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HS2

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 5: Appendix TR-003-00002

Traffic and transport

MA02: Wimboldsley to Lostock Gralam

Transport Assessment Part 3

M286

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Department for Transport

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

High Speed Two (HS2) Limited
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA

Telephone: 08081 434 434

General email enquiries: HS2enquiries@hs2.org.uk

Website: www.hs2.org.uk

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

ARUP+ ERM | FOSTER + PARTNERS | JACOBS
RAMBOLL | TYPSA | COSTAIN

MWJV
Mott MacDonald | WSP

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14.1 Description of the Proposed Scheme

14.1.1 The Proposed Scheme within the Wimboldsley to Lostock Gralam area (MA02) will comprise five main components:

- the route of the Proposed Scheme, which will be 14.6km in length, continuing from the Hough to Walley's Green area (MA01) in the south passing between the towns of Winsford and Middlewich on a series of embankments and viaducts to the west of Lostock Green and east of Rudheath, Lostock Gralam and Higher Wincham;
- Crewe Northern Connection: which will enable future NPR services to connect with HS2;
- Crewe North infrastructure maintenance base - rail (IMB-R) - a maintenance facility and storage area for the Proposed Scheme, which will occupy land between the route of the Proposed Scheme and the West Coast Main Line (WCML) north of Walley's Green and south of the Crewe North Rolling Stock Depot (RSD);
- Crewe North Rolling Stock Depot (RSD), which will serve as an operational and maintenance hub for HS2 rolling stock; and
- WCML and HS2 reception tracks, which will connect the Crewe North RSD with both the WCML and the route of the Proposed Scheme.

14.1.2 The Proposed Scheme will comprise the following features in the MA02 area:

- viaducts for a total length of 3.9km (Shropshire Union Canal viaduct, A54 Middlewich Road viaduct, River Dane viaduct, Puddinglake Brook viaduct, Trent and Mersey Canal viaduct, Gad Brook viaduct, Wade Brook viaduct, Lostock Gralam viaduct and Smoker Brook viaduct);
- embankments for a total length of 10.6km (Walley's Green embankment, Clive Green North embankment, Stanthorne South embankment, Stanthorne North embankment, Dane Valley embankment, Whatcroft South embankment, Whatcroft North embankment, Rudheath embankment, Lostock Gralam South embankment and Lostock Gralam North embankment); and
- a 164m long box structure (Middlewich box).

14.1.3 The key traffic issues within the MA02 area are related to the construction and operation of the Proposed Scheme, including construction traffic, and temporary and permanent changes to highways and public rights of way (PRoW). In addition, in order to construct the Proposed Scheme, there will be a number of construction compounds within the MA02 area.

14.1.4 The following changes to the existing road network will be required to accommodate the Proposed Scheme in the area:

- temporary and permanent road realignments, including of the A530 Nantwich Road, Clive Green Lane, Coalpit Lane, the A54 Middlewich Road, the A533 Northwich Road, Bell Lane, Whatcroft Hall Lane, Cookes Lane, the A556 Shurlach Road, the A530 King Street, the A559 Manchester Road and Birches Lane;
- permanent diversion of the B5082 Penny's Lane;
- temporary and permanent road closures, including the permanent closure of a short section Cookes Lane where it crosses the route of the realigned A556 Shurlach Road. Bell Lane, Davenham Road and Linnards Lane will be subject to temporary closures; and
- construction of a new access road and junction, serving the Crewe North RSD from the Clive Green Lane realignment.

14.1.5 Buses use a number of routes which will be affected by the Proposed Scheme in the MA02 area and these will be diverted as necessary onto alternative routes.

14.1.6 There are interfaces with the existing rail network in this area, in particular with the WCML, the Sandbach to Northwich Line and the Mid-Cheshire Line. Rail possessions will be required in association with the construction of the A530 Nantwich Road overbridge; Crewe North RSD; the Trent and Mersey Canal viaduct; the Lostock Gralam viaduct; and utility diversions.

14.1.7 The temporary and permanent closure, diversion and realignment of PRoW will also be required, notably Footpath Wimboldsley 1/1, Footpath Stanthorne 3/4, Footpath Winsford 3/1, Footpath Stanthorne 3/1, Footpath Winsford 37/1, Footpath Stanthorne 1/1, Footpath Rudheath 3/4, Footpath Rudheath 3/3, Footpath Lach Dennis 3X/2 and Footpath Lach Dennis 3X/1.

14.1.8 A full description of the assessment methodology is set out in Transport Assessment (TA), Part 1 (see Volume 5: Appendix TR-001-00000), Section 3: Methodology, with specific details and exceptions outlined in the following sections.

14.2 Proposed Scheme construction description

Introduction

14.2.1 This section provides an overview of the construction traffic and transport impacts for the section of the Proposed Scheme that will pass through the MA02 area.

14.2.2 Construction of the Proposed Scheme is expected to commence in 2025 with construction activity continuing to 2038 (although activity in 2038 will be limited to testing and commissioning). Construction activities have been assessed against 2030 baseline traffic flows, irrespective of when they occur during the construction period.

Construction activities and phasing

14.2.3 Details of the main construction works and the time periods when each compound is operational are summarised in the indicative construction programme. For the construction

programme refer to Volume 2, Community Area report: Wimboldsley to Lostock Gralam area (MA02), Section 2.

14.2.4 A complete description of the works associated with the Proposed Scheme in the MA02 area is provided in Volume 2, Section 2 of the Environmental Statement. The construction works will be carried out throughout the site for the majority of the construction period. The overall programme has been outlined on a year by year basis. The key construction activities, along with their start dates, are provided in Table 14-1.

Table 14-1: Key highway construction activities in the MA02 area

Activity	Community Area (CA)	Start date
Area advance works	MA02	2025 Q1
A556 Shurlach Road realignment	MA02	2025 Q4
Crewe North RSD	MA02	2027 Q1
Clive Green Lane overbridge and realignment	MA02	2027 Q2
A530 Nantwich Road overbridge and realignment	MA02	2027 Q2
A54 Middlewich Road realignment	MA02	2027 Q2
A559 Manchester Road realignment	MA02	2028 Q2
Birches Lane diversion	MA02	2029 Q1
Park House Farm access realignment	MA02	2029 Q2
B5082 Penny's Lane diversion	MA02	2029 Q4

Compounds and construction sites

14.2.5 The Proposed Scheme will be constructed from compounds. This will include main compounds that manage and coordinate the work from satellite compounds. Where material is required to be transferred from site haul movements to highway movements this will be undertaken through transfer nodes.

14.2.6 Table 14-2 summarises the expected average and peak workforce (site workers plus staff) at each construction compound in the MA02 area. The location of the construction compounds and the associated construction HGV routes are shown in Volume 5, Traffic and transport Map Book, Map Series TR-08.

Table 14-2: Assumed workforce at construction sites in the MA02 area

Compound type	Compound name	Number of site workers (peak)	Number of staff (peak)	Total workforce (site plus staff)	
				Average	Peak
Satellite	A530 Nantwich Road satellite compound	80	53	81	125
Satellite	Crewe North RSD satellite compound 1	140	45	113	185
Satellite	Crewe North RSD satellite compound 2	180	131	190	303
Satellite	Crewe North RSD satellite compound 3	160	45	116	205
Rail Systems	Minshull Vernon satellite compound	50	15	43	65

Compound type	Compound name	Number of site workers (peak)	Number of staff (peak)	Total workforce (site plus staff)	
				Average	Peak
Borrow Pit	MA02 Borrow Pit A	50	15	52	65
Borrow Pit	MA02 Borrow Pit B	80	45	53	95
Borrow Pit	MA02 Borrow Pit C	80	45	52	95
Satellite	Clive Green Lane satellite compound	80	45	97	125
Satellite	Shropshire Union Canal South satellite compound	155	45	121	200
Satellite	Shropshire Union Canal North satellite compound	175	45	96	220
Satellite	A54 Middlewich Road satellite compound	130	105	173	235
Satellite	A533 Bostock Road satellite compound	120	45	111	165
Satellite	River Dane viaduct south satellite compound	120	45	110	165
Satellite	River Dane viaduct north satellite compound	100	45	103	145
Satellite	Puddlinglake Brook viaduct satellite compound	180	45	120	225
Borrow Pit	MA02 Borrow Pit D	70	15	74	85
Satellite	Gad Brook viaduct South satellite compound	166	54	126	218
Satellite	Gad Brook viaduct North satellite compound	160	45	101	205
Satellite	Rudheath embankment satellite compound	47	75	117	122
Satellite	B5082 Penny's Lane satellite compound	47	75	117	122
Satellite	Birches Lane satellite compound	157	45	91	202
Satellite	Lostock Gralam viaduct satellite compound	170	45	126	215
Satellite	Smoker Brook viaduct south satellite compound	141	69	141	209

14.2.7 Table 14-3 provides details of the compound set up date and the duration of active use. The duration of active use excludes any period where there are no substantial workforce trips or movement of materials to and from the compound.

14.2.8 Table 14-3 also provides a summary of the HGV and car/light goods vehicle (LGV) access trips at each compound in the peak month of activity and during the busy period. For each compound, the peak month of activity is the month within which HGV traffic is at its highest for that compound. The busy period is the period during which HGV traffic serving that compound will be greater than 50% of the HGV traffic in the peak month. The average daily combined two-way vehicle trips[1] for the busy period is the lower end of the range shown in

[1] Two-way trips refer to the total number of vehicle movements in both directions (i.e. with 200 westbound (or arriving) vehicles and 100 eastbound (or departing), there would be 300 two-way trips).

Table 14-3 and the average daily combined two-way vehicle trips for the peak month is the upper end of the range shown. The estimated duration of busy period is also provided.

Table 14-3: Typical vehicle trip generations for construction site compounds in the MA02 area

Compound type	Compound name	Indicative start/set up date (years/ quarter)	Estimated duration of active use (years/ months)	Average daily combined two–way car/LGV trips during busy period and within peak month of activity	Average daily combined two–way HGV trips during busy period and within peak month of activity	Estimated duration of busy period (months)
Satellite	A530 Nantwich Road satellite compound	2027 Q2	5 years	200-270	129-162	5
Satellite	Crewe North RSD satellite compound 1	2025 Q3	8 years	238-334	519-554	3
Satellite	Crewe North RSD satellite compound 2	2025 Q3	9 years	465-632	82-126	51
Satellite	Crewe North RSD satellite compound 3	2025 Q3	8 years	236-354	642-732	15
Rail Systems	Minshull Vernon satellite compound	2027 Q4	1 year and 6 months	122-122	4-4	7
Borrow Pit	MA02 Borrow Pit A	2027 Q2	2 years and 3 months	90-112	36-44	5
Borrow Pit	MA02 Borrow Pit B	2027 Q2	1 year and 6 months	162-162	34-42	5
Borrow Pit	MA02 Borrow Pit C	2027 Q2	1 year and 9 months	162-162	33-42	4
Satellite	Clive Green Lane satellite compound	2027 Q2	3 years and 6 months	167-214	49-70	19
Satellite	Shropshire Union Canal South satellite compound	2027 Q2	2 years and 3 months	244-340	60-76	7
Satellite	Shropshire Union Canal North satellite compound	2027 Q2	4 years	321-434	79-92	7
Satellite	A54 Middlewich Road satellite compound	2027 Q2	4 years and 3 months	297-404	77-122	10
Satellite	A533 Bostock Road satellite compound	2027 Q2	4 years and 6 months	202-284	425-516	14
Satellite	River Dane viaduct South satellite compound	2027 Q2	3 years	209-284	72-94	9
Satellite	River Dane viaduct North satellite compound	2027 Q2	3 years	191-248	54-76	9
Satellite	Puddinglake Brook viaduct satellite compound	2027 Q2	3 years and 6 months	237-384	65-94	11

Compound type	Compound name	Indicative start/set up date (years/ quarter)	Estimated duration of active use (years/ months)	Average daily combined two–way car/LGV trips during busy period and within peak month of activity	Average daily combined two–way HGV trips during busy period and within peak month of activity	Estimated duration of busy period (months)
Borrow Pit	MA02 Borrow Pit D	2027 Q2	4 years and 9 months	130-148	398-488	36
Satellite	Gad Brook viaduct south satellite compound	2027 Q2	3 years and 9 months	288-408	413-496	3
Satellite	Gad Brook viaduct north satellite compound	2025 Q2	6 years and 6 months	246-368	238-260	5
Satellite	Rudheath embankment satellite compound	2028 Q3	3 years and 3 months	198-210	443-476	4
Satellite	B5082 Penny's Lane satellite compound	2028 Q3	3 years and 3 months	200-210	427-498	4
Satellite	Birches Lane satellite compound	2025 Q2	6 years and 6 months	179-270	463-498	3
Satellite	Lostock Gralam viaduct satellite compound	2028 Q4	1 year and 6 months	231-276	72-88	8
Satellite	Smoker Brook viaduct south satellite compound	2027 Q3	4 years and 6 months	244-328	423-486	4

14.2.9 The indicative construction programme in Volume 2, Section 2 illustrates how the phasing of activities at different compounds will generally be staggered and that construction activities at individual compounds may not occur over the whole duration presented in Table 14-3.

Construction HGV routes

14.2.10 Construction vehicle movements required to construct the Proposed Scheme will include the delivery of plant and materials, movement of excavated materials and site workforce trips. Works will include utilities diversions, earthworks, and the construction of underpasses, viaducts, bridges and highways.

14.2.11 HGV have been routed, where reasonably practicable, along the strategic or primary road network, although some access locations will be via secondary roads. Where reasonably practicable, the use of the local road network has been limited to site set up, access for environmental surveys and ongoing servicing (including refuse collection and general deliveries).

14.2.12 The location of the compounds and the associated construction HGV routes are shown on the Volume 5, Traffic and transport Map Book, Map Series TR-08. Table 14-4 summarises the

construction HGV routes to and from each compound to the main road network. For some compounds, Table 14-4 includes multiple construction HGV routes. This is either because the construction HGV route varies depending on the origin/destination of the trip or because the construction HGV route varies over time to account for changes to the highway network through the construction period.

14.2.13 The average daily combined two-way HGV trips reported in Table 14-3 represent the total number of HGV movements to and from each compound during the busy period and in the peak month of activity on all of the available construction HGV routes combined. Where multiple construction HGV routes are shown in Table 14-4, the split of construction traffic between the available construction HGV routes will vary based on the point in the construction programme and the origin/destination of the construction HGV traffic.

Table 14-4: Construction HGV routes for construction compounds in the MA02 area

Compound name(s)	Access routes to/from compound(s) to main road network
A530 Nantwich Road satellite compound Crewe North RSD satellite compound 1	A530 Nantwich Road
Crewe North RSD satellite compound 2	Route to/from south: On-site construction traffic route, Clive Green Lane and A530 Nantwich Road Route to/from north (to be used after opening of the Clive Green Lane realignment): On-site construction traffic route, Clive Green Lane and A54 Middlewich Road On-site construction traffic route, Clive Green Lane, Road One and A533 Davenham Bypass
Crewe North RSD satellite compound 3	On-site construction traffic route, Clive Green Lane and A530 Nantwich Road On-site construction traffic route and A530 Nantwich Road
Minshull Vernon satellite compound	A530 Nantwich Road
MA02 Borrow Pit A MA02 Borrow Pit B	Route to/from south: A530 Nantwich Road Route to/from north (to be used after opening of the Clive Green Lane realignment): A530 Nantwich Road, Clive Green Lane and A54 Middlewich Road A530 Nantwich Road, Clive Green Lane, Road One and A533 Davenham Bypass
MA02 Borrow Pit C	On-site construction traffic route and A54 Middlewich Road
Clive Green Lane satellite compound	Route to/from south: Clive Green Lane and A530 Nantwich Road Route to/from north (to be used after opening of the Clive Green Lane realignment): Clive Green Lane and A54 Middlewich Road Clive Green Lane, Road One and A533 Davenham Bypass
Shropshire Union Canal South satellite compound	Route to/from south: On-site construction traffic route, Clive Green Lane and A530 Nantwich Road Route to/from north (to be used after opening of the Clive Green Lane realignment): On-site construction traffic route, Clive Green Lane and A54 Middlewich Road

Compound name(s)	Access routes to/from compound(s) to main road network
	On-site construction traffic route, Clive Green Lane, Road One and A533 Davenham Bypass
Shropshire Union Canal North satellite compound	On-site construction traffic route and A54 Middlewich Road
A54 Middlewich Road satellite compound	A533 Bostock Road
A533 Bostock Road satellite compound	A54 Middlewich Road
River Dane viaduct South satellite compound	On-site construction traffic route and A533 Bostock Road
River Dane viaduct North satellite compound	On-site construction traffic route, Whatcroft Hall Lane and A530 King Street
Puddinglake Brook viaduct satellite compound	Whatcroft Hall Lane and A530 King Street
MA02 Borrow Pit D	On-site construction traffic route, B5081 Byley Road, B5309 Centurion Way and A54 Holmes Chapel Road
Gad Brook viaduct south satellite compound Gad Brook viaduct north satellite compound	A530 King Street
Rudheath embankment satellite compound	On-site construction traffic route and A530 King Street
B5082 Penny's Lane satellite compound	Route to/from the north: B5082 Penny's Lane and A556 Shurlach Road (to be used before opening of the Penny's Lane diversion) B5082 Penny's Lane diversion to A530 King Street (to be used after opening of the Penny's Lane diversion) Route to/from the south: B5082 Penny's Lane, Crowders Lane and A530 King Street (to be used before opening of the Penny's Lane diversion) B5082 Penny's Lane diversion to A530 King Street (to be used after opening of Penny's Lane diversion)
Birches Lane satellite compound	Birches Lane and A556 Shurlach Road
Lostock Gralam viaduct satellite compound	On-site construction traffic route, Birches Lane and A556 Shurlach Road
Smoker Brook viaduct south satellite compound	A556 Shurlach Road

14.2.14 Table 14-5 summarises the peak daily construction traffic flows associated with the Proposed Scheme, both in HGV and total vehicles, on roads within the MA02 area that form part of construction routes. In MA02, the main construction traffic routes from the Strategic Road Network (SRN) are: M6 junction 18; A530 Nantwich Road/Newton Bank/Croxton Lane/King Street/Griffiths Road (between the southern boundary of the Wimboldsley to Lostock Gralam area and the A559 Manchester Road); A54 Middlewich Road/Chester Road/St Michael's Way/Kinderton Street/Holmes Chapel Road/Middlewich Road (between M6

junction 18 and Clive Lane); A533 Northwich Road/Bostock Road/Davenham Bypass/London Road (between A54 Middlewich Road and A556 Shurlach Road); A556 Shurlach Road (between A533 London Road and Wimboldsley to Lostock Gralam area northern boundary); A559 Manchester Road (between A530 Griffiths Road and A556 Chester Road); B5309 Centurion Way/King Street (between A54 Holmes Chapel Road and A530 King Street); B5081 Byley Road (between B5309 Centurion Way and MA02 Borrow Pit D); B5082 Penny's Lane (between Crowders Lane and A556 Shurlach Road); Clive Green Lane; Coalpit Lane (short section at the southern extent); Clive Lane; Road One, through Winsford Industrial Estate; London Road (short section at the southern extent); Whatcroft Hall Lane (between A530 King Street and Puddinglake Brook viaduct satellite compound); Davenham Road (between A530 King Street and Higgins Lane Farm); Crowder's Lane (between A530 King Street and B5082 Penny's Lane); Birches Lane (between Lostock Gralam and Station Road); Station Road (between Birches Lane and A559 Manchester Road); Ascol Drive; and Linnards Lane (short section at the southern extent).

Table 14-5: MA02 peak daily construction traffic flow

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
A530 Nantwich Road (between Brookhouse Lane and Clive Green Lane)	NB	184	1,155
	SB	184	1,273
Clive Green Lane (between A54 Middlewich Road and A530 Nantwich Road)	NB	145	407
	SB	145	862
A54 Kinderton Street (between A533 Leadsmithy Street and King Street)	EB	320	799
	WB	320	605
A54 St Michael's Way (between A533 Leadsmithy Street and The Bull Ring)	EB	320	796
	WB	320	613
A530 Nantwich Road (between A530 Newton Bank and A54 St Michael's Way)	WB	320	1,134
A54 St Michael's Way (between Wheelock Street and A530 Nantwich Road)	WB	320	613
A54 St Michael's Way (between The Bull Ring and A54 Chester Road)	EB	320	796
	WB	320	613
A530 Newton Bank (between A530 Nantwich Road and A54 Chester Road)	NB	320	1,329
A54 St Michael's Way (between A54 Chester Road and The Bull Ring)	EB	320	796
A54 Chester Road (between A54 St Michael's Way and A530 Newton Bank)	EB	320	1,303
A54 Holmes Chapel Road (between King Street and B5309 Centurion Way)	EB	320	505
	WB	320	612
	EB	320	983

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
A54 Chester Road (between A530 Newton Bank and A530 Croxton Lane)	WB	320	891
A54 Middlewich Road (between Clive Lane and A533 Northwich Road)	NB	136	283
	SB	136	355
A54 Chester Road (between A530 Croxton Lane and A533 Northwich Road)	EB	320	486
	WB	320	445
B5309 Centurion Way (between B5081 Byley Road and A54 Holmes Chapel Road)	EB	301	348
	WB	301	355
A54 Middlewich Road realignment (between A533 Northwich Road diversion and A533 Northwich Road)	EB	294	486
	WB	294	417
A54 Holmes Chapel Road (between B5309 Centurion Way and Brereton Lane)	EB	297	478
	WB	297	588
B5309 Centurion Way (between White Park Close and B5081 Byley Road)	EB	718	733
	WB	718	727
A54 Holmes Chapel Road (between Brereton Lane and Poolford Lane)	EB	297	456
	WB	297	588
B5309 Centurion Way (between White Park Close and B5309 King Street)	NB	718	727
	SB	718	733
A533 Northwich Road diversion (between A54 Middlewich Road realignment and A533 Northwich Road)	NB	37	390
	SB	37	447
B5309 Centurion Way (between B5309 King Street and King Street Industrial Estate)	NB	718	727
	SB	718	733
Road One (between A533 Bostock Road and A54 Middlewich Road)	NB	13	456
	SB	13	577
B5081 Byley Road (between B5309 Centurion Way and Moss Lane)	NB	572	600
	SB	572	586
B5309 King Street (between B5309 Centurion Way and Yatehouse Lane)	NB	718	987
	SB	718	733
B5309 King Street (between Yatehouse Lane and A530 Croxton Lane)	NB	718	987
	SB	718	733
A533 Davenham Bypass (between A533 Bostock Road and Jack Lane)	NB	12	453
	SB	12	111
B5081 Byley Road (between Moss Lane and B5082 Holmes Chapel Road)	NB	572	614
	SB	572	651
A533 Davenham Bypass (between Jack Lane and London Road)	NB	12	403
	SB	12	104

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
A530 King Street (between Whatcroft Hall Lane and Davenham Road)	NB	899	1,204
	SB	899	1,472
Davenham Road (between Shurlach Lane and A530 King Street)	EB	83	147
	WB	83	227
A533 Davenham Bypass (between London Road and A556 Shurlach Road)	EB	0	50
	WB	12	335
A556 Shurlach Road (between A533 London Road and A556 off-slip to A533 Davenham Bypass)	EB	12	482
	WB	0	83
A556 Shurlach Road off-slip (between A556 Shurlach Road and A533 Davenham Bypass)	SB	12	39
A533 London Road (between A556 Chester Road and A533 Kingsmead)	NB	0	17
	SB	12	325
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	24	92
	WB	0	34
A556 Shurlach Road (between A556 off-slip to A533 Davenham Bypass and Shurlach Lane)	EB	12	482
	WB	12	105
A530 King Street (between Crowder's Lane and B5082 Penny's Lane diversion)	NB	325	422
	SB	325	729
A556 Shurlach Road (between Shurlach Lane and Shipbrook Road)	EB	12	482
	WB	12	109
B5082 Penny's Lane diversion (between Penny's Lane and A556 Shurlach Road)	EB	35	93
	WB	35	65
A556 Shurlach Road (between Shipbrook Road and Gadbrook Road)	EB	12	474
	WB	12	109
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	NB	314	481
	SB	314	813
A556 Shurlach Road (between Gadbrook Road and A530 King Street)	EB	12	473
	WB	12	125
A530 King Street (between B5082 Middlewich Road and A556 Shurlach Road)	NB	147	168
	SB	147	162
A556 Shurlach Road (between A530 King Street and Birches Lane)	NB	815	1,634
	SB	815	1,757
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	96	144
	SB	96	104
A556 Shurlach Road (between Birches Lane and A559 Manchester Road)	NB	855	1,808
	SB	328	1,189

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
A530 Griffiths Road (between A559 Manchester Road and B5082 Middlewich Road)	NB	147	162
	SB	147	162
A559 Manchester Road (between A530 Griffiths Road and A559 Hall Lane)	EB	147	166
	WB	147	167
Station Road (between School Lane and A559 Manchester Road)	NB	0	134
	SB	55	96
A559 Manchester Road (between A559 Hall Lane and Stubbs Lane)	EB	147	162
	WB	147	163
A559 Manchester Road (between Stubbs Lane and Fryer Road)	EB	147	162
	WB	147	163
A559 Manchester Road (between Fryer Road and A556 Shurlach Road)	EB	147	162
	WB	147	163
A556 Chester Road (between A559 Manchester Road and Linnards Lane)	EB	865	1,786
	WB	865	2,066
A556 Chester Road (between Linnards Lane and Plumley Moor Road)	EB	815	1,361
	WB	815	1,545

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

Traffic management, road closures and diversions

14.2.15 The construction of the Proposed Scheme has been planned to limit disruption to travellers due to traffic management, road closures or diversions. Nonetheless, the construction of the Proposed Scheme will require the temporary closure or restriction of and/or diversion of some existing highways as well as traffic management. Where temporary closures are necessary and no temporary alternative route is provided, the general approach is to undertake the closures for short discrete periods to ensure that the impact on users is reduced, insofar as reasonably practicable. TA, Part 1 (TR-001-00000), Section 4 sets out the general approach to mitigation for construction which includes constructing new roads prior to the closure of any existing roads where reasonably practicable.

14.2.16 Where site haul routes, created adjacent to the route of the Proposed Scheme, cross the existing road network, traffic control measures will be implemented and could include the provision of temporary signals or roundabouts, which will be removed on completion of the works. These traffic control measures are not expected to have a substantial impact on traffic flows and delays for vehicle occupants and non-motorised road users.

14.2.17 Utility works have been assessed in detail where they are major and where the traffic and transport impacts from the works separately, or in combination with other works, will be greater than other construction activities arising within the area. Minor utility works are

expected to result in only localised traffic and pedestrian diversions, which will often be of short-term duration. No additional substantial impacts from these works are expected. Similarly, other minor works will involve a low level of use of local roads. Such use is not expected to give rise to substantial construction traffic impacts.

14.2.18 Permanent road closures are addressed in the operational assessment.

Public Rights of Way, closures and diversions

14.2.19 The construction of the Proposed Scheme will require the temporary closure of and/or diversion of some existing footpaths and roadside footways as well as some bridleways. The impact on footpaths (including roadside footways), cycle ways and bridleway links along the route of the Proposed Scheme has been reduced, insofar as reasonably practicable, through the design process. TA, Part 1 (TR-001-00000), Section 4 sets out the general approach to mitigation for construction which includes constructing new PRoW prior to the closure of any existing PRoW, where reasonably practicable.

14.2.20 As with highways, where site haul routes, created adjacent to the route of the Proposed Scheme, cross the existing PRoW network, active control measures will be implemented to manage the safety of PRoW users and could include staffed crossings and the provision of temporary gates or signals, which will be removed on completion of the works. These control measures are not expected to have a substantial impact on delays for pedestrian, cyclist or equestrian users of the network.

14.3 Proposed Scheme assessment of construction impacts

Key construction transport issues

14.3.1 The construction assessment takes account of all of the impacts of the Proposed Scheme in the MA02 area. The main temporary traffic and transport impacts in this area will include:

- construction and workforce vehicle movements to and from the various construction compounds;
- road closures, realignments and diversions;
- alternative routes for PRoW and roadside footways; and
- possessions and blockades on the conventional rail network.

14.3.2 The construction assessment has also considered any impacts in this area that arise from construction of the Proposed Scheme in the adjoining area.

Highway network

Highway diversions, realignments and closures

14.3.3 Temporary road or lane closures and associated diversions will be required in a number of locations including:

- A530 Nantwich Road - the existing A530 Nantwich Road will remain open during construction of the A530 Nantwich Road realignment, which will take three years to complete. Temporary traffic signals will be required for some of the construction phases, with no change in journey length;
- Clive Green Lane - in order to construct the permanent realignment of Clive Green Lane, a section of the existing highway to the west of the Shropshire Union Canal (Middlewich Branch) will be temporarily realigned for one year and nine months. A 340m section of Clive Green Lane will be realigned, up to 80m north of its existing alignment, resulting in a change in journey length of less than 100m. Traffic management measures will be implemented for three months to connect the existing highway with the permanent realignment of Clive Green Lane;
- A530 Nantwich Road/Clive Green Lane/Coalpit Lane roundabout - temporary realignment of the A530 Nantwich Road for 10 months to accommodate the construction of the A530 Nantwich Road/Clive Green Lane/Coalpit Lane roundabout, resulting in a change in journey length of less than 100m;
- Birch Lane - temporary traffic management for two months during construction of the Birch Lane diversion, with no change in journey length;
- Bell Lane - temporary closure of Bell Lane during the construction of the A54 Middlewich Road realignment for a period of four years and three months. Traffic will be diverted via the existing A533 Northwich Road, the existing A54 Middlewich Road and the realigned A54 Middlewich Road following its opening, increasing journey length for some users by 660m;
- Whatcroft Hall Lane - temporary realignment of Whatcroft Hall Lane, over a distance of 200m, up to 30m south of its current alignment, which will be in use for three months, resulting in a change in journey length of less than 100m;
- Davenham Road - temporary closure of a section of Davenham Road where it is crossed by the route of the Proposed Scheme for 4 weeks. Traffic will be diverted via Davenham Road, Shipbrook Road, Church Street, London Road and the A556 Chester Road, increasing journey length for some users by 7.2km;
- A530 King Street - temporary diversion of a section of the A530 King Street, 50m east of its existing alignment, which will take four weeks to complete resulting in a change in journey length of less than 100m. On completion of construction, the A530 King Street will be reinstated along its existing alignment;
- A556 Shurlach Road/Chester Road - temporary realignment of the A556 Shurlach Road/Chester Road at its junction with the A559 Manchester Road over a distance of

240m, 22m north of its existing alignment which will be in use for two years and six months, resulting in a change in journey length of less than 100m. The current configuration will be reinstated once construction of Wade Brook viaduct and Lostock Gralam viaduct are complete;

- A559 Manchester Road - temporary realignment of the A559 Manchester Road at its junction with A556 Shurlach Road/Chester Road over a distance of 335m, 25m north of its existing alignment, which will be in use for two years and six months, resulting in a change in journey length of less than 100m. The current configuration will be reinstated once construction of Wade Brook viaduct and Lostock Gralam viaduct are complete; and
- Linnards Lane - temporary closure of Linnards Lane for four weeks during the construction of Smoker Brook viaduct. Traffic will be diverted via the A559 Manchester Road/Hall Lane and the B5391 Church Street, increasing journey length for some users by 1.7km.

14.3.4 These may involve lane closures and partial lane closures under traffic control for the tie-in of the new alignments, intermittent lane restrictions and temporary road closures. Closures and diversions will be restricted to short-term overnight and/or weekend closures where reasonably practicable.

14.3.5 Permanent realignments, diversions and closures are considered under the operational assessment.

Highway network analysis

14.3.6 The impacts of construction of the Proposed Scheme on the highway network have been assessed by undertaking strategic model runs for a number of 'with HS2' construction scenarios, and by comparing the flows and delays against the 2030 future baseline scenario.

14.3.7 Changes have been made within the strategic model to reflect construction including HS2 construction traffic and changes to the road network including road closures, traffic management and changes to junction operations. These scenarios are only relevant to some aspects of the assessment, essentially those related to highway impacts due to the combination of highway changes and construction traffic. These are changes in:

- traffic flows;
- junction performance; and
- bus journey times.

14.3.8 To ensure the assessment addresses the different combinations and interactions of advance works, utility diversions, temporary highway closures and diversions and construction lorry movements through the construction programme period, the effects have been considered in four scenarios representing four distinct temporal phases. These scenarios ensure that all activities are assessed and combined impacts identified:

- scenario 1, peak between 2025 Q1 and 2028 Q4. This scenario corresponds with utility and advance works, compound set up and early main construction works. The main

construction activities taking place during this scenario include construction of the Crewe North RSD, extraction of material from MA02 Borrow Pits A, B, C and D and the construction of several highway modifications, including the A530 Nantwich Road realignment, the Clive Green Lane realignment, the A54 Middlewich Road realignment, the A533 Nantwich Road diversion and the A556 Shurlach Road realignment. A number of viaducts will also be under construction during this scenario, including the Shropshire Union Canal viaducts, River Dane viaduct, Puddinglake Brook viaduct, Trent and Mersey Canal viaduct, Gad Brook viaduct, Lostock Gralam viaduct and Smoker Brook viaduct. This scenario equates to 100% of the overall peak in construction traffic across the whole construction period;

- scenario 2, peak between 2029 Q1 and 2029 Q4. This scenario corresponds with the construction peak following the opening of the A54 Middlewich Road realignment and the A533 Northwich Road diversion. The main construction activities taking place during this scenario include the construction of the Crewe North RSD, River Dane viaduct, Trent and Mersey Canal viaduct, Gad Brook viaduct, Wade Brook viaduct, Lostock Gralam viaduct, Smoker Brook viaduct, Walley's Green embankment, Clive Green South and North embankments, Stanthorne South and North embankments, Dane Valley embankment, Whatcroft South and North embankments, Rudheath embankment, Lostock Gralam South and North embankments, the A530 Nantwich Road realignment, the B5082 Penny's Lane diversion and the Middlewich box structure. This scenario equates to 91% of the overall peak in construction traffic across the whole construction period;
- scenario 3, peak between 2030 Q1 and 2030 Q2. This scenario corresponds with the construction peak following the opening of the Clive Green Lane realignment, enabling construction traffic associated with the Proposed Scheme to use routes between the Crewe North RSD and the A54 Middlewich Road. The majority of construction activities taking place during scenario 2 will continue into scenario 3. This scenario equates to 89% of the overall peak in construction traffic across the whole construction period; and
- scenario 4, peak after 2030 Q2. This scenario corresponds with the construction peak following the opening of the B5082 Penny's Lane realignment. The main construction activities taking place during this scenario comprise works associated with the construction of Crewe North RSD. This scenario equates to 87% of the overall peak in construction traffic across the whole construction period.

14.3.9 The advance works, utility diversions, main works and construction lorry movements included in each scenario are shown in Table 14-6. This ensures that the impacts of the relevant activities are assessed in combination, as appropriate.

Table 14-6: Construction highway interventions by scenario in the MA02 area

Type	Intervention	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Utilities	A54 Middlewich Road shuttle working	Included	Not included	Not included	Not included

Type	Intervention	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Main Works	A54 Middlewich Road realignment	Not included	Included	Included	Included
Main Works	A533 Northwich Road diversion	Not included	Included	Included	Included
Main Works	Clive Green Lane available to construction traffic	Not included	Not included	Included	Included
Main Works	B5082 Penny's Lane realignment	Not included	Not included	Not included	Included
Key construction activities	Crewe North RSD	Included	Included	Included	Included
Key construction activities	Clive Green Lane overbridge and realignment	Not included	Included	Included	Included
	Construction HGV traffic assessed as a percentage of peak construction HGV traffic (Winsford and Northwich models combined)	100%	91%	89%	87%

Strategic and local road network traffic flows

14.3.10 During the construction period a number of roads will be affected by the construction of the Proposed Scheme. An assessment of the impact of construction related vehicle movements and temporary diversions has been undertaken and is detailed below. The flows outlined in the following sections will not necessarily occur concurrently, as impacts on different parts of the network will occur at different times.

