

Northern Gateway (JPA1.1)

Outline Planning Application

Transport Assessment



Northern Gateway: Proposed Development Within JPA1.1

784-B048805

Transport Assessment

For Planning (Revision 01)

April 2025

Northern Gateway Development Vehicle LLP



TETRA TECH

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Document Control

Document:	Transport Assessment
Project:	Northern Gateway: Proposed Development Within JPA1.1
Client:	Northern Gateway Development Vehicle LLP
Project Number:	784-B048805
File Origin:	Y:\Projects\784-B048805_Northern_Gateway_2023\60 Project Output\63 Published\Transport\63.3 Reports\TA – Final

Revision:	01	Prepared by:	M Thompson / J Tusiime
Date:	15/04/2025	Checked by:	M Thompson / P Blair
Status:	For Planning	Approved By:	P Blair

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Associated Documents Uploaded to the Planning Portal

Preliminary Transport Assessment Scoping Note (PTASN)

Transport Assessment Scoping Note Update (TASNU)

NH Comments (Scoping)

WSP Strategic Modelling Team (Leeds) – Local Model Validation Report

WSP Strategic Modelling Team (Leeds) – Response to NH comments on the LMVR

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FTP Eastern Access Analysis

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Abbreviations

NG	Northern Gateway
NGDV	Northern Gateway Development Vehicle LLP
PfE	Places for Everyone Joint Development Plan
GM	Greater Manchester
TfGM	Transport for Greater Manchester
GMCA	Greater Manchester Combined Authorities
BC	Bury Council
RMBC	Rochdale Metropolitan Borough Council
DfT	Department for Transport
ATE	Active Travel England
FTP	Focus Transport Planning
TT	Tetra Tech
PF	Pell Frischmann
TSG	Transport Steering Group (BC / RMBC / TfGM / NH / FTP/ PF / WSP)
MDZ	Mayoral Development Zone
LTN	Local Transport Note
LAR	Locality Assessment Report
GMSF	Greater Manchester Spatial Framework
PRoW	Public Right of Way
SPD	Supplementary Planning Document
NGDF SPD	Northern Gateway Development Framework SPD
DPD	Development Plan Document
PTASN	Preliminary Transport Assessment Scoping Note: prepared by FTP
TASNU	Transport Assessment Scoping Note Update: Prepared by TT
SRN	Strategic Road Network
QEII Way	Queen Elizabeth II Way
BSIP	Bus Service Improvement Plan
NGTM	Northern Gateway Traffic Model
LMVR	Local Model Validation Report
TIA	Traffic Impact Assessment
DM	Do Minimum (Without development modelling scenario)
DS	Do Something (With development modelling scenario)
HGV	Heavy Goods Vehicle
LGV	Light Goods Vehicle
PCU	Passenger Car Units
OD Matrices	Origin Destination Matrices
KS	Key Stakeholders
HTWG	Highways Technical Working Group (BC / RMBC / TfGM / NH / WSP)
IPDS	Infrastructure Phasing and Delivery Strategy

Terminology

Applicant	Northern Gateway Development Vehicle LLP (NGDV)
Application	The cross-boundary application for outline planning permission (all matters reserved) for the Proposed Scheme, submitted by the Applicant to the Councils.
Application Site	The spatial footprint of the Proposed Scheme, extending to 209.8ha, as defined by the Application Boundary Plan. This includes 120.15ha within Bury and 89.65ha within Rochdale.
Atom Valley Mayoral Development Zone	Atom Valley is a Mayoral Development Zone (MDZ) within the Atom Valley Growth Location identified in Places for Everyone and was established in August 2022, with the focus being on Northern Gateway (Rochdale & Bury), Kingsway Park (Rochdale) and Stakehill (Rochdale & Oldham). The Atom Valley Growth Location is the single largest employment opportunity for the Greater Manchester city-region. Collectively these three sites have the potential to provide 1.6 million sqm of employment space, generating 20,000 high-quality jobs and facilitating the construction of 7,000 new homes. Atom Valley is led by a partnership of developers, industrialists, universities, and local government. The vision is to create an extensive and interconnected manufacturing “mega-cluster”, which builds on existing local strengths in advanced manufacturing, materials, and machinery in the local area. Bringing together world-class research, manufacturing, research and development, it aims to shape the future while levelling up communities.
Councils	The collective term to be used when referring to Bury Council and Rochdale Borough Council.
EIA Assessment Boundary	The spatial footprint of the EIA Project for Assessment.
EIA Development Specifications	A description of the EIA Project for Assessment & the Proposed Scheme, including a series of strategies that are integral to the project and a description of how the EIA Project for Assessment & the Proposed Scheme are likely to be constructed and anticipated timescales. This description, together with a series plans form the basis of the technical assessments presented in the ES.
EIA Project for Assessment	The wider, comprehensive development project including facilitating infrastructure upon which the EIA is based.
Pilsworth Road / Moss Hall Lane – North (Fowler Welch)	Three arm junction between Moss Hall Road and Pilsworth Road, 1.2km to the east of M66 Junction 3, just to the north of the Great Bear / Fowler Welch Industrial Unit access.
Places for Everyone Joint Development Plan Document	Places for Everyone (PfE) is a long-term plan of nine Greater Manchester authorities (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan) for jobs, new homes, and sustainable growth over the plan period 2022 - 2039. It was prepared

