HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 2 and Additional Provision 3 Environmental Statement

Volume 5 | Technical appendices

Sound, noise and vibration

SV-002-001, SV-003-001 and SV-004-001

September 2015

SES2 and AP3 ES 3.5.1.6

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Department for Transport

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This table shows the topics covered by the technical appendices in this volume, and the reference codes for them.

CFA name and number	Topic	Code
CFA1, Euston Station and Approach	Sound, noise and vibration	SV-002-001
		SV-003-001
		SV-004-001

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Supplementary Environmental Statement 2 and Additional Provision 3 Environmental Statement

Volume 5 | Technical appendices

Sound, noise and vibration

SV-002-001

Environmental topic:	Sound, noise and vibration	SV
Appendix name:	Baseline sound, noise and vibration report	002
Community forum area:	Euston - Station and Approach	001

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1 Introduction

1.1.1 This appendix provides an update to Appendix SV-002-001 baseline sound, noise and vibration report for the Euston - Station and Approach community forum area 1 (CFA1) from the main Environmental Statement (ES) as a result of design changes as part of the Supplementary Environmental Statement 2 (SES2) and the Additional Provision 3 Environmental Statement (AP3 ES). This update should be read in conjunction with Appendix SV-002-001 baseline sound, noise and vibration report from the main ES.

1.2 Existing acoustic environment

1.2.1 The existing baseline sound environment for this area is typical of urban central London.

1.2.2 Sound levels are high in close proximity to busy multi-lane roads, such as Euston Road, where daytime sound levels are typically around 75dB. However, due to the screening provided by buildings and other structures, sound levels can be much lower (typically around 55 to 60dB) on side roads away from the major thoroughfares.

1.2.3 To the north of Euston station, sounds from existing trains (including 'wheel squeal'), traffic on Hampstead Road and other local roads contribute to the prevailing sound environment. Here, daytime sound levels are typically around 65 to 70dB.

1.2.4 To the east of the station, sound from traffic on the A4200 Eversholt Road, a relatively busy road, dominates the sound environment and daytime sound levels are typically around 70dB. Side roads away from the station have lower sound levels, due to the screening effect of buildings and other obstacles between these locations and the main road traffic sound sources, resulting in daytime sound levels of typically around 55 to 60dB.

1.2.5 Located to the south of the station is the A501 Euston Road, which is a very busy cross London route. Local to this road, traffic movements, including many buses and heavy goods vehicles (HGV), generate sound levels during the day of around 75dB. Further to the south, although smaller side roads can be screened from the busy main roads and typically experience sound levels around 65dB, local traffic still dominates the sound environment.

1.2.6 To the west of the station, at St James's Gardens and the surrounding areas, sound levels are relatively low for an urban environment. Daytime levels are typically around 55dB, due to the screening of the main roads by buildings and other obstacles. For example, the playground of Maria Fidelis Convent (Lower) School which borders St James's Gardens benefits from such screening and experiences sound levels which are relatively low for such an urban location.

1.2.7 Night-time sound levels across the study area are 2 to 4dB lower than the daytime level where it is dominated by road traffic on busy main roads and 5 to 8dB lower in locations further away from these roads.

1.2.8 Additional baseline sound measurements have been completed in CFA1 to inform the assessment of the Euston revised scheme. This included measurements on Park

Village East where the noise environment primarily consists of road traffic noise from local roads and busier but more distant roads. Measurements were also carried out around Euston Street and at Regnart Buildings where the noise environment was in places dominated by mechanical plant units on local buildings.

2 Scope, assumptions and limitations

2.1 Changes of relevance to this assessment

2.1.1 The assessment includes construction and operational sound, noise and vibration for the Euston revised scheme. This appendix includes details of the existing and future baseline sound environment within the area.

2.1.2 Maps showing the baseline sound monitoring locations and assessment locations within this area are included in SES2 and AP3 ES Map Series SV-03 and SV-04 (Volume 5 Map Book, Sound, Noise and Vibration).

3 Environmental baseline

3.1 Existing baseline data collection methodology

3.1.1 The overall approach to baseline data collection for sound noise and vibration is described in Volume 5: Appendix SV-001-000 from the main ES.

3.1.2 Additional baseline sound measurements have been undertaken at nine new locations including two long term measurements and seven short term measurements.

3.1.3 The other measurements undertaken over the Euston - Station and Approach area are described in Appendix SV-002-001 from the main ES.

3.2 Existing baseline sound levels

3.2.1 From the measurements described in Section 3.1, baseline sound levels have been ascertained for each new assessment location within this area. These levels are presented in terms of the following key sound indicators:

- for the operational sound assessment:
  - $L_{pAeq,16hr\ weekday}$ daytime (07:00-23:00) sound pressure level;
  - $L_{pAeq,8hr\ weekday}$ night-time (23:00-07:00) sound pressure level;
  - arithmetic average of $L_{pAFmax,5min}$ night-time sound pressure level; and
  - highest $L_{pAFmax,5min}$ night-time sound pressure level.
- for the construction sound assessment:
  - daytime L_{pAeq} sound pressure level (Monday to Friday 07:00-19:00; Saturday 07:00-13:00);
  - evening/weekend L_{pAeq} sound pressure level (Monday to Friday 19:00-23:00; Saturday 13:00-23:00; Sunday 07:00-23:00); and
  - night-time L_{pAeq} sound pressure level (Monday to Sunday 23:00-07:00).

3.2.2 The values above are presented in Table 1. The data source coding included within this table details how the baseline sound levels allocated to each assessment location have been derived. This coding is summarised in Table 2 and explained in detail in Volume 5, Appendix SV-001-000 of the main ES.

Table 1 : Existing baseline sound levels

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding[1]
			For operational sound assessment				For construction sound assessment			
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}	
519788	Euston Road, London	LM1307	74.9	70.9	80.9	97.5	75.3	74.7	71.0	3,A,ii,b
520315	Parkway, London	LM0061	51.4	46.5	54.7	71.0	51.7	48.7	46.2	1,A,ii,b
520752	Eversholt Street, London	LM1049	69.6	67.2	79.8	99.3	69.9	68.9	67.2	1,A,ii,b
521033	Park Village East, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,ii,b
521556	Redhill Street, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
522490	Augustus Street, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
523758	Parkway, London	LM0061	51.4	46.5	54.7	71.0	51.7	48.7	46.2	1,A,i,a
523809	Mornington Terrace, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,ii,b
523826	Mornington Terrace, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,ii,b
523935	Albert Street, London	LM1075	55.2	46.7	50.8	70.6	55.5	63.6	46.3	1,A,iii,b
525979	Arlington Road, London	LM1075	55.2	46.7	50.8	70.6	55.5	63.6	46.3	1,A,iii,b
527860	Albany Street, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,iii,b
528008	Park Village West, London	LM1074	51.4	45.7	51.9	70.8	51.7	48.3	44.9	1,A,ii,b
528051	Cumberland Terrace, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,iii,b
528192	Cumberland Terrace Mews, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,iii,b
528324	Park Village East, London	LM1074	51.4	45.7	51.9	70.8	51.7	48.3	44.9	1,A,iii,b
528405	Albany Street, Regent'S Park	LM1074	51.4	45.7	51.9	70.8	51.7	48.3	44.9	1,A,iii,b
528585	Park Village East, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,i,a
528600	Park Village East, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,i,a
528624	Park Village East, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,ii,b
528830	Park Village East, London	LM7088	63.2	56.0	62.2	77.8	64.5	61.2	55.7	1,B,ii,b
528856	Park Village East, London	LM7088	63.2	56.0	62.2	77.8	64.5	61.2	55.7	1,B,ii,b
528881	Park Village East, London	LM7088	63.2	56.0	62.2	77.8	64.5	61.2	55.7	1,B,ii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding[1]
			For operational sound assessment				For construction sound assessment			
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}	
528890	Park Village East, London	LM7088	63.2	56.0	62.2	77.8	64.5	61.2	55.7	1,B,ii,b
528900	Park Village East, London	LM7088	63.2	56.0	62.2	77.8	64.5	61.2	55.7	1,B,ii,b
528939	Park Village West, London	LM1074	51.4	45.7	51.9	70.8	51.7	48.3	44.9	1,A,i,a
529017	Mornington Terrace, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,ii,b
529041	Mornington Terrace, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,i,a
529064	Mornington Street, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,i,a
529185	Mornington Terrace, London	LM1305	60.7	55.2	65.4	80.6	61.0	59.2	54.5	3,A,ii,b
529201	Mornington Terrace, London	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,ii,b
529302	Mornington Place, London	LM1305	60.7	55.2	65.4	80.6	61.0	59.2	54.5	3,A,ii,b
533032	Euston Road, London	LM1307	74.9	70.9	80.9	97.5	75.3	74.7	71.0	3,A,ii,b
533361	Doric Way, St. Pancras And Somers Town	LM1049	69.6	67.2	79.8	99.3	69.9	68.9	67.2	1,A,i,a
533433	Churchway, London	LM1303	52.5	49.9	68.7	88.1	52.5	49.9	49.9	3,D,ii,b
533445	Eversholt Street, London	LM1049	69.6	67.2	79.8	99.3	69.9	68.9	67.2	1,A,i,a
533673	Churchway, London	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,i,a
533851	Eversholt Street, London	LM7025	68.7	66.3	76.1	95.6	69.4	68.4	66.7	3,A,i,a
533958	Chalton Street, London	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
534200	Eversholt Street, London	LM1049	69.6	67.2	79.8	99.3	69.9	68.9	67.2	1,A,ii,b
534286	Polygon Road, London	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
534557	Cobourg Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
534765	Cobourg Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,i,a
534772	Starcross Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,i,a
534932	North Gower Street, London	LM1075	55.2	46.7	50.8	70.6	55.5	63.6	46.3	1,A,iii,b
535017	Varndell Street, London	LM1200	67.7	63.5	75.1	87.8	68.0	65.8	63.7	1,A,ii,b
535091	Hampstead Road, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b

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535446	Hampstead Road, Regent's Park	LM7027	68.7	64.5	73.5	86.2	69.0	66.8	64.7	3,A,ii,b
535454	Harrington Street, London	LM7027	59.9	55.7	73.5	86.2	60.2	58.0	55.9	3,C,ii,b
535501	Harrington Street, Regent's Park	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,ii,b
535544	Augustus Street, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,ii,b
535686	Cumberland Market, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
535768	Varndell Street, London	LM1200	64.0	56.9	75.1	87.8	64.0	59.2	57.1	1,D,ii,b
536408	Euston Road, London	LM1307	74.9	70.9	80.9	97.5	75.3	74.7	71.0	3,A,ii,b
539626	North Gower Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
543159	Aldenham Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,iii,b
544316	Albert Street, London	LM1075	55.2	46.7	50.8	70.6	55.5	63.6	46.3	1,A,iii,b
544328	Arlington Road, London	LM1075	55.2	46.7	50.8	70.6	55.5	63.6	46.3	1,A,iii,b
544630	Mornington Terrace, Regent's Park	LM0059	59.1	53.6	67.9	83.1	59.1	57.3	52.6	3,A,i,a
545266	Harrington Square, London	LM1304	66.8	61.3	70.8	86.0	67.0	65.2	60.5	3,A,i,a
545326	Mornington Crescent, London	LM0058	61.8	56.3	65.0	80.2	62.1	60.3	55.6	1,A,ii,b
545365	Mornington Crescent, London	LM1305	55.7	50.2	65.4	80.6	56.0	54.2	49.9	3,B,ii,b
545455	Oakley Square, London	LM0058	61.8	56.3	65.0	80.2	62.1	60.3	55.6	1,A,ii,b
545616	Eversholt Street, London	LM0058	61.8	56.3	65.0	80.2	62.1	60.3	55.6	1,A,ii,b
545708	Ampthill Square, London	LM1308	64.3	61.9	75.9	95.4	64.7	63.7	62.0	3,A,ii,b
545716	Ampthill Square, London	LM0058	56.8	51.3	65.0	80.2	57.1	55.3	50.6	1,B,iii,b
545744	Ampthill Square, London	LM0058	56.8	51.3	65.0	80.2	57.1	55.3	50.6	1,B,iii,b
545762	Barnby Street, St. Pancras and Somers Town	LM7022	62.2	60.5	82.2	97.4	62.0	63.3	59.7	3,B,iii,b
545877	Harrington Square, London	LM1304	66.8	61.3	70.8	86.0	67.0	65.2	60.5	3,A,ii,b
545890	Harrington Square, London	LM7022	66.6	64.9	82.2	97.4	66.4	67.7	64.1	3,C,ii,b
545919	Hampstead Road, London	LM7027	68.7	64.5	73.5	86.2	69.0	66.8	64.7	3,A,ii,b

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546176	Ampthill Square, London	LM0058	51.8	46.3	65.0	80.2	52.1	50.3	45.6	1,B,ii,b
546361	Mornington Place, London	LM0059	59.1	53.6	67.9	83.1	59.1	57.3	52.6	3,A,ii,b
547012	Hampstead Road, London	LM1200	67.7	63.5	75.1	87.8	68.0	65.8	63.7	1,A,ii,b
700187	Royal College Street, St. Pancras and Somers Town	LM0071	67.3	65.6	71.7	85.0	67.2	65.5	64.1	3,A,iii,b
700246	College Grove, London	LM0069	66.8	64.1	76.7	90.9	66.4	66.5	62.6	3,A,iii,b
700247	Unnamed Road, St. Pancras and Somers Town	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700249	St. Pancras Way, London	LM1314	56.1	48.0	59.2	64.0	56.7	53.8	48.0	3,A,iii,b
700384	Mornington Terrace, Regent's Park	LM1309	60.4	55.5	66.5	82.8	60.7	57.7	55.2	3,A,ii,b
700386	Park Village East, London	LM7088	63.2	56.0	62.2	77.8	64.5	61.2	55.7	1,B,ii,b
700387	Park Village East, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,ii,b
700388	Stanhope Street, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,ii,b
700389	Hampstead Road, London	LM7027	66.0	61.8	73.5	86.2	66.3	64.1	62.0	3,C,ii,b
700391	Melton Street, London	LM1307	56.8	52.7	80.9	97.5	57.2	56.6	52.9	3,C,ii,b
700392	Hampstead Road, Regent's Park	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
700393	Chester Place, London	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,iii,b
700394	Robert Street, London	LM1200	60.3	56.1	75.1	87.8	60.6	58.4	56.3	1,BC,ii,b
710960	Albany Street, Regent's Park	LM1200	67.7	63.5	75.1	87.8	68.0	65.8	63.7	1,A,iii,b
710962	Camden High Street, London	LM1304	66.8	61.3	70.8	86.0	67.0	65.2	60.5	3,A,iii,b
710964	Bayham Street, London	LM0059	59.1	53.6	67.9	83.1	59.1	57.3	52.6	3,A,iii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding[1]
			For operational sound assessment				For construction sound assessment			
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}	
710965	Cumberland Market, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
710966	Robert Street, London	LM7021	60.7	55.9	69.7	84.9	62.8	57.8	55.5	3,A,ii,b
710967	Clarence Gardens, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
710968	Camden High Street, London	LM1304	66.8	61.3	70.8	86.0	67.0	65.2	60.5	3,A,iii,b
710969	Bayham Street, London	LM0059	59.1	53.6	67.9	83.1	59.1	57.3	52.6	3,A,iii,b
710970	Cardington Street, London	LM1200	67.7	63.5	75.1	87.8	68.0	65.8	63.7	1,A,ii,b
710971	William Road, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
710972	Stanhope Street, London	LM7023	52.4	49.9	65.6	80.8	52.4	50.6	49.1	3,A,iii,b
710973	Oakley Square, London	LM0058	61.8	56.3	65.0	80.2	62.1	60.3	55.6	1,A,ii,b
710974	Cardington Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
710975	Cranleigh Street, London	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,iii,b
710976	Crowndale Road, London	LM0059	59.1	53.6	67.9	83.1	59.1	57.3	52.6	3,A,iii,b
710977	Chalton Street, London	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
710978	Chalton Street, St. Pancras and Somers Town	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
711025	Committed Development C251-CM261	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720352	St Mary School North	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720354	Hotel, Graton Place	LM7025	63.7	61.3	76.1	95.6	64.4	63.4	61.7	3,B,ii,b
720355	36 Churchway	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b
720356	Wellesley House, Churchway	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b
720357	9-16 St Mary's House, Drummond Crescent	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b
720358	1-36 St Joseph's Flats, Drummond Crescent	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding[1]
			For operational sound assessment				For construction sound assessment			
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}	
720359	Drummond Crescent, Churchway	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b
720360	Ian Hamilton House, Doric Way	LM1049	64.6	62.2	79.8	99.3	64.9	63.9	62.2	1,B,ii,b
720363	Winsham House, Church way	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,i,a
720365	Victoria (PH), Chalton Street	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720367	St Aloysius RC Church	LM7025	63.7	61.3	76.1	95.6	64.4	63.4	61.7	3,B,ii,b
720368	32 Phoenix Road	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720370	62-76 Chalton Street	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720371	48-54 Chatlon Street	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720372	The Saw Theathe Hotel, Chalton Street	LM1066	64.3	60.3	67.6	84.2	64.7	64.1	60.4	1,A,ii,b
720375	75-85 Chalton Street	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720376	St Anne's Flat, Doric Way	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b
720377	1-35 Chalton House, Chaoton Street	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720378	1-79 Doric Way	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,ii,b
720380	St Aloysius Catholic Infant School	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720381	St Martin's House, St Margaret's House	LM7025	63.7	61.3	76.1	95.6	64.4	63.4	61.7	3,B,ii,b

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding[1]
			For operational sound assessment				For construction sound assessment			
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}	
720383	The Cock Tavern, Phoenix Road	LM1303	57.1	54.7	68.7	88.1	57.8	56.8	55.1	3,A,iii,b
720384	1-26 Alednham House, Aldanham Street	LM7025	63.7	61.3	76.1	95.6	64.4	63.4	61.7	3,B,ii,b
720385	St Mary's Church North	LM7025	63.7	61.3	76.1	95.6	64.4	63.4	61.7	3,B,ii,b
720386	1 Aldenham Street	LM7025	63.7	61.3	76.1	95.6	64.4	63.4	61.7	3,B,ii,b
720387	Stephenson Way South	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,iii,b
720388	Stephenson Way N2	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,iii,b
720389	Stephenson Way N1	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,iii,b
720391	Euston Road Midddle	LM1307	74.9	70.9	80.9	97.5	75.3	74.7	71.0	3,A,ii,b
720392	Stephenson Way North facade	LM7092	63.5	65.4	73.3	78.2	64.3	63.1	65.5	3,A,i,a
720393	Regnart Buildings	LM7092	63.5	65.4	73.3	78.2	64.3	63.1	65.5	3,A,i,a
720400	Tavern hs, Augustus Street	LM7021	60.7	55.9	69.7	84.9	62.8	57.8	55.5	3,A,ii,b
720403	Starcross Street West	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
720404	Drummond Street East	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
720405	Drummond Street Middle	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
720406	Drummond Street West	LM7026	54.5	47.3	61.0	65.0	55.1	52.1	47.3	3,A,ii,b
720407	Euston Street East	LM7093	64.1	60.1	71.3	76.1	64.7	61.8	60.1	4,A,i,a

Assessment location ID	Area represented	Measurement location	Existing baseline sound level (dB)							Data source coding[1]
			For operational sound assessment				For construction sound assessment			
			Daytime $L_{pAeq,16hr}$	Night-time $L_{pAeq,8hr}$	Arithmetic average of night-time $L_{pAFmax,5min}$	Highest night-time $L_{pAFmax,5min}$	Daytime L_{pAeq}	Evening / Weekend L_{pAeq}	Night-time L_{pAeq}	
720408	Euston Street Middle	LM7094	61.2	55.8	70.1	74.9	61.8	58.9	55.8	4,A,i,a
720409	Euston Street West	LM7094	61.2	55.8	70.1	74.9	61.8	58.9	55.8	4,A,i,a
720415	Goldsmith House	LM1310	62.9	57.4	72.5	87.7	63.2	61.4	56.7	3,A,ii,b
720427	St Richards House South	LM7025	68.7	66.3	76.1	95.6	69.4	68.4	66.7	3,A,i,a
720428	Hampstead Road, Newlands (proposed)	LM7027	68.7	64.5	73.5	86.2	69.0	66.8	64.7	3,A,ii,b
720429	Hampstead Road, Rydal (proposed)	LM7027	68.7	64.5	73.5	86.2	69.0	66.8	64.7	3,A,ii,b
720430	Park Village East, Park Village Studio	LM0061	51.4	46.5	54.7	71.0	51.7	48.7	46.2	1,A,ii,b
720431	York and Albany Hotel	LM0083	57.1	53.6	67.9	82.9	57.0	55.1	52.1	3,A,iii,b

Table 2 : Data source coding key

Code	Data source type
1	Long-term measurement location.
2	Short-term (linked to simultaneous long-term).
3	Short-term (using profile from non-simultaneous long-term).
4	Short-term using standard (National noise incidence study[1] or other) 24hr profile.
5	Specific validated prediction.
6	Predictions from other sources (Department for Environment, Food and Rural Affairs (Defra) noise maps[2], etc.).
7	Generic levels.