14.3.11 The Winsford (and Middlewich) to M6 model and the Northwich Town Centre model have been used to model the construction scenarios across the MA02 area. In the MA02 area, the Winsford (and Middlewich) to M6 model covers the area from Bostock Green in the north to Walley's Green in the south, and from Winsford in the west to Holmes Chapel in the east. The Northwich Town Centre model covers the area from Higher Wincham in the north to Wharton Green in the south, and from Sandiway in the west to the M6 in the east.

14.3.12 Table 14-7 and Table 14-8 set out the traffic flows for the 2030 future baseline and the Proposed Scheme on the roads most affected by construction of the Proposed Scheme for the AM and PM peak hour. In both time periods, the percentage changes in HGV flows are generally higher than the percentage changes in all traffic flows as a result of the relatively

low number of HGV movements in the future baseline. Due to the simplified way in which the road network is represented in the strategic models, the use of some local roads may not be precisely reflected in the forecast traffic flows during construction of the Proposed Scheme, however, this is not expected to change the conclusions of the assessment.

14.3.13 Traffic flows on all other roads are either unaffected from the future baseline or there are only small changes in traffic flows (HGV or all vehicles of less than 10%) compared to the future baseline daily flow.

14.3.14 It should be noted that, unless identified in the next section of this report relating to junction impacts, these increases in traffic will not result in material increases in congestion or delay.

14.3.15 Traffic flow changes are shown in Figure 14-1 to Figure 14-6 for each scenario for the AM and PM peak hours respectively. The width of the band indicates the proportional change in traffic, with red representing an increase and green a decrease compared with the 2030 future baseline scenario.

Table 14-7: 2030 future baseline and with the Proposed Scheme construction traffic (vehicles), AM peak hour (08:00–09:00)

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Swanlow Drive (between B5074 Swanlow Lane and Darnhall School Lane)	EB	25	1	25	1	0%	0%	25	1	0%	0%	25	1	0%	0%	25	1	0%	0%
	WB	56	1	91	1	63%	0%	69	1	23%	0%	76	1	36%	0%	76	1	36%	0%
B5074 Swanlow Lane (between Moors Lane and Swanlow Drive)	NB	541	21	723	23	34%	10%	619	23	14%	10%	632	23	17%	10%	632	23	17%	10%
	SB	438	14	583	27	33%	93%	503	18	15%	29%	471	14	8%	0%	471	14	8%	0%
Middlewich Eastern Bypass (between A533 Booth Lane and Cledford Lane)	NB	167	15	310	22	86%	47%	314	20	88%	33%	275	21	65%	40%	275	21	65%	40%
	SB	145	1	66	2	-54%	100%	82	2	-43%	100%	78	2	-46%	100%	78	2	-46%	100%
Darnhall School Lane (between Glebe Green Drive and B5074 Swanlow Lane)	NB	25	1	4	1	-84%	0%	23	1	-8%	0%	22	1	-12%	0%	22	1	-12%	0%
	SB	35	1	275	1	686%	0%	150	1	329%	0%	144	1	311%	0%	144	1	311%	0%
Durham Drive/Glebe Green Drive (between Darnhall School Lane and Townsfields Drive)	NB	158	2	454	2	187%	0%	289	2	83%	0%	293	2	85%	0%	293	2	85%	0%
	SB	34	2	34	2	0%	0%	34	2	0%	0%	37	2	9%	0%	37	2	9%	0%
Durham Drive/Dover Drive/Mount Pleasant Drive (between Townsfields Drive and Denbigh Drive)	NB	113	2	373	2	230%	0%	238	2	111%	0%	240	2	112%	0%	240	2	112%	0%
	SB	114	2	117	2	3%	0%	112	2	-2%	0%	115	2	1%	0%	115	2	1%	0%
Mount Pleasant Drive (between Denbigh Drive and Woodford Lane West)	EB	60	0	69	0	15%	0%	65	0	8%	0%	67	0	12%	0%	67	0	12%	0%
	WB	168	0	430	0	156%	0%	296	0	76%	0%	297	0	77%	0%	297	0	77%	0%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Cledford Lane (between Jones Lane and Bradwall Road)	EB	5	0	1	0	-80%	0%	4	0	-20%	0%	4	0	-20%	0%	4	0	-20%	0%
	WB	2	0	26	0	1200%	0%	26	0	1200%	0%	26	0	1200%	0%	26	0	1200%	0%
Woodford Lane West (between Mount Pleasant Drive and A54 Oakmere Road)	NB	55	0	60	0	9%	0%	60	0	9%	0%	63	0	15%	0%	63	0	15%	0%
	SB	201	2	461	2	129%	0%	328	2	63%	0%	329	2	64%	0%	329	2	64%	0%
St Ann's Road (between Sutton Lane and Manor Lane)	NB	87	0	78	0	-10%	0%	57	0	-34%	0%	73	0	-16%	0%	73	0	-16%	0%
	SB	109	0	90	0	-17%	0%	97	0	-11%	0%	100	0	-8%	0%	100	0	-8%	0%
Clive Green Lane/Clive Lane (between A530 Nantwich Road and A54 Middlewich Road)	NB	463	21	482	15	4%	-29%	432	17	-7%	-19%	412	30	-11%	43%	412	30	-11%	43%
	SB	220	20	499	8	127%	-60%	315	16	43%	-20%	607	35	176%	75%	607	35	176%	75%
St Ann's Road (between Manor Lane and King Edward Street)	NB	87	1	96	1	10%	0%	61	1	-30%	0%	76	1	-13%	0%	76	1	-13%	0%
	SB	130	0	110	0	-15%	0%	136	0	5%	0%	125	0	-4%	0%	125	0	-4%	0%
A54 Middlewich Road (between Clive Lane and A54 Winsford Bypass)	EB	759	19	705	6	-7%	-68%	718	12	-5%	-37%	755	29	-1%	53%	755	29	-1%	53%
	WB	604	27	441	4	-27%	-85%	553	22	-8%	-19%	540	24	-11%	-11%	540	24	-11%	-11%
St Ann's Road (between King Edward Street and A530 Nantwich Road)	NB	147	1	156	1	6%	0%	106	1	-28%	0%	131	1	-11%	0%	131	1	-11%	0%
	SB	187	0	156	0	-17%	0%	173	0	-7%	0%	180	0	-4%	0%	180	0	-4%	0%
A54 Kinderton Street (between A533 Leadsmithy Street and King Street)	EB	1,238	62	1,049	74	-15%	19%	1,120	78	-10%	26%	1,189	107	-4%	73%	1,189	107	-4%	73%
	WB	567	58	635	62	12%	7%	622	71	10%	22%	610	80	8%	38%	610	80	8%	38%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
A54 St Michael's Way (between A533 Leadsmithy Street and The Bull Ring)	EB	962	45	709	57	-26%	27%	838	61	-13%	36%	901	90	-6%	100%	901	90	-6%	100%
	WB	738	56	655	59	-11%	5%	725	71	-2%	27%	758	78	3%	39%	758	78	3%	39%
Middlewich Eastern Bypass (between Cledford Lane and A54 Holmes Chapel Road)	NB	429	15	618	22	44%	47%	593	20	38%	33%	553	22	29%	47%	553	22	29%	47%
	SB	195	1	152	2	-22%	100%	158	2	-19%	100%	150	2	-23%	100%	150	2	-23%	100%
A54 St Michael's Way (between A54 Chester Road and The Bull Ring)	EB	1,017	43	747	55	-27%	28%	887	59	-13%	37%	953	88	-6%	105%	953	88	-6%	105%
A54 Chester Road (between A54 St Michael's Way and A530 Newton Bank)	EB	1,592	44	1,198	56	-25%	27%	1,635	60	3%	36%	1,587	89	0%	102%	1,587	89	0%	102%
A54 Holmes Chapel Road (between King Street and B5309 Centurion Way)	EB	1,007	77	847	94	-16%	22%	906	99	-10%	29%	971	128	-4%	66%	971	128	-4%	66%
	WB	575	53	788	64	37%	21%	762	74	33%	40%	731	82	27%	55%	731	82	27%	55%
A54 Chester Road (between A530 Newton Bank and A530 Croxton Lane)	EB	1,223	43	801	54	-35%	26%	1,354	59	11%	37%	1,289	88	5%	105%	1,289	88	5%	105%
	WB	965	54	660	57	-32%	6%	942	68	-2%	26%	936	74	-3%	37%	936	74	-3%	37%
King Street (between New King Street and Hadrian Way)	NB	379	1	498	1	31%	0%	481	1	27%	0%	464	1	22%	0%	464	1	22%	0%
	SB	82	1	78	1	-5%	0%	46	1	-44%	0%	46	1	-44%	0%	46	1	-44%	0%
A54 Chester Road (between A530 Croxton Lane and A533 Northwich Road)	EB	739	43	302	53	-59%	23%	855	61	16%	42%	761	90	3%	109%	761	90	3%	109%
	WB	793	44	328	48	-59%	9%	707	58	-11%	32%	745	65	-6%	48%	745	65	-6%	48%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
B5309 Centurion Way (between B5081 Byley Road and A54 Holmes Chapel Road)	EB	607	55	353	54	-42%	-2%	347	59	-43%	7%	357	63	-41%	15%	357	63	-41%	15%
	WB	646	73	642	101	-1%	38%	586	92	-9%	26%	594	108	-8%	48%	594	108	-8%	48%
B5309 Centurion Way (between White Park Close and B5081 Byley Road)	EB	415	23	197	74	-53%	222%	161	56	-61%	143%	174	62	-58%	170%	174	62	-58%	170%
	WB	427	70	352	145	-18%	107%	367	117	-14%	67%	348	134	-19%	91%	348	134	-19%	91%
B5309 Centurion Way (between White Park Close and B5309 King Street)	NB	372	60	307	137	-17%	128%	340	108	-9%	80%	316	125	-15%	108%	316	125	-15%	108%
	SB	308	23	102	74	-67%	222%	84	56	-73%	143%	92	62	-70%	170%	92	62	-70%	170%
B5081 Byley Road (between B5309 Centurion Way and Moss Lane)	NB	308	7	452	60	47%	757%	381	52	24%	643%	401	46	30%	557%	401	46	30%	557%
	SB	280	36	360	89	29%	147%	364	81	30%	125%	349	76	25%	111%	349	76	25%	111%
B5309 King Street (between B5309 Centurion Way and Yatehouse Lane)	NB	624	57	689	134	10%	135%	707	105	13%	84%	671	122	8%	114%	671	122	8%	114%
	SB	321	29	112	79	-65%	172%	68	61	-79%	110%	84	67	-74%	131%	84	67	-74%	131%
A533 Bostock Road (between A54 Middlewich Road realignment and London Road)	NB	325	7	31	0	-90%	-100%	236	2	-27%	-71%	270	1	-17%	-86%	270	1	-17%	-86%
	SB	320	19	319	18	0%	-5%	579	19	81%	0%	493	25	54%	32%	493	25	54%	32%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
B5309 King Street (between Yatehouse Lane and A530 Croxton Lane)	NB	656	57	720	134	10%	135 %	738	105	13%	84%	702	122	7%	114 %	702	122	7%	114 %
	SB	337	29	125	79	-63%	172 %	82	61	-76%	110 %	98	68	-71%	134 %	98	68	-71%	134 %
London Road (between A533 Bostock Road and Brick Kiln Lane)	NB	266	0	5	0	-98%	0%	187	0	-30%	0%	218	0	-18%	0%	218	0	-18%	0%
	SB	425	1	686	1	61%	0%	757	1	78%	0%	784	1	84%	0%	784	1	84%	0%
A530 King Street (between Whatcroft Hall Lane and Davenham Road)	NB	838	19	834	104	0%	447 %	834	104	0%	447 %	790	74	-6%	289 %	929	54	11%	184 %
	SB	702	38	842	104	20%	174 %	842	104	20%	174 %	798	91	14%	139 %	776	64	11%	68%
Davenham Road (between Shurlach Lane and A530 King Street)	EB	235	0	226	8	-4%	0%	226	8	-4%	0%	256	2	9%	0%	141	5	-40%	0%
	WB	474	0	544	8	15%	0%	544	8	15%	0%	549	2	16%	0%	578	5	22%	0%
A556 Shurlach Road off-slip (between A556 Shurlach Road and A533 Davenham Bypass)	SB	253	11	297	34	17%	209 %	297	34	17%	209 %	268	20	6%	82%	268	21	6%	91%
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	163	0	236	2	45%	0%	236	2	45%	0%	237	0	45%	0%	43	0	-74%	0%
	WB	253	0	247	0	-2%	0%	247	0	-2%	0%	257	0	2%	0%	239	0	-6%	0%
A530 King Street (between Crowder's Lane and B5082 Penny's Lane diversion)	NB	630	19	598	102	-5%	437 %	598	102	-5%	437 %	568	73	-10%	284 %	697	52	11%	174 %
	SB	643	39	912	102	42%	162 %	912	102	42%	162 %	849	90	32%	131 %	785	62	22%	59%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
B5082 Penny's Lane (between Crowder's Lane and B5082 Penny's Lane Diversion)	EB	270	2	174	2	-36%	0%	174	2	-36%	0%	187	2	-31%	0%	410	2	52%	0%
	WB	218	30	130	31	-40%	3%	130	31	-40%	3%	148	30	-32%	0%	180	17	-17%	-43%
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	NB	636	18	586	94	-8%	422%	586	94	-8%	422%	557	65	-12%	261%	796	68	25%	278%
	SB	626	39	925	94	48%	141%	925	94	48%	141%	863	83	38%	113%	1,164	63	86%	62%
Birches Lane diversion (between A556 Shurlach Road and B5082 Holmes Chapel Road)	NB	6	0	142	0	2267%	0%	142	0	2267%	0%	155	0	2483%	0%	168	14	2700%	0%
	SB	167	2	267	2	60%	0%	267	2	60%	0%	224	3	34%	50%	212	2	27%	0%
Gadbrook Road (between East Avenue and A556 Shurlach Road)	NB	162	1	163	7	1%	600%	163	7	1%	600%	163	1	1%	0%	142	1	-12%	0%
	SB	286	4	284	5	-1%	25%	284	5	-1%	25%	285	5	0%	25%	287	5	0%	25%
East Avenue (between Gadbrook Road and Grange Road)	NB	33	0	41	6	24%	0%	41	6	24%	0%	32	0	-3%	0%	32	0	-3%	0%
	SB	45	3	71	4	58%	33%	71	4	58%	33%	70	4	56%	33%	71	4	58%	33%
East Avenue (between Grange Road and South Drive)	NB	35	0	43	6	23%	0%	43	6	23%	0%	34	0	-3%	0%	34	0	-3%	0%
	SB	44	3	69	4	57%	33%	69	4	57%	33%	69	4	57%	33%	68	4	55%	33%
West Avenue (between Gadbrook Road and Grange Road)	NB	37	1	27	1	-27%	0%	27	1	-27%	0%	32	1	-14%	0%	33	1	-11%	0%
	SB	8	0	14	0	75%	0%	14	0	75%	0%	12	0	50%	0%	12	0	50%	0%
Grange Road (between West Avenue and East Avenue)	EB	3	0	4	0	33%	0%	4	0	33%	0%	4	0	33%	0%	5	0	67%	0%
	WB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
East Avenue (between South Drive and Central Road)	NB	19	0	28	7	47%	0%	28	7	47%	0%	19	0	0%	0%	19	0	0%	0%
	SB	68	3	94	4	38%	33%	94	4	38%	33%	94	4	38%	33%	94	4	38%	33%
Central Road (between West Avenue and East Avenue)	NB	1	0	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%
	SB	20	0	40	1	100%	0%	40	1	100%	0%	36	1	80%	0%	38	1	90%	0%
Greenway Drive (between Agecroft Road and Belmont Road)	EB	13	2	13	2	0%	0%	13	2	0%	0%	13	1	0%	-50%	11	1	-15%	-50%
	WB	14	3	15	3	7%	0%	15	3	7%	0%	15	3	7%	0%	15	3	7%	0%
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	182	7	206	24	13%	243%	206	24	13%	243%	204	16	12%	129%	270	28	48%	300%
	SB	16	1	11	10	-31%	900%	11	10	-31%	900%	3	3	-81%	200%	0	0	-100%	-100%
A556 Shurlach Road (between Birches Lane and A559 Manchester Road)	NB	1,325	76	1,325	158	0%	108%	1,325	158	0%	108%	1,335	133	1%	75%	1,334	108	1%	42%
	SB	1,467	95	2,005	177	37%	86%	2,005	177	37%	86%	1,870	150	27%	58%	1,812	125	24%	32%
A559 Manchester Road (between A530 Griffiths Road and A559 Hall Lane)	EB	509	24	567	39	11%	63%	567	39	11%	63%	540	28	6%	17%	536	30	5%	25%
	WB	866	28	899	41	4%	46%	899	41	4%	46%	870	30	0%	7%	879	32	2%	14%

Location	Direction	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Station Road (between School Lane and A559 Manchester Road)	NB	179	2	95	14	-47%	600%	95	14	-47%	600%	96	13	-46%	550%	136	22	-24%	1000%
	SB	106	1	33	0	-69%	-100%	33	0	-69%	-100%	29	0	-73%	-100%	24	6	-77%	500%
School Lane (between Station Road and Stubbs Lane)	NB	117	0	101	0	-14%	0%	101	0	-14%	0%	105	0	-10%	0%	128	0	9%	0%
A559 Manchester Road (between A559 Hall Lane and Stubbs Lane)	EB	271	16	308	30	14%	88%	308	30	14%	88%	300	20	11%	25%	281	22	4%	38%
	WB	606	20	589	35	-3%	75%	589	35	-3%	75%	578	24	-5%	20%	585	26	-3%	30%
A559 Manchester Road (between Stubbs Lane and Fryer Road)	EB	216	17	272	31	26%	82%	272	31	26%	82%	265	21	23%	24%	262	23	21%	35%
	WB	422	20	437	34	4%	70%	437	34	4%	70%	425	24	1%	20%	427	26	1%	30%
A556 Chester Road (between A559 Manchester Road and Linnards Lane)	EB	1,431	91	1,557	174	9%	91%	1,557	174	9%	91%	1,541	151	8%	66%	1,518	125	6%	37%
	WB	1,730	112	2,421	195	40%	74%	2,421	195	40%	74%	2,238	170	29%	52%	2,155	144	25%	29%
A556 Chester Road (between Linnards Lane and Plumley Moor Road)	EB	1,592	80	1,576	93	-1%	16%	1,576	93	-1%	16%	1,521	149	-4%	86%	1,508	159	-5%	99%
	WB	1,307	89	1,318	93	1%	4%	1,318	93	1%	4%	1,280	137	-2%	54%	1,282	137	-2%	54%

Table 14-8: 2030 future baseline and with the Proposed Scheme construction traffic (vehicles), PM peak hour (17:00–18:00)

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Swanlow Drive (between B5074 Swanlow Lane and Darnhall School Lane)	EB	18	1	19	1	6%	0%	18	1	0%	0%	18	1	0%	0%	18	1	0%	0%
	WB	29	1	61	1	110%	0%	36	1	24%	0%	36	1	24%	0%	36	1	24%	0%
B5074 Swanlow Lane (between Moors Lane and Swanlow Drive)	NB	566	2	661	2	17%	0%	596	2	5%	0%	634	2	12%	0%	634	2	12%	0%
	SB	474	4	697	4	47%	0%	625	5	32%	25%	543	5	15%	25%	543	5	15%	25%
Middlewich Eastern Bypass (between A533 Booth Lane and Cledford Lane)	NB	52	0	139	0	167%	0%	57	0	10%	0%	83	0	60%	0%	83	0	60%	0%
	SB	422	10	462	20	9%	100%	456	20	8%	100%	398	20	-6%	100%	398	20	-6%	100%
Darnhall School Lane (between Glebe Green Drive and B5074 Swanlow Lane)	NB	4	1	1	1	-75%	0%	1	1	-75%	0%	1	1	-75%	0%	1	1	-75%	0%
	SB	119	1	271	1	128%	0%	205	1	72%	0%	213	1	79%	0%	213	1	79%	0%
Durham Drive/Glebe Green Drive	NB	108	2	296	2	174%	0%	204	2	89%	0%	211	2	95%	0%	211	2	95%	0%
	SB	36	2	39	2	8%	0%	36	2	0%	0%	36	2	0%	0%	36	2	0%	0%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
(between Darnhall School Lane and Townsfields Drive)																			
Durham Drive/Dover Drive/Mount Pleasant Drive (between Townsfields Drive and Denbigh Drive)	NB	114	2	251	2	120%	0%	198	2	74%	0%	210	2	84%	0%	210	2	84%	0%
	SB	84	2	76	2	-10%	0%	73	2	-13%	0%	73	2	-13%	0%	73	2	-13%	0%
Mount Pleasant Drive (between Denbigh Drive and Woodford Lane West)	EB	95	0	91	0	-4%	0%	89	0	-6%	0%	86	0	-9%	0%	86	0	-9%	0%
	WB	59	0	219	0	271%	0%	165	0	180%	0%	174	0	195%	0%	174	0	195%	0%
Cledford Lane (between Jones Lane and Bradwall Road)	EB	129	0	133	0	3%	0%	173	0	34%	0%	158	0	22%	0%	158	0	22%	0%
	WB	2	0	10	0	400%	0%	10	0	400%	0%	9	0	350%	0%	9	0	350%	0%
Woodford Lane West (between Mount Pleasant Drive and A54 Oakmere Road)	NB	102	0	99	0	-3%	0%	96	0	-6%	0%	93	0	-9%	0%	93	0	-9%	0%
	SB	69	2	228	2	230%	0%	175	2	154%	0%	184	2	167%	0%	184	2	167%	0%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
St Ann's Road (between Sutton Lane and Manor Lane)	NB	142	0	100	0	-30%	0%	100	0	-30%	0%	107	0	-25%	0%	107	0	-25%	0%
	SB	247	0	61	0	-75%	0%	228	0	-8%	0%	256	0	4%	0%	256	0	4%	0%
Clive Green Lane/Clive Lane (between A530 Nantwich Road and A54 Middlewich Road)	NB	350	20	511	8	46%	-60%	442	20	26%	0%	390	35	11%	75%	390	35	11%	75%
	SB	280	4	312	9	11%	125%	191	3	-32%	-25%	408	18	46%	350%	408	18	46%	350%
St Ann's Road (between Manor Lane and King Edward Street)	NB	168	0	126	0	-25%	0%	118	0	-30%	0%	121	0	-28%	0%	121	0	-28%	0%
	SB	292	1	77	1	-74%	0%	264	1	-10%	0%	288	1	-1%	0%	288	1	-1%	0%
A54 Middlewich Road (between Clive Lane and A54 Winsford Bypass)	EB	552	4	543	8	-2%	100%	564	3	2%	-25%	625	4	13%	0%	625	4	13%	0%
	WB	798	2	677	2	-15%	0%	831	2	4%	0%	810	2	2%	0%	810	2	2%	0%
St Ann's Road (between King Edward Street	NB	157	0	136	0	-13%	0%	115	0	-27%	0%	121	0	-23%	0%	121	0	-23%	0%
	SB	301	1	104	1	-65%	0%	276	1	-8%	0%	301	1	0%	0%	301	1	0%	0%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
and A530 Nantwich Road)																			
A54 Kinderton Street (between A533 Leadsmithy Street and King Street)	EB	763	24	836	57	10%	138%	1,051	47	38%	96%	1,155	53	51%	121%	1,155	53	51%	121%
	WB	714	19	676	51	-5%	168%	684	44	-4%	132%	681	48	-5%	153%	681	48	-5%	153%
A54 St Michael's Way (between A533 Leadsmithy Street and The Bull Ring)	EB	810	31	711	54	-12%	74%	1,084	55	34%	77%	1,162	60	43%	94%	1,162	60	43%	94%
	WB	926	19	781	51	-16%	168%	895	44	-3%	132%	900	49	-3%	158%	900	49	-3%	158%
Middlewich Eastern Bypass (between Cledford Lane and A54 Holmes Chapel Road)	NB	71	0	167	0	135%	0%	87	0	23%	0%	110	0	55%	0%	110	0	55%	0%
	SB	804	10	851	20	6%	100%	772	20	-4%	100%	756	20	-6%	100%	756	20	-6%	100%
A54 St Michael's Way (between A54 Chester Road and The Bull Ring)	EB	818	29	718	52	-12%	79%	1,096	53	34%	83%	1,174	58	44%	100%	1,174	58	44%	100%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
A54 Chester Road (between A54 St Michael's Way and A530 Newton Bank)	EB	1,277	29	908	52	-29%	79%	1,543	53	21%	83%	1,550	58	21%	100%	1,550	58	21%	100%
A54 Holmes Chapel Road (between King Street and B5309 Centurion Way)	EB	776	31	705	63	-9%	103%	817	53	5%	71%	852	60	10%	94%	852	60	10%	94%
	WB	764	28	710	59	-7%	111%	686	52	-10%	86%	669	57	-12%	104%	669	57	-12%	104%
A54 Chester Road (between A530 Newton Bank and A530 Croxton Lane)	EB	1,053	29	569	51	-46%	76%	1,122	52	7%	79%	1,074	58	2%	100%	1,074	58	2%	100%
	WB	1,024	18	771	49	-25%	172%	995	42	-3%	133%	992	47	-3%	161%	992	47	-3%	161%
King Street (between New King Street and Hadrian Way)	NB	407	1	524	1	29%	0%	598	1	47%	0%	655	1	61%	0%	655	1	61%	0%
	SB	52	1	51	1	-2%	0%	52	1	0%	0%	53	1	2%	0%	53	1	2%	0%
A54 Chester Road (between A530 Croxton Lane and A533	EB	776	26	300	48	-61%	85%	897	51	16%	96%	862	55	11%	112%	862	55	11%	112%
	WB	672	18	354	49	-47%	172%	642	42	-4%	133%	656	47	-2%	161%	656	47	-2%	161%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Northwich Road)																			
B5309 Centurion Way (between B5081 Byley Road and A54 Holmes Chapel Road)	EB	585	15	409	45	-30%	200%	352	48	-40%	220%	384	53	-34%	253%	384	53	-34%	253%
	WB	648	35	792	46	22%	31%	863	58	33%	66%	835	54	29%	54%	835	54	29%	54%
B5309 Centurion Way (between White Park Close and B5081 Byley Road)	EB	332	12	374	91	13%	658%	293	74	-12%	517%	331	81	0%	575%	331	81	0%	575%
	WB	553	26	454	86	-18%	231%	485	78	-12%	200%	491	76	-11%	192%	491	76	-11%	192%
B5309 Centurion Way (between White Park Close and B5309 King Street)	NB	263	26	155	86	-41%	231%	173	79	-34%	204%	194	76	-26%	192%	194	76	-26%	192%
	SB	355	9	365	88	3%	878%	280	71	-21%	689%	336	78	-5%	767%	336	78	-5%	767%
B5081 Byley Road (between B5309 Centurion Way and Moss Lane)	NB	222	9	486	65	119%	622%	508	53	129%	489%	473	48	113%	433%	473	48	113%	433%
	SB	381	4	220	61	-42%	1425%	216	48	-43%	1100%	208	43	-45%	975%	208	43	-45%	975%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
B5309 King Street (between B5309 Centurion Way and Yatehouse Lane)	NB	698	34	692	95	-1%	179%	777	87	11%	156%	864	84	24%	147%	864	84	24%	147%
	SB	395	7	379	86	-4%	1129%	294	69	-26%	886%	362	76	-8%	986%	362	76	-8%	986%
A533 Bostock Road (between A54 Middlewich Road realignment and London Road)	NB	289	10	206	10	-29%	0%	376	10	30%	0%	351	10	21%	0%	351	10	21%	0%
	SB	366	6	79	0	-78%	-100%	470	6	28%	0%	474	6	30%	0%	474	6	30%	0%
B5309 King Street (between Yatehouse Lane and A530 Croxton Lane)	NB	742	34	724	95	-2%	179%	820	87	11%	156%	898	84	21%	147%	898	84	21%	147%
	SB	390	7	361	85	-7%	1114%	287	69	-26%	886%	347	76	-11%	986%	347	76	-11%	986%
London Road (between A533 Bostock Road and Brick Kiln Lane)	NB	231	0	281	0	22%	0%	342	0	48%	0%	293	0	27%	0%	293	0	27%	0%
	SB	155	1	1	1	-99%	0%	266	1	72%	0%	266	1	72%	0%	266	1	72%	0%
A530 King Street (between Whatcroft Hall Lane and	NB	892	25	912	113	2%	352%	912	113	2%	352%	875	85	-2%	240%	711	57	-20%	128%
	SB	1,058	7	1,033	97	-2%	1286%	1,033	97	-2%	1286%	1,065	67	1%	857%	1,133	41	7%	486%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Davenham Road)																			
Davenham Road (between Shurlach Lane and A530 King Street)	EB	212	0	192	8	-9%	0%	192	8	-9%	0%	212	2	0%	0%	235	5	11%	0%
	WB	104	0	92	8	-12%	0%	92	8	-12%	0%	86	2	-17%	0%	90	5	-13%	0%
A556 Shurlach Road off-slip (between A556 Shurlach Road and A533 Davenham Bypass)	SB	875	10	835	10	-5%	0%	835	10	-5%	0%	847	11	-3%	10%	858	11	-2%	10%
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	47	0	137	2	191%	0%	137	2	191%	0%	121	0	157%	0%	112	0	138%	0%
	WB	131	0	121	1	-8%	0%	121	1	-8%	0%	123	0	-6%	0%	112	0	-15%	0%
A530 King Street (between Crowder's Lane and B5082 Penny's Lane diversion)	NB	797	25	749	111	-6%	344%	749	111	-6%	344%	726	83	-9%	232%	560	56	-30%	124%
	SB	792	7	826	94	4%	1243%	826	94	4%	1243%	831	66	5%	843%	878	40	11%	471%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
B5082 Penny's Lane (between Crowder's Lane and B5082 Penny's Lane Diversion)	EB	209	2	247	1	18%	-50%	247	1	18%	-50%	250	1	20%	-50%	322	2	54%	0%
	WB	212	21	196	21	-8%	0%	196	21	-8%	0%	206	19	-3%	-10%	318	12	50%	-43%
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	NB	776	25	761	103	-2%	312%	761	103	-2%	312%	739	76	-5%	204%	887	66	14%	164%
	SB	780	7	795	86	2%	1129%	795	86	2%	1129%	800	59	3%	743%	1,143	40	47%	471%
Birches Lane diversion (between A556 Shurlach Road and B5082 Holmes Chapel Road)	NB	160	0	234	0	46%	0%	234	0	46%	0%	206	0	29%	0%	243	11	52%	0%
	SB	258	3	322	4	25%	33%	322	4	25%	33%	292	3	13%	0%	232	3	-10%	0%
Gadbrook Road (between East Avenue and A556 Shurlach Road)	NB	382	3	355	3	-7%	0%	355	3	-7%	0%	379	3	-1%	0%	382	3	0%	0%
	SB	222	0	223	0	0%	0%	223	0	0%	0%	223	0	0%	0%	222	0	0%	0%
East Avenue (between Gadbrook Road	NB	149	1	144	1	-3%	0%	144	1	-3%	0%	145	1	-3%	0%	145	1	-3%	0%
	SB	7	3	38	3	443%	0%	38	3	443%	0%	32	3	357%	0%	36	3	414%	0%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
and Grange Road)																			
East Avenue (between Grange Road and South Drive)	NB	150	1	146	1	-3%	0%	146	1	-3%	0%	146	1	-3%	0%	147	1	-2%	0%
	SB	8	3	11	3	38%	0%	11	3	38%	0%	9	3	13%	0%	7	3	-13%	0%
West Avenue (between Gadbrook Road and Grange Road)	NB	6	1	46	1	667%	0%	46	1	667%	0%	41	1	583%	0%	52	1	767%	0%
	SB	9	0	10	0	11%	0%	10	0	11%	0%	10	0	11%	0%	10	0	11%	0%
Grange Road (between West Avenue and East Avenue)	EB	1	0	30	0	2900%	0%	30	0	2900 %	0%	26	0	2500 %	0%	32	0	3100 %	0%
	WB	1	0	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%
East Avenue (between South Drive and Central Road)	NB	195	1	187	1	-4%	0%	187	1	-4%	0%	190	1	-3%	0%	192	1	-2%	0%
	SB	35	3	35	3	0%	0%	35	3	0%	0%	35	3	0%	0%	35	3	0%	0%
Central Road (between West Avenue and East Avenue)	NB	1	0	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%
	SB	1	0	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%	1	0	0%	0%
Greenway Drive (between	EB	5	0	5	0	0%	0%	5	0	0%	0%	5	0	0%	0%	5	0	0%	0%
	WB	8	3	21	3	163%	0%	21	3	163%	0%	8	3	0%	0%	8	3	0%	0%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Agecroft Road and Belmont Road)																			
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	218	8	328	18	50%	125%	328	18	50%	125%	332	16	52%	100%	367	18	68%	125%
	SB	19	3	10	10	-47%	233%	10	10	-47%	233%	3	3	-84%	0%	0	0	-100%	-100%
A556 Shurlach Road (between Birches Lane and A559 Manchester Road)	NB	948	39	1,022	122	8%	213%	1,022	122	8%	213%	1,013	95	7%	144%	1,042	72	10%	85%
	SB	1,576	39	1,509	123	-4%	215%	1,509	123	-4%	215%	1,526	96	-3%	146%	1,545	72	-2%	85%
A559 Manchester Road (between A530 Griffiths Road and A559 Hall Lane)	EB	710	3	747	18	5%	500%	747	18	5%	500%	737	8	4%	167%	729	9	3%	200%
	WB	813	14	811	28	0%	100%	811	28	0%	100%	803	17	-1%	21%	823	19	1%	36%
Station Road (between School Lane and A559 Manchester Road)	NB	192	1	192	8	0%	700%	192	8	0%	700%	178	13	-7%	1200%	181	12	-6%	1100%
	SB	50	1	0	0	-100%	-100%	0	0	-100%	-100%	0	0	-100%	-100%	6	6	-88%	500%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
School Lane (between Station Road and Stubbs Lane)	NB	126	0	174	0	38%	0%	174	0	38%	0%	171	0	36%	0%	191	0	52%	0%
A559 Manchester Road (between A559 Hall Lane and Stubbs Lane)	EB	486	2	505	17	4%	750%	505	17	4%	750%	498	6	2%	200%	488	8	0%	300%
	WB	454	5	474	19	4%	280%	474	19	4%	280%	452	9	0%	80%	416	11	-8%	120%
A559 Manchester Road (between Stubbs Lane and Fryer Road)	EB	585	2	618	17	6%	750%	618	17	6%	750%	611	6	4%	200%	608	8	4%	300%
	WB	270	5	347	20	29%	300%	347	20	29%	300%	310	9	15%	80%	268	11	-1%	120%
A556 Chester Road (between A559 Manchester Road and Linnards Lane)	EB	1,244	41	1,416	123	14%	200%	1,416	123	14%	200%	1,391	98	12%	139%	1,367	74	10%	80%
	WB	1,782	43	1,888	129	6%	200%	1,888	129	6%	200%	1,833	103	3%	140%	1,766	78	-1%	81%
A556 Chester Road (between Linnards Lane	EB	973	45	1,056	54	9%	20%	1,056	54	9%	20%	1,163	121	20%	169%	1,223	124	26%	176%
	WB	1,502	45	1,485	51	-1%	13%	1,485	51	-1%	13%	1,420	118	-5%	162%	1,393	119	-7%	164%

Location	Direction*	2030 baseline flows		Proposed Scheme flows - scenario 1		Scenario 1 - % change from 2030 baseline		Proposed Scheme flows - scenario 2		Scenario 2 - % change from 2030 baseline		Proposed Scheme flows - scenario 3		Scenario 3 - % change from 2030 baseline		Proposed Scheme flows - scenario 4		Scenario 4 - % change from 2030 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
and Plumley Moor Road)																			