	by the Greater Manchester Combined Authority (GMCA) on behalf of the nine authorities and was adopted in March 2024. It now forms part of the statutory development plan for the nine authorities, including Bury and Rochdale.
Proposed Scheme	The development for which outline planning permission (with all matters reserved) is sought through the Application. This comprises a national-scale employment development, of up to 600000sqm including logistics, warehousing, industrial and manufacturing uses, with a range of other supporting uses (up to 5,000sqm) and associated demolition works, landscaping, drainage, ecological enhancements, highway works, cycleway and footpath linkages and other ancillary infrastructure.
JPA1.1 Allocation Site	The land allocated within PfE under Policy JPA1.1 (Heywood / Pilsworth – Northern Gateway) for around 1,200,000 sqm of industrial and warehousing floorspace (with around 935,000 sqm being delivered within the plan period to 2039), around 1,200 new homes, a new primary school and an appropriate range of supporting and ancillary services and facilities, such as a new local centre, hotel, leisure and conference facilities, as well as new and improved sustainable transport, active travel and highways infrastructure and multifunctional green and blue infrastructure. Part of this allocation is already consented (South Heywood Masterplan Area) and has delivered major enabling infrastructure (Queen Elizabeth II way) to support the JPA1.1 allocation The JPA1.1 Allocation Site covers an area of around 634 hectares (1,567 acres) and is positioned at a strategically important intersection directly to the east of the M66, directly to the north west of the M62 and north of the M60. The JPA1.1 Allocation Site straddles the administrative boundary of Bury and Rochdale, with 327 hectares within Bury and 307 hectares within Rochdale.
JPA1.2 Allocation Site	The land allocated within PfE under Policy JPA1.2 (Simister / Bowlee – Northern Gateway) for around 1,550 dwellings, a new primary school and a new local centre, as well as new and improved sustainable transport, active travel and highways infrastructure and multifunctional green and blue infrastructure. The JPA1.2 Allocation Site covers an area of around 98 hectares and straddles the administrative boundary of Bury and Rochdale.
Junctions 9/10	Modelling Software: Priority junction models (T-junctions, crossroads, roundabouts)
LinSig	Modelling Software: Signalised Junctions (T-junctions and crossroads)
M66 link road	Pilsworth Road between M66 Junction 3 and Pilsworth Road / Moss Hall Lane - North Junction
Northern Gateway Development Framework	The NGDF is being prepared by the Councils and is expected to be adopted as a Supplementary Planning Document (SPD) which will be a

Supplementary Planning Document	material consideration in the determination of all planning applications relating to the JPA1.1 Allocation Site. It establishes a framework against which future planning applications will be considered and identifies the necessary infrastructure required to support the delivery of the JPA1.1 Allocation Site as a whole. The draft NGDF SPD was published for public consultation on 15 November 2023, which is open until 10 January 2025. Thereafter, consultation feedback will be reviewed and the NGDF SPD will be updated as necessary prior to consideration at meetings of the Councils respective Cabinets for formal adoption (expected in March 2025). A separate Development Framework will be produced for the JPA1.2 Allocation Site in due course.
Northern Gateway Development Vehicle LLP (NGDV)	A 50:50 joint venture between Russell LDP and Harworth Group, who are the main promoter of the Northern Gateway (comprising both the JPA1.1 and JPA1.2 Allocation Sites) and are the Applicant for the Application.
Pilsworth Road / Moss Hall Road / Hareshill Road / QEII Way Corridor	The link road between M66 Junction 3 and M62 Junction 19
SATURN	Modelling Software: Strategic Model used for the NGTM
South Heywood Masterplan Area	The area of land within the northeast of the JPA1.1 Allocation Site, within Rochdale Borough, which extends to 129.4ha. This comprises the H-Park employment area (175,460 sqm of use class B2/B8 floorspace) and up to 1,000 new homes, which are being implemented, as well as the recently completed Queen Elizabeth II Way. Hybrid planning permission was originally granted by Rochdale Borough Council in March 2020 (ref. 16/01399/HYBR) comprising: • Full planning permission for a new 2.2km link road between Junction 19 of the M62 and Pilsworth Road, which has now been completed and is open for use (known as Queen Elizabeth II Way). • Outline planning permission (with all matters reserved except for access) for a major mixed-use development comprising up to 135,460 sqm of employment floorspace (Use Classes B2/B8), 1,000 new homes, a new local centre and primary school and associated landscaping, sports pitches, drainage, ecological enhancements, cycleway and footpath linkages and ancillary infrastructure. Following the grant of reserved matters approval, the early phases of development are now under construction. A further outline planning permission was granted in January 2023 (ref. 22/01569/OUT) for an additional 40,000 sqm of employment floorspace (Use Class B8) on land within the South Heywood Masterplan Area. As a result, the total amount of employment floorspace approved at South Heywood is 175,460 sqm.
South Heywood Link	A potential future vehicular connection between the South Heywood Masterplan Area and the wider JPA1.1 Allocation Site.

