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HS2

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 5: Appendix TR-003-00003

Traffic and transport

MA03: Pickmere to Agden and Hulseheath Transport Assessment Part 3

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Department for Transport

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15.1 Description of the Proposed Scheme

15.1.1 The Proposed Scheme within the Pickmere to Agden and Hulseheath area (MA03) will comprise three main components:

- the HS2 West Coast Main Line (WCML) connection (referred to in this report as the route of the Proposed Scheme), which will be approximately 10.6km in length in this area, continuing from the northern boundary of the Wimboldsley to Lostock Gralam area (MA02) and travelling northwards towards the Broomedge to Glazebrook area (MA04);
- the HS2 Manchester spur: approximately 3.3km long spur diverging from the route of the Proposed Scheme west of Hulseheath and continuing towards the Hulseheath to Manchester Airport area (MA06); and
- the Northern Powerhouse Rail (NPR) London to Liverpool junction: approximately 3.1km long section of earthworks and associated infrastructure to provide for future NPR services.

15.1.2 The Proposed Scheme will comprise the following features in the MA03 area:

- viaducts for a total length of 393m (Arley Brook viaduct, M6 Mere viaduct, A56 Lymm Road viaduct and Peacock Lane viaduct);
- box structures for a total length of 284m (Hoo Green box structure and M56 West overbridge);
- the Hoo Green tunnel for a total length of 297m;
- cuttings for a total length of 4.7km (Hoo Green North cutting, High Legh cutting, Agden cutting and Hoo Green West cutting); and
- embankments for a total length of 10.6km (Pickmere embankment, Heyrose embankment, Hoo Green South embankment No.1, Hoo Green South embankment No.2, Hoo Green South embankment No.3, Lymm South embankment, Lymm North embankment, Hulseheath South embankment and Hulseheath North embankment).

15.1.3 The key traffic issues within the MA03 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 MA03 area.

15.1.4 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 the M6, the A50 Warrington Road, the B5391 Pickmere Lane, Flittogate Lane, School Lane, Frog Lane, Hoo Green Lane and Peacock Lane; and

- temporary and permanent road closures, including Budworth Road, Bowden View Lane and Agden Lane.

15.1.5 The temporary and permanent closure, diversion and realignment of PRoW will also be required, notably Footpath Tabley Inferior 3/1, Footpath Agden 4/1, Footpath Agden 2/4, Footpath Agden 1/2.

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

15.2 Proposed Scheme construction description

Introduction

15.2.1 This section provides an overview of the construction traffic and transport impacts for the section of the Proposed Scheme that will pass through the MA03 area.

15.2.2 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

15.2.3 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: Pickmere to Agden and Hulseheath (MA03), Section 2.

15.2.4 A complete description of the works associated with the Proposed Scheme in the MA03 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 15-1.

Table 15-1: Key highway construction activities in the MA03 area

Activity	Community Area (CA)	Start date
Area advance works	MA03	2025 Q1
Arley brook viaduct	MA03	2027 Q2
Heyrose embankment	MA03	2027 Q2
Hoo Green North cutting retaining wall and Hoo Green West cutting	MA03	2027 Q2
A556/Chapel Lane temporary slip roads	MA03	2027 Q2
Smoker Brook viaduct	MA03	2027 Q4

Activity	Community Area (CA)	Start date
M6 Mere viaduct and M6 realignment	MA03	2027 Q4
Manchester to Liverpool junction overbridge	MA03	2027 Q4
Pickmere embankment	MA03	2028 Q1
A50 Warrington Road overbridge and realignment and Hoo Green Lane diversion	MA03	2028 Q1
M56 West overbridge	MA03	2028 Q1
B5391 Pickmere Lane realignment	MA03	2028 Q3
Peacock Lane overbridge and realignment	MA03	2028 Q3
Bridgewater Canal viaduct	MA04	2028 Q3
Temporary overbridge over the M56 at Yarwoodheath Lane	MA06	2028 Q3
Warrington Lane realignment	MA04	2030 Q3

Compounds and construction sites

15.2.5 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.

15.2.6 Table 15-2 summarises the expected average and peak workforce (site workers plus staff) at each construction compound in the MA03 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 15-2: Assumed workforce at construction sites in the MA03 area

Compound type	Compound name	Number of site workers (peak)	Number of staff (peak)	Total workforce (site plus staff)	
				Average	Peak
Satellite	Smoker Brook viaduct north satellite compound	95	45	106	140
Satellite	Pickmere Lane satellite compound	120	45	111	165
Satellite	Arley Brook viaduct satellite compound	83	53	89	135
Satellite	Budworth Road satellite compound	60	45	94	105
Satellite	M6 viaduct south satellite compound	85	45	85	130
Satellite	M6 viaduct north satellite compound	45	45	100	180
Main	A50 Warrington Road main compound	150	136	187	285
Satellite	Wrenshot Lane satellite compound	70	45	83	115
Satellite	Bowden View satellite compound	100	45	100	145
Satellite	Peacock Lane satellite compound	60	45	90	105

Compound type	Compound name	Number of site workers (peak)	Number of staff (peak)	Total workforce (site plus staff)	
				Average	Peak
Satellite	Peacock Lane ATFS satellite compound	115	56	87	160
Satellite	Agden Lane satellite compound	85	60	107	145
Satellite	M56 West satellite compound	50	45	85	95
Satellite	Agden Brow satellite compound	120	75	127	195
Satellite	A56 Lymm Road satellite compound	152	60	133	212

15.2.7 Table 15-3 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.

15.2.8 Table 15-3 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 Table 15-3 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 15-3: Typical vehicle trip generations for construction site compounds in the MA03 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	Smoker Brook viaduct north satellite compound	2027 Q3	3 years and 3 months	195-250	456-506	4
Satellite	Pickmere Lane satellite compound	2027 Q2	4 years	203-286	92-116	6
Satellite	Arley Brook viaduct satellite compound	2027 Q2	4 years	221-272	104-116	6
Satellite	Budworth Road satellite compound	2027 Q2	3 years	160-180	383-476	11
Satellite	M6 viaduct south satellite compound	2027 Q2	4 years and 3 months	224-256	66-84	8

[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).

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	M6 viaduct north satellite compound	2027 Q2	4 years and 3 months	199-318	438-440	2
Main	A50 Warrington Road main compound	2027 Q2	5 years and 3 months	401-516	140-234	15
Satellite	Wrenshot Lane satellite compound	2027 Q3	3 years and 9 months	143-198	363-438	7
Satellite	Bowden View satellite compound	2027 Q2	4 years and 6 months	177-248	416-484	11
Satellite	Peacock Lane satellite compound	2028 Q3	3 years	155-182	50-68	5
Satellite	Peacock Lane ATFS satellite compound	2027 Q2	5 years	259-346	75-112	5
Satellite	Agden Lane satellite compound	2027 Q4	4 years	186-252	78-98	7
Satellite	M56 west satellite compound	2027 Q4	4 years	145-164	38-48	8
Satellite	Agden Brow satellite compound	2027 Q2	4 years and 9 months	236-330	400-512	14
Satellite	A56 Lymm Road satellite compound	2027 Q2	4 years and 6 months	237-362	69-80	6

15.2.9 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 15-3.

Construction HGV routes

15.2.10 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.

15.2.11 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).

15.2.12 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 15-4 summarises the construction HGV routes to and from each compound to the main road network. For some compounds, Table 15-4 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.

15.2.13 The average daily combined two-way HGV trips reported in Table 15-3 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 15-4, 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 15-4: Construction HGV routes for construction compounds in the MA03 area

Compound name(s)	Access routes to/from compound(s) to main road network
Smoker Brook viaduct north satellite compound	A556 Chester Road
Pickmere Lane satellite compound	B5391 Pickmere Lane and A556 Chester Road
Arley Brook viaduct satellite compound	Budworth Road, B5391 Pickmere Lane and A556 Chester Road (to be used before closure of Budworth Road) Budworth Road, Frog Lane, School Lane, B5391 Pickmere Lane and A556 Chester Road (to be used after closure of Budworth Road)
Budworth Road satellite compound	B5391 Pickmere Lane and A556 Chester Road
M6 viaduct south satellite compound	On-site construction traffic route, Budworth Road, B5391 Pickmere Lane and A556 Chester Road (to be used before closure of Budworth Road) On-site construction traffic route, Budworth Road, Frog Lane, School Lane, B5391 Pickmere Lane and A556 Chester Road (to be used after closure of Budworth Road)
M6 viaduct north satellite compound	Route to/from the north: On-site construction traffic route, Old Hall Lane, B5569 Chester Road, A50 Knutsford Road and A556 (outgoing to the north only) A556, A5034 Chester Road, B5569 Chester Road, Old Hall Lane and on-site construction traffic route (incoming from the north only) Route to/from the south: On-site construction traffic route, Old Hall Lane and A556
A50 Warrington Road main compound	A50 Warrington Road
Wrenshot Lane satellite compound Bowden View satellite compound	On-site construction traffic route, A50 Warrington Road (to be used before and after closure of the A556 temporary construction slip roads) On-site construction traffic route, Peacock Lane, Chapel Lane, A556 temporary construction slip roads and A556 (to be used while the A556 temporary construction slip roads are open)
Peacock Lane satellite compound	Route to/from the west: Peacock Lane, B5159 West Lane and A50 Warrington Road Route to/from the north and south:

Compound name(s)	Access routes to/from compound(s) to main road network
	Peacock Lane, Chapel Lane, A5034 Chester Road, B5569 Chester Road, Old Hall Lane and A556 (to be used before opening and after closure of the A556 temporary construction slip roads) Peacock Lane, Chapel Lane, A556 temporary construction slip roads and A556 (to be used while the A556 temporary construction slip roads are open)
Peacock Lane ATFS satellite compound	Peacock Lane, Chapel Lane, A5034 Chester Road, B5569 Chester Road, Old Hall Lane and A556 (to be used before opening and after closure of the A556 temporary construction slip roads) Peacock Lane, Chapel Lane, A556 temporary construction slip roads and A556 (to be used while the A556 temporary construction slip roads are open)
Agden Lane satellite compound	On-site construction traffic route, Peacock Lane, Chapel Lane, A5034 Chester Road, B5569 Chester Road, Old Hall Lane and A556 (to be used before opening and after closure of the A556 temporary construction slip roads) On-site construction traffic route, Peacock Lane, Chapel Lane, A556 temporary construction slip roads and A556 (to be used while the A556 temporary construction slip roads are open)
M56 west satellite compound	On-site construction traffic route, A56 Lymm Road and M56 junction 7/8
Agden Brow satellite compound A56 Lymm Road satellite compound	A56 Lymm Road and M56 junction 7/8

15.2.14 Table 15-5 summarises the peak daily construction traffic flows associated with the Proposed Scheme, both in HGV and total vehicles, on roads within the MA03 area that form part of construction HGV routes. In MA03, the main construction HGV routes from the Strategic Road Network (SRN) are: the M6 (including junctions 19 and 20); the A556; the A556 Chester Road; the A50 Warrington Road/Chester Road/Knutsford Road/Cliff Lane; A5034 Mereside Road; the A56 Lymm Road; the B5391 Pickmere Lane; the B5569 Chester Road; the B5159 West Lane; Flittogate Lane; School Lane; Frog Lane; Budworth Road; Colliers Lane, Old Hall Lane; Winterbottom Lane; Hoo Green Lane; Chapel Lane; Peacock Lane; Back Lane; Agden Lane and Ashley Road.

Table 15-5: MA03 peak daily construction traffic flow

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	927	1,534
	SB	927	1,702
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	NB	66	233
	SB	66	322
Frog Lane realignment/School Lane realignment (between B5391 Pickmere Lane and Budworth Road)	NB	62	122
	SB	62	113
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	927	1,574
	SB	927	1,710
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	EB	251	416
	WB	216	265

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	EB	263	538
	WB	221	460
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	0	0
	SB	96	116
A556 (between M6 junction 19 and Old Hall Lane)	NB	1,491	2,715
	SB	1,498	2,722
A556 (between B5569 Chester Road and Old Hall Lane)	NB	1,418	2,370
	SB	1,422	2,490
Old Hall Lane (between A556 southbound on-slip and B5569 Chester Road)	EB	197	414
	WB	286	502
Old Hall Lane (between A556 northbound off-slip and A556 southbound on-slip)	EB	197	414
	WB	46	122
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road	NB	197	414
	SB	286	502
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	133	255
	WB	338	444
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	133	206
	SB	338	408
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	133	206
	SB	338	410
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	133	313
	WB	338	556
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	300	553
	SB	142	315
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	421	672
	SB	224	388
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	235	407
	SB	291	706
A556 (between A50 Knutsford Road and M56 junction 8)	NB	1,693	2,907
	SB	1,422	2,490
A50 Warrington Road realignment (between Wrenshot Lane and Hoo Green Lane)	EB	291	795
	WB	235	624
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	NB	227	233
	SB	214	288
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	291	648
	WB	235	591
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	EB	516	530
	WB	112	117
	EB	291	710

Location	Direction*	Daily peak HGV vehicles	Daily peak all vehicles
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	WB	235	585
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	4	110
	SB	4	70
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	294	747
	WB	238	649
Chapel Lane/Peacock Lane (between Hulseheath Lane and Back Lane)	NB	222	268
	SB	222	268
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	294	594
	WB	238	619
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	294	594
	WB	238	610
Peacock Lane realignment (between Back Lane diversion and Broadoak Lane)	EB	208	299
	WB	208	244
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	4	92
	SB	4	240
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	4	120
	WB	4	59
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	294	721
	WB	238	672
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	EB	216	721
	WB	216	538
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	216	507
	WB	216	657

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

Traffic management, road closures and diversions

15.2.15 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 minimised, 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.

15.2.16 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.

15.2.17 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.

15.2.18 Permanent road closures are addressed in the operational assessment.

Public rights of way, closures and diversions

15.2.19 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.

15.2.20 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.

15.3 Proposed Scheme assessment of construction impacts

Key construction transport issues

15.3.1 The construction assessment takes account of all of the impacts of the Proposed Scheme in the MA03 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; and
- alternative routes for PRoW and roadside footways.

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

Highway network

Highway diversions, realignments and closures

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

- B5391 Pickmere Lane - temporary diversion of traffic using the B5391 Pickmere Lane during construction of Arley Brook viaduct and the B5391 Pickmere Lane realignment. Traffic will be diverted via Flittogate Lane, a section of the permanent Flittogate Lane realignment and the temporary Flittogate Lane realignment. Traffic will be diverted for one year and three months, increasing journey length by 358m;
- Flittogate Lane - temporary realignment of a 210m section of Flittogate Lane. The temporary realignment will enable Flittogate Lane to remain open during construction of the tie-in to the permanent realignment. The temporary realignment will be in use for one year and six months, resulting in a change in journey length of less than 100m;
- School Lane - temporary closure to enable the permanent widening of School Lane from its current width of 4m to 7.3m. Widening is required to accommodate diverted traffic associated with the permanent closure of Budworth Road. The works will be undertaken in stages in order to maintain access to the existing properties. School Lane will be closed for through traffic for approximately one year. Temporary traffic signals will be required for the construction of the junction with the B5391 Pickmere Lane. During the temporary closures, traffic will be diverted via Budworth Road and the B5391 Pickmere Lane, increasing journey length by 2.3km;
- Frog Lane - temporary closure of a section of Frog Lane between Budworth Road and School Lane during construction of the Frog Lane realignment. Traffic will be diverted via the School Lane realignment, the B5391 Pickmere Lane and Budworth Road for six months, increasing journey length by 3km. Access to properties will be retained. Temporary traffic signals will be required for the construction of the junction between Frog Lane realignment and Budworth Road;
- M6 - the construction of M6 Mere viaduct will require six temporary full closures of the motorway (two off peak weekend closures and four shorter off-peak or night-time closures) between junction 19 and junction 20. During the temporary full closures, traffic will be diverted via the A556 and the M56, increasing journey length for some users by up to 9.5km. Traffic management will also be required for a period of two years, comprising the narrowing of the existing traffic lanes to achieve enough working space and an access route for construction traffic. The existing three 'live' traffic lanes will be retained in each direction;
- A50 Warrington Road - temporary realignment of a 700m section of the A50 Warrington Road between Bucklow Hill Lane and Wrenshot Lane to enable the construction of the A50 Warrington Road overbridge and the permanent A50 Warrington Road realignment. The A50 Warrington Road will be temporarily realigned approximately 80m to the south

of the existing alignment. The temporary arrangements will be in use for one year and nine months, resulting in a change in journey length of less than 100m;

- Hoo Green Lane - the Hoo Green Lane diversion will be constructed up to 450m to the west of its existing alignment and will be constructed offline. The diversion will be constructed in phases, in conjunction with the A50 Warrington Road overbridge and the permanent A50 Warrington Road realignment. The southern section of the diversion will be completed up to its intersection with A50 Warrington Road temporary realignment, where it will form the minor arm of a temporary priority-controlled T-junction. The northern section of the Hoo Green Lane diversion will be completed in conjunction with the construction of A50 Warrington Road overbridge and the permanent A50 Warrington Road realignment. The temporary arrangements will be in use for one year and nine months, resulting in an increase in journey length of up to 792m;
- A556 - temporary slip roads will be constructed between the A556 and Chapel Lane during the area advance works. A temporary off-slip from the A556 northbound to Chapel Lane and a temporary on-slip to the A556 southbound from Chapel Lane will be constructed to provide access to construction compounds in the Hoo Green and Hulseheath area. Access will be restricted to construction traffic associated with the Proposed Scheme only. The new slip roads will take six months to complete and will be in use for approximately four years and six months;
- Peacock Lane and Back Lane - temporary closures will be required during construction of Peacock Lane overbridge, Peacock Lane viaduct and the Peacock Lane realignment. Rolling closures of sections of Peacock Lane will be required during construction of the tie-ins to the existing highway at the eastern and western extents and during construction of the realignment where it crosses the existing Peacock Lane. Closures will be staggered to ensure that access to properties on Peacock Lane and Back Lane is retained. Users traveling between Hulseheath and High Legh will be diverted via Chapel Lane, the B5569 Chester Road, the A50 Knutsford Road/Warrington Road, the B5159 West Lane and Peacock Lane for one year, increasing journey length by up to 8.6km;
- M56 - temporary realignment of an 800m section of the M56 between junctions 8 and 9 to enable the construction of M56 West overbridge. The M56 will be realigned approximately 50m north of its existing alignment for three years and six months, increasing journey length by 20m. Traffic management will be required to construct the crossovers and to reinstate the carriageways at the interface with the existing alignment. Overnight closures will be required during this period. The motorway will be reinstated on its current alignment on completion of M56 West overbridge; and
- A56 Lymm Road - temporary realignment of an 800m section of the A56 Lymm Road to enable to construction of A56 Lymm Road viaduct. The road will be realigned approximately 50m to the south-east of its existing alignment for one year and three months, resulting in a change in journey length of less than 100m.

15.3.4 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.

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

Highway network analysis

15.3.6 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.

15.3.7 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.

15.3.8 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 covering the main construction phases. These scenarios ensure that all activities are assessed and combined impacts identified:

- scenario 1, peak between 2025 Q1 and 2027 Q2. This corresponds with the setting-up of a number of compounds and the commencement of works in the Pickmere and Hoo Green areas. This scenario equates to 60% of the overall peak in construction traffic across the whole construction period;
- scenario 2, peak between 2027 Q3 and 2029 Q1. This corresponds with the peak in construction traffic movements prior to the installation of M56 temporary overbridge at Yarwoodheath Lane in the Hulseheath to Manchester Airport area (MA06). This scenario includes the construction of permanent highway realignments and diversions in the Pickmere area and the construction of M6 Mere viaduct, Hoo Green North cutting retaining wall and Hoo Green South cutting retaining wall. This scenario equates to 98% of the overall peak in construction traffic across the whole construction period;
- scenario 3, peak between 2029 Q2 and 2031 Q3. This corresponds with the construction peak following the opening of M56 temporary overbridge at Yarwoodheath Lane in the Hulseheath to Manchester Airport area (MA06). This scenario includes the construction of M6 Mere viaduct, Hoo Green North cutting retaining wall and Hoo Green South cutting retaining wall. This scenario equates to 100% of the overall peak in construction traffic across the whole construction period; and

- scenario 4, peak after 2031 Q3. This corresponds with the peak in construction traffic movements following the removal of M56 temporary overbridge at Yarwoodheath Lane in the Hulseheath to Manchester Airport area (MA06). All permanent realignments, diversions and closures are also included in this scenario. This scenario equates to 46% of the overall peak in construction traffic across the whole construction period.

15.3.9 The advance works, utility works, main works and construction lorry movements included in each scenario are shown in Table 15-6. This ensures that the impacts of the relevant activities are assessed in combination, as appropriate.

Table 15-6: Construction highway interventions by scenario in the MA03 area

Type	Intervention	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Main works	Old Hall Lane access, direct accesses from the A556 in the Hulseheath to Manchester Airport area (MA06) and temporary slip-roads at Chapel Lane	Not included	Included	Included	Included
Main works	M56 temporary overbridge at Yarwoodheath Lane in the Hulseheath to Manchester Airport area (MA06)	Not included	Not included	Included	Not included
Main works	B5391 Pickmere Road, Frog Lane, School Lane, and Peacock Lane realignments	Not included	Not included	Included	Included
Main works	Flittogate Lane, Hoo Green Lane, the A50 Warrington Road and Agden Lane diversions	Not included	Not included	Included	Included
Main works	Budworth Road and Bowden View Lane closures	Not included	Not included	Included	Included
	Construction HGV traffic assessed as a percentage of peak construction HGV traffic	**60%**	**98%**	**100%**	**46%**

Strategic and local road network traffic flows

15.3.10 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.

15.3.11 The M6 Junction 19 model has been used to model the construction scenarios across MA03. In the MA03 area the model covers the area from Oughtrington in the north to Pickmere in the south, and from the M56 junction 9 in the west to Rostherne in the east.

15.3.12 Table 15-7 and Table 15-8 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.

15.3.13 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.

15.3.14 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.