Figure 14-1: MA02 traffic flow changes 2030 future baseline to Proposed Scheme scenario 1, AM peak hour

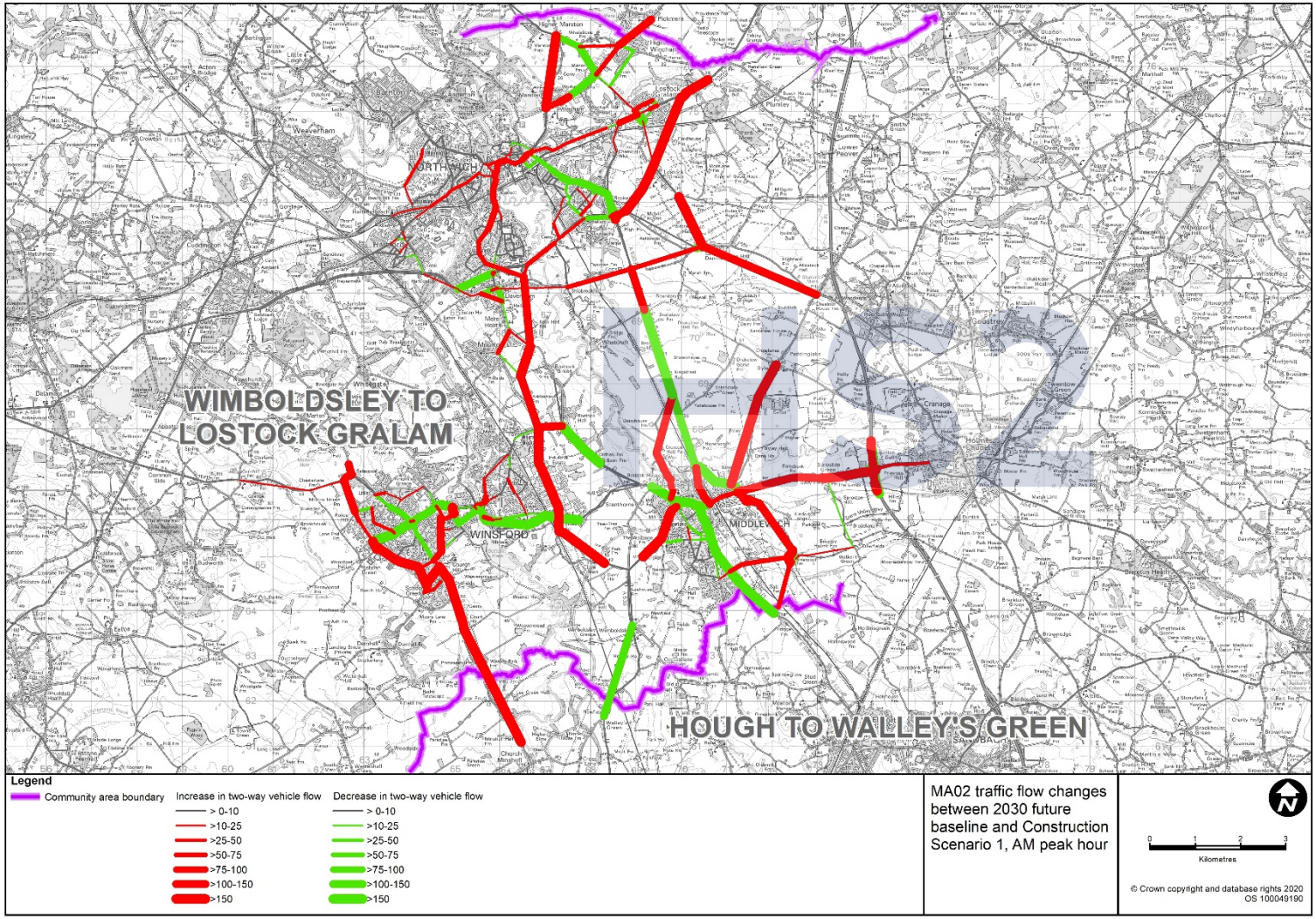


Figure 14-2: MA02 traffic flow changes 2030 future baseline to Proposed Scheme scenario 1, PM peak hour

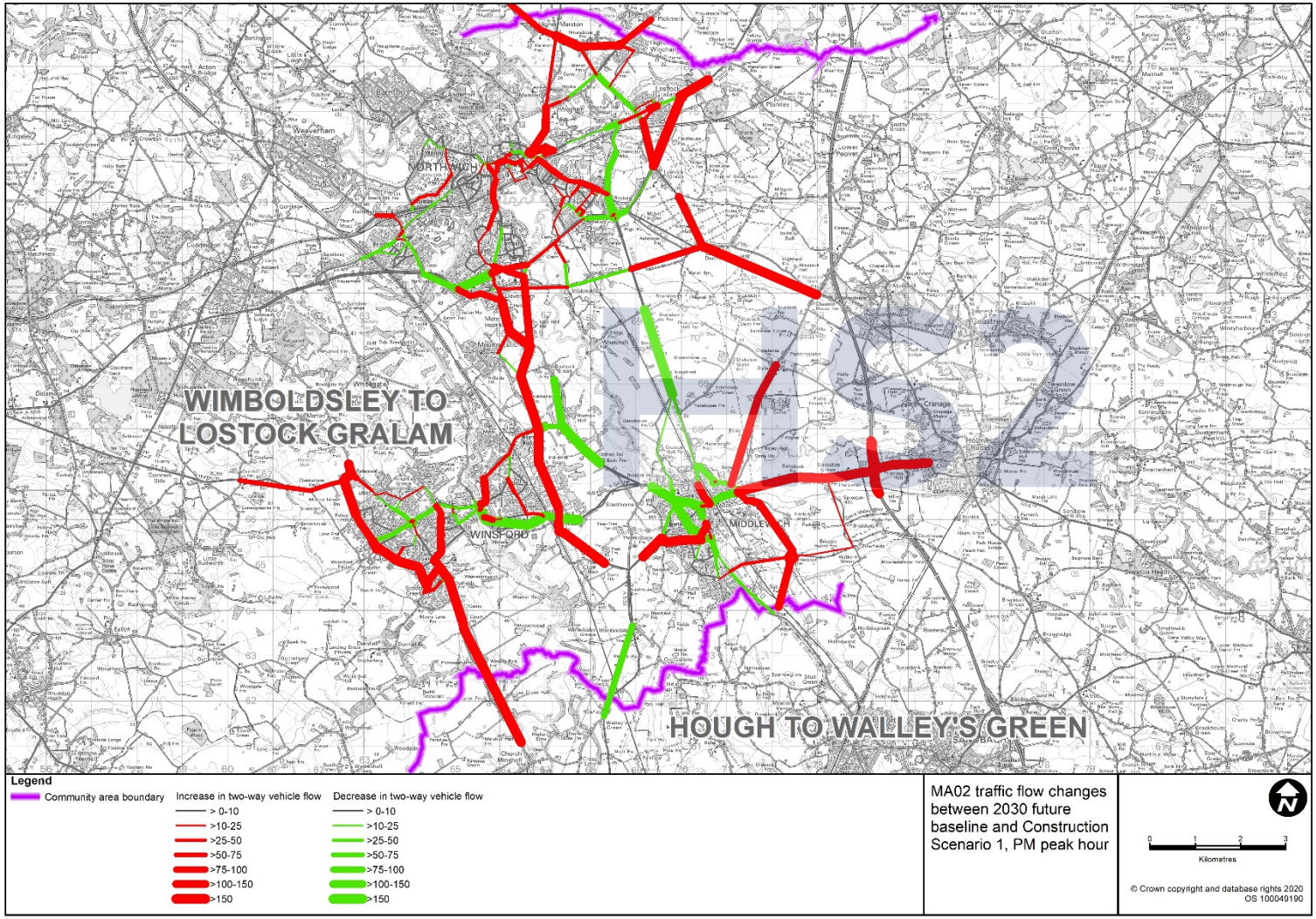


Figure 14-3: MA02 traffic flow changes 2030 future baseline to Proposed Scheme scenario 2, AM peak hour

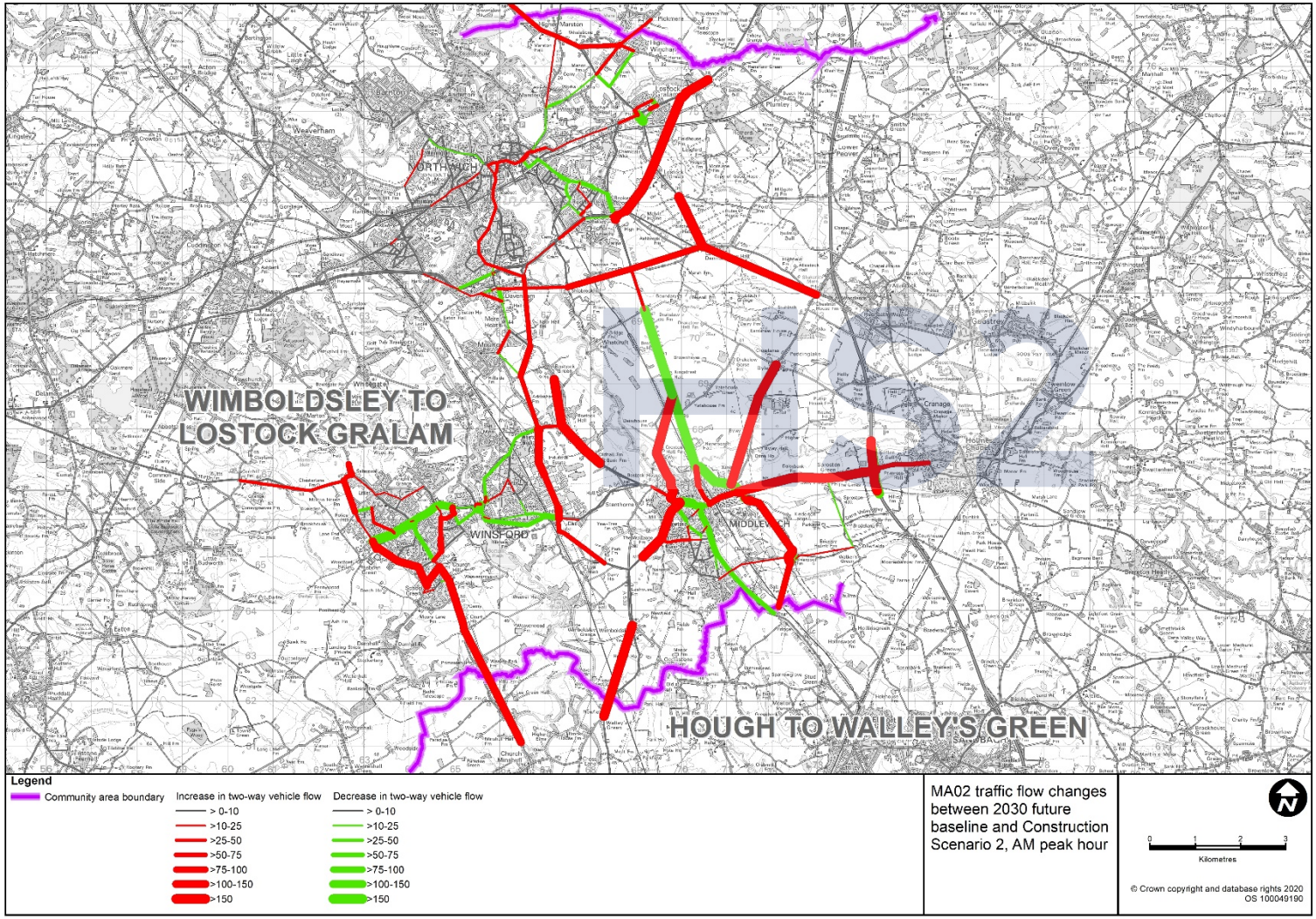


Figure 14-4: MA02 traffic flow changes 2030 future baseline to Proposed Scheme scenario 2, PM peak hour

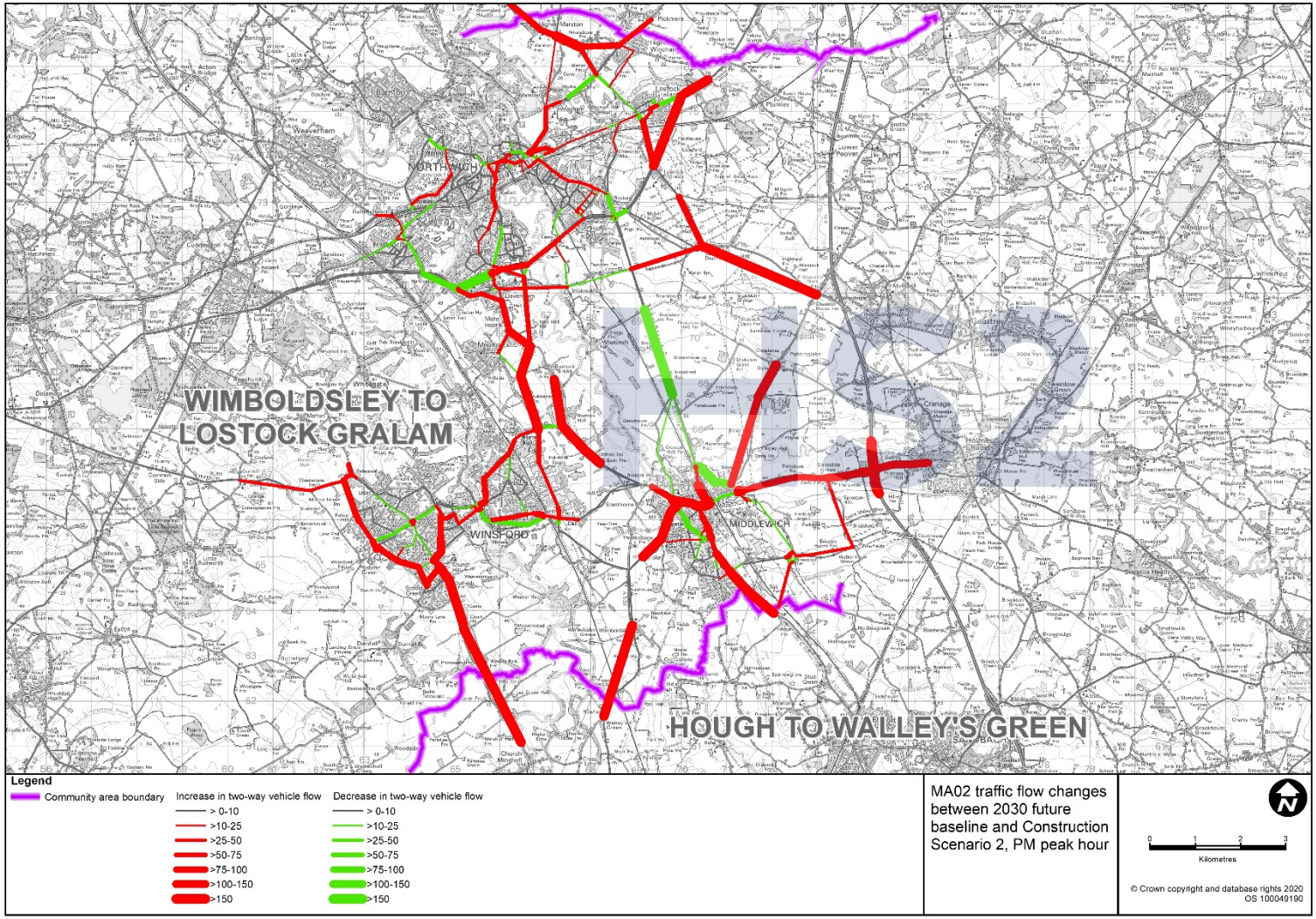


Figure 14-5: MA02 traffic flow changes 2030 future baseline to Proposed Scheme scenario 3, AM peak hour

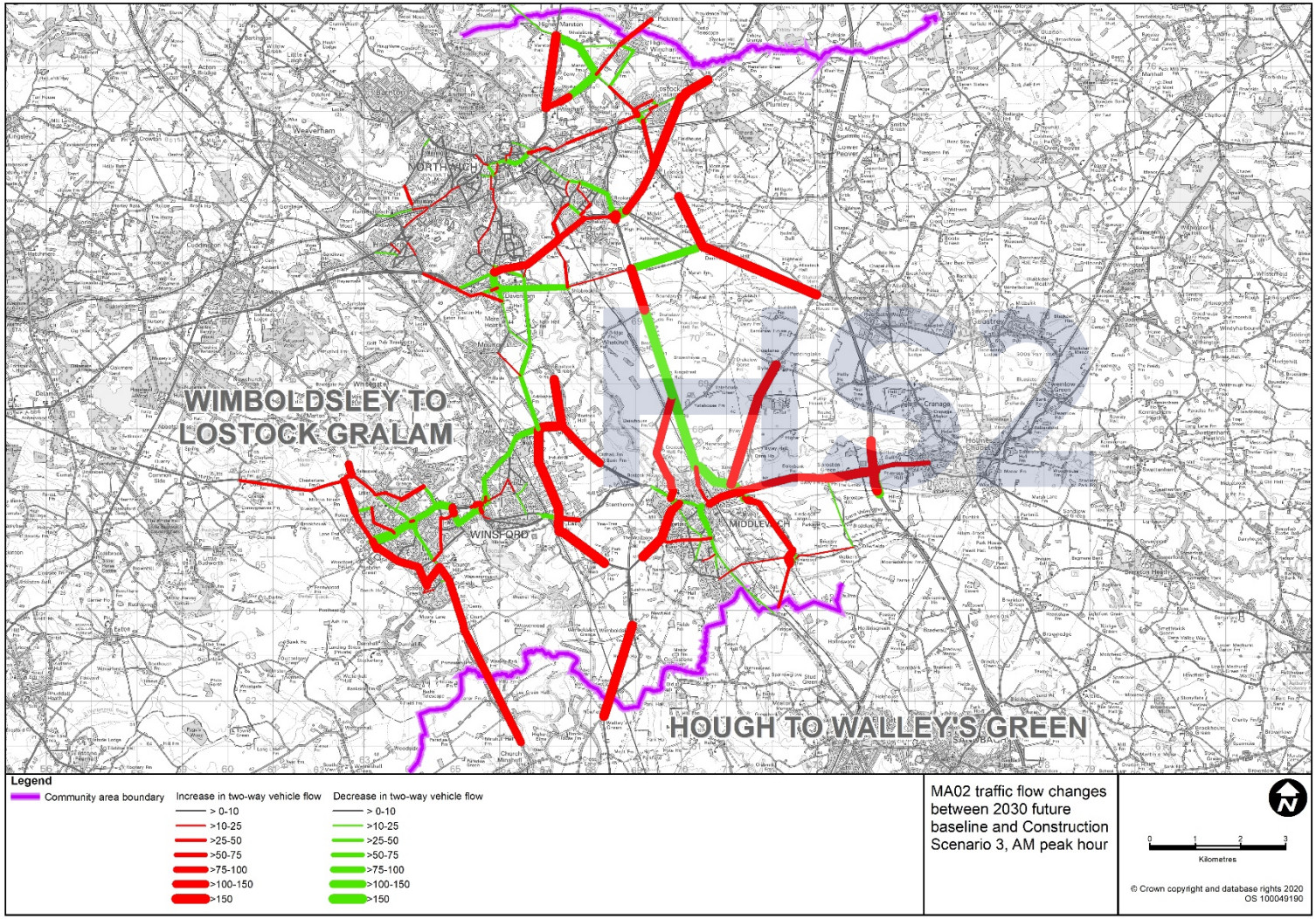
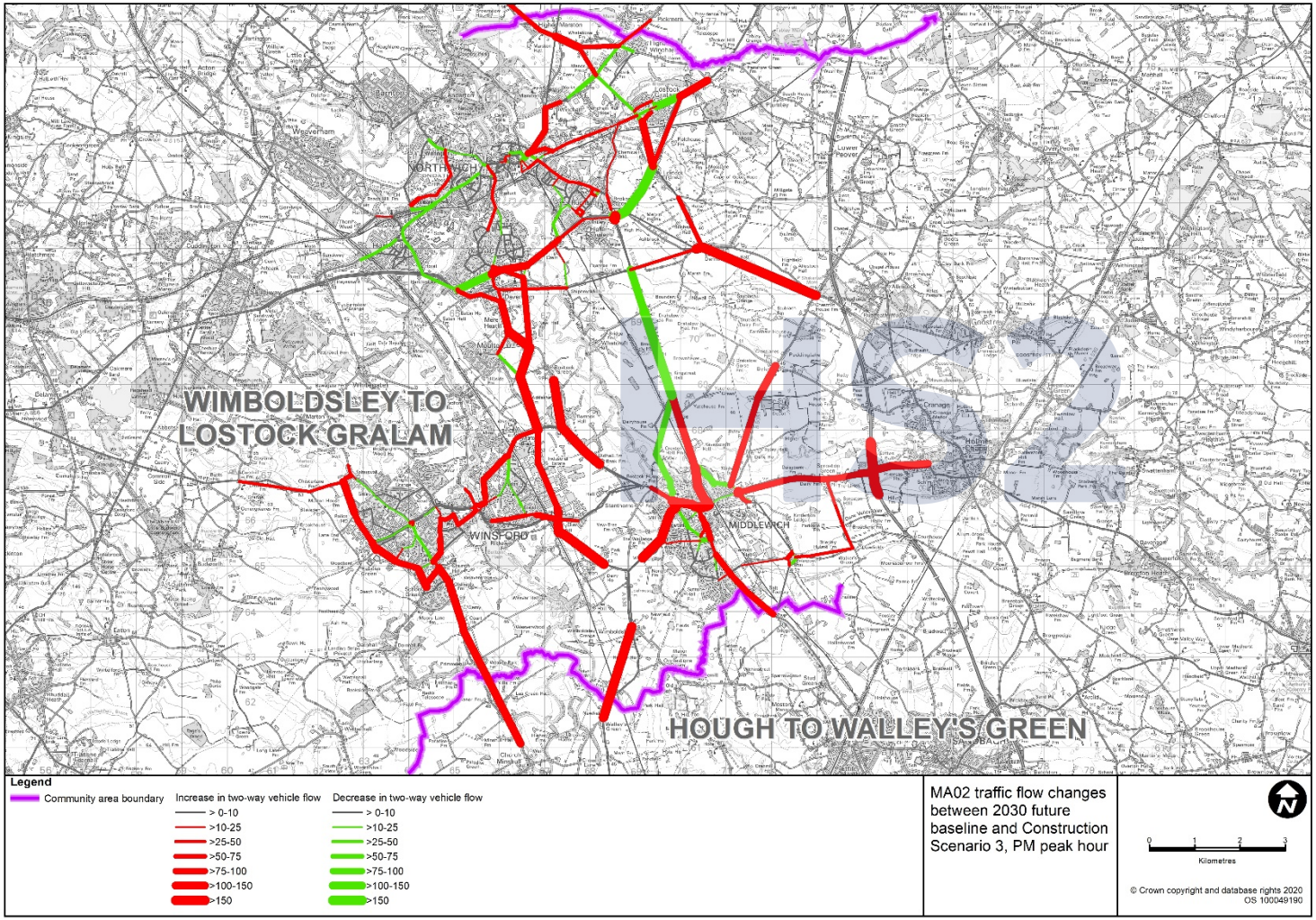


Figure 14-6: MA02 traffic flow changes 2030 future baseline to Proposed Scheme scenario 3, PM peak hour



Junction performance

14.3.16 Junction capacity analysis has been undertaken for the AM and PM peak hours comparing junction operation in the 2030 future baseline scenario with the modelled scenarios for the Proposed Scheme.

14.3.17 The following tables and commentary set out the performance at junctions where there is the potential for the Proposed Scheme to have substantial impacts, including new temporary junctions and those junctions where temporary changes are proposed.

14.3.18 Junctions which experience an impact as a result of the Proposed Scheme, but where the layout is not changed are generally identified using the following criteria:

- the Ratio of Flow to Capacity (RFC), Degree of Saturation (DoS) or Volume over Capacity (VoC) for an approach arm increases to over 87% during the construction of the Proposed Scheme; and
- the RFC, DoS or VoC for an approach arm increases by 2% or more from the baseline.

14.3.19 Similarly, junctions which experience a beneficial impact as a result of the Proposed Scheme, but where the layout is not changed are generally identified using the following criteria:

- the RFC, DoS or VoC for an approach arm is over 87% during the baseline; and
- the RFC, DoS or VoC for an approach arm decreases by 2% or more during the construction of the Proposed Scheme.

14.3.20 The results are presented from south to north through the MA02 area, firstly for junctions on the strategic road network, followed by junctions on other roads. The 2030 future baseline results are included for comparison. The models developed to assess the existing and future baseline have been used, except where otherwise stated.

14.3.21 It should be noted that the assessments consider the peak level of construction traffic in each location and these conditions will not be present across the whole construction period.

14.3.22 The results of the junction assessments indicate that there will be an increase in queuing and delay at a number of junctions during construction of the Proposed Scheme, some of which are shown to already operate over capacity in one or both peak hours in the future baseline. HS2 Ltd will work with the relevant highway authority to seek to reduce the impacts of the Proposed Scheme at these locations insofar as reasonably practicable.

M6 junction 18/A54 Middlewich Road/A54 Holmes Chapel Road

14.3.23 Table 14-9 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-9: M6 junction 18/A54 Middlewich Road/A54 Holmes Chapel Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU*/hr	VoC	Q**, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
M6 junction 18 southbound off-slip	875	46%	0	902	45%	0	885	45%	0	768	40%	0
A54 Middlewich Road	383	24%	0	507	31%	0	481	29%	0	468	28%	0
M6 junction 18 northbound off-slip	699	30%	0	773	37%	0	760	35%	0	720	33%	0
A54 Holmes Chapel Road	928	39%	0	856	36%	0	908	38%	0	931	39%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
M6 junction 18 southbound off-slip	310	15%	0	513	26%	0	495	25%	0	374	19%	0
A54 Middlewich Road	403	20%	0	609	33%	0	504	27%	0	479	25%	0
M6 junction 18 northbound off-slip	448	21%	0	454	24%	0	483	24%	0	471	23%	0
A54 Holmes Chapel Road	852	35%	0	860	36%	0	781	33%	0	850	36%	0

**PCU = Passenger Car Units*

*** Q = Queue*

14.3.24 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths at this junction

A530 Nantwich Road/Chapel Lane

14.3.25 Table 14-10 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-10: A530 Nantwich Road/Chapel Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 Nantwich Road (north)	745	45%	0	807	49%	0	807	49%	0	860	52%	0
Chapel Lane	407	41%	1	558	71%	3	535	70%	3	496	58%	2
A530 Nantwich Road (south)	876	61%	0	958	70%	0	952	70%	0	879	64%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 Nantwich Road (north)	545	33%	0	652	40%	0	646	39%	0	635	39%	0
Chapel Lane	463	73%	3	431	97%	7	414	76%	5	421	79%	5
A530 Nantwich Road (south)	616	38%	0	674	44%	0	701	46%	0	743	47%	0

14.3.26 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and close to capacity with the Proposed Scheme.

14.3.27 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour. In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Chapel Lane approach from 73% in the future baseline to 97%, with a corresponding change in queue length from three PCU in the future baseline to seven PCU.

A533 Booth Lane/Cledford Lane/Cross Lane

14.3.28 Table 14-11 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-11: A533 Booth Lane/Cledford Lane/Cross Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A533 Booth Lane (north)	193	10%	0	170	9%	0	183	10%	0	198	10%	0
Cledford Lane	95	11%	0	132	16%	0	117	14%	0	118	14%	0
A533 Booth Lane (south)	495	28%	0	327	19%	0	427	24%	0	452	25%	0
Cross Lane	336	85%	2	349	75%	1	338	80%	1	339	83%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A533 Booth Lane (north)	188	10%	0	174	9%	0	295	15%	0	287	15%	0
Cledford Lane	364	88%	6	381	91%	7	294	87%	7	340	86%	6
A533 Booth Lane (south)	633	38%	0	627	38%	0	725	44%	0	651	40%	0
Cross Lane	175	51%	0	175	49%	0	175	56%	1	177	55%	1

14.3.29 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and within capacity with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.30 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.31 In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Cledford Lane approach from 88% in the future baseline to 91%, with a corresponding change in queue length from six PCU in the future baseline to seven PCU.

Local network change in the Clive Green area

14.3.32 There are a number of permanent changes to the local road network in the Clive Green area as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 14.5. Where the new or modified junctions are proposed during the construction phase, the operational performance of both the existing and new junction layouts are presented.

Clive Green Lane realignment/Crewe North RSD access

14.3.33 Clive Green Lane realignment/Crewe North RSD access will be a new three-arm priority controlled T-junction as part of the Proposed Scheme. Table 14-12 summarises the performance of the junction as a result of the Proposed Scheme.

Table 14-12: Clive Green Lane realignment/Crewe North RSD access 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme scenario 2 (proposed layout)**		
Clive Green Lane realignment (west) (ahead and left)	651	-	-
Crewe North RSD access (left)	4	0.00	0
Crewe North RSD access (right)	0	0.00	0
Clive Green Lane realignment (east) (ahead and right)	520	0.21	1
17:00–18:00	**Proposed Scheme scenario 2 (proposed layout)**		
Clive Green Lane realignment (west) (ahead and left)	431	-	-
Crewe North RSD access (left)	124	0.23	0
Crewe North RSD access (right)	77	0.20	0
Clive Green Lane realignment (east) (ahead and right)	351	0.00	0

14.3.34 The assessment shows that this junction operates well within capacity with the Proposed Scheme.

A530 Nantwich Road/Clive Green Lane

14.3.35 Initially, the A530 Nantwich Road/Clive Green Lane junction will remain in its existing form. However, later in the construction period the junction will be permanently modified as part of the Proposed Scheme. It will become a five-arm priority controlled roundabout, incorporating the Clive Green Lane realignment and Coalpit Lane. The modified junction layout will be implemented during construction of the Proposed Scheme and has therefore been assessed for 2030 AM and PM peak hours using Junctions 9 software.

14.3.36 Table 14-13 summarises the results of the changes to the performance of the existing junction as a result of the Proposed Scheme.

Table 14-13: A530 Nantwich Road/Clive Green Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/ hr	RFC	Q, PCU	Flow, PCU/ hr	RFC	Q, PCU	Flow, PCU/ hr	RFC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1 (existing layout)**			**Proposed Scheme scenario 2 (existing layout)**		
A530 Nantwich Road (north) (ahead and right)	756	0.56	3	896	1.29	127	1,060	1.12	77
Clive Green Lane (left)	40	1.09	4	83	4.25	49	13	2.34	5
Clive Green Lane (right)	249	1.08	18	330	4.37	193	271	2.52	98
A530 Nantwich Road (south) (ahead and left)	1,088	-	-	1,064	-	-	1,095	-	-
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1 (existing layout)**			**Proposed Scheme scenario 2 (existing layout)**		
A530 Nantwich Road (north) (ahead and right)	559	0.27	1	509	0.41	1	494	0.25	1
Clive Green Lane (left)	123	1.09	10	253	1.58	63	174	1.45	32
Clive Green Lane (right)	295	1.09	21	364	1.59	90	294	1.43	53
A530 Nantwich Road (south) (ahead and left)	1,036	-	-	1,120	-	-	1,303	-	-

14.3.37 The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.38 The change in traffic due to construction of the Proposed Scheme will increase the RFC on the Clive Green Lane (right) approach from 1.08 in the future baseline to 4.37 in the AM peak hour, with a corresponding change in queue length from 18 PCU in the future baseline to 193 PCU. The change in traffic due to construction of the Proposed Scheme will also increase the RFC on the Clive Green Lane (left) approach from 1.09 in the future baseline to 4.25 in

the AM peak hour, with a corresponding change in queue length from four PCU in the future baseline to 49 PCU.

14.3.39 The change in traffic due to construction of the Proposed Scheme will increase the RFC on the Clive Green Lane (right) approach from 1.09 in the future baseline to 1.59 in the PM peak hour, with a corresponding change in queue length from 21 PCU in the future baseline to 90 PCU. The change in traffic due to construction of the Proposed Scheme will also increase the RFC on the Clive Green Lane (left) approach from 1.09 in the future baseline to 1.58 in the PM peak hour, with a corresponding change in queue length from 10 PCU in the future baseline to 63 PCU.

14.3.40 HS2 Ltd will seek to achieve earlier delivery of the proposed permanent junction layout or work with the Local Highway Authority to identify potential opportunities to mitigate this constraint.

14.3.41 The permanent realignment of Clive Green Lane and the associated changes to the A530 Nantwich Road/Clive Green Lane junction are expected to open during scenario 2, but would not be fully operational until scenario 3. The HS2 Track Access approach is a minor arm that is not included within the Junctions 9 model.

14.3.42 Table 14-14 summarises the performance of the A530 Nantwich Road/Clive Green Lane realignment/Coalpit Lane realignment junction as a result of the Proposed Scheme, after the opening of the permanent junction layout. The HS2 Track Access approach is a minor arm that is not included within the Junctions 9 model.

Table 14-14: A54 Middlewich Road realignment/A533 Bostock Road realignment 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme scenarios 3 and 4 (proposed layout)**		
A530 Nantwich Road (north)	886	0.63	2
A530 Nantwich Road (south)	1,100	0.71	2
Clive Green Lane	709	0.55	1
HS2 Track Access	-	-	-
Coalpit Lane	146	0.15	0
17:00–18:00	**Proposed Scheme scenarios 3 and 4 (proposed layout)**		
A530 Nantwich Road (north)	416	0.29	0
A530 Nantwich Road (south)	1,297	0.81	4
Clive Green Lane	793	0.68	12
HS2 Track Access	-	-	-
Coalpit Lane	229	0.29	0

14.3.43 The assessment shows that in the AM peak hour this junction operates well within capacity with the Proposed Scheme. In the PM peak hour, the assessment shows that this junction is within capacity with the Proposed Scheme with a maximum RFC of 0.81 on the A530 Nantwich Road (south) approach with an associated queue length of four PCU.

B5074 Swanlow Lane/Townfields Road/Townfields Drive

14.3.44 Table 14-15 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-15: B5074 Swanlow Lane/Townfields Road/Townfields Drive junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Townfields Road	247	35%	6	290	42%	7	283	41%	6	253	36%	6
B5074 Swanlow Lane (south)	651	96%	11	538	98%	11	602	96%	11	610	96%	11
Townfields Drive	140	23%	3	179	31%	4	142	25%	3	145	24%	3
B5074 Swanlow Lane (north)	333	39%	7	426	50%	9	359	42%	7	356	42%	7
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Townfields Road	350	43%	7	457	59%	9	442	56%	9	388	48%	8
B5074 Swanlow Lane (south)	526	94%	10	429	100%	9	459	96%	9	489	99%	10
Townfields Drive	78	14%	2	98	16%	2	69	13%	1	69	12%	1
B5074 Swanlow Lane (north)	332	44%	7	428	61%	9	393	53%	8	368	49%	8

14.3.45 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.46 In scenario 1, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the B5074 Swanlow Lane (south) approach from 96% in the future baseline to 98% in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the B5074 Swanlow Lane (south) approach from 94% in the future baseline to 100%, with a corresponding change in queue length from 10 PCU in the future baseline to nine PCU.

A530 Nantwich Road/Brynlow Drive

14.3.47 Table 14-16 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-16: A530 Nantwich Road/Brynlow Drive junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 Nantwich Road (north)	510	26%	0	665	34%	0	773	40%	0	668	34%	0
Brynlow Drive	261	48%	1	229	53%	1	304	84%	3	275	64%	1
A530 Nantwich Road (south)	654	55%	0	713	63%	0	656	58%	0	671	64%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 Nantwich Road (north)	457	24%	0	400	21%	0	449	23%	0	351	18%	0
Brynlow Drive	194	33%	0	189	33%	0	163	29%	0	140	24%	0
A530 Nantwich Road (south)	689	55%	0	973	106%	1	961	77%	0	1,035	81%	0

14.3.48 The assessment shows that in the AM peak hour the junction operates well within capacity in the future baseline and within capacity with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.49 In scenario 2, the change in traffic due to construction of the Proposed Scheme in the AM peak hour will increase the VoC on the Brynlow Drive approach from 48% in the future baseline to 84%, with a corresponding change in queue length from one PCU in the future baseline to three PCU.

