



High Speed Rail (West Midlands - Crewe)

Supplementary Environmental Statement and
Additional Provision Environmental Statement

Volume 5: Technical appendices

Transport assessment addendum (TR-001-000)



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Department for Transport

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1 Introduction

1.1 Structure of the transport assessment addendum

- 1.1.1 This document is an addendum, which forms part of Volume 5 of the Supplementary Environmental Statement (SES) and Additional Provision Environmental Statement (AP ES).
- 1.1.2 This addendum provides an update to the Transport Assessment (TA) presented in the High Speed Rail (West Midlands - Crewe) Environmental Statement (ES)¹ published in July 2017 (the main ES), as a result of SES changes and AP amendments, assessed as part of the SES and AP ES. This update should be read in conjunction with main ES Volume 5: Appendix TR-001-000 (the main TA).
- 1.1.3 This addendum covers the following community areas (CAs) as well as route-wide and off-route assessment:
- CA1 Fradley to Colton;
 - CA2: Colton to Yarlet;
 - CA3: Stone and Swynnerton;
 - CA4: Whitmore Heath to Madeley; and
 - CA5: South Cheshire.

1.2 Scope and methodology

- 1.2.1 The assessment methodology is described in Section 3 of the main TA. It should be noted that where text, tables or figures are not discussed, they are unchanged from the main TA. Where not specifically stated, all paragraph, table and figure references are references to the main TA.
- 1.2.2 In this report the scheme is referred to as the AP revised scheme, which is the original scheme (i.e. the Bill scheme submitted to Parliament in July 2017, which was assessed in the main ES) as amended by the SES changes and amendments.

¹ HS2 Ltd (2017), *High Speed Rail (West Midlands-Crewe) Environmental Statement*, <https://www.gov.uk/government/collections/hs2-phase-2a-environmental-statement>.

2 CA1 Fradley to Colton

2.1 SES changes and amendments

2.1.1 The original scheme is described in Section 6 of the main TA.

2.1.2 The SES changes and amendments relevant to traffic and transport in the Fradley to Colton area are listed as follows:

- SES-001-001: Provision of a new railway systems compound at Stockwell Heath cutting satellite compound. The Bill provides for land to be acquired temporarily for establishment of the Stockwell Heath cutting satellite for civil engineering works. This SES change provides for a new railway systems compound to be provided within the footprint of the Stockwell Heath cutting satellite compound on completion of the civil engineering works;
- Changes to a railway systems compound: Since the submission of the Bill further information relating to the construction methodology of the installation of a slab track formation and hydraulically bound layer has meant that there is a need to change the operational characteristics of one railway systems compound in the Fradley to Colton area. The change to this compound relates to: change to the operational period (duration and start/end date); change in the number of railway system workers (peak and/or average); and change in railway systems construction traffic numbers (HGV and cars/LGV) or duration of traffic. Whilst the changes to the construction methodology of the installation of a slab track formation and hydraulically bound layer have the potential to increase the number of railway systems HGV movements these are generally later in the construction programme than civil engineering HGV movements. Any increase in traffic due to these changes will generally be relatively small in comparison to the peak level of traffic generated by the civil engineering works. As there is no increase for one compound and only a small increase in peak traffic levels for the other compound in this area, it is not expected that there will be any materially different traffic impacts on the road network compared to those reported in the main TA;
- AP-001-003: Additional land permanently required for a new site haul route and HS2 maintenance access route from Pipe Lane and modifications to existing highways. The modifications include the provision of a new permanent site haul route and HS2 maintenance access route, approximately 470m in length, from Pipe Lane towards the Pipe Ridware embankment. During construction, this will be used for construction traffic, and upon completion it will be retained to provide maintenance access, avoiding Pipe Ridware. Construction works will also include the widening of Common Lane and a section of Pipe Lane. Approximately 4km of the site haul route, between Common Lane and the B5014 Uttoxeter Road (near Blithbury) will also be upgraded to accommodate construction traffic. The temporary modifications along the B5014 Ridware Road/Uttoxeter Road proposed in the hybrid Bill, which included the provision of six passing bays along Common Lane and B5014 Ridware Road/Uttoxeter Road and the provision of temporary control

points on the north-western and eastern approaches to Hill Ridware are no longer required and are removed; and

- Corrections to the main ES: Corrections to four railway systems compounds although there is no material increase in traffic levels compared to those reported in the main TA.

2.2 Existing baseline

2.2.1 Baseline conditions are described in Section 5.3 of the main TA.

2.2.2 Common Lane between the B5014 Uttoxeter Road and Pipe Lane will be affected by the amendment (AP-001-003) as a result of the provision of a new site haul route and HS2 maintenance access route. Therefore, baseline traffic flows and junction performance at both junctions are reported in this addendum.

Baseline traffic flows

2.2.3 Table 3 of the main TA provided baseline traffic flows for local roads in the area. There is one addition to Table 3, Common Lane between the B5014 Uttoxeter Road and Pipe Lane.

Table 3: Fradley to Colton strategic and primary road network 2016 baseline flows (vehicles)

Location	Direction ²	2016 baseline AM peak (08:00 - 09:00)		2016 baseline PM peak (17:00 - 18:00)		2016 AADT ³	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Common Lane (between B5014 Uttoxeter Road and Pipe Lane)	NB	15	1	21	1	210	15
	SB	30	1	18	1	274	15

Junction operation

B5014 Uttoxeter Road/Common Lane

2.2.4 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The existing operation of the junction has been assessed for the AM and PM peak hours as shown in Table 34.1.

² NB = northbound; SB = southbound

³ AADT – Annual Average Daily Traffic represents the average daily traffic flow on the link

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Table 34.1: 2016 baseline performance at B5014 Uttoxeter Road/Common Lane junction

Approach	Flow, PCU ⁴ /hr	RFC ⁵	Queue, PCU
	2016 AM (08:00 - 09:00) baseline results		
Common Lane (Left+Right)	30	0.05	0
B5014 Uttoxeter Road (S) (Ahead+Right)	22	0.04	0
B5014 Uttoxeter Road (S) (Ahead)	132	-	-
B5014 Uttoxeter Road (N) (Left)	0	-	-
B5014 Uttoxeter Road (N) (Ahead)	215	-	-
	2016 PM (17:00 - 18:00) baseline results		
Common Lane (Left +Right)	20	0.03	0
B5014 Uttoxeter Road (S) (Ahead+Right)	26	0.04	0.1
B5014 Uttoxeter Road (S) (Ahead)	162	-	-
B5014 Uttoxeter Road (N) (Left)	3	-	-
B5014 Uttoxeter Road (N) (Ahead)	84	-	-

2.2.5 The junction traffic model shows that this junction operates well within capacity in the AM and PM peak hours with minimal queuing on all approaches.

Common Lane/Pipe Lane

2.2.6 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The existing operation of the junction has been assessed for the AM and PM peak hours as shown in Table 34.2.

⁴ PCU – Passenger Car Unit, a measure used to represent mixed traffic in a standard format based on a car as the common unit

⁵ RFC – Ratio of Flow to Capacity, a measure of the level of service at non-signalised traffic junctions

Table 34.2: 2016 baseline performance at Common Lane/Pipe Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2016 AM (08:00 - 09:00) baseline results		
Pipe Lane (W) (Ahead+Right)	15	0.03	0
Pipe Lane (E) (Ahead+Left)	2	0	0
Pipe Lane (E) (Left)	22	-	-
Common Lane (Left)	5	-	-
Common Lane (Ahead)	11	-	-
2016 PM (17:00 - 18:00) baseline results			
Pipe Lane (W) (Ahead+Right)	5	0.01	0
Pipe Lane (E) (Ahead+Left)	5	0.01	0
Pipe Lane (E) (Left)	16	-	-
Common Lane (Left)	0	-	-
Common Lane (Ahead)	22	-	-

2.2.7 The junction traffic model shows that this junction operates well within capacity in the AM and PM peak hours with minimal queuing on all approaches.

2.3 Assessment methodology

2.3.1 The assessment methodology is described in Section 3 of the main TA with specific details and exceptions outlined in Section 7.2 of the main TA. This section of the TA is unchanged.

2.3.2 The construction assessment considers the traffic and transport impacts in the peak month of construction activity at each location, based on the proposed phasing of construction works. The assessment also includes cumulative impacts arising from construction in the adjoining community areas as well as movements through the area.

2.4 Future baseline

2.4.1 Future baseline traffic and transport conditions are described in Section 7.2 of the main TA.

2.4.2 Table 105 in the main TA summarises the 2023, 2027 and 2041 AM (08:00 - 09:00) and PM (17:00 - 18:00) peak future baseline traffic flows for local roads, in comparison to the 2016 baseline flows, where it is expected that there is the potential for a substantial impact either during construction or the operation of the original scheme. There is one addition to Table 105, Common Lane between the B5014 Uttoxeter Road and Pipe Lane.

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Table 105: Strategic and primary road network AM peak hour (08.00 – 09.00) and PM peak hour (17.00 – 18.00) future baseline traffic flows

Location	Direction ⁶	AM (08:00 – 09:00)								PM (17:00 – 18:00)							
		2016		2023		2027		2041		2016		2023		2027		2041	
		Veh	HGV	Veh	HGV	Veh	HGV	Veh	HGV	Veh	HGV	Veh	HGV	Veh	HGV	Veh	HGV
Common Lane (between B5014 Uttoxeter Road and Pipe Lane)	NB	15	1	17	1	18	1	20	1	21	1	24	1	25	1	28	1
	SB	30	1	33	1	34	1	38	1	18	1	20	1	21	1	24	1

Junction operation – future baseline

B5014 Uttoxeter Road/Common Lane

- 2.4.3 The future baseline performance of this junction and the results for the AM and PM peak hours are shown in Table 139.1. As the junction is not affected by the operation of the AP revised scheme, future baseline results are presented for 2023 only (with and without HS2 Phase One construction traffic).

