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HS2

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 5: Appendix TR-002-00003

Traffic and transport

MA03: Pickmere to Agden and Hulseheath Transport Assessment Part 2

M279

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Department for Transport

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8.1.1 The study area for traffic and transport includes the settlements of Pickmere, Knutsford, High Legh, Tabley, Mere, Hoo Green, Bucklow Hill and Little Bollington. Local rail services are accessible via Knutsford Station.

8.1.2 Strategic roads potentially affected by the Proposed Scheme in the MA03 area include the M6 (including junction 19 and junction 20), the M56 (including junction 9) and the A556 (between M6 junction 19 and the boundary with the Hulseheath to Manchester Airport area (MA06)).

8.1.3 Local roads in the MA03 area potentially affected by the Proposed Scheme include: the A556 Chester Road; the A556; the A537 Adam's Hill/Brook Street/Chelford Road; the A50 Toft Road/King Edward Road/Manchester Road/Warrington Road/Chester Road/Knutsford Road/Cliff Lane; the A5033 Northwich Road; the A5034 Mereside Road; the A56 Lymm Road/Dunham Road; the B5160 Charcoal Road; the B5391 Pickmere Lane; the B5085 Hollow Lane/Mobberley Road; the B5083 Stanley Road/King Street/Garden Road; the B5569 Chester Road; the B5159 West Lane/High Legh Road; Flittogate Lane; School Lane; Frog Lane; Budworth Road; Old Hall Lane; Hoo Green Lane; Bowden View Lane; Chapel Lane; Peacock Lane; Back Lane; Thowler Lane; Boothbank Lane; Chester Road; Agden Lane; and Ashley Road.

8.1.4 The Mid-Cheshire Line is the only passenger and freight line that runs through the MA03 area.

8.1.5 Major committed changes to the transport network that have been taken into account in the future baseline include:

- M6 junction 19 improvement scheme; and
- A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction improvement scheme.

8.1.6 The M6 junction 19 improvement scheme is promoted by Highways England. The scheme includes the building of a new bridge across the centre of the junction, providing two new dedicated links, one from the M6 northbound off-slip to the A556 northbound and the other from the M6 southbound off-slip to the A556 southbound. The scheme is intended to provide additional capacity to meet the expected increase in traffic using the M6 and the A556, in part, associated with the expansion of Manchester Airport (Airport City) and the development of the Wythenshawe MediPark. At the time of the assessment, the programmed date for completion was September 2021.

8.1.7 The A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction improvement scheme is promoted by Cheshire East Council (CEC). The junction improvement comprises the introduction of signal control on the A556 Chester Road and Tabley Hill Lane approaches, improved facilities for pedestrians and cyclists and formalisation of the central reserve island and are being undertaken in conjunction with the M6 junction 19 improvement scheme. At the time of the assessment, the programmed date for completion was September 2021.

8.1.8 The M6 Junction 19 model has been used to model the majority of the traffic-related impacts across the MA03 area during construction and operation of the Proposed Scheme. 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.

8.1.9 For ease of reference, the existing and future baseline conditions are considered together, for each transport topic.

8.2 Local land uses

8.2.1 The MA03 area is predominantly rural, comprising largely fields, villages and hamlets including Pickmere, High Legh, Tabley, Mere, Hoo Green, Bucklow Hill and Little Bollington. The town of Knutsford is located in the south-east of the MA03 area.

8.2.2 The following sources have been analysed in order to determine the impact of future land uses upon future traffic and transport conditions:

- Local Plan documents (Cheshire West and Chester Council (CWCC) and CEC); Adopted Cheshire East Local Plan Strategy 2010 - 2030 (2017)[1]; Saved policies of the adopted Macclesfield Borough Local Plan (2004-2011)[2]; Adopted Cheshire West and Chester Local Plan (Part One) Strategic Policies (2015)[3]; Adopted Trafford Local Plan: Core Strategy (2012)[4]; Cheshire West and Chester Local Transport Strategy 2017-2030 (2017)[5]; Greater

[1] Cheshire East Council (2017), *Adopted Cheshire East Local Plan Strategy 2010 – 2030*. Available online at: https://www.cheshireeast.gov.uk/pdf/planning/local-plan/local-plan-strategy-web-version-1.pdf.

[2] Cheshire East Council (2004), *Macclesfield Borough Local Plan 2004 – 2011*. Available online at: https://www.cheshireeast.gov.uk/planning/spatial-planning/saved_and_other_policies/macclesfield_local_plan/macclesfield_local_plan.aspx.

[3] Cheshire West and Chester Council (2015), *Cheshire West and Chester Local Plan (Part One) Strategic Policies*. Available online at: http://consult.cheshirewestandchester.gov.uk/portal/cwc_ldf/adopted_cwac_lp/lp_1_adopted?tab=files.

[4] Trafford Metropolitan Borough Council (2012), *Trafford Local Plan: Core Strategy Adopted 2012.* Available online at: https://www.trafford.gov.uk/planning/strategic-planning/docs/core-strategy-adopted-final.pdf.

[5] Cheshire West and Chester Council (2017), *Integrated Transport Strategy 2017-2030*. Available online at: https://www.cheshirewestandchester.gov.uk/residents/transport-and-roads/public-transport/transport-strategy/transport-strategy.aspx.

Manchester Transport Strategy to 2040 (2017)[6]; Cheshire East Local Transport Plan 2019-2024 (2019)[7];

- local planning authority planning portals (to obtain details of recently consented, committed development that is not included in the sources above). This allows the impact of these committed developments to be considered at a very local level (i.e. at roads and junctions in proximity to the committed sites); and
- the M6 Junction 19 model developed by Highways England which is based on agreed committed developments in the MA03 area.

8.2.3 The committed developments identified through this review have been taken into account in the development of the future baseline.

8.3 Baseline surveys

8.3.1 Surveys were undertaken to understand the use of highways and public rights of way (PRoW) within the study area. The survey types and locations are shown in Background Information and Data (BID): Transport Assessment policy and data (BID TR-004-00001)[8].

Traffic surveys

8.3.2 Traffic surveys, comprising junction turning counts (JTC), manual classified counts (MCC), queue length surveys (QLS) and automatic traffic counts (ATC), were undertaken in November 2017, July 2018 and March 2020. These data have been supplemented by existing traffic data from other sources, including from Highways England, CEC and CWCC, Trafford Metropolitan Borough Council (TMBC) and Transport for Greater Manchester (TfGM). Where possible, ATC data were gathered for a two-week period. In total 77 traffic surveys have been undertaken in the MA03 area.

Non-motorised user surveys

8.3.3 Non-motorised user surveys were undertaken on various routes used by pedestrians, cyclists and equestrians in August and September 2017 to establish their nature and usage. The surveys included PRoW and roads that are crossed by the route of the Proposed Scheme and any additional PRoW and roads that may be affected by the Proposed Scheme.

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[6] Greater Manchester Combined Authority (2017), *Greater Manchester Transport Strategy 2040*. Available online at: https://downloads.ctfassets.net/nv7y93idf4jq/7FiejTsJ68eaa8wQw8MiWw/bc4f3a45f6685148eba2acb618c2424f/03._GM_2040_TS_Full.pdf.

[7] Cheshire East Council (2019), *Cheshire East Local Transport Plan 2019-2024*. Available online at: https://moderngov.cheshireeast.gov.uk/ecminutes/documents/s72327/Local%20Transport%20Plan%20-%20app%201.pdf.

[8] High Speed Two Ltd (2022), High Speed Rail (Crewe – Manchester), *Background Information and Data.* Available online at: https://www.gov.uk/government/collections/hs2-phase-2b-crewe-manchester-environmental-statement.

The majority of the PRoW surveys were undertaken during the weekend, at times when recreational use is expected to be highest, but where routes are likely to be used for non-leisure uses such as commuting, surveys were undertaken on a weekday.

8.3.4 The baseline survey report in Transport Assessment policy and data (see BID TR-004-00001) provides a summary of non-motorised user survey data within the MA03 area. For ease of reference the data have been presented for each parish within the area, from south to north.

8.3.5 The surveys indicated that the majority of PRoW crossing the route of the Proposed Scheme are used by pedestrians for recreational purposes.

8.3.6 Compared to the existing baseline, no changes are assumed to non-motorised user provision in the future baseline.

Accident data

8.3.7 Accident[9] data have been sourced from official Department of Transport (DfT) STATS19 statistics[10]. Data for the three year period from July 2016 to June 2019 have been assessed.

8.4 Highway network

Strategic and primary 'A' road network

8.4.1 Two motorways and one primary 'A' road run through the study area: the M6, the M56 and the A556.

8.4.2 The M6 extends from M6 junction 20 (M56 junction 9) in the north-west of the MA03 area to Knutsford in the south-east. The motorway is managed by Highways England. The M6 junction 19 provides access to the A556, in the form of a grade-separated roundabout junction. To the north-west of the M6 junction 19, the motorway incorporates three lanes and a hard shoulder in each direction. To the south of the M6 junction 19, the M6 operates as a 'smart motorway' incorporating four lanes in each direction ('all-lanes running') and variable speed limits. The route of the Proposed Scheme intersects the M6 approximately 1.5km to the north-west of the M6 junction 19.

8.4.3 The M56 extends along the northern boundary of the MA03 area on an east to west alignment, between the M56 junction 9 and Booth Bank respectively. The national speed limit applies on the M56 which has three lanes and a hard shoulder. The M56 junction 9 in the north-west of the MA03 area is the only grade-separated junction along the M56 in the

[9] The term accident in this report refers to injury related collisions reported to/recorded by the police. This data, known as STATS19, relate only to personal injury accidents on public roads that are reported to the police, and subsequently recorded, using the STATS19 accident reporting form.

[10] Department for Transport (2021), *STATS19 Road Safety Data July 2016 - June 2019*. Available online at: https://www.gov.uk/government/collections/road-accidents-and-safety-statistics.

MA03 area. The route of the Proposed Scheme intersects the M56 approximately 1.6km to the north-east of High Legh.

8.4.4 The A556 extends on a south to north alignment, between Tabley Mere and Bucklow Hill respectively. To the south of the M6 junction 19, the A556 Chester Road is a four-lane single carriageway and is managed by CEC. Traffic is subject to a 60mph speed limit.

8.4.5 The section of the A556 to the north of the M6 junction 19 forms part of the strategic road network and is managed by Highways England. This section of the A556 is a dual carriageway, with two lanes in each direction. Traffic is subject to a 60mph speed limit. There are two grade-separated junctions: the A556/Old Hall Lane junction and the A556/A50 Knutsford Road junction. The route of the Proposed Scheme does not intersect the A556 within the MA03 area.

Local road network

8.4.6 The key local roads in the MA03 area, including roads likely to be affected by the Proposed Scheme, are:

- A5034 Mereside Road, which follows a south to north alignment and connects the A50 Manchester Road in the south and the A556 Chester Road in the north. The A5034 Mereside Road is a single carriageway road with a 40mph speed limit. The road does not cross the route of the Proposed Scheme;
- A50 Toft Road/King Edward Road/Manchester Road/Knutsford Road/Warrington Road/Cliff Lane, which follows a north-west to south-east alignment and connects the settlements of Sworton Heath and High Legh in the north-west and Knutsford in the south-east. The A50 is a single carriageway road with a 60mph speed limit and reduced speeds in built up areas. The road crosses the route of the Proposed Scheme approximately 1.5km to the south-east of High Legh;
- A56 Lymm Road/Dunham Road, which follows a west to east alignment and connects the settlements of Agden in the west and Little Bollington in the east. The A56 Lymm Road/Dunham Road is a single carriageway road with a 60mph speed limit and reduced speeds in built up areas. The road crosses the HS2 West Coast Main Line (WCML) connection approximately 1km to the east of Broomedge;
- B5391 Pickmere Lane, which follows a south-west to north-east alignment and connects the settlements of Pickmere in the south-west and Tabley in the north-east. The B5391 Pickmere Lane is a single carriageway road with a 60mph speed limit and reduced speeds in built up areas. The road crosses the route of the Proposed Scheme approximately 1.8km to the north-east of Pickmere;
- B5569 Chester Road, which follows a south to north alignment and connects the settlements of Over Tabley in the south and Bucklow Hill in the north. The B5569 Chester Road is a single carriageway road with a 40mph speed limit and reduced speeds in built up areas. The road does not cross the route of the Proposed Scheme; and

- B5159 West Lane/High Legh Road, which follows a south to north alignment and connects the settlements of High Legh in the south and Broomedge in the north. The B5159 West Lane is a single carriageway road with a 60mph speed limit and reduced speeds in built up areas. The road does not cross the route of the Proposed Scheme.

8.4.7 There are a number of other roads which cross the route of or may be affected by the Proposed Scheme, or which are used as construction routes and are therefore potentially affected by the Proposed Scheme. These are:

- Flittogate Lane;
- School Lane;
- Frog Lane, between Park Lane and Budworth Road;
- Budworth Road, between Colliers Lane and the B5391 Pickmere Lane;
- Colliers Lane;
- Old Hall Lane;
- Winterbottom Lane;
- Hoo Green Lane;
- Chapel Lane;
- Peacock Lane;
- Back Lane;
- Thowler Lane;
- Agden Lane, between Thowler Lane and Agden Hall Farm; and
- Ashley Road, between the A5034 Mereside Road and the boundary with the Hulseheath to Manchester Airport area (MA06).