14.3.50 In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A530 Nantwich Road (south) approach from 55% in the future baseline to 106%, with a corresponding change in queue length from no queue in the future baseline to one PCU.

Clive Lane/Clive Green Lane

14.3.51 Table 14-17 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. Clive Back Lane approach is a minor arm that is not included within the strategic traffic model.

Table 14-17: Clive Lane/Clive Green Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Clive Lane	246	13%	0	510	26%	0	336	17%	0	652	34%	0
Clive Green Lane	492	25%	0	503	26%	0	456	23%	0	451	23%	0
Clive Back Lane	-	-	-	-	-	-	-	-	-	-	-	-
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Clive Lane	285	15%	0	324	17%	0	196	10%	0	431	22%	0
Clive Green Lane	369	19%	0	515	100%	0	461	24%	0	427	22%	0
Clive Back Lane	-	-	-	-	-	-	-	-	-	-	-	-

14.3.52 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme. The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour. In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Clive Green Lane approach from 19% in the future baseline to 100% with no change in corresponding queue length.

Clive Lane/Rilshaw Lane

14.3.53 Table 14-18 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. Rilshaw Lane approach is a minor arm that is not included within the strategic traffic model.

Table 14-18: Clive Lane/Rilshaw Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Clive Lane (north)	256	21%	0	533	33%	0	345	25%	0	639	36%	0
Rilshaw Lane	-	-	-	-	-	-	-	-	-	-	-	-
Clive Lane (south)	492	25%	0	503	26%	0	456	24%	0	451	23%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Clive Lane (north)	333	28%	0	374	32%	0	249	26%	0	479	37%	0
Rilshaw Lane	-	-	-	-	-	-	-	-	-	-	-	-
Clive Lane (south)	376	19%	0	521	115%	0	468	100%	0	434	100%	0

14.3.54 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.55 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.56 In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Clive Lane (south) approach from 19% in the future baseline to 115%, with no change in corresponding queue length.

A54 Middlewich Road/Clive Lane/Road One

14.3.57 Table 14-19 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-19: A54 Middlewich Road/Clive Lane/Road One junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU /hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Road One	253	38%	4	502	74%	8	399	57%	6	539	76%	8
A54 Middlewich Road (east)	545	60%	5	246	30%	2	501	56%	5	594	64%	6
Clive Lane	497	94%	8	494	98%	8	467	83%	7	454	96%	7
A54 Middlewich Road (west)	789	93%	10	717	92%	9	739	98%	9	796	94%	10
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
Road One	546	91%	9	477	79%	8	493	82%	8	620	99%	10
A54 Middlewich Road (east)	411	34%	4	386	34%	4	486	39%	5	496	42%	5
Clive Lane	477	103%	8	490	104%	8	488	104%	8	457	105%	7
A54 Middlewich Road (west)	558	71%	8	555	76%	8	569	71%	8	632	85%	9

14.3.58 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.59 In scenario 1, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Clive Lane approach from 94% in the future baseline to 98% in the AM peak hour, with no change in corresponding queue length.

14.3.60 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 Middlewich Road (west) approach from 93% in the future baseline to 98% in the AM peak hour, with a corresponding change in queue length from 10 PCU to nine PCU.

14.3.61 In scenarios 3 and 4, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Road One approach from 91% in the future baseline to 99%, with a corresponding change in queue length from nine PCU to 10 PCU.

A530 Nantwich Road/St Ann's Road

14.3.62 Table 14-20 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-20: A530 Nantwich Road/St Ann's Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 Nantwich Road	697	37%	0	724	38%	0	964	50%	0	836	44%	0
St Ann's Road	160	83%	2	169	76%	1	117	98%	4	144	88%	3
A530 Nantwich Road	686	51%	0	695	51%	0	711	57%	0	682	54%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 Nantwich Road	844	45%	0	556	29%	0	803	43%	0	724	39%	0
St Ann's Road	171	97%	4	151	68%	1	125	96%	4	132	96%	4
A530 Nantwich Road	665	42%	0	690	42%	0	902	55%	0	945	56%	0

14.3.63 The assessment shows that in the AM peak hour the junction operates within capacity in the future baseline and close to capacity with the Proposed Scheme. In the PM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.64 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the St Ann's Road approach from 83% in the future baseline to 98% in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to four PCU.

14.3.65 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A54 Kinderton Street/A54 St Michael's Way/A533 Leadsmithy Street

14.3.66 Table 14-21 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-21: A54 Kinderton Street/A54 St Michael's Way/A533 Leadsmithy Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Kinderton Street	644	91%	13	713	100%	15	713	100%	15	711	100%	15
A533 Leadsmithy Street	812	89%	20	649	71%	16	731	80%	18	755	82%	19
A54 St Michael's Way	1,025	66%	13	775	50%	10	915	59%	11	1,016	65%	13
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Kinderton Street	740	104%	15	739	104%	15	739	104%	15	741	104%	15
A533 Leadsmithy Street	627	79%	16	604	76%	16	665	83%	17	683	85%	18
A54 St Michael's Way	851	50%	10	770	46%	9	1,152	68%	13	1,237	73%	14

14.3.67 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.68 In scenario 1, 2, 3 and 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 Kinderton Street approach from 91% in the future baseline to 100% in the AM peak hour, with a corresponding change in queue length from 13 PCU in the future baseline to 15 PCU.

14.3.69 In scenarios 3 and 4, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A533 Leadsmithy Street approach from 79% in the future baseline to 85%, with a corresponding change in queue length from 16 PCU in the future baseline to 18 PCU.

A54 St Michael's Way/Wheelock Street

14.3.70 Table 14-22 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-22: A54 St Michael's Way/Wheelock Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 St Michael's Way (north)	743	38%	0	646	33%	0	738	100%	0	788	40%	0
Wheelock Street	41	14%	0	41	13%	0	41	37%	0	41	15%	0
A54 St Michael's Way (south)	-	-	-	-	-	-	-	-	-	-	-	-
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 St Michael's Way (north)	797	41%	0	694	36%	0	802	41%	0	812	42%	0
Wheelock Street	94	35%	0	94	31%	0	94	35%	0	94	36%	0
A54 St Michael's Way (south)	-	-	-	-	-	-	-	-	-	-	-	-

14.3.71 The assessment shows that in the AM peak hour the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

14.3.72 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 St Michael's Way approach from 38% in the future baseline to 100% in the AM peak hour, with no change in corresponding queue length.

14.3.73 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A54 Chester Road/A530 Newton Bank

14.3.74 Table 14-23 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The A54 Chester Road (east) is a one-way exit arm from the junction and is therefore not included in the results.

Table 14-23: A54 Chester Road/A530 Newton Bank junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Chester Road (west)	1,286	66%	0	862	44%	0	1,430	73%	0	1,404	72%	0
A530 Newton Bank	1,412	99%	5	1,136	45%	1	1,327	100%	4	1,359	101%	4
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Chester Road (west)	1,092	56%	0	622	32%	0	1,188	61%	0	1,149	59%	0
A530 Newton Bank	1,284	82%	0	1,169	46%	0	1,513	101%	4	1,580	104%	7

14.3.75 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.76 In scenarios 3 and 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A530 Newton Bank approach from 99% in the future baseline to 101% in the AM peak hour, with a change in queue length from five PCU in the future baseline to four PCU.

14.3.77 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A530 Newton Bank approach from 82% in the future baseline to 104%, with a corresponding change in queue length from no queue in the future baseline to seven PCU.

A54 Chester Road/A530 Croxton Lane

14.3.78 Table 14-24 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-24: A54 Chester Road/A530 Croxton Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Chester Road (north)	844	87%	0	407	44%	0	972	103%	4	923	96%	1
A530 Croxton Lane	540	69%	1	501	54%	0	608	82%	1	602	80%	1
A54 Chester Road (south)	1,038	101%	2	732	70%	0	1,031	101%	2	1,031	101%	2
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Chester Road (north)	810	87%	1	348	38%	0	959	103%	5	930	99%	3
A530 Croxton Lane	366	46%	0	296	31%	0	345	46%	0	291	39%	0
A54 Chester Road (south)	1,050	101%	2	827	79%	0	1,047	101%	2	1,049	101%	2

14.3.79 The assessment shows that in the AM and PM peak hours the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.80 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 Chester Road (north) approach from 87% in the future baseline to 103% in the AM peak hour, with a corresponding change in queue length from no queue in the future baseline to four PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 Chester Road (north) approach from 87% in the future baseline to 103%, with a corresponding change in queue length from one PCU in the future baseline to five PCU.

A54 Holmes Chapel Road/B5309 Centurion Way/Pochin Way

14.3.81 Table 14-25 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-25: A54 Holmes Chapel Road/B5309 Centurion Way/Pochin Way junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
B5309 Centurion Way	679	74%	2	416	43%	0	419	42%	0	435	47%	1
A54 Holmes Chapel Road (east)	769	60%	1	1,067	67%	1	1,019	60%	0	963	59%	0
Pochin Way	627	51%	1	818	78%	2	717	65%	1	692	61%	1
A54 Holmes Chapel Road (west)	1,069	82%	2	930	81%	2	997	74%	1	1,099	80%	2
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
B5309 Centurion Way	606	62%	1	461	46%	0	408	40%	0	447	46%	1
A54 Holmes Chapel Road (east)	823	60%	1	1,065	67%	1	1,030	64%	1	930	59%	1
Pochin Way	771	59%	1	845	69%	1	805	66%	1	845	63%	1
A54 Holmes Chapel Road (west)	891	73%	1	861	85%	2	957	92%	4	998	93%	4

14.3.82 The assessment shows that in the AM peak hour the junction operates within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and close to capacity with the Proposed Scheme.

14.3.83 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.84 In scenarios 3 and 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 Holmes Chapel Road (west) approach from 73% in the future baseline to 93% in the PM peak hour, with a corresponding change in queue length from one PCU in the future baseline to four PCU.

14.3.85 Further detailed analysis of this junction, undertaken using Junctions 9, suggests that the junction would operate within capacity in both the future baseline and with the Proposed Scheme. As a result, there would not be substantial changes in capacity indicators such as VoC and queue lengths in either the AM or PM peak hour.

Local network change in the Stanthorne area

14.3.86 There are a number of temporary and permanent changes to the local road network in the Stanthorne area as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 14.5. Where the new or modified junctions are proposed during the construction phase, the operational performance of both the existing and new junction layouts are presented.

A54 Middlewich Road realignment/A533 Northwich Road diversion

14.3.87 The A54 Middlewich Road realignment/A533 Northwich Road diversion will be a new three-arm priority controlled (give way) roundabout as part of the Proposed Scheme. Table 14-26 summarises the performance of the junction as a result of the Proposed Scheme.

Table 14-26: A54 Middlewich Road realignment/A533 Bostock Road realignment 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme scenario 2 (proposed layout)**			**Proposed Scheme scenarios 3 and 4 (proposed layout)**		
A533 Northwich Road diversion	609	0.51	1	533	0.46	1
A54 Middlewich Road realignment (east)	714	0.35	1	778	0.38	1
A54 Middlewich Road realignment (south)	451	0.35	1	484	0.38	1

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
17:00–18:00	**Proposed Scheme scenario 2 (proposed layout)**			**Proposed Scheme scenarios 3 and 4 (proposed layout)**		
A533 Northwich Road diversion	478	0.40	1	477	0.40	1
A54 Middlewich Road realignment (east)	787	0.38	1	803	0.39	1
A54 Middlewich Road realignment (south)	497	0.40	1	475	0.38	1

14.3.88 The assessment shows that this junction operates within capacity with the Proposed Scheme.

A54 Middlewich Road realignment/Birch Lane diversion/Bell Lane realignment

14.3.89 The A54 Middlewich Road realignment/Birch Lane diversion/Bell Lane realignment junction will be modified to accommodate the A54 Middlewich Road realignment as a result of the Proposed Scheme. The modifications comprise the realignment of Bell Lane and the diversion of Birch Lane to form a four-arm priority-controlled (give-way) staggered crossroads. The proposed junction modifications are described in further detail in Section 14.5. Table 14-27 summarises the performance of the junction as a result of the Proposed Scheme.

Table 14-27: A54 Middlewich Road realignment/Birch Lane diversion/Bell Lane realignment junction 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme scenario 2 (proposed layout)**			**Proposed Scheme scenarios 3 and 4 (proposed layout)**		
Birch Lane diversion (ahead, left and right)	139	0.29	0	139	0.30	0
A54 Middlewich Road (east) (ahead, left and right)	785	0.00	0	829	0.00	0
Bell Lane realignment (ahead, left and right)	0	0.00	0	0	0.00	0
A54 Middlewich Road (west) (ahead, left and right)	1,073	0.30	0	1,013	0.31	0
17:00–18:00	**Proposed Scheme scenario 2 (proposed layout)**			**Proposed Scheme scenarios 3 and 4 (proposed layout)**		
Birch Lane diversion (ahead, left and right)	152	0.31	0	152	0.31	0
A54 Middlewich Road (east) (ahead, left and right)	701	0.00	0	720	0.00	0
Bell Lane realignment (ahead, left and right)	0	0.00	0	0	0.00	0

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
A54 Middlewich Road (west) (ahead, left and right)	1,150	0.36	1	1,120	0.37	1

14.3.90 The assessment shows that the junction operates well within capacity with the Proposed Scheme.

A54 Chester Road/A54 Middlewich Road/A533 Northwich Road

14.3.91 Table 14-28 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-28: A54 Chester Road/A54 Middlewich Road/A533 Northwich Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**		
A54 Middlewich Road (ahead and left)	466	-	-	342	-	-
A533 Northwich Road (left)	343	0.68	2	79	0.15	0
A533 Northwich Road (right)	1	0.01	0	41	0.11	0
A54 Chester Road (ahead and right)	827	0.96	19	415	0.28	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**		
A54 Middlewich Road (ahead and left)	439	-	-	339	-	-
A533 Northwich Road (left)	330	0.65	2	40	0.08	0
A533 Northwich Road (right)	4	0.02	0	26	0.07	0
A54 Chester Road (ahead and right)	686	0.85	7	419	0.29	1

14.3.92 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and within capacity with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and within capacity with the Proposed Scheme.

14.3.93 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as RFC and queue lengths at this junction.

A54 Chester Road/A530 St Michael's Way/A530 Nantwich Road

14.3.94 Table 14-29 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme

Table 14-29: A54 Chester Road/A530 St Michael's Way/A530 Nantwich Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Chester Road	571	29%	0	453	23%	0	746	38%	0	630	32%	0
A54 St Michael's Way	784	90%	2	687	74%	1	777	100%	6	829	99%	5
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A54 Chester Road	440	23%	0	175	9%	0	429	22%	0	358	18%	0
A54 St Michael's Way	891	95%	2	787	74%	0	895	95%	2	906	93%	1

14.3.95 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.96 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A54 St Michael's Way approach from 90% in the future baseline to 100% in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to six PCU.

14.3.97 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A5018 Wharton Road/A5018 Wharton Park Road/B5355 Wharton Road/Collingtree Avenue

14.3.98 Table 14-30 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-30: A5018 Wharton Road/A5018 Wharton Park Road/B5355 Wharton Road/Collingtree Avenue junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A5018 Wharton Road	722	69%	0	670	64%	0	643	61%	0	601	58%	0
B5355 Wharton Road	303	28%	0	292	26%	0	306	26%	0	316	27%	0
A5018 Wharton Park Road	792	59%	0	866	64%	0	838	62%	0	838	63%	0
Collingtree Avenue	161	20%	0	161	22%	0	161	21%	0	161	22%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A5018 Wharton Road	1,057	102%	3	1,120	108%	4	1,079	104%	3	1,059	102%	3
B5355 Wharton Road	204	22%	0	182	20%	0	205	22%	0	206	22%	0
A5018 Wharton Park Road	635	46%	0	654	47%	0	668	49%	0	699	51%	0
Collingtree Avenue	67	7%	0	66	7%	0	67	7%	0	67	7%	0

14.3.99 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.100 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.101 In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A5018 Wharton Road approach from 102% in the future baseline to 108%, with a corresponding change in queue length from three PCU in the future baseline to four PCU.

A533 Bostock Road/A5018 Bostock Road/A533 Davenham Road/Road One

14.3.102 Table 14-31 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-31: A533 Bostock Road/A5018 Bostock Road/A533 Davenham Road/Road One junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A533 Bostock Road	296	17%	0	457	26%	0	346	20%	0	460	26%	0
Road One	244	12%	0	237	12%	0	202	10%	0	187	9%	0
A5018 Bostock Road	1,138	98%	2	1,197	102%	3	1,188	101%	3	1,189	100%	3
A533 Davenham Bypass	839	102%	7	886	103%	7	845	103%	7	844	103%	7
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A533 Bostock Road	277	14%	0	150	8%	0	252	13%	0	276	14%	0
Road One	629	32%	0	859	44%	0	742	39%	0	675	35%	0
A5018 Bostock Road	759	68%	0	748	70%	0	787	73%	0	819	75%	0
A533 Davenham Bypass	754	74%	1	805	72%	0	755	74%	0	840	82%	1

14.3.103 The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and within capacity with the Proposed Scheme.

14.3.104 In scenario 1, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A5018 Bostock Road approach from 98% in the future baseline to 102% in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to three PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A530 King Street/A530 Croxton Lane/B5309 King Street

14.3.105 Table 14-32 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-32: A530 King Street/A530 Croxton Lane/B5309 King Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 King Street	741	96%	2	693	123%	4	638	120%	4	644	116%	4
B5309 King Street	732	55%	0	884	67%	0	870	66%	0	856	64%	0
A530 Croxton Lane	256	40%	0	386	101%	6	344	64%	2	301	52%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenarios 3 and 4**		
A530 King Street	772	100%	2	902	113%	2	754	108%	3	766	104%	2
B5309 King Street	788	59%	0	836	63%	0	927	70%	0	1,003	75%	0
A530 Croxton Lane	378	70%	2	412	105%	5	388	102%	6	355	104%	5

14.3.106 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.107 In scenario 1, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A530 Croxton Lane approach from 40% in the future baseline to 101% in the AM peak hour, with a corresponding change in queue length from no queue in the future baseline to six PCU. In scenario 1, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A530 King Street approach from 96% in the future baseline to 123% in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to four PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A530 Croxton Lane approach from 70% in the future baseline to 105%, with a corresponding change in queue length from two PCU in the future baseline to five PCU. In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A530 King Street approach from 100% in the future baseline to 113%, with no change in corresponding queue length.

A533 Davenham Bypass/Jack Lane

14.3.108 Table 14-33 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-33: A533 Davenham Bypass/Jack Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A533 Davenham Bypass (north)	998	45%	0	1,170	53%	0	1,062	48%	0	1,048	47%	0
A533 Davenham Bypass (south)	1,435	73%	0	1,463	74%	0	1,469	74%	0	1,335	68%	0
Brick Kiln Lane	138	161%	4	114	172%	3	126	167%	3	151	159%	4
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A533 Davenham Bypass (north)	1,071	47%	0	1,143	52%	0	1,109	50%	0	1,093	50%	0
A533 Davenham Bypass (south)	1,277	65%	0	1,566	80%	0	1,456	74%	0	1,508	77%	0
Brick Kiln Lane	99	93%	3	51	77%	2	67	84%	2	62	82%	2

14.3.109 The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.110 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Jack Lane approach from 161% in the future baseline to 172% in the AM peak hour, with a corresponding change in queue length from four PCU in the future baseline to three PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

London Road/Jack Lane

14.3.111 Table 14-34 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-34: London Road/Jack Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
London Road (north)	312	19%	0	321	20%	0	313	19%	0	316	19%	0
London Road (south)	488	25%	0	479	24%	0	487	25%	0	461	23%	0
Jack Lane	784	161%	5	839	174%	5	813	168%	5	788	160%	5
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
London Road (north)	388	61%	0	382	65%	0	379	63%	0	367	64%	0
London Road (south)	647	34%	0	822	43%	0	753	40%	0	790	42%	0
Jack Lane	109	19%	0	158	36%	0	141	30%	0	147	32%	0

14.3.112 The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

14.3.113 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Jack Lane approach from 161% in the future baseline to 174% in the AM peak hour, with no change in corresponding queue length.

14.3.114 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

London Road/Church Street

14.3.115 Table 14-35 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme

Table 14-35: London Road/Church Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
London Road (north)	781	43%	0	753	42%	0	777	43%	0	657	36%	0
Church Street	13	4%	0	13	4%	0	13	4%	0	13	4%	0
London Road (south)	778	59%	0	750	57%	0	767	58%	0	748	56%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
London Road (north)	346	18%	0	323	16%	0	332	17%	0	322	16%	0
Church Street	402	110%	5	454	126%	5	453	125%	5	442	123%	5
London Road (south)	473	25%	0	550	28%	0	508	26%	0	531	27%	0

14.3.116 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.117 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.118 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Church Street approach from 110% in the future baseline to 126%, with no change in corresponding queue length.

Shurlach Lane/Davenham Road/Shipbrook Road/Manor Lane

14.3.119 Table 14-36 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The Manor Lane approach is a minor arm that is not included within the strategic traffic model.

Table 14-36: Shurlach Lane/Davenham Road/Shipbrook Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Shurlach Lane	89	13%	0	74	11%	0	88	14%	0	91	13%	0
Davenham Road	477	93%	2	559	99%	4	555	97%	3	589	96%	3
Manor Lane	-	-	-	-	-	-	-	-	-	-	-	-
Shipbrook Road	626	35%	0	648	36%	0	660	36%	0	550	31%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Shurlach Lane	593	93%	0	565	92%	1	575	92%	1	578	93%	1
Davenham Road	104	12%	0	104	12%	0	89	12%	0	97	12%	0
Manor Lane	-	-	-	-	-	-	-	-	-	-	-	-
Shipbrook Road	34	2%	0	34	2%	0	34	2%	0	34	2%	0

14.3.120 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.121 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Davenham Road approach from 93% in the future baseline to 99% in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to four PCU.

14.3.122 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A556 Shurlach Road/A533 Davenham Bypass junction

14.3.123 Table 14-37 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-37: A556 Shurlach Road/A533 Davenham Bypass junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Shurlach Road (off-slip)	271	29%	0	347	39%	0	298	32%	0	299	33%	0
A533 Davenham Bypass (south)	1,073	90%	0	1,099	92%	0	1,102	92%	0	1,010	84%	0
A533 Davenham Bypass (west)	511	43%	0	564	47%	0	530	44%	0	529	44%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Shurlach Road (off-slip)	892	91%	1	852	88%	1	865	88%	1	876	89%	1
A533 Davenham Bypass (south)	726	63%	0	819	70%	0	794	68%	0	809	70%	0
A533 Davenham Bypass (west)	413	34%	0	438	36%	0	420	35%	0	416	35%	0

14.3.124 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.125 In scenario 1, 2 and 3, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A533 Davenham Bypass (south) approach from 90% in the future baseline to 92% in the AM peak hour, with no change in corresponding queue length.

14.3.126 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A556 Shurlach Road/A556 Chester Road/A533 London Road/London Road

14.3.127 Table 14-38 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-38: A556 Shurlach Road/A556 Chester Road/A533 London Road/London Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A533 London Road	569	100%	8	564	100%	8	565	100%	8	584	100%	8
A556 Shurlach Road	994	59%	1	953	54%	0	979	57%	1	1,006	54%	0
London Road (south)	890	105%	9	927	105%	9	908	105%	9	887	105%	9
A556 Chester Road	1,666	100%	11	1,621	101%	11	1,652	100%	11	1,642	101%	11
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A533 London Road	622	64%	1	627	66%	1	623	66%	1	628	66%	1
A556 Shurlach Road	1,336	75%	1	1,344	75%	1	1,362	76%	1	1,353	75%	1
London Road (south)	695	81%	2	770	91%	4	742	88%	3	758	90%	3
A556 Chester Road	1,538	82%	1	1,412	83%	2	1,444	84%	2	1,459	85%	2

14.3.128 The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in the future baseline and close to capacity with the Proposed Scheme.

14.3.129 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.130 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the London Road (south) approach from 81% in the future baseline to 91%, with a corresponding change in queue length from two PCU in the future baseline to four PCU.

A530 King Street/Davenham Road/Crowders Lane

14.3.131 Table 14-39 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-39: A530 King Street/Davenham Road/Crowders Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A530 King Street (north)	702	38%	0	1,048	67%	0	976	63%	0	874	70%	0
Crowders Lane	255	74%	1	249	101%	6	259	93%	4	241	88%	3
A530 King Street (south)	870	45%	0	985	53%	0	900	47%	0	1,010	52%	0
Davenham Road	237	73%	1	238	100%	7	260	97%	5	149	69%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A530 King Street (north)	805	40%	0	943	49%	0	917	46%	0	934	47%	0
Crowders Lane	132	38%	0	123	38%	0	123	38%	0	112	34%	0
A530 King Street (south)	931	54%	0	1,072	77%	0	997	70%	0	794	60%	0
Davenham Road	212	111%	5	204	129%	5	216	128%	5	243	122%	6

14.3.132 The assessment shows that in the AM peak hour the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.133 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Davenham Road approach from 73% in the future baseline to 100% in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to seven PCU.

14.3.134 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Crowders Lane approach from 74% in the future baseline to 101% in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to six PCU.

14.3.135 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Davenham Road approach from 111% in the future baseline to 129%, with no change in corresponding queue length.

A533 Kingsmead/A533 London Road/London Road

14.3.136 Table 14-40 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-40: A533 Kingsmead/A533 London Road/London Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
London Road	512	60%	11	506	59%	11	508	59%	11	510	59%	11
A533 Davenham Bypass (Kingsmead)	1,081	70%	20	1,099	71%	21	1,105	72%	21	1,016	66%	19
A533 London Road	871	63%	14	850	61%	14	858	62%	14	891	64%	14
A533 Kingsmead	1,220	82%	23	1,273	86%	24	1,238	83%	24	1,248	84%	24
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
London Road	335	28%	6	321	27%	6	323	27%	6	326	28%	6
A533 Davenham Bypass (Kingsmead)	831	75%	17	890	80%	19	872	79%	18	903	82%	19
A533 London Road	1,181	82%	19	1,188	83%	19	1,182	82%	19	1,198	83%	19
A533 Kingsmead	910	65%	17	909	65%	17	900	65%	17	898	64%	17

14.3.137 The assessment shows that in the AM peak hour the junction operates within capacity in the future baseline and close to capacity with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in both the future baseline and with the Proposed Scheme.

14.3.138 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A533 Kingsmead approach from 82% in the future baseline to 86%, with a corresponding change in queue length from 23 PCU to 24 PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A556 Shurlach Road/Shurlach Lane

14.3.139 Table 14-41 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-41: A556 Shurlach Road/Shurlach Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Shurlach Road (east)	1,090	28%	0	1,083	28%	0	1,099	28%	0	1,096	28%	0
Shurlach Lane	340	88%	2	362	94%	3	343	89%	2	365	95%	3
A556 Shurlach Road (west)	2,493	-	-	2,548	-	-	2,514	-	-	2,603	-	-
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Shurlach Road (east)	2,136	54%	0	2,096	53%	0	2,135	54%	0	2,136	54%	0
Shurlach Lane	153	114%	4	180	129%	4	171	128%	4	168	125%	4
A556 Shurlach Road (west)	1,423	-	-	1,491	-	-	1,490	-	-	1,517	-	-

14.3.140 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.141 In scenario 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Shurlach Lane approach from 88% in the future baseline to 95% in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to three PCU.

14.3.142 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Shurlach Lane approach from 114% in the future baseline to 129%, with no change in corresponding queue length.

A530 King Street/Gadbrook Distribution Centre

14.3.143 The existing A530 King Street/Gadbrook Distribution Centre junction will be modified to accommodate the B5082 Penny's Lane diversion as a result of the Proposed Scheme. The B5082 Penny's Lane diversion will form a new fourth-arm of the roundabout. Details of the permanent changes are presented in the operational assessment at Section 14.5. The junction layout will be implemented during construction of the Proposed Scheme and has therefore been assessed against the existing layout in scenario 1 and against the proposed layout in scenario 3. Table 14-42 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-42: A530 King Street/Gadbrook Distribution Centre junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2030 future baseline (existing layout)**			**Proposed Scheme scenarios 1 and 2 (existing layout)**			**Proposed Scheme scenario 4 (proposed layout)**		
A530 King Street (north)	813	0.24	0	1,072	0.31	1	1,259	0.47	1
B5082 Penny's Lane diversion	-	-	-	-	-	-	223	0.20	0
A530 King Street (south)	1,123	0.43	1	750	0.28	0	800	0.42	1
Gadbrook Distribution Centre	142	0.08	0	42	0.02	0	37	0.03	0
17:00–18:00	**2030 future baseline (existing layout)**			**Proposed Scheme scenarios 1 and 2 (existing layout)**			**Proposed Scheme scenario 4 (proposed layout)**		
A530 King Street (north)	871	0.26	0	922	0.27	0	1,203	0.45	1
B5082 Penny's Lane diversion	-	-	-	-	-	-	372	0.33	1
A530 King Street (south)	848	0.33	1	911	0.33	1	667	0.36	1
Gadbrook Distribution Centre	188	0.10	0	84	0.05	0	79	0.05	0

14.3.144 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

14.3.145 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as RFC and queue lengths at this junction.

A556 Shurlach Road /A530 King Street

14.3.146 Table 14-43 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-43: A556 Shurlach Road/A530 King Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A530 King Street (north)	829	102%	9	748	105%	9	786	105%	9	791	105%	9
A556 Shurlach Road (east)	1,702	83%	1	2,060	105%	10	2,006	101%	10	1,709	103%	11
A530 King Street (south)	667	110%	9	657	102%	9	606	102%	8	864	101%	9
A556 Shurlach Road (west)	1,801	97%	4	1,847	102%	8	1,840	101%	8	1,899	100%	8
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A530 King Street (north)	1,012	101%	10	942	103%	10	997	102%	10	1,059	100%	10
A556 Shurlach Road (east)	1,771	105%	11	1,838	109%	11	1,813	108%	11	1,434	105%	11
A530 King Street (south)	815	109%	9	843	101%	9	818	101%	9	1,034	101%	10
A556 Shurlach Road (west)	1,465	92%	3	1,479	95%	4	1,479	93%	3	1,479	88%	2

14.3.147 The assessment shows that in the AM and PM peak hours the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.148 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A556 Shurlach Road (east) approach from 83% in the future baseline to 105% in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to 10 PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A556 Shurlach Road (east) approach from 105% in the future baseline to 109%, with no change in corresponding queue length.

Gadbrook Road/East Avenue junction

14.3.149 Table 14-44 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-44: Gadbrook Road/East Avenue junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
East Avenue	48	9%	0	76	13%	0	76	97%	1	76	97%	1
Gadbrook Road (south)	164	12%	0	174	14%	0	166	12%	0	144	11%	0
Gadbrook Road (north)	259	13%	0	227	11%	0	230	100%	0	231	100%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
East Avenue	10	2%	0	41	7%	0	35	47%	0	39	7%	0
Gadbrook Road (south)	388	33%	0	361	31%	0	384	33%	0	387	33%	0
Gadbrook Road (north)	243	12%	0	207	10%	0	214	100%	0	209	11%	0

14.3.150 The assessment shows that in the AM peak hour the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.151 In scenarios 3 and 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the East Avenue approach from 9% in the future baseline to 97% in the AM peak hour, with a corresponding change in queue length from no queue in the future baseline to one PCU.

14.3.152 In scenario 3, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Gadbrook Road (north) approach from 12% in the future baseline to 100%, with no change in corresponding queue length.

A533 London Road/A533 Kingsmead

14.3.153 Table 14-45 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-45: A533 London Road/A533 Kingsmead junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A533 London Road	887	57%	10	955	62%	11	911	59%	10	925	60%	11
London Road	280	59%	4	285	60%	4	283	60%	4	281	59%	4
A533 Kingsmead	978	89%	9	991	91%	9	991	91%	9	956	82%	9
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A533 London Road	1,176	63%	13	1,208	64%	13	1,192	63%	13	1,172	62%	13
London Road	127	43%	2	127	43%	2	126	43%	2	126	43%	2
A533 Kingsmead	829	60%	6	877	63%	6	869	63%	6	864	62%	6

14.3.154 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

14.3.155 In scenarios 1, 2 and 3, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A533 Kingsmead approach from 89% in the future baseline to 91% in the AM peak hour, with no change in corresponding queue length.

14.3.156 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A530 Griffiths Road/A530 King Street/B5082 Middlewich Road

14.3.157 Table 14-46 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. Penny's Lane approach is a minor arm that is not included within the strategic traffic model.

Table 14-46: A530 Griffiths Road/A530 King Street/B5082 Middlewich Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A530 Griffiths Road	525	48%	5	545	48%	5	538	49%	5	534	48%	5
Penny's Lane	-	-	-	-	-	-	-	-	-	-	-	-
A530 King Street	495	50%	7	451	45%	6	475	48%	7	472	48%	7
B5082 Middlewich Road	371	70%	9	307	54%	7	331	62%	8	339	63%	8
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A530 Griffiths Road	531	45%	5	526	55%	5	539	51%	5	591	50%	6
Penny's Lane	-	-	-	-	-	-	-	-	-	-	-	-
A530 King Street	701	70%	10	680	68%	9	677	67%	9	700	70%	10
B5082 Middlewich Road	437	97%	10	435	97%	10	442	97%	10	430	100%	10

14.3.158 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.159 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour. In scenario 4, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the B5082 Middlewich Road approach from 97% in the future baseline to 100%, with no change in corresponding queue length.

A559 Watling Street/Apple Market Street

14.3.160 Table 14-47 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-47: A559 Watling Street/Apple Market Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Apple Market Street	117	98%	4	115	101%	4	117	101%	4	117	97%	3
A559 Watling Street (east)	-	-	-	-	-	-	-	-	-	-	-	-
A559 Watling Street (west)	2,354	39%	0	2,392	40%	0	2,381	40%	0	2,343	39%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Apple Market Street	203	100%	5	199	100%	5	199	100%	5	202	100%	5
A559 Watling Street (east)	-	-	-	-	-	-	-	-	-	-	-	-
A559 Watling Street (west)	1,834	31%	0	1,856	31%	0	1,857	31%	0	1,839	31%	0

14.3.161 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.162 In both 2030 scenario 1, 2 and 3 the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Apple Market Street approach from 98% in the future baseline to 101% in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

Local network change in the Lostock Green area

14.3.163 There are a number of temporary and permanent changes to the local road network in the Lostock Green area as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 14.5.

A556 Shurlach Road (northbound) realignment/Birches Lane realignment

14.3.164 The A556 Shurlach Road realignment (northbound)/Birches Lane realignment junction is a new three-arm priority-controlled (give-way) T-junction located approximately 90m north-west of the existing A556 Shurlach Road (northbound)/Birches Lane junction. The A556 Shurlach Road will be one-way northbound and therefore no results are reported for the A556 Shurlach Road (north) approach. The junction will be implemented during construction of the Proposed Scheme and has therefore been assessed for scenario 3 AM and PM peak hours using Junctions 9 software. Table 14-48 summarises the performance of the junction as a result of the Proposed Scheme.

Table 14-48: A556 Shurlach Road (northbound) realignment/Birches Lane realignment 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Queue, PCU
08:00 - 09:00	**Proposed Scheme scenario 3 (proposed layout)**		
A556 Shurlach Road realignment (north)	-	-	-
A556 Shurlach Road realignment (south) (ahead)	1,488	0.00	0
A556 Shurlach Road realignment (south) (left)	578	0.00	0
Birches Lane realignment (left)	14	0.06	0
17:00-18:00	**Proposed Scheme scenario 3 (proposed layout)**		
A556 Shurlach Road realignment (north)	-	-	-
A556 Shurlach Road realignment (south) (ahead)	1,066	0.00	0
A556 Shurlach Road realignment (south) (left)	395	0.00	0
Birches Lane realignment (left)	131	0.34	1

14.3.165 The assessment shows that this junction operates within capacity with the Proposed Scheme.

A556 Shurlach Road (southbound) realignment/Birches Lane diversion

14.3.166 The A556 Shurlach Road realignment (southbound)/Birches Lane diversion junction will be a new three-arm priority-controlled (give-way) T-junction located approximately 350m north of the existing A556 Shurlach Road (southbound)/Birches Lane junction. The A556 Shurlach Road will be one-way southbound and therefore no results are reported for the A556 Shurlach Road (south) approach. The junction will be implemented during construction of the Proposed Scheme and has therefore been assessed for scenarios 1 and 2 AM and PM peak hours using Junctions 9 software. Table 14-49 summarises the performance of the junction as a result of the Proposed Scheme.

