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HS2

High Speed Rail (Crewe – Manchester) Environmental Statement

Volume 5: Appendix TR-002-00004

Traffic and transport

MA04: Broomedge to Glazebrook

Transport Assessment Part 2

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Department for Transport

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9.1 Study area

9.1.1 The study area for traffic and transport includes the settlements of Lymm, Partington, Cadishead, Irlam, Broomedge, Heatley, Mossbrow, Warburton, Hollins Green and Glazebrook. Local rail services are accessible via Glazebrook Station and Irlam Station.

9.1.2 Strategic roads potentially affected by the Proposed Scheme in the MA04 area include the M6 (including junction 21), the M60 (including junctions 8-11) and the M62.

9.1.3 Local roads in the MA04 area potentially affected by the Proposed Scheme include the A6144 Birch Brook Road/Mill Lane/Bent Lane/Paddock Lane/Warburton Lane/Manchester Road/Carrington Lane/Carrington Spur, the A56 Lymm Road, the A57 Manchester Road/Cadishead Way/Liverpool Road, the B5159 Mill Lane, the B5160 Dunham Road, the B5210 Woolston Grange Avenue, the B5212 Glazebrook Lane/Holcroft Lane, the B5214 Trafford Boulevard/Barton Road, Agden Lane, Warrington Lane, Spring Lane, Bradshaw Lane, Wet Gate Lane, Paddock Lane, Manchester Road, Dam Head Lane, Dam Lane and Banky Lane.

9.1.4 The Liverpool to Manchester Line (via Warrington Central) is the only passenger and freight railway that runs through the MA04 area.

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

- the entirety of the Western Gateway Infrastructure Scheme (WGIS);
- M62 junction 10 to 12 smart motorway; and
- M6 junction 21A to 26 smart motorway.

9.1.6 Phase 1 of the WGIS, provided a new link, the Salford Western Gateway, which connects from a new signalised junction with the A57 to the west of the M60 before passing under the M60 south of junction 11, over the Manchester Ship Canal and connecting with Trafford Way on the eastern side of the M60. The new link opened in December 2017.

9.1.7 As part of a later phase of the WGIS, there are proposals to provide connectivity in the form of new links from Salford Western Gateway either side of the M60 to the M60 junction 11, and the subsequent removal of the current M60 junction 11 northbound off-slip and M60 junction 11 southbound on-slip. Traffic which currently uses these slip roads to egress/access the M60 at junction 11 will instead travel via the Salford Western Gateway to M60 junction 10. This will also lead to downgrading of the A57 between M60 junction 11 and the Salford Western Gateway as traffic will no longer use the A57 to access M60 junction 11.

9.1.8 Work at M62 junction 10 to 12 was completed in January 2021 to provide an 'all-lane running' smart motorway with 4 lanes in each direction and variable speed limits.

9.1.9 Work at M6 junction 21A to 26 is in progress to provide an 'all-lane running' smart motorway with 4 lanes in each direction and variable speed limits. At the time of the assessment, this was expected to be completed in 2023.

9.1.10 The Greater Manchester Strategic Model (GMSM) and the Warrington Western Link Model (WWLM) have been used to derive baseline and future baseline traffic flows across the MA04 area.

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

9.2 Local land uses

9.2.1 The MA04 area is predominantly rural, comprising largely of fields, towns, villages and hamlets including Agden, Rixton-with-Glazebrook, Warburton and Cadishead. The town of Lymm is located in the south of the area and the towns of Irlam and Partington are located in the north of the area.

9.2.2 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 (Warrington Local Plan Core Strategy (2014)[1]; Trafford Local Plan: Core Strategy (2012)[2]; saved policies of the City of Salford Unitary Development Plan (2006)[3]; Greater Manchester Transport Strategy to 2040 (2017)[4]; Warrington Local Transport Plan 4 (2019)[5]; and Transport in Salford 2025 (2013)[6];
- local planning authority planning portals (to obtain details of recently consented, committed development that is not included in the sources above). This allows the

[1] Warrington Borough Council (2014), *Local Plan Core Strategy 2012-2027 (Adopted 2014).* Available online at: https://www.warrington.gov.uk/info/200564/planning_policy/1903/local_plan.

[2] Trafford Council (2012), *Trafford Local Plan: Core Strategy 2011-2026*. Available online at: https://www.trafford.gov.uk/planning/strategic-planning/docs/core-strategy-adopted-final.pdf.

[3] Salford City Council (2006), *City of Salford Unitary Development Plan 2004-2016 (saved policies) (adopted 2006)*. Available online at: https://www.salford.gov.uk/planning-building-and-regeneration/planning-policies/local-planning-policy/salfords-development-plan/saved-unitary-development-plan-policies/.

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

[5] Warrington Borough Council (2019), *Warrington Local Transport Plan 4*, Available online at: https://www.warrington.gov.uk/LTP4.

[6] Salford City Council (2013), *Transport in Salford 2025*. Available online at: http://services.salford.gov.uk/solar_documents/transport%20in%20salford%202025.pdf.

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 WWLM developed by Warrington Borough Council and the GMSM[7] developed by Transport for Greater Manchester which are based on agreed committed developments in the MA04 area.

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

9.3 Baseline surveys

9.3.1 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 in Background Information and Data (BID): Transport Assessment policy and data (BID TR-004-00001)[8].

Traffic surveys

9.3.2 Traffic surveys, comprising junction turning counts (JTC), manual classified counts (MCC), queue length surveys (QLS) and automatic traffic counts (ATC), were undertaken in June, July and November 2017, and June and July 2018. These data have been supplemented by existing traffic data from other sources, including from Highways England, Warrington Borough Council (WBC), Salford City Council (SaCC) and Trafford Metropolitan Borough Council (TMBC). Where possible, ATC data were gathered for a two-week period. In total 27 traffic surveys have been undertaken in the MA04 area.

Non-motorised user surveys

9.3.3 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 is crossed by the route of the Proposed Scheme and any additional PRoW and roads that may be affected by the Proposed Scheme. 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.

9.3.4 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 MA04 area. For ease of reference the data have been presented for each parish within the area, from south to north.

[7] GMSM model reference: GMVDM04A.
[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.

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

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

Accident data

9.3.7 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.

9.4 Highway network

Strategic and primary 'A' road network

9.4.1 Three motorways and one primary 'A' road run through the study area: the M6, the M60, the M62 and the A57.

9.4.2 The M6 extends on a south to north alignment from Lymm in the south-west to Grange in the north-west. The M6 is managed by Highways England and comprises a three-lane motorway with a hard shoulder in each direction. The national speed limit applies. The M6 junction 21 is the only junction on the M6 within the MA04 area, located in the north-west of the area. The junction comprises a grade-separated double roundabout ('dumbbell') junction with the A57 Manchester Road.

9.4.3 The M60 forms part of the Manchester Outer Ring Road and intersects the MA04 area in the east. The M60 is managed by Highways England and comprises a three-lane motorway with a hard shoulder in each direction. The national speed limit applies. There are four grade-separated junctions on the M60 within the MA04 area:

- M60 junction 8 - Carrington Interchange;
- M60 junction 9 - Lostock Circle;
- M60 junction 10 - Redclyffe Circle; and
- M60 junction 11 - Peel Green Interchange.

9.4.4 The M62 intersects the MA04 area to the north of Irlam and extends on a west to east alignment between Warrington to the west and Manchester to the east. The M62 is managed by Highways England. Between junction 10 and 12, the M62 operates as a 'smart motorway'

[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.

incorporating four lanes in each direction ('all-lanes running') and variable speed limits. There are no junctions on the M62 within the MA04 area.

9.4.5 The A57 Manchester Road/Cadishead Way/Liverpool Road extends on a south-west to north-east alignment along the northern side of the Manchester Ship Canal, connecting the M6 junction 21 in the west of the MA04 area with the M60 junction 11 to the east. Within MA04, the A57 serves the towns of Cadishead and Irlam. The A57 is a single carriageway road with localised sections of dual carriageway between Glazebrook Lane and Hollins Green and at its junction with the M6. The speed limit varies along the length of the A57 within the MA04 area, however most of the route is restricted to 50mph. The A57 is managed by the respective borough highway authorities; TMBC and WBC. The route of the Proposed Scheme intersects the A57 immediately to the east of Hollins Green.

9.4.6 As previously noted, Phase 1 of the WGIS provided a new link, known as the Salford Western Gateway, which connects from a new signalised junction with the A57 to the west of the M60 before passing under the M60 south of junction 11, over the Manchester Ship Canal and connecting with Trafford Way on the eastern side of the M60.

Local road network

9.4.7 The key local roads in MA04 area, including roads likely to be affected by the Proposed Scheme, are:

- A6144 Birch Brook Road/Mill Lane/Bent Lane/Paddock Lane/Warburton Lane/Manchester Road/Carrington Lane/Carrington Spur, which follows a south-west to north-east alignment and connects Lymm in the south-west of MA04 with Partington and Carrington in the north-east. The A6144 is a single carriageway road and has variable speed restrictions between 30mph and 40mph. The road crosses the route of the Proposed Scheme approximately 800m to the east of Warburton;
- A57 Manchester Road/Cadishead Way/Liverpool Road, which follows an east-west alignment and connects from M6 junction 21 in the west to M60 junction 11 in the east. The A57 is a single carriageway road for the majority of the route with a 50mph speed limit. The road crosses the route of the Proposed Scheme to the south west of Cadishead;
- B5159 Mill Lane, which follows a south to north alignment and connects Stage Lane in the south and the A6144 Birch Brook Road in the north. The B5159 Mill Lane is a single carriageway road with varying speed restrictions between 30mph and 60mph speed limit. The road does not cross the route of the Proposed Scheme;
- B5160 Dunham Road, which follows a south east to north west alignment and connects with the B5160 Station Road in the south in the settlement of Dunham Massey and the A6144 Paddock Lane/Warburton Lane in the north. The B5160 Dunham Road is a single carriageway road with varying speed restrictions between 30mph and 60mph speed limit. The road does not cross the route of the Proposed Scheme;

- B5210 Woolston Grange Avenue, which follows a south to north alignment and connects at the south to a roundabout with the A57 Manchester Road and the M6 junction 21 northbound slip roads and to the north with the A574 Birchwood Way. The B5210 Woolston Grange Avenue is predominantly a dual carriageway at its southern end, with the northern section being single carriageway. The speed limit is 40mph. The road does not cross the route of the Proposed Scheme;
- B5212 Glazebrook Lane/Holcroft Lane, which follows a south to north alignment and connects the settlements of Hollins Green and Cadishead in the south and Culcheth in the north. The B5212 Glazebrook Lane/Holcroft Lane is a single carriageway road with a 30mph speed limit. The road does not cross the route of the Proposed Scheme; and
- B5214 Trafford Boulevard/Barton Road, which follows a south to north alignment and connects Urmston in the south with Trafford Park in the north. The B5214 Barton Road is a dual carriageway road with a 40mph speed limit. The road does not cross the route of the Proposed Scheme.

9.4.8 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:

- Agden Lane, between A56 Agden Brow and Warrington Lane;
- Warrington Lane, between A56 Lymm Road and Lymm Marina;
- Spring Lane, between Bradshaw Lane and Rose Cottages;
- Bradshaw Lane, between Spring Lane and B5159 Mill Lane;
- Wet Gate Lane, between Spring Lane and B5159 Mill Lane;
- Paddock Lane, between A6144 Paddock Lane and Townfield Lane;
- Manchester Road, between A57 Manchester Road and B5212 Glazebrook Lane;
- Dam Head Lane, between Dam Lane and B5212 Glazebrook Lane;
- Dam Lane, between Manchester Road and Dam Head Lane;
- Banky Lane;
- Salford Western Gateway, between A57 Liverpool Road and Trafford Way; and
- Trafford Way, between Salford Western Gateway and B5214 Trafford Boulevard.

Growth in traffic

9.4.9 In considering the future baseline, traffic will vary across the MA04 area. 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

[11] GMSM and WWLM.

within MA04 calculated using the total link flows for each future year. These illustrative overall growth factors are summarised in Table 9-1.

