

Supplementary Environmental Statement and Additional Provision 2 Environmental Statement

Volume 5 | Technical appendices map book Water resources

July 2015

SES and AP2 ES 3.5.20

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High Speed Two (HS2) Limited, One Canada Square, London E14 5AB

Details of how to obtain further copies are available from HS2 Ltd.

Telephone: 020 7944 4908

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.gov.uk/hs2

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Map series name	WR-01 - Surface Water Baseline	WR-02 - Groundwater Baseline	WR-03 - Water Framework Directive
Map series description	This map series shows surface water features such as rivers, streams, ponds, canals and reservoirs, flood zones, and surface water abstractions as referred to in the ES.  All points where the alignment crosses a watercourse	These maps show geology and hydrogeological features such as aquifers and groundwater abstractions that are referred to in the Environmental Impact Assessment (EIA).	These maps show water bodies, their Water Framework Directive current status and associated ecological features.
Compressible Foreign Area manage	are also shown and labelled with their reference in the text. These are shown as "Surface Water Crossings (SWC)".		
Community Forum Area name	*	×	×
CFA o4 – Kilburn (Brent) to Old Oak Common	*	× ×	*
CFA of South Building to Johanna	•		·
CFA o6 – South Ruislip to Ickenham CFA o7 – Colne Valley	×	×	*
CFA 07 – Come valley  CFA 08 – The Chalfonts and Amersham	*	*	v ×
CFA 09 – The Challonis and Amersham  CFA 09 – Central Chilterns	*	×	*
CFA 10 – Dunsmore, Wendover and Halton	*	×	./
CFA 11 – Stoke Mandeville and Aylesbury	*	×	·/
CFA 12 – Waddesdon and Quainton	×	×	·/
CFA 13 – Calvert, Steeple Claydon, Twyford and Chetwode	×	×	·/
CFA 14 – Newton Purcell to Brackley	×	×	<b>√</b>
CFA 15 – Greatworth to Lower Boddington	×	×	<b>√</b>
CFA 16 – Ladbroke and Southam	×	×	<b>√</b>
CFA 17 – Offchurch and Cubbington	* *	×	×
CFA 18 – Stoneleigh, Kenilworth and Burton Green	×	*	<b>∵</b>
CFA 19 – Coleshill Junction	*	*	, *
CFA 20 – Curdworth to Middleton	*	*	*
CFA 21 – Drayton Bassett, Hints and Weeford	*	*	*
CFA 22 – Whittington to Handsacre	<b>√</b>	<b>√</b>	✓
CFA 23 – Balsall Common and Hampton-in-Arden	×	×	✓
CFA 24 – Birmingham Interchange and Chelmsley Wood	×	×	✓
CFA 25 – Castle Bromwich and Bromford	×	×	×
CFA 26 – Washwood Heath to Curzon Street	×	×	×
Off-route – Heathrow Express (HEx) Depot Relocation	×	×	✓
Off-route – Modifications to WCML between Lichfield and Colwich	×	×	×

### Mapping explanatory notes

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

The Supplementary Environmental Statement (SES) and Additional Provision 2 Environmental Statement (AP2 ES) comprises:

- Non-technical summary (NTS). This provides a summary in non-technical language of the SES (Part 1) and AP2 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') and, where relevant, the AP ES submitted in September 2014 (hereafter referred to as 'the AP1 ES').
- Volume 1: Introduction to the SES and the AP2 ES. This introduces the supplementary environmental information and design changes included within the SES and amendments which have resulted in the need to amend the Bill within the AP2 ES. It also explains any changes to the scope, methodology, assumptions and limitations required for the environmental impact assessment.
- Volume 2: Community Forum Area (CFA) reports and Map Books. These describe the supplementary environmental information and design changes included within the SES (Part 1), amendments within the AP2 ES (Part 2) and report any new or different likely significant environmental effects arising from these changes in each CFA compared to those reported in the main ES and, where relevant, the AP1 ES. 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 SES (Part 1) and amendments within the AP2 ES (Part 2) compared to those reported in the main ES and, where relevant, the AP1 ES.
- Volume 4: Off-route effects. This reports new or different likely significant off-route effects arising from the supplementary environmental information and design changes included within the SES (Part 1) and amendments within the AP2 ES (Part 2) compared to those reported in the main ES and, where relevant, the AP1 ES.
- Volume 5: Appendices and Map Books. This contains supporting environmental information and associated maps in support of the CFA sections of Volume 2.
- Glossary of terms and list of abbreviations. This contains any new or different terms and abbreviations used throughout the SES and AP2 ES compared to those included in the main ES and AP1 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 London-West Midlands Supplementary Environmental Statement (SES) and Additional Provision 2 Environmental Statement (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.

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

### Chainage

Most of the maps presented as part of the SES and 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. 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 dependent 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 SES and AP2 ES map on the right. For the CT-05 and CT-06 map series, the SES and 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 SES and 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 SES (Part 1 of each Volume 2 CFA report).
Red	Proposed amendments relating to AP2 (Part 2 of each Volume 2 CFA report).
Grey	Proposed amendments relating to AP1, as they appeared in the AP1 ES, provided for reference.

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

#### 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 53 map books which make up the SES and AP2 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 5 Technical appendices map book: Ecology - London Metropolitan (CFA4-6)
Volume 2 Community forum area map book: CFA5 Northolt Corridor	Volume 5 Technical appendices map book: Ecology - CFA7 Colne Valley
Volume 2 Community forum area map book: CFA6 South Ruislip to Ickenham	Volume 5 Technical appendices map book: Ecology - CFA8 The Chalfonts and Amersham
Volume 2 Community forum area map book: CFA7 Colne Valley	Volume 5 Technical appendices map book: Ecology - CFA9 Central Chilterns
Volume 2 Community forum area map book: CFA9 Central Chilterns	Volume 5 Technical appendices map book: Ecology - CFA10 Dunsmore, Wendover and Halton
Volume 2 Community forum area map book: CFA10 Dunsmore, Wendover and Halton	Volume 5 Technical appendices map book: Ecology - CFA11 Stoke Mandeville and Aylesbury
Volume 2 Community forum area map book: CFA11 Stoke Mandeville and Aylesbury	Volume 5 Technical appendices map book: Ecology - CFA12 Waddesdon and Quainton
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Volume 2 Community forum area map book: CFA13 Calvert, Steeple Claydon, Twyford and Chetwode	Volume 5 Technical appendices map book: Ecology - CFA14 Newton Purcell to Brackley
Volume 2 Community forum area map book: CFA14 Newton Purcell to Brackley	Volume 5 Technical appendices map book: Ecology - CFA15 Greatworth to Lower Boddington
Volume 2 Community forum area map book: CFA15 Greatworth to Lower Boddington	Volume 5 Technical appendices map book: Ecology - CFA16 Ladbroke and Southam
Volume 2 Community forum area map book: CFA16 Ladbroke and Southam	Volume 5 Technical appendices map book: Ecology - CFA17 Offchurch and Cubbington
Volume 2 Community forum area map book: CFA17 Offchurch and Cubbington	Volume 5 Technical appendices map book: Ecology - CFA18 Stoneleigh, Kenilworth and Burton Green
Volume 2 Community forum area map book: CFA18 Stoneleigh, Kenilworth and Burton Green	Volume 5 Technical appendices map book: Ecology - CFA19 Coleshill Junction
Volume 2 Community forum area map book: CFA19 Coleshill Junction	Volume 5 Technical appendices map book: Ecology - CFA20 Curdworth to Middleton
Volume 2 Community forum area map book: CFA20 Curdworth to Middleton	Volume 5 Technical appendices map book: Ecology - CFA21 Drayton Bassett, Hints and Weeford
Volume 2 Community forum area map book: CFA21 Drayton Bassett, Hints and Weeford	Volume 5 Technical appendices map book: Ecology - CFA22 Whittington to Handsacre
Volume 2 Community forum area map book: CFA22 Whittington to Handsacre	Volume 5 Technical appendices map book: Ecology - West Midlands Metropolitan (CFA23-26)
Volume 2 Community forum area map book: CFA23 Balsall Common and Hampton-in-Arden	Volume 5 Technical appendices map book: Ecology - Off-route
Volume 2 Community forum area map book: CFA24 Birmingham Interchange and Chelmsley Wood	Volume 5 Technical appendices map book: Land quality
Volume 2 Community forum area map book: CFA25 Castle Bromwich and Bromford	Volume 5 Technical appendices map book: Landscape and visual
Volume 2 Community forum area map book: CFA26 Washwood Heath to Curzon Street	Volume 5 Technical appendices map book: Socio-economics
Volume 4 Off-route effects map book	Volume 5 Technical appendices map book: Sound, noise and vibration
Volume 5 Technical appendices map book: Agriculture, forestry and soils	Volume 5 Technical appendices map book: Traffic and transport
Volume 5 Technical appendices map book: Air quality	Volume 5 Technical appendices map book: Water resources
Volume 5 Technical appendices map book: Community	Volume 5 Technical appendices map book: Cross-topic appendix 1 - Committed developments
Volume 5 Technical appendices map book: Cultural heritage	

Supplementary Environmental Statement and Additional Provision 2 Environmental Statement

Volume 5 | Data dictionary and definitions

### Data dictionary and definitions

Legend features	Definition	Source	Copyright
Ancient woodland	Ancient Woodland Inventory. Ancient Woodland is land that has had continuous woodland cover since at least 1600AD. Natural England maintain an inventory of ancient woodlands. The inventory was updated in 2014, and therefore this data set includes changes from that reported in the main ES. Additional woodlands which are considered likely to be ancient, but have not been formally added to the inventory are not included in the mapped data set.	Natural England	© Natural England copyright 2015 Contains Ordnance Survey data © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015. http://www.naturalengland.org.uk/Images/open- government-licence-NE-OS_tcm6-30743.pdf
Bedrock geology	Soils or rocks older than Quaternary deposits.  The data that comprises the geological theme of 'Bedrock' as depicted on the 1:50000 published map DiGMapGB-50. The legend on the full geological legend page (WR-02-LEGEND) comprises the LEX_RCS (a unique abbreviation to identify the rock), the rock name and its aquifer status.	British Geological Survey (BGS)	Derived from 1:50,000 scale BGS Digital Data under Licence 2012/062 British Geological Survey. © NERC.
Community forum boundary	The Environmental Statement has been split into 26 sections called Community Forum Areas.	High Speed Two (HS2) Ltd	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
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.
Flood Map for Surface Water (FMfSW) - (200 year) - Deep (+0.3m) and Shallow (+0.1m)	The Environment Agency's surface water flood maps give an indication of the broad extent of areas likely to be at risk of surface water flooding, i.e. areas where surface water would be expected to flow or pond.  The FMfSW will pick out natural drainage channels, rivers, low areas in floodplains, and flow paths between buildings. But it will only indicate flooding caused by local rainfall. It does not show flooding that occurs from overflowing watercourses, drainage systems or public sewers caused by catchment-wide rainfall events or river flow. It is therefore very important that users apply local knowledge and in particular the 'locally agreed surface water information' held by the lead local flood authority to assess how suitable the Flood Map for Surface Water is for their needs.  FMfSW may be suitable for identifying where properties are in areas at risk of flooding for locations where surface water flooding is strongly influenced by topography.  Two rainfall events, one with a 1 in 30 and the other with a 1 in 200 chance of occurring in any year, are modelled and mapped. However, users must note that this is the chance of this rainfall, and not of the resulting flood extent occurring. Consequently it only provides a general indication of areas which may be more likely to suffer from surface water flooding in these rainfall probabilities.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Flood Zone 2	National Flood Zone 2 (FZ2). Land assessed, ignoring the presence of flood defences, as having between a 1% and 0.1% annual probability of river flooding.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.

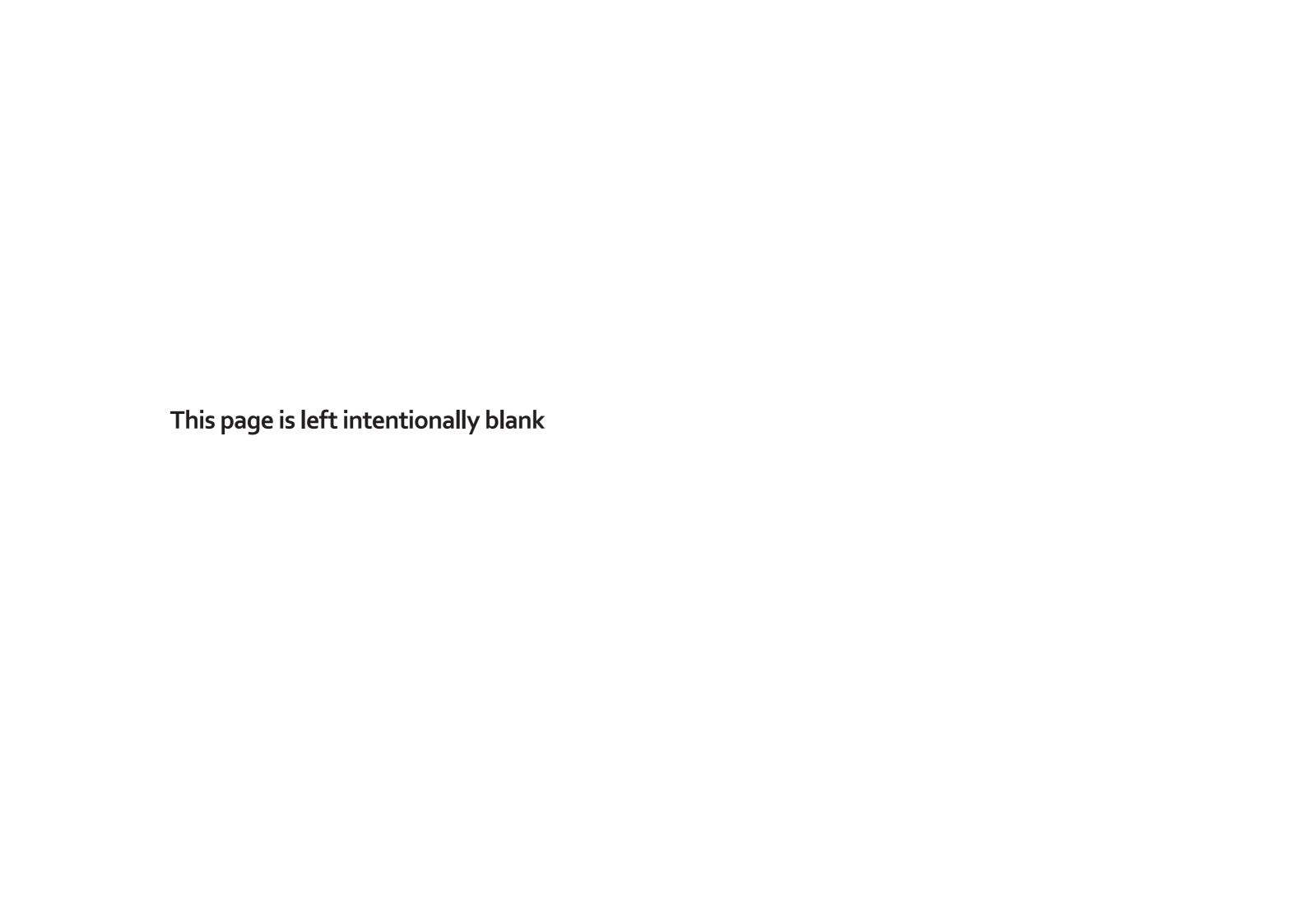
Legend features	Definition	Source	Copyright
Flood Zone 3	National Flood Zone 3 (FZ3). Land assessed, ignoring the presence of flood defences, as having a 1% or greater annual probability of river flooding.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Geological fault line	The surface of a fault fracture along which the rocks have been displaced.	British Geological Survey (BGS)	Collins English Dictionary – Complete and Unabridged © HarperCollins Publishers 1991, 1994, 1998, 2000, 2003
	The data that comprises the geological theme of 'Linear' as depicted on the 1:50000 published map DiGMapGB-50.		Derived from 1:50,000 scale BGS Digital Data under Licence 2012/062 British Geological Survey. © NERC.
Groundwater discharge location	A discharge to groundwater under permit regulations (the Environmental Permitting, England and Wales Regulations, 2010 (EPR)).	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Groundwater source protection zone	Source Protection Zones (SPZs) have been defined for approximately two thousand groundwater sources such as wells, boreholes and springs used for public drinking water supply. These zones show the risk of contamination from any activities that might cause pollution in the area. The closer the activity, the greater the risk. The maps show three main zones; SPZ1 - inner, SPZ2 - outer and SPZ3 - total catchment.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Historic flooding area	Historic Flood Map is the maximum extent of all recorded individual Historic Flood Events Outlines from river, the sea and groundwater springs and shows areas of land that have previously been subject to flooding in England & Wales.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
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	
Landfill site (historic or active)	A historic (closed) landfill site is one where there is no PPC permit or waste management licence currently in force.  The local authority recorded landfill sites dataset contains landfill records sourced from individual	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
	local authorities that were able to provide information on sites operating prior to the introduction of the Control Pollution Act (COPA) in 1974.	Landmark	Bespoke licence agreement LIG\2012\40160411
Landfill site (historic or active)	Additional landfill sites missing from third party datasets.	High Speed Two (HS2) Ltd	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Licensed groundwater abstraction (excluding public water supplies)	A groundwater abstraction licence issued by the Environment Agency, which abstracts more than 20 cubic metres a day.  Data supplied as spreadsheet. Digitised within 2km. Excludes the precise location of public water supplies in order to comply with Security and Environmental Measures Direction 1998.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Licensed surface water abstraction (excluding public water supplies)	A surface water abstraction licence issued by the Environment Agency, which abstracts more than 20 cubic metres a day.  Data supplied as spreadsheet. Digitised within 2km. Excludes the precise location of public water supplies in order to comply with Security and Environmental Measures Direction 1998.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Local Nature Reserve (LNR)	A Local Nature Reserve (LNR) is a statutory designation made under Section 21 of the National Parks and Access to the Countryside Act 1949 by principal local authorities. Data supplied has the	Natural England	© Natural England copyright 2015 Contains Ordnance Survey data © Crown copyright. Reproduced by permission of Ordnance Survey

Legend features	Definition	Source	Copyright
	status of Declared. The boundaries are interpreted from material gathered from the local authorities and does not currently cover all LNRs. This national dataset is indicative not definitive. Definitive information can only be provided by individual local authorities and you should refer directly to their information for all purposes that require the most up to date and complete dataset.		Licence Number 100049190. Year of Publication 2015. http://www.naturalengland.org.uk/Images/opengovernment-licence-NE-OS_tcm6-30743.pdf
		Supplied by Ecorecord, Warwickshire County Council, Birmingham Council	Data supplied by Ecorecord, Warwickshire BRC & Birmingham use (© Crown Copyright and database rights 2013 Ordnance Survey Licence Number 100049190.)
		Greenspace Information for Greater London (GiGL)	Map derived from GiGL data 2015 (where a map shows information derived from GiGL data).
Local Wildlife Site (LWS) - county/metropolitan value		Northamptonshire County Council	This data incorporates biodiversity data supplied to HS2 by Northamptonshire Biodiversity Records Centre and The Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire (Wildlife Trust BCN), and is copyright to Wildlife Trust BCN and/or its partners.
	Local Wildlife Sites (LWSs) are identified and selected for their local nature conservation value. They protect threatened species and habitats acting as buffers, stepping stones and corridors between nationally-designated wildlife sites.  Local Wildlife Sites (LWS) are local non-statutory nature conservation sites. They were formerly	Buckinghamshire County Council	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.
	referred to as County Wildlife Sites.  In some cases Local Wildlife data is not shown as this is still being verified.	Thames Valley Ecological Records Centre c/o Oxfordshire County Council (TVERC)	Incorporates biodiversity data supplied by Thames Valley Environmental Records Centre (TVERC). This data are copyright to TVERC and/or its partners.
		Hertfordshire Biological Record Centre	Incorporates biodiversity data supplied to High Speed Two (HS2) by Hertfordshire Biological Records Centre and is copyright to Hertfordshire County Council, Hertfordshire Biological Records Centre and/or its partners."
		Staffordshire Ecological Record (SER)	Copyright © Staffordshire Ecological Record Partnership, 2013. The information is reproduced from, or based upon information supplied by Staffordshire Ecological Record (SER) and reproduced with the permission of the SER Partnership. Individual records within the data are copyright their original recorders and provided under licence via SER. All data supplied by SER is