Three Arrows Junction	3-arm junction between Pilsworth Road and Moss Hall Road on the northern boundary of the site, at the location of the former Three Arrows Public House
Transyt	Modelling Software: Signalised Junctions (gyratory)
VISSIM	Modelling Software: Microsimulation of networks

1.0 Introduction

1.1 Background

- 1.1.1 Tetra Tech has been commissioned by Northern Gateway Development Vehicle LLP (NGDV) to provide transport planning advice in relation to development proposals at the allocated Northern Gateway (NG) site in Greater Manchester (GM).
- 1.1.2 NG comprises two sites allocated in the adopted Places for Everyone (PfE) Joint Development Plan as follows:
- **Policy JPA 1.1 (Heywood and Pilsworth)** – allocated for around 1,200,000 sqm of industrial and warehousing floorspace (with around 935,000 sqm being delivered within the plan period to 2039), around 1,200 new homes, a new primary school and an appropriate range of supporting and ancillary services and facilities, such as a new local centre, hotel, leisure and conference facilities, as well as new and improved sustainable transport, active travel and highways infrastructure and multifunctional green and blue infrastructure ('JPA1.1 Allocation Site'). The JPA1.1 Allocation Site covers an area of around 634 hectares (ha) and is positioned at a strategically important intersection directly to the east of the M66, directly to the north-west of the M62 and north of the M60. The JPA1.1 Allocation Site straddles the administrative boundary of Bury and Rochdale, with 327 hectares within Bury (western side) and 307 hectares within Rochdale (eastern side).
 - **Policy JPA 1.2 (Simister and Bowlee)** – allocated for around 1,550 dwellings, a new primary school and a new local centre, as well as new and improved sustainable transport, active travel and highways infrastructure and multifunctional green and blue infrastructure ('JPA1.2 Allocation Site'). The JPA1.2 Allocation Site covers an area of around 98ha and straddles the administrative boundary of Bury and Rochdale.
- 1.1.3 This Transport Assessment (TA) is submitted as part of a cross-boundary application for outline planning permission (all matters reserved) ('the Application') for a national-scale employment development, including logistics, warehousing, industrial and manufacturing uses, with a range of other supporting uses (as defined by the Uses Schedule) and associated demolition works, landscaping, drainage, ecological enhancements, highway works, cycleway and footpath linkages and other ancillary infrastructure ('the Proposed Scheme'), comprising part of the JPA1.1 Allocation Site ('the Application Site'). The spatial footprint of the Application Site extends to 209.8ha and includes 120.15ha within Bury and 89.65ha within Rochdale.
- 1.1.4 It is pertinent to note from the outset that the Application is being made in outline and that access is reserved, i.e not being applied for at this stage. Mitigations on the Strategic Road Network will be dictated by the National Highways (NH), Project Control Framework (PCF) process and Transport for Greater Manchester (TfGM) are developing active travel and public transport strategies for Northern Gateway, which will guide mitigations in those categories. The NG allocations are of such a scale that strategic road network (SRN), local road network, active travel and public transport mitigations will not just accommodate development demands, but will play

a wider role in serving existing demands, PfE growth and in delivering the wider GM Transport Strategy for 2040.