Table 9-1: MA04 traffic growth summary

Period years	AM peak hour	PM peak hour
2018-2030	10%	10%
2018-2038	16%	16%
2018-2046	23%	23%

Baseline traffic flows

9.4.10 The 2018 baseline traffic flows derived from the GMSM and the WWLM models for strategic, primary 'A' roads and local roads for the MA04 area are summarised in Table 9-2 for the weekday AM (08:00–09:00) and PM (17:00–18:00) peak hours and in Table 9-3 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 9-2: MA04 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) - HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
B5159 High Legh Road (between Kay Lane and A56 Higher Lane)	NB	330	4	310	2
	SB	186	5	334	1
A56 Higher Lane (between B5159 Burford Lane and Agden Park Lane)	EB	657	5	276	1
	WB	267	4	745	3
Crouchley Lane (between Mag Lane and A56 Higher Lane)	NB	16	0	71	2
	SB**	0	0	0	0
A56 Higher Lane (between Crouchley Lane and Oughtrington Lane)	EB	230	2	143	1
	WB	98	1	233	1
B5159 Burford Lane (between A56 Higher Lane and Stage Lane)	NB	165	0	156	0
	SB	43	0	75	0
Bradshaw Lane (between B5159 Burford Lane and Wet Gate Lane)	EB	4	0	3	0
	WB	3	0	3	0
Stage Lane (between B5159 Burford Lane and Sandy Lane)	EB	15	0	10	0
	WB	29	1	43	0
B5159 Mill Lane (between Bradshaw Lane and Wet Gate Lane)	NB	196	5	132	2
	SB	211	5	270	5
	EB	10	0	10	0

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) - HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
Wet Gate Lane (between B5159 Mill Lane and Bradshaw Lane)	WB	10	0	10	0
B5160 Station Road (between Barns Lane and B5160 Paddock Lane)	NB	179	4	327	8
	SB	172	3	198	3
B5159 Mill Lane (between Wet Gate Lane and A6144 Birch Brook Road)	NB	196	5	132	2
	SB	211	5	270	5
B5160 Paddock Lane (between Barns Lane and B5160 Station Road)	EB	219	4	206	3
	WB	180	4	327	8
B5160 Dunham Road (between B5160 Paddock Lane and Barns Lane)	NB	180	4	327	8
	SB	219	4	206	3
B5160 Dunham Road (between Barns Lane and Gorsey Lane)	EB	219	4	206	3
	WB	180	4	327	8
A6144 Mill Lane (between B5159 Mill Lane and B5159 Townfield Lane)	NB	751	8	478	4
	SB	399	7	653	3
A6144 Bent Lane (between A6144 Paddock Lane and B5159 Townfield Lane)	NB	562	8	323	5
	SB	287	7	610	3
A6144 Warburton Lane (between B5160 Dunham Road and Moss Lane)	NB	679	6	566	2
	SB	430	6	612	2
A57 Manchester Road (between Moat Lane and M6 Junction 21)	EB	601	59	963	70
	WB	823	86	672	20
Red House Lane (between Sinderland Lane and Henshall Lane)	NB	507	9	481	2
	SB	475	5	349	2
A57 Manchester Road (between Chapel Lane and Moat Lane)	EB	604	50	918	42
	WB	759	66	625	21
A57 Manchester Road (between Chapel Lane and Warburton Bridge Road)	EB	667	54	974	43
	WB	652	47	686	24
A57 Manchester Road (between Warburton Bridge Road and Manchester Road)	EB	667	54	974	43
	WB	652	47	686	24
A6144 Warburton Lane (between Moss Lane and Chapel Lane)	NB	768	6	608	6
	SB	458	11	766	4
Manchester Road (between A57 Manchester Road and Dam Lane)	NB	18	2	56	1
	SB	131	4	38	1
A57 Manchester Road (between Manchester Road and B5212 Glazebrook Lane)	NB	683	55	936	42
	SB	554	46	666	24
	EB	64	0	54	0

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) - HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
Dam Lane (between School Lane and Manchester Road)	WB	170	2	125	0
Manchester Road (between Dam Lane and B5212 Glazebrook Lane)	EB	60	2	64	0
	WB	224	5	156	0
A57 Manchester Road (between B5212 Glazebrook Lane and Liverpool Road)	EB	630	52	842	23
	WB	835	53	959	48
B5212 Glazebrook Lane (between Manchester Road and A57 Manchester Road)	NB	352	12	494	6
	SB	450	13	283	6
A6144 Warburton Lane (between Chapel Lane and Moss Lane)	EB	834	12	676	7
	WB	624	15	853	4
Dam Lane (between School Lane and Dam Head Lane)	EB	52	2	18	1
	WB	14	2	27	1
B5212 Glazebrook Lane (between Manchester Road and Bank Street)	NB	237	14	423	10
	SB	445	22	256	11
Dam Head Lane (between Dam Lane and Bank Street)	NB	15	1	22	0
	SB	49	0	16	0
A6144 Manchester Road (between B5158 Flixton Road and Moss Lane)	EB	843	12	664	7
	WB	611	15	851	4
B5212 Glazebrook Lane (between Dam Head Lane and Bank Street)	EB	445	22	256	11
	WB	237	14	423	10
Dam Head Lane (between B5212 Glazebrook Lane and Bank Street)	EB	15	1	22	0
	WB	49	0	16	0
A6144 Carrington Lane (between A6144 Carrington Lane and B5158 Flixton Road)	EB	640	51	636	23
	WB	775	41	755	39
B5212 Glazebrook Lane (between Dam Head Lane and Woolden Road)	NB	429	22	240	10
	SB	240	17	384	12
A6144 Carrington Spur (between A6144 Carrington Lane and M60 junction 8)	EB	1,167	47	577	28
	WB	701	41	1,060	34
Glaziers Lane (between Wigshaw Lane and A574 Warrington Road)	EB	40	2	132	2
	WB	136	1	42	1
A57 Cadishead Way (between Liverpool Road and B5311 Fairhills Road)	NB	156	11	150	29
	SB	494	15	132	1
A57 Liverpool Road (between B5320 Liverpool Road and M60 junction 11)	NB	2,279	26	1,295	38
	SB	1,351	35	2,003	16
	EB	254	5	664	3

Location	Direction*	2018 baseline AM peak hour (08:00–09:00) - All vehicles	2018 baseline AM peak hour (08:00–09:00) - HGV	2018 baseline PM peak hour (17:00–18:00) - All vehicles	2018 baseline PM peak hour (17:00–18:00) - HGV
Trafford Way (between B5214 Trafford Boulevard and Old Park Lane)	WB	91	2	227	0

** 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 9-3: MA04 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
B5159 High Legh Road (between Kay Lane and A56 Higher Lane)	NB	4,409	41
	SB	3,574	44
A56 Higher Lane (between B5159 Burford Lane and Agden Park Lane)	EB	6,432	42
	WB	6,949	50
Crouchley Lane (between Mag Lane and A56 Higher Lane)	NB	592	17
	SB	4	4
A56 Higher Lane (between Crouchley Lane and Oughtrington Lane)	EB	2,575	16
	WB	2,271	15
B5159 Burford Lane (between A56 Higher Lane and Stage Lane)	NB	2,208	0
	SB	809	0
Bradshaw Lane (between B5159 Burford Lane and Wet Gate Lane)	EB	38	0
	WB	33	0
Stage Lane (between B5159 Burford Lane and Sandy Lane)	EB	137	1
	WB	400	5
B5159 Mill Lane (between Bradshaw Lane and Wet Gate Lane)	NB	1,842	35
	SB	2,701	58
Wet Gate Lane (between B5159 Mill Lane and Bradshaw Lane)	EB	111	0
	WB	111	0
B5160 Station Road (between Barns Lane and B5160 Paddock Lane)	NB	3,339	77
	SB	2,439	39
B5159 Mill Lane (between Wet Gate Lane and A6144 Birch Brook Road)	NB	1,842	35
	SB	2,701	58
B5160 Paddock Lane (between Barns Lane and B5160 Station Road)	EB	2,793	44
	WB	3,342	80
B5160 Dunham Road (between B5160 Paddock Lane and Barns Lane)	NB	3,342	80
	SB	2,793	44
B5160 Dunham Road (between Barns Lane and Gorsey Lane)	EB	2,793	44
	WB	3,342	80
	NB	6,910	68

Location	Direction	Annual Average Daily Traffic (AADT) - all vehicles	Annual Average Daily Traffic (AADT) - HGV
A6144 Mill Lane (between B5159 Mill Lane and B5159 Townfield Lane)	SB	5,905	51
A6144 Bent Lane (between A6144 Paddock Lane and B5159 Townfield Lane)	NB	4,971	70
	SB	5,034	51
A6144 Warburton Lane (between B5160 Dunham Road and Moss Lane)	NB	6,751	41
	SB	5,794	37
A57 Manchester Road (between Moat Lane and M6 Junction 21)	EB	8,778	724
	WB	8,401	593
Red House Lane (between Sinderland Lane and Henshall Lane)	NB	6,498	69
	SB	5,422	41
A57 Manchester Road (between Chapel Lane and Moat Lane)	EB	8,544	518
	WB	7,772	489
A57 Manchester Road (between Chapel Lane and Warburton Bridge Road)	EB	9,211	543
	WB	7,511	400
A57 Manchester Road (between Warburton Bridge Road and Manchester Road)	EB	9,211	543
	WB	7,511	400
A6144 Warburton Lane (between Moss Lane and Chapel Lane)	NB	7,445	66
	SB	6,860	73
Manchester Road (between A57 Manchester Road and Dam Lane)	NB	412	14
	SB	948	23
A57 Manchester Road (between Manchester Road and B5212 Glazebrook Lane)	NB	9,084	543
	SB	6,848	391
Dam Lane (between School Lane and Manchester Road)	EB	667	0
	WB	1,656	11
Manchester Road (between Dam Lane and B5212 Glazebrook Lane)	EB	698	11
	WB	2,138	28
A57 Manchester Road (between B5212 Glazebrook Lane and Liverpool Road)	EB	8,260	419
	WB	10,072	565
B5212 Glazebrook Lane (between Manchester Road and A57 Manchester Road)	NB	4,749	101
	SB	4,117	104
A6144 Warburton Lane (between Chapel Lane and Moss Lane)	EB	8,181	98
	WB	8,199	95
Dam Lane (between School Lane and Dam Head Lane)	EB	395	15
	WB	230	16
B5212 Glazebrook Lane (between Manchester Road and Bank Street)	NB	3,703	134
	SB	3,944	183
Dam Head Lane (between Dam Lane and Bank Street)	NB	211	3
	SB	363	0

Location	Direction	Annual Average Daily Traffic (AADT) - all vehicles	Annual Average Daily Traffic (AADT) - HGV
A6144 Manchester Road (between B5158 Flixton Road and Moss Lane)	EB	8,148	98
	WB	8,124	95
B5212 Glazebrook Lane (between Dam Head Lane and Bank Street)	EB	3,944	183
	WB	3,703	134
Dam Head Lane (between B5212 Glazebrook Lane and Bank Street)	EB	211	3
	WB	363	0
A6144 Carrington Lane (between A6144 Carrington Lane and B5158 Flixton Road)	EB	8,400	487
	WB	10,073	525
B5212 Glazebrook Lane (between Dam Head Lane and Woolden Road)	NB	3,760	178
	SB	3,503	165
A6144 Carrington Spur (between A6144 Carrington Lane and M60 junction 8)	EB	11,460	496
	WB	11,603	491
Glaziers Lane (between Wigshaw Lane and A574 Warrington Road)	EB	961	22
	WB	1,001	11
A57 Cadishead Way (between Liverpool Road and B5311 Fairhills Road)	NB	1,722	223
	SB	3,520	91
A57 Liverpool Road (between B5320 Liverpool Road and M60 junction 11)	NB	20,088	358
	SB	18,820	288
Trafford Way (between B5214 Trafford Boulevard and Old Park Lane)	EB	6,053	54
	WB	2,096	13

9.4.11 Table 9-4, Table 9-5 and Table 9-6 summarise the 2030, 2038 and 2046 future baseline traffic flows for the weekday AM peak hour (08:00–09:00), weekday PM peak hour (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 9-4: MA04 strategic and local road network future baseline flows AM peak hour 08:00–09:00