Legend features	Definition	Source	Copyright
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		Supplied by Ecorecord, Warwickshire County Council, Birmingham Council.	Data supplied by Ecorecord, Warwickshire BRC & Birmingham use (© Crown Copyright and database rights 2013 Ordnance Survey Licence Number 100049190.)
		Greenspace Information for Greater London (GiGL)	Map derived from GiGL data 2015 (where a map shows information derived from GiGL data).
		Northamptonshire County Council	This data incorporates biodiversity data supplied to HS2 by Northamptonshire Biodiversity Records Centre and The Wildlife Trust for Bedfordshire, Cambridgeshire and Northamptonshire (Wildlife Trust BCN), and is copyright to Wildlife Trust BCN and/or its partners.
Local Wildlife Site (LWS) - less than county/metropolitan value	Local Wildlife Sites (LWSs) are identified and selected for their local nature conservation value. They protect threatened species and habitats acting as buffers, stepping stones and corridors between nationally-designated wildlife sites.  Local Wildlife Sites (LWS) are local non-statutory nature conservation sites. They were formerly referred to as County Wildlife Sites.  In some cases Local Wildlife data is not shown as this is still being verified.	Buckinghamshire County Council	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.
		Thames Valley Ecological Records Centre c/o Oxfordshire County Council (TVERC)	Incorporates biodiversity data supplied by Thames Valley Environmental Records Centre (TVERC). This data are copyright to TVERC and/or its partners.
		Hertfordshire Biological Record Centre	Incorporates biodiversity data supplied to High Speed Two (HS2) by Hertfordshire Biological Records Centre and is copyright to Hertfordshire County Council, Hertfordshire Biological Records Centre and/or its partners."
			Copyright © Staffordshire Ecological Record Partnership, 2013. The information is reproduced

Legend features	Definition	Source	Copyright
		Staffordshire Ecological Record (SER)	from, or based upon information supplied by Staffordshire Ecological Record (SER) and reproduced with the permission of the SER Partnership. Individual records within the data are copyright their original recorders and provided under licence via SER. All data supplied by SER is to the best of SER's knowledge correct at the time of production. However, the precision or accuracy of SER data is usually based upon the original information supplied by the recorder and although SER strives to ensure all records are checked and validated, SER cannot be held responsible for any errors or omissions. The presence of a marked boundary within SER information does not infer any rights of public access.
Open water	A body of water such as a lake or pond forming a physiographical feature.  Based on Ordnance Survey Vector Map District.	Ordnance Survey	Copyright © 2015 Oxford University Press. All rights reserved.  © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Reservoir inundation area	This dataset shows the largest area that might be flooded if a reservoir were to fail and release the water it holds. Since this is a worst case scenario, it is unlikely that any actual flood would be this large.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Route centreline - split by type (DES)	Represents the centreline of the proposed route, symbolised based on formation type.	High Speed Two (HS2) Ltd	
Site of Special Scientific Interest (SSSI)	A Site of Special Scientific Interest (SSSI) is the land notified as an SSSI under the Wildlife and Countryside Act (1981), as amended.	Natural England	© Natural England copyright 2015 Contains Ordnance Survey data © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015. http://www.naturalengland.org.uk/Images/open- government-licence-NE-OS_tcm6-30743.pdf
Special Area of Conservation (SAC)	A Special Area of Conservation (SAC) is the land designated under Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora.	Natural England	© Natural England copyright 2015 Contains Ordnance Survey data © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015. http://www.naturalengland.org.uk/Images/open- government-licence-NE-OS_tcm6-30743.pdf
Superficial deposits	A geological deposit that was laid down during the Quaternary period. Such deposits were largely formed by river and glacial processes but may also include wind–blown deposits known as loess.  The data that comprises the geological theme of 'Superficial' as depicted on the 1:50000 published map DiGMapGB-50. The legend on the full geological legend page (WR-02-LEGEND) comprises the LEX_RCS (a unique abbreviation to identify the rock), the rock name and its aquifer status.	British Geological Survey (BGS)	Derived from 1:50,000 scale BGS Digital Data under Licence 2012/062 British Geological Survey.  © NERC.
Surface water crossing location	Locations where the route crosses a watercourse.	High Speed Two (HS2) Ltd	

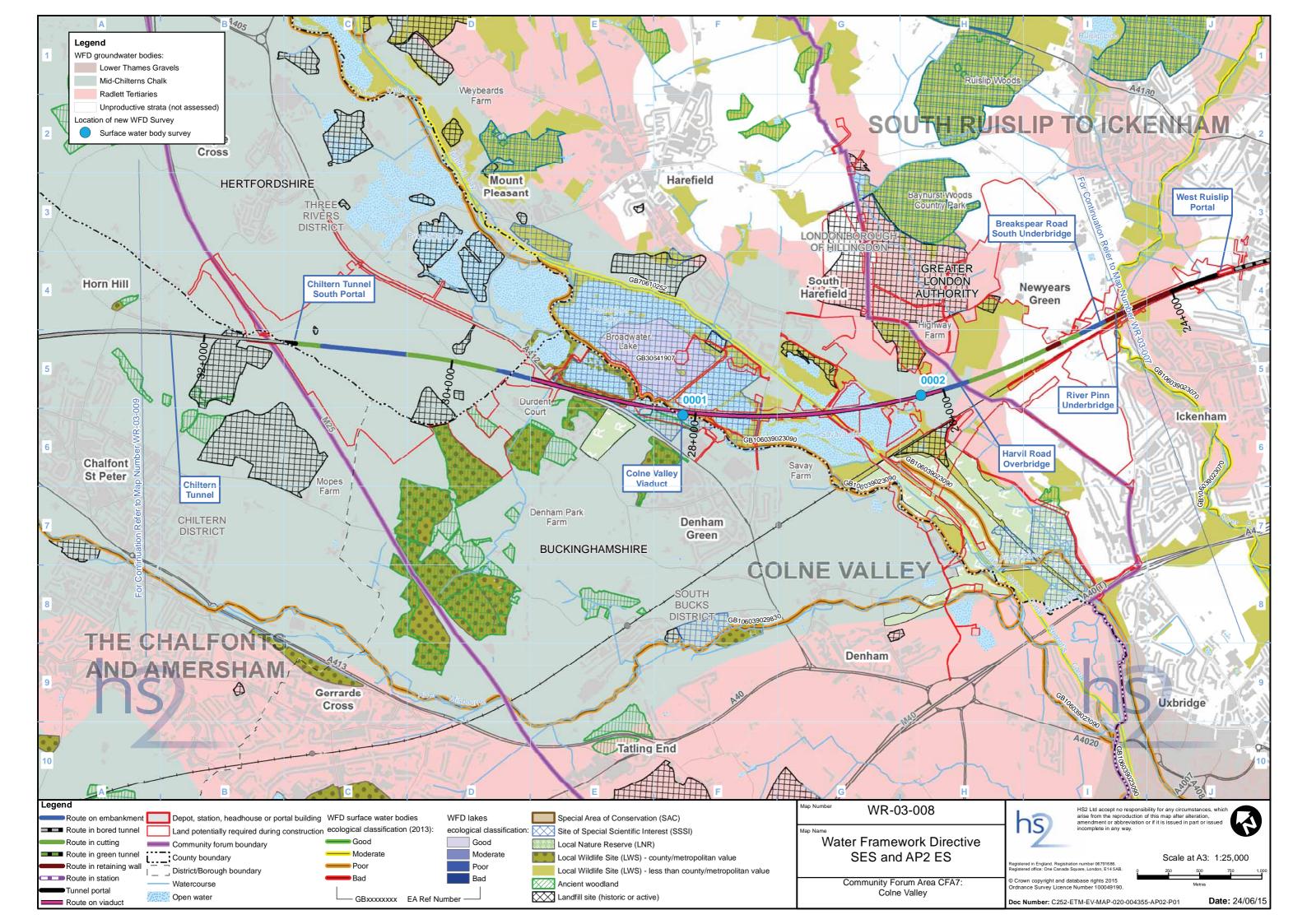
Legend features	Definition	Source	Copyright
Surface water discharge location	A discharge to surface water e.g. a river or lake under permit regulations (the Environmental Permitting, England and Wales Regulations, 2010 (EPR)).  A permit is required for the discharge of treated effluent to surface water under the Environmental Permitting (England and Wales) Regulations, 2010 (EPR).	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Unlicensed groundwater abstraction (or surface water abstraction)	A private water supply from either a groundwater or a surface water source, which abstracts less than 20 cubic metres a day. Local authorities currently hold a register of private water supplies. The local authorities are required in accordance with The Private Water Supplies Regulations 2009, to ensure that unlicensed abstractions meet certain quality standards.  Data supplied as spreadsheet. Digitised within 2km.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
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.
WFD groundwater bodies	A distinct volume of groundwater within one or more aquifers, identified by the Environment Agency and reported on maps in RBMP.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
WFD lakes ecological classification	Data is a combination of two datasets:  WFD - Lake Waterbodies. The dataset contains the extents of waterbodies identified as "lakes" under the Water Framework Directive. Based on River Basin Characterisation 2 (RBC2) data. and Water Framework Directive – Surface Water Classification Status and Objectives (2013)  An ecological classification comprises: - the condition of biological elements, for example fish - concentrations of supporting physio-chemical elements, for example oxygen or ammonia - concentrations of specific pollutants, for example copper and for high status, - largely undisturbed hydromorphology  Ecological status class is recorded on the scale of high, good, moderate, poor or bad. 'High' denotes largely undisturbed conditions and the other classes represent increasing deviation from this undisturbed, or reference, condition. The ecological status classification for the water body is determined by the worst scoring quality element.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.  Contains public sector information licensed under the Open Government Licence v1.0.
WFD surface water bodies ecological classification (2013)	A discrete and significant element of surface water, identified by the Environment Agency and reported on maps in RBMP.  Water Framework Directive – Surface Water Classification Status and Objectives (2013)  An ecological classification comprises: - the condition of biological elements, for example fish - concentrations of supporting physio-chemical elements, for example oxygen or ammonia - concentrations of specific pollutants, for example copper and for high status, - largely undisturbed hydromorphology  Ecological status class is recorded on the scale of high, good, moderate, poor or bad. 'High' denotes largely undisturbed conditions and the other classes represent increasing deviation from this undisturbed, or reference, condition. The ecological status classification for the water body is determined by the worst scoring quality element.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.





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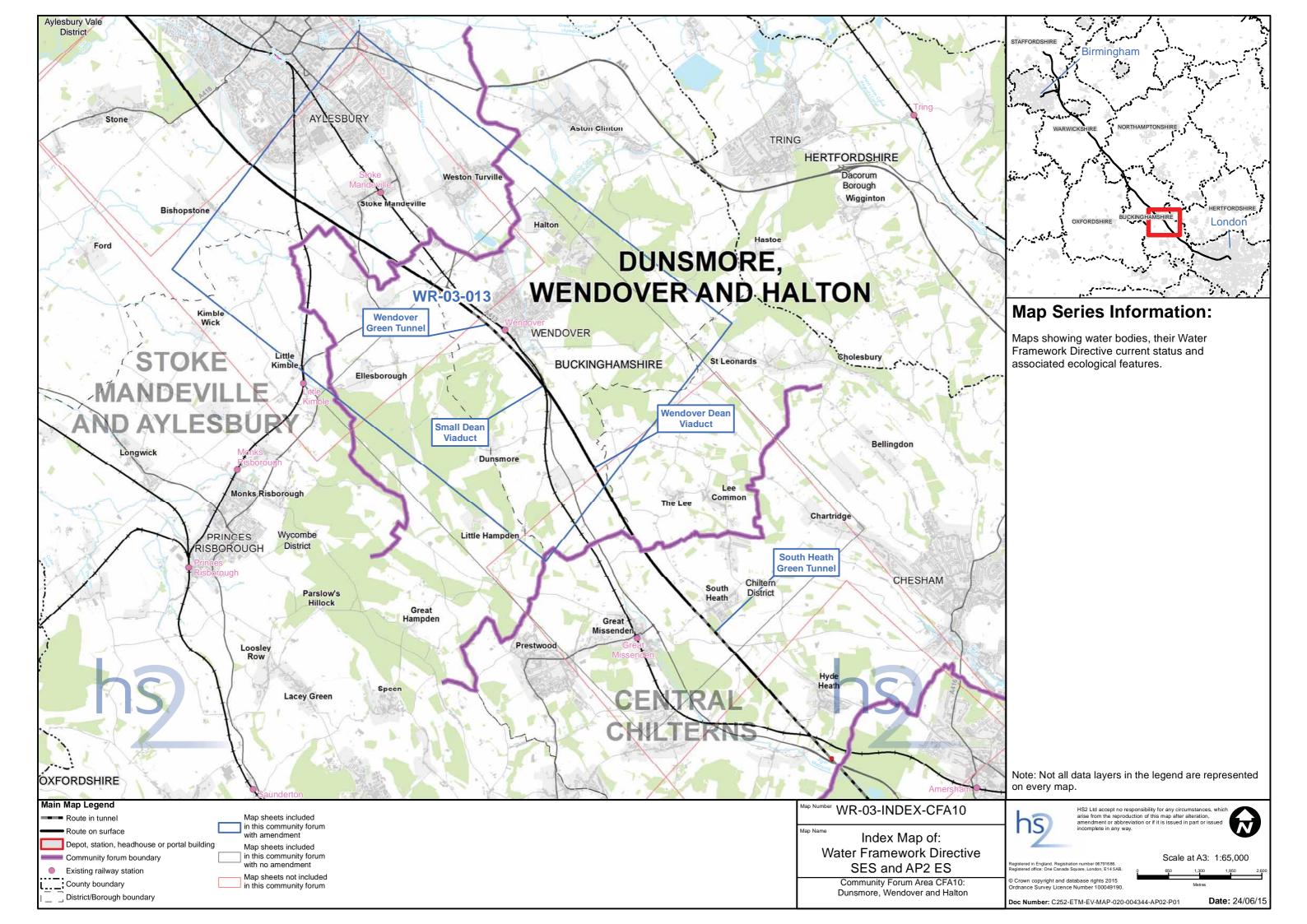
Volume 5 | CFA7 | Colne Valley WR-03 – Water Framework Directive

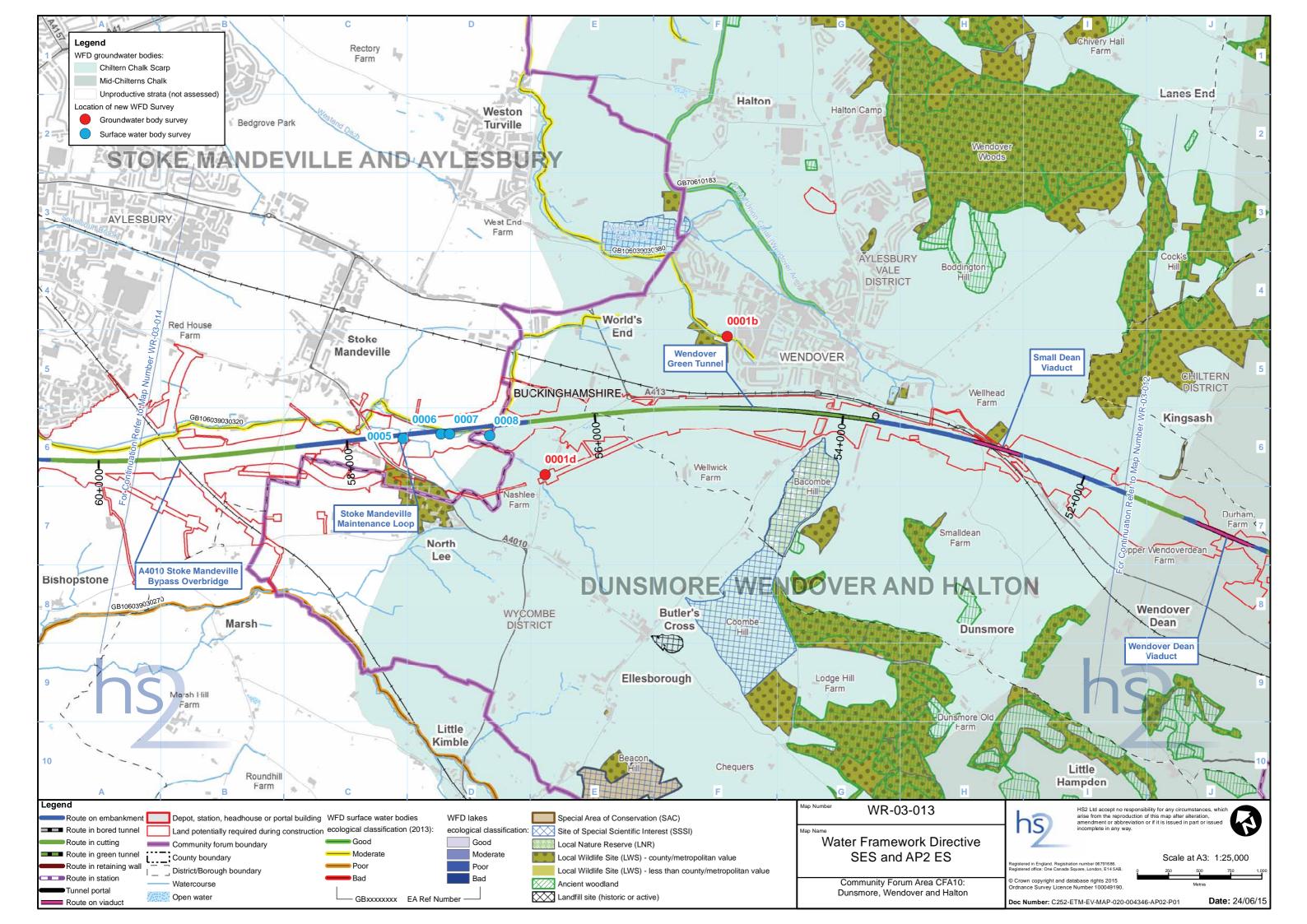


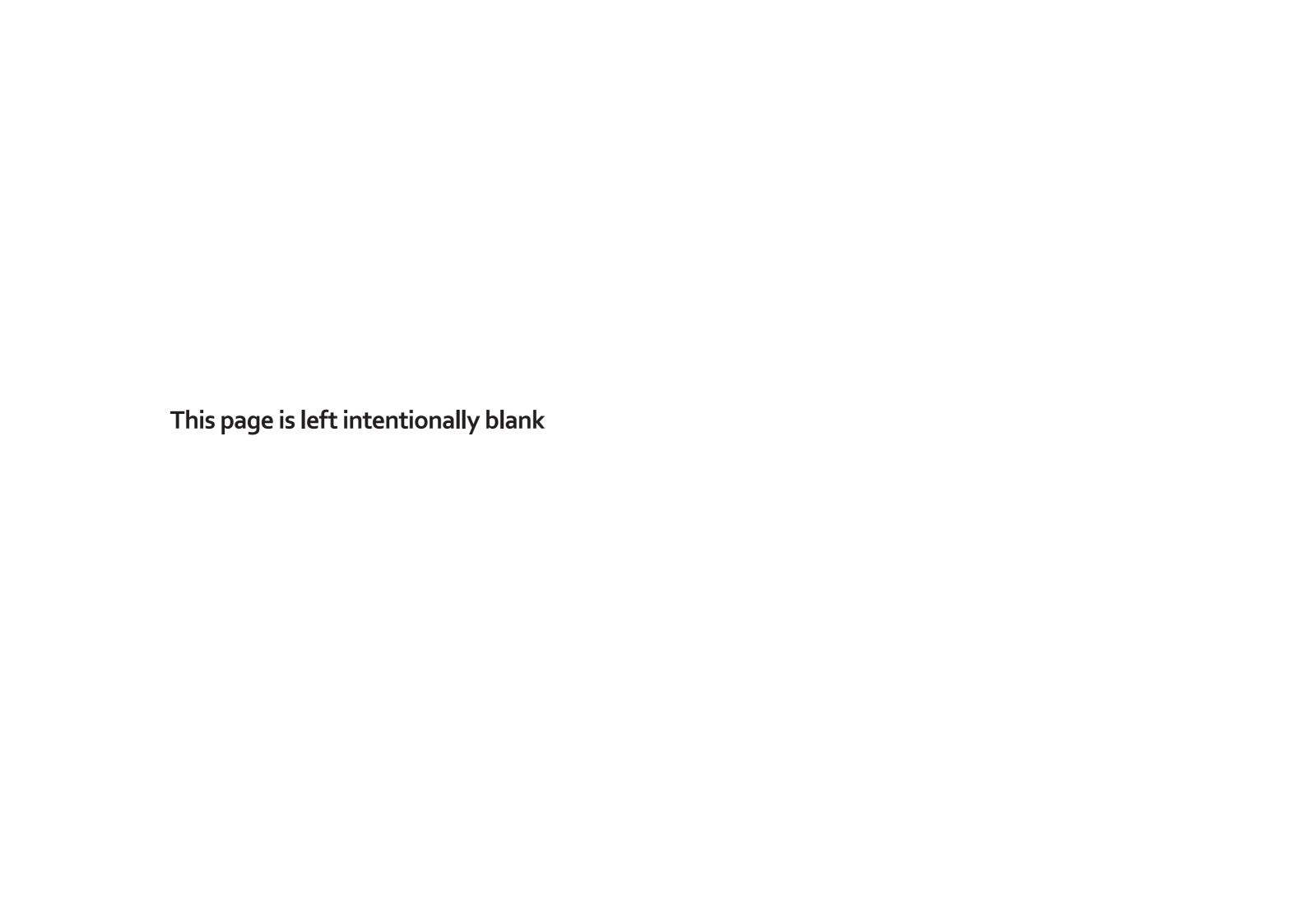


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Volume 5 | CFA10 | Dunsmore, Wendover and Halton WR-03 – Water Framework Directive