Table 14-49: A556 Shurlach Road (southbound) realignment/Birches Lane diversion junction 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme scenarios 1 and 2 (proposed layout)**		
A556 Shurlach Road realignment (north) (ahead)	2,035	-	0
A556 Shurlach Road realignment (north) (left)	217	-	0
Birches Lane diversion (left)	188	1.66	44
A556 Shurlach Road realignment (south)	-	-	-
17:00–18:00	**Proposed Scheme scenarios 1 and 2 (proposed layout)**		
A556 Shurlach Road realignment (north) (ahead)	1,720	-	0
A556 Shurlach Road realignment (north) (left)	237	-	0
Birches Lane diversion (left)	260	1.25	33
A556 Shurlach Road realignment (south)	-	-	-

14.3.167 The assessment shows that the junction operates over capacity with the Proposed Scheme with a maximum RFC of 1.66 on the Birches Lane diversion approach in the AM peak hour with an associated queue length of 44 PCU. In the PM peak hour, the maximum RFC of 1.25 is on the Birches Lane diversion approach with a queue length of 33 PCU.

B5082 Station Road/B5062 Middlewich Road/Manchester Road/Victoria Road

14.3.168 Table 14-50 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-50: B5082 Station Road/B5062 Middlewich Road/Manchester Road/Victoria Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Manchester Road	166	23%	2	166	22%	2	163	23%	2	163	23%	2
B5082 Middlewich Road	848	91%	10	826	88%	9	835	89%	10	846	90%	10
Victoria Road	450	58%	6	410	52%	5	429	55%	6	431	56%	6
B5082 Station Road	200	22%	2	198	21%	2	198	21%	2	204	22%	2
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Manchester Road	341	42%	4	290	36%	4	319	40%	4	317	39%	4
B5082 Middlewich Road	766	82%	9	839	90%	10	799	85%	9	820	88%	9
Victoria Road	311	51%	4	309	49%	4	313	50%	4	317	51%	4
B5082 Station Road	329	35%	4	331	36%	4	319	34%	4	308	33%	4

14.3.169 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in the future baseline and at capacity with the Proposed Scheme.

14.3.170 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.171 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the B5082 Middlewich Road approach from 82% in the future baseline to 90%, with a corresponding change in queue length from nine PCU in the future baseline to 10 PCU.

A559 Chester Way/B5082 Station Road/B5075 New Warrington Road

14.3.172 Table 14-51 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-51: A559 Chester Way/B5082 Station Road/B5075 New Warrington Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5075 New Warrington Road	539	36%	0	565	38%	0	544	37%	0	550	37%	0
A559 Chester Way (east)	457	46%	5	478	48%	5	461	47%	5	469	47%	5
B5082 Station Road	846	97%	4	815	96%	5	841	97%	4	834	96%	4
A559 Chester Way (west)	844	37%	8	875	38%	8	874	38%	8	806	35%	7
Leicester Street	129	10%	1	128	10%	1	129	10%	1	130	10%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5075 New Warrington Road	876	70%	1	935	78%	1	908	73%	1	916	73%	1
A559 Chester Way (east)	728	74%	8	815	82%	9	758	77%	8	742	75%	8
B5082 Station Road	555	97%	6	503	100%	7	530	98%	6	547	98%	6
A559 Chester Way (west)	742	32%	7	726	32%	7	727	32%	7	719	31%	7
Leicester Street	414	31%	5	417	32%	5	417	32%	5	417	32%	5

14.3.173 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.174 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.175 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the B5082 Station Road approach from 97% in the future baseline to 100%, with a corresponding change in queue length from six PCU in the future baseline to seven PCU.

A530 Griffiths Road/A559 Manchester Road

14.3.176 Table 14-52 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-52: A530 Griffiths Road/A559 Manchester Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A599 Manchester Road (east)	911	48%	0	961	51%	0	918	49%	0	930	50%	0
A530 Griffiths Road	166	48%	0	195	61%	1	170	51%	0	177	55%	0
A599 Manchester Road (west)	639	64%	0	639	58%	0	658	64%	0	649	64%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A599 Manchester Road (east)	834	44%	0	848	45%	0	829	43%	0	851	45%	0
A530 Griffiths Road	332	96%	3	312	102%	6	338	101%	6	310	99%	5
A599 Manchester Road (west)	851	84%	0	852	82%	0	868	85%	0	904	96%	1

14.3.177 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme.

14.3.178 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.179 In scenario 4, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A599 Manchester Road (west) approach from 84% in the future baseline to 96%, with a corresponding change in queue length from no queue in the future baseline to one PCU. In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A530 Griffiths Road approach from 96% in the future baseline to 102%, with a corresponding change in queue length from three PCU in the future baseline to six PCU.

A559 Manchester Road/A559 Hall Lane/Station Road

14.3.180 Table 14-53 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-53: A559 Manchester Road/A559 Hall Lane/Station Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A559 Hall Lane	297	56%	6	380	70%	7	359	67%	7	340	63%	7
A559 Manchester Road (east)	639	78%	11	640	78%	12	615	75%	11	625	76%	11
Station Road	139	71%	4	115	59%	3	115	58%	3	169	86%	4
A559 Manchester Road (west)	547	71%	10	625	82%	11	583	76%	10	582	76%	10
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A559 Hall Lane	381	71%	7	356	67%	7	378	71%	7	391	73%	8
A559 Manchester Road (east)	463	58%	8	498	62%	9	465	59%	8	430	53%	8
Station Road	189	97%	5	204	104%	5	197	101%	5	199	105%	5
A559 Manchester Road (west)	717	100%	12	773	108%	13	749	105%	13	743	104%	13

14.3.181 The assessment shows that in the AM peak hour the junction operates within capacity in the future baseline and close to capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.182 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.183 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A559 Manchester Road (west) approach from 100% in the future baseline to 108%, with a corresponding change in queue length from 12 PCU in the future baseline to 13 PCU.

14.3.184 In scenario 4, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Station Road approach from 97% in the future baseline to 105%, with no change in corresponding queue length.

A559 Manchester Road/Stubbs Lane

14.3.185 Table 14-54 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-54: A559 Manchester Road/Stubbs Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A559 Manchester Road (east)	453	23%	0	486	25%	0	461	23%	0	466	24%	0
Stubbs Lane	310	65%	0	308	69%	1	309	68%	1	320	72%	1
A559 Manchester Road (west)	295	32%	0	352	36%	0	329	34%	0	313	34%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A559 Manchester Road (east)	278	14%	0	371	19%	0	322	16%	0	283	14%	0
Stubbs Lane	443	101%	5	408	104%	5	430	104%	5	435	104%	5
A559 Manchester Road (west)	491	39%	0	526	41%	0	507	39%	0	500	39%	0

14.3.186 The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.187 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour. In scenarios 1 to 4, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Stubbs Lane approach from 101% in the future baseline to 104%, with no change in corresponding queue length.

B5075 Ollershaw Lane/B5075 New Warrington Road/Chapel Street

14.3.188 Table 14-55 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-55: B5075 Ollershaw Lane/B5075 New Warrington Road/Chapel Street junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5075 Ollershaw Lane	395	20%	0	560	29%	0	429	22%	0	556	29%	0
Chapel Street	182	36%	0	162	33%	0	157	33%	0	154	32%	0
B5075 New Warrington Road	753	89%	1	736	94%	1	730	88%	1	738	94%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5075 Ollershaw Lane	373	19%	0	426	21%	0	414	21%	0	397	20%	0
Chapel Street	560	105%	5	547	104%	5	552	106%	5	558	104%	5
B5075 New Warrington Road	549	39%	0	611	51%	0	593	49%	0	609	50%	0

14.3.189 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.190 In scenario 1, 2 and 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the B5075 New Warrington Road approach from 89% in the future baseline to 94% in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A556 Chester Road/A556 Shurlach Road/A559 Manchester Road

14.3.191 The A556 Chester Road/A556 Shurlach Road/A559 Manchester Road will be temporarily modified as part of the Proposed Scheme to accommodate the temporary realignment of the A556 Shurlach Road/Chester Road and the A559 Manchester Road, and temporary access to the Smoker Brook viaduct south satellite compound.

14.3.192 Table 14-56 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-56: A556 Chester Road/A556 Shurlach Road/A559 Manchester Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
08:00 - 09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Shurlach Road (north) (nearside) (ahead)	940	47%	0	1,279	64%	1	1,167	59%	1	1,110	56%	1
A556 Shurlach Road (north) (offside) (ahead)	1,073	54%	1	1,447	73%	1	1,316	66%	1	1,257	63%	1
Smoker Brook viaduct south satellite compound access	-	-	-	54	6%	0	54	6%	0	54	6%	0
A556 Shurlach Road (south) (nearside) (left and ahead)	865	78%	18	784	68%	14	772	67%	14	753	65%	13
A556 Shurlach Road (south) (offside) (ahead)	850	78%	18	772	68%	14	761	67%	14	743	65%	13
A559 Manchester Road (nearside) (ahead)	266	74%	8	174	55%	5	173	55%	5	172	55%	5
A559 Manchester Road (offside) (ahead)	270	75%	8	178	57%	5	177	56%	5	174	55%	5
A556 Shurlach Road (internal past A556 (north) entry)	90	16%	2	31	8%	0	73	15%	2	89	18%	2
A556 Shurlach Road (internal past A556 (south) entry) (nearside)	171	26%	3	264	44%	6	249	41%	5	246	41%	5
A556 Shurlach Road (internal past A556 (south) entry) (offside)	184	28%	4	282	46%	6	265	43%	6	262	43%	6
A556 Shurlach Road (internal past A559 Manchester Road entry) (nearside)	790	58%	1	738	52%	1	723	51%	1	704	50%	1
A556 Shurlach Road (internal past A559 Manchester Road entry) (offside)	850	58%	1	773	51%	1	763	50%	1	745	49%	1
17:00-18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Shurlach Road (north) (nearside) (ahead)	942	47%	1	961	48%	1	910	46%	0	859	43%	0
A556 Shurlach Road (north) (offside) (ahead)	1,123	56%	1	1,118	56%	1	1,054	53%	1	1,010	51%	1
Smoker Brook viaduct south satellite compound access	-	-	-	22	2%	0	22	2%	0	22	2%	0
A556 Shurlach Road (south) (nearside) (left and ahead)	644	63%	12	621	62%	12	590	60%	11	589	60%	11

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
A556 Shurlach Road (south) (offside) (ahead)	632	63%	12	620	63%	12	584	61%	11	579	60%	11
A559 Manchester Road (nearside) (ahead)	251	56%	6	298	63%	7	292	59%	7	288	58%	7
A559 Manchester Road (offside) (ahead)	249	55%	6	300	64%	7	294	59%	7	288	58%	7
A556 Shurlach Road (internal past A556 (north) entry)	148	26%	4	178	34%	3	153	28%	3	152	28%	3
A556 Shurlach Road (internal past A556 (south) entry) (nearside)	325	44%	6	269	35%	5	221	28%	4	189	24%	3
A556 Shurlach Road (internal past A556 (south) entry) (offside)	340	45%	7	287	37%	5	237	29%	4	204	25%	4
A556 Shurlach Road (internal past A559 Manchester Road entry) (nearside)	528	41%	0	581	46%	1	522	42%	0	484	37%	0
A556 Shurlach Road (internal past A559 Manchester Road entry) (offside)	632	46%	0	623	46%	1	587	44%	1	582	44%	1

14.3.193 The assessment shows that in the AM peak hour the junction operates within capacity in the future baseline and well within capacity with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

14.3.194 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as DoS and queue lengths at this junction.

A559 Marston Lane/A559 Hall Lane/B5391 Church Street/Wincham Lane

14.3.195 Table 14-57 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-57: A559 Marston Lane/A559 Hall Lane/B5391 Church Street/Wincham Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5391 Church Street	235	76%	4	269	88%	4	260	85%	4	257	84%	4
A559 Hall Lane	510	55%	5	476	48%	5	453	49%	4	498	50%	5
Wincham Lane	165	56%	3	176	59%	3	166	56%	3	172	58%	3
A559 Marston Lane	273	40%	3	162	16%	2	283	39%	3	149	15%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5391 Church Street	101	34%	2	114	37%	2	106	35%	2	103	35%	2
A559 Hall Lane	431	43%	4	394	38%	4	407	40%	4	373	37%	4
Wincham Lane	309	103%	5	321	107%	5	317	106%	5	311	104%	5
A559 Marston Lane	156	16%	2	132	14%	1	151	15%	1	171	17%	2

14.3.196 The assessment shows that in the AM peak hour the junction operates within capacity in the future baseline and close to capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.197 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the B5391 Church Street approach from 76% in the future baseline to 88% in the AM peak hour, with no change in corresponding queue length.

14.3.198 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Wincham Lane approach from 103% in the future baseline to 107%, with no change in corresponding queue length.

A556 Chester Road/B5569 Plumley Moor Road

14.3.199 Table 14-58 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-58: A556 Chester Road/B5569 Plumley Moor Road junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Chester Road (north)	1,423	60%	18	1,433	60%	18	1,481	62%	18	1,476	62%	18	1,421	60%	18
B5569 Plumley Moor Road (east)	105	40%	2	106	40%	2	103	39%	2	78	29%	1	102	39%	2
A556 Chester Road (south)	1,629	81%	17	1,626	81%	17	1,652	82%	17	1,665	83%	17	1,631	81%	17
B5569 Plumley Moor Road (west)	200	102%	3	198	102%	3	199	102%	3	198	102%	3	198	102%	3
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A556 Chester Road (north)	1,583	71%	22	1,590	71%	22	1,631	73%	23	1,596	71%	22	1,585	71%	22
B5569 Plumley Moor Road (east)	41	22%	1	43	24%	1	51	28%	1	61	34%	1	42	23%	1
A556 Chester Road (south)	989	52%	11	1,079	57%	12	1,271	67%	12	1,322	70%	13	1,132	60%	11
B5569 Plumley Moor Road (west)	278	87%	5	263	82%	4	265	83%	5	291	91%	5	251	79%	4

14.3.200 The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme.

14.3.201 The change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths in the AM peak hour.

14.3.202 In scenario 3, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the B5569 Plumley Moor Road (West) approach from 87% in the future baseline to 91%, with no change in corresponding queue length.

B5391 Church Street/B5391 Pickmere Lane/Linnards Lane/Earles Lane

14.3.203 This junction is on the northern edge of the MA02 area and has been assessed using the M6 Junction 19 Model, which is primarily used to assess the impact of the Proposed Scheme in the Pickmere to Agden and Hulseheath (MA03) area and the western parts of the Hulseheath to Manchester Airport (MA06) area. The start and end dates of the construction scenarios differ between the MA02 and MA03 areas and therefore the construction scenarios reported for this junction differ from other junctions reported in MA02. Details of the construction scenarios in the MA03 area are set out in Section 8.

14.3.204 Table 14-59 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-59: B5391 Church Street/B5391 Pickmere Lane/Linnards Lane/Earles Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5391 Pickmere Lane	395	20%	395	504	26%	0	464	24%	0	449	23%	0	504	26%	0
Linnards Lane	140	40%	140	125	40%	0	145	45%	0	143	41%	0	125	40%	0
B5391 Church Street	168	8%	168	200	10%	0	170	9%	0	188	9%	0	200	10%	0
Earles Lane	496	79%	496	471	76%	0	522	83%	0	454	73%	0	471	76%	0
B5391 Church Street (north) (internal)	386	34%	386	480	45%	0	456	42%	0	444	41%	0	480	45%	0
B5391 Church Street (south) (internal)	660	85%	660	666	88%	1	688	95%	2	638	81%	1	660	85%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5391 Pickmere Lane	380	20%	0	451	23%	0	428	22%	0	412	21%	0	451	23%	0
Linnards Lane	135	29%	0	130	26%	0	139	29%	0	129	28%	0	130	26%	0
B5391 Church Street	379	19%	0	378	19%	0	375	19%	0	349	17%	0	378	19%	0
Earles Lane	206	38%	0	279	51%	0	249	45%	0	244	44%	0	279	51%	0
B5391 Church Street (north) (internal)	393	55%	0	482	68%	0	456	65%	0	431	60%	0	482	68%	0
B5391 Church Street (south) (internal)	582	48%	0	654	56%	0	620	52%	0	589	47%	0	654	56%	0

14.3.205 The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

14.3.206 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the B5391 Church Street (south) approach from 85% in the future baseline to 95% in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to two PCU. In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will not result in substantial changes in capacity indicators such as VoC and queue lengths.

A559 Marston Lane/B5075 Ollershaw Lane/Dark Lane

14.3.207 Table 14-60 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 14-60: A559 Marston Lane/B5075 Ollershaw Lane/Dark Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Dark Lane	0	0%	0	0	0%	0	0	0%	0	0	0%	0
A559 Marston Lane (east)	330	17%	0	369	19%	0	356	19%	0	371	19%	0
B5075 Ollershaw Lane	344	93%	2	340	94%	2	336	91%	2	342	95%	2
A559 Marston Lane (west)	952	85%	0	952	101%	2	1,007	89%	0	923	100%	2
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenarios 1 and 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Dark Lane	0	0%	0	0	0%	0	0	0%	0	0	0%	0
A559 Marston Lane (east)	493	25%	0	640	33%	0	612	32%	0	577	30%	0
B5075 Ollershaw Lane	478	101%	5	461	108%	6	460	105%	6	460	105%	5
A559 Marston Lane (west)	546	64%	0	592	71%	0	590	70%	0	594	69%	0

14.3.208 The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme.

14.3.209 In scenario 1, 2 and 4, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A559 Marston Lane (west) approach from 85% in the future baseline to 101% in the AM peak hour, with a corresponding change in queue length from no queue in the future baseline to two PCU.

14.3.210 In scenarios 1 and 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the B5075 Ollershaw Lane approach from 101% in the future baseline to 108% in the PM peak hour, with a corresponding change in queue length from five PCU in the future baseline to six PCU.

Accidents and safety

14.3.211 There are no locations with existing safety concerns that are likely to experience substantial increases in traffic during construction and, consequently, no unacceptable impacts on accident and safety risks are expected. Although there will be increases in construction traffic on other links and junctions, none have been identified in the baseline assessment as the location of a known or likely safety concern.

Parking and loading

14.3.212 There will be a temporary loss of off-street parking along the route of the Proposed Scheme in the MA02 area. This will be a temporary loss of approximately 210 off-street parking spaces, including 13 Blue Badge bays, at the Gadbrook Distribution centre, located of the A530 King Street south of Northwich, for a period of two years and three months.

14.3.213 Permanent loss of parking is reported under the operational assessment.

Public transport

Local bus services

14.3.214 Local bus services will be affected where they are crossed by the route of the Proposed Scheme and where the Proposed Scheme results in changes to the route taken or where construction traffic or general traffic diversions affect bus routes.

14.3.215 Temporary traffic management on the A530 Nantwich Road will affect two bus routes during some of the construction phases associated with the permanent realignment of the A530 Nantwich Road, which will take three years to complete: route 30 (Shavington - Crewe - Leighton Hospital - Middlewich - Winsford - Northwich) and route 42 (Crewe - Leighton Hospital- Middlewich - Holmes Chapel - Congleton). This will not cause a change in the journey length.

14.3.216 The temporary realignment of the A559 Manchester Road will affect one bus route for a period of two years and six months: route 89 (Northwich - Wincham - Knutsford). This will result in a change in journey length of less than 100m.

14.3.217 The temporary realignment of the A556 Shurlach Road will affect one bus route for a period of two years and six months: route 89 (Northwich - Wincham - Knutsford). This will result in a change in journey length of less than 100m.

14.3.218 The construction of the Proposed Scheme will not result in disruption to coach services due to temporary closure or diversions. However, increases in traffic on the highway network may result in increases in delay for coach services.

Rail network

14.3.219 There are interfaces with the existing rail network in this area, in particular on the operation of the WCML, the Sandbach to Northwich Line and the Mid-Cheshire Line and the passengers and rail freight services that use these lines. However, the majority of the rail possessions will have little or no impact on the operation of rail services as they will be relatively minor localised works, such as work on and adjacent to track when not in use. In addition, where rail possessions do have the potential to disrupt services, interventions will be combined, where practicable, to reduce the frequency of potential disruption.

14.3.220 The construction of the Proposed Scheme, in particular the A530 Nantwich Road realignment, Crewe North RSD, Trent and Mersey Canal viaduct, Lostock Gralam viaduct and utility diversions, is expected to require a number of rail possessions and blockades. This includes nine possessions of 27 hours, 12 possessions up to 54 hours, one possession up to 72 hours.

14.3.221 HS2 Ltd will work with Network Rail and the train operating companies and freight operating companies to ensure that disruption to passengers and freight is reduced as far as reasonably practicable and that any need for additional possessions can be reduced with good planning and communication (including appropriate advance notice). This includes measures such as:

- careful programming of works to coincide with possessions that are planned for the general maintenance of the existing railway;
- planning works so that they will be undertaken in short, overnight stages when passenger services will not be disrupted; and
- programming longer closures at weekends or bank holidays to reduce the number of passengers affected.

Public transport interchanges

14.3.222 There are no major public transport interchanges in the MA02 area and therefore no consequential construction activity impacts on public transport interchange facilities in the MA02 area.

Pedestrians, cyclists and equestrians

14.3.223 The works required to construct the Proposed Scheme will affect routes used by pedestrians, cyclists and equestrians, primarily where construction results in changes to the affected routes. In most cases this will enable the construction of temporary diversions or permanent diversions and over and under-bridges, which will carry the permanent diversions of these PRoW and roadside footways. In some circumstances, access to PRoW will need to be managed by way of banksmen and very local realignments. Pedestrians and other non-motorised users may also be affected by changes in traffic levels due, particularly,

to construction traffic associated with the Proposed Scheme. Roads with substantial changes in traffic levels are listed above.

14.3.224 Locations where routes used by pedestrians, cyclists and equestrians will be temporarily diverted, realigned or closed are shown below. Table 14-61 summarises the temporary diversions, realignments and extensions to PRoW required to accommodate the construction of the Proposed Scheme.

Table 14-61: MA02 construction changes on public rights of way and roadside footways for non-motorised users/day

PRoW name	Surveyed daily usage	Temporary diversion	Change in distance	Duration
Footpath Wimboldsley 5/2	0 users	Managed use of existing route during construction.	No change	Three years and nine months
Footpath Wimboldsley 1/1	0 users	The permanent closure of Footpath Wimboldsley 1/1, in combination with the temporary realignment of Clive Green Lane will result in a diversion via the Shropshire Union Canal (Middlewich Branch) footpath (Footpath Wimboldsley 9/3 and Footpath Winsford 3/4), Clive Green Lane temporary realignment, Clive Green Lane and A530 Nantwich Road.	Increase of 1.5km	Two years and one month
Footpath Winsford 3/4	N/A	Temporary diversion of Footpath Winsford 3/4 during construction of Clive Green Lane overbridge. A 625m diversion route is proposed along Clive Green Lane and the temporarily realigned Clive Green Lane. On completion of construction of the Clive Green Lane overbridge, the Footpath Winsford 3/4 will be reinstated along its existing alignment.	Increase of 585m	Two years and one month
Footpath Winsford 3/1 and Footpath Stanthorne 3/1	N/A	Managed use of the existing route during construction of the Shropshire Union Canal viaducts. During periods of closure, users of Footpath Winsford 3/1 and Footpath Stanthorne 3/1 will be temporarily diverted for	Increase of 511m	Two years and seven months

PRoW name	Surveyed daily usage	Temporary diversion	Change in distance	Duration
		1.5km via Clive Green Lane and Coalpit Lane.		
Clive Green Lane	32 users	Temporary realignment of a 340m section of Clive Green Lane, located to the west of the Shropshire Union Canal (Middlewich Branch) during construction of Clive Green Lane overbridge.	Increase of 44m	One years and nine months
Birch Lane	N/A	Managed use of existing route or localised diversions during construction of A54 Middlewich Road realignment.	No change	Five months
Bell Lane	N/A	Closure of Bell Lane during the construction of the A54 Middlewich Road. Users will be diverted via the existing A533 Northwich Road and the existing A54 Middlewich Road.	Increase of 625m	Four years and eight months
Footpath Winsford 37/1 and Footpath Stanthorne 1/1	0 users	Temporary diversion of the Footpath Winsford 37/1 and Footpath Stanthorne 1/1 during construction. This will divert users for 440m along the realigned A54 Middlewich Road, to meet the existing A533 Northwich Road.	Increase of 765m	11 months
Footpath Davenham 6/1	14 users	Managed use of existing route or localised diversions during construction of the River Dane viaduct.	No change	Two years and 11 months
Footpath Davenham 6X/2	14 users	Managed use of existing route or localised diversions during construction of Puddinglake Brook viaduct.	No change	One year
Footpath Rudheath 10/1	14 users	Managed use of existing route or localised diversions during construction of Trent and Mersey Canal viaduct.	No change	One year and five months
Footpath Rudheath 3/4, Footpath Rudheath 3/3,	0 users	Temporary diversion of Footpath Rudheath 3/4, Footpath Rudheath 3/3,	Increase of 660m	Four years and two months

PRoW name	Surveyed daily usage	Temporary diversion	Change in distance	Duration
Footpath Lach Dennis 3X/2 and Footpath Lach Dennis 3X/1		Footpath Lach Dennis 3X/2 and Footpath Lach Dennis 3X/1 during construction of the Rudheath embankment. This will divert users for 360m to join the B5082 Penny's Lane to its existing junction with the A556 Shurlach Road.		
A559 Manchester Road	15 users	Users will be diverted via the temporary realignment of the A559 Manchester Road.	Negligible change	Two year and six months
Restricted Byway Lostock Gralam 14/3	45 users	Managed use of existing route or localised diversions during construction of Lostock Gralam viaduct.	No change	Ten months
Linnards Lane	N/A	Temporary closure of Linnards Lane for four weeks during the construction of the Smoker Brook viaduct. Pedestrian users between the A556 Chester Road and Footpath Wincham 8/1 will be diverted via the A559 Manchester Road, Hall Lane, Green Lane and Linnards Lane. Cyclists and equestrian users will use the same diversion, but would not require access to Footpath Wincham 8/1.	Increase of 3.6km for pedestrian users and increase of 1.7km for cyclists and equestrians.	One month

14.3.225 The busiest routes affected will be the Restricted Byway Lostock Gralam 14/3 (45 users), Clive Green Lane (32 users), and Footpath Byley 3/1, Footpath Davenham 6/1, Footpath Davenham 6X/2, Footpath Rudheath 6X/1 and Footpath Rudheath 10/1 (which together form part of the Trent and Mersey Canal towpath (14 users).

14.3.226 Six of the PRoW/footway routes affected experience very little, or no change in length, or the PRoW routes become shorter (e.g. on the A559 Manchester Road). A further four changes result in diversions which increase PRoW/footway route length up to 750m.

14.3.227 Other PRoW routes experience larger changes in length of diversion, including the longest diversion of up to 3.6km.

14.3.228 Other longer diversions include Footpath Wimboldsley 1/1, and Footpath Winsford 37/1 and Footpath Stanthorne 1/1 with increases in route length of up to 1.5km and 758m

respectively. Of these longer diversions, most had no users per day when surveyed, or no survey was undertaken.

14.3.229 Permanently diverted PRoW and roadside footways are reported under the operational assessment, although these could also be subject to temporary closure, diversion or realignment during construction.

Waterways and canals

14.3.230 The route of the Proposed Scheme will cross over the Shropshire Union Canal (Middlewich Branch) and the Trent and Mersey Canal at the following locations:

- three proposed viaducts will cross over the Shropshire Union Canal (Middlewich Branch). The viaducts will provide connections to the Crewe North RSD, including the Crewe depot up track, the Crewe depot down track, the Crewe North Connection down track and the Crewe North Connection up track; and
- the River Dane viaduct will cross over the Trent and Mersey Canal.

14.3.231 The Clive Green Lane realignment will also cross over the Shropshire Union Canal (Middlewich Branch) on the Clive Green Lane overbridge.

14.3.232 The construction of the Proposed Scheme will require short closures, of up to three days at each location. HS2 Ltd will work with the Canal & River Trust to ensure that any need for closures can be limited. As the closures will be short-term in nature, the impact on users of the waterway and the associated canal towpath will not be substantial.

14.4 Proposed Scheme operation description

14.4.1 The Proposed Scheme within the MA02 area will comprise four main components:

- the route of the Proposed Scheme, which will be 14.6km in length, continuing from the Hough to Walley's Green area (MA01) in the south passing between the towns of Winsford and Middlewich on a series of embankments and viaducts to the west of Lostock Green and east of Rudheath, Lostock Gralam and Higher Wincham;
- Crewe North IMB-R;
- Crewe North RSD, which will serve as an operational and maintenance hub for HS2 rolling stock;
- Crewe Northern Connection: which will enable future NPR services to connect with HS2; and
- reception tracks connecting the Crewe North RSD with both the WCML and the route of the Proposed Scheme.

14.4.2 The Crewe North RSD will serve as an operational and maintenance hub. Activities will include light and heavy maintenance, where train servicing (plus interior and exterior cleaning) will take place on the Proposed Scheme's rolling stock.

14.4.3 The Crewe North RSD site will be approximately 65ha in area and occupy land between the existing WCML and the route of the Proposed Scheme south of Clive Green Lane. It will be 2.7km long and up to 500m wide. The site will include a gatehouse and new access roads from the realigned Clive Green Lane and a surface car park with approximately 600 spaces for use by staff and visitors.

14.4.4 The Crewe North IMB-R will serve as a permanent base and satellite site to the Phase 2a Stone IMB-R, to support the maintenance of railway infrastructure. The Crewe North IMB-R will continue into the Hough to Walley's Green area (MA01) and will be accessed via the Crewe North RSD.

14.5 Proposed Scheme assessment of operation impacts

14.5.1 This section provides an overview of the impacts resulting from the operation of the Proposed Scheme. HS2 Phase Two services are expected to commence in 2038. Operation of the Proposed Scheme will not have any cumulative impacts resulting from the operation of the Proposed Scheme with HS2 Phase 2a.

Key operation transport issues

14.5.2 The operational assessment takes account of all of the impacts of the Proposed Scheme in the MA02 area. The main traffic and transport impacts during operation of the Proposed Scheme in this area will be associated with the operation and maintenance of Crewe North RSD and Crewe North IMB-R, partly located in the Hough to Walley's Green area (MA01), which will generate additional vehicle movements due to staff, servicing and operational traffic.

14.5.3 The proposed Crewe North IMB-R and Crewe North RSD will generate additional vehicle movements due to staff, servicing and operational traffic. However, Crewe North IMB-R is expected to generate infrequent traffic movements and will not result in any traffic and transport impacts. The majority of trips generated by Crewe North RSD are expected to occur during off-peak periods, however, the Proposed Scheme may result in traffic and transport impacts on the local road network.

14.5.4 The maintenance of the Proposed Scheme will generate a limited number of vehicular trips associated with servicing and maintenance, and there will be some minor local reassignment of traffic due to road diversions, but these impacts will not be substantial.

Highway network

Highway diversions, realignments and closures

14.5.5 Table 14-62 summarises the permanent road diversions, realignments and extensions and any new or altered junctions required to accommodate the Proposed Scheme. New or altered junctions are assessed under junction performance.

Table 14-62: MA02 permanent highway diversion/closure/amendment

Highway name/junction	Description	Change/alteration
A530 Nantwich Road	Realignment of a section of the A530 Nantwich Road, up to 55m south of its existing alignment. The realignment will cross the existing WCML and the route of the Proposed Scheme on the A530 Nantwich Road overbridge. Access will be retained to both sides of the Proposed Scheme for the Verdin Arms public house, Wimboldsley Hall and Wimboldsley Grange to the west, and Manor Cottage to the east and used as an emergency access for the Crewe North RSD.	For users travelling on the A530 Nantwich Road between Bradfield Green and Wimboldsley, the journey length will reduce by less than 100m.
Clive Green Lane	Realignment and modification of a section of Clive Green Lane, up to 120m south of its current alignment crossing the route of the Proposed Scheme on the Clive Green Lane overbridge. At its western extent, the Clive Green Lane realignment will cross the Shropshire Union Canal on a new overbridge and at its eastern extent will connect to the A530 Nantwich Road and Coalpit Lane via a new roundabout. The existing Clive Green Lane to the east of the Proposed Scheme will be repurposed to serves as a HS2 maintenance access road. To the west of the Proposed Scheme, access to properties on Clive Green Lane located between the route of the Proposed scheme and the Shropshire Union Canal (Middlewich Branch) will be via the Crewe North RSD access road. The Clive Green Lane realignment will connect to the A530 Nantwich Road, Coalpit Lane and the HS2 maintenance access road via a new five-arm priority controlled (give-way) roundabout. Coalpit Lane will be realigned up to 25m west of its existing alignment and A530 Nantwich Road will be realigned up to 60m west of its existing alignment to tie-in with the new roundabout junction.	Users travelling on Clive Green Lane between the A530 Nantwich Road and Winsford will be diverted via the Clive Green Lane realignment, increasing journey length by 182m. Journey lengths for users of Coalpit Lane and A530 Nantwich Road will change by less than 100m.
A54 Middlewich Road	Realignment of a section of the A54 Middlewich Road, up to 137m north of its existing alignment, connecting with the A533 Northwich Road diversion at a new three-arm priority controlled (give-way) roundabout. The A54 Middlewich Road realignment will be crossed by the route of the Proposed Scheme on A54 Middlewich Road viaduct. The Bell Lane realignment and the Birch Lane diversion will connect with the A54 Middlewich Road realignment at a priority controlled (give-way) staggered crossroads.	Users between Winsford and Middlewich will be diverted via the A54 Middlewich Road realignment, increasing journey length by 154m.

Highway name/junction	Description	Change/alteration
	The A54 Middlewich Road will be closed where it crosses the route of the Proposed Scheme.	
Birch Lane	Diversion of a section of Birch Lane to connect with the realigned A54 Middlewich Road, up to 50m west of its existing alignment. A priority-controlled (give-way) staggered crossroads will be formed with the A54 Middlewich Road realignment and Bell Lane realignment.	For users between A54 Middlewich Road and Coalpit Lane, the journey length will increase by 128m.
Bell Lane	Bell Lane will be realigned where it is crossed by the A54 Middlewich Road realignment, reducing its length by 40m. A priority-controlled (give-way) staggered crossroads will be formed with the A54 Middlewich Road realignment and Birch Lane diversion.	Users between Bell Lane and Birch Lane will be diverted via the new staggered cross-roads, increasing journey length by 128m.
A533 Northwich Road	Diversion of a section of the A533 Northwich Road, up to 300m south of its existing alignment. The A533 Northwich Road diversion will connect with the realigned A54 Middlewich Road at a new three-arm priority-controlled (give-way) roundabout. The A533 Northwich Road will be closed where it crosses the route of the Proposed Scheme.	For users travelling between Wharton Green and Middlewich, the journey length will increase by 221m.
B5082 Penny's Lane	The existing B5082 Penny's Lane will be closed where it is crossed by the route of the Proposed Scheme. It will be retained as access to both sides of the route of the Proposed Scheme, with turning heads provided to facilitate vehicle access on the retained sections of the road. A section of the B5082 Penny's Lane will be diverted 420m south of its current alignment, connecting with A530 King Street as a new fourth arm of the existing A530 King Street/Gadbrook Distribution Centre roundabout junction. The diverted B5082 Penny's Lane is crossed by the route of the Proposed Scheme beneath Gad Brook viaduct.	For users travelling between Lach Dennis and Rudheath, the journey length will increase by 468m.
Cookes Lane	Closure of the north-eastern section of Cookes Lane where it is crossed by A556 Shurlach Road realignment. An access road serving land to the west of the A556 Shurlach Road realignment will be provided.	No change in journey length.
A556 Shurlach Road	Realignment of a 2.3km section of the A556 Shurlach Road, up to 90m to the north-west of its current alignment, including improvement of the junctions with Birches Lane.	Users will be diverted via the A556 Shurlach Road realignment, increasing journey length by less than 100m.
Birches Lane (east)	To the east of the A556 Shurlach Road realignment, a 494m section of Birches Lane will be diverted under Wade Brook offline overbridge. The Birches Lane realignment will connect with the A556 Shurlach Road realignment, 300m north-east its existing junction, at a left-in left-out priority-controlled (give-way) T-junction.	Users travelling between Lostock Green and Rudheath will be diverted via the Birches Lane diversion and the A556 Shurlach Road realignment, increasing journey length by 395m.
Birches Lane (west)	To the west of the A556 Shurlach Road realignment, Birches Lane will be reduced in length and will connect	For users travelling between the A556 Shurlach Road and Lostock

Highway name/junction	Description	Change/alteration
	with the A556 Shurlach Road realignment at a left-in left-out priority-controlled (give-way) T-junction.	Gralam Station, the journey length will decrease by 90m.

