

HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 3 and
Additional Provision 4 Environmental Statement

Volume 5 | Technical appendices map book
Air quality

October 2015

SES3 and AP4 ES 3.5.2.2

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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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Map series name	AQ-01 - Air Quality Monitoring Locations and Receptors
Map series description	<i>These maps show the location of local air quality monitoring locations, management areas and receptors used in the construction/operational traffic assessments in relation to the proposed scheme.</i>
Community Forum Area name	
CFA 04 – Kilburn (Brent) to Old Oak Common	x
CFA 05 – Northolt Corridor	x
CFA 06 – South Ruislip to Ickenham	✓
CFA 07 – Colne Valley	✓
CFA 08 – The Chalfonts and Amersham	x
CFA 09 – Central Chilterns	x
CFA 10 – Dunsmore, Wendover and Halton	x
CFA 11 – Stoke Mandeville and Aylesbury	x
CFA 12 – Waddesdon and Quainton	x
CFA 13 – Calvert, Steeple Claydon, Twyford and Chetwode	x
CFA 14 – Newton Purcell to Brackley	x
CFA 15 – Greatworth to Lower Boddington	x
CFA 16 – Ladbrooke and Southam	x
CFA 17 – Offchurch and Cubbington	x
CFA 18 – Stoneleigh, Kenilworth and Burton Green	x
CFA 19 – Coleshill Junction	x
CFA 20 – Curdworth to Middleton	x
CFA 21 – Drayton Bassett, Hints and Weeford	x
CFA 22 – Whittington to Handsacre	x
CFA 23 – Balsall Common and Hampton-in-Arden	x
CFA 24 – Birmingham Interchange and Chelmsley Wood	x
CFA 25 – Castle Bromwich and Bromford	x
CFA 26 – Washwood Heath to Curzon Street	x
Off-route – Heathrow Express (HEX) Depot Relocation	x
Off-route – Modifications to WCML between Lichfield and Colwich	x

Mapping explanatory notes

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

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

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

Copyright statements

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

Ordnance Survey data

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

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

Chainage

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

Chainage (known as reference chainage) is referenced from Euston Station, which is 0+000, and the value presented is in metres. E.g. 77+000 refers to the point, 77,000m, or 77km, from Euston Station. Chainage values increase in intervals dependant on the map scale. For maps at 1:50,000 scale chainage is shown at 5km intervals. For maps at 1:25,000 scale chainage is shown at 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 SES₃ and AP₄ ES map on the right. For the CT-05 and CT-06 map series, the SES₃ and AP₄ ES map is annotated with different coloured clouds which highlight the areas of change. The coloured text box provides a brief description of the design change and amendment, and gives the SES₃ and AP₄ ES reference number. Only maps which have been amended as a result of the SES₃ and AP₄ ES are included within the map books. Other design changes which are within the existing limits of the Bill and do not result in new or different likely significant effects are also shown on the maps, but are not indicated by a cloud. The below table highlights the coloured clouds used, and their description.

Cloud / text box colour	Description
Blue	Design changes relating to the SES ₃ (Part 1 of each Volume 2 CFA report).
Red	Proposed amendments relating to AP ₄ (Part 2 of each Volume 2 CFA report).
Grey	Proposed amendments and design changes relating to previous APs and SESs, provided for reference.