⁶ NB = northbound; SB = southbound

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Table 139.1: Future baseline performance B5014 Uttoxeter Road/Common Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2016 AM			2023 AM			2023 future baseline with Phase One - AM		
Common Lane (Left+Right)	30	0.05	0	34	0.06	0	69	0.13	0
B5014 Uttoxeter Road (S) (Ahead+Right)	22	0.04	0	25	0.04	0	71	0.12	0
B5014 Uttoxeter Road (S) (Ahead)	132	-	-	148	-	-	139	-	-
B5014 Uttoxeter Road (N) (Left)	0	-	-	0	-	-	0	-	-
B5014 Uttoxeter Road (N) (Ahead)	215	-	-	242	-	-	244	-	-
	2016 PM			2023 PM			2023 future baseline with Phase One - PM		
Common Lane (Left+Right)	20	0.03	0	22	0.04	0	51	0.09	0
B5014 Uttoxeter Road (S) (Ahead+Right)	26	0.04	0.1	31	0.05	0	69	0.11	0
B5014 Uttoxeter Road (S) (Ahead)	162	-	-	181	-	-	174	-	-
B5014 Uttoxeter Road (N) (Left)	3	-	-	3	-	-	3	-	-
B5014 Uttoxeter Road (N) (Ahead)	84	-	-	94	-	-	98	-	-

2.4.4 The junction traffic model shows that this junction operates within capacity in the AM and PM peak hours with minimal queuing on all approaches.

Common Lane/Pipe Lane

2.4.5 The future baseline performance of this junction and the results for the AM and PM peak hours are shown in Table 139.2 of the main TA. As the junction is not affected by the operation of the AP revised scheme, future baseline results are presented for 2023 only (with and without HS2 Phase One construction traffic).

Table 139.2: Future baseline performance Common Lane/Pipe Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2016 AM			2023 AM			2023 future baseline with Phase One - AM		
Pipe Lane (W) (Ahead+Right)	15	0.03	0	17	0.03	0	17	0.03	0
Pipe Lane (E) (Ahead+Left)	2	0	0	2	0	0	2	0.00	0
Pipe Lane (E) (Left)	22	-	-	25	-	-	60	-	-
Common Lane (Left)	5	-	-	6	-	-	6	-	-
Common Lane (Ahead)	11	-	-	12	-	-	48	-	-
	2016 PM			2023 PM			2023 future baseline with Phase One - PM		
Pipe Lane (W) (Ahead+Right)	5	0.01	0	6	0	0.01	14	0.03	0
Pipe Lane (E) (Ahead+Left)	5	0.01	0	6	0	0.01	6	0.01	0
Pipe Lane (E) (Left)	16	-	-	18	-	-	46	-	-
Common Lane (Left)	0	-	-	0	-	-	0	-	-
Common Lane (Ahead)	22	-	-	25	-	-	53	-	-

2.5 Construction description

2.5.1 Changes reported in this section include changes in the routing of construction traffic associated with the provision of the new site haul route and HS2 maintenance access route from Pipe Lane towards the Pipe Ridware embankment and changes and corrections associated with railway systems compounds. These are set out in replacement and amendments to Tables 140, 141 and 142 below.

Compounds and construction sites

2.5.2 Table 140 shows the assumed workforce at each of the construction sites. Table 140 fully replaces Table 140 in the main TA to show specifically the use of compounds by railway systems workers.

2.5.3 Table 140 includes railway systems compounds at Pyford North embankment satellite compound, Pipe Ridware embankment satellite compound, Blithbury crossovers satellite compound, Newlands Lane auto-transformer feeder station satellite compound and Stockwell Heath cutting satellite compound.

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Table 140: Assumed workforce at construction sites in the Fradley to Colton area

Compound type	Location	Total number of workers		Number of workers (peak)	Number of staff
		Average	Peak		
Satellite	Pyford Brook viaduct satellite compound	8	12	8	2
Satellite	Pyford North embankment satellite compound (including Bourne Brook auto-transformer station satellite compound), civil engineering works	20	30	20	5
	Pyford North embankment satellite compound (including Bourne Brook auto-transformer station satellite compound), railway system works	32	53	46	7
Satellite	Bourne embankment satellite compound	32	48	32	8
Satellite	River Trent viaduct satellite compound	44	66	44	11
Satellite	Pipe Ridware embankment satellite compound (including Pipe Ridware auto-transformer station compound), civil engineering works	24	36	24	6
	Pipe Ridware embankment satellite compound (including Pipe Ridware auto-transformer station compound), railway systems works	26	38	37	4
Satellite	Blithbury crossovers satellite compound	8	13	12	1
Satellite	Blithbury Central cutting satellite compound	24	36	24	6
Satellite	Blithbury North cutting satellite compound	56	84	56	14
Satellite	Newlands Lane auto-transformer feeder station satellite compound	39	73	66	16
Satellite	Stockwell Heath cutting satellite compound, civil engineering works	20	30	20	5
	Stockwell Heath cutting satellite compound, railway systems works	23	40	34	6
Satellite	Moreton Brook satellite compound	4	6	4	1

2.5.4 Table 141 shows the typical vehicle trip generation for construction compounds in this area. Table 141 in the main TA is partially amended as follows:

- at the Pyford North embankment satellite compound for the railway system works, the indicative start date will be December 2024 (not October 2024); the duration of the busy period, also referred to as the estimated duration with busy vehicle movements, will be reduced to four months (from 10 months); and the average daily combined two-way vehicle trips during the busy period

and within the peak month of activity will be reduced to 41 - 58 for cars/Light Goods Vehicles (LGVs) (from 57 - 84) and increased to 82 - 84 for Heavy Goods Vehicles (HGVs) (from up to 10);

- at the Pipe Ridware embankment satellite compound for the rail system works the indicative start date will be December 2024 (not October 2024); the estimated duration of use will be reduced to one year and one month (from one year and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 – 41 for cars/LGV (from 57 – 84) for the rail system works. The duration of the busy period is unchanged;
- at the Blithbury crossovers satellite compound, the indicative start date will be May 2026 (not April 2025); the estimated duration of use will be reduced to three months (from nine months); and the average daily combined two-way vehicles trips during the busy period and within the peak month of activity will be reduced to less than 10 for cars/LGV (from 18 - 30). The duration of the busy period is unchanged;
- at the Newlands Lane auto-transformer feeder station satellite compound the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 50 - 73 for cars/LGV (from 85 - 158). The duration of the busy period is unchanged; and
- at the Stockwell Heath cutting satellite compound, in addition to the civil engineering works, railway systems works will also be carried out. There is no change to the civil engineering works, which will have an indicative completion date of April 2025. The railway systems work will have an indicative start date of March 2025; have an estimated duration of one year with a busy period of four months; and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be 26 - 38 for cars/LGV and 158 - 160 for HGVs.

Table 14.1: Typical vehicle trip generation for construction site compounds in the Fradley to Colton area (partial amendment)

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration with busy vehicle movements (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars/LGV	HGV
Satellite	Pyford North embankment satellite compound	Common Lane (South) for site set up and servicing, followed by site haul route linking to the A515 Lichfield Road	January 2021	Civil engineering – 3 years and 9 months	3	40 - 55	99 - 111
			December 2024	Railway system works – 1 year and 6 months	4	41 - 58	82 - 84

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration with busy vehicle movements (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars/ LGV	HGV
Satellite	Pipe Ridware embankment satellite compound	Access via diverted Pipe Lane for initial site set up and servicing, followed by site haul route linking to the B5014 Uttoxeter Road, the A513 Rugeley Road and on to the A515 Lichfield Road	January 2021	Civil engineering - 3 years and 9 months	3	48 - 66	96 - 122
			December 2024	Railway system works - 1 year and 1 month	10	29 - 41	up to 10
Satellite	Blithbury crossovers satellite compound	Pipe Lane and site haul route to the B5014 Uttoxeter Road, the A513 Rugeley Road and on to the A515 Lichfield Road	May 2026	3 months	3	up to 10	up to 10
Satellite	Newlands Lane auto-transformer feeder station satellite compound	Newlands Lane to Hollow Lane, Blithbury Road, the B5014 Uttoxeter Road, the A513 Rugeley Road and on to the A515 Lichfield Road	January 2024	2 years	18	50 - 73	up to 10
Satellite	Stockwell Heath cutting satellite compound	B5013 Uttoxeter Road and on to the A51 Stafford Road	January 2021	Civil engineering - 4 years and 3 months	4	40 - 55	66 - 87
			March 2025	Rail system works - 1 year	4	26 - 38	158 - 160

Construction HGV routes

2.5.5 Table 142 summarises the peak daily construction traffic flows in this area. Table 142 in the main TA is partially amended as a result of the Hill Ridware construction route and the removal of construction HGV traffic from the settlements of Hill Ridware and Pipe Ridware. In addition to amendments to the B5014 Rake End Lane, B5014 Uttoxeter Road, Hollow Lane and Blithbury Road, there is one addition, Common Lane between the B5014 Uttoxeter Road and Pipe Lane. Common Lane is upgraded and will be used as a route for construction traffic.