Code	Corrections applied
A	Data from above source applied directly.
B	Correction applied for screening.
C	Correction applied for distance from source.
D	Minimum level cut-off applied.

Code	Distance from measurement
i	Data applied from a measurement at or very close to the assessment location.
ii	Data applied from a local measurement location at a greater distance but noted to have equivalent acoustic climate.
iii	Data applied from a distant measurement location where sound levels would be expected to be similar.

Code	Uncertainty
a	Data are considered highly representative of the prevailing sound climate
b	Data are considered representative of the prevailing sound climate, but variations in measured levels indicate that there may be a higher degree of uncertainty than for (a).
c	Data are considered to be an estimate of the sound climate, (e.g. taken from Defra noise maps, etc.).

1 Building Research Establishment, (2002), National Noise Incidence Study 2000/2001.
2 Defra, Noise Mapping England, http://services.defra.gov.uk/wps/portal/noise/; accessed 26 July 2013.

3.3 Future baseline methodology

Construction

3.3.1 The assessment of noise from construction activities assumes a baseline year of 2017. As a conservative assumption, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2015) and the future baseline year of 2017.

3.3.2 Due to the duration of the construction work and as the precise timing of the highest sound levels would be different in each location, using baseline sound levels for 2017 as the start of the construction period, provides a reasonable worst case assessment.

3.3.3 The assessment of construction traffic is based on future baseline traffic flows for 2021, as a year which is representative of the middle of the construction period.

Operation

3.3.4 There is potential for future baseline sound levels for operation (2026) to change when compared to the existing baseline sound levels (2015) as a result of changes in baseline sound sources.

3.3.5 In the vast majority of cases where change might occur it is expected that baseline sound levels will increase at assessment locations due to increases in vehicle movements on roads. It is therefore considered that the use of the 2015 baseline levels in the operational assessment will result in a worst case assessment of the impact of changes in the future baseline sound levels in the majority of locations.

3.3.6 Therefore for the purposes of this assessment future baseline levels have been assumed to be identical to those identified in Table 1 of this appendix for 2015.

3.3.7 In addition, based on available road traffic information a screening exercise has been undertaken to identify any areas in which a reduction in baseline sound level might be likely. Where reductions in baseline sound level have been identified a further screening assessment has been completed to identify if these changes would be likely to materially affect the operational sound assessment.

3.3.8 The screening assessment has not identified any locations in this area where a decrease in future baseline (2026), compared to existing baseline (2015), is likely to materially affect the operational sound assessment.

HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 2 and Additional Provision 3 Environmental Statement

Volume 5 | Technical appendices

Sound, noise and vibration

SV-003-001

Environmental topic	Sound, noise and vibration	SV
Appendix name	Construction assessment report	003
Community forum area	Euston – Station and Approach	001

Contents

List of tables

1 Introduction

1.1.1 This appendix provides an update to Appendix SV-003-001 for Euston – Station and Approach community forum area 1 (CFA1) from the main Environmental Statement (ES) as a result of design changes in the Euston area, as part of the Supplementary Environmental Statement 2 (SES2) and the Additional Provision 3 Environmental Statement (AP3 ES). This update should be taken to replace Appendix SV-003-001 from the main ES.

1.1.2 The sound, noise and vibration appendices comprise four sections. The first of these is an introduction to the relevant policy and methodology (main ES Volume 5, Appendix SV-001-000). This relates to the sound, noise and vibration assessment for all community forum areas (CFA).

1.1.3 For CFA1 the other three sections are as follows for the SES2 and AP3 ES:

- baseline sound, noise and vibration (Volume 5, SES2 and AP3 ES Appendix SV-002-001);
- construction sound, noise and vibration (Volume 5, SES2 and AP3 ES Appendix SV-003-001) (this appendix); and
- operational sound, noise and vibration (Volume 5, SES2 and AP3 ES Appendix SV-004-001).

1.1.4 The outcomes of the assessment are summarised in CFA Report 01, Section 11.

1.1.5 The maps referred to throughout the sound, noise and vibration appendices are contained in the Volume 5, Map Book Sound, Noise and Vibration.

1.1.6 This appendix presents the likely noise and vibration impacts, effects and significant effects arising from the construction of the scheme for the Euston station and approach area on:

- people, primarily where they live ('residential receptors') in terms of:
  - individual dwellings; and
  - on a wider community basis, including any shared community open areas.
- community facilities such as schools, hospitals, places of worship, and also commercial properties such as offices and hotels, collectively described as 'non-residential receptors' and 'quiet areas'.

1.2 Evaluation of impacts and effects

1.2.1 This appendix provides a quantitative assessment of construction noise and vibration impacts/effects and a qualitative assessment of likely significant effects, based on the impacts/effects identified and other local context information consistent with the scope and methodology defined for the scheme.

1.2.2 Indirect effects arising from temporary changes in traffic patterns on the existing road network as a consequence of constructing the scheme are also reported in this appendix, where they will occur within the study area (as defined in Volume 5, Appendix SV-001-000 of the main ES).

1.2.3 In undertaking the assessment of noise and vibration, consistent with Environmental Impact Assessment (EIA) Regulations and emerging National Planning Practice Guidance[1] a differentiation between impacts, effects, adverse effects and significant effects is made. Further information is provided in Appendix SV-001-000 of the main ES.

1.2.4 The assessment of impacts and effects has been undertaken at assessment locations that are representative of a number of dwellings or other sensitive receptors. The assessment locations employed in this assessment are presented in Map SV-03-001 (Volume 5, Map Book Sound, Noise and Vibration).

[1] Information is provided in the Department for Communities and Local Government's emerging National Planning Practice Guidance – Noise http://planningguidance.planningportal.gov.uk, (refer to the noise exposure hierarchy), as available on 14th October 2013.

2 Scope, assumptions and limitations

2.1 Regional and local policy guidance

2.1.1 The policy framework for sound, noise and vibration is set out in Volume 1 and in Volume 5, Appendix SV-001-000 of the main ES. As part of the engagement with local authorities through the Planning Forum Sub Group - Acoustics, information regarding any specific local planning guidance in respect of noise and vibration has been requested. Whilst no information has been received for this study area via the Planning Forum Sub Group - Acoustics, the following local policy guidance on noise and vibration has been identified: Camden Local Development Framework - November 2010.

2.1.2 This guidance has been considered as part of formulating the detailed application of the impact and significance criteria set out in Volume 5, Appendix SV-001-000.

2.2 Engagement

2.2.1 Details of engagement on a route-wide basis with the local and county authorities' environmental health practitioners via the Planning Forum Sub Group - Acoustics, is set out in Volume 1.

2.2.2 Engagement with communities has been via the community forums, as set out in Volume 1. In respect of sound, noise and vibration the following discussions have taken place:

- general discussions in respect of local issues, including possible ways to avoid and mitigate the potential impacts of noise and vibration;
- September / October 2012: a specific presentation about sound, noise and vibration with discussion afterwards with one of the project team specialists;
- November / December 2012: specific request for the community forum regarding baseline sound monitoring locations;
- January / February 2013: feedback to the community forum on any proposed baseline monitoring locations;
- verbal / written responses to questions and sound, noise and vibration;
- meetings with various businesses including the Royal College of General Practitioners, the Magic Circle, the Royal Asiatic Society , and Park Village Studio and the Maria Fidelis School to better understand the sensitivity of their building uses; and
- 2013-2015: a series of meetings with the London Borough of Camden concerning construction phase impacts and proposals for rehousing residents of the Regent's Park Estate.

2.3 Methodology

2.3.1 The methodology used for the assessment of airborne sound, ground-borne sound and vibration impacts and the determination of significant effects is defined in the Scope and Methodology Report (SMR) (Volume 5, Appendix CT-001-000/1). Further clarification regarding specific areas is presented in the SMR addendum (Volume 5, Appendix CT-001-000/2). Further information is contained in Volume 5, Appendix SV 001-000.

2.3.2 In this area construction of the scheme includes building complex major engineering structures over a wide area including utility diversions, demolitions, excavations, retaining wall construction, bridge replacements, and construction of the extended station facilities.

2.3.3 This assessment considers the noise contributions from all the main activities required to construct the scheme. Through extensive liaison with the construction engineering team, a noise model was created comprising approximately 450 activity locations, each comprising of up to 20 items of construction plant. The noise levels from all these activities were predicted for each month of the assumed construction programme to give cumulative noise levels at each assessment location from all activities likely to occur simultaneously.

2.3.4 The assessment of effects has been undertaken at approximately 130 assessment locations that are each representative of a number of dwellings or other sensitive receptors.

2.3.5 The design of the scheme has evolved since the completion of the construction noise assessment. However, the changes mainly affect the programming of works and are unlikely to affect the significance of the effects identified.

2.4 Assumptions

2.4.1 Route-wide assumptions are outlined in Volume 1 and are further detailed in Volume 5, Appendix SV-001-000 of the main ES. Local assumptions that apply to the assessment of construction sound noise and vibration within this area are set out in Volume 2, CFA Report 01.

2.5 Limitations

2.5.1 The route-wide limitations and the approach adopted to assure that they will not impact the robust assessment of sound, noise and vibration are presented in Appendix SV-001-000.

2.5.2 The construction works in Euston are complex and spatially constrained. At this stage of the design the contractors who will do the construction work have not been appointed. The level of detail on likely construction methods available at this time is adequate to predict likely noise levels, and as discussed below, a standard extent of mitigation known to be deliverable throughout the works has been included. It is, however, likely that under the requirements of the CoCP the contractors will, by applying the Best Practicable Means (BPM) specific to each site, find additional ways

to reduce noise levels so that the extent of noise insulation and residual impacts will be less and of shorter duration than those reported at this stage.

3 Environmental baseline

3.1 Existing baseline

3.1.1 Baseline sound level data has been collected at locations representative of the airborne sound-sensitive receptors. The existing and future baseline airborne sound levels derived from these measurements are given in Volume 5, SES2 and AP3 ES Appendix SV-002-001. Details of the baseline data collection and the methodology are given in Volume 5: Appendix SV-001-000 of the main ES and specifically for this study area in Volume 5, Appendix SV-002-001.

3.2 Future baseline

3.2.1 The assessment of noise from construction activities assumes a baseline year of 2017 which represents the period immediately prior to the start of the construction period. As a reasonable worst case, it has been assumed that no change in baseline sound levels will occur between the existing baseline (2012/13) and the future baseline year of 2017. The assessment of noise from construction traffic assumes baseline years of 2021 and 2026, as discussed below, representative of the construction periods when the construction traffic flows are generally expected to be at its highest. Further information can be found in the traffic and transport assessment (Volume 5, SES2 and AP3 ES Appendix TR-001-000).

4 Effects arising during construction

4.1 Introduction

4.1.1 The assessment is reported first for ground-borne sound and vibration and then for airborne sound. Under each of these headings, the results of the quantitative identification of impacts and effects are presented. This is followed by the identification of significant effects and the evidence used to support these conclusions.

4.1.2 The structure of this assessment report is:

- avoidance and mitigation measures;
- quantitative identification of impact and effects:
  - ground-borne sound and vibration:
    - residential; and
    - non-residential;
  - airborne sound:
    - residential; and
    - non-residential;
- assessment of impacts and effects:
  - residential receptors: direct effects – dwellings;
  - residential receptors: direct effects – communities;
  - residential receptors: indirect effects;
  - non-residential receptors: direct effects;
  - non-residential receptors: indirect effects; and
  - cumulative effects from the scheme and other committed development.

4.2 Avoidance and mitigation measures

4.2.1 These measures are set out in Volume 2, CFA Report 1.

4.2.2 In addition, there will be several construction compounds around the perimeter of the Euston site that will be occupied for some years. These compounds will serve various functions, the majority of which will not be major noise sources. Unlike works areas, where the locations of noisy activities are largely dictated by the scheme design, in the compounds there is some flexibility as to how the different facilities are laid out. Therefore, where these are in close proximity to noise sensitive receptors the layout of the compounds will be used to minimise noise impacts.

4.2.3 The National Temperance Hospital compound is adjacent to the Maria Fidelis School. It will house worker facilities including offices, storage and canteens. These temporary buildings will not generate high levels of noise and will be positioned to provide screening of noise emission to the school and its neighbours.

4.2.4 Similarly stacked porta cabins will be used on the Regent's Park Estate satellite compound to reduce noise impacts to adjacent housing.

4.2.5 The layout of the Hampstead Road Bridge satellite compounds and the Royal Mail NW1 Delivery Office satellite compound will similarly be designed to reduce noise emissions to housing in Mornington Terrace, Mornington Crescent, and the Ampthill Estate.

4.2.6 Before construction begins, the contractor will be required to predict noise levels for the Section 61[2] application to the local authority. It is likely that in many cases quieter methods of working and specific on site noise mitigation measures will be available. For example, mobile noise barriers located close to noisy plant can usually reduce noise levels at adjacent properties by at least 5dB. The result will be lower noise impacts than reported.

4.3 Quantitative identification of impacts and effects

Ground-borne vibration

4.3.1 Assessment locations defined for the quantitative assessment of impacts are shown in Map SV-03-001 (Volume 5, Map Book Sound, Noise and Vibration).

4.3.2 The ground-borne vibration assessment considers the effects of the following activities in this area:

- vibratory compaction of structural earthworks;
- vibratory piling; and
- ballast compaction.

4.3.3 There is no requirement for vibratory compaction of earthworks in the Euston area. The use of vibratory rollers for more minor works, such as road surfacing, reinstatement after utility diversions etc. have been scoped out of the assessment based on the limited nature and duration of such works.

4.3.4 The majority of piling required to construct retaining walls, bridges and other structures will be continuous flight auger piling, which is not a significant source of vibration. Vibratory piling techniques are expected for some bridge piers. The relevant prediction method for the proposed type of piling as detailed in BS5228-2:2009[3] has been adopted.

[2] Section 61 Agreement under the Control of Pollution Act, 1974 (c.40). London, Her Majesty's Stationery Office.
[3] British Standard 5228: 'Code of practice for noise and vibration control on construction and open sites: Part 2: Vibration', British Standards Institution, 2009.

4.3.5 Pneumatic breakers are commonly required to break up existing concrete structures during demolition works. The use of such equipment can generate perceptible vibration. However, the impact is limited to a small area in very close proximity of the equipment. Based on the limited extent and duration of such works a quantitative assessment of vibration from pneumatic breakers is not considered to be required.

4.3.6 Subject to the screening distances identified in the SMR, the likely impacts and significant effects from construction vibration have been considered for residential receptors, both as individual dwellings and communities, and non-residential receptors.

4.3.7 In Table 1 the number of impacts represented column, identifies the number of receptors likely to be subject to construction vibration levels above the impact criteria. The assessment location itself may be representative of a greater number of receptors but due to a range of factors (including building orientation and increased distance from the source of the vibration) not all the receptors represented would be likely to be impacted. In Table 2 the number of impacts column has been left blank and information regarding the relevant receptors is included in the area represented column.

4.3.8 For each assessment location, the assessment results for residential and non-residential receptors are presented in Table 1 and Table 2. Explanation of the information in Tables 1 and 2 is provided in Volume 5, Appendix SV-001-000, with the following additional notes:

	Where the significant effect column is highlighted, then a significant effect is identified at the referenced community, or individual receptor.
*	Significant effect – the quantitative impact methodology has identified either: 1) no impact at this receptor but further information (see assessment) has identified that a significant effect is nonetheless likely; or 2) an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not gives rise to a significant effect.
~	Significant effect – impacted dwellings which are either spatially remote from larger defined residential areas, or a small number of dwellings whose impact is not considered to represent the larger defined residential area, and as such are not considered to be part of a community significant effect.
A	Type of effect – annoyance.
D	Type of effect – disturbance.
Sd	Type of effect – sleep disturbance.
Q	Type of effect – deterioration of acoustic quality.
R	Type of receptor – residential.

V1 Type of receptor:

(V1) vibration sensitive research and manufacturing, hospital, and university equipment;

(V2) hotels, hospital wards and education dormitories;

(V3) offices, schools and places of worship; or

(V4) workshops.

T Receptor design – typical.

S Receptor design – special.

Table 1 : Assessment of construction induced ground-borne vibration at residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
521033	Park Village East, Cubitt Court	0.66	-	0.29/0.29	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	40	R	T		-	-	N 2.9	-	CSV01-C02
528830	Park Village East, Middle	0.86	-	0.39/0.39	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	3	R	T		-	-	N 2.5	-	CSV01-C02
528856	Park Village East, Middle	0.70	-	0.31/0.31	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	2	R	T		-	-	N 2.5	-	CSV01-C02
529041	Mornington Terrace, Middle 1	0.72	-	0.32/0.32	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	10	R	T		-	-	N 2.5	-	CSV01-C03
529064	Mornington Terrace, Middle 3	1.54	-	0.78/0.78	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	S	8	R	T		-	-	N 2.5	-	CSV01-C03
529185	Mornington Terrace, S3	0.55	-	0.23/0.23	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	12	R	T		-	-	N 2.5	-	CSV01-C03

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
529201	Mornington Terrace, S2	1.11	-	0.53/0.53	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	S	10	R	T		-	-	N 2.5	-	CSV01-C03
534557	Cobourg Street	3.09	1.76/1.76	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	S	15	R	T		-	-	D 1.9	-	CSV01-C05
534765	Cobourg Street	0.56	0.24/0.24	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	A	15	R	T		-	-	D 1.9	-	CSV01-C05
535446	Hampstead Road, Cartmel House, North	1.59	0.81/0.81	0.23/0.23	Day: Bridge Construction - Construction of new bridge pier (daytime works) - Vibratory piling rig; and Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	S	35	R	T		-	-	D 1.5; N 1.8	-	CSV01-C06
535454	Harrington Street, Coniston House	1.31	0.65/0.65	0.25/0.25	Day: Bridge Construction - Construction of new bridge pier (daytime works) - Vibratory piling rig; and Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	20	R	T		-	-	D 1.5; N 1.8	-	CSV01-C06

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
535501	Harrington Street, Langdale House	0.66	0.29/0.29	0.27/0.27	Day: Bridge Construction - Construction of new bridge pier (daytime works) - Vibratory piling rig; and Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	20	R	T		-	-	D 1.5; N 1.3	-	CSV01-C06
535544	Augustus Street, Augustus House	0.60	-	0.26/0.26	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	30	R	T		-	-	N 2.9	-	CSV01-C06
535768	Varndell Street, East	1.87	0.98/0.98	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	S	20	R	T		-	-	D 1.4	-	CSV01-C06
545326	Mornington Crescent, South	0.76	-	0.34/0.34	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	10	R	T		-	-	N 2.9	-	CSV01-C03
545919	Ampthill Estate, Gillfoot House	1.25	-	0.61/0.61	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	S	80	R	T		-	-	N 1.3	-	CSV01-C04

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
700384	Mornington Terrace	1.87	-	0.98/0.98	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	S	10	R	T		-	-	N 2.5	-	CSV01-C03
700388	Harrington Street, Langdale House	0.55	-	0.23/0.23	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	20	R	T		-	-	N 2.9	-	CSV01-C06
700389	Hampstead Road, Cartmel House, South	0.74	0.33/0.33	-	Day: Bridge Construction - Construction of new bridge pier (daytime works) - Vibratory piling rig	A	35	R	T		-	-	D 1.5	-	CSV01-C06
720400	Augustus Street, Tintern House	0.54	-	0.23/0.23	Night: Bridge Construction - Construction of new bridge pier (night time works) - Vibratory piling rig	A	15	R	T		-	-	N 2.9	-	CSV01-C06
720404	Drummond Street, East	1.06	0.51/0.51	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	A	10	R	T		-	-	D 1.9	-	CSV01-C05
720405	Drummond Street,	0.77	0.35/0.35	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling	A	5	R	T		-	-	D 1.9	-	CSV01-C05

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Peak particle velocity (PPV) [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
	Middle				rig										
720407	Euston Street, East	8.39	5.65/5.65	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	S	5	R	T		-	-	D 1.9	-	CSV01-C05
720408	Euston Street, Middle	1.64	0.84/0.84	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	S	5	R	T		-	-	D 1.9	-	CSV01-C05
720409	Euston Street, West	0.63	0.27/0.27	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	A	5	R	T		-	-	D 1.9	-	CSV01-C05
720428	Hampstead Road, Newlands (proposed)	1.28	0.63/0.63	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	A	30	R	T		-	-	D 1.4	-	CSV01-C06
720429	Hampstead Road, Rydal Water (proposed)	1.19	0.58/0.58	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	A	25	R	T		-	-	D 1.4	-	CSV01-C06

* Impacts with durations of less than 1 month are not generally considered significant.