Growth in traffic

8.4.8 In considering the future baseline, traffic will vary across MA03. The use of strategic transport models[11], TEMPro and local traffic models, with further adjustment for known developments, means that forecast traffic growth is not uniform on all links and at junctions. Notwithstanding this, it is possible to produce an overall average growth factor for links within MA03 calculated using the total link flows for each future year. These illustrative overall growth factors are summarised in Table 8-1.

Table 8-1: MA03 traffic growth summary

Period years	AM peak hour	PM peak hour
2018-2030	7%	4%
2018-2038	12%	8%
2018-2046	18%	13%

[11] M6 Junction 19 model.

Baseline traffic flows

8.4.9 The 2018 baseline traffic flows derived from the M6 Junction 19 model for strategic, primary 'A' roads and local roads for the MA03 area are summarised in Table 8-2 for the weekday AM (08:00–09:00) and weekday PM (17:00–18:00) peak hours and in Table 8-3 for Annual Average Daily Traffic (AADT). Due to the simplified way in which the road network is represented in the strategic transport models, the use of some local roads may not be precisely reflected in the baseline traffic flows, however, this is not expected to change the conclusions of the assessment.

Table 8-2: MA03 strategic and local road network 2018 AM and PM peak hour baseline flows (vehicles)

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) – (heavy goods vehicle) HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	1,378	94	959	50
	SB	1,221	107	1,533	44
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	333	32	202	6
	WB	290	20	308	12
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	195	2	222	0
	SB	388	2	467	1
B5391 Pickmere Lane (between Park Lane and Budworth Road)	NB	134	10	65	1
	SB	85	4	434	1
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	465	20	505	4
	WB	872	18	1,209	9
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	1,167	103	978	57
	SB	1,139	113	1,053	46
Tatton Street (between A50 King Edward Road and B5083 Garden Road)**	NB	0	0	0	0
	SB	295	0	140	0
B5083 Garden Road (between Tatton Street and A50 Manchester Road)**	EB	0	0	0	0
	WB	85	15	129	3
Tabley Road (between Ladies Mile and A50 Manchester Road)	EB	96	0	164	0
	WB	194	2	197	0
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	EB	39	1	42	0
	WB	69	2	70	1
	EB	163	11	95	1

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) – (heavy goods vehicle) HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	WB	144	5	491	2
Budworth Road (between B5391 Pickmore Lane and Cann Lane)	EB	21	0	14	0
	WB	17	1	56	0
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	83	0	67	0
	WB	4	1	39	0
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	83	0	67	0
	WB	4	1	39	0
A556 (between M6 junction 19 and Old Hall Lane)	NB	1,900	201	1,819	102
	SB	1,705	199	2,127	94
Old Hall Lane (between Budworth Road and A556 northbound off-slip)**	NB	3	0	0	0
	SB	0	0	3	0
Old Hall Lane (between A556 southbound on-slip and B5569 Chester Road)	EB	100	3	136	3
	WB	83	6	93	2
Old Hall Lane (between A556 northbound off-slip and A556 southbound on-slip)**	EB	100	3	136	3
	WB	0	0	3	0
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	100	3	136	3
	SB	83	6	93	2
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	341	15	251	4
	WB	368	15	798	9
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	172	4	112	2
	SB	270	13	231	2
Clamhunger Lane (between A5034 Mereside Road and A50 Warrington Road)	NB	67	1	25	0
	SB	37	1	58	2
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	198	5	168	2
	SB	566	13	360	2
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	408	16	276	5
	WB	406	16	856	11
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)**	NB	0	0	65	0
	SB	526	11	296	2
	NB	423	18	952	14

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) – (heavy goods vehicle) HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	SB	408	20	330	6
A556 (between B5569 Old Hall Lane and A50 Knutsford Road)	NB	1,804	198	1,684	99
	SB	1,622	194	2,038	93
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	423	18	952	14
	SB	408	20	330	6
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	251	18	631	14
	SB	464	22	368	6
A556 (between A50 Knutsford Road and M56 junction 8)	NB	2,030	202	2,042	100
	SB	1,622	194	2,038	93
A50 Knutsford Road/Warrington Road (between Hoo Green Lane and Wrenshot Lane)	EB	520	21	292	5
	WB	241	14	657	15
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	NB	37	1	24	0
	SB	79	10	145	2
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	477	18	273	5
	WB	238	14	648	14
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)**	NB	3	0	9	1
	SB	43	3	20	1
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	EB	616	25	530	9
	WB	380	16	821	14
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	NB	63	0	98	0
	SB	83	0	30	1
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	545	22	431	8
	WB	295	17	876	19
Chapel Lane/Peacock Lane (between Hulseheath Lane and Back Lane)	NB	7	1	10	1
	SB	11	1	13	1
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	118	2	93	0
	WB	57	3	243	2
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	239	2	258	0
	SB	226	6	413	6
	NB	26	1	31	0

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) – (heavy goods vehicle) HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
Heath Lane (between Swineyard Lane and A50 Warrington Road)	SB	18	1	71	1
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	57	0	50	1
	WB	57	0	34	0
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	429	20	338	8
	WB	241	14	633	17
Broadoak Lane (between Wrenshot Lane and Peacock Lane)	NB	3	0	9	1
	SB	12	1	17	0
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	429	19	338	7
	WB	225	14	577	15
Peacock Lane (between Back Lane and Broadoak Lane)	EB	22	1	52	1
	WB	44	3	14	1
Back Lane/Thowler Lane (between Peacock Lane and Agden Lane)	NB	9	0	7	0
	SB	7	0	5	0
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	447	20	409	8
	WB	251	15	609	15
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	327	4	316	1
	SB	174	4	317	1
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	12	1	17	0
	WB	3	0	9	1
Mag Lane (between Crouchley Lane and A50 Warrington Road)**	NB	16	0	56	2
	SB	0	0	0	0
Boothbank Lane (between Agden Lane and Millington Lane)	EB	32	0	14	0
	WB	27	0	28	0
B5159 West Lane (between Peacock Lane and Beechtreee Lane)	NB	330	4	325	2
	SB	186	5	334	1
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	27	0	93	0
	SB	32	0	14	0
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)**	EB	0	0	0	0
	WB	0	0	15	0
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	30	0	23	0
	SB	24	1	15	0
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	EB	655	5	285	2
	WB	263	5	667	3
	EB	625	5	262	1

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) – (heavy goods vehicle) HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	WB	239	4	652	3
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	503	8	492	4
	WB	553	12	695	10
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	172	3	161	3
	WB	553	12	695	10
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	172	3	198	3
	WB	179	4	327	8

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

*** 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 8-3: MA03 strategic and local road network 2018 AADT baseline flows (vehicles)

Location	Direction	Annual Average Daily Traffic (AADT) - all vehicles	Annual Average Daily Traffic (AADT) - HGV
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	16,100	992
	SB	18,949	1,037
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	3,692	260
	WB	4,120	220
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	2,874	18
	SB	5,881	23
B5391 Pickmere Lane (between Park Lane and Budworth Road)	NB	1,375	78
	SB	3,563	34
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	6,676	163
	WB	14,313	185
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	14,778	1,099
	SB	15,089	1,092
Tatton Street (between A50 King Edward Road and B5083 Garden Road)**	NB	1	0
	SB	3,000	0
B5083 Garden Road (between Tatton Street and A50 Manchester Road)**	EB	0	0
	WB	1,472	126
Tabley Road (between Ladies Mile and A50 Manchester Road)	EB	1,787	0
	WB	2,691	13
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	EB	560	12
	WB	955	15
	EB	1,778	87

Location	Direction	Annual Average Daily Traffic (AADT) - all vehicles	Annual Average Daily Traffic (AADT) - HGV
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	WB	4,360	46
Budworth Road (between B5391 Pickmore Lane and Cann Lane)	EB	245	0
	WB	502	11
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	1,033	0
	WB	292	12
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	1,033	0
	WB	292	12
A556 (between M6 junction 19 and Old Hall Lane)	NB	25,604	2,093
	SB	26,368	2,024
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	21	1
	SB	23	0
Old Hall Lane (between A556 southbound on-slip and B5569 Chester Road)	EB	1,617	46
	WB	1,208	50
Old Hall Lane (between A556 northbound off-slip and A556 southbound on-slip)**	EB	1,617	46
	WB	24	0
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	1,617	46
	SB	1,208	50
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	4,075	132
	WB	8,016	169
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	1,957	42
	SB	3,452	107
Clamhunger Lane (between A5034 Mereside Road and A50 Warrington Road)	NB	635	11
	SB	656	20
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	2,521	49
	SB	6,377	107
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	4,710	143
	WB	8,672	189
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)	NB	445	0
	SB	5,667	85
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	9,450	223
	SB	5,079	181
A556 (between B5569 Old Hall Lane and A50 Knutsford Road)	NB	24,009	2,049
	SB	25,185	1,975
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	9,450	223
	SB	5,078	181
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	6,059	219
	SB	5,725	196

Location	Direction	Annual Average Daily Traffic (AADT) - all vehicles	Annual Average Daily Traffic (AADT) - HGV
A556 (between A50 Knutsford Road and M56 junction 8)	NB	28,029	2,081
	SB	25,185	1,975
A50 Knutsford Road/Warrington Road (between Hoo Green Lane and Wrenshot Lane)	EB	5,597	184
	WB	6,174	199
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	NB	420	10
	SB	1,543	86
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	5,167	156
	WB	6,090	188
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)**	NB	84	11
	SB	430	27
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	EB	7,893	232
	WB	8,256	209
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	NB	1,107	3
	SB	778	7
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	6,720	206
	WB	8,051	245
Chapel Lane/Peacock Lane (between Hulseheath Lane and Back Lane)	NB	110	11
	SB	136	9
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	1,451	17
	WB	2,063	34
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	3,422	18
	SB	4,391	80
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	397	12
	SB	614	10
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	736	7
	WB	625	0
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	5,285	188
	WB	6,003	212
Broadoak Lane (between Wrenshot Lane and Peacock Lane)	NB	84	11
	SB	197	7
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	5,281	184
	WB	5,512	195
Peacock Lane (between Back Lane and Broadoak Lane)	EB	231	10
	WB	278	17
Back Lane/Thowler Lane (between Peacock Lane and Agden Lane)	NB	83	3
	SB	66	2
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	5,895	194
	WB	5,909	207

Location	Direction	Annual Average Daily Traffic (AADT) - all vehicles	Annual Average Daily Traffic (AADT) - HGV
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	4,426	30
	SB	3,377	37
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	197	7
	WB	84	11
Mag Lane (between Crouchley Lane and A50 Warrington Road)**	NB	491	17
	SB	4	4
Boothbank Lane (between Agden Lane and Millington Lane)	EB	320	0
	WB	377	0
B5159 West Lane (between Peacock Lane and Beechtreee Lane)	NB	4,510	41
	SB	3,574	44
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	822	0
	SB	319	0
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)**	EB	0	0
	WB	101	0
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	364	6
	SB	267	11
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	EB	6,476	48
	WB	6,394	60
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	6,112	42
	WB	6,127	49
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	6,550	76
	WB	8,220	141
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	2,197	39
	WB	8,220	141
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	2,439	39
	WB	3,339	77

8.4.10 Table 8-4, Table 8-5 and Table 8-6 summarise the 2030, 2038 and 2046 future baseline traffic flows for the AM (08:00–09:00), PM (17:00–18:00) and AADT respectively. Flows are presented for strategic and local roads where it is considered that there is the potential for a substantial impact either during construction or through the operation of the Proposed Scheme. 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 future baseline traffic flows, however, this is not expected to change the conclusions of the assessment.