Location	Direction	AM peak hour 2030 all vehicles	AM peak hour 2030 HGV	AM peak hour 2038 all vehicles	AM peak hour 2038 HGV	AM peak hour 2046 all vehicles	AM peak hour 2046 HGV
B5159 High Legh Road (between Kay Lane and A56 Higher Lane)	NB	382	5	373	5	390	5
	SB	222	6	231	6	240	6
A56 Higher Lane (between B5159 Burford Lane and Agden Park Lane)	EB	687	5	717	5	727	5
	WB	310	5	306	5	310	5

Location	Direction	AM peak hour 2030 all vehicles	AM peak hour 2030 HGV	AM peak hour 2038 all vehicles	AM peak hour 2038 HGV	AM peak hour 2046 all vehicles	AM peak hour 2046 HGV
Crouchley Lane (between Mag Lane and A56 Higher Lane)	NB	29	0	31	0	40	0
	SB	0	0	0	0	0	0
A56 Higher Lane (between Crouchley Lane and Oughtrington Lane)	EB	225	1	222	2	221	2
	WB	104	1	96	1	98	1
B5159 Burford Lane (between A56 Higher Lane and Stage Lane)	NB	226	0	223	0	250	0
	SB	70	0	90	0	105	0
Bradshaw Lane (between B5159 Burford Lane and Wet Gate Lane)	EB	5	0	5	0	5	0
	WB	3	0	4	0	4	0
Stage Lane (between B5159 Burford Lane and Sandy Lane)	EB	13	0	13	0	13	0
	WB	24	1	20	1	17	1
B5159 Mill Lane (between Bradshaw Lane and Wet Gate Lane)	NB	223	5	239	5	254	5
	SB	241	5	260	5	278	5
Wet Gate Lane (between B5159 Mill Lane and Bradshaw Lane)	EB	11	0	12	0	13	0
	WB	11	0	12	0	13	0
B5160 Station Road (between Barns Lane and B5160 Paddock Lane)	NB	205	4	196	4	190	4
	SB	192	2	197	2	209	3
B5159 Mill Lane (between Wet Gate Lane and A6144 Birch Brook Road)	NB	223	5	239	5	254	5
	SB	241	5	260	5	278	5
B5160 Paddock Lane (between Barns Lane and B5160 Station Road)	EB	274	3	292	3	377	4
	WB	211	5	204	5	204	5
B5160 Dunham Road (between B5160 Paddock Lane and Barns Lane)	NB	211	5	204	5	204	5
	SB	274	3	292	3	377	4
B5160 Dunham Road (between Barns Lane and Gorsey Lane)	EB	274	3	292	3	377	4
	WB	211	5	204	5	204	5
A6144 Mill Lane (between B5159 Mill Lane and B5159 Townfield Lane)	NB	847	8	899	8	949	8
	SB	451	7	480	7	507	7
	NB	634	8	673	8	710	8

Location	Direction	AM peak hour 2030 all vehicles	AM peak hour 2030 HGV	AM peak hour 2038 all vehicles	AM peak hour 2038 HGV	AM peak hour 2046 all vehicles	AM peak hour 2046 HGV
A6144 Bent Lane (between A6144 Paddock Lane and B5159 Townfield Lane)	SB	324	7	345	7	364	7
A6144 Warburton Lane (between B5160 Dunham Road and Moss Lane)	NB	767	6	814	6	860	7
	SB	485	6	516	6	545	6
A57 Manchester Road (between Moat Lane and M6 Junction 21)	EB	682	60	733	61	782	62
	WB	931	87	996	88	1,059	89
Red House Lane (between Sinderland Lane and Henshall Lane)	NB	433	10	403	11	325	12
	SB	420	5	392	5	349	5
A57 Manchester Road (between Chapel Lane and Moat Lane)	EB	679	51	721	51	760	52
	WB	853	67	906	68	957	69
A57 Manchester Road (between Chapel Lane and Warburton Bridge Road)	EB	749	55	794	56	838	56
	WB	735	48	783	48	829	49
A57 Manchester Road (between Warburton Bridge Road and Manchester Road)	EB	749	55	794	56	838	56
	WB	735	48	783	48	829	49
A6144 Warburton Lane (between Moss Lane and Chapel Lane)	NB	867	6	921	6	972	6
	SB	517	11	550	11	581	11
Manchester Road (between A57 Manchester Road and Dam Lane)	NB	20	2	21	2	22	2
	SB	148	4	157	4	165	4
A57 Manchester Road (between Manchester Road and B5212 Glazebrook Lane)	NB	766	56	812	57	857	57
	SB	625	47	666	47	705	48
Dam Lane (between School Lane and Manchester Road)	EB	73	0	78	0	82	0
	WB	192	2	204	2	216	2
Manchester Road (between Dam Lane and B5212 Glazebrook Lane)	EB	68	2	72	2	76	2
	WB	253	5	269	5	284	5
A57 Manchester Road (between B5212 Glazebrook Lane and Liverpool Road)	EB	709	53	754	54	797	54
	WB	939	53	996	54	1,051	55
	NB	397	12	422	12	445	12

Location	Direction	AM peak hour 2030 all vehicles	AM peak hour 2030 HGV	AM peak hour 2038 all vehicles	AM peak hour 2038 HGV	AM peak hour 2046 all vehicles	AM peak hour 2046 HGV
B5212 Glazebrook Lane (between Manchester Road and A57 Manchester Road)	SB	507	13	539	13	569	14
A6144 Warburton Lane (between Chapel Lane and Moss Lane)	EB	941	12	999	12	1,054	12
	WB	703	15	747	15	789	15
Dam Lane (between School Lane and Dam Head Lane)	EB	59	2	63	2	67	2
	WB	15	2	17	2	17	2
B5212 Glazebrook Lane (between Manchester Road and Bank Street)	NB	269	14	288	14	306	14
	SB	508	22	546	23	583	23
Dam Head Lane (between Dam Lane and Bank Street)	NB	17	1	18	1	19	1
	SB	55	0	59	0	62	0
A6144 Manchester Road (between B5158 Flixton Road and Moss Lane)	EB	950	12	1,009	12	1,065	12
	WB	689	15	732	15	773	15
B5212 Glazebrook Lane (between Dam Head Lane and Bank Street)	EB	508	22	546	23	583	23
	WB	269	14	288	14	306	14
Dam Head Lane (between B5212 Glazebrook Lane and Bank Street)	EB	17	1	18	1	19	1
	WB	55	0	59	0	62	0
A6144 Carrington Lane (between A6144 Carrington Lane and B5158 Flixton Road)	EB	800	44	802	45	876	47
	WB	826	44	874	46	965	48
B5212 Glazebrook Lane (between Dam Head Lane and Woolden Road)	NB	485	22	517	22	548	23
	SB	273	18	294	18	313	18
A6144 Carrington Spur (between A6144 Carrington Lane and M60 junction 8)	EB	1,297	52	1,217	55	1,141	119
	WB	716	42	722	44	724	45
Glaziers Lane (between Wigshaw Lane and A574 Warrington Road)	EB	45	2	47	2	50	2
	WB	153	1	162	1	171	1
A57 Cadishead Way (between Liverpool Road and B5311 Fairhills Road)	NB	208	24	229	26	251	29
	SB	376	38	352	0	366	0
A57 Liverpool Road (between B5320 Liverpool Road and M60 junction 11)	NB	2,600	40	2,771	43	2,941	47
	SB	1,368	60	1,405	18	1,467	1

Location	Direction	AM peak hour 2030 all vehicles	AM peak hour 2030 HGV	AM peak hour 2038 all vehicles	AM peak hour 2038 HGV	AM peak hour 2046 all vehicles	AM peak hour 2046 HGV
Salford Western Gateway (between Trafford Way and B5214 Trafford Boulevard)	EB	932	69	940	72	944	76
	WB	504	30	532	31	561	32
Trafford Way (between B5214 Trafford Boulevard and Old Park Lane)	EB	401	38	427	29	456	22
	WB	34	9	37	10	44	11
Salford Western Gateway (between Trafford Way and A57 Liverpool Road)	EB	787	88	800	82	801	78
	WB	1,221	81	1,322	99	1,421	119

Table 9-5: MA04 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
B5159 High Legh Road (between Kay Lane and A56 Higher Lane)	NB	315	2	317	2	324	2
	SB	309	1	269	1	287	1
A56 Higher Lane (between B5159 Burford Lane and Agden Park Lane)	EB	319	2	342	2	341	2
	WB	787	3	814	4	825	4
Crouchley Lane (between Mag Lane and A56 Higher Lane)	NB	73	2	75	4	82	3
	SB	0	0	0	0	0	0
A56 Higher Lane (between Crouchley Lane and Oughtrington Lane)	EB	163	1	162	1	151	1
	WB	232	1	274	2	251	2
B5159 Burford Lane (between A56 Higher Lane and Stage Lane)	NB	198	0	233	0	269	0
	SB	62	0	83	0	95	0
Bradshaw Lane (between B5159 Burford Lane and Wet Gate Lane)	EB	3	0	4	0	4	0
	WB	3	0	4	0	4	0
Stage Lane (between B5159 Burford Lane and Sandy Lane)	EB	10	0	10	0	11	0
	WB	52	1	64	2	77	3
B5159 Mill Lane (between Bradshaw Lane and Wet Gate Lane)	NB	149	2	160	2	170	2
	SB	309	5	332	5	356	5
Wet Gate Lane (between B5159 Mill Lane and Bradshaw Lane)	EB	11	0	12	0	13	0
	WB	11	0	12	0	13	0
B5160 Station Road (between Barns Lane and B5160 Paddock Lane)	NB	324	7	291	7	234	6
	SB	209	3	215	3	269	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
B5159 Mill Lane (between Wet Gate Lane and A6144 Birch Brook Road)	NB	149	2	160	2	170	2
	SB	309	5	332	5	356	5
B5160 Paddock Lane (between Barns Lane and B5160 Station Road)	EB	241	3	278	3	364	3
	WB	338	9	311	9	256	9
B5160 Dunham Road (between B5160 Paddock Lane and Barns Lane)	NB	338	9	311	9	256	9
	SB	241	3	278	3	364	3
B5160 Dunham Road (between Barns Lane and Gorsey Lane)	EB	241	3	278	3	364	3
	WB	338	9	311	9	256	9
A6144 Mill Lane (between B5159 Mill Lane and B5159 Townfield Lane)	NB	538	4	571	4	602	4
	SB	734	3	777	3	818	3
A6144 Bent Lane (between A6144 Paddock Lane and B5159 Townfield Lane)	NB	363	5	385	5	405	5
	SB	686	3	727	3	765	3
A6144 Warburton Lane (between B5160 Dunham Road and Moss Lane)	NB	637	2	676	2	712	2
	SB	688	2	729	2	767	2
A57 Manchester Road (between Moat Lane and M6 Junction 21)	EB	1,096	71	1,178	71	1,258	72
	WB	764	20	820	20	873	20
Red House Lane (between Sinderland Lane and Henshall Lane)	NB	392	2	299	2	240	3
	SB	355	2	351	3	317	3
A57 Manchester Road (between Chapel Lane and Moat Lane)	EB	1,031	43	1,093	43	1,151	44
	WB	701	21	743	21	781	21
A57 Manchester Road (between Chapel Lane and Warburton Bridge Road)	EB	1,094	43	1,161	44	1,223	44
	WB	769	24	814	25	856	25
A57 Manchester Road (between Warburton Bridge Road and Manchester Road)	EB	1,094	43	1,161	44	1,223	44
	WB	769	24	814	25	856	25
A6144 Warburton Lane (between Moss Lane and Chapel Lane)	NB	684	6	726	6	765	6
	SB	861	4	913	4	962	4
Manchester Road (between A57 Manchester Road and Dam Lane)	NB	63	1	67	1	70	1
	SB	42	1	45	1	47	1
A57 Manchester Road (between Manchester Road and B5212 Glazebrook Lane)	NB	1,051	42	1,115	43	1,175	43
	SB	746	24	790	24	831	24