Table 2 : Assessment of construction induced ground-borne vibration at non-residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	PPV [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
534557	Cobourg Street, (Society of College National and University libraries)	3.09	1.76	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N3
534765	Cobourg Street, (Exmouth Arms House and residential)	0.56	0.24	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	-
700391	1-9 Melton Street, RCGP	0.83	0.38	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	-
700394	Robert Street (Surma Community Centre)	0.54	0.23	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.4	-	-
720387	Stephenson Way, South	0.76	0.34	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	-
720388	Stephenson Way, Middle	1.75	0.91	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N12

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	PPV [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
720389	Stephenson Way, RCGP	1.25	0.61	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N10
720390	Stephenson Way, Middle	1.34	0.67	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N12
720392	Regnart Buildings, Magic Circle	3.88	2.30	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V1	T		-	-	D 1.9	-	CSV01-N13
720392	Regnart Buildings, Magic Circle	3.88	2.30	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N13
720393	Regnart Buildings, Wesley Hotel	8.39	5.65	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V2	T		-	-	D 1.9	-	CSV01-N14
720404	Drummond Street, East shops	1.06	0.51	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N15
720405	Drummond Street, Middle shops	0.77	0.35	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	-
720407	Euston Street, East Shops and offices	8.39	5.65	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V3	T		-	-	D 1.9	-	CSV01-N16

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	PPV [mm/s] on foundation	Typical/highest monthly indoor VDV [m/s$^{1.75}$]		Construction activity resulting in highest forecast vibration levels and its duration (months)	Type of effect	Number of impacts represented	Type of receptor	Receptor resign	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
			Day 0700-2300	Night 2300-0700											
720408	Euston Street, Middle shops and offices	1.64	0.84	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V_3	T		-	-	D 1.9	-	CSV01-N16
720409	Euston Street, West shops and offices	0.63	0.27	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V_3	T		-	-	D 1.9	-	-
720428	Hampstead Road, Newlands (proposed)	1.28	0.63	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V_3	T		-	-	D 1.4	-	CSV01-N17
720429	Hampstead Road, Rydal Water (proposed)	1.19	0.58	-	Day: Pipe jacking - Pile and excavate jacking and receiving pits - Vibratory piling rig	B	1	V_3	T		-	-	D 1.4	-	CSV01-N18

* Impacts with durations of less than 1 month are not generally considered significant.

Residential

4.3.9 The assessment of impacts due to ground-borne vibration from the construction of the scheme has identified temporary effects on groups of dwellings around the works falling into five community areas.

4.3.10 With reference to Table 1, the assessment has identified that there are no dwellings for which the expected levels exceed the vibration impact criteria for buildings of 6 mm/s PPV except at the east end of Euston Street where levels up to 8mm/s are predicted from vibratory piling nearby. It is expected that an alternative method can be used to reduce this to below the criterion.

4.3.11 Likely significant effects from construction vibration are expected in residential dwellings in Mornington Terrace, Gillfoot in Ampthill Estate, Cobourg Street and Euston Street, and Cartmel in the Regent's Park Estate. Significant effects are not predicted in other dwellings or where utility diversion works are required, because, although vibration may be perceptible, the durations of impacts will be less than a month.

4.3.12 In the Park Village East and the Mornington Terrace community areas (CSV01-C02 and CSV01-C03), vibration effects may be experienced intermittently during a period of up to approximately three months at dwellings near the Mornington Street Bridge work which may require vibratory piling during the night-time. In the Cobourg Street, Drummond Street, Euston Street area (CSV01-C05) vibration effects may be experienced intermittently during a period of up to approximately two months as a result of pile jacking and vibratory piling. In the Regent's Park Estate area (CSV01-C06) community vibration effects may be experienced intermittently during a period of up to approximately two months at dwellings nearest the Hampstead Road Bridge work which may require vibratory piling during both the daytime and night-time. The typical community response to a minor vibration impact will be a low probability of adverse comment. Combined with simultaneous airborne noise impacts, the effects on these dwellings are considered to be a change in the acoustic character of the area and hence to be perceived as an adverse effect on the quality of life. In combination these individual effects are considered significant.

4.3.13 Elsewhere vibration may be perceptible during various works, such as utility works, demolition and road surface compaction, but for periods of less than a month. No percussive piling is expected in the Euston area.

Non-residential

4.3.14 The area around the Euston works has various non-residential uses including offices, shops, schools and churches, often alongside and below residential properties. These have been assessed through predictions of likely levels of ground vibration during those works most likely to generate vibration, as described above, and comparing the likely levels with the assessment criteria laid out in Volume 5, Appendix SV-001-000. Where non-residential receptors are located on roads where utilities works will be carried out it is expected that the duration of associated vibration impacts will be less than one month and will not give rise to significant annoyance effects within the building.

4.3.15 Consideration of the likely vibration levels from construction of the revised scheme, the sensitivity of the receptor, the magnitude of the impact, and other significance criteria as set out in Volume 5, Appendix SV-001-000 has resulted in the identification of a likely significant effect on the following non-residential receptors on a precautionary basis.

4.3.16 There are two main areas where the users of non-residential buildings could be affected by ground vibration. In Cobourg Street the Society of College National and University libraries could be affected as a result of pile jacking and vibratory piling in the area. Shops and commercial property on Euston Street and Drummond Street could also experience vibration from these works.

4.3.17 Similarly there may be a need for pile jacking and vibratory piling in the Stephenson Way area which could affect the users of offices there, including the Magic Circle and Royal College of General Practitioners. The highest levels are predicted closest to piling works in the Wesley Hotel and the east end of Euston Street. In this area attention will be required in the design of the construction works and through the Section 61 process to adjust the methods of working if necessary to further reduce levels and minimise impacts.

4.3.18 Buildings in the Cobourg Street and Euston Road areas could potentially house sensitive research equipment when the work takes place. Prior to works commencing manufacturers' safe operating limits will be established if such equipment is identified and monitoring will be carried out to monitor levels.

4.3.19 Two audio-visual studios have been identified in the area whose businesses may require the use of equipment that could be affected by ground vibration. The Park Village Studio in Park Village East and the Maverick TV Studio in Churchway could be affected depending on the equipment in use at the time of the works. In Churchway only Utility works are required, so that impacts should be less than a month in duration. In Park Village East works are required in addition to Utility works that could lead to longer duration impacts. Prior to works commencing manufacturers' safe operating limits will be established if such equipment is identified and monitoring will be carried out to monitor levels.

Airborne sound: direct impacts and effects

4.3.20 Activities associated with the construction phases of the scheme will generate airborne noise. The assessment of the likely impacts and significant effects as a result of the construction noise has considered the effects on:

- residential receptors, both as individual dwellings and communities; and
- non-residential receptors, including quiet areas.

4.3.21 For each type of receptor, subject to the screening distances identified, and based upon supplied plant information from engineers, the typical and highest monthly $L_{pAeq,T}$ noise levels from construction activities have been calculated at the façade of all assessment locations, which are representative of a number of receptors in the study area.

4.3.22 The assessment results, impact criteria and significance criteria for the assessment of the scheme at residential and non-residential receptors are presented in Tables 3 and 4 respectively.

4.3.23 The construction activity resulting in the highest forecast noise levels is reported in Tables 3 and 4 for each assessment location and time period, where the highest forecast noise level from any individual construction activity is above $L_{pAeq,T}$ 40dB during the daytime and evening periods and $L_{pAeq,T}$ 35dB during the night-time. Where the highest forecast noise level from any individual construction activity is less than $L_{pAeq,T}$ 40dB during the daytime and evening or $L_{pAeq,T}$ 35dB during the night-time no activities have been reported.

4.3.24 The area around the construction work planned at Euston comprises numerous buildings with diverse uses. Information regarding the number and use of all sensitive receptors was based upon the best available data at the time of assessment. It is possible that in locations where effects are identified the number of affected receptors and the type of effect may vary. A worst case approach has been taken and wherever possible and the most sensitive likely receptor has been assumed.

4.3.25 In Tables 3 and 4 the number of impacts represented column identifies the number of receptors likely to be subject to construction noise levels above the impact criteria. The assessment location itself may be representative of a greater number of receptors but due to a range of factors (including additional screening, building orientation and increased distance from the source of the noise) not all receptors represented would be likely to be impacted. The durations of impacts indicated are the longest durations where the criteria are predicted to be exceeded for any floor of the assessment location, which is not necessarily the floor with the highest noise levels as reported. Where no impact has been identified this column has been marked with '1'.

4.3.26 Since the main ES, new assessment locations have been added and some have been removed to give a total of 78 assessment locations representing over 1,600 properties. Additional assessment locations have generally been added where impacts have changed or to add detail for estimating exactly which facades are impacts and could warrant mitigation. Assessment locations have been removed generally where impacts were not identified or where they are not needed because adjacent locations provide similar results.

4.3.27 Explanation of the information within Tables 3 and 4 is provided in Volume 5, Appendix SV-001-000, with the following additional notes:

Where the significant effect column is highlighted then a significant effect is identified at the referenced community, or individual non-residential receptor

* Significant effect – the quantitative impact methodology has identified either:

1) no impact at this receptor but further information (see assessment) has identified that a significant effect is nonetheless likely; or

2) an impact at this receptor which, based upon further qualitative receptor information, (see assessment text) does not gives rise to a significant effect.

~	Significant effect - impacted dwellings which are either spatially remote from larger defined residential areas, or a small number of dwellings whose impact is not considered to represent the larger defined residential area, and as such are not considered to be part of a community significant effect.
A	Type of effect – adverse effect.
S	Type of effect – significant adverse effect.
NA	Type of effect – not generally an adverse effect.
B	Type of effect – for non-residential receptors further detail about the type of effect is set out in the text of Appendix SV-001-000.
R	Type of receptor – residential.
G	Type of receptor: (G1) theatres, large auditoria and concert halls; (G2) sound recording and broadcast studios; (G3) places of meeting for religious worship, courts, cinemas, lecture theatres, museums and small auditoria or halls; (G4) schools, colleges, hospitals, hotels and libraries; or (G5) offices and general commercial premises.
T	Receptor design – typical.
S	Receptor design – special.
H	Existing environment – high existing ambient noise levels: daytime level more than 75dB, evening-time level more than 65dB or night-time level more than 55dB $L_{pAeq\ at\ the\ façade.}$
NI	Mitigation effect - identified as likely to qualify for noise insulation under the draft Construction Code of Practice (draft CoCP).
^	An impact which meets the noise insulation criteria at the worst affected floor of the assessment location, which, based upon further qualitative receptor information, (see assessment text) either does not gives rise to a noise insulation effect or the number of receptors affected is lower.
D,E,N	Impact duration (months) – duration of impact during the day (D), evening (E) or night (N).

Table 3 : Assessment of construction noise at residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
519788	Euston Road, West	45/57 [>C]	<40/<40 [>C]	<40/51 [>C]	Day: Subway box works - Quick bridge works SWB1 Night: Subway box works - Quick bridge works SWB1	NA	1	R	T	H	-	-	-	-	
520752	Eversholt Street, South	70/84 [>C]	<40/47 [>C]	<40/52 [>C]	Day: Utility works - Utilities, Euston Gardens Night: Demolition	S	40	R	T	H	-	-	D 1	-	CSV01-C01
521033	Park Village East, Cubitt Court	70/84 [B]	59/70 [>C]	61/72 [>C]	Day: Utility works - Utilities, excavations Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of deck	S	40	R	T	H	-	-	D 36; E 5; N 37	NI	CSV01-C02
522490	Augustus Street	56/70 [A]	<40/48 [B]	<40/53 [C]	Day: Utilities, demolition - Demolition of buildings in the station approach	A	75	R	T	-	-	-	D1	-	*
523758	Parkway	61/72 [A]	41/52 [A]	59/74 [C]	Day: Utility trenching - sample utility works, Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	10	R	T	-	-	-	D 16; N 33	NI	CSV01-C02
523809	Mornington Terrace, North	66/77 [B]	46/59 [C]	62/75 [>C]	Day: Demolitions Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	1	R	T	H	-	-	D 22; N 27	NI	CSV01-C03
523826	Mornington Terrace, North	70/86 [B]	47/56 [C]	63/73 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	10	R	T	H	-	-	D 24; N 32	NI	CSV01-C03
523935	Albert Street,	50/64	<40/47	<40/50	Day: Utility trenching	NA	1	R	T	H	-	-	-	-	

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	South	[A]	[>C]	[C]	Evening: Retaining walls and abutments Night: Park Village East - Install contiguous piles in portal										
524286	Delancey Street	67/81 [B]	46/57 [C]	62/73 [>C]	Day: Utility trenching Evening: Retaining walls and abutments, Barrette construction Night: Park Install contiguous piles in portal	S	25	R	T	H	-	-	D 10; N 11	NI	CSV01-C03
527860	Albany Street, North	74/82 [B]	<40/46 [>C]	<40/46 [>C]	Day: Utility trenching Evening: Retaining walls and abutments	S	40	R	T	H	-	-	D1	-	*
528008	Park Village West, Regent's Park Barracks	53/65 [A]	47/57 [A]	48/59 [C]	Day: Park Village East - Barrette cap, cantilevered road and parapet construction Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of existing bridge piers	S	1	R	T	-	-	-	E 3; N 11	-	CSV01-C02
528051	Cumberland Terrace	74/82 [B]	<40/49 [>C]	<40/46 [>C]	Day: Utility trenching Evening: Retaining walls and abutments - Barrette construction	S	15	R	T	H	-	-	D 1	-	*
528192	Cumberland Terrace Mews	76/81 [B]	<40/43 [>C]	<40/44 [>C]	Day: Utility trenching	S	50	R	T	H	-	-	D 1	-	*
528324	Park Village East, Regent's Park Barracks	47/59 [A]	<40/44 [A]	43/58 [C]	Day: Utility works - Utilities Evening: Utility works - Utilities Night: Retaining walls and abutments - Barrette construction	A	1	R	T	-	-	-	N 1	-	*
528585	Park Village East, Silsoe House, South	69/83 [B]	51/57 [>C]	58/68 [>C]	Day: Utility works - Utilities Evening: Utility works Night: Retaining walls and abutments - Barrette construction	S	15	R	T	H	-	-	D 13; N 28	NI	CSV01-C02
528600	Park Village East, Silsoe House, North	68/82 [B]	52/60 [>C]	59/69 [>C]	Day: Utility works - Utilities Evening: Utility works - Utilities Night: Retaining walls and abutments - Barrette construction	S	10	R	T	H	-	-	D 14; N 26	NI	CSV01-C02

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
528624	Park Village East, Richmond Court	69/83 [B]	53/60 [>C]	59/68 [>C]	Day: Utility works - Utilities Evening: Utility works - Utilities Night: Retaining walls and abutments - Barrette construction	S	45	R	T	H	-	-	D 12; N 29	NI	CSV01-C02
528830	Park Village East, Middle	82/90 [C]	74/81 [>C]	51/64 [>C]	Day: Excavation - Major earthworks Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - Removal of existing bridge piers	S	5	R	T	H	-	-	D 13; E 3; N 1	NI	CSV01-C02
528856	Park Village East, Middle	82/89 [C]	73/83 [>C]	51/64 [>C]	Day: Park Village East - Barrette cap, cantilevered road and parapet construction Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	5	R	T	H	-	-	D 17; E 6; N 11	NI	CSV01-C02
528881	Park Village East, North	76/86 [C]	76/82 [>C]	62/73 [>C]	Day: Park Village East - Barrette cap, cantilevered road and parapet construction Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	10	R	T	H	-	-	D 18; E 3; N 3	NI	CSV01-C02
528890	Park Village East, North	72/83 [C]	55/65 [>C]	55/68 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	5	R	T	H	-	-	D 5; N 3	NI	CSV01-C02
528900	Park Village East, North	69/81 [C]	53/63 [>C]	62/73 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	5	R	T	H	-	-	D 5; N 6	NI	CSV01-C02

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
528939	Park Village West	56/69 [A]	47/59 [A]	45/56 [C]	Day: Park Village East - divert existing road Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	40	R	T	-	-	-	D 3; E 1; N 4	-	CSV01-C02
529017	Mornington Terrace, Middle 2	71/86 [B]	49/58 [C]	64/73 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	8	R	T	H	-	-	D 27; N 37	NI	CSV01-C03
529041	Mornington Terrace, Middle 1	70/84 [B]	50/62 [C]	65/73 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	10	R	T	H	-	-	D 27; N 37	NI	CSV01-C03
529064	Mornington Terrace, Middle 3	72/86 [B]	58/71 [C]	65/75 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - Install contiguous piles in portal	S	8	R	T	H	-	-	D 29; E 4; N 38	NI	CSV01-C03
529185	Mornington Terrace, S3	73/89 [B]	49/58 [C]	60/70 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Retaining walls and abutments - Daytime contiguous piling	S	12	R	T	H	-	-	D 12; N 34	NI	CSV01-C03
529201	Mornington Terrace, S2	69/85 [B]	54/68 [C]	62/74 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge Construction - removal of existing bridge piers	S	10	R	T	H	-	-	D 17; E 2; N 35	NI	CSV01-C03
529302	Mornington Place	69/86 [B]	46/53 [C]	58/69 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette	S	20	R	T	H	-	-	D 6; N 27	NI	CSV01-C03

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
					construction Night: Retaining walls and abutments - Daytime contiguous piling										
533361	Doric Way	70/84 [>C]	52/56 [>C]	47/58 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Demolition - Demolish carriage shed etc. in West Sidings	S	40	R	T	H	-	-	D 1	-	*
533433	Churchway	<40/54 [A]	<40/<40 [B]	<40/<40 [>C]	Day: Utility works - Utilities	NA	40	R	T	H	-	-	-	-	
533445	Eversholt Street, South	70/84 [>C]	<40/48 [>C]	<40/44 [>C]	Day: Utility works - Utilities	S	85	R	T	H	-	-	D 1	-	*
533851	Eversholt Street, Middle	69/82 [C]	<40/<40 [>C]	<40/45 [>C]	Day: Utility works - Utilities	S	10	R	T	H	-	-	D 1	-	*
533958	Chalton Street	50/65 [A]	<40/43 [C]	<40/<40 [>C]	Day: Demolition - Demolition of buildings in the station approach	NA	1	R	T	H	-	-	-	-	
534200	Eversholt Street, Street Richard's House, North	69/84 [>C]	46/54 [>C]	52/64 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Demolition - Demolish carriage shed etc. in west sidings	S	30	R	T	H	-	-	D 1	-	*
534557	Cobourg Street	78/88 [A]	66/78 [B]	47/56 [C]	Day: New utility corridor (Cobourg Street) Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	15	R	T	-	-	-	D 62; E 14; N 6	NI	CSV01-C05
534765	Cobourg Street	73/85 [A]	68/79 [B]	48/57 [C]	Day: New utility corridor (Cobourg Street) - Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	15	R	T	-	-	-	D 75; E 19; N 11	NI	CSV01-C05