Table 8-4: MA03 strategic and local road network future baseline flows AM peak hour 08:00-09:00

Location	Direction	2030 all vehicles	2030 HGV	2038 all vehicles	2038 HGV	2046 all vehicles	2046 HGV
	NB	1,416	82	1,443	97	1,449	99

Location	Direction	2030 all vehicles	2030 HGV	2038 all vehicles	2038 HGV	2046 all vehicles	2046 HGV
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	SB	1,275	89	1,284	90	1,312	76
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	306	21	263	22	256	23
	WB	334	27	342	38	373	70
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	185	1	180	1	185	1
	SB	460	4	529	4	563	3
B5391 Pickmere Lane (between Park Lane and Budworth Road)	NB	204	12	330	12	412	13
	SB	177	4	202	8	140	8
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	465	20	485	23	514	25
	WB	1,021	2	1,083	12	1,102	39
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	1,215	109	1,232	134	1,199	165
	SB	1,213	102	1,214	102	1,230	89
Tatton Street (between A50 King Edward Road and B5083 Garden Road)	NB	0	0	0	0	0	0
	SB	319	1	321	1	312	1
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0	0	0	0
	WB	84	4	96	4	110	4
Tabley Road (between Ladies Mile and A50 Manchester Road)	EB	127	0	139	0	139	0
	WB	195	2	196	1	196	1
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	EB	40	0	41	0	41	1
	WB	77	2	76	1	72	1
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	EB	232	12	359	12	441	13
	WB	243	6	266	8	200	8
Budworth Road (between B5391 Pickmore Lane and Cann Lane)	EB	22	0	23	0	24	0
	WB	24	1	23	0	19	0
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	114	0	129	0	148	0
	WB	24	2	27	0	36	0
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	114	0	129	0	148	0
	WB	24	2	27	0	36	0
A556 (between M6 junction 19 and Old Hall Lane)	NB	2,677	256	2,738	270	2,739	270
	SB	2,035	233	2,255	241	2,361	234
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	4	1	5	1	7	1
	SB	5	0	5	0	5	0
Old Hall Lane (between A556 southbound on-slip and B5569 Chester Road)	EB	206	7	200	7	205	7
	WB	162	9	159	10	175	11
	EB	206	7	200	7	205	7

Location	Direction	2030 all vehicles	2030 HGV	2038 all vehicles	2038 HGV	2046 all vehicles	2046 HGV
Old Hall Lane (between A556 northbound off-slip and A556 southbound on-slip)	WB	5	0	5	0	5	0
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	206	7	200	7	205	7
	SB	162	9	159	10	175	11
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	381	5	412	6	431	6
	WB	292	3	309	4	345	5
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	148	3	159	3	170	3
	SB	216	10	180	10	154	10
Clamhunger Lane (between A5034 Mereside Road and A50 Warrington Road)	NB	174	3	173	4	179	4
	SB	41	3	43	3	44	3
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	185	4	200	4	202	4
	SB	535	11	500	11	465	11
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	555	8	585	10	610	10
	WB	333	6	352	7	389	9
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)	NB	0	0	0	0	0	0
	SB	495	10	444	10	395	10
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	283	8	302	9	327	10
	SB	462	12	494	13	519	14
A556 (between B5569 Old Hall Lane and A50 Knutsford Road)	NB	2,476	249	2,543	264	2,542	264
	SB	1,878	223	2,101	231	2,192	223
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	283	8	302	9	327	10
	SB	462	12	494	13	519	14
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	202	7	223	8	247	9
	SB	484	14	515	15	546	16
A556 (between A50 Knutsford Road and M56 junction 8)	NB	2,578	253	2,641	267	2,648	267
	SB	1,878	223	2,101	231	2,192	223
A50 Knutsford Road/Warrington Road (between Hoo Green Lane and Wrenshot Lane)	EB	546	13	574	14	600	15
	WB	153	3	174	4	195	4
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	NB	40	1	43	1	45	2
	SB	87	12	92	12	96	13
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	494	8	520	9	538	10
	WB	153	2	174	3	194	4
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)	NB	1	1	1	1	1	1
	SB	51	5	53	5	61	5

Location	Direction	2030 all vehicles	2030 HGV	2038 all vehicles	2038 HGV	2046 all vehicles	2046 HGV
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	EB	647	13	675	11	697	11
	WB	322	4	336	6	382	6
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	NB	69	0	73	0	76	1
	SB	92	0	97	0	101	0
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	539	11	558	9	565	9
	WB	177	5	203	7	224	7
Chapel Lane/Peacock Lane (between Hulseheath Lane and Back Lane)	NB	8	1	8	1	9	1
	SB	13	1	13	1	14	1
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	111	2	112	2	117	3
	WB	47	3	49	5	48	5
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	265	2	253	3	274	3
	SB	228	5	236	5	248	6
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	33	2	35	2	32	2
	SB	37	1	41	1	46	1
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	63	0	67	0	70	0
	WB	63	0	66	0	69	0
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	428	9	446	7	451	7
	WB	130	2	154	2	179	2
Broadoak Lane (between Wrenshot Lane and Peacock Lane)	NB	1	1	1	1	1	1
	SB	40	1	42	1	46	2
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	428	9	446	7	451	7
	WB	101	2	123	2	140	2
Peacock Lane (between Back Lane and Broadoak Lane)	EB	24	1	26	1	27	1
	WB	48	3	51	3	53	3
Back Lane/Thowler Lane (between Peacock Lane and Agden Lane)	NB	10	0	10	0	11	0
	SB	8	0	8	0	9	0
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	465	10	487	7	497	8
	WB	134	3	158	3	172	4
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	382	4	372	4	389	4
	SB	182	4	189	4	194	5
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	40	1	42	1	46	2
	WB	1	1	1	1	1	1
Mag Lane (between Crouchley Lane and A50 Warrington Road)	NB	29	0	31	0	40	0
	SB	0	0	0	0	0	0
Boothbank Lane (between Agden Lane and Millington Lane)	EB	45	0	63	0	72	0
	WB	64	0	67	0	71	0
B5159 West Lane (between Peacock Lane and Beechtreee Lane)	NB	382	5	373	5	390	5
	SB	222	6	231	6	240	6

Location	Direction	2030 all vehicles	2030 HGV	2038 all vehicles	2038 HGV	2046 all vehicles	2046 HGV
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	64	0	67	0	71	0
	SB	45	0	63	0	72	0
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)	EB	0	0	0	0	0	0
	WB	0	0	0	0	0	0
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	38	0	38	0	39	1
	SB	30	1	33	1	34	1
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	EB	680	5	692	6	695	6
	WB	276	6	272	6	274	6
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	642	5	654	5	656	5
	WB	245	5	239	5	240	5
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	502	7	516	7	519	7
	WB	620	12	632	13	676	13
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	192	2	197	2	208	2
	WB	620	12	632	13	676	13
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	192	2	197	2	209	3
	WB	205	4	196	4	190	4

Table 8-5: MA03 strategic and local road network future baseline flows PM peak hour 17:00-18:00

Location	Direction	PM peak hour 2030 all vehicles	PM peak hour 2030 HGV	PM peak hour 2038 all vehicles	PM peak hour 2038 HGV	PM peak hour 2046 all vehicles	PM peak hour 2046 HGV
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	930	46	967	47	1,011	49
	SB	1,527	44	1,505	46	1,444	45
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	200	9	202	16	196	13
	WB	303	18	307	20	417	19
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	212	0	179	0	174	0
	SB	465	3	443	3	534	4
B5391 Pickmere Lane (between Park Lane and Budworth Road)	NB	54	1	73	1	86	1
	SB	382	1	378	1	365	1
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	608	7	652	7	683	4
	WB	1,163	7	1,350	10	1,362	8
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	986	60	1,123	69	1,197	70
	SB	1,107	50	1,076	51	1,007	45
Tatton Street (between A50 King Edward Road and B5083 Garden Road)	NB	1	0	3	0	60	0
	SB	121	0	222	1	242	1

Location	Direction	PM peak hour 2030 all vehicles	PM peak hour 2030 HGV	PM peak hour 2038 all vehicles	PM peak hour 2038 HGV	PM peak hour 2046 all vehicles	PM peak hour 2046 HGV
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0	0	0	0
	WB	104	3	109	3	116	3
Tabley Road (between Ladies Mile and A50 Manchester Road)	EB	165	0	163	0	166	0
	WB	183	0	85	0	71	0
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	EB	52	1	52	1	51	1
	WB	67	0	69	0	69	0
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	EB	86	2	111	2	125	2
	WB	430	1	433	1	422	2
Budworth Road (between B5391 Pickmore Lane and Cann Lane)	EB	15	0	21	0	23	0
	WB	56	0	56	0	55	0
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	35	0	35	0	13	0
	WB	82	0	83	0	83	0
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	35	0	35	0	13	0
	WB	82	0	83	0	83	0
A556 (between M6 junction 19 and Old Hall Lane)	NB	2,271	120	2,448	123	2,573	154
	SB	2,268	105	2,604	120	2,747	120
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	0	0	0	0	3	0
	SB	12	0	5	0	2	0
Old Hall Lane (between A556 southbound on-slip and B5569 Chester Road)	EB	137	4	139	4	142	4
	WB	103	3	385	5	371	5
Old Hall Lane (between A556 northbound off-slip and A556 southbound on-slip)	EB	137	4	139	4	142	4
	WB	11	0	5	0	2	0
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	137	4	139	4	142	4
	SB	103	3	385	5	369	5
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	285	5	280	12	290	12
	WB	891	9	850	4	870	4
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	140	2	168	2	165	2
	SB	224	2	110	1	96	1
Clamhunger Lane (between A5034 Mereside Road and A50 Warrington Road)	NB	30	0	33	0	36	1
	SB	68	2	127	3	121	3
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	189	2	220	2	271	2
	SB	300	2	295	2	303	2
	EB	316	5	312	13	326	13

Location	Direction	PM peak hour 2030 all vehicles	PM peak hour 2030 HGV	PM peak hour 2038 all vehicles	PM peak hour 2038 HGV	PM peak hour 2046 all vehicles	PM peak hour 2046 HGV
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	WB	959	12	977	6	991	6
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)	NB	74	0	93	0	117	0
	SB	214	2	185	2	178	2
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	1,050	14	802	8	825	8
	SB	373	7	389	15	401	16
A556 (between B5569 Old Hall Lane and A50 Knutsford Road)	NB	2,133	116	2,309	119	2,435	150
	SB	2,176	103	2,224	114	2,379	114
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	1,050	14	802	8	825	8
	SB	373	7	389	15	401	16
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	663	14	397	8	402	8
	SB	407	7	422	16	428	16
A556 (between A50 Knutsford Road and M56 junction 8)	NB	2,552	118	2,746	121	2,881	152
	SB	2,176	103	2,224	114	2,379	114
A50 Knutsford Road/Warrington Road (between Hoo Green Lane and Wrenshot Lane)	EB	333	6	320	13	327	13
	WB	701	15	330	7	333	7
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	NB	27	0	29	0	30	0
	SB	161	2	171	2	179	2
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	319	5	318	12	324	12
	WB	695	14	327	5	331	5
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)	NB	6	1	3	1	2	1
	SB	13	1	3	1	2	1
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	EB	519	8	512	15	522	15
	WB	883	15	476	6	475	6
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	NB	109	0	115	0	121	0
	SB	33	1	35	1	36	1
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	391	7	391	14	387	14
	WB	894	19	467	9	474	10
Chapel Lane/Peacock Lane (between Hulseheath Lane and Back Lane)	NB	11	1	11	1	12	1
	SB	14	1	15	1	16	1
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	71	0	106	1	110	1
	WB	230	1	239	2	243	2

Location	Direction	PM peak hour 2030 all vehicles	PM peak hour 2030 HGV	PM peak hour 2038 all vehicles	PM peak hour 2038 HGV	PM peak hour 2046 all vehicles	PM peak hour 2046 HGV
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	258	0	247	0	246	0
	SB	397	6	359	4	380	6
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	61	0	48	0	49	1
	SB	66	1	64	1	65	1
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	55	1	58	1	61	1
	WB	38	0	40	0	42	0
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	320	6	286	13	287	13
	WB	665	17	229	7	241	9
Broadoak Lane (between Wrenshot Lane and Peacock Lane)	NB	6	1	3	1	2	1
	SB	10	0	2	0	2	0
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	320	6	286	13	286	13
	WB	608	15	172	5	174	6
Peacock Lane (between Back Lane and Broadoak Lane)	EB	57	2	61	2	63	2
	WB	15	1	16	1	17	1
Back Lane/Thowler Lane (between Peacock Lane and Agden Lane)	NB	8	0	8	0	9	0
	SB	5	0	5	0	6	0
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	386	7	349	14	351	14
	WB	668	16	220	5	223	7
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	325	0	331	2	339	1
	SB	299	1	267	1	286	1
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	10	0	2	0	2	0
	WB	6	1	3	1	2	1
Mag Lane (between Crouchley Lane and A50 Warrington Road)	NB	57	2	58	2	67	2
	SB	0	0	0	0	0	0
Boothbank Lane (between Agden Lane and Millington Lane)	EB	14	0	14	0	12	0
	WB	38	0	141	0	163	0
B5159 West Lane (between Peacock Lane and Beechtreee Lane)	NB	331	2	334	4	340	2
	SB	309	1	269	1	287	1
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	111	0	234	0	280	0
	SB	13	0	14	0	11	0
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)	EB	0	0	0	0	0	0
	WB	16	0	17	2	15	1
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	34	0	38	0	43	1
	SB	14	0	14	0	14	0
	EB	340	3	367	3	373	3

Location	Direction	PM peak hour 2030 all vehicles	PM peak hour 2030 HGV	PM peak hour 2038 all vehicles	PM peak hour 2038 HGV	PM peak hour 2046 all vehicles	PM peak hour 2046 HGV
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	WB	690	3	594	4	559	4
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	305	2	329	2	330	2
	WB	676	3	580	3	545	3
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	496	5	498	5	501	6
	WB	796	9	816	9	768	9
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	159	3	158	3	194	3
	WB	796	9	816	9	768	9
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	209	3	215	3	269	3
	WB	324	7	291	7	234	6

