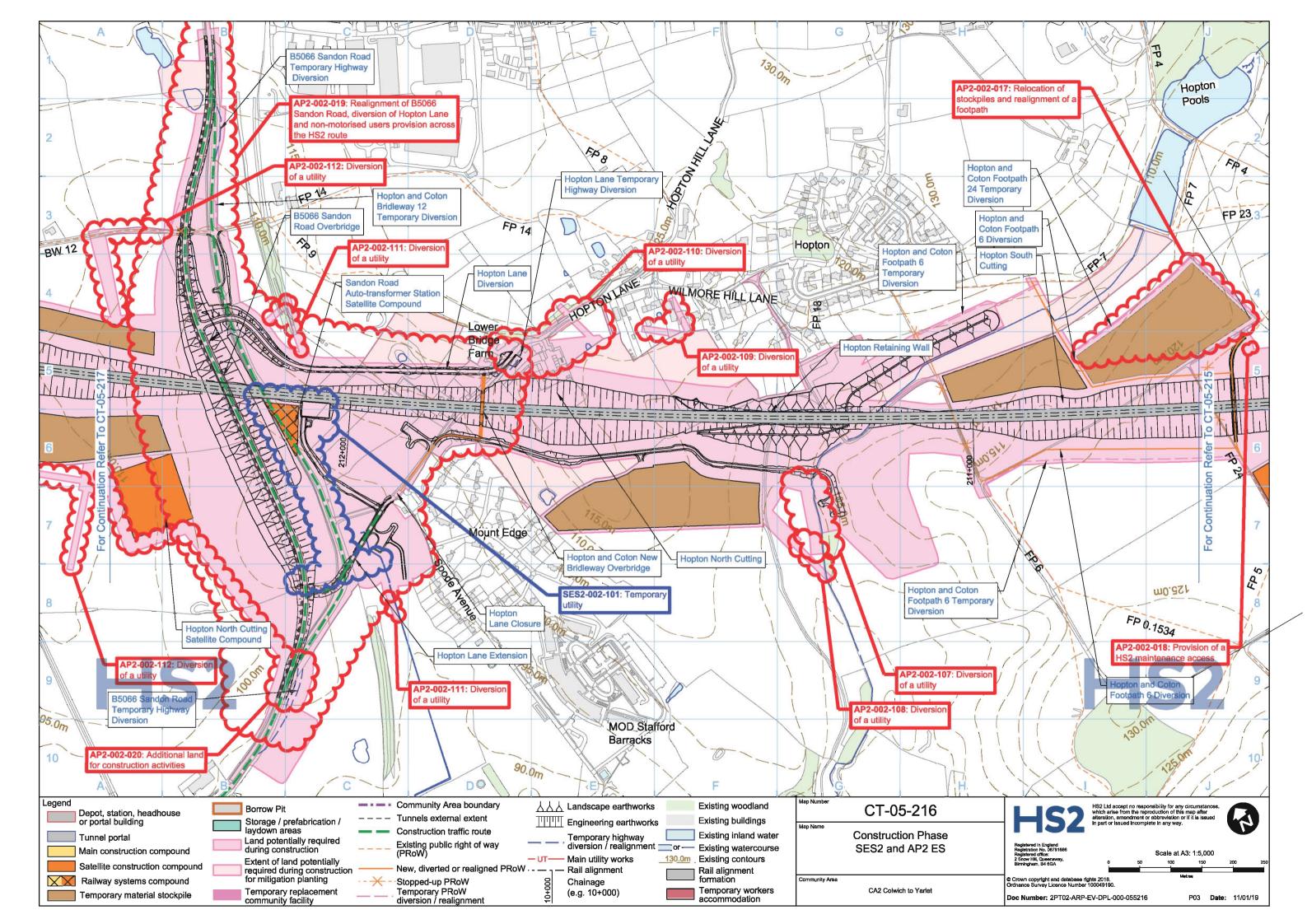


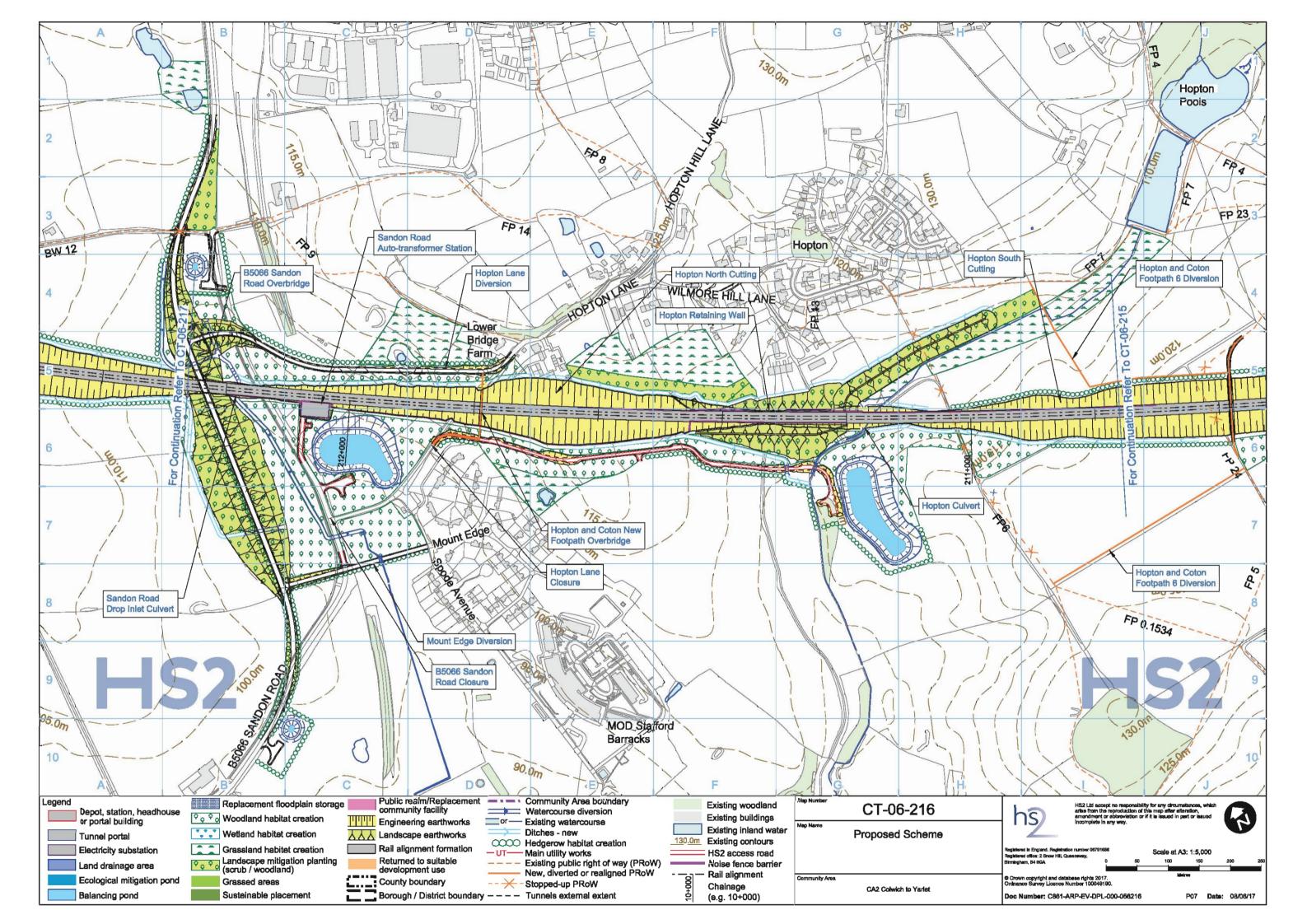


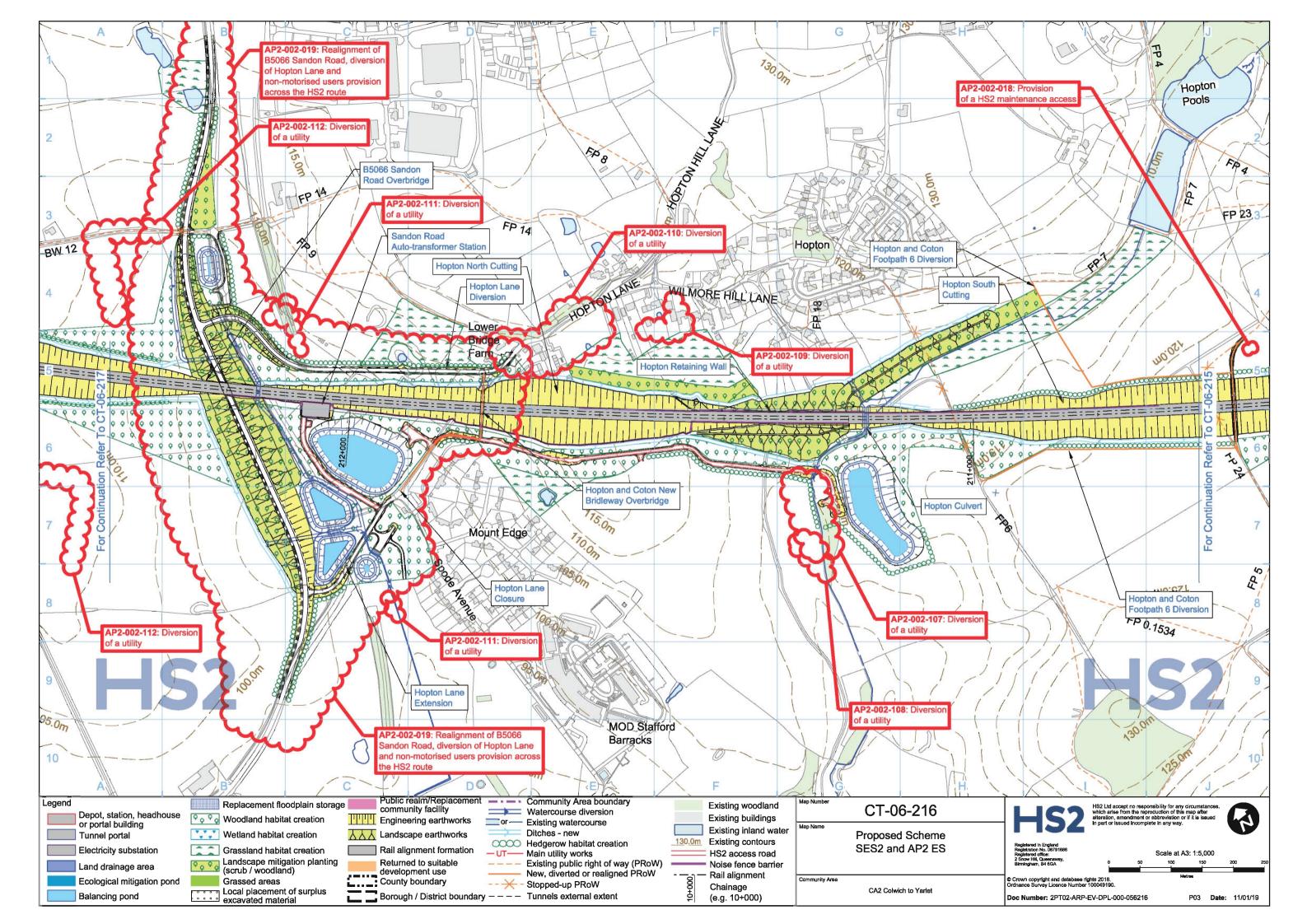


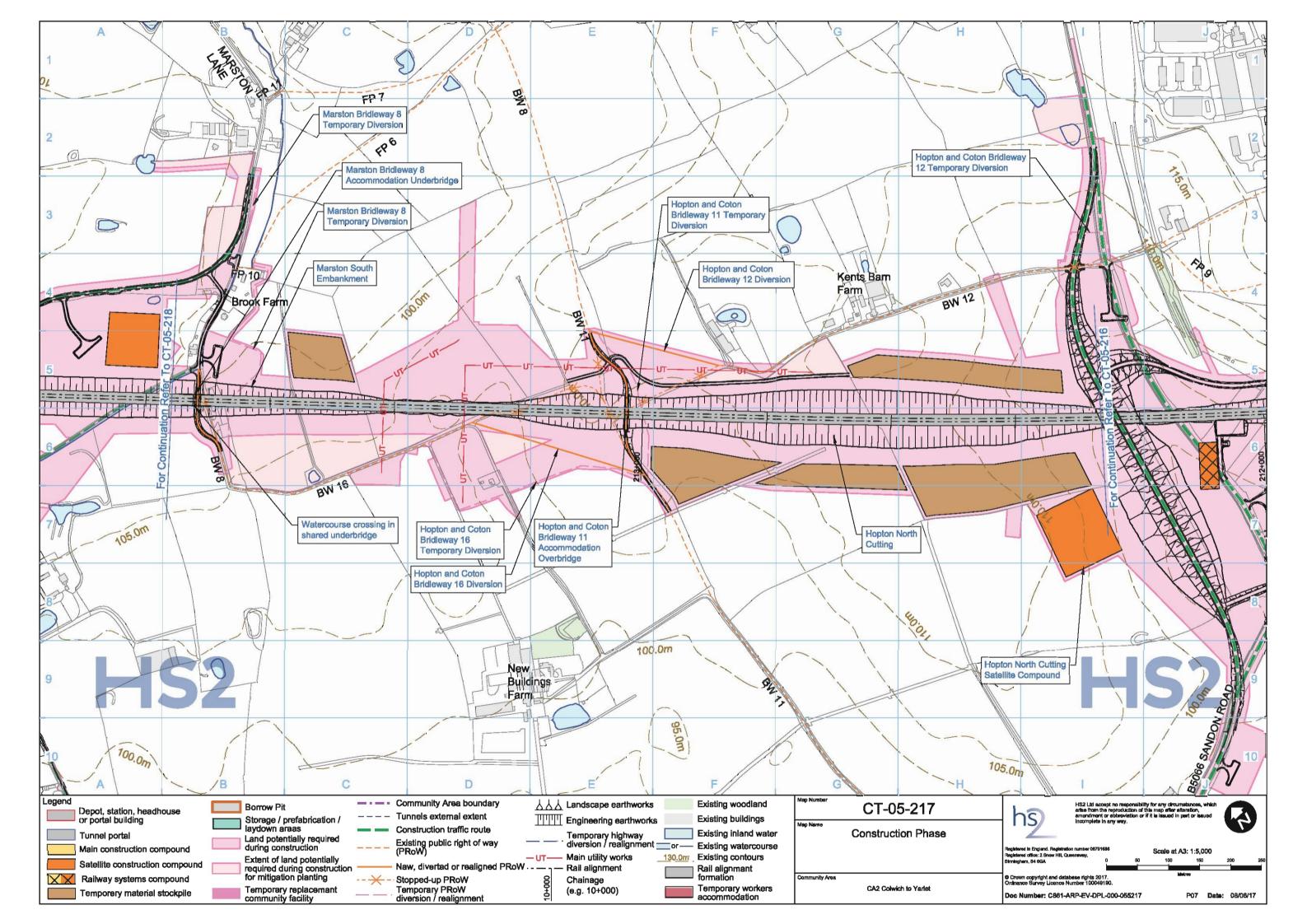


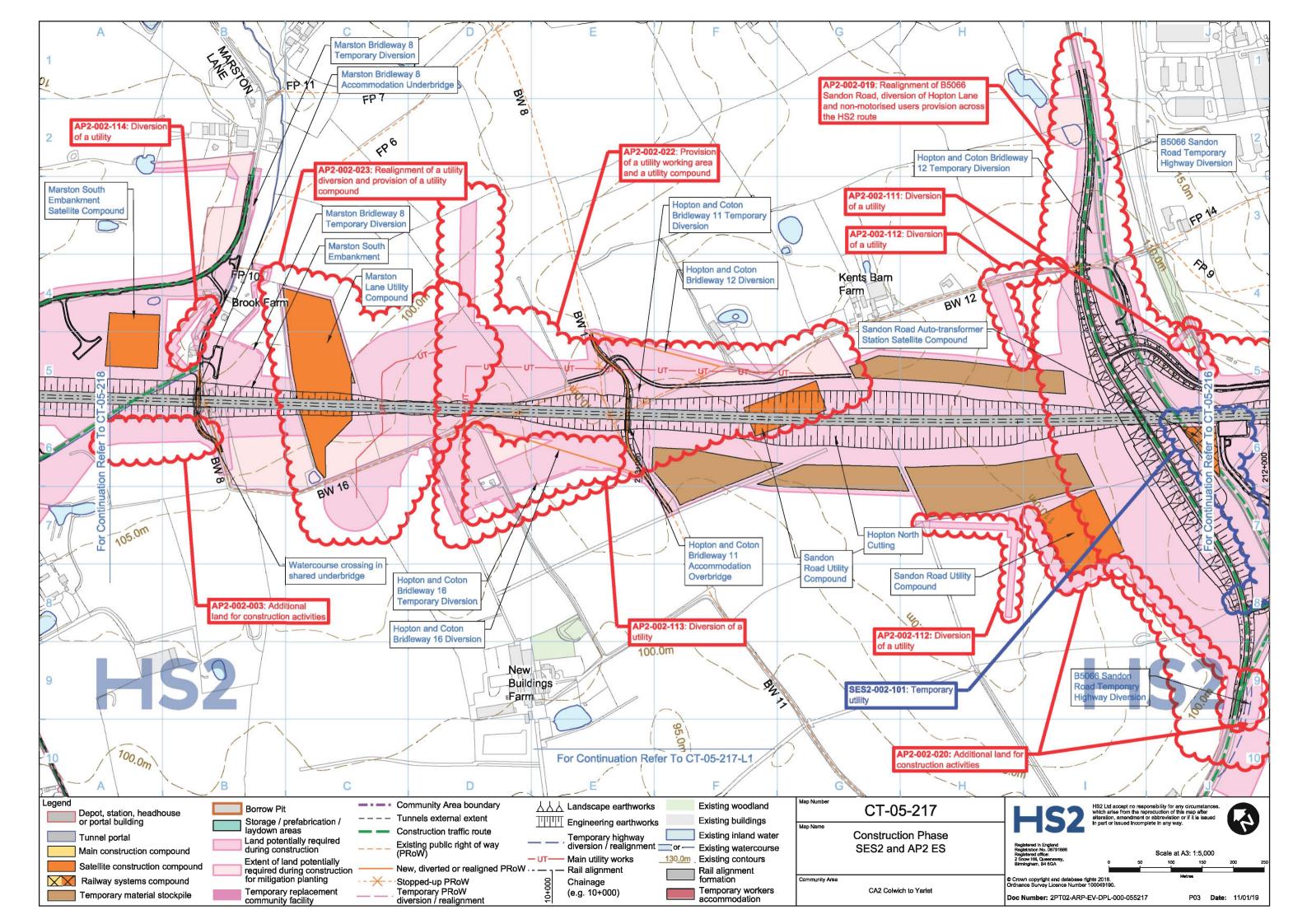


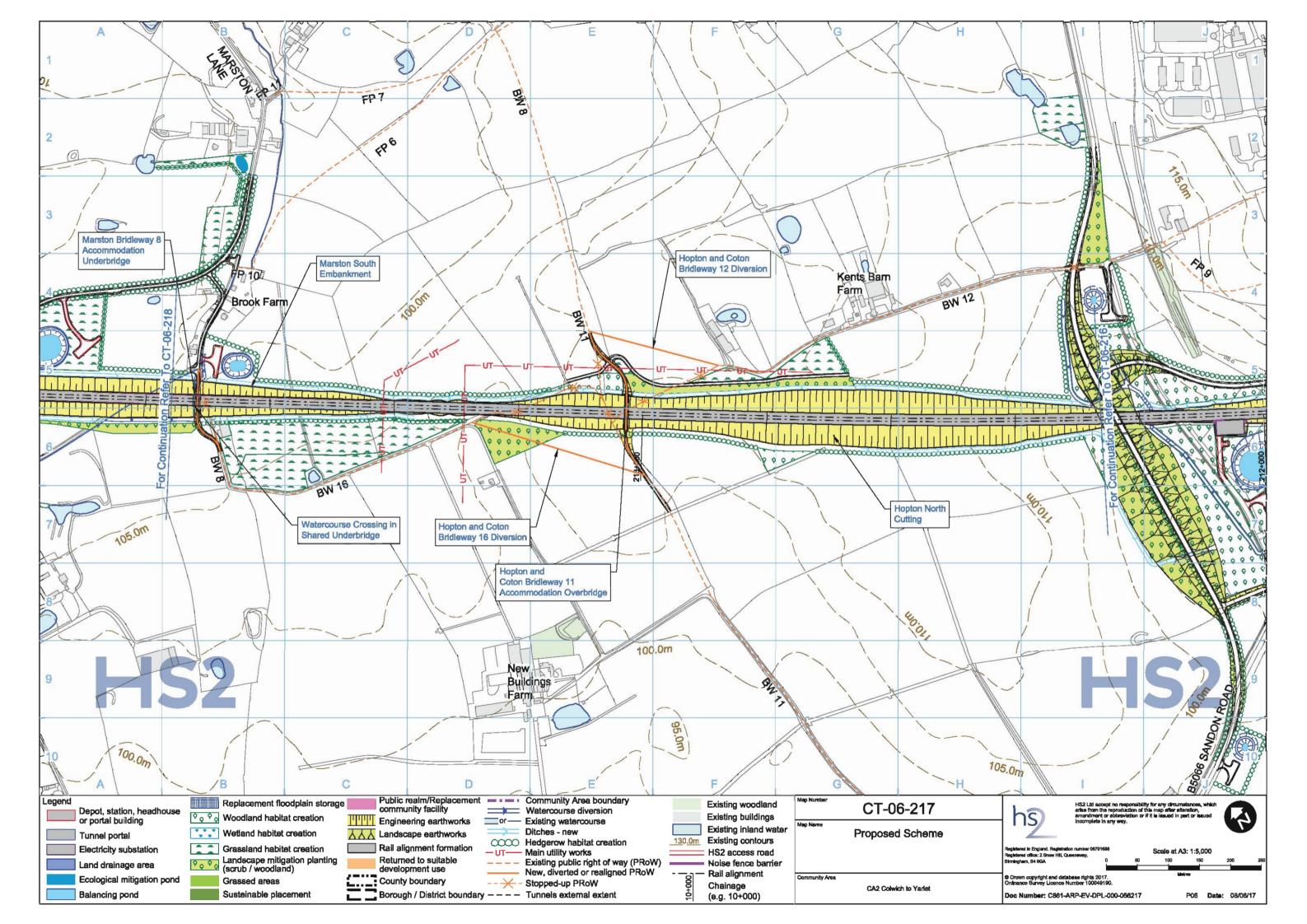


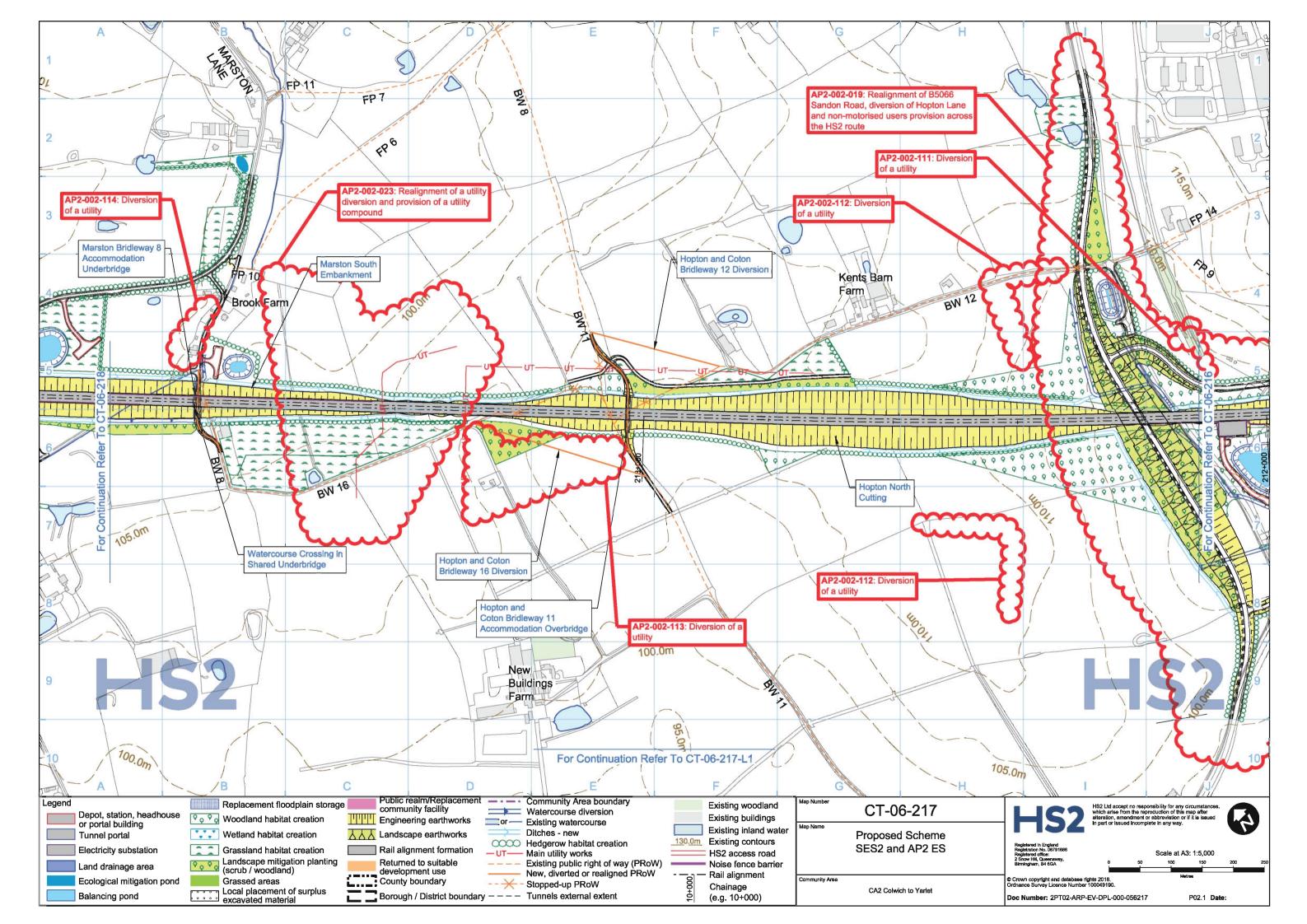




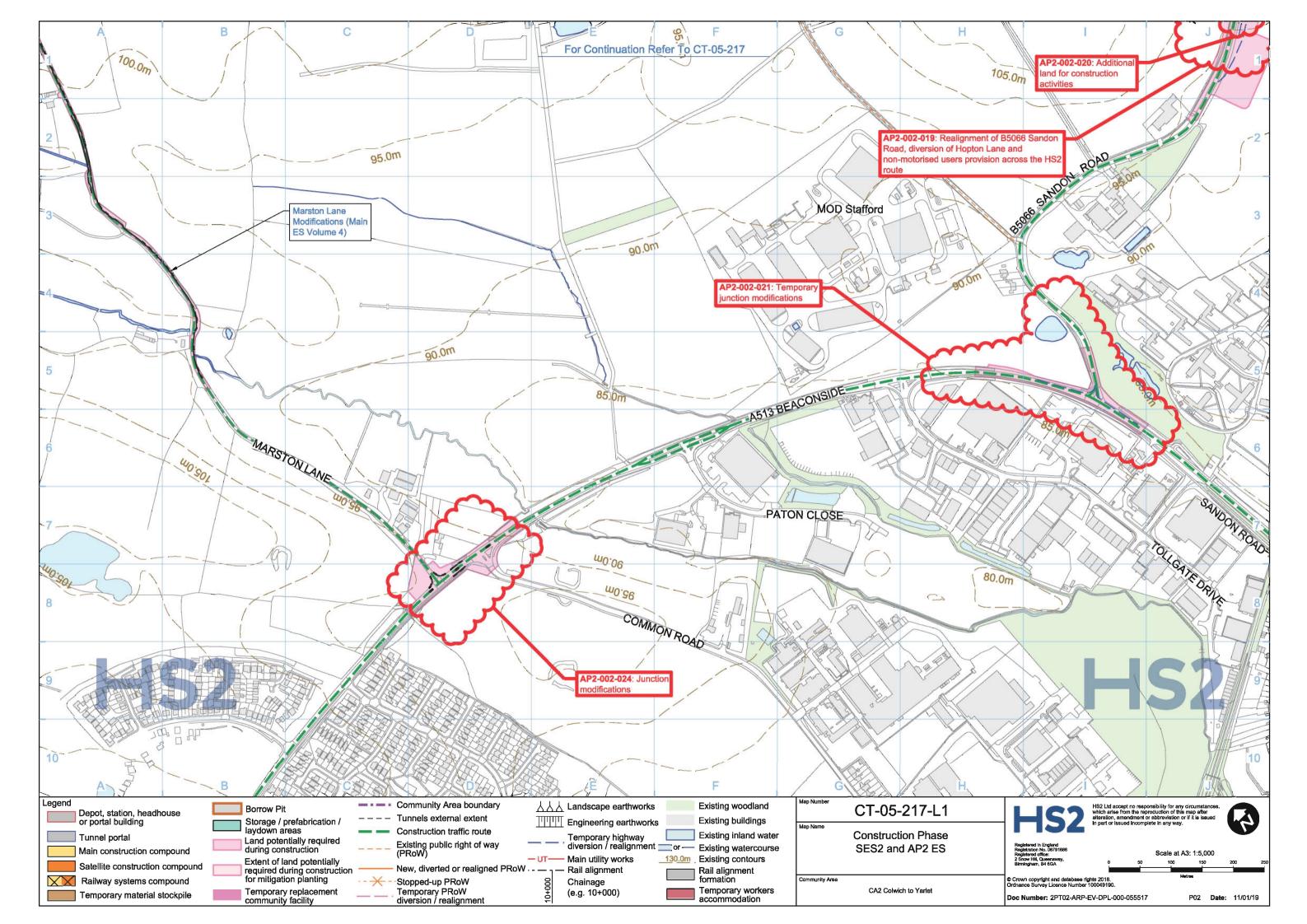