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Table 142: CA1 peak daily construction traffic flow (partial amendment)

Location	Direction ⁷	Daily peak HGV, vehicles	Daily peak all vehicles
B5014 Rake End Lane (between School Lane and Stoneyford Lane)	NB	0	54
	SB	0	54
B5014 Uttoxeter Road (between Blithbury Road and the AP revised scheme)	NB	0	54
	SB	0	54
B5014 Uttoxeter Road (between Common Lane and School Lane)	WB	0	54
	EB	0	54
B5014 Uttoxeter Road (between Stoneyford Lane and the AP revised scheme)	NB	0	54
	SB	0	54
Hollow Lane (between High Street and Blithbury Road)	EB	0	362
	WB	0	362
Blithbury Road (between Hadley Gate and the AP revised scheme)	WB	0	317
	EB	0	317
Blithbury Road (between Stoneyford Lane and Blithbury Road)	WB	0	197
	EB	0	197
Blithbury Road (between Uttoxeter Road and the AP revised scheme)	WB	0	317
	EB	0	317
Pipe Lane (north of Common Lane)	WB	0	104
	EB	0	104
Common Lane (between the B5014 Uttoxeter Road and Pipe Lane)	NB	122	218
	SB	122	218

⁷ NB = northbound; SB = southbound; EB = eastbound; and WB = westbound

2.6 Assessment of construction impacts

Strategic and local road network traffic flows

2.6.1 Tables 144 and 145 set out the 2023 traffic flows on highway links affected by construction traffic for the AM and PM peak hour respectively. Tables 144 and 145 in the main TA are partially amended as a result of the Hill Ridware construction route.

2.6.2 The permanent widening of Common Lane and a section of Pipe Lane and the provision of a new site haul route from Pipe Lane towards the Pipe Ridware embankment will enable construction traffic to access the works to the south of Hill Ridware. Construction HGV traffic for compounds to the north of Hill Ridware will then use site haul routes to access these works. The amendment will remove the need for construction HGV traffic to travel through Hill Ridware and Pipe Ridware to access the construction compounds. The amendment will also remove the need for traffic modifications to the B5014 Ridware Road / Uttoxeter Road proposed in the original scheme. These changes are reported in Section 7 of this addendum.

Table 144: 2023 future and with the AP revised scheme construction traffic (vehicles) – AM peak hour (08:00 – 09:00) (partial amendment)

Location	Direction ⁸	2023 baseline		2023 with HS2 Phase One		2023 with HS2 Phase One plus AP revised scheme		AP revised scheme % change		With HS2 Phase One & AP revised scheme % change from 2023 baseline	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
B5014 Rake End Lane (between School Lane and Stoneyford Lane)	NB	117	6	121	6	145	6	23.2%	0.0%	19.8%	0.0%
	SB	123	6	126	6	150	6	22.1%	0.0%	19.0%	0.0%
B5014 Uttoxeter Road (between Blithbury Road and the AP revised scheme)	NB	79	4	82	4	106	4	34.5%	0.0%	29.1%	0.0%
	SB	99	3	102	3	126	3	27.6%	0.0%	23.5%	0.0%
B5014 Uttoxeter Road (between Common Lane and School Lane)	WB	128	6	135	6	155	6	21.2%	0.0%	15.3%	0.0%
	EB	212	5	218	5	239	5	12.8%	0.0%	9.4%	0.0%
B5014 Uttoxeter Road (between Stoneyford Lane and the AP revised scheme)	NB	79	4	82	4	106	4	34.5%	0.0%	29.1%	0.0%
	SB	99	3	102	3	126	3	27.6%	0.0%	23.5%	0.0%
Hollow Lane (between High Street and Blithbury Road)	EB	23	1	99	1	204	1	770.3%	0.0%	106.7%	0.0%
	WB	17	1	92	1	198	1	1089.0%	0.0%	114.7%	0.0%

⁸ NB = northbound; SB = southbound; EB = eastbound; WB = westbound

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Location	Direction ⁸	2023 baseline		2023 with HS2 Phase One		2023 with HS2 Phase One plus AP revised scheme		AP revised scheme % change		With HS2 Phase One & AP revised scheme % change from 2023 baseline	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
Blithbury Road (between Hadley Gate and the AP revised scheme)	WB	45	2	83	2	203	2	353.4%	0.0%	146.3%	0.0%
	EB	75	2	112	2	233	2	212.6%	0.0%	107.6%	0.0%
Blithbury Road (between Stoneyford Lane and Blithbury Road)	WB	88	3	125	3	186	3	112.5%	0.0%	48.6%	0.0%
	EB	111	2	148	2	209	2	89.0%	0.0%	41.0%	0.0%
Blithbury Road (between Uttoxeter Road and the AP revised scheme)	WB	45	2	83	2	203	2	353.4%	0.0%	146.3%	0.0%
	EB	75	2	112	2	233	2	212.6%	0.0%	107.6%	0.0%
Pipe Lane (north of Common Lane)	WB	28	1	63	1	80	1	185.0%	0.0%	26.0%	0.0%
	EB	16	1	51	1	67	1	332.2%	0.0%	32.4%	0.0%
Common Lane (between B5014 Uttoxeter Road and Pipe Lane)	NB	17	1	17	1	77	13	355.6%	1109.1%	355.6%	1109.1%
	SB	33	1	68	1	93	13	183.9%	1109.1%	36.3%	1109.1%

Table 145: 2023 future and with the AP revised scheme construction traffic (vehicles) – PM peak hour (17:00 – 18:00) (partial amendment)

Location	Direction ⁹	2023 baseline		2023 with HS2 Phase One		2023 with HS2 Phase One plus AP revised scheme		AP revised scheme % change		With HS2 Phase One & AP revised scheme % change from 2023 baseline	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
B5014 Rake End Lane (between School Lane and Stoneyford Lane)	NB	105	2	105	2	132	2	25.9%	0.0%	25.9%	0.0%
	SB	102	2	102	2	129	2	26.7%	0.0%	26.7%	0.0%
B5014 Uttoxeter Road (between Blithbury Road and the AP revised scheme)	NB	73	1	73	1	101	1	37.0%	0.0%	37.0%	0.0%
	SB	64	1	64	1	91	1	42.5%	0.0%	42.5%	0.0%

⁹ NB = northbound; SB = southbound; EB = eastbound; WB = westbound

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Location	Direction ⁹	2023 baseline		2023 with HS2 Phase One		2023 with HS2 Phase One plus AP revised scheme		AP revised scheme % change		With HS2 Phase One & AP revised scheme % change from 2023 baseline	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
B5014 Uttoxeter Road (between Common Lane and School Lane)	WB	176	2	176	2	203	2	15.5%	0.0%	15.5%	0.0%
	EB	103	2	103	2	131	2	26.3%	0.0%	26.3%	0.0%
B5014 Uttoxeter Road (between Stoneyford Lane and the AP revised scheme)	NB	73	1	73	1	101	1	37.0%	0.0%	37.0%	0.0%
	SB	64	1	64	1	91	1	42.5%	0.0%	42.5%	0.0%
Hollow Lane (between High Street and Blithbury Road)	EB	21	0	21	0	202	0	853.3%	0.0%	853.3%	0.0%
	WB	25	0	25	0	206	0	719.9%	0.0%	719.9%	0.0%
Blithbury Road (between Hadley Gate and the AP revised scheme)	WB	52	1	56	1	210	1	305.4%	0.0%	274.2%	0.0%
	EB	43	1	47	1	201	1	370.1%	0.0%	326.9%	0.0%
Blithbury Road (between Stoneyford Lane and Blithbury Road)	WB	82	1	86	1	180	1	120.6%	0.0%	109.5%	0.0%
	EB	88	1	92	1	186	1	112.3%	0.0%	102.4%	0.0%
Blithbury Road (between Uttoxeter Road and the AP revised scheme)	WB	52	1	56	1	210	1	305.4%	0.0%	274.2%	0.0%
	EB	43	1	47	1	201	1	370.1%	0.0%	326.9%	0.0%
Pipe Lane (north of Common Lane)	WB	20	0	24	0	72	0	258.9%	0.0%	195.1%	0.0%
	EB	24	1	29	1	76	1	214.4%	0.0%	166.7%	0.0%
Common Lane (between B5014 Uttoxeter Road and Pipe Lane)	NB	24	1	24	1	84	13	254.0%	1109.0%	254.0%	1109.0%
	SB	20	1	25	1	80	13	296.3%	1109.0%	226.5%	1109.0%

Junction performance 2023

2.6.3 The provision of the new site haul route and HS2 maintenance access route from Pipe Lane towards the Pipe Ridware embankment will result in an increase in construction traffic at the B5014 Uttoxeter Road/Common Lane junction and the Common Lane/Pipe Lane junction.

B5014 Uttoxeter Road/Common Lane

2.6.4 Table 175.1 summarises the results of the changes to the performance of the junction as a result of the AP revised scheme in 2023.

Table 175.1: B5014 Ridware Road/Common Lane junction 2023 future baseline and with the AP revised scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
08:00 – 09:00	2023 future baseline			2023 future baseline with HS2 Phase One			2023 future baseline with HS2 Phase One and the AP revised scheme		
Common Lane (Left+Right)	34	0.06	0	69	0.13	0	106	0.2	0
B5014 Uttoxeter Road (S) (Ahead+Right)	25	0.04	0	71	0.12	0	125	0.21	0
B5014 Uttoxeter Road (S) (Ahead)	148	-	-	139	-	-	147	-	-
B5014 Uttoxeter Road (N) (Left)	0	-	-	0	-	-	0	-	-
B5014 Uttoxeter Road (N) (Ahead)	242	-	-	244	-	-	269	-	-
17:00 – 18:00	2023 future baseline			2023 future baseline with HS2 Phase One			2023 future baseline with HS2 Phase One and the AP revised scheme		
Common Lane (Left+Right)	22	0.04	0	51	0.09	0	95	0.17	0
B5014 Uttoxeter Road (S) (Ahead+Right)	31	0.05	0	69	0.11	0	135	0.2	0
B5014 Uttoxeter Road (S) (Ahead)	181	-	-	174	-	-	176	-	-
B5014 Uttoxeter Road (N) (Left)	3	-	-	3	-	-	3	-	-
B5014 Uttoxeter Road (N) (Ahead)	94	-	-	98	-	-	122	-	-

2.6.5 The results show that the junction operates within capacity in 2023 with the addition of both the HS2 Phase One and the AP revised scheme construction traffic, without any substantial increases in queuing or Ratio of Flow to Capacity (RFC) from the future baseline including HS2 Phase One or the future baseline excluding HS2 Phase One.