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
534772	Starcross Street, East	68/80 [A]	55/66 [B]	48/58 [C]	Day: Demolition - Demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Demolition - demolish carriage shed etc. in west sidings	S	10	R	T	-	-	-	D 44; E 6; N 11	NI	CSV01-C05
535446	Hampstead Road, Cartmel House	73/86 [C]	75/85 [>C]	63/70 [>C]	Day: Retaining walls and abutments - Barrette construction Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	35	R	T	H	-	-	D 23; E 9; N 7	NI	CSV01-C06
535454	Harrington Street, Coniston House	71/84 [B]	61/72 [C]	62/71 [>C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	40	R	T	H	-	-	D 24; E 4; N 30	NI	CSV01-C06
535501	Harrington Street, Langdale House	74/87 [A]	64/73 [B]	64/73 [C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	20	R	T	-	-	-	D 58; E 16; N 57	NI	CSV01-C06
535544	Augustus Street, Augustus House	73/84 [A]	62/69 [B]	61/73 [C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	60	R	T	-	-	-	D 63; E 14; N 50	NI	CSV01-C06
535686	Cumberland Market	68/73 [A]	40/54 [B]	41/55 [C]	Day: Utility works - utilities	A	1	R	T	-	-	-	D1	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
535768	Varndell Street, East	69/81 [B]	61/70 [C]	57/65 [>C]	Day: Bridge Construction - HRB base works, Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	30	R	T	H	-	-	D 40; E 7; N 14	NI	CSV01-C06
539626	North Gower Street	74/83 [A]	<40/47 [B]	<40/<40 [C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	1	R	T	-	-	-	D 1	NI	*
544316	Albert Street	54/67 [A]	42/50 [>C]	44/59 [C]	Day: Demolition - Demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - install contiguous piles in portal	S	50	R	T	H	-	-	D 3; N 2	-	CSV01-C03
544328	Arlington Street, South	47/62 [A]	<40/46 [>C]	<40/49 [C]	Day: Demolition - demolition of buildings in the station approach	NA	1	R	T	H	-	-	-	-	
545326	Mornington Crescent, South	63/74 [B]	58/63 [>C]	62/71 [>C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - construction of new bridge pier	S	10	R	T	H	-	-	D 5; N 22	NI	CSV01-C03
545365	Mornington Crescent, North	62/75 [A]	49/59 [B]	54/66 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of existing bridge piers	S	15	R	T	H	-	-	D 18; N 20	NI	CSV01-C03
545455	Eversholt Road, North	70/79 [B]	<40/<40 [>C]	<40/<40 [>C]	Day: Utility works - utilities	S	20	R	T	H	-	-	D1	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
545616	Eversholt Street, North	69/81 [B]	<40/<40 [>C]	<40/40 [>C]	Day: Utility works - utilities	S	40	R	T	H	-	-	D 1	-	*
545708	Ampthill Estate, Barnby Street	65/75 [C]	56/62 [>C]	63/77 [>C]	Day: Demolition - Demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Demolition - demolish carriage shed etc. in west sidings	S	25	R	T	H	-	-	N 17	NI	CSV01-C04
545716	Ampthill Estate, Mickledore	61/71 [A]	54/58 [C]	55/63 [>C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Retaining walls and abutments	S	10	R	T	H	-	-	D 19; N 22	NI	CSV01-C04
545744	Ampthill Estate, Brathay	65/76 [A]	55/62 [C]	62/70 [>C]	Day: Retaining walls and abutments - Daytime contiguous piling Evening: Retaining walls and abutments - Barrette construction Night: Demolition - demolish carriage shed etc. in west sidings	S	10	R	T	H	-	-	D 58; N 49	NI	CSV01-C04
545762	Ampthill Estate, Calgarth/ Glenridding	72/84 [B]	55/61 [>C]	59/70 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - Removal of bridge deck	S	25	R	T	H	-	-	D 14; N 14	NI	CSV01-C04
545877	Ampthill Estate, Oxenholme	64/78 [C]	57/64 [>C]	60/71 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge Construction - removal of bridge deck	S	80	R	T	H	-	-	D 4; N 10	NI	CSV01-C04
545890	Ampthill Estate, Dalehead	68/77 [C]	62/69 [>C]	66/75 [>C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette	S	80	R	T	H	-	-	D 7; N 15	NI	CSV01-C04

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	House				construction Night: Bridge construction - removal of bridge deck										
545919	Ampthill Estate, Gillfoot House	73/86 [C]	66/80 [>C]	70/80 [>C]	Day: Pipe jacking - pile and excavate jacking and receiving pits Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	80	R	T	H	-	-	D 23; E 3; N 23	NI	CSV01-C04
700388	Harrington Street, Langdale House	70/84 [A]	61/70 [B]	61/73 [C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	20	R	T	-	-	-	D 66; E 15; N 57	NI	CSV01-C06
700389	Hampstead Road, Cartmel House, South	69/81 [C]	67/76 [>C]	61/68 [>C]	Day: Bridge construction - HRB base works, Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - Removal of bridge deck	S	35	R	T	H	-	-	D 17; E 11; N 7	NI	CSV01-C06
700393	Chester Place	73/82 [B]	<40/<40 [>C]	<40/<40 [>C]	Day: Utility trenching	S	5	R	T	H	-	-	D 1	-	*
710960	Albany Street, South	65/72 [C]	<40/<40 [>C]	<40/<40 [>C]	Day: Utility trenching	NA	10	R	T	H	-	-	-	-	
710965	Cumberland Market	43/54 [A]	<40/41 [B]	<40/<40 [C]	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Demolition - demolish carriage shed etc. in west sidings	NA	1	R	T	-	-	-	-	-	*
710966	Robert Street, Middle	68/84 [A]	<40/<40 [B]	<40/<40 [C]	Day: Utility trenching	S	20	R	T	-	-	-	D 1	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
710973	Oakley Square	72/80 [B]	<40/44 [>C]	<40/46 [>C]	Day: Utility works - utilities Night: Bridge construction - construction of new bridge pier (night time works)	S	1	R	T	H	-	-	D12	-	*
720354	Grafton Place	56/68 [B]	<40/44 [>C]	54/57 [>C]	Day: Utility works - utilities	NA	1	R	T	H	-	-	-	-	
720360	Doric Way, Ian Hamilton House	53/67 [B]	<40/47 [>C]	<40/42 [>C]	Day: Demolition - Demolition of buildings in the station approach	NA	10	R	T	H	-	-	-	-	
720400	Augustus Street, Tintern House	65/80 [B]	56/67 [C]	60/70 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	15	R	T	H	-	-	D 10; E 3; N 38	NI	CSV01-C04
720428	Hampstead Road, Newlands (proposed)	70/82 [C]	64/73 [>C]	60/67 [>C]	Day: Bridge construction - HRB base works Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	30	R	T	H	-	-	D 14; E 8	NI	CSV01-C06
720429	Hampstead Road, Rydal Water (proposed)	70/83 [B]	57/66 [C]	56/63 [>C]	Day: Bridge construction - HRB base works Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	25	R	T	H	-	-	D 29; E 2;	NI	CSV01-C06
720403	Starcross Street, West	60/74 [A]	45/54 [A]	<40/45 [B]	Day: Demolition - Demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	A	10	R	T	-	-	-	D 10	NI	CSV01-C05
720404	Drummond Street, East	73/83 [A]	61/71 [A]	<40/52 [B]	Day: Demolition - Demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette	S	10	R	T	-	-	-	D 33; E 11	NI	CSV01-C05

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
					construction Night: Retaining walls and abutments - Daytime contiguous piling										
720405	Drummond Street, Middle	73/83 [A]	47/57 [A]	<40/47 [B]	Day: Utility trenching Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	S	5	R	T	-	-	-	D 10	NI	CSV01-C05
720406	Drummond Street, West	73/84 [A]	43/52 [A]	<40/45 [B]	Day: Utility trenching Evening: Retaining walls and abutments - Barrette construction Night: Demolition - demolish carriage shed etc. in West Sidings	S	20	R	T	-	-	-	D 12	NI	CSV01-C05
720407	Euston Street, East	83/90 [B]	63/73 [C]	48/57 [>C]	Day: Pipe jacking - pile and excavate jacking and receiving pits Evening: Retaining walls and abutments - Barrette construction Night: Retaining walls and abutments - Daytime contiguous piling	S	5	R	T	H	-	-	D 52; E 9;	NI	CSV01-C05
720408	Euston Street, Middle	60/74 [A]	45/56 [C]	<40/40 [>C]	Day: Pipe jacking - pile and excavate jacking and receiving pits Evening: Retaining walls and abutments - Barrette construction	A	5	R	T	H	-	-	D 11	Ni	CSV01-C05
720409	Euston Street, West	58/72 [A]	<40/50 [C]	<40/<40 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Demolition - demolish carriage shed etc. in West Sidings	A	5	R	T	H	-	-	D 7	NI	CSV01-C05
720415	Park Village East, Goldsmith House	63/77 [B]	56/63 [C]	60/68 [>C]	Day: Utility works - utilities Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge	S	20	R	T	H	-	-	D10; N 36	NI	CSV01-C02

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the facade [Assessment category A/B/C]			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
					deck										
720427	Eversholt Street, Street Richard's House, South	70/83 [C]	<40/44 [>C]	<40/49 [>C]	Day: Utility works - utilities Night: Demolition - demolish carriage shed etc. in west sidings	S	30	R	T	H	-	-	D 1	-	*

* Impacts of less than 1 month duration are not generally considered significant.

Table 4 : Assessment of construction noise at non-residential receptors

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
519788	Euston Road, (university College Hospital + residential)	45/57	<40/<40	37/51	Day: Subway box works - Quick bridge works SWB1, Night: Subway box works - Quick bridge works SWB1	B	1	G 4	T	H	-	-	-	-	
520315	Park Village East, Park Village Studio	66/76	46/58	64/79	Day: Station works – Barrette piling Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - install contiguous piles in portal (night works)	B	1	G 2	T	-	-	-	D 62; E 3; N 38	-	CSV01-N1
520752	Eversholt Street (offices, Travelodge Hotel + residential)	70/84	<40/<40	<35/39	Day: Utility works - utilities	B	1	G 4	T	H	-	-	D 1	-	*
521556	Redhill Street, (Antiochian Orthadox society)	43/59	<40/<40	<35/36	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G 4	T	-	-	-	D 1	-	*
522490	Augustus Street (Healthy Living Centre+offices+ residential)	56/70	<40/48	40/53	Day: Utilities, demolition - demolition of buildings in the station approach	B	5	G 4	T	-	-	-	D 1;	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
523758	Parkway (offices + residential)	61/72	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	-	-	-	-	-	
527860	Albany Street (offices)	74/82	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	H	-	-	D 1	-	*
528051	Cumberland Terrace, (church)	74/82	<40/40	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G3	T	H	-	-	D1	-	*
528405	Park Village West, Regent's Park Barracks	48/61	-	-	Day: Demolition - Demolition of buildings in the station approach	B	1	G5	T	-	-	-	-	-	
533032	Euston Road, (conference facilities)	69/82	40/52	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor Evening: Retaining walls and abutments - Barrette construction	B	1	G3	T	H	-	-	D 1	-	*
533361	Doric Way, Eversholt Street (academy and media film and TV)	69/84	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	D1	-	*
533445	Eversholt Street, (shops and commercial	70/84	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	D 1	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	properties +residential)														
533673	Churchway, (studio – Maverick television)	46/61	<40/42	36/46	Day: Utilities diversions, demolition - demolition of buildings in the station approach	B	1	G 2	T	H	-	-	D 1	-	CSV01-N2
533851	Eversholt Street, middle, commercial properties	69/82	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	D 1	-	*
533958	Chalton Street, (offices + residential)	50/65	-	-	Day: Demolition - demolition of buildings in the station approach	B	1	G5	T	H	-	-	-	-	
534200	Eversholt Street, shops and commercial properties	69/84	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	D 1	-	*
534557	Cobourg Street, (Society of College National and University libraries)	78/88	58/69	45/56	Day: New utility corridor (Cobourg Street) - new utility corridor (Cobourg Street) Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	B	1	G 4	T	-	-	-	D 79; E 18; N 13	-	CSV01-N3

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
534765	Cobourg Street, (Exmouth Arms House and residential)	72/85	-	-	Day: New utility corridor (Cobourg Street) - new utility corridor (Cobourg Street)	B	1	G5	T	-	-	-	D 14	-	CSV01-N4
534772	Starcross Street, 204 North Gower Street(Church-Euston Mosque)	66/80	52/63	-	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction	B	1	G3	T	-	-	-	D 67; E 10	-	CSV01-N5
534932	North Gower Street, NHS Margaret Centre	66/80	-	-	Day: Demolition - demolition of buildings in the station approach	B	-	G5	T	-	-	-	D 5	-	CSV01-N6
534932	Maria Fidelis School, North Gower Street	66/80	55/62	51/58	Day: Demolition - demolition of buildings in the station approach Evening: Retaining walls and abutments - Barrette construction	B	1	G 4	T	H	-	-	D 91;	-	CSV01-N7
535544	Augustus Street, Regent's Park Children's Centre Nursery	73/84			Day: Demolition - demolition of buildings in the station approach	B	-	G5	T	-	-	-	D 63	-	CSV01-N8
535686	Cumberland	68/73	<40/50	<35/41	Day: On site traffic - construction traffic	B	1	G	T	-	-	-	D 1;	-	*

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	Market (Education Centre)							4							
536408	Euston Road, (School of Arts)	71/84	46/53	66/75	Day: Subway box works - quick bridge works SWB1	B	1	G 4	T	H	-	-	D 3;	-	CSV01-N9
543159	Aldenham Street, (school)	44/57	<40/43	<35/46	Day: Demolition - demolition of buildings in the station approach	B	1	G 4	T	-	-	-	-	-	
545266	Harrington Square, (Hotel)	60/73	50/57	51/67	Day: Utility trenching (all scheme) - sample utility works on each utility corridor Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	B	1	G 4	T	H	-	-	D 1;	-	*
545616	Eversholt Street, (offices +residential)	69/81	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	D1	-	*
547012	Hampstead Road (offices +residential)	57/70	-	-	Day: Bridge construction - HRB base works	B	1	G5	T	H	-	-	-	-	
700391	1-9 Melton Street, RCGP	69/83	-	-	Day: Demolition - Demolition of buildings in the station approach	B	1	G5	T	H	-	-	D 13	-	CSV01-N10

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
700394	Robert Street (Surma Community Centre)	76/86	43/54	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G3	T	H	-	-	D 41	-	CSV01-N11
720365	Victoria (PH), Chalton Street	<40/45	<40/<40	<35/<35	Day: Demolition - Demolition of buildings in the station approach	B	1	G 4	T	H	-	-	-	-	
720367	Phoenix Road, St. Aloysius RC Church	51/65	<40/<40	-	Day: Utility works - utilities	B	1	G3	T	H	-	-	D 1	-	*
720380	Pheonix Road, St. Aloysius Catholic Infant School	42/56	<40/40	<35/40	Day: Utility works - utilities Night: Demolition - demolish carriage shed etc. in west sidings	B	1	G 4	T	H	-	-	-	-	
720383	The Cock Tavern, Phoenix Road	41/56	<40/<40	<35/38	Day: Demolition - demolition of buildings in the station approach Night: Demolition - demolish carriage shed etc. in west sidings	B	1	G 4	T	H	-	-	-	-	
720385	Aldenham Street, St. Mary's Church	55/71	<40/42	-	Day: Utility works - utilities	B	1	G3	T	H	-	-	D 1	-	*
720387	Stephenson Way, South, offices	84/90	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	-	-	-	D 3	-	CSV01-N12

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
720388	Stephenson Way, middle, offices	80/90	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	-	-	-	D 3	-	CSV01-N12
720389	Stephenson Way, RCGP	81/92	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	-	-	-	D 8	-	CSV01-N10
720390	Stephenson Way, Middle, offices	83/89	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	-	-	-	D3	-	CSV01-N12
720391	Euston Road, Middle	68/82	47/54	57/69	Day: Utility trenching (all scheme) - sample utility works on each utility corridor Evening: Retaining walls and abutments - Barrette construction Night: Subway box works - quick bridge works SWB1	B	1	G 4	T	H	-	-	D 4	-	*
720392	Regnart Buildings, Magic Circle	74/85	58/72	-	Day: London Underground Limited (LUL) vent shaft - LUL vent shaft construction Evening: Retaining walls and abutments - Barrette construction	B	1	G3	T	H	-	-	D 27; E 2	-	CSV01-N13
720393	Regnart Buildings, Wesley Hotel	76/88	59/71	45/55	Day: Pipe jacking - Pile and excavate jacking and receiving pits Evening: Retaining walls and abutments - Barrette construction Night: Bridge construction - removal of bridge deck	B	1	G 4	T	H	-	-	D 51; E 3	-	CSV01-N14

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
720404	Drummond Street, East shops	73/83	-	-	Day: Demolition - demolition of buildings in the station approach	B	1	G5	T	-	-	-	D 16	-	CSV01-N15
720405	Drummond Street, Middle shops	73/83	-	-	Day: Utility trenching (all scheme) - Sample utility works on each utility corridor	B	1	G5	T	-	-	-	D 3	-	CSV01-N15
720406	Drummond Street, West shops	73/84	-	-	Day: Utility trenching (all scheme) - sample utility works on each utility corridor	B	1	G5	T	-	-	-	D 3	-	CSV01-N15
720407	Euston Street, East Shops and offices	83/90	-	-	Day: Pipe jacking - pile and excavate jacking and receiving pits	B	1	G5	T	H	-	-	D 9	-	CSV01-N16
720408	Euston Street, mid shops and offices	60/74	-	-	Day: Pipe jacking - pile and excavate jacking and receiving pits	B	1	G5	T	H	-	-	-	-	
720409	Euston Street, West shops and offices	58/72	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	-	-	
720427	Eversholt Street, shops and offices	70/83	-	-	Day: Utility works - utilities	B	1	G5	T	H	-	-	D1	-	*
720428	Hampstead Road, Newlands, ground floor shops	70/82	-	-	Day: Bridge construction - HRB base works	B	1	G5	T	H	0	-	D 7	-	CSV01-N17

Assessment location		Impact criteria				Significance criteria									Significant effect
ID	Area represented	Typical/highest monthly outdoor LpAeq [dB] at the façade			Construction activity resulting in highest forecast noise levels	Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Impact duration [months]	Mitigation effect	
		Day 0700-1900	Evening 1900-2300	Night 2300-0700											
	(proposed)														
720429	Hampstead Road, Rydal Water ground floor shops (proposed)	70/83	-	-	Day: Bridge construction - HRB base works	B	1	G5	T	H	0	-	D 5	-	CSV01-N18
720431	York and Albany Hotel	65/79	<40/41	<35/47	Day: Utility trenching (all scheme) - sample utility works on each utility corridor Evening: Retaining walls and abutments - Barrette construction Night: Park Village East - install contiguous piles in portal (night works)	B	1	G 4	T	H	-	-	D 24	-	CSV01-N19

* Impacts of less than 1 month duration are not generally considered significant.

Airborne sound: indirect effects

4.3.28 Construction road traffic associated with the scheme will generate airborne noise. In the Euston area road traffic management measures on several roads will divert public traffic to other roads. Together, these two changes to road traffic patterns have been assessed for approximately 1,000 road links within 1km of the works, based on traffic modelling provided in this main ES. Three stages in the construction programme were assessed. Three reference years during the Stage A construction phase of the revised scheme have been assessed (2017, 2018 and 2023) and compared to the future baseline year of 2021. One reference year during the Stage B1 construction phase of the revised scheme during operation of Stage A has been assessed (2031) and compared to the future baseline year of 2026.