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
Dam Lane (between School Lane and Manchester Road)	EB	61	0	65	0	68	0
	WB	141	0	149	0	157	0
Manchester Road (between Dam Lane and B5212 Glazebrook Lane)	EB	72	0	76	0	80	0
	WB	176	0	186	0	196	0
A57 Manchester Road (between B5212 Glazebrook Lane and Liverpool Road)	EB	945	23	1,002	23	1,054	23
	WB	1,076	49	1,142	49	1,203	50
B5212 Glazebrook Lane (between Manchester Road and A57 Manchester Road)	NB	556	6	590	6	622	6
	SB	318	6	337	6	355	6
A6144 Warburton Lane (between Chapel Lane and Moss Lane)	EB	760	7	806	7	849	7
	WB	959	4	1,016	4	1,069	4
Dam Lane (between School Lane and Dam Head Lane)	EB	20	1	22	1	23	1
	WB	31	1	33	1	34	1
B5212 Glazebrook Lane (between Manchester Road and Bank Street)	NB	480	10	515	11	548	11
	SB	292	11	313	11	334	11
Dam Head Lane (between Dam Lane and Bank Street)	NB	25	0	27	0	28	0
	SB	18	0	19	0	20	0
A6144 Manchester Road (between B5158 Flixton Road and Moss Lane)	EB	747	7	792	7	834	7
	WB	956	4	1,014	4	1,067	4
B5212 Glazebrook Lane (between Dam Head Lane and Bank Street)	EB	292	11	313	11	334	11
	WB	480	10	515	11	548	11
Dam Head Lane (between B5212 Glazebrook Lane and Bank Street)	EB	25	0	27	0	28	0
	WB	18	0	19	0	20	0
A6144 Carrington Lane (between A6144 Carrington Lane and B5158 Flixton Road)	EB	675	24	732	20	787	21
	WB	830	42	855	44	869	46
B5212 Glazebrook Lane (between Dam Head Lane and Woolden Road)	NB	271	10	289	10	306	10
	SB	438	12	472	12	504	13
A6144 Carrington Spur (between A6144 Carrington Lane and M60 junction 8)	EB	666	29	737	25	802	27
	WB	1,109	37	1,108	39	1,112	40
Glaziers Lane (between Wigshaw Lane and A574 Warrington Road)	EB	148	2	156	2	164	2
	WB	47	1	50	1	53	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
A57 Cadishead Way (between Liverpool Road and B5311 Fairhills Road)	NB	247	116	245	105	243	93
	SB	154	1	166	1	177	1
A57 Liverpool Road (between B5320 Liverpool Road and M60 junction 11)	NB	1,549	127	1,625	116	1,701	106
	SB	2,271	17	2,412	19	2,553	20
Salford Western Gateway (between Trafford Way and B5214 Trafford Boulevard)	EB	830	14	861	15	889	15
	WB	503	27	519	21	516	21
Trafford Way (between B5214 Trafford Boulevard and Old Park Lane)	EB	306	42	310	19	332	15
	WB	156	14	174	22	199	24
Salford Western Gateway (between Trafford Way and A57 Liverpool Road)	EB	501	22	518	22	530	23
	WB	1,606	69	1,655	75	1,702	80

Table 9-6: MA04 strategic and local road network future baseline flows AADT

Location	Direction	AADT 2030	AADT 2038	AADT 2046
B5159 High Legh Road (between Kay Lane and A56 Higher Lane)	NB	4,803	4,749	4,915
	SB	3,655	3,436	3,629
A56 Higher Lane (between B5159 Burford Lane and Agden Park Lane)	EB	6,934	7,298	7,365
	WB	7,533	7,697	7,799
Crouchley Lane (between Mag Lane and A56 Higher Lane)	NB	698	725	837
	SB	3	2	1
A56 Higher Lane (between Crouchley Lane and Oughtrington Lane)	EB	2,672	2,643	2,568
	WB	2,309	2,545	2,396
B5159 Burford Lane (between A56 Higher Lane and Stage Lane)	NB	2,920	3,136	3,576
	SB	910	1,191	1,374
Bradshaw Lane (between B5159 Burford Lane and Wet Gate Lane)	EB	44	47	50
	WB	38	41	43
Stage Lane (between B5159 Burford Lane and Sandy Lane)	EB	133	133	134
	WB	424	474	524
B5159 Mill Lane (between Bradshaw Lane and Wet Gate Lane)	NB	2,094	2,241	2,384
	SB	3,088	3,325	3,557
Wet Gate Lane (between B5159 Mill Lane and Bradshaw Lane)	EB	125	132	139
	WB	125	132	139
B5160 Station Road (between Barns Lane and B5160 Paddock Lane)	NB	3,483	3,212	2,793
	SB	2,643	2,712	3,144
	NB	2,094	2,241	2,384

Location	Direction	AADT 2030	AADT 2038	AADT 2046
B5159 Mill Lane (between Wet Gate Lane and A6144 Birch Brook Road)	SB	3,088	3,325	3,557
B5160 Paddock Lane (between Barns Lane and B5160 Station Road)	EB	3,386	3,754	4,881
	WB	3,618	3,393	3,027
B5160 Dunham Road (between B5160 Paddock Lane and Barns Lane)	NB	3,618	3,393	3,027
	SB	3,386	3,754	4,881
B5160 Dunham Road (between Barns Lane and Gorsey Lane)	EB	3,386	3,754	4,881
	WB	3,618	3,393	3,027
A6144 Mill Lane (between B5159 Mill Lane and B5159 Townfield Lane)	NB	7,787	8,265	8,715
	SB	6,649	7,055	7,435
A6144 Bent Lane (between A6144 Paddock Lane and B5159 Townfield Lane)	NB	5,600	5,943	6,267
	SB	5,667	6,012	6,335
A6144 Warburton Lane (between B5160 Dunham Road and Moss Lane)	NB	7,611	8,080	8,522
	SB	6,526	6,925	7,299
A57 Manchester Road (between Moat Lane and M6 Junction 21)	EB	9,979	10,724	11,453
	WB	9,523	10,198	10,854
Red House Lane (between Sinderland Lane and Henshall Lane)	NB	5,427	4,618	3,719
	SB	5,100	4,893	4,386
A57 Manchester Road (between Chapel Lane and Moat Lane)	EB	9,593	10,177	10,729
	WB	8,729	9,262	9,766
A57 Manchester Road (between Chapel Lane and Warburton Bridge Road)	EB	10,343	10,973	11,567
	WB	8,446	8,969	9,465
A57 Manchester Road (between Warburton Bridge Road and Manchester Road)	EB	10,343	10,973	11,567
	WB	8,446	8,969	9,465
A6144 Warburton Lane (between Moss Lane and Chapel Lane)	NB	8,390	8,907	9,393
	SB	7,725	8,197	8,640
Manchester Road (between A57 Manchester Road and Dam Lane)	NB	463	492	518
	SB	1,068	1,134	1,197
A57 Manchester Road (between Manchester Road and B5212 Glazebrook Lane)	NB	10,200	10,820	11,406
	SB	7,698	8,174	8,625
Dam Lane (between School Lane and Manchester Road)	EB	753	800	844
	WB	1,869	1,985	2,095
Manchester Road (between Dam Lane and B5212 Glazebrook Lane)	EB	786	834	879
	WB	2,410	2,558	2,698
A57 Manchester Road (between B5212 Glazebrook Lane and Liverpool Road)	EB	9,284	9,853	10,392
	WB	11,315	12,005	12,657
	NB	5,349	5,679	5,990

Location	Direction	AADT 2030	AADT 2038	AADT 2046
B5212 Glazebrook Lane (between Manchester Road and A57 Manchester Road)	SB	4,637	4,922	5,192
A6144 Warburton Lane (between Chapel Lane and Moss Lane)	EB	9,214	9,777	10,306
	WB	9,228	9,789	10,314
Dam Lane (between School Lane and Dam Head Lane)	EB	447	477	506
	WB	259	275	291
B5212 Glazebrook Lane (between Manchester Road and Bank Street)	NB	4,205	4,503	4,792
	SB	4,493	4,828	5,155
Dam Head Lane (between Dam Lane and Bank Street)	NB	238	253	267
	SB	410	436	461
A6144 Manchester Road (between B5158 Flixton Road and Moss Lane)	EB	9,177	9,737	10,264
	WB	9,144	9,700	10,220
B5212 Glazebrook Lane (between Dam Head Lane and Bank Street)	EB	4,493	4,828	5,155
	WB	4,205	4,503	4,792
Dam Head Lane (between B5212 Glazebrook Lane and Bank Street)	EB	238	253	267
	WB	410	436	461
A6144 Carrington Lane (between A6144 Carrington Lane and B5158 Flixton Road)	EB	9,702	10,099	10,948
	WB	10,904	11,377	12,071
B5212 Glazebrook Lane (between Dam Head Lane and Woolden Road)	NB	4,249	4,530	4,800
	SB	3,993	4,293	4,587
A6144 Carrington Spur (between A6144 Carrington Lane and M60 junction 8)	EB	12,906	12,849	12,779
	WB	12,026	12,061	12,096
Glaziers Lane (between Wigshaw Lane and A574 Warrington Road)	EB	1,079	1,142	1,201
	WB	1,127	1,196	1,260
A57 Cadishead Way (between Liverpool Road and B5311 Fairhills Road)	NB	2,556	2,665	2,774
	SB	2,982	2,911	3,054
A57 Liverpool Road (between B5320 Liverpool Road and M60 junction 11)	NB	23,321	24,708	26,096
	SB	20,420	21,422	22,560
Salford Western Gateway (between Trafford Way and B5214 Trafford Boulevard)	EB	11,600	11,857	12,060
	WB	6,629	6,921	7,093
Trafford Way (between B5214 Trafford Boulevard and Old Park Lane)	EB	4,654	4,850	5,187
	WB	1,252	1,397	1,606
Salford Western Gateway (between Trafford Way and A57 Liverpool Road)	EB	8,468	8,672	8,752
	WB	18,625	19,609	20,563

Junction operation

9.4.12 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 Proposed Scheme, have been assessed using the existing and future baseline traffic flows. The GMSM, Junctions 9 and LinSig software have been used to calculate the existing capacity of all junctions within the study area. The results for the MA04 area are presented from south to north, firstly for junctions on the strategic road network, followed by junctions on other roads.

9.4.13 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 21/A57 Manchester Road

9.4.14 The M6 junction 21/A57 Manchester Road is a grade-separated junction, comprising two dumbbell roundabouts:

- M6 junction 21/A57 Manchester Road (eastern roundabout); and
- M6 junction 21/A57 Manchester Road/B5210 Woolston Grange Avenue (western roundabout).

9.4.15 The two junctions are considered separately below.

M6 junction 21/A57 Manchester Road (eastern roundabout)

9.4.16 This junction is a five-arm priority controlled (give-way) roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2016 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 9-7. Juniper Lane serves a car dealership and a pub/restaurant, and a fifth arm serves as a maintenance track. Traffic data was unavailable for these two arms and therefore they have been excluded from the assessment.

Table 9-7: 2016 baseline performance at the M6 junction 21/A57 Manchester Road (eastern roundabout) junction

Approach	Flow, PCU*/hr	RFC**	Q***, PCU
	2016 AM peak hour (08:00–09:00) baseline results		
A57 Manchester Road (west)	1,152	0.46	1
Juniper Lane	-	-	-
M6 Off Slip	651	0.33	1

Approach	Flow, PCU*/hr	RFC**	Q***, PCU
A57 Manchester Road (east)	1,071	0.50	1
Access Road	-	-	-
	2016 PM peak hour (17:00–18:00) baseline results		
A57 Manchester Road (west)	1,546	0.56	1
Juniper Lane	-	-	-
M6 Off Slip	798	0.40	1
A57 Manchester Road (east)	639	0.30	0
Access Road	-	-	-

**PCU = Passenger Car Unit*

***RFC = Ratio of Flow to Capacity*

***Q = Queue

9.4.17 The assessment shows that this junction operates well within capacity in the 2016 baseline.

9.4.18 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-8. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-8: Future baseline performance at the M6 junction 21/A57 Manchester Road (eastern roundabout) junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
A57 Manchester Road (west)	1,280	0.52	1
Juniper Lane	-	-	-
M6 Off Slip	723	0.37	1
A57 Manchester Road (east)	1,190	0.57	1
Access Road	0	0.00	0
	2030 PM peak hour (17:00–18:00)		
A57 Manchester Road (west)	1,714	0.62	2
Juniper Lane	-	-	-
M6 Off Slip	884	0.45	1
A57 Manchester Road (east)	709	0.34	1
Access Road	0	0.00	0

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

M6 junction 21/A57 Manchester Road/B5210 Woolston Grange Avenue (western roundabout)

9.4.20 This junction is a four-arm part time signal controlled roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2016 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 9-9.

