

HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement and Additional Provision 2 Environmental Statement

Volume 5 | Technical appendices map book
Ecology | London Metropolitan
CFA4 – Kilburn (Brent) to Old Oak Common
CFA5 – Northolt Corridor
CFA6 – South Ruislip to Ickenham

July 2015

SES and AP2 ES 3.5.13.1

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Department
for Transport

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

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

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BRINCKERHOFF**



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Map series name	EC-04 - Amphibians	EC-05 - Bats – Roost	EC-06 - Bats – Activity	EC-12 - Other Protected and Notable Species (2)
Map series description	<i>This map series shows the results of amphibian surveys conducted to inform the Environmental Assessment. It principally details the results of great crested newt surveys conducted. In addition it shows the location of those 'exceptional' populations of common amphibians recorded.</i>	<i>This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. It shows the location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.</i>	<i>This map series shows the location of bat activity surveys conducted to inform the Environmental Statement. In addition it shows the location of the key bat foraging and commuting routes which have been established on the basis of the survey work conducted.</i>	<i>This map series shows the extent of protected species surveys conducted to inform the Environmental Statement.</i>
Community Forum Area name				
CFA 04 – Kilburn (Brent) to Old Oak Common	✖	✓	✖	✖
CFA 05 – Northolt Corridor	✖	✓	✖	✖
CFA 06 – South Ruislip to Ickenham	✓	✓	✓	✓

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 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 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 differing 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 reference number. Only maps which have been amended as a result of 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
Volume 2 Community forum area map book: CFA12 Waddesdon and Quainton	Volume 5 Technical appendices map book: Ecology - CFA13 Calvert, Steeple Claydon, Twyford and Chetwode
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	

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Supplementary Environmental Statement and
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Volume 5 | Data dictionary and definitions

Data dictionary and definitions

Legend features	Definition	Source	Copyright
250m radius from all water bodies where presence of Great Crested Newt is confirmed.	250m radius from all water bodies where presence of Great Crested Newt (GCN) is confirmed.	High Speed Two (HS2) Ltd	
50m radius from all water bodies where presence of Great Crested Newt is confirmed.	50m radius from all water bodies where presence of Great Crested Newt (GCN) is confirmed.	High Speed Two (HS2) Ltd	
500m radius from all water bodies where presence of Great Crested Newt is confirmed.	500m radius from all water bodies where presence of Great Crested Newt (GCN) is confirmed.	High Speed Two (HS2) Ltd	
Activity transect route	Transect route that was surveyed during bat activity surveys.	High Speed Two (HS2) Ltd	
Ancient woodland	Ancient Woodland Inventory. Ancient Woodland is land that has had continuous woodland cover since at least 1600AD.	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
Aquatic invertebrate: Aquatic invertebrate survey location	Location of aquatic invertebrate survey.	High Speed Two (HS2) Ltd	
Assumed key area of foraging habitat	Likely areas of bat foraging habitat for local bat populations, derived from bat activity survey results.	High Speed Two (HS2) Ltd	
Assumed key commuting route	Key commuting and foraging bat routes that have been identified by an ecologist after review of available survey data and application of professional judgement.	High Speed Two (HS2) Ltd	
Bat activity static detector location	Location where bat activity static detectors were used during survey period.	High Speed Two (HS2) Ltd	
Biodiversity Alert Site (BAS)	<p>Local wildlife sites in Staffordshire are Biodiversity Alert Sites (BAS)and Sites of Biological Importance (SBI). BAS are local wildlife sites and are of lower intrinsic quality or have suffered damage or disturbance. Nevertheless, they collectively form a significant part of Staffordshire’s nature conservation resource, and, in some cases, a valuable reserve series for some of the SBI.</p> <p>The BAS 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.</p> <ul style="list-style-type: none"> - 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 right of public access. 	Staffordshire Ecological Record	Copyright © Staffordshire Ecological Record Partnership, (2015).
Biological Notification Sites (BNS)	Biological Notification Sites (BNS) preceded Local Wildlife Sites as a local non-statutory designation. They were first designated in the late 1980s and have since been revised. There are no formal citations and for some sites we have no survey data.	Buckinghamshire County Council, Buckinghamshire and Milton Keynes Environment Record Centre (BMERC)	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

Legend features	Definition	Source	Copyright
			proceedings. Buckinghamshire County Council Licence No. 100021529,2012. Copyright Buckinghamshire County Council.
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.
Confirmed bat roost – buildings: Hibernation roost Maternity roost Other roost Multiple roost types Potential to support roosting bats – buildings: High Moderate	Locations where bat roost survey has been completed within buildings. Buildings are categorised into those with potential to support bat roosts (high and medium potential) and those that have confirmed roosts. Confirmed roosts are further categorised into Hibernation, Maternity, Other or Multiple roosts.	High Speed Two (HS2) Ltd	
Confirmed bats roost – trees: Hibernation roost Maternity roost Other roost Multiple roost types Potential to support roosting bats – trees: High Moderate	Locations where bat roost survey has been completed within trees. Trees are categorised into those with potential to support bat roosts (high and medium potential) and those that have confirmed roosts. Confirmed roosts are further categorised into Hibernation, Maternity, Other or Multiple roosts.	High Speed Two (HS2) Ltd	
County boundary	County boundaries from Ordnance Survey boundary mapping.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Depot, station, headhouse or portal building	Extends to cover operational footprint of each depot and station and the footprint of each tunnel vent shaft and headhouse at surface level. Excludes any ancillary buildings associated with these structures.	High Speed Two (HS2) Ltd	
District/Borough boundary	Ordnance Survey local authority boundary mapping.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Ditch vegetation survey	Extent of Ditch vegetation surveys.	High Speed Two (HS2) Ltd	
Dormouse: Nest tube survey and/or nut search conducted and presence confirmed Nest tube survey and/or nut search conducted and no signs of dormouse identified Site identified as potentially suitable for dormouse but no access available	Extent of Dormouse survey using nest tube and/or nut search. Those areas where access was available either had confirmed presence or no signs were found.	High Speed Two (HS2) Ltd	
Fish: Fish survey location	Location where fish survey was conducted.	High Speed Two (HS2) Ltd	
Great Crested Newt (GCN) survey locations	Results from Great Crested Newt pond surveys.	High Speed Two (HS2) Ltd	
'Important' hedgerow confirmed by field survey Possible 'Important' hedgerow - no access available for survey	Location of those hedgerows that have been identified as 'important hedgerows' or possible 'important hedgerows' under the wildlife and landscape criteria in the Hedgerows Regulations (2007).	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	High Speed Two (HS2) Ltd	

Legend features	Definition	Source	Copyright
	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.		
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 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.	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
Local Wildlife Site (LWS)	<p>Local Wildlife Sites (LWS) 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.</p> <p>They are local non-statutory nature conservation sites. They were formerly referred to as County Wildlife Sites.</p>	<p>EcoRecord Warwickshire County Council Birmingham Council</p> <p>Greenspace Information for Greater London (GiGL)</p> <p>Buckinghamshire County Council</p> <p>Staffordshire Ecological Record (SER)</p>	<p>Data supplied by EcoRecord, Warwickshire BRC & Birmingham © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.</p> <p>© Crown copyright and database rights 2012 Ordnance Survey Licence Number 100049190. Map derived from GiGL data 2012 (where a map shows information derived from GiGL data).</p> <p>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.</p> <p>Copyright © Staffordshire Ecological Record Partnership, 2015. 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 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.</p>
National Nature Reserve (NNR)	A National Nature Reserve (NNR) is the land declared under the National Parks and Access to the Countryside Act 1949 or 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

Legend features	Definition	Source	Copyright
			100049190. Year of Publication 2015. http://www.naturalengland.org.uk/Images/open-government-licence-NE-OS_tcm6-30743.pdf
National Vegetation Classification survey	Extent of National Vegetation Classification surveys.	High Speed Two (HS2) Ltd	
Nature reserve	<p>Designated and non-designated nature reserves managed by local authorities, The Wildlife Trusts and private landowners.</p> <p>Nature reserve 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.</p> <p>- 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</p> <p>- The presence of a marked boundary within SER information does not infer any right of public access.</p>	Ecorecord, Staffordshire Ecological Record, Royal Society for the Protection of Birds	<p>Licensed in accordance with PSMA © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.</p> <p>Copyright © Staffordshire Ecological Record Partnership, (2015).</p> <p>Data reproduced with the permission of RSPB. © Crown copyright. Ordnance Survey Licence Number 100021787 (2015).</p>
Otter: Active otter holt Potential otter holt	Location of active otter holts and potential otter holts found during field survey.	High Speed Two (HS2) Ltd	
Otter terrestrial habitat	Areas of terrestrial habitat within 100m of the Proposed Scheme that are identified as having 'high' potential to act as otter breeding sites (i.e. those ranked as having a score of 5 on the scale devised by Chanin).	High Speed Two (HS2) Ltd	
Phase 1 Habitat survey data	Results from Phase1 habitat surveys.	High Speed Two (HS2) Ltd	
Pond survey: Pond survey – national pond survey Pond survey – PSYM Pond survey – rapid assessment method	Location and type of pond surveys conducted.	High Speed Two (HS2) Ltd	
River corridor survey extent	Extent of river corridor surveys.	High Speed Two (HS2) Ltd	
River habitat survey extent	Extent of river habitat surveys.	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	
Site of Biological Importance (SBI)	<p>Local wildlife sites in Staffordshire are called Sites of Biological Importance (SBI) and Biodiversity Alert Sites (BAS). SBI are generally the best remaining examples within Staffordshire of habitats which rate highly on the basis of such factors as naturalness, diversity or rarity of species or communities. These sites are frequently the remnants of larger areas of semi-natural vegetation, which may not be either sufficiently extensive or undisturbed to warrant SSSI status but are important examples of characteristic or notable vegetation types or habitat complexes (sometimes with associated dependent plant or animal species). As such, they contribute the most significant element in the county's nature conservation resources.</p> <p>The SBI information is reproduced from, or based upon information supplied by Staffordshire Ecological Record (SER) and reproduced with</p>	Staffordshire Ecological Record	Copyright © Staffordshire Ecological Record Partnership, (2015).