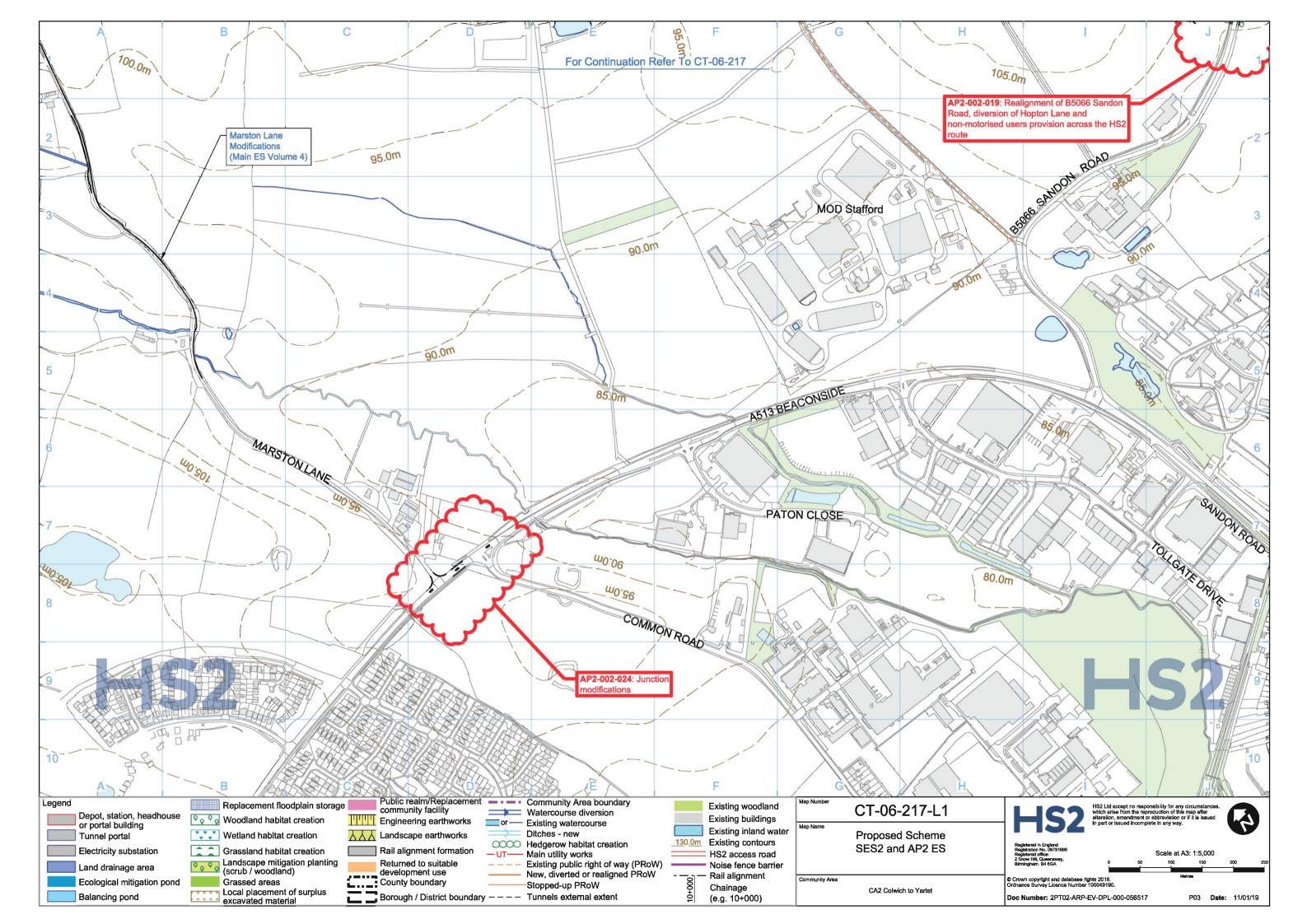


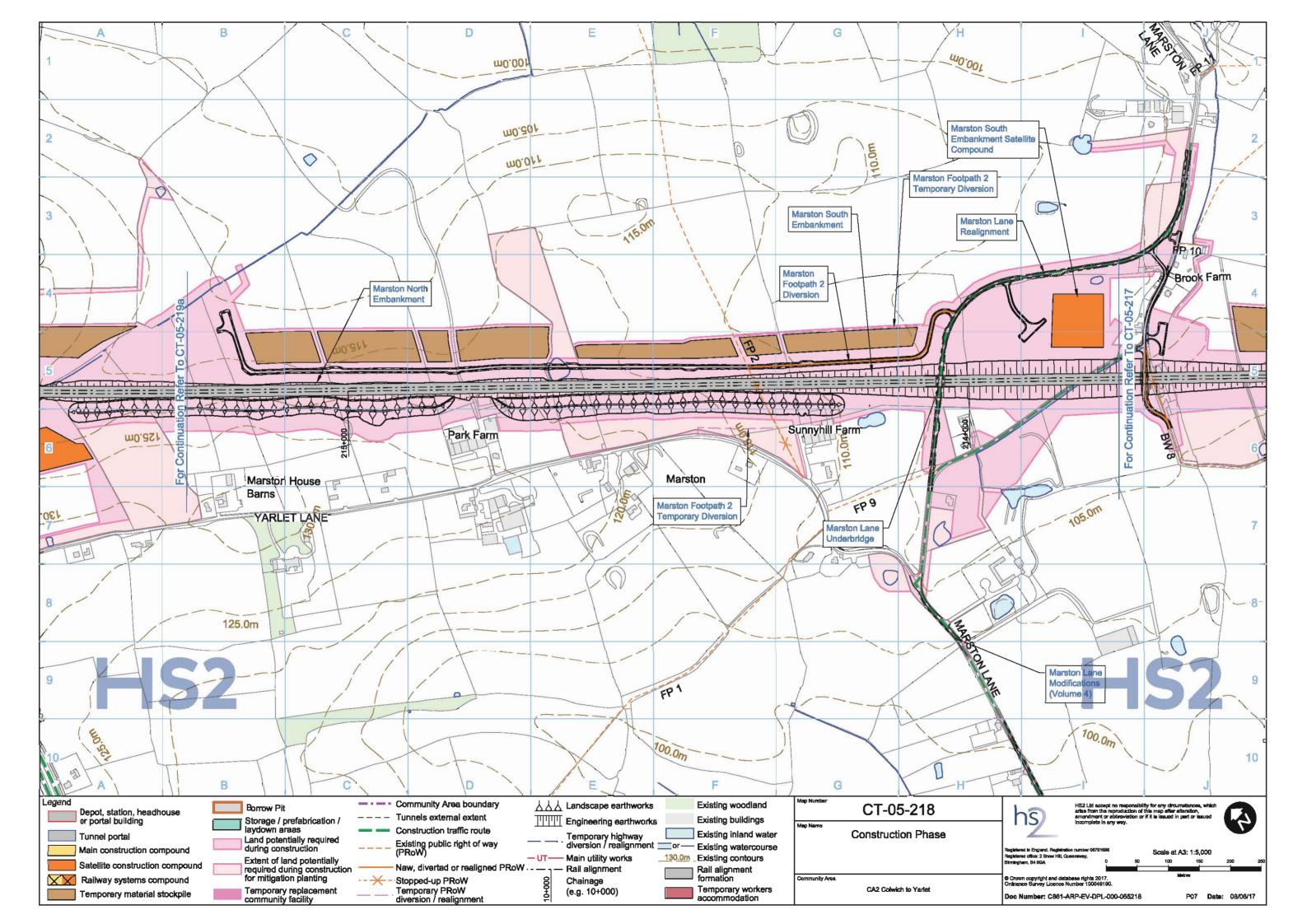


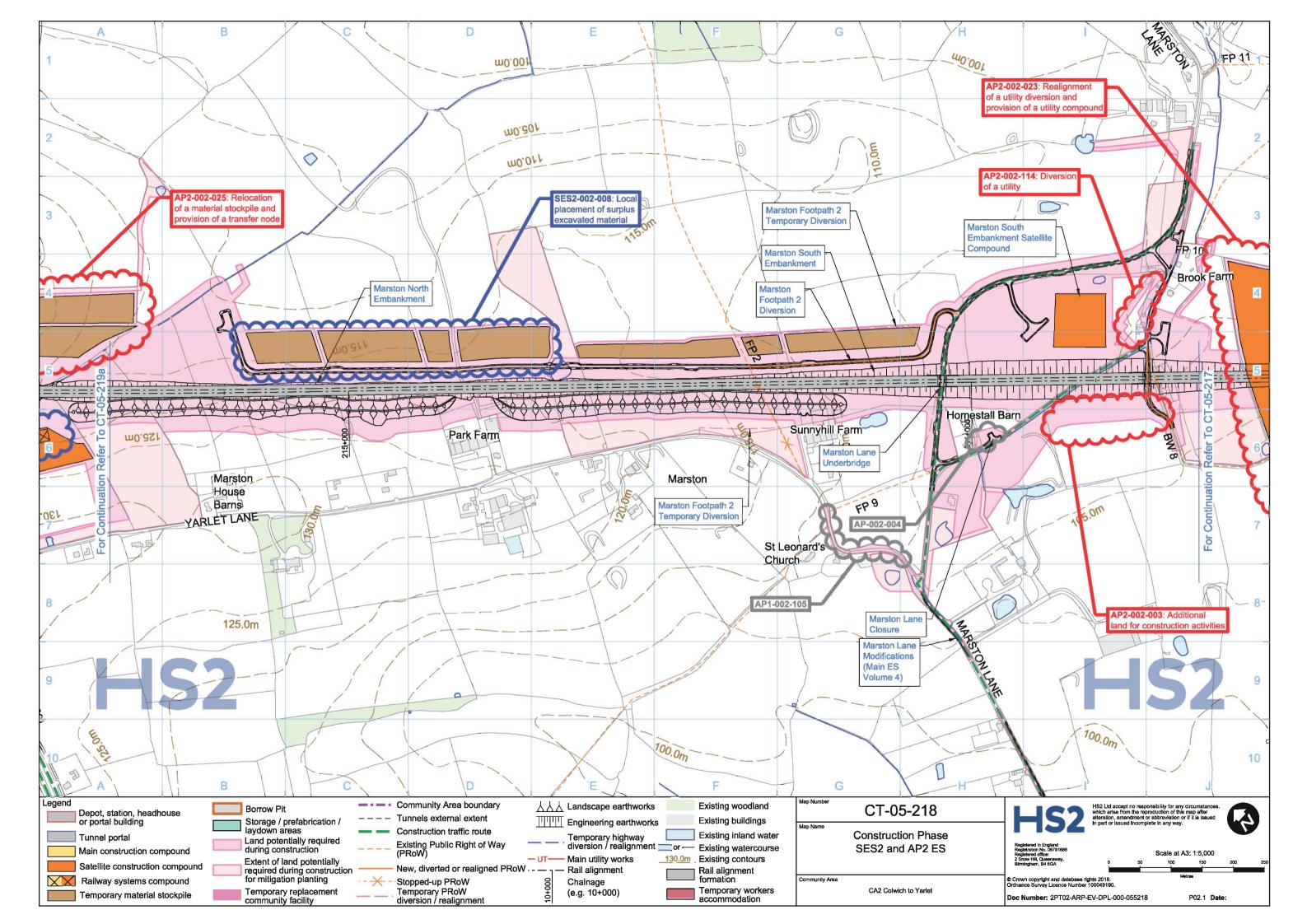


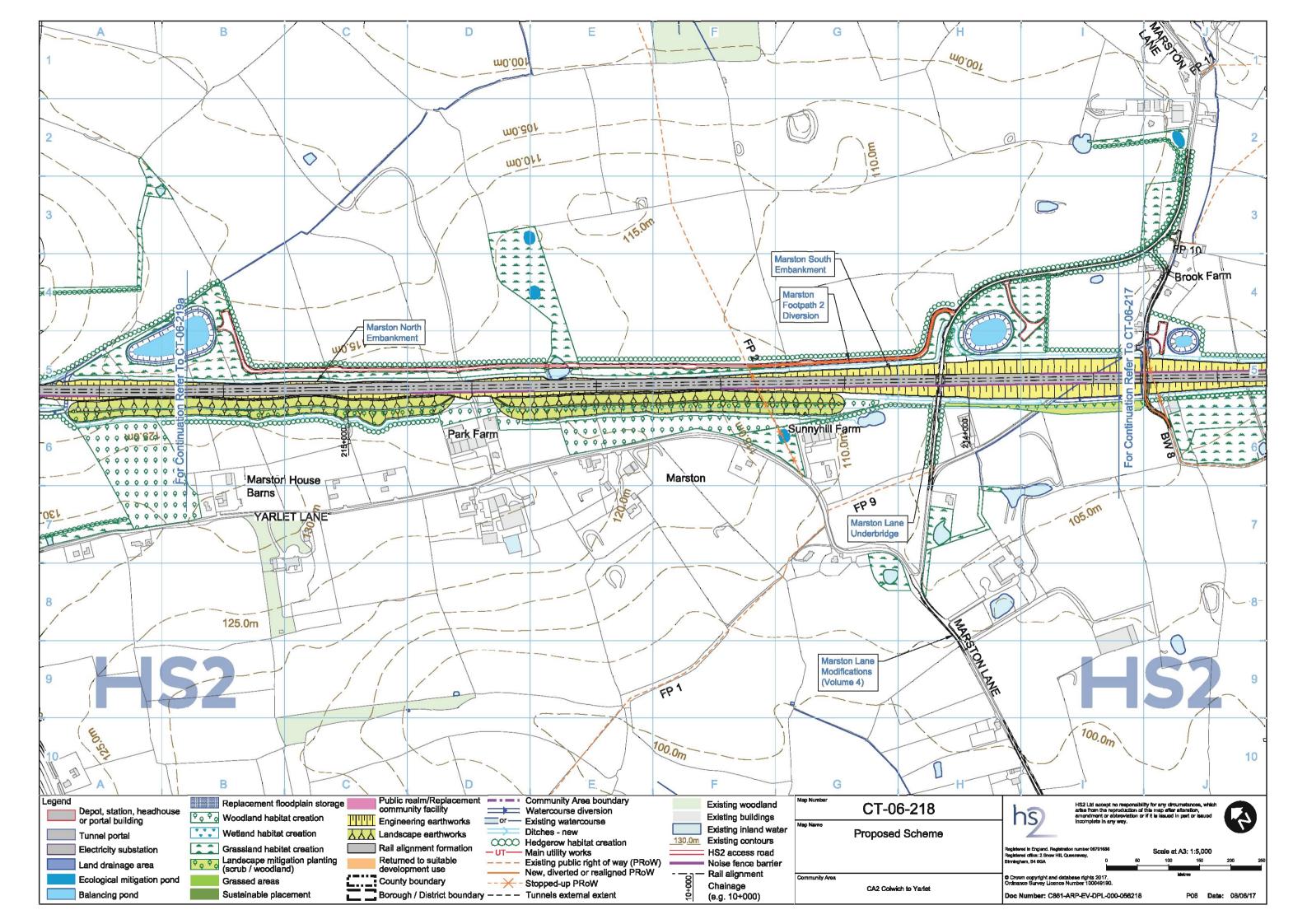


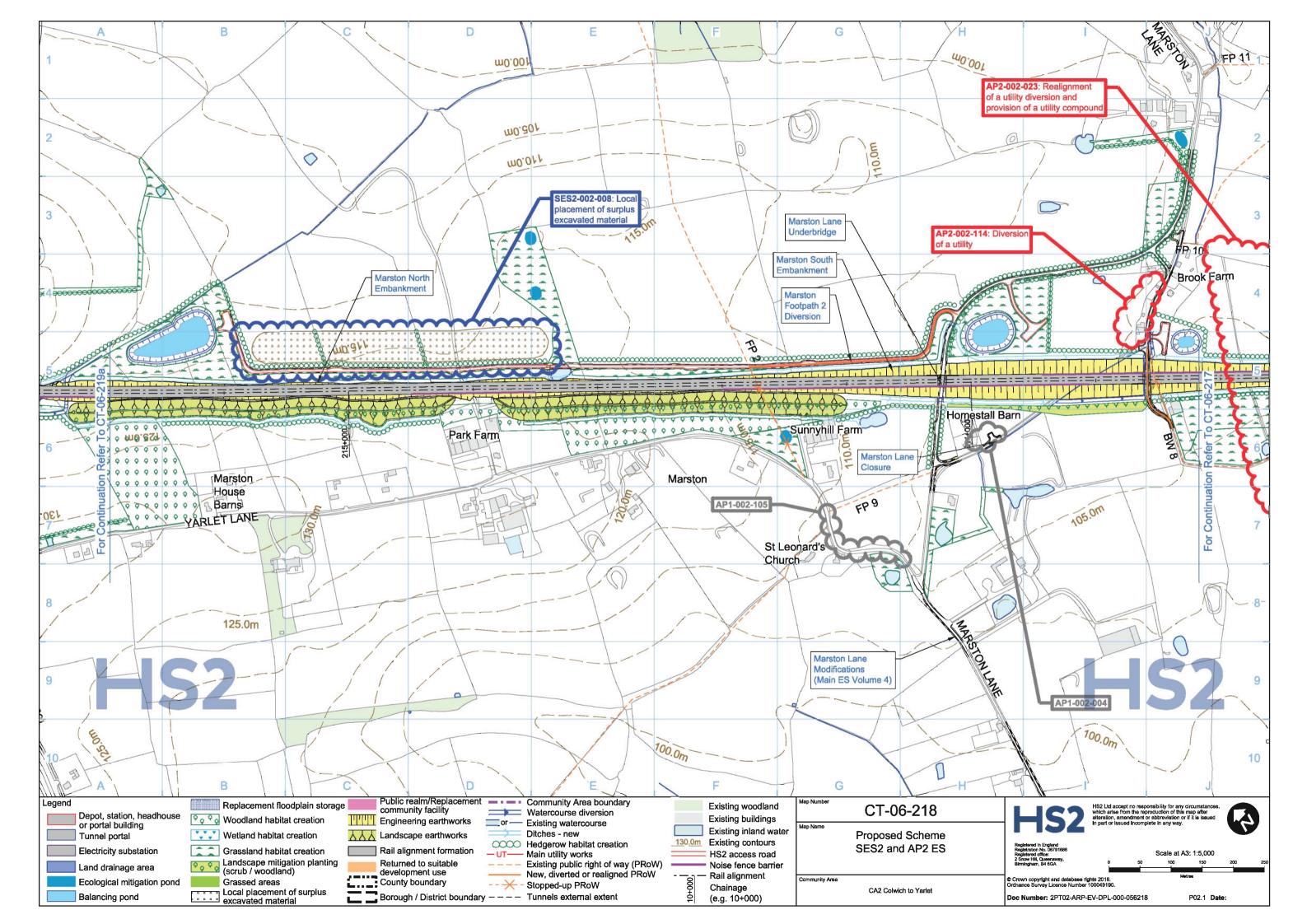
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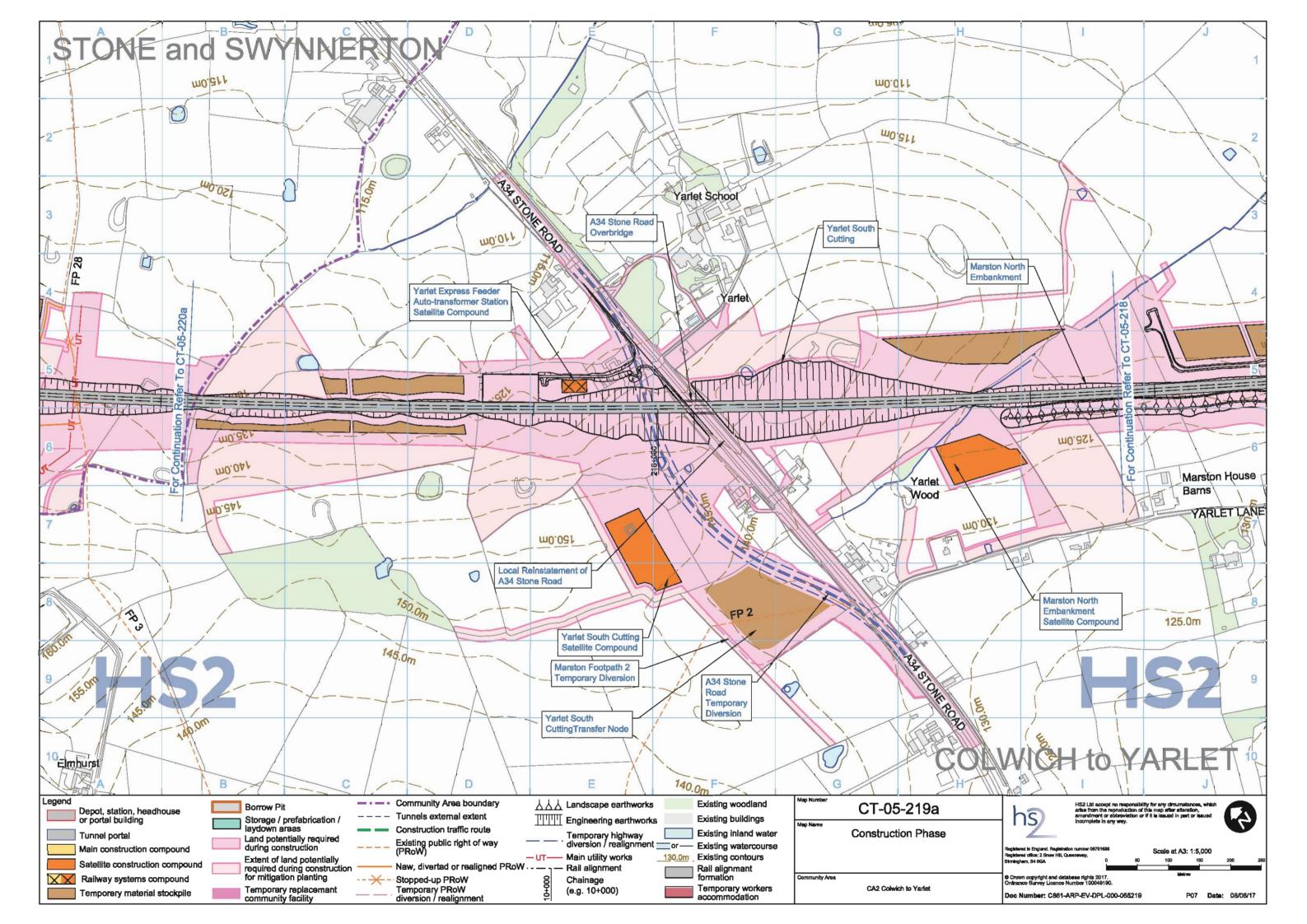