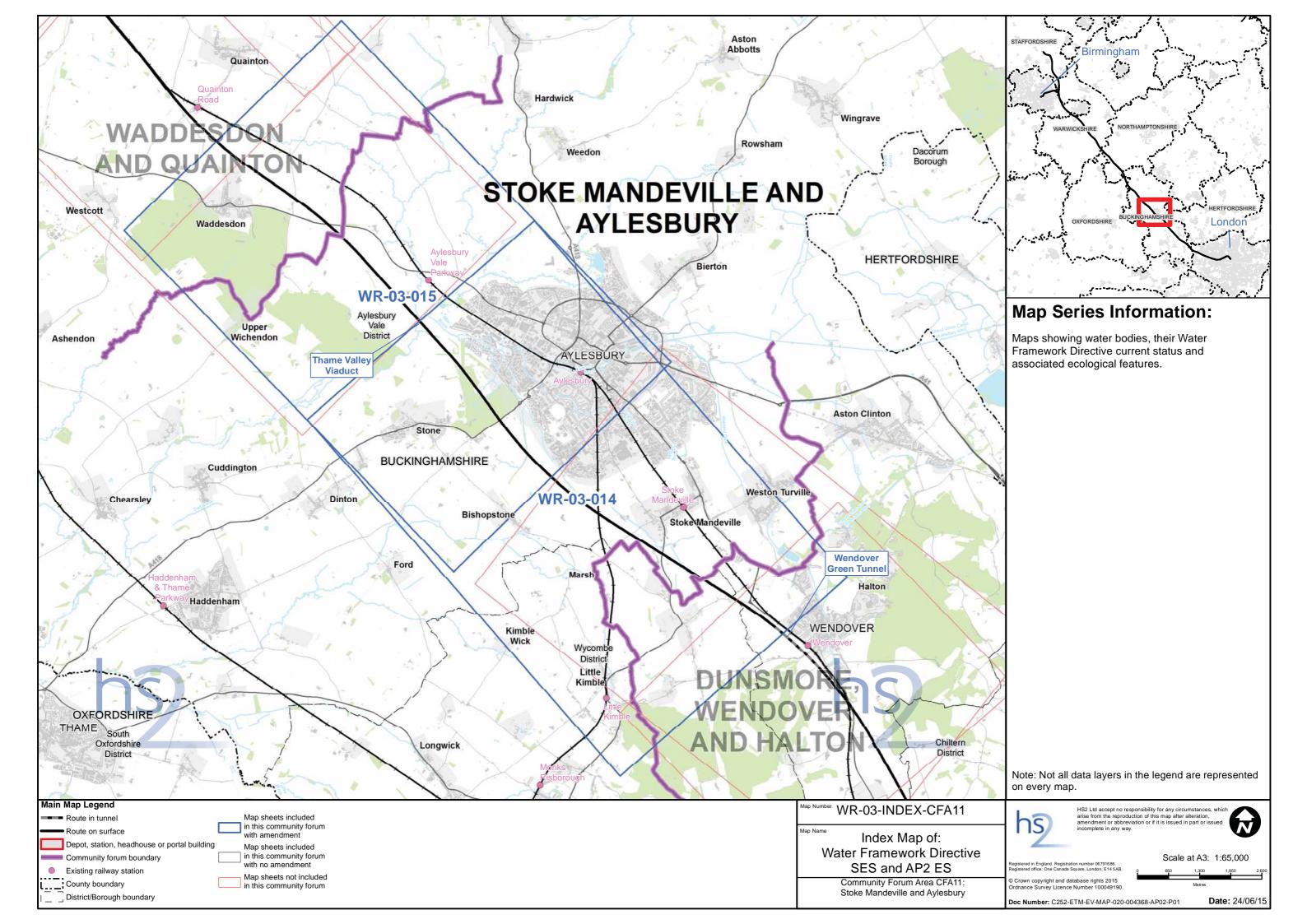


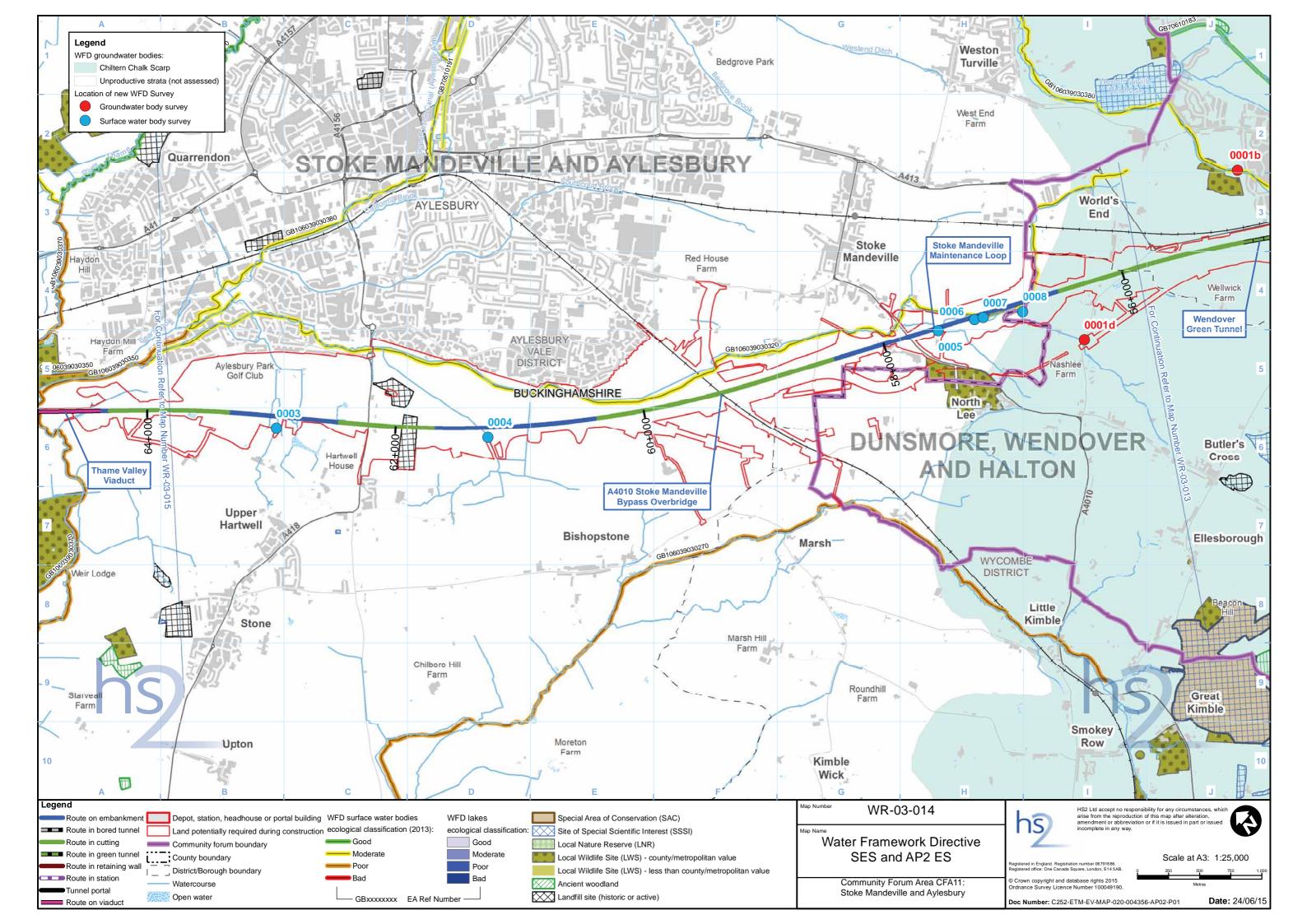


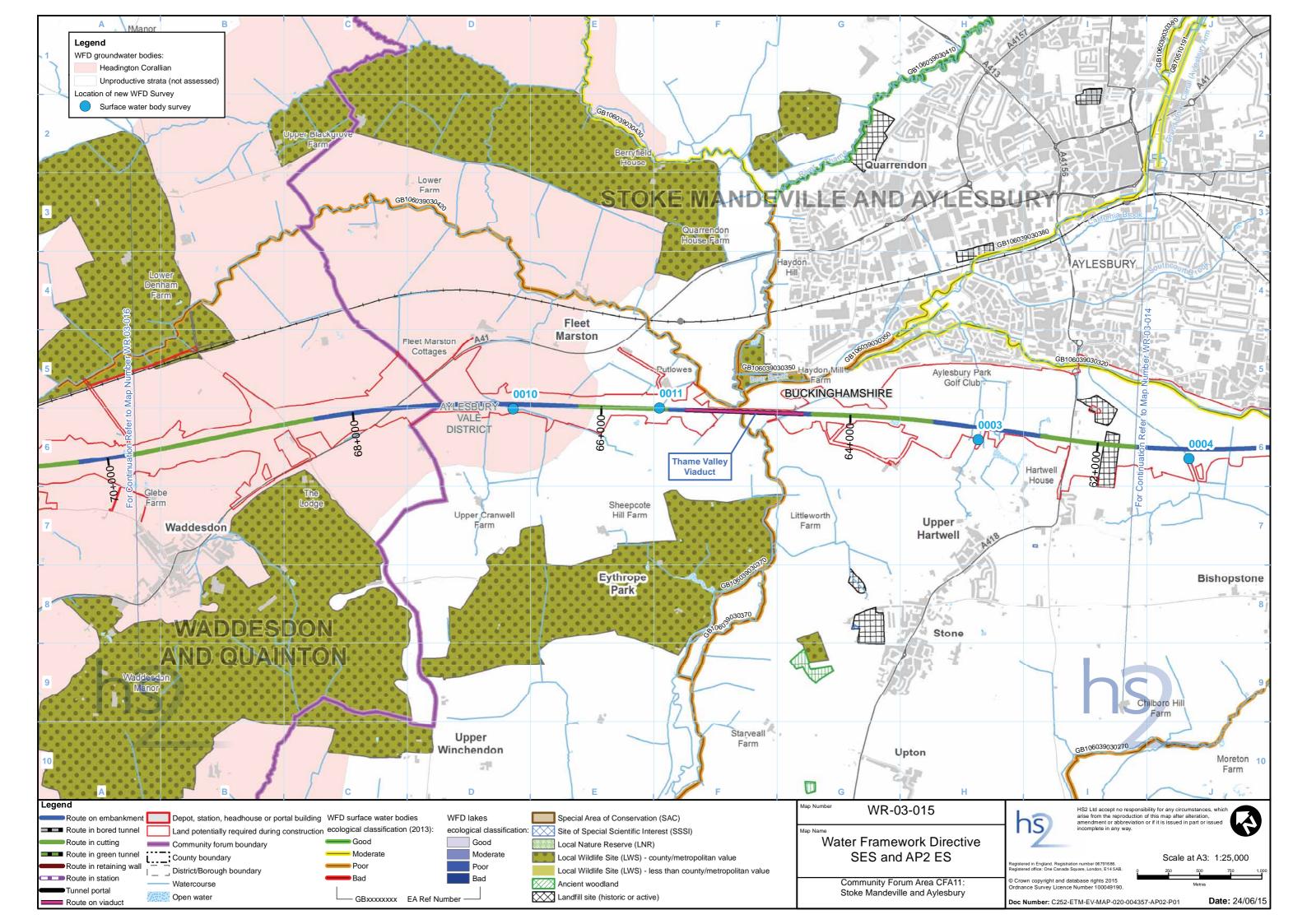


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Volume 5 | CFA11 | Stoke Mandeville and Aylesbury WR-03 – Water Framework Directive



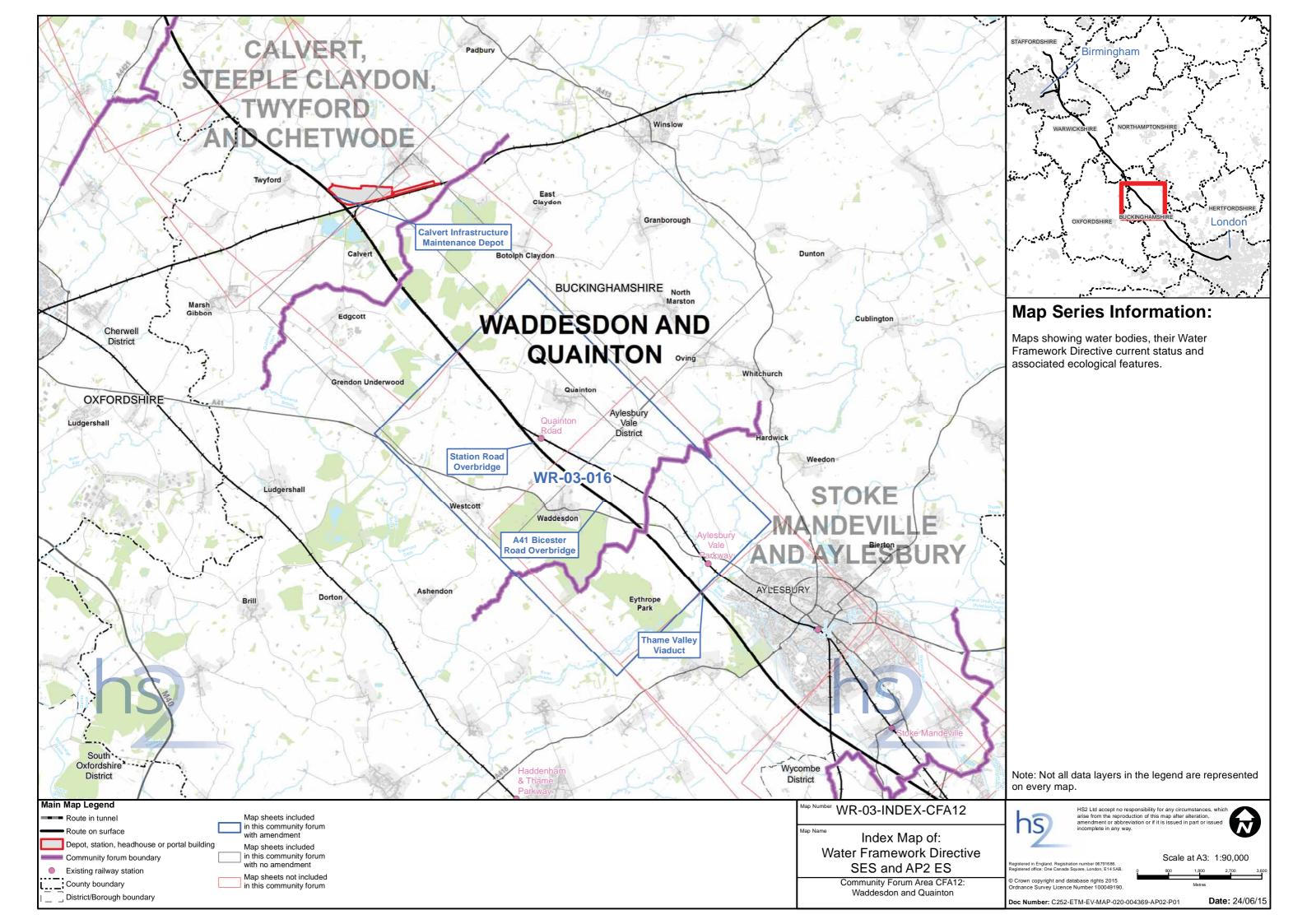


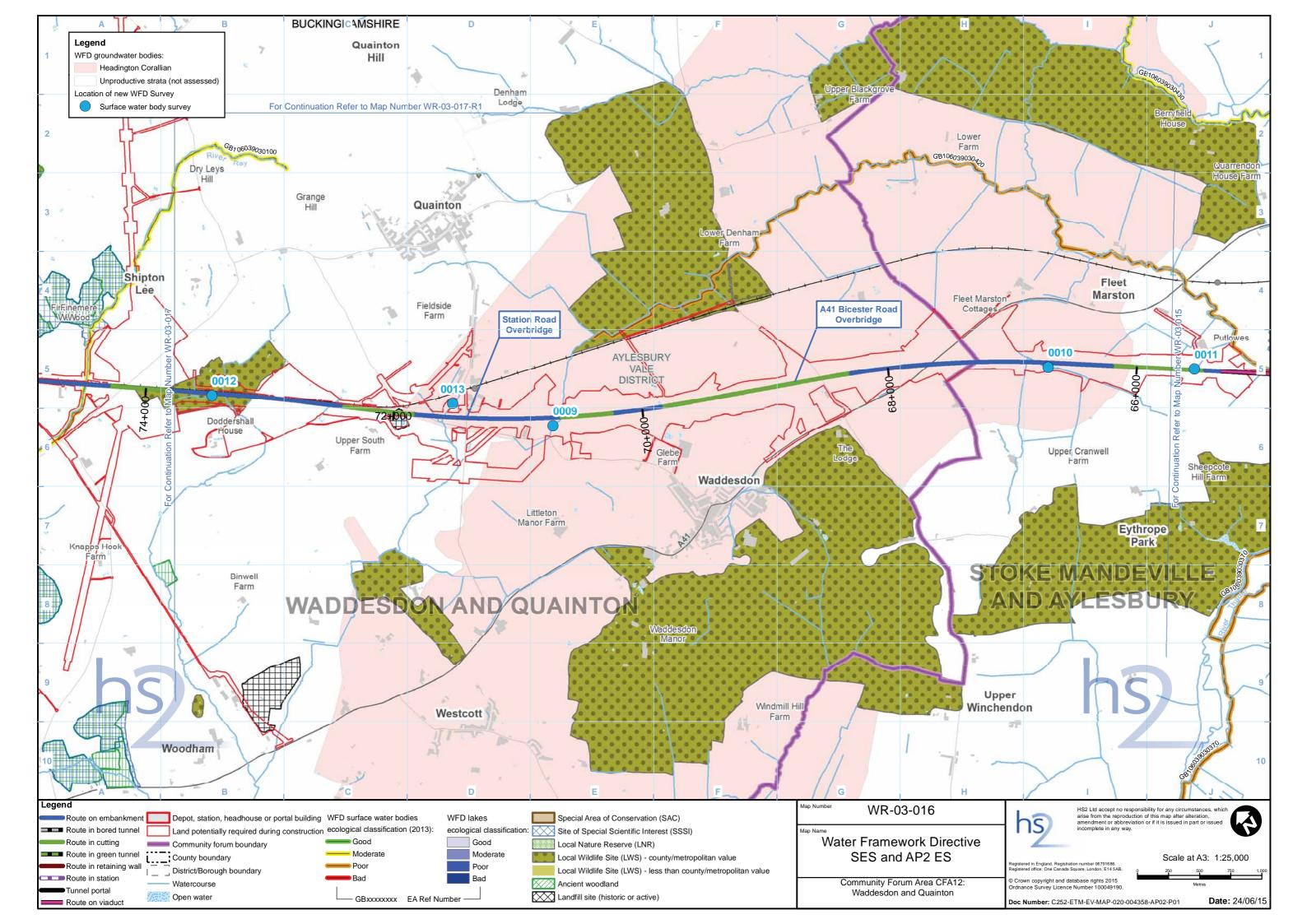


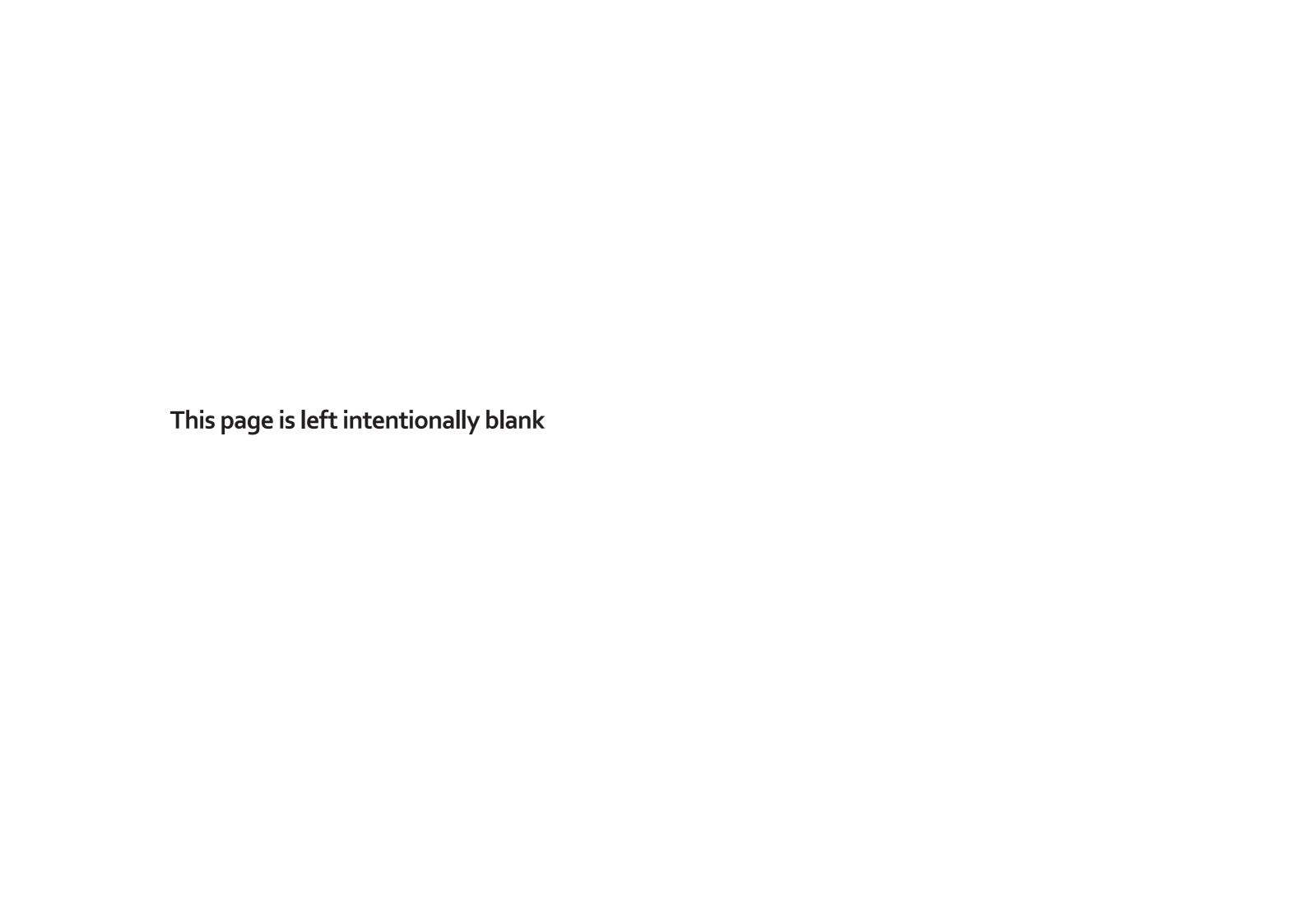


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Volume 5 | CFA12 | Waddesdon and Quainton WR-03 – Water Framework Directive