Table 9-9: 2016 baseline performance at M6 junction 21/A57 Manchester Road/B5210 Woolston Grange Avenue (western roundabout) junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2016 AM peak hour (08:00–09:00) baseline results		
B5210 Woolston Grange Avenue	825	0.33	1
A57 Manchester Road (east)	1,014	0.39	1
M6 Off Slip	1,588	0.63	2
A57 Manchester Road (west)	829	0.86	6
	2016 PM peak hour (17:00–18:00) baseline results		
B5210 Woolston Grange Avenue	1,629	0.63	2
A57 Manchester Road (east)	964	0.39	1
M6 Off Slip	936	0.38	1
A57 Manchester Road (west)	633	0.41	1

9.4.21 The assessment shows that this junction operates close to capacity in the 2016 baseline with a maximum RFC of 0.86 on the A57 Manchester Road (west) approach in the AM peak hour with an associated queue length of six PCU. In the PM peak hour, the junction operates well within capacity in the 2016 baseline.

9.4.22 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-10. As the junction is affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-10: Future baseline performance at M6 junction 21/A57 Manchester Road/B5210 Woolston Grange Avenue (western roundabout) junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
B5210 Woolston Grange Avenue	916	0.37	1
A57 Manchester Road (east)	1,126	0.43	1
M6 off-slip	1,763	0.72	3
A57 Manchester Road (west)	920	1.14	49
	2030 PM peak hour (17:00–18:00)		
B5210 Woolston Grange Avenue	1,806	0.71	3
A57 Manchester Road (east)	1,070	0.44	1
M6 off-slip	1,039	0.43	1
A57 Manchester Road (west)	703	0.48	1

9.4.23 This junction operates over capacity in the 2030 future baseline with a maximum RFC of 1.14 on the A57 Manchester Road (west) approach in the AM peak hour with an associated queue length of 49 PCU. In the PM peak hour, the junction operates well within capacity in the 2030 future baseline.

9.4.24 The junction analysis indicates that the junction will be operating above its capacity in the 2030 future baseline. However, as the signals timings are determined by the baseline traffic flow, it is possible that the delays could be reduced by signal optimisation.

M60 (junction 8)/A6144 Carrington Spur

9.4.25 This junction is a three-arm priority-controlled (give way) grade-separated roundabout with no controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2019 existing baseline AM and PM peak hours using Junctions 9 software and is shown in Table 9-11.

Table 9-11: 2019 baseline performance at the M60 junction 8/A6144 Carrington Spur junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2019 AM peak hour (08:00–09:00) baseline results		
M60 southbound off-slip	453	0.23	0
A6144 Carrington Spur	786	0.31	1
M60 northbound off-slip	1,340	0.57	1
	2019 PM peak hour (17:00–18:00) baseline results		
M60 southbound off-slip	749	0.33	1
A6144 Carrington Spur	954	0.44	1
M60 northbound off-slip	694	0.27	0

9.4.26 The assessment shows that this junction operates well within capacity in the 2019 baseline.

9.4.27 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-12. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-12: Future baseline performance at the M60 (junction 8)/A6144 Carrington Spur junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
M60 southbound off-slip	493	0.26	0
A6144 Carrington Spur	856	0.34	1
M60 northbound off-slip	1,459	0.63	2
	2030 PM peak hour (17:00–18:00)		
M60 southbound off-slip	815	0.37	1
A6144 Carrington Spur	1,038	0.49	1
M60 northbound off-slip	755	0.30	1

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

M60 junction 10/B5214 Trafford Boulevard/B5214 Barton Road

9.4.29 This junction is a four-arm signal controlled grade-separated roundabout with 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 9-13.

Table 9-13: 2018 baseline performance at the M60 junction 10/B5214 Trafford Boulevard/B5214 Barton Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M60 southbound off-slip	1,317	45%	12
B5214 Trafford Boulevard	470	33%	5
M60 northbound off-slip	475	43%	5
B5214 Barton Road	1,580	103%	15
	2018 PM peak hour (17:00–18:00) baseline results		
M60 southbound off-slip	1,495	42%	14
B5214 Trafford Boulevard	1,499	52%	13
M60 northbound off-slip	703	85%	10
B5214 Barton Road	1,073	83%	15

9.4.30 This junction operates over capacity in the 2018 baseline with a maximum VoC of 103% on the B5214 Barton Road approach in the AM peak hour with an associated queue length of 15 PCU. The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 85% is on the M60 northbound off-slip approach in the PM peak hour with an associated queue length of 10 PCU.

9.4.31 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-14. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only. The future baseline takes into consideration the Western Gateway Infrastructure Scheme and associated traffic redistribution.

Table 9-14: Future baseline performance at the M60 junction 10/B5214 Trafford Boulevard/B5214 Barton Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
M60 southbound off-slip	792	53%	9
B5214 Trafford Boulevard	661	46%	7
M60 northbound off-slip	897	82%	10
B5214 Barton Road	1,621	105%	15
	2030 PM peak hour (17:00–18:00)		
M60 southbound off-slip	643	48%	8
B5214 Trafford Boulevard	1,334	47%	12
M60 northbound off-slip	839	101%	12
B5214 Barton Road	1,215	94%	17

9.4.32 This junction operates over capacity in the 2030 future baseline with a maximum VoC of 105% on the B5214 Barton Road approach in the AM peak hour with an associated queue length of 15 PCU. In the PM peak hour, the maximum VoC of 101% is on the M60 northbound off-slip approach with a queue length of 12 PCU.

M60 junction 11/A57 Liverpool Road/Brookhouse Avenue

9.4.33 This junction is a five-arm signal controlled grade-separated roundabout 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 9-15.

Table 9-15: 2018 baseline performance at the M60 junction 11/A57 Liverpool Road/Brookhouse Avenue junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
M60 southbound off-slip	768	85%	9
A57 Liverpool Road (east)	1,019	79%	11
M60 northbound off-slip	545	40%	6
A57 Liverpool Road (west)	1,297	65%	10
Brookhouse Avenue	526	95%	4
	2018 PM peak hour (17:00–18:00) baseline results		
M60 southbound off-slip	713	48%	7
A57 Liverpool Road (east)	923	95%	11
M60 northbound off-slip	760	78%	10
A57 Liverpool Road (west)	1,207	69%	10
Brookhouse Avenue	266	45%	1

9.4.34 The assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the Brookhouse Avenue approach in the AM peak hour with an associated queue length of four PCU. In the PM peak hour, the maximum VoC of 95% is on the A57 Liverpool Road (east) approach with a queue length of 11 PCU.

9.4.35 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-16. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only. The future baseline takes into consideration the Western Gateway Infrastructure Scheme (WGIS) and associated traffic redistribution.

Table 9-16: Future baseline performance at the M60 junction 11/A57 Liverpool Road/Brookhouse Avenue junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
M60 southbound off-slip	869	96%	10
A57 Liverpool Road (east)	1,026	79%	11
WGIS Link Road	726	47%	6
A57 Liverpool Road (west)	10	0%	0
Brookhouse Avenue	568	65%	2

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 PM peak hour (17:00–18:00)		
M60 southbound off-slip	1,395	94%	14
A57 Liverpool Road (east)	930	96%	11
WGIS Link Road	1,049	68%	8
A57 Liverpool Road (west)	12	1%	0
Brookhouse Avenue	296	36%	1

9.4.36 The assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 96% on the M60 southbound off-slip approach in the AM peak hour with an associated queue length of 10 PCU. In the PM peak hour, the maximum VoC of 96% is on the A57 Liverpool Road (east) approach with a queue length of 11 PCU.

A56 Higher Lane/B5159 Burford Lane/B5159 High Legh Road

9.4.37 This junction is a four-arm signal controlled crossroads 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 9-17.

Table 9-17: 2018 baseline performance at A56 Higher Lane/B5159 Burford Lane/B5159 High Legh Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5159 Burford Lane	43	9%	1
A56 Higher Lane (east)	278	20%	3
B5159 High Legh Road	343	67%	6
A56 Higher Lane (west)	238	17%	4
	2018 PM peak hour (17:00–18:00) baseline results		
B5159 Burford Lane	75	19%	1
A56 Higher Lane (east)	748	54%	5
B5159 High Legh Road	312	102%	5
A56 Higher Lane (west)	144	10%	2

9.4.38 In the 2018 baseline the assessment shows that this junction operates well within capacity the AM peak hour. In the PM peak hour, the assessment shows that this junction is over capacity in the 2018 baseline with a maximum VoC of 102% on the B5159 High Legh Road approach with an associated queue length of five PCU.

9.4.39 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-18. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-18: Future baseline performance at A56 Higher Lane/B5159 Burford Lane/B5159 High Legh Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
B5159 Burford Lane	72	15%	1
A56 Higher Lane (east)	323	23%	3
B5159 High Legh Road	397	84%	7
A56 Higher Lane (west)	232	17%	4
	2030 PM peak hour (17:00–18:00)		
B5159 Burford Lane	62	16%	1
A56 Higher Lane (east)	790	57%	5
B5159 High Legh Road	317	103%	5
A56 Higher Lane (west)	164	12%	2

9.4.40 In the 2030 future baseline the assessment shows that this junction operates within capacity the AM peak hour with a maximum VoC of 84% on the the B5159 High Legh Road approach with an associated queue length of seven PCU. In the PM peak hour, the assessment shows that this junction operates over capacity in the 2030 future baseline with a maximum VoC of 103% on the B5159 High Legh Road approach with an associated queue length of five PCU.

A6144 Birch Brook Road/A6144 Mill Lane/B5159 Mill Lane

9.4.41 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 Junctions 9 software and is shown in Table 9-19.

Table 9-19: 2018 baseline performance at the A6144 Birch Brook Road/A6144 Mill Lane/B5159 Mill Lane junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5159 Mill Lane (left)	19	0.03	0
B5159 Mill Lane (right)	148	0.38	1
A6144 Birch Brook Road	669	0.17	1
A6144 Mill Lane (left)	161	0.00	0
A6144 Mill Lane (ahead)	203	0.00	0
	2018 PM peak hour (17:00–18:00) baseline results		
B5159 Mill Lane (left)	23	0.04	0
B5159 Mill Lane (right)	95	0.20	0
A6144 Birch Brook Road	236	0.06	0
A6144 Mill Lane (left)	99	0.00	0

Approach	Flow, PCU/hr	RFC	Q, PCU
A6144 Mill Lane (ahead)	219	0.00	0

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

9.4.43 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-20. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-20: Future baseline performance at the A6144 Birch Brook Road/A6144 Mill Lane/B5159 Mill Lane junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
B5159 Mill Lane (left)	21	0.04	0
B5159 Mill Lane (right)	164	0.45	1
A6144 Birch Brook Road	744	0.21	1
A6144 Mill Lane (left)	179	0.00	0
A6144 Mill Lane (ahead)	226	0.00	0
	2030 PM peak hour (17:00–18:00)		
B5159 Mill Lane (left)	25	0.04	0
B5159 Mill Lane (right)	105	0.23	0
A6144 Birch Brook Road	262	0.07	0
A6144 Mill Lane (left)	110	0.00	0
A6144 Mill Lane (ahead)	243	0.00	0

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

A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road

9.4.45 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities, however it operates as three sets of junctions. 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 9-21, Table 9-22 and Table 9-23.

Table 9-21: 2017 baseline performance at A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road junction, northern part of junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A6144 Warburton Lane (north) (ahead and left)	467	-	-
B5160 Dunham Road Slip (left and right)	33	0.11	0
A6144 Warburton Lane (south) (ahead and right)	778	0.00	0
	2017 PM peak hour (17:00–18:00) baseline results		
A6144 Warburton Lane (north)	667	-	-

Approach	Flow, PCU/hr	RFC	Q, PCU
B5160 Dunham Road Slip (left and right)	63	0.22	0
A6144 Warburton Lane (south) (ahead and right)	475	0.00	0

Table 9-22: 2017 baseline performance at A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road junction, eastern part of junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
B5160 Dunham Road Slip (south) (left and right)	82	0.15	0
B5160 Dunham Road (east) (ahead and right)	152	0.07	0
B5160 Dunham Road (west) (ahead and left)	333	-	-
	2017 PM peak hour (17:00–18:00) baseline results		
B5160 Dunham Road Slip (south) (left and right)	46	0.08	0
B5160 Dunham Road (east) (ahead and right)	362	0.15	0
B5160 Dunham Road (west) (ahead and left)	142	-	-

Table 9-23: 2017 baseline performance at A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road junction, western part of junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A6144 Warburton Lane (north)	385	-	-
B5160 Dunham Road (east) (left and right)	119	0.20	0
A6144 Paddock Lane (west) (ahead and right)	1,111	1.16	101
	2017 PM peak hour (17:00–18:00) baseline results		
A6144 Warburton Lane (north)	621	-	-
B5160 Dunham Road (east) (left and right)	299	0.59	1
A6144 Paddock Lane (west) (ahead and right)	617	0.47	2

9.4.46 This junction operates over capacity in the 2017 baseline with a maximum RFC of 1.16 on the A6144 Paddock Lane (west) (ahead and right) approach to the western part of the junction in the AM peak hour with an associated queue length of 101 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2017 baseline.