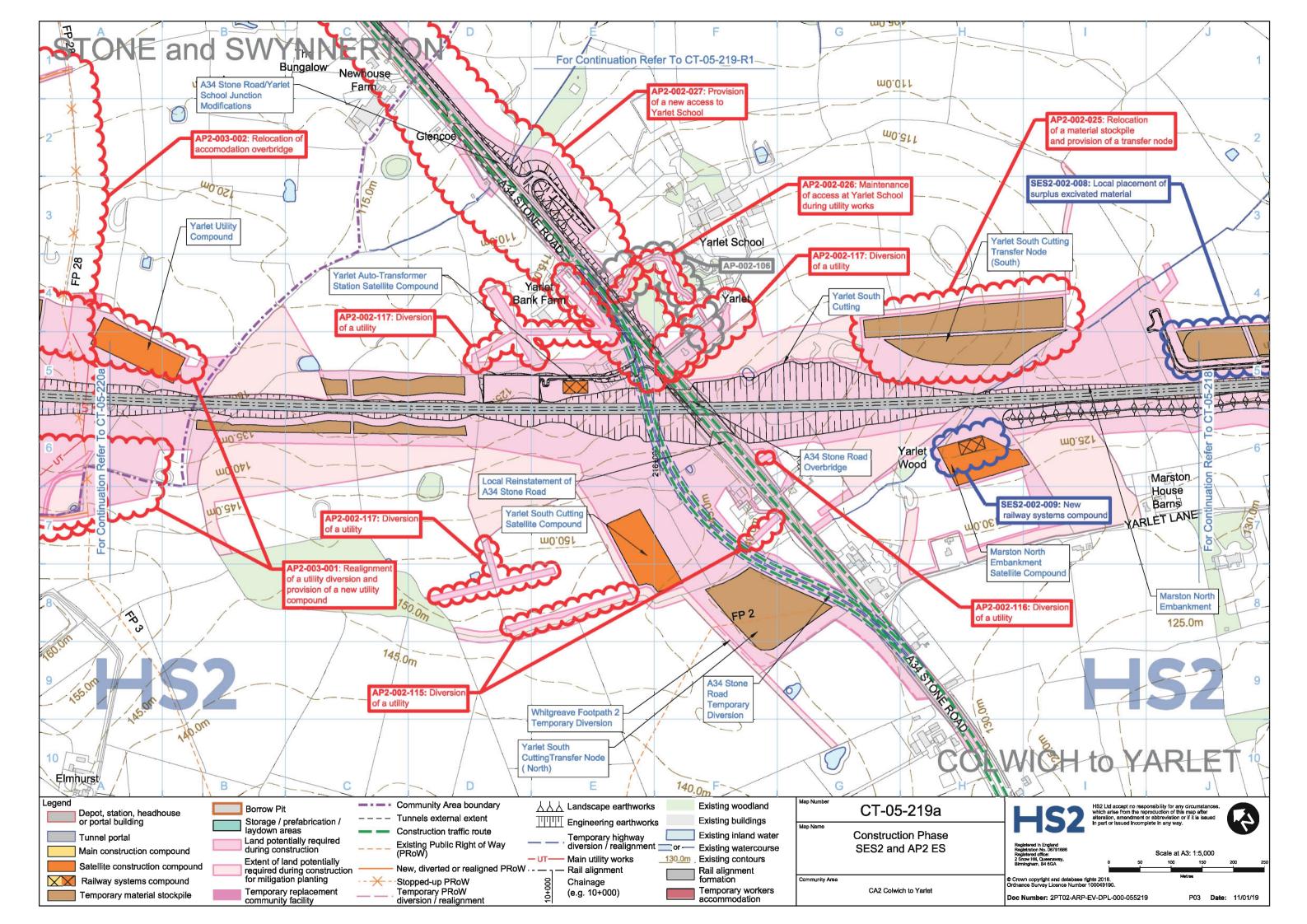


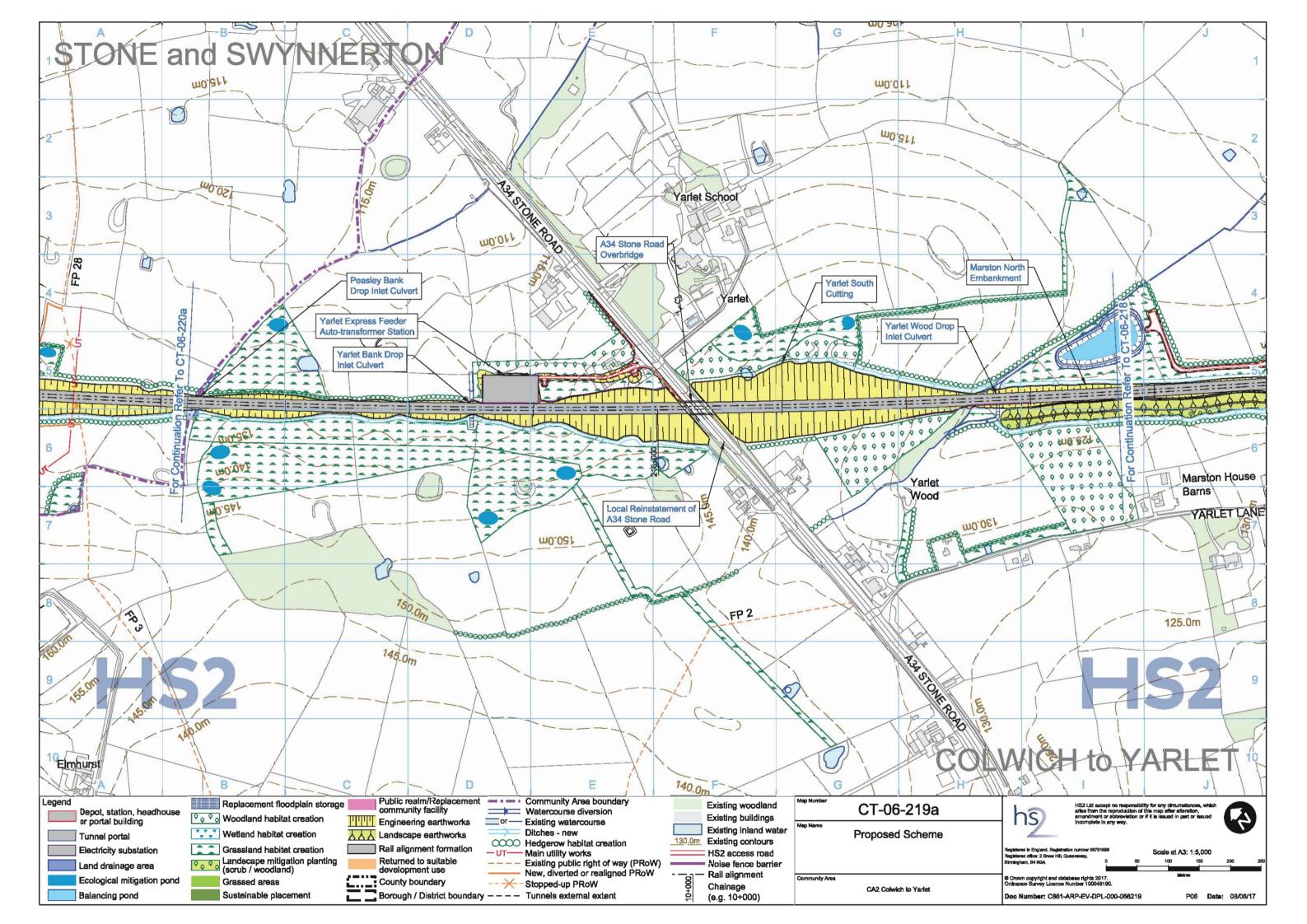


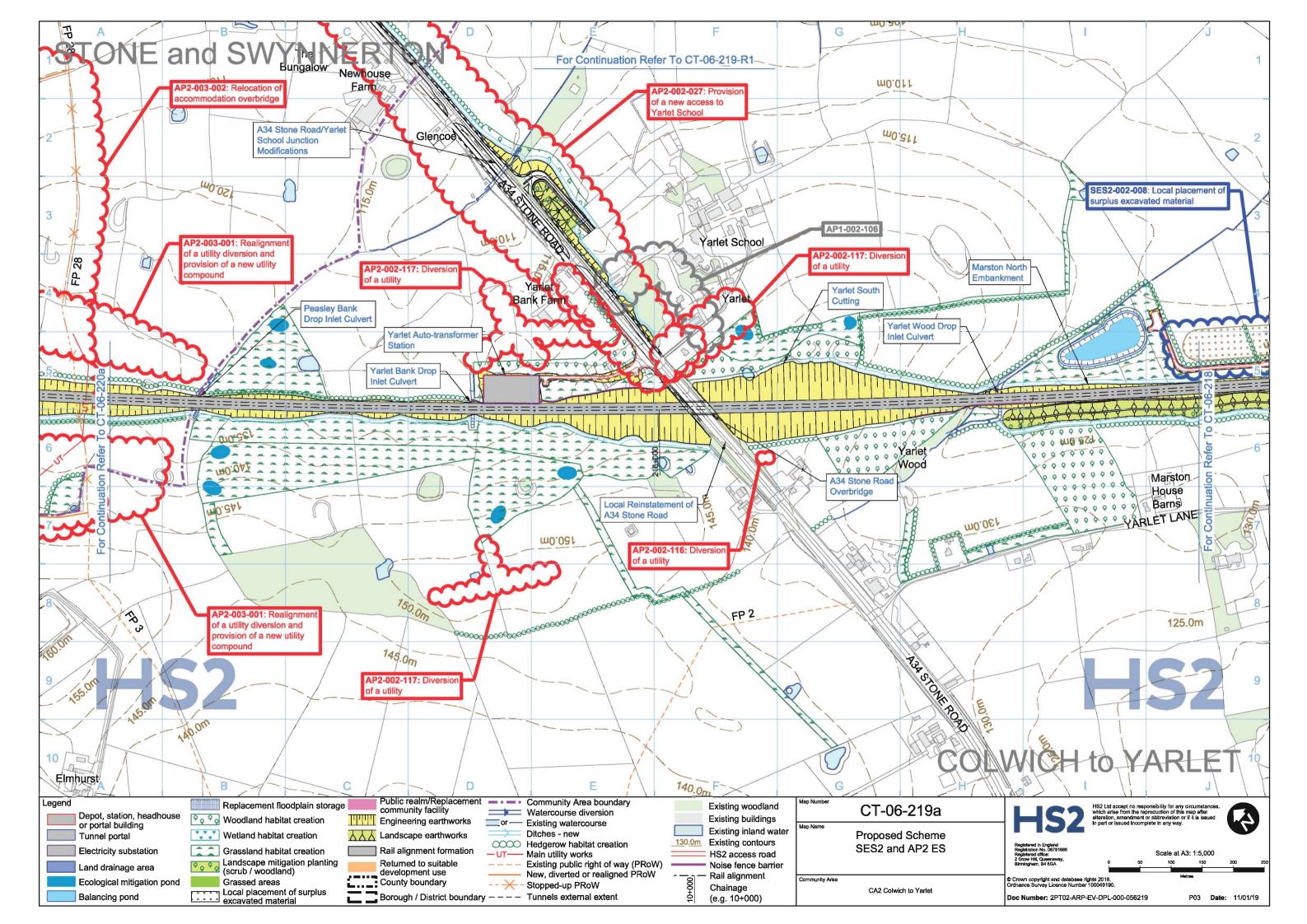






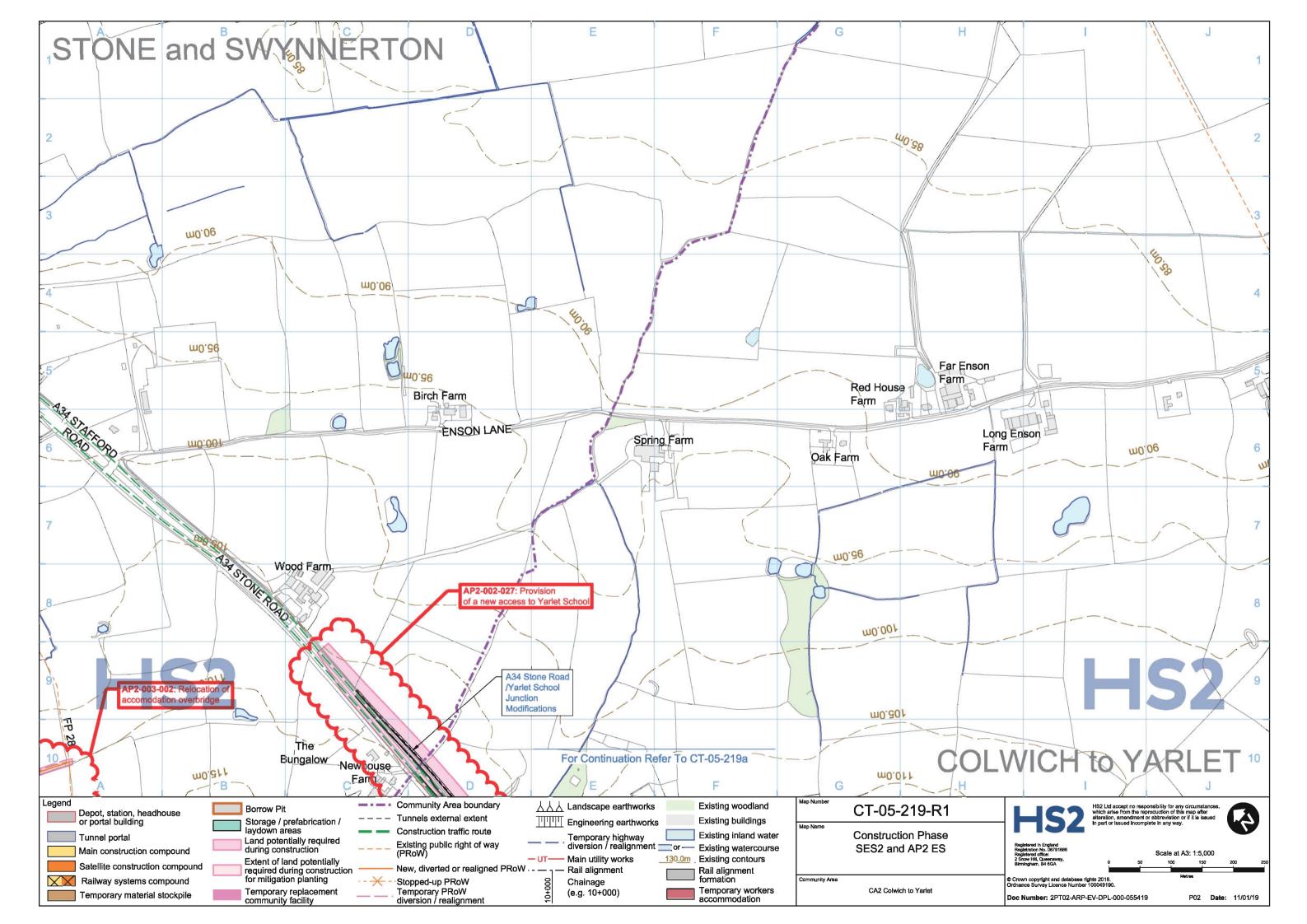






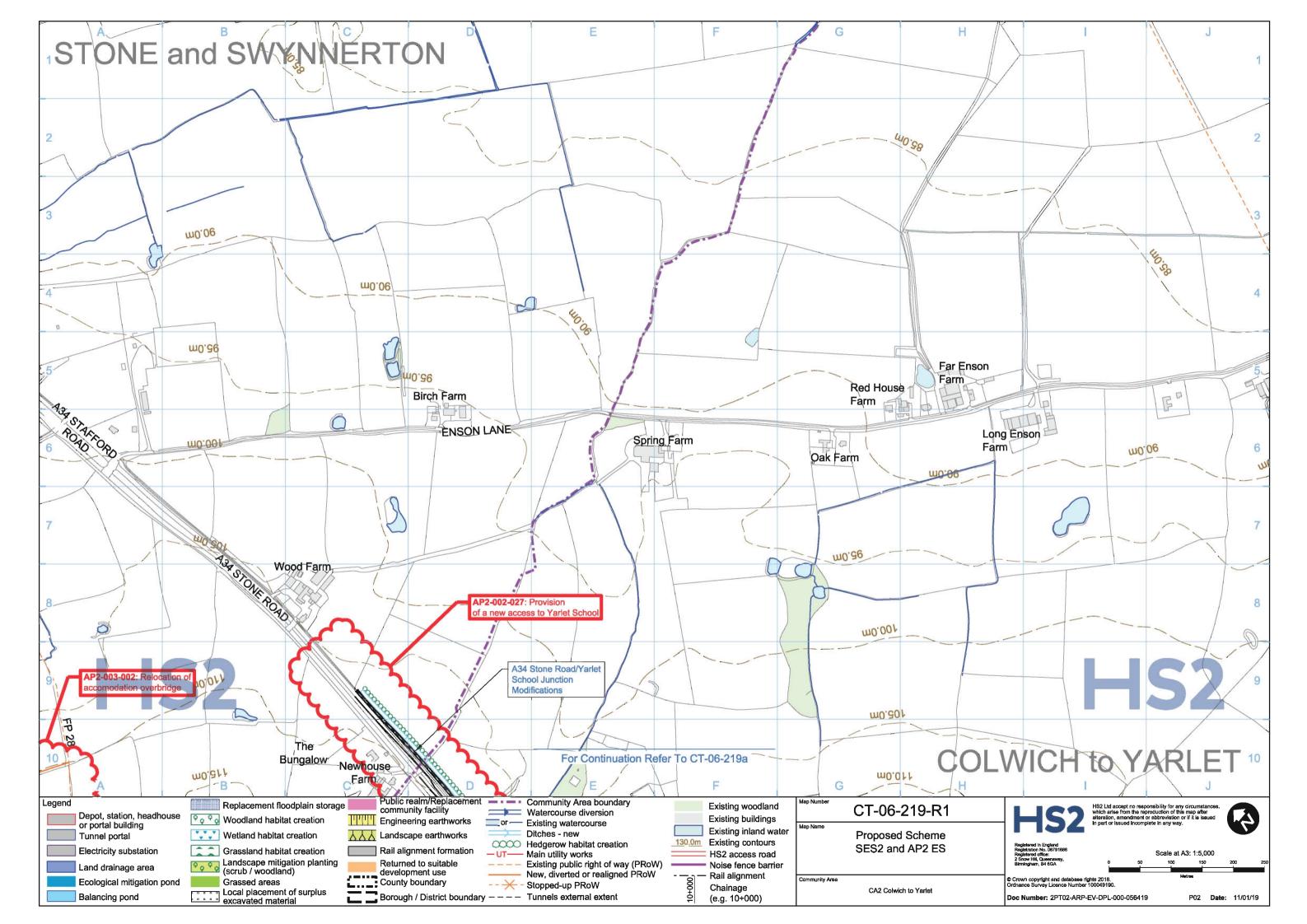


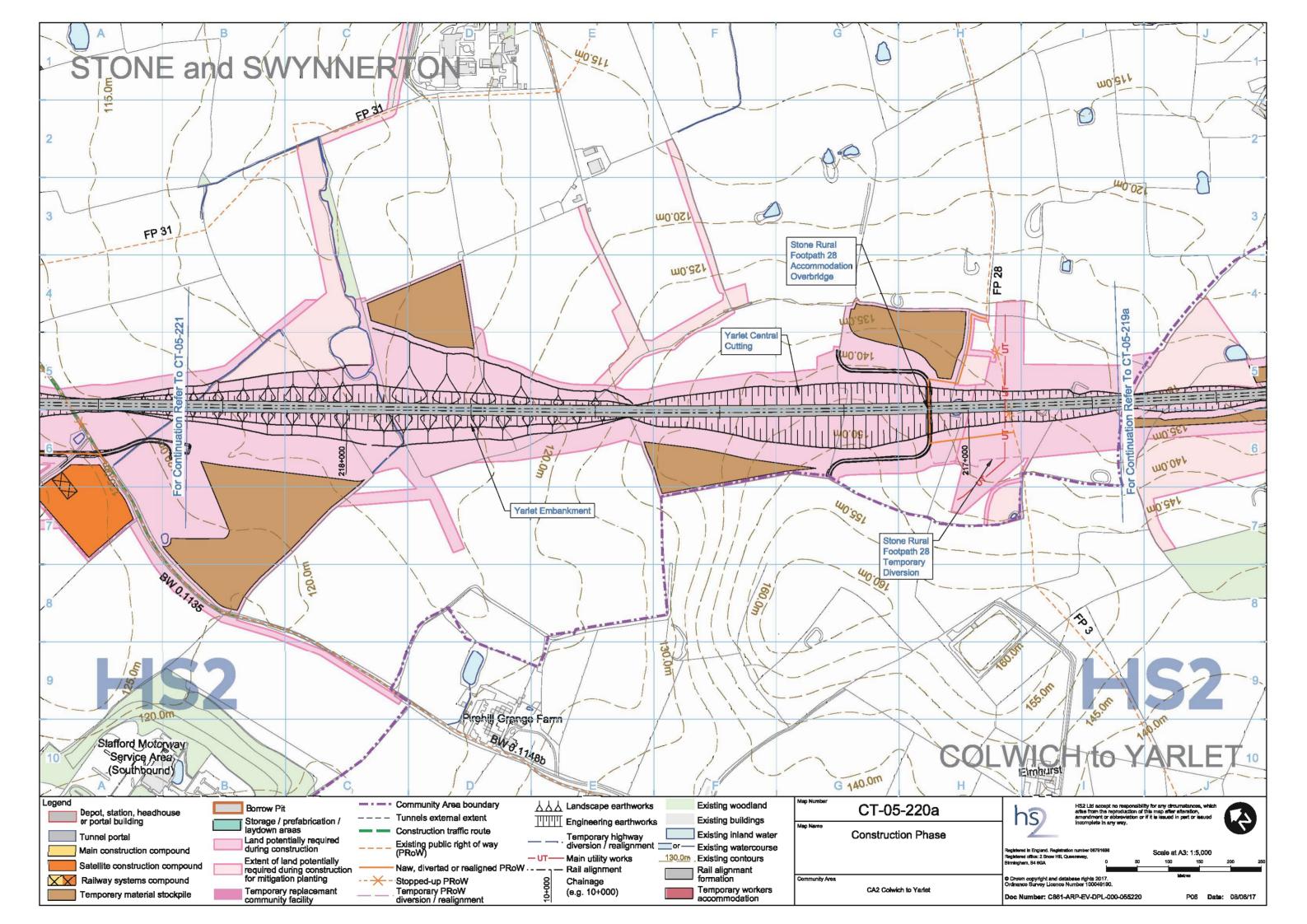
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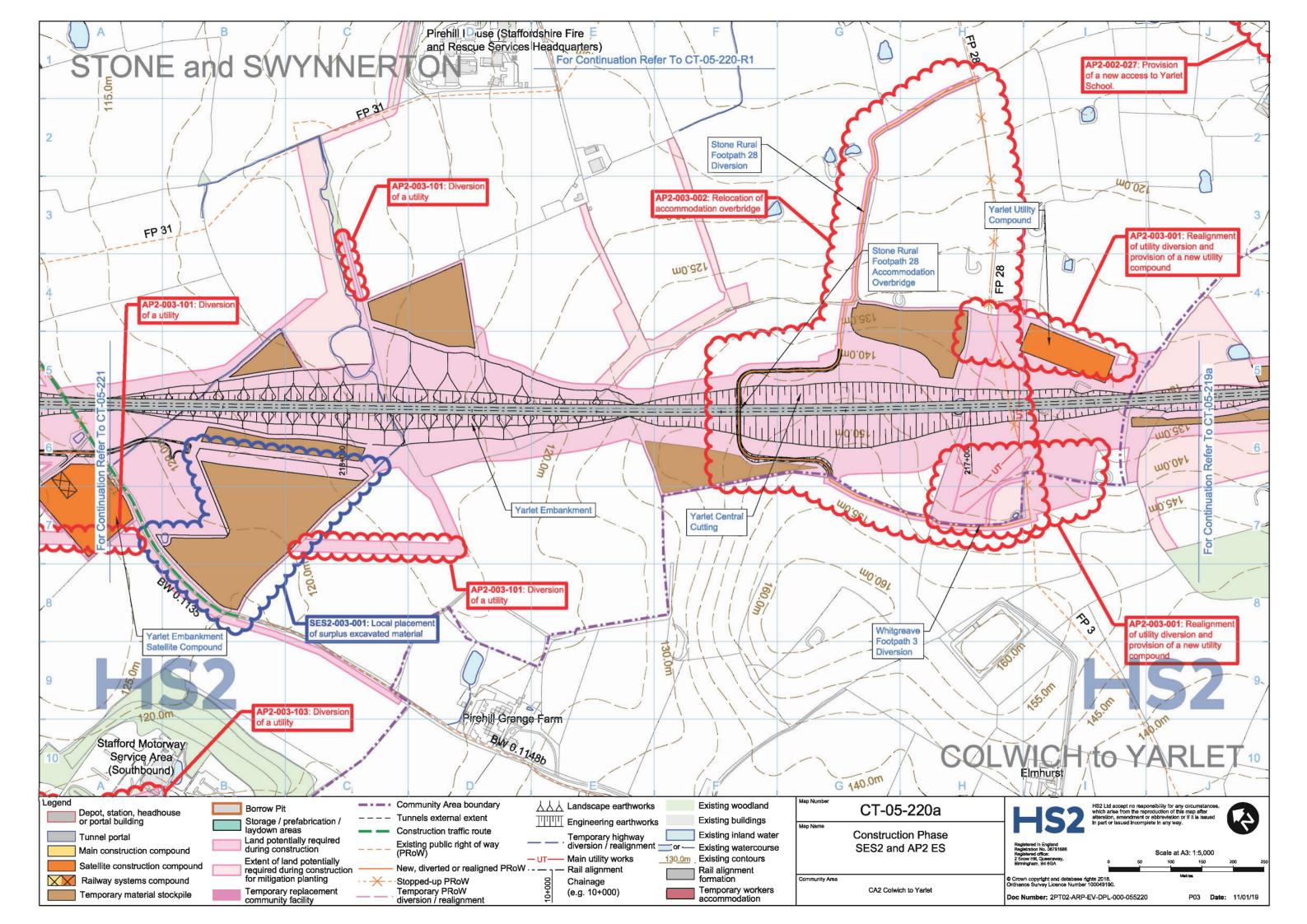