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

Map orientation

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

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

Map books

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

Name	Name
Volume 2 Community forum area map book: CFA ₄ Kilburn (Brent) to Old Oak Common	Volume 2 Community forum area map book: CFA ₂₃ Balsall Common and Hampton-in-Arden
Volume 2 Community forum area map book: CFA ₅ Northolt Corridor	Volume 2 Community forum area map book: CFA ₂₄ Birmingham Interchange and Chelmsley Wood
Volume 2 Community forum area map book: CFA ₆ South Ruislip to Ickenham	Volume 2 Community forum area map book: CFA ₂₅ Castle Bromwich and Bromford
Volume 2 Community forum area map book: CFA ₇ Colne Valley	Volume 2 Community forum area map book: CFA ₂₆ Washwood Heath to Curzon Street
Volume 2 Community forum area map book: CFA ₈ The Chalfonts and Amersham	Volume 4 Off-route effects map book
Volume 2 Community forum area map book: CFA ₉ Central Chilterns	Volume 5 Technical appendices map book: Agriculture, forestry and soils
Volume 2 Community forum area map book: CFA ₁₀ Dunsmore, Wendover and Halton	Volume 5 Technical appendices map book: Air quality
Volume 2 Community forum area map book: CFA ₁₁ Stoke Mandeville and Aylesbury	Volume 5 Technical appendices map book: Community
Volume 2 Community forum area map book: CFA ₁₂ Waddesdon and Quainton	Volume 5 Technical appendices map book: Cultural heritage
Volume 2 Community forum area map book: CFA ₁₃ Calvert, Steeple Claydon, Twyford and Chetwode	Volume 5 Technical appendices map book: Ecology
Volume 2 Community forum area map book: CFA ₁₄ Newton Purcell to Brackley	Volume 5 Technical appendices map book: Land quality
Volume 2 Community forum area map book: CFA ₁₅ Greatworth to Lower Boddington	Volume 5 Technical appendices map book: Landscape and visual
Volume 2 Community forum area map book: CFA ₁₆ Ladbroke and Southam	Volume 5 Technical appendices map book: Socio-economics
Volume 2 Community forum area map book: CFA ₁₇ Offchurch and Cubbington	Volume 5 Technical appendices map book: Sound, noise and vibration
Volume 2 Community forum area map book: CFA ₁₈ Stoneleigh, Kenilworth and Burton Green	Volume 5 Technical appendices map book: Traffic and transport
Volume 2 Community forum area map book: CFA ₁₉ Coleshill Junction	Volume 5 Technical appendices map book: Water resources
Volume 2 Community forum area map book: CFA ₂₀ Curdworth to Middleton	Volume 5 Technical appendices map book: Cross-topic appendix 1 - Committed developments
Volume 2 Community forum area map book: CFA ₂₂ Whittington to Handsacre	

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Supplementary Environmental Statement 3 and
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Volume 5 | Data dictionary and definitions

October 2015

Data dictionary and definitions

Legend features	Definition	Source	Copyright
Air quality modelled receptors	Air quality modelled receptors.	High Speed Two (HS2) Ltd	
Airport	Ordnance Survey airports from the OS Strategi dataset.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
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.
DEFRA air quality management areas 2015 (AQMA)	Since December 1997 each Local Authority in the UK has been carrying out a review and assessment of air quality in their area. This involves measuring air pollution and trying to predict how it will change in the next few years. The aim of the review is to make sure that the national air quality objectives will be achieved throughout the UK by the relevant deadlines. These objectives have been put in place to protect people's health and the environment. If a Local Authority finds any places where the objectives are not likely to be achieved, it must declare the location as an Air Quality Management Area. This area may extend for one or two streets, or it could be a much wider area.	Department Environment Food and Rural Affairs (DEFRA)	© Crown 2015 copyright Defra via uk-air.defra.gov.uk, licenced under the Open Government Licence (OGL).
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.
Existing rail line	Existing railway stations derived from Ordnance Survey Vector map data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Existing railway station	Existing railway stations derived from Ordnance Survey Vector map data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Monitoring location type: Automatic Passive	A full explanation of a Passive (Diffusion tube) and Automatic (Continuous) monitoring location type is provided in the Glossary & Abbreviations document.	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	
Water body	Based on Ordnance Survey Vector Map District.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.
Watercourse	The Detailed River Network (DRN) is the only large-scale, accurate and fully attributed digital river centreline covering England and Wales.	Environment Agency	© Environment Agency copyright and/or database right 2015. All rights reserved.
Woodland	Woodland areas derived from Ordnance Survey mastermap data.	Ordnance Survey	© Crown copyright. Reproduced by permission of Ordnance Survey Licence Number 100049190. Year of Publication 2015.