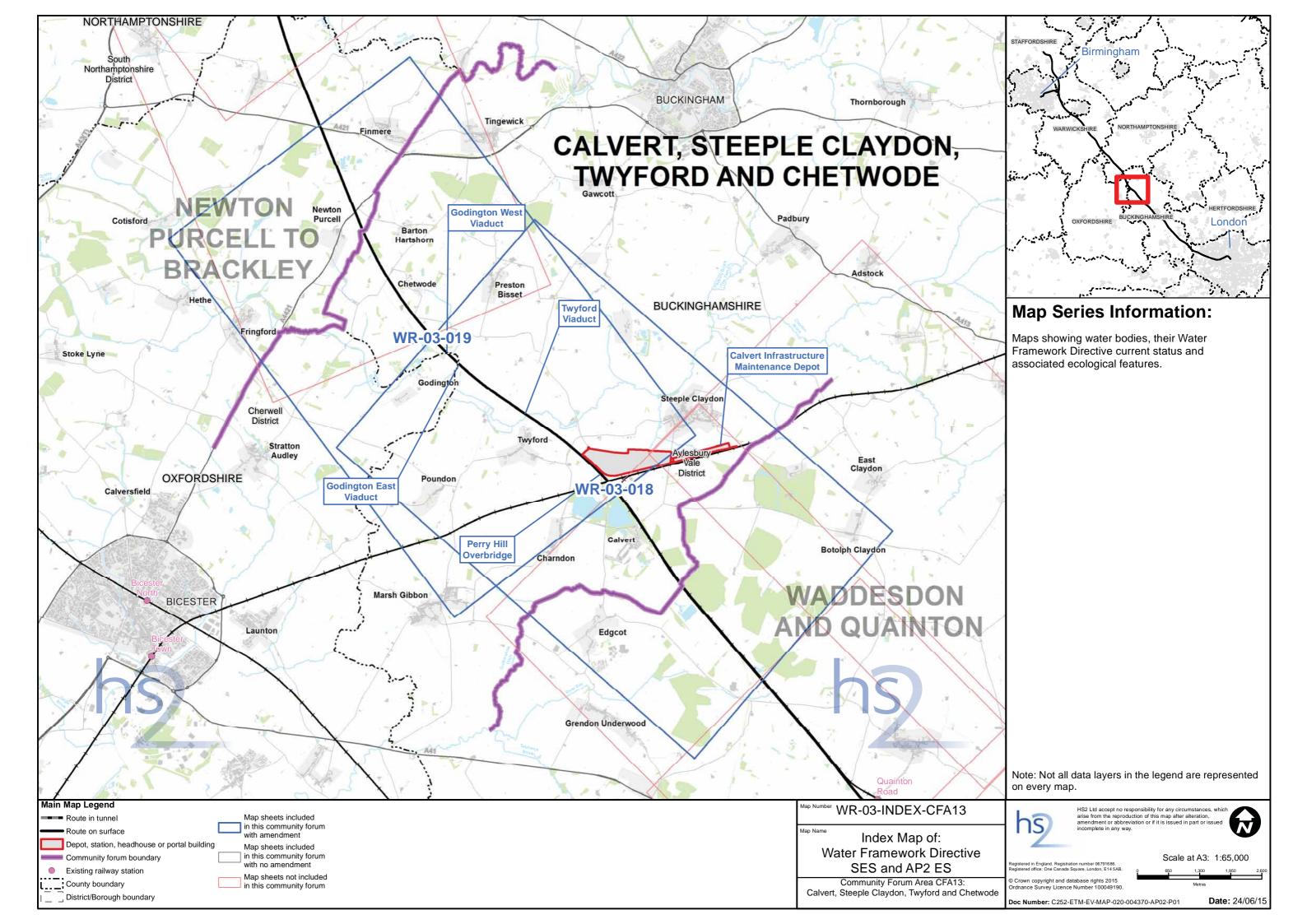


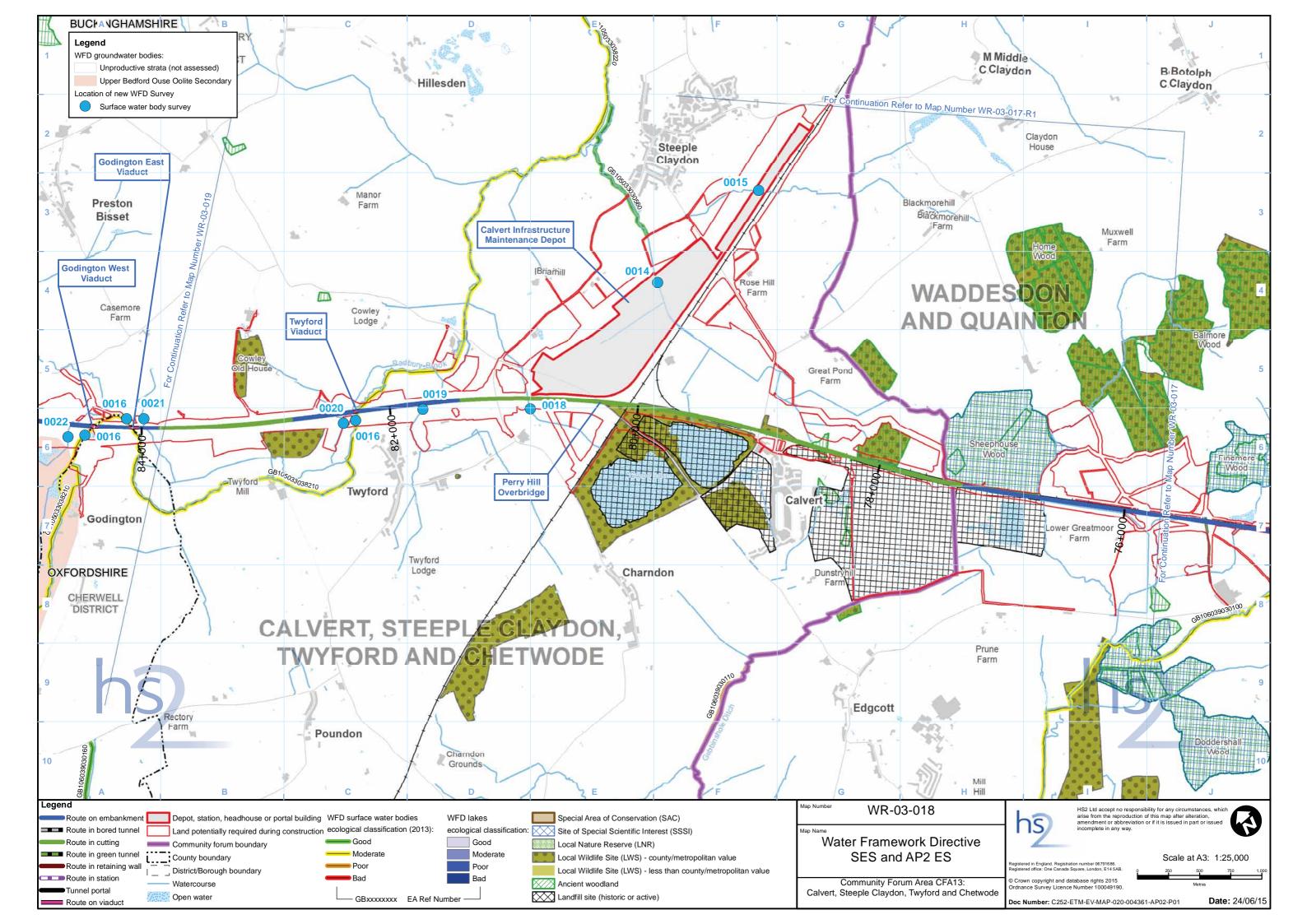


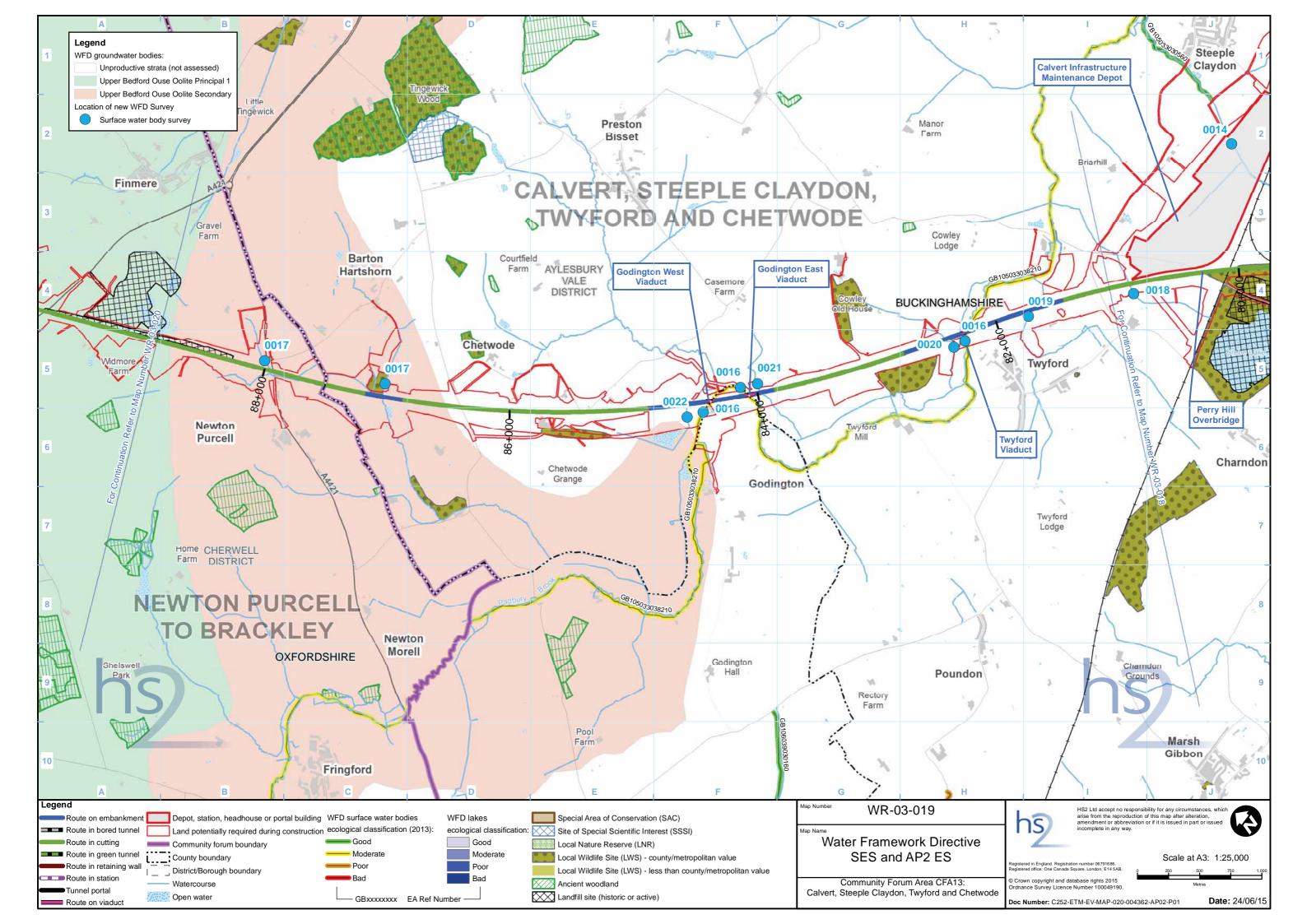


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Volume 5 | CFA13 | Calvert, Steeple Claydon, Twyford and Chetwode WR-03 – Water Framework Directive