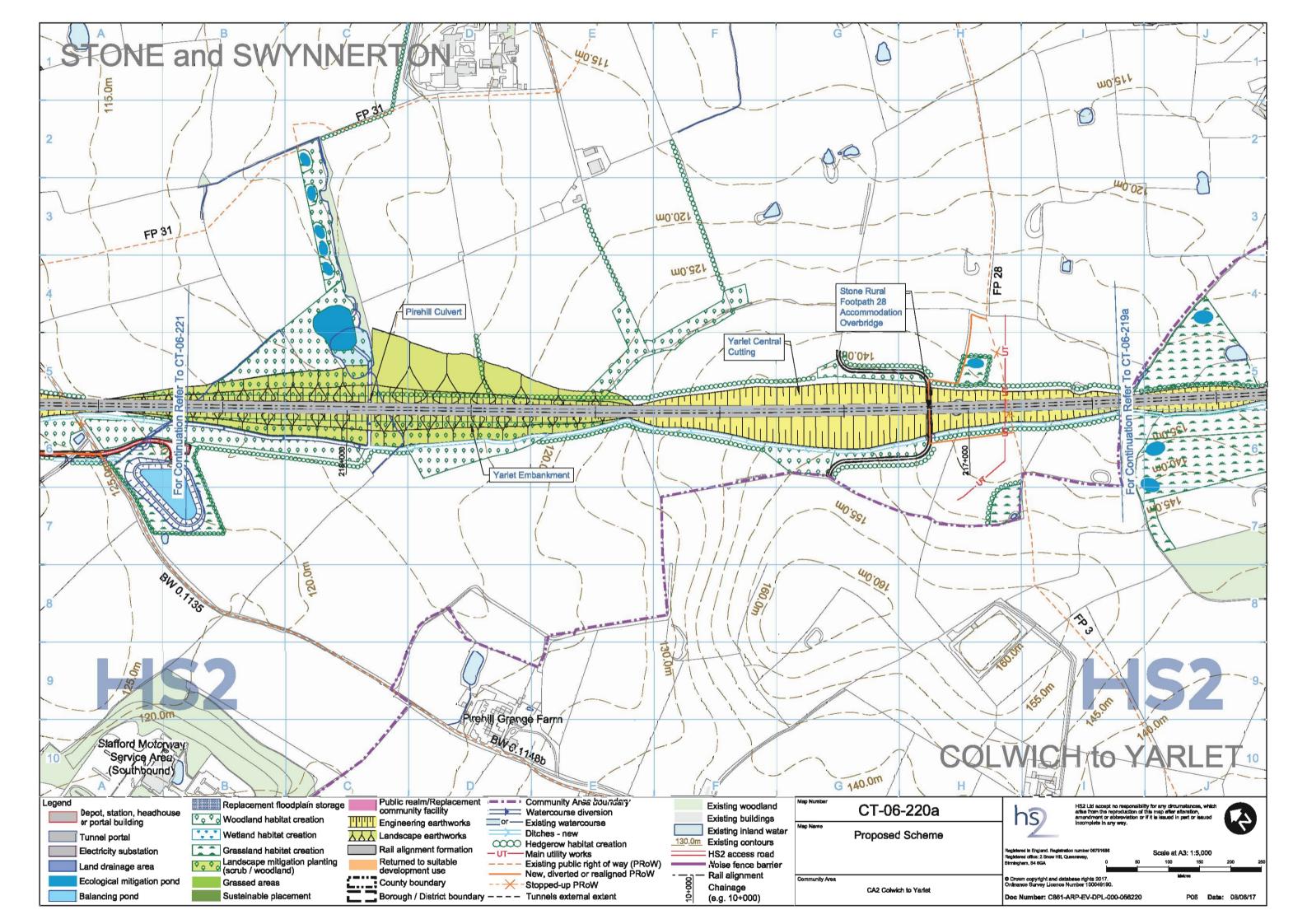


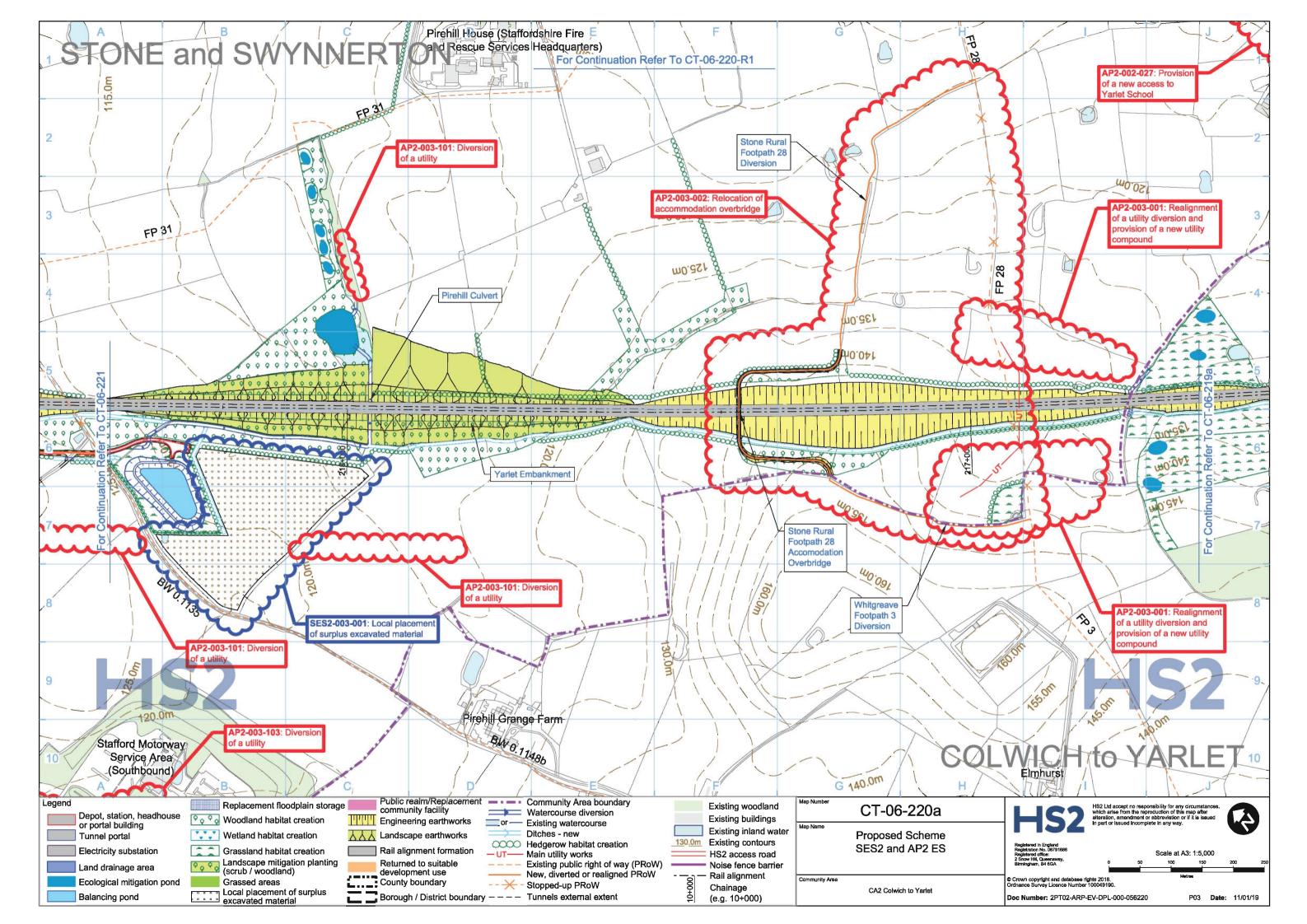
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High Speed Rail (West Midlands - Crewe)
Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

LV-01 - Photomontages

# Viewpoint 007.03.015: View north from Upper Moreton Farm

This viewpoint is representative of views experienced by recreational receptors at Upper Moreton Farm.

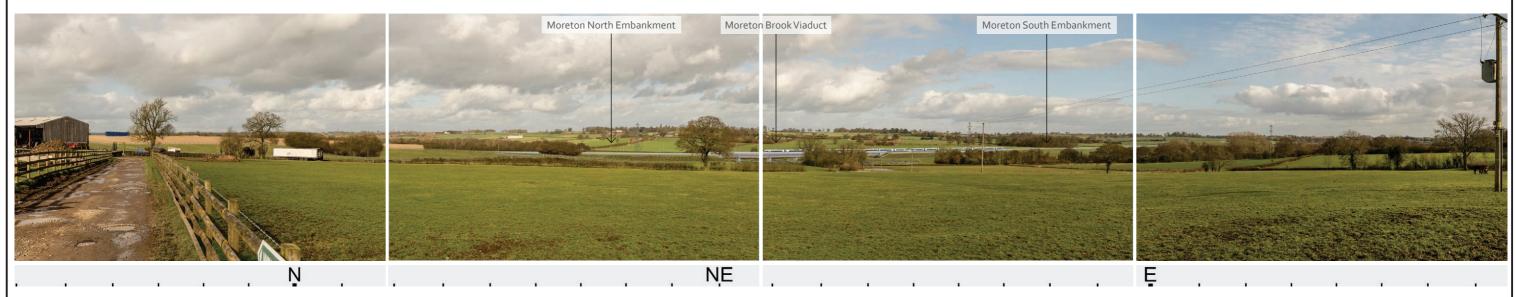
## **Current Baseline - Winter View**

Date taken: 01/03/2017. Time taken: 16:43. Camera: Sony a7RII, Zeiss Loxia 50mm f/2.0 lens (stitched panorama). Co-ordinates: 402964.289, 322177.030. Elevation: 102.137 Metres AOD.



# Winter Verifiable Photomontage - Operation Year 1 (2027)

Date taken: 01/03/2017. Time taken: 16:43. Camera: Sony a7RII, Zeiss Loxia 50mm f/2.0 lens (stitched panorama). Co-ordinates: 402964.289, 322177.030. Elevation: 102.137 Metres AOD.



NOTE: Exact pylon design has not been shown at this stage. Exact appearance of pylons may vary following detailed design and retained existing buildings shown as indicative white massing were masked by vegetation in the original photography. The viewpoint has been taken approximately 556 metres away from the Proposed Scheme. Viewpoint location shown on Map LV-08-208b.

For full details of the visual assessment at viewpoint 07.03.015 refer to Volume 5: Appendix LV-001-003, Part 3.

This verifiable photomontage provides an illustration of how the Proposed Scheme may look in 2027 (opening year) to help inform the visual impact assessment. The design of the LV-01-680 Proposed Scheme may be subject to design development in response to consultation. Development of detail design after Hybrid Bill submission will not result in any significant adverse change in the environmental effects reported in the assessment. Where new planting is proposed, it has been shown as immature plants which would mature over time to further integrate the Proposed Scheme into the landscape.

At this scale the images do not lend themselves to direct comparison out in the field. Therefore, for viewing in the field, it is recommended that each image from the panoramic photomontage is printed individually, onto an A3 landscape sheet for a viewing distance of 500mm. For further details on the selection of photomontage locations, verifiable methodology and presentation refer to the Landscape and visual assessment Technical Note - Approach to verifiable photomontages (SMR Addendum Volume 5: Appendix CT-001-002).



LV-01-680

Operation Year 1 (2027) - Winter Viewpoint 007.03.015

> Community Area 2: Colwich to Yarlet

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Doc Number: C861-ARP-EV-MAP-000-101680-P01

Date: 12/06/17

# Viewpoint 007.03.015 View north from Upper Moreton Farm

This viewpoint is representative of views experienced by recreational receptors at Upper Moreton Farm.

## **Current baseline - Winter view**

Date taken: 01/03/2017. Time taken: 16:43. Camera: Sony a7RII, Zeiss Loxia 50mm f/2.0 lens (stitched panorama). Co-ordinates: 402964.289, 322177.030. Elevation: 102.137 metres AOD.



# Winter Verifiable Photomontage - Operation Year 1 (2027)

Date taken: 01/03/2017. Time taken: 16:43. Camera: Sony a7RII, Zeiss Loxia 50mm f/2.0 lens (stitched panorama). Co-ordinates: 402964.289, 322177.030. Elevation: 102.137 metres AOD.



The viewpoint has been taken approximately 556 metres away from the AP2 revised scheme. Viewpoint location shown on Map LV-08-208a.

This verifiable photomontage provides an illustration of how the AP2 revised scheme may look during 2027 (opening year) to help inform the visual impact assessment. The design of the AP2 revised scheme may be subject to design development in response to consultation. Development of detail design after Hybrid Bill submission will not result in any significant adverse change in the environmental effects reported in the assessment. Where new planting is proposed, it has been shown as immature plants which would mature over time to further integrate the AP2 revised scheme into the

At this scale, the images do not lend themselves to direct comparison out in the field. Therefore, for viewing in the field, it is recommended that each image from the panoramic photomontage is printed individually, onto an A3 landscape sheet for a viewing distance of 500mm. For further details on the selection of photomontage locations, verifiable methodology and presentation refer to the Landscape and visual assessment Technical Note - Approach to verifiable photomontages (See the main ES, SMR Addendum Volume 5: Appendix CT-001-002).



LV-01-680

Figure Name Verifiable Photomontage
Operation Year 1 (2027) - Winter
Viewpoint 007.03.015

Community Area 2: Colwich to Yarlet SES2 and AP2 ES HS2

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Date: 12/12/18



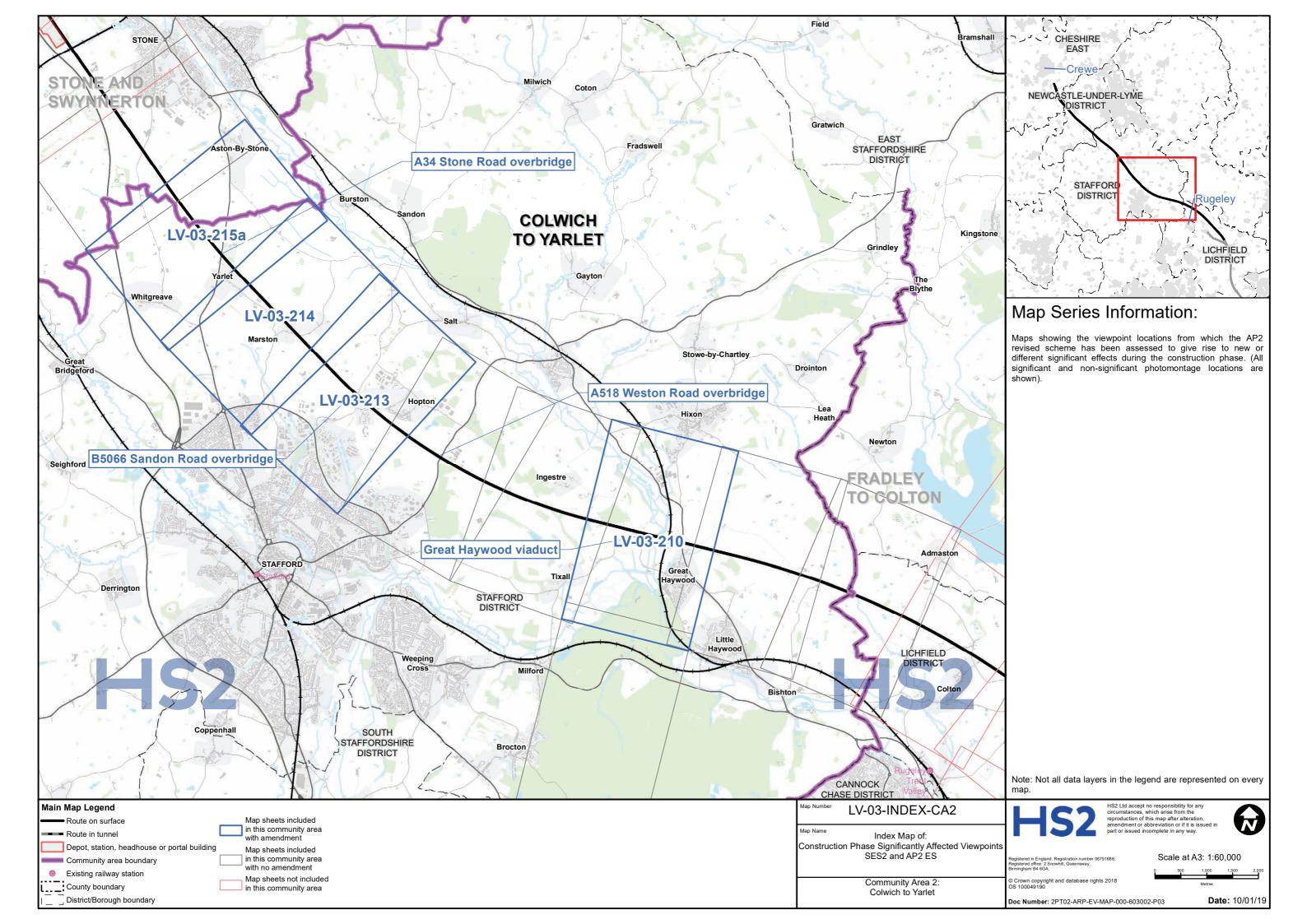
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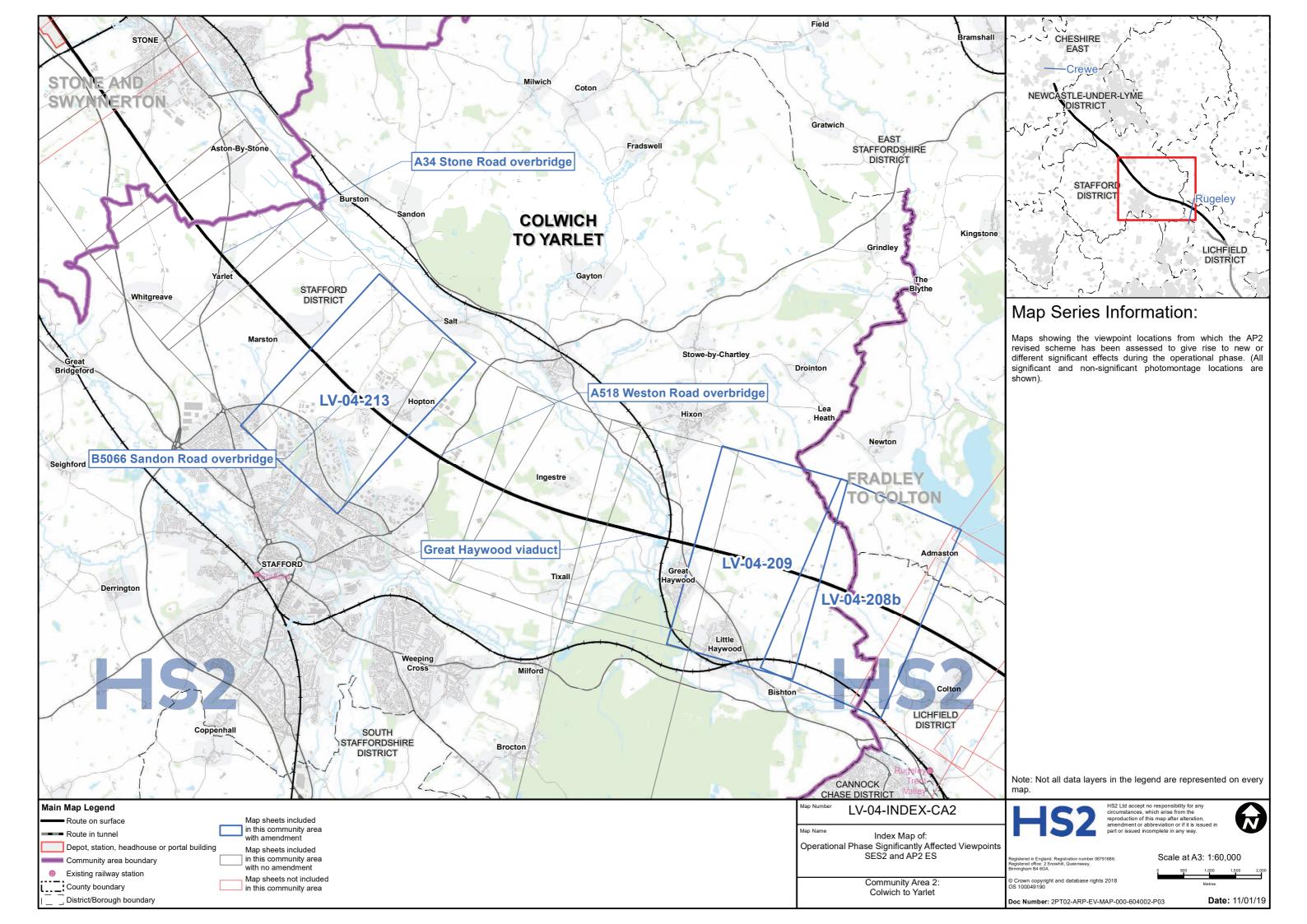


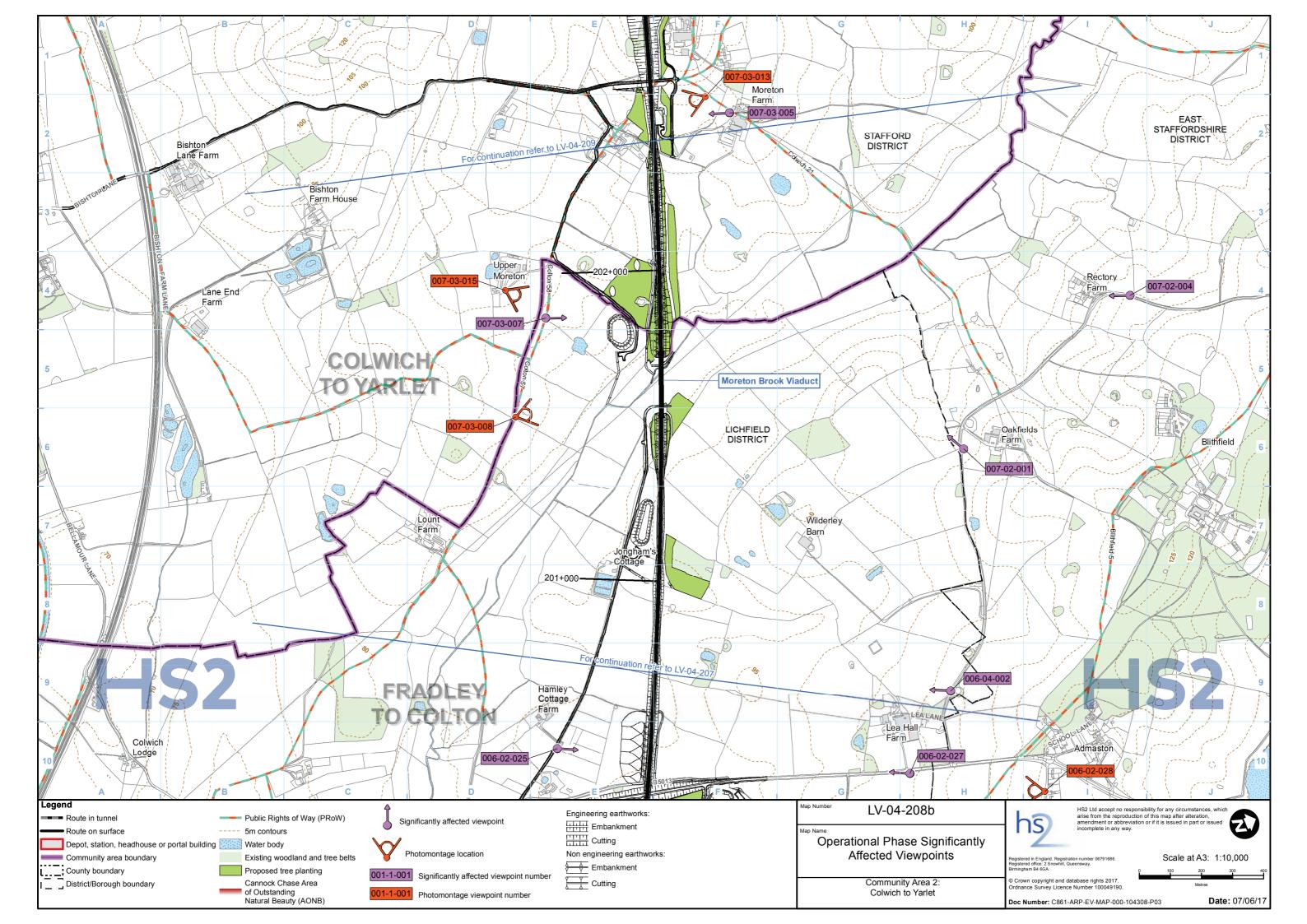
# High Speed Rail (West Midlands - Crewe) Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