Common Lane/Pipe Lane

2.6.6 Table 175.2 summarises the results of the changes to the performance of the junction as a result of the AP revised scheme in 2023. The existing junction will be converted from a three-armed priority junction to a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. This new junction will facilitate the construction of the new site haul route and maintenance access route.

Table 175.2: Common Lane/Pipe Lane junction 2023 future baseline and with the AP revised scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
08:00 – 09:00	2023 future baseline			2023 future baseline with HS2 Phase One			2023 future baseline with HS2 Phase One and AP revised scheme		
Pipe Lane (W) (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	17	0.04	0
Common Lane (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	63	0.11	0
Common Lane (Left)	N/A	N/A	N/A	N/A	N/A	N/A	4	-	-
Common Lane (Right)	N/A	N/A	N/A	N/A	N/A	N/A	22	-	-
Pipe Lane (E) (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	74	0.13	0
Temporary Road (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Temporary Road (Left)	N/A	N/A	N/A	N/A	N/A	N/A	0	-	-
Temporary Road (Right)	N/A	N/A	N/A	N/A	N/A	N/A	24	-	-
17:00 – 18:00	2023 future baseline			2023 future baseline with HS2 Phase One			2023 future baseline with HS2 Phase One and AP revised scheme		
Pipe Lane (W) (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	5	0.01	0
Common Lane (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	75	0.13	0
Common Lane (Left)	N/A	N/A	N/A	N/A	N/A	N/A	0	-	-
Common Lane (Right)	N/A	N/A	N/A	N/A	N/A	N/A	21	-	-
Pipe Lane (E) (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	71	0.13	0

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
Temporary Road (Ahead+Left+Right)	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0
Temporary Road (Left)	N/A	N/A	N/A	N/A	N/A	N/A	0	-	-
Temporary Road (Right)	N/A	N/A	N/A	N/A	N/A	N/A	24	-	-

2.6.7 The results show that the junction operates within capacity in 2023. Future baseline 2023 results with and without HS2 Phase One are not reported in Table 175.2 because the layout has changed but they are reported in Table 139.2.

2.7 Operation description and assessment of operation impacts

2.7.1 Operational impacts are described in Section 7.5 of the main TA. This section of the main TA is unchanged.

3 CA2 Colwich to Yarlet

3.1 SES changes and amendments

3.1.1 The original scheme is described in Section 6 of the main TA.

3.1.2 The SES changes and amendments relevant to traffic and transport in the Colwich to Yarlet area are as follows:

- Changes to a railway systems compound: Since the submission of the Bill further information relating to the construction methodology of the installation of a slab track formation and hydraulically bound layer has meant that there is a need to change the operational characteristics of one railway systems compound in the Colwich to Yarlet area. The change to this compound relates to: change to the operational period (duration and start/end date); change in the number of railway system workers (peak and/or average); and change in railway systems construction traffic numbers (HGV and cars/LGV) or duration of traffic. Whilst the changes to the construction methodology of the installation of a slab track formation and hydraulically bound layer have the potential to increase the number of railway systems HGV movements these are generally later in the construction programme than civil engineering HGV movements. Any increase in traffic due to these changes will generally be relatively small in comparison to the peak level of traffic generated by the civil engineering works. As there is only a small increase in peak traffic levels, it is not expected that there will be any materially different traffic impacts on the road network compared to those reported in the main TA; and
- Corrections to the main ES: The temporary diversion of Whitgreave Footpath 2 should have been reported in the main TA and was not included. This is corrected in this report. There are corrections to three railway systems compounds although there is no material increase in traffic levels compared to those reported in the main TA.

3.2 Existing baseline

3.2.1 Baseline conditions are described in Section 5.4 of the main TA. Paragraph 5.4.95 of the main TA identified public rights of way (PRoW) in close proximity to the original scheme. Whitgreave Footpath 2 between Green Lane and A34 Stone Road is added to the list.

3.3 Assessment methodology

3.3.1 The assessment methodology is described in Section 3 of the main TA with specific details and exceptions outlined in Section 8.2 of the main TA. This section of the main TA is unchanged.

3.3.2 The construction assessment considers the traffic and transport impacts in the peak month of construction activity at each location, based on the proposed phasing of works. The assessment also includes cumulative impacts arising from construction in the adjoining community areas as well as movements through the area.

3.4 Future baseline

3.4.1 Future baseline traffic and transport conditions are described in Section 8.2 of the main TA. This section of the main TA is unchanged.

3.5 Construction description

3.5.1 Changes reported in this section are a result of changes and corrections associated with railway systems compounds. These are set out in replacement or amendments to Tables 213, 214 and 215 below.

Compounds and construction sites

3.5.2 Table 213 shows the assumed workforce at each of the construction sites. Table 213 is fully replaced to show specifically the use of compounds by railway systems workers.

3.5.3 Table 213 includes railway systems compounds at Moreton auto-transformer station satellite compound, Trent North embankment satellite compound, Sandon Road auto transformer station satellite compound and Yarlet express feeder auto-transformer station satellite compound.

Table 213: Assumed workforce at construction sites in Colwich to Yarlet area, community area 2

Compound type	Location	Total number of workers		Number of workers (peak)	Number of staff
		Average	Peak		
Satellite	Moreton auto-transformer station satellite compound	26	38	37	4
Main	Trent South embankment main compound	200	300	200	50
Satellite	Trent North embankment satellite compound, civil engineering works	20	30	20	5
	Trent North embankment satellite compound, railway systems works	26	38	37	4
Satellite	Brancote South cutting satellite compound	20	30	20	5
Satellite	Hopton South cutting satellite compound	28	42	28	7
Satellite	Hopton North cutting satellite compound	24	36	24	6
Satellite	Sandon Road auto-transformer station satellite compound	43	69	59	10
Satellite	Marston South embankment satellite compound	16	24	16	4
Satellite	Marston North embankment satellite compound	8	12	8	2
Satellite	Yarlet South cutting satellite compound	16	24	16	4
Satellite	Yarlet express feeder auto-transformer station satellite compound	26	38	37	4

3.5.4

Table 214 shows the typical vehicle trip generation for construction compounds in this area. Table 214 in the main TA is partially amended as follows:

- at the Moreton auto transformer station satellite compound, the indicative start date will be December 2024 (not October 2024); the estimated duration of use will be reduced to one year and one month (from one year and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 - 41 for cars/LGV (from 57 - 84). The duration of the busy period is unchanged;
- at the Trent North embankment satellite compound, the indicative start date will be December 2024 (not October 2024); the estimated duration of use will be reduced to one year and one month (from one year and three months); and average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 - 41 for cars/LGV (from 57 - 84). The duration of the busy period is unchanged;
- at the Sandon Road auto transformer station satellite compound, the indicative start date will be December 2024 (not October 2024); the estimated duration of busy period will be reduced to four months (from 10 months); and average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 55 - 76 for cars/LGV (from 57 - 84) and increased to 161 - 164 for HGVs (from up to 10); and
- at the Yarlet express feeder auto-transformer station satellite compound, the indicative start date will be December 2024 (not October 2024); the estimated duration of use will be reduced to one year and one month (from one year and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 - 41 for cars/LGV (from 57 - 84). The duration of the busy period is unchanged.

Table 214: Typical vehicle trip generation for construction site compounds in the Colwich to Yarlet area (partial amendment)

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years and months)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars/LGV	HGV
Satellite	Moreton auto-transformer station satellite compound	Bishton Lane and on to the A51 Wolseley Bridge	December 2024	1 year and 1 month	10	29 - 41	up to 10
Satellite	Trent North embankment satellite compound	Great Haywood Road to Tixall Road, Blackheath Lane and on to the A518 Weston Road	January 2021	Civil engineering - 3 years and 9 months	2	40 - 55	98 - 122
			December 2024	Railway system works - 1 year and 1 month	10	29 - 41	up to 10

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years and months)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars/LGV	HGV
Satellite	Sandon Road auto-transformer station satellite compound	Off Mount Edge diversion to the B5066 Sandon Road and on to the A513 Beaconside	December 2024	1 year and 3 months	4	55 - 76	161 - 164
Satellite	Yarlet express feeder auto-transformer station satellite compound	A34 Stone Road	December 2024	1 year and 1 month	10	29 - 41	up to 10

Construction HGV routes

3.5.5 Table 215 summarises the peak daily construction traffic flows in this area. Table 215 in the main TA is partially amended as a result of changes to the construction assumptions associated with railway systems works being managed from Sandon Road auto-transformer station satellite compound, outlined in Table 214. This will result in an increase in the peak traffic flow and extend the busy peak on Sandon Road.

Table 215: CA2 peak daily construction traffic flow (partial amendment)

Location	Direction	Daily peak HGV, vehicles	Daily peak all vehicles
B5066 Sandon Road (between Beaconside and Hopton Lane)	NB	82	175
	SB	82	175
B5066 Sandon Road (between Hopton Lane and the AP revised scheme)	NB	82	131
	SB	82	131
B5066 Sandon Road (between the AP revised scheme and Within Lane)	NB	82	131
	SB	82	131

3.6 Assessment of construction impacts

PRoW closures and diversions

- 3.6.1 Table 216 set out the temporary PRoW diversions and realignments required to accommodate the construction of the original scheme. The following is added to Table 216 to show the temporary diversion of Whitgreave Footpath 2.