4.3.29 Based upon the supplied traffic information, the change in basic noise level for a given road as a result of the presence of construction traffic and the diversion of public traffic has been predicted using the calculation of road traffic noise[4] methodology. The results at a reference distance of 10m from the edge of nearside carriageway are presented in Table 5 where roads will be reduced to one way traffic or closed at stages in the works and noise reductions will result, the impacts are not reported since they are beneficial environmental noise impacts.

4.3.30 In the Euston area many roads have low traffic speeds due to congestion. For traffic speeds below 20kph the calculation of road traffic noise procedure is not valid because noise levels can rise unpredictably in queuing situations. In these cases noise changes have been estimated (and rounded in the table) where possible, for example where noise levels from traffic in one direction can be reliably calculated or by assuming no change with a traffic speed of 20kph. There are a number of roads where a small proportion of additional traffic creates small noise increases, but below the significance criteria (a 3dB increase where existing sound levels are below $L_{pAeq,16hr}$ 65dB and a 1dB increase where existing sound levels are high i.e. above $L_{pAeq,16hr}$ 65dB). The results for the roads where potentially significant effects could arise as a result of the proposed scheme are presented in Table 5. Only the results of the assessment in reference years which have indicated a potentially significant effect are presented in Table 5 and the reference year in which the effect occurs is indicated in the table.

4.3.31 Explanation of the information within Table 5 is provided in Volume 5, Appendix SV-001-000, with the following additional notes:

Where the significant effect column is highlighted then a significant effect is identified on nearby communities or individual receptors.

Change values

Yellow denotes a minor impact – a change of between 3 and 5dB or between 1 and 3dB where a high existing sound level is identified.

Orange denotes a moderate impact – a change of between 5 and 10dB or between 3 and 5dB

[4] Calculation of Road Traffic Noise, Department of Transport and Welsh Office. HMSO, 1988.

where a high existing sound level is identified.

Red denotes a major impact – a change of more than 10dB or more than 5dB where a high existing sound level is identified.

Table 5 : Assessment of construction traffic noise levels

Road name	Link	Future baseline sound level (dB)	Future baseline sound level + construction traffic (dB) (year of assessment)	Change (dB) (year of assessment)	Significant effect
		Daytime $L_{pAeq,16hr}$ 0700-23:00 free-field	Daytime $L_{pAeq,16hr}$ 0700-2300 free-field		
Albert Street / Mornington Place		46.2	55.7 (2018)	9.5 (2018)	CSV01-C03
Albert Street	Between Mornington Street and Delancey Street	44.7	49.9 (2017) 56.4 (2018)	5.2 (2017) 11.7 (2018)	CSV01-C03
Albert Street	Between Mornington Street and Mornington Place	45.7	55.0 (2018)	9.3 (2018)	CSV01-C03
Albert Street	Between Parkway and Delancey Street	44.0	52.9 (2017) 51.1 (2018)	8.9 (2017) 7.1 (2018)	CSV01-C03
Bidborough Street		51.1	54.7 (2023)	3.6 (2023)	CSV01-C05
Cartwright Gardens		56.0	59.1 (2023)	3.1 (2023)	CSV01-C05
Granby Terrace		54.5	58.6 (2023)	4.1 (2023)	*
Mornington Crescent	Between Clarkson Row and Mornington Place	48.9	58.3 (2018)	5.9 (2018)	CSV01-C03
Mornington Place		50.4	54.5 (2018)	4.1 (2018)	CSV01-C01
Robert Street	Between Osnaburgh Street	53.7	56.9 (2018)	3.2 (2018)	CSV01-C06

Road name	Link	Future baseline sound level (dB)	Future baseline sound level + construction traffic (dB) (year of assessment)	Change (dB) (year of assessment)	Significant effect
		Daytime $L_{pAeq,16hr}$ 0700-23:00 free-field	Daytime $L_{pAeq,16hr}$ 0700-2300 free-field		
	and Albany Street		57.7 (2023)	4.0 (2023)	
Robert Street	Between Stanhope Street and Osnaburgh Street	42.3	47.4 (2018) 50.3 (2023)	5.1 (2018) 8.0 (2023)	CSV01-C06
Varndell Street	Between Stanhope Street and Augustus Street	55.7	60.0 (2018)	4.3 (2018)	CSV01-C10
Varndell Street	Between Stanhope Street and Hampstead Road	48.1	51.7 (2017) 53.7 (2018)	3.6 (2017) 5.6 (2018)	CSV01-C10

* See discussion on Granby Terrace Bridge below.

4.4 Assessment of significant effects

Residential Receptors: direct effects – individual dwellings

4.4.1 Taking account of the avoidance and mitigation measures set out in the previous paragraphs, the following residential buildings are forecast to experience noise levels higher than the noise insulation trigger levels as defined in the draft CoCP. For daytime construction the trigger level is an equivalent continuous noise level of 75 dB[5] measured outdoors, for evening 65dB and for night 55dB.

4.4.2 In the Park Village East area (approximately 165 dwellings):

- Park Village East, Cubitt Court (approximately 30 dwellings);
- Parkway (approximately 10 dwellings);
- Park Village East, Silsoe House, (approximately 35 dwellings);
- Park Village East, Richmond Court (approximately 45 dwellings);
- Park Village East, Goldsmith House (approximately 20 dwellings); and
- Park Village East, individual houses (approximately 25 dwellings).

4.4.3 In the Mornington Terrace area (approximately 130 dwellings):

- Delancey Street (approximately 25 dwellings);
- Mornington Terrace, North (approximately 60 dwellings);
- Mornington Place (approximately 20 dwellings); and
- Mornington Crescent, (approximately 25 dwellings).

4.4.4 In the Ampthill Estate area (approximately 320 dwellings):

- Ampthill Estate, Barnby Street (approximately 25 dwellings);
- Ampthill Estate, Mickledore (approximately 10 dwellings);
- Ampthill Estate, Brathay (approximately 10 dwellings);
- Ampthill Estate, Calgarth/ Glenridding (approximately 35 dwellings);
- Ampthill Estate, Oxenholme (approximately 80 dwellings);
- Ampthill Estate, Dalehead House (approximately 80 dwellings); and
- Ampthill Estate, Gillfoot House (approximately 80 dwellings).

4.4.5 In the Cobourg Street area (approximately 100 dwellings):

- Cobourg Street (approximately 30 dwellings);
- Starcross Street (approximately 20 dwellings);

[5] $L_{pAeq,0800-1800}$ measured at the façade.

- Drummond Street (approximately 35 dwellings); and
- Euston Street (approximately 15 dwellings).

4.4.6 In the Regent's Park Estate area (approximately 310 dwellings):

- Hampstead Rod, The Tarns (approximately 30 dwellings);
- Hampstead Road, Cartmel House, (approximately 70 dwellings);
- Harrington Street, Coniston House (approximately 40 dwellings);
- Harrington Street, Langdale House (approximately 40 dwellings);
- Augustus Street, Augustus House (approximately 60 dwellings);
- Augustus Street, Tintern House (approximately 15 dwellings);
- Hampstead Road, Newlands proposed replacement housing (approximately 30 dwellings); and
- Hampstead Road, Rydal Water proposed replacement housing (approximately 25 dwellings).

4.4.7 The mitigation measures, including noise insulation where necessary, in these buildings, will reduce noise inside all dwellings to a level where it should not significantly affect residents.

Residential receptors: direct effects - communities

4.4.8 With regard to noise outside dwellings, the assessment of temporary effects takes account of construction noise relative to existing sound levels.

4.4.9 In locations with lower existing sound levels, construction noise adverse effects[6] are likely to be caused by changes to noise levels outside dwellings. These may be considered by the local community as an effect on the acoustic character of the area and hence be perceived as a change in the quality of life. These adverse effects are considered to be significant when assessed on a community basis taking account of the local context.

The direct adverse construction noise effects[6] on the areas of the residential communities identified in the following paragraphs are considered to be significant.

Park Village East

4.4.10 Temporary construction noise impacts are identified at residential dwellings along the full length of Park Village East. Taking account of the envisaged incorporated mitigation, the forecast construction noise will not be expected cause significant effects inside all dwellings. However, accounting for the impact on the noise amenity outside the dwellings, the number of impacts, the grouping of impacts and their duration, a significant effect is likely to occur at this group of dwellings, denoted by CSV01-C2 in Table 3.

[6] Further information is provided in Volume 5: Appendix SV-001-000.

4.4.11 Approximately 165 properties on Park Village East and Parkway are likely to experience construction noise levels during the day above $L_{pAeq,12hr}$ 75dB and/or 3dB above baseline for a continuous period exceeding one month. Most properties will be impacted intermittently for a total of 1-2 years. This includes Cubitt Court and all properties on Park Village East. The main sources of noise impact are expected to be utility diversions, demolition of the existing retaining wall, construction of the Barrette wall, cantilevered road and parapet construction over, works to rebuild Hampstead Road Bridge and Mornington Terrace Bridges.

4.4.12 The majority of these properties will also be impacted at night (construction noise levels above $L_{pAeq,1hr}$ 55dB and/or 3dB above baseline) for a continuous period exceeding one month. The main sources of noise impact are expected to be demolitions close to railway operations, Mornington Terrace Bridge demolition and construction of new bridge piers.

Mornington Terrace

4.4.13 Temporary construction noise impacts are identified at residential dwellings along the length of Mornington Terrace and the South of Mornington Crescent. Taking account of the envisaged incorporated mitigation including the provision of noise insulation, the forecast construction noise will not be expected to cause significant effects inside all dwellings. However, accounting for the impact on the noise amenity outside the dwellings, the number of impacts, the grouping of impacts and their duration, a significant effect is likely to occur at this group of dwellings, denoted by CSV01-C3 in Table 3.

4.4.14 Approximately 130 properties on Mornington Terrace are likely to experience construction noise levels during the day above 75dB (LpAeq,12hr) and/or 3dB above baseline for a continuous period exceeding one month. The majority of these will also be impacted at night (above 55dB LpAeq,1hr and/or 3dB above baseline) for a continuous period exceeding one month.

4.4.15 During the day the main sources of noise impact are expected to be contiguous piling of the retaining wall abutments, excavation, and Barrette wall construction (in Park Village East). In the south of this area demolitions and bridge works will also be major sources in the day and night.

Ampthill Estate

4.4.16 Temporary construction noise impacts are identified at residential dwellings in the Ampthill Estate area. Taking account of the envisaged incorporated mitigation including the provision of noise insulation, the forecast construction noise will not be expected to cause significant effects inside all dwellings. However, accounting for the impact on the noise amenity outside the dwellings, the number of impacts, the grouping of impacts and their duration, a significant effect is likely to occur at this group of dwellings, denoted by CSV01-C4 in Table 3.

4.4.17 Approximately 320 properties, including 240 in the Gillfoot, Dalehead and Oxenholme blocks of the Ampthill Estate are likely to experience construction noise levels during the day above 75dB ($L_{pAeq,12hr}$) and/or 3dB above baseline for a continuous period

exceeding one month. Nearly all of these properties will also be impacted at night (above 55dB $L_{pAeq,1hr}$ and/or 3dB above baseline) for a continuous period exceeding one month.

4.4.18 During the day the main sources of noise are expected to be utilities diversions through the estate, demolition of buildings in the station approach, and construction of Granby Terrace and Hampstead Road Bridges. At night bridge demolitions and construction will also be major sources.

Cobourg Street

4.4.19 Temporary construction noise impacts are identified at residential dwellings in the Cobourg Street area. Taking account of the envisaged incorporated mitigation including the provision of noise insulation, the forecast construction noise will not be expected to cause significant effects inside all dwellings. However, accounting for the impact on the noise amenity outside the dwellings, the number of impacts, the grouping of impacts and their duration, a significant effect is likely to occur at this group of dwellings, denoted by CSV01-C5 in Table 3.

4.4.20 Approximately 100 properties are likely to experience construction noise levels during the day above 75dB ($L_{pAeq,12hr}$) and/or 3dB above baseline for a continuous period exceeding one month. Those in the east end of the area (approximately 50) will also be impacted at night (above 55dB $L_{pAeq,1hr}$ and/or 3dB above baseline) for a continuous period exceeding one month.

4.4.21 During the day the main sources of noise impact are expected to be utility trenching, demolition of buildings in Melton Street and the station approach, construct Barrette retaining walls and abutments, major earthworks. Construction of Barrette retaining walls and abutments could create impacts in the evening. At night, bridge works will be the main sources of noise.

Regent's Park Estate

4.4.22 Temporary construction noise impacts are identified at residential dwellings in the Regent's Park Estate. Taking account of the envisaged incorporated mitigation including the provision of noise insulation, the forecast construction noise will not be expected to cause significant effects inside all dwellings. However, accounting for the impact on the noise amenity outside the dwellings, the number of impacts, the grouping of impacts and their duration, a significant effect is likely to occur at this group of dwellings, denoted by CSV01-C6 in Table 3.

4.4.23 Approximately 310 properties are likely to experience construction noise levels during the day above 75dB ($L_{pAeq,12hr}$) and/or 3dB above baseline for a continuous period exceeding one month. These include 69 properties in Cartmel House, 40 properties in Coniston House and 40 properties in Langdale House, and 55 properties in the proposed replacement Rydal Water and Newlands houses that are expected to overlook the works for several years. All of these properties will also be impacted at night (above 55dB $L_{pAeq,1hr}$ and/or 3dB above baseline) for a continuous period exceeding one month.

4.4.24 During the day the main sources of noise impact are expected to be demolition of Eskdale House, Ainsdale House, Silverdale House and buildings in the station approach, major earthworks, Barrette retaining wall construction, construction of the new bridge and carriageway. Construction of Barrette retaining walls and abutments could create effects in the evening. At night bridge works will be the main sources of noise.

Non-residential direct effects

4.4.25 The area around the Euston works has various non-residential and commercial uses many of which are already exposed to high levels of road traffic noise. The assessment of potential noise impacts incorporates consideration of baseline noise levels, and in many cases construction noise impacts are not expected because construction noise will not significantly increase the existing noise levels. There are also many non-residential and commercial receptors on roads where utilities works will be carried out where noise impacts will be too short i.e. less than one month to be a significant effect.

4.4.26 Consideration of the likely noise level from construction of the scheme, the sensitivity of the receptor, the magnitude of the impact, and other significance criteria as set out in Volume 5, Appendix SV-001-000, has resulted in identification of a likely significant effect on the following non-residential receptors:

- a significant daytime effect at the Park Village Studio on Park Village East represented by Assessment Location 530215 and effect CSV01-N1 in Table 4.The external daytime criteria are exceeded within intermittent periods totalling approximately 60 months due to a range of works including utility trenching and Barrette pile cap breaking, on site vehicles and cantilevered road construction. The studio may also be sensitive to impacts in the evening and on occasions at night. The extent of impacts will depend on the noise insulation offered by the building as well as the sensitivity of the recording activities within;
- a significant daytime effect is possible at the Maverick TV Studio on Churchway represented by Assessment Location 533673 and effect CSV01-N2 in Table 4, if utilities are diverted on Churchway. The daytime criteria are exceeded only briefly during utility works, but given the sensitivity of the building this may be significant;
- a significant daytime effect at the offices in Cobourg Street represented by Assessment Location 534577 and CSV01-N3 in Table 4. The daytime criteria are exceeded within a period of up to six years and six months due to a range of works including demolitions a new utility corridor, Barrette pile construction and major earthworks;
- a significant daytime effect at the Exmouth Arms Public House in Starcross Street represented by Assessment Location 534765 and effect CSV01-N4 in Table 4. The daytime criteria are exceeded within a period of up to 14 months due to a range of works including demolitions a new utility corridor, Barrette

pile construction and major earthworks;

- a significant daytime effect at the Euston Mosque in Starcross Street represented by Assessment Location 534772 and effect CSV01-N5 in Table 4. The daytime criteria are exceeded within a period of up to five years due to a range of works including demolitions a new utility corridor, Barrette pile construction and major earthworks;
- a significant daytime effect at the NHS Centre and Maria Fidelis Convent School in North Gower Street represented by Assessment Location 534932 and effects CSV01-N6 and CSV01-N7 in Table 4. The daytime criteria are exceeded within a period of up to five months at the NHS Centre and seven years at the school due to a range of works including demolitions, a new utility corridor, Barrette piling of retaining walls, major earthworks, and bridge construction;
- a significant daytime effect at the Regent's Park Children's Centre nursery in Augustus Street represented by Assessment Location 535544 and effect CSV01-N8 in Table 4. The daytime criteria are exceeded within a period of up to five years due to a range of works including demolitions a new utility corridor, major earthworks, and bridge construction;
- a significant daytime effect at the School of Arts on Euston Road represented by Assessment Location 535409 and effect CSV01-N9 in Table 4.The daytime criteria are exceeded within a period of three months due to construction of the Quick Bridge on Euston Road;
- a significant daytime effect at the Royal College of General Practitioners offices at 1-9 Melton Street represented by Assessment Locations 700391 and 720389 and effect CSV01-N10 in Table 4. The daytime criteria are exceeded within a period of up to eight to 13 months due to a range of activities including demolition of buildings in the station approach, construction of a new utilities corridor and bored piling. The extent of impacts will depend on the noise insulation offered by the different parts of the building as well as the sensitivity of the activities within them;
- a significant daytime effect at the Surma Community Centre on Robert Street represented by Assessment Location 700393 and effect CSV01-N11 in Table 4.The daytime criteria are exceeded within a period of three years due to utilities diversions, demolitions, earthworks and construction of Hampstead Road Bridge;
- a significant daytime effect at offices facing onto Stephenson Way represented by Assessment Locations 720387, 720388 and 720390 and effect CSV01-N12 in Table 4.The daytime criteria are exceeded within a period of three months due to utilities diversions in Stephenson Way;
- a significant daytime effect at the Magic Circle and Royal Asiatic Society offices in Stephenson Way facing onto Regnart Buildings represented by

Assessment Locations 720392 and effect CSV01-N13 in Table 4. The daytime criteria are exceeded within a period of two years due to demolition of the Wolfson House, bored piling and construction of the LUL ventilation shaft;

- a significant daytime effect at the Wesley Hotel on Euston Street represented by Assessment Location 720393 and effect CSV01-N14 in Table 4. The daytime criteria are exceeded within a period of four years due to demolition of the Wolfson House, bored piling and construction of the LUL ventilation shaft and station construction;
- a significant daytime effect at the shops and commercial properties in Drummond Street represented by Assessment Locations 720404, 720405 and 720406 and effect CSV01-N15 in Table 4. The daytime criteria are exceeded within a period of up to 18 months due to demolitions, utilities and station construction;
- a significant daytime effect at the shops and commercial properties in Euston Street represented by Assessment Location 720427 and effect CSV01-N16 in Table 4. The daytime criteria are exceeded within a period of up to twelve months due to demolitions, utilities and station construction;
- a significant daytime effect at the shops or commercial space on the ground floor of the proposed Rydal Water and Newlands replacement housing buildings on Hampstead Road, represented by Assessment Locations 720428 and 720429 and effects CSV01-N17 and CSV01-N18 in Table 4. The daytime criteria are exceeded within a period of up to seven months due construction of the approaches to Hampstead Road Bridge; and
- a significant daytime effect at the York and Albany Hotel on Parkway represented by Assessment Location 720431 and effects CSV01-N19 in Table 4.The daytime criteria are exceeded within a period of up to two years due construction traffic and activities on Park Village East.

4.4.27 The assessment has identified the potential for significant effects within these properties based on cautious criteria (50, 55 or 60dB in some cases). The extent of impacts will depend on the noise insulation provided by the building as well as the sensitivity of each particular use. For example, the estimated longest duration impact is 91 months at the upper floors of the Maria Fidelis School. This is the duration above the baseline noise level 59dB. The highest noise level predicted is 80dB and the estimated duration above the residential assessment criterion of 75dB is 21 months. If the school is present during the works a noise insulation package to the rear façade could be effective at mitigating this impact. HS2 has consulted some non-residential and commercial properties on these matters and will continue to do so to establish if mitigation such as noise insulation can be provided.