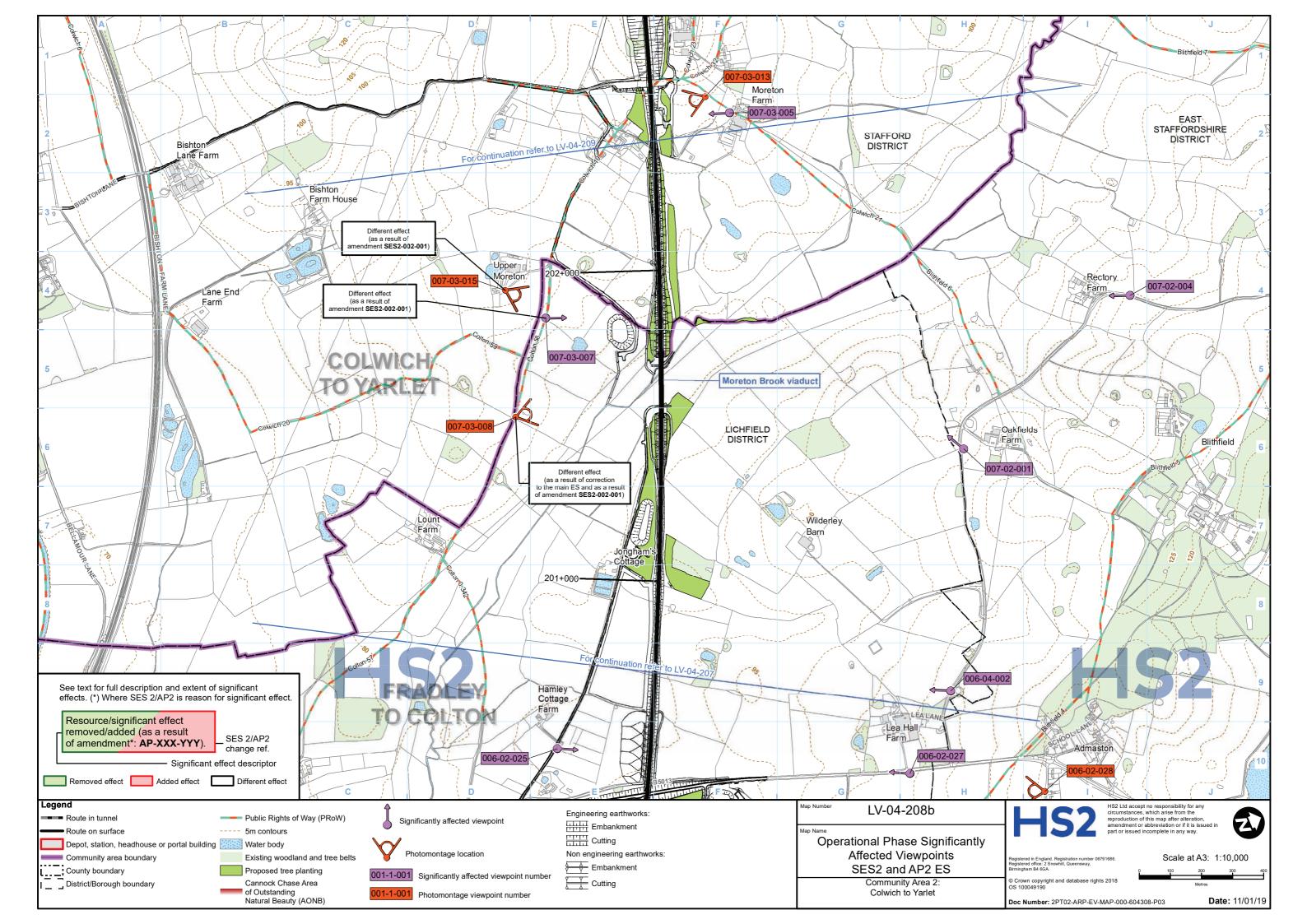
LV-03 - Construction Phase Significantly Affected Viewpoints

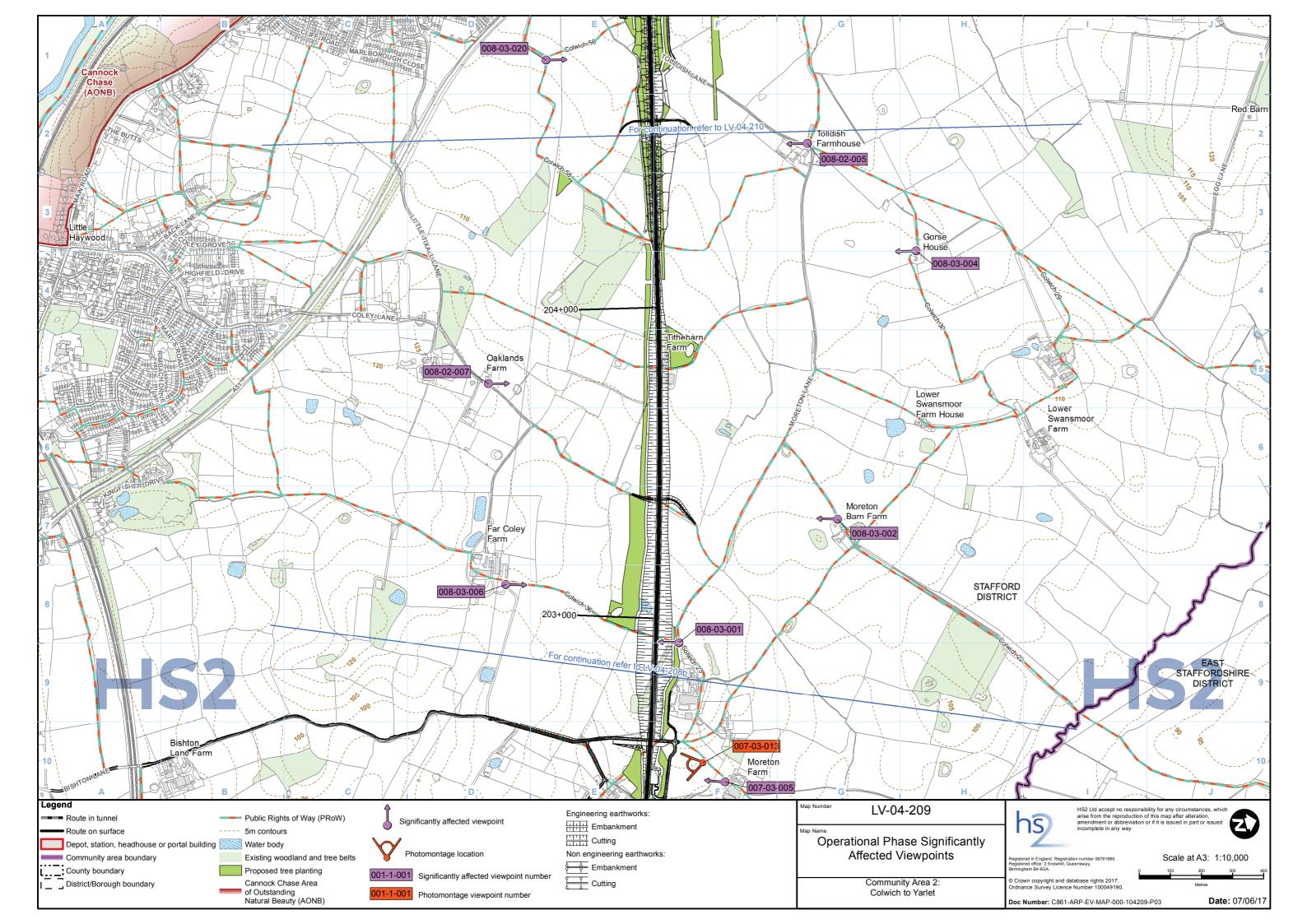
LV-04 - Operational Phase Significantly Affected Viewpoints

