

HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 3 and
Additional Provision 4 Environmental Statement
Volume 3 | Route-wide effects

October 2015

SES3 and AP4 ES 3.3

SES3 and AP4 ES Volume 3 – Route-wide effects

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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) comprise:

- non-technical summary (NTS). This provides a summary in non-technical language of the SES₃ (Part 1) and the 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 Two (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 (referred to as 'the main ES') as updated by the subsequent SESs 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: community forum area (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;

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Table 22: Combined impacts of Phase One (original scheme, AP₂ revised scheme, AP₃ revised scheme and AP₄ revised scheme) and Phase Two

	Phase One				Phase Two (Phase Two Manchester and Phase Two Leeds)	Overall Total (Phase One AP ₄ revised scheme and Phase Two)
	Original scheme	AP ₂ revised scheme ⁵⁸	AP ₃ revised scheme ⁵⁹	AP ₄ revised scheme ⁶⁰		
Route characteristics (km)						
Total	225.5 ⁶¹	216.0 ⁶²	216.0 ⁶²	216.0 ⁶³	335.2	551.2
At grade	0.1	0 ⁶⁴	0 ⁶⁴	0 ⁶⁴	24.1	24.1
Tunnel	53.4	47.9 ⁶⁴	47.9 ⁶⁴	49.4 ⁶⁴	27.3	76.7
Cutting	73.8	76.0 ⁶⁴	76.0 ⁶⁴	74.7 ⁶⁴	130.9	205.6
Viaduct	18.5	16.4 ⁶⁴	16.4 ⁶⁴	16.3 ⁶⁴	47.0	63.3
Embankment	65.2	62.6 ⁶⁴	62.6 ⁶⁴	62.6 ⁶⁴	105.9	168.5
Property and settlements						
Demolitions (residential)	339 dwellings ^{65,66} (265 buildings)	335 dwellings (248 buildings)	333 dwellings (246 buildings)	326 dwellings (218 buildings)	278	604
Demolitions ⁶⁷ (community)	21 community facilities ⁶⁸	21 ⁶⁹ community facilities	20 community facilities	19 community facilities	4	23
Demolitions (commercial/retail)	404 units (312 buildings) ⁷⁰	408 units (312 buildings)	368 units (295 buildings)	371 units (308 buildings)	227	609
Demolitions (manufacturing/industrial)					11	
Total demolitions	600 buildings ^{71,72}	582 buildings	560 buildings	545 buildings	520	1,065

⁵⁸ The AP₂ revised scheme assumes that the AP₁ amendments have been implemented.

⁵⁹ The AP₃ revised scheme assumes that the AP₁ and AP₂ amendments have been implemented.

⁶⁰ The AP₄ revised scheme assumes that the AP₁, AP₂ and AP₃ amendments have been implemented.

⁶¹ This total includes another 14.5km attributed to retaining walls and stations.

⁶² This total includes another 13.1km attributed to retaining walls and stations. This total includes the removal of the HS₁-HS₂ Link.

⁶³ This total includes another 13.0km attributed to retaining walls and stations. This total includes the removal of the HS₁-HS₂ Link.

⁶⁴ This total includes the removal of the HS₁-HS₂ Link.

⁶⁵ This figure excludes student accommodation at Curzon Street on the basis that this is a commercially operated business for short term lets (and is included as two buildings under commercial/retail demolitions).

⁶⁶ This figure excludes future baseline (i.e. committed residential development not currently completed).

⁶⁷ This total includes the community facilities that are demolished and not re-provided.

⁶⁸ This figure is provided for the number of community resources (i.e. a cluster of buildings providing a single resource is reported as a single demolition). This figure does not include the demolition of buildings which will not prevent the continued operation of a community resource (e.g. outbuildings or other ancillary structures), however these are included under total demolitions.

⁶⁹ Two community facilities are being re-provided: Burton Green Community Hall and Wendover Cricket Ground.

⁷⁰ This figure includes some properties which also provide community resources, e.g. public house, local services.