15.3.15 Traffic flow changes are shown in Figure 15-1 to Figure 15-8 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 15-7: 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
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	1,416	82	1,397	94	-1%	15%	1,356	163	-4%	99%	1,361	170	-4%	107%	1,393	103	-2%	26%
	SB	1,275	89	1,288	93	1%	4%	1,291	149	1%	67%	1,295	145	2%	63%	1,285	90	1%	1%
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	NB	204	12	226	15	11%	25%	318	10	56%	-17%	345	15	69%	25%	246	9	21%	-25%
	SB	177	4	229	9	29%	125%	257	9	45%	125%	283	14	60%	250%	266	3	50%	-25%
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	1,215	109	1,198	121	-1%	11%	1,177	189	-3%	73%	1,158	196	-5%	80%	1,169	127	-4%	17%
	SB	1,213	102	1,218	113	0%	11%	1,193	170	-2%	67%	1,199	164	-1%	61%	1,221	109	1%	7%
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%
	WB	84	4	85	4	1%	0%	103	3	23%	-25%	121	3	44%	-25%	87	4	4%	0%
Budworth Road (between Old Hall Lane and	EB	40	0	82	13	105%	0%	105	30	163%	0%	81	33	103%	0%	39	1	-3%	0%
	WB	77	2	96	14	25%	600%	101	23	31%	1050%	69	20	-10%	900%	53	0	-31%	-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
B5391 Pickmere Lane)																			
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	EB	232	12	263	27	13%	125%	361	32	56%	167%	362	35	56%	192%	251	9	8%	-25%
	WB	243	6	281	23	16%	283%	296	24	22%	300%	288	22	19%	267%	285	3	17%	-50%
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	114	0	146	0	28%	0%	199	0	75%	0%	197	0	73%	0%	146	0	28%	0%
	WB	24	2	16	1	-33%	-50%	13	2	-46%	0%	10	0	-58%	-100%	10	0	-58%	-100%
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	60	2	4	0	-93%	-100%	8	1	-87%	-50%	7	1	-88%	-50%	4	1	-93%	-50%
	SB	17	2	35	0	106%	-100%	68	14	300%	600%	67	17	294%	750%	25	0	47%	-100%
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	114	0	146	0	28%	0%	199	0	75%	0%	197	0	73%	0%	146	0	28%	0%
	WB	24	2	16	1	-33%	-50%	13	2	-46%	0%	10	0	-58%	-100%	10	0	-58%	-100%
B5569 Chester Road (between Old Hall Lane and A50	NB	206	7	239	26	16%	271%	277	27	34%	286%	268	22	30%	214%	237	20	15%	186%
	SB	162	9	193	38	19%	322%	214	38	32%	322%	232	29	43%	222%	118	29	-27%	222%

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
Warrington Road)																			
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	381	5	389	10	2%	100%	376	17	-1%	240%	383	14	1%	180%	409	18	7%	260%
	WB	292	3	347	24	19%	700%	378	35	29%	1067%	438	15	50%	400%	448	34	53%	1033%
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	148	3	130	8	-12%	167%	138	16	-7%	433%	54	10	-64%	233%	54	14	-64%	367%
	SB	216	10	217	33	0%	230%	204	45	-6%	350%	176	20	-19%	100%	242	37	12%	270%
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	185	4	153	9	-17%	125%	160	16	-14%	300%	78	11	-58%	175%	87	15	-53%	275%
	SB	535	11	569	33	6%	200%	552	45	3%	309%	465	21	-13%	91%	559	38	4%	245%
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	555	8	566	14	2%	75%	567	21	2%	163%	561	17	1%	113%	598	21	8%	163%
	WB	333	6	389	27	17%	350%	421	38	26%	533%	481	18	44%	200%	491	37	47%	517%
A50 Chester Road (between B5569 Chester	NB	283	8	360	26	27%	225%	410	36	45%	350%	463	21	64%	163%	487	19	72%	138%
	SB	462	12	495	26	7%	117%	483	20	5%	67%	503	22	9%	83%	478	14	3%	17%

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
Road (south) and B5569 Chester Road (north))																			
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	283	8	350	17	24%	113%	423	48	49%	500%	480	36	70%	350%	489	20	73%	150%
	SB	462	12	465	13	1%	8%	463	34	0%	183%	467	14	1%	17%	478	14	3%	17%
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	202	7	233	8	15%	14%	299	29	48%	314%	295	15	46%	114%	298	11	48%	57%
	SB	484	14	487	15	1%	7%	487	42	1%	200%	491	22	1%	57%	485	15	0%	7%
A50 Warrington Road realignment (between Wrenshot Lane and Hoo Green Lane)	EB	546	13	592	14	8%	8%	674	40	23%	208%	670	21	23%	62%	598	14	10%	8%
	WB	153	3	169	4	10%	33%	200	25	31%	733%	200	11	31%	267%	277	7	81%	133%
B5569 Chester Road (between A50 Knutsford	NB	40	1	14	13	-65%	1200%	23	23	-43%	2200%	2	2	-95%	100%	3	2	-93%	100%
	SB	87	12	35	18	-60%	50%	58	25	-33%	108%	52	24	-40%	100%	5	4	-94%	-67%

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
Road and A5034 Mereside Road)																			
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	494	8	528	9	7%	13%	606	36	23%	350%	602	16	22%	100%	536	9	9%	13%
	WB	153	2	166	4	8%	100%	183	24	20%	1100%	180	11	18%	450%	277	7	81%	250%
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	EB	92	0	7	6	-92%	0%	53	52	-42%	0%	48	42	-48%	0%	15	9	-84%	0%
	WB	69	0	7	6	-90%	0%	12	11	-83%	0%	9	8	-87%	0%	3	2	-96%	0%
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)**	NB	1	1	1	1	0%	0%	1	1	0%	0%	1	1	0%	0%	1	1	0%	0%
	SB	51	5	64	5	25%	0%	68	5	33%	0%	68	5	33%	0%	62	5	22%	0%
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	EB	647	13	698	14	8%	8%	789	38	22%	192%	787	18	22%	38%	698	14	8%	8%
	WB	322	4	339	6	5%	50%	370	27	15%	575%	368	13	14%	225%	438	9	36%	125%
A50 Warrington Road (between B5159 West Lane	EB	539	11	594	12	10%	9%	713	36	32%	227%	718	16	33%	45%	582	12	8%	9%
	WB	177	5	193	6	9%	20%	195	27	10%	440%	184	13	4%	160%	306	9	73%	80%

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 Swineyard Lane)																			
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	111	2	115	1	4%	-50%	172	1	55%	-50%	143	1	29%	-50%	92	1	-17%	-50%
	WB	47	3	48	3	2%	0%	35	3	-26%	0%	42	4	-11%	33%	38	4	-19%	33%
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	33	2	35	2	6%	0%	25	1	-24%	-50%	27	1	-18%	-50%	55	2	67%	0%
	SB	37	1	70	1	89%	0%	100	1	170%	0%	109	1	195%	0%	55	1	49%	0%
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	63	0	22	3	-65%	0%	22	3	-65%	0%	22	3	-65%	0%	21	3	-67%	0%
	WB	63	0	0	0	-100%	0%	0	0	-100%	0%	0	0	-100%	0%	0	0	-100%	0%
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	428	9	479	11	12%	22%	544	35	27%	289%	577	15	35%	67%	490	11	14%	22%
	WB	130	2	145	3	12%	50%	162	24	25%	1100%	144	9	11%	350%	268	5	106%	150%
Broadoak Lane (between Wrenshot Lane and Peacock Lane)**	NB	1	1	1	1	0%	0%	1	1	0%	0%	1	1	0%	0%	1	1	0%	0%
	SB	40	1	42	1	5%	0%	47	1	18%	0%	46	1	15%	0%	40	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
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	428	9	479	11	12%	22%	544	35	27%	289%	577	15	35%	67%	490	11	14%	22%
	WB	101	2	115	3	14%	50%	130	24	29%	1100%	112	9	11%	350%	240	5	138%	150%
Peacock Lane realignment (between Back Lane diversion and Broadoak Lane)	EB	24	1	0	0	-100%	-100%	23	23	-4%	2200%	66	21	175%	2000%	6	0	-75%	-100%
	WB	48	3	0	0	-100%	-100%	23	23	-52%	667%	21	21	-56%	600%	0	0	-100%	-100%
Peacock Lane (between Broadoak Lane and B5159 West Lane)**	EB	40	1	42	1	5%	0%	46	2	15%	100%	89	2	123%	100%	46	1	15%	0%
	WB	1	1	1	1	0%	0%	1	1	0%	0%	1	1	0%	0%	1	1	0%	0%
Mag Lane (between Crouchley Lane and A50 Warrington Road)**	NB	29	0	30	0	3%	0%	33	0	14%	0%	32	0	10%	0%	28	0	-3%	0%
	SB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	465	10	549	12	18%	20%	644	36	38%	260%	686	15	48%	50%	545	12	17%	20%
	WB	134	3	150	5	12%	67%	155	26	16%	767%	139	10	4%	233%	295	7	120%	133%

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
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	64	0	62	0	-3%	0%	62	0	-3%	0%	-	-	-	-	-	-	-	-
	SB	45	0	72	0	60%	0%	113	0	151%	0%	-	-	-	-	-	-	-	-
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)**	EB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%
	WB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	38	0	37	0	-3%	0%	36	0	-5%	0%	74	0	95%	0%	60	0	58%	0%
	SB	30	1	34	1	13%	0%	34	1	13%	0%	65	1	117%	0%	62	1	107%	0%
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	EB	680	5	608	11	-11%	120%	618	26	-9%	420%	609	25	-10%	400%	614	9	-10%	80%
	WB	276	6	333	11	21%	83%	408	26	48%	333%	421	25	53%	317%	312	9	13%	50%
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	642	5	571	10	-11%	100%	582	25	-9%	400%	598	24	-7%	380%	596	8	-7%	60%
	WB	245	5	299	10	22%	100%	374	25	53%	400%	419	24	71%	380%	291	8	19%	60%

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
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	502	7	534	9	6%	29%	522	9	4%	29%	524	9	4%	29%	519	9	3%	29%
	WB	620	12	684	21	10%	75%	696	21	12%	75%	695	21	12%	75%	675	18	9%	50%
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	192	2	352	7	83%	250%	328	7	71%	250%	330	7	72%	250%	323	7	68%	250%
	WB	620	12	684	21	10%	75%	696	21	12%	75%	695	21	12%	75%	675	18	9%	50%
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	192	2	352	7	83%	250%	328	7	71%	250%	330	7	72%	250%	323	7	68%	250%
	WB	205	4	205	13	0%	225%	209	13	2%	225%	209	13	2%	225%	216	10	5%	150%

*** Some traffic movements may not be precisely reflected due to the simplified way in which the road network is represented in the strategic traffic models, however, this is not expected to change the conclusions of the assessment.*

Table 15-8: 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
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	930	46	1,017	55	9%	20%	1,190	134	28%	191%	1,256	133	35%	189%	1,052	62	13%	35%
	SB	1,527	44	1,527	51	0%	16%	1,476	130	-3%	195%	1,441	127	-6%	189%	1,511	58	-1%	32%
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	NB	54	1	87	7	61%	600%	104	3	93%	200%	164	8	204%	700%	83	1	54%	0%
	SB	382	1	352	7	-8%	600%	355	3	-7%	200%	401	8	5%	700%	419	1	10%	0%
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	986	60	1,104	69	12%	15%	1,328	149	35%	148%	1,409	147	43%	145%	1,174	77	19%	28%
	SB	1,107	50	1,113	57	1%	14%	1,047	136	-5%	172%	1,046	133	-6%	166%	1,088	63	-2%	26%
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%
	WB	104	3	108	3	4%	0%	113	3	9%	0%	159	3	53%	0%	126	3	21%	0%
	EB	52	1	102	13	96%	1200%	152	23	192%	2200%	119	26	129%	2500%	40	0	-23%	-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
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	WB	67	0	77	12	15%	0%	84	22	25%	0%	33	20	-51%	0%	13	0	-81%	0%
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	EB	86	2	165	19	92%	850%	230	25	167%	1150%	254	28	195%	1300%	98	1	14%	-50%
	WB	430	1	405	19	-6%	1800%	412	23	-4%	2200%	405	23	-6%	2200%	408	1	-5%	0%
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	35	0	35	0	0%	0%	75	0	114%	0%	54	0	54%	0%	37	0	6%	0%
	WB	82	0	82	0	0%	0%	83	0	1%	0%	83	0	1%	0%	82	0	0%	0%
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	20	2	0	0	-100%	-100%	4	0	-80%	-100%	3	0	-85%	-100%	0	0	-100%	-100%
	SB	57	3	13	0	-77%	-100%	21	8	-63%	167%	21	10	-63%	233%	14	0	-75%	-100%
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	35	0	35	0	0%	0%	75	0	114%	0%	54	0	54%	0%	37	0	6%	0%
	WB	82	0	82	0	0%	0%	83	0	1%	0%	83	0	1%	0%	82	0	0%	0%
	NB	137	4	181	23	32%	475%	207	24	51%	500%	197	19	44%	375%	159	17	16%	325%

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
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	SB	103	3	160	31	55%	933%	240	27	133%	800%	226	19	119%	533%	178	23	73%	667%
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	285	5	284	9	0%	80%	319	17	12%	240%	321	14	13%	180%	281	17	-1%	240%
	WB	891	9	876	31	-2%	244%	801	43	-10%	378%	850	21	-5%	133%	893	38	0%	322%
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	140	2	145	8	4%	300%	177	15	26%	650%	106	10	-24%	400%	84	13	-40%	550%
	SB	224	2	257	24	15%	1100%	205	35	-8%	1650%	162	11	-28%	450%	246	28	10%	1300%
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	189	2	202	8	7%	300%	234	15	24%	650%	114	10	-40%	400%	128	13	-32%	550%
	SB	300	2	326	24	9%	1100%	346	36	15%	1700%	303	12	1%	500%	329	28	10%	1300%
A50 Warrington Road (between Clamhunger	EB	316	5	315	10	0%	100%	351	17	11%	240%	351	14	11%	180%	311	17	-2%	240%
	WB	959	12	968	34	1%	183%	925	46	-4%	283%	1,001	23	4%	92%	1,000	40	4%	233%

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
Lane and B5569 Chester Road)																			
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	1,050	14	1,050	34	0%	143%	952	44	-9%	214%	1,020	27	-3%	93%	1,022	23	-3%	64%
	SB	373	7	384	20	3%	186%	409	11	10%	57%	406	12	9%	71%	368	7	-1%	0%
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	1,050	14	1,040	25	-1%	79%	965	57	-8%	307%	1,037	43	-1%	207%	1,024	24	-2%	71%
	SB	373	7	370	7	-1%	0%	426	28	14%	300%	401	8	8%	14%	368	7	-1%	0%
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	663	14	680	16	3%	14%	617	38	-7%	171%	647	23	-2%	64%	640	16	-3%	14%
	SB	407	7	432	7	6%	0%	586	35	44%	400%	593	15	46%	114%	417	8	2%	14%
A50 Warrington Road realignment (between	EB	333	6	347	6	4%	0%	434	34	30%	467%	421	14	26%	133%	330	7	-1%	17%
	WB	701	15	773	17	10%	13%	821	39	17%	160%	854	23	22%	53%	725	17	3%	13%

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
Wrenshot Lane and Hoo Green Lane)																			
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	NB	27	0	15	13	-44%	0%	24	23	-11%	0%	2	2	-93%	0%	3	2	-89%	0%
	SB	161	2	20	18	-88%	800%	22	21	-86%	950%	22	20	-86%	900%	5	4	-97%	100%
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	319	5	322	6	1%	20%	318	33	0%	560%	295	13	-8%	160%	325	6	2%	20%
	WB	695	14	766	16	10%	14%	814	38	17%	171%	783	22	13%	57%	694	16	0%	14%
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	EB	33	1	7	6	-79%	500%	53	52	61%	5100%	47	42	42%	4100%	12	9	-64%	800%
	WB	109	0	81	6	-26%	0%	87	11	-20%	0%	10	8	-91%	0%	41	2	-62%	0%
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)	NB	6	1	7	1	17%	0%	7	1	17%	0%	71	1	1083%	0%	31	1	417%	0%
	SB	13	1	12	1	-8%	0%	55	1	323%	0%	57	1	338%	0%	6	1	-54%	0%
A50 Warrington Road (between Halliwell's Brow	EB	519	8	557	9	7%	13%	613	40	18%	400%	577	20	11%	150%	499	9	-4%	13%
	WB	883	15	926	17	5%	13%	957	38	8%	153%	912	23	3%	53%	828	16	-6%	7%

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 B5159 West Lane)																			
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	391	7	455	8	16%	14%	542	39	39%	457%	472	19	21%	171%	361	8	-8%	14%
	WB	894	19	954	21	7%	11%	1,020	43	14%	126%	1,026	27	15%	42%	914	21	2%	11%
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	71	0	121	0	70%	0%	145	0	104%	0%	135	0	90%	0%	82	0	15%	0%
	WB	230	1	224	2	-3%	100%	253	2	10%	100%	254	1	10%	0%	224	2	-3%	100%
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	61	0	57	0	-7%	0%	57	0	-7%	0%	72	0	18%	0%	68	0	11%	0%
	SB	66	1	67	1	2%	0%	67	1	2%	0%	68	1	3%	0%	68	1	3%	0%
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	55	1	3	0	-95%	-100%	33	1	-40%	0%	33	1	-40%	0%	1	1	-98%	0%
	WB	38	0	0	0	-100%	0%	0	0	-100%	0%	0	0	-100%	0%	0	0	-100%	0%
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	320	6	334	7	4%	17%	408	39	28%	550%	368	18	15%	200%	280	7	-13%	17%
	WB	665	17	730	19	10%	12%	778	41	17%	141%	804	26	21%	53%	690	19	4%	12%

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
Broadoak Lane (between Wrenshot Lane and Peacock Lane)	NB	6	1	7	1	17%	0%	7	1	17%	0%	71	1	1083%	0%	31	1	417%	0%
	SB	10	0	10	0	0%	0%	22	0	120%	0%	23	0	130%	0%	5	0	-50%	0%
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	320	6	334	7	4%	17%	408	38	28%	533%	368	18	15%	200%	280	7	-13%	17%
	WB	608	15	673	17	11%	13%	708	39	16%	160%	716	24	18%	60%	633	17	4%	13%
Peacock Lane realignment (between Back Lane diversion and Broadoak Lane)	EB	57	2	0	0	-100%	-100%	24	23	-58%	1050%	28	21	-51%	950%	0	0	-100%	-100%
	WB	15	1	0	0	-100%	-100%	23	23	53%	2200%	37	21	147%	2000%	68	0	353%	-100%
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	10	0	10	0	0%	0%	22	1	120%	0%	30	0	200%	0%	5	0	-50%	0%
	WB	6	1	7	1	17%	0%	8	2	33%	100%	87	2	1350%	100%	98	1	1533%	0%
Mag Lane (between Crouchley Lane and A50 Warrington Road)**	NB	57	2	58	2	2%	0%	70	2	23%	0%	88	2	54%	0%	57	2	0%	0%
	SB	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
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	386	7	401	8	4%	14%	475	39	23%	457%	436	19	13%	171%	348	8	-10%	14%
	WB	668	16	730	18	9%	13%	765	40	15%	150%	788	24	18%	50%	701	18	5%	13%
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	111	0	148	0	33%	0%	234	0	111%	0%	-	-	-	-	-	-	-	-
	SB	13	0	10	0	-23%	0%	9	0	-31%	0%	-	-	-	-	-	-	-	-
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)	EB	0	0	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%	0	0	0%	0%
	WB	16	0	19	0	19%	0%	23	0	44%	0%	24	0	50%	0%	18	0	13%	0%
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	34	0	92	0	171%	0%	162	0	376%	0%	239	0	603%	0%	123	0	262%	0%
	SB	14	0	15	0	7%	0%	16	0	14%	0%	22	0	57%	0%	22	0	57%	0%
A56 Lymm Road (between Bowdon	EB	340	3	435	9	28%	200%	583	24	71%	700%	585	23	72%	667%	431	6	27%	100%
	WB	690	3	676	10	-2%	233%	665	25	-4%	733%	644	23	-7%	667%	646	7	-6%	133%

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
Roundabout and Reddy Lane)																			
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	305	2	342	8	12%	300%	421	23	38%	1050%	447	22	47%	1000%	362	6	19%	200%
	WB	676	3	661	9	-2%	200%	649	24	-4%	700%	723	23	7%	667%	678	7	0%	133%
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	496	5	502	14	1%	180%	503	14	1%	180%	504	14	2%	180%	499	14	1%	180%
	WB	796	9	790	10	-1%	11%	783	11	-2%	22%	777	11	-2%	22%	781	11	-2%	22%
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	159	3	212	12	33%	300%	217	12	36%	300%	215	12	35%	300%	228	12	43%	300%
	WB	796	9	790	10	-1%	11%	783	11	-2%	22%	777	11	-2%	22%	781	11	-2%	22%
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	209	3	257	12	23%	300%	261	12	25%	300%	259	12	24%	300%	272	12	30%	300%
	WB	324	7	321	8	-1%	14%	326	9	1%	29%	324	9	0%	29%	345	9	6%	29%

Figure 15-1: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 1, AM peak hour

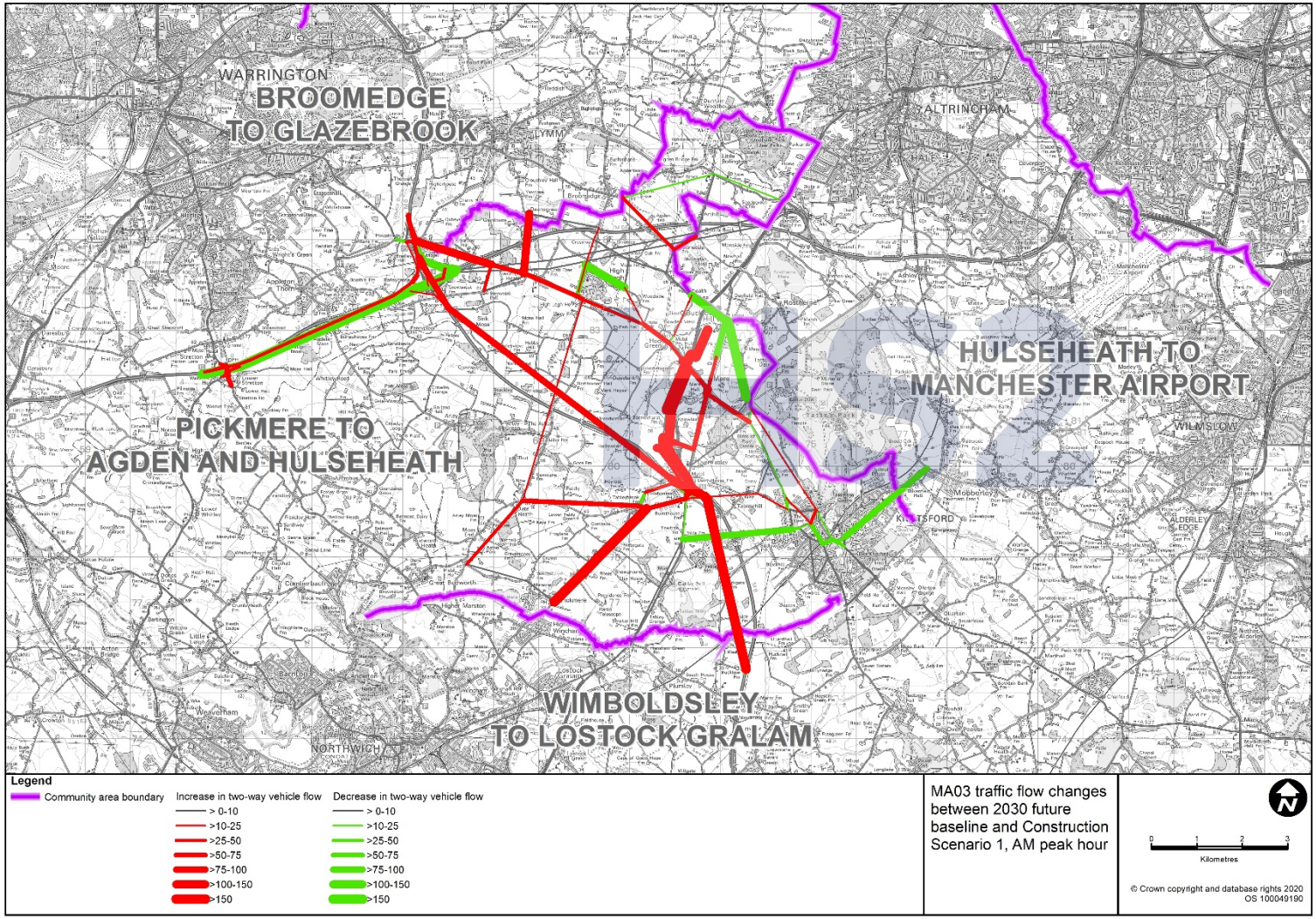


Figure 15-2: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 1, PM peak hour

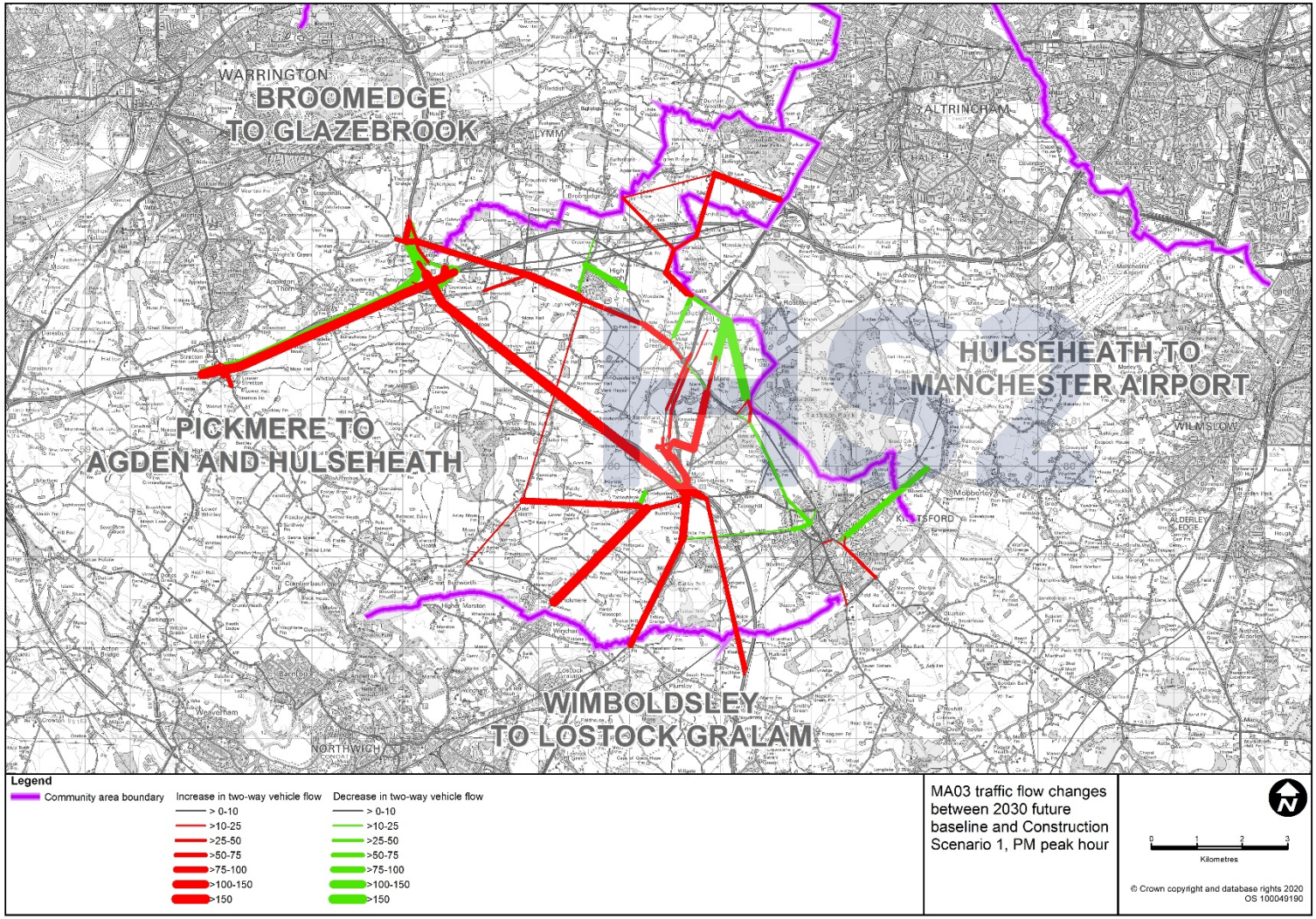


Figure 15-3: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 2, AM peak hour