Table 8-6: MA03 strategic and local road network future baseline flows AADT

Location	Direction	AADT 2030	AADT 2038	AADT 2046
A556 Chester Road (between Plumley Moor Road and A5033 Northwich Road)	NB	16,163	16,599	16,943
	SB	19,283	19,194	18,962
A537 Brook Street (between B5085 Mobberley Road and B5085 Hollow Lane)	EB	3,488	3,206	3,114
	WB	4,381	4,474	5,434
B5085 Mobberley Road (between A537 Chelford Road and B5085 Hollow Lane)	NB	2,733	2,474	2,470
	SB	6,371	6,695	7,549
B5391 Pickmere Lane (between Park Lane and Budworth Road)	NB	1,781	2,779	3,436
	SB	3,844	3,988	3,469
A5033 Northwich Road (between A50 Manchester Road and B5083 Stanley Road)	EB	7,378	7,821	8,235
	WB	15,028	16,741	16,955
A556 Chester Road (between A5033 Northwich Road and B5391 Pickmere Lane)	NB	15,155	16,217	16,497
	SB	15,973	15,763	15,412
Tatton Street (between A50 King Edward Road and B5083 Garden Road)	NB	9	20	412
	SB	3,035	3,741	3,810
B5083 Garden Road (between Tatton Street and A50 Manchester Road)	EB	0	0	0
	WB	1,290	1,414	1,553
Tabley Road (between Ladies Mile and A50 Manchester Road)	EB	2,009	2,074	2,100
	WB	2,601	1,936	1,835
Budworth Road (between Old Hall Lane and B5391 Pickmere Lane)	EB	629	644	632
	WB	996	997	972
B5391 Pickmere Lane (between Budworth Road and A556 Chester Road)	EB	2,194	3,246	3,904
	WB	4,625	4,809	4,277
Budworth Road (between B5391 Pickmore Lane and Cann Lane)	EB	256	301	322
	WB	550	542	510

Location	Direction	AADT 2030	AADT 2038	AADT 2046
Tabley Road (between Sugar Pit Lane and Green Lane)	EB	1,032	1,133	1,113
	WB	726	756	820
Tabley Hill Lane (between A556 Chester Road and Green Lane)	EB	1,032	1,133	1,113
	WB	726	756	820
A556 (between M6 junction 19 and Old Hall Lane)	NB	34,070	35,707	36,573
	SB	29,614	33,438	35,151
Old Hall Lane (between Budworth Road and A556 northbound off-slip)	NB	31	37	75
	SB	113	66	48
Old Hall Lane (between A556 southbound on-slip and B5569 Chester Road)	EB	2,365	2,340	2,388
	WB	1,827	3,739	3,755
Old Hall Lane (between A556 northbound off-slip and A556 southbound on-slip)	EB	2,365	2,340	2,388
	WB	112	67	52
B5569 Chester Road (between Old Hall Lane and A50 Warrington Road)	NB	2,365	2,340	2,388
	SB	1,827	3,738	3,743
A50 Warrington Road (between A5034 Mereside Road and Clamhunger Lane)	EB	4,591	4,762	4,966
	WB	8,128	7,966	8,352
A5034 Mereside Road (between Mereheath Lane and A50 Warrington Road)	NB	1,981	2,250	2,305
	SB	3,028	1,995	1,722
Clamhunger Lane (between A5034 Mereside Road and A50 Warrington Road)	NB	1,412	1,422	1,482
	SB	749	1,171	1,136
A5034 Mereside Road (between Ashley Road and Mereheath Lane)	NB	2,576	2,890	3,255
	SB	5,753	5,481	5,292
A50 Warrington Road (between Clamhunger Lane and B5569 Chester Road)	EB	6,003	6,184	6,448
	WB	8,876	9,136	9,485
A5034 Mereside Road (between Ciceley Mill Lane and Ashley Road)	NB	504	638	799
	SB	4,888	4,340	3,956
A50 Chester Road (between B5569 Chester Road (south) and B5569 Chester Road (north))	NB	9,160	7,586	7,911
	SB	5,754	6,079	6,333
A556 (between B5569 Old Hall Lane and A50 Knutsford Road)	NB	31,736	33,406	34,265
	SB	27,902	29,774	31,460
A50 Knutsford Road (between B5569 Chester Road (north) and A556 northbound on-slip)	NB	9,160	7,586	7,911
	SB	5,752	6,079	6,333
A50 Knutsford Road (between A556 northbound on-slip and Hoo Green Lane)	NB	5,942	4,263	4,466
	SB	6,131	6,448	6,705
A556 (between A50 Knutsford Road and M56 junction 8)	NB	35,316	37,081	38,058
	SB	27,902	29,774	31,460
A50 Knutsford Road/Warrington Road (between Hoo Green Lane and Wrenshot Lane)	EB	6,052	6,161	6,386
	WB	5,870	3,468	3,627
	NB	471	498	523

Location	Direction	AADT 2030	AADT 2038	AADT 2046
B5569 Chester Road (between A50 Knutsford Road and A5034 Mereside Road)	SB	1,727	1,830	1,919
A50 Warrington Road (between Halliwell's Brow and Wrenshot Lane)	EB	5,606	5,775	5,946
	WB	5,823	3,442	3,608
Wrenshot Lane (between A50 Warrington Road and Broadoak Lane)	NB	46	26	18
	SB	445	384	437
A50 Warrington Road (between Halliwell's Brow and B5159 West Lane)	EB	8,027	8,174	8,394
	WB	8,279	5,584	5,897
Chapel Lane (between Hulseheath Lane and B5569 Chester Road)	NB	1,239	1,313	1,377
	SB	871	923	967
A50 Warrington Road (between B5159 West Lane and Swineyard Lane)	EB	6,404	6,538	6,556
	WB	7,355	4,605	4,798
Chapel Lane/Peacock Lane (between Hulseheath Lane and Back Lane)	NB	123	130	136
	SB	153	162	169
Swineyard Lane (between Heath Lane and A50 Warrington Road)	EB	1,253	1,501	1,562
	WB	1,903	1,977	1,996
B5159 West Lane (between Wrenshot Lane and A50 Warrington Road)	NB	3,602	3,438	3,581
	SB	4,301	4,097	4,321
Heath Lane (between Swineyard Lane and A50 Warrington Road)	NB	643	572	560
	SB	711	719	759
Wrenshot Lane (between B5159 West Lane and Broadoak Lane)	EB	824	873	916
	WB	700	742	778
A50 Warrington Road (between Swineyard Lane and Mag Lane)	EB	5,155	5,044	5,083
	WB	5,455	2,635	2,891
Broadoak Lane (between Wrenshot Lane and Peacock Lane)	NB	46	26	18
	SB	349	302	329
A50 Warrington Road (between Mag Lane and Heath Lane)	EB	5,152	5,042	5,082
	WB	4,867	2,028	2,160
Peacock Lane (between Back Lane and Broadoak Lane)	EB	259	274	288
	WB	312	330	346
Back Lane/Thowler Lane (between Peacock Lane and Agden Lane)	NB	93	99	103
	SB	73	78	81
A50 Warrington Road/Cliff Lane (between Heath Lane and M6 junction 20)	EB	5,862	5,761	5,842
	WB	5,510	2,600	2,720
B5159 West Lane (between Peacock Lane and Wrenshot Lane)	NB	4,868	4,840	5,008
	SB	3,306	3,133	3,300
Peacock Lane (between Broadoak Lane and B5159 West Lane)	EB	350	302	334
	WB	46	26	18
	NB	588	607	731

Location	Direction	AADT 2030	AADT 2038	AADT 2046
Mag Lane (between Crouchley Lane and A50 Warrington Road)	SB	3	2	1
Boothbank Lane (between Agden Lane and Millington Lane)	EB	404	527	576
	WB	702	1,430	1,607
B5159 West Lane (between Peacock Lane and Beechtreee Lane)	NB	4,913	4,866	5,021
	SB	3,655	3,436	3,629
Agden Lane/Agden Park Lane (between Thowler Lane and A56 Higher Lane)	NB	1,207	2,069	2,407
	SB	403	527	571
Crouchley Lane/Beechtree Lane (between Mag Lane and B5159 West Lane)	EB	0	0	0
	WB	110	117	106
Reddy Lane (between Millington Lane and A56 Lymm Road)	NB	496	525	570
	SB	308	325	330
A56 Lymm Road (between Bowdon Roundabout and Reddy Lane)	EB	7,028	7,296	7,363
	WB	6,635	5,953	5,723
A56 Lymm Road (between Reddy Lane and Agden Park Lane)	EB	6,532	6,772	6,794
	WB	6,327	5,628	5,393
B5160 Charcoal Road (between A56 Dunham Road and Charcoal Road)	EB	6,572	6,675	6,711
	WB	9,323	9,535	9,511
B5160 Smithy Lane (between Charcoal Road and School Lane)	EB	2,315	2,334	2,647
	WB	9,323	9,535	9,511
B5160 Woodhouse Lane (between School Lane and Barns Lane)	EB	2,643	2,712	3,144
	WB	3,483	3,212	2,793

Junction operation

8.4.11 The operation of the key junctions that are likely to be directly affected by the Proposed Scheme or are on the main access routes from the strategic road network (SRN) through the study area to the construction sites or are otherwise affected by the construction or operation of the scheme, have been assessed using the existing and future baseline traffic flows. The M6 Junction 19 model, Junctions 9 and LinSig software have been used to calculate the existing capacity of all junctions within the study area. The results for the MA03 area are presented from south to north, firstly for junctions on the strategic road network, followed by junctions on other roads.

8.4.12 Where a junction will be affected by construction of the Proposed Scheme, future baseline results are included for 2030. Where a junction will be affected by the operation of the Proposed Scheme, which is primarily due to changes in traffic as a result of infrastructure changes or changes in demand associated with the Proposed Scheme, results are included for 2038 and 2046. Junctions affected by both construction and operation include results for all three assessment years.

M6 junction 19/A556 Chester Road/A556

8.4.13 This junction is a four-arm grade-separated signal-controlled roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-7. A free-flow left-turn lane connects the A556 from the north with the M6 junction 19 southbound on-slip to the east and is therefore the traffic on this lane is not reported in the table below.

Table 8-7: 2018 baseline performance at the M6 junction 19/A556 Chester Road/A556 junction

Approach	Flow, PCU*/hr	VoC**	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M6 junction 19 southbound off-slip	737	68%	9
A556 (north)	896	37%	0
M6 junction 19 northbound off-slip	1,391	117%	11
A556 Chester Road	1,495	71%	14
	2018 PM peak hour (17:00–18:00) baseline results		
M6 junction 19 southbound off-slip	481	84%	7
A556 (north)	973	35%	0
M6 junction 19 northbound off-slip	1,424	99%	12
A556 Chester Road	1,107	53%	10

**PCU = Passenger Car Unit*

***VoC = Volume over Capacity*

8.4.14 This assessment shows that the junction operates over capacity in the 2018 baseline with a maximum VoC of 117% on the M6 northbound off-slip approach in the AM peak hour with

an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity with a maximum VoC of 99% on the M6 northbound off-slip approach with a queue length of 12 PCU.

8.4.15 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-8. The future baseline includes the Highways England M6 junction 19 improvement scheme comprising the construction of a new bridge across the centre of the grade-separated motorway junction. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-8: Future baseline performance at M6 junction 19/A556 Chester Road/A556 junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
M6 junction 19 southbound off-slip	709	31%	8	724	31%	8	714	31%	8
A556 (north)	1,025	28%	0	1,050	29%	0	1,010	28%	0
M6 junction 19 northbound off-slip	2,300	74%	17	2,300	74%	17	2,300	74%	17
A556 Chester Road	1,634	50%	9	1,814	56%	11	1,913	59%	11
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
M6 junction 19 southbound off-slip	525	28%	6	531	28%	6	429	23%	5
A556 (north)	791	22%	0	1,012	28%	0	982	28%	0
M6 junction 19 northbound off-slip	2,037	60%	14	2,194	65%	15	2,300	68%	15
A556 Chester Road	1,090	31%	6	1,260	36%	7	1,359	39%	7

8.4.16 The assessment shows that the junction operates well within capacity following the introduction of the M6 junction 19 improvement scheme in the 2030, 2038 and 2046 future baselines, in the AM and PM peak hours. The assessment shows that traffic flows on the M6 junction 19 northbound off-slip approach will increase to 2,300 PCU/hour in the 2030 future baseline in the AM peak hour and remain at this level in the 2038 and 2046 future baselines. This growth results from the changes made to the junction as part of the improvement scheme as well as general traffic growth. However, growth is constrained due to a capacity limit on the diverge where the M6 junction 19 northbound off-slip leaves the M6 mainline carriageway, which is forecast to restrict the volume of traffic using the M6 junction 19 northbound off-slip. HS2 Ltd will work with Highways England to identify potential opportunities to address this constraint.

M6 junction 20/A50 Cliff Lane/B5158 Cherry Lane

8.4.17 This junction is a five-arm partially signalised dumb-bell junction with no controlled pedestrian crossing facilities. The M56 northbound off-slip approach is signalised where it joins the A50 Cliff Lane roundabout circulatory (south) approach. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using LinSig software and is shown in Table 8-9.