Network traffic flows

14.5.6 The highway changes set out above together with changes in traffic flows arising from the operation of the Proposed Scheme will result in changes to travel patterns in the area.

Strategic and local road network traffic flows

14.5.7 The impacts of the Proposed Scheme on the highway network have been assessed by undertaking strategic model runs for the 2038 and 2046 'with HS2' scenarios, and by comparing the flows and delays against the corresponding future baseline scenarios.

14.5.8 The Winsford (and Middlewich) to M6 model and the Northwich Town Centre model have been used to model the operation scenarios across the MA02 area. In the MA02 area, the Winsford (and Middlewich) to M6 model covers the area from Bostock Green in the north to Walley's Green in the south, and from Winsford in the west to Holmes Chapel in the east. The Northwich Town Centre model covers the area from Higher Wincham in the north to Wharton Green in the south, and from Sandiway in the west to the M6 in the east.

14.5.9 Changes have been made within the strategic models to reflect the proposed changes to the road network including road closures, realigned roads and changes to junction operations.

14.5.10 Table 14-63 and Table 14-64 set out the traffic flows on highway links affected by operation of the Proposed Scheme for the weekday AM peak hour (08:00–09:00) for 2038 and 2046 respectively. Table 14-65 and Table 14-66 cover the weekday PM peak hour (17:00–18:00) for 2038 and 2046 respectively. Due to the simplified way in which the road network is represented in the strategic models, the use of some local roads may not be precisely reflected in the forecast traffic flows during operation of the Proposed Scheme, however, this is not expected to change the conclusions of the assessment.

14.5.11 Traffic flows on all other links are either unaffected from the future baseline or result in only small changes.

14.5.12 Traffic flow changes are shown in Figure 14-7, Figure 14-8, Figure 14-9 and Figure 14-10 for the AM and PM peak hours respectively for both 2038 and 2046. The width of the band indicates the proportional change in traffic, with red representing an increase and green a decrease compared with the 2038 and 2046 future baseline scenario. Flow changes are the combination of changes in passenger demand and reassigned baseline traffic.

Table 14-63: MA02 impacted links, 2038 AM peak

Location	Direction	2038 baseline flows		2038 Proposed Scheme flows		Proposed Scheme - actual flow change from 2038 baseline		Proposed Scheme - % change from 2038 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Darnhall School Lane (between Glebe Green Drive and B5074 Swanlow Lane)	NB	4	1	4	1	0	0	0%	0%
	SB	131	1	158	1	27	0	21%	0%
Durham Drive/Glebe Green Drive (between Darnhall School Lane and Townsfields Drive)	NB	260	2	291	2	31	0	12%	0%
	SB	32	2	33	2	1	0	3%	0%
Durham Drive/Dover Drive/Mount Pleasant Drive (between Townsfields Drive and Denbigh Drive)	EB	47	2	52	2	5	0	11%	0%
	WB	239	2	263	2	24	0	10%	0%
Clive Green Lane realignment/Clive Lane (between A530 Nantwich Road and A54 Middlewich Road)	NB	441	19	477	19	36	0	8%	0%
	SB	207	21	401	21	194	0	94%	0%
Station Road (between B5355 Crook Lane and Rilshaw Lane)	EB	135	6	156	6	21	0	16%	0%
	WB	56	2	57	2	1	0	2%	0%
B5355 Station Road (between A54 Middlewich Road and B5355 Crook Lane)	EB	258	4	298	4	40	0	16%	0%
	WB	43	5	48	5	5	0	12%	0%
A54 Middlewich Road realignment (between Clive Lane and A533 Northwich Road diversion)	NB	416	14	422	13	6	-1	1%	-7%
	SB	472	38	482	38	10	0	2%	0%
A54 Middlewich Road realignment (between A533 Northwich Road diversion and A533 Northwich Road)	EB	416	14	734	33	318	19	76%	136%
	WB	472	38	777	39	305	1	65%	3%
Road One (between A533 Bostock Road and A54 Middlewich Road)	NB	137	15	79	15	-58	0	-42%	0%
	SB	376	24	489	24	113	0	30%	0%
A533 Northwich Road diversion (between A54 Middlewich Road realignment and A533 Northwich Road)	NB	288	1	349	1	61	0	21%	0%
	SB	380	19	366	19	-14	0	-4%	0%

Location	Direction	2038 baseline flows		2038 Proposed Scheme flows		Proposed Scheme - actual flow change from 2038 baseline		Proposed Scheme - % change from 2038 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
A533 Bostock Road (between A5018 Bostock Road and London Road)	EB	141	19	135	19	-6	0	-4%	0%
	WB	393	2	474	2	81	0	21%	0%
London Road (between A533 Bostock Road and Brick Kiln Lane)	NB	228	0	282	0	54	0	24%	0%
	SB	574	1	640	1	66	0	11%	0%
London Road (between Hartford Road and Church Street)	EB	759	6	626	6	-133	0	-18%	0%
	WB	589	51	563	51	-26	0	-4%	0%
Church Street/Shipbrook Road (between London Road and Shurlach Lane)	EB	678	0	530	0	-148	0	-22%	0%
	WB	13	0	13	0	0	0	0%	0%
London Road (between Green Lane and A556 Chester Road)	NB	807	58	766	57	-41	-1	-5%	-2%
	SB	584	11	448	10	-136	-1	-23%	-9%
Davenham Road (between Shurlach Lane and A530 King Street)	EB	273	0	142	0	-131	0	-48%	0%
	WB	477	0	494	0	17	0	4%	0%
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	220	0	53	0	-167	0	-76%	0%
	WB	242	0	249	0	7	0	3%	0%
B5082 Penny's Lane diversion (between Penny's Lane and A556 Shurlach Road)	EB	224	1	424	2	200	1	89%	100%
	WB	173	30	77	17	-96	-13	-55%	-43%
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	NB	550	20	759	37	209	17	38%	85%
	SB	663	40	1,029	41	366	1	55%	2%
Shipbrook Road (between Gadbrook Road and A556 Shurlach Road)	NB	166	9	208	10	42	1	25%	11%
	SB	55	0	51	0	-4	0	-7%	0%
	NB	160	0	207	15	47	15	29%	0%

Location	Direction	2038 baseline flows		2038 Proposed Scheme flows		Proposed Scheme - actual flow change from 2038 baseline		Proposed Scheme - % change from 2038 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Birches Lane diversion (between A556 Shurlach Road and B5082 Holmes Chapel Road)	SB	158	2	154	2	-4	0	-3%	0%
A556 Shurlach Road (between A530 King Street and Birches Lane)	EB	1,836	102	1,440	85	-396	-17	-22%	-17%
	WB	1,682	122	1,358	90	-324	-32	-19%	-26%
	SB	0	0	154	2	154	2	0%	0%
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	192	7	229	8	37	1	19%	14%
	SB	17	1	17	1	0	0	0%	0%
Station Road (between School Lane and A559 Manchester Road)	NB	189	2	211	3	22	1	12%	50%
	SB	112	1	112	1	0	0	0%	0%
School Lane (between Station Road and Stubbs Lane)	NB	120	0	134	0	14	0	12%	0%

Table 14-64: MA02 impacted links, 2046 AM peak

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Darnhall School Lane (between Glebe Green Drive and B5074 Swanlow Lane)	NB	3	1	3	1	0	0	0%	0%
	SB	112	1	124	1	12	0	11%	0%
Durham Drive/Dover Drive/Mount Pleasant Drive (between Townsfields Drive and Denbigh Drive)	NB	131	2	100	2	-31	0	-24%	0%
	SB	134	2	133	2	-1	0	-1%	0%
	EB	295	0	341	0	46	0	16%	0%

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Townfields Drive (between B5074 Swanlow Lane and Durham Drive)	WB	12	0	12	0	0	0	0%	0%
Woodford Lane West (between Mount Pleasant Drive and A54 Oakmere Road)	NB	72	0	75	0	3	0	4%	0%
	SB	174	2	131	2	-43	0	-25%	0%
Elm Road (between Long Lane South and A533 Booth Lane)	EB	74	5	90	5	16	0	22%	0%
	WB	11	1	11	1	0	0	0%	0%
Beeston Drive (between Denbigh Drive and Handley Hill)	NB	141	17	157	17	16	0	11%	0%
	SB	16	2	17	2	1	0	6%	0%
Brynlow Drive (between Long Lane and A530 Nantwich Road)	EB	85	10	120	10	35	0	41%	0%
	WB	332	9	339	9	7	0	2%	0%
Hayhurst Avenue (between Long Lane and Sutton Lane)	EB	93	9	125	9	32	0	34%	0%
	WB	94	8	98	8	4	0	4%	0%
St Annes Avenue (between Sutton Lane and A533 Booth Lane)	EB	107	3	138	3	31	0	29%	0%
	WB	67	2	72	2	5	0	7%	0%
Beeston Drive (between Handley Hill and B5074 Swanlow Lane)	EB	142	17	158	17	16	0	11%	0%
	WB	16	2	17	2	1	0	6%	0%
Clive Green Lane realignment/Clive Lane (between A530 Nantwich Road and A54 Middlewich Road)	NB	513	20	558	20	45	0	9%	0%
	SB	199	22	408	22	209	0	105%	0%
Dingle Lane/Weaver Street (between The Drumber and A54 Winsford Bypass)	NB	472	0	393	0	-79	0	-17%	0%
	SB	293	5	276	5	-17	0	-6%	0%
Dingle Lane (between A54 High Street and The Drumber)	NB	411	1	412	1	1	0	0%	0%

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
	SB	172	3	241	2	69	-1	40%	-33%
Nixon Drive (between Abbotts Way and Basford Way)	EB	91	2	96	2	5	0	5%	0%
	WB	46	2	66	2	20	0	43%	0%
Nixon Drive (between B5074 Delamere Street and Abbotts Way)	EB	42	2	46	2	4	0	10%	0%
	WB	50	2	69	2	19	0	38%	0%
A54 Middlewich Road realignment (between Clive Lane and A533 Northwich Road diversion)	NB	464	14	432	13	-32	-1	-7%	-7%
	SB	418	17	475	19	57	2	14%	12%
A54 Middlewich Road realignment (between A533 Northwich Road diversion and A533 Northwich Road)	EB	464	14	687	32	223	18	48%	129%
	WB	418	17	749	20	331	3	79%	18%
A533 Northwich Road diversion (between A54 Middlewich Road realignment and A533 Northwich Road)	NB	323	1	360	1	37	0	11%	0%
	SB	337	21	335	20	-2	-1	-1%	-5%
A530 King Street (between A530 Croxton Lane and Whatcroft Hall Lane)	NB	742	23	923	13	181	-10	24%	-43%
	SB	715	40	730	39	15	-1	2%	-3%
London Road (between Hartford Road and Church Street)	EB	766	6	632	6	-134	0	-17%	0%
	WB	556	46	540	46	-16	0	-3%	0%
Church Street/Shipbrook Road (between London Road and Shurlach Lane)	EB	711	0	591	0	-120	0	-17%	0%
	WB	12	0	12	0	0	0	0%	0%
A50 London Road (between B5082 Northwich Road and Booth Bed Lane)	NB	200	1	159	1	-41	0	-21%	0%
	SB	76	2	75	1	-1	-1	-1%	-50%
London Road (between Green Lane and A556 Chester Road)	NB	834	53	792	53	-42	0	-5%	0%
	SB	577	10	440	10	-137	0	-24%	0%

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Davenham Road (between Shurlach Lane and A530 King Street)	EB	294	0	184	0	-110	0	-37%	0%
	WB	485	0	503	0	18	0	4%	0%
B5082 Holmes Chapel Road (between B5081 Byley Lane and Birches Lane)	EB	655	3	669	4	14	1	2%	33%
	WB	594	30	518	41	-76	11	-13%	37%
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	279	0	81	0	-198	0	-71%	0%
	WB	219	0	238	0	19	0	9%	0%
London Road (between Dunham Road and Old Hall Road)	NB	151	4	112	4	-39	0	-26%	0%
	SB	202	4	198	4	-4	0	-2%	0%
B5082 Penny's Lane diversion (between Penny's Lane and A556 Shurlach Road)	EB	196	1	428	2	232	1	118%	100%
	WB	152	30	90	18	-62	-12	-41%	-40%
Old Hall Road (between Clifton Drive and Fairfield Road)	EB	122	2	120	2	-2	0	-2%	0%
	WB	92	2	6	2	-86	0	-93%	0%
Old Hall Road (between Granville Road and Clifton Drive)	EB	125	5	123	5	-2	0	-2%	0%
	WB	95	5	8	5	-87	0	-92%	0%
Old Hall Road (between London Road and Granville Road)	EB	142	5	139	5	-3	0	-2%	0%
	WB	102	5	26	5	-76	0	-75%	0%
London Road (between Old Hall Road and Lime Avenue)	NB	241	4	125	4	-116	0	-48%	0%
	SB	331	4	325	4	-6	0	-2%	0%
Kingsley Drive (between Old Hall Road and Langley Road)	NB	2	0	87	0	85	0	4,250%	0%
	SB	16	0	16	0	0	0	0%	0%
	NB	509	23	772	30	263	7	52%	30%

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	SB	696	41	1,046	41	350	0	50%	0%
Shipbrook Road (between Gadbrook Road and A556 Shurlach Road)	NB	193	11	225	10	32	-1	17%	-9%
	SB	53	0	51	0	-2	0	-4%	0%
Birches Lane diversion (between A556 Shurlach Road and B5082 Holmes Chapel Road)	NB	223	0	191	23	-32	23	-14%	0%
	SB	180	2	159	2	-21	0	-12%	0%
A556 Shurlach Road (between A530 King Street and Birches Lane)	EB	1,847	103	1,493	79	-354	-24	-19%	-23%
	WB	1,789	123	1,427	92	-362	-31	-20%	-25%
Brockhurst Street (between Percy Street and A5509 Chester Way)	EB	131	0	96	0	-35	0	-27%	0%
	WB	82	1	81	1	-1	0	-1%	0%
Percy Street (between Whalley Road and A559 Chester Way)	NB	64	0	63	0	-1	0	-2%	0%
	SB	22	0	54	0	32	0	145%	0%
Applemarket Street (between Weaver Way and A559 Watling Street)	NB	122	1	144	1	22	0	18%	0%
	SB	102	2	106	2	4	0	4%	0%
A50 Holmes Chapel Road (between Booth Bed Lane and B5081 Middlewich Road)	NB	266	2	225	2	-41	0	-15%	0%
	SB	103	2	96	2	-7	0	-7%	0%
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	200	8	253	11	53	3	27%	38%
	SB	18	1	18	1	0	0	0%	0%
Station Road (between School Lane and A559 Manchester Road)	NB	197	2	220	5	23	3	12%	150%
	SB	117	2	117	2	0	0	0%	0%
School Lane (between Station Road and Stubbs Lane)	NB	107	0	137	0	30	0	28%	0%

Table 14-65: MA02 impacted links, 2038 PM peak

Location	Direction	2038 baseline flows		2038 Proposed Scheme flows		Proposed Scheme - actual flow change from 2038 baseline		Proposed Scheme - % change from 2038 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Beeston Drive (between Denbigh Drive and Handley Hill)	NB	54	2	49	2	-5	0	-9%	0%
	SB	98	10	121	10	23	0	23%	0%
Beeston Drive (between Handley Hill and B5074 Swanlow Lane)	EB	54	2	49	2	-5	0	-9%	0%
	WB	99	10	122	10	23	0	23%	0%
Clive Green Lane realignment/Clive Lane (between A530 Nantwich Road and A54 Middlewich Road)	NB	318	21	408	21	90	0	28%	0%
	SB	271	4	357	4	86	0	32%	0%
Dene Drive (between A54 High Street and The Drumber)	NB	220	5	255	4	35	-1	16%	-20%
	SB	249	1	263	1	14	0	6%	0%
A54 Middlewich Road realignment (between Clive Lane and A533 Northwich Road diversion)	NB	NB	451	21	418	21	-33	0	-7%
	SB	SB	415	8	464	8	49	0	12%
A54 Middlewich Road realignment (between A533 Northwich Road diversion and A533 Northwich Road)	EB	EB	451	21	807	27	356	6	79%
	WB	WB	415	8	662	18	247	10	60%
A533 Northwich Road diversion (between A54 Middlewich Road realignment and A533 Northwich Road)	NB	NB	247	11	237	11	-10	0	-4%
	SB	SB	398	6	428	6	30	0	8%
Booth Bed Lane (between Main Road and A50 London Road)	NB	109	0	124	0	15	0	14%	0%
	SB	47	1	48	1	1	0	2%	0%
B5082 Holmes Chapel Road (between B5081 Byley Lane and Birches Lane)	EB	569	4	552	4	-17	0	-3%	0%
	WB	538	22	740	24	202	2	38%	9%
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	27	0	76	0	49	0	181%	0%
	WB	157	0	132	0	-25	0	-16%	0%

Location	Direction	2038 baseline flows		2038 Proposed Scheme flows		Proposed Scheme - actual flow change from 2038 baseline		Proposed Scheme - % change from 2038 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
B5082 Penny's Lane diversion (between Penny's Lane and A556 Shurlach Road)	EB	213	1	231	2	18	1	8%	100%
	WB	201	22	362	12	161	-10	80%	-45%
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	NB	764	26	998	38	234	12	31%	46%
	SB	753	7	1,120	9	367	2	49%	29%
Birches Lane diversion (between A556 Shurlach Road and B5082 Holmes Chapel Road)	NB	195	0	246	11	51	11	26%	0%
	SB	344	3	245	3	-99	0	-29%	0%
A556 Shurlach Road (between A530 King Street and Birches Lane)	EB	1,467	56	1,111	46	-356	-10	-24%	-18%
	WB	1,720	59	1,381	38	-339	-21	-20%	-36%
A530 King Street (between B5082 Middlewich Road and A556 Shurlach Road)	NB	650	26	697	27	47	1	7%	4%
	SB	858	9	971	9	113	0	13%	0%
A530 Griffiths Road (between A559 Manchester Road and B5082 Middlewich Road)	NB	361	19	359	19	-2	0	-1%	0%
	SB	504	8	613	8	109	0	22%	0%
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	231	8	315	8	84	0	36%	0%
	SB	20	3	20	3	0	0	0%	0%
School Lane (between Station Road and Stubbs Lane)	NB	114	0	186	0	72	0	63%	0%
Fryer Road/Townshend Road (between A559 Hall Lane and A559 Manchester Road)	NB	280	1	310	1	30	0	11%	0%
	SB	79	1	85	2	6	1	8%	100%
A569 Hall Lane (between Townshend Road and Green Lane)	EB	154	3	203	4	49	1	32%	33%
	WB	439	12	460	12	21	0	5%	0%
A559 Manchester Road (between Fryer Road and A556 Shurlach Road)	EB	598	1	573	2	-25	1	-4%	100%
	WB	511	4	479	4	-32	0	-6%	0%

Location	Direction	2038 baseline flows		2038 Proposed Scheme flows		Proposed Scheme - actual flow change from 2038 baseline		Proposed Scheme - % change from 2038 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
A569 Marston Lane (between B5391 Church Street and Earles Lane)	NB	210	1	213	2	3	1	1%	100%
	SB	124	9	161	9	37	0	30%	0%
Linnards Lane (between Green Lane and B5391 Church Street)	EB	288	6	242	5	-46	-1	-16%	-17%
	WB	157	9	140	9	-17	0	-11%	0%

Table 14-66: MA02 impacted links, 2046 PM peak

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Beeston Drive (between Denbigh Drive and Handley Hill)	NB	49	2	49	2	0	0	0%	0%
	SB	91	10	111	10	20	0	22%	0%
Beeston Drive (between Handley Hill and B5074 Swanlow Lane)	EB	49	2	49	2	0	0	0%	0%
	WB	92	10	112	10	20	0	22%	0%
Sutton Lane (between St Anns Road and A533 Lewin Street)	NB	85	1	121	1	36	0	42%	0%
	SB	66	8	64	8	-2	0	-3%	0%
Clive Green Lane realignment/Clive Lane (between A530 Nantwich Road and A54 Middlewich Road)	NB	334	22	411	22	77	0	23%	0%
	SB	249	3	411	4	162	1	65%	33%
A54 Middlewich Road realignment (between Clive Lane and A533 Northwich Road diversion)	NB	452	21	371	19	-81	-2	-18%	-10%
	SB	424	8	483	8	59	0	14%	0%

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
A54 Middlewich Road realignment (between A533 Northwich Road diversion and A533 Northwich Road)	EB	452	21	884	26	432	5	96%	24%
	WB	424	8	674	18	250	10	59%	125%
B5355 Wharton Road (between Nat Lane and Bradbury Road)	NB	125	6	167	5	42	-1	34%	-17%
	SB	84	2	75	2	-9	0	-11%	0%
A533 Northwich Road diversion (between A54 Middlewich Road realignment and A533 Northwich Road)	NB	238	11	232	11	-6	0	-3%	0%
	SB	453	6	555	6	102	0	23%	0%
B5355 Wharton Road (between A5018 Wharton Park Road and Bradbury Road)	NB	108	10	156	9	48	-1	44%	-10%
	SB	159	5	149	5	-10	0	-6%	0%
A533 Bostock Road (between A533 Northwich Road diversion and London Road)	EB	475	6	576	6	101	0	21%	0%
	WB	239	11	231	11	-8	0	-3%	0%
A533 Bostock Road (between A5018 Bostock Road and London Road)	EB	292	6	310	6	18	0	6%	0%
	WB	38	12	55	12	17	0	45%	0%
B5082 Holmes Chapel Road (between B5081 Byley Lane and Birches Lane)	EB	624	6	605	4	-19	-2	-3%	-33%
	WB	600	20	790	26	190	6	32%	30%
Crowders Lane (between B5082 Penny's Lane and A530 King Street)	EB	26	0	82	0	56	0	215%	0%
	WB	175	0	144	0	-31	0	-18%	0%
B5082 Penny's Lane diversion (between Penny's Lane and A556 Shurlach Road)	EB	214	1	249	2	35	1	16%	100%
	WB	200	19	400	13	200	-6	100%	-32%
A530 King Street (between B5082 Penny's Lane diversion and A556 Shurlach Road)	NB	777	27	1,025	37	248	10	32%	37%
	SB	750	6	1,131	9	381	3	51%	50%
	NB	244	0	247	14	3	14	1%	0%

Location	Direction	2046 baseline flows		2046 Proposed Scheme flows		Proposed Scheme - actual flow change from 2046 baseline		Proposed Scheme - % change from 2046 baseline	
		All vehicles	HGV	All vehicles	HGV	All vehicles	HGV	All vehicles	HGV
Birches Lane diversion (between A556 Shurlach Road and B5082 Holmes Chapel Road)	SB	403	4	274	3	-129	-1	-32%	-25%
A556 Shurlach Road (between A530 King Street and Birches Lane)	EB	1,463	53	1,095	44	-368	-9	-25%	-17%
	WB	1,742	55	1,379	38	-363	-17	-21%	-31%
A530 King Street (between B5082 Middlewich Road and A556 Shurlach Road)	NB	612	26	668	26	56	0	9%	0%
	SB	869	9	968	9	99	0	11%	0%
Birches Lane/Station Road (between A556 Shurlach Road and School Lane)	NB	242	8	338	11	96	3	40%	38%
	SB	21	3	21	3	0	0	0%	0%
Station Road (between School Lane and A559 Manchester Road)	NB	212	1	226	4	14	3	7%	300%
	SB	55	1	55	1	0	0	0%	0%
School Lane (between Station Road and Stubbs Lane)	NB	109	0	192	0	83	0	76%	0%
A569 Hall Lane (between Townshend Road and Green Lane)	EB	154	3	215	4	61	1	40%	33%
	WB	454	10	459	12	5	2	1%	20%
A559 Manchester Road (between Fryer Road and A556 Shurlach Road)	EB	600	1	578	2	-22	1	-4%	100%
	WB	601	4	524	4	-77	0	-13%	0%
A559 Hall Lane (between Green Lane and B5391 Church Street)	EB	135	3	195	4	60	1	44%	33%
	WB	429	10	432	12	3	2	1%	20%
B5391 Church Street (between Earles Lane and A559 Marston Lane)	NB	380	5	359	3	-21	-2	-6%	-40%
	SB	145	9	120	6	-25	-3	-17%	-33%
Linnards Lane (between Green Lane and B5391 Church Street)	EB	310	6	253	5	-57	-1	-18%	-17%
	WB	185	8	192	10	7	2	4%	25%

Figure 14-7: MA02 traffic flow changes – 2038 AM peak

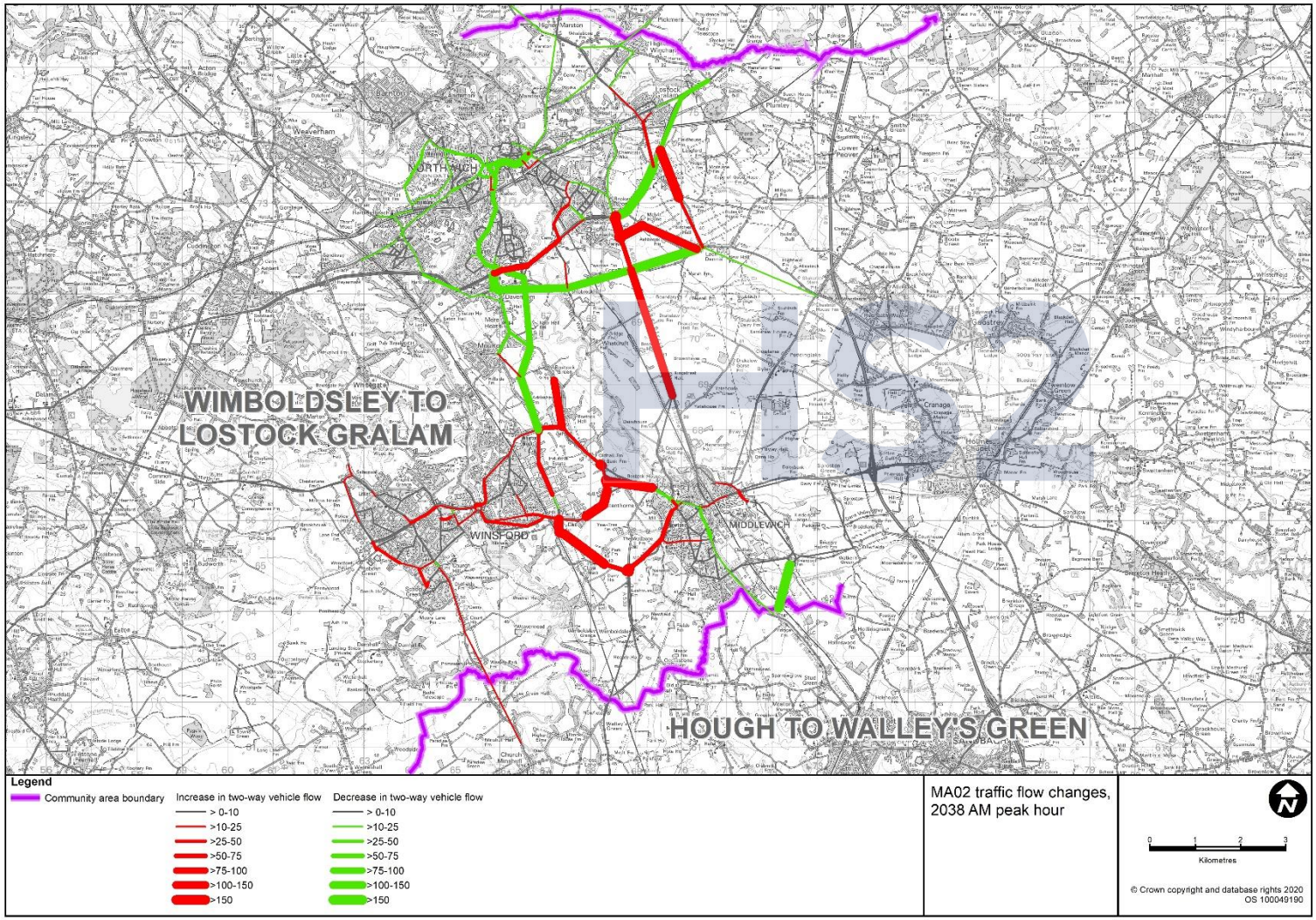


Figure 14-8: MA02 traffic flow changes – 2046 AM peak

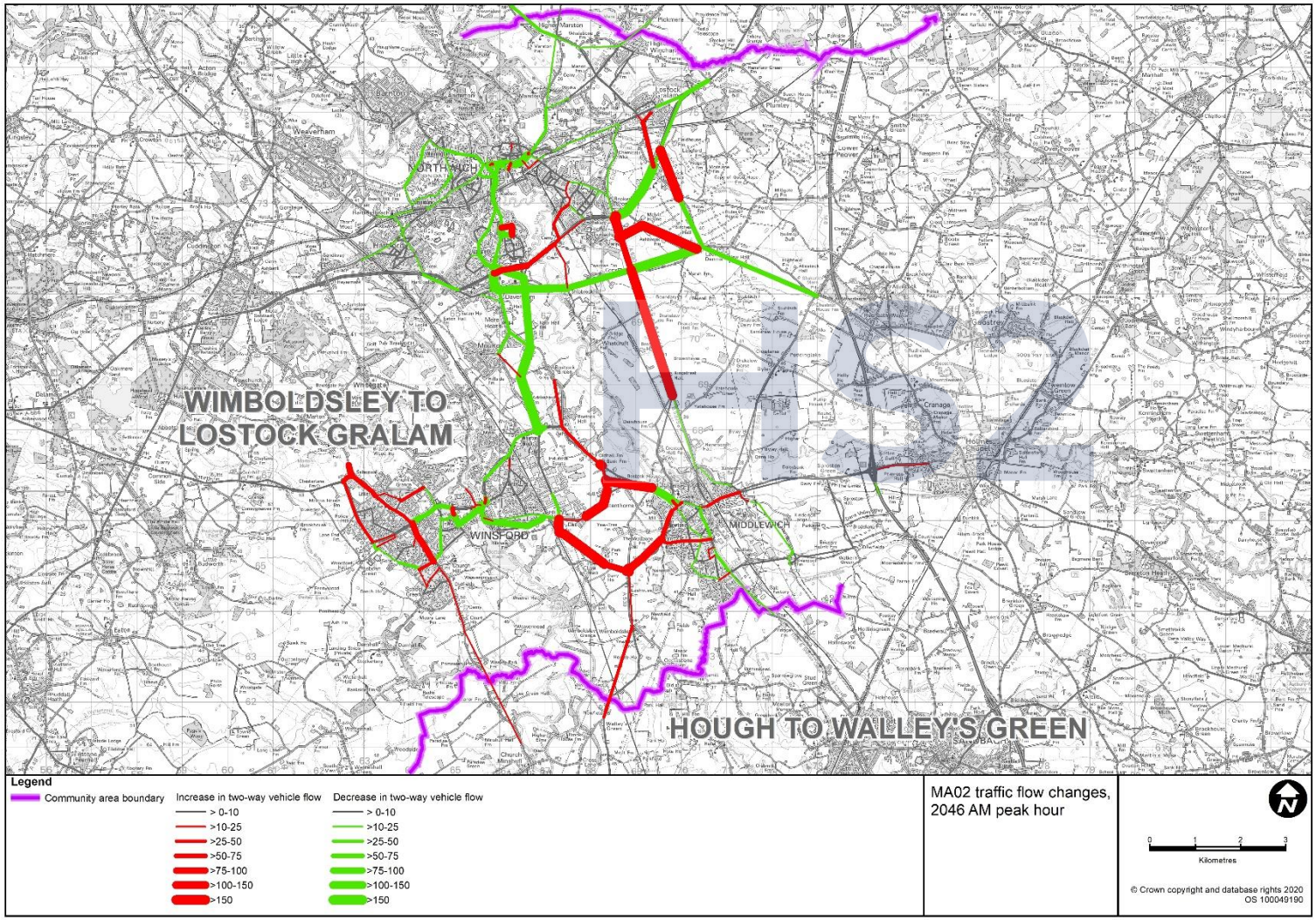


Figure 14-9: MA02 traffic flow changes – 2038 PM peak

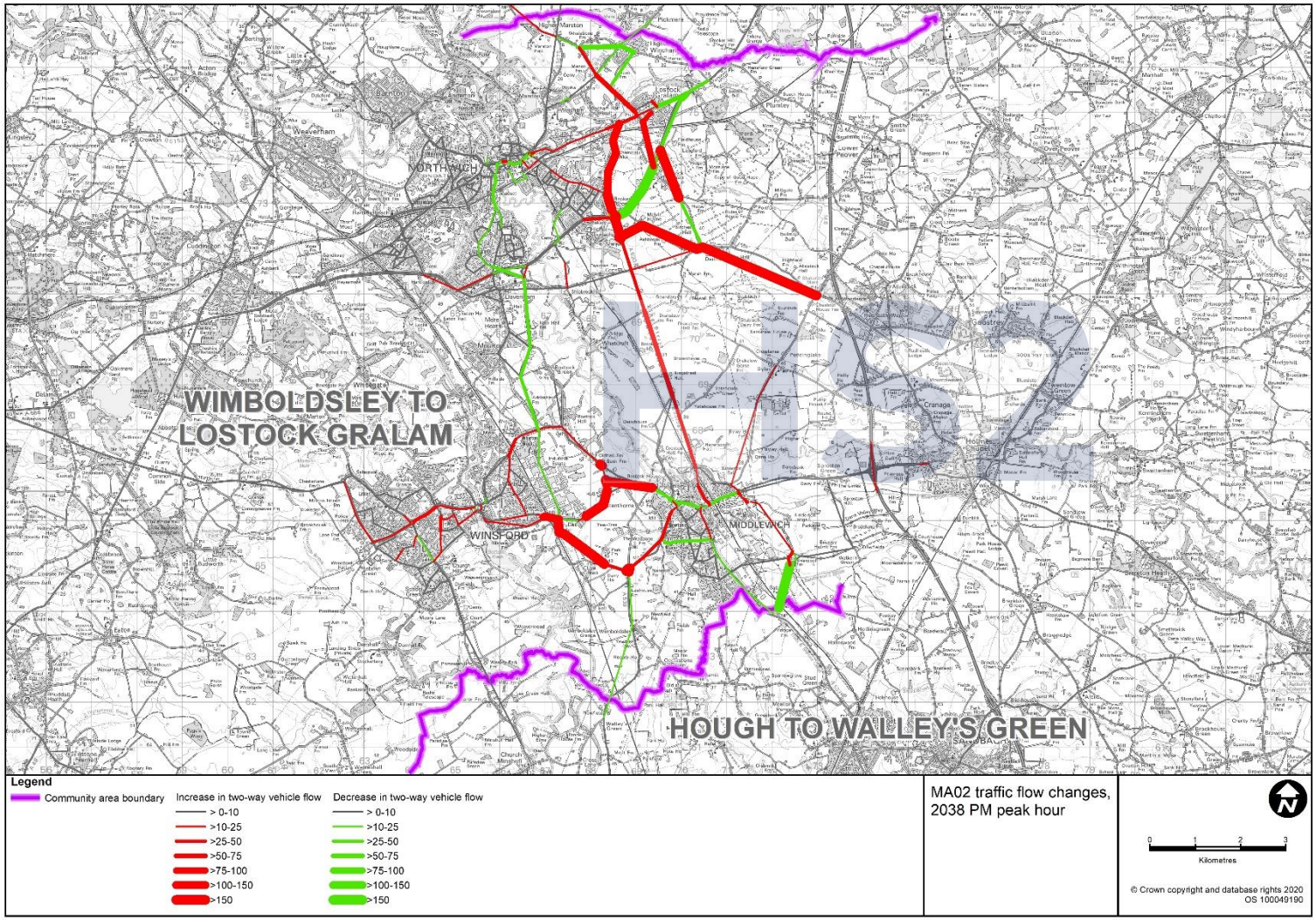
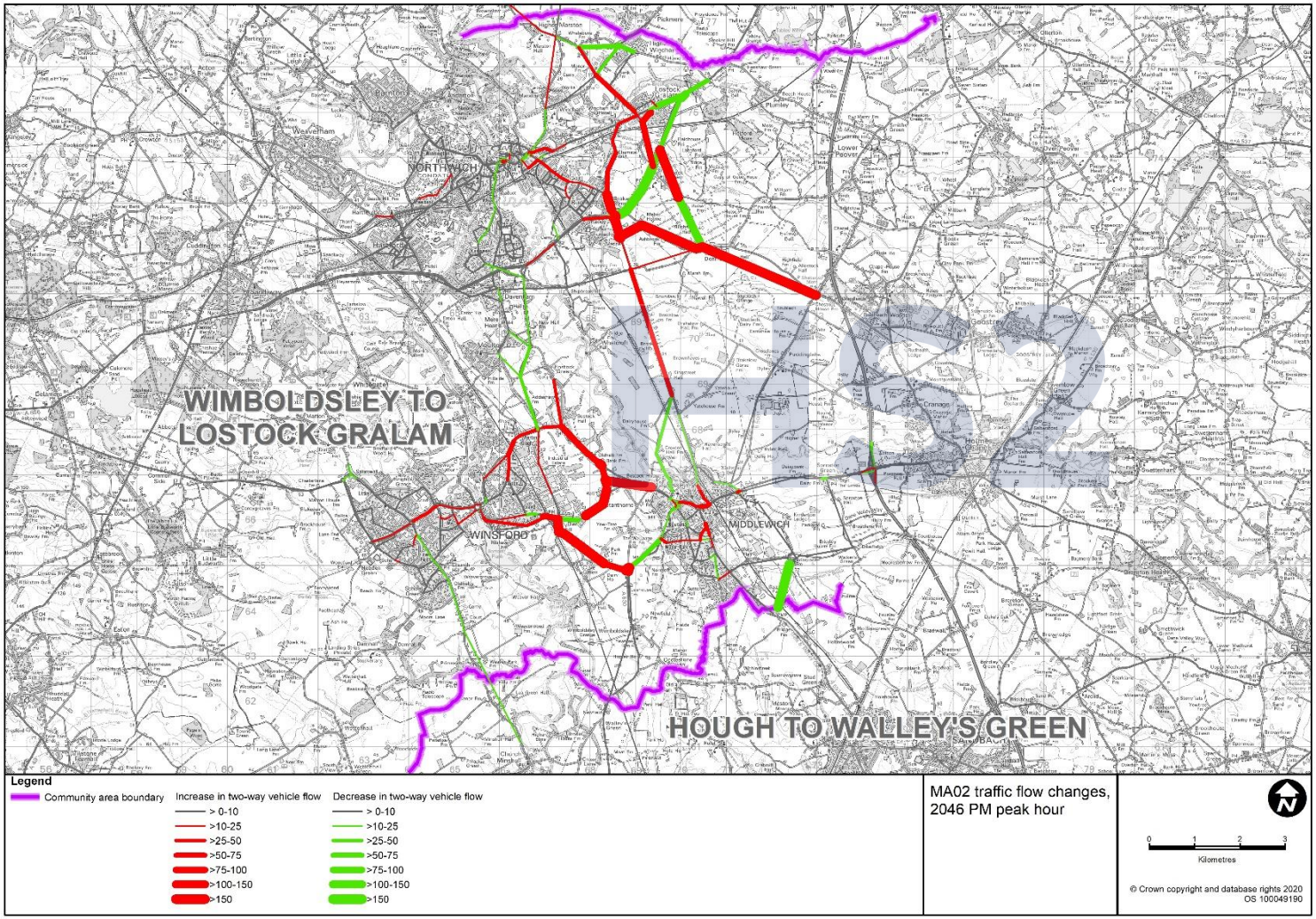


Figure 14-10: MA02 traffic flow changes – 2046 PM peak



Junction performance

14.5.13 Junction capacity analysis has been undertaken for the weekday AM and PM peak hours comparing junction operation in the 2038 and 2046 future baseline with 2038 and 2046 with HS2.