Legend features	Definition	Source	Copyright
	<p>the permission of the SER Partnership. Individual records within the data are copyright their original recorders and provided under licence via SER.</p> <ul style="list-style-type: none"> - 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 right of public access. 		
Site of Borough (Grade I) Importance for Nature Conservation (SBI.I)	SINCs are designated by a panel of local ecological professionals. This is a non-statutory designation, although SINCs are still afforded a high level of protection within the planning system. Development that negatively impacts on a SINC will only be permitted in exceptional circumstances and where mitigation can be proven from the beginning. Sites of Borough Importance (grade 1) are selected from candidates within each borough, so ensuring that borough has some sites identified.	Greenspace Information for Greater London (GiGL)	GiGL data [2015].
Site of Borough (Grade II) Importance for Nature Conservation (SBI.II)	SINCs are designated by a panel of local ecological professionals. This is a non-statutory designation, although SINCs are still afforded a high level of protection within the planning system. Development that negatively impacts on a SINC will only be permitted in exceptional circumstances and where mitigation can be proven from the beginning. Sites of Borough Importance (grade 2) are selected from candidates within each borough, so ensuring that borough has some sites identified.	Greenspace Information for Greater London (GiGL)	GiGL data (2015).
Site of Importance for Nature Conservation (SINC)	Also known as Local Wildlife Sites, these sites have a 'substantive nature conservation value'. They are defined areas, identified and selected locally for their nature conservation value, based on important, distinctive and threatened habitats and species with a national, regional and (importantly) a local context.	EcoRecord	Licensed in accordance with PSMA © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Site of Local Importance for Nature Conservation (SLINC)	<p>Also known as Local Wildlife Sites, these sites have a 'substantive nature conservation value'. They are defined areas, identified and selected locally for their nature conservation value, based on important, distinctive and threatened habitats and species with a national, regional and (importantly) a local context.</p> <p>The system in operation in London identifies three grades of SINC: Sites of Metropolitan Importance (SMI); Sites of Borough Importance (SBI); and Sites of Local Importance (SLI).</p>	EcoRecord Greenspace Information for Greater London (GiGL)	<p>Licensed in accordance with PSMA © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015. Crown Copyright and database rights 2012 Ordnance Survey Licence Number 1000049190.</p> <p>GiGL data (2015).</p>
Site of Metropolitan Importance for Nature Conservation (SMI)	Sites of Metropolitan Importance are selected on a London-wide basis. These come under the umbrella designation of SINCs which are designated by a panel of local ecological professionals. This is a non-statutory designation, although SINCs are still afforded a high level of protection within the planning system. Development that negatively impacts on a SINC will only be permitted in exceptional circumstances and where mitigation can be proven from the beginning. Sites of Metropolitan Importance are selected on a London-wide basis.	Greenspace Information for Greater London (GiGL)	<p>Licensed in accordance with PSMA © Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.</p> <p>GiGL data (2015).</p>
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

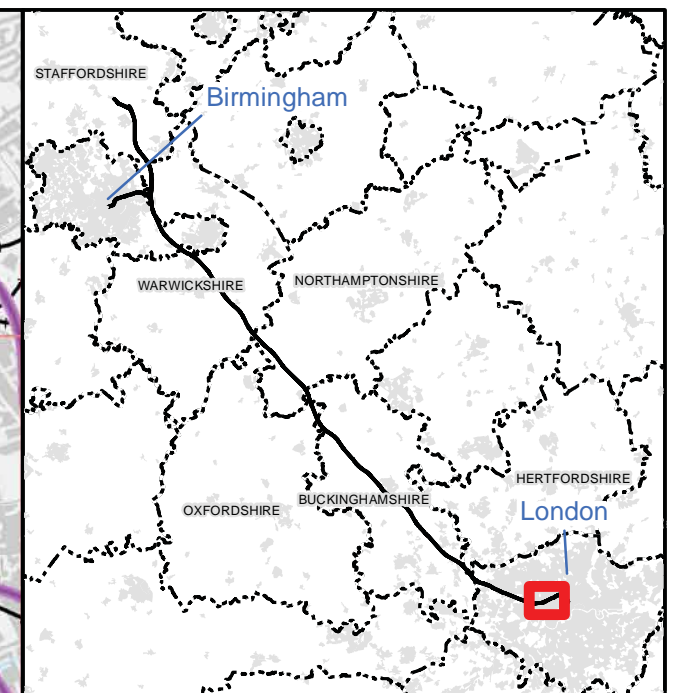
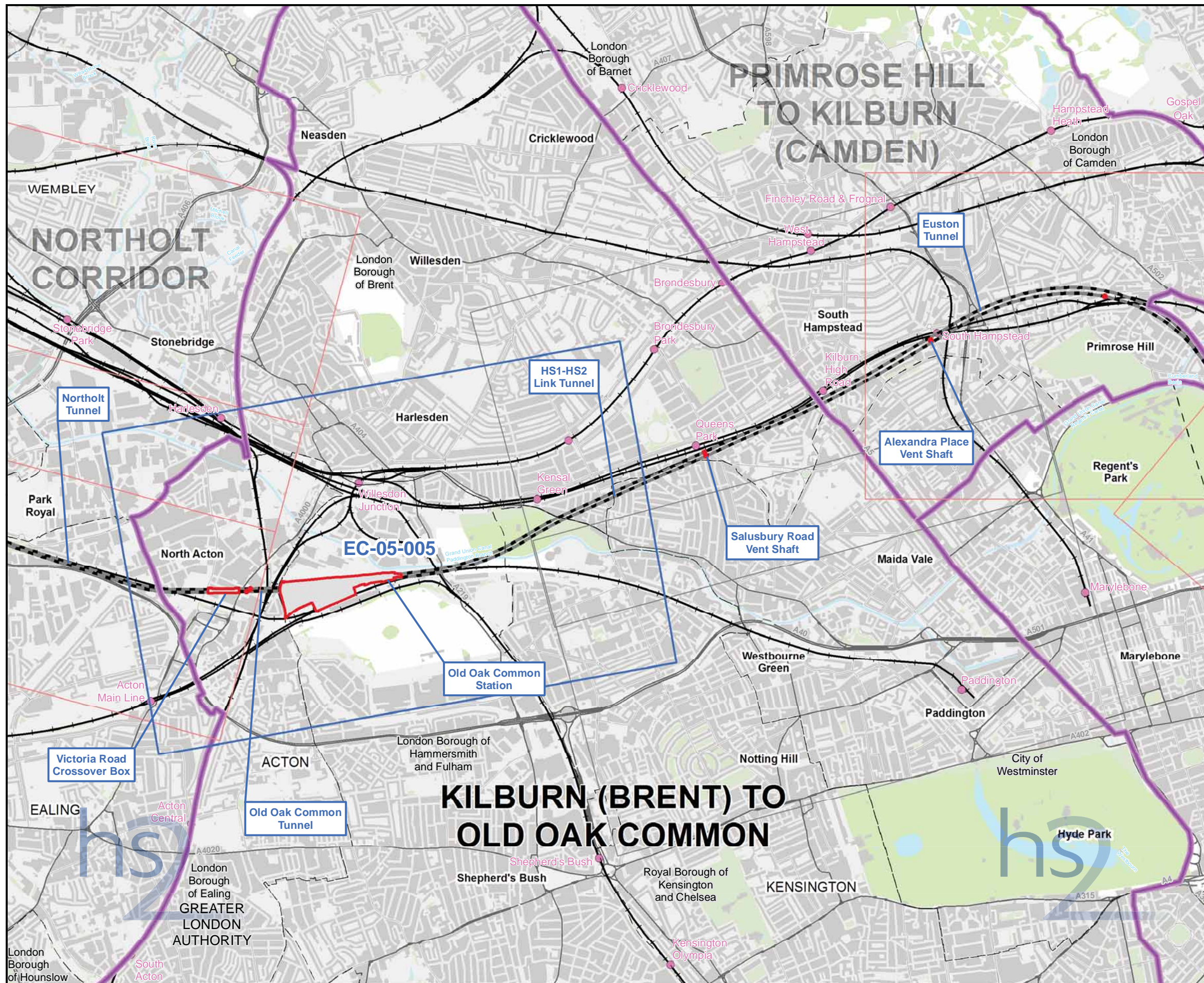
Legend features	Definition	Source	Copyright
			permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015. http://www.naturalengland.org.uk/Images/open-government-licence-NE-OS_tcm6-30743.pdf
Terrestrial invertebrate: Terrestrial invertebrate survey extent	Extent of terrestrial invertebrate survey.	High Speed Two (HS2) Ltd	
Water body	Based on Ordnance Survey Vector Map District.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Water vole: Water vole survey undertaken – presence confirmed Water vole survey undertaken – assumed absent Watercourse potentially suitable for water vole – no or limited access for survey	Extent of water vole survey. Those areas where access was available either had confirmed presence or water voles were assumed absent.	High Speed Two (HS2) Ltd	
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.
White clawed crayfish: Manual search and/or trapping conducted and presence confirmed Manual search and/or trapping conducted and assumed absent Site identified as potentially suitable but no access available	Location where white clawed crayfish survey was conducted. Location categorised as to whether presence was confirmed, assumed absent or no access was available.	High Speed Two (HS2) Ltd	
Woodland (not verified by survey) Woodland (verified by survey)	Woodland areas derived from Ordnance Survey mastermap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.

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HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement and
Additional Provision 2 Environmental Statement

Volume 5 | CFA4 | Kilburn (Brent) to Old Oak Common
EC-05 – Bats – Roosts



Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Main Map Legend	
Route in tunnel	Map sheets included in this community forum with amendment
Route on surface	Map sheets included in this community forum with no amendment
Depot, station, headhouse or portal building	Map sheets not included in this community forum
Community forum boundary	
Existing railway station	
County boundary	
District/Borough boundary	

Map Number	EC-05-INDEX-CFA4
Map Name	Index Map of: Bat - Roost SES and AP2 ES Community Forum Area CFA4: Kilburn (Brent) to Old Oak Common

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Scale at A3: 1:30,000

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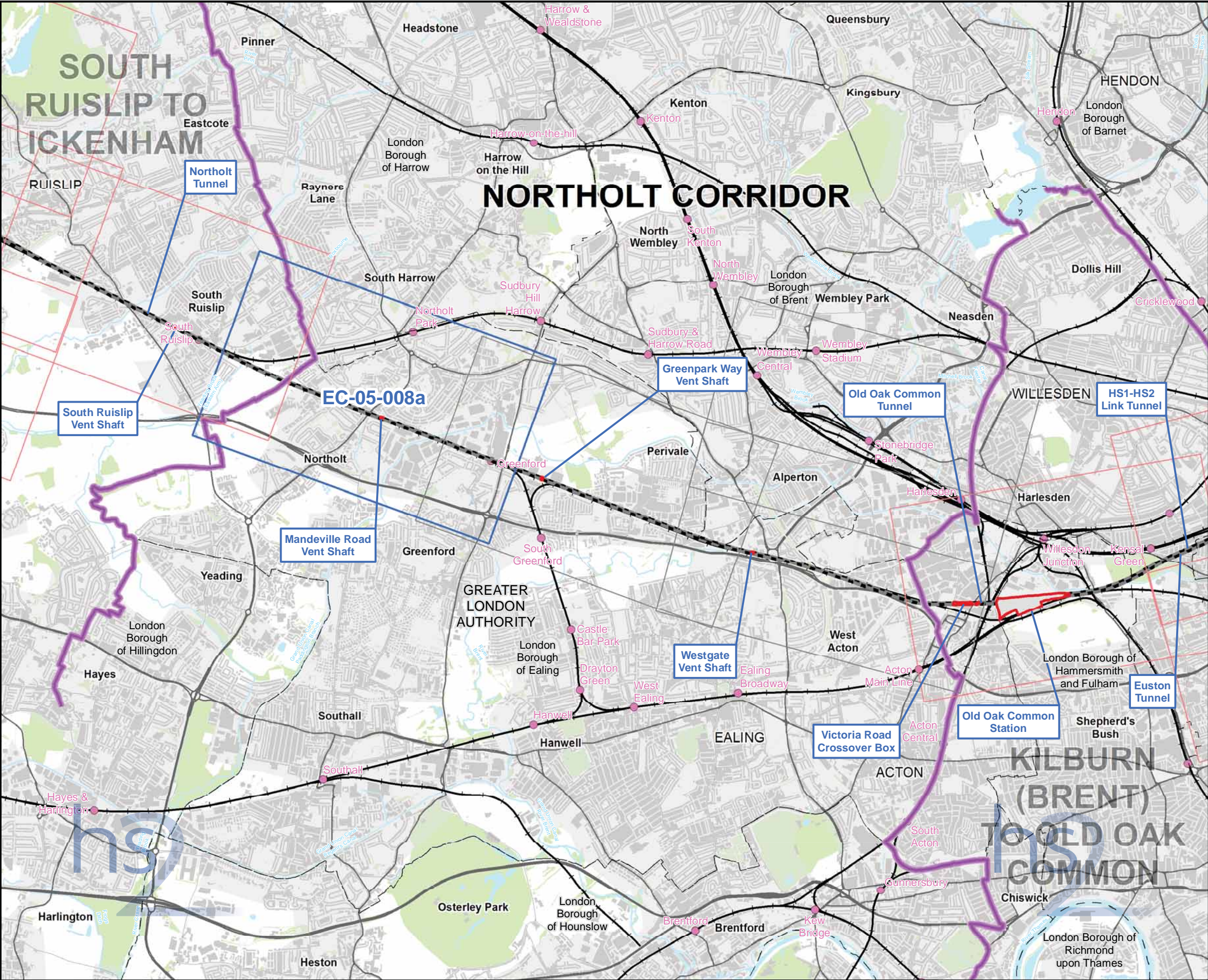
Doc Number: C251-ETM-EV-MAP-010-001571-AP02-P01 Date: 08/06/15