Table 216: CA2 peak daily construction traffic flow

PRoW Name	Description	Change in length
Whitgreave Footpath 2	Temporary diversion of 190m of existing route for accommodation of Yarlet South cutting transfer node. On completion of construction, Whitgreave Footpath 2 will be returned to its existing alignment.	Temporary diversion is 250m longer

Strategic and local road network traffic flows

- 3.6.2 Tables 217 and 218 set out the 2023 traffic flows on highway links affected by construction traffic associated with the original scheme for the AM and PM peak hour respectively. Tables 217 and 218 in the main TA are partially amended as a result of changes to the Sandon Road auto-transformer station satellite compound described in Table 214 above. Additional information is reported in Table 217 for construction impacts on the Sandon Road between Hopton Lane and the AP revised scheme and Sandon Road between the AP revised scheme and Within Lane.

Table 217: 2023 future baseline with the AP revised scheme construction traffic (vehicles) – AM peak hour (08:00 – 09:00) (partial amendment)

Location	Direction ¹⁰	2023 baseline		2023 with AP revised scheme		AP revised scheme % change	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
B5066 Sandon Road (between Beaconside and Hopton Lane)	NB	235	14	290	22	23.2%	60.6%
	SB	531	14	586	22	10.3%	57.9%
B5066 Sandon Road (between Hopton Lane and the AP revised scheme)	NB	220	13	252	21	14.8%	64.5%
	SB	510	13	543	21	6.4%	62.0%
B5066 Sandon Road (between the AP revised scheme and Within Lane)	NB	220	13	252	21	14.8%	64.5%
	SB	510	13	543	21	6.4%	62.0%

¹⁰ NB = northbound; SB = southbound

Table 218: 2023 future baseline with the AP revised scheme construction traffic (vehicles) – PM peak hour (17:00 – 18:00) (partial amendment)

Location	Direction ¹¹	2023 baseline		2023 with AP revised scheme		AP revised scheme % change	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
B5066 Sandon Road (between Beaconside and Hopton Lane)	NB	449	5	504	13	12.2%	167.6%
	SB	192	4	247	12	28.4%	207.3%
B5066 Sandon Road (between Hopton Lane and the AP revised scheme)	NB	434	5	466	13	7.5%	175.0%
	SB	187	4	219	12	17.4%	207.3%
B5066 Sandon Road (between the AP revised scheme and Within Lane)	NB	434	5	466	13	7.5%	175.0%
	SB	187	4	219	12	17.4%	207.3%

3.6.3 The changes reported in Tables 217 and 218 do not increase construction traffic flows during the network peaks at the A513 Beaconside / B5066 Sandon Road (east) junction. Therefore, there is no additional requirement for junction modelling assessment.

Pedestrian, cyclists and equestrians

3.6.4 Table 236 of the main TA showed the locations where routes used by pedestrians, cyclists and equestrians are temporarily diverted, realigned or closed and the associated impact on users. The following is added to Table 236 to show the temporary diversion of Whitgreave Footpath 2.

Table 236: CA2 construction changes on public rights of way for non-motorised users

PRoW Name	Change in distance	Change in length
Whitgreave Footpath 2	Temporary diversion to the south is 250m longer than the existing length	45 months

3.6.5 Paragraph 8.4.81 and 8.4.82 are replaced by:

- “Within these 21 temporary diversions of PRoW and roads, the majority of routes affected experience either no change in length (in the case of the A34 Stone Road, Colwich Bridleways 23 and 35, and Hopton and Coton Bridleway 11), or changes of no more than 150m.”
- “Three routes do experience larger changes in length of diversion, of up to 800m on Colwich Footpath 26, and up to 400m on Tixall Footpath 0.1630. These are effectively diverted on to other nearby PRoW routes in order to share temporary crossing point of the construction works sites. Users of Whitgreave Footpath 2 are also diverted by up to 400m.”

¹¹ NB = northbound; SB = southbound

3.7 Operation description and assessment of operation impacts

3.7.1 Operational impacts are described in Section 8.5 of the main TA. This section of the main TA is unchanged.

4 CA3 Stone and Swynnerton

4.1 SES changes and amendments

4.1.1 The original scheme is described in Section 6 of the main TA.

4.1.2 The SES changes and amendments relevant to traffic and transport in the Stone and Swynnerton area are listed as follows:

- Changes to a railway systems compound: Since the submission of the Bill further information relating to the construction methodology of the installation of a slab track formation and hydraulically bound layer has meant that there is a need to change the operational characteristics of one railway systems compound in the Stone and Swynnerton area. The change to this compound relates to a change in the number of railway system workers (peak and/or average) and a change in railway systems construction traffic numbers (HGV and cars/LGV) or duration of traffic. Whilst the changes to the construction methodology of the installation of a slab track formation and hydraulically bound layer have the potential to increase the number of railway systems HGV movements these are generally later in the construction programme than civil engineering HGV movements. Any increase in traffic due to these changes will generally be relatively small in comparison to the peak level of traffic generated by the civil engineering works. As there is no increase in peak traffic levels, it is not expected that there will be any materially different traffic impacts on the road network compared to those reported in the main TA;
- AP-003-003 Additional land permanently required for a new junction of the A51 Bury Bank and Stone Rural Byway Open to All Traffic (BOAT) 34;
- AP-003-006 Additional land permanently required for the provision of a roundabout at the junction of the realigned Dog Lane, the A51 The Rowe, Bent Lane and the A51 through Stableford; and
- Corrections to the main ES: There are corrections to CA3 regarding HGV construction traffic volumes on the A34 Stafford Road corridor in Table 277. In addition, there is one correction to the number of workers (peak) reported at the Yarlet embankment satellite compound in Table 275. There are corrections to four railway systems compounds although there is no material increase in traffic levels compared to those reported in the main TA.

4.2 Existing baseline

4.2.1 Baseline conditions are described in Section 5.5 of the main TA. This section of the main TA is unchanged.

4.3 Assessment methodology

4.3.1 The assessment methodology is described in Section 3 of the main TA with specific details and exceptions outlined in Section 9.2 of the main TA. This section of the main TA is unchanged.

4.3.2 The construction assessment considers the traffic and transport impacts in the peak month of construction activity at each location, based on the proposed phasing of works. The assessment also includes cumulative impacts arising from construction in the adjoining community areas as well as through movements through the area.

4.4 Future baseline

4.4.1 Future baseline traffic and transport conditions are described in Section 9.2 of the main TA. This section of the main TA is unchanged.

4.5 Construction description

4.5.1 Changes reported in this section are a result of changes and corrections associated with railway systems compounds. These are set out in replacement and amendments to Tables 275, 276 and 277.

Compounds and construction sites

4.5.2 Table 275 shows the assumed workforce at each of the construction sites. Table 275 is fully replaced to show specifically the use of compounds by railway systems workers.

4.5.3 Table 275 is amended to include railway systems compounds at the Yarlet embankment satellite compound, Stone connection satellite compound, Stone railhead main compound, Swynnerton embankment satellite compound (including Swynnerton auto-transformer station compound) and Stableford auto-transformer station satellite compound.

4.5.4 Table 275 is also amended as a result of an error in reporting the number of workers (peak) at the Yarlet embankment satellite compound. In the main TA the number reported is 2814. The correct figure is 28.

Table 275: Assumed workforce at construction sites

Compound type	Location	Total number of workers		Number of workers (peak)	Number of staff
		Average	Peak		
Satellite	Yarlet embankment satellite compound, civil engineering works	28	42	28	7
	Yarlet embankment satellite compound, railway systems works	8	13	12	1
Satellite	Yarlet North cutting satellite compound	76	114	76	19
Satellite	Stone connection satellite compound	41	100	95	5
Main	Stone railhead main compound	220	312	242	50
Satellite	Yarnfield North embankment satellite compound	132	198	132	33
Satellite	M6 Meaford viaduct satellite compound	12	18	12	3
Satellite	Meaford North embankment satellite compound	36	54	36	9

Compound type	Location	Total number of workers		Number of workers (peak)	Number of staff
		Average	Peak		
Satellite	Swynnerton embankment satellite compound (including Swynnerton auto-transformer station compound), civil engineering works	12	18	12	3
	Swynnerton embankment satellite compound (including Swynnerton auto-transformer station compound), railway systems works	26	38	37	4
Main	Swynnerton North cutting main compound	200	300	200	50
Satellite	Hatton South cutting satellite compound	24	36	24	6
Satellite	Stableford auto-transformer station satellite compound	26	38	37	4

4.5.5 Table 276 shows the typical vehicle trip generation for construction site compounds in this area. Table 276 in the main TA is partially amended as follows:

- at the Yarlet embankment satellite compound for the railway systems works, the indicative start date will be May 2026 (not January 2025); the estimated duration of use will be reduced to three months (from one year and six months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be increased to 29 - 41 for cars/LGV (from 18 - 30). The duration of the busy period is unchanged;
- at the Stone connection satellite compound, the indicative start date will be September 2021 (not October 2021); the estimated duration of use will be reduced to five months (from six months); the estimated duration of the busy period will be increased to four months (from three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 68 - 80 for cars/LGV (from 94 - 222) and increased to 25 - 32 for HGVs (from up to 10);
- at the Stone railhead main compound, the estimated duration of use will be reduced to one year and 11 months (from three years and three months); the estimated duration of the busy period will be increased to six months (from five months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 211 - 263 for cars/LGV (from 258 - 840) and increased to 178 - 244 for HGVs (from 39 - 135);
- at the Swynnerton embankment satellite compound for railway system works the indicative start date will be August 2024 (not July 2024); the estimated duration of use will be reduced to one year and one month (from one year and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 - 41 for cars/LGV (from 57 - 84). The duration of the busy period is unchanged; and
- at the Stableford auto transformer station satellite compound the indicative start date will be August 2024 (not July 2024); the estimated duration of use

will be reduced to one year and one month (from one year and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 - 41 for cars/LGV (from 57 - 84). The duration of the busy period is unchanged.