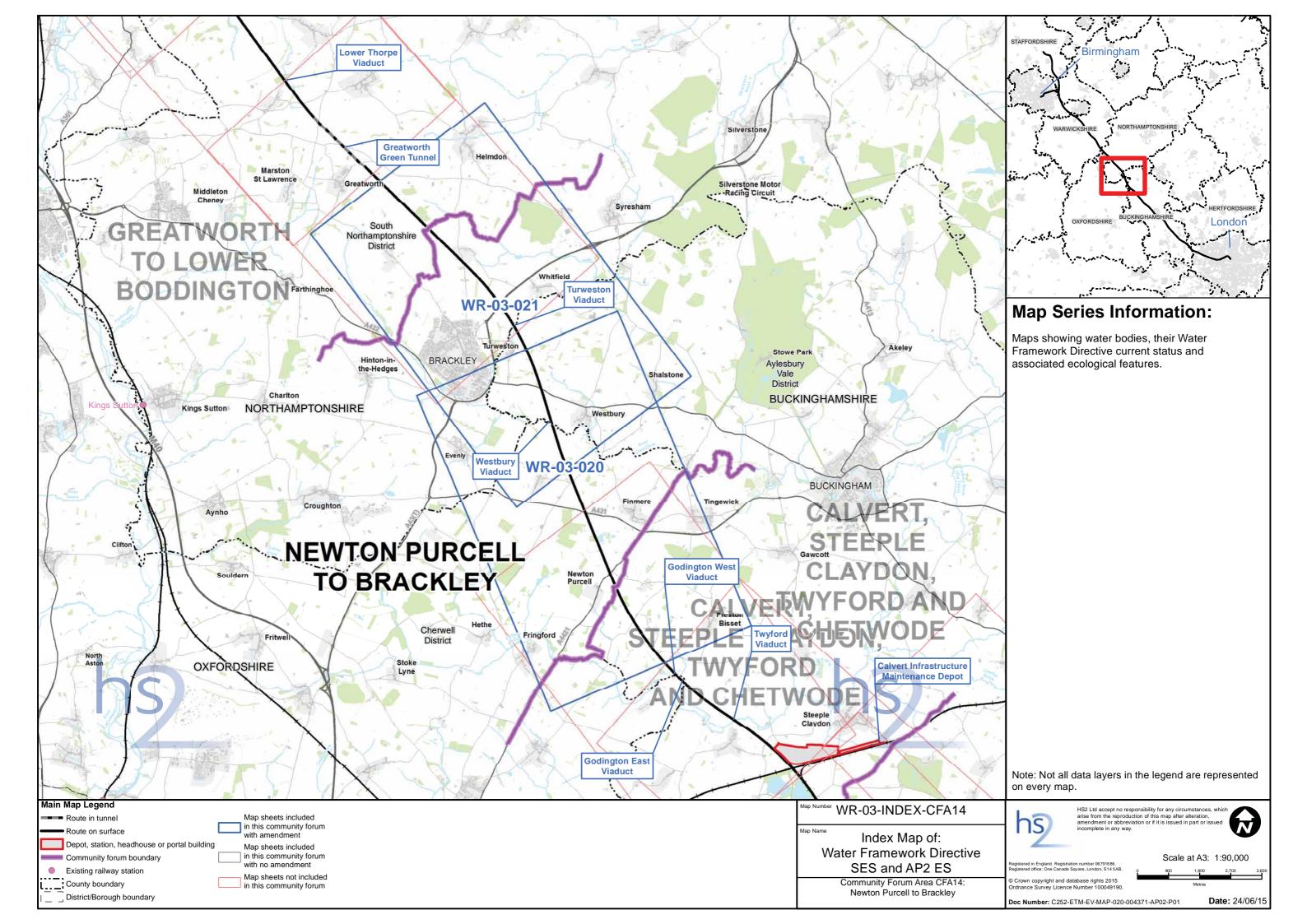


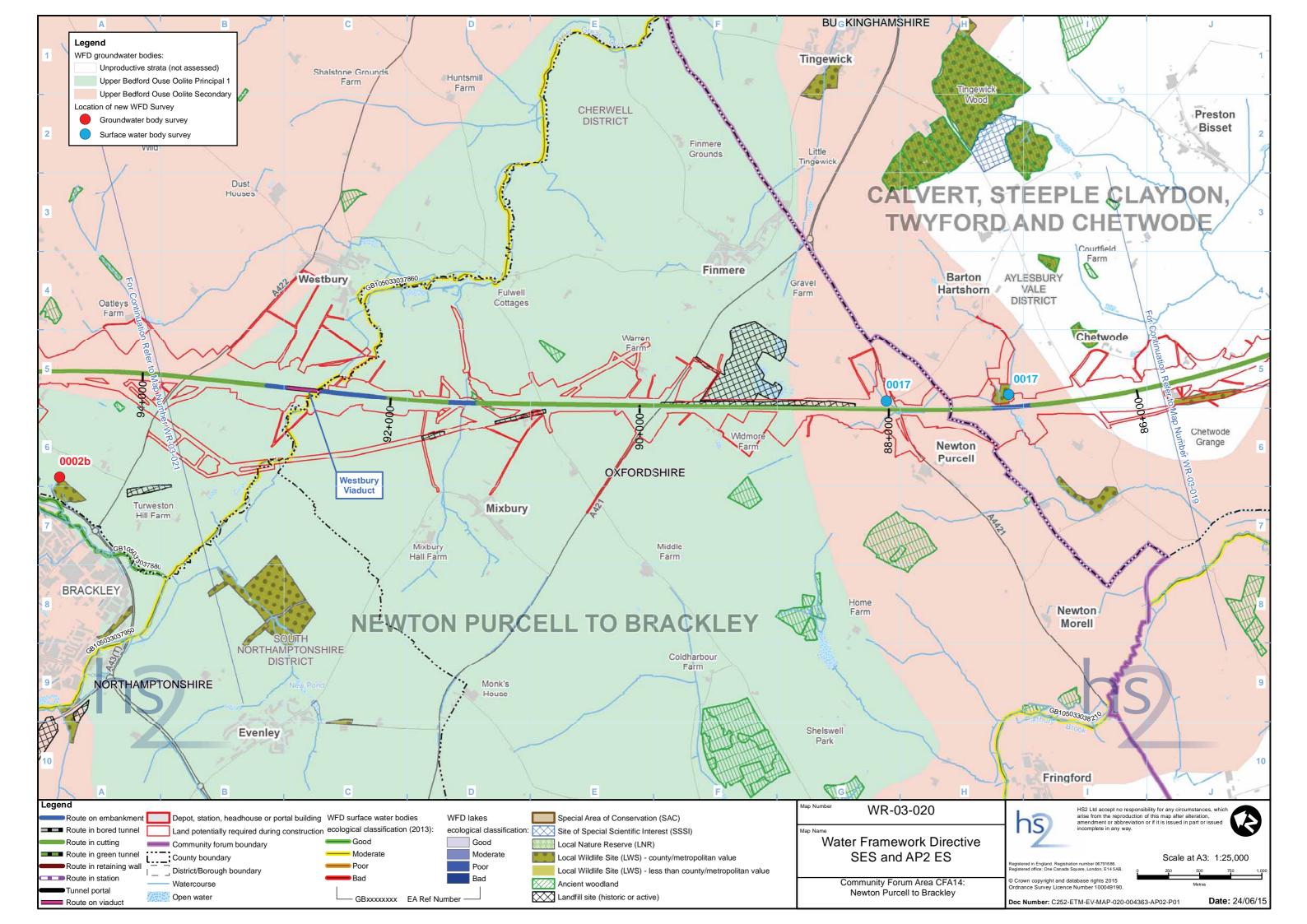


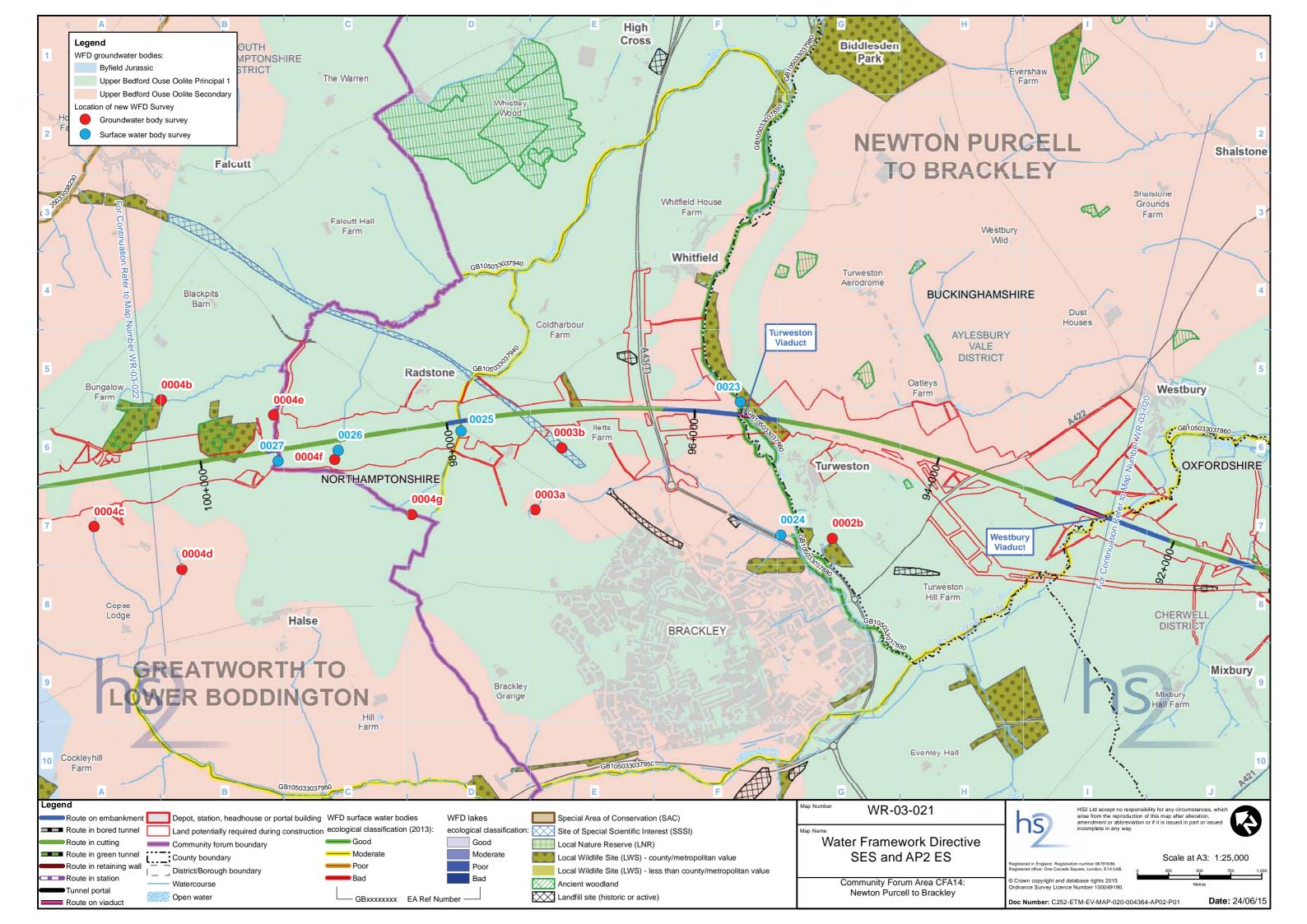


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Volume 5 | CFA14 | Newton Purcell to Brackley WR-03 – Water Framework Directive



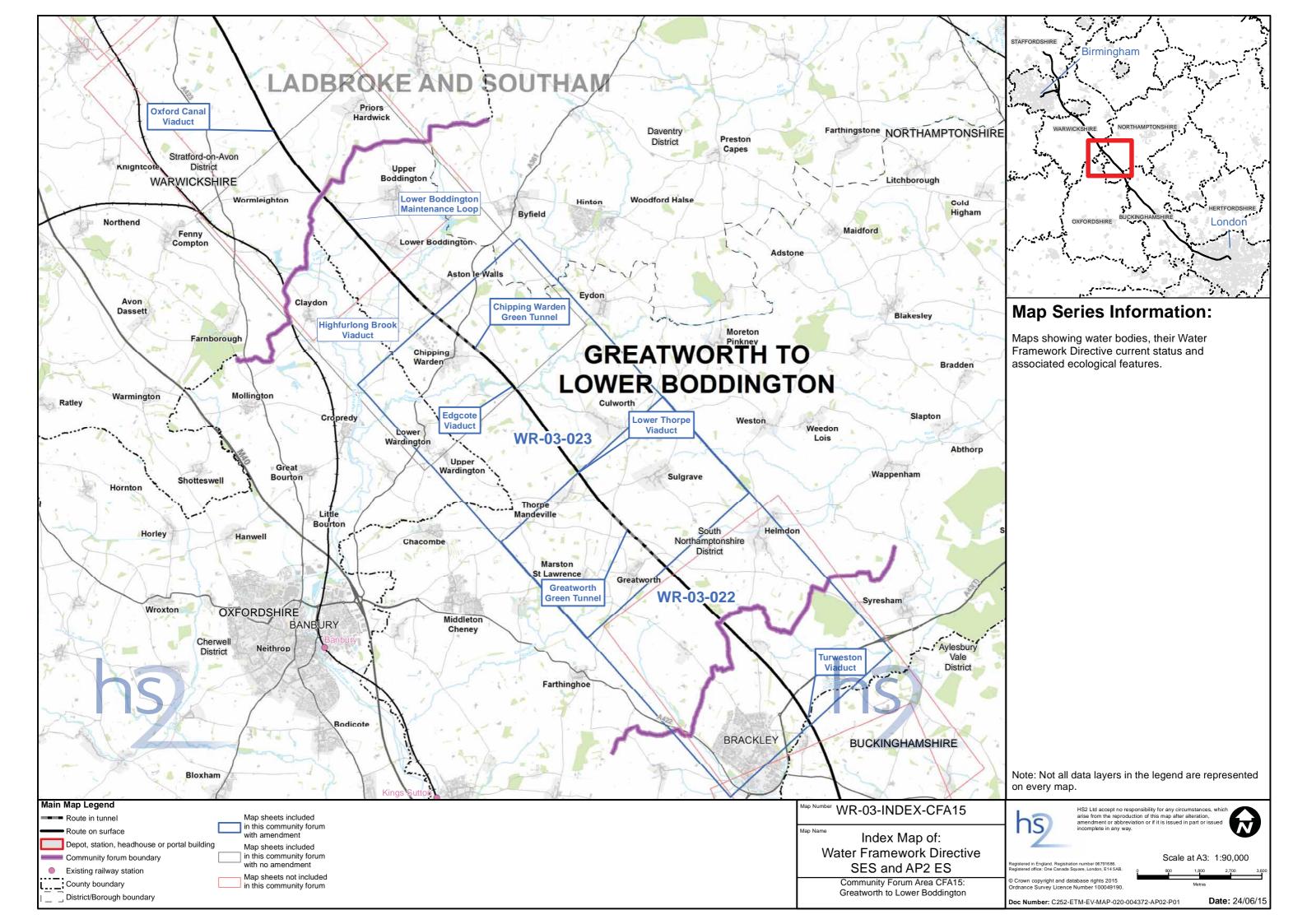


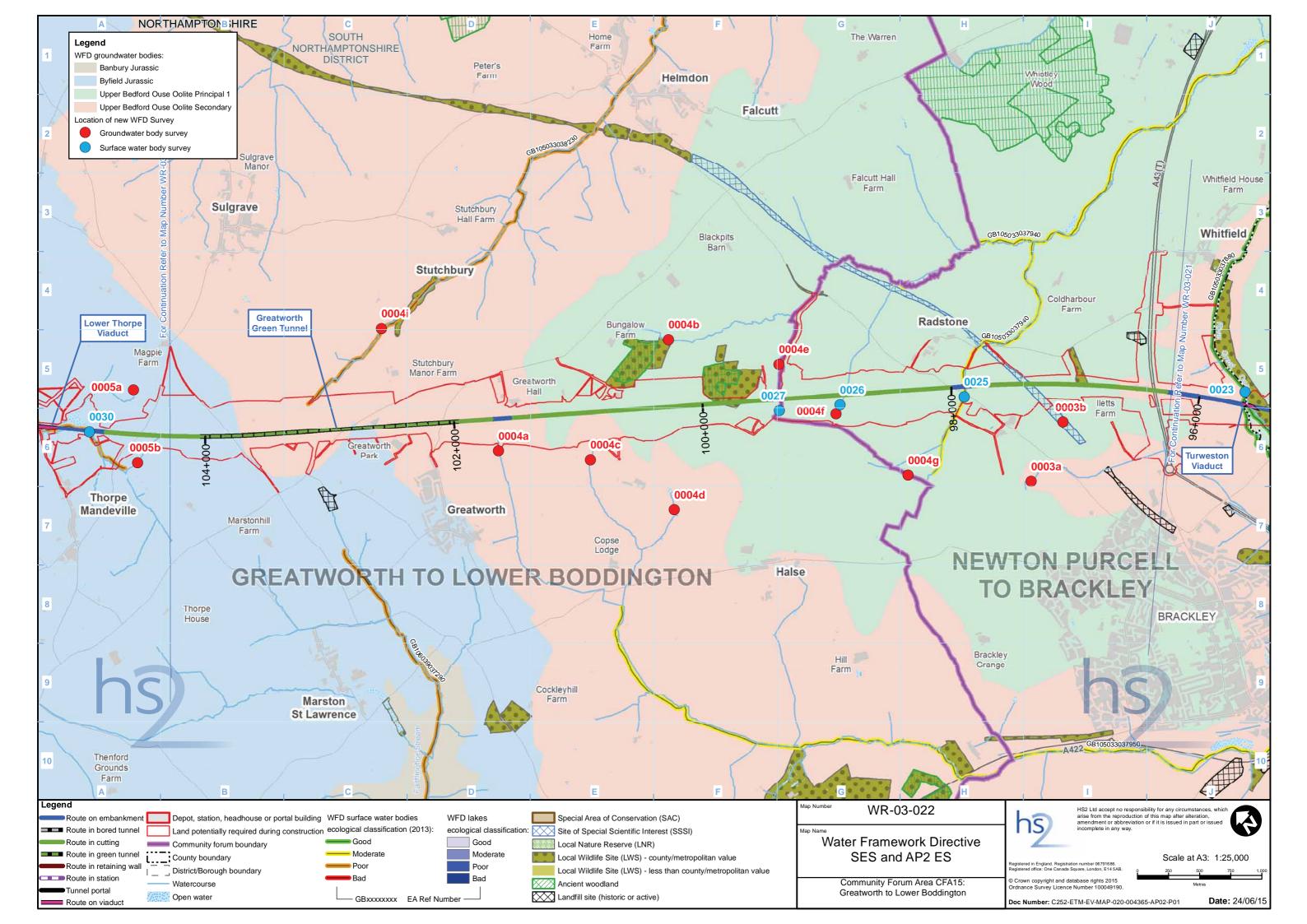


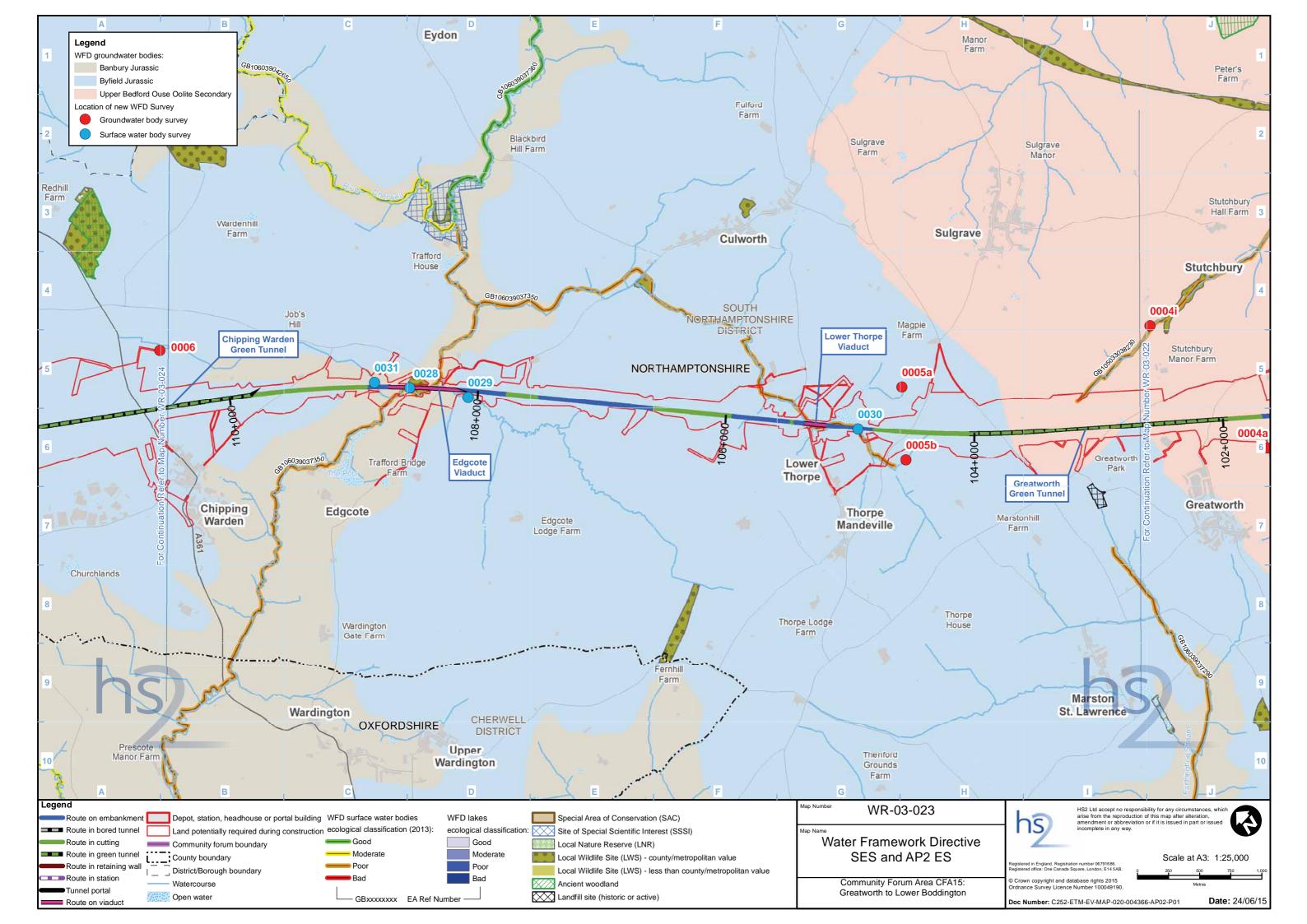


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Volume 5 | CFA15 | Greatworth to Lower Boddington WR-03 – Water Framework Directive