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HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement and
Additional Provision 2 Environmental Statement

Volume 5 | CFA5 | Northolt Corridor
EC-05 – Bats – Roosts



Route in tunnel

Route on surface

Depot, station, headhouse or portal building

Community forum boundary

Existing railway station

County boundary

District/Borough boundary

Map sheets included in this community forum with amendment

Map sheets included in this community forum with no amendment

Map sheets included in this community forum

Map Number

EC-05-INDEX-CFA5

Map Name

Index Map of:
Bat - Roost
SES and AP2 ES
Community Forum Area CFA5:
Northolt Corridor

Map Series Information:

This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Note: Not all data layers in the legend are represented on every map

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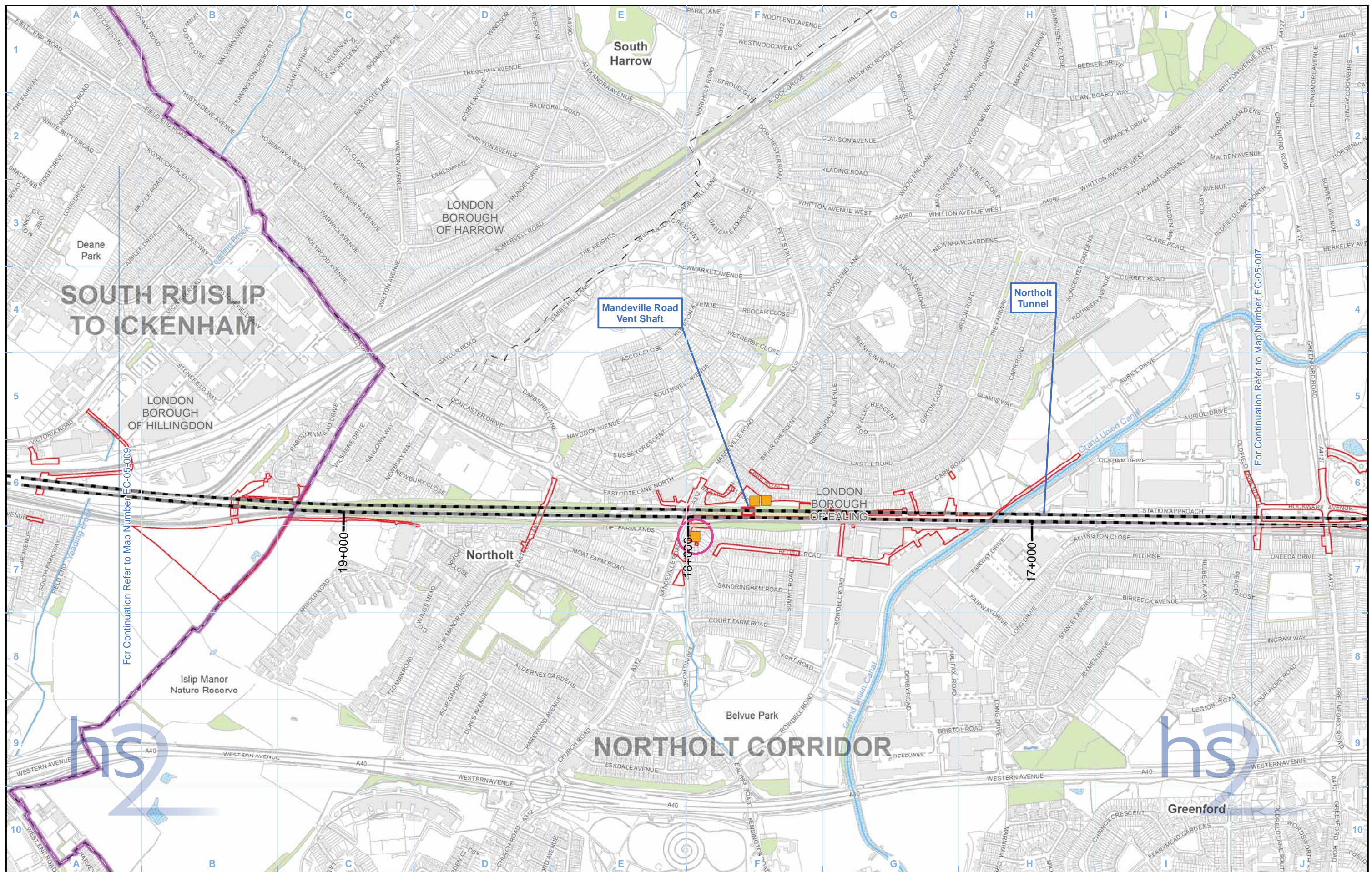
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Metres

Doc Number: C251-ETM-EV-MAP-010-001578-AP02-P01

Date: 05/06/15



Legend

Route in tunnel

Route on surface

Depot, station, headhouse or portal building

Land potentially required during construction

Community forum boundary

County boundary

District/Borough boundary

Watercourse

Water body

Woodland (not verified by survey)

Area contains new survey data

Confirmed bat roost - trees:

Hibernation roost

Maternity roost

Other roost

Multiple roost types

Confirmed bat roost - buildings:

Hibernation roost

Maternity roost

Other roost

Multiple roost types

Potential to support roosting bats - trees:

High

Moderate

Potential to support roosting bats - buildings:

High

Moderate

Map Number

EC-05-008a

Map Name

Bat - Roost
SES and AP2 ES

Community Forum Area CFA5:
Northolt Corridor

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Scale at A3: 1:10,000

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Metres

Doc Number: C251-ETM-EV-MAP-010-001577-AP02-P01

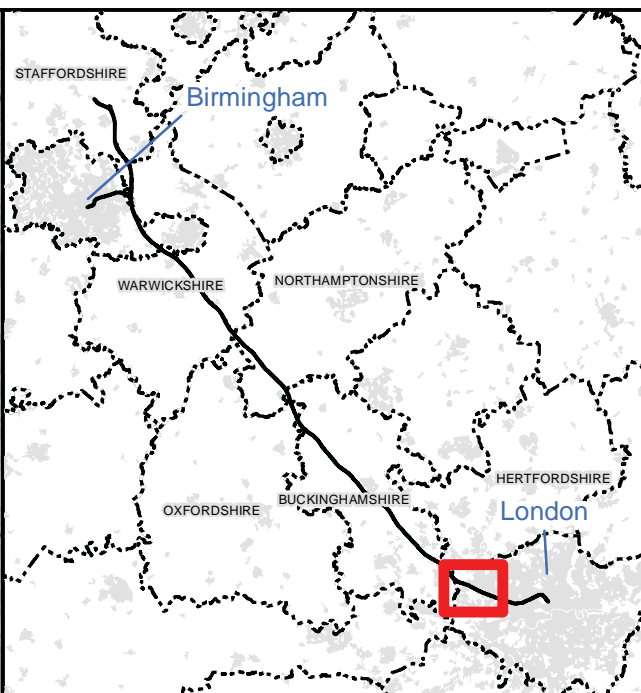
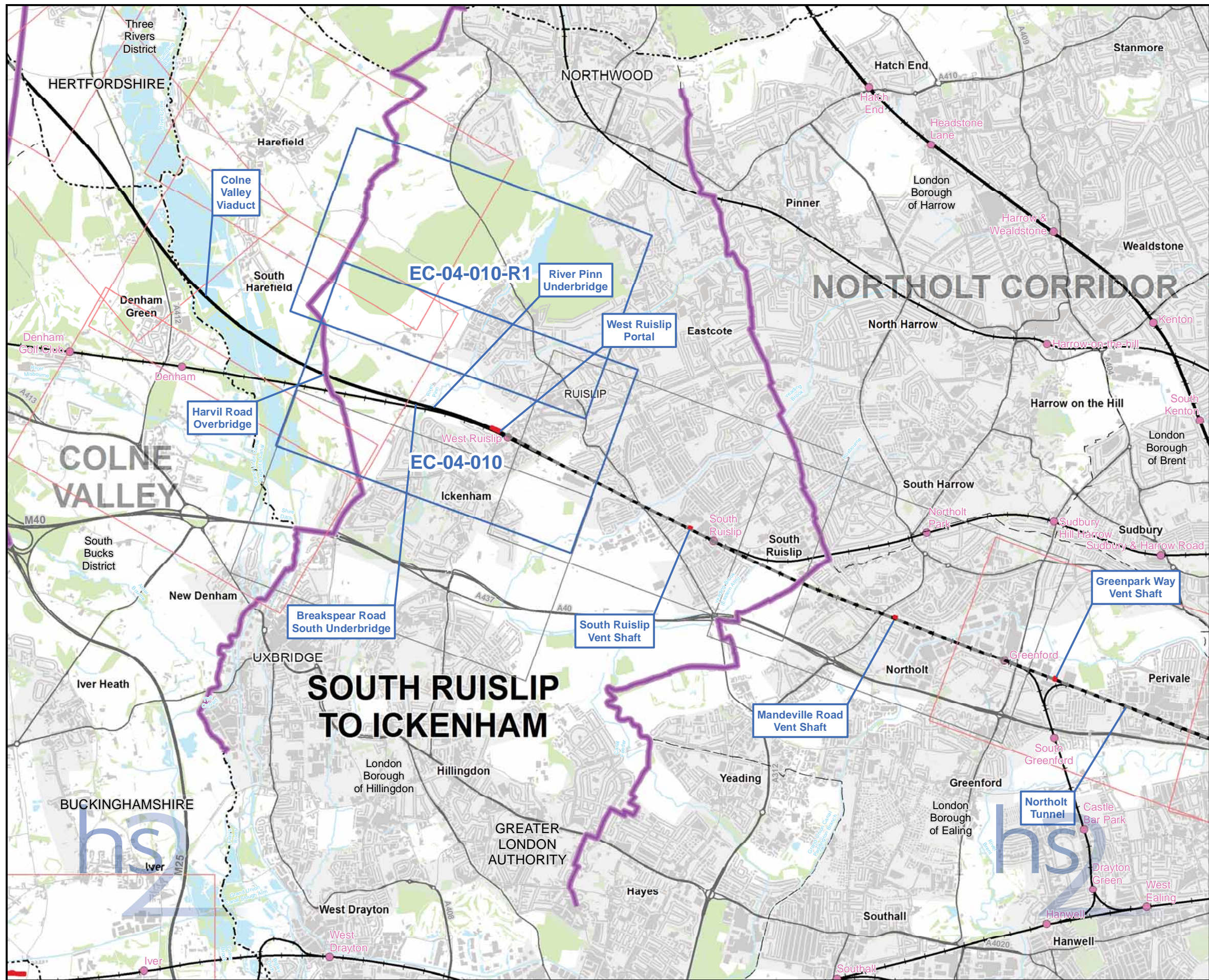
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HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement and Additional Provision 2 Environmental Statement

Volume 5 | CFA6 | South Ruislip to Ickenham
EC-04 – Amphibians
EC-05 – Bats – Roosts
EC-06 – Bats – Activity
EC-12 – Other Protected and Notable Species (2)



Map Series Information:

This map series shows the results of amphibian surveys conducted to inform the Environmental Assessment. It principally details the results of great crested newt surveys conducted. In addition it show the location of those 'exceptional' populations of common amphibians recorded.