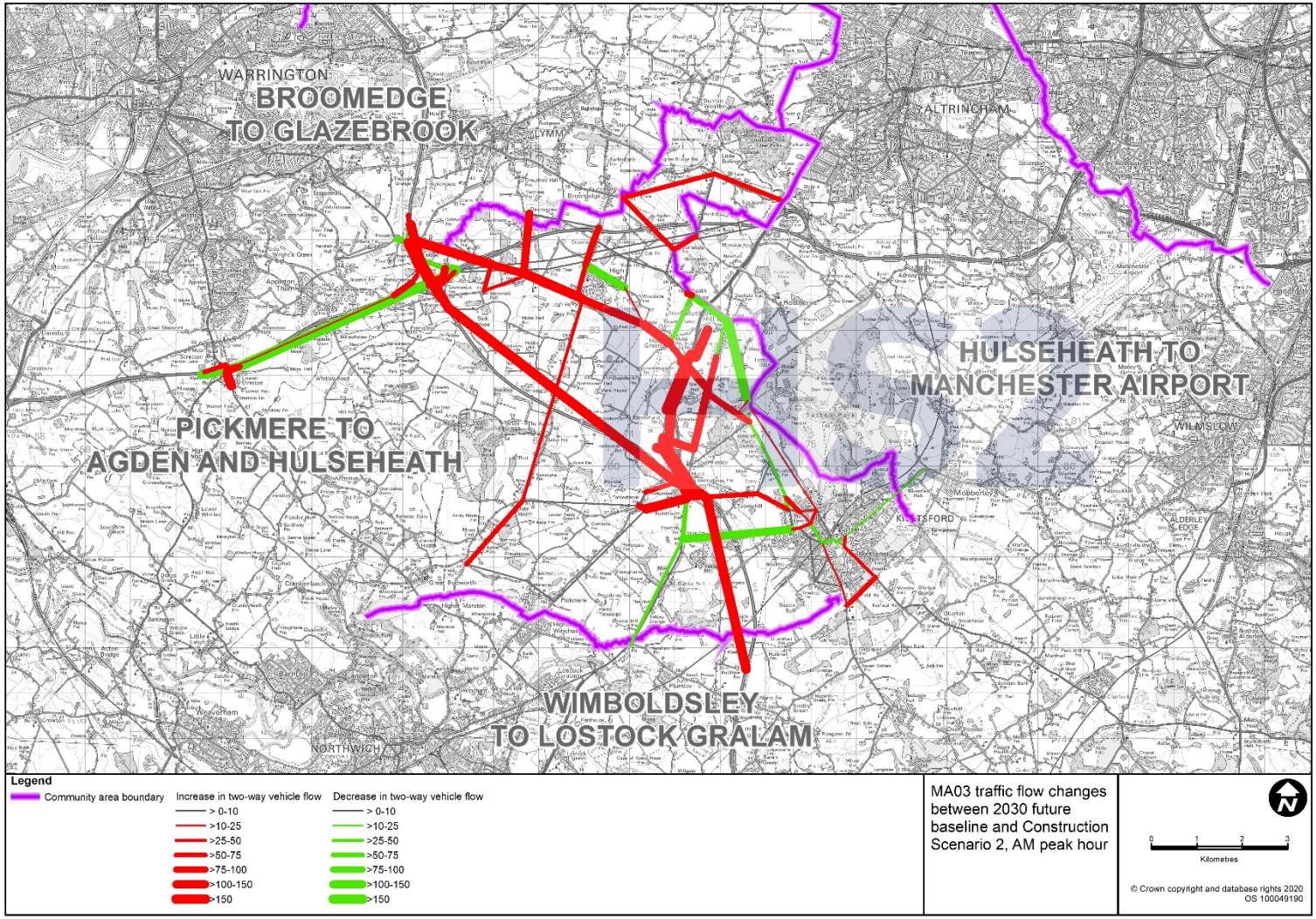


Figure 15-4: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 2, PM peak hour

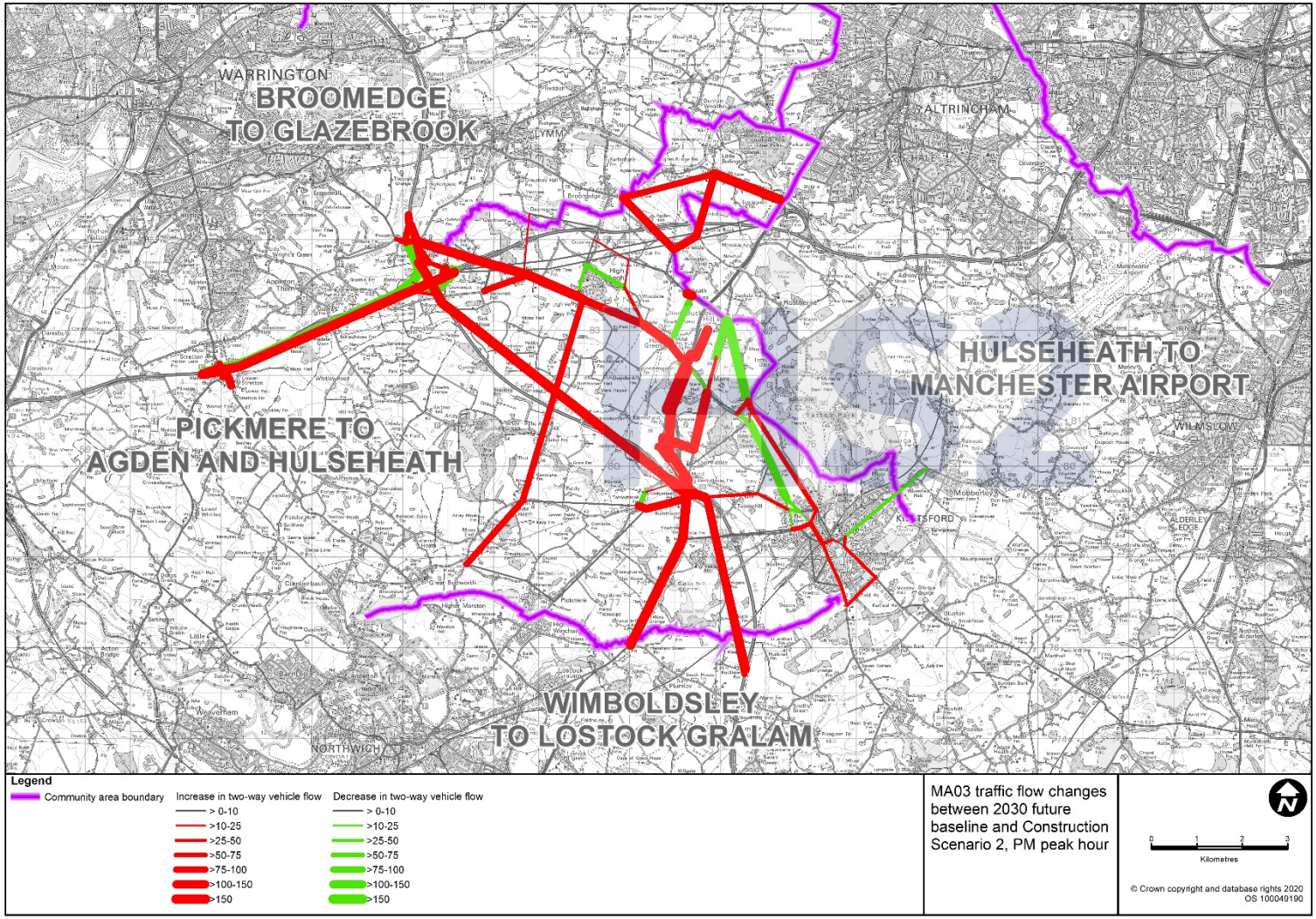


Figure 15-5: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 3, AM peak hour

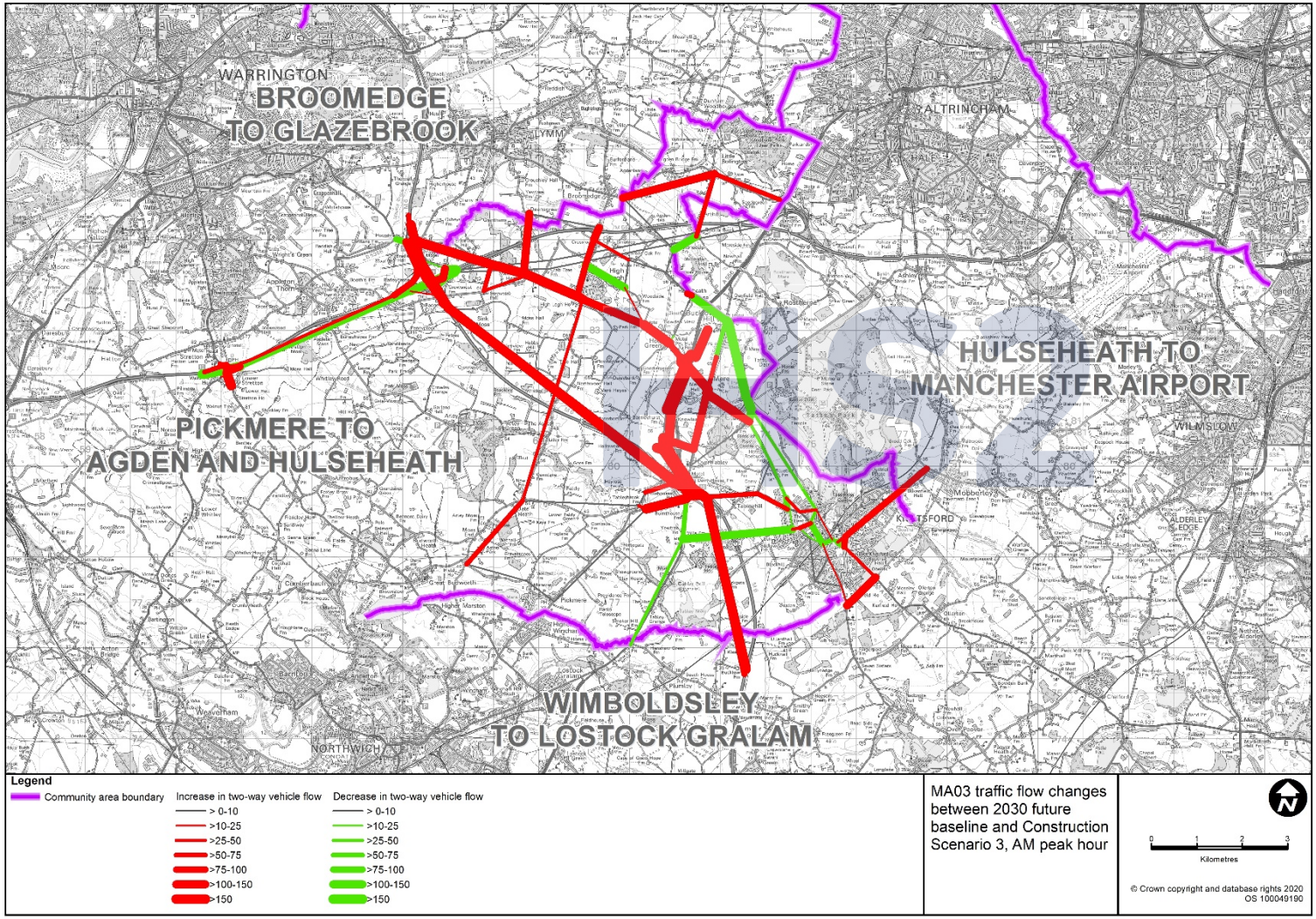


Figure 15-6: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 3, PM peak hour

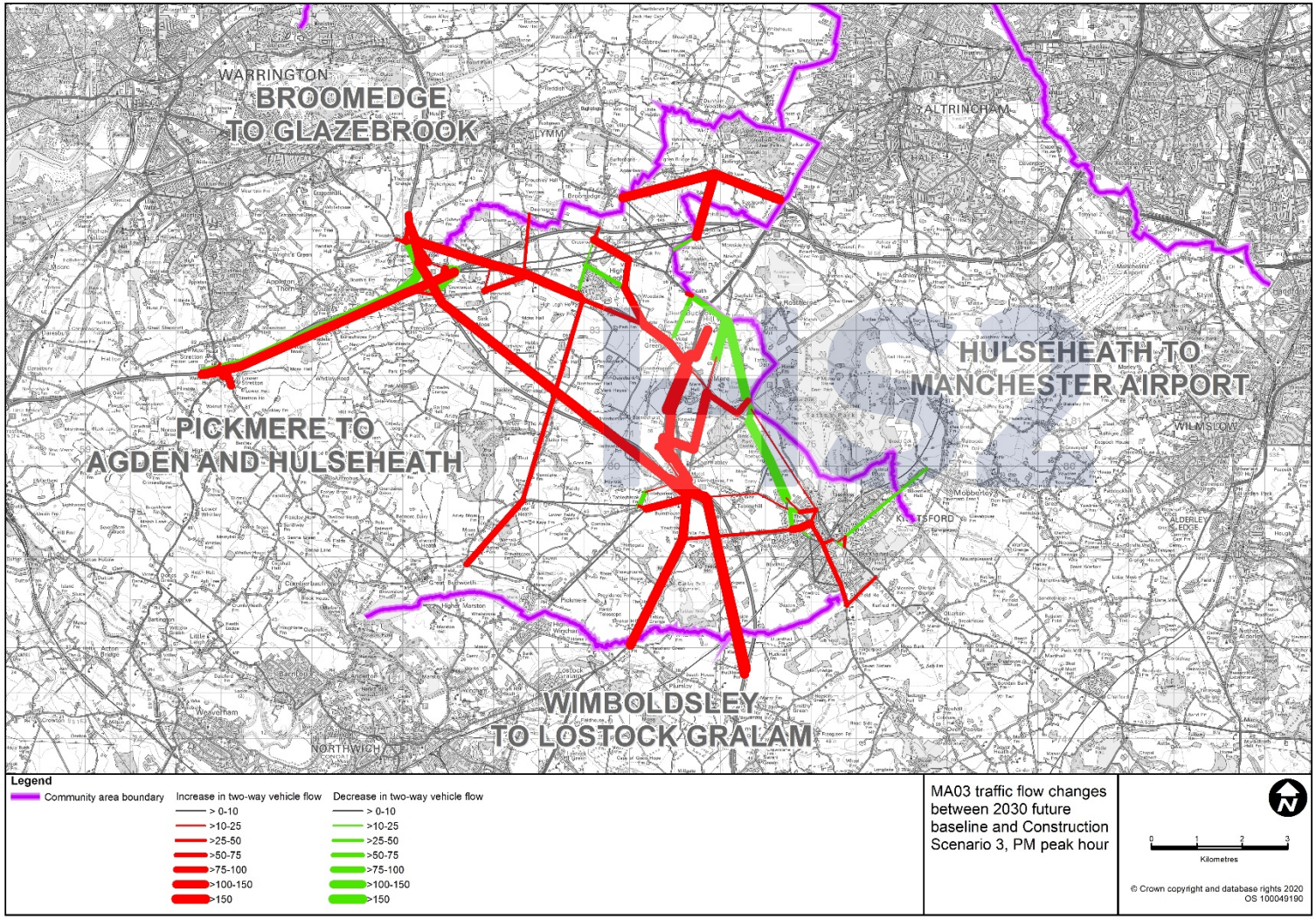


Figure 15-7: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 4, AM peak hour

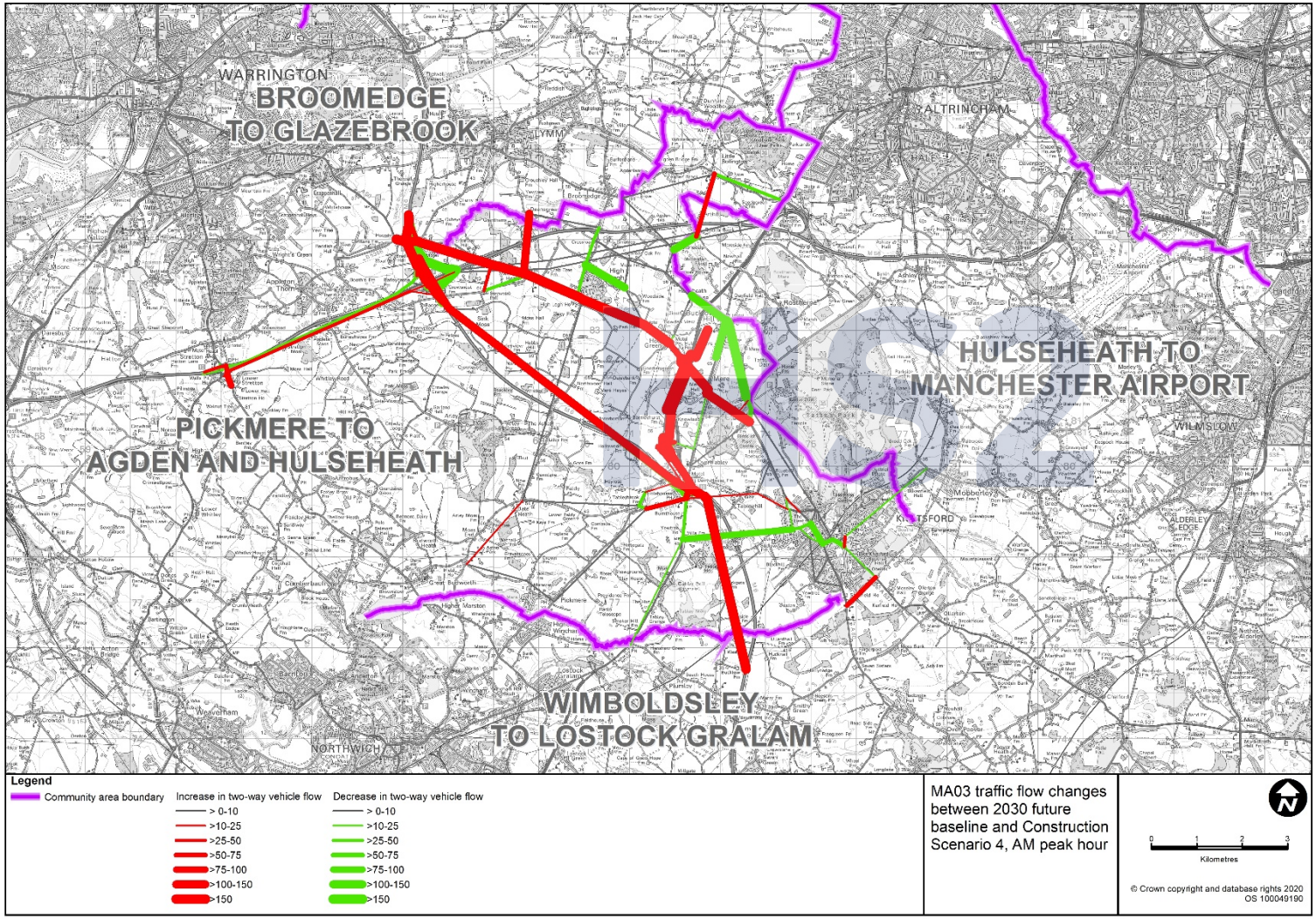
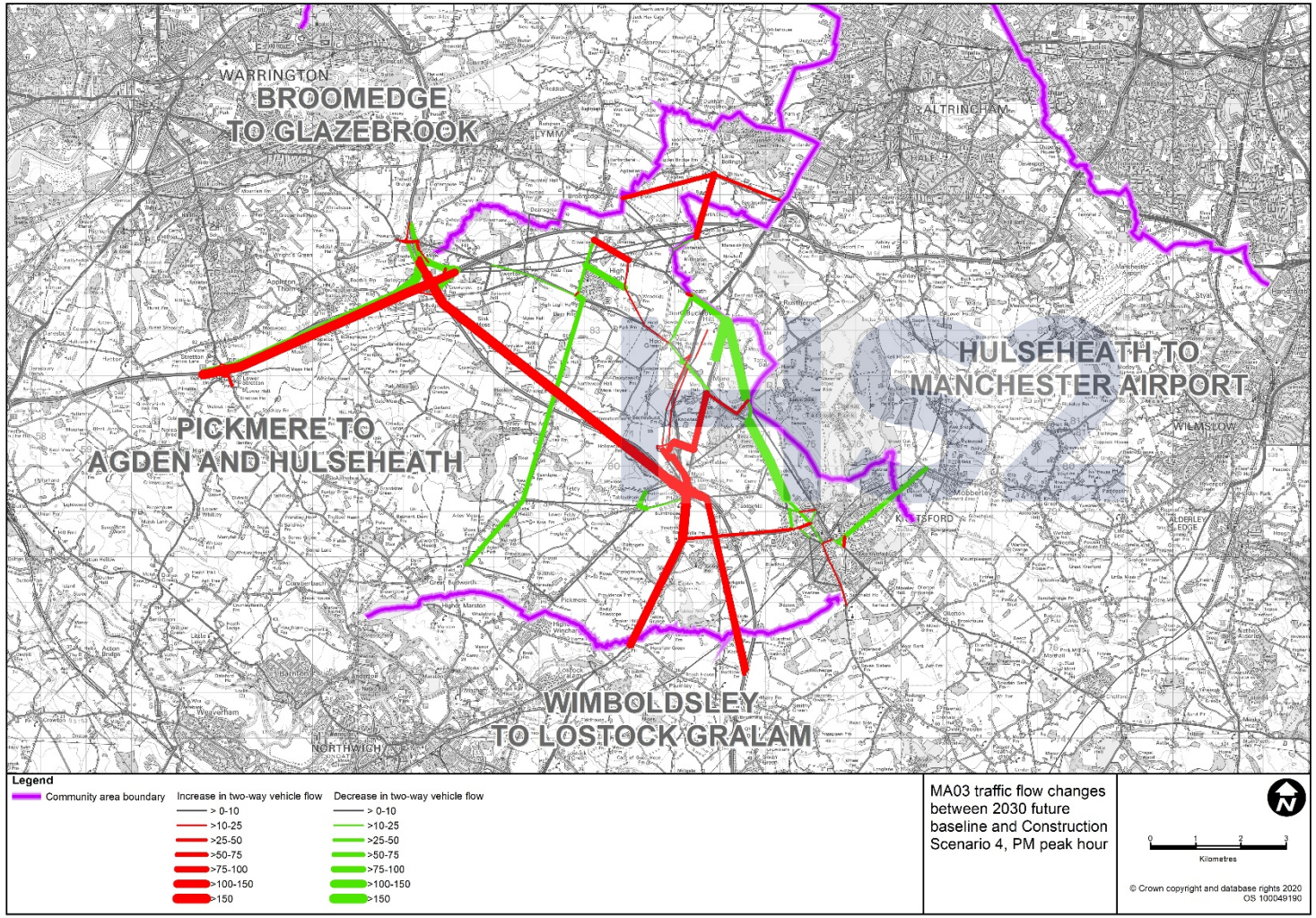


Figure 15-8: MA03 traffic flow changes between 2030 future baseline and Proposed Scheme scenario 4, PM peak hour



Junction performance

15.3.16 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.

15.3.17 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.

15.3.18 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.

15.3.19 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.

15.3.20 The results are presented from south to north through the MA03 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.

15.3.21 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.