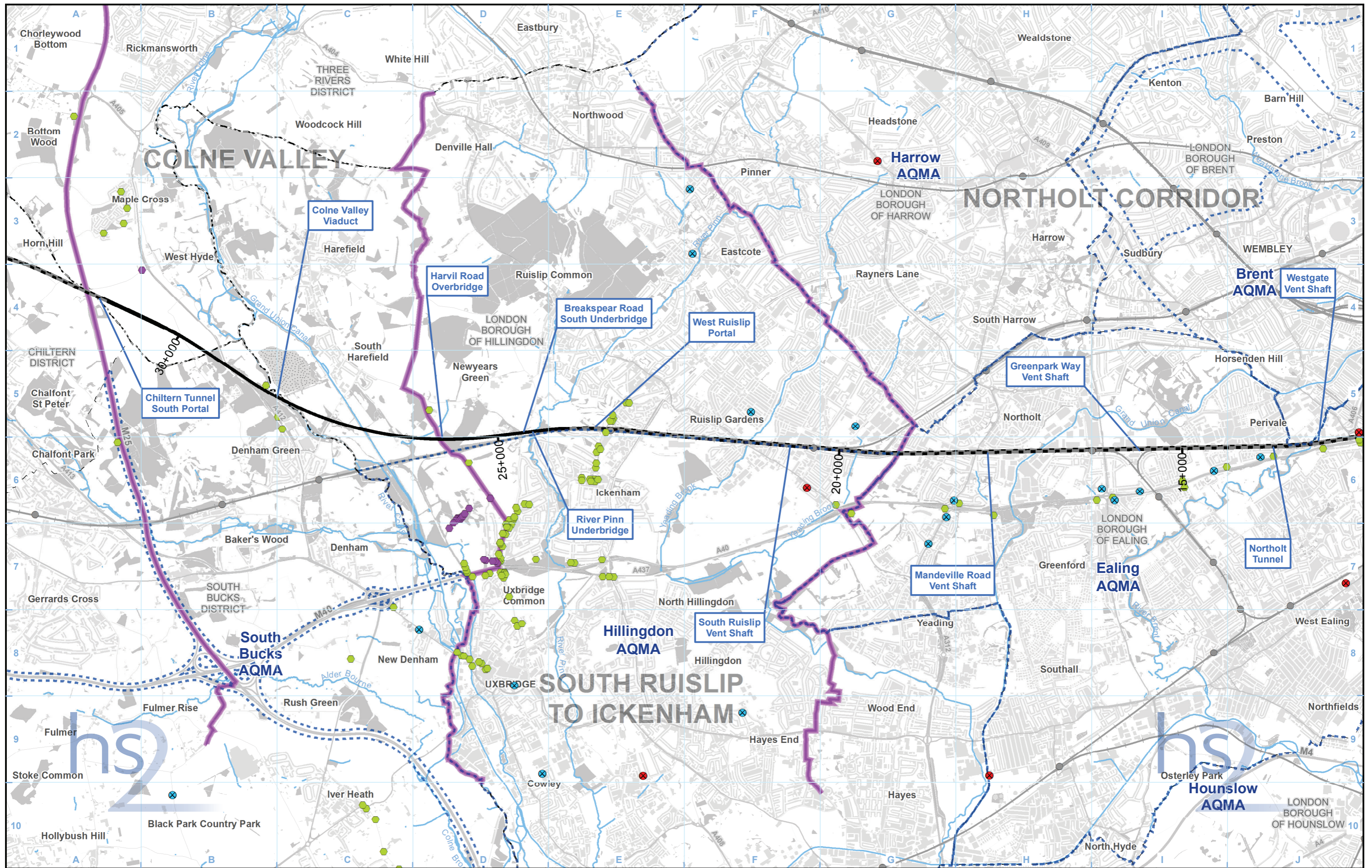
HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 3 and
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Volume 5 | CFA6 South Ruislip to Ickenham

AQ-01 - Air Quality Monitoring Locations and Receptors

October 2015



Legend

<ul style="list-style-type: none"> Route in tunnel Route on surface Depot, station, headhouse or portal building Community forum boundary County boundary District/Borough boundary 	<ul style="list-style-type: none"> Watercourse Water body Woodland Existing railway station Existing rail line Airport 	<ul style="list-style-type: none"> DEFRA Air Quality Management Areas 2015 (AQMA) Air quality modelled receptors Additional air quality modelled receptors Removed air quality modelled receptors <p>Monitoring location type:</p> <ul style="list-style-type: none"> Automatic Passive
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Map Number: AQ-01-006