Table 8-9: 2018 baseline performance at M6 junction 20/A50 Cliff Lane/B5158 Cherry Lane junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M6 southbound off-slip (nearside) (left and ahead)	642	74%	1
M6 southbound off-slip (offside) (ahead)	392	64%	4
B5158 Cherry Lane (nearside) (ahead)	148	21%	0
B5158 Cherry Lane (offside) (ahead)	239	63%	2
A50 Cliff Lane (east) (nearside) (left)	339	39%	0
A50 Cliff Lane (east) (offside) (ahead)	469	53%	1
M6 northbound off-slip (nearside) (ahead)	525	58%	10
M6 northbound off-slip (offside) (ahead)	495	51%	9
A50 Cliff Lane (west) (nearside) (left)	388	47%	2
A50 Cliff Lane (west) (offside) (ahead)	433	59%	3
A50 Cliff Lane (nearside) (ahead)	1,489	76%	2
	2018 PM peak hour (17:00–18:00) baseline results		
M6 southbound off-slip (nearside) (left and ahead)	630	65%	1
M6 southbound off-slip (offside) (ahead)	483	63%	1
B5158 Cherry Lane (nearside) (ahead)	109	14%	0
B5158 Cherry Lane (offside) (ahead)	151	30%	0
A50 Cliff Lane (east) (nearside) (left)	277	29%	0
A50 Cliff Lane (east) (offside) (ahead)	907	94%	7
M6 northbound off-slip (nearside) (ahead)	719	86%	18
M6 northbound off-slip (offside) (ahead)	737	82%	17
A50 Cliff Lane (west) (nearside) (left)	238	35%	0
A50 Cliff Lane (west) (offside) (ahead)	227	40%	0
A50 Cliff Lane (nearside) (ahead)	980	50%	1

8.4.18 The assessment shows that this junction operates well within capacity in the 2018 baseline in the AM peak hour. In the PM peak hour, the junction operates close to capacity with a maximum DoS of 94% on the A50 Cliff Lane (east) (offside) (ahead) approach with a queue length of seven PCU.

8.4.19 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-10. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-10: Future baseline performance at M6 junction 20/A50 Cliff Lane/B5158 Cherry Lane junction

Approach	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
M6 southbound off-slip (nearside) (left and ahead)	634	72%	1
M6 southbound off-slip (offside) (ahead)	416	64%	3
B5158 Cherry Lane (nearside) (ahead)	229	33%	0
B5158 Cherry Lane (offside) (ahead)	138	41%	1
A50 Cliff Lane (east) (nearside) (left)	396	48%	1
A50 Cliff Lane (east) (offside) (ahead)	274	25%	0
M6 northbound off-slip (nearside) (ahead)	410	52%	8
M6 northbound off-slip (offside) (ahead)	321	38%	6
A50 Cliff Lane (west) (nearside) (left)	410	43%	1
A50 Cliff Lane (west) (offside) (ahead)	487	53%	2
A50 Cliff Lane (nearside) (ahead)	1,113	57%	1
	2030 PM peak hour (17:00–18:00)		
M6 southbound off-slip (nearside) (left and ahead)	602	62%	1
M6 southbound off-slip (offside) (ahead)	469	61%	1
B5158 Cherry Lane (nearside) (ahead)	121	15%	0
B5158 Cherry Lane (offside) (ahead)	155	31%	0
A50 Cliff Lane (east) (nearside) (left)	319	34%	0
A50 Cliff Lane (east) (offside) (ahead)	925	99%	13
M6 northbound off-slip (nearside) (ahead)	709	85%	18
M6 northbound off-slip (offside) (ahead)	717	79%	16
A50 Cliff Lane (west) (nearside) (left)	250	37%	0
A50 Cliff Lane (west) (offside) (ahead)	239	42%	0
A50 Cliff Lane (nearside) (ahead)	1,002	51%	1

8.4.20 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the junction operates close to capacity with a maximum DoS of 99% on the A50 Cliff Lane (east) (offside) (ahead) approach with an associated queue length of 13 PCU.

A50 Toft Road/Goughs Lane

8.4.21 This junction is a three-arm priority (give-way) controlled T-junction with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-11.

Table 8-11: 2018 baseline performance at A50 Toft Road/Goughs Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A50 Toft Road (north)	436	32%	0
Goughs Lane	315	58%	0
A50 Toft Road (south)	537	39%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A50 Toft Road (north)	460	33%	0
Goughs Lane	504	103%	6
A50 Toft Road (south)	731	53%	0

8.4.22 In the 2018 baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 103% on the Goughs Lane approach with an associated queue length of six PCU.

8.4.23 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-12. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-12: 2030 future baseline performance at A50 Toft Road/Goughs Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A50 Toft Road (north)	432	31%	0
Goughs Lane	439	80%	1
A50 Toft Road (south)	416	30%	0
	2030 PM peak hour (17:00–18:00)		
A50 Toft Road (north)	564	41%	0
Goughs Lane	488	106%	6
A50 Toft Road (south)	781	57%	0

8.4.24 In the 2030 future baseline the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 80% on the Goughs Lane approach with an associated queue length of one PCU. In the PM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum VoC of 106% on the Goughs Lane approach with an associated queue length of six PCU.

B5391 Pickmere Lane/School Lane

8.4.25 This junction is a four-arm priority controlled (give-way) crossroads with no signal controlled pedestrian crossing facilities. The access to Cheshire Showground is only used during events and is not included within the assessment. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-13.

Table 8-13: 2017 baseline performance at B5391 Pickmere Lane/School Lane junction

Approach	Flow, PCU/hr	RFC*	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
B5391 Pickmere Lane (east) (ahead, left and right)	68	0.02	0
B5391 Pickmere Lane (west) (ahead, left and right)	159	0.00	0
School Lane (ahead and left)	10	0.02	0
School Lane (ahead and right)	0	0.00	0
	2017 PM peak hour (17:00–18:00) baseline results		
B5391 Pickmere Lane (east) (ahead, left and right)	160	0.02	0
B5391 Pickmere Lane (west) (ahead, left and right)	56	0.00	0
School Lane (ahead and left)	10	0.02	0
School Lane (ahead and right)	0	0.00	0

**RFC = Ratio of Flow to Capacity*

8.4.26 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.27 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-14. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-14: Future baseline performance at B5391 Pickmere Lane/School Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
B5391 Pickmere Lane (east) (ahead, left and right)	75	0.02	0	80	0.02	0	84	0.02	0
B5391 Pickmere Lane (west) (ahead, left and right)	177	0.00	0	187	0.00	0	197	0.00	0
School Lane (ahead and left)	11	0.02	0	12	0.02	0	12	0.02	0
School Lane (ahead and right)	0	0.00	0	0	0.00	0	0	0.00	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
B5391 Pickmere Lane (east) (ahead, left and right)	177	0.02	0	188	0.02	0	198	0.02	0
B5391 Pickmere Lane (west) (ahead, left and right)	62	0.00	0	66	0.00	0	69	0.00	0
School Lane (ahead and left)	11	0.02	0	12	0.02	0	12	0.02	0
School Lane (ahead and right)	0	0.00	0	0	0.00	0	0	0.00	0

8.4.28 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

B5391 Pickmere Lane/Flittogate Lane

8.4.29 This junction is a three-arm priority controlled (give-way) T-junction with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-15.

Table 8-15: 2017 baseline performance at B5391 Pickmere Lane/Flittogate Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Pickmere Lane (north) (ahead)	58	0.00	0
Pickmere Lane (north) (left)	7	0.00	0
Flittogate Lane (left)	10	0.02	0
Flittogate Lane (right)	57	0.12	0
Pickmere Lane (south) (ahead and right)	159	0.05	0
	2017 PM peak hour (17:00–18:00) baseline results		
Pickmere Lane (north) (ahead)	150	0.00	0
Pickmere Lane (north) (left)	3	0.00	0
Flittogate Lane (left)	10	0.02	0
Flittogate Lane (right)	16	0.03	0
Pickmere Lane (south) (ahead and right)	56	0.03	0

8.4.30 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.31 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-16. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-16: Future baseline performance at B5391 Pickmere Lane/Flittogate Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Pickmere Lane (north) (ahead)	125	0.00	0	146	0.00	0	80	0.00	0
Pickmere Lane (north) (left)	10	0.00	0	9	0.00	0	6	0.00	0
Flittogate Lane (left)	11	0.02	0	10	0.02	0	8	0.01	0
Flittogate Lane (right)	64	0.15	0	72	0.18	0	79	0.20	0
Pickmere Lane (south) (ahead and right)	240	0.06	0	387	0.07	0	504	0.09	0

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
Pickmere Lane (north) (ahead)	130	0.00	0	129	0.00	0	159	0.00	0
Pickmere Lane (north) (left)	4	0.00	0	3	0.00	0	3	0.00	0
Flittogate Lane (left)	11	0.02	0	11	0.02	0	12	0.02	0
Flittogate Lane (right)	18	0.04	0	19	0.04	0	20	0.04	0
Pickmere Lane (south) (ahead and right)	46	0.03	0	62	0.03	0	76	0.04	0

8.4.32 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

School Lane/Frog Lane

8.4.33 This junction is a three-arm priority controlled (give-way) T-junction with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-17.

Table 8-17: 2017 baseline performance at School Lane/Frog Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Frog Lane (north) (ahead)	1	0.00	0
Frog Lane (north) (left)	10	0.00	0
School Lane (left)	0	0.00	0
School Lane (right)	20	0.04	0
Frog Lane (south) (ahead and right)	1	0.00	0
	2017 PM peak hour (17:00–18:00) baseline results		
Frog Lane (north) (ahead)	3	0.00	0
Frog Lane (north) (left)	10	0.00	0
School Lane (left)	0	0.00	0
School Lane (right)	20	0.04	0
Frog Lane (south) (ahead and right)	1	0.00	0

8.4.34 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.35 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-18. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-18: Future baseline performance at School Lane/Frog Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Frog Lane (north) (ahead)	1	0.00	0	1	0.00	0	1	0.00	0
Frog Lane (north) (left)	11	0.00	0	12	0.00	0	12	0.00	0
School Lane (left)	0	0.00	0	0	0.00	0	0	0.00	0
School Lane (right)	22	0.05	0	23	0.05	0	25	0.05	0
Frog Lane (south) (ahead and right)	1	0.00	0	1	0.00	0	1	0.00	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Frog Lane (north) (ahead)	3	0.00	0	4	0.00	0	4	0.00	0
Frog Lane (north) (left)	11	0.00	0	12	0.00	0	12	0.00	0
School Lane (left)	0	0.00	0	0	0.00	0	0	0.00	0
School Lane (right)	22	0.05	0	23	0.05	0	25	0.05	0
Frog Lane (south) (ahead and right)	1	0.00	0	1	0.00	0	1	0.00	0

8.4.36 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

Budworth Road/Frog Lane

8.4.37 This junction is a three-arm priority controlled (give-way) T-junction with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-19.

Table 8-19: 2017 baseline performance at Budworth Road/Frog Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Budworth Road (west) (ahead and right)	49	0.02	0
Budworth Road (east) (ahead and left)	36	-	-
Frog Lane (left)	18	0.03	0
Frog Lane (right)	2	0.00	0
	2017 PM peak hour (17:00–18:00) baseline results		
Budworth Road (west) (ahead and right)	35	0.02	0
Budworth Road (east) (ahead and left)	75	-	-
Frog Lane (left)	20	0.03	0

Approach	Flow, PCU/hr	RFC	Queue, PCU
Frog Lane (right)	1	0.00	0

8.4.38 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.39 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-20. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-20: Future baseline performance at Budworth Road/Frog Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			2038 AM peak hour (08:00–09:00)			2046 AM peak hour (08:00–09:00)		
Budworth Road (west) (ahead and right)	63	0.02	0	57	0.02	0	23	0.04	0
Budworth Road (east) (ahead and left)	38	-	-	38	-	-	37	-	-
Frog Lane (left)	20	0.03	0	20	0.03	0	23	0.04	0
Frog Lane (right)	1	0.00	0	2	0.00	0	2	0.00	0
	2030 PM peak hour (17:00–18:00)			2038 PM peak hour (17:00–18:00)			2046 PM peak hour (17:00–18:00)		
Budworth Road (west) (ahead and right)	34	0.02	0	27	0.01	0	27	0.02	0
Budworth Road (east) (ahead and left)	69	-	-	86	-	-	100	-	-
Frog Lane (left)	26	0.04	0	28	0.04	0	25	0.04	0
Frog Lane (right)	0	0.00	0	0	0.00	0	0	0.00	0

8.4.40 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

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

8.4.41 This junction is a four-arm signal controlled staggered crossroads with signal-controlled pedestrian crossing facilities. The B5083 Stanley Road is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-21.

Table 8-21: 2018 baseline performance at the A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A50 Toft Road (north)	1,223	102%	6
A537 Adams Hill (east)	712	84%	9
A50 Toft Road (south)	411	30%	6
	2018 PM peak hour (17:00–18:00) baseline results		
A50 Toft Road (north)	940	79%	4
A537 Adams Hill (east)	872	102%	12
A50 Toft Road (south)	743	43%	11

8.4.42 This junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the A50 King Edward Road (north) approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 102% is on the A537 Adams Hill (east) approach with a queue length of 12 PCU.