M6 junction 19/A556 Chester Road/A556

15.3.22 Table 15-9 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-9: M6 junction 19/A556 Chester Road/A556 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**		
M6 junction 19 southbound off-slip	709	31%	8	702	30%	8	742	32%	8	763	33%	8	680	29%	8
A556 (north)	1,025	28%	0	1,143	32%	0	1,268	35%	0	1,228	35%	0	1,077	30%	0
M6 junction 19 northbound off-slip	2,300	74%	17	2,300	74%	17	2,300	74%	17	2,300	74%	17	2,300	74%	17
A556 Chester Road	1,634	50%	9	1,656	51%	10	1,782	55%	10	1,790	55%	10	1,605	49%	9
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
M6 junction 19 southbound off-slip	525	28%	6	504	27%	6	457	24%	6	464	25%	6	531	28%	6
A556 (north)	791	22%	0	834	24%	0	1,020	29%	0	956	28%	0	794	22%	0
M6 junction 19 northbound off-slip	2,037	60%	14	2,074	61%	14	2,051	61%	14	2,091	62%	14	2,045	61%	14
A556 Chester Road	1,090	31%	6	1,322	38%	7	1,679	48%	9	1,810	52%	10	1,331	38%	7

**PCU = Passenger Car Unit*

***Q = Queue*

15.3.23 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.

15.3.24 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.

15.3.25 The assessment shows that traffic flows on the M6 junction 19 northbound off-slip approach will be limited to 2,300 PCU/hour as in the 2030 future baseline in the AM peak hour. This is caused by a capacity constraint on the diverge where the M6 junction 19 northbound off-slip diverges from the M6 mainline carriageway, which is forecast to restrict the volume of traffic using the M6 junction 19 northbound off-slip. Without this capacity constraint, there is the potential for other areas of the junction to be affected adversely.

M6 junction 20/A50 Cliff Lane/B5158 Cherry Lane

15.3.26 Table 15-10 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-10: M6 junction 20/A50 Cliff Lane/B5158 Cherry Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
M6 southbound off-slip (nearside) (left and ahead)	634	72%	1	614	70%	1	597	68%	1	602	66%	1
M6 southbound off-slip (offside) (ahead)	416	64%	3	458	70%	6	438	68%	5	491	68%	5
B5158 Cherry Lane (nearside) (ahead)	229	33%	0	141	18%	0	180	22%	0	133	16%	0
B5158 Cherry Lane (offside) (ahead)	138	41%	1	2	0%	0	2	0%	0	60	11%	0
A50 Cliff Lane (east) (nearside) (left)	396	48%	1	96	11%	0	83	10%	0	50	6%	0
A50 Cliff Lane (east) (offside) (ahead)	274	25%	0	100	8%	0	72	7%	0	261	32%	0
M6 northbound off-slip (nearside) (ahead)	410	52%	8	386	38%	6	403	38%	6	553	63%	11
M6 northbound off-slip (offside) (ahead)	321	38%	6	554	50%	9	594	51%	9	507	53%	9
A50 Cliff Lane (west) (nearside) (left)	410	43%	1	308	32%	0	309	32%	0	245	27%	0
A50 Cliff Lane (west) (offside) (ahead)	487	53%	2	355	40%	2	354	41%	2	286	35%	0
A50 Cliff Lane (nearside) (ahead)	1,113	57%	1	664	34%	0	677	35%	0	1,149	59%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
M6 southbound off-slip (nearside) (left and ahead)	602	62%	1	806	81%	2	781	78%	2	730	73%	1
M6 southbound off-slip (offside) (ahead)	469	61%	1	708	80%	2	686	78%	3	632	73%	3
B5158 Cherry Lane (nearside) (ahead)	121	15%	0	224	26%	0	242	28%	0	186	21%	0
B5158 Cherry Lane (offside) (ahead)	155	31%	0	91	19%	0	49	10%	0	65	12%	0
A50 Cliff Lane (east) (nearside) (left)	319	34%	0	133	15%	0	131	15%	0	75	8%	0
A50 Cliff Lane (east) (offside) (ahead)	925	99%	13	688	115%	93	688	114%	91	650	102%	57

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
M6 northbound off-slip (nearside) (ahead)	709	85%	18	476	82%	13	481	80%	12	473	81%	12
M6 northbound off-slip (offside) (ahead)	717	79%	16	72	12%	1	104	16%	2	153	24%	3
A50 Cliff Lane (west) (nearside) (left)	250	37%	0	237	28%	0	222	26%	0	210	25%	0
A50 Cliff Lane (west) (offside) (ahead)	239	42%	0	267	33%	0	248	31%	0	232	28%	0
A50 Cliff Lane (nearside) (ahead)	1002	51%	1	908	46%	0	869	44%	0	851	43%	0

15.3.27 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.

15.3.28 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 in the AM peak hour.

15.3.29 In scenario 1, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the DoS on the offside lane of the A50 Cliff Lane (east) approach from 99% in the future baseline to 115%, with a corresponding change in queue length from 13 PCU in the future baseline to 93 PCU.

A50 Toft Road/Goughs Lane

15.3.30 Table 15-11 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-11: A50 Toft Road/Goughs 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**		
A50 Toft Road (north)	432	31%	0	443	32%	0	443	32%	0	448	32%	0	450	33%	0
Goughs Lane	439	80%	1	445	81%	1	486	88%	1	531	93%	2	468	84%	1
A50 Toft Road (south)	416	30%	0	418	30%	0	431	31%	0	437	32%	0	412	30%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A50 Toft Road (north)	564	41%	0	565	41%	0	593	43%	0	621	45%	0	578	42%	0
Goughs Lane	488	106%	6	490	104%	6	481	104%	6	475	103%	6	491	104%	6
A50 Toft Road (south)	781	57%	0	807	58%	0	825	60%	0	835	60%	0	803	58%	0

15.3.31 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.

15.3.32 In scenario 3, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the Goughs Lane approach from 80% in the future baseline to 93% in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to two PCU.

15.3.33 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 Pickmere area

15.3.34 There are a number of permanent changes to the local road network in the Pickmere area as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 15.5. 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.

B5391 Pickmere Lane/School Lane

15.3.35 Table 15-12 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-12: B5391 Pickmere Lane/School 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
08:00–09:00	**2030 future baseline**			**Proposed Scheme 1**			**Proposed Scheme 2**		
B5391 Pickmere Lane (east) (ahead, left and right)	75	0.02	0	254	0.03	0	283	0.03	0
B5391 Pickmere Lane (west) (ahead, left and right)	177	0.00	0	260	0.00	0	349	0.00	0
School Lane (ahead and left)	11	0.02	0	11	0.03	0	11	0.03	0
School Lane (ahead and right)	0	0.00	0	0	0.00	0	0	0.00	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme 1**			**Proposed Scheme 2**		
B5391 Pickmere Lane (east) (ahead, left and right)	177	0.02	0	370	0.03	0	369	0.03	0
B5391 Pickmere Lane (west) (ahead, left and right)	62	0.00	0	107	0.00	0	118	0.00	0
School Lane (ahead and left)	11	0.02	0	11	0.03	0	11	0.03	0
School Lane (ahead and right)	0	0.00	0	0	0.00	0	0	0.00	0

15.3.36 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.

15.3.37 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.

B5391 Pickmere Lane realignment/Flittogate Lane diversion

15.3.38 The B5391 Pickmere Lane realignment/Flittogate Lane diversion junction is a new three-arm priority-controlled (give-way) T-junction located approximately 250m north of the existing B5391 Pickmere Lane/Flittogate Lane junction. The new junction is proposed to accommodate the B5391 Pickmere Lane realignment and Flittogate Lane diversion as a result of the Proposed Scheme. Table 15-13 summarises the performance of the junction as a result of the Proposed Scheme.

Table 15-13: Pickmere Lane realignment/Flittogate Lane realignment junction 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 (proposed layout)**			**Proposed Scheme scenario 4 (proposed layout)**		
Pickmere Lane realignment (north) (ahead)	302	0.00	0	275	0.00	0
Pickmere Lane realignment (north) (left)	10	0.00	0	10	0.00	0
Flittogate Lane realignment (left)	11	0.02	0	11	0.02	0
Flittogate Lane realignment (right)	64	0.17	0	64	0.16	0
Pickmere Lane realignment (south) (ahead and right)	400	0.08	0	292	0.07	0
17:00–18:00	**Proposed Scheme (proposed layout)**			**Proposed Scheme scenario 4 (proposed layout)**		
Pickmere Lane realignment (north) (ahead)	410	0.00	0	420	0.00	0
Pickmere Lane realignment (north) (left)	4	0.00	0	4	0.00	0
Flittogate Lane realignment (left)	11	0.02	0	11	0.02	0
Flittogate Lane realignment (right)	18	0.05	0	18	0.04	0
Pickmere Lane realignment (south) (ahead and right)	388	0.05	0	101	0.04	0

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

School Lane/Frog Lane

15.3.40 Initially, the School Lane/Frog 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 priority-controlled (give-way) crossroads, where the Frog Lane realignment and School Lane realignment will form the major arms of the junction and Frog Lane and Common Farm access will form the minor arms. 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.

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

Table 15-14: School Lane/Frog Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results (existing layout)

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2030 future baseline (existing layout)**			**Proposed Scheme (existing layout)**		
Frog Lane (north) (ahead)	1	0.00	0	1	0.00	0
Frog Lane (north) (left)	11	0.00	0	11	0.00	0
School Lane (left)	0	0.00	0	0	0.00	0
School Lane (right)	22	0.05	0	22	0.05	0
Frog Lane (south) (ahead and right)	1	0.00	0	1	0.00	0
17:00–18:00	**2030 future baseline (existing layout)**			**Proposed Scheme (existing layout)**		
Frog Lane (north) (ahead)	3	0.00	0	1	0.00	0
Frog Lane (north) (left)	11	0.00	0	11	0.00	0
School Lane (left)	0	0.00	0	0	0.00	0
School Lane (right)	22	0.05	0	22	0.05	0
Frog Lane (south) (ahead and right)	1	0.00	0	1	0.00	0

15.3.42 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.

15.3.43 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.

15.3.44 Table 15-15 summarises the performance of the modified junction as a result of the Proposed Scheme, after the opening of the permanent junction layout.

Table 15-15: School Lane/Frog Lane junction 2030 with the Proposed Scheme junction capacity assessment results (proposed layout)

Approach	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme (proposed layout)**		
Frog Lane realignment (left, ahead and right)	38	0.00	0
Frog Lane (left, ahead and right)	1	0.00	0
School Lane realignment (left, ahead and right)	37	0.00	0
Farm Access (left, ahead and right)	0	0.00	0
17:00–18:00	**Proposed Scheme (proposed layout)**		
Frog Lane realignment (left, ahead and right)	43	0.01	0
Frog Lane (left, ahead and right)	1	0.00	0

Approach	Flow, PCU/hr	RFC	Q, PCU
School Lane realignment (left, ahead and right)	59	0.00	0
Farm Access (left, ahead and right)	0	0.00	0

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

Budworth Road/Frog Lane

15.3.46 Budworth Road/Frog Lane is to be a modified three-arm priority controlled T-junction associated with the diversion of Frog Lane. Table 15-16 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-16: Budworth Road/Frog 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
08:00–09:00	**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
Budworth Road (west) (ahead and left)	2	0.00	0	2	0.00	0
Budworth Road (east) (left and right)	18	0.03	0	18	0.03	0
Frog Lane realignment (ahead and right)	55	0.03	0	39	0.03	0
17:00–18:00	**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
Budworth Road (west) (ahead and left)	1	0.00	0	1	0.00	0
Budworth Road (east) (left and right)	59	0.09	0	59	0.09	0
Frog Lane realignment (ahead and right)	115	0.11	0	105	0.10	0

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

A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road

15.3.48 Table 15-17 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The B5083 Stanley Road is a one-way exit arm from the junction and is therefore not reported in the results.

Table 15-17: A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road junction 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**			**2030 Proposed Scheme scenario 1**			**2030 Proposed Scheme scenario 2**			**2030 Proposed Scheme scenario 3**			**2030 Proposed Scheme scenario 4**		
A50 Toft Road (north)	1,219	102%	6	1,199	100%	6	1,174	98%	6	1,132	95%	5	1,198	100%	6
A537 Adams Hill	768	91%	9	716	84%	9	743	87%	9	745	87%	9	701	82%	9
A50 Toft Road (south)	314	23%	5	305	23%	5	322	23%	5	321	22%	5	289	21%	4
17:00–18:00	**2030 future baseline**			**2030 Proposed Scheme scenario 1**			**2030 Proposed Scheme scenario 2**			**2030 Proposed Scheme scenario 3**			**2030 Proposed Scheme scenario 4**		
A50 Toft Road (north)	982	82%	5	982	82%	5	1,044	87%	5	1,047	88%	5	975	82%	5
A537 Adams Hill	872	102%	12	872	103%	12	872	103%	12	873	103%	12	873	103%	12
A50 Toft Road (south)	766	44%	11	775	45%	11	780	45%	11	780	45%	11	775	45%	11

15.3.49 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. 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 2030 scenario 3 the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A50 King Edward Road (north) approach from 82% in the future baseline to 88%, with no change in corresponding queue length.

A537 Brook Street/B5085 Hollow Lane/Lilybrook Drive

15.3.50 Table 15-18 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. Lilybrook Drive approach is a minor arm that is not included within the strategic traffic model.

Table 15-18: A537 Brook Street/B5085 Hollow Lane/Lilybrook 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	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**		
B5085 Hollow Lane	524	50%	8	478	46%	8	495	47%	8	523	50%	8	483	46%	8
A537 Brook Street (east)	376	35%	3	354	33%	3	380	35%	3	374	35%	3	348	32%	3
Lilybrook Drive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A537 Brook Street (west)	824	76%	7	808	75%	7	789	73%	7	773	71%	7	806	75%	7
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5085 Hollow Lane	855	79%	10	804	74%	9	802	74%	9	813	75%	9	812	75%	9
A537 Brook Street (east)	326	46%	4	352	49%	5	342	48%	5	326	45%	4	322	40%	4
Lilybrook Drive	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A537 Brook Street (west)	758	92%	11	774	94%	11	807	98%	11	798	97%	11	766	93%	11

15.3.51 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 close to capacity in both the future baseline and with the Proposed Scheme.

15.3.52 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 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A537 Brook Street (west) approach from 92% in the future baseline to 98%, with no change in corresponding queue length.

15.3.53 In scenario 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A537 Brook Street (west) approach from 92% in the future baseline to 98%, with no change in corresponding queue length.

15.3.54 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 A537 Brook Street (west) approach from 92% in the future baseline to 94%, with no change in corresponding queue length.

A537 Brook Street/A537 Adam's Hill/B5083 King Street

15.3.55 Table 15-19 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The B5083 King Street approach is a minor arm that is not included within the strategic traffic model.

Table 15-19: A537 Brook Street/A537 Adam's Hill/B5083 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	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**		
B5083 King Street (north)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A537 Brook Street (east)	899	83%	3	832	77%	2	875	81%	3	897	83%	3	831	77%	2
A537 Adam's Hill (west)	824	97%	1	808	95%	1	789	93%	1	773	91%	1	806	95%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5083 King Street (north)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A537 Brook Street (east)	1,138	105%	9	1,119	103%	8	1,111	103%	8	1,107	102%	9	1,115	103%	8
A537 Adam's Hill (west)	758	89%	1	774	91%	1	807	95%	1	798	94%	1	766	90%	1

15.3.56 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.

15.3.57 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.

15.3.58 In scenario 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the A537 Adam's Hill (west) approach from 89% in the future baseline to 95%, with no change in corresponding queue length.

A556 Chester Road/A5033 Northwich Road

15.3.59 Table 15-20 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-20: A556 Chester Road/A5033 Northwich 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)	1,375	101%	19	1,387	102%	18	1,414	105%	18	1,408	104%	18	1,382	102%	18
A533 Northwich Road	568	36%	8	523	33%	8	555	35%	8	532	34%	8	503	32%	8
A556 Chester Road (south)	1,557	78%	17	1,551	78%	17	1,579	80%	18	1,592	80%	18	1,554	78%	17
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)	1,170	96%	17	1,185	99%	17	1,211	101%	17	1,207	101%	17	1,168	96%	17
A533 Northwich Road	1,147	64%	13	1,153	64%	13	1,198	67%	14	1,211	68%	14	1,197	67%	14
A556 Chester Road (south)	989	65%	13	1,085	71%	13	1,337	88%	17	1,408	92%	18	1,129	74%	14

15.3.60 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 the future baseline and over capacity with the Proposed Scheme.

15.3.61 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A556 Chester Road (north) approach from 101% in the future baseline to 105% in the AM peak hour, with a corresponding change in queue length from 19 PCU in the future baseline to 18 PCU. In the PM Peak hour, the change in traffic due to construction of the Proposed Scheme will increase the VoC on the A556 Chester Road (north) approach from 96% in the future baseline to 101%, with no change in corresponding queue length.

A5033 Northwich Road/Ladies Mile

15.3.62 Table 15-21 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-21: A5033 Northwich Road/Ladies Mile 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**		
Ladies Mile	277	75%	1	279	72%	1	287	69%	1	284	70%	1	281	74%	1
A5033 Northwich Road (east)	1,120	37%	0	1,097	36%	0	1,164	38%	0	1,140	37%	0	1,064	35%	0
A5033 Northwich Road (west)	673	62%	1	610	56%	0	567	52%	0	572	53%	0	632	58%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Ladies Mile	293	88%	2	298	87%	2	279	90%	2	239	89%	2	276	88%	2
A5033 Northwich Road (east)	1,352	45%	0	1,327	44%	0	1,428	48%	0	1,474	49%	0	1,401	47%	0
A5033 Northwich Road (west)	465	43%	1	441	41%	1	409	38%	1	440	41%	1	443	41%	1

15.3.63 The assessment shows that in the AM peak hour the junction operates 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 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 in the AM peak hour. In scenario 2, the change in traffic due to construction of the Proposed Scheme in the PM peak hour will increase the VoC on the Ladies Mile approach from 88% in the future baseline to 90%, with no change in corresponding queue length.

Tabley Road/Ladies Mile

15.3.64 Table 15-22 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-22: Tabley Road/Ladies Mile 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**		
Tabley Road (east)	204	102%	1	205	102%	1	207	103%	1	206	103%	1	204	102%	1
Ladies Mile	162	24%	0	156	23%	0	155	23%	0	137	20%	0	147	21%	0
Tabley Road (west)	201	101%	0	202	101%	0	202	101%	0	202	101%	0	202	101%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Tabley Road (east)	154	77%	0	143	72%	0	166	83%	0	151	75%	0	155	78%	0
Ladies Mile	284	43%	0	282	42%	0	277	41%	0	276	41%	0	275	41%	0
Tabley Road (west)	183	92%	0	190	95%	0	147	74%	0	126	63%	0	170	85%	0

15.3.65 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.

15.3.66 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 Tabley Road (west) approach from 92% in the future baseline to 95%, with no change in corresponding queue length.

A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane

15.3.67 Table 15-23 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-23: A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction 2030 future baseline and with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
08:00–09:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
A556 Chester Road (north) (left and ahead)	1,017	117%	109	1,075	119%	122	930	124%	148	1,112	123%	144
A556 Chester Road (north) (ahead and right)	1,083	117%	117	1,149	119%	130	978	124%	160	1,196	123%	156
Tabley Hill Lane (left and ahead)	122	82%	5	110	74%	4	143	72%	4	102	69%	4
A556 Chester Road (south) (left and ahead)	797	117%	87	773	120%	94	805	124%	104	788	123%	102
A556 Chester Road (south) (ahead)	792	117%	86	767	120%	93	794	124%	104	783	123%	101
B5391 Pickmere Lane (left)	292	29%	4	358	34%	4	322	44%	6	465	45%	7
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
A556 Chester Road (north) (left and ahead)	713	97%	28	930	111%	80	963	124%	128	949	125%	129
A556 Chester Road (north) (ahead and right)	744	97%	28	978	111%	85	1,020	124%	136	1,001	125%	137
Tabley Hill Lane (left and ahead)	148	90%	7	143	98%	9	145	100%	10	144	99%	10
A556 Chester Road (south) (left and ahead)	807	99%	34	805	111%	70	956	122%	121	1,001	125%	136
A556 Chester Road (south) (ahead)	799	99%	33	794	111%	68	944	122%	119	990	125%	134
B5391 Pickmere Lane (left)	115	13%	2	322	33%	4	392	42%	6	422	46%	7

15.3.68 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.

15.3.69 In scenario 2, the change in traffic due to construction of the Proposed Scheme will increase the DoS on the A556 Chester Road (north) and A556 Chester Road (south) approaches from 117% in the future baseline to 124% in the AM peak hour, with a corresponding change in queue length from 117 PCU in the future baseline to 160 PCU on the A556 Chester Road (north) approach. This will result in queuing that will exceed the length storage capacity of the lane between the A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction and the roundabout circulatory of the M6 junction 19 and will therefore impact the neighbouring junction. However due to limitations of available the modelling software this is not reflected in the with Proposed Scheme results presented for either junction.

15.3.70 In the PM peak hour, the change in traffic due to construction of the Proposed Scheme will increase the DoS on the Tabley Hill Lane (left and ahead) approach from 90% in the future baseline to 100%, with a corresponding change in queue length from 7 PCU in the future baseline to 10 PCU.

15.3.71 In scenario 3, the change in traffic due to construction of the Proposed Scheme will increase the DoS on the A556 Chester Road (north) approach from 97% in the future baseline to 125% in the PM peak hour, with a corresponding change in queue length from 28 PCU in the future baseline to 129 PCU.

15.3.72 HS2 Ltd will work with Highways England and CEC to identify opportunities to address the capacity issues at the M6 Junction 19 and the A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction, where reasonably practicable.

B5569 Chester Road/Old Hall Lane

15.3.73 Table 15-24 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-24: B5569 Chester Road/Old Hall 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**		
B5569 Chester Road (north)	178	12%	0	243	16%	0	264	18%	0	272	18%	0	156	10%	0
B5569 Chester Road (south)	0	0%	0	0	0%	0	0	0%	0	0	0%	0	0	0%	0
Old Hall Lane	220	12%	0	273	15%	0	312	17%	0	297	17%	0	263	15%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5569 Chester Road (north)	107	7%	0	197	13%	0	273	18%	0	248	17%	0	205	14%	0
B5569 Chester Road (south)	0	0%	0	0	0%	0	0	0%	0	7	0%	0	4	0%	0
Old Hall Lane	142	8%	0	206	12%	0	233	13%	0	220	12%	0	177	10%	0

15.3.74 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.

15.3.75 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.

A556/Old Hall Lane

15.3.76 Table 15-25 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-25: A556/Old Hall 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**		
Old Hall Lane (east)	5	0%	0	54	4%	0	90	6%	0	88	6%	0	27	2%	0
A556 northbound off-slip	214	14%	0	293	20%	0	390	26%	0	362	24%	0	257	17%	0
Old Hall Lane (south)	6	0%	0	4	0%	0	9	1%	0	8	1%	0	5	0%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Old Hall Lane (east)	12	1%	0	13	1%	0	16	1%	0	19	1%	0	14	1%	0
A556 northbound off-slip	143	10%	0	187	12%	0	194	13%	0	184	12%	0	177	12%	0
Old Hall Lane (south)	0	0%	0	0	0%	0	4	0%	0	3	0%	0	0	0%	0

15.3.77 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.

A50 Warington Road/A5034 Mereside Road/A50 Manchester Road/Moss Lane

15.3.78 Table 15-26 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. Moss Lane approach is a minor arm that is not included within the strategic traffic model.

Table 15-26: A50 Warrington Road/A5034 Mereside Road/A50 Manchester Road/Moss Lane junction capacity assessment results

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	Flow, PCU/ hr	RFC	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**		
Mereside Road (left)	196	0.34	1	200	0.34	1	186	0.32	1	143	0.25	0	196	0.35	1
Mereside Road (right)	14	0.05	0	31	0.11	0	42	0.14	0	28	0.09	0	59	0.20	0
Manchester Road (east) (ahead and right)	511	0.19	0	610	0.21	0	638	0.21	0	639	0.13	0	629	0.11	0
Moss Lane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manchester Road (west) (ahead and left)	554	0.00	0	548	0.00	0	535	0.00	0	534	0.00	0	556	0.00	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Mereside Road (left)	231	0.39	1	279	0.48	1	238	0.42	1	182	0.32	1	250	0.44	1
Mereside Road (right)	77	0.27	0	33	0.13	0	36	0.14	0	22	0.09	0	52	0.19	0
Manchester Road (east) (ahead and right)	1,039	0.19	0	802	0.34	1	745	0.36	1	740	0.29	0	744	0.23	0
Moss Lane	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Manchester Road (west) (ahead and left)	323	0.00	0	550	0.00	0	589	0.00	0	583	0.00	0	543	0.00	0

15.3.79 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 assessment shows that the junction operates well within capacity in both the future baseline and with the Proposed Scheme.