Main Map Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Community forum boundary
- Existing railway station
- County boundary
- District/Borough boundary

- Map sheets included in this community forum with amendment
- Map sheets included in this community forum with no amendment
- Map sheets not included in this community forum

Map Number

EC-04-INDEX-CFA6

Map Name

Index Map of:
Amphibians
SES and AP2 ES
Community Forum Area CFA6:
South Ruislip to Ickenham

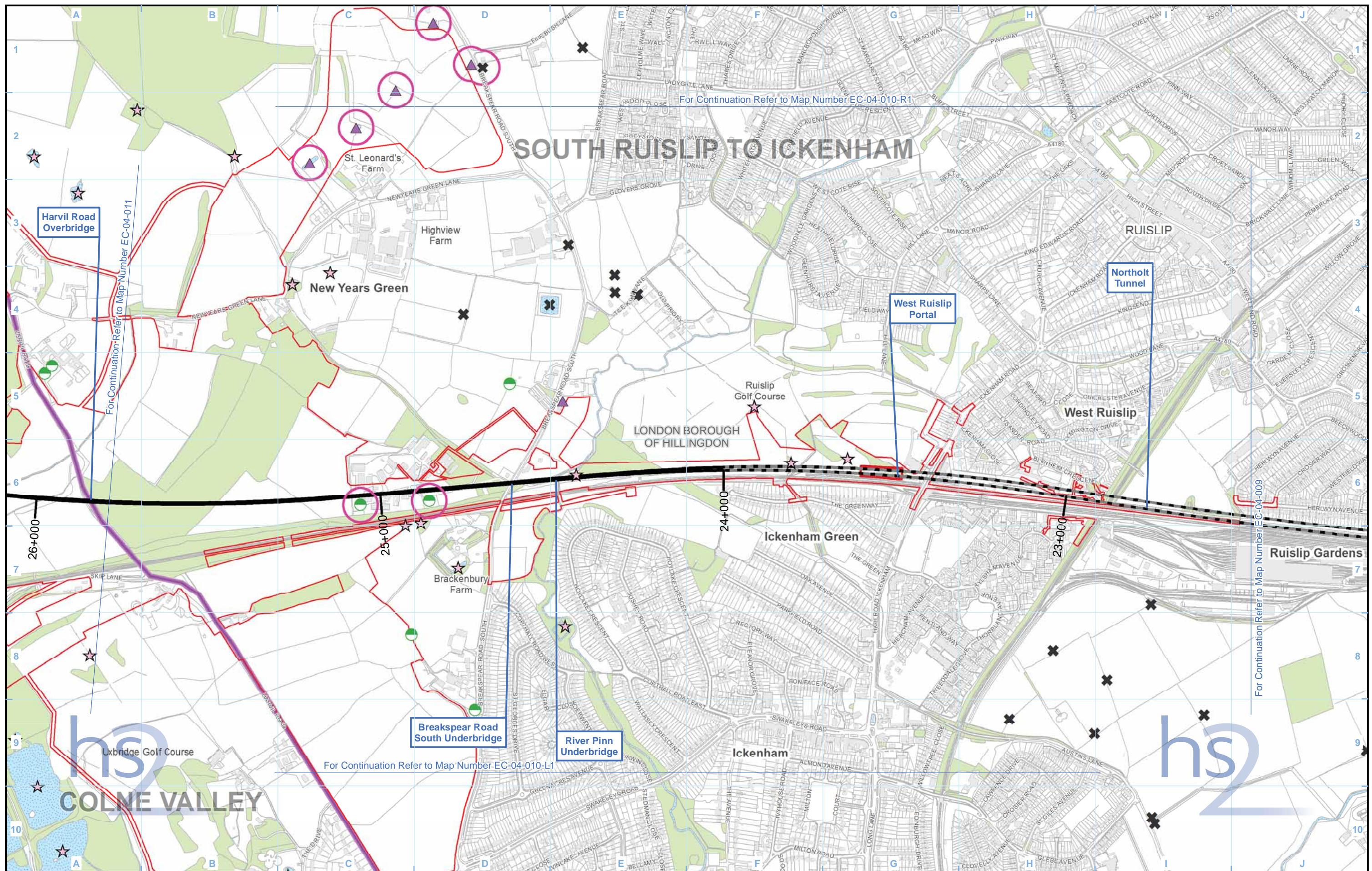
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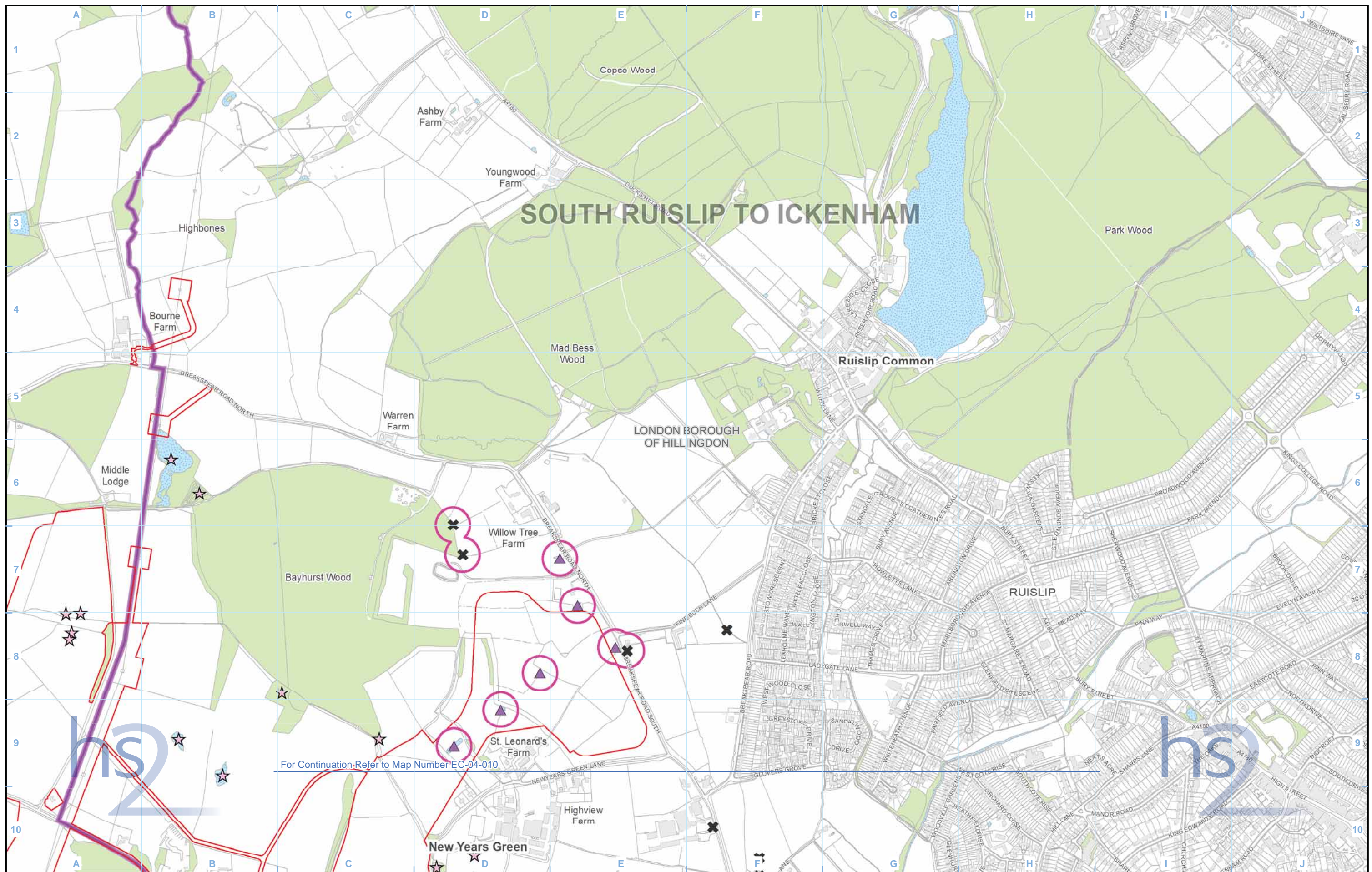
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Date: 08/06/15



Legend		Map Number EC-04-010		 HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way. Registered in England. Registration number 0679 1686. Registered office: One Canada Square, London, E14 5AB. © Crown copyright and database rights 2015. Ordnance Survey Licence Number 100049190. Doc Number: C251-ETM-EV-MAP-010-001581-AP02-P01 Date: 08/06/15
Route in tunnel	District/Borough boundary	Survey complete, Great Crested Newts assumed absent	Map Name Amphibians SES and AP2 ES	
Route on surface	Watercourse	Scoped in - Habitat Suitability Index (HSI)/walkover only	Community Forum Area CFA6: South Ruislip to Ickenham	
Depot, station, headhouse or portal building	Water body	Scoped in - no access permission		
Land potentially required during construction	Woodland (not verified by survey)	Scoped out - no survey required		
Community forum boundary	Area contains new survey data			
County boundary				




For Continuation Refer to Map Number EC-04-010

- Legend**
- Route in tunnel
 - Route on surface
 - Depot, station, headhouse or portal building
 - Land potentially required during construction
 - Community forum boundary
 - County boundary
 - District/Borough boundary
 - Watercourse
 - Water body
 - Woodland (not verified by survey)
 - Area contains new survey data

- Scoped in - Habitat Suitability Index (HSI)/walkover only
- Scoped in - no access permission
- Scoped out - no survey required


Map Number	EC-04-010-R1
Map Name	Amphibians SES and AP2 ES
Community Forum Area CFA6: South Ruislip to Ickenham	




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Doc Number: C251-ETM-EV-MAP-010-001580-AP02-P01