Map Name: Air Quality Monitoring Locations and Receptors SES3 and AP4 ES

Community Forum Area CFA6: South Ruislip to Ickenham

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Scale at A3: 1:50,000

Doc Number: C251-ETM-EV-MAP-010-001702-AP04-P01 Date: 24/09/15

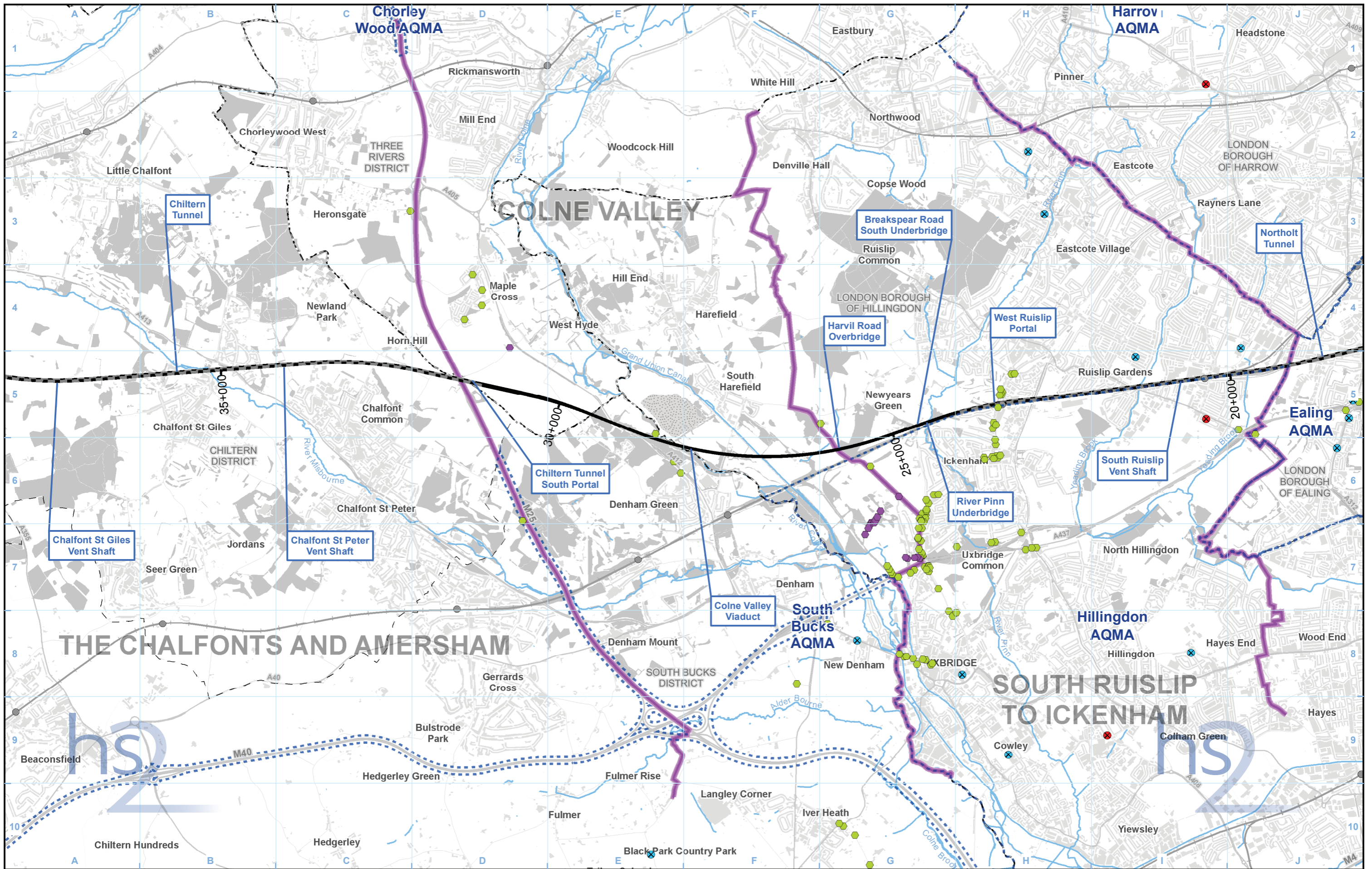
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Volume 5 | CFA7 Colne Valley

AQ-01 - Air Quality Monitoring Locations and Receptors

October 2015



Legend

Route in tunnel	Watercourse	DEFRA Air Quality Management Areas 2015 (AQMA)
Route on surface	Water body	Air quality modelled receptors
Depot, station, headhouse or portal building	Woodland	Additional air quality modelled receptors
Community forum boundary	Existing railway station	Removed air quality modelled receptors
County boundary	Existing rail line	Monitoring location type:
District/Borough boundary	Airport	Automatic
		Passive

Map Number: **AQ-01-007**

Map Name: **Air Quality Monitoring Locations and Receptors SES3 and AP4 ES**

Community Forum Area CFA7: **Colne Valley**

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Scale at A3: **1:50,000**

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

Doc Number: **C252-ETM-EV-MAP-020-004478-AP04-P01** Date: **17/09/15**