15.3.80 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.

A50 Warrington Road/A50 Chester Road/B5569 Chester Road (south)

15.3.81 Table 15-27 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-27: A50 Warrington Road/A50 Chester Road/B5569 Chester Road (south) 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**		
B5569 Chester Road	220	21%	3	273	26%	4	312	30%	4	297	29%	4	263	25%	4
A50 Chester Road	488	29%	3	538	34%	4	518	34%	4	540	35%	4	505	33%	3
A50 Warrington Road	348	36%	4	431	44%	5	476	48%	6	513	52%	6	546	54%	6
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5569 Chester Road	142	14%	2	206	20%	3	233	23%	3	220	21%	3	177	17%	3
A50 Chester Road	382	31%	2	408	35%	3	422	36%	3	421	36%	3	378	32%	2
A50 Warrington Road	973	92%	11	1,009	97%	11	981	96%	11	1,031	101%	11	1,051	101%	12

15.3.82 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.

15.3.83 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.

15.3.84 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 A50 Warrington Road approach from 92% in the future baseline to 101%, with a corresponding change in queue length from 11 PCU in the future baseline to 12 PCU.

A50 Knutsford Road/A50 Chester Road/B5569 Chester Road (north)

15.3.85 Table 15-28 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-28: A50 Knutsford Road/A50 Chester Road/B5569 Chester Road (north) 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**		
A50 Knutsford Road	488	33%	3	493	33%	3	514	35%	3	494	33%	3	505	34%	3
B5569 Chester Road	0	0%	0	56	8%	1	88	13%	2	81	12%	1	9	1%	0
A50 Chester Road	300	17%	1	398	22%	1	460	26%	2	497	28%	2	520	29%	1
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A50 Knutsford Road	381	25%	2	378	25%	2	460	32%	3	410	27%	2	378	25%	2
B5569 Chester Road	1	0%	0	42	6%	1	49	7%	1	47	7%	1	10	1%	0
A50 Chester Road	1,068	60%	2	1,091	61%	3	1,007	56%	3	1,054	59%	3	1,051	59%	2

15.3.86 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.

A50 Knutsford Road/A556

15.3.87 Table 15-29 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The A556 on-slip is a one-way exit arm from the junction and is therefore not reported in the results.

Table 15-29: A50 Knutsford Road/A556 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**		
A50 Knutsford Road (north)	513	34%	0	518	34%	0	546	36%	0	527	35%	0	514	34%	0
A50 Knutsford Road (south)	300	20%	0	378	25%	0	487	32%	0	532	35%	0	523	35%	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
A50 Knutsford Road (north)	415	28%	0	441	29%	0	629	42%	0	612	41%	0	427	28%	0
A556 On-Slip	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A50 Knutsford Road (south)	1,068	71%	0	1,071	71%	0	1,034	69%	0	1,090	73%	0	1,054	70%	0

15.3.88 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.

15.3.89 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.

Local network change in the Hoo Green area

15.3.90 There are a number of permanent changes to the local road network in the Hoo Green area as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 15. 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.

A50 Knutsford Road/Bucklow Hill Lane/Hoo Green Lane

15.3.91 Table 15-30 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-30: A50 Knutsford Road/Bucklow Hill Lane/Hoo 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	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	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**		
Bucklow Hill Lane (ahead, left and right)	15	0.03	0	15	0.03	0	15	0.04	0	15	0.04	0	15	0.03	0
A50 Knutsford Road (east) (ahead, left and right)	241	0.02	0	227	0.01	0	255	0.01	0	251	0.01	0	245	0.01	0
Hoo Green Lane (ahead and left)	6	0.01	0	6	0.01	0	6	0.01	0	6	0.01	0	6	0.01	0
Hoo Green Lane (ahead and right)	14	0.04	0	14	0.04	0	14	0.04	0	14	0.04	0	14	0.04	0
A50 Knutsford Road (west) (ahead, left and right)	583	0.04	0	668	0.02	0	740	0.02	0	732	0.02	0	701	0.01	0
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
Bucklow Hill Lane (ahead, left and right)	56	0.25	0	56	0.15	0	56	0.18	0	56	0.18	0	56	0.14	0
A50 Knutsford Road (east) (ahead, left and right)	905	0.06	0	392	0.04	0	423	0.06	0	426	0.06	0	373	0.04	0
Hoo Green Lane (ahead and left)	20	0.05	0	20	0.04	0	20	0.04	0	20	0.04	0	20	0.04	0
Hoo Green Lane (ahead and right)	21	0.14	0	21	0.07	0	21	0.08	0	21	0.08	0	21	0.07	0
A50 Knutsford Road (west) (ahead, left and right)	1,071	0.15	0	699	0.07	0	988	0.11	0	961	0.10	0	680	0.07	0

15.3.92 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.

15.3.93 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.

A50 Warrington Road realignment/Hoo Green Lane diversion

15.3.94 The A50 Warrington Road realignment/Hoo Green Lane diversion junction will be a new three-arm priority controlled (give way) T-junction as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 15.5. The junction will be implemented during construction of the Proposed Scheme and has therefore been assessed for scenario 2 and scenario 3 AM and PM peak hours using Junctions 9 software. Table 15-31 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-31: A50 Warrington Road realignment/Hoo Green Lane diversion junction 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 scenario 3 (proposed layout)**		
A50 Warrington Road realignment (east) (ahead)	369	0.00	0	400	0.00	0
Realigned A50 Warrington Road realignment (east) (left)	4	0.00	0	4	0.00	0
Hoo Green Lane diversion (left)	7	0.01	0	7	0.01	0
Hoo Green Lane diversion (right)	13	0.04	0	13	0.04	0
A50 Warrington Road realignment (west) (ahead and right)	535	0.02	0	519	0.02	0
17:00–18:00	**Proposed Scheme scenario 2 (proposed layout)**			**Proposed Scheme scenario 3 (proposed layout)**		
A50 Warrington Road realignment (east) (ahead)	1,042	0.00	0	901	0.00	0
Realigned A50 Warrington Road realignment (east) (left)	5	0.00	0	5	0.00	0
Hoo Green Lane diversion (left)	6	0.02	0	6	0.02	0
Hoo Green Lane diversion (right)	3	0.01	0	3	0.01	0
A50 Warrington Road realignment (west) (ahead and right)	611	0.00	0	426	0.00	0

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

Temporary network changes at Chapel Lane

15.3.96 Temporary slip roads will be constructed between the A556 and Chapel Lane, with a temporary off-ramp from the A556 northbound to Chapel Lane and a temporary on-ramp to the A556 southbound from Chapel Lane which will be constructed to provide access to construction compounds in the Hoo Green and Hulsehealth area. Access will be restricted to construction traffic only.

Chapel Lane/A556 southbound on-slip

15.3.97 The Chapel Lane/A556 southbound on-slip junction is to be a new temporary three-arm priority controlled (give way) junction. Table 15-32 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The operation of the junction has been assessed using Junctions 9 software.

Table 15-32: Chapel Lane/A556 southbound on-slip junction 2030 with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme**		
A556 on-slip	-	-	-
Chapel Lane (west) (ahead and right)	213	0.18	0
17:00–18:00	**Proposed Scheme**		
A556 on-slip	-	-	-
Chapel Lane (west) (ahead and right)	213	0.18	0

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

Chapel Lane/A556 northbound off-slip

15.3.99 The Chapel Lane/A556 northbound off-slip junction is to be a new temporary three-arm priority controlled (give way) junction. Table 15-33 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme. The operation of the junction has been assessed using Junctions 9 software.

Table 15-33: Chapel Lane/A556 northbound off-slip with the Proposed Scheme junction capacity assessment results

Approach	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**Proposed Scheme scenario 1 (proposed layout)**		
Chapel Lane (west) (ahead and right)	119	0.00	0
Chapel Lane (east) (ahead)	25	-	-
A556 off-slip (left)	97	0.15	0
A556 off-slip (right)	-	-	-
17:00–18:00	**Proposed Scheme scenario 1 (proposed layout)**		
Chapel Lane (west) (ahead and right)	119	0.00	0
Chapel Lane (east) (ahead)	100	-	-
A556 off-slip (left)	97	0.16	0
A556 off-slip (right)	-	-	-

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

A50 Warrington Road/B5159 West Lane (east)

15.3.101 Table 15-34 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-34: A50 Warrington Road/B5159 West Lane (east) 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**		
B5159 West Lane (left and right)	159	0.32	1	319	0.91	7	331	1.03	17	332	1.01	14	316	0.98	12
A50 Warrington Road (east) (ahead and right)	522	0.34	1	355	0.35	1	408	0.36	1	391	0.36	1	458	0.37	1
A50 Warrington Road (west) (ahead)	273	-	-	556	-	-	658	-	-	632	-	-	556	-	-
A50 Warrington Road (west) (left)	25	-	-	218	-	-	218	-	-	218	-	-	218	-	-
17:00–18:00	**2030 future baseline**			**Proposed Scheme scenario 1**			**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**			**Proposed Scheme scenario 4**		
B5159 West Lane (left and right)	230	0.45	1	187	1.16	19	231	1.40	41	248	1.26	33	409	1.54	95
A50 Warrington Road (east) (ahead and right)	956	0.33	1	946	0.47	1	1,003	0.49	1	940	0.47	1	849	0.44	1
A50 Warrington Road (west) (ahead)	328	-	-	395	-	-	519	-	-	458	-	-	327	-	-
A50 Warrington Road (west) (left)	3	-	-	210	-	-	210	-	-	210	-	-	210	-	-

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

15.3.103 In scenario 1, the change in traffic due to construction of the Proposed Scheme will increase the RFC on the B5159 West Lane (left and right) approach from 0.32 in the future baseline to 1.03 in the AM peak hour, with a corresponding change in queue length from one PCU in the future baseline to 17 PCU.

15.3.104 In scenario 3, the change in traffic due to construction of the Proposed Scheme will increase the RFC on the B5159 West Lane (left and right) approach from 0.45 in the future baseline to 1.54 in the PM peak hour, with a corresponding change in queue length from one PCU in the future baseline to 95 PCU.

Local network change in the Hulseheath area

15.3.105 There are a number of permanent changes to the local road network in the Hulseheath area as part of the Proposed Scheme. Details of the permanent changes are presented in the operational assessment at Section 15.5. 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.

Peacock Lane realignment/Back Lane diversion

15.3.106 The Peacock Lane realignment/Back Lane diversion junction is to be modified to accommodate the construction of the Peacock Lane overbridge and the realignment of Peacock Lane and the diversion of Back Lane as a result of the Proposed Scheme.

15.3.107 Table 15-35 summarises the results of the changes to the performance of the junction as a result of the Proposed Scheme.

Table 15-35: Peacock Lane realignment/Back 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
08:00–09:00	**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
Peacock Lane (west) (ahead)	112	0.00	0	17	0.00	0
Peacock Lane (west) (left)	52	0.00	0	33	0.00	0
Back Lane diversion (left and right)	12	0.02	0	11	0.02	0
Peacock Lane (east) (ahead and right)	37	0.02	0	12	0.02	0
17:00–18:00	**Proposed Scheme scenario 2**			**Proposed Scheme scenario 3**		
Peacock Lane (west) (ahead)	26	0.00	0	0	0.00	0
Peacock Lane (west) (left)	7	0.00	0	7	0.00	0
Back Lane diversion (left and right)	64	0.14	0	44	0.09	0
Peacock Lane (east) (ahead and right)	124	0.02	0	65	0.02	0

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

Accidents and safety

15.3.109 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

15.3.110 There will be a temporary loss of off-street car parking along the route of the Proposed Scheme in the MA03 area. A total of 75 out of 120 parking spaces will be temporarily lost at the Mere Court Hotel and Conference Centre, located off the A50 Warrington Road, for a period of three years and three months.

15.3.111 There will be a temporary loss of land at Cheshire Showground, which is used for parking during events. Approximately 23 hectares (ha) of land, which is used for the parking of cars and cars with trailers, will be required, or will be inaccessible, during the construction of the Proposed Scheme. The area affected by the Proposed Scheme during construction is estimated to have capacity of approximately 9,364 parking spaces[2].

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

Public transport

Local bus services

15.3.113 Local bus services will be affected where they cross 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 services.

15.3.114 Temporary traffic management on the B5391 Pickmere Lane will affect bus route 89 (Northwich- Wincham - Knutsford) for one year and one month. This will increase the journey distance by 358m.

15.3.115 The temporary realignment of the A50 Warrington Road will affect bus route 47 (Warrington - High Legh - Knutsford) for one year and one month. This will increase the journey distance by less than 100m.

15.3.116 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.

[2] Based upon an assumed 25m^2 per car parking space applied to 23.41ha of land.

Rail network

15.3.117 There is no construction activity associated with the Proposed Scheme in MA03 that requires interface with the existing rail network.

Public transport interchanges

15.3.118 There are no major public transport interchanges in MA03 area and therefore no consequential construction activity impacts on public transport interchange facilities in the MA03 area.

Pedestrians, cyclists and equestrians

15.3.119 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.

15.3.120 Locations where routes used by pedestrians, cyclists and equestrians will be temporarily diverted, realigned or closed are shown below. Table 15-36 summarises the temporary diversions, realignments and extensions to PRoW and roadside footways required to accommodate the construction of the Proposed Scheme.

Table 15-36: MA03 construction changes on public rights of way and roadside footways for non-motorised users

PRoW name	Surveyed daily usage	Temporary diversion	Change in distance	Duration
Footpath Tabley Inferior 1/1	N/A	Temporary realignment of Footpath Tabley Inferior 1/1 140m to the north of its existing alignment.	Increase of 206m	One year and four months
Footpath Tabley Inferior 3/1	0 users	Temporary realignment of Footpath Tabley Inferior 3/1, following a temporary footpath parallel to the Cheshire Showground North Access diversion on the western side of the route of the Proposed Scheme, the permanent B5391 Pickmere Lane realignment, the permanent Flittogate Lane realignment and a temporary footpath parallel to the Cheshire Showground South Access diversion on the eastern side of the route of the Proposed Scheme.	Increase of 1.2km	11 months

PRoW name	Surveyed daily usage	Temporary diversion	Change in distance	Duration
Footpath Pickmere 9/1	0 users	A section of Footpath Pickmere 9/1 between the existing Flittogate Lane and Flittogate Lane realignment will be permanently closed. Footpath Pickmere 9/1 will be temporarily realigned parallel to the north-east of the Flittogate Lane realignment during construction, re-joining the existing Flittogate Lane to the east.	Increase of 345m	One year and six months
Frog Lane	0 users	Temporary closure of a section of Frog Lane between School Lane and Budworth Road during the construction of the Frog Lane realignment. Pedestrian users will be diverted via Footpath Pickmere 4/1 and Footpath Aston By Budworth 8/1. Cyclists and equestrians will be diverted via the School Lane realignment, the B5391 Pickmere Lane and Budworth Road for six months.	Increase of 1.1km for pedestrians and 3km for cyclists and equestrians	Four months
School Lane	N/A	Temporary closure during the construction of the School Lane realignment. Users will be diverted via the B5391 Pickmere Lane, Hall Lane and Frog Lane to the south or B5391 Pickmere Lane, Footpath Tabley Superior 8/1 and Budworth Road.	Increase of 1.7km	Four months
Restricted Byway Tabley Superior 4/1	N/A	Temporary realignment of Restricted Byway Tabley Superior 4/1 up to 63m south of the existing alignment for a period of one year and six months.	Increase of 53m	One year and six months
Bridleway Mere 1/1	N/A	Temporary realignment of Bridleway Mere 1/1 up to 65m north of the existing alignment during construction of the Bridleway Mere 1/1 accommodation underbridge.	Increase of 10m	11 months
Hoo Green Lane	N/A	The permanent Hoo Green Lane diversion will be completed up to the temporary A50 Warrington Road realignment during construction of the A50 Warrington Road overbridge and the permanent realignment.	Increase of 781m	One year and two months
A50 Warrington Road	Four users	Temporary realignment, 80m south of the existing alignment during the construction of the A50 Warrington Road overbridge and the permanent realignment.	Increase of 24m	One year and two months
Peacock Lane	14 users	Temporary closures of Peacock Lane during the construction of the Peacock Lane overbridge. Pedestrian users between Hulseheath and High Legh will be diverted for a period of one year via Hulseheath Lane, the A50 Warrington Road temporary realignment, Wrenshot Lane and Footpath High Legh 4/1. Cyclists and equestrians will be diverted via Broadoak Lane, to avoid Footpath High Legh 4/1.	Increase of 2.3km for pedestrians and 2.7km for cyclists and equestrians	One year
Back Lane	N/A	Temporary closures of Peacock Lane will impact on users of Back Lane during the construction of	Increase of 3.5km for	One year

PRoW name	Surveyed daily usage	Temporary diversion	Change in distance	Duration
		the Peacock Lane overbridge. Users of Back Lane will be diverted via Hulseheath Lane, the A50 Warrington Road temporary realignment, Wrenshot Lane and Footpath High Legh 4/1. Cyclists and equestrians will be diverted via Broadoak Lane, to avoid Footpath High Legh 4/1.	pedestrians and 3.9km for cyclists and equestrians	
Agden Lane	N/A	Agden Lane will be permanently closed where it crosses the route of the Proposed Scheme. Prior to the construction of the permanent Back Lane diversion and the Peacock Lane realignment, users will be diverted via Thowler Lane, Back Lane, Peacock Lane and Moss Lane.	Increase of 2.1km	One year and two months
Footpath Agden 4/1	Two users	Footpath Agden 4/1 will be permanently closed. Users will be diverted via Footpath Agden 1/4, Footpath Agden 1/1, Footpath Agden 2/4, Footpath Agden 3/3 and Footpath Agden 2/3. During construction, use of Footpath Agden 2/4 will be managed until construction of the Agden Brook Farm accommodation access underbridge and the permanent footpath diversion is completed.	Increase of 701m	One year and one month
Footpath Agden 2/4	Two users	Managed use of the existing route where it crosses the route of the Proposed Scheme until the construction of Agden Brook Farm Accommodation Access underbridge and the permanent footpath diversion is completed. Users will be diverted via Footpath Agden 1/2, the permanent Footpath Agden 2/4 diversion and Footpath Agden 3/3.	Increase of 500m	One year and one month
Footpath Agden 1/2	Two users	Managed use of the existing route where it crosses the route of the Proposed Scheme until the construction of Agden Brook Farm Accommodation Access underbridge and the permanent footpath diversion is completed. Users will be diverted via Footpath Agden 2/4, Footpath Agden 3/3 and the permanent Footpath Agden 2/4 diversion.	Increase of 500m	One year and one month

15.3.121 The busiest routes affected will be Peacock Lane (14 users), the A50 Warrington Road (four users) and Footpaths 4/1, 2/4 and 1/2 within the parish of Agden (two users).

15.3.122 Five of the PRoW/roadside footway routes affected experience very little, or no change in length. Three changes results in a realignment which increases PRoW/roadside footway route length up to 500m.

15.3.123 Other PRoW/footway routes experience larger changes in length of diversion, including the longest diversion of up to 3.9km for users of Back Lane, however no users were recorded on the day of the survey. Other longer diversions include Peacock Lane and Agden Lane with

increases in route length of up to 2.5km and 2.1km respectively. Of these longer diversions, Peacock Lane had 14 users most and none were recorded on Agden Lane.

15.3.124 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

15.3.125 The construction of the Proposed Scheme will not impact upon navigable waterways or canals in the MA03 area.

15.4 Proposed Scheme operation description

15.4.1 The Proposed Scheme within the MA03 area has three main components:

- the route of the Proposed Scheme: approximately 10.6km in length, continuing from the northern boundary of the Wimboldsley to Lostock Gralam area (MA02) and travelling northwards towards the Broomedge to Glazebrook area (MA04);
- the HS2 Manchester spur: approximately 3.3km long spur diverging from the route of the Proposed Scheme west of Hulseheath and continuing towards the Hulseheath to Manchester Airport area (MA06); and
- the NPR London to Liverpool junction: approximately 3.1km long section of earthworks and associated infrastructure to provide for future NPR services.

15.5 Proposed Scheme assessment of operation impacts

15.5.1 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

15.5.2 The operational assessment takes account of all of the impacts of the Proposed Scheme in the MA03 area. The main potential operational impacts relate to the diversion, realignment of roads and implementation of new junctions in order to accommodate the Proposed Scheme, together with changes to PRoW.

15.5.3 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

15.5.4 Table 15-37 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 15-37: MA03 permanent highway diversion/closure/amendment

Highway name/junction	Description	Change/alteration
Flittogate Lane	Diversion of Flittogate Lane, 260m north of its current alignment for 491m. A new three-arm priority-controlled (give-way) T-junction will be formed at the connection with the B5391 Pickmere Lane realignment.	Users will be diverted along the Flittogate Lane diversion and the B5391 Pickmere Lane realignment, increasing journey length by 372m.
School Lane	Realignment of School Lane, comprising carriageway widening from its current width of 4m to 7.3m Widening is required to accommodate diverted traffic associated with the permanent closure of Budworth Road.	A change in journey length of less than 100m.
B5391 Pickmere Lane	Realignment of the B5391 Pickmere Lane, 62m north of its current alignment for 422m, crossed by the route of the Proposed Scheme beneath Arley Brook viaduct.	Users will be diverted along the realigned B5391 Pickmere Lane, resulting in a change in journey length of less than 100m.
Frog Lane	Realignment of Frog Lane, 50m west of its current alignment for 323m. The realignment will result in modifications to the junctions of Budworth Road/Frog Lane and Frog Lane/School Lane. Budworth Road (west) and Frog Lane realignment will form the major arms of a priority-controlled (give-way) T-junction with Budworth Road (east). Frog Lane realignment and School Lane realignment will form the major arms of a priority-controlled (give-way) crossroads, with Frog Lane (south) and Common Farm access forming the minor arms.	Users will be diverted along the realigned Frog Lane, decreasing journey length by less than 100m.
Budworth Road	Closure of Budworth Road where it is crossed by the route of the Proposed Scheme, with access to properties retained on both sides of the route.	Traffic will be diverted via the Frog Lane realignment, School Lane realignment and the B5391 Pickmere Lane realignment, increasing journey length for some users by 3km.
M6	Realignment of the M6, comprising widening by 2m over a length of 425m, 1.6km to the north-west of junction 19 to accommodate a pier in the central reservation for the M6 Mere viaduct.	A change in journey length of less than 100m.
Hoo Green Lane	Diversion of Hoo Green Lane, 450m west of its current alignment for 800m. The diversion will connect with the A50 Warrington Road realignment at a new three-arm priority-controlled (give-way) T-junction. The	Users will be diverted via the Hoo Green Lane diversion, the A50 Warrington Road realignment and

Highway name/junction	Description	Change/alteration
	existing Hoo Green Lane will be closed where it is crossed by the Proposed Scheme. Access will be retained on both sides of the route of the Proposed Scheme for properties and fields.	the existing Hoo Green Lane, increasing journey length by 828m.
A50 Warrington Road	Realignment of the A50 Warrington Road, 15m south of its current alignment for 550m, crossed by the route of the Proposed Scheme on the A50 Warrington Road overbridge.	Users will be diverted along the realigned A50 Warrington Road, decreasing journey length by less than 100m.
Bowden View Lane	Closure of Bowden View Lane where it is crossed by the route of the Proposed Scheme, with access to properties retained on the eastern side of the route. A turning head will be provided to facilitate vehicle access on the retained section of Bowden View Lane, east of the Proposed Scheme.	Users will be diverted along the A50 Warrington Road realignment, increasing journey length by 783m.
Peacock Lane	Realignment of Peacock Lane over a distance of 1.4km. The western section will be realigned on an embankment up to 47m south of its current alignment and will be crossed by the route of the Proposed Scheme on Peacock Lane overbridge. The realignment will intersect the current alignment of Peacock Lane in the vicinity of its existing junction with Back Lane and continue on the northern side of Peacock Lane, up to 175m north of its current alignment. The realignment will cross HS2 Manchester spur beneath Peacock Lane viaduct.	The diversion of Peacock Lane will result in a change in journey length of less than 100m.
Back Lane	Back Lane will be diverted to tie-in with the Peacock Lane realignment, approximately 195m to the east of its existing junction with Peacock Lane.	The diversion of Back Lane will result in a change in journey length of less than 100m.
Agden Lane	Closure of Agden Lane where it is crossed by the route of the Proposed Scheme, with access to properties retained on the eastern and western sides of the route.	Users will be diverted via Moss Lane, Peacock Lane realignment, Back Lane and Thowler Lane, increasing journey length by 2.2km.