Table 276: Typical vehicle trip generation for construction sites in the Stone and Swynnerton area (partial amendment)

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars / LGV	HGV
Satellite	Yarlet embankment satellite compound	Stone Rural Bridleway 0.1135 to Pirehill Road / Eccleshall Road for site set up and servicing, followed by site haul route thereafter to the A34 Stone Road	January 2021	Civil engineering - 4 years	3	56 - 77	82 - 98
			May 2026	Railway systems works – 3 months	3	29 - 41	up to 10
Satellite	Stone connection satellite compound	Via Stone railhead main compound	September 2021	5 months	4	68 - 80	25 - 32
Main	Stone railhead main compound	Yarnfield Lane and then on to the A34 The Fillybrooks, for site set up, then via the M6.	July 2024	1 year and 11 months	6	211 - 263	178 - 244
Satellite	Swynnerton embankment satellite compound	Tittensor Road to the A51 Stone Road for site set up, main access via site haul route	Civil engineering - January 2021	4 years	3	24 - 33	71 - 84
			Railway systems works - August 2024	1 year and 1 month (6 month overlap with civil engineering)	10	29 - 41	up to 10
Satellite	Stableford auto-transformer station	Bent Lane (North) then the A51 The Rowe.	August 2024	1 year 1 month	10	29 - 41	up to 10

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars / LGV	HGV
	satellite compound						

Construction HGV routes

- 4.5.6 Table 277 summarises the peak daily construction traffic flows in this area. Table 277 in the main TA is partially amended as a result of errors in reporting construction traffic volumes along the A34 corridor.
- 4.5.7 In the main TA, along the A34 Stafford Road (between Stone Bypass and Eccleshall Road) peak HGV vehicles had been reported as 18 vehicles in each direction and peak all vehicles as 248 vehicles in each direction. The correct figures are 253 HGVs in each direction and 415 all vehicles in each direction. In the main TA, along the A34 The Fillybrooks (between Eccleshall Road and Yarnfield Lane) peak HGV vehicles had been reported as 88 vehicles in each direction and peak all vehicles as 411 vehicles in each direction. The correct figures are 218 HGVs in each direction and 497 all vehicles in each direction.

Table 277: CA3 peak daily construction traffic flow (partial amendment)

Location	Direction ¹²	Daily peak HGV, vehicles	Daily peak all vehicles
A34 Stafford Road (between Stone Bypass and Eccleshall Road)	NB	253	415
	SB	253	415
A34 The Fillybrooks (between Eccleshall Road and Yarnfield Lane)	WB	218	497
	EB	218	497

4.6 Assessment of construction impacts

- 4.6.1 Tables 279 and 280 set out the 2023 traffic flows on highway links affected by construction traffic associated with the AP revised scheme for the AM and PM peak hour respectively. Tables 279 and 280 in the main TA are partially amended as a result of errors in reporting construction traffic volumes along the A34 corridor.
- 4.6.2 Table 279 in the main TA along the A34 The Fillybrooks (between Eccleshall Road and Yarnfield Lane) peak hour HGV vehicles had been reported as 82 vehicles in the westbound direction and 79 vehicles in the eastbound direction. The correct figures are 94 vehicles in the westbound direction and 92 vehicles in the eastbound direction. In Table 279 of the main TA, all vehicles had been reported as 1087 vehicles in the westbound direction and 1053 vehicles in the eastbound direction. The correct figures

¹² NB = northbound; SB = southbound; EB = eastbound; WB = westbound

are 1085 vehicles in the westbound direction and 1052 vehicles in the eastbound direction.

- 4.6.3 These changes in vehicle flows result in changes to the AP revised scheme % changes. The HS2 Phase 2a % change for HGV vehicles was reported in Table 279 in the main TA as 12% in the westbound direction and 12.4% in the eastbound direction. The correct figures are 29.8% in the westbound direction and 30.8% in the eastbound direction. The HS2 Phase 2a % change for all vehicles was reported in Table 279 in the main TA as 8.8% in the westbound direction and 9.1% in the eastbound direction. The correct figures are 8.7% in the westbound direction and 9% in the eastbound direction.
- 4.6.4 Additional information is reported in the amendment to Table 279 for construction impacts on the A34 Stafford Road between Stone Bypass and Eccleshall Road.

Table 279: 2023 future baseline with the AP revised scheme construction traffic (vehicles) – AM peak hour (08:00 – 09:00) (partial amendment)

Location	Direction ¹³	2023 baseline		2023 with AP revised scheme		AP revised scheme % change	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
A34 Stafford Road (between Stone Bypass and Eccleshall Road)	NB	1,148	95	1,220	121	6.3%	26.5%
	SB	1,786	100	1,857	126	4.0%	25.2%
A34 The Fillybrooks (between Eccleshall Road and Yarnfield Lane)	WB	999	73	1,085	94	8.7%	29.8
	EB	965	70	1,052	92	9.0%	30.8%

- 4.6.5 Table 280 in the main TA along the A34 The Fillybrooks (between Eccleshall Road and Yarnfield Lane) peak hour HGV vehicles had been reported as 35 vehicles in the westbound direction and 48 vehicles in the eastbound direction. The correct figures are 47 vehicles in the westbound direction and 61 vehicles in the eastbound direction. In Table 280 in the main TA, all vehicles had been reported as 984 vehicles in the westbound direction and 1436 vehicles in the eastbound direction. The correct figures are 982 vehicles in the westbound direction and 1435 vehicles in the eastbound direction.
- 4.6.6 These changes in vehicle flows result in changes to AP revised scheme % changes. The HS2 Phase 2a % change for HGV vehicles was reported in Table 280 in the main TA as 33.9% in the westbound direction and 22.5% in the eastbound direction. The correct figures are 83.9% in the westbound direction and 55.5% in the eastbound direction. The HS2 Phase 2a % change for all vehicles was reported in Table 280 in the main TA as 10.8% in the westbound direction and 7.2% in the eastbound direction. The correct figures are 10.6% in the westbound direction and 7% in the eastbound direction.
- 4.6.7 Additional information is reported in the amendment to Table 280 for construction impacts on the A34 Stafford Road between Stone Bypass and Eccleshall Road.

¹³ NB = northbound; SB = southbound; EB = eastbound; WB = westbound

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Table 280: 2023 future baseline with the AP revised scheme construction traffic (vehicles) – PM peak hour (17:00 – 18:00) (partial amendment)

Location	Direction ¹⁴	2023 baseline		2023 with AP revised scheme		AP revised scheme % change	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
A34 Stafford Road (between Stone by Pass and Eccleshall Road)	NB	1,500	40	1,566	65	4.4%	63.1%
	SB	1,161	35	1,227	60	5.6%	71.7%
A34 The Fillybrooks (between Eccleshall Road and Yarnfield Lane)	WB	888	26	982	47	10.6%	83.9%
	EB	1,340	39	1,435	61	7.0%	55.5%

Junction performance 2023

A51 The Rowe/Dog Lane/Bent Lane

- 4.6.8 Since submission of the Bill, it has been identified that there is a need to improve the safety of the junction between the A51 The Rowe and Dog Lane/Bent Lane (South). When approaching the junction from the south-east, traffic on the A51 The Rowe looking to turn right onto the realigned Dog Lane would have poor visibility due to the existing railway bridge. To improve the safety of the junction, a four-arm roundabout will be provided.
- 4.6.9 Table 293 in the main TA summarises the results of the junction capacity assessments with the original scheme in 2023. Table 293 in the main TA is replaced by the following table.

Table 293: A51 The Rowe/Dog Lane/Bent Lane junction 2023 future baseline and with the AP revised scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
08:00 – 09:00	2023 future baseline			2023 future baseline with AP revised scheme		
A51 The Rowe (S)	271	0.26	0	305	0.3	1
A51 The Rowe (W)	233	0.23	0	253	0.26	0
Bent Lane	31	0.03	0	42	0.05	0
Dog Lane	9	0.01	0	51	0.06	0
17:00 – 18:00	2023 future baseline			2023 future baseline with AP revised scheme		
A51 The Rowe (S)	283	0.27	0	341	0.36	1
A51 The Rowe (W)	180	0.17	0	345	0.34	1
Bent Lane	58	0.06	0	80	0.1	0
Dog Lane	10	0.01	0	244	0.28	0

¹⁴ NB = northbound; SB = southbound; EB = eastbound; WB = westbound

4.6.10 Paragraph 9.4.50 is replaced by:

“The results show that this junction operates within capacity in 2023 with the addition of the AP revised scheme, without any substantial increases in queuing or RFC from the future baseline.”

4.7 Operation description and assessment of operation impacts

Public rights of way diversions, realignments and closures

4.7.1 Table 306 in the main TA summarises the permanent PRoW diversions and realignments required to accommodate the original scheme. There is one addition to Table 306, Stone Rural BOAT 34. Stone Rural BOAT 34 is currently an unsurfaced route that will be upgraded in order to provide maintenance access. The AP revised scheme will realign Stone Rural BOAT 34 where it accesses the A51 Stone Road in order to improve visibility and thereby address safety concerns.

Table 306: CA3 permanent PRoW diversions

PRoW name	Description	Change in length
Stone Rural BOAT 34	Stone Rural BOAT 34 will be realigned where it accesses the A51 Stone Road in order to improve visibility where BOAT 34 meets the A51 Stone Road	Up to 400m longer for non-motorised users travelling in a westbound direction and 25m longer for non-motorised users travelling in an eastbound direction

Junction performance 2027

A51 The Rowe/Dog Lane/Bent Lane

4.7.2 The junction upgrade will remain as a permanent junction improvement and therefore the AP1 revised scheme has been assessed as part of the operational assessment.