Quiet areas

4.4.28 No quiet areas have been identified in this area.

Indirect noise effects

4.4.29 Construction traffic will enter the various parts of the site through a number of routes, the busiest of which will be via an access ramp at the west end of Granby Terrace Bridge. Initially construction traffic will be routed to this access point from Stanhope Street, having come along Robert Street either from the east (from Hampstead Road) or from the west (from Albany Street). The traffic routing will be diverted from Robert Street/Stanhope Street to the re-built Granby Terrace Bridge to mitigate the impact of construction traffic through the Regent's Park Estate after 2020. Construction traffic flows are expected to rise to around 280 HGV trips/day in 2024 during the main earthworks phase.

4.4.30 Taking account of incorporated mitigation the following likely indirect construction noise or vibration residual significant effects at residential areas have been identified for the scheme.

- Albert Street, Mornington Place and Mornington Crescent (CSV04-C08) – approximately 280 dwellings located immediately adjacent to the road are forecast to experience an increase in outdoor noise levels of between 4dB and 12dB during the peak months of the 2018 construction stages (High Speed main works). Of these, approximately 70 dwellings on Albert Street between Mornington Street and Delancey Street located immediately adjacent to the road are also forecast to experience an increase in outdoor noise levels of around 5dB during the peak months of the 2017 construction stages (Enabling works and demolition);
- Bidborough Street (CSV04-C09) – approximately 30 dwellings located immediately adjacent to the road are forecast to experience an increase in outdoor noise levels of around 4dB during the peak months of the 2023 construction stages (High speed Railway Systems works);
- Cartwright Gardens (CSV04-C09) – Canterbury Hall, Hughes Parry Hall and Commonwealth Hall student accommodation located immediately adjacent to the road are forecast to experience an increase in outdoor noise levels of around 3dB during the peak months of the 2023 construction stages;
- Robert Street (CSV04-C10) – approximately 100 dwellings located immediately adjacent to the road are forecast to experience an increase in outdoor noise levels of between 3dB and 5dB during the peak months of the 2018 construction stages and of between 4dB and 8dB during the peak months of the 2023 construction stages; and
- Varndell Street (CSV04-C10) – approximately 70 dwellings located immediately adjacent to the road (excluding those close to Hampstead Road) are forecast to experience an increase in outdoor noise levels of around 4dB during the peak months of the 2018 construction stages.

4.4.31 Most of these impacted areas are residential, but the following impacted non-residential receptors have also been identified.

- the Conference Centre (CSV01-N20), the Jewish Museum (CSV01-N21) and Friends of the Hebrew University (CSV01-N22) on Albert Street between Mornington Street and Delancey Street are forecast to experience an increase in noise levels of between 7dB and 9dB during the peak months of the 2017 and 2018 construction stages; and
- the Dental Surgery (CSV01-N23) on Robert Street between Stanhope Street and Osnaburgh Street is forecast to experience an increase in noise levels of between 5dB and 8dB during the peak months of the 2018 and 2023 construction stages.

Cumulative effects from the scheme and other committed development

4.4.32 This assessment has considered the potential cumulative construction noise effects of the revised scheme and other committed developments (see Section 2.1). The proposed replacement housing at Rydan House and Newlands House on Hampstead Road are also included in the assessment.

4.4.33 There are a number of other potentially noise-sensitive committed developments in this area. However, these will come forward on sites where existing sensitive receptors are located. These existing receptors have been considered as part of this assessment and although the committed developments may result in changes to the number of impacts identified no additional significant effects have been identified.

4.4.34 There are a number of developments in the area that could result in cumulative construction adverse noise or vibration effects at nearby receptors if they were to be built at the same time as the scheme:

- Odeon Cinema Site, Grafton Way, medical/health care uses or mixed use development including housing; and
- King's Cross Railway Lands, a major mixed use development including residential.

4.4.35 These developments are sufficiently far from the Euston station works that additive effects on the predicted construction noise levels are unlikely. The potential cumulative impact from committed developments affecting road traffic noise in conjunction with the road traffic noise effects from the construction and operation of the revised scheme have been considered as part of this assessment. This has been achieved by including changes in traffic predicted as a result of the committed developments within the traffic data used for the noise assessment.

5 References

British Standard 5228: *'Code of practice for noise and vibration control on construction and open sites: Part 2: Vibration*', British Standards Institution, 2009.

Department of Transport and Welsh Office. HMSO, (1988),*Calculation of Road Traffic Noise*.

Control of Pollution Act 1974 (c.40). London, Her Majesty's Stationery Office.

HIGH SPEED RAIL (LONDON - WEST MIDLANDS)

Supplementary Environmental Statement 2 and Additional Provision 3 Environmental Statement

Volume 5 | Technical appendices

Sound, noise and vibration

SV-004-001

Environmental topic:	Sound, noise and vibration	SV
Appendix name:	Operational assessment report	004
Community forum area:	Euston - Station and Approach	001

Contents

List of tables

1 Introduction

1.1.1 This appendix provides an update to Appendix SV-004-001 Operational Sound, Noise and Vibration assessment report for community forum area 1 (CFA1) Euston – Station and Approaches from the main Environmental Statement (ES) as a result of an ES correction included in Supplementary Environmental Statement 2 (SES2) and the Additional Provision 3 Environmental Statement (AP3 ES). This update should be read in conjunction with Appendix SV-004-001 operational noise assessment report from the main ES.

2 Scope, assumptions and limitations

2.1 Changes of relevance to this assessment

SES correction

2.1.1 Changes are required to the operational sound, noise and vibration assessment reported in the main ES, given that Cartmel House, represented by assessment location 535446 was omitted from the list of properties qualifying for discretionary noise insulation.

Amendments of provisions

2.1.2 Operational sound, noise and vibration assessments have been undertaken for the Euston AP3 proposal for a staged scheme - changes to station and approaches.

3 Effects arising during operation

3.1 Avoidance and mitigation measures

3.1.1 These are set out in main ES, Volume 2, CFA Report 1, Section 11.

3.2 Quantitative identification of impacts and effects

Ground-borne sound and vibration

3.2.1 The amendments do not alter the assessment of operational ground-borne sound and vibration identified in main ES Appendix SV-004-001.

Airborne sound: direct impacts and effects

3.2.2 Table 1 presents the operational sound levels for Cartmel House based upon the original scheme with significance criteria, updated as a result of the SES2 correction.

3.2.3 The direct effects from the operation of the revised scheme as well as any new or altered roads or railway lines, which are identified as part of the scheme, are presented in Table 2 for those locations in the vicinity of the amendments.

3.2.4 The assessment information, impact criteria and significance criteria for the assessment of the incorporated mitigation case at residential and non-residential receptors are presented in Table 2. The results should be considered in conjunction

with the information contained in SES2 and AP3 ES map series SV-02 in the CFA1 Volume 5 Map Book, Sound, noise and vibration.

3.2.5 Explanation of the Table 2 information is provided in main ES, Volume 5, Appendix SV-001-000 and Appendix SV-004-001.

Table 1 : Operational noise – detailed results (SES correction)

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
535446	Hampstead Road, Regent's Park	67	59	74/76	69	65	74	69	65	0	0	A	69	R	T	H	-	-	NI	OSV01-D01

Table 2 : Operational noise – detailed results (revised scheme)

Assessment location		Impact criteria									Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
519788	Euston Road, London	31	23	48/51	75	71	81	75	71	0	0	NA	462	R	T	H	-	-	-	
520315	Parkway, London	42	35	59/62	51	47	55	52	47	1	0	NA	2	R	T	-	-	-	-	
520752	Eversholt Street, London	34	27	51/54	70	67	80	70	67	0	0	NA	73	R	T	H	-	-	-	
521033	Park Village East, London	57	49	68/70	63	57	73	64	58	1	1	A	105	R	T	H	-	-	-	
521556	Redhill Street, London	36	29	47/50	52	50	66	53	50	0	0	NA	102	R	T	-	-	-	-	
522490	Augustus Street, London	42	35	56/59	52	50	66	53	50	0	0	NA	376	R	T	-	-	-	-	
523758	Parkway, London	32	24	53/56	51	47	55	51	47	0	0	NA	4	R	T	-	-	-	-	
523809	Mornington Terrace, London	43	35	60/63	60	56	67	60	56	0	0	NA	1	R	T	H	-	-	-	
523826	Mornington Terrace, London	43	36	57/60	60	56	67	60	56	0	0	NA	47	R	T	H	-	-	-	
523935	Albert Street, London	38	30	48/51	55	47	51	55	47	0	0	NA	120	R	T	-	-	-	-	
524286	Delancey Street, London	38	31	58/61	60	56	67	60	56	0	0	NA	116	R	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
525979	Arlington Road, London	36	28	47/50	55	47	51	55	47	0	0	NA	152	R	T	-	-	-	-	
527860	Albany Street, London	32	24	47/50	63	57	73	63	57	0	0	NA	41	R	T	H	-	-	-	
528008	Park Village West, London	40	33	49/52	51	46	52	52	46	0	0	NA	11	R	T	-	-	-	-	
528051	Cumberland Terrace, London	34	26	45/48	63	57	73	63	57	0	0	NA	17	R	T	H	-	-	-	
528192	Cumberland Terrace Mews, London	34	26	44/47	63	57	73	63	57	0	0	NA	52	R	T	H	-	-	-	
528324	Redhill Street, Regent's Park	44	37	56/59	51	46	52	52	46	1	1	NA	93	R	T	-	-	-	-	
528405	Albany Street, Regent's Park	38	30	49/52	51	46	52	52	46	0	0	NA	15	R	T	-	-	-	-	
528585	Park Village East, London	54	46	65/68	63	57	73	63	58	0	0	A	22	R	T	H	-	-	-	
528600	Park Village East, London	54	47	66/69	63	57	73	63	58	1	0	A	26	R	T	H	-	-	-	
528624	Park Village East, London	54	47	66/69	63	57	73	63	58	1	0	A	44	R	T	H	-	-	-	
528830	Park Village East, London	52	45	59/62	65	59	75	65	59	0	0	A	4	R	T	H	-	-	-	
528856	Park Village East, London	48	41	52/55	65	59	75	65	59	0	0	A	2	R	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
528881	Park Village East, London	40	33	53/56	65	59	75	65	59	0	0	NA	9	R	T	H	-	-	-	
528890	Park Village East, London	42	35	52/55	65	59	75	65	59	0	0	NA	2	R	T	H	-	-	-	
528900	Park Village East, London	40	33	49/52	65	59	75	65	59	0	0	NA	5	R	T	H	-	-	-	
528939	Park Village West, London	35	27	50/53	51	46	52	51	46	0	0	NA	44	R	T	-	-	-	-	
529017	Mornington Terrace, London	45	38	59/62	60	56	67	61	56	0	0	NA	27	R	T	H	-	-	-	
529041	Mornington Terrace, London	47	40	61/64	60	56	67	61	56	0	0	A	25	R	T	H	-	-	-	
529064	Mornington Street, London	49	42	62/65	60	56	67	61	56	0	0	A	35	R	T	H	-	-	-	
529185	Mornington Terrace, London	52	45	64/67	61	55	65	61	56	1	0	A	20	R	T	H	-	-	-	
529201	Mornington Terrace, London	51	44	64/67	60	56	67	61	56	1	0	A	22	R	T	H	-	-	-	
529302	Mornington Place, London	51	43	62/65	61	55	65	61	55	0	0	A	29	R	T	H	-	-	-	
533032	Euston Road, London	27	19	44/47	75	71	81	75	71	0	0	NA	657	R	T	H	-	-	-	
533361	Doric Way, St. Pancras and Somers Town	35	28	50/53	70	67	80	70	67	0	0	NA	40	R	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533433	Churchway, London	29	21	41/44	53	50	69	53	50	0	0	NA	16	R	T	-	-	-	-	
533445	Eversholt Street, London	36	29	47/50	70	67	80	70	67	0	0	NA	162	R	T	H	-	-	-	
533673	Churchway, London	34	26	48/51	57	55	69	57	55	0	0	NA	116	R	T	H	-	-	-	
533851	Eversholt Street, London	40	33	52/55	69	66	76	69	66	0	0	NA	20	R	T	H	-	-	-	
533958	Chalton Street, London	33	25	44/47	57	55	69	57	55	0	0	NA	169	R	T	H	-	-	-	
534200	Eversholt Street, London	49	41	58/61	70	67	80	70	67	0	0	A	183	R	T	H	-	-	-	
534286	Polygon Road, London	35	28	43/46	57	55	69	57	55	0	0	NA	114	R	T	H	-	-	-	
534557	Cobourg Street, London	30	23	49/52	55	47	61	55	47	0	0	NA	42	R	T	-	-	-	-	
534765	Cobourg Street, London	31	23	42/45	55	47	61	55	47	0	0	NA	37	R	T	-	-	-	-	
534772	Starcross Street, London	32	25	43/46	55	47	61	55	47	0	0	NA	22	R	T	-	-	-	-	
534932	North Gower Street, London	35	27	45/48	55	47	51	55	47	0	0	NA	0	R	T	-	-	-	-	
535446	Hampstead Road, Regent's Park	67	59	74/76	69	65	74	69	65	0	0	A	69	R	T	H	-	-	NI	OSV01-D01