Network traffic flows

15.5.5 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

15.5.6 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.

15.5.7 The M6 Junction 19 model has been used to model the operation scenarios across MA03. In the MA03 area, the model covers the area from Oughtrington in the north to Pickmere in the south, and from the M56 junction 9 in the west to Rostherne in the east.

15.5.8 Changes have been made within the strategic model to reflect the Manchester Airport High Speed station, located in the adjacent Hulseheath to Manchester Airport (MA06) area and the consequential changes to travel patterns, together with proposed changes to the road network including road closures, realigned roads and changes to junction operations.

15.5.9 Table 15-38 and Table 15-39 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 15-40 and Table 15-41 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.

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

15.5.11 Traffic flow changes are shown in Figure 15-9, Figure 15-10, Figure 15-11and Figure 15-12 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 15-38: MA03 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
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	EB	330	12	396	12	66	0	20%	0%
	WB	202	8	207	8	5	0	2%	0%
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	412	6	420	5	8	-1	2%	-17%
	WB	309	4	405	5	96	1	31%	25%
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	159	3	71	2	-88	-1	-55%	-33%
	SB	180	10	170	10	-10	0	-6%	0%
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	200	4	96	3	-104	-1	-52%	-25%
	SB	500	11	459	11	-41	0	-8%	0%
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	585	10	599	8	14	-2	2%	-20%
	WB	352	7	451	8	99	1	28%	14%
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	302	9	401	10	99	1	33%	11%
	SB	494	13	521	12	27	-1	5%	-8%
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	302	9	401	10	99	1	33%	11%
	SB	494	13	521	12	27	-1	5%	-8%
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	38	0	131	1	93	1	245%	0%
	SB	33	1	81	1	48	0	145%	0%

Table 15-39: MA03 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
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	EB	412	13	479	13	67	0	16%	0%
	WB	140	8	146	8	6	0	4%	0%
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	514	25	515	25	1	0	0%	0%
	WB	1,102	39	1,098	53	-4	14	0%	36%
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	431	6	440	6	9	0	2%	0%
	WB	345	5	448	6	103	1	30%	20%
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	170	3	77	2	-93	-1	-55%	-33%
	SB	154	10	158	10	4	0	3%	0%
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	202	4	93	3	-109	-1	-54%	-25%
	SB	465	11	447	10	-18	-1	-4%	-9%
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	610	10	625	10	15	0	2%	0%
	WB	389	9	496	10	107	1	28%	11%
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	327	10	431	11	104	1	32%	10%
	SB	519	14	561	14	42	0	8%	0%
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	327	10	431	11	104	1	32%	10%
	SB	519	14	561	14	42	0	8%	0%
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	39	1	122	1	83	0	213%	0%
	SB	34	1	88	1	54	0	159%	0%

Table 15-40: MA03 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
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	202	16	237	16	35	0	17%	0%
	WB	307	20	366	20	59	0	19%	0%
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	179	0	137	0	-42	0	-23%	0%
	SB	443	3	395	2	-48	-1	-11%	-33%
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	NB	73	1	76	1	3	0	4%	0%
	SB	378	1	432	1	54	0	14%	0%
Tatton Street (between A50 King Edward Road and B5083 Garden Road)	NB	3	0	2	0	-1	0	-33%	0%
	SB	222	1	288	1	66	0	30%	0%
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0	0	0	0	0%	0%
	WB	109	3	139	3	30	0	28%	0%
Tabley Road (between Ladies Mille and A50 Manchester Road)	EB	163	0	162	0	-1	0	-1%	0%
	WB	85	0	56	0	-29	0	-34%	0%
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	139	4	137	4	-2	0	-1%	0%
	SB	385	5	307	5	-78	0	-20%	0%
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	168	2	38	0	-130	-2	-77%	-100%
	SB	110	1	81	1	-29	0	-26%	0%
Clamhunger Lane (between A5034 Mereside Road and A50 Warrington Road)	NB	33	0	31	0	-2	0	-6%	0%
	SB	127	3	75	3	-52	0	-41%	0%
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	220	2	54	0	-166	-2	-75%	-100%
	SB	295	2	324	2	29	0	10%	0%
	NB	93	0	6	0	-87	0	-94%	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
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)	SB	185	2	202	2	17	0	9%	0%
A50 Warrington Road realignment (between Wrenshot Lane and Hoo Green Lane)	EB	320	13	327	13	7	0	2%	0%
	WB	330	7	389	6	59	-1	18%	-14%
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	177	0	242	0	65	0	37%	0%
	SB	191	1	198	1	7	0	4%	0%
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	48	0	92	0	44	0	92%	0%
	SB	64	1	64	1	0	0	0%	0%
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	331	2	343	2	12	0	4%	0%
	SB	267	1	327	1	60	0	22%	0%
B5159 West Lane (between Peacock Lane and Beechtreee Lane)	NB	334	4	340	4	6	0	2%	0%
	SB	269	1	338	1	69	0	26%	0%
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	38	0	176	1	138	1	363%	0%
	SB	14	0	23	0	9	0	64%	0%
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	329	2	307	2	-22	0	-7%	0%
	WB	580	3	702	3	122	0	21%	0%

Table 15-41: MA03 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
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	196	13	225	16	29	3	15%	23%
	WB	417	19	530	20	113	1	27%	5%
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	174	0	99	1	-75	1	-43%	0%
	SB	534	4	467	4	-67	0	-13%	0%
B5391 Pickmere Lane realignment (between School Lane and Budworth Road)	NB	86	1	103	1	17	0	20%	0%
	SB	365	1	424	1	59	0	16%	0%
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	683	4	704	7	21	3	3%	75%
	WB	1,362	8	1,398	9	36	1	3%	13%
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0	0	0	0	0%	0%
	WB	116	3	138	3	22	0	19%	0%
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	142	4	138	4	-4	0	-3%	0%
	SB	369	5	264	6	-105	1	-28%	20%
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	271	2	64	0	-207	-2	-76%	-100%
	SB	303	2	324	2	21	0	7%	0%
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)	NB	117	0	9	0	-108	0	-92%	0%
	SB	178	2	178	2	0	0	0%	0%
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	825	8	953	10	128	2	16%	25%
	SB	401	16	406	16	5	0	1%	0%
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	825	8	953	10	128	2	16%	25%
	SB	401	16	406	16	5	0	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
A50 Warrington Road realignment (between Wrenshot Lane and Hoo Green Lane)	EB	327	13	332	13	5	0	2%	0%
	WB	333	7	421	7	88	0	26%	0%
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	324	12	330	12	6	0	2%	0%
	WB	331	5	416	5	85	0	26%	0%
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	177	0	251	0	74	0	42%	0%
	SB	205	1	205	1	0	0	0%	0%
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	49	1	66	1	17	0	35%	0%
	SB	65	1	66	1	1	0	2%	0%
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	287	13	298	13	11	0	4%	0%
	WB	241	9	287	7	46	-2	19%	-22%
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	43	1	205	1	162	0	377%	0%
	SB	14	0	56	0	42	0	300%	0%

Figure 15-9: MA03 traffic flow changes, 2038 AM peak

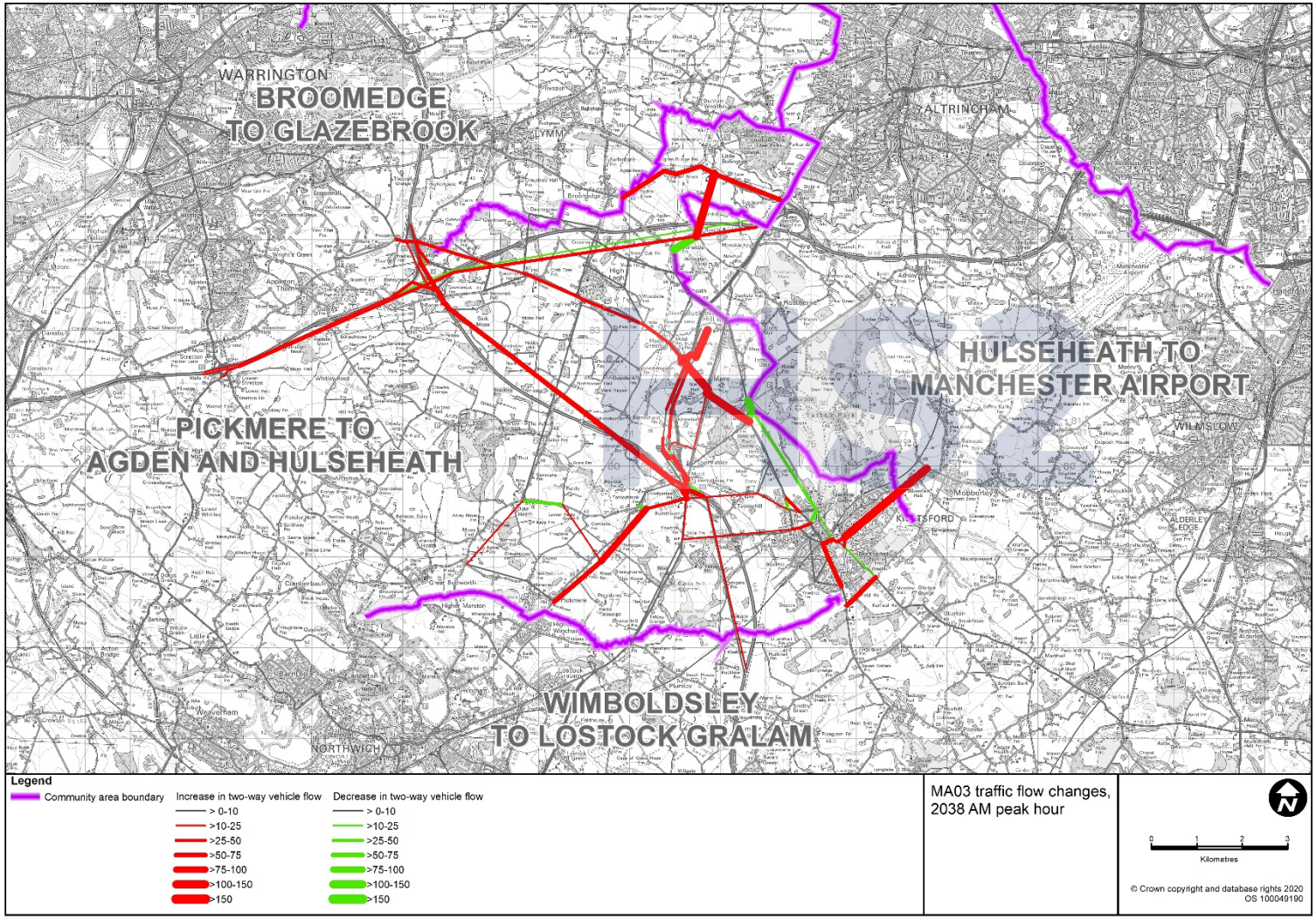


Figure 15-10: MA03 traffic flow changes, 2046 AM peak

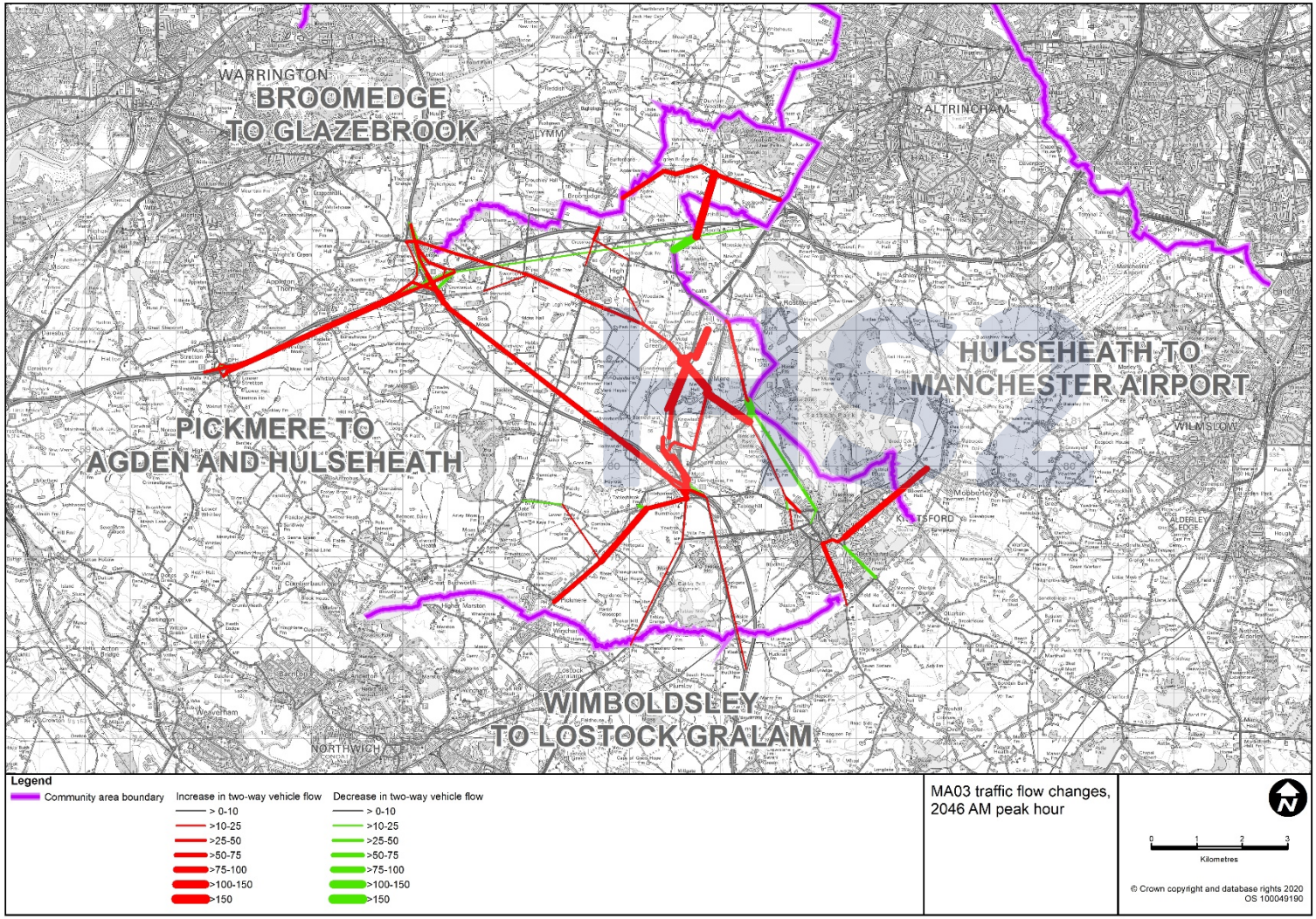


Figure 15-11: MA03 traffic flow changes, 2038 PM peak hour

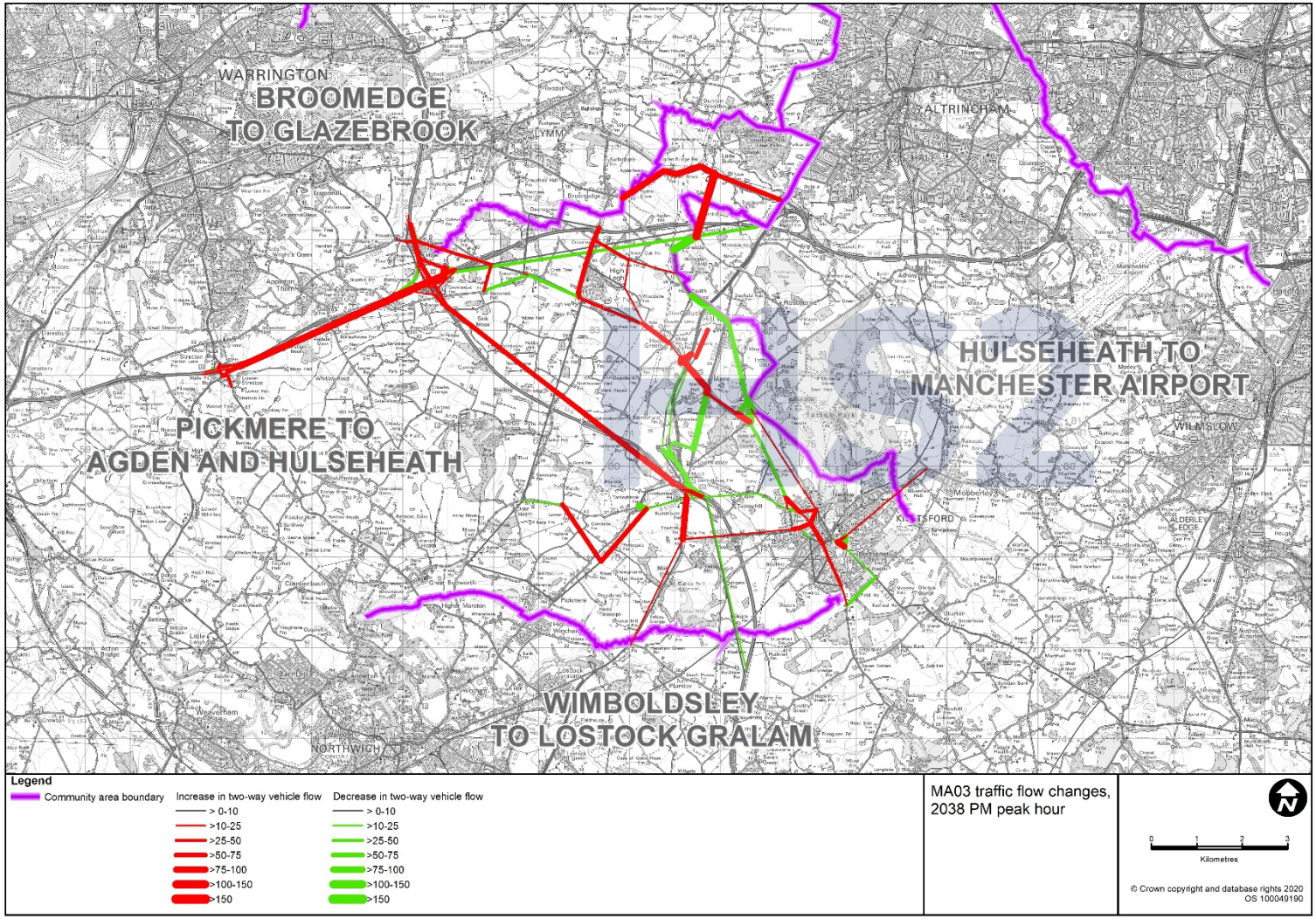
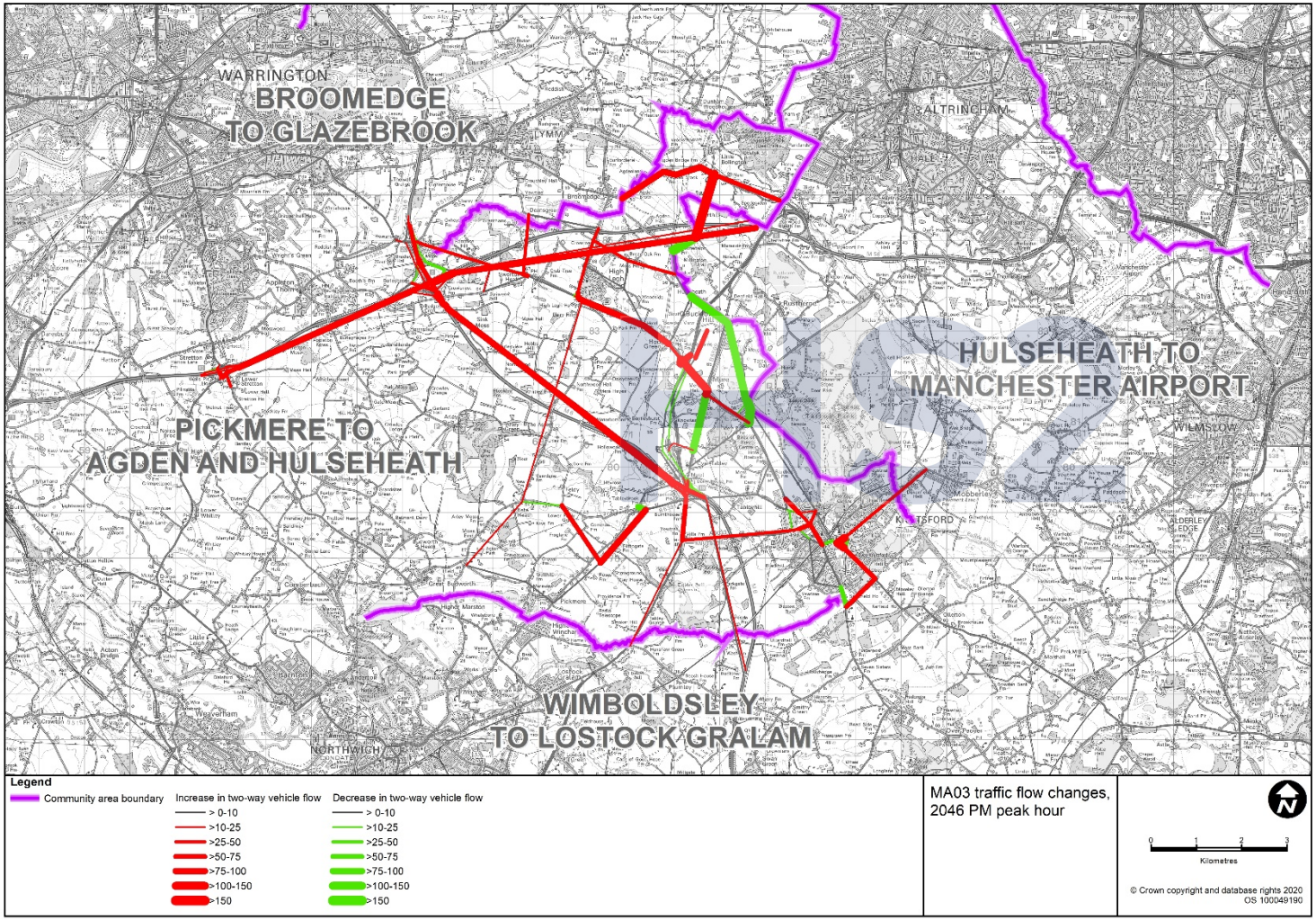


Figure 15-12: MA03 traffic flow changes, 2046 PM peak hour



15.5.12 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.

Junction performance

15.5.13 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.

15.5.14 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.

15.5.15 The results are presented from south to north through the MA03 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.

15.5.16 The junctions assessed in the following section are:

- M6 junction 19/A556 Chester Road/A556;
- B5391 Pickmere Lane/School Lane realignment;
- B5391 Pickmere Lane realignment/Flittogate Lane diversion;
- School Lane realignment/Frog Lane realignment;
- Budworth Road/Frog Lane realignment;
- A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road;
- A537 Brook Street/B5085 Hollow Lane/Brook Lane;
- B5085 Mobberley Road/B5085 Hollow Lane;
- A537 Brook Street/A537 Adam's Hill/B5083 King Street;
- A556 Chester Road/A5033 Northwich Road;
- A5033 Northwich Road/Ladies Mile;
- A50 Manchester Road/A50 King Edward Road/A5033 Northwich Road/Gaskell Avenue/Canute Place;
- A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane;
- A50 Warrington Road realignment/Hoo Green Lane diversion;
- Peacock Lane realignment/Back Lane realignment;
- A50 Tofts Road/Goughs Lane; and
- Tabley Road/Sugar Pit Lane.