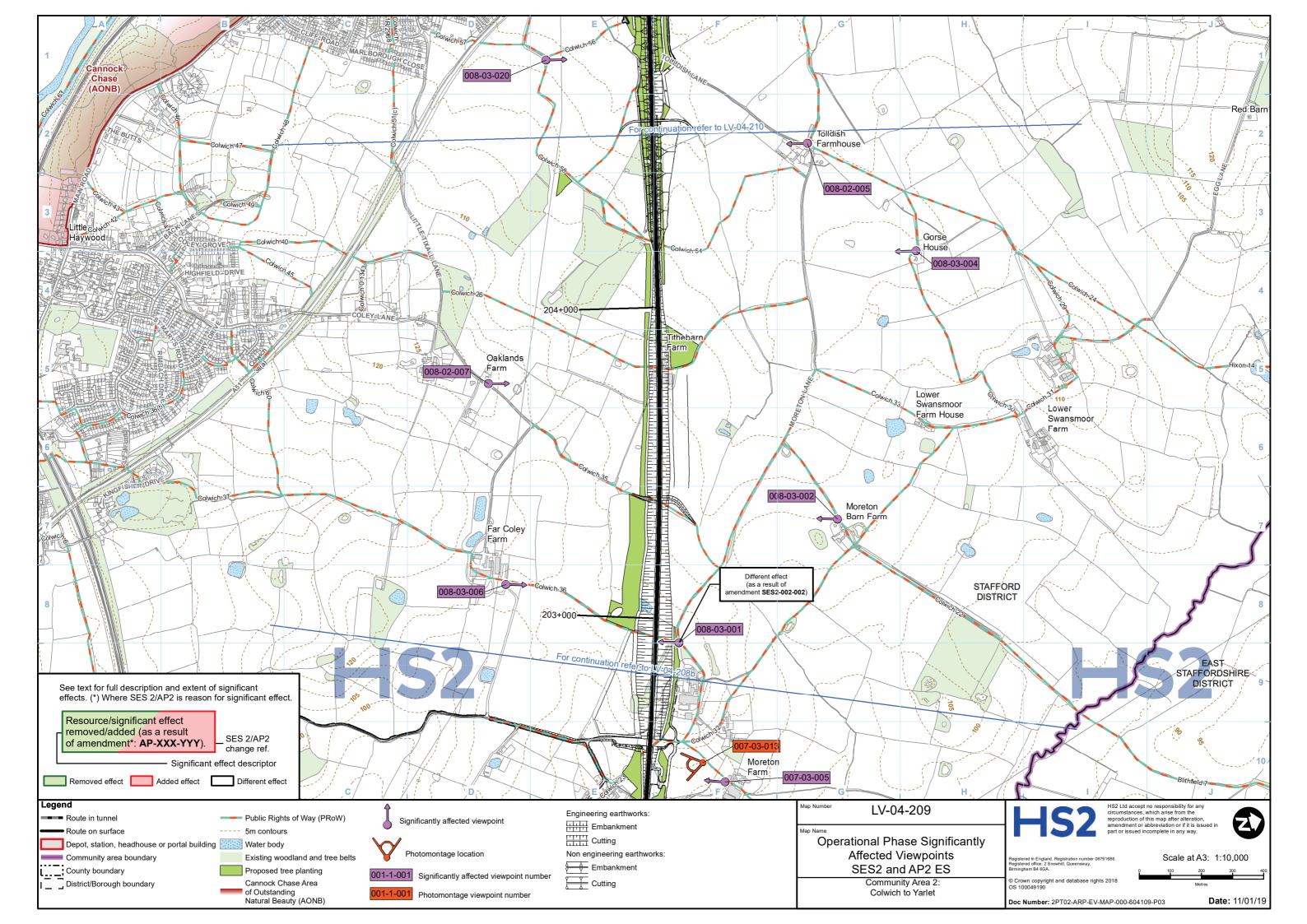


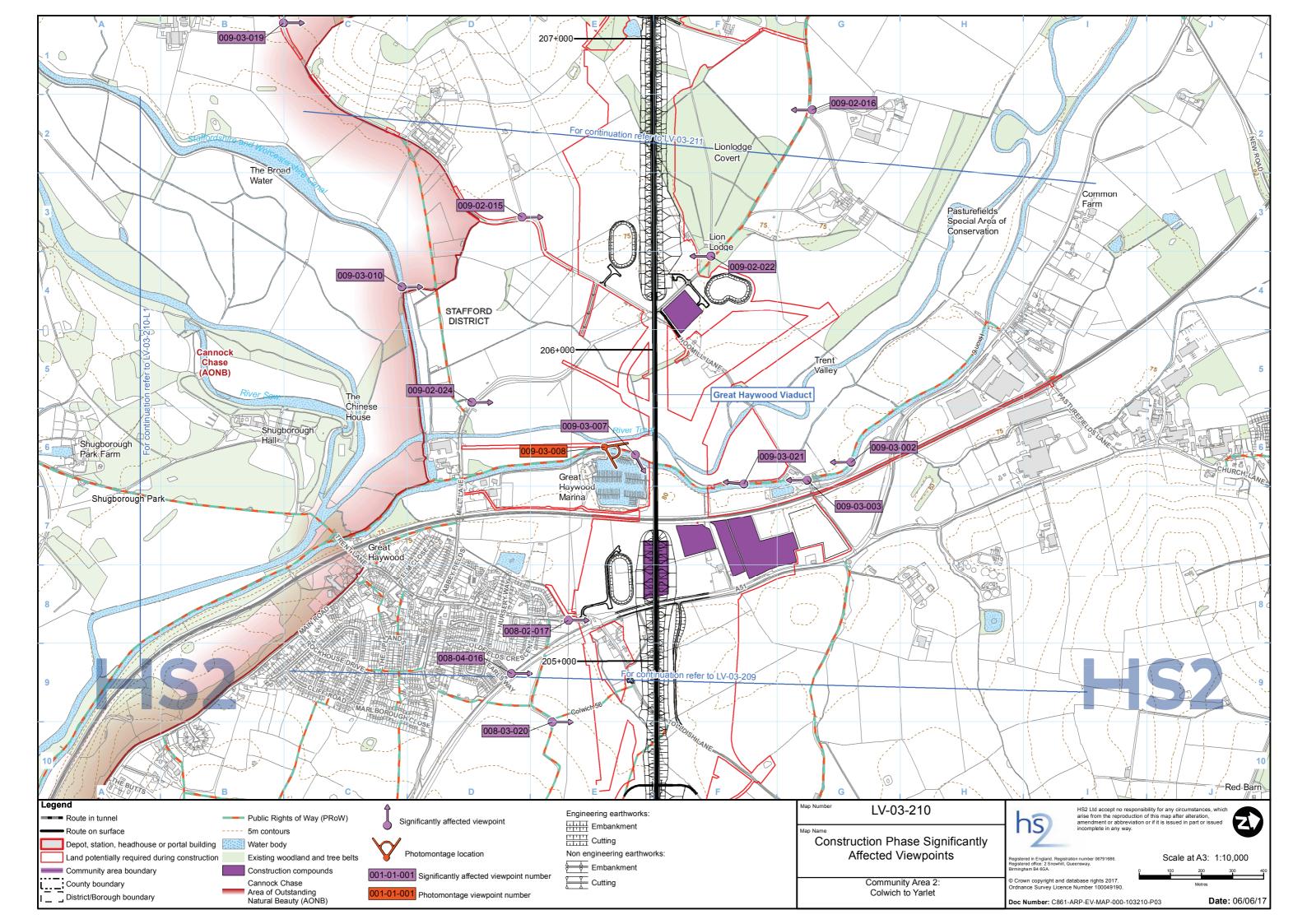


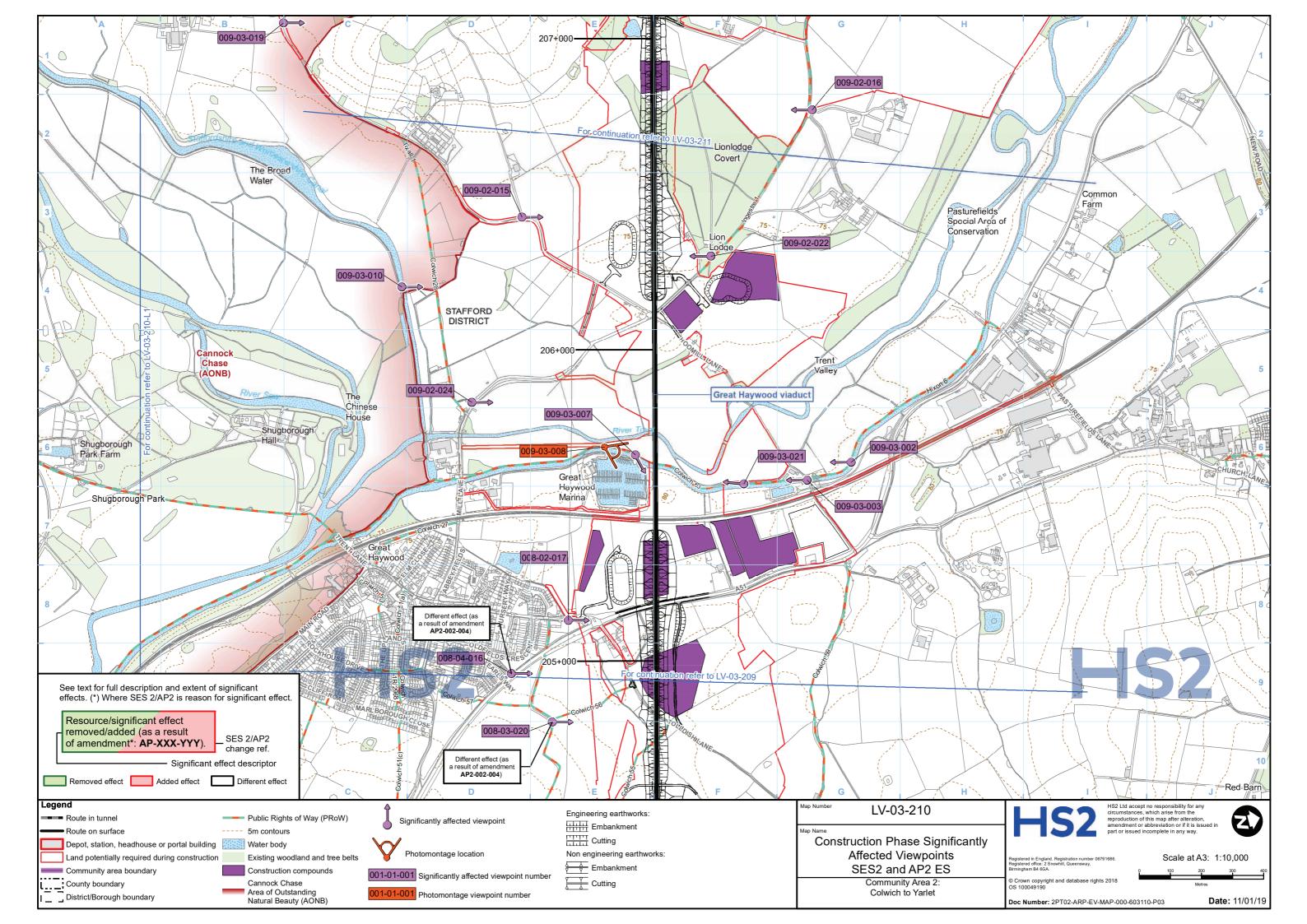


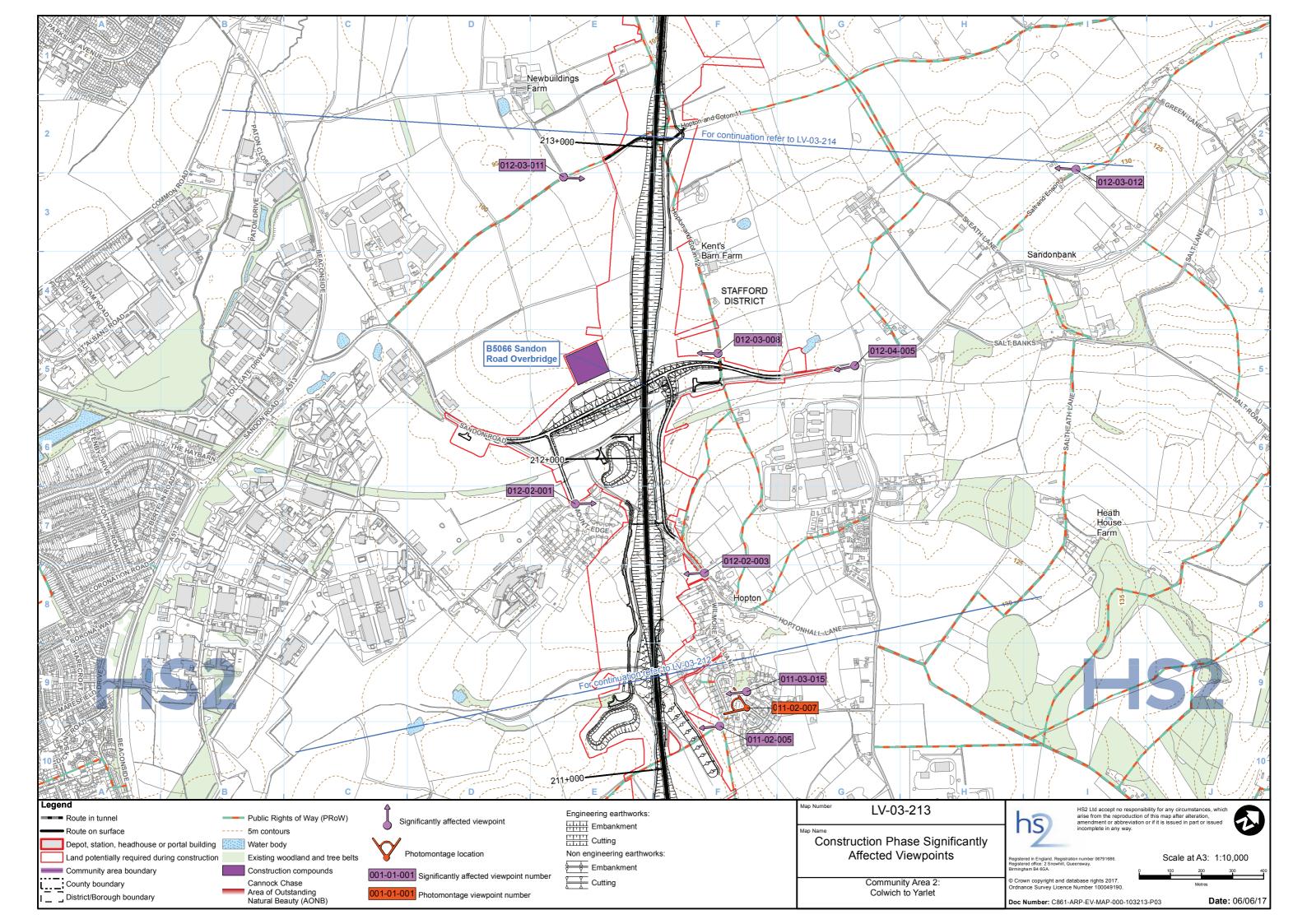


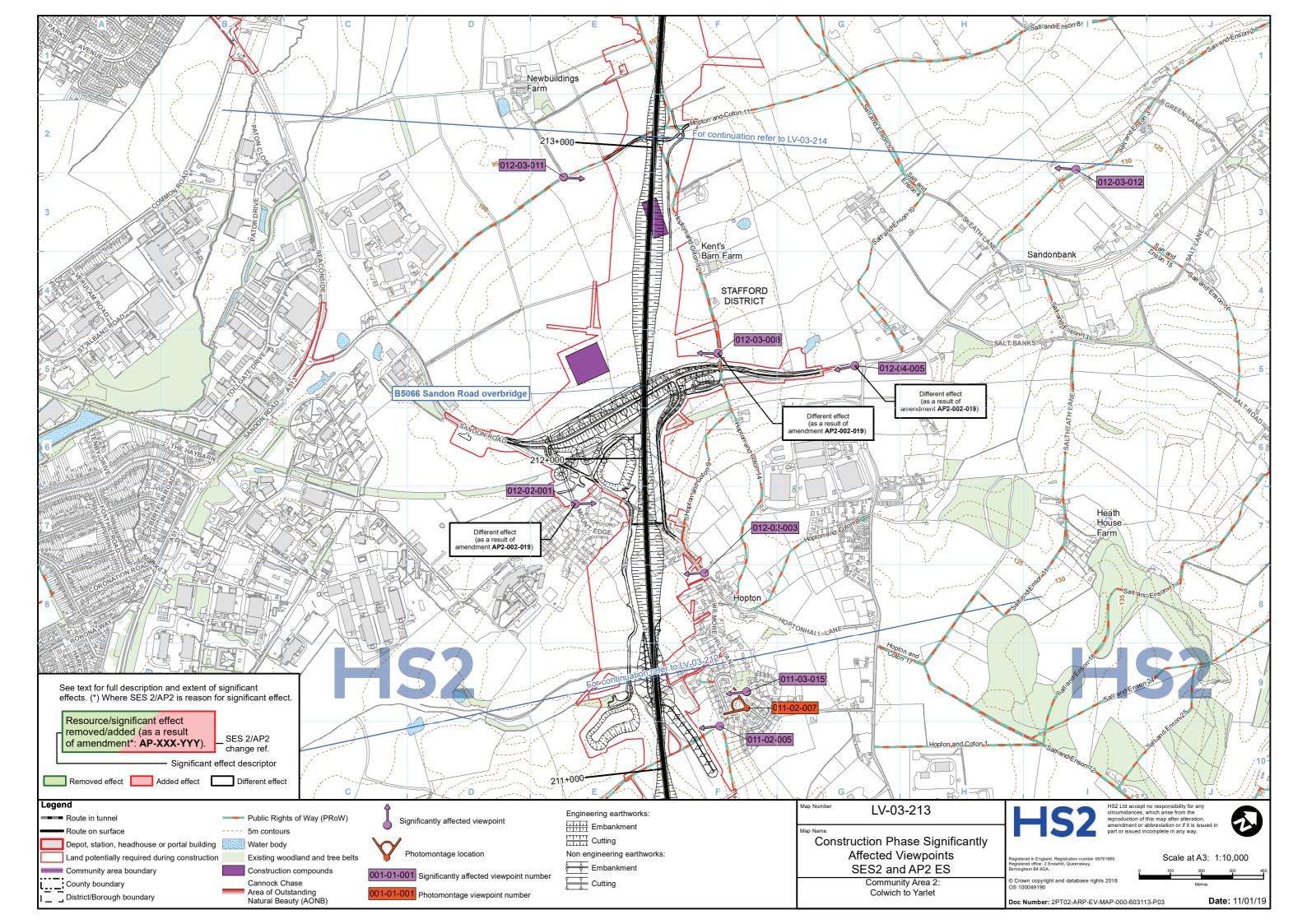


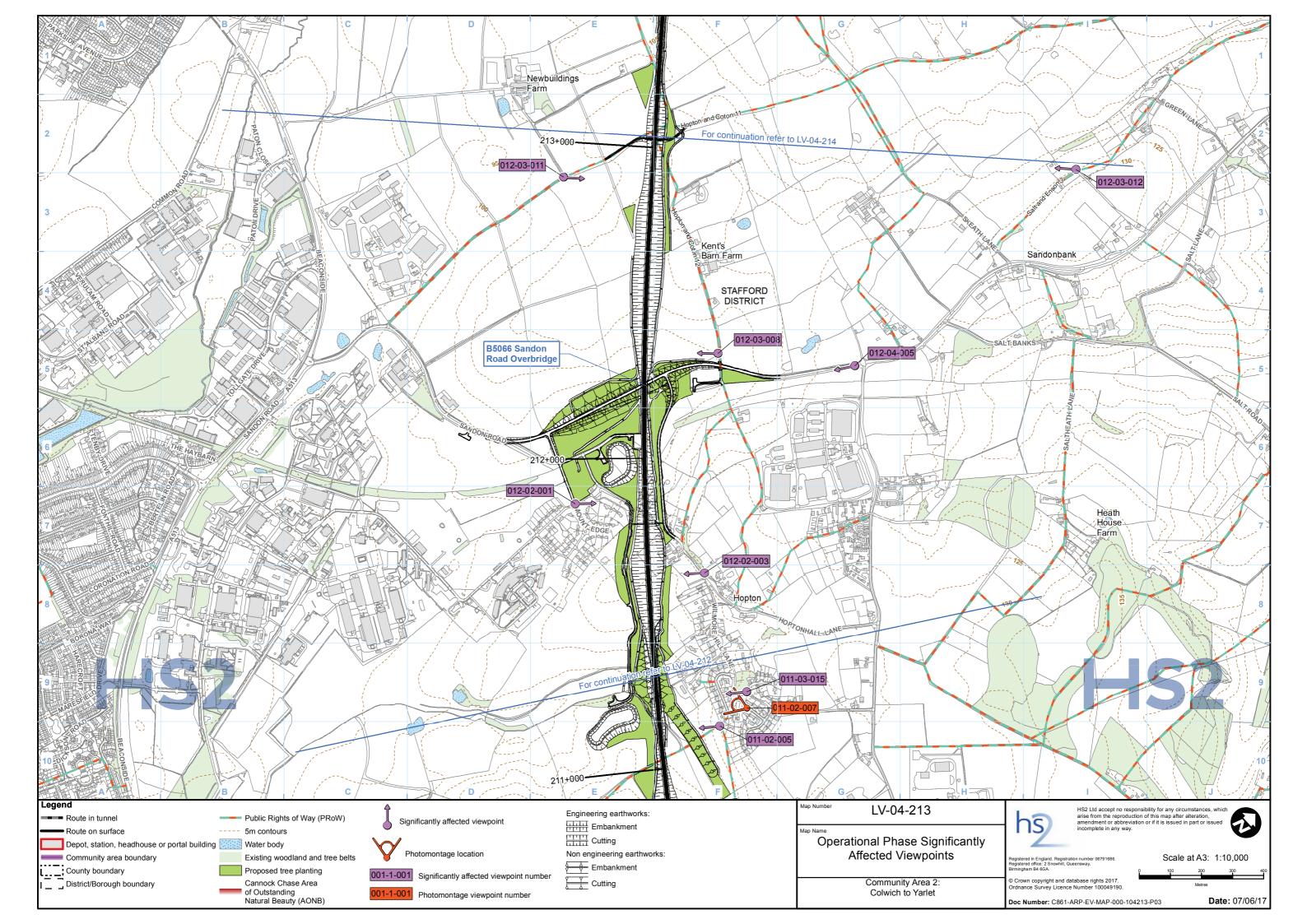


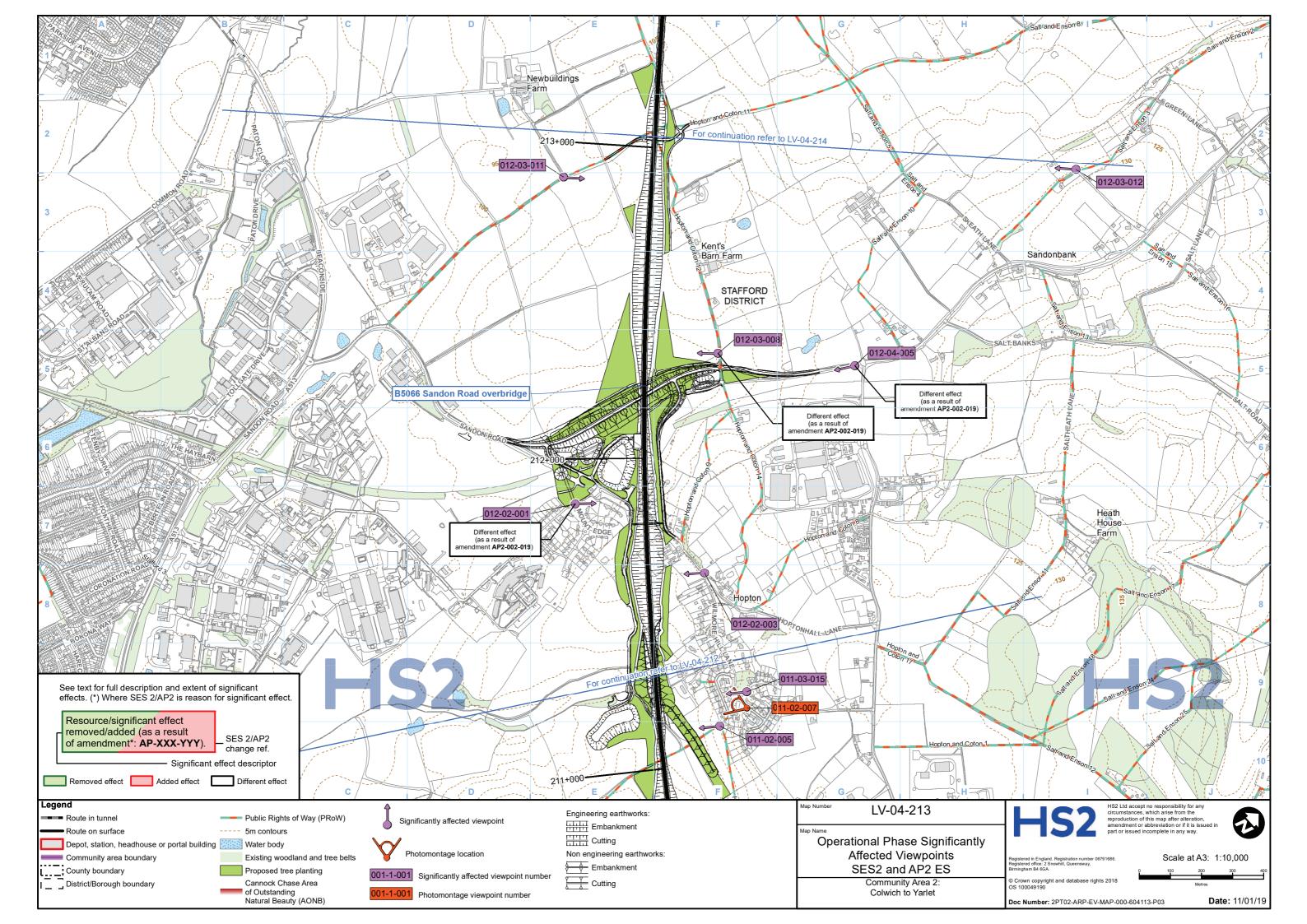