- 1.1.5 Consequently, that mitigation will also serve as city region mitigation which aligns with the approach being taken and the involvements of the Key Stakeholders, i.e Local Highway Authorities (LHA) at Bury Council (BC) and Rochdale Metropolitan Borough Council (RMBC), TfGM, NH, Greater Manchester Combined Authority (GMCA), NGDV etc. At this early stage, the Application seeks to confirm its commitment to supporting those future mitigations which will emerge and be determined as the proposals develop. For example, the NGDV is engaged in delivering such mitigations for Northern Gateway already through its co-funding of the TfGM A576 Study which is a necessary stage in identifying and delivering those future mitigations. The TA sets out the likely impacts based on a range of interventions, in a range of scenarios.
- 1.1.6 The location of the Proposed Scheme (Application Site), in the context of the wider JPA1.1 Allocation Site is shown in **Figure 1**.
- 1.1.7 The site location in the wider context is shown in **Plan 1** and the local highway network is shown in **Plan 2**.

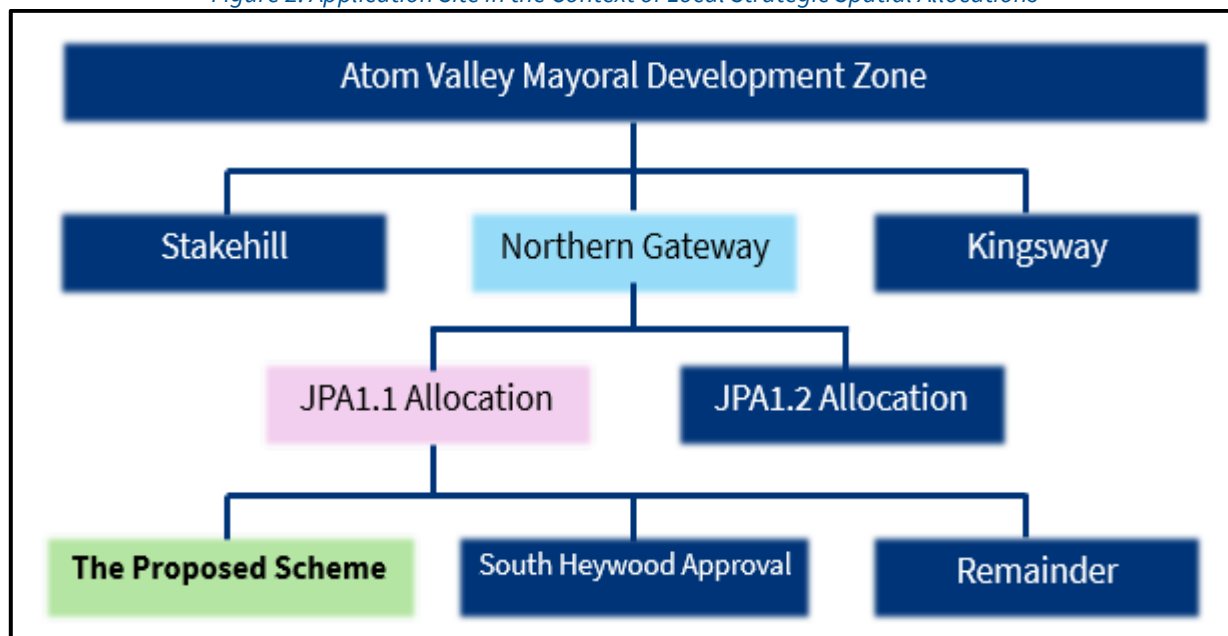
Figure 1: Location Plan



1.2 Planning Context

- 1.2.1 The Proposed Scheme forms a significant part of the major, strategic, long term development proposals for GM, that could transform the economic prospects of the City Region. It is embedded within several spatial designations and allocations which are depicted conceptually in **Figure 2**.

Figure 2: Application Site in the Context of Local Strategic Spatial Allocations



- 1.2.2 As illustrated in **Figure 2**:

Atom Valley Mayoral Development Zone

- The Atom Valley Mayoral Development Zone (MDZ) is the single largest employment opportunity for the GM City Region. Designated within PfE, it has the potential to provide 1.6 million sqm of employment space, generating 20,000 high-quality jobs and facilitating the construction of 7,000 new homes.
- The MDZ is led by a partnership of developers, industrialists, universities, and local government with a vision to create an extensive and interconnected manufacturing “mega-cluster”, which builds on existing local strengths in advanced manufacturing, materials, and machinery in the local area.
- The MDZ includes NG, Stakehill and Kingsway.

Northern Gateway (JPA1.1 & JPA1.2 Allocation Sites)

- NG comprises both the JPA1.1 Allocation Site and the JPA1.2 Allocation Site.
- The JPA1.1 Allocation Site is summarised below.
- The JPA1.2 Allocation Site is allocated for around 1,550 dwellings, a new primary school and a new local centre.
- NG is collectively expected to deliver around 1,200,000sqm of employment floorspace, around 2,550 dwellings, two new primary schools and a range of supporting and ancillary uses (including new local centres).