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
535454	Harrington Street, London	59	51	69/72	60	56	74	62	57	3	1	A	24	R	T	H	-	-	-	OSV01-C01
535501	Harrington Street, Regent's Park	57	50	67/70	52	50	66	58	53	6	3	A	60	R	T	-	-	-	-	OSV01-C01
535544	Augustus Street, London	53	45	65/68	52	50	66	56	51	3	1	A	50	R	T	-	-	-	-	OSV01-C01
535686	Cumberland Market, London	47	40	56/59	52	50	66	54	50	1	0	A	314	R	T	-	-	-	-	
535768	Varndell Street, London	58	50	65/68	64	57	75	65	58	1	1	A	119	R	T	H	-	-	-	
536408	Euston Road, London	31	23	51/54	75	71	81	75	71	0	0	NA	175	R	T	H	-	-	-	
539626	North Gower Street, London	31	23	44/47	55	47	61	55	47	0	0	NA	101	R	T	-	-	-	-	
543159	Aldenham Street, London	39	31	48/51	55	47	61	55	47	0	0	NA	379	R	T	-	-	-	-	
544316	Albert Street, London	42	34	52/55	55	47	51	55	47	0	0	NA	23	R	T	-	-	-	-	
544328	Arlington Road, London	38	30	47/50	55	47	51	55	47	0	0	NA	143	R	T	-	-	-	-	
544630	Mornington Terrace, Regent's Park	53	45	64/67	59	54	68	60	54	1	1	A	0	R	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
545266	Harrington Square, London	42	35	56/59	67	61	71	67	61	0	0	NA	126	R	T	H	-	-	-	
545326	Mornington Crescent, London	54	46	65/68	62	56	65	62	57	1	0	A	18	R	T	H	-	-	-	
545365	Mornington Crescent, London	50	42	61/64	56	50	65	57	51	1	1	A	17	R	T	-	-	-	-	
545455	Oakley Square, London	38	31	49/52	62	56	65	62	56	0	0	NA	97	R	T	H	-	-	-	
545616	Eversholt Street, London	38	30	44/47	62	56	65	62	56	0	0	NA	178	R	T	H	-	-	-	
545708	Ampthill Square, London	55	48	65/68	64	62	76	65	62	1	0	A	24	R	T	H	-	-	-	
545716	Ampthill Square, London	52	44	62/65	57	51	65	58	52	1	1	A	24	R	T	-	-	-	-	
545744	Ampthill Square, London	54	47	64/67	57	51	65	59	53	2	1	A	12	R	T	-	-	-	-	
545762	Barnby Street, St. Pancras and Somers Town	52	44	62/65	62	61	82	63	61	0	0	A	24	R	T	H	-	-	-	
545877	Harrington Square, London	52	45	62/65	67	61	71	67	61	0	0	A	80	R	T	H	-	-	-	
545890	Harrington Square, London	54	47	64/67	67	65	82	67	65	0	0	A	80	R	T	H	-	-	-	
545919	Hampstead Road, London	58	50	67/69	69	65	74	69	65	0	0	A	80	R	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
546176	Ampthill Square, London	47	40	59/62	52	46	65	53	47	1	1	A	0	R	T	-	-	-	-	
546361	Mornington Place, London	46	39	57/60	59	54	68	59	54	0	0	NA	63	R	T	-	-	-	-	
547012	Hampstead Road, London	39	31	53/56	68	64	75	68	64	0	0	NA	139	R	T	H	-	-	-	
700144	Parkway, London	34	24	47/50	57	54	68	57	54	0	0	NA	64	R	T	-	-	-	-	
700384	Mornington Terrace, Regent's Park	51	44	65/68	60	56	67	61	56	1	0	A	52	R	T	H	-	-	-	
700386	Park Village East, London	54	46	56/59	65	59	75	65	59	0	0	A	2	R	T	H	-	-	-	
700393	Chester Place, London	33	26	43/46	63	57	73	63	57	0	0	NA	55	R	T	H	-	-	-	
700394	Robert Street, London	44	37	55/58	60	56	75	60	56	0	0	NA	107	R	T	H	-	-	-	
710960	Albany Street, London	32	25	40/43	68	64	75	68	64	0	0	NA	126	R	T	H	-	-	-	
710961	Arlington Road, London	34	25	45/48	55	47	51	55	47	0	0	NA	4	R	T	-	-	-	-	
710962	Camden High Street, London	33	25	45/48	67	61	71	67	61	0	0	NA	101	R	T	H	-	-	-	
710963	Camden High Street, London	32	24	45/48	59	54	68	59	54	0	0	NA	34	R	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710964	Bayham Street, London	32	24	45/48	59	54	68	59	54	0	0	NA	289	R	T	-	-	-	-	
710965	Albany Street, London	34	27	40/43	52	50	66	52	50	0	0	NA	160	R	T	-	-	-	-	
710966	Robert Street, London	36	28	47/50	52	50	66	52	50	0	0	NA	179	R	T	-	-	-	-	
710967	Clarence Gardens, London	31	23	40/43	52	50	66	52	50	0	0	NA	211	R	T	-	-	-	-	
710968	Camden High Street, London	36	28	47/50	67	61	71	67	61	0	0	NA	61	R	T	H	-	-	-	
710969	Bayham Street, London	32	24	43/46	59	54	68	59	54	0	0	NA	156	R	T	-	-	-	-	
710971	William Road, London	36	28	50/53	52	50	66	52	50	0	0	NA	57	R	T	-	-	-	-	
710972	Stanhope Street, London	32	24	42/45	52	50	66	52	50	0	0	NA	215	R	T	-	-	-	-	
710973	Oakley Square, London	39	31	51/54	62	56	65	62	56	0	0	NA	92	R	T	H	-	-	-	
710975	Cranleigh Street, London	37	29	47/50	55	47	61	55	47	0	0	NA	171	R	T	-	-	-	-	
710976	Godwin Court, London	33	25	41/44	59	54	68	59	54	0	0	NA	115	R	T	-	-	-	-	
710977	Charlton Street, London	29	23	36/39	57	55	69	57	55	0	0	NA	211	R	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710978	Phoenix Court, London	33	26	39/42	57	55	69	57	55	0	0	NA	258	R	T	H	-	-	-	
898989	Albert Street, London	34	26	45/48	50	42	51	50	42	0	0	NA	60	R	T	-	-	-	-	
519788	Maple House, Tottenham Court Road (TV production)	31	23	48/51	75	71	81	75	71	0	0	B	9	G2	T	H	-	-	-	
519788	Tottenham Court Road, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	20	G5	T	H	-	-	-	
519788	Grafton Hotel, Tottenham Court Road, London (Hotel)	31	23	48/51	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
519788	Shirley House 25-27, Tottenham Court Road, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
519788	Grafton Way, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	8	G5	T	H	-	-	-	
519788	Suffolk House, Whitfield Place, London (Office)	31	23	48/51	75	71	81	75	71	0	0	B	7	G5	T	H	-	-	-	
519788	Euston Road, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	9	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
519788	Whitfield Street, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	10	G5	T	H	-	-	-	
519788	Memorial Centre, Whitfield Street, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
519788	Project House, Tottenham Court Road, London (Office)	31	23	48/51	75	71	81	75	71	0	0	B	4	G5	T	H	-	-	-	
519788	University College Hospital, Euston Road, London (Hospital)	31	23	48/51	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
519788	Midford Place, London (Factory)	31	23	48/51	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
519788	Chinese Medical Academy, University Street, London (Higher Education)	31	23	48/51	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
519788	Maple Street, London (Office)	31	23	48/51	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
519788	A R D German Television, Midford Place, London (Television Studio)	31	23	48/51	75	71	81	75	71	0	0	B	1	G2	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
519788	University College Hospital, Gower Street, London (Hospital)	31	23	48/51	75	71	81	75	71	0	0	B	6	G4	T	H	-	-	-	
519788	University Street, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
519788	University Street, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
519788	Schafer House 168-182, Whitfield Street, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
519788	Warren Street, London (General Commercial)	31	23	48/51	75	71	81	75	71	0	0	B	19	G5	T	H	-	-	-	
520315	Park Village East, London (Office)	42	35	59/62	51	47	55	52	47	1	0	B	1	G5	T	-	-	-	-	
520752	Eversholt Street, London (General Commercial)	34	27	51/54	70	67	80	70	67	0	0	B	1	G5	T	H	-	-	-	
520752	Fire Station, Euston Road, London (Fire Station)	34	27	51/54	70	67	80	70	67	0	0	B	1	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
520752	Evergreen House, Euston Road, London (General Commercial)	34	27	51/54	70	67	80	70	67	0	0	B	4	G5	T	H	-	-	-	
520752	Travelodge, Grafton Place, London (Hotel)	34	27	51/54	70	67	80	70	67	0	0	B	1	G4	T	H	-	-	-	
521556	Albany Street, London (General Commercial)	36	29	47/50	52	50	66	53	50	0	0	B	2	G5	T	-	-	-	-	
521556	Antiochian Orthodox Church, Redhill Street, London (Church)	36	29	47/50	52	50	66	53	50	0	0	B	1	G3	T	-	-	-	-	
521556	Christ Church C of E Primary School, Redhill Street, London (Primary School)	36	29	47/50	52	50	66	53	50	0	0	B	1	G4	T	-	-	-	-	
522490	Ascot House, Redhill Street, London (Shopping)	42	35	56/59	52	50	66	53	50	0	0	B	1	G5	T	-	-	-	-	
523758	Parkway, London (General Commercial)	32	24	53/56	51	47	55	51	47	0	0	B	5	G5	T	-	-	-	-	
523809	Mornington Terrace, London (General Commercial)	43	35	60/63	60	56	67	60	56	0	0	B	1	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
523826	Delancey Street, London (General Commercial)	43	36	57/60	60	56	67	60	56	0	0	B	1	G5	T	-	-	-	-	
523935	Mornington Street, London (General Commercial)	38	30	48/51	55	47	51	55	47	0	0	B	2	G5	T	-	-	-	-	
524286	Novas Gallery, Parkway, London (Art Gallery)	38	31	58/61	60	56	67	60	56	0	0	B	1	G3	T	-	-	-	-	
524286	Albert Street, London (Museum)	38	31	58/61	60	56	67	60	56	0	0	B	1	G3	T	-	-	-	-	
524286	Parkway Dental Care, Parkway, London (Dental Surgery)	38	31	58/61	60	56	67	60	56	0	0	B	1	G4	T	-	-	-	-	
524286	Delancey Street, London (Shopping)	38	31	58/61	60	56	67	60	56	0	0	B	1	G5	T	-	-	-	-	
524286	Albert Street, London (General Commercial)	38	31	58/61	60	56	67	60	56	0	0	B	1	G5	T	-	-	-	-	
524286	Delancey Street, London (Shopping)	38	31	58/61	60	56	67	60	56	0	0	B	1	G5	T	-	-	-	-	
524286	Parkway, London (General	38	31	58/61	60	56	67	60	56	0	0	B	28	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	Commercial)																			
524286	Gloucester Crescent, London (Office)	38	31	58/61	60	56	67	60	56	0	0	B	1	G5	T	-	-	-	-	
525979	Camden High Street, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	19	G5	T	-	-	-	-	
525979	Delancey Passage, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
525979	Delancey Passage, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	2	G5	T	-	-	-	-	
525979	Delancey Street, London (Restaurant)	36	28	47/50	55	47	51	55	47	0	0	B	2	G5	T	-	-	-	-	
525979	Camden Dental Surgery, Camden High Street, London (Dental Surgery)	36	28	47/50	55	47	51	55	47	0	0	B	1	G4	T	-	-	-	-	
525979	Delancey Passage, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	2	G5	T	-	-	-	-	
525979	Delancey Passage, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	2	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
525979	Mary Terrace, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
525979	Arlington Road, London (General Commercial)	36	28	47/50	55	47	51	55	47	0	0	B	2	G5	T	-	-	-	-	
527860	St. Katharine's Precinct, London (General Commercial)	32	24	47/50	63	57	73	63	57	0	0	B	1	G5	T	-	-	-	-	
528008	Regent's Park Barracks, Albany Street, London (Central Government Office)	40	33	49/52	51	46	52	52	46	0	0	B	1	G5	T	-	-	-	-	
528051	The Danish Church, St. Katharine's Precinct, London (Church)	34	26	45/48	63	57	73	63	57	0	0	B	1	G3	T	-	-	-	-	
528324	Redhill Street, London (Horticultural Nursery)	44	37	56/59	51	46	52	52	46	1	1	B	1	G4	T	-	-	-	-	
528405	Regent's Park Barracks, Albany Street, London (Central Government Office)	38	30	49/52	51	46	52	52	46	0	0	B	1	G5	T	-	-	-	-	
528624	Goldsmith House, Park Village East, London (General	54	47	66/69	63	57	73	63	58	1	0	B	1	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	Commercial)																			
533032	The Place Theatre, Duke's Road, London (Theatre)	27	19	44/47	75	71	81	75	71	0	0	B	3	G1	T	H	-	-	-	
533032	Flaxman Lodge, Flaxman Terrace, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Burton Street, London (Shopping)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Tiger House, Burton Street, London (Local Government Office)	27	19	44/47	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
533032	Jenkins Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Mabledon Court Hotel, Mabledon Place, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Woburn Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	St. Pancras Parish Church, Euston Road, London (Church)	27	19	44/47	75	71	81	75	71	0	0	B	1	G3	T	H	-	-	-	
533032	Tavistock House South, Tavistock Square, London (Office)	27	19	44/47	75	71	81	75	71	0	0	B	10	G5	T	H	-	-	-	
533032	The Ambassadors Hotel, Upper Woburn Place, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
533032	Grey Health Centre, Tavistock Square, London (Health Centre)	27	19	44/47	75	71	81	75	71	0	0	B	18	G4	T	H	-	-	-	
533032	Gordon Square, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	3	G5	T	H	-	-	-	
533032	University of London, Tavistock Square, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	University of London, Birkbeck College Faculty of Continuing Education, Tavistock Square, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	University College London, Gordon Square, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Tavistock Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	County Hotel, Upper Woburn Place, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Tavistock House North, Tavistock Square, London (Local Government Office)	27	19	44/47	75	71	81	75	71	0	0	B	14	G5	T	H	-	-	-	
533032	Tavistock Square, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
533032	Woburn House, Tavistock Square, London (Office)	27	19	44/47	75	71	81	75	71	0	0	B	6	G5	T	H	-	-	-	
533032	Upper Woburn Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
533032	Student Hostel, Endsleigh Street, London (Hostel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	Woburn Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	5	G5	T	H	-	-	-	
533032	Woburn Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	University of London, John Adams Hall, Endsleigh Street, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Student Hostel, Kilburn Bridge House 69-71, Endsleigh Gardens, London (Hostel)	27	19	44/47	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
533032	Tavistock Hotel, Tavistock Square, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
533032	University of London, Gordon Square, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
533032	University College London, Gordon Square, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Duke's Road, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	6	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	University College London, Gordon Square (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Taviton Street, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Tavis House, Tavistock Square, London (Central Government Office)	27	19	44/47	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
533032	Woburn Square, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Charles Clore House, Russell Square, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	4	G5	T	H	-	-	-	
533032	Clifton House, Euston Road, London (Bank)	27	19	44/47	75	71	81	75	71	0	0	B	6	G5	T	H	-	-	-	
533032	Judd Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	University of London, Gordon Square, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	Adult Dyslexia Centre, Woburn Walk, London (Adult Education)	27	19	44/47	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
533032	Metropolitan College, Tavistock Place, London (Further Education College)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Tavistock Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
533032	B M A House, Tavistock Square, London (Office)	27	19	44/47	75	71	81	75	71	0	0	B	5	G5	T	H	-	-	-	
533032	University College London, Campbell House, Taviton Street, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Upper Woburn Place, London (Office)	27	19	44/47	75	71	81	75	71	0	0	B	7	G5	T	H	-	-	-	
533032	Mabledon Place, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	3	G5	T	H	-	-	-	
533032	Euston Road, London (Office)	27	19	44/47	75	71	81	75	71	0	0	B	4	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	Premier Inn, Dukes Road, London (Inn)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Mentone Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	The Place, Flaxman Terrace, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Taviton Street, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Endsleigh Gardens, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Friends House, Euston Road, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
533032	Bidborough House, Bidborough Street, London (Local Government Office)	27	19	44/47	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
533032	Online Galleries Ltd, Hamilton House, Mabledon Place, London (Art Gallery)	27	19	44/47	75	71	81	75	71	0	0	B	16	G3	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533032	University College London, Central House, Upper Woburn Place, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	4	G4	T	H	-	-	-	
533032	Euro Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	School of Public Policy, Tavistock Square, London (School)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Avonmore Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	George Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Camden Chinese Community Centre, Tavistock Place, London (Community Centre)	27	19	44/47	75	71	81	75	71	0	0	B	1	G3	T	H	-	-	-	
533032	University College London, Bentham House, Endsleigh Gardens, London (University)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Taviton Street, London	27	19	44/47	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(General Commercial)																			
533032	Crescent Hotel, Cartwright Gardens, London (Hotel)	27	19	44/47	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
533032	Euston Road, London (Office)	27	19	44/47	75	71	81	75	71	0	0	B	4	G5	T	H	-	-	-	
533032	Woburn Walk, London (General Commercial)	27	19	44/47	75	71	81	75	71	0	0	B	12	G5	T	H	-	-	-	
533361	Learning Tree International Ltd, Euston House, Eversholt Street, London (Education)	35	28	50/53	70	67	80	70	67	0	0	B	3	G4	T	H	-	-	-	
533433	Churchway, London (Office)	29	21	41/44	53	50	69	53	50	0	0	B	1	G5	T	-	-	-	-	
533445	Eversholt Street, London (General Commercial)	36	29	47/50	70	67	80	70	67	0	0	B	9	G5	T	H	-	-	-	
533673	Chalton Street, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	8	G5	T	-	-	-	-	
533673	Maverick Television Ltd, Churchway, London (Television Studio)	34	26	48/51	57	55	69	57	55	0	0	B	1	G2	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533673	Wide Learning Ltd, Chalton Street, London (Education)	34	26	48/51	57	55	69	57	55	0	0	B	8	G4	T	-	-	-	-	
533673	Euston Road, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
533673	Unison Centre, Euston Road, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
533673	Churchway, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
533673	Christopher Place, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
533673	Churchway, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
533673	Euston Road, London (Higher Education)	34	26	48/51	57	55	69	57	55	0	0	B	4	G4	T	-	-	-	-	
533673	Churchway, London (General Commercial)	34	26	48/51	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
533851	Eversholt Street, London	40	33	52/55	69	66	76	69	66	0	0	B	2	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(General Commercial)																			
533851	Maria Fidelis Convent Upper School, Phoenix Road, London (School)	40	33	52/55	69	66	76	69	66	0	0	B	1	G4	T	H	-	-	-	
533851	St. Aloysius Catholic Infant School, Phoenix Road, London (Infant School)	40	33	52/55	69	66	76	69	66	0	0	B	1	G4	T	H	-	-	-	
533851	St. Aloysius RC Church, Phoenix Road, London (Church)	40	33	52/55	69	66	76	69	66	0	0	B	1	G3	T	H	-	-	-	
533851	Drummond Crescent, London (Police Services)	40	33	52/55	69	66	76	69	66	0	0	B	1	G4	T	H	-	-	-	
533958	Phoenix Road, London (General Commercial)	33	25	44/47	57	55	69	57	55	0	0	B	5	G5	T	-	-	-	-	
533958	Chalton Street, London (General Commercial)	33	25	44/47	57	55	69	57	55	0	0	B	5	G5	T	-	-	-	-	
533958	Phoenix Road, London (Training)	33	25	44/47	57	55	69	57	55	0	0	B	1	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
533958	Chalton Street, London (Youth Centre)	33	25	44/47	57	55	69	57	55	0	0	B	1	G3	T	-	-	-	-	
534200	St. Marys Church, Eversholt Street, London (Church)	49	41	58/61	70	67	80	70	67	0	0	B	1	G3	T	H	-	-	-	
534200	Eversholt Street, London (General Commercial)	49	41	58/61	70	67	80	70	67	0	0	B	8	G5	T	H	-	-	-	
534200	ST. Aloysius RC Junior School, Aldenham Street, London (Junior School)	49	41	58/61	70	67	80	70	67	0	0	B	1	G4	T	H	-	-	-	
534557	Stephenson House 158-160, North Gower Street, London (General Commercial)	30	23	49/52	55	47	61	55	47	0	0	B	2	G5	T	-	-	-	-	
534557	Stephenson Way, London (Research)	30	23	49/52	55	47	61	55	47	0	0	B	2	G5	T	-	-	-	-	
534557	North Gower Street, London (General Commercial)	30	23	49/52	55	47	61	55	47	0	0	B	3	G5	T	-	-	-	-	
534557	Agency for Legal Deposit Libraries, Euston Street, London (Library)	30	23	49/52	55	47	61	55	47	0	0	B	2	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
534557	Euston Road, London (Office)	30	23	49/52	55	47	61	55	47	0	0	B	2	G5	T	-	-	-	-	
534557	Euston Street, London (Office)	30	23	49/52	55	47	61	55	47	0	0	B	2	G5	T	-	-	-	-	
534557	Stephenson Way, London (Welfare Services)	30	23	49/52	55	47	61	55	47	0	0	B	5	G5	T	-	-	-	-	
534557	Euston Road, London (General Commercial)	30	23	49/52	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	
534557	Euston Street, London (Office)	30	23	49/52	55	47	61	55	47	0	0	B	11	G5	T	-	-	-	-	
534557	Stephenson Way, London (General Commercial)	30	23	49/52	55	47	61	55	47	0	0	B	6	G5	T	-	-	-	-	
534557	Society of College, National and University Libraries, Euston Street, London (Library)	30	23	49/52	55	47	61	55	47	0	0	B	2	G4	T	-	-	-	-	
534557	Euston Square Hotel, North Gower Street, London (Hotel)	30	23	49/52	55	47	61	55	47	0	0	B	1	G4	T	-	-	-	-	
534557	Euston House, Euston Street, London (General Commercial)	30	23	49/52	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
534557	Drummond Street, London (General Commercial)	30	23	49/52	55	47	61	55	47	0	0	B	7	G5	T	-	-	-	-	
534765	Drummond Street, London (General Commercial)	31	23	42/45	55	47	61	55	47	0	0	B	7	G5	T	-	-	-	-	
534772	North Gower Street, London (Mosque)	32	25	43/46	55	47	61	55	47	0	0	B	1	G3	T	-	-	-	-	
534772	North Gower Street, London (General Commercial)	32	25	43/46	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	
534932	Maria Fidelis Convent Lower School, North Gower Street, London (School)	35	27	45/48	55	47	51	55	47	0	0	B	1	G4	T	-	-	-	-	
534932	St. James' House, Hampstead Road, London (General Commercial)	35	27	45/48	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
534932	Hampstead Road, London (General Commercial)	35	27	45/48	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
535544	Stanhope Parade, London (General Commercial)	53	45	65/68	52	50	66	56	51	3	1	B	7	G5	T	-	-	-	-	$