8.4.43 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-22. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-22: Future baseline performance at the A50 Toft Road/A537 Adam's Hill/B5083 Stanley Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A50 King Edward Road (north)	1,219	102%	6	1,230	103%	7	1,230	103%	6
A537 Adams Hill (east)	768	91%	9	778	92%	10	844	100%	11
A50 Toft Road (south)	314	23%	5	347	26%	5	389	29%	6
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A50 King Edward Road (north)	982	82%	5	1,002	84%	5	1,021	85%	5
A537 Adams Hill (east)	872	102%	12	871	102%	12	868	102%	12
A50 Toft Road (south)	766	44%	11	782	45%	11	794	46%	12

8.4.44 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 102% on the A50 King Edward Road (north) approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 102% is on the A537 Adams Hill (east) approach with an associated queue length of 12 PCU.

8.4.45 In the 2038 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 103% on the A50 King Edward Road (north) approach with an associated queue length of seven PCU. In the PM peak hour, the maximum VoC of 102% is on the A537 Adams Hill (east) approach with a queue length of 12 PCU.

8.4.46 In the 2046 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 103% on the A50 King Edward Road (north) approach with an associated queue length of six PCU. In the PM peak hour, the maximum VoC of 102% is on the A537 Adams Hill (east) approach with a queue length of 12 PCU.

A537 Brook Street/B5085 Hollow Lane/Lilybrook Drive

8.4.47 This junction is a four-arm signal-controlled staggered crossroads with controlled pedestrian crossing facilities. Lilybrook Drive (leading to Brook Lane) is a minor road and is not included within the M6 Junction 19 model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-23.

Table 8-23: 2018 baseline performance at the A537 Brook Street/B5085 Hollow Lane/Lilybrook Drive junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5085 Hollow Lane	524	50%	8
A537 Brook Street (east)	324	30%	3
Lilybrook Drive	-	-	-
A537 Brook Street (west)	813	75%	7
	2018 PM peak hour (17:00–18:00) baseline results		
B5085 Hollow Lane	806	75%	9
A537 Brook Street (east)	323	41%	4
Lilybrook Drive	-	-	-
A537 Brook Street (west)	786	95%	11

8.4.48 In the 2018 baseline the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the A537 Brook Street (west) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the A537 Brook Street (west) approach and an associated queue length of 11 PCU.

8.4.49 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-24. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-24: Future baseline performance at the A537 Brook Street/B5085 Hollow Lane/Lilybrook Drive junction

Approach	Flow, PCU/hr	VoC	Q, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
B5085 Hollow Lane	524	50%	8	524	50%	8	524	50%	8
A537 Brook Street (east)	376	35%	3	401	37%	3	473	44%	4
Lilybrook Drive	-	-	-	-	-	-	-	-	-
A537 Brook Street (west)	824	76%	7	800	74%	7	809	75%	7
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
B5085 Hollow Lane	855	79%	10	866	80%	10	756	70%	9
A537 Brook Street (east)	326	46%	4	333	50%	4	441	69%	6
Lilybrook Drive	-	-	-	-	-	-	-	-	-
A537 Brook Street (west)	758	92%	11	768	93%	11	771	93%	11

8.4.50 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 76% on the A537 Brook Street (west) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 92% on the A537 Brook Street (west) approach with an associated queue length of 11 PCU.

8.4.51 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour with a maximum VoC of 74% on the A537 Brook Street (west) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 93% on the A537 Brook Street (west) approach with an associated queue length of 11 PCU.

8.4.52 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the A537 Brook Street (west) approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 93% on the A537 Brook Street (west) approach with an associated queue length of 11 PCU.

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

8.4.53 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The B5083 King Street approach is a minor arm that is not included within the strategic traffic model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-25.

Table 8-25: 2018 baseline performance at A537 Brook Street/A537 Adam's Hill/B5083 King Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5083 King Street (north)	-	-	-
A537 Brook Street (east)	847	78%	3
A537 Adam's Hill (west)	813	95%	1
	2018 PM peak hour (17:00–18:00) baseline results		
B5083 King Street (north)	-	-	-
A537 Brook Street (east)	1,108	102%	9
A537 Adam's Hill (west)	786	92%	1

8.4.54 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the A537 Adam's Hill (west) approach in the AM peak hour with an associated queue length of one PCU. In the PM peak hour, the junction operates over capacity in the 2018 baseline with a maximum VoC of 102% is on the A537 Brook Street (east) approach with an associated queue length of nine PCU.

8.4.55 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-26. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-26: Future baseline performance at A537 Brook Street/A537 Adam's Hill/B5083 King Street junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
B5083 King Street (north)	-	-	-	-	-	-	-	-	-
A537 Brook Street (east)	899	83%	3	924	85%	3	996	92%	4
A537 Adam's Hill (west)	824	97%	1	800	94%	1	809	95%	1
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
B5083 King Street (north)	-	-	-	-	-	-	-	-	-

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
A537 Brook Street (east)	1,138	105%	9	1,151	106%	9	1,161	107%	7
A537 Adam's Hill (west)	758	89%	1	768	90%	1	771	91%	1

8.4.56 In the 2030 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 97% on the A537 Adam's Hill (west) approach with an associated queue length of one PCU. In the PM peak hour, the junction operates over capacity in the 2030 baseline with a maximum VoC of 105% on the A537 Brook Street (east) approach with an associated queue length of nine PCU.

8.4.57 In the 2038 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 94% on the A537 Adam's Hill (west) approach with an associated queue length of one PCU. In the PM peak hour, the junction operates over capacity in the 2038 baseline with a maximum VoC of 106% on the A537 Brook Street (east) approach with an associated queue length of nine PCU.

8.4.58 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 95% on the A537 Adam's Hill (west) approach with an associated queue length of one PCU. In the PM peak hour, the junction operates over capacity in the 2046 baseline with a maximum VoC of 107% on the A537 Brook Street (east) approach with an associated queue length of seven PCU.

A556 Chester Road/A5033 Northwich Road

8.4.59 This junction is a three-arm signal-controlled T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-27.

Table 8-27: 2018 baseline performance at the A556 Chester Road/A5033 Northwich Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A556 Chester Road (north)	1,315	96%	18
A5033 Northwich Road	502	32%	7
A556 Chester Road (south)	1,535	77%	16
	2018 PM peak hour (17:00–18:00) baseline results		
A556 Chester Road (north)	1,111	102%	16
A5033 Northwich Road	1,127	63%	12
A556 Chester Road (south)	1,022	56%	11

8.4.60 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 96% on the A556 Chester Road (north) approach in the AM peak hour with an associated queue length of 18 PCU. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the A556 Chester Road (north) approach with an associated queue length of 16 PCU.

8.4.61 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-28. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-28: Future baseline performance at the A556 Chester Road/A5033 Northwich Road junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A556 Chester Road (north)	1,375	101%	19	1,376	101%	19	1,376	101%	19
A5033 Northwich Road	568	36%	8	601	38%	9	616	39%	9
A556 Chester Road (south)	1,557	78%	17	1,604	81%	18	1,612	81%	19
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A556 Chester Road (north)	1,170	96%	17	1,140	93%	17	1,065	87%	16
A5033 Northwich Road	1,147	64%	13	1,264	71%	15	1,287	72%	15
A556 Chester Road (south)	989	65%	13	1,027	68%	13	1,074	71%	13

8.4.62 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 101% on the A556 Chester Road (north) approach with an associated queue length of 19 PCU. In the PM peak hour, this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the A556 Chester Road (north) approach with an associated queue length of 17 PCU.

8.4.63 In the 2038 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum VoC of 101% on the A556 Chester Road (north) approach with an associated queue length of 19 PCU. In the PM peak hour, this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 93% on the A556 Chester Road (north) approach with an associated queue length of 17 PCU.

8.4.64 In the 2046 future baseline, the assessment shows that this junction operates over capacity in the AM peak hour with a maximum VoC of 101% on the A556 Chester Road (north) approach with an associated queue length of 19 PCU. In the PM peak hour, this junction operates close to capacity in the 2046 future baseline with a maximum of VoC of 87% on the A556 Chester Road (north) approach with an associated queue length of 16 PCU.

B5085 Mobberley Road/B5085 Hollow Lane

8.4.65 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The B5085 Mobberley Road (south) approach is one-way. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-29.

Table 8-29: 2018 baseline performance at B5085 Mobberley Road/B5085 Hollow Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5085 Mobberley Road (north)	613	35%	0
B5085 Mobberley Road (south)	203	59%	1
B5085 Hollow Lane	430	40%	1
	2018 PM peak hour (17:00–18:00) baseline results		
B5085 Mobberley Road (north)	631	36%	0
B5085 Mobberley Road (south)	222	89%	3
B5085 Hollow Lane	597	55%	5

8.4.66 In the AM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 89% on the B5085 Mobberley Road (south) approach with an associated queue length of three PCU.

8.4.67 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-30. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 8-30: Future baseline performance at B5085 Mobberley Road/B5085 Hollow Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
B5085 Mobberley Road (north)	740	43%	0	774	45%	0
B5085 Mobberley Road (south)	186	56%	1	191	68%	1
B5085 Hollow Lane	503	47%	1	517	48%	2
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
B5085 Mobberley Road (north)	618	36%	0	583	34%	0
B5085 Mobberley Road (south)	180	96%	4	174	100%	6
B5085 Hollow Lane	593	55%	6	594	55%	6

8.4.68 In the 2038 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 96% on the B5085 Mobberley Road (south) approach with an associated queue length of four PCU.

8.4.69 In the 2046 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 100% on the B5085 Mobberley Road (south) approach with an associated queue length of six PCU.

A5033 Northwich Road/Ladies Mile

8.4.70 This junction is a three-arm priority-controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-31.

Table 8-31: 2018 baseline performance at A5033 Northwich Road/Ladies Mile junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A5033 Northwich Road (west)	626	58%	0
Ladies Mile	320	84%	2
A5033 Northwich Road (east)	980	33%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A5033 Northwich Road (west)	397	37%	0
Ladies Mile	328	90%	2
A5033 Northwich Road (east)	1,382	46%	0

8.4.71 The assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 84% on the Ladies Mile approach in the AM peak hour with an associated queue length of two PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 90% on the Ladies Mile approach with an associated queue length of two PCU.

8.4.72 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-32. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-32: Future baseline performance at A5033 Northwich Road/Ladies Mile junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A5033 Northwich Road (west)	673	62%	1	691	64%	1	688	64%	1
Ladies Mile	277	75%	1	266	76%	1	277	76%	1
A5033 Northwich Road (east)	1,120	37%	0	1,205	41%	0	1,277	43%	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A5033 Northwich Road (west)	465	43%	1	468	43%	1	458	42%	1

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
Ladies Mile	293	88%	2	180	89%	2	171	92%	2
A5033 Northwich Road (east)	1,352	45%	0	1,546	52%	0	1,571	53%	0

8.4.73 In the 2030 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 75% on the Ladies Mile approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 88% on the Ladies Mile approach with an associated queue length of two PCU.

8.4.74 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 76% on the Ladies Mile approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2038 future baseline with a maximum VoC of 89% on the Ladies Mile approach with an associated queue length of two PCU.

8.4.75 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 76% on the Ladies Mile approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2046 future baseline with a maximum VoC of 92% on the Ladies Mile approach with an associated queue length of two PCU.

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

8.4.76 This junction is a five-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. Gaskell Avenue approach is a minor arm that is not included within the strategic traffic model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-33.

Table 8-33: 2018 baseline performance at A50 Manchester Road/A50 King Edward Road/A5033 Northwich Road/Canute Place junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A50 Manchester Road	513	75%	1
Canute Place	302	40%	0
A50 King Edward Road	1,020	85%	2
Gaskell Avenue	-	-	-
A5033 Northwich Road	502	47%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A50 Manchester Road	481	70%	1
Canute Place	140	18%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
A50 King Edward Road	1,219	102%	7
Gaskell Avenue	-	-	-
A5033 Northwich Road	509	46%	0

8.4.77 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% on the A50 King Edward Road approach with an associated queue length of two PCU. In the PM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 102% on the A50 King Edward Road approach with an associated queue length of seven PCU.

8.4.78 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-34. As the junction is only affected by the operation of the Proposed Scheme and not the construction, future baseline results are presented for 2038 and 2046 only.

Table 8-34: Future baseline performance at A50 Manchester Road/A50 King Edward Road/A5033 Northwich Road/Canute Place junction

Approach	Flow, PCU/hr	VoC	Queue, PCU	Flow, PCU/hr	VoC	Queue, PCU
	2038 AM peak hour (08:00–09:00)			**2046 AM peak hour (08:00–09:00)**		
A50 Manchester Road	578	84%	1	583	85%	1
Canute Place	330	43%	0	320	42%	0
A50 King Edward Road	997	83%	2	1,039	87%	2
Gaskell Avenue	-	-	-	-	-	-
A5033 Northwich Road	527	46%	0	559	49%	0
	2038 PM peak hour (17:00–18:00)			**2046 PM peak hour (17:00–18:00)**		
A50 Manchester Road	580	85%	1	580	85%	1
Canute Place	223	29%	0	242	32%	0
A50 King Edward Road	1,230	103%	9	1,250	105%	9
Gaskell Avenue	-	-	-	-	-	-
A5033 Northwich Road	660	61%	0	687	65%	0

8.4.79 In the 2038 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum VoC of 84% on the A50 Manchester Road approach with an associated queue length of one PCU. In the PM peak hour, this junction operates over capacity in the 2038 future baseline with a maximum VoC of 103% on the A50 King Edward Road approach with an associated queue length of nine PCU.