The JPA1.1 Allocation Site

- The JPA1.1 Allocation Site is allocated for the delivery of around 1,200,000sqm of employment floorspace, around 1,200 dwellings, a new primary school and an appropriate range of supporting and ancillary services and facilities, such as a new local centre, hotel, leisure and conference facilities.

The Application Site & Proposed Scheme

- As set out in Section 1.1, the Application Site forms part of the JPA 1.1 Allocation Site. It is bordered to the north by the South Heywood Masterplan Area (SHMA - summarised below).
- The Proposed Scheme comprises up to 600,000sqm of employment uses and up to 5,000sqm of supporting land uses (as defined by the Uses Schedule submitted with the Application).

The South Heywood Masterplan Area

- A portion of the JPA1.1 Allocation Site, known as the SHMA, has received hybrid (part full / part outline) planning permission from Rochdale Metropolitan Borough Council (RMBC) for 175,460sqm of industrial floorspace, 1,000 dwellings and a primary school (RMBC refs: 16/01399/HYBR and 22/01569/OUT). The SHMA incorporates highways infrastructure (including the Queen Elizabeth II Way – QEII Way) and will provide funding for public transport improvements. The SHMA has been implemented and is in the process of being delivered.

The Remainder of the JPA1.1 Allocation Site

- The remainder of the JPA1.1 Allocation Site – excluding the Proposed Scheme and the SHMA – will provide around 425,000sqm of employment floorspace and around 200 dwellings and will be subject to a future planning application(s).

1.3 The TA and Key Stakeholders

- 1.3.1 The TA seeks to be clear and explicit throughout when referencing the:
- the ‘**Proposed Scheme**’ (i.e. the development proposed within the Application Site and for which the Application seeks outline planning permission (all matters reserved));
 - the wider ‘**JPA 1.1 Allocation Site**’ which comprises part of Northern Gateway; and
 - the ‘**Cumulative Impacts**’ of the full JPA1.1 and JPA1.2 Allocation Sites.
- 1.3.2 This TA has been developed within this ambitious and complex planning context. It draws on data and evidence from both site-specific analysis of the transport requirements associated with the development proposals, and the cumulative demand associated with the more strategic site allocations and designations.
- 1.3.3 The LHA’s relevant to the Application Site are BC and RMBC. Furthermore, given the Application Sites’ location within GM, TfGM, who are responsible for co-ordinating transport across the ten GM districts, are also a key consultee. The Application Site is also located in close proximity to the SRN, namely the M62 and M66, which is operated and controlled by NH.
- 1.3.4 For the purposes of this TA, BC / RMBC / TfGM and NH are described as the Key Stakeholders (KS).

1.4 Development Context

- 1.4.1 It is important to put highways traffic and transportation considerations in context. The JPA1.1 Allocation Site represents GM's largest allocated employment site, coming forward on a busy and often congested highway network.
- 1.4.2 Within the GM Transport Strategy, TfGM have set the vision / target to have 50% of trips in GM made by sustainable modes by 2040. As GM transitions to this modal share their strategies will deliver improved opportunities for greater take up of alternative travel modes to the private car. The strategy also seeks an overall reduction in travel by car in 2040, as compared to 2017 levels.
- 1.4.3 It is not the purpose of policy to protect the journey convenience of commuters. Free flowing traffic conditions do not take precedence over securing economic growth and jobs. It is acknowledged that significant mitigations, even new junctions on the motorway may be required to support and achieve the wider aspirations of the now adopted PfE Joint Development Plan. Individual developments cannot viably deliver mitigation of that scale, nor should they be expected to, when those mitigations will serve other local and regional aspirations.
- 1.4.4 The allocations set out in PfE will come forward at different times, yet all should contribute towards the overall mitigation solution. The Proposed Scheme seeks approval early in the Plan period and is prepared to fund or deliver its proportional share of mitigation.
- 1.4.5 This TA has been generated in close collaboration with the KS. The PfE policy JP-C8 requires all TAs to test a Vision-Led approach.
- 1.4.6 The decision to allocate the larger JPA 1.1 Allocation Site was made in the knowledge that housing and employment growth would have to come forward in an area subject to high volumes of traffic. JPA 1.1 is in close proximity to the SRN, namely the M60, M62 and M66, which already operate at or close to capacity with limited scope to increase provision on the network.
- 1.4.7 The decision to allocate GM's largest employment site was made in the overarching PfE context that a Vision-Led approach to future travel demand would be applied. The Vision-Led approach seeks to deliver development in the context of the National Government and GM Transport Strategies to reduce car use and promote mitigation which targets travel choice with the aim of providing attractive and realistic alternatives to the car for those living and working in the area.
- 1.4.8 Such an approach aligns with the policy approach established by the GMCA and TfGM, and their target for 50% of trips in GM to be made by sustainable modes by 2040. TfGM are bringing forward Active Travel and Public Transport Strategies and those which are specific to NG are set out in the Northern Gateway Transport Framework Document (NG TFD), see **Appendix A**.
- 1.4.9 This is supported by the views of regional leaders. At the Northern Transport Summit 2024, Heni Murison, Chief Executive of the Northern Powerhouse Partnership, said that "*development needs to be Vision-Led rather than stopgap with patch up mitigation, based on whatever finances fall from the planning tree*". At the same event, Lord Patrick McLaughlin, Chair of Transport for the North, said Transport Policy does not end at a city boundary, it must integrate across the region.
- 1.4.10 The scale of the Proposed Scheme and wider JPA 1.1 Allocation Site are such that highway capacity improvements, particularly close to the site where development traffic impacts will be focused,