9.4.47 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-24, Table 9-25 and Table 9-26. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-24: Future baseline performance at A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road junction, northern part of junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
A6144 Warburton Lane (north) (ahead and left)	519	-	-
Dunham Road Slip (left and right)	36	0.14	0
A6144 Warburton Lane (south) (ahead and right)	865	0.00	0

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 PM peak hour (17:00–18:00)		
A6144 Warburton Lane (north) (ahead and left)	740	-	-
Dunham Road Slip (left and right)	70	0.27	0
A6144 Warburton Lane (south) (ahead and right)	527	0.00	0

Table 9-25: Future baseline performance at A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road junction, eastern part of junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
Dunham Road Slip (left and right)	92	0.17	0
B5160 Dunham Road (east) (ahead and right)	168	0.08	0
B5160 Dunham Road (west) (ahead and left)	370	-	-
	2030 PM peak hour (17:00–18:00)		
Dunham Road Slip (south) (left and right)	51	0.08	0
B5160 Dunham Road (east) (ahead and right)	402	0.17	0
B5160 Dunham Road (west) (ahead and left)	157	-	-

Table 9-26: Future baseline performance at A6144 Warburton Lane/A6144 Paddock Lane/B5160 Dunham Road junction, western part of junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
A6144 Warburton Lane (north)	427	-	-
B5160 Dunham Road (east) (left and right)	132	0.23	0
A6144 Paddock Lane (west) (ahead and right)	1,235	1.31	202
	2030 PM peak hour (17:00–18:00)		
A6144 Warburton Lane (north)	689	-	-
B5160 Dunham Road (east) (left and right)	332	0.68	2
A6144 Paddock Lane (west) (ahead and right)	684	0.57	3

9.4.48 In the AM peak hour, this junction operates over capacity in the 2030 future baseline with a maximum RFC of 1.31 on the A6144 Paddock Lane (west) (ahead and right) approach to the western part of the junction with an associated queue length of 202 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

A6144 Bent Lane/A6144 Paddock Lane/Paddock Lane

9.4.49 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 9-27.

Table 9-27: 2017 baseline performance at A6144 Bent Lane/A6144 Paddock Lane/Paddock Lane junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A6144 Paddock Lane (ahead and right)	502	0.72	3
A6144 Bent Lane (left)	2	0.00	0
A6144 Bent Lane (ahead)	657	0.00	0
Paddock Lane (left)	463	0.93	9
Paddock Lane (right)	2	0.14	0
	2017 PM peak hour (17:00–18:00) baseline results		
A6144 Paddock Lane (ahead and right)	914	1.06	44
A6144 Bent Lane (left)	8	0.00	0
A6144 Bent Lane (ahead)	301	0.00	0
Paddock Lane (left)	321	0.54	1
Paddock Lane (right)	8	0.05	0

9.4.50 In the 2017 baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum RFC of 0.93 on the Paddock Lane (left) approach with an associated queue length of nine PCU. In the PM peak hour, the assessment shows that this junction operates over capacity in the 2017 baseline with a maximum RFC of 1.06 on the A6144 Paddock Lane approach with an associated queue length of 44 PCU.

9.4.51 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-28. 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 9-28: Future baseline performance at A6144 Bent Lane/A6144 Paddock Lane/Paddock Lane junction

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, 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)**		
A6144 Paddock Lane (ahead and right)	558	0.86	7	588	0.94	13	623	1.02	26
A6144 Bent Lane (left)	2	0.00	0	2	0.00	0	2	0.00	0
A6144 Bent Lane (ahead)	730	0.00	0	771	0.00	0	816	0.00	0
Paddock Lane (left)	515	1.08	31	543	1.17	52	575	1.28	79
Paddock Lane (right)	2	1.08	1	2	1.16	1	2	1.20	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)**		
A6144 Paddock Lane (ahead and right)	1,014	1.18	102	1,070	1.26	144	1,132	1.34	206

Approach	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU	Flow, PCU/hr	RFC	Q, PCU
A6144 Bent Lane (left)	9	0.00	0	9	0.00	0	10	0.00	0
A6144 Bent Lane (ahead)	334	0.00	0	352	0.00	0	373	0.00	0
Paddock Lane (left)	356	0.61	2	376	0.66	2	397	0.76	3
Paddock Lane (right)	9	0.09	0	9	0.13	0	10	0.37	1

9.4.52 This junction operates over capacity in the 2030 future baseline with a maximum RFC of 1.08 on both the Paddock Lane (left) and Paddock Lane (right) approaches in the AM peak hour, with associated queue length of 31 PCU and one PCU respectively. In the PM peak hour, the maximum RFC of 1.18 is on the A6144 Paddock Lane (ahead and right) approach with a queue length of 102 PCU.

9.4.53 This junction operates over capacity in the 2038 future baseline with a maximum RFC of 1.17 on the Paddock Lane (left) approach in the AM peak hour with an associated queue length of 52 PCU. In the PM peak hour, the maximum RFC of 1.26 is on the A6144 Paddock Lane (ahead and right) approach with a queue length of 144 PCU.

9.4.54 This junction operates over capacity in the 2046 future baseline with a maximum RFC of 1.28 on the Paddock Lane (left) approach in the AM peak hour with an associated queue length of 79 PCU. In the PM peak hour, the maximum RFC of 1.34 is on the A6144 Paddock Lane (ahead and right) approach with a queue length of 206 PCU.

A57 Manchester Road/Manchester Road

9.4.55 This junction is a three-arm priority controlled (give way) T-junction with no controlled pedestrian crossing facilities. Traffic is not permitted to turn right from A57 Manchester Road (east) to Manchester Road. 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 9-29.

Table 9-29: 2017 baseline performance at the A57 Manchester Road/Manchester Road junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
Manchester Road (left)	41	0.10	0
Manchester Road (right)	83	0.24	0
A57 Manchester Road (east) (ahead)	659	0.00	0
A57 Manchester Road (east) (right)	0	0.00	0
A57 Manchester Road (west) (left)	27	0.00	0
A57 Manchester Road (west) (ahead)	741	0.00	0
	2017 PM peak hour (17:00–18:00) baseline results		
Manchester Road (left)	21	0.05	0
Manchester Road (right)	14	0.07	0
A57 Manchester Road (east) (ahead)	742	0.00	0

Approach	Flow, PCU/hr	RFC	Q, PCU
A57 Manchester Road (east) (right)	0	0.00	0
A57 Manchester Road (west) (left)	48	0.00	0
A57 Manchester Road (west) (ahead)	998	0.00	0

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

9.4.57 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-30. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-30: Future baseline performance at the A57 Manchester Road/Manchester Road junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
Manchester Road (left)	34	0.10	0
Manchester Road (right)	183	0.50	1
A57 Manchester Road (east) (ahead)	665	0.00	0
A57 Manchester Road (east) (right)	0	0.00	0
A57 Manchester Road (west) (left)	22	0.00	0
A57 Manchester Road (west) (ahead)	724	0.00	0
	2030 PM peak hour (17:00–18:00)		
Manchester Road (left)	24	0.07	0
Manchester Road (right)	15	0.07	0
A57 Manchester Road (east) (ahead)	823	0.00	0
A57 Manchester Road (east) (right)	0	0.00	0
A57 Manchester Road (west) (left)	53	0.00	0
A57 Manchester Road (west) (ahead)	1,107	0.00	0

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

A57 Manchester Road/B5212 Glazebrook Lane/Manchester Road

9.4.59 This network comprises two junctions in proximity, which have therefore been modelled together using LinSig software and are reported separately below.

A57 Manchester Road/B5212 Glazebrook Lane

9.4.60 This junction is a three-arm signal-controlled T-junction with no controlled pedestrian crossing facilities. The operation of the network has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 9-31.

Table 9-31: 2017 baseline performance at A57 Manchester Road/B5212 Glazebrook Lane junction

Approach	Flow, PCU/hr	DoS*	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
B5212 Glazebrook Lane (north) (nearside) (left)	292	62%	7
B5212 Glazebrook Lane (north) (offside) (right)	150	31%	3
A57 Manchester Road (east) (nearside) (ahead)	420	35%	5
A57 Manchester Road (east) (centre and offside) (ahead and right)	330	62%	8
A57 Manchester Road (west) (nearside) (left and ahead)	323	59%	8
A57 Manchester Road (west) (offside) (ahead)	340	61%	8
	2017 PM peak hour (17:00–18:00) baseline results		
B5212 Glazebrook Lane (north) (nearside) (left)	183	61%	5
B5212 Glazebrook Lane (north) (offside) (right)	111	36%	3
A57 Manchester Road (east) (nearside) (ahead)	655	48%	7
A57 Manchester Road (east) (centre and offside) (ahead and right)	263	61%	6
A57 Manchester Road (west) (nearside) (left and ahead)	499	62%	10
A57 Manchester Road (west) (offside) (ahead)	532	63%	11

**DoS = Degree of Saturation*

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

9.4.62 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-32. 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 9-32: Future baseline performance at A57 Manchester Road/B5212 Glazebrook Lane junction

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, 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)**		
B5212 Glazebrook Lane (north) (nearside) (left)	325	69%	9	343	73%	9	363	77%	10
B5212 Glazebrook Lane (north) (offside) (right)	166	34%	4	175	36%	4	186	38%	4
A57 Manchester Road (east) (nearside) (ahead)	467	39%	6	493	42%	7	522	44%	7
A57 Manchester Road (east) (centre and offside) (ahead and right)	366	69%	9	386	73%	10	409	77%	11
A57 Manchester Road (west) (nearside) (left and ahead)	360	66%	9	380	70%	10	403	74%	11

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU
A57 Manchester Road (west) (offside) (ahead)	377	67%	10	397	71%	10	420	75%	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)**		
B5212 Glazebrook Lane (north) (nearside) (left)	204	69%	6	214	72%	6	227	76%	7
B5212 Glazebrook Lane (north) (offside) (right)	123	40%	3	130	42%	3	138	45%	3
A57 Manchester Road (east) (nearside) (ahead)	726	53%	9	766	56%	9	810	59%	10
A57 Manchester Road (east) (centre and offside) (ahead and right)	293	68%	8	308	71%	8	327	76%	9
A57 Manchester Road (west) (nearside) (left and ahead)	553	69%	12	585	73%	13	619	77%	14
A57 Manchester Road (west) (offside) (ahead)	589	70%	13	620	73%	14	655	77%	15

9.4.63 In the 2030 future baseline, the assessment shows that this junction operates well within capacity.

9.4.64 In the 2038 future baseline, the assessment shows that this junction operates well within capacity.

9.4.65 In the 2046 future baseline, the assessment shows that this junction operates within capacity in the AM peak hour with a maximum DoS of 77% on both the centre and offside lane of the A57 Manchester Road (east) approach and on the nearside lane of the B5212 Glazebrook Lane (north) approach, with an associated queue length of 11 PCU and 10 PCU respectively. In the PM peak hour, the maximum DoS of 77% is on the nearside and offside lanes of the A57 Manchester Road (west) approach with a queue length of 14 PCU and 15 PCU respectively.

B5212 Glazebrook Lane/Manchester Road

9.4.66 This junction is a three-arm priority-controlled (give-way) T-junction with no controlled pedestrian crossing facilities. The operation of the network has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 9-33.