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	Phase One				Phase Two (Phase Two Manchester and Phase Two Leeds)	Overall Total (Phase One AP4 revised scheme and Phase Two)
	Original scheme	AP2 revised scheme ⁵⁸	AP3 revised scheme ⁵⁹	AP4 revised scheme ⁶⁰		
surface (km)						
Cultural heritage						
Scheduled Monuments directly affected	1	1	1	1	1	2
Registered Battlefields directly affected	1	1	1	1	0	1
Grade I & II* structures directly affected	1 ⁸⁴	1 ⁸⁴	2 ⁸⁵	2 ⁸⁵	0	2
Grade II structures directly affected	18	18	17 ⁸⁶	17 ⁸⁶	8	25
Registered parks and gardens directly affected	2	2	2	2	0	2
Conservation Areas directly affected	2	2	2	2	8	10
Biodiversity and wildlife						
Natura 2000 sites affected	0	0	0	0	0	0
SSSIs directly affected	2	2	2	3 ⁸⁷	13	16
Habitats of Principal Importance directly affected	41	41	41	41	62	n/a ⁸⁸
Ancient	37 ⁸⁹	37 ⁸⁹	37 ⁸⁹	32 ⁹⁰	14	46

⁸⁴ This comprises the alteration to a curtilage wall to a Grade 1 Listed building.

⁸⁵ This figure includes the removal of the war memorial at Euston Square Gardens that has been re-graded from a Grade II to Grade II* since the submission of the main ES.

⁸⁶ This figure includes the removal of the war memorial at Euston Square Gardens that has been re-graded from a Grade II to Grade II* since the submission of the main ES.

⁸⁷ Additional SSSI affected as a result of the AP4 scheme is the Frays Farm Meadows SSSI.

⁸⁸ Phase One and Phase Two will affect many of the same Habitats of Principal Importance types therefore these figures are not additive.

⁸⁹ Volume 3 of the main ES reported 19 ancient woodland sites were directly affected by the original scheme. Since publication of the main ES, four additional woodlands have been added to the ancient woodland inventory and three additional sites have been identified that were previously

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	Phase One				Phase Two (Phase Two Manchester and Phase Two Leeds)	Overall Total (Phase One AP ₄ revised scheme and Phase Two)
	Original scheme	AP ₂ revised scheme ⁵⁸	AP ₃ revised scheme ⁵⁹	AP ₄ revised scheme ⁶⁰		
Woodlands directly affected						
Water resources and flood risk						
Major rivers diverted	7	8 ⁹¹	8	8	5	13
Route through Flood Zone 3 (km)	12.0	12.0	12.0	12.0	28.5	40.5
Station/depot occupation of Flood Zone 3 (ha)	2.1	2.1	2.1	2.1	23.6	25.7
Cutting or tunnel through SPZ 1 or 2 (km)	8.1	8.1	8.1	6.7	1.7	8.4
Land use resources						
Active landfills crossed	0	0	0	0	5	5
Grade 1 and 2 agricultural land (km)	22.0	22.0	22.0	22.0	50.8	72.8
Waste and material resources						
Excavated material (million m ³)	62.2 ⁹²	62.4 ⁹²	62.6 ⁹²	63.4 ⁹²	29.00	92.4
Concrete (million tonnes)	13.62	13.04 ⁹³	13.04 ⁹⁴	13.04 ⁹⁵	6.77	19.81
Steel (million tonnes)	1.36	1.30 ⁹³	1.30 ⁹⁴	1.30 ⁹⁵	0.73	2.03

considered as a single ancient woodland area. In addition a further 11 woodland sites were identified as likely to be added to the ancient woodland inventory and therefore are assumed to be ancient.

⁹⁰ AP₄ amendments will ensure that no loss of ancient woodland occurs at Mantle's Wood; Sibley's Coppice; Farthing's Wood; Parkhill Wood and Langley Hill Wood.

⁹¹ The additional river diverted as a result of the AP₂ revised scheme from the original scheme is Mare Brook.

⁹² This figure is the total quantity of excavated material that will be generated from the construction of Phase One. This includes excavated material that will be reused in the construction process as well as surplus excavated material that will be made available for use off-site or disposed of on or off-site.

⁹³ This total reflects the reduced length of the AP₂ scheme as a pro-rata of the original scheme.

⁹⁴ This total reflects the reduced length of the AP₃ scheme as a pro-rata of the original scheme.

⁹⁵ This total reflects the reduced length of the AP₄ scheme as a pro-rata of the original scheme.

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