14.5.14 The following tables and commentary set out the performance at junctions where there is the potential for the Proposed Scheme to have substantial impacts, including new junctions and those where changes are proposed.

14.5.15 The results are presented from south to north through the MA02 area, firstly for junctions on the strategic road network, followed by junctions on other roads. The 2038 and 2046 future baseline results are included for comparison. The models developed to assess the existing and future baseline have been used, except where otherwise stated.

14.5.16 The junctions assessed in the following section are:

- M6 junction 18/A54 Holmes Chapel Road/A54 Middlewich Road;
- A530 Nantwich Road/School Lane;
- Clive Green Lane realignment/Crewe North RSD access;
- A530 Nantwich Road/Clive Green Lane realignment/Coalpit Lane;
- A533 Booth Lane/Long Lane South;
- A54 Middlewich Road/Clive Lane/Road One;
- A530 Nantwich Road/A530 St Michael's Way/St. Ann's Road;
- A54 Kinderton Street/A54 St Michael's Way/A533 Leadsmithy Street;
- A54 Middlewich Road realignment/A533 Northwich Road diversion;
- A54 Middlewich Road realignment/Birch Lane/Bell Lane;
- A533 Bostock Road/Road One/A5018 Bostock Road/A533 Davenham Road;
- A556 Chester Road/Hartford Road/Hill Top Grange;
- A530 King Street/Davenham Road/Crowders Lane;
- A556 Chester Road/Shurlach Lane;
- A530 King Street/ Gadbrook Distribution Centre/B5082 Penny's Lane diversion;
- A556 Chester Road/A530 King Street;
- A530 Griffiths Road/A530 King Street/B5082 Middlewich Road/Penny's Lane;
- A556 Chester Road (southbound) realignment/Birches Lane diversion;
- A556 Chester Road (northbound) realignment/Birches Lane diversion;
- A530 Griffiths Road/A559 Manchester Road;
- A559 Manchester Road/Station Road/Hall Lane; and
- A556 Chester Road/A559 Manchester Road.

M6 junction 18/A54 Holmes Chapel Road/A54 Middlewich Road

14.5.17 Table 14-67 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-67: M6 junction 18/A54 Holmes Chapel Road/A54 Middlewich Road junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
M6 junction 18 southbound off-slip	780	40%	0	781	40%	0	697	36%	0	700	36%	0
A54 Middlewich Road	436	26%	0	436	26%	0	525	30%	0	534	30%	0
M6 junction 18 northbound off-slip	768	34%	0	772	34%	0	798	36%	0	802	36%	0
A54 Holmes Chapel Road	962	41%	0	955	40%	0	964	41%	0	948	40%	0
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
M6 junction 18 southbound off-slip	397	18%	0	398	19%	0	533	23%	0	510	22%	0
A54 Middlewich Road	454	23%	0	460	23%	0	538	26%	0	536	26%	0
M6 junction 18 northbound off-slip	464	22%	0	464	22%	0	490	25%	0	490	25%	0
A54 Holmes Chapel Road	610	25%	0	612	25%	0	290	12%	0	311	13%	0

14.5.18 The model shows that for this junction, the change in traffic due to operation in 2038 and 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM and PM peak hours the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in 2038 and 2046 of the Proposed Scheme.

Local network change in the Clive Green area

14.5.19 As set out in Table 14-62 there are a number of changes to the local road network as part of the Proposed Scheme. Figure 14-11 and Figure 14-12 show the local network changes introduced as part of the Proposed Scheme in the Clive Green area.

Clive Green Lane realignment/Crewe North RSD access

14.5.20 Clive Green Lane realignment/Crewe North RSD access will be a new three-arm priority controlled T-junction as part of the Proposed Scheme. Figure 14-11 shows the junction layout introduced as part of the Proposed Scheme. Table 14-68 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Figure 14-11. Junction layout diagram (Clive Green Lane realignment/Crewe North RSD access)

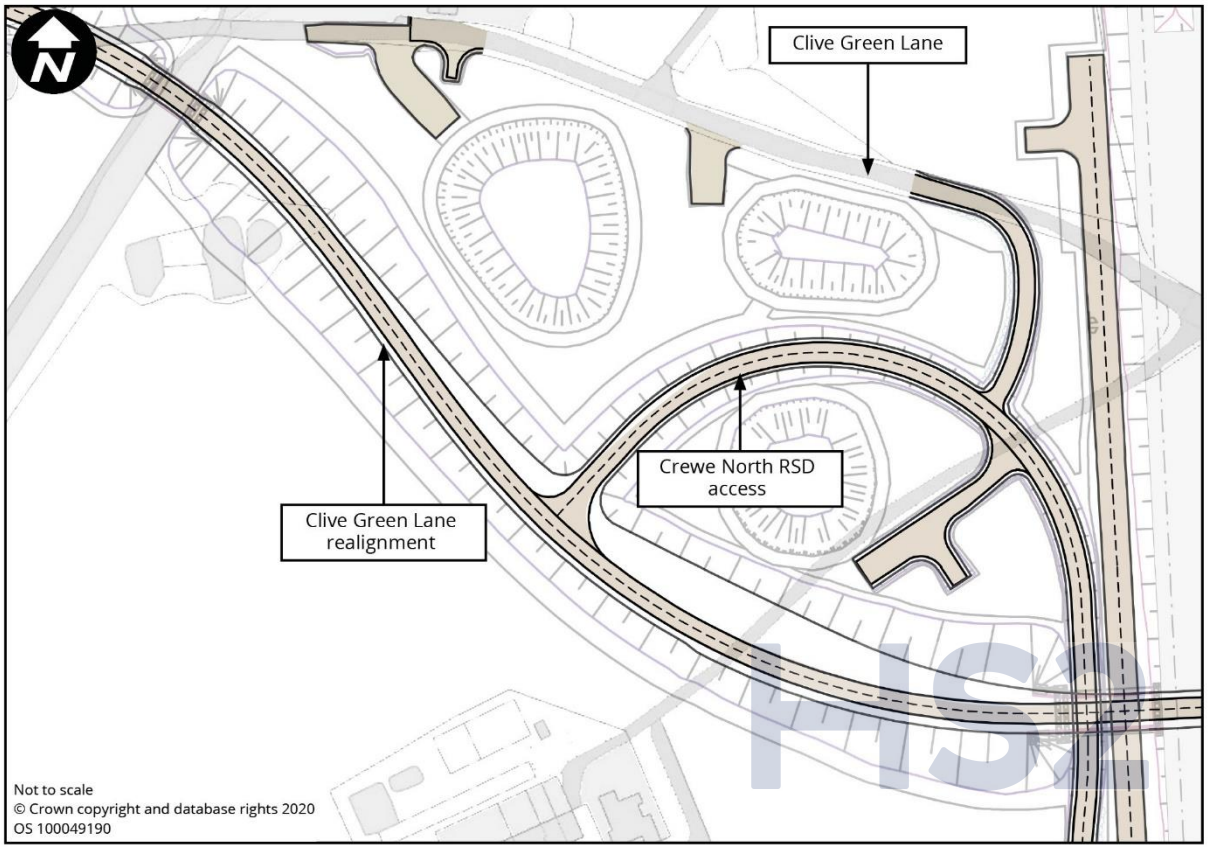


Table 14-68: Clive Green Lane realignment/Crewe North RSD access junction 2038 and 2046 Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
Clive Green Lane realignment (west) (ahead and left)	430	-	-	437	-	-
Crewe North RSD access (left)	18	0.03	0	18	0.03	0
Crewe North RSD access (right)	74	0.18	0	75	0.20	0
Clive Green Lane realignment (east) (ahead and right)	482	0.14	0	559	0.14	0
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
Clive Green Lane realignment (west) (ahead and left)	363	-	-	417	-	-
Crewe North RSD access (left)	77	0.15	0	60	0.12	0
Crewe North RSD access (right)	139	0.31	1	139	0.32	1
Clive Green Lane realignment (east) (ahead and right)	300	0.02	0	303	0.02	0

14.5.21 The assessment shows that the junction operates well within capacity in both 2038 and 2036 with the Proposed Scheme.

A530 Nantwich Road/Clive Green Lane realignment/Coalpit Lane

14.5.22 A530 Nantwich Road/Clive Green Lane realignment/Coalpit Lane will be a new junction as part of the Proposed Scheme. It will be a five-arm priority controlled roundabout. The HS2 Track Access approach is a minor arm and is not included within the Junctions 9 model. The Figure 14-12 shows the junction layout introduced as part of the Proposed Scheme.

14.5.23 Table 14-69 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Figure 14-12. Junction layout diagram (A530 Nantwich Road/Clive Green Lane realignment/Coalpit Lane)

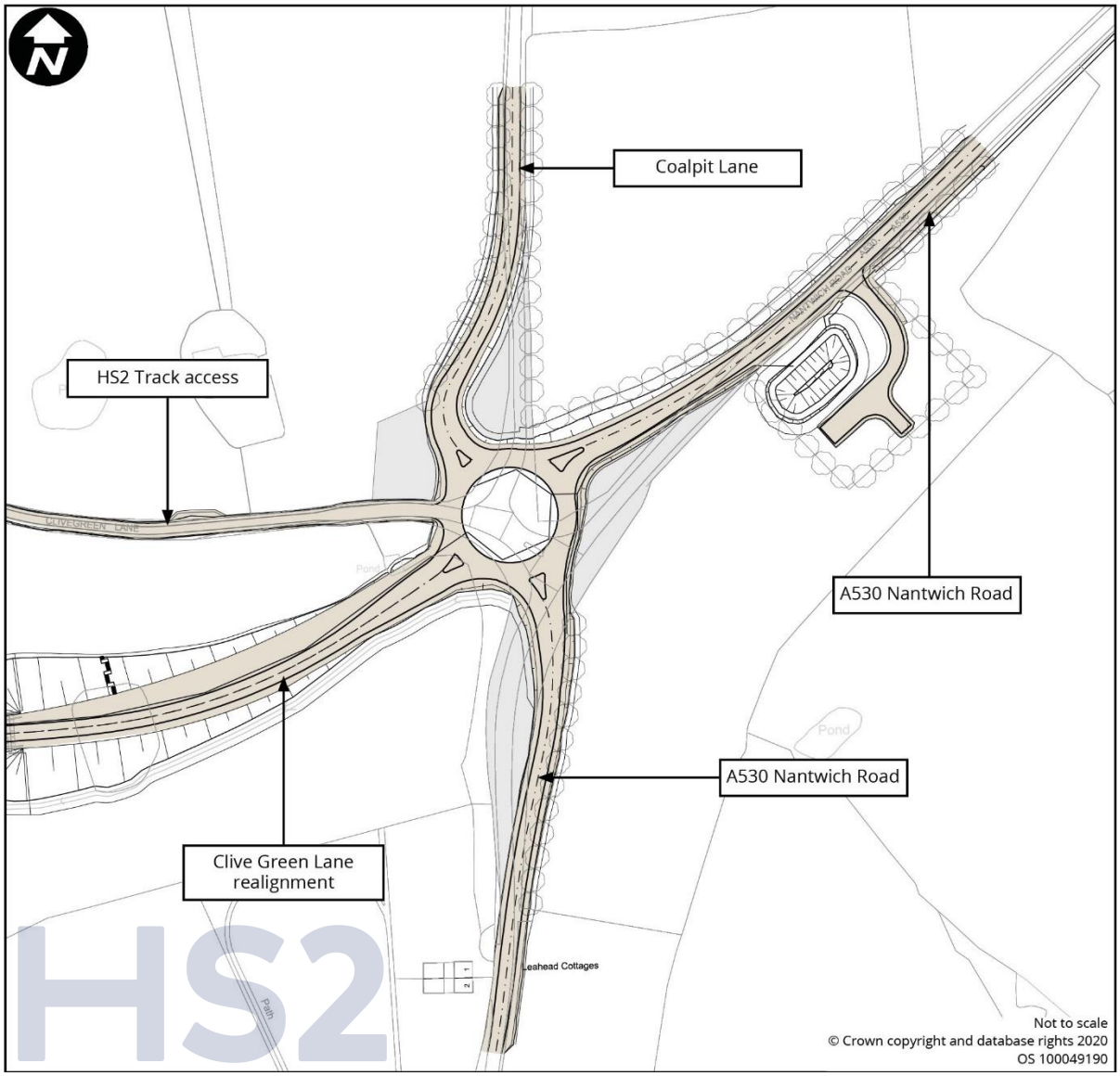


Table 14-69: A530 Nantwich Road/Clive Green Lane realignment/Coalpit Lane junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A530 Nantwich Road (north)	855	0.55	1	814	0.48	1
A530 Nantwich Road (south)	1,226	0.69	2	1,481	0.96	15
Clive Green Lane	327	0.26	0	392	0.42	1
HS2 track access	-	-	-	-	-	-
Coalpit Lane	134	0.13	0	129	0.17	0
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A530 Nantwich Road (north)	163	0.11	0	669	0.4	1
A530 Nantwich Road (south)	1,191	0.66	2	1,401	0.84	5
Clive Green Lane	399	0.33	1	498	0.53	1
HS2 track access	-	-	-	-	-	-
Coalpit Lane	134	0.14	0	124	0.18	0

14.5.24 The assessment shows that the junction operates well within capacity in 2038 with the Proposed Scheme.

14.5.25 The assessment shows that the junction operates close to capacity in 2046 with the Proposed Scheme with a maximum RFC if 0.96 on the A530 Nantwich Road (south) approach in the AM peak hour with an associated queue length of 15 PCU. In the PM peak hour, the assessment shows that this junction is at capacity in 2046 with the Proposed Scheme with a maximum RFC of 0.84 on the A530 Nantwich Road (south) approach with an associated queue length of five PCU.

A54 Middlewich Road/Clive Lane/Road One

14.5.26 Table 14-70 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-70: A54 Middlewich Road/Clive Lane/Road One junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
Road One	284	43%	4	355	53%	5	318	48%	5	378	55%	6
A54 Middlewich Road (east)	553	63%	5	561	61%	5	474	49%	4	531	56%	5
Clive Lane	506	98%	8	519	98%	8	507	98%	8	528	101%	8
A54 Middlewich Road (west)	788	96%	10	822	98%	11	750	100%	10	710	104%	9
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
Road One	582	97%	10	572	95%	10	587	97%	10	600	99%	10
A54 Middlewich Road (east)	432	36%	4	463	39%	4	443	36%	4	485	40%	5
Clive Lane	486	104%	8	484	104%	8	486	104%	8	485	104%	8
A54 Middlewich Road (west)	582	74%	8	630	83%	9	571	71%	8	608	82%	9

14.5.27 The change in traffic due to operation of the Proposed Scheme will not increase the maximum VoC between the 2038 future baseline and the Proposed Scheme in the AM peak hour. However, in the AM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the VoC from 96% in the 2038 future baseline to 98% with the Proposed Scheme in 2038 on the A54 Middlewich Road (west) approach in the AM peak hour. Queue lengths would increase from 10 PCU in the future baseline to 11 PCU with the Proposed Scheme in 2038. In the PM peak hour, the model shows that the change in traffic due to the operation of the Proposed Scheme in 2038 will decrease the VoC from 97% in the future baseline to 95% with the Proposed Scheme on the Road One approach, with no change in corresponding queue length. In the AM peak hour, the assessment shows that this junction is close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, this junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a beneficial impact on the operation of the junction in the PM peak hour.

14.5.28 The change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 100% in the 2046 future baseline to 104% with the Proposed Scheme in 2046 on the A54 Middlewich Road (west) approach in the AM peak hour. Queue lengths would decrease from 10 PCU in the future baseline to nine PCU with the Proposed Scheme in 2046. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will not increase the maximum VoC between the 2046 future baseline and with the Proposed Scheme. However, in the PM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the VoC from 97% in the 2046 future baseline to 99% with the Proposed Scheme in 2046 on the Road One approach, with no change in corresponding queue length. The assessment shows that in the AM and PM peak hours the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction, which is, however, predicted to operate above its capacity in the future baseline.

A530 Nantwich Road/St Ann's Road

14.5.29 Table 14-71 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-71: A530 Nantwich Road/St Ann's Road junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A530 Nantwich Road (north)	785	41%	0	791	41%	0	798	42%	0	805	42%	0
St Ann's Road	141	88%	2	135	90%	3	126	92%	3	120	92%	3
A530 Nantwich Road (south)	707	54%	0	735	56%	0	796	59%	0	832	61%	0
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A530 Nantwich Road (north)	848	45%	0	841	45%	0	905	48%	0	842	45%	0
St Ann's Road	156	98%	4	152	96%	4	133	101%	4	138	100%	4
A530 Nantwich Road (south)	715	46%	0	743	47%	0	836	55%	0	850	55%	0

14.5.30 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 88% in the 2038 future baseline to 90% with the Proposed Scheme in 2038 on the St Ann's Road approach in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to three PCU. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will decrease the maximum VoC from 98% in the 2038 future baseline to 96% with the Proposed Scheme in 2038 on the St Ann's Road approach, with no change in corresponding queue length. The assessment shows that in the AM and PM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a beneficial impact on the operation of the junction in the PM peak hour.

14.5.31 The model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction.

A54 Kinderton Street/A54 St Michael's Way/A533 Leadsmithy Street

14.5.32 Table 14-72 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-72: A54 Kinderton Street/A54 St Michael's Way/A533 Leadsmithy Street junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 Kinderton Street	664	94%	14	674	95%	14	660	94%	14	668	95%	14
A533 Leadsmithy Street	816	89%	20	815	89%	20	806	88%	20	822	90%	20
A54 St Michael's Way	1,047	67%	13	1,020	65%	13	1,025	66%	13	985	63%	12
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 Kinderton Street	740	104%	15	740	104%	15	739	104%	15	739	104%	15
A533 Leadsmithy Street	652	82%	17	665	83%	17	696	87%	18	714	89%	18
A54 St Michael's Way	958	57%	11	928	55%	11	1,053	62%	12	1,092	65%	12

14.5.33 The model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM peak hour. The change in traffic due to operation of the Proposed Scheme will not substantially increase the maximum VoC between the 2038 future baseline and the Proposed Scheme in the PM peak hour. In the AM peak hour, the assessment shows that this junction is close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, this junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour, which is, however, predicted to operate above its capacity in the future baseline in the PM peak hour.

14.5.34 The model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM peak hour. The change in traffic due to operation of the Proposed Scheme will not substantially increase the maximum VoC between the 2046 future baseline and the Proposed Scheme in the PM peak hour. However, in the PM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the VoC from 87% in the 2046 future baseline to 89% with the Proposed Scheme in 2046 on the A533 Leadsmithy Street approach, with no change in corresponding queue length. In the AM peak hour, the assessment shows that this junction is close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, this junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour, which is, however, predicted to operate above its capacity in the future baseline in the PM peak hour.

A54 St Michael's Way/Wheelock Street

14.5.35 Table 14-73 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-73: A54 St Michael's Way/Wheelock Street junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 St Michael's Way (north)	740	38%	0	756	39%	0	673	35%	0	704	36%	0
Wheelock Street	41	14%	0	46	16%	0	42	13%	0	47	16%	0
A54 St Michael's Way (south)	-	-	-	-	-	-	-	-	-	-	-	-
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 St Michael's Way (north)	804	41%	0	799	41%	0	803	41%	0	803	41%	0
Wheelock Street	95	36%	0	95	36%	0	98	37%	0	98	37%	0
A54 St Michael's Way (south)	-	-	-	-	-	-	-	-	-	-	-	-

14.5.36 The model shows that for this junction, the change in traffic due to operation in 2038 and 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM and PM peak hours the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on the operation of the junction in the PM peak hour.

A54 Chester Road/A530 St Michael's Way/A530 Nantwich Road

14.5.37 Table 14-74 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-74: A54 Chester Road/A530 St Michael's Way/A530 Nantwich Road junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 Chester Road	622	32%	0	610	31%	0	627	32%	0	615	32%	0
A54 St Michael's Way	781	93%	2	802	95%	3	715	85%	1	751	89%	2
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 Chester Road	411	21%	0	397	20%	0	454	23%	0	392	20%	0
A54 St Michael's Way	899	95%	2	894	94%	2	900	97%	3	901	94%	2

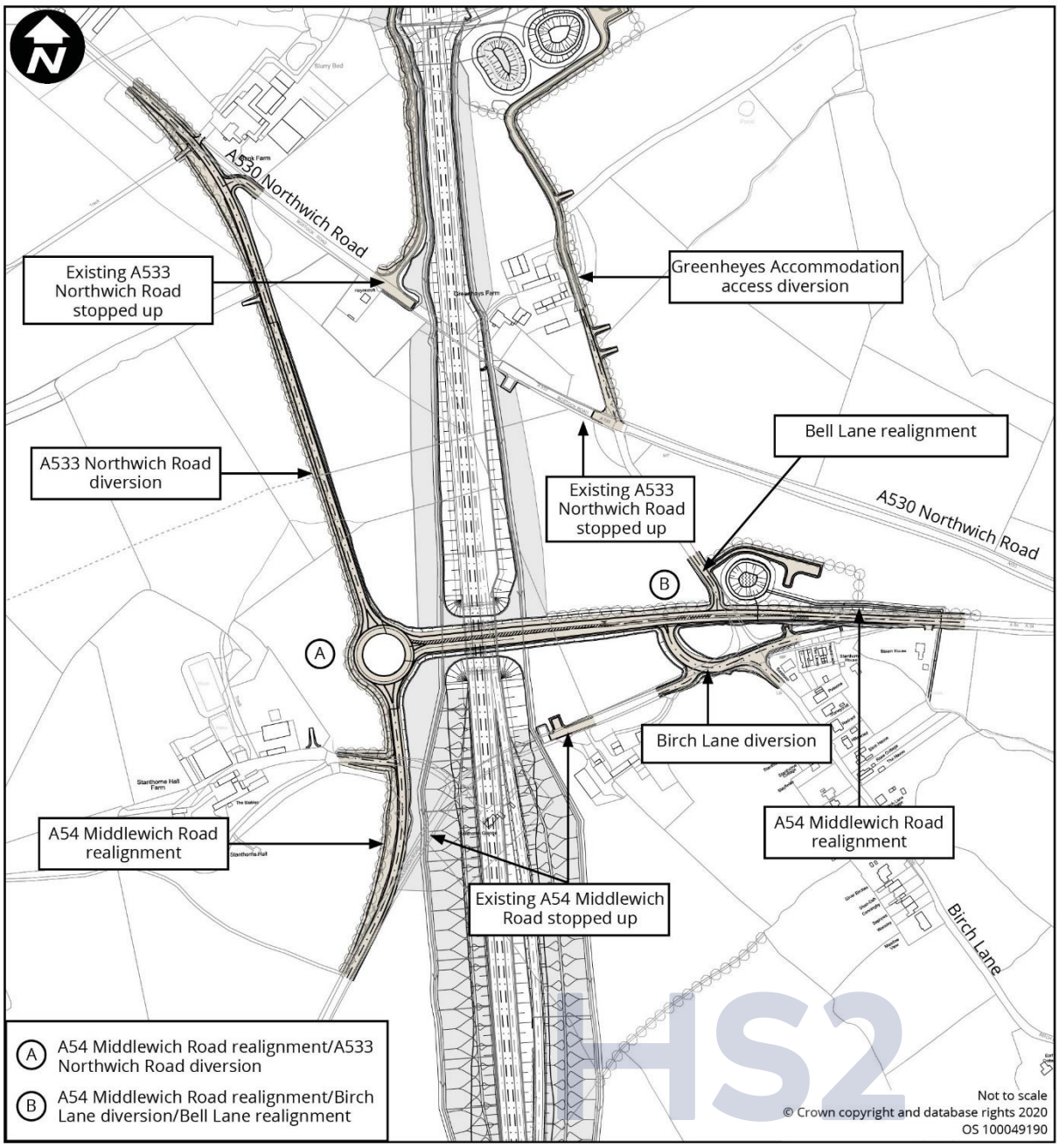
14.5.38 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 93% in the 2038 future baseline to 95% with the Proposed Scheme in 2038 on the A54 St Michael's Way approach in the AM peak hour, with a corresponding change in queue length from two PCU in the future baseline to three PCU. In the PM peak hour the maximum VoC will decrease from 95% in the 2038 future baseline to 94% with the Proposed Scheme in 2038 on the A54 St Michael's Way approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on the operation of the junction in the PM peak hour.

14.5.39 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 85% in the 2046 future baseline to 89% with the Proposed Scheme in 2046 on the A54 St Michael's Way approach in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to two PCU. In the PM peak hour the maximum VoC will decrease from 97% in the 2046 future baseline to 94% with the Proposed Scheme in 2046 on the A54 St Michael's Way approach, with a corresponding change in queue length from three PCU in the future baseline to two PCU. The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a beneficial impact on the operation of the junction in the PM peak hour.

Local network change in the Stanthorne area

14.5.40 As set out in Table 14-62 there are a number of changes to the local road network as part of the Proposed Scheme. Figure 14-13 shows the local network changes introduced as part of the Proposed Scheme in the Stanthorne area.

Figure 14-13 Junction layout diagram (A54 Middlewich Road realignment/A533 Northwich Road diversion)



A54 Middlewich Road realignment/A533 Northwich Road diversion

14.5.41 The A54 Middlewich Road realignment/A533 Northwich Road diversion will be a three-arm priority controlled (give way) roundabout. Figure 14-15 shows the junction layout introduced as part of the Proposed Scheme. Table 14-75 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-75: Future baseline performance at A54 Middlewich Road realignment/A533 Northwich Road diversion

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A533 Northwich Road diversion	369	0.31	1	492	0.43	1
A54 Middlewich Road realignment (east)	878	0.42	1	509	0.24	0
A54 Middlewich Road realignment (south)	416	0.34	1	539	0.38	1
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A533 Northwich Road diversion	433	0.36	1	630	0.54	1
A54 Middlewich Road realignment (east)	787	0.38	1	751	0.36	1
A54 Middlewich Road realignment (south)	410	0.32	1	463	0.34	1

14.5.42 The assessment shows that this junction operates well within capacity in both 2038 and 2046 with the Proposed Scheme.

A54 Chester Road/A54 Middlewich Road/A533 Northwich Road

14.5.43 Table 14-76 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-76: A54 Chester Road/A54 Middlewich Road/A533 Northwich Road junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 Middlewich Road (ahead and left)	468	-	-	785	-	-	444	-	-	737	-	-
A533 Northwich Road (left)	413	0.82	4	5	0.01	0	444	0.87	6	5	0.01	0
A533 Northwich Road (right)	1	0.01	0	5	0.03	0	1	0.02	0	5	0.02	0
A54 Chester Road (ahead and right)	791	0.84	8	836	0.03	0	783	0.88	10	784	0.02	0
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A54 Middlewich Road (ahead and left)	482	-	-	848	-	-	470	-	-	924	-	-
A533 Northwich Road (left)	381	0.77	3	5	0.01	0	416	0.83	5	5	0.01	0
A533 Northwich Road (right)	5	0.04	0	5	0.03	0	6	0.06	0	5	0.03	0
A54 Chester Road (ahead and right)	667	0.75	4	692	0.02	0	658	0.73	4	704	0.02	0

14.5.44 The change in traffic due to operation of the Proposed Scheme will decrease the maximum RFC from 0.84 in the 2038 future baseline to 0.03 with the Proposed Scheme in 2038 on the A54 Chester Road (ahead and right) approach in the AM peak hour, with a corresponding change in queue length from eight PCU to no queue. In the PM peak hour, the maximum RFC will decrease from 0.77 in the 2038 future baseline to 0.01 with the Proposed Scheme in 2038 on the A533 Northwich Road (left) approach, with a corresponding change in queue length from three PCU to no queue. The assessment shows that in the AM and PM peak hour the junction operates within capacity in the future baseline and well within capacity with the Proposed Scheme. The traffic flow will have a beneficial impact on the operation of the junction.

14.5.45 The change in traffic due to operation of the Proposed Scheme will decrease the maximum RFC from 0.88 in the 2046 future baseline to 0.02 with the Proposed Scheme in 2046 on the A54 Chester Road (ahead and right) approach in the AM peak hour, with a corresponding change in queue length from 10 PCU to no queue. In the PM peak hour, the maximum RFC will decrease from 0.83 in the 2046 future baseline to 0.01 with the Proposed Scheme in 2046 on the A533 Northwich Road (left) approach, with a corresponding change in queue length from five PCU to no queue. The assessment shows that in the AM peak hour the junction operates close to capacity in the future baseline and well within capacity with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in the future baseline and well within capacity with the Proposed Scheme. The traffic flow will have a beneficial impact on the operation of the junction.

A54 Middlewich Road realignment/Birch Lane diversion/Bell Lane realignment

14.5.46 The A54 Middlewich Road realignment/Birch Lane diversion/Bell Lane realignment junction will be modified to accommodate the A54 Middlewich Road realignment as a result of the Proposed Scheme. The modifications comprise the realignment of Bell Lane and the diversion of Birch Lane to form a four-arm priority-controlled (give-way) staggered crossroads. Figure 14-13 shows the junction layout introduced as part of the Proposed Scheme. Table 14-77 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-77: A54 Middlewich Road realignment/Birch Lane diversion/Bell Lane realignment junction 2038 and 2046 with the Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
Birch Lane diversion (ahead, left and right)	147	0.32	1	155	0.32	1
A54 Middlewich Road (east) (ahead, left and right)	822	0.00	0	722	0.00	0
Bell Lane realignment (ahead, left and right)	0	0.00	0	0	0.00	0
A54 Middlewich Road (west) (ahead, left and right)	1,027	0.33	1	975	0.33	1
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
Birch Lane diversion (ahead, left and right)	160	0.31	1	170	0.33	1
A54 Middlewich Road (east) (ahead, left and right)	641	0.00	0	652	0.00	0
Bell Lane realignment (ahead, left and right)	0	0.00	0	0	0.00	0
A54 Middlewich Road (west) (ahead, left and right)	1,197	0.37	1	1,291	0.39	1

14.5.47 The assessment shows that the junction operates well within capacity in 2038 and 2046 with the Proposed Scheme.

A533 Bostock Road/Road One/A5018 Bostock Road/A533 Davenham Road

14.5.48 Table 14-78 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-78: A533 Bostock Road/A5018 Bostock Road/A533 Davenham Road/Road One junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A533 Bostock Road	382	21%	0	458	26%	0	583	33%	0	523	30%	0
Road One	176	9%	0	115	6%	0	170	9%	0	95	5%	0
A5018 Bostock Road	1,189	100%	3	1,226	101%	2	1,225	103%	3	1,285	106%	2
A533 Davenham Bypass	799	102%	7	777	103%	7	722	104%	7	699	107%	7
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A533 Bostock Road	373	19%	0	383	19%	0	420	21%	0	423	21%	0
Road One	612	32%	0	605	32%	0	576	30%	0	565	30%	0
A5018 Bostock Road	765	69%	0	794	72%	0	737	67%	0	789	71%	0
A533 Davenham Bypass	703	71%	0	681	69%	0	684	70%	0	702	73%	1

14.5.49 The model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction.

14.5.50 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 104% in the 2046 future baseline to 107% with the Proposed Scheme in 2046 on the A533 Davenham Bypass approach in the AM peak hour, with no change in corresponding queue length. The change in traffic due to operation of the Proposed Scheme will also increase the VoC from 103% in the 2046 future baseline to 106% with the Proposed Scheme in 2046 on the A5018 Bostock Road approach in the AM peak hour, with a change in queue length from three PCU in the future baseline to two PCU. In the PM peak hour, the model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths. The assessment shows that in the AM peak hour the junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on the operation of the junction in the PM peak hour.