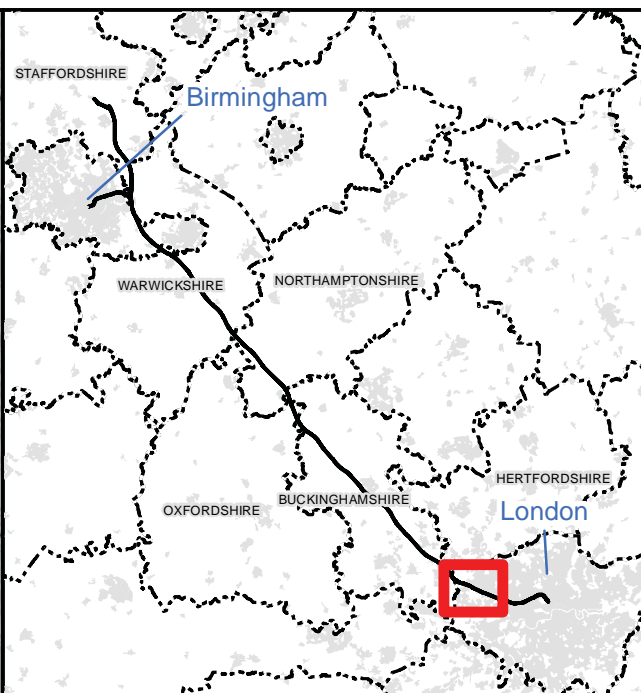
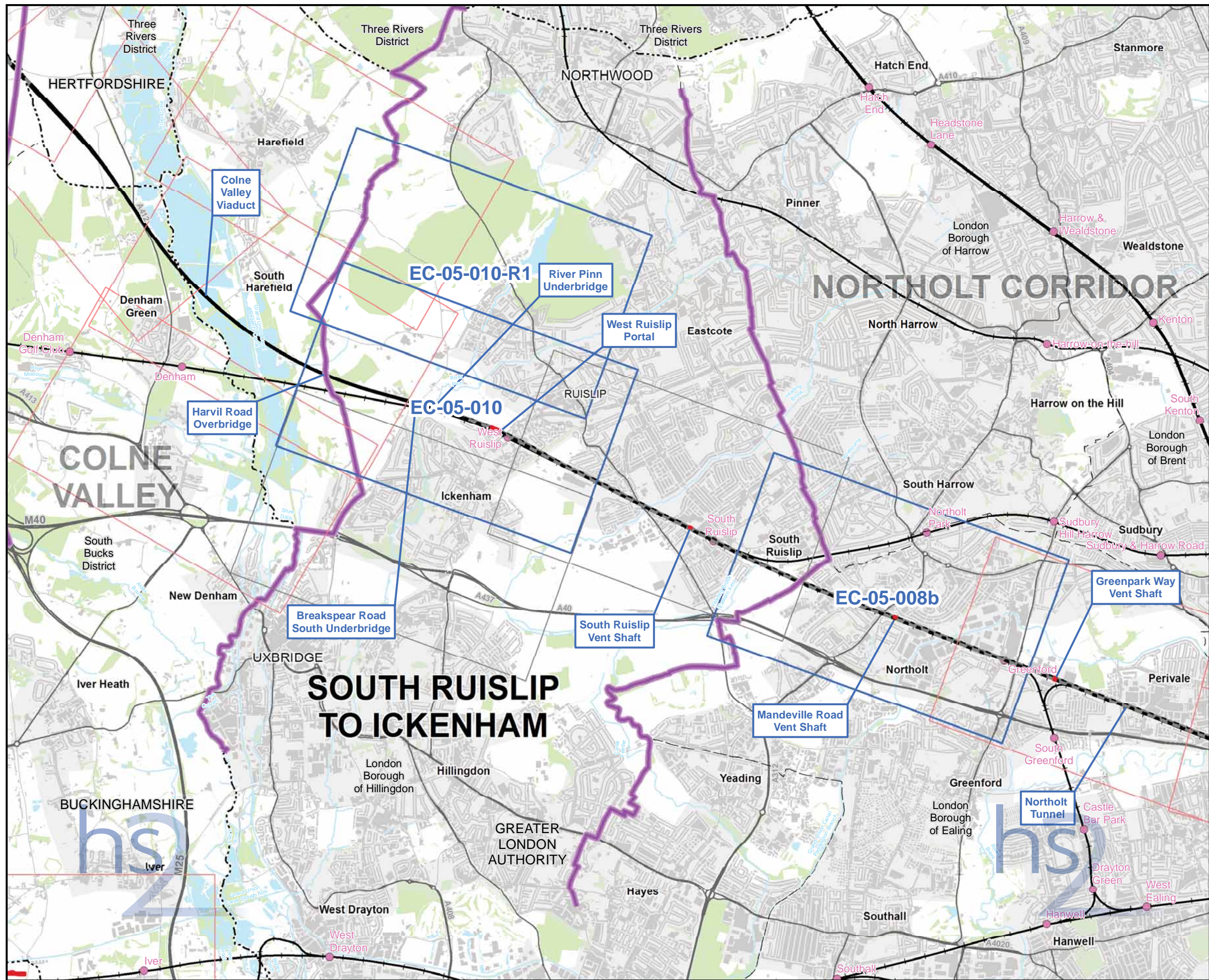
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0 100 200 300 400 Metres

Date: 08/06/15

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Map Series Information:
This map series shows results of field surveys conducted to investigate the potential for trees and buildings/structures to support roosting bats. The maps show location of roosts confirmed by field survey and features identified as having a high or moderate potential to support roosting bats.

Main Map Legend

Route in tunnel

Route on surface

Depot, station, headhouse or portal building

Community forum boundary

Existing railway station

County boundary

District/Borough boundary

Map sheets included in this community forum with amendment

Map sheets included in this community forum with no amendment

Map sheets not included in this community forum

Map Number

EC-05-INDEX-CFA6

Map Name

Index Map of:
Bat - Roost
SES and AP2 ES
Community Forum Area CFA6:
South Ruislip to Ickenham

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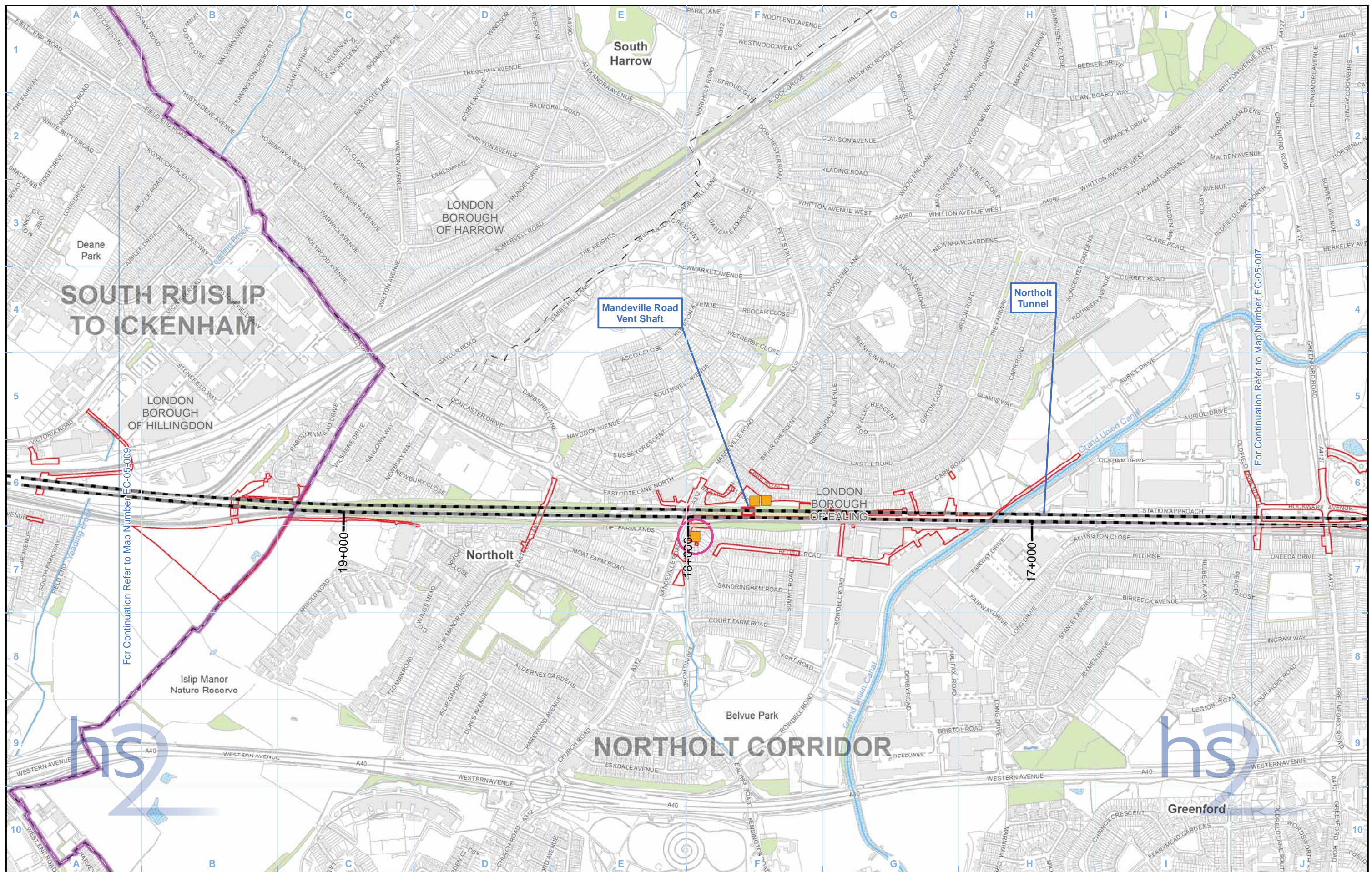
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Scale at A3: 1:50,000

0 500 1,000 1,500 2,000
Metres

Doc Number: C251-ETM-EV-MAP-010-001586-AP02-P01

Date: 08/06/15



Legend

Route in tunnel

Route on surface

Depot, station, headhouse or portal building

Land potentially required during construction

Community forum boundary

County boundary

District/Borough boundary

Watercourse

Water body

Woodland (not verified by survey)

Area contains new survey data

Confirmed bat roost - trees:

Hibernation roost

Maternity roost

Other roost

Multiple roost types

Confirmed bat roost - buildings:

Hibernation roost

Maternity roost

Other roost

Multiple roost types

Potential to support roosting bats - trees:

High

Moderate

Potential to support roosting bats - buildings:

High

Moderate

Map Number

EC-05-008b

Map Name

Bat - Roost
SES and AP2 ES

Community Forum Area CFA6:
South Ruislip to Ickenham

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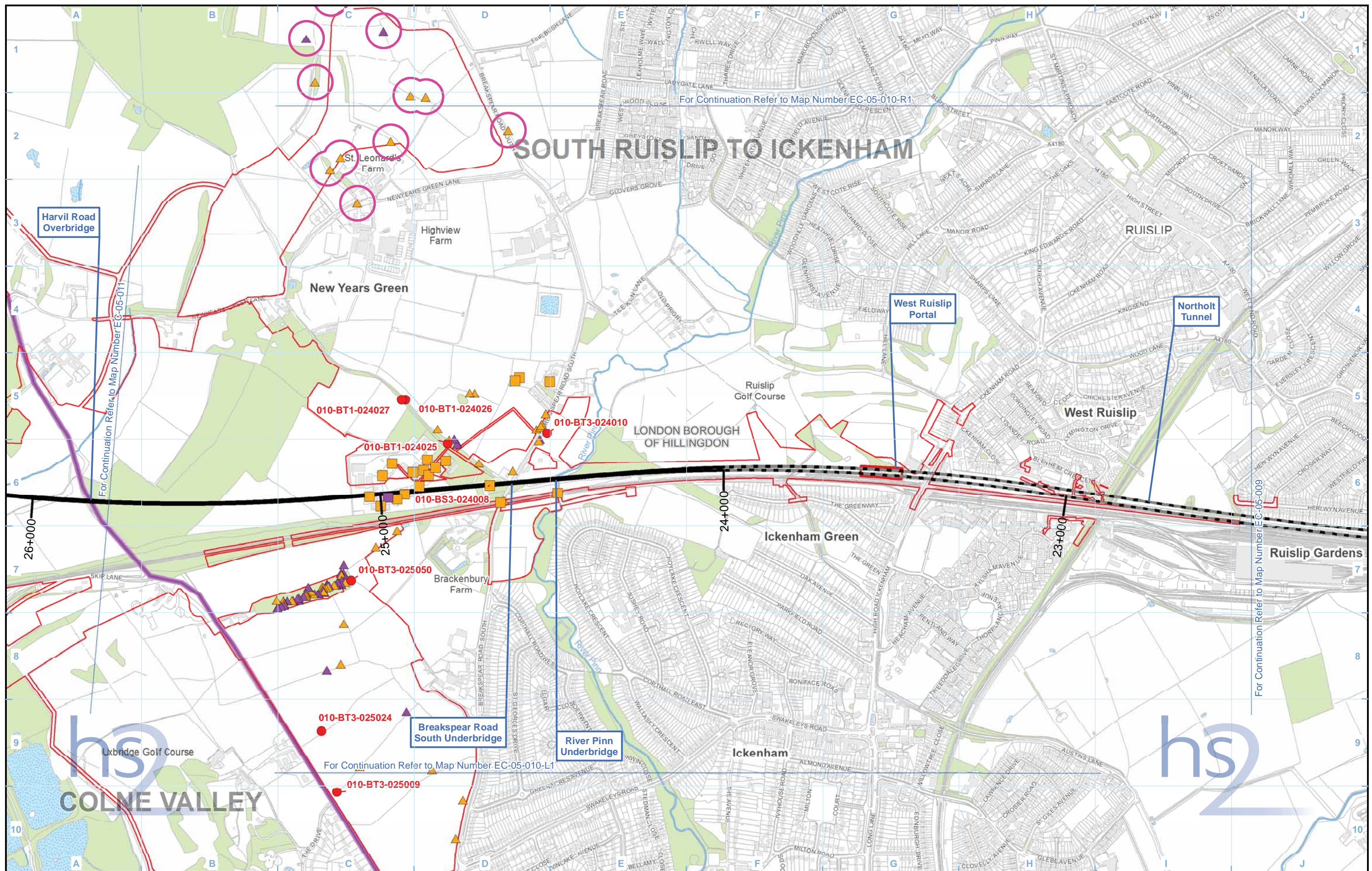
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Doc Number: C251-ETM-EV-MAP-010-001583-AP02-P01

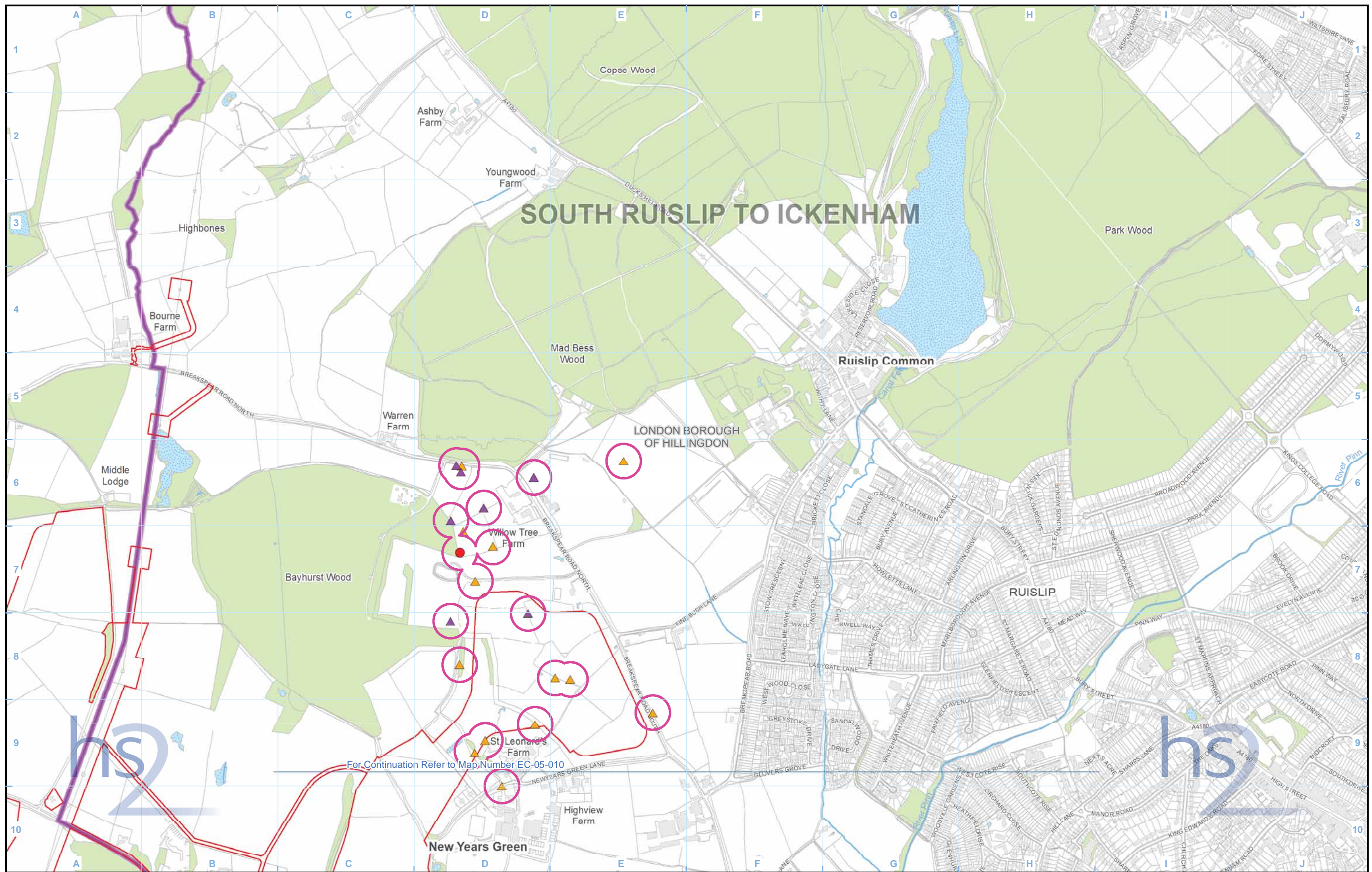
Date: 08/06/15



Legend			Map Number EC-05-010		 HS2 Ltd accept no responsibility for any circumstances, which arise from the reproduction of this map after alteration, amendment or abbreviation or if it is issued in part or issued incomplete in any way. Registered in England. Registration number 0679 1686. Registered office: One Canada Square, London, E14 5AB. © Crown copyright and database rights 2015. Ordnance Survey Licence Number 100049190. Doc Number: C251-ETM-EV-MAP-010-001584-AP02-P01 Date: 08/06/15	
Confirmed bat roost - trees: ◆ Hibernation roost ★ Maternity roost ● Other roost ✱ Multiple roost types			Confirmed bat roost - buildings: ◆ Hibernation roost ★ Maternity roost ● Other roost ✱ Multiple roost types			Map Name Bat - Roost SES and AP2 ES
Potential to support roosting bats - trees: ▲ High ▲ Moderate			Potential to support roosting bats - buildings: ■ High ■ Moderate			Community Forum Area CFA6: South Ruislip to Ickenham

Scale at A3: 1:10,000

0 100 200 300 400 Metres



Legend		Confirmed bat roost - trees:		Confirmed bat roost - buildings:		Potential to support roosting bats - trees:		Potential to support roosting bats - buildings:	
Route in tunnel	Watercourse	◆ Hibernation roost	◆ Hibernation roost	▲ High	▲ High	▲ High	▲ High	▲ High	▲ High
Route on surface	Water body	★ Maternity roost	★ Maternity roost	▲ Moderate	▲ Moderate	▲ Moderate	▲ Moderate	▲ Moderate	▲ Moderate
Depot, station, headhouse or portal building	Woodland (not verified by survey)	● Other roost	● Other roost	▲ High	▲ High	▲ High	▲ High	▲ High	▲ High
Land potentially required during construction	Area contains new survey data	✳ Multiple roost types	✳ Multiple roost types	▲ High	▲ High	▲ High	▲ High	▲ High	▲ High
Community forum boundary				▲ High	▲ High	▲ High	▲ High	▲ High	▲ High
County boundary				▲ High	▲ High	▲ High	▲ High	▲ High	▲ High
District/Borough boundary				▲ High	▲ High	▲ High	▲ High	▲ High	▲ High

Map Number	EC-05-010-R1
Map Name	Bat - Roost SES and AP2 ES
Community Forum Area CFA6: South Ruislip to Ickenham	

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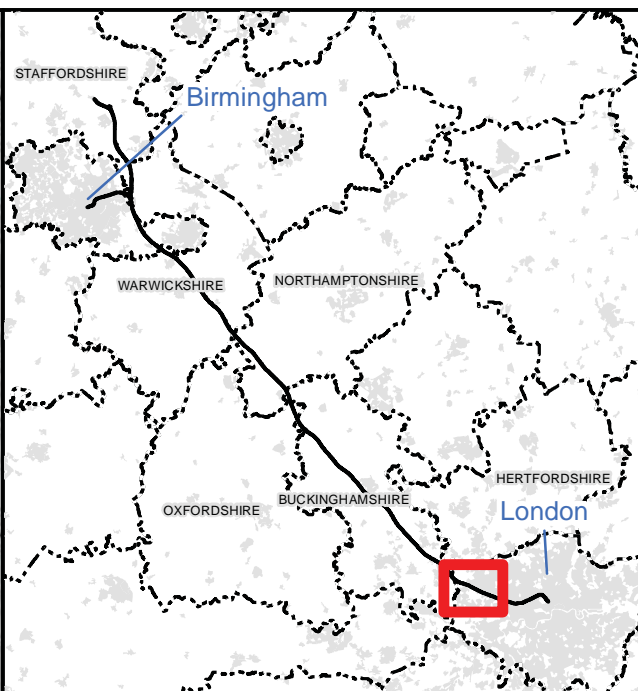
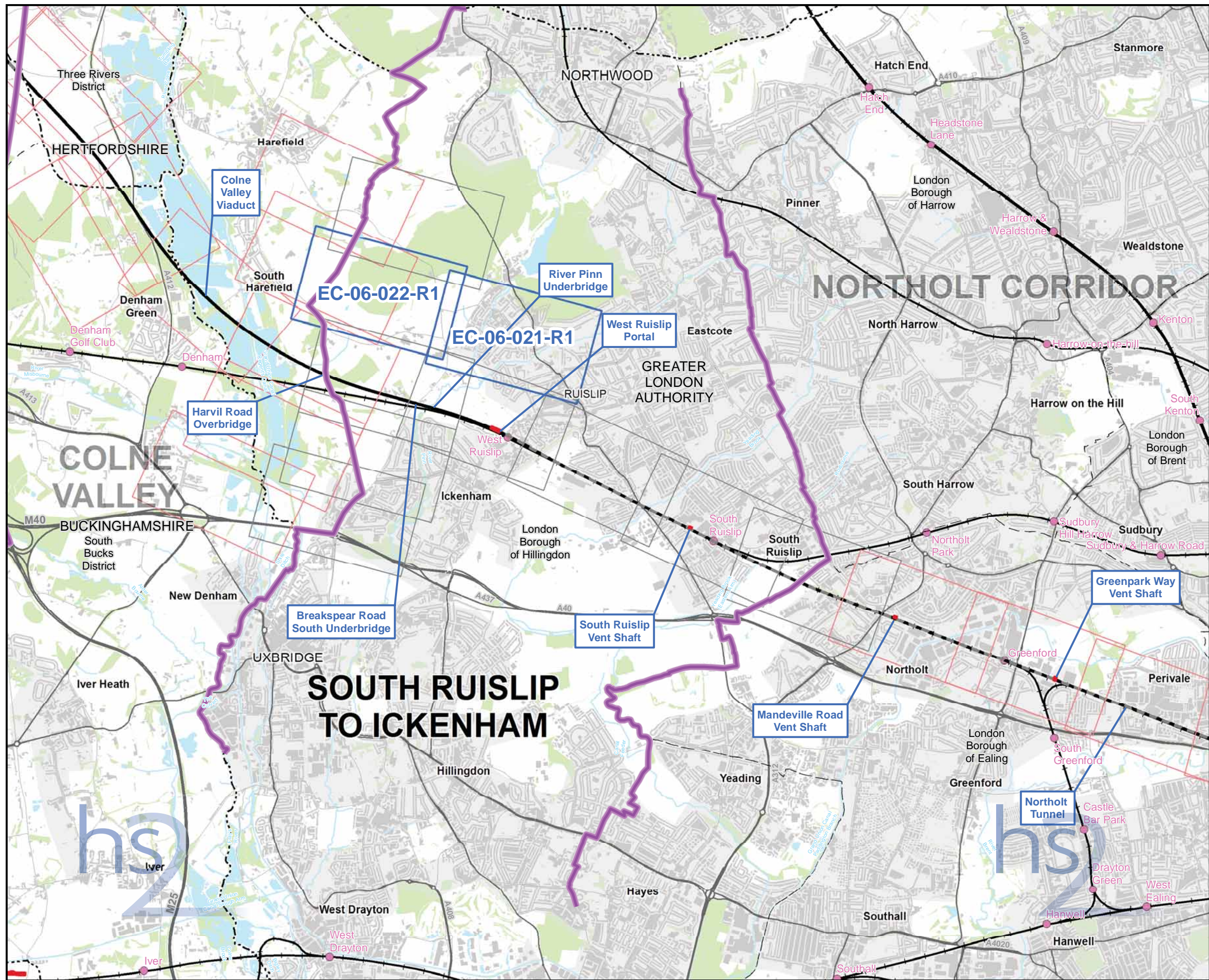
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Doc Number: C251-ETM-EV-MAP-010-001585-AP02-P01