Table 312 in the main TA is replaced by the following table:

Table 312: A51 The Rowe/Dog Lane/Bent Lane junction 2027 baseline and with the AP revised scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
08:00 – 09:00	2027 future baseline			2027 with the AP revised scheme		
A51 The Rowe (S)	-	-	-	288	0.27	0
A51 The Rowe (W)	-	-	-	249	0.25	0
Bent Lane	-	-	-	0	0.00	0
Dog Lane	-	-	-	41	0.05	0
17:00 – 18:00	2027 future baseline			2027 with the AP revised scheme		
A51 The Rowe (S)	-	-	-	303	0.29	0
A51 The Rowe (W)	-	-	-	192	0.18	0
Bent Lane	-	-	-	0	0.00	0
Dog Lane	-	-	-	81	0.09	0

4.7.3 Paragraph 9.6.21 is replaced by:

“The proposed junction layout operates within capacity with the addition of the AP revised scheme.”

Junction performance 2041

A51 The Rowe/Dog Lane/Bent Lane

4.7.4 Table 320 in the main TA is replaced by the following table:

Table 320: A51 The Rowe/Dog Lane/Bent Lane junction 2041 future baseline and with the AP revised scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
08:00 – 09:00	2041 future baseline			2041 with the AP revised scheme		
A51 The Rowe (S)	-	-	-	316	0.30	1
A51 The Rowe (W)	-	-	-	271	0.27	0
Bent Lane	-	-	-	0	0.00	0
Dog Lane	-	-	-	44	0.05	0
17:00 – 18:00	2041 future baseline			2041 with the AP revised scheme		
A51 The Rowe (S)	-	-	-	335	0.32	1
A51 The Rowe (W)	-	-	-	212	0.20	0
Bent Lane	-	-	-	0	0.00	0
Dog Lane	-	-	-	90	0.10	0

4.7.5 Paragraph 9.6.39 is replaced by:

“The proposed junction layout operates within capacity with the addition of the AP revised scheme layout.”

Pedestrians, cyclists and equestrians

4.7.6 Table 323 summarised the permanent diversions, realignments and extensions required to PRow to accommodate the original scheme. There is one amendment to Table 323 in the main TA. Stone Rural BOAT 34 is currently an unsurfaced route that will be upgraded in order to provide maintenance access. The AP revised scheme will realign Stone Rural BOAT 34, which will be realigned where it accesses the A51 Stone Road in order to improve visibility and thereby address safety concerns.

Table 323: CA3 permanent changes to public rights of way for non-motorised users (partial amendment)

PRow name	Change in length	New over-or under bridge
Stone Rural BOAT 34	Up to 400m longer for non-motorised users travelling in a westbound direction and 25m longer for non-motorised users travelling in an eastbound direction	None

4.7.7 The raising of the HS2 route between the B5026 Eccleshall Road and the northern extent of Yarnfield North embankment will result in minor realignments to Stone Rural Footpath 33 and Swynnerton Footpath 17. In both cases, the change in distance will be less than 10m compared to the original scheme and this does not affect the assessment for non-motorised users.

5 CA4 Whitmore Heath to Madeley

5.1 SES changes and amendments

- 5.1.1 The original scheme is described in Section 6 of the main TA.
- 5.1.2 The SES changes and amendments relevant to traffic and transport in the Whitmore Heath to Madeley area is a correction to Phase 2a construction traffic flows on Manor Road and Holly Bush Lane.

5.2 Existing baseline

- 5.2.1 Baseline conditions are described in Section 5.6 of the main TA. This section of the main TA is unchanged.

5.3 Assessment methodology

- 5.3.1 The assessment methodology is described in Section 3 of the main TA with specific details and exceptions outlined in Section 10.2 of the main TA. This section of the main TA is unchanged.
- 5.3.2 The construction assessment considers the traffic and transport impacts in the peak month of construction activity at each location, based on the proposed phasing of works. The assessment also includes cumulative impacts arising from construction in the adjoining community areas as well as movements through the area.

5.4 Future baseline

- 5.4.1 Future baseline traffic and transport conditions are described in Section 10.2 of the main TA. This section of the main TA is unchanged.

5.5 Construction description

- 5.5.1 The construction description is reported in Section 10.3 of the main TA.

Construction HGV routes

- 5.5.2 Table 338 summarises the peak daily construction traffic flows in this area. Table 338 in the main TA is amended as a result of errors in reporting construction traffic volumes along Manor Road (between the original scheme and Camp Hill and Holly Bush Lane). This section of Manor Road should not have been reported as a HGV construction route.
- 5.5.3 In the main TA, along this section of Manor Road, peak HGV vehicles had been reported during construction as 85 vehicles in each direction and peak all vehicles had been reported as 190 vehicles in each direction. The correct figures are zero HGVs in each direction and 225 peak all vehicles in each direction. In addition, in the main TA, along this section of Holly Bush Lane, the peak HGV vehicles had been reported as 94 vehicles in each direction and peak all vehicles had been reported as 320 vehicles in each direction. The correct figures are zero HGVs in each direction and 225 peak all vehicles in each direction.
- 5.5.4 For clarity peak daily construction traffic flows on Manor Road between Bar Hill and the HS2 route remain unchanged.

Table 338: CA4 peak daily construction traffic flow (partial amendment)

Location	Direction ¹⁵	Peak HGV	Peak all vehicles
Manor Road (between HS2 route and Camp Hill)	NB	0	225
	SB	0	225
Holly Bush Lane (between Newcastle Road and Madeley Road)	NB	0	225
	SB	0	225

5.5.5 The remainder of Section 10.3 of the main TA is unchanged.

5.6 Assessment of construction impacts

5.6.1 Tables 340 and 341 in the main TA set out the 2023 traffic flows on highway links affected by construction traffic associated with the AP revised scheme for the AM and PM peak hour respectively. Tables 340 and 341 are amended, at Manor Road and Holly Bush Lane, to address errors in the main TA.

5.6.2 For clarity, peak hour construction traffic flows on Manor Road between Bar Hill and the HS2 route remain unchanged.

Table 340: 2023 future baseline with the AP revised scheme construction traffic (vehicles) – AM peak hour (08:00 – 09:00) (partial amendment)

Location	Direction ¹⁵	2023 baseline		2023 with AP revised scheme		AP revised scheme % change	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
Manor Road (between the AP revised scheme and Camp Hill)	NB	64	5	218	5	238.9%	2.0%
	SB	99	3	253	3	155.7%	3.2%
Holly Bush Lane (between Newcastle Road and Madeley Road)	NB	64	5	218	5	238.9%	2.0%
	SB	99	3	253	3	155.7%	3.2%

Table 341: 2023 future baseline with the AP revised scheme construction traffic (vehicles) – PM peak hour (17:00 – 18:00) (partial amendment)

Location	Direction ¹⁵	2023 baseline		2023 with AP revised scheme		AP revised scheme % change	
		Vehicles	HGV	Vehicles	HGV	Vehicles	HGV
Manor Road (between the AP revised scheme and Camp Hill)	NB	75	1	229	1	204.0%	8.1%
	SB	54	2	208	2	285.2%	6.0%
Holly Bush Lane (between Newcastle Road and Madeley Road)	NB	75	1	229	1	204.0%	8.1%
	SB	54	2	208	2	285.2%	6.0%

¹⁵ NB = northbound; SB = southbound

5.7 Operation description and assessment of operation impacts

5.7.1 Operational impacts are reported in Section 10.6 of the main TA. This section of the main TA is unchanged.

6 CA5 South Cheshire

6.1 SES changes and amendments

6.1.1 The original scheme is described in Section 6 of the main TA.

6.1.2 The SES changes and amendments relevant to traffic and transport in the South Cheshire area relate to changes and corrections to railway systems compounds and are listed as follows:

- Changes to railway systems compounds: Since the submission of the Bill further information relating to the construction methodology of the installation of a slab track formation and hydraulically bound layer has meant that there is a need to change the operational characteristics of three railway systems compounds in the South Cheshire area. The changes to these compounds relate to: change to the operational period (duration and start/end date); change in the number of railway system workers (peak and/or average); and change in railway systems construction traffic numbers (HGV and cars/LGV) or duration of traffic. Whilst the changes to the construction methodology of the installation of a slab track formation and hydraulically bound layer have the potential to increase the number of railway systems HGV movements these are generally later in the construction programme than civil engineering HGV movements. Any increase in traffic due to these changes will generally be relatively small in comparison to the peak level of traffic generated by the civil engineering works. As there is no increase or only a small increase in peak traffic levels, it is not expected that there will be any materially different traffic impacts on the road network compared to those reported in the main TA; and
- Corrections to the main ES: Corrections to nine railway systems compounds although there is no material increase in traffic levels compared to those reported in the main TA.

6.2 Existing baseline

6.2.1 Baseline conditions are described in Section 5.6 of the main TA. This section of the main TA is unchanged.

6.3 Assessment methodology

6.3.1 The assessment methodology is described in Section 3 of the main TA with specific details and exceptions outlined in Section 11.2 of the main TA. This section of the main TA is unchanged.

6.3.2 The construction assessment considers the traffic and transport impacts in the peak month of construction activity at each location, based on the proposed phasing of works. The assessment also includes cumulative impacts arising from construction in the adjoining community areas as well as movements through the area.

6.4 Future baseline

6.4.1 Future baseline traffic and transport conditions are described in Section 10.2 of the main TA. This section of the main TA is unchanged.

6.5 Construction description

6.5.1 Changes reported in this section are a result of changes and corrections associated with railway systems compounds. These are set out in replacements and amendments to Tables 376 and 377.

Compounds and construction sites

6.5.2 Table 376 in the main TA shows the assumed workforce at each of the construction sites. Table 376 is fully replaced to show specifically the use of compounds by railway systems workers.