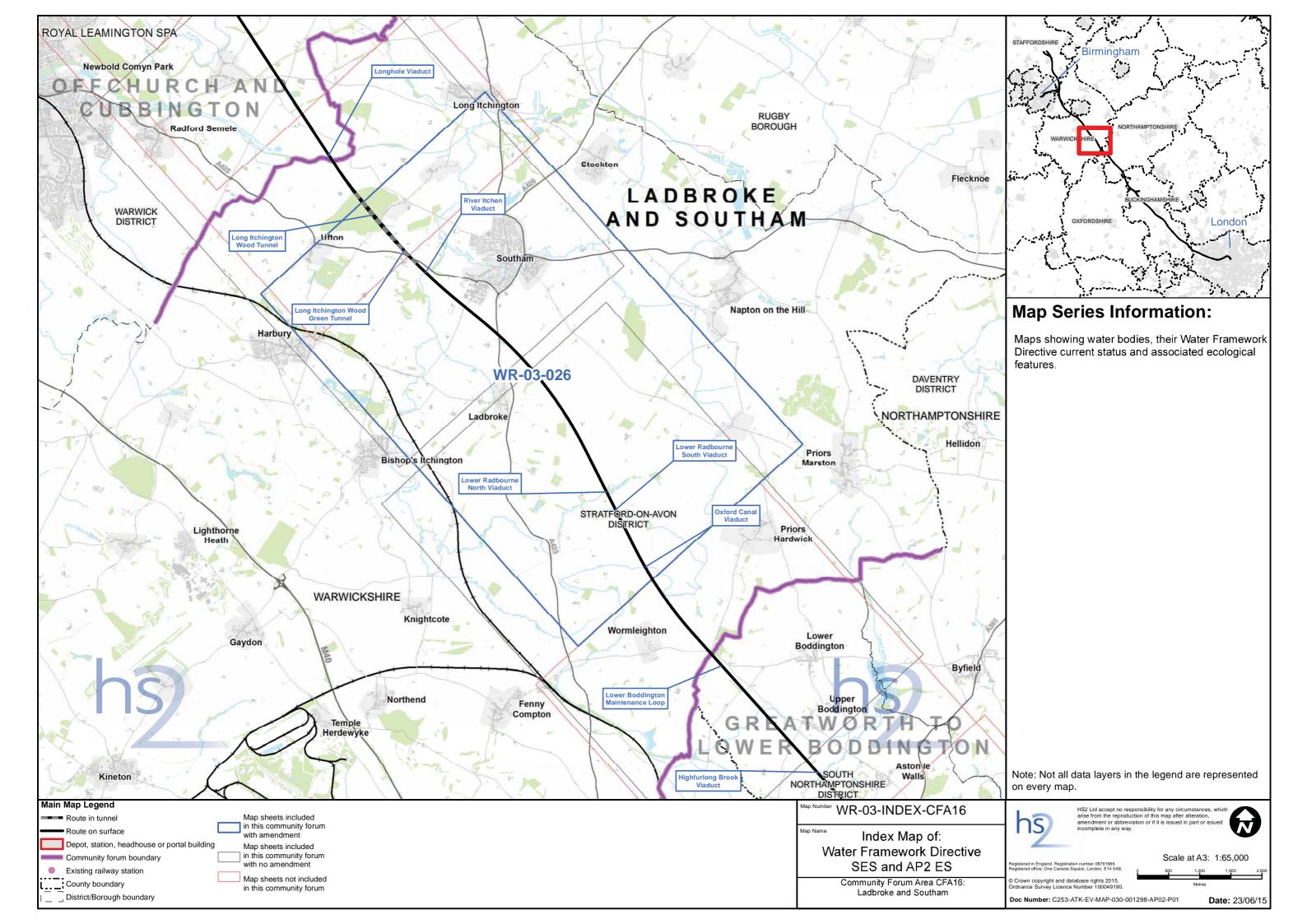


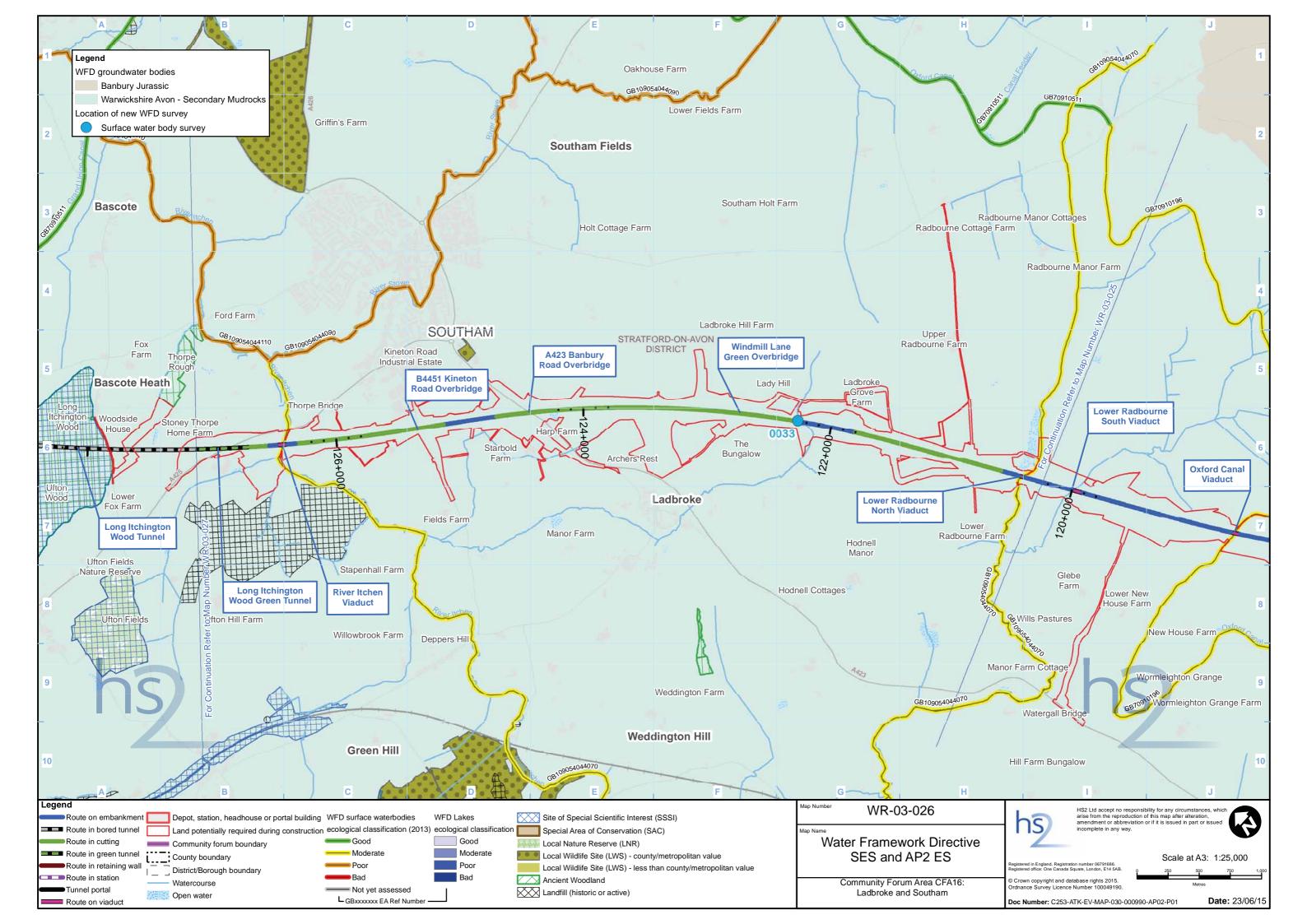


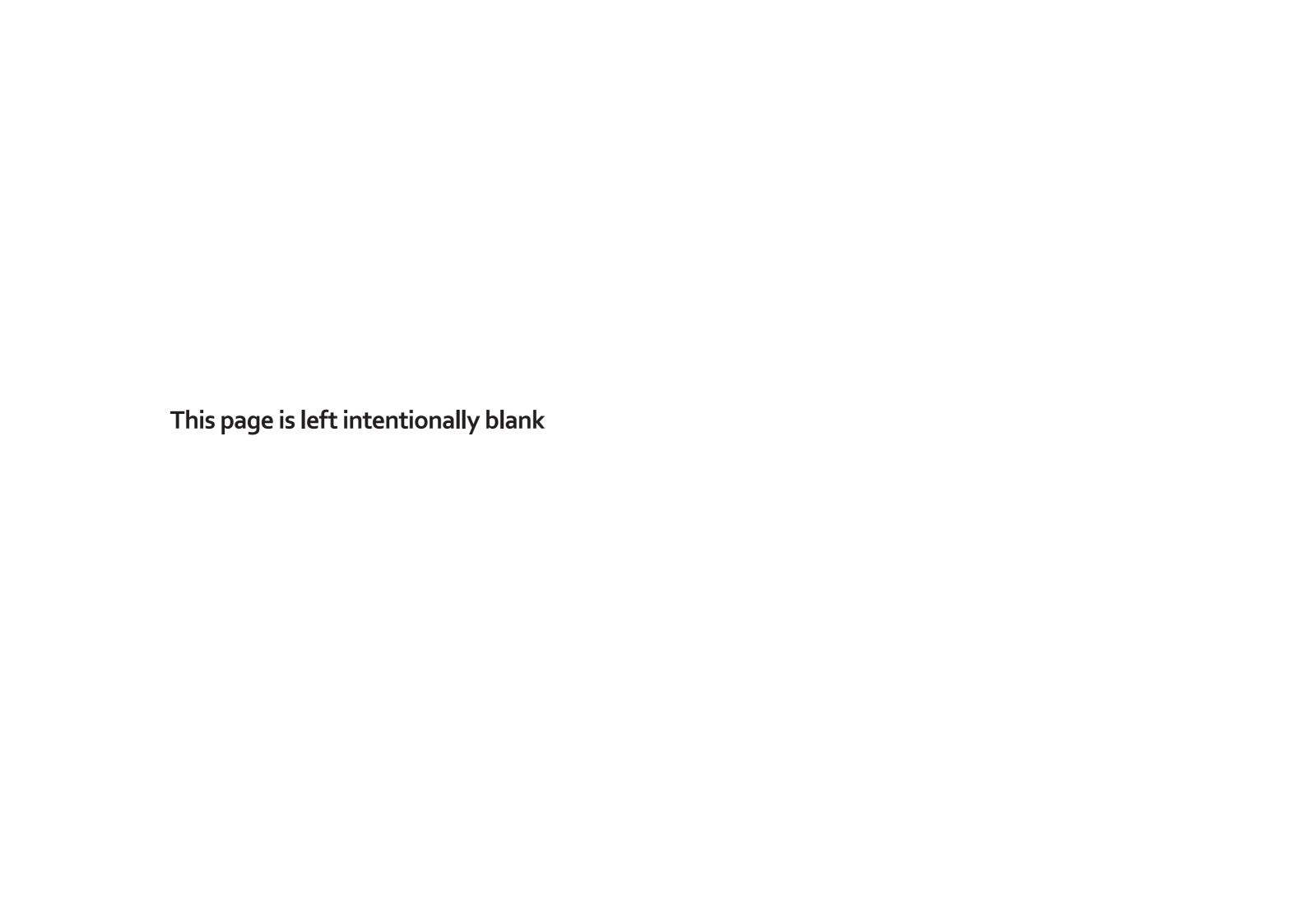


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Volume 5 | CFA16 | Ladbroke and Southam WR-03 – Water Framework Directive



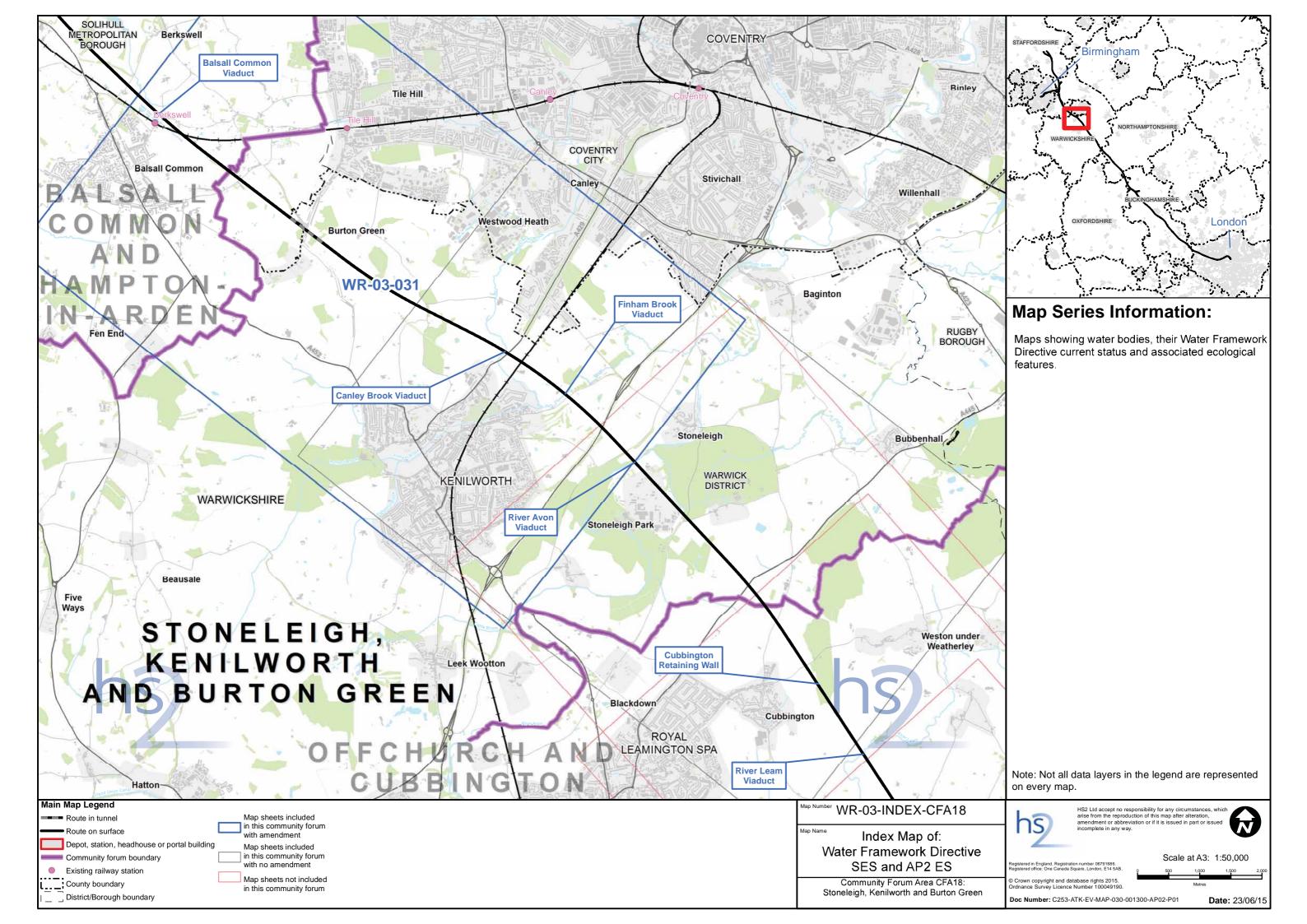


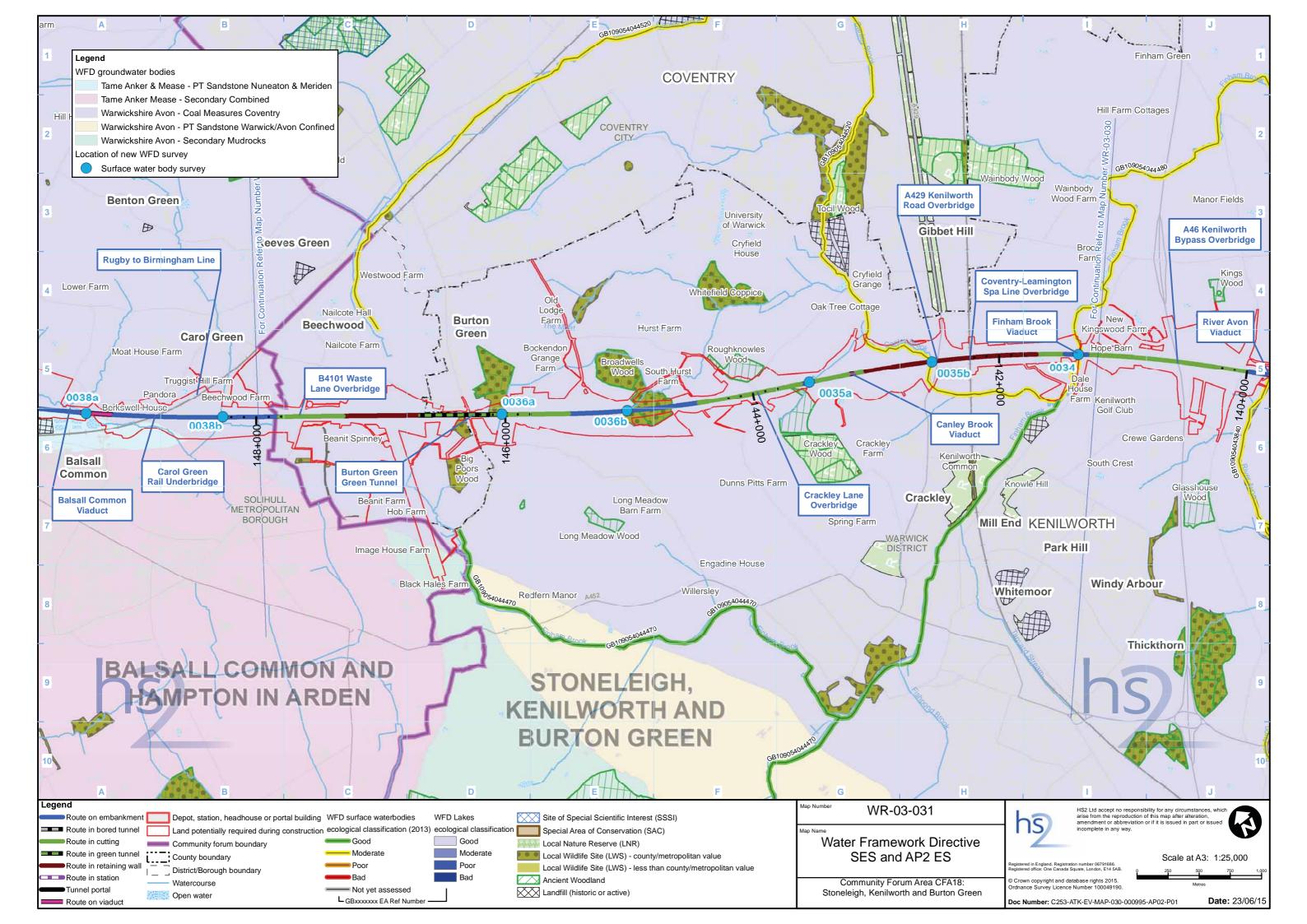


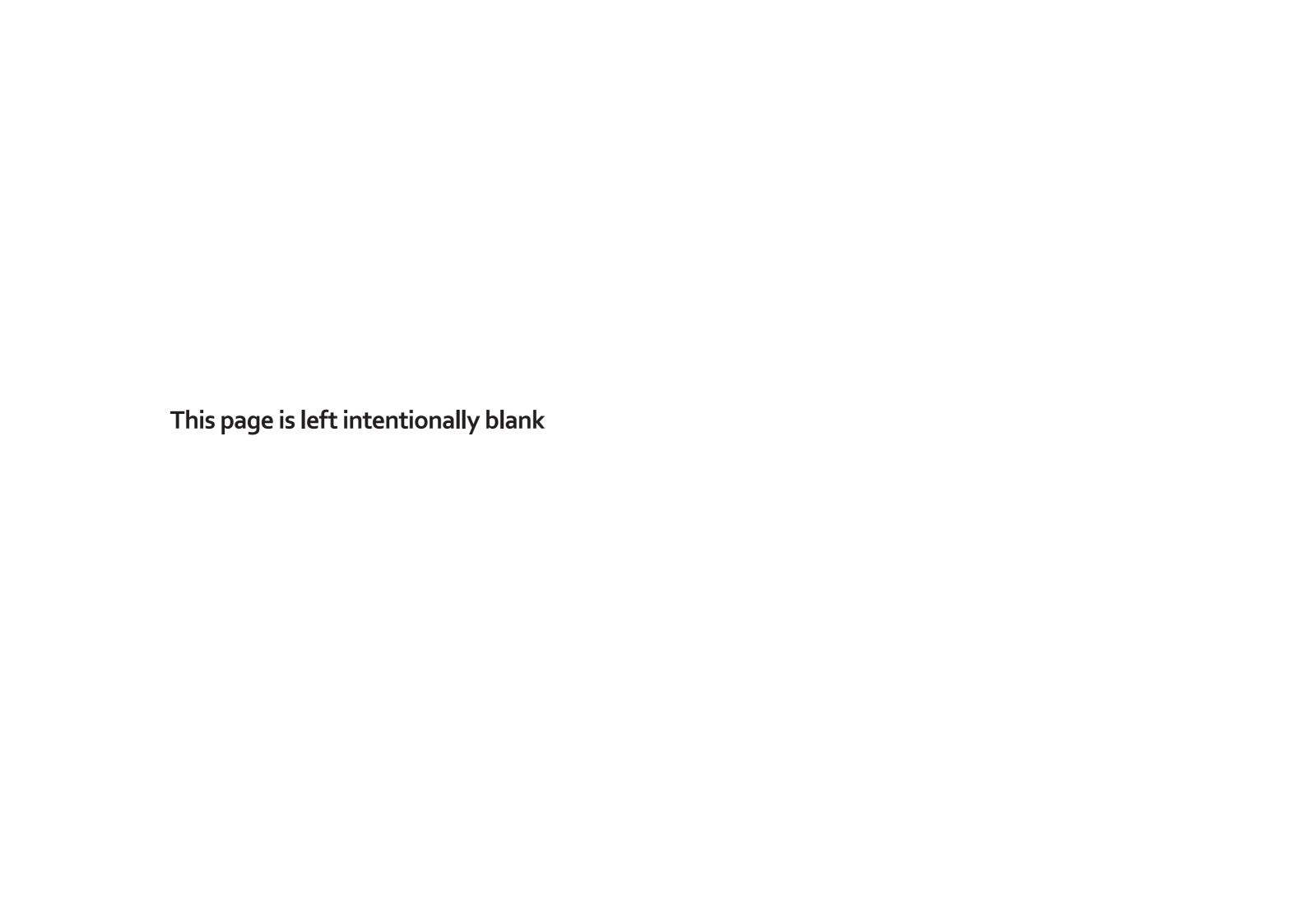


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Volume 5 | CFA18 | Stoneleigh, Kenilworth and Burton Green WR-03 – Water Framework Directive









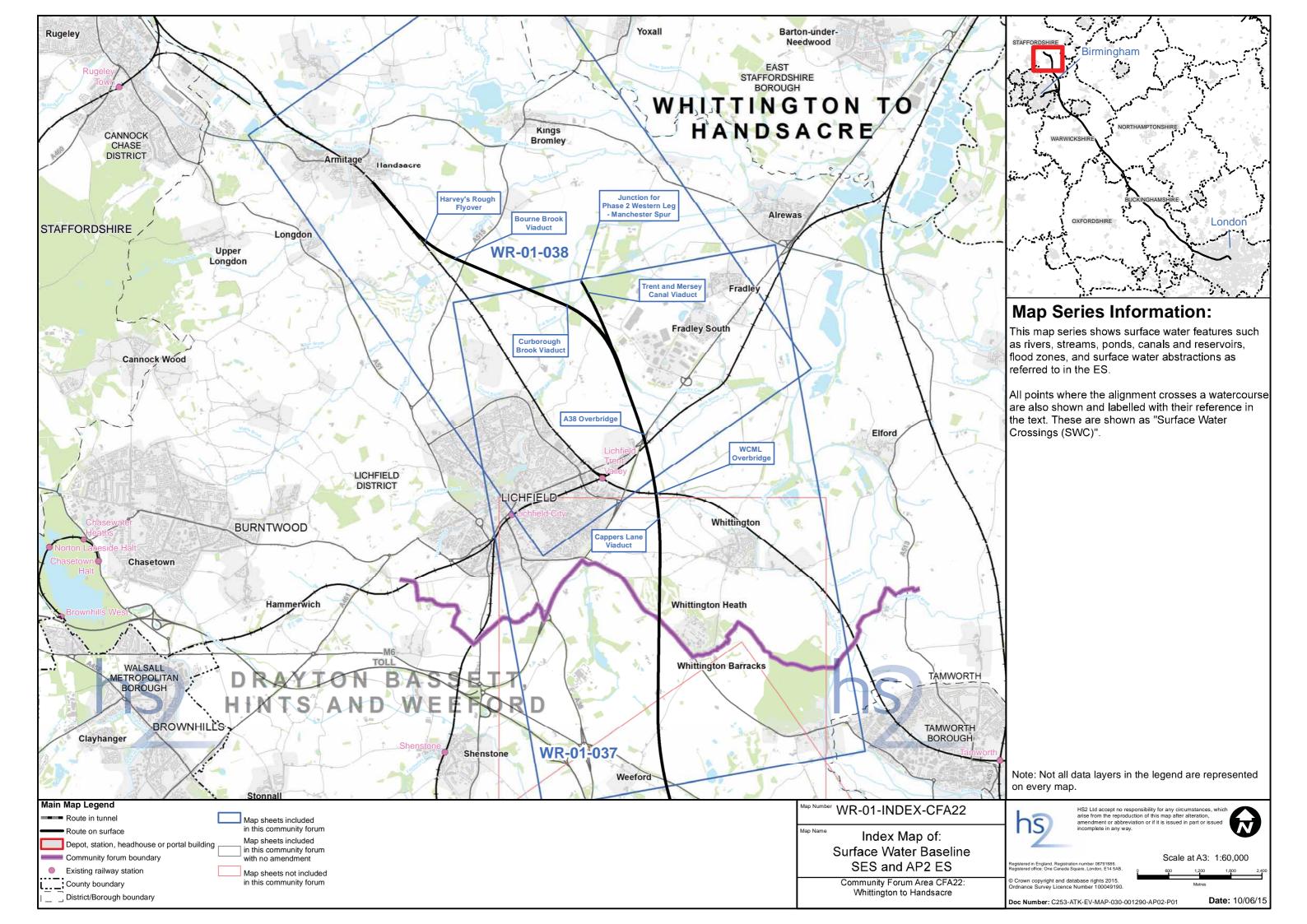
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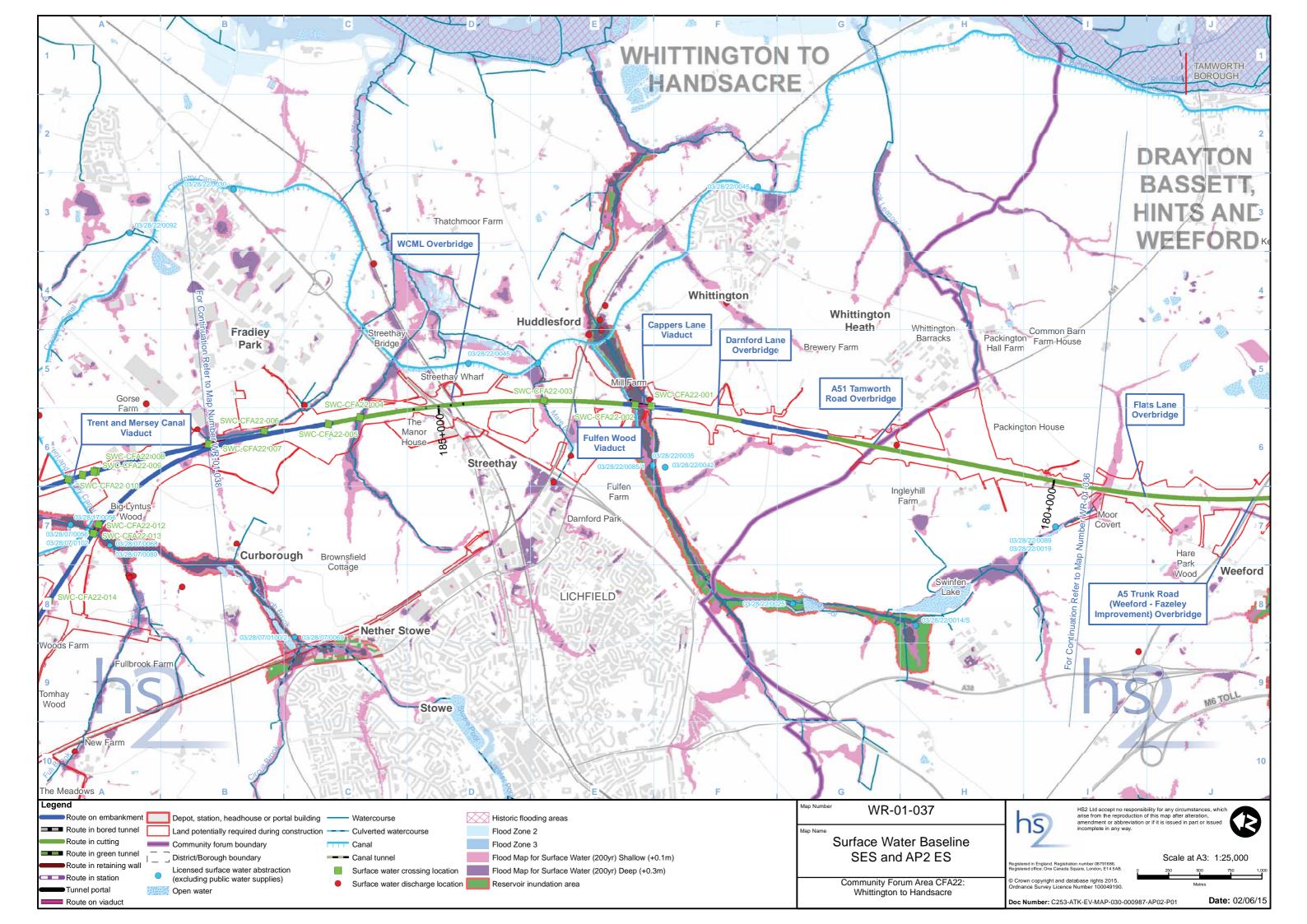
Volume 5 | CFA22 | Whittington to Handsacre