Date: 08/06/15

Scale at A3: 1:10,000



Map Series Information:

This map series shows the location of bat activity surveys conducted to inform the Environmental Statement. In addition it shows the location of the key bat foraging and commuting routes which have been established on the basis of the survey work conducted.

Main Map Legend

Route in tunnel	Map sheets included in this community forum with amendment
Route on surface	Map sheets included in this community forum with no amendment
Depot, station, headhouse or portal building	Map sheets not included in this community forum
Community forum boundary	
Existing railway station	
County boundary	
District/Borough boundary	

Map Number	EC-06-INDEX-CFA6
Map Name	Index Map of: Bat - Activity SES and AP2 ES Community Forum Area CFA6: South Ruislip to Ickenham

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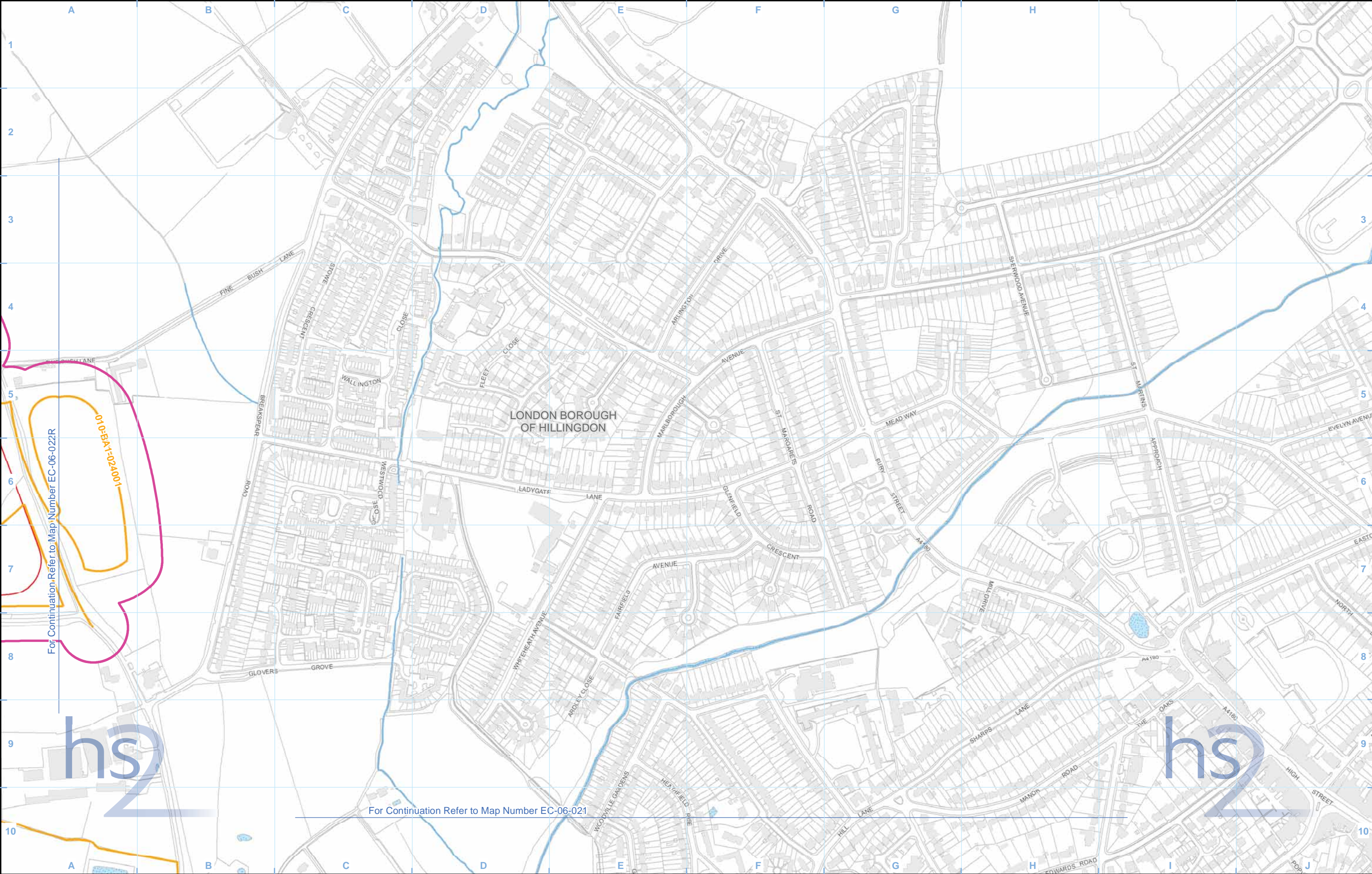
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Scale at A3: 1:50,000

0 500 1,000 1,500 2,000 Metres

Doc Number: C251-ETM-EV-MAP-010-001590-AP02-P01 **Date:** 08/06/15



Legend

- Route in tunnel
- Route on surface
- Depot, station, headhouse or portal building
- Land potentially required during construction
- Community forum boundary
- District/Borough boundary
- Watercourse
- Water body
- Woodland (verified by survey)
- Area contains new survey data
- Bat activity static detector location
- Activity transect route
- Assumed key commuting route
- Assumed key area of foraging habitat

Map Number EC-06-021-R1

Map Name
Bat Activity
SES and AP2 ES

Community Forum Area CFA6:
South Ruislip to Ickenham

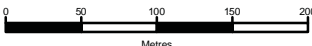


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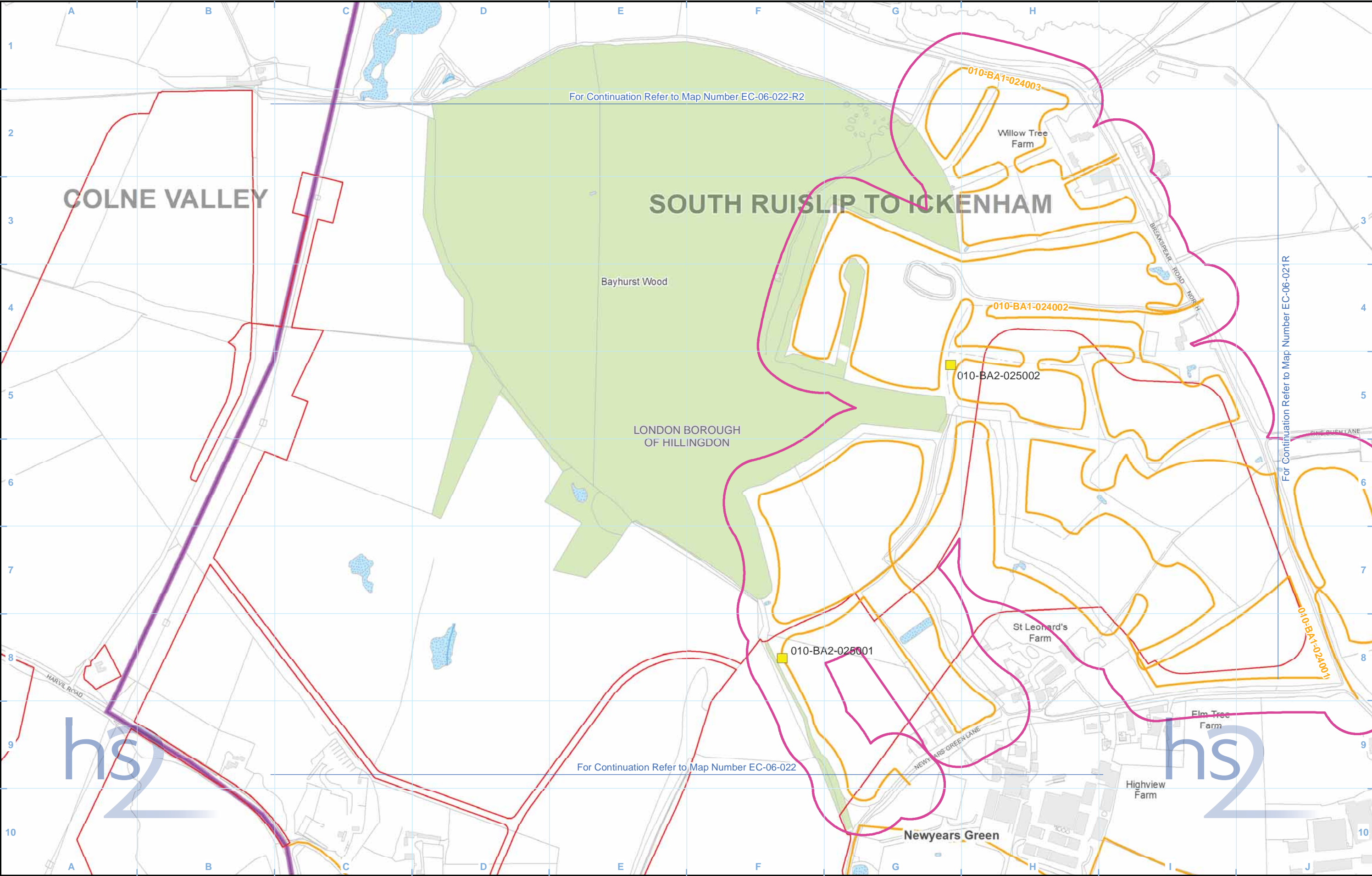
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Scale at A3: 1:5,000