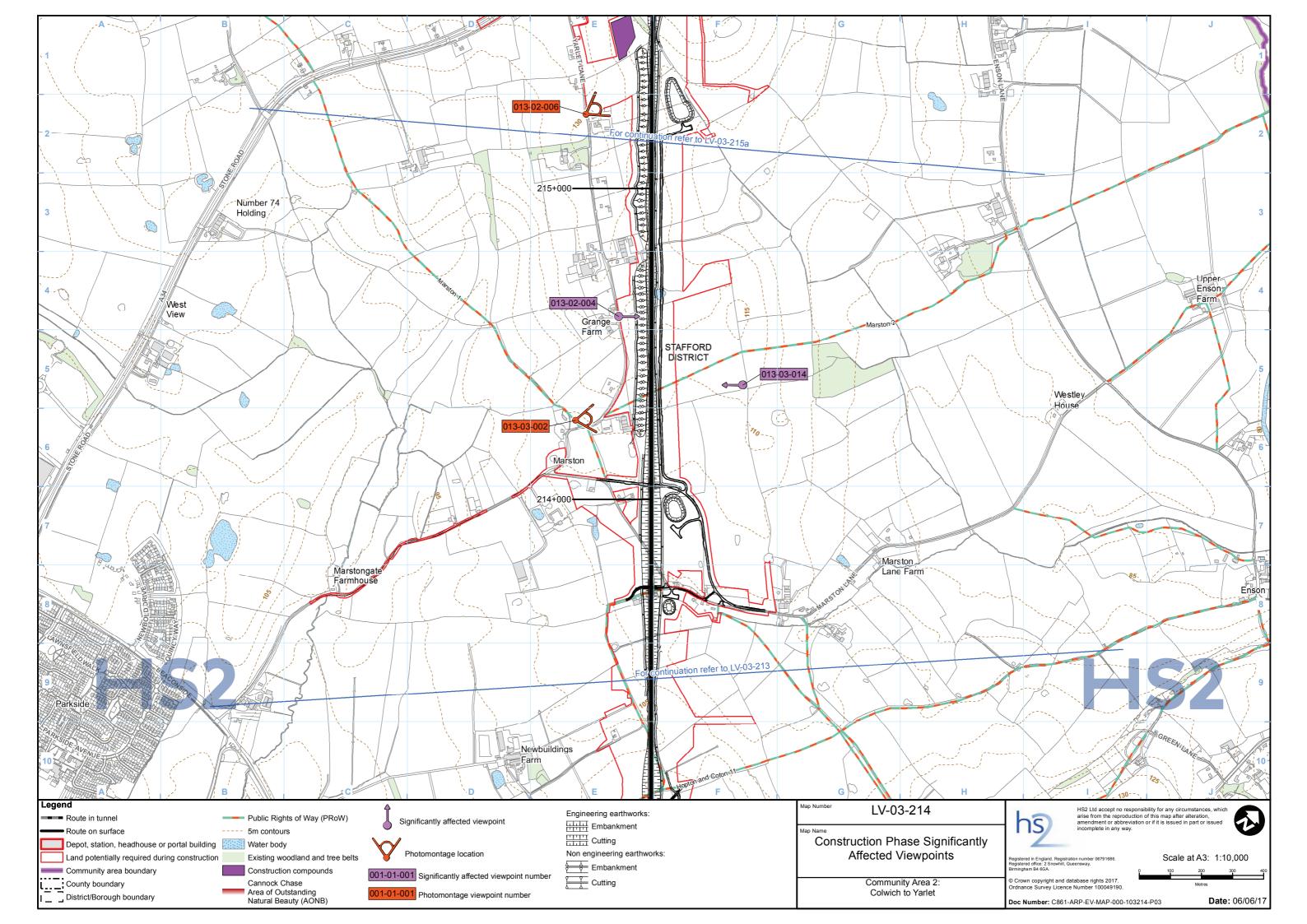


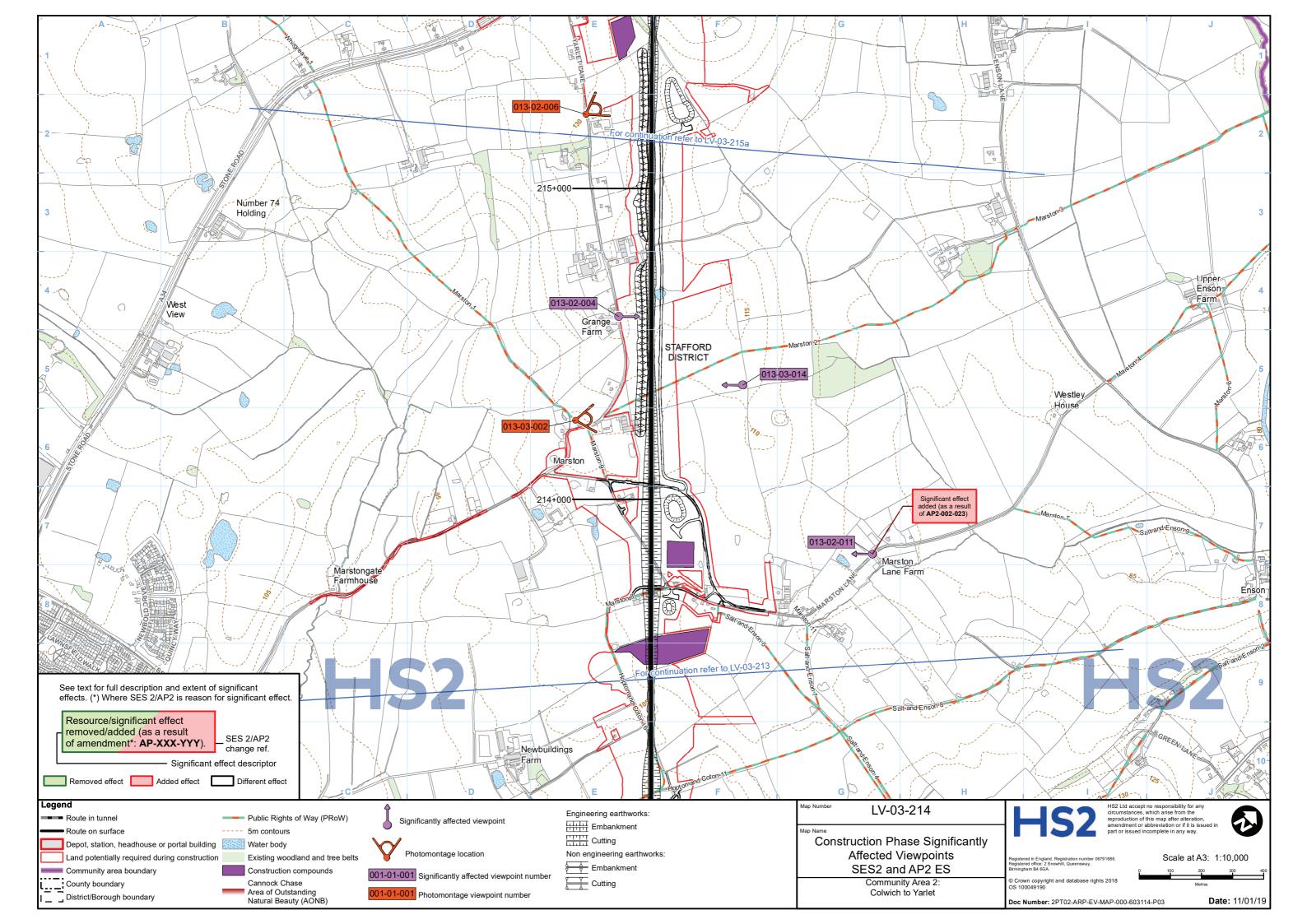


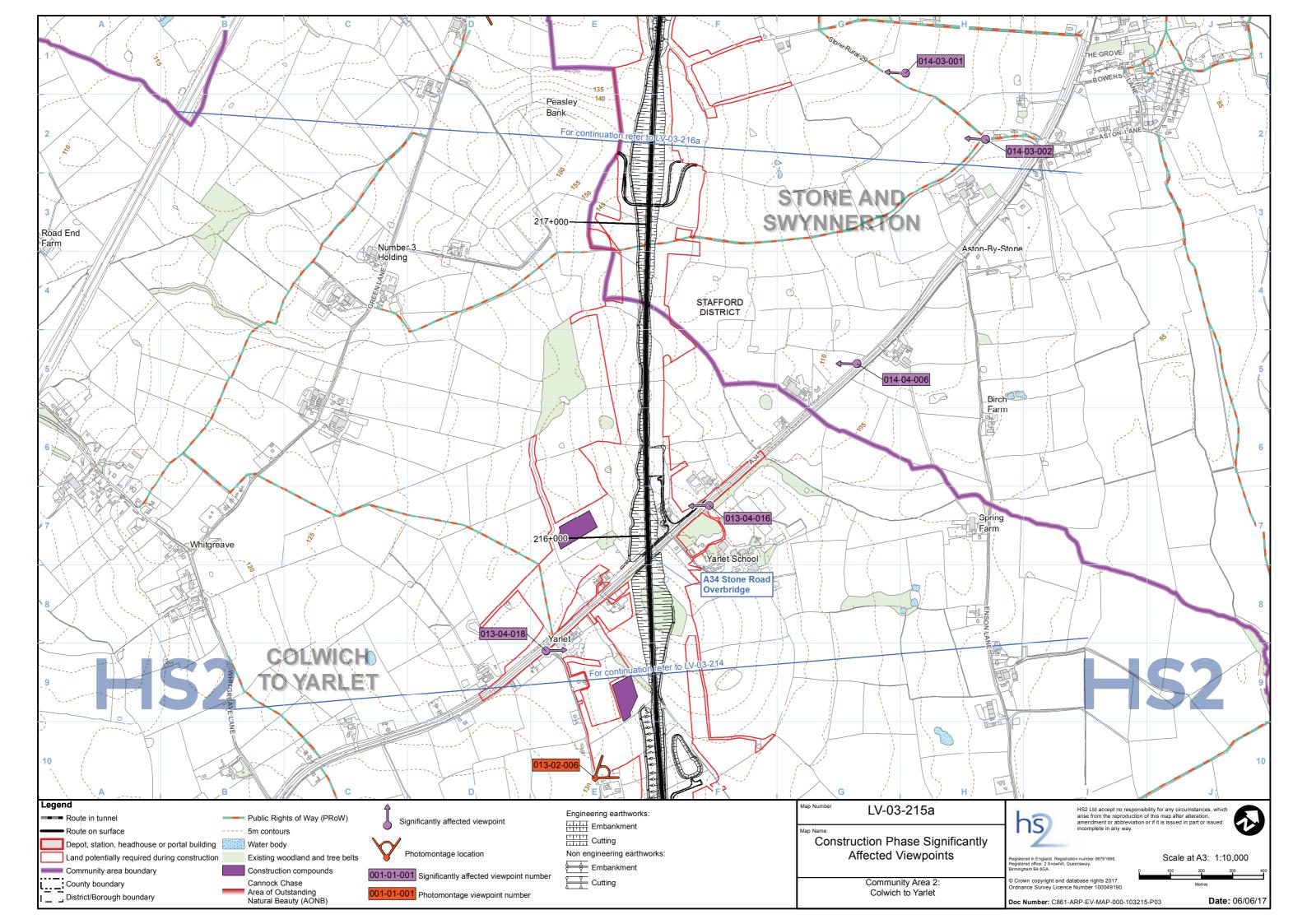


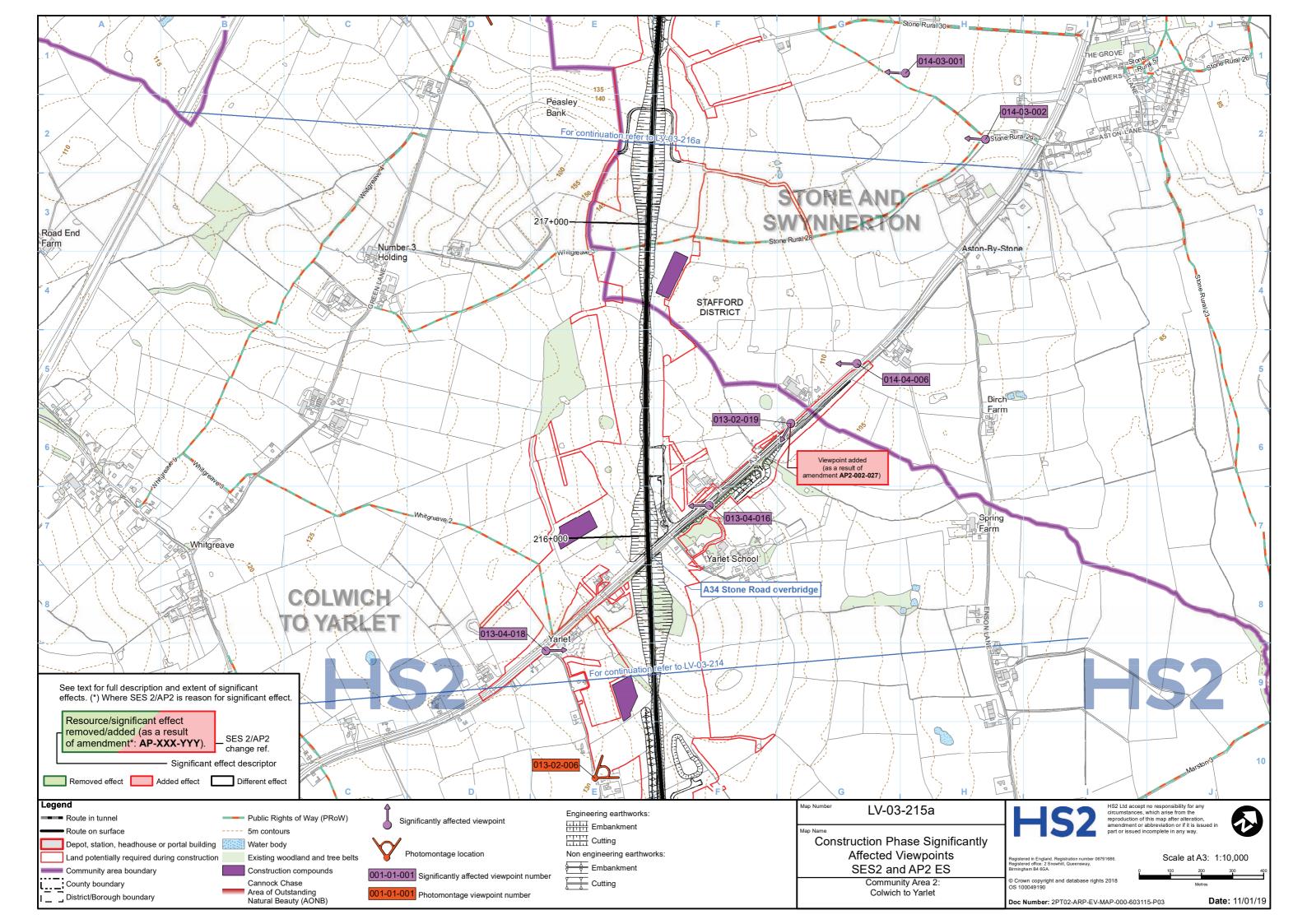














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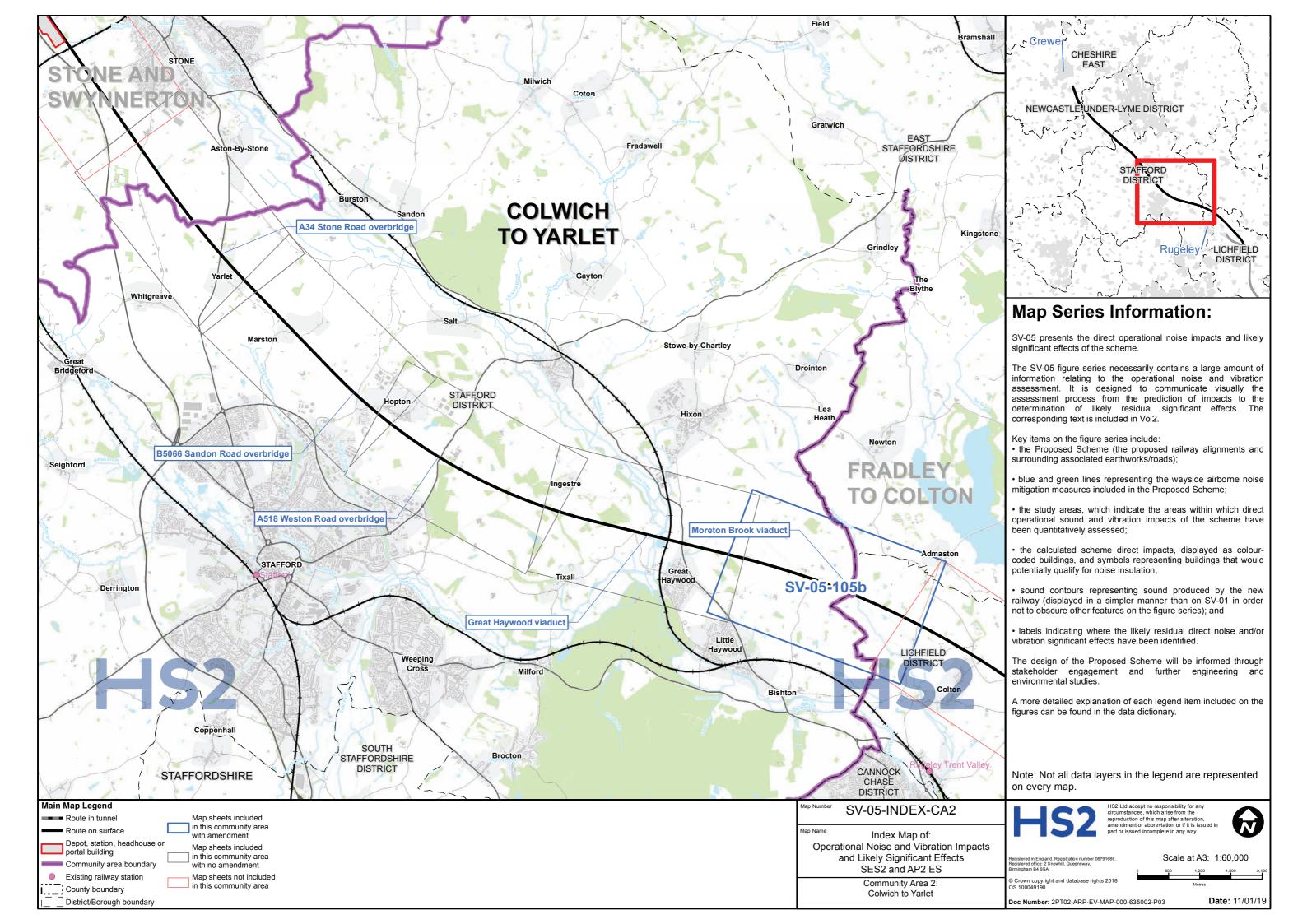


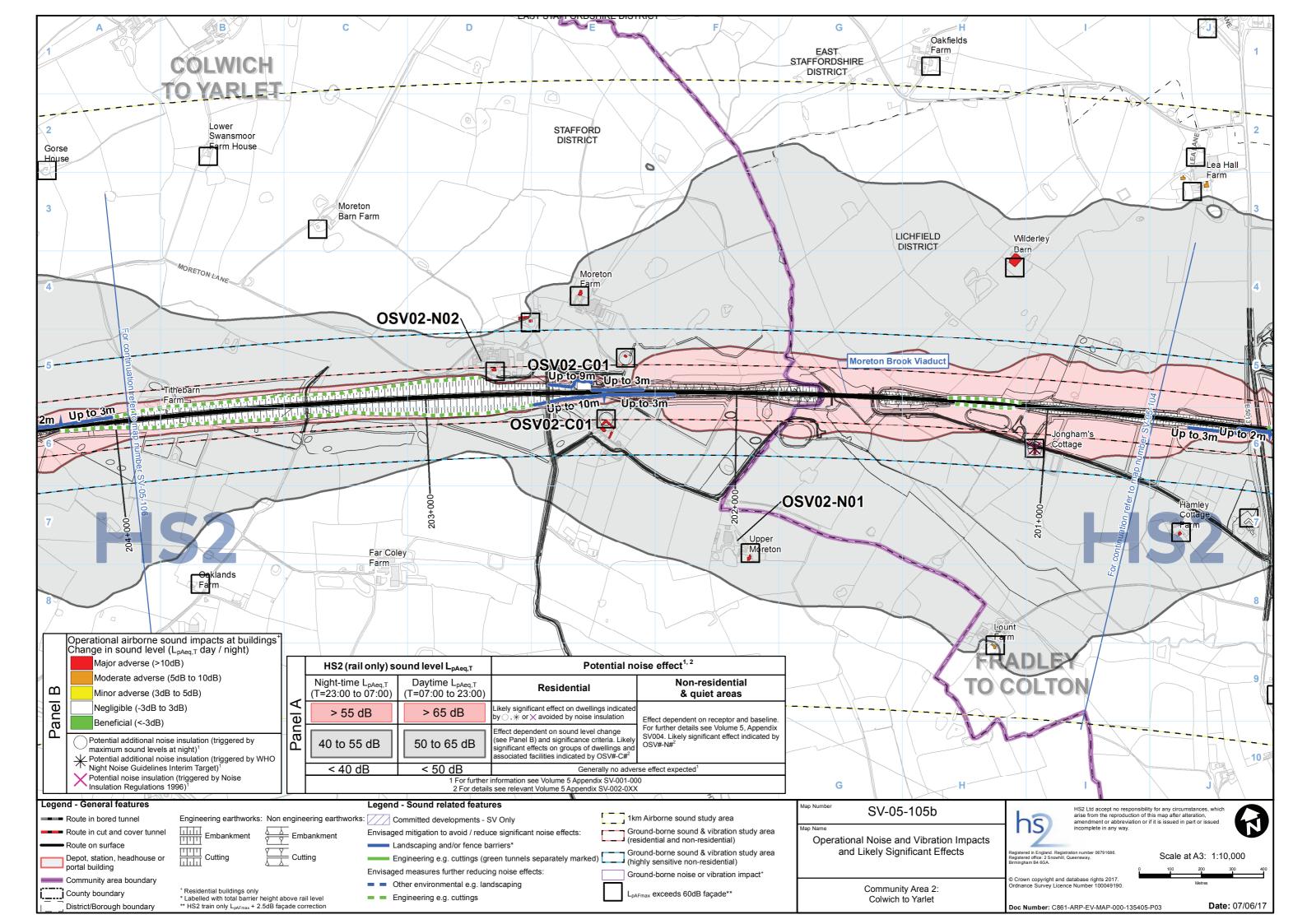