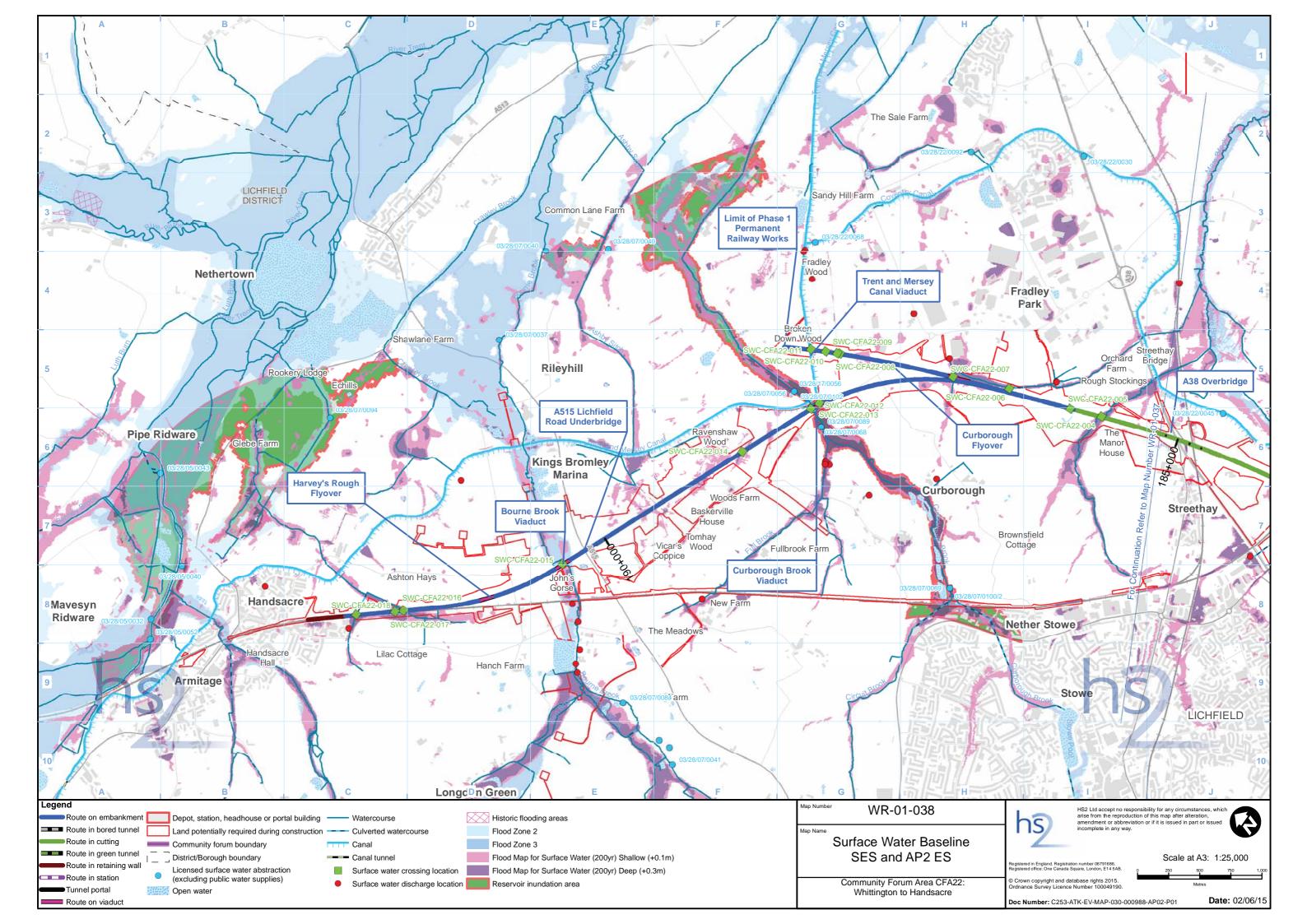
WR-01 – Surface Water Baseline

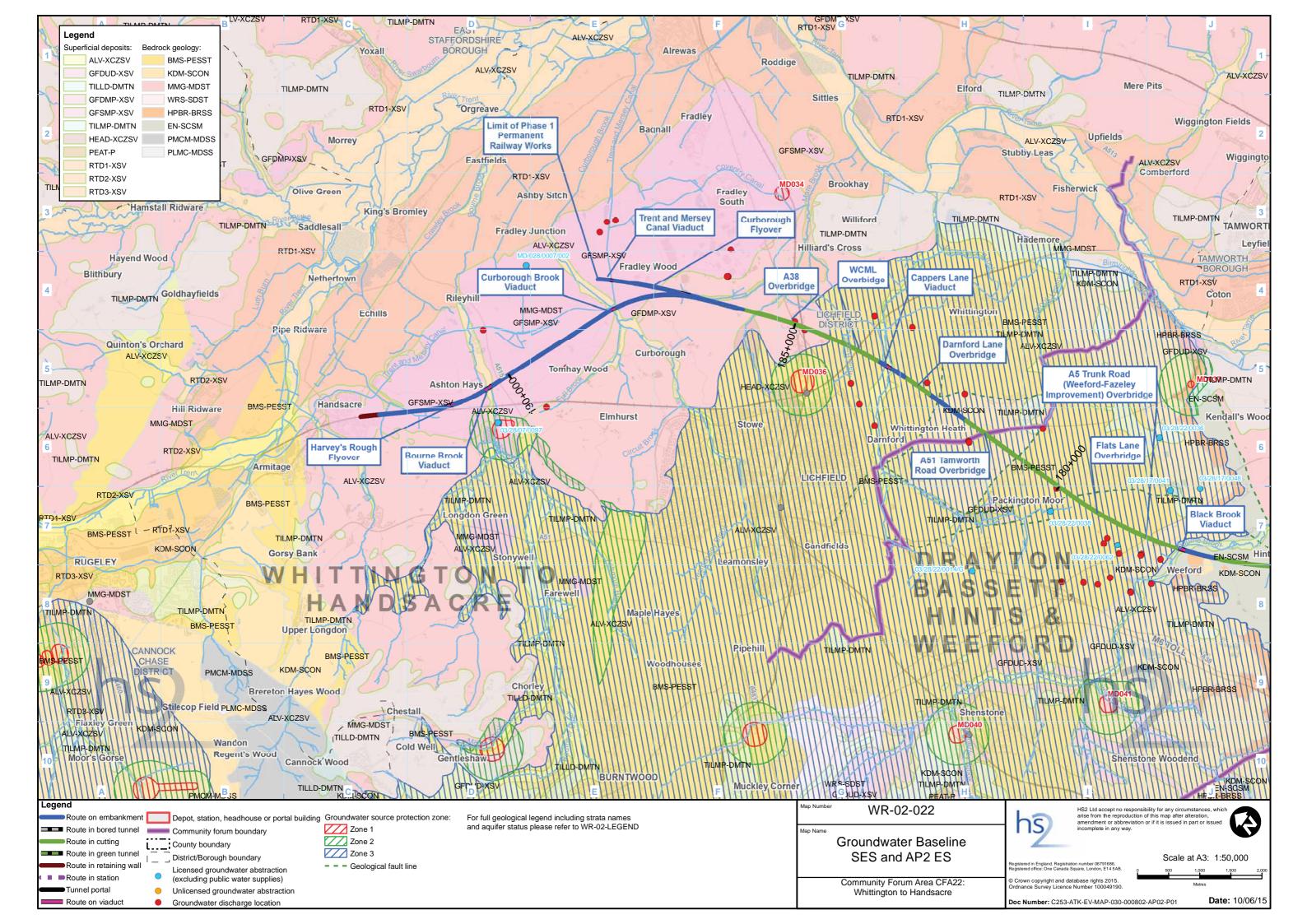
WR-02 – Groundwater Baseline

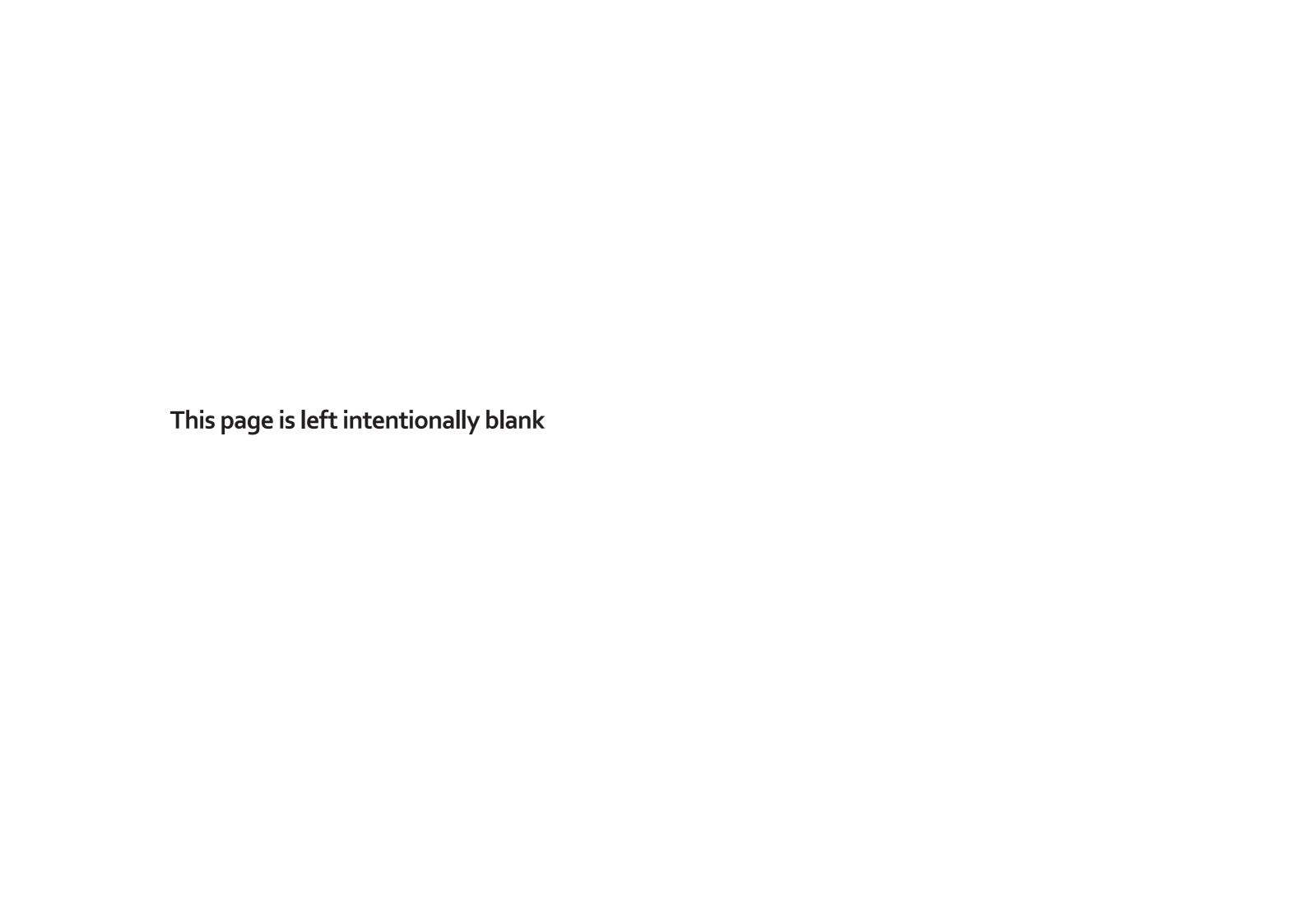
WR-03 – Water Framework Directive

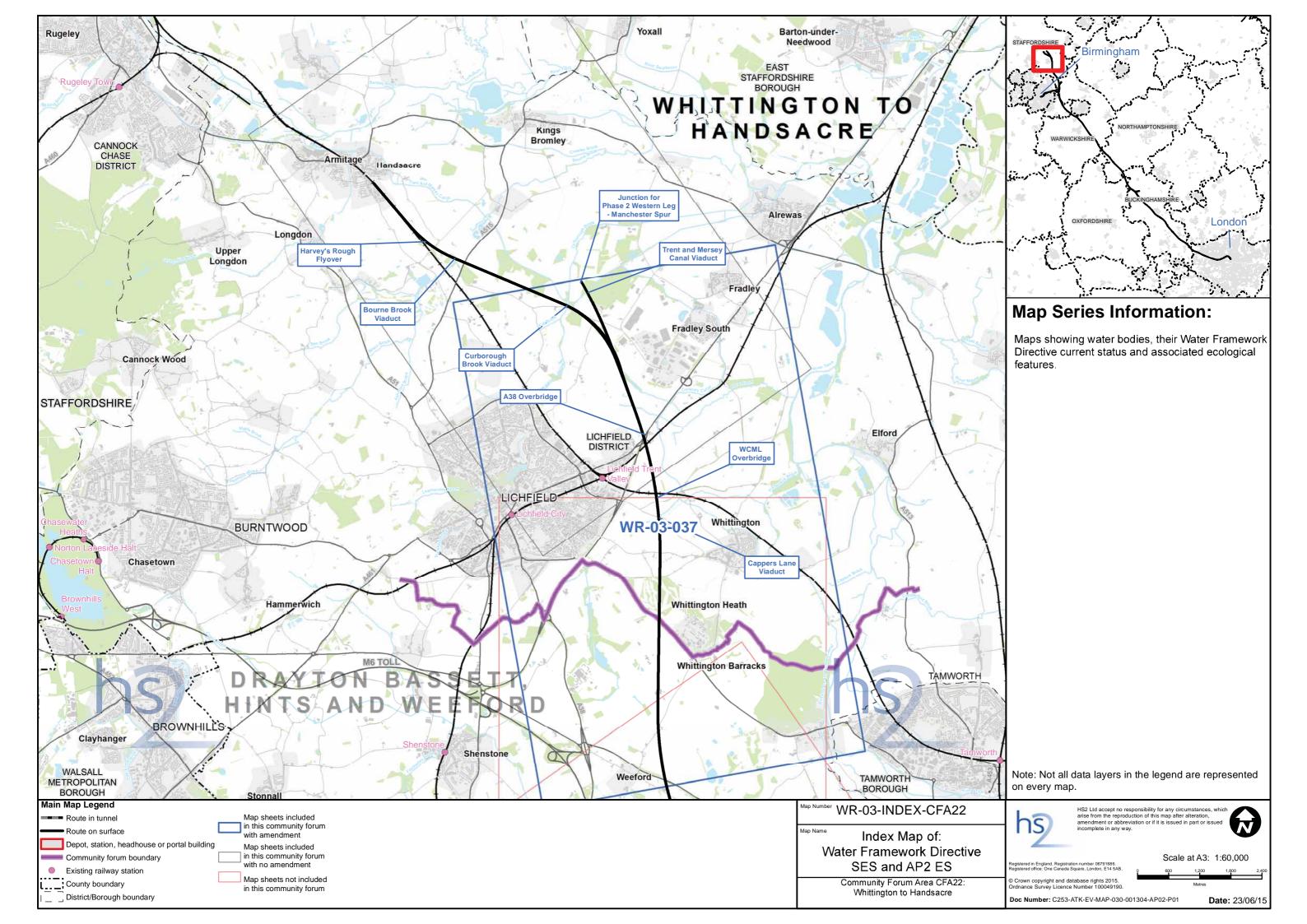


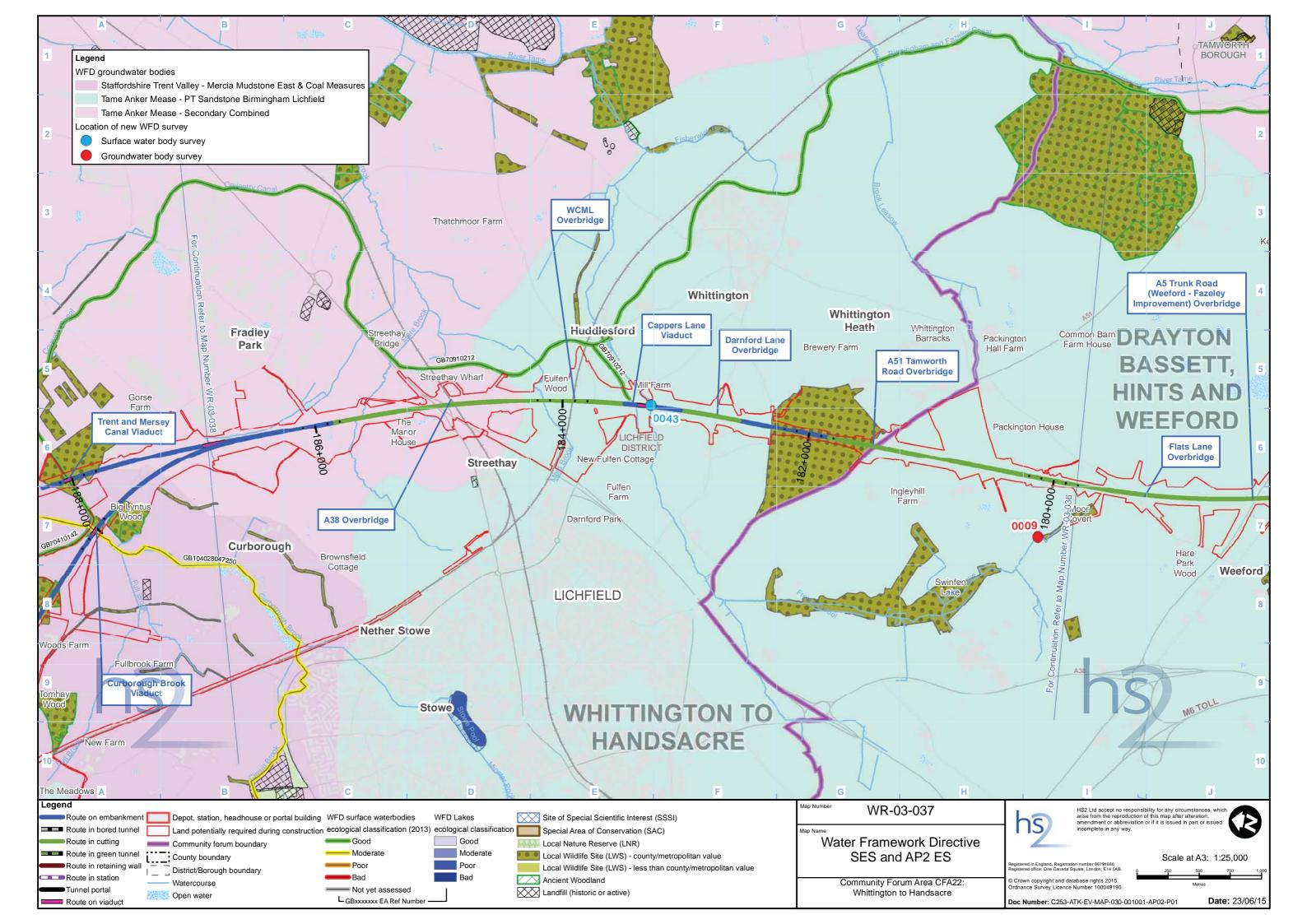








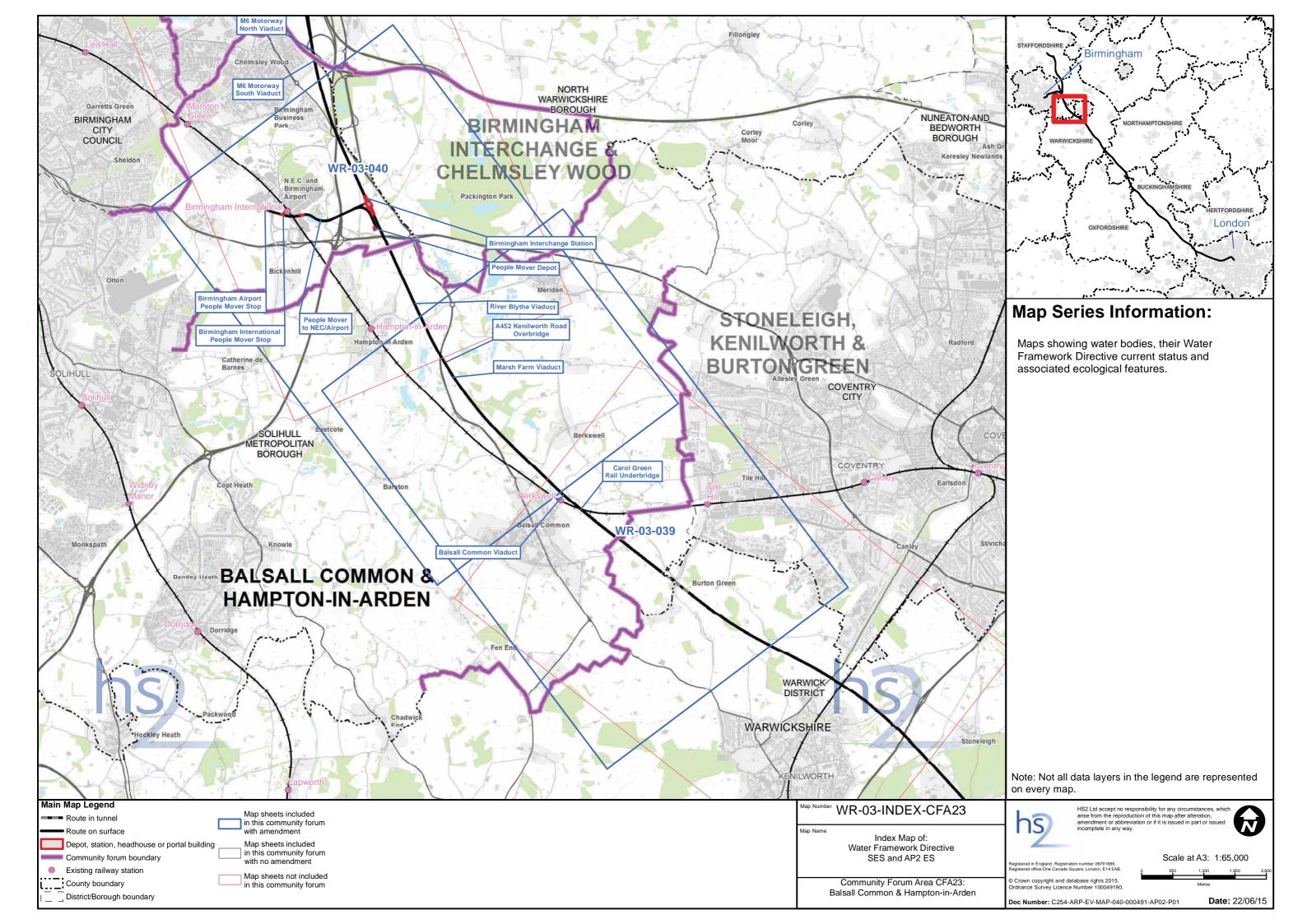


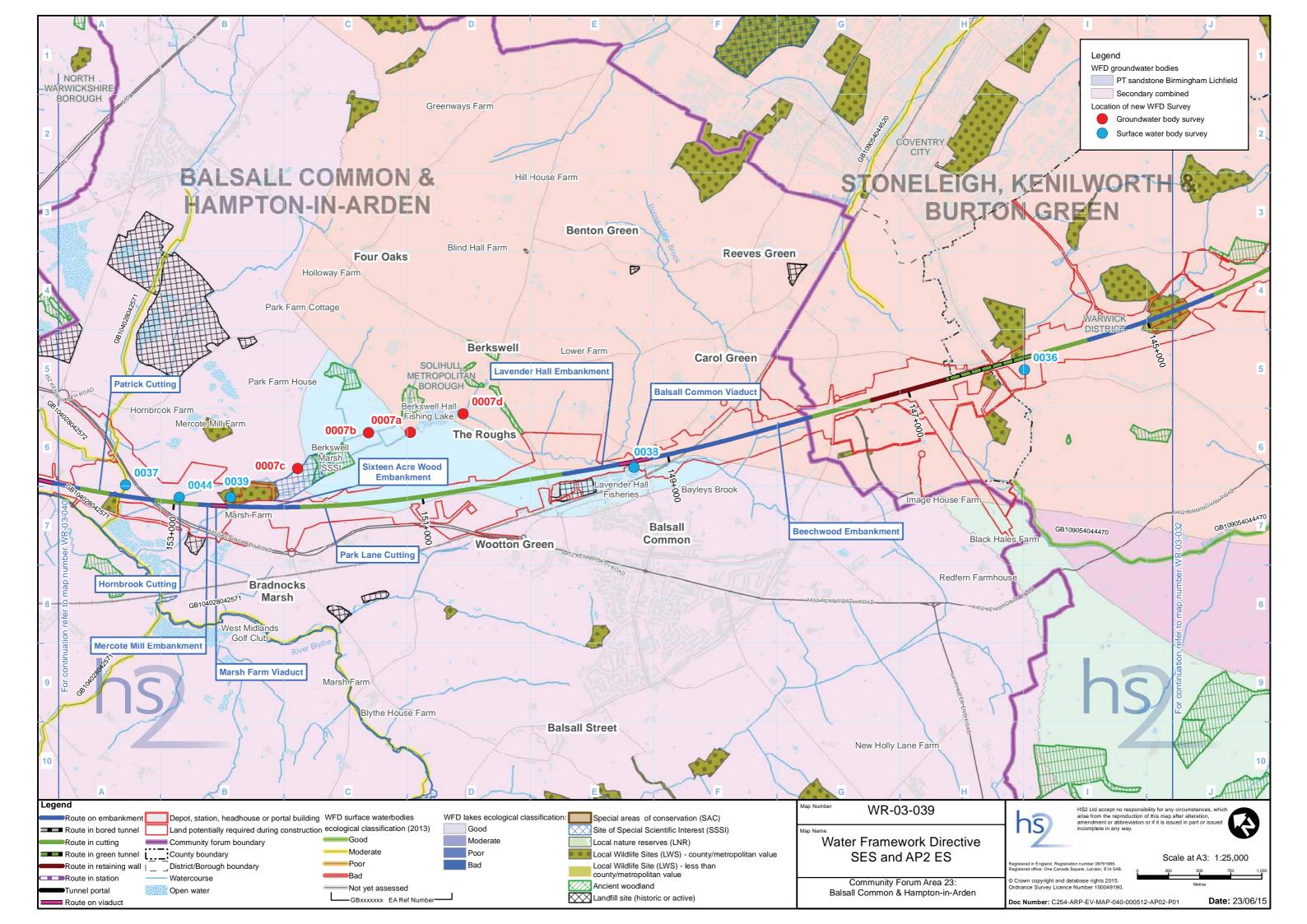


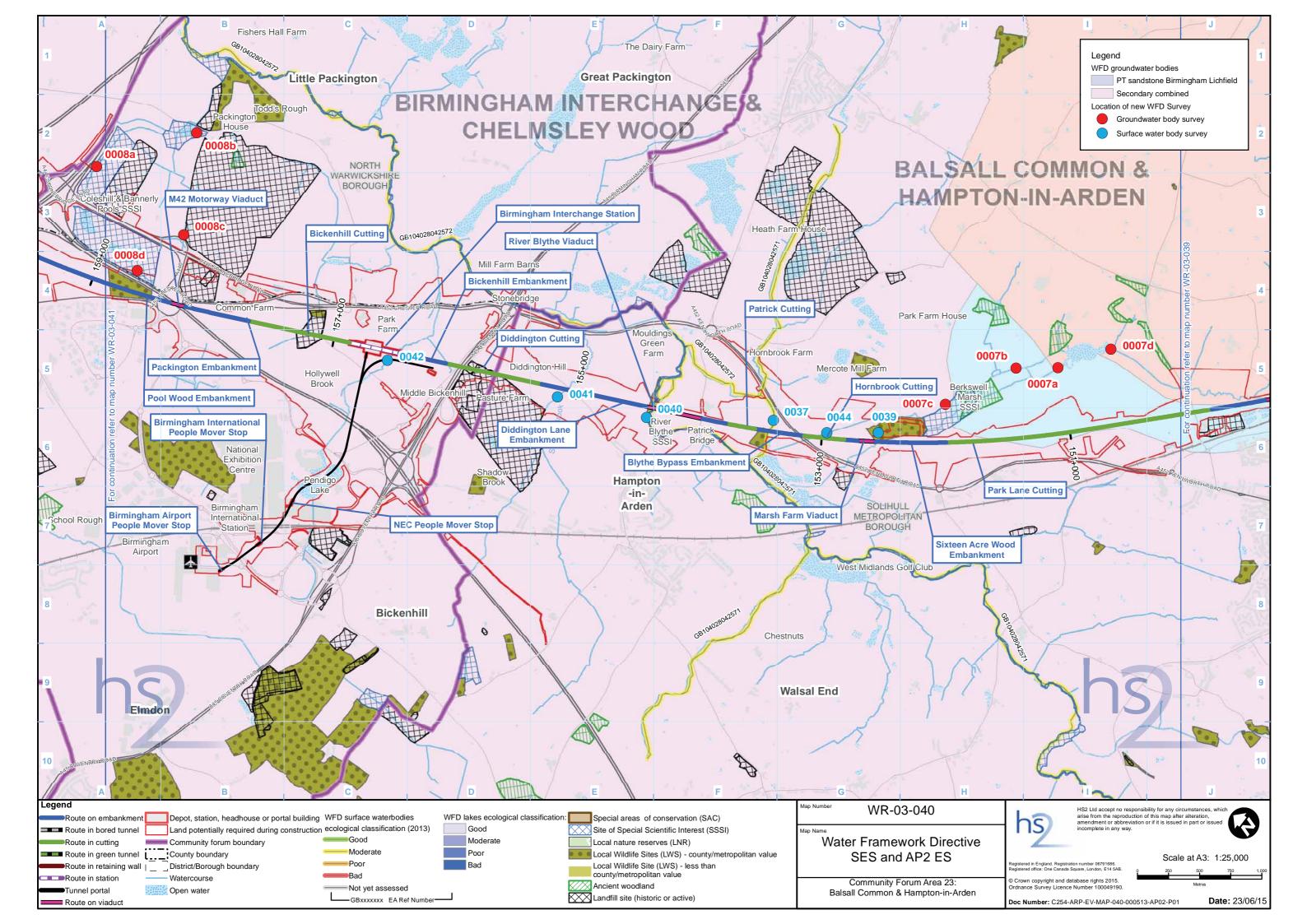


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Volume 5 | CFA23 | Balsall Common and Hampton-in-Arden WR-03 – Water Framework Directive