Doc Number: C251-ETM-EV-MAP-010-001588-AP02-P01

Date: 08/06/15



Legend

- Route in tunnel

Route on surface

Depot, station, headhouse or portal building

Land potentially required during construction

Community forum boundary

District/Borough boundary

Watercourse

Water body

Woodland (verified by survey)

Area contains new survey data
- Bat activity static detector location
- Activity transect route
- Assumed key commuting route
- Assumed key area of foraging habitat

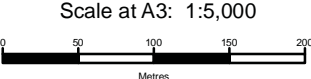
Map Number	EC-06-022-R1
Map Name	Bat Activity SES and AP2 ES
Community Forum Area CFA6: South Ruislip to Ickenham	



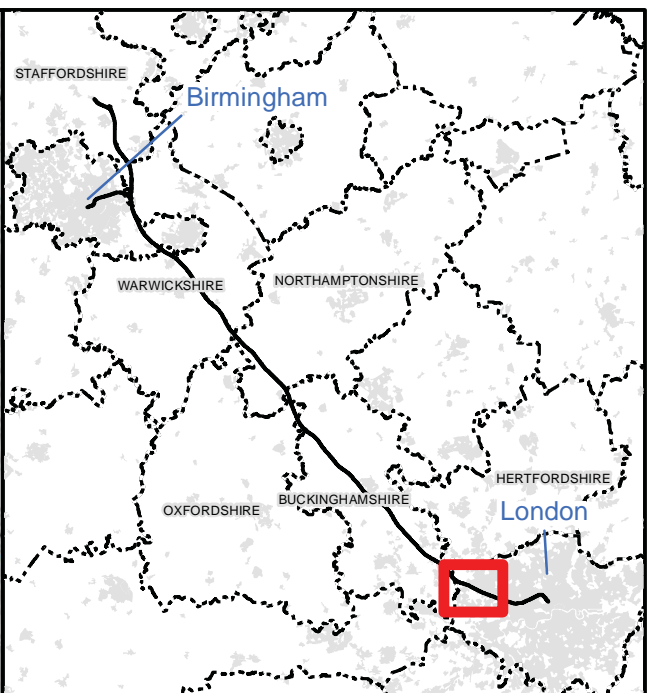
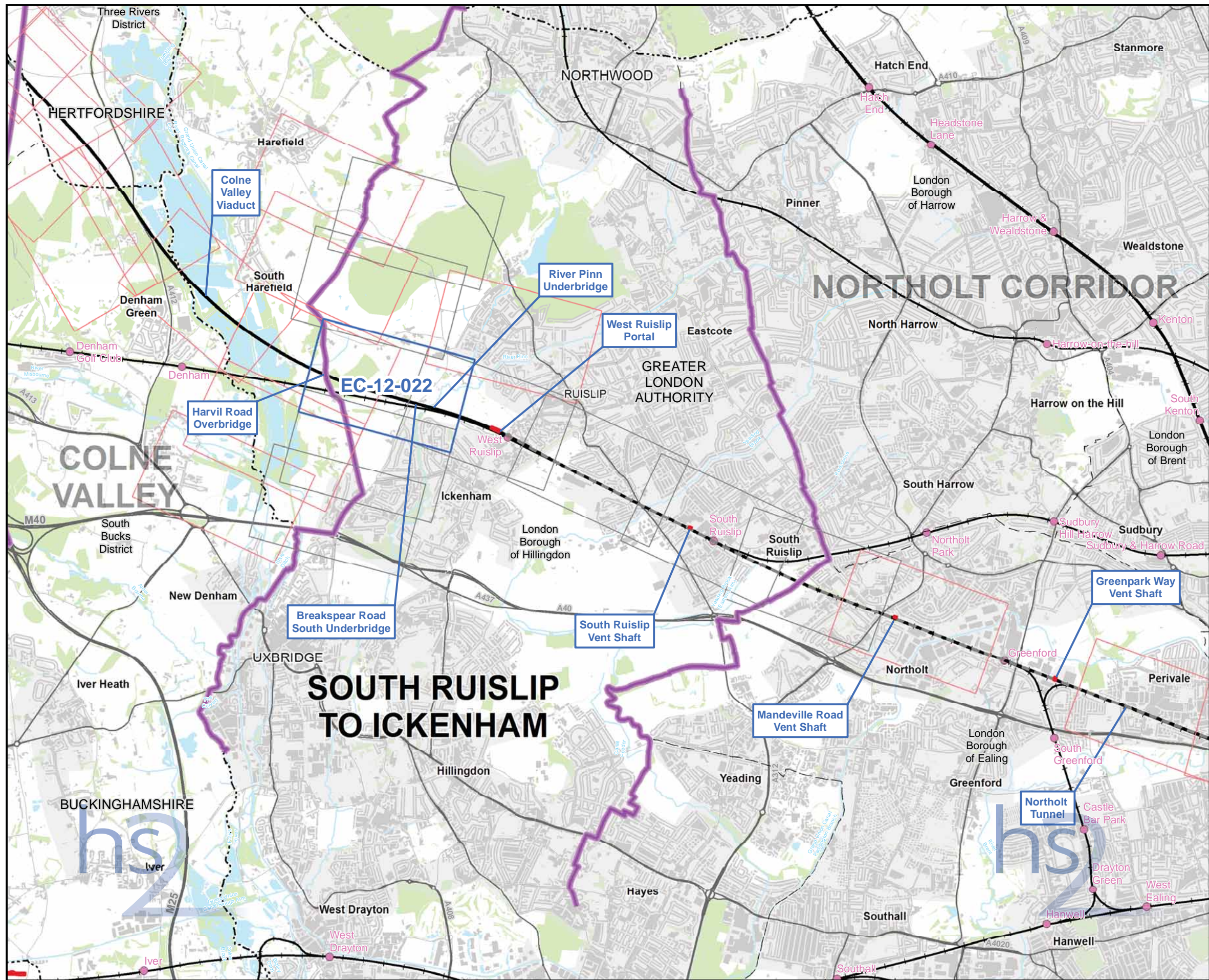
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Map Series Information:

This map series shows the extent of various protected species surveys conducted to inform the Environmental Statement.

Main Map Legend		Map Number	EC-12-INDEX-CFA6
Route in tunnel	Map sheets included in this community forum with amendment	Map Name	Index Map of: Other Protected and Notable Species (2) SES and AP2 ES
Route on surface	Map sheets included in this community forum with no amendment	Community Forum Area CFA6: South Ruislip to Ickenham	
Depot, station, headhouse or portal building	Map sheets not included in this community forum		
Community forum boundary			
Existing railway station			
County boundary			
District/Borough boundary			

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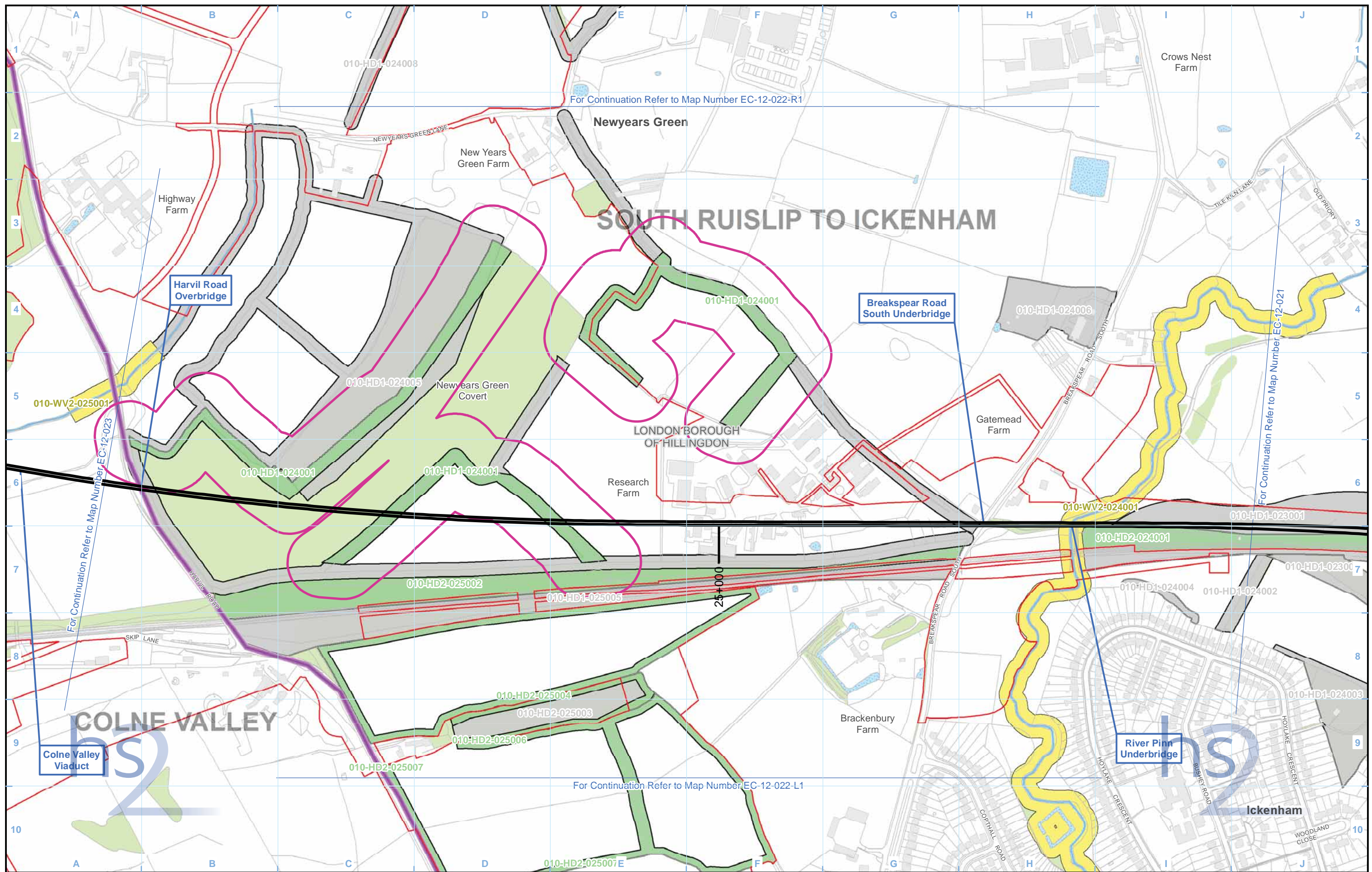
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Scale at A3: 1:50,000

Date: 08/06/15



Legend		Map Number EC-12-022	
Route in tunnel	Watercourse	Map Name Other Protected and Notable Species (2) SES and AP2 ES Community Forum Area CFA6: South Ruislip to Ickenham	
Route on surface	Water body		
Depot, station, headhouse or portal building	Woodland (verified by survey)	 Registered in England. Registration number 0679 1686. Registered office: One Canada Square, London, E14 5AB. © Crown copyright and database rights 2015. Ordnance Survey Licence Number 100049190. Doc Number: C251-ETM-EV-MAP-010-001628-AP02-P01 Date: 08/06/15	
Land potentially required during construction	Area contains new survey data		
Community forum boundary	Water vole:	 Scale at A3: 1:5,000 0 50 100 150 200 Metres	
District/Borough boundary	Water vole survey undertaken - presence confirmed		
	Water vole survey undertaken - assumed absent	Dormouse:	
	Watercourse potentially suitable for water vole - no or limited access for survey		
		Nest tube survey and/or nut search conducted and presence confirmed	
		Site identified as potentially suitable for dormouse but no access available	

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