are likely to be required to facilitate peak hour development impacts. Those are identified within this TA, together with an indication of the commensurate level of intervention and mitigation envisaged for an early stage of development, then the Proposed Scheme and then the cumulative development of JPA1.1 and JPA1.2 in full.

- 1.4.11 The limitations of the highway network to accommodate the potential traffic demand from the JPA1.1 Allocation Site are well recognised by all KS. The allocation and Vision-Led approach acknowledge that potential increases in journey times for traffic will be outweighed by the step change in travel choice, and the benefits derived from the economic growth and job opportunities provided in the area.

1.5 Scoping

- 1.5.1 Prior to the preparation of this TA, scoping has taken place with the KS. The detail and extent of that exercise is detailed later in this report, with a brief summary provided in **Table 1.1**.

Table 1.1: Scoping Correspondence

Scoping	Prepared by/ Attended by	Date
Preliminary Transport Assessment Scoping Note (PTASN)	FTP	July 2022
9 x Transport Steering Group (TSG) meetings	TSG members	
Transport Assessment Scoping Note Update (TASNU)	TT	Aug. 2024
TASNU Addendum	TT	Sept. 2024
Transport Technical Meeting	TT, NGDV, the KS	Sept. 2024
Public Transport and Active Travel Strategy Meeting	TfGM & TT	13.11.2024
TfGM response on Base Model	TfGM	28.11.2024
NH response to TASNU & TASNU Addendum	NH	Nov. 2024 (received Dec. 2024)
NH response to Base Model	NH	Nov. 2024 (received Dec. 2024)
Tetra Tech response to NH comments on Scope (TTN10)	TT	Feb. 2025
WSP response to NH comments on base model	WSP	Feb. 2025
Highways Technical Working Group Meetings 1 to 5	TT, NGDV, the KS	Jan. to Apr. 2025

- 1.5.2 Given the scale of the Application and the number of variables and ‘moving parts’ associated with the mitigation options and access strategies, it was important that the scope and focus of the assessment were agreed with the KS, prior to commencing the critique of the impacts and necessary mitigation.

- 1.5.3 A scoping note for the TA was therefore issued in July 2022 and updated in August 2024 with an Addendum in Sept. 2024. Comments from the NH were not received until late December / early January 2025 by which time the traffic modelling assessments were well progressed. Comments were generally in agreement with the scope and queries have been responded to.
- 1.5.4 In January 2025, TfGM presented a Draft of the NG TFD (**Appendix A**) to guide the NG development and that confirms that the Vision-Led approach, focused on non-car travel and seeking to support the GM Transport Strategy 2040, has primacy.

1.6 Report Structure

- 1.6.1 Following this section, the report is structured as follows:
- **Section 2** sets out the Vision for the area and the Application Site;
 - **Section 3** provides an overview of the National Policy;
 - **Section 4** provides an overview of the Local Policy;
 - **Section 5** describes the Application Site context and the existing conditions;
 - **Section 6** sets out the Proposed Scheme;
 - **Section 7** describes the emerging mitigation works and the mitigation strategies;
 - **Section 8** describes the approach to assessment;
 - **Section 9** describes the scope evolution and the revised assessment methodology;
 - **Section 10** sets out the multi-modal trip generation;
 - **Section 11** provides an overview of the strategic modelling;
 - **Section 12** provides an overview of the junction analysis;
 - **Section 13** describes the key findings from the junction analysis;
 - **Section 14** provides details in relations to Phasing;
 - **Section 15** summarises and concludes the report.