M6 junction 19/A556 Chester Road/A556

15.5.17 The M6 junction 19/A556 Chester Road/A556 junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport (MA06) area as a result of the Proposed Scheme. Table 15-42 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-42: M6 junction 19/A556 Chester Road/A556 junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

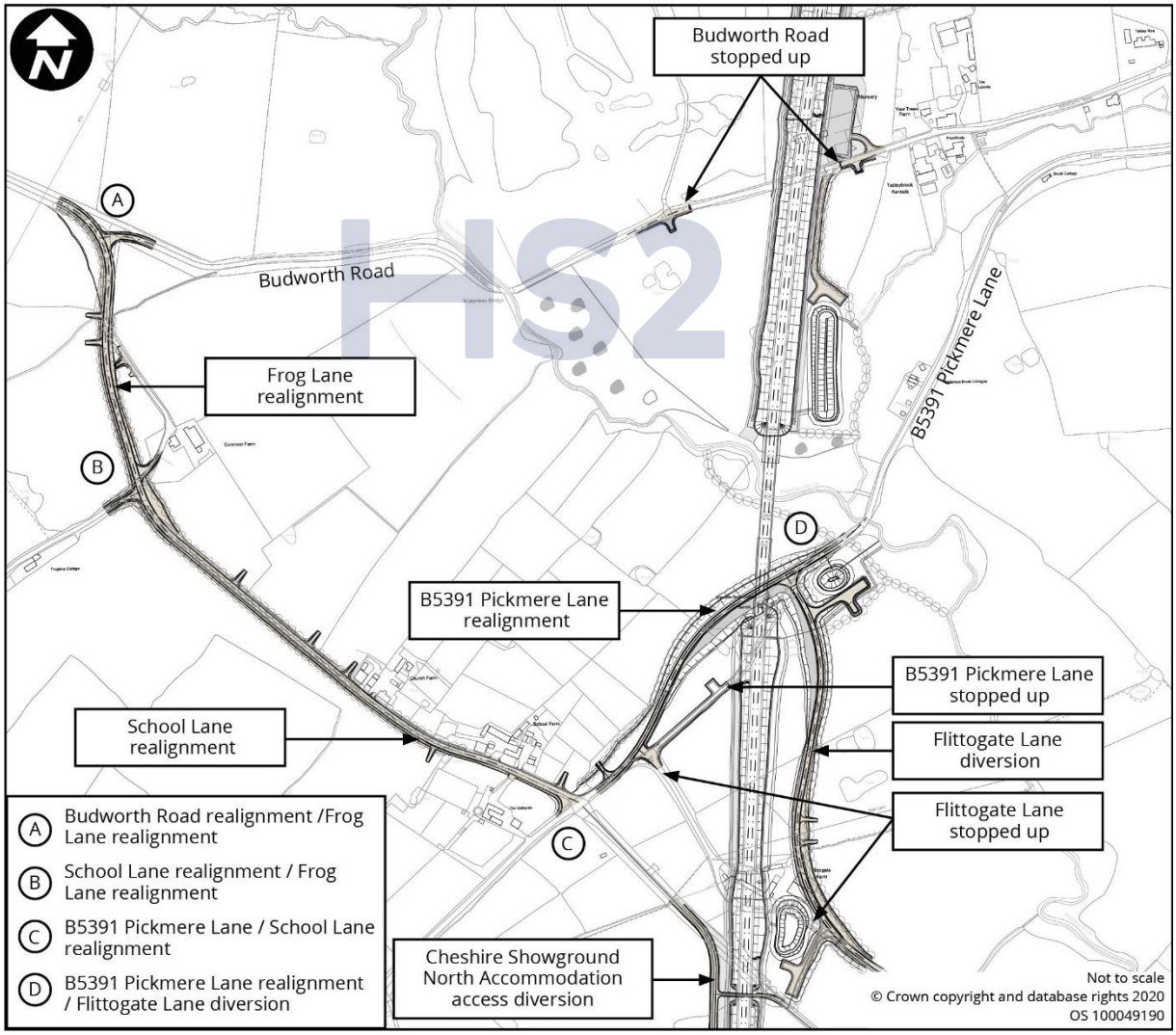
Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
M6 junction 19 southbound off-slip	724	31%	8	761	33%	8	714	31%	8	744	32%	8
A556 (north)	1,050	29%	0	1,057	29%	0	1,010	28%	0	1,042	29%	0
M6 junction 19 northbound off-slip	2,300	74%	17	2,300	74%	17	2,300	74%	17	2,300	74%	17
A556 Chester Road	1,814	56%	11	1,884	58%	11	1,913	59%	11	1,987	61%	12
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
M6 junction 19 southbound off-slip	531	28%	6	540	29%	7	429	23%	5	452	24%	6
A556 (north)	1,012	28%	0	1,001	28%	0	982	28%	0	1,013	28%	0
M6 junction 19 northbound off-slip	2,194	65%	15	2,155	64%	14	2,300	68%	15	2,300	68%	15
A556 Chester Road	1,260	36%	7	1,303	37%	7	1,359	39%	7	1,400	40%	7

15.5.18 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.

Local network change in the Pickmere area

15.5.19 As described in Table 15-37 there are a number of changes to the local road network as part of the Proposed Scheme. Figure 15-13 shows the local network changes introduced as part of the Proposed Scheme in the Pickmere area.

Figure 15-13: Junction layout diagram (Pickmere area)



B5391 Pickmere Lane/School Lane realignment

15.5.20 The B5391 Pickmere Lane/School Lane realignment junction will be modified as a result of the Proposed Scheme to accommodate the School Lane realignment. The modifications comprise the widening of School Lane and the associated geometric changes at the junction. Figure 15-13 shows the junction layout introduced as part of the Proposed Scheme. Table 15-43 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-43: B5391 Pickmere Lane/School Lane realignment 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**		
B5391 Pickmere Lane (east) (ahead, left and right)	80	0.02	0	155	0.15	0	84	0.02	0	164	0.16	0
B5391 Pickmere Lane (west) (ahead, left and right)	187	0.00	0	187	0.00	0	197	0.00	0	197	0.00	0
School Lane (ahead and left)	12	0.02	0	71	0.11	0	12	0.02	0	75	0.12	0
School Lane (ahead and right)	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
B5391 Pickmere Lane (east) (ahead, left and right)	188	0.02	0	421	0.43	1	198	0.02	0	445	0.46	1
B5391 Pickmere Lane (west) (ahead, left and right)	66	0.00	0	65	0.00	0	69	0.00	0	69	0.15	0
School Lane (ahead and left)	12	0.02	0	98	0.15	0	12	0.02	0	103	0.00	0
School Lane (ahead and right)	0	0.00	0	0	0.00	0	0	0.00	0	0	0.00	0

15.5.21 The model shows that for this junction, the changes due to operation of the Proposed Scheme in 2038 and 2046 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 and 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.

B5391 Pickmere Lane realignment/Flittogate Lane diversion

15.5.22 The B5391 Pickmere Lane realignment/Flittogate Lane diversion junction will be a new three-arm priority-controlled (give-way) T-junction located approximately 250m north of the existing B5391 Pickmere Lane/Flittogate Lane junction. The new junction is proposed to accommodate the B5391 Pickmere Lane realignment and Flittogate Lane diversion as a result of the Proposed Scheme. Figure 15-13 shows the junction layout introduced as part of the Proposed Scheme. Table 15-44 summarises the performance of the junction as a result of the Proposed Scheme.

Table 15-44: B5391 Pickmere Lane realignment/Flittogate Lane diversion junction 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 Proposed Scheme (proposed layout)**			**2046 Proposed Scheme (proposed layout)**		
B5391 Pickmere Lane realignment (north) (ahead)	143	-	-	152	-	-
B5391 Pickmere Lane realignment (north) (left)	9	0.00	0	9	0.00	0
Flittogate Lane diversion (left)	12	0.02	0	12	0.02	0
Flittogate Lane diversion (right)	67	0.15	0	71	0.16	0
B5391 Pickmere Lane realignment (south) (ahead and right)	246	0.07	0	261	0.08	0
17:00–18:00	**2038 Proposed Scheme (proposed layout)**			**2046 Proposed Scheme (proposed layout)**		
B5391 Pickmere Lane realignment (north) (ahead)	409	-	-	433	-	-
B5391 Pickmere Lane realignment (north) (left)	3	0.00	0	3	0.00	0
Flittogate Lane diversion (left)	12	0.02	0	13	0.02	0
Flittogate Lane diversion (right)	18	0.04	0	20	0.05	0
B5391 Pickmere Lane realignment (south) (ahead and right)	151	0.04	0	160	0.05	0

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

School Lane realignment/Frog Lane realignment

15.5.24 The School Lane realignment/Frog Lane realignment junction will be modified to accommodate the School Lane and Frog Lane realignments as a result of the Proposed Scheme. The existing three-arm priority controlled (give-way) T-junction will be converted to a priority-controlled (give-way) crossroads, where the Frog Lane realignment and School Lane realignment will form the major arms of the junction and Frog Lane and Common Farm access will form the minor arms. Figure 15-13 shows the junction layout introduced as part of the Proposed Scheme. Table 15-45 summarises the performance of the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-45: School Lane/Frog Lane 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)**		
Frog Lane realignment (left, ahead and right)	72	0.00	0	76	0.00	0
Frog Lane (left, ahead and right)	1	0.00	0	1	0.00	0
School Lane realignment (left, ahead and right)	99	0.00	0	104	0.00	0
Farm Access (left, ahead and right)	0	0.00	0	0	0.00	0
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
Frog Lane realignment (left, ahead and right)	102	0.01	0	107	0.01	0
Frog Lane (left, ahead and right)	1	0.00	0	1	0.00	0
School Lane realignment (left, ahead and right)	257	0.00	0	272	0.00	0
Farm Access (left, ahead and right)	0	0.00	0	0	0.00	0

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

Budworth Road/Frog Lane realignment

15.5.26 The Budworth Road/Frog Lane junction will be modified to accommodate the Frog Lane realignment as a result of the Proposed Scheme. The layout of the junction will be modified, with Budworth Road (west) and Frog Lane realignment forming the major arms of a priority-controlled (give-way) T-junction and Budworth Road (east) forming the minor arm. Figure 15-13 shows the junction layout introduced as part of the Proposed Scheme. Table 15-46 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-46: Budworth Road/Frog 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**			**2046 with the Proposed Scheme**		
Budworth Road (west) (ahead and left)	2	0.00	0	3	0.01	0
Budworth Road (east) (left and right)	20	0.03	0	23	0.40	0
Frog Lane realignment (ahead and right)	102	0.04	0	117	0.05	0
17:00–18:00	**2038 with the Proposed Scheme**			**2046 with the Proposed Scheme**		
Budworth Road (west) (ahead and left)	2	0.01	0	2	0.01	0
Budworth Road (east) (left and right)	64	0.10	0	73	0.11	0
Frog Lane realignment (ahead and right)	266	0.13	0	305	0.15	0

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

A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road

15.5.28 The A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. The B5083 Stanley Road is a one-way exit arm from the junction and is therefore not reported in the results. Table 15-47 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-47: A50 Toft Road/A537 Adam's Hill/B5083 Stanley 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**		
A50 Toft Road (north)	1,230	103%	7	1,232	103%	7	1,230	103%	6	1,241	104%	6
A537 Adams Hill	778	92%	10	798	94%	10	844	100%	11	861	101%	11
A50 Toft Road (south)	347	26%	5	379	28%	6	389	29%	6	469	35%	7
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A50 Toft Road (north)	1,002	84%	5	1,051	88%	5	1,021	85%	5	1,086	91%	6
A537 Adams Hill	871	102%	12	871	102%	12	868	102%	12	869	102%	12
A50 Toft Road (south)	782	45%	11	774	45%	11	794	46%	12	744	43%	11

15.5.29 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 hours. However, in the AM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the VoC from 92% in the 2038 future baseline to 94% with the Proposed Scheme in 2038 on the A537 Adams Hill 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 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 84% in the 2038 future baseline to 88% with the Proposed Scheme in 2038 on the A50 Toft Road (north) approach. There will be no change in queue lengths. The assessment shows that this junction operates over capacity in both the future baseline and with the Proposed Scheme in the AM and PM peak hours. 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 future baseline.

15.5.30 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 operation of the Proposed Scheme will not increase the maximum VoC between the 2046 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 85% in the 2046 future baseline to 91% with the Proposed Scheme in 2046 on the A50 Toft Road (north) approach. There will be no change in queue lengths. The assessment shows that this junction operates over capacity in both the future baseline and with the Proposed Scheme in the AM and PM peak hours. 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 over its capacity in the future baseline

A537 Brook Street/B5085 Hollow Lane/Lilybrook Drive

15.5.31 The A537 Brook Street/B5085 Hollow Lane/Lilybrook Drive junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Lilybrook Drive (leading to Brook Lane) approach is a minor arm that is not included within the strategic traffic model. Table 15-48 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-48: A537 Brook Street/B5085 Hollow Lane/Lilybrook 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**		
A537 Brook Street (west)	800	74%	7	835	77%	7	809	75%	7	851	79%	7
B5085 Hollow Lane	524	50%	8	524	50%	8	524	50%	8	525	50%	8
A537 Brook Street (east)	401	37%	3	411	38%	4	473	44%	4	502	46%	4
Lilybrook Drive	-	-	-	-	-	-	-	-	-	-	-	-
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A537 Brook Street (west)	768	93%	11	765	93%	11	771	93%	11	744	96%	11
B5085 Hollow Lane	866	80%	10	868	80%	10	756	70%	9	799	74%	9
A537 Brook Street (east)	333	50%	4	379	77%	5	441	69%	6	550	100%	7
Lilybrook Drive	-	-	-	-	-	-	-	-	-	-	-	-

15.5.32 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 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 both the future baseline and with the Proposed Scheme. The traffic flow will have a negligible impact on the operation of the junction.

15.5.33 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 93% in the 2036 future baseline to 96% with the Proposed Scheme in 2046 on the A537 Brook Street (west) approach, with no change in corresponding queue length. The change in traffic due to operation of the Proposed Scheme will also increase the VoC from 69% in the 2046 future baseline to 100% with the Proposed Scheme in 2046 on the A537 Brook Street (east) approach, with a corresponding change in queue length from six PCU in the future baseline to seven 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 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.

B5085 Mobberley Road/B5085 Hollow Lane

15.5.34 The B5085 Mobberley Road/B5085 Hollow Lane junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Table 15-49 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-49: B5085 Mobberley Road/B5085 Hollow 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**		
B5085 Hollow Lane	503	47%	1	549	51%	2	517	48%	2	557	52%	2
B5085 Mobberley Road (north)	740	43%	0	766	44%	0	774	45%	0	801	46%	0
B5085 Mobberley Road (south)	186	56%	1	197	64%	1	191	68%	1	185	70%	1
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
B5085 Hollow Lane	593	55%	6	621	57%	5	594	55%	6	692	64%	6
B5085 Mobberley Road (north)	618	36%	0	641	37%	0	583	34%	0	621	36%	0
B5085 Mobberley Road (south)	180	96%	4	139	99%	5	174	100%	6	98	68%	5

15.5.35 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 96% in the 2038 future baseline to 99% with the Proposed Scheme in 2038 on the B5085 Mobberley Road (south) approach, with a corresponding change in queue length from four PCU in the future baseline to five PCU. In the AM peak hour, the assessment shows that this junction operates well within capacity in both the 2038 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.

15.5.36 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 decrease the maximum VoC from 100% in the 2046 future baseline to 68% with the Proposed Scheme in 2046 on the B5085 Mobberley Road (south) approach, with a corresponding change in queue length from six PCU in the future baseline to five 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 over capacity in the future baseline and well within 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 a beneficial impact on the operation of the junction in the PM peak hour.

A537 Brook Street/A537 Adam's Hill/B5083 King Street

15.5.37 The A537 Brook Street/A537 Adam's Hill/B5083 King Street junction will be affected by changes in traffic flows as a result of the Proposed Scheme. Table 15-50 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046. The B5083 King Street approach is a minor arm that is not included within the strategic traffic model.

Table 15-50: A537 Brook Street/A537 Adam's Hill/B5083 King 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**		
B5083 King Street (north)	-	-	-	-	-	-	-	-	-	-	-	-
A537 Brook Street (east)	924	85%	3	934	86%	3	996	92%	4	1,023	95%	4
A537 Adam's Hill (west)	800	94%	1	835	98%	1	809	95%	1	852	100%	1
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
B5083 King Street (north)	-	-	-	-	-	-	-	-	-	-	-	-
A537 Brook Street (east)	1,151	106%	9	1,141	106%	9	1,161	107%	7	1,157	107%	8
A537 Adam's Hill (west)	768	90%	1	765	90%	0	771	91%	1	744	87%	0

15.5.38 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 94% in the 2038 future baseline to 98% with the Proposed Scheme in 2038 on the A537 Adams Hill (west) 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 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 the operation of the junction in the PM peak hour.

15.5.39 The change in traffic due to operation of the Proposed Scheme will increase the maximum VoC from 95% in the 2046 future baseline to 100% with the Proposed Scheme in 2046 on the A537 Adams Hill (west) 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 92% in the 2046 future baseline to 95% with the Proposed Scheme in 2046 on the A537 Brook Street (east) approach in the AM peak hour, with no change in corresponding queue length. In the PM peak hour, the change in traffic due to operation in 2046 of the Proposed Scheme will not increase the maximum VoC between the 2046 future baseline and the Proposed Scheme. However, in the PM peak hour, the change in traffic due to operation of the Proposed Scheme will decrease the VoC from 91% in the 2046 future baseline to 87% with the Proposed Scheme in 2046 on the A537 Adams Hill (west) approach. Queue length will decrease from one PCU in the future baseline to no queue with the Proposed Scheme. 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. 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.

A556 Chester Road/A5033 Northwich Road

15.5.40 The A556 Chester Road/A5033 Northwich Road junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Table 15-51 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-51: A556 Chester Road/A5033 Northwich 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**		
A556 Chester Road (north)	1,376	101%	19	1,379	101%	19	1,376	101%	19	1,382	102%	18
A533 Northwich Road	601	38%	9	612	39%	9	616	39%	9	621	40%	9
A556 Chester Road (south)	1,604	81%	18	1,606	81%	18	1,612	81%	19	1,633	82%	19
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A556 Chester Road (north)	1,140	93%	17	1,166	95%	17	1,065	87%	16	1,092	89%	16
A533 Northwich Road	1,264	71%	15	1,278	71%	15	1,287	72%	15	1,305	73%	15
A556 Chester Road (south)	1,027	68%	13	1,055	69%	13	1,074	71%	13	1,095	72%	14

15.5.41 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 maximum VoC will increase from 93% in the 2038 future baseline to 95% with the Proposed Scheme in 2038 on the A556 Chester Road (north) approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour, this 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. 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.

15.5.42 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 87% in the 2046 future baseline to 89% with the Proposed Scheme in 2046 on the A556 Chester Road (north) approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour, this junction operates over capacity in both the future baseline and with the Proposed Scheme. In the PM peak hour, the assessment shows that this 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.

A5033 Northwich Road/Ladies Mile

15.5.43 The A5033 Northwich Road/Ladies Mile junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Table 15-52 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

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Table 15-52: A5033 Northwich Road/Ladies Mile 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**		
Ladies Mile	266	76%	1	270	78%	1	277	76%	1	267	73%	1
A5033 Northwich Road (east)	1,205	41%	0	1,218	41%	0	1,277	43%	0	1,270	43%	0
A5033 Northwich Road (west)	691	64%	1	696	64%	1	688	64%	1	682	63%	1
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
Ladies Mile	180	89%	2	159	92%	2	171	92%	2	155	92%	2
A5033 Northwich Road (east)	1,546	52%	0	1,596	53%	0	1,571	53%	0	1,596	53%	1
A5033 Northwich Road (west)	468	43%	1	479	44%	1	458	42%	1	481	44%	1

15.5.44 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 89% in the 2038 future baseline to 92% with the Proposed Scheme in 2038 on the Ladies Mile approach, with no change in corresponding queue length. The assessment shows that in the AM peak hour, this junction operates 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.

15.5.45 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. In the AM peak hour, the assessment shows that this junction operates within capacity in the future baseline and well 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. The traffic flow will have a negligible impact on the operation of the junction.

A50 Manchester Road/A50 King Edward Road/A5033 Northwich Road/Gaskell Avenue/Canute Place

15.5.46 The A50 Manchester Road/A50 King Edward Road/A5033 Northwich Road/Gaskell Avenue/Canute Place junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Table 15-53 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046. Gaskell Avenue approach is a minor arm that is not included within the strategic traffic model.

Table 15-53: A50 Manchester Road/A50 King Edward Road/A5033 Northwich Road/Gaskell Avenue/Canute Place 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 (existing layout)**			**2038 with the Proposed Scheme**			**2046 future baseline (existing layout)**			**2046 with the Proposed Scheme**		
A50 Manchester Road	578	84%	1	599	87%	2	583	85%	1	617	90%	2
Canute Place	330	43%	0	297	39%	0	320	42%	0	323	42%	0
A50 King Edward Road	997	83%	2	992	83%	2	1,039	87%	2	1,032	86%	2
Gaskell Avenue	-	-	-	-	-	-	-	-	-	-	-	-
A5033 Northwich Road	527	46%	0	543	47%	0	559	49%	0	540	47%	0
17:00–18:00	**2038 future baseline (existing layout)**			**2038 with the Proposed Scheme**			**2046 future baseline (existing layout)**			**2046 with the Proposed Scheme**		
A50 Manchester Road	580	85%	1	610	89%	2	580	85%	1	605	88%	2
Canute Place	223	29%	0	284	37%	0	242	32%	0	288	38%	0
A50 King Edward Road	1,230	103%	9	1,231	103%	9	1,250	105%	9	1,248	104%	9
Gaskell Avenue	-	-	-	-	-	-	-	-	-	-	-	-
A5033 Northwich Road	660	61%	0	666	62%	0	687	65%	0	711	66%	0

15.5.47 The change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 84% in the 2038 future baseline to 87% with the Proposed Scheme in 2038 on the A50 Manchester Road 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 change in traffic due to the operation of the Proposed Scheme will not 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 85% in the 2038 future baseline to 89% with the Proposed Scheme in 2038 on the A50 Manchester Road approach. Queue length will increase from one PCU in the future baseline to two 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.

15.5.48 The change in traffic due to operation of the Proposed Scheme will not 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 VoC from 87% in the 2046 future baseline to 90% with the Proposed Scheme in 2046 on the A50 Manchester Road approach. Queue length will increase from one PCU in the future baseline to two PCU with the Proposed Scheme. 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 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 85% in the 2046 future baseline to 88% with the Proposed Scheme in 2046 on the A50 Manchester Road approach. Queue length will increase from one PCU in the future baseline to two 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.

A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane

15.5.49 Table 15-54 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-54: A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
08:00–09:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A556 Chester Road (north) (left and ahead)	1,034	119%	119	1,065	124%	140	1,015	117%	111	1,022	129%	151
A556 Chester Road (north) (ahead and right)	1,104	119%	128	1,144	124%	152	1,081	117%	118	1,110	129%	165
Tabley Hill Lane (left and ahead)	123	83%	5	222	120%	29	123	84%	6	331	129%	52
A556 Chester Road (south) (left and ahead)	824	121%	102	795	124%	105	815	119%	96	818	131%	127
A556 Chester Road (south) (ahead)	818	121%	100	786	123%	103	808	120%	95	810	131%	126
B5391 Pickmere Lane (left)	422	42%	6	558	54%	9	534	53%	8	675	64%	11
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A556 Chester Road (north) (left and ahead)	711	99%	31	874	116%	91	716	100%	33	815	114%	79
A556 Chester Road (north) (ahead and right)	746	99%	32	909	116%	96	767	100%	34	848	114%	82
Tabley Hill Lane (left and ahead)	137	93%	8	206	113%	22	129	87%	6	204	112%	21

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
A556 Chester Road (south) (left and ahead)	868	101%	42	906	116%	95	875	102%	44	951	116%	99
A556 Chester Road (south) (ahead)	851	100%	39	895	116%	93	867	102%	44	942	116%	99
B5391 Pickmere Lane (left)	155	18%	2	227	24%	3	199	23%	3	296	33%	4

15.5.50 The assessment shows that in the AM and PM peak hours, the junction operates over capacity in both the 2038 future baseline and with the Proposed Scheme.

15.5.51 The change in traffic due to operation of the Proposed Scheme will increase the DoS from 83% in the 2038 future baseline to 120% with the Proposed Scheme in 2038 on the Tabley Hill Lane approach in the AM peak hour, with a corresponding change in queue length from five PCU in the future baseline to 29 PCU. The change in traffic due to operation of the Proposed Scheme will also increase the DoS from 119% in the 2038 future baseline to 124% with the Proposed Scheme in 2038 on the A556 Chester Road (north) (ahead and right) with a corresponding change in queue length from 128 PCU in the future baseline to 152 PCU. The change in traffic due to operation of the Proposed Scheme will also increase the DoS from 121% in the 2038 future baseline to 124% with the Proposed Scheme in 2038 on the on A556 Chester Road (north) (left and ahead) with a corresponding change in queue length from 102 PCU in the future baseline to 105 PCU.

15.5.52 In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the DoS from 99% in the 2038 future baseline to 116% with the Proposed Scheme in 2038 on the A556 Chester Road (north) approaches, with a corresponding change in queue length from 32 PCU in the future baseline to 96 PCU. This will result in queuing that will exceed the length storage capacity of the lane between the A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction and the roundabout circulatory of the M6 junction 19 and will therefore impact the neighbouring junction. However due to limitations of available the modelling software this is not reflected in the with Proposed Scheme results presented for either junction.

15.5.53 The change in traffic due to operation of the Proposed Scheme will also increase the DoS on the Tabley Hill Lane approach from 93% in the 2038 future baseline to 113% with the Proposed Scheme in the PM peak hour, with a corresponding change in queue length from eight PCU in the future baseline to 22 PCU. Finally, the change in traffic due to operation of the Proposed Scheme will increase the DoS on the A556 Chester Road (south) (left and ahead) approach from 100% in the 2038 future baseline to 116% with the Proposed Scheme, with a corresponding change in queue length from 39 PCU in the future baseline to 93 PCU.