Table 9-33: 2017 baseline performance at B5212 Glazebrook Lane/Manchester Road junction

Approach	Flow, PCU/hr	DoS	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
B5212 Glazebrook Lane (south) (left and ahead)	415	22%	0
Manchester Road (left and right)	53	13%	0
B5212 Glazebrook Lane (north) (ahead and right)	527	41%	0
	2017 PM peak hour (17:00–18:00) baseline results		
B5212 Glazebrook Lane (south) (left and ahead)	498	25%	0
Manchester Road (left and right)	70	15%	0
B5212 Glazebrook Lane (north) (ahead and right)	277	19%	0

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

9.4.68 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-34. 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 9-34: Future baseline performance at B5212 Glazebrook Lane/Manchester Road junction

Approach	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, PCU	Flow, PCU/hr	DoS	Q, 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)**		
B5212 Glazebrook Lane (south) (left and ahead)	461	24%	0	486	25%	0	515	27%	0
Manchester Road (left and right)	59	15%	0	62	16%	0	65	18%	1
B5212 Glazebrook Lane (north) (ahead and right)	586	47%	2	618	50%	3	655	53%	4
	2030 PM peak hour (17:00–18:00)			**2038 PM peak hour (17:00–18:00)**			**2046 PM peak hour (17:00–18:00)**		
B5212 Glazebrook Lane (south) (left and ahead)	553	28%	0	583	30%	0	617	31%	0
Manchester Road (left and right)	78	17%	0	82	19%	0	87	21%	1
B5212 Glazebrook Lane (north) (ahead and right)	308	21%	0	324	22%	0	343	24%	0

9.4.69 In the 2030 future baseline, the assessment shows that this junction operates well within capacity.

9.4.70 In the 2038 future baseline, the assessment shows that this junction operates well within capacity.

9.4.71 In the 2046 future baseline, the assessment shows that this junction operates well within capacity.

A6144 Manchester New Road/A6144 Manchester Road/Manchester Road/Moss Lane

9.4.72 This junction is a four-arm priority controlled (give way) roundabout with no controlled pedestrian crossing facilities. The Manchester Road approach is a minor arm that is not included in the model. 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 9-35.

Table 9-35: 2017 baseline performance at A6144 Manchester New Road/A6144 Manchester Road/Manchester Road/Moss Lane junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A6144 Manchester Road	383	0.46	1
Moss Lane	468	0.57	1
A6144 Manchester New Road	393	0.81	4
Manchester Road	-	-	-
	2017 PM peak hour (17:00–18:00) baseline results		
A6144 Manchester Road	821	0.99	19
Moss Lane	273	0.45	1
A6144 Manchester New Road	156	0.26	0
Manchester Road	-	-	-

9.4.73 In the 2017 baseline the assessment shows that this junction operates within capacity in the AM peak hour with a maximum RFC of 0.81 on the A6144 Manchester New Road approach with an associated queue length of 4 PCU. In the PM peak hour, the assessment shows that this junction operates close to capacity in the 2017 baseline with a maximum RFC of 0.99 on the A6144 Manchester Road approach with an associated queue length of 19 PCU.

9.4.74 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-36. As the junction is only affected by construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-36: Future baseline performance at A6144 Manchester New Road/A6144 Manchester Road/Manchester Road/Moss Lane junction

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
A6144 Manchester Road	425	0.51	1
Moss Lane	520	0.64	2
A6144 Manchester New Road	436	0.96	11
Manchester Road	-	-	-

Approach	Flow, PCU/hr	RFC	Q, PCU
	2030 PM peak hour (17:00–18:00)		
A6144 Manchester Road	911	1.10	57
Moss Lane	303	0.51	1
A6144 Manchester New Road	173	0.30	0
Manchester Road	-	-	-

9.4.75 In the 2030 future baseline the assessment shows that this junction operates close to capacity in the AM peak hour with a maximum RFC of 0.96 on the A6144 Manchester New Road approach with an associated queue length of 11 PCU. In the PM peak hour, the assessment shows that this junction operates over capacity in the 2030 future baseline with a maximum RFC of 1.10 on the A6144 Manchester Road approach with an associated queue length of 57 PCU.

A6144 Carrington Lane/A6144 Carrington Spur/Banky Lane

9.4.76 This junction is a four-arm signal controlled crossroads with signal-controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 9-37.

Table 9-37: 2017 baseline performance at the A6144 Carrington Lane/A6144 Carrington Spur/Banky Lane junction

Approach	Flow, PCU/hr	DoS	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
A6144 Carrington Lane (west) (ahead, left and right)	832	121%	110
A6144 Carrington Spur (ahead, left and right)	848	120%	121
Banky Lane (left, right and ahead)	10	25%	1
A6144 Carrington Lane (south) (right, left and ahead)	1,326	121%	208
	2017 PM peak hour (17:00–18:00) baseline results		
A6144 Carrington Lane (west) (ahead, left and right)	724	107%	53
A6144 Carrington Spur (ahead, left and right)	1,236	110%	116
Banky Lane (left, right and ahead)	10	24%	1
A6144 Carrington Lane (south) (right, left and ahead)	781	108%	52

9.4.77 This junction operates over capacity in the 2017 baseline with a maximum DoS of 121% on both the A6144 Carrington Lane (west) and A6144 Carrington Lane (south) approaches in the AM peak hour with an associated queue length of 110 PCU and 208 PCU respectively. In the

PM peak hour, the maximum DoS of 110% is on the A6144 Carrington Spur approach with a queue length of 116 PCU.

9.4.78 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-38. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-38: Future baseline performance at the A6144 Carrington Lane/A6144 Carrington Spur/ Banky Lane junction

Approach	Flow, PCU/hr	DoS	Q, PCU
	2030 AM peak hour (08:00–09:00)		
A6144 Carrington Lane (west) (ahead, left and right)	924	134%	176
A6144 Carrington Spur (ahead, left and right)	942	133%	195
Banky Lane (left, right and ahead)	11	27%	1
A6144 Carrington Lane (south) (right, left and ahead)	1,473	134%	317
	2030 PM peak hour (17:00–18:00)		
A6144 Carrington Lane (west) (ahead, left and right)	803	121%	113
A6144 Carrington Spur (ahead, left and right)	1,370	122%	213
Banky Lane (left, right and ahead)	12	29%	1
A6144 Carrington Lane (south) (right, left and ahead)	866	120%	109

9.4.79 In the 2030 future baseline, this junction operates over capacity with a maximum DoS of 134% on both the A6144 Carrington Lane (west) and A6144 Carrington Lane (south) approaches in the AM peak hour with an associated queue length of 176 PCU and 317 PCU respectively. In the PM peak hour, the maximum DoS of 122% is on the A6144 Carrington Spur approach with a queue length of 213 PCU.

A6144 Carrington Lane/B5158 Flixton Road

9.4.80 This junction is a four-arm signal controlled junction with controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2017 existing baseline AM and PM peak hours using LinSig software and is shown in Table 9-39.

Table 9-39: 2017 baseline performance at A6144 Carrington Lane/B5158 Flixton Road junction

Approach	Flow, PCU/hr	DoS	Q, PCU
	2017 AM peak hour (08:00–09:00) baseline results		
B5158 Flixton Road (left and right)	758	107%	50
A6144 Carrington Lane (ahead and right)	812	105%	39
Isherwood Road (left, ahead and right)	91	45%	2
A6144 Manchester Road (left, ahead and right)	923	105%	59

Approach	Flow, PCU/hr	DoS	Q, PCU
A6144 Manchester Road (internal eastbound) (nearside)	136	15%	1
A6144 Manchester Road (internal eastbound) (offside)	387	42%	1
A6144 Manchester Road (internal westbound) (nearside)	116	8%	0
A6144 Manchester Road (internal westbound) (offside)	832	51%	13
B5158 Flixton Road left turn slip (internal northbound)	460	37%	5
	2017 PM peak hour (17:00–18:00) baseline results		
B5158 Flixton Road (left and right)	691	109%	46
A6144 Carrington Lane (ahead and right)	924	109%	68
Isherwood Road (left, ahead and right)	208	58%	5
A6144 Manchester Road (left, ahead and right)	760	108%	59
A6144 Manchester Road (internal eastbound) (nearside)	103	14%	1
A6144 Manchester Road (internal eastbound) (offside)	317	42%	2
A6144 Manchester Road (internal westbound) (nearside)	71	5%	0
A6144 Manchester Road (internal westbound) (offside)	787	52%	14
B5158 Flixton Road left turn slip (internal northbound)	463	40%	7

9.4.81 This junction operates over capacity in the 2017 baseline with a maximum DoS of 107% on the B5158 Flixton Road approach in the AM peak hour with an associated queue length of 50 PCU. In the PM peak hour, the maximum DoS of 109% is on both the B5158 Flixton Road and A6144 Carrington Lane approaches, with a queue length of 46 PCU and 68 PCU respectively.

9.4.82 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-40. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-40: Future baseline performance at A6144 Carrington Lane/B5158 Flixton Road junction

Approach	Flow, PCU/hr	DoS	Q, PCU
	2030 AM peak hour (08:00–09:00)		
B5158 Flixton Road (left and right)	842	119%	97
A6144 Carrington Lane (ahead and right)	902	117%	90
Isherwood Road (left, ahead and right)	102	50%	3
A6144 Manchester Road (left, ahead and right)	1,025	119%	123
A6144 Manchester Road (internal eastbound) (nearside)	183	18%	1

Approach	Flow, PCU/hr	DoS	Q, PCU
A6144 Manchester Road (internal eastbound) (offside)	397	38%	1
A6144 Manchester Road (internal westbound) (nearside)	129	8%	0
A6144 Manchester Road (internal westbound) (offside)	924	51%	13
B5158 Flixton Road left turn slip (internal northbound)	512	36%	2
	2030 PM peak hour (17:00–18:00)		
B5158 Flixton Road (left and right)	766	120%	90
A6144 Carrington Lane (ahead and right)	1,025	121%	134
Isherwood Road (left, ahead and right)	231	65%	6
A6144 Manchester Road (left, ahead and right)	843	123%	111
A6144 Manchester Road (internal eastbound) (nearside)	134	17%	1
A6144 Manchester Road (internal eastbound) (offside)	331	39%	2
A6144 Manchester Road (internal westbound) (nearside)	79	5%	0
A6144 Manchester Road (internal westbound) (offside)	872	52%	11
B5158 Flixton Road left turn slip (internal northbound)	514	41%	7

9.4.83 This junction operates over capacity in the 2030 future baseline with a maximum DoS of 119% on both the B5158 Flixton Road and A6144 Manchester Road approaches in the AM peak hour with an associated queue length of 97 PCU and 123 PCU respectively. In the PM peak hour, the maximum DoS of 123% is on the A6144 Manchester Road approach with a queue length of 111 PCU.

A57 Liverpool Road/Salford Western Gateway

9.4.84 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. The operation of the junction has been assessed for the 2019 existing baseline AM and PM peak hours using SATURN software and is shown in Table 9-41.

Table 9-41: 2019 baseline performance at A57 Liverpool Road/Salford Western Gateway junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2019 AM peak hour (08:00–09:00) baseline results		
A57 Link Road (nearside) (left)	28	6%	1
A57 Link Road (centre and offside) (ahead and right)	1,097	142%	199
Salford Western Gateway (nearside) (left and ahead)	121	31%	3

Approach	Flow, PCU/hr	VoC	Q, PCU
Salford Western Gateway (centre and offside) (ahead and right)	203	40%	4
Stadium Way (left, ahead and right)	27	10%	1
A57 Liverpool Road (nearside and centre 1) (left)	1,155	63%	11
A57 Liverpool Road (centre 2) (ahead)	291	82%	9
A57 Liverpool Road (centre 3 and offside) (ahead and right)	340	85%	11
	2019 PM peak hour (17:00–18:00) baseline results		
A57 Link Road (nearside) (left)	12	3%	0
A57 Link Road (centre and offside) (ahead and right)	916	125%	117
Salford Western Gateway (nearside) (left and ahead)	500	114%	48
Salford Western Gateway (centre and offside) (ahead and right)	507	116%	47
Stadium Way (left, ahead and right)	55	19%	1
A57 Liverpool Road (nearside and centre 1) (left)	1,181	66%	12
A57 Liverpool Road (centre 2) (ahead)	136	38%	3
A57 Liverpool Road (centre 3 and offside) (ahead and right)	213	52%	5

9.4.85 The assessment shows that this junction operates over capacity in the 2019 baseline with a maximum VoC of 142% on the centre and offside lanes of the A57 Link Road approach in the AM peak hour with an associated queue length of 199 PCU. In the PM peak hour, the maximum RFC of 125% is on the centre and offside lanes of the A57 Link Road approach with a queue length of 117 PCU.