2.0 The Vision

2.1 Overview

- 2.1.1 NG (JPA1.1 and JPA1.2 Allocation Sites) has the potential to form a nationally important location for economic growth. It forms an integral part of the PfE and sits within the 'Atom Valley' MDZ.
- 2.1.2 In line with current planning policy and guidance, the transport proposals are led by a vision for long term sustainable development. The JPA1.1 Allocation Site will be futureproofed by promoting sustainable travel as part of achieving long term growth for the area in proximity to the site and the city region.

2.2 Strategic Priorities

- 2.2.1 The strategic priorities contained within the Northern Gateway Development Framework (NGDF) Supplementary Planning Document (SPD), which was adopted by BC and RMBC in April 2025, associated with the delivery of the JPA1.1 Allocation Site are to¹:
- Rebalance economic growth.
 - Provide a strategically significant employment location.
 - Deliver comprehensive and coherent development.
 - Support Advanced Manufacturing and development of skills.
 - Promote robust placemaking principles.
 - Deliver sustainable communities.
 - Create high-quality and sustainable connections with surrounding communities.
 - Promote exemplar sustainability standards.
 - Embed a network of high-quality and naturalised green and blue infrastructure.
 - Enhance and support local habitats and biodiversity.
- 2.2.2 Within this context and the wider national planning and transport policy context, the transport priorities of the JPA1.1 Allocation Site should seek to:
- Provide realistic and attractive alternatives to the car.
 - Maximise the accessibility of the site by public transport.
 - Give priority to pedestrians and cyclists across the site.
 - Provide the capacity (both public transport and highway) for growth.
- 2.2.3 In this respect the emphasis is on a 'Vision-Led' approach to accommodating future demand associated with the housing and employment provision that will come forward over the next twenty years.
- 2.2.4 This places an emphasis on sustainable travel being at the heart of the NG, both in terms of local connections and strategic trips to the JPA1.1 and JPA1.2 Allocation Sites. It represents a move away from the traditional 'predict and provide' approach to transport planning, which sought to

¹ A separate Supplementary Planning Document is to be produced for the JPA 1.2 Allocation Site.

estimate future volumes of traffic on the network and provide highway capacity to meet this demand.

- 2.2.5 The traditional predict and provide approach perpetuated car dependency within new developments and is at odds with a desire to move towards net zero and decarbonise the transport network.
- 2.2.6 The Proposed Scheme is part of NG, which is the subject of the NG TFD.
- 2.2.7 The initial stages of the NG TFD, were presented in the Arup Reports titled “NG - Draft Transport Strategy” and “NG - Draft Active Travel Masterplan”, both dated November 2022. Those documents set out initial mitigation options, priorities and funding streams.
- 2.2.8 The NG TFD (**Appendix A**) builds upon the Arup work from 2022 and is a comprehensive Framework to guide the development of NG in the context of the GM Transport Strategy 2040 and describes the expectations and approach to be taken on transport matters in bringing forward development at NG. The Transport Vision, as set out the NG TFD is:

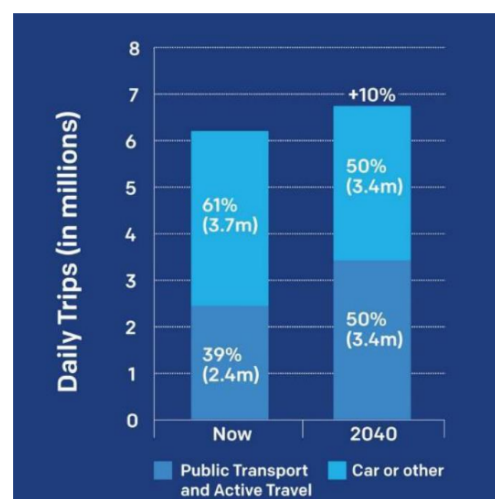
01 Transport Vision

Transport Vision

An ambitious and sustainable transport vision has been agreed for the Northern Gateway development as part of this overarching transport framework document. The vision was developed in partnership between TfGM, Rochdale Council, Bury Council and the Joint Venture.

All transport interventions will need to fully support our transport vision, set out below:

- Overall mode share target – 60-70% Car / 40-30% PT & AT
- All communities and interchanges within a 5km catchment of JPA 1.1, and key workplaces and facilities (such as secondary schools and shops) within a 5km catchment of JPA 1.2 to have a high-quality cycling route to/from the two sites.
- Direct and frequent local bus services connecting to/from Bury, Heywood, Middleton, Oldham, Prestwich, Radcliffe, Rochdale, Whitefield and Northeast Manchester including North Manchester Hospital (in relation to JPA 1.2).
- Public transport connection to/from Manchester city centre and universities.
- Mitigation of safety and significant congestion impacts on the highway network (SRN/ MRN and Local Highways).
- Overall support for sustainable travel across the Atom Valley area and GM's ambition for zero net increase in car traffic by 2040.
- Streets for all principles embedded in the on-site layout and Western Access design, including appropriate management of car parking to ensure prioritisation of sustainable and active modes.