A556 Chester Road/Hartford Road/Hill Top Grange

14.5.51 Table 14-79 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046. The Hill Top Grange approach is a minor arm that is not included within the strategic traffic model.

Table 14-79: A556 Chester Road/Hartford Road/Hill Top Grange junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**		
Hill Top Grange	-	-	-	-	-	-	-	-	-	-	-	-
A556 Chester Road (east)	1,191	56%	16	1,214	57%	17	1,154	54%	16	1,179	55%	16
Hartford Road	660	90%	15	669	91%	15	633	86%	14	652	89%	14
A556 Chester Road (west)	1,466	68%	19	1,459	68%	19	1,552	73%	19	1,548	72%	19
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
Hill Top Grange	-	-	-	-	-	-	-	-	-	-	-	-
A556 Chester Road (east)	1,239	57%	17	1,245	57%	17	1,253	58%	17	1,248	57%	17
Hartford Road	64	9%	1	66	10%	2	60	9%	1	63	9%	1
A556 Chester Road (west)	1,673	77%	22	1,675	77%	22	1,715	79%	22	1,715	79%	22

14.5.52 The model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM or PM peak hour. The assessment shows that in the AM peak hour the junction operates close to capacity in both the 2038 future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on the operation of the junction in the PM peak hour.

14.5.53 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 86% in the 2046 future baseline to 89% with the Proposed Scheme in 2046 on the Hartford Road approach in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths. The assessment shows that in the AM peak hour the junction operates close to capacity in both the 2046 future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on the operation of the junction in the PM peak hour.

A530 King Street/Davenham Road/Crowders Lane

14.5.54 Table 14-80 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-80: A530 King Street/Davenham Road/Crowders Lane junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A530 King Street (north)	742	40%	0	691	38%	0	777	42%	0	708	39%	0
Crowders Lane	244	68%	1	255	78%	2	221	61%	1	243	77%	2
A530 King Street (south)	796	42%	0	948	49%	0	789	42%	0	971	51%	0
Davenham Road	275	79%	2	146	53%	1	297	83%	2	188	69%	1
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A530 King Street (north)	779	39%	0	927	48%	0	775	39%	0	929	51%	0
Crowders Lane	157	43%	0	133	40%	0	175	50%	1	144	44%	0
A530 King Street (south)	888	48%	0	823	56%	0	900	48%	0	838	58%	0
Davenham Road	232	113%	6	226	115%	6	238	114%	6	225	116%	6

14.5.55 The model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM peak hour. In the PM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 113% in the 2038 future baseline to 115% with the Proposed Scheme in 2038 on the Davenham Road approach, with no change in queue length. The assessment shows that in the AM peak hour the junction operates within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour.

14.5.56 The model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM peak hour. In the PM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 114% in the 2046 future baseline to 116% with the Proposed Scheme in 2046 on the Davenham Road approach, with no change in queue length. The assessment shows that in the AM peak hour the junction operates within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour.

A556 Shurlach Road/Shurlach Lane

14.5.57 Table 14-81 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-81: A556 Shurlach Road/Shurlach Lane junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A556 Shurlach Road (east)	1,086	28%	0	1,103	28%	0	1,098	28%	0	1,101	28%	0
Shurlach Lane	342	89%	2	358	94%	3	346	90%	2	372	97%	4
A556 Shurlach Road (west)	2,551	-	-	2,648	-	-	2,630	-	-	2,732	-	-
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A556 Shurlach Road (east)	2,138	54%	0	2,137	54%	0	2,152	54%	0	2,152	54%	0
Shurlach Lane	156	117%	4	156	118%	4	159	123%	4	159	124%	4
A556 Shurlach Road (west)	1,436	-	-	1,418	-	-	1,443	-	-	1,442	-	-

14.5.58 The change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 89% in the 2038 future baseline to 94% with the Proposed Scheme in 2038 on the Shurlach Lane approach in the AM peak hour, with a change in corresponding queue length from two PCU in the future baseline to three PCU. In the PM peak hour, the model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths. The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on operation of the junction in the PM peak hour.

14.5.59 The change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 90% in the 2046 future baseline to 97% with the Proposed Scheme in 2046 on the Shurlach Lane approach in the AM peak hour, with a change in corresponding queue length from two PCU in the future baseline to four PCU. In the PM peak hour, the model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths. The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction in the AM peak hour and a negligible impact on the operation of the junction in the PM peak.

A530 King Street/Gadbrook Distribution Centre/B5082 Penny's Lane diversion

14.5.60 The existing A530 King Street/Gadbrook Distribution Centre junction will be modified to accommodate the B5082 Penny’s Lane diversion as a result of the Proposed Scheme. The B5082 Penny’s Lane diversion will form a new fourth-arm of the roundabout. Figure 14-14 shows the junction layout introduced as part of the Proposed Scheme. Table 14-82 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Figure 14-14: Junction layout diagram (A530 King Street/Gadbrook Distribution Centre/B5082 Penny's Lane diversion)

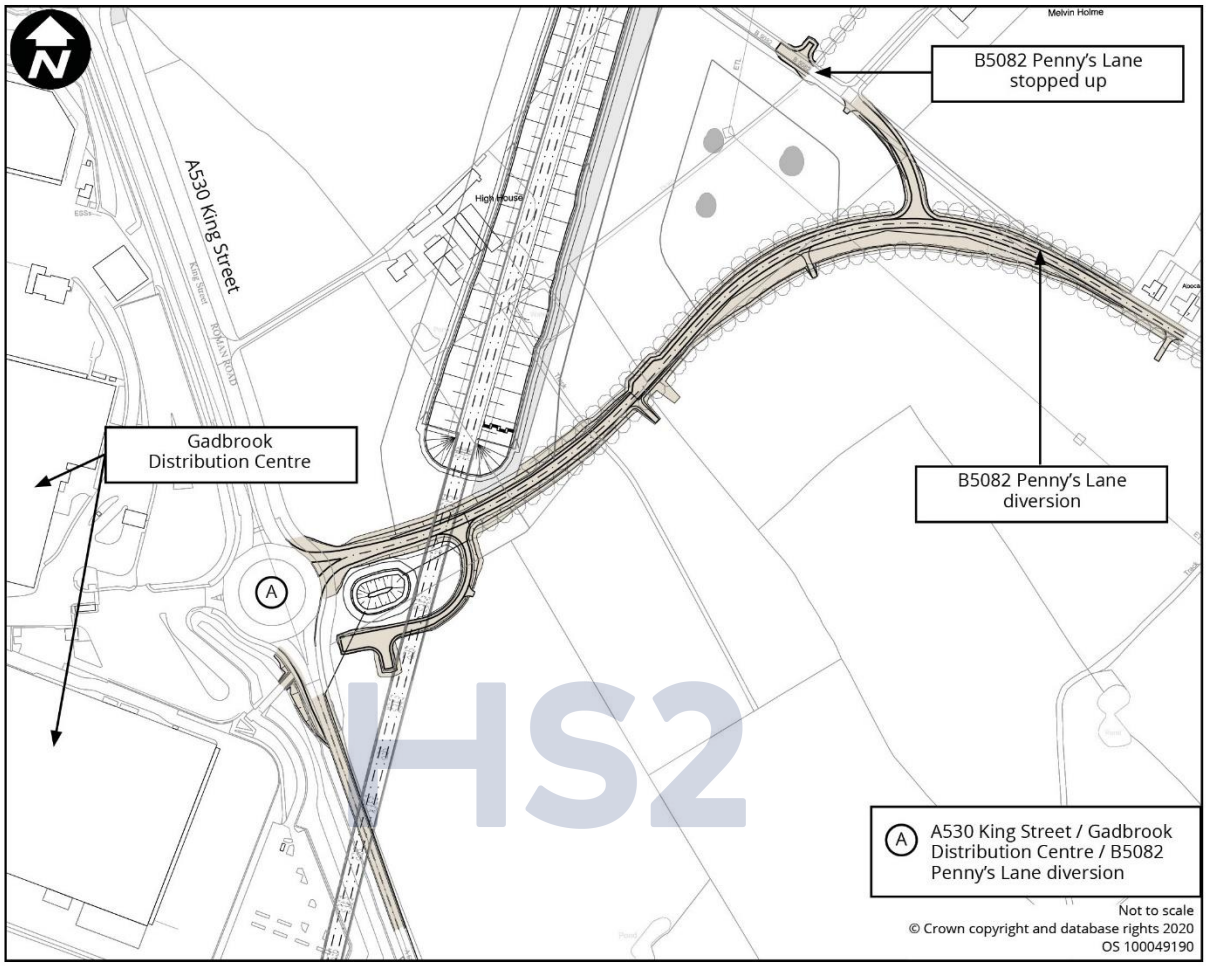


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Table 14-82: A530 King Street/Gadbrook Distribution Centre/B5082 Penny's Lane diversion junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 future baseline (existing layout)**			**2038 with the Proposed Scheme (proposed layout)**			**2046 future baseline (existing layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A530 King Street (north)	706	0.21	0	1,302	0.49	1	658	0.20	0	1,288	0.49	1
B5082 Penny's Lane diversion	-	-	-	122	0.11	0	-	-	-	129	0.12	0
A530 King Street (south)	1,188	0.46	1	1,156	0.61	2	1,247	0.48	1	1,151	0.60	2
Gadbrook Distribution Centre	142	0.09	0	142	0.10	0	142	0.09	0	142	0.10	0
17:00–18:00	**2038 future baseline (existing layout)**			**2038 with the Proposed Scheme (proposed layout)**			**2046 future baseline (existing layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A530 King Street (north)	862	0.26	0	1,252	0.47	1	877	0.26	0	1,244	0.47	1
B5082 Penny's Lane diversion	-	-	-	392	0.38	1	-	-	-	440	0.42	1
A530 King Street (south)	819	0.32	1	746	0.43	1	811	0.31	1	744	0.43	1
Gadbrook Distribution Centre	188	0.10	0	188	0.14	0	188	0.10	0	188	0.14	0

14.5.61 The model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in RFC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction.

14.5.62 The model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in RFC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction.

A530 Griffiths Road/A530 King Street/B5082 Middlewich Road/Penny's Lane

14.5.63 Table 14-83 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046. Penny's Lane approach is a minor arm that is not included within the strategic traffic model.

Table 14-83: A530 Griffiths Road/A530 King Street/B5082 Middlewich Road/Penny's Lane junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A530 Griffiths Road	507	48%	5	515	47%	5	518	50%	5	525	50%	5
A530 King Street	498	50%	7	474	48%	7	480	49%	7	466	47%	6
B5082 Middlewich Road	372	69%	9	383	79%	9	391	71%	9	393	81%	9
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A530 Griffiths Road	517	44%	5	625	53%	6	559	53%	5	627	54%	6
A530 King Street	690	69%	10	737	73%	10	650	64%	9	706	70%	10
B5082 Middlewich Road	444	98%	10	424	101%	10	434	100%	10	418	103%	10

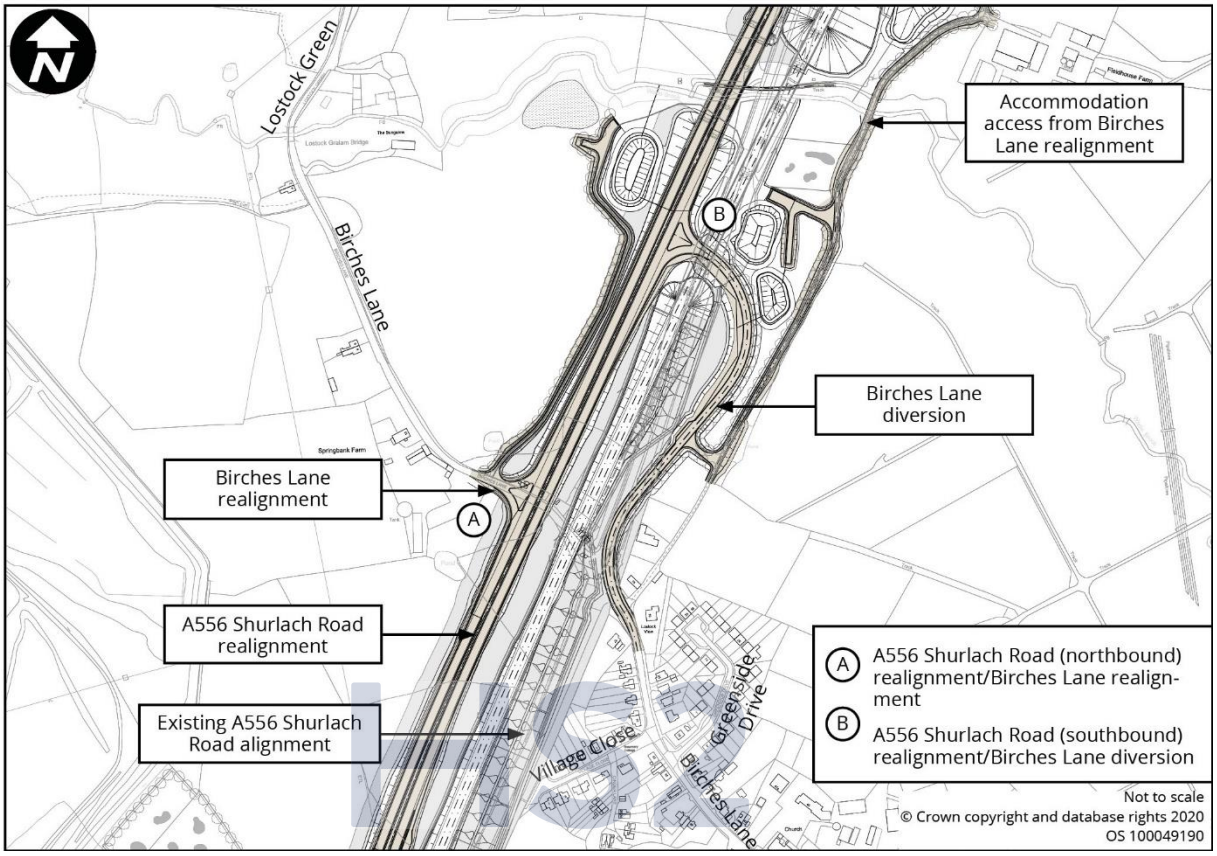
14.5.64 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 69% in the 2038 future baseline to 79% with the Proposed Scheme in 2038 on the B5082 Middlewich Road approach in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the maximum VoC will increase from 98% in the 2038 future baseline to 101% with the Proposed Scheme in 2038 on the B5082 Middlewich Road approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour the junction operates well within capacity in the future baseline and within capacity with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction.

14.5.65 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 71% in the 2046 future baseline to 81% with the Proposed Scheme in 2046 on the B5082 Middlewich Road approach in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the maximum VoC will increase from 100% in the 2046 future baseline to 103% with the Proposed Scheme in 2046 on the B5082 Middlewich Road approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour the junction operates well within capacity in the future baseline and within capacity with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction.

Local network change in the Lostock Green area

14.5.66 As set out in Table 14-62 there are a number of changes to the local road network as part of the Proposed Scheme. Figure 14-15 shows the local network changes introduced as part of the Proposed Scheme in the Lostock Green area.

Figure 14-15: Junction layout diagram (A556 Shurlach Road realignment/Birches Lane realignment/Birches Lane diversion)



A556 Shurlach Road (northbound) realignment/Birches Lane realignment

14.5.67 The A556 Shurlach Road (northbound) realignment/Birches Lane realignment junction is a new three-arm priority-controlled (give-way) T-junction located approximately 90m north-west of the existing A556 Shurlach Road (northbound)/Birches Lane junction. The A556 Shurlach Road will be one-way northbound and therefore no results are reported for the A556 Shurlach Road (north) approach. Figure 14-15 shows the junction layout introduced as part of the Proposed Scheme. Table 14-84 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-84 A556 Shurlach Road (northbound) realignment/Birches Lane realignment 2038 and 2046 with the Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A556 Shurlach Road realignment (north)	-	-	-	-	-	-

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
A556 Shurlach Road realignment (south) (ahead)	1,617	0.00	0	1,667	0.00	0
A556 Shurlach Road realignment (south) (left)	262	0.00	0	265	0.00	0
Birches Lane realignment (left)	24	0.10	0	41	0.19	0
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A556 Shurlach Road realignment (north)	-	-	-	-	-	-
A556 Shurlach Road realignment (south) (ahead)	1,637	0.00	0	1,645	0.00	0
A556 Shurlach Road realignment (south) (left)	172	0.00	0	179	0.00	0
Birches Lane realignment (left)	9	0.04	0	9	0.04	0

14.5.68 The assessment shows that the junction operates well within capacity in both 2038 and 2046 with the Proposed Scheme.

A556 Shurlach Road (southbound) realignment/Birches Lane diversion

14.5.69 The A556 Shurlach Road realignment (southbound)/Birches Lane diversion junction will be a new three-arm priority-controlled (give-way) T-junction located approximately 350m north of the existing A556 Shurlach Road (southbound)/Birches Lane junction. The A556 Shurlach Road will be one-way southbound and therefore no results are reported for the A556 Shurlach Road (south) approach. Figure 14-15 shows the junction layout introduced as part of the Proposed Scheme. Table 14-85 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-85: A556 Shurlach Road (southbound) realignment/Birches Lane diversion junction 2038 and 2046 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A556 Shurlach Road realignment (north) (ahead)	1,626	0.00	0	1,712	0.00	0
A556 Shurlach Road realignment (north) (left)	145	0.00	0	167	0.00	0

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
Birches Lane diversion (left)	282	1.13	24	274	1.25	34
A556 Shurlach Road realignment (south)	-	-	-	-	-	-
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A556 Shurlach Road realignment (north) (ahead)	1,294	0.00	0	1,322	0.00	0
A556 Shurlach Road realignment (north) (left)	276	0.00	0	311	0.00	0
Birches Lane diversion (left)	306	0.91	7	309	0.96	10
A556 Shurlach Road realignment (south)	-	-	-	-	-	-

14.5.70 The assessment shows that the junction operates over capacity in 2038 with the Proposed Scheme with a maximum RFC of 1.13 on the Birches Lane diversion approach in the AM peak hour with an associated queue length of 24 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in 2038 with the Proposed Scheme with a maximum RFC of 0.91 on the Birches Lane diversion approach with an associated queue length of seven PCU.

14.5.71 The assessment shows that the junction operates over capacity in 2046 with the Proposed Scheme with a maximum RFC of 1.25 on the Birches Lane diversion approach in the AM peak hour with an associated queue length of 34 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in 2046 with the Proposed Scheme with a maximum RFC of 0.96 on the Birches Lane diversion approach with an associated queue length of 10 PCU.

A530 Griffiths Road/A559 Manchester Road

14.5.72 Table 14-86 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-86: A530 Griffiths Road/A559 Manchester Road junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A599 Manchester Road (east)	899	48%	0	914	48%	0	914	48%	0	934	50%	0
A530 Griffiths Road	183	55%	0	175	54%	0	198	61%	1	188	60%	1
A599 Manchester Road (west)	665	66%	0	673	67%	0	709	69%	0	711	70%	0
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A599 Manchester Road (east)	831	43%	0	879	46%	0	880	46%	0	924	48%	0
A530 Griffiths Road	332	97%	4	327	94%	3	326	96%	4	309	89%	2
A599 Manchester Road (west)	875	87%	0	918	98%	1	927	97%	1	942	102%	1

14.5.73 The model shows that for this junction, the change in traffic due to the operation in 2038 of the Proposed Scheme will not result in substantial changes in VoC and queue lengths in the AM peak hour. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will not substantially increase the maximum VoC between the 2038 future baseline and the Proposed Scheme. However, in the PM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the VoC from 87% in the 2038 future baseline to 98% with the Proposed Scheme in 2038 on the A599 Manchester Road (west) approach. Queue length will increase from no queue in the future baseline to one PCU. The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour.

14.5.74 The model shows that the change in traffic due to the operation of the Proposed Scheme in 2046 will not result in substantial changes in VoC and queue lengths in the AM peak hour. In the PM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 97% in the 2046 future baseline to 102% with the Proposed Scheme in 2046 on the A599 Manchester Road (west) approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates close to capacity in the future baseline and over capacity with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour.

A559 Manchester Road/Station Road/Hall Lane

14.5.75 Table 14-87 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-87: A559 Manchester Road/Station Road/Hall Lane junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A559 Hall Lane	273	51%	5	279	52%	5	313	59%	6	315	59%	6
A559 Manchester Road (east)	652	79%	11	654	79%	11	632	77%	11	640	78%	11
Station Road	150	76%	4	177	91%	4	149	75%	4	178	91%	4
A559 Manchester Road (west)	579	76%	10	586	77%	10	629	88%	11	630	89%	11
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A559 Hall Lane	364	68%	7	405	76%	8	372	70%	7	429	81%	8
A559 Manchester Road (east)	482	61%	8	485	62%	8	520	64%	9	499	63%	9
Station Road	185	95%	5	198	102%	5	177	91%	4	195	101%	5
A559 Manchester Road (west)	724	101%	12	722	101%	13	736	103%	12	723	101%	13

14.5.76 The change in traffic due to operation of the Proposed Scheme will not substantially increase the maximum VoC between the 2038 future baseline and the Proposed Scheme in the AM peak hour. However, in the AM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the VoC from 76% in the 2038 future baseline to 91% with the Proposed Scheme in 2038 on the Station Road approach in the AM peak hour. There will be no change in queue lengths. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will not substantially increase the maximum VoC between the 2038 future baseline and the Proposed Scheme. However, in the PM peak hour, the change in traffic due to the operation of the Proposed Scheme in 2038 will increase the VoC from 95% in the 2038 future baseline to 102% with the Proposed Scheme on the Station Road approach. Queue length will increase from 12 PCU in the future baseline to 13 PCU with the Proposed Scheme. The assessment shows that in the AM peak hour the junction operates within capacity in the future baseline and close to capacity with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction, which is, however, predicted to operate over its capacity in the PM peak hour of the future baseline.

14.5.77 The change in traffic due to operation of the Proposed Scheme will not substantially increase the maximum VoC between the 2046 future baseline and the Proposed Scheme in the AM peak hour. However, in the AM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 75% in the 2046 future baseline to 91% with the Proposed Scheme in 2046 on the Station Road approach, with no change in corresponding queue length. In the PM peak hour, the change in traffic due to the operation of the Proposed Scheme will decrease the maximum VoC from 103% in the 2046 future baseline to 101% with the Proposed Scheme in 2046 on the A559 Manchester Road (west) approach, with a change in queue lengths from 12 PCU in the future baseline to 13 PCU with the Proposed Scheme. However, in the PM peak hour, the change in traffic due to the operation of the Proposed Scheme will increase the VoC from 91% in the 2046 future baseline to 101% with the Proposed Scheme in 2046 on the Station Road approach. Queue length will increase from four PCU in the future baseline to five PCU with the Proposed Scheme. The assessment shows that in the AM peak hour the junction operates close to capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates over capacity in both the future baseline and with the Proposed Scheme. The traffic flow will have an adverse impact on the operation of the junction, which is, however, predicted to operate over its capacity in the PM peak hour of the future baseline.

A556 Chester Road/A556 Shurlach Road/A559 Manchester Road

14.5.78 Table 14-88 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 14-88: A556 Chester Road/A556 Shurlach Road/A559 Manchester Road junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2036 with the Proposed Scheme**		
A556 Shurlach Road (north) (nearside) (ahead)	961	48%	1	940	47%	0	1,022	52%	1	1,005	51%	1
A556 Shurlach Road (north) (offside) (ahead)	1,099	55%	1	1,078	54%	1	1,160	58%	1	1,141	57%	1
A556 Shurlach Road (south) (nearside) (left and ahead)	891	80%	19	875	79%	18	942	83%	21	923	81%	20
A556 Shurlach Road (south) (offside) (ahead)	878	80%	19	862	79%	18	929	83%	21	910	82%	20
A559 Manchester Road (nearside) (ahead)	272	76%	8	267	74%	8	279	83%	9	275	81%	9
A559 Manchester Road (offside) (ahead)	272	76%	8	267	74%	8	279	83%	9	275	81%	9
A556 Shurlach Road (internal past A556 (north) entry)	94	17%	2	95	17%	2	87	17%	2	91	17%	2
A556 Shurlach Road (internal past A556 (south) entry) (nearside)	175	27%	3	172	27%	3	181	29%	4	176	28%	4
A556 Shurlach Road (internal past A556 (south) entry) (offside)	185	28%	4	183	28%	4	193	30%	4	186	29%	4
A556 Shurlach Road (internal past A559 Manchester Road entry) (nearside)	813	59%	1	794	58%	1	870	62%	1	848	61%	1
A556 Shurlach Road (internal past A559 Manchester Road entry) (offside)	878	60%	1	862	59%	1	929	62%	1	910	61%	1
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2036 with the Proposed Scheme**		
A556 Shurlach Road (north) (nearside) (ahead)	1,008	51%	1	818	41%	0	1,077	54%	1	850	43%	0
A556 Shurlach Road (north) (offside) (ahead)	1,191	60%	1	837	42%	0	1,266	64%	1	880	44%	0
A556 Shurlach Road (south) (nearside) (left and ahead)	661	66%	13	887	91%	24	666	70%	14	897	92%	25

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
A556 Shurlach Road (south) (offside) (ahead)	647	66%	13	872	91%	24	649	69%	13	881	92%	25
A559 Manchester Road (nearside) (ahead)	254	54%	6	440	89%	14	256	49%	6	440	89%	14
A559 Manchester Road (offside) (ahead)	252	53%	6	440	89%	14	252	49%	6	441	89%	14
A556 Shurlach Road (internal past A556 (north) entry)	155	29%	4	185	26%	4	157	31%	4	176	25%	4
A556 Shurlach Road (internal past A556 (south) entry) (nearside)	348	45%	7	124	16%	2	408	50%	8	131	17%	2
A556 Shurlach Road (internal past A556 (south) entry) (offside)	363	46%	7	135	17%	2	424	51%	8	142	18%	2
A556 Shurlach Road (internal past A559 Manchester Road entry) (nearside)	537	43%	0	800	65%	1	523	43%	0	814	66%	1
A556 Shurlach Road (internal past A559 Manchester Road entry) (offside)	647	48%	1	872	66%	1	649	50%	1	881	66%	1

14.5.79 The model shows that for this junction, the change in traffic due to operation in 2038 of the Proposed Scheme will not result in substantial changes in DoS and queue lengths in the AM peak hour. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the maximum DoS from 66% in the 2038 future baseline to 91% with the Proposed Scheme in 2038 on the nearside and offside lanes of the A556 Shurlach Road (south) approach, with a corresponding change in queue length from 13 PCU on each approach in the future baseline 24 PCU on each approach. The change in traffic due to operation of the Proposed Scheme will also increase the DoS from 54% in the 2038 future baseline to 89% with the Proposed Scheme in 2038 on the nearside lane of the A559 Manchester Road approach, with a corresponding change in queue length from six PCU in the future baseline 14 PCU. The assessment shows that in the AM peak hour the junction operates within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and close to capacity with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour.

14.5.80 The model shows that for this junction, the change in traffic due to operation in 2046 of the Proposed Scheme will not result in substantial changes in DoS and queue lengths in the AM peak hour. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the maximum DoS from 69% in the 2046 future baseline to 92% with the Proposed Scheme in 2046 on the offside lane of the A556 Shurlach Road (south) approach, with a corresponding change in queue length from 13 PCU in the future baseline 25 PCU. The change in traffic due to operation of the Proposed Scheme will also increase the DoS from 49% in the 2046 future baseline to 89% with the Proposed Scheme in 2046 on the nearside and offside lanes of the A559 Manchester Road approach, with a corresponding change in queue length from six PCU in the future baseline 14 PCU. The assessment shows that in the AM peak hour the junction operates within capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the junction operates well within capacity in the future baseline and close to capacity with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction in the AM peak hour and an adverse impact on the operation of the junction in the PM peak hour.

14.5.81 This section provides an overview of the impacts resulting from the operation of the Proposed Scheme. HS2 Phase Two services are expected to commence in 2038. Operation of the Proposed Scheme will not have any cumulative impacts resulting from the operation of the Proposed Scheme with HS2 Phase 2a.

Accidents and safety

14.5.82 The baseline safety analysis identified no locations which had experienced an accident cluster over a three-year period.

14.5.83 Whilst there are locations in the MA02 area where there are substantial forecast increases in traffic flows due to the operation of the Proposed Scheme, these will not affect known safety concerns and, consequently, no unacceptable impacts on accident and safety risks are expected.

14.5.84 New highway links and junctions will be constructed to current standards and/or in keeping with the existing infrastructure. The Proposed Scheme is unlikely to create any new safety concerns.

Parking and loading

14.5.85 There will be a permanent loss of off-street car parking at one location along the route of the Proposed Scheme in the MA02 area. This will be the permanent loss of 43 out of 733 parking spaces at the Gadbrook Distribution Centre on the A530 King Street to the south of Northwich.

Public transport

Local bus services

14.5.86 Local bus services will be affected where the road corridors used cross the route of the Proposed Scheme and where the Proposed Scheme results in changes to the route.

14.5.87 Of the ten roads with bus services identified in the existing baseline, three roads are affected by the Proposed Scheme. The A530 Nantwich Road will be diverted onto a new alignment, affecting eight journeys per day on route 42. The A54 Middlewich Road will be diverted onto a new alignment, affecting nine journeys per day on route 37, six journeys per day on route 37A, one journey per day on route 37E and eight journeys per day on route 42. The A556 Shurlach Road will be diverted onto a new alignment, affecting four journeys per day on route 89. However, the diversions result in changes in journey length of less than 100m and will have no impact on the bus service.

Rail network

14.5.88 There are no local changes to the rail network or operations in this CA as a result of the Proposed Scheme.

Public transport interchanges

14.5.89 There are no substantial impacts on public transport interchange facilities in the MA02 area and no committed proposals for public transport interchange facilities in this area.

Pedestrians, cyclists and equestrians

14.5.90 The operational scheme will affect PRoW and roadside footways used by pedestrians, cyclists and equestrians that cross the route of the Proposed Scheme, or where the operation of the Proposed Scheme results in changes to PRoW or roadside footways.

14.5.91 Locations where PRoW and roads used by pedestrians, cyclists and equestrians are permanently diverted, realigned or reinstated are shown in Table 14-89 and Table 14-90 below. The tables summarise the permanent diversions, realignments and extensions required to PRoW and roads to accommodate the Proposed Scheme.

Table 14-89: MA02 permanent changes to PRoW for non-motorised users

PRoW name	Change in length	Comments
Footpath Wimboldsley 1/1	Closure of Footpath Wimboldsley 1/1 between the A530 Nantwich Road and the Shropshire Union Canal (Middlewich Branch). Users will be diverted along the Shropshire Union Canal (Middlewich Branch) towpath (Footpath Wimboldsley 9/3 and Footpath Winsford 3/4), Clive Green Lane and A530 Nantwich Road, increasing journey length by 960m.	None
Footpath Winsford 37/1 and Footpath Stanthorne 1/1	Closure of Footpath Winsford 37/1 and Footpath Stanthome 1/1 where it crosses the route of the Proposed Scheme. Users will be diverted along the realigned A54 Middlewich Road, crossing the Proposed Scheme beneath the A54 Middlewich Road viaducts. This will increase the length of journey by 223m.	None
Footpath Rudheath 3/4, Footpath Rudheath 3/3, Footpath Lach Dennis 3X/2 and Footpath Lach Dennis 3X/1	Closure of Footpath Rudheath 3/4, Footpath Rudheath 3/3, Footpath Lach Dennis 3X/2 and Footpath Lach Dennis 3X/1 which are crossed by the route of the Proposed Scheme. Users will be diverted along the proposed maintenance access to the B5082 Penny's Lane realignment, increasing the length of the journey by up to 1.7km.	None
New PRoW at Lostock Green	A new PRoW will be created between Birches Lane on the western side of the A556 Shurlach Road realignment and the Birches Lane diversion on the eastern side of the A556 Shurlach Road realignment. Further details are provided in Table 14-90.	None

Table 14-90: MA02 permanent changes to roads for non-motorised users

Road name	Change in length	Comments
A530 Nantwich Road	Realignment of a section of the A530 Nantwich Road, 55m south of its current alignment, crossing the existing WCML and the route of the Proposed Scheme on the A530 Nantwich Road overbridge, resulting in a change in journey length of less than 10m.	New overbridge

Road name	Change in length	Comments
Clive Green Lane	Realignment of a section of Clive Green Lane, up to 120m south of its current alignment, crossing the route of the Proposed Scheme on the Clive Green Lane overbridge, increasing journey length by 182m.	New overbridge
A54 Middlewich Road	Realignment of a section of the A54 Middlewich Road, up to 137m north of its existing alignment, meeting the realigned A533 Northwich Road at a new roundabout before crossing the route of the Proposed Scheme beneath the A54 Middlewich Road viaduct. Journey length will increase by up to 164m.	Viaduct
Birch Lane	Diversion of a section of Birch Lane to connect with the realigned A54 Middlewich Road, up to 50m west of its existing alignment. Users between Bell Lane realignment and Birch Lane diversion will be diverted via the new staggered cross-roads, increasing journey length by 128m.	None
Bell Lane	Realignment of a section of Bell Lane where it is crossed by the realigned A54 Middlewich Road, reducing its length by 40m.	None
A533 Northwich Road	Diversion of a section of the A533 Northwich Road, up to 300m south of its existing alignment, increasing journey length by up to 232m.	Viaduct
B5082 Penny's Lane	A section of the B5082 Penny's Lane will be diverted 420m south of its current alignment, connecting with A530 King Street. Journey length will increase by up to 913m.	Viaduct
Cookes Lane	Closure of the north-eastern section of Cookes Lane where it is crossed by A556 Shurlach Road realignment. The existing access for non-motorised users, between Cookes Lane and the A556 Shurlach Road will be closed, increasing journey lengths by up to 588m.	None
A556 Shurlach Road	Realignment of a section of the A556 Shurlach Road, up to 90m to the north-west of its current alignment for 2.3km, changing journey length by less than 10m.	None
Birches Lane	Diversion of a section of Birches Lane, along the realigned Birches Lane beneath the route of the Proposed Scheme, then north to pass beneath Wade Brook overbridge, before turning south as a new PRoW to re-join Birches Lane to the west of the route of the Proposed Scheme and the realigned A556 Shurlach Road, increasing journey length by up to 581m.	New overbridge

14.5.92 Within these diversions and reinstatements, two of the routes affected becomes shorter (Bell Lane and the A556 Shurlach Road). A further ten changes result in diversions which increase route length up to 960m on PRoW and roadside footways.

14.5.93 Other routes experience larger changes in length of diversion, with the largest increase associated with the closure of Footpath Rudheath 3/4, Footpath Rudheath 3/3, Footpath Lach Dennis 3X/2 and Footpath Lach Dennis 3X/1.

Waterways and canals

14.5.94 It is not expected that the operation of the Proposed Scheme will affect the waterways and canals in the MA02 area.

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High Speed Two (HS2) Limited
Two Snowhill
Snow Hill Queensway
Birmingham B4 6GA
Freephone: 08081 434 434
Minicom: 08081 456 472
Email: HS2enquiries@hs2.org.uk