9.4.86 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-42. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-42: Future baseline performance at A57 Liverpool Road/Salford Western Gateway junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
A57 Link Road (nearside) (left)	2	1%	0
A57 Link Road (centre and offside) (ahead and right)	34	9%	1
Salford Western Gateway (nearside) (left and ahead)	583	78%	15
Salford Western Gateway (centre and offside) (ahead and right)	632	78%	16
Stadium Way (left, ahead and right)	27	10%	1
A57 Liverpool Road (nearside and centre 1) (left)	42	2%	0
A57 Liverpool Road (centre 2) (ahead)	691	97%	26
A57 Liverpool Road (centre 3 and offside) (ahead and right)	762	98%	29

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 PM peak hour (17:00–18:00)		
A57 Link Road (nearside) (left)	1	1%	0
A57 Link Road (centre and offside) (ahead and right)	45	12%	1
Salford Western Gateway (nearside) (left and ahead)	681	91%	21
Salford Western Gateway (centre and offside) (ahead and right)	738	91%	22
Stadium Way (left, ahead and right)	56	16%	1
A57 Liverpool Road (nearside and centre 1) (left)	20	1%	0
A57 Liverpool Road (centre 2) (ahead)	607	85%	17
A57 Liverpool Road (centre 3 and offside) (ahead and right)	671	86%	18

9.4.87 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 98% on the centre 3 and offside lanes of the A57 Liverpool Road approach with an associated queue length of 29 PCU. In the PM peak hour, the maximum VoC of 91% is on the nearside and centre/offside lanes of the Salford Western Gateway (left and ahead) approach and with a queue length of 21 PCU and 22 PCU respectively.

B5230 Barton Lane/B5211 Barton Road/B5211 Redclyffe Road/Peel Green Road

9.4.88 This junction is a four-arm priority controlled crossroads junction with 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 9-43.

Table 9-43: 2018 baseline performance at B5230 Barton Lane/B5211 Barton Road/B5211 Redclyffe Road/Peel Green Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
B5211 Barton Road	262	39%	5
B5230 Barton Lane	540	97%	10
B5211 Redclyffe Road	414	30%	6
Peel Green Road	190	86%	3
	2018 PM peak hour (17:00–18:00) baseline results		
B5211 Barton Road	54	13%	1
B5230 Barton Lane	500	60%	7
B5211 Redclyffe Road	828	71%	14
Peel Green Road	132	35%	2

9.4.89 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 97% on the B5230 Barton Lane approach with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

9.4.90 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-44. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-44: Future baseline performance at B5230 Barton Lane/B5211 Barton Road/B5211 Redclyffe Road/Peel Green Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
B5211 Barton Road	485	72%	9
B5230 Barton Lane	546	99%	10
B5211 Redclyffe Road	499	42%	7
Peel Green Road	33	74%	1
	2030 PM peak hour (17:00–18:00)		
B5211 Barton Road	100	24%	2
B5230 Barton Lane	565	67%	8
B5211 Redclyffe Road	869	77%	15
Peel Green Road	160	55%	3

9.4.91 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 99% on the B5230 Barton Lane approach and an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates within capacity in the 2030 future baseline with a maximum VoC of 77% on the B5211 Redclyffe Road approach and an associated queue length of 15 PCU.

A57 Liverpool Road/Hardy Street/Peel Green Road

9.4.92 This junction is a four-arm signal controlled crossroads with signal controlled pedestrian crossing facilities. Hardy Street approach is a minor arm that is not included within the SATURN 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 9-45.

Table 9-45: 2018 baseline performance at A57 Liverpool Road/Hardy Street/Peel Green Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2018 AM peak hour (08:00–09:00) baseline results		
Hardy Street	-	-	-
A57 Liverpool Road (east)	807	95%	10
Peel Green Road	0	0%	0
A57 Liverpool Road (west)	574	68%	7
	2018 PM peak hour (17:00–18:00) baseline results		
Hardy Street	-	-	-
A57 Liverpool Road (east)	733	66%	8
Peel Green Road	0	0%	0

Approach	Flow, PCU/hr	VoC	Q, PCU
A57 Liverpool Road (west)	693	63%	8

9.4.93 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2018 baseline with a maximum VoC of 95% on the A57 Liverpool Road (east) approach with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2018 baseline.

9.4.94 The future year baseline performance and the results for the AM and PM peak hours are shown in Table 9-46. As the junction is only affected by the construction of the Proposed Scheme, future baseline results are presented for 2030 only.

Table 9-46: Future baseline performance at A57 Liverpool Road/Hardy Street/Peel Green Road junction

Approach	Flow, PCU/hr	VoC	Q, PCU
	2030 AM peak hour (08:00–09:00)		
Hardy Street	-	-	-
A57 Liverpool Road (east)	789	93%	10
Peel Green Road	0	0%	0
A57 Liverpool Road (west)	462	54%	6
	2030 PM peak hour (17:00–18:00)		
Hardy Street	-	-	-
A57 Liverpool Road (east)	730	66%	8
Peel Green Road	0	0%	0
A57 Liverpool Road (west)	659	60%	7

9.4.95 In the AM peak hour, the assessment shows that this junction operates close to capacity in the 2030 future baseline with a maximum VoC of 93% on the A57 Liverpool Road (east) approach with an associated queue length of 10 PCU. In the PM peak hour, the assessment shows that this junction operates well within capacity in the 2030 future baseline.

Accidents and safety

9.4.96 Accident records have been obtained from the information provided by the DfT. Within the MA04 area, a total of 321 accidents occurred over the three-year period July 2016 – June 2019, of which 268 (83%) were recorded as slight, 48 (15%) as serious and five (2%) as fatal. There were 86 accidents involving non-motorised users (i.e. pedestrians, cyclists, equestrians or mobility scooters).

9.4.97 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 MA04 area over the three years between July 2016 and June 2019.

9.4.98 No accident clusters were identified in the MA04 area (i.e. locations recording nine or more accidents over the three years for which data were analysed).

9.4.99 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

9.4.100 Within the MA04 area, in the built-up areas of Partington and Carrington, the A6144 Warburton Lane/Manchester Road is subject to parking restrictions including no waiting at any time or between specified times. On rural roads, parking is generally unrestricted, except for some main roads, such as the A6144 Carrington Spur and A57 Manchester Road/Cadishead Way which are 24-hour clearways.

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

9.5 Public transport

9.5.1 Public transport provision is focused on the local centres of Lymm, Partington, Carrington, Cadishead and Hollins Green, with other more rural areas within MA04 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 Glazebrook and Irlam stations. The following sections describes the rail and bus services in the area.

Rail network

9.5.2 The Liverpool to Manchester Line (via Warrington Central) traverses the north of the MA04 area and is served by Glazebrook and Irlam stations. This railway carries local services between Liverpool Lime Street and Manchester Airport calling at stops including Manchester

Piccadilly, Liverpool South Parkway and Warrington. Services are provided by Northern and operate once every two hours throughout the day in each direction.

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

Local bus network

9.5.4 Ten bus services operate on five roads that may be impacted by the Proposed Scheme in MA04. 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:

- A6144 Mill Lane/Bent Lane/Paddock Lane: route Cat5 (Warrington- Lymm- Warburton - Altrincham);
- A6144 Mill Lane/Bent Lane/Paddock Lane/Warburton Lane/Manchester Road: route Cat5a (Warrington- Lymm- Warburton - Altrincham);
- A6144 Warburton Lane/Manchester Road: route 247 (Altrincham - Sinderland - Partington - Flixton - Trafford Centre); route 248 (Partington- Trafford Park); route 253 (Partington - Flixton - Urmston - Stretford - Hulme - Manchester); route 255 (Partington - Flixton - Urmston - Stretford - Old Trafford - Manchester); and route 260 (Sale - Carrington - Partington);
- A57 Manchester Road: route 100 (Warrington- Irlam - Trafford Centre - Eccles - Salford - Manchester); route P5 (Irlam - Cadishead - Priestley College); and route 40b (Martinscroft - Hollins Green- Latchford Locks - Lymm, Oughtrington Lane); and
- Manchester Road: service 100 (Warrington- Irlam - Trafford Centre - Eccles - Salford – Manchester); route P5 (Irlam - Cadishead - Priestley College); and route 40b (Martinscroft - Hollins Green- Latchford Locks - Lymm, Oughtrington Lane).

9.5.5 Buses are operated by Warrington's Own Buses, Arriva, Go Goodwins, Stagecoach, Diamond Bus, and Go North West within the area.

9.5.6 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

9.5.7 There are no major public transport interchange facilities in the MA04 area potentially affected by the Proposed Scheme and no committed proposals for public transport interchanges in this area.

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

9.6 Pedestrians, cyclists and equestrians

9.6.1 There are pedestrian footways adjacent to many of the roads in the built-up areas of Lymm, Partington, Cadishead, Irlam, Broomedge, Heatley, Mossbrow, Warburton, Hollins Green and Glazebrook. There is a network of advisory cycle routes[12], a National Cycle Network (NCN) national 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

9.6.2 Roadside footways in the built-up areas within MA04 vary in width and condition. Where there is no formal roadside footway provision, non-motorised user numbers are generally low.

9.6.3 The route of the Proposed Scheme will cross two roads with roadside footways within the Broomedge to Glazebrook area. These are the A6144 Paddock Lane and Manchester Road.

9.6.4 In addition to the pedestrian facilities on the public roads, there are a number of PRoW in the MA04 area:

- Footpath Lymm 43 (Cheshire Ring Canal Walk) - between Spring Lane and B5159 Burford Lane;
- Footpath Warburton 8 - between Footpath Warburton 37 and B5160 Woodhouse Lane;
- Footpath Warburton 4 and Footpath Warburton 37 - between Footpath Dunham 8 and Wet Gate Lane;
- National Route 62 (part of the Trans Pennine Trail) - between the B5159 Mill Lane and the B5160 Dunham Road;
- Footpath Warburton 3 - between Footpath Warburton 4 and A6144 Bent Lane;
- Footpath Warburton 11 - between A6144 Warburton Lane and Lock Lane;
- Footpath Rixton-with-Glazebrook 7 - between Dam Lane and Footpath Rixton-with-Glazebrook 8;
- Footpath Rixton-with-Glazebrook 8 - between Manchester Road and Dam Lane;
- Footpath Rixton-with-Glazebrook 9 - between Footpath Rixton-with-Glazebrook 8 and Bank Street; and
- Footpath Rixton-with-Glazebrook 14 - between Footpath Rixton-with-Glazebrook 9 and Dam Lane.

9.6.5 There is also one the Manchester Ship Canal informal footpath between Warburton Bridge Road and A57 Cadishead Way in the MA04 area.

[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.

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

Cycle facilities

9.6.7 In MA04, there is a network of advisory cycle routes linking Hollins Green, Cadishead, Irlam and Higher Irlam and these include the following roads:

- A57 Manchester Road/Cadishead Way which connects Cadishead and Irlam;
- B5320 Liverpool Road which connects Cadishead and Irlam; and
- A6144 Warburton Lane, which passes through the built-up area of Partington to the south of the Manchester Ship Canal.

9.6.8 In addition, one national route on the NCN passes through the area. This is National Route 62 which traverses MA04 from Warrington in the west to Altrincham in the east. National Route 62 forms part of the Trans Pennine Trail, a long-distance path running from coast to coast across northern England.

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

Equestrian facilities

9.6.10 Bridleway Partington 6 (part of the Bollin Valley Way) is the only bridleway in the vicinity of the Proposed Scheme in MA04. Some sections of the Trans Pennine Trail within MA04 are also open to horse riders, including the section between Mill Lane and the B5160 Dunham Road.

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

9.7 Waterways and canals

9.7.1 There are two navigable waterways in MA04. The Bridgewater Canal runs through Lymm on a south-west to north-east alignment between Runcorn and Manchester. The Manchester Ship Canal is located in the centre of the study area, running broadly east-west and is actively used for transporting freight. Both waterways are crossed by the Proposed Scheme in the study area.

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

9.8 Air transport

9.8.1 There is no relevant air transport in MA04.

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