## High Speed Rail (West Midlands - Crewe) Supplementary Environmental Statement 2 and Additional Provision 2 Environmental Statement

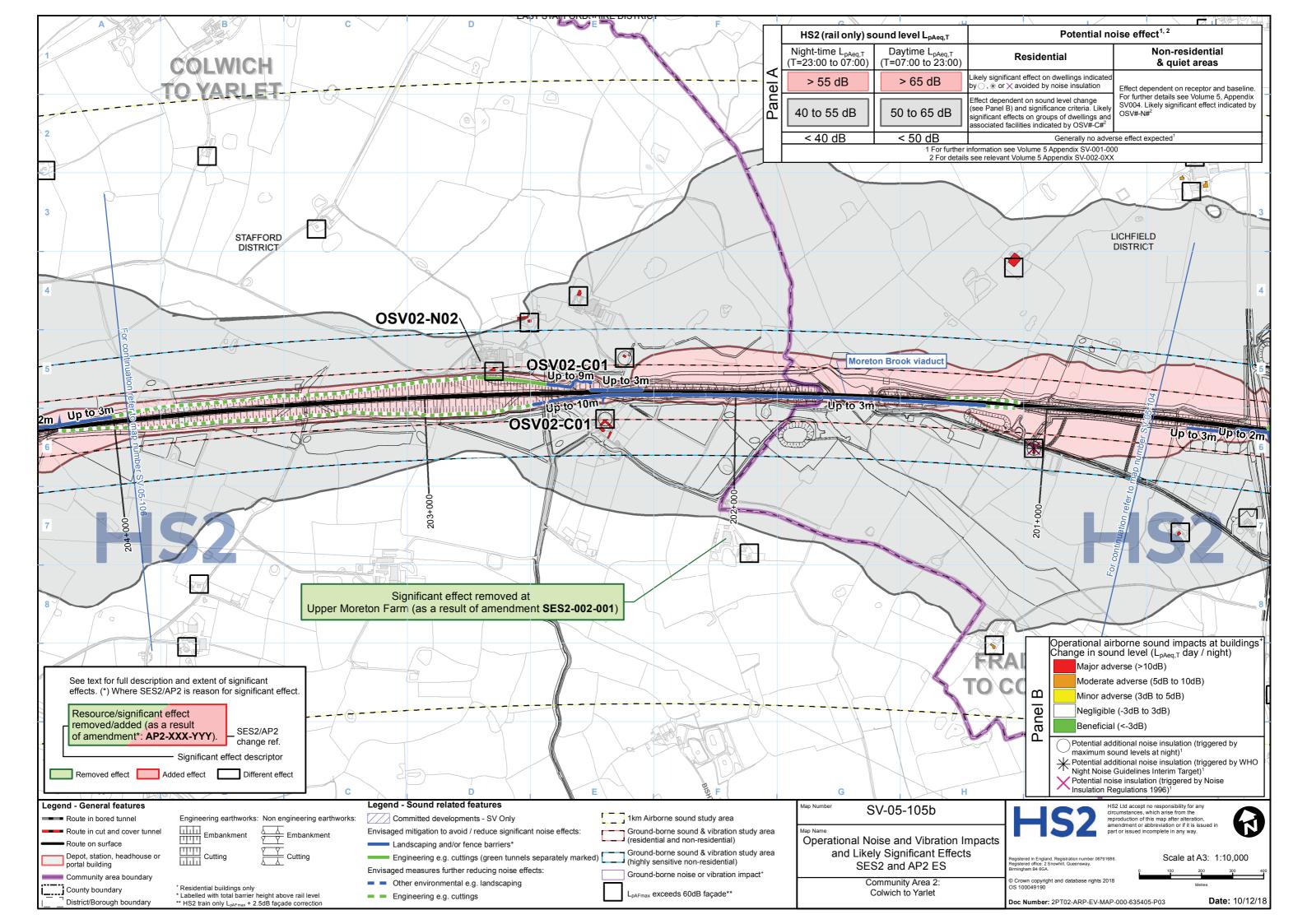
SV-05 - Operational Noise and Vibration Impacts and Likely Significant Effects



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