6.5.3 Table 376 includes railway systems compounds at Checkley Lane East main compound (including Checkley North embankment satellite), Checkley Lane West satellite compound, Den Lane welfare satellite compound, Den Lane East satellite compound, Den Lane West satellite compound, Delta Junction satellite compound, Crewe South cutting satellite, Waybutt Lane satellite compound, Swill Brook satellite compound, Heath Farm satellite compound, Creamery Bridge satellite compound, Crewe South portal satellite compound, Casey Lane East satellite compound, Basford Hall southbound satellite compound, Crewe South crossovers satellite compound, Motorail Terminal main compound and Alexandra Stadium satellite compound.

Table 376: Assumed workforce at construction sites

Compound type	Location	Total number of workers		Number of workers (peak)	Number of staff
		Average	Peak		
Satellite and Main	Checkley Lane East main compound (including Checkley North embankment satellite compound), civil engineering works	16	24	16	4
	Checkley Lane East main compound (including Checkley North Embankment satellite compound), railway systems works	15	18	13	10
Satellite	Checkley Lane West satellite compound	6	15	13	3
Satellite	Den Lane welfare satellite compound	41	100	95	10
Satellite	Den Lane East satellite compound	8	8	8	0
Satellite	Den Lane West satellite compound	16	100	95	5
Satellite	Blakenhall northbound spur embankment satellite compound (West Coast Main Line)	68	102	68	17
Satellite	Blakenhall cutting satellite compound	28	42	28	7
Satellite	Delta Junction satellite compound	6	8	8	1

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Compound type	Location	Total number of workers		Number of workers (peak)	Number of staff
		Average	Peak		
Satellite	Crewe South cutting satellite compound, civil engineering works	64	96	64	16
	Crewe South cutting satellite compound, railway systems works	26	38	37	4
Satellite	Waybutt Lane satellite compound	26	38	37	4
Satellite	Swill Brook satellite compound	8	13	12	1
Satellite	Heath Farm satellite compound	11	24	20	4
Main	Chorlton cutting main compound	16	24	16	4
Satellite	Creamery Bridge satellite compound	10	50	45	5
Satellite	Crewe South portal satellite compound, civil engineering works	12	18	12	3
	Crewe South portal satellite compound, railway systems works	10	50	45	5
Satellite	Casey Lane East satellite compound	8	8	8	0
Satellite	Basford Hall southbound satellite compound	15	50	50	5
Main	Basford cutting main compound	200	300	200	50
Satellite	Crewe South crossovers satellite compound	16	55	50	5
Main	Motorail Terminal main compound	55	55	40	15
Satellite	Alexandra Stadium satellite compound (existing Network Rail land)	15	15	10	5

6.5.4 Table 377 shows the typical vehicle trip generation for construction site compounds in this area. Table 377 in the main TA is partially amended as follows:

- at the Checkley Lane east main compound, for railway systems works, the indicative start date will be December 2024 (not January 2025); the estimated duration of the busy period will be reduced to two months (from eight months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 17 - 21 for cars/LGVs (from 42 - 82) and increased to 44 - 48 for HGVs (from 16 - 34);
- at the Checkley Lane West satellite compound the estimated duration of use will be reduced to one year and two months (from one year and three months); the estimated duration of the busy period will be reduced to two months (from eight months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 14 - 17 for cars/LGVs (from 26 - 58) and increased to 44 - 48 for HGVs (from 19 - 34);

- at the Den Lane welfare satellite compound the indicative start date will be February 2025 (not January 2025); the estimated duration of use will be reduced to four months (from six months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 76 - 93 for cars/LGVs (from 99 - 224). The duration of the busy period is unchanged;
- at the Den Lane East satellite compound the estimated duration of use will be reduced to two years and two months (from two years and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to > 10 for cars/LGVs (from a peak of 18). The duration of the busy period is unchanged;
- at the Den Lane West satellite compound the estimated duration of use will be reduced to two years and two months (from two years and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 55 - 87 for cars/LGVs (from 38 - 224). The duration of the busy period is unchanged;
- at the Delta junction satellite compound the estimated duration of use will be reduced to one year and two months (from one year and three months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 6 - 8 for cars/LGVs (from 14 - 18). The duration of the busy period is unchanged;
- at the Crewe South cutting satellite compound, for railway systems works, the indicative start date will be August 2024 (not July 2024); the estimated duration of use will be reduced to one year and one month (from one year and six months); the estimated duration of the busy period will be increased to 11 months (from 10 months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 29 - 41 for cars/LGVs (from 57 - 84);
- at the Waybutt Lane satellite compound the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 30 - 41 for cars/LGVs (from 58 - 84). The duration of the busy period is unchanged;
- at the Swill Brook satellite compound the indicative start date will be May 2026 (not April 2026); the estimated duration of use will be reduced to three months (from six months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 6 - 7 for cars/LGVs (from 18 - 30). The duration of the busy period is unchanged;
- at the Heath Farm satellite compound the indicative start date will be May 2025 (not July 2025); the estimated duration of use will be increased to 10 months (from nine months); the estimated duration of the busy period will be reduced to two months (from six months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to 15 - 21 for cars/LGVs (from 29 - 32) and increased to

70 - 80 for HGVs (from 28 - 32);

- at the Motorail Terminal main compound the indicative start date has a provisional date of January 2024 (not October 2020); the estimated duration of the busy period has reduced to five months (from nine months); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to a peak of 35 for cars/LGVs (from a peak of 130) and amended to 21 - 25 for HGVs (from 11 - 25); and
- at the Alexandra Stadium satellite compound the indicative start date has a provisional date of January 2024 (not October 2020); and the average daily combined two-way vehicle trips during the busy period and within the peak month of activity will be reduced to a peak of 11 for cars/LGVs (from a peak of 34). The duration of the busy period is unchanged.

Table 377: Typical vehicle trip generation for construction site compounds in the South Cheshire area (partial amendment)

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars / LGV	HGV
Main and satellite	Checkley Lane East main compound (including Checkley North embankment satellite compound)	Checkley Lane for site set up and servicing, followed by site haul route linking to the A53 Newcastle Road	October 2020	Civil engineering - 4 years and 3 months	4	32 - 44	49 - 77
			December 2024	Railway systems works - 1 year and 9 months	2	17 - 21	44 - 48
Satellite	Checkley Lane west satellite compound	Accessed via Checkley Lane to the east and west and then via the site permanent maintenance roads constructed to the east and west of the HS2 route	January 2025	1 year and 2 months	2	14 - 17	44 - 48
Satellite	Den Lane welfare satellite compound	Den Lane to the A51 London Road and site haul route to	February 2025	4 months	3	76 - 93	up to 10

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Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars / LGV	HGV
		Newcastle Road					
Satellite	Den Lane east satellite compound	Den Lane to the A51 London Road and site haul route to Newcastle Road	January 2024	2 years and 2 months	7	up to 10	up to 10
Satellite	Den Lane west satellite compound	Den Lane to the A51 London Road and site haul route to Newcastle Road	January 2024	2 years and 2 months	4	55 - 87	up to 10
Satellite	Delta Junction satellite compound	Accessed via Den Lane and then the site haul route	January 2025	1 year and 2 months	11	up to 10	10
Satellite	Crewe South cutting satellite compound	Accessed via the diverted Chorlton Lane to Newcastle Road, the A531 Newcastle Road and the A500 Newcastle Road	October 2020	Civil engineering - 4 years and 3 months	11	128 - 176	146 - 199
			August 2024	Railway systems works - 1 year and 1 month	11	29 - 41	up to 10
Satellite	Waybutt Lane satellite compound	Den Lane or Chorlton Lane to Newcastle Road, the A531 Newcastle Road and the A500 Newcastle Road and site haul routes	January 2025	1 year	9	30 - 41	up to 10

Compound type	Location	Access to / from compound to main road network	Indicative start / set up date	Estimated duration of use (years)	Estimated duration of busy period (months)	Average daily combined two-way vehicle trips during busy period and within peak month of activity	
						Cars / LGV	HGV
Satellite	Swill Brook satellite compound	Accessed via the diverted Chorlton Lane to Newcastle Road, the A531 Newcastle Road and the A500 Newcastle Road and site haul routes	May 2026	3 months	3	up to 10	up to 10
Satellite	Heath Farm satellite compound	Accessed via the diverted Chorlton Lane to Newcastle Road, the A531 Newcastle Road and the A500 Newcastle Road and site haul routes	May 2025	10 months	2	15 - 21	70 - 80
Main	Motorail Terminal main compound	A500 Shavington Bypass	January 2024, provisional date	2 years and 9 months	5	35 - 35	21 - 25
Satellite	Alexandra Stadium satellite compound (existing Network Rail land)	A500 Shavington Bypass	January 2024, provisional date	2 years and 9 months	33	11 - 11	up to 10

6.6 Assessment of construction impacts

6.6.1 Construction impacts are reported in Section 11.4 of the main TA. This section of the main TA is unchanged.

6.7 Operation description and assessment of operation impacts

6.7.1 Operational impacts are reported in Section 11.6 of the main TA. This section of the main TA is unchanged.

7 Route-wide and off-route assessment

7.1 Introduction

7.1.1 The main TA presented an assessment of potential route-wide and off-route impacts.

7.1.2 There are no route-wide traffic and transport related impacts associated with the AP revised scheme. The only off-route impacts are related to highway modifications in the Hill Ridware area.

Off-route highway modifications

7.1.3 Table 426 of the main TA (not re-presented in this report) summarises the location and nature of the works proposed for the original scheme and identifies whether they are required for temporary or permanent access. Table 426 in the main TA is amended such that there will be no modification to the B5014 Uttoxeter Road and no provision of six passing bays. The Hill Ridware construction route, described in Section 2 of this report, removes the need to provide any passing bays along the B5014 Uttoxeter Road.

7.1.4 The remainder of Section 12 of the main TA is unchanged.

8 References

HS2 Ltd (2017), *High Speed Rail (West Midlands-Crewe) Environmental Statement*. Available online at: <https://www.gov.uk/government/collections/hs2-phase-2a-environmental-statement>.

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