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
535544	Augustus Street, London (General Commercial)	53	45	65/68	52	50	66	56	51	3	1	B	1	G5	T	-	-	-	-	$
535686	The Regent's Park Practice, Cumberland Market, London (Clinic)	47	40	56/59	52	50	66	54	50	1	0	B	1	G4	T	-	-	-	-	
535768	Hampstead Road, London (Shopping)	58	50	65/68	64	57	75	65	58	1	1	B	1	G5	T	-	-	-	-	
536408	University College London, Drayton House, Gordon Street, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
536408	Tottenham Court Road, London (General Commercial)	31	23	51/54	75	71	81	75	71	0	0	B	3	G5	T	H	-	-	-	
536408	University College London, Torrington Place, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	Chenies Mews, London (General Commercial)	31	23	51/54	75	71	81	75	71	0	0	B	5	G5	T	H	-	-	-	
536408	University College London, Gower Street, London	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(University)																			
536408	Bloomsbury Theatre, Gordon Street, London (Theatre)	31	23	51/54	75	71	81	75	71	0	0	B	1	G1	T	H	-	-	-	
536408	University College London, New Chemistry Building, Gordon Street, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	Huntley Street, London (Office)	31	23	51/54	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
536408	Euston Road, London (Office)	31	23	51/54	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
536408	Gower Place Practice, Gower Place, London (Clinic)	31	23	51/54	75	71	81	75	71	0	0	B	3	G4	T	H	-	-	-	
536408	Shropshire House, Capper Street, London (Office)	31	23	51/54	75	71	81	75	71	0	0	B	8	G5	T	H	-	-	-	
536408	University College London, Malet Place, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	Malet Street, London (Office)	31	23	51/54	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
536408	University College London, Gordon Square, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	2	G4	T	H	-	-	-	
536408	University College London, Gower Street, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	University College London, Chenies Mews, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	University College London, Gower Street, London (Bank)	31	23	51/54	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
536408	Catholic Chaplaincy to the London Universities, Newman House, Gower Street, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	University College London, The Bartlett School, Gordon Street, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	Congregational Library, Gordon Square, London	31	23	51/54	75	71	81	75	71	0	0	B	3	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(Library)																			
536408	Gower Street, London (General Commercial)	31	23	51/54	75	71	81	75	71	0	0	B	5	G5	T	H	-	-	-	
536408	Gordon Street, London (General Commercial)	31	23	51/54	75	71	81	75	71	0	0	B	3	G5	T	H	-	-	-	
536408	Huntley Street, London (Office)	31	23	51/54	75	71	81	75	71	0	0	B	2	G5	T	H	-	-	-	
536408	University of London Chaplaincy, Torrington Square, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	University of London, Woburn Square, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	The Cloisters, Gordon Square, London (General Commercial)	31	23	51/54	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
536408	Gower Street, London (Hostel)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	Gower Street, London (Factory)	31	23	51/54	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
536408	Taviton Street, London (General Commercial)	31	23	51/54	75	71	81	75	71	0	0	B	1	G5	T	H	-	-	-	
536408	University College London, Gordon Square, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	University College Hospital, University Street, London (Hospital)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
536408	University College London, Gordon Square, London (University)	31	23	51/54	75	71	81	75	71	0	0	B	1	G4	T	H	-	-	-	
539626	Dental Surgery, North Gower Street, London (Dental Surgery)	31	23	44/47	55	47	61	55	47	0	0	B	1	G4	T	-	-	-	-	
539626	North Gower Street, London (Café)	31	23	44/47	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	
539626	Triton Square, London (General Commercial)	31	23	44/47	55	47	61	55	47	0	0	B	2	G5	T	-	-	-	-	
539626	Triton Square, London	31	23	44/47	55	47	61	55	47	0	0	B	5	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(General Commercial)																			
539626	Triton Square Mall, Triton Square, London (Estate Agency)	31	23	44/47	55	47	61	55	47	0	0	B	3	G5	T	-	-	-	-	
539626	Prism Entertainment, Euston Tower, Euston Road, London (Entertainment Centre)	31	23	44/47	55	47	61	55	47	0	0	B	31	G2	T	-	-	-	-	
539626	Camden Peoples Theatre, Hampstead Road, London (Theatre)	31	23	44/47	55	47	61	55	47	0	0	B	5	G1	T	-	-	-	-	
539626	Euston Road, London (Employment Agency)	31	23	44/47	55	47	61	55	47	0	0	B	3	G5	T	-	-	-	-	
539626	Drummond Street, London (General Commercial)	31	23	44/47	55	47	61	55	47	0	0	B	3	G5	T	-	-	-	-	
543159	St. Christopher's Nursery, St. Christopher's House (Pre School Education)	39	31	48/51	55	47	61	55	47	0	0	B	2	G4	T	-	-	-	-	
543159	St. Mary and St. Pancras Primary School (Primary	39	31	48/51	55	47	61	55	47	0	0	B	2	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	School)																			
543159	Chalton Street, London (Club)	39	31	48/51	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	
543159	Edith Neville Primary School (Primary School)	39	31	48/51	55	47	61	55	47	0	0	B	1	G4	T	-	-	-	-	
543159	Mary Wollstonecraft House, Chalton Street (General Commercial)	39	31	48/51	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	
543159	Chalton Street, London (Leisure Centre)	39	31	48/51	55	47	61	55	47	0	0	B	1	G5	T	-	-	-	-	
544328	Camden High Street, London (General Commercial)	38	30	47/50	55	47	51	55	47	0	0	B	17	G5	T	-	-	-	-	
544328	Mornington Crescent, London (General Commercial)	38	30	47/50	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
544328	Arlington Road, London (General Commercial)	38	30	47/50	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
544328	Old Bakery, Carlow Street, London (Office)	38	30	47/50	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
544630	Greater London House, Hampstead Road, London (Office)	53	45	64/67	59	54	68	60	54	1	1	B	15	G5	T	-	-	-	-	
545266	Millbrook Place, London (Office)	42	35	56/59	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
545266	Ampthill Square Medical Centre, Eversholt Street, London (Health Centre)	42	35	56/59	67	61	71	67	61	0	0	B	1	G4	T	H	-	-	-	
545266	Mornington Crescent Station, Millbrook Place, London (General Commercial)	42	35	56/59	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
545266	Lidlington Place, London (General Commercial)	42	35	56/59	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
545266	Isis Beauty Clinic, Eversholt Street, London (Clinic)	42	35	56/59	67	61	71	67	61	0	0	B	1	G4	T	H	-	-	-	
545266	Hurdwick Place, London (General Commercial)	42	35	56/59	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
545266	Eversholt Street, London (General Commercial)	42	35	56/59	67	61	71	67	61	0	0	B	17	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
545266	Harrington Square, London (Surgery)	42	35	56/59	67	61	71	67	61	0	0	B	1	G4	T	H	-	-	-	
545266	Happyvale Hotel, Harrington Square, London (Hotel)	42	35	56/59	67	61	71	67	61	0	0	B	1	G4	T	H	-	-	-	
545326	Mornington Crescent, London (Car Dealer)	54	46	65/68	62	56	65	62	57	1	0	B	1	G5	T	-	-	-	-	
545455	Eversholt Street, London (General Commercial)	38	31	49/52	62	56	65	62	56	0	0	B	2	G5	T	-	-	-	-	
545616	Eversholt Street, London (General Commercial)	38	30	44/47	62	56	65	62	56	0	0	B	3	G5	T	-	-	-	-	
546176	Broadcasting Support Services, Eversholt Street, London (Television Studio)	47	40	59/62	52	46	65	53	47	1	1	B	15	G2	T	-	-	-	-	
547012	Netley Primary School, William Road, London (Primary School)	39	31	53/56	68	64	75	68	64	0	0	B	1	G4	T	H	-	-	-	
547012	Prince Of Wales Passage, London (General Commercial)	39	31	53/56	68	64	75	68	64	0	0	B	3	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
547012	Hampstead Road, London (General Commercial)	39	31	53/56	68	64	75	68	64	0	0	B	6	G5	T	H	-	-	-	
547012	William Road, London (General Commercial)	39	31	53/56	68	64	75	68	64	0	0	B	4	G5	T	H	-	-	-	
547012	Drummond Street, London (General Commercial)	39	31	53/56	68	64	75	68	64	0	0	B	5	G5	T	H	-	-	-	
547012	Confident Dental Practice, Hampstead Road (Dental Surgery)	39	31	53/56	68	64	75	68	64	0	0	B	1	G4	T	H	-	-	-	
547012	Stanhope Street, London (Local Government Office)	39	31	53/56	68	64	75	68	64	0	0	B	1	G5	T	H	-	-	-	
700144	Parkway Business Centre, Parkway (Conference Centre)	34	24	47/50	57	54	68	57	54	0	0	B	1	G3	T	-	-	-	-	
700144	Blackmore Dental Surgery, Parkway (Dental Surgery)	34	24	47/50	57	54	68	57	54	0	0	B	1	G4	T	-	-	-	-	
700144	British Friends of the Hebrew University, Albert Street, London (University)	34	24	47/50	57	54	68	57	54	0	0	B	9	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
700144	Our Lady of Hal RC Church, Arlington Road (Church)	34	24	47/50	57	54	68	57	54	0	0	B	1	G3	T	-	-	-	-	
700144	The Cavendish School, Inverness Street, London (School)	34	24	47/50	57	54	68	57	54	0	0	B	1	G4	T	-	-	-	-	
700144	Arlington Road, London (Probation Centre)	34	24	47/50	57	54	68	57	54	0	0	B	1	G5	T	-	-	-	-	
700144	Parkway, London (General Commercial)	34	24	47/50	57	54	68	57	54	0	0	B	23	G5	T	-	-	-	-	
700144	Arlington Road, London (Travel Agency)	34	24	47/50	57	54	68	57	54	0	0	B	1	G5	T	-	-	-	-	
700144	Inverness Street, London (General Commercial)	34	24	47/50	57	54	68	57	54	0	0	B	1	G5	T	-	-	-	-	
700393	Cumberland Terrace, London (Office)	33	26	43/46	63	57	73	63	57	0	0	B	1	G5	T	-	-	-	-	
700394	Surma Community Centre, Robert Street, London (Office)	44	37	55/58	60	56	75	60	56	0	0	B	1	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710960	Chester Court, Albany Street, London (Shopping)	32	25	40/43	68	64	75	68	64	0	0	B	5	G5	T	H	-	-	-	
710961	Camden High Street, London (General Commercial)	34	25	45/48	55	47	51	55	47	0	0	B	10	G5	T	-	-	-	-	
710961	Arlington Road, London (General Commercial)	34	25	45/48	55	47	51	55	47	0	0	B	3	G5	T	-	-	-	-	
710961	Delancey Street, London (Snooker)	34	25	45/48	55	47	51	55	47	0	0	B	1	G5	T	-	-	-	-	
710962	Camden High Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	12	G5	T	H	-	-	-	
710962	Pratt Mews, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	8	G5	T	H	-	-	-	
710962	Plender Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
710962	Plender Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
710962	Kings Terrace, London	33	25	45/48	67	61	71	67	61	0	0	B	3	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(Shopping)																			
710962	Trojan Recording, Pratt Mews, London (Recording Studio)	33	25	45/48	67	61	71	67	61	0	0	B	4	G2	T	H	-	-	-	
710962	Bayham Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
710962	Bayham Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
710962	Pratt Mews, London (Kingdom Hall)	33	25	45/48	67	61	71	67	61	0	0	B	1	G3	T	H	-	-	-	
710962	Bayham Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	1	G5	T	H	-	-	-	
710962	Pratt Street, London (General Commercial)	33	25	45/48	67	61	71	67	61	0	0	B	3	G5	T	H	-	-	-	
710963	Bayham Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	18	G5	T	-	-	-	-	
710963	Energy Film Library, Bayham Street, London (Library)	32	24	45/48	59	54	68	59	54	0	0	B	6	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710963	Opticians, Camden High Street, London (Clinic)	32	24	45/48	59	54	68	59	54	0	0	B	14	G4	T	-	-	-	-	
710963	Variety Club House, Bayham Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	3	G5	T	-	-	-	-	
710963	Camden High Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	3	G5	T	-	-	-	-	
710963	Pratt Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	4	G5	T	-	-	-	-	
710964	Camden Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710964	The Marr, Camden Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	2	G5	T	-	-	-	-	
710964	Plender Street, London (General Commercial)	32	24	45/48	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710964	Curnock Estate Car Park, Pratt Street, London (Office)	32	24	45/48	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710965	Dick Collins Hall, Redhill Street, London (Office)	34	27	40/43	52	50	66	52	50	0	0	B	1	G5	T	-	-	-	-	
710965	Robert Street, London (General Commercial)	34	27	40/43	52	50	66	52	50	0	0	B	6	G5	T	-	-	-	-	
710966	Regent's Park Branch Library, Robert Street, London (Library)	36	28	47/50	52	50	66	52	50	0	0	B	1	G5	T	-	-	-	-	
710966	Arrow Dental Surgery, Robert Street, London (Dental Surgery)	36	28	47/50	52	50	66	52	50	0	0	B	1	G4	T	-	-	-	-	
710966	Robert Street, London (Office)	36	28	47/50	52	50	66	52	50	0	0	B	3	G5	T	-	-	-	-	
710967	Troutbeck, Albany Street, London (Research)	31	23	40/43	52	50	66	52	50	0	0	B	10	G5	T	-	-	-	-	
710967	Compton Close, London (Shopping)	31	23	40/43	52	50	66	52	50	0	0	B	1	G5	T	-	-	-	-	
710968	Plender Street, London (General Commercial)	36	28	47/50	67	61	71	67	61	0	0	B	3	G5	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710968	3 D D Entertainment Ltd, Camden High Street, London (Music Production)	36	28	47/50	67	61	71	67	61	0	0	B	3	G2	T	H	-	-	-	
710968	Camden Theatre, Camden High Street, London (General Commercial)	36	28	47/50	67	61	71	67	61	0	0	B	2	G5	T	H	-	-	-	
710968	Bayham Street, London (Training)	36	28	47/50	67	61	71	67	61	0	0	B	1	G4	T	H	-	-	-	
710968	The Camden Methodist Church, Plender Street, London (Church)	36	28	47/50	67	61	71	67	61	0	0	B	1	G3	T	H	-	-	-	
710968	Bayham Street, London (General Commercial)	36	28	47/50	67	61	71	67	61	0	0	B	2	G5	T	H	-	-	-	
710968	Bayham Place, London (General Commercial)	36	28	47/50	67	61	71	67	61	0	0	B	2	G5	T	H	-	-	-	
710968	Kings Terrace, London (General Commercial)	36	28	47/50	67	61	71	67	61	0	0	B	7	G5	T	H	-	-	-	
710968	Camden High Street Dental Practice, Camden High Street,	36	28	47/50	67	61	71	67	61	0	0	B	1	G4	T	H	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	London (Dental Surgery)																			
710968	Camden High Street, London (General Commercial)	36	28	47/50	67	61	71	67	61	0	0	B	12	G5	T	H	-	-	-	
710969	Bayham Street, London (General Commercial)	32	24	43/46	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710969	Bayham Place, London (General Commercial)	32	24	43/46	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710969	Bayham Place, London (General Commercial)	32	24	43/46	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710969	Bayham Place, London (General Commercial)	32	24	43/46	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710969	Working Men's College, Crowndale Road, London (Further Education College)	32	24	43/46	59	54	68	59	54	0	0	B	1	G4	T	-	-	-	-	
710969	Plender Street, London (General Commercial)	32	24	43/46	59	54	68	59	54	0	0	B	3	G5	T	-	-	-	-	
710969	Plender Street, London (Surgery)	32	24	43/46	59	54	68	59	54	0	0	B	1	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	Significant effect
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
710971	University of London, Schafer House, Drummond Street, London (University)	36	28	50/53	52	50	66	52	50	0	0	B	1	G4	T	-	-	-	-	
710971	William Road, London (General Commercial)	36	28	50/53	52	50	66	52	50	0	0	B	1	G5	T	-	-	-	-	
710971	Acre House, William Road, London (General Commercial)	36	28	50/53	52	50	66	52	50	0	0	B	1	G5	T	-	-	-	-	
710971	Drummond Street, London (General Commercial)	36	28	50/53	52	50	66	52	50	0	0	B	5	G5	T	-	-	-	-	
710971	Stephenson House, Hampstead Road, London (Travel Agency)	36	28	50/53	52	50	66	52	50	0	0	B	2	G5	T	-	-	-	-	
710971	The Photographers Gallery, William Road, London (Art Gallery)	36	28	50/53	52	50	66	52	50	0	0	B	2	G3	T	-	-	-	-	
710972	Stanhope Street, London (Youth Centre)	32	24	42/45	52	50	66	52	50	0	0	B	1	G3	T	-	-	-	-	
710972	Fine Arts College, Regent's Park Centre, Longford Street,	32	24	42/45	52	50	66	52	50	0	0	B	1	G4	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	(Further Education College)																			
710973	Eversholt Street, London (General Commercial)	39	31	51/54	62	56	65	62	56	0	0	B	1	G5	T	-	-	-	-	
710973	Eversholt Street, London (Local Government Office)	39	31	51/54	62	56	65	62	56	0	0	B	6	G5	T	-	-	-	-	
710973	Crowndale Health Centre, Crowndale Road, London (Health Centre)	39	31	51/54	62	56	65	62	56	0	0	B	1	G4	T	-	-	-	-	
710973	Oakley Square, London (General Commercial)	39	31	51/54	62	56	65	62	56	0	0	B	1	G5	T	-	-	-	-	
710975	Mayford Day Centre, Mayford, Oakley Square (Day Care)	37	29	47/50	55	47	61	55	47	0	0	B	1	G4	T	-	-	-	-	
710975	Chalton Street, London (General Commercial)	37	29	47/50	55	47	61	55	47	0	0	B	2	G5	T	-	-	-	-	
710976	Godwin Court, Crowndale Road, London (Office)	33	25	41/44	59	54	68	59	54	0	0	B	1	G5	T	-	-	-	-	
710976	Medburn Centre, Chalton Street, London (Welfare	33	25	41/44	59	54	68	59	54	0	0	B	7	G5	T	-	-	-	-	

Assessment location		Impact criteria										Significance criteria								Significant effect
ID	Area represented	HS2 scheme only (Year 15 traffic)			Do nothing (Opening year baseline)			Do something (Opening year baseline + Year 15 traffic) ****		Change		Type of effect	Number of impacts represented	Type of receptor	Receptor design	Existing environment	Unique feature	Combined impact	Mitigation of effect	
		Day *	Night **	Max ***	Day *	Night **	Max ***	Day *	Night **	Day *	Night **									
	Services)																			
710976	Medburn Centre, Chalton Street, London (Youth Centre)	33	25	41/44	59	54	68	59	54	0	0	B	2	G3	T	-	-	-	-	
710977	British Library, Euston Road, London (Library)	29	23	36/39	57	55	69	57	55	0	0	B	1	G4	T	-	-	-	-	
710977	Euston Road, London (General Commercial)	29	23	36/39	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
710977	Chalton Street, London (General Commercial)	29	23	36/39	57	55	69	57	55	0	0	B	10	G5	T	-	-	-	-	
710978	Phoenix Road, London (General Commercial)	33	26	39/42	57	55	69	57	55	0	0	B	1	G5	T	-	-	-	-	
710978	Polygon Road, London (Family Service)	33	26	39/42	57	55	69	57	55	0	0	B	1	G4	T	-	-	-	-	
710978	Hampden Community Centre, Ossulston Street, London (Community Centre)	33	26	39/42	57	55	69	57	55	0	0	B	1	G3	T	-	-	-	-	
898989	Albert Street, London (Office)	34	26	45/48	50	42	51	50	42	0	0	B	1	G5	T	-	-	-	-	

Direct impact - Summary

3.2.6 The operational airborne noise impacts identified in Table 2 are summarised in Table 3.

Table 3 : Summary of operational airborne sound impacts

Receptor	Number of Impacts		
	Minor	Moderate	Major
Residential properties	59	41	0
Non-residential properties	1	0	4
Quiet Areas	None	None	None

3.3 Assessment of significance of effects

Residential receptors: direct effects- individual dwellings

3.3.1 Taking account of the avoidance and mitigation measures incorporated into the scheme, the main ES assessment did not identify any properties, where noise would exceed the daytime noise insulation trigger threshold set forth in the Noise Insulation (railway and other guided systems) Regulations 1996, the night-time World Health Organization's Interim Target of 55dB[1] or the criterion[2] for maximum noise level as a train passes.

3.3.2 However, the main ES should have identified that at Cartmel House, Hampstead Road, represented by receptor 535446 (marked as OSV01-D01 in Tables 1 and 2), the forecast night-time noise level would exceed the World Health Organization's Interim Target of 55dB[3]. It is therefore estimated that this building will be offered noise insulation as described in the Avoidance and mitigation measures section of main ES, Volume 2, CFA Report 1, Section 11.

3.3.3 Cartmel House is thus indicated (as being estimated to qualify for noise insulation) on AP3 ES Volume 5, Map Book Sound, Noise and Vibration, map series SV-02. As indicated in Table 2 this outcome is unchanged as a result of the AP3 amendments.

3.3.4 The mitigation measures, including noise insulation, will reduce noise inside all dwellings such that it will not reach a level where it would significantly affect residents.

Residential receptors: direct effects- communities

3.3.5 No change from the main ES.

1 World Health Organization, (2010), Night-time Noise Guidelines for Europe.
2 During the night (2300-0700) a significant effect is also identified where the scheme results in a maximum sound level at the façade of a building at or above: 85dB LpAFmax (where the number of train pass-bys exceeding this value is less than or equal to 20); or 80dB LpAFmax (where the number of train pass-bys exceeding this value is greater than 20).
3 World Health Organization, (2010), Night-time Noise Guidelines for Europe.

Residential receptors: indirect effects

3.3.6 The main ES identified that as a result of changes in road traffic due to the operation of the revised scheme the following likely significant effects:

- beneficial noise effects on residential receptors along Drummond Street, Robert Street and Varndell Street; and
- adverse noise effects on residential receptors along part of North Gower Street, Cobourg Street, the section of Stanhope Street between Granby Terrace and Robert Street, Mornington Street and Arlington Street.

3.3.7 Changes in road traffic due to the operation of the revised scheme, set out in Volume 2, Section 15, Traffic and Transport, are likely to create beneficial noise effects on residential receptors along Cardigan Street (OSV01-C03) where a reduction in outdoor noise levels of approximately 5dB is forecast due to reorientation of traffic routes in this area.

3.3.8 Changes in road traffic due to the revised scheme, are likely to cause permanent adverse noise effects on residential receptors along the following local roads where an overall increase in outdoor noise levels of around 10dB is forecast[4]:

- Cobourg Street (OSV01-C04); and
- Euston Street between Stephenson Way and Cobourg Street (OSV01-C04).

3.3.9 The changes in noise levels resulting from these changes in road traffic are likely to affect the acoustic character of the area, such that there is a perceived change in the quality of life. These effects are considered significant when assessed on a community basis taking account of the local context.

3.3.10 Changes in road traffic due to the revised scheme are likely to cause permanent beneficial noise effects on residential receptors along Drummond Street and the section of North Gower Street between Euston Street and Drummond Street. At these properties the road closures will result in a reduction of outdoor noise levels of approximately 3dB in the vicinity of dwellings located immediately adjacent to this road due to rerouting of traffic in this area. Considering, the magnitude of the impact, the baseline noise levels and the contribution to the baseline sound levels from other sources this effect is not considered to be significant.

Non-residential receptors: direct effects

3.3.1 No change from the main ES.

Non-residential receptors: indirect effects

3.3.2 In addition to residential receptors on Cobourg Street and Euston Street between Stephenson Way and Cobourg Street, an effect is identified at the office on Cobourg Street, including the Society of College National and University libraries. Considering the building uses, the magnitude of the impact, the baseline noise levels and the

4 The increase in traffic noise on this road is around 12dB, but the sound level at the adjacent dwellings is not currently dominated by the traffic flow on this road.

contribution to the baseline sound levels from other sources the effect on these non-residential properties is not considered to be significant.

Cumulative effects

3.3.3 No change from the main ES.

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