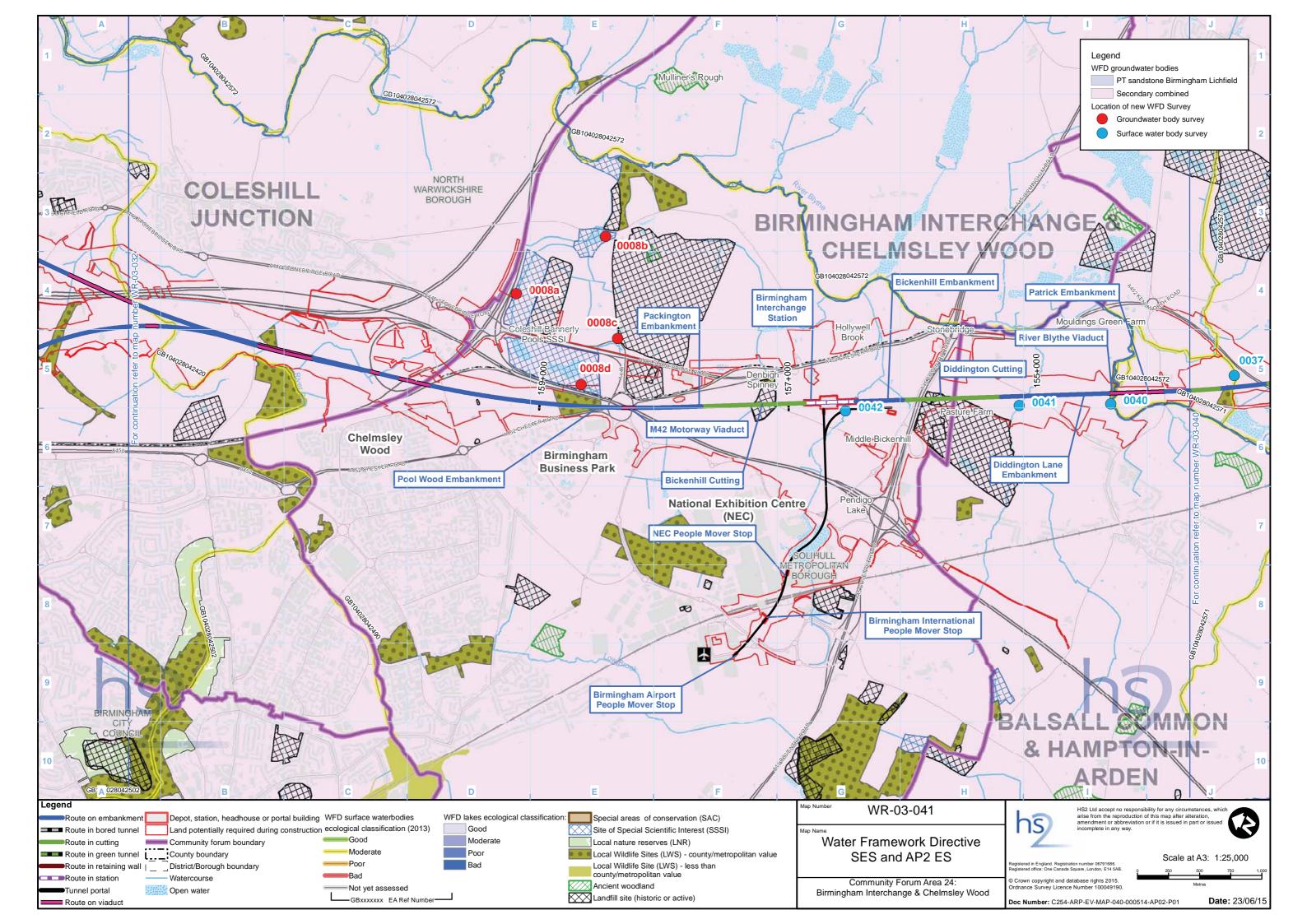






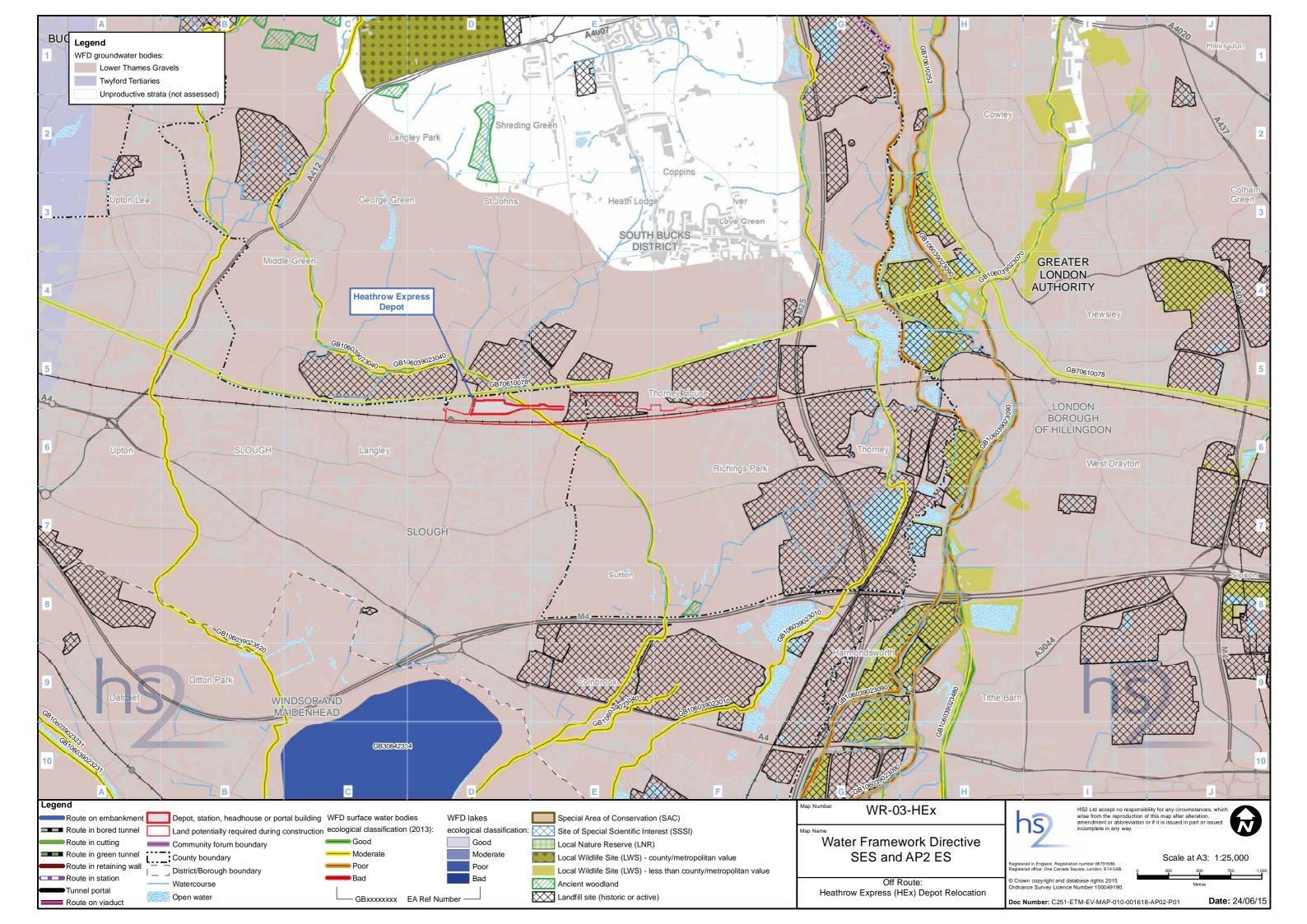
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Volume 5 | CFA24 | Birmingham Interchange and Chelmsley Wood WR-03 – Water Framework Directive



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Volume 5 | Off Route | Proposed Site for Relocation of Heathrow Express (HEx) Depot WR-03 – Water Framework Directive





**High Speed Two (HS2) Limited** One Canada Square London E14 5AB

**T** 020 7944 4908

E hs2enquiries@hs2.org.uk

X105