15.5.54 As in the 2038 assessment, the assessment shows that in the AM and PM peak hours, the junction operates over capacity in both the 2046 future baseline and with the Proposed Scheme.

15.5.55 The change in traffic due to operation of the Proposed Scheme will increase the DoS from 84% in the 2046 future baseline to 129% with the Proposed Scheme in 2046 on the Tabley Hill Lane approach in the AM peak hour, with a corresponding change in queue length from 6 PCU in the future baseline to 52 PCU. In the PM peak hour, the change in traffic due to operation of the Proposed Scheme will increase the DoS from 87% to 112% on the Tabley Hill Lane approach in the PM peak hour, with a corresponding change in queue length from 6 PCU in the future baseline to 21 PCU. The change in traffic due to operation of the

Proposed Scheme will also increase the DoS on the A556 Chester Road (north) approach from 100% in the 2046 future baseline to 114%, with a corresponding change in queue length from 33 PCU in the future baseline to 79 PCU. Finally, the change in traffic due to operation of the Proposed Scheme will increase the DoS on the A556 Chester Road (south) approach from 102% in the 2046 future baseline to 116% with the Proposed Scheme, with a corresponding change in queue length from 44 PCU in the future baseline to 99 PCU.

15.5.56 The queueing on the A556 Chester Road (north) is forecast to exceed the length storage capacity of the lane between the A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction and the roundabout circulatory of the M6 junction 19 and will therefore impact the neighbouring junction. Due to limitations of the available modelling software this is not reflected in the with Proposed Scheme results presented for either junction.

15.5.57 HS2 Ltd will work with Highways England and Cheshire East to identify opportunities to address the capacity issues at the M6 Junction 19 and the A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction, where reasonably practicable.

A50 Warrington Road realignment/Hoo Green Lane diversion

15.5.58 The A50 Warrington Road realignment/Hoo Green Lane diversion junction is a new three-arm priority controlled (give-way) T-junction as a result of the Proposed Scheme. Figure 15-14 shows the junction layout introduced as part of the Proposed Scheme. Table 15-55 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Figure 15-14: Junction layout diagram (A50 Warrington Road realignment/Hoo Green Lane diversion)

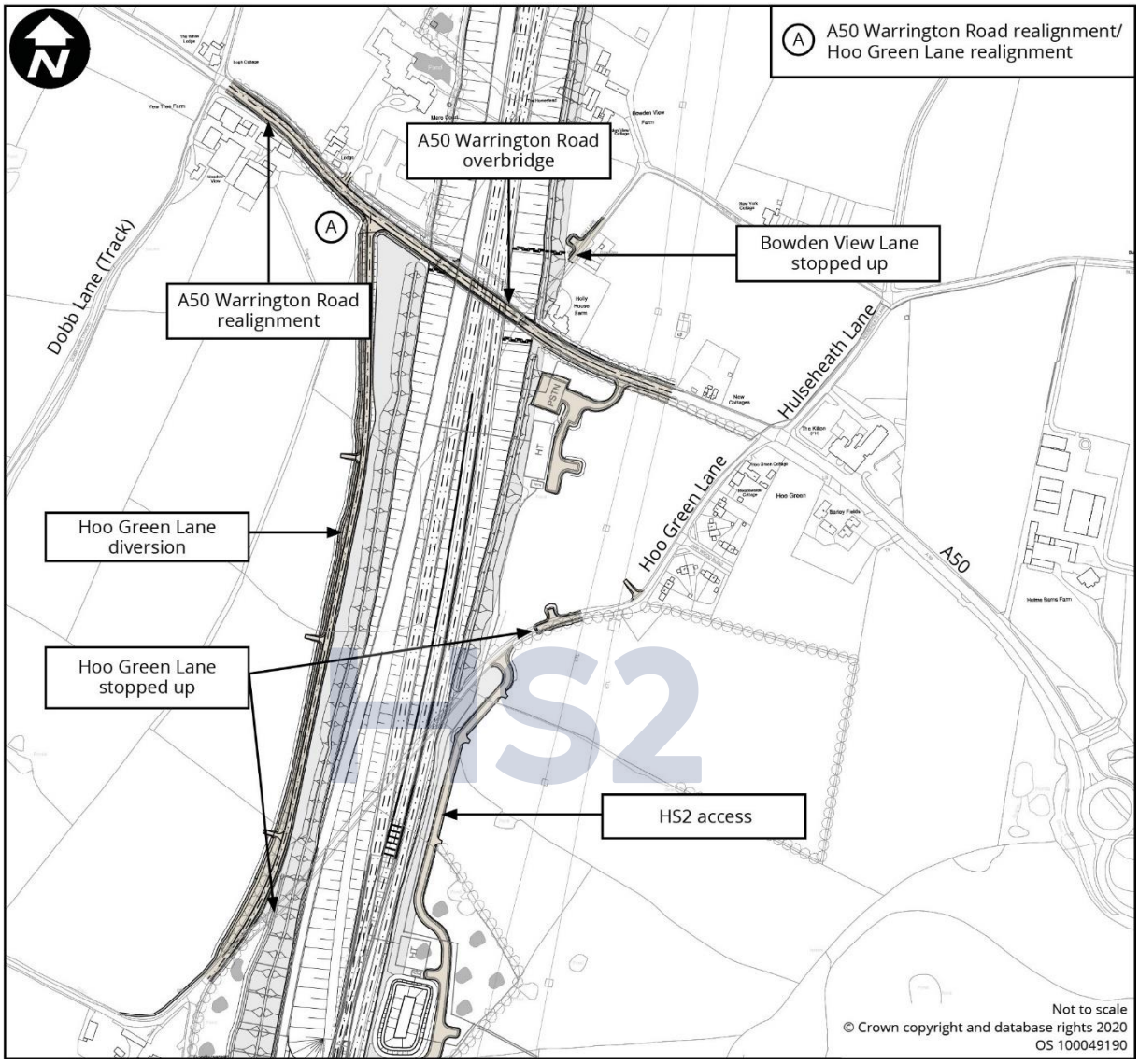

Table 15-55: A50 Warrington Road realignment/Hoo Green Lane diversion junction 2038 and 2046 future baseline and Proposed Scheme junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A50 Warrington Road realignment (east) (ahead)	234	0.00	0	247	0.00	0
Realigned A50 Warrington Road realignment (east) (left)	4	0.00	0	5	0.00	0
Hoo Green Lane diversion (left)	7	0.01	0	7	0.01	0
Hoo Green Lane diversion (right)	14	0.04	0	14	0.04	0

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
A50 Warrington Road realignment (west) (ahead and right)	457	0.02	0	485	0.02	0
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
A50 Warrington Road realignment (east) (ahead)	654	0.00	0	692	0.00	0
Realigned A50 Warrington Road realignment (east) (left)	5	0.00	0	6	0.00	0
Hoo Green Lane diversion (left)	7	0.02	0	7	0.02	0
Hoo Green Lane diversion (right)	3	0.01	0	3	0.01	0
A50 Warrington Road realignment (west) (ahead and right)	272	0.00	0	287	0.00	0

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

Local network change in the Hulseheath area

15.5.60 As described in Table 15-37 there are a number of changes to the local road network as part of the Proposed Scheme. Figure 15-15 shows the local network changes introduced as part of the Proposed Scheme in the Pickmere area.

Peacock Lane realignment/Back Lane diversion

15.5.61 The Peacock Lane realignment/Back Lane diversion junction will be modified to accommodate the construction of the Peacock Lane overbridge and the realignment of Peacock Lane and the diversion of Back Lane as a result of the Proposed Scheme. Table 15-56 and Table 15-57 summarise the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Figure 15-15: Junction layout diagram (Peacock Lane realignment/Back Lane diversion)

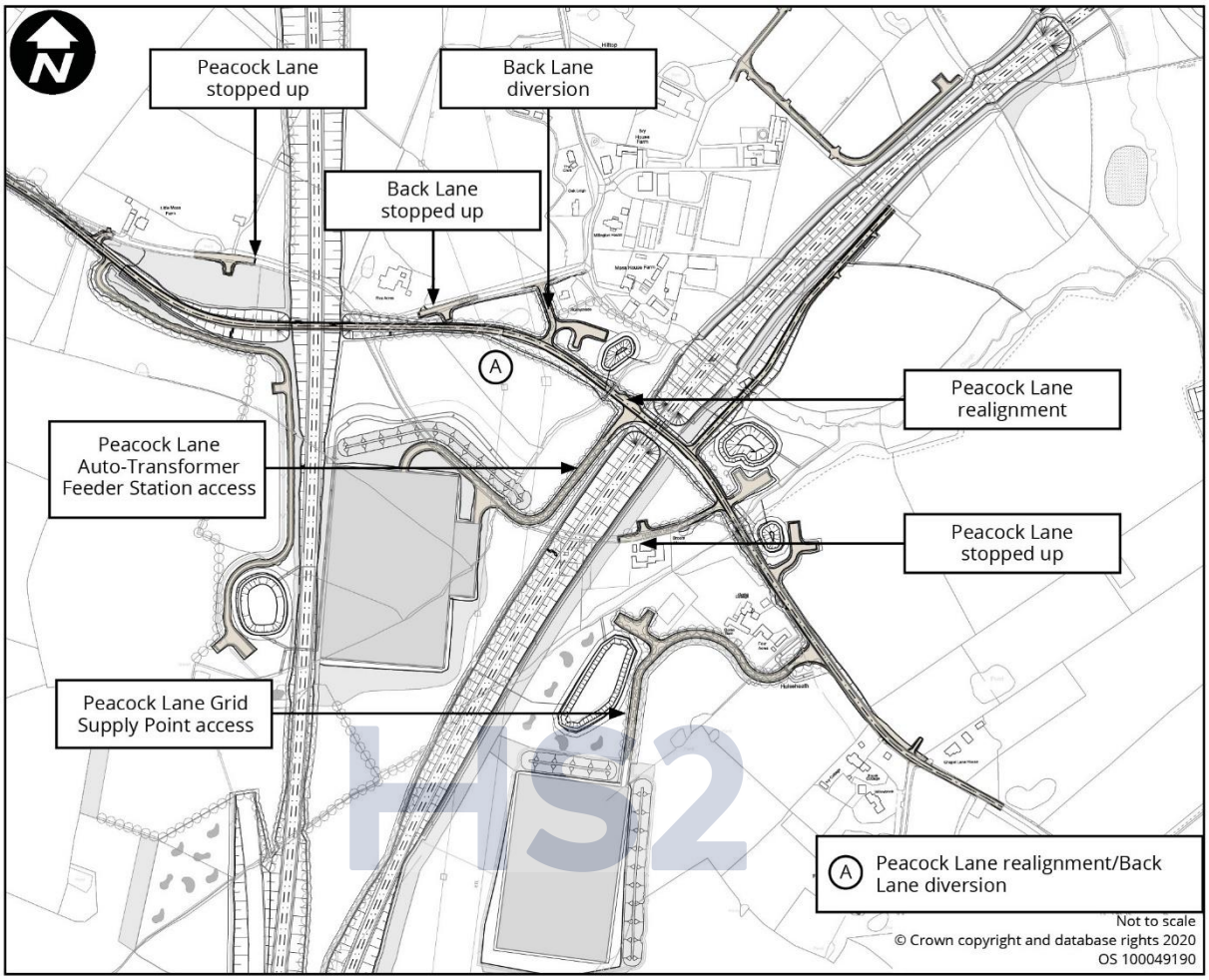

Table 15-56: Peacock Lane/Back Lane junction 2038 and 2046 future baseline junction capacity assessment

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
08:00–09:00	**2038 future baseline (existing layout)**			**2046 future baseline (existing layout)**		
Peacock Lane (west) (ahead)	70	0.00	0	72	0.00	0
Peacock Lane (west) (left)	23	0.00	0	26	0.00	0
Back Lane (left and right)	15	0.03	0	16	0.03	0
Peacock Lane (east) (ahead and right)	70	0.02	0	72	0.02	0
17:00–18:00	**2038 future baseline (existing layout)**			**2046 future baseline (existing layout)**		
Peacock Lane (west) (ahead)	18	0.00	0	19	0.00	0
Peacock Lane (west) (left)	6	0.00	0	10	0.00	0
Back Lane (left and right)	29	0.06	0	30	0.07	0

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
Peacock Lane (east) (ahead and right)	129	0.03	0	137	0.03	0

Table 15-57: Peacock Lane realignment/Back Lane diversion 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)**		
Back Lane diversion (left and right)	12	0.02	0	12	0.02	0
Peacock Lane realignment (east) (ahead and right)	55	0.01	0	55	0.01	0
17:00–18:00	**2038 with the Proposed Scheme (proposed layout)**			**2046 with the Proposed Scheme (proposed layout)**		
Back Lane diversion (left and right)	42	0.09	0	37	0.08	0
Peacock Lane realignment (east) (ahead and right)	18	0.00	0	24	0.00	0

15.5.62 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 RFC and queue lengths in the AM or PM peak hours. The assessment shows that in the AM and PM peak hour the junction operates well within capacity in both the future baseline and with the Proposed Scheme in 2038 and 2046. The traffic flow will have a negligible impact on the operation of the junction in 2038 and 2046.

A50 Tofts Road/Goughs Lane

15.5.63 The A50 Tofts Road/Goughs Lane junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Table 15-58 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-58: A50 Tofts Road/Goughs 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**		
A50 Toft Road (north)	457	33%	0	463	34%	0	499	36%	0	559	41%	0
Goughs Lane	515	92%	2	546	95%	2	536	98%	4	509	100%	5
A50 Toft Road (south)	435	31%	0	444	32%	0	485	35%	0	466	34%	0
17:00–18:00	**2038 future baseline**			**2038 with the Proposed Scheme**			**2046 future baseline**			**2046 with the Proposed Scheme**		
A50 Toft Road (north)	604	44%	0	632	46%	0	641	46%	0	652	47%	0
Goughs Lane	472	107%	6	446	106%	6	462	108%	6	455	108%	6
A50 Toft Road (south)	785	57%	0	774	56%	0	866	63%	0	853	62%	0

15.5.64 The change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 92% in the 2038 future baseline to 95% with the Proposed Scheme in 2038 on the Goughs Lane 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 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 this 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 junction in the PM peak hour.

15.5.65 The change in traffic due to the operation of the Proposed Scheme will increase the maximum VoC from 98% in the 2046 future baseline to 100% with the Proposed Scheme in 2046 on the Goughs Lane approach in the AM peak hour, with a corresponding change in queue length from four PCU in the future baseline to five PCU with the Proposed Scheme. In the PM peak hour, 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. 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. 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.

Tabley Road/Sugar Pit Lane

15.5.66 The Tabley Road/Sugar Pit Lane junction will experience changes in traffic flows associated with the new station located in the adjacent Hulseheath to Manchester Airport area (MA06) as a result of the Proposed Scheme. Table 15-59 summarises the results of the changes to the junction as a result of the Proposed Scheme in both 2038 and 2046.

Table 15-59: Tabley Road/Sugar Pit 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 (existing layout)**			**2038 with the Proposed Scheme**			**2046 future baseline (existing layout)**			**2046 with the Proposed Scheme**		
Tabley Road (west)	132	12%	0	159	15%	0	151	14%	0	166	15%	0
Sugar Pit Lane	88	44%	0	60	30%	0	69	35%	0	53	26%	0
Tabley Road (east)	159	79%	0	149	74%	0	160	80%	0	154	77%	0
17:00–18:00	**2038 future baseline (existing layout)**			**2038 with the Proposed Scheme**			**2046 future baseline (existing layout)**			**2046 with the Proposed Scheme**		
Tabley Road (west)	35	3%	0	21	2%	0	13	1%	0	17	2%	0
Sugar Pit Lane	179	89%	0	186	93%	0	184	92%	0	184	92%	0
Tabley Road (east)	167	83%	0	164	82%	0	166	83%	0	154	77%	0

15.5.67 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 89% in the 2038 future baseline to 93% with the Proposed Scheme on the Sugar Pit Lane approach, with no change in corresponding queue length. 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 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.

15.5.68 The model shows that for this junction, the change in traffic due to operation in the 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 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.

Accidents and safety

15.5.69 The baseline safety analysis identified one location which had experienced an accident cluster over a three-year period.

15.5.70 Whilst there are locations in the MA03 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.

15.5.71 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

15.5.72 There will be a permanent loss of off-street car parking at one location along the route of the Proposed Scheme in the MA03 area. This will be the permanent loss of 28 of the 120 existing parking spaces at the Mere Court Hotel, located on the A50 Warrington Road near Hoo Green.

15.5.73 There will also be a permanent loss of land at Cheshire Showground, which is used for parking during events. Approximately 5.3ha of land, which is used for the parking of cars and cars with horseboxes, will be required, or will be inaccessible, during the operation of the Proposed Scheme. The area affected by the Proposed Scheme during operation is estimated to have a capacity of approximately 2,115 parking spaces.

15.5.74 HS2 Ltd will work with the businesses affected to identify opportunities where reasonably practicable to mitigate effects on parking.

Public transport

Local bus services

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

15.5.76 Of the four roads with bus services identified in the existing baseline only two roads are affected by the Proposed Scheme. The B5391 Pickmere Lane will be diverted onto a new alignment, affecting four journeys per day on route 89. The A50 Warrington Road will be diverted onto a new alignment, affecting six journey per day on route 47. However, the diversions result in a change in journey length of less than 100m and will have no impact on the bus service.

Rail network

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

Public transport interchanges

15.5.78 There are no substantial impacts on public transport interchange facilities in the MA03 area and no committed proposals for public transport interchange facilities in this area.

Pedestrians, cyclists and equestrians

15.5.79 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.

15.5.80 Locations where roads used by pedestrians, cyclists and equestrians are permanently diverted, realigned or reinstated are shown in Table 15-60 and Table 15-61 below. The tables summarise the permanent diversions, realignments and extensions required to PRoW and roads to accommodate the Proposed Scheme.

Table 15-60: MA03 permanent changes to PRoW for non-motorised users

PRoW name	Change in length	Comments
Footpath Tabley Inferior 1/1	Realignment of Footpath Tabley Inferior 1/1, 14m north of its existing alignment for 137m, to cross the route of the Proposed Scheme on its existing alignment through the Footpath Tabley Inferior 1/1 accommodation underbridge, increasing the journey length by 6m.	New underbridge
Footpath Tabley Inferior 3/1	Realignment of Footpath Tabley Inferior 3/1, 384m north of its existing alignment for 667m. The footpath will be realigned along the Cheshire Showground North access diversion, the Cheshire Showground South Access diversion and passing under the route of the Proposed Scheme through the Footpath Pickmere 9/1 underbridge, increasing the length of journey by 866m.	New underbridge
Footpath Pickmere 9/1	Realignment of Footpath Pickmere 9/1, 190m south of its existing alignment for 106m, crossing under the route of the Proposed Scheme through the Footpath Pickmere 9/1 underbridge, increasing the length of journey by 248m.	New underbridge
Restricted Byway Tabley Superior 4/1	Realignment of Restricted Byway Tabley Superior 4/1, up to 20m north of its existing alignment for 245m, crossing under the route of the Proposed Scheme through the Restricted Byway Tabley Superior 4/1 accommodation underbridge, resulting in a change in journey length of less than 10m.	New underbridge
Bridleway Mere 1/1	Realignment of Bridleway Mere 1/1, up to 9m south of its current alignment for 288m, crossing under the route of the Proposed Scheme through the Bridleway Mere 1/1 accommodation underbridge, increasing the length of journey by 10m.	New underbridge
Footpath Agden 4/1	Closure of Footpath Agden 4/1 where it crosses the route of the Proposed Scheme. Users will be diverted along Footpath Agden 1/2, Footpath Agden 1/4, Footpath Agden 2/4 diversion and Footpath	New underbridge

PRoW name	Change in length	Comments
	Agden 3/3, crossing under the route of the Proposed Scheme through the Agden Brook Farm accommodation underbridge, increasing the length of journey by 1.4km.	
Footpath Agden 2/4	Diversion of Footpath Agden 2/4, 40m north of its current alignment for 632m. The footpath will connect with Footpath Agden 3/3 and cross under the route of the Proposed Scheme through the Agden Brook Farm accommodation underbridge increasing the length of journey by 736m.	New underbridge
Footpath Agden 1/2	Closure of a section of Footpath Agden 1/2 where it crosses the route of the Proposed Scheme. Users will be diverted along Footpath Agden 2/4 diversion and the Agden Brook Farm accommodation underbridge, increasing the length of journey by 309m.	New underbridge

Table 15-61: MA03 permanent changes to roads for non-motorised users

PRoW name	Change in length	Comments
Flittogate Lane	Diversion of Flittogate Lane, 260m north of its current alignment for 491m. Pedestrian users will be diverted via the Footpath Pickmere 9/1 realignment, increasing journey length by 60m. Cyclists and equestrians will be diverted along the Flittogate Lane diversion and the B5391 Pickmere Lane realignment, increasing journey length by 372m.	None
Frog Lane	Realignment of Frog Lane, 50m west of its current alignment for 323m, increasing journey length by 30m.	None
School Lane	Realignment of School Lane, comprising carriageway widening from its current width of 4m to 7.3m Widening is required to accommodate diverted traffic associated with the permanent closure of Budworth Road, resulting in a negligible change in journey length	None
Budworth Road	Closure of Budworth Road where it crosses the route of the Proposed Scheme. Pedestrian users will be diverted via the existing Budworth Road, Frog Lane realignment, School Lane realignment, the B5391 Pickmere Lane realignment and Footpath Tabley Superior 8/1, increasing journey length by 2.5km. Cyclists and equestrians will be diverted via the junction of B5391 Pickmere Lane/Budworth Road, avoiding the Footpath Tabley Superior 8/1, resulting in an increase in journey length of 3km.	None
Hoo Green Lane	Diversion of Hoo Green Lane, 450m west of its current alignment for 800m. The diversion will connect with the A50 Warrington Road realignment. The existing Hoo Green Lane will be closed where it crosses the Proposed Scheme, increasing journey lengths by 828m;	None
A50 Warrington Road	Realignment of the A50 Warrington Road, 15m south of its current alignment for 550m, crossing the route of the Proposed Scheme on the A50 Warrington Road overbridge, resulting in a change in journey length of less than 10m.	New overbridge
Bowden View Lane	Closure of Bowden View Lane where it crosses the route of the Proposed Scheme. Users will be diverted via the realigned A50 Warrington Road, Hulseheath Lane and Bowden View Lane, increasing journey length by 752m.	New overbridge
Peacock Lane	Realignment of Peacock Lane over a distance of 1.4km crossing the route of the Proposed Scheme on Peacock Lane overbridge and the	New overbridge

PRoW name	Change in length	Comments
	HS2 Manchester spur beneath Peacock Lane viaduct, resulting in a negligible change in journey length.	
Back Lane	Closure of Back Lane where it crosses the route of the Proposed Scheme. Users will be diverted via the realigned Peacock Lane and Back Lane diversion, resulting in a negligible change in journey length.	New overbridge
Agden Lane	Permanent closure of Agden Lane where it crosses under the route of the Proposed Scheme. Users will be diverted via Moss Lane, the realigned Peacock Lane, Back Lane, Thowler Lane and Agden Lane, increasing journey length by up to 2.2km.	New overbridge

15.5.81 Within these diversions and reinstatements, one of the routes affected becomes shorter (Restricted Byway Tabley Superior 4/1). A further seven changes result in diversions which increase route length up to 61m on PRoW or roads.

15.5.82 Other routes experience larger changes in length of diversion of between 248m and 3km, with the largest increase associated with the Budworth Road closure.

15.5.83 In the case of Flittogate Lane, local access for some users will be retained, avoiding lengthy highways diversion. Using the Footpath Pickmere 9/1 realignment results in a reduced diversion route length of 60m for pedestrians. This compares to the longer diversion of 372m which cyclists and equestrians will have to follow, using the on-road route via Flittogate Lane realignment and B5391 Pickmere Lane realignment, resulting in additional distance of around 372m to these less distance-sensitive users. Similarly, in the case of Budworth Road, using the Footpath Tabley Superior 8/1 results in a reduced diversion route length of 2.5km for pedestrians. This compares to the longer diversion for 3km which cyclists and equestrians will have to follow, using the on-road route via B5391 Pickmere Lane and Budworth Road, resulting in additional distance of around 500m to these less distance-sensitive users.

Waterways and canals

15.5.84 The operation of the Proposed Scheme will not impact upon navigable waterways or canals in the MA03 area.

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