8.4.80 In the 2046 future baseline, the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum VoC of 87% on the A50 King Edward Road approach with an associated queue length of two PCU. In the PM peak hour, this junction operates over capacity in the 2046 future baseline with a maximum VoC of 105% on the A50 King Edward Road approach with an associated queue length of nine PCU.

Tabley Road/Ladies Mile

8.4.81 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-35.

Table 8-35: 2018 baseline performance at Tabley Road/Ladies Mile junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Tabley Road (east)	203	101%	1
Ladies Mile	156	23%	0
Tabley Road (west)	200	100%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Tabley Road (east)	191	96%	1
Ladies Mile	278	43%	0
Tabley Road (west)	197	99%	0

8.4.82 In the AM peak hour, this junction operates over capacity in the 2018 baseline with a maximum VoC of 101% on the Tabley Road (east) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 99% on the Tabley Road (west) approach with an associated queue length of zero PCU.

8.4.83 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-36. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-36: Future baseline performance at Tabley Road/Ladies Mile junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Tabley Road (east)	204	102%	1
Ladies Mile	162	24%	0
Tabley Road (west)	201	101%	0
	2030 PM peak hour (17:00–18:00)		
Tabley Road (east)	154	77%	0
Ladies Mile	284	43%	0
Tabley Road (west)	183	92%	0

8.4.84 In the 2030 future baseline, this junction operates over capacity in the AM peak hour with a maximum VoC of 102% on the Tabley Road (east) approach with an associated queue length of one PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 92% on the Tabley Road (west) approach with an associated queue length of zero PCU.

A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane

8.4.85 This junction is a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-37. This junction will be upgraded in 2021 to a four-arm signal controlled crossroads, as part of the M6 Junction 19 improvement works. Future baseline operation results of the junction have been assessed using LinSig software.

8.4.86 The A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction and the M6 junction 19 are reported separately, but it should be noted that due to the close proximity of the two junctions, if queues at one of the junctions extend beyond the available storage capacity, they could impact on the operation of the upstream junction.

Table 8-37: 2017 baseline performance at A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A556 Chester Road (north) (left, ahead and right)	1,957	0.14	0
Tabley Hill Lane (left and ahead)	98	0.39	1
Tabley Hill Lane (ahead and right)	47	0.23	0
A556 Chester Road (south) (left, ahead and right)	1,479	0.00	0
B5391 Pickmere Lane (left, ahead and right)	235	0.46	1
	2017 PM peak hour (17:00–18:00) baseline results		
A556 Chester Road (north) (left, ahead and right)	1,494	0.21	0
Tabley Hill Lane (left and ahead)	109	0.33	1
Tabley Hill Lane (ahead and right)	53	0.19	0
A556 Chester Road (south) (left, ahead and right)	1,654	0.00	0
B5391 Pickmere Lane (left, ahead and right)	121	0.25	0

8.4.87 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.88 A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane is to be modified to a four-arm signal controlled crossroads as a result of the M6 junction 19 improvement scheme. The assessment takes into account the completed changes in the future baseline.

8.4.89 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-38. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-38: Future baseline performance at A556 Chester Road/B5391 Pickmere Lane/Tabley Hill Lane junction

Approach	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU	Flow, PCU/hr	DoS	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
A556 Chester Road (north) (left and ahead)	1,017	117%	109	1,034	119%	119	1,015	117%	111
A556 Chester Road (north) (ahead and right)	1,083	117%	117	1,104	119%	128	1,081	117%	118
Tabley Hill Lane (left and ahead)	122	82%	5	123	83%	5	123	84%	6
A556 Chester Road (south) (left and ahead)	797	117%	87	824	121%	102	815	119%	96
A556 Chester Road (south) (ahead)	792	117%	86	818	121%	100	808	120%	95
B5391 Pickmere Lane (left)	292	29%	4	422	42%	6	534	53%	8
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
A556 Chester Road (north) (left and ahead)	713	97%	28	711	99%	31	716	100%	33
A556 Chester Road (north) (ahead and right)	744	97%	28	746	99%	32	767	100%	34
Tabley Hill Lane (left and ahead)	148	90%	7	137	93%	8	129	87%	6
A556 Chester Road (south) (left and ahead)	807	99%	34	868	101%	42	875	102%	44
A556 Chester Road (south) (ahead)	799	99%	33	851	100%	39	867	102%	44
B5391 Pickmere Lane (left)	115	13%	2	155	18%	2	199	23%	3

8.4.90 In the 2030 future baseline, this junction operates over capacity with a maximum DoS of 117% on the A556 Chester Road (north) (ahead and right) approach in the AM peak hour with an associated queue length of 109 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 on the neighbouring junction. However due to limitations of the available modelling software this is not reflected in the 2030, 2038 or 2046 future baseline results presented for either junction. In the PM peak hour, the maximum DoS of 99% is on the A556 Chester Road (south) approach with a queue length of 34 PCU.

8.4.91 In the 2038 future baseline, this junction operates over capacity with a maximum DoS of 121% on the A556 Chester Road (south) in the AM peak hour with an associated queue length of 102 PCU. In the PM peak hour, the maximum DoS of 101% is on the A556 Chester Road (south) (left and ahead) approach with a queue length of 42 PCU.

8.4.92 In the 2046 future baseline, this junction operates over capacity with a maximum DoS of 120% on the A556 Chester Road (south) (left and ahead) approach in the AM peak hour with an associated queue length of 95 PCU. In the PM peak hour, the maximum DoS of 102% is on the A556 Chester Road (south) (ahead) approach with a queue length of 44 PCU.

8.4.93 The junction analysis indicates that the junction will be operating above its capacity in the 2030, 2038 and 2046 future baseline. However, a degree of wider rerouting would be expected to occur, which could to a degree improve junction performance.

B5569 Chester Road/Old Hall Lane

8.4.94 This junction is a three-arm priority-controlled (give way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-39.

Table 8-39: 2018 baseline performance at the B5569 Chester Road/Old Hall Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5569 Chester Road (north)	92	6%	0
B5569 Chester Road (south)	0	0%	0
Old Hall Lane	106	6%	0
	2018 PM peak hour (17:00–18:00) baseline results		
B5569 Chester Road (north)	95	6%	0
B5569 Chester Road (south)	0	0%	0
Old Hall Lane	140	8%	0

8.4.95 The assessment shows that this junction operates well within capacity in the 2018 baseline.

8.4.96 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-40. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-40: Future baseline performance at the B5569 Chester Road/Old Hall Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5569 Chester Road (north)	178	12%	0
B5569 Chester Road (south)	0	0%	0
Old Hall Lane	220	12%	0
	2030 PM peak hour (17:00–18:00)		
B5569 Chester Road (north)	107	7%	0
B5569 Chester Road (south)	0	0%	0

Approach	Flow, PCU/hr	VoC	Queue, PCU
Old Hall Lane	142	8%	0

8.4.97 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A556/Old Hall Lane

8.4.98 This junction is a three-arm priority-controlled (give way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-41.

Table 8-41: 2018 baseline performance at the A556/Old Hall Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Old Hall Lane (east)	0	0%	0
A556 northbound off-slip	103	7%	0
Old Hall Lane (south)	3	0%	0
	2018 PM peak hour (17:00–18:00) baseline results		
Old Hall Lane (east)	3	0%	0
A556 northbound off-slip	140	9%	0
Old Hall Lane (south)	0	0%	0

8.4.99 The assessment shows that this junction operates well within capacity in the 2018 baseline.

8.4.100 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-42. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-42: Future baseline performance at the A556/Old Hall Lane junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Old Hall Lane (east)	5	0%	0
A556 northbound off-slip	214	14%	0
Old Hall Lane (south)	6	0%	0
	2030 PM peak hour (17:00–18:00)		
Old Hall Lane (east)	12	1%	0
A556 northbound off-slip	143	10%	0
Old Hall Lane (south)	0	0%	0

8.4.101 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

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

8.4.102 This junction is a four-arm priority controlled (give way) crossroads with no controlled pedestrian crossing facilities. Moss Lane approach is a minor arm that is not included within the strategic traffic model. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-43.

Table 8-43: 2018 baseline performance at A50 Warrington Road/A5034 Mereside Road/A50 Manchester Road/Moss Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Mereside Road (left)	251	0.43	1
Mereside Road (right)	18	0.07	0
Manchester Road (east) (ahead and right)	697	0.31	1
Moss Lane	-	-	-
Manchester Road (west) (ahead and left)	525	0.00	0
	2018 PM peak hour (17:00–18:00) baseline results		
Mereside Road (left)	239	0.39	1
Mereside Road (right)	79	0.25	0
Manchester Road (east) (ahead and right)	914	0.15	0
Moss Lane	-	-	-
Manchester Road (west) (ahead and left)	283	0.00	0

8.4.103 The assessment shows that this junction operates well within capacity in the 2018 baseline.

8.4.104 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-44. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-44: Future baseline performance at A50 Warrington Road/A5034 Mereside Road/A50 Manchester Road/Moss Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
Mereside Road (left)	196	0.34	1
Mereside Road (right)	14	0.05	0
Manchester Road (east) (ahead and right)	511	0.19	0
Moss Lane	-	-	-
Manchester Road (west) (ahead and left)	554	0.00	0
	2030 PM peak hour (16:00-17:00)		
Mereside Road (left)	231	0.39	1
Mereside Road (right)	77	0.27	0
Manchester Road (east) (ahead and right)	1,039	0.19	0

Approach	Flow, PCU/hr	RFC	Queue, PCU
Moss Lane	-	-	-
Manchester Road (west) (ahead and left)	323	0.00	0

8.4.105 The assessment sat this junction operates well within capacity in the 2030 future baseline.

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

8.4.106 This junction is a three-arm signal controlled T-junction with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-45.

Table 8-45: 2018 baseline performance at A50 Warrington Road/A50 Chester Road/B5569 Chester Road (south) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5569 Chester Road	106	10%	2
A50 Chester Road	444	28%	2
A50 Warrington Road	436	42%	5
	2018 PM peak hour (17:00–18:00) baseline results		
B5569 Chester Road	140	14%	2
A50 Chester Road	337	26%	2
A50 Warrington Road	869	82%	10

8.4.107 In the 2018 baseline the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2018 baseline with a maximum VoC of 82% on the A50 Warrington Road approach with an associated queue length of 10 PCU.

8.4.108 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-46. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-46: Future baseline performance at A50 Warrington Road/A50 Chester Road/B5569 Chester Road (south) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5569 Chester Road	220	21%	3
A50 Chester Road	488	29%	3
A50 Warrington Road	348	36%	4
	2030 PM peak hour (17:00–18:00)		
B5569 Chester Road	142	14%	2
A50 Chester Road	382	31%	2
A50 Warrington Road	973	92%	11

8.4.109 In the 2030 future baseline, the assessment shows that this junction operates well within capacity in the AM peak hour. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 92% on the A50 Warrington Road approach with an associated queue length of 11 PCU.

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

8.4.110 This junction is a three-arm priority-controlled (give way) T-junction with a controlled pedestrian and cycle crossing facility (Toucan) located on A50 Warrington Road. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-47.

Table 8-47: 2018 baseline performance at the A50 Knutsford Road/A50 Chester Road/B5569 Chester Road (north) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A50 Knutsford Road	444	30%	3
B5569 Chester Road (north)	0	0%	0
A50 Warrington Road	456	25%	1
	2018 PM peak hour (17:00–18:00) baseline results		
A50 Knutsford Road	337	22%	2
B5569 Chester Road (north)	0	0%	0
A50 Warrington Road	970	54%	2

8.4.111 The assessment shows that this junction operates well within capacity in the 2018 baseline.

8.4.112 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-48. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-48: Future baseline performance at A50 Knutsford Road/A50 Chester Road/B5569 Chester Road (north) junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A50 Knutsford Road	488	33%	3
B5569 Chester Road (north)	0	0%	0
A50 Warrington Road	300	17%	1
	2030 PM peak hour (17:00–18:00)		
A50 Knutsford Road	381	25%	2
B5569 Chester Road (north)	1	0%	0
A50 Warrington Road	1,068	60%	2

8.4.113 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A50 Knutsford Road/A556

8.4.114 This junction is a three-arm priority controlled (give-way) roundabout with no signal controlled pedestrian crossing facilities. The A556 on-slip is a one-way exit arm from the junction and is therefore not reported in the results. The operation of the junction has been assessed for the 2018 existing baseline AM and PM peak hours using SATURN software and is shown in Table 8-49.

Table 8-49: 2018 baseline performance at A50 Knutsford Road/A556 junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
A50 Knutsford Road (north)	504	34%	0
A50 Knutsford Road (south)	456	30%	0
	2018 PM peak hour (17:00–18:00) baseline results		
A50 Knutsford Road (north)	375	25%	0
A50 Knutsford Road (south)	970	65%	0

8.4.115 The assessment shows that this junction operates well within capacity in the 2018 baseline.

8.4.116 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-50. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-50: Future baseline performance at A50 Knutsford Road/A556 junction

Approach	Flow, PCU/hr	VoC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
A50 Knutsford Road (north)	513	34%	0
A50 Knutsford Road (south)	300	20%	0
	2030 PM peak hour (17:00–18:00)		
A50 Knutsford Road (north)	415	28%	0
A50 Knutsford Road (south)	1,068	71%	0

8.4.117 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

A50 Knutsford Road/Bucklow Hill Lane/Hoo Green Lane

8.4.118 This junction is a four-arm priority controlled (give-way) staggered crossroads with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-51.

Table 8-51: 2017 baseline performance at A50 Knutsford Road/Bucklow Hill Lane/Hoo Green Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Bucklow Hill Lane (ahead, left and right)	13	0.03	0
A50 (east) (ahead, left and right)	333	0.03	0
Hoo Green Lane (ahead and left)	5	0.01	0
Hoo Green Lane (ahead and right)	13	0.04	0
A50 (west) (ahead, left and right)	571	0.03	0
	2017 PM peak hour (17:00–18:00) baseline results		
Bucklow Hill Lane (ahead, left and right)	51	0.20	0
A50 (east) (ahead, left and right)	857	0.05	0
Hoo Green Lane (ahead and left)	18	0.04	0
Hoo Green Lane (ahead and right)	18	0.10	0
A50 (west) (ahead, left and right)	968	0.11	0

8.4.119 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.120 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-52. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-52: Future baseline performance at A50 Knutsford Road/Bucklow Hill Lane/Hoo Green Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Bucklow Hill Lane (ahead, left and right)	15	0.03	0	15	0.03	0	16	0.04	0
A50 (east) (ahead, left and right)	241	0.02	0	267	0.02	0	279	0.03	0
Hoo Green Lane (ahead and left)	6	0.01	0	6	0.01	0	6	0.01	0
Hoo Green Lane (ahead and right)	14	0.04	0	15	0.04	0	16	0.05	0
A50 (west) (ahead, left and right)	583	0.04	0	616	0.05	0	706	0.05	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Bucklow Hill Lane (ahead, left and right)	56	0.25	0	59	0.22	0	62	0.23	0
A50 (east) (ahead, left and right)	905	0.06	0	507	0.03	0	509	0.03	0

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
Hoo Green Lane (ahead and left)	20	0.05	0	19	0.04	0	20	0.04	0
Hoo Green Lane (ahead and right)	21	0.14	0	23	0.10	0	25	0.11	0
A50 (west) (ahead, left and right)	1,071	0.15	0	1,146	0.18	1	1,159	0.20	1

8.4.121 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

A50 Warrington Road/B5159 West Lane (east)

8.4.122 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-53.

Table 8-53: 2017 baseline performance at A50 Warrington Road/B5159 West Lane (east) junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
B5159 West Lane (left and right)	187	0.39	1
A50 Warrington Road (east) (ahead and right)	455	0.31	0
A50 Warrington Road (west) (ahead)	513	-	-
A50 Warrington Road (west) (left)	2	-	-
	2017 PM peak hour (17:00–18:00) baseline results		
B5159 West Lane (left and right)	228	0.44	1
A50 Warrington Road (east) (ahead and right)	965	0.29	0
A50 Warrington Road (west) (ahead)	308	-	-
A50 Warrington Road (west) (left)	2	-	-

8.4.123 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.124 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-54. As the junction is affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 8-54: Future baseline performance at A50 Warrington Road/B5159 West Lane (east) junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)		
B5159 West Lane (left and right)	159	0.32	1
A50 Warrington Road (east) (ahead and right)	522	0.34	1
A50 Warrington Road (west) (ahead)	273	-	-
A50 Warrington Road (west) (left)	25	-	-

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2030 PM peak hour (17:00–18:00)		
B5159 West Lane (left and right)	230	0.45	1
A50 Warrington Road (east) (ahead and right)	956	0.33	1
A50 Warrington Road (west) (ahead)	328	-	-
A50 Warrington Road (west) (left)	3	-	-

8.4.125 The assessment shows that this junction operates well within capacity in the 2030 future baseline.

Peacock Lane/Back Lane

8.4.126 This junction is a three-arm priority controlled (give-way) T-junction with no signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 8-55.

Table 8-55: 2017 baseline performance at Peacock Lane/Back Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Peacock Lane (west) (ahead)	72	0.00	0
Peacock Lane (west) (left)	7	0.00	0
Back Lane (left and right)	12	0.02	0
Peacock Lane (east) (ahead and right)	55	0.01	0
	2017 PM peak hour (17:00–18:00) baseline results		
Peacock Lane (west) (ahead)	16	0.00	0
Peacock Lane (west) (left)	2	0.00	0
Back Lane (left and right)	25	0.05	0
Peacock Lane (east) (ahead and right)	111	0.02	0

8.4.127 The assessment shows that this junction operates well within capacity in the 2017 baseline.

8.4.128 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 8-56. As the junction is affected by both construction and operation of the Proposed Scheme, future baseline results are presented for 2030, 2038 and 2046.

Table 8-56: Future baseline performance at Peacock Lane/Back Lane junction

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU
	2030 AM peak hour (08:00–09:00)			**2038 AM peak hour (08:00–09:00)**			**2046 AM peak hour (08:00–09:00)**		
Peacock Lane (west) (ahead)	69	0.00	0	70	0.00	0	72	0.00	0
Peacock Lane (west) (left)	21	0.00	0	23	0.00	0	26	0.00	0

Approach	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/hr	RFC	Queue, PCU	Flow, PCU/ hr	RFC	Queue, PCU
Back Lane (left and right)	14	0.03	0	15	0.03	0	16	0.03	0
Peacock Lane (east) (ahead and right)	66	0.02	0	70	0.02	0	72	0.02	0
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
Peacock Lane (west) (ahead)	17	0.00	0	18	0.00	0	19	0.00	0
Peacock Lane (west) (left)	3	0.00	0	6	0.00	0	10	0.00	0
Back Lane (left and right)	27	0.06	0	29	0.06	0	30	0.07	0
Peacock Lane (east) (ahead and right)	123	0.03	0	129	0.03	0	137	0.03	0

8.4.129 The assessment shows that this junction operates well within capacity in the 2030, 2038 and 2046 future baseline.

Accidents and safety

8.4.130 Accident records have been obtained from the information provided by the DfT. Within the MA03 area, a total of 199 accidents occurred over the three-year period July 2016 - June 2019, of which 153 (77%) were recorded as slight, 39 (20%) as serious and seven (4%) as fatal. There were 24 accidents involving non-motorised users (i.e. pedestrians, cyclists, equestrians or mobility scooters).

8.4.131 The baseline survey report in Transport Assessment policy and data (see BID TR-004-00001) illustrates the location of accidents, including their severity and whether pedestrians or cyclists were involved, recorded in the MA03 area over the three years between July 2016 and June 2019.

8.4.132 There was one accident cluster identified within the Pickmere to Agden and Hulseheath area at the M6 junction 19/A556 Chester Road junction. In total, there were 13 accidents, of which four were classified as serious and nine were classified as slight.

8.4.133 No issues have been identified for the operation of the future baseline network as a result of changes to the highway network or travel demands, and the accident and safety records for the existing baseline are assumed to provide a relevant basis for assessment.

Parking and loading

8.4.134 The MA03 area is predominantly rural in nature, and therefore on-street parking is generally unrestricted. A private off-street car park comprising 120 parking spaces associated with the Mere Court Hotel, located to the north of the A50 Warrington Road in Hoo Green, is expected to be affected by the Proposed Scheme. Land at the Cheshire Showground, which is used as temporary parking areas during events, is also expected to be affected by the Proposed Scheme.

8.4.135 Within the MA03 area, unrestricted on-street parking occurs on Chapel Lane (between the B5569 Chester Road and Crescent Road), which is a construction traffic route.

8.4.136 Compared to the existing baseline, no changes are assumed to parking and loading in the future baseline.

8.5 Public transport

8.5.1 Public transport provision is focused on the local centre of Knutsford, with other more rural areas within the MA03 area being less well served. Bus routes cross the area along the principal highway corridors, serving a number of smaller settlements. Local rail services can be accessed from Knutsford Station. The following sections describe the rail and bus services in the area.

Rail network

8.5.2 The Mid-Cheshire Line traverses the south-east of the MA03 area and is served by Knutsford Station. The Mid-Cheshire Line carries local services between Chester and Manchester Piccadilly, calling at stops including Stockport, Altrincham and Northwich.

8.5.3 Compared to the existing baseline, no changes are assumed to the rail network in the future baseline.

Local bus network

8.5.4 Two bus services operate on four roads that may be impacted by the Proposed Scheme in MA03. There are also bus stops primarily located to serve the main built-up areas. Where bus services and stops are expected to be affected by either the construction or operation of the Proposed Scheme, these are referred to in the relevant assessment sections. The bus routes that could be affected by the Proposed Scheme include:

- B5391 Pickmere Lane: route 89 (Knutsford - Wincham - Northwich);
- A556 Chester Road: route 89 (Knutsford - Wincham - Northwich);
- A50 Manchester Road/Warrington Road/Chester Road/Knutsford Road: route 47 (Warrington - Mere - High Legh - Knutsford); and
- B5159 West Lane: route 47 (Warrington - Mere - High Legh - Lymm).

8.5.5 Bus service provision in the MA03 area is focused on connections to and from Knutsford. Buses are operated by D&G Bus and Warrington's Own Buses within the area.

8.5.6 Since it is not possible to forecast how services may change in the future, it has been assumed that bus services for the future years of assessment will be the same as those currently operating.

Public transport interchanges

8.5.7 There are no major public transport interchange facilities in the MA03 area potentially affected by the Proposed Scheme and no committed proposals for public transport interchanges in this area.

8.5.8 Compared to the existing baseline, no changes are assumed to public transport interchanges in the future baseline.

8.6 Pedestrians, cyclists and equestrians

8.6.1 There are pedestrian footways adjacent to many of the roads in the built-up areas of Knutsford, Pickmere, High Legh and Bucklow Hill. There is a network of advisory cycle

routes[12], a National Cycle Network (NCN) regional route and a number of PRoW in the vicinity of the Proposed Scheme. The following sections identify the pedestrian, cycle and equestrian facilities in the study area.

Pedestrian facilities

8.6.2 Roadside footways in the built-up areas within MA03 vary in width and condition. Where there is no formal roadside footway provision, non-motorised user numbers are generally low.

8.6.3 The Proposed Scheme will cross two roads with roadside footways within the Pickmere to Agden and Hulseheath area. These are the A50 Warrington Road and the A56 Lymm Road.

8.6.4 In addition to the pedestrian facilities on the public roads, there are a number of PRoW in the MA03 area:

- Footpath Tabley Inferior 1/1 - between Footpath Pickmere 5 and the A556 Chester Road;
- Footpath Pickmere 8/1 - between Footpath Tabley Inferior 3/1 and the A556 Chester Road;
- Footpath Tabley Inferior 3/1 - between B5391 Pickmere Lane and Footpath Pickmere 8;
- Footpath Pickmere 9/1 - between Footpath Pickmere 4/1 and Waterless Brook;
- Footpath Pickmere 9/2 - Flittogate Lane and Cheshire Showground north access;
- Footpath Agden 4/1 - between Agden Lane and Footpath Agden 1/3;
- Footpath Agden 2/4 - between Footpath Agden 1/4 and Agden Lane; and
- Footpath Agden 1/2 - between Reddy Lane and A56 Lymm Road.

8.6.5 There are no known proposals for changes to pedestrian facilities and routes that affect the future baseline.

Cycle facilities

8.6.6 In MA03, one regional route on the NCN passes through the area. This is Regional Route 70, The Cheshire Cycleway, which traverses the MA03 area on a south to north alignment. The route follows minor roads and connects villages including Great Budworth, High Legh and Bucklow Hill. The route of the Proposed Scheme will cross the cycleway at two locations on Peacock Lane.

8.6.7 Compared to the existing baseline, no changes are assumed to cycle facilities in the future baseline.

[12] Advisory cycle routes are locally promoted routes for use by cyclists that do not generally have any formal cycle infrastructure provision, such as cycle lanes.

Equestrian facilities

8.6.8 There is one bridleway and one Restricted Byway in the vicinity of the route of the Proposed Scheme in the Pickmere to Agden and Hulseheath area, which are :

- Bridleway Mere 1; and
- Restricted Byway Tabley Superior 4.

8.6.9 Compared to the existing baseline, no changes are assumed to equestrian facilities in the future baseline.

8.7 Waterways and canals

8.7.1 There is one navigable waterway in the MA03 area. The Bridgewater Canal passes through the north-east section of the study area on a south-west to north-east alignment and extends between Runcorn and Manchester. It is not expected that there will be any effects on the Bridgewater Canal during construction or operation of the Proposed Scheme. Consequently, this topic has not been considered further in this assessment.

8.7.2 Compared to the existing baseline, no changes are assumed to waterways and canals in the future baseline.

8.8 Air transport

8.8.1 There is no relevant air transport in the MA03 area.

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