- 2.2.9 This TA has been produced in line with delivering the NG TFD vision and there are many elements of the NG TFD which will be cross referenced in this TA.
- 2.2.10 Whilst TfGM, PFE, the NGDF SPD and the National Planning Policy Framework (NPPF) / planning system (as explained in Section 3.0 below) require the Vision-Led approach to be applied, in scoping discussions with NH, they have requested the inclusion of assessment scenarios which align more with the traditional approach of ‘predict and provide’. To ensure a comprehensive appraisal approach, this TA therefore includes assessments to consider both approaches. However, as the NGDF SPD and the planning system require, the Vision-Led approach is the appropriate approach for planning purposes.

2.3 Summary

- 2.3.1 The TA has been produced to accord with current national and local policy and the Vision-Led approach to planning. More traditional predict and provide assessments are also provided to help inform the decision maker.

3.0 National Policy

3.1 Overview

- 3.1.1 A detailed overview of the relevant planning policy is set out within the Planning Statement (prepared by Turley) which supports the Application. This section of the TA captures changes in national transport and highways policy since the original TA Scoping Note was issued in July 2022. It highlights changes in national policy of relevance to the JPA1.1 Allocation Site coming forward. This TA has regard to the policies, guidance and policy updates set out in this section. This TA also aligns with policy and guidance which has emerged during the application preparation period.

3.2 National Planning Policy Framework (December 2024)

- 3.2.1 The NPPF was updated in December 2024. It now acknowledges changes to the planning system to promote Vision-Led plans and development. The concept of Vision-Led planning represents a shift in focus and a new emphasis on determining the type of places society wants to create. Although the December 2024 NPPF was published after PfE was adopted, it is pertinent to note that the Proposed Scheme and wider NG development accords with current NPPF requirements and is being brought forward within a vision that looks decades ahead.

- 3.2.2 In relation to transport, in Paragraph 109 the NPPF states:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, using a Vision-Led approach to identify transport solutions that deliver well-designed, sustainable and popular places”.

- 3.2.3 Paragraph 110 states:

“Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health”.

- 3.2.4 Paragraph 115 states:

“In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;

b) safe and suitable access to the site can be achieved for all users;

c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code⁴⁸; and

d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a Vision-Led approach.”

3.2.5 In relation to levels of acceptability and range of assessments in Paragraph 116 the NPPF states:

“Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios.”

3.2.6 Historically the approach of planning has been to ‘predict and provide’ based upon trends and forecast demand. This perpetuated a focus on highway capacity and reinforced reliance on the car in many communities. The change in emphasis moves away from this approach and focuses more on meeting travel demand through the provision of sustainable transport and active travel. The “reasonable future scenario” is the Vision-Led test, which reflects the active travel and public transport mitigations and the future transport strategies to which TfGM and the Government are fully committed.

3.3 National Highways

3.3.1 NH are a key stakeholder in the development of the NG sites and have been involved in the discussions to date on how the proposals can be assessed and delivered.

3.3.2 DfT Circular 01/2022 and the NH “Planning for the Future” document provide information on how new development should promote and provide infrastructure for sustainable travel modes.

DfT Circular 01/2022

3.3.3 DfT Circular 01/2022 (hereafter referred to as the Circular) sets out how NH will engage with the planning system and fulfil its role as a delivery partner for sustainable economic growth, whilst managing the SRN².

3.3.4 The document sets out that new development should reduce reliance on private vehicles by promoting sustainable travel modes through appropriate infrastructure and that doing so can help to promote growth for Local Authorities.

3.3.5 Promoting sustainable travel should also be used to reduce the need to introduce new connections to the SRN which may negatively affect safety, reliability and efficiency. NH will engage in the planning process where the SRN is affected, to consult and ensure that it can still operate safely in the long term with the proposed development in place.

² [Strategic road network and the delivery of sustainable development - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/106422/Strategic-road-network-and-the-delivery-of-sustainable-development.pdf)

Planning for the Future

- 3.3.6 The 'Planning for the Future' document (hereafter referred to as the Planning Guide), describes the approach taken by NH when engaging in the plan making system and when considering planning applications. It is to be read in conjunction with the Circular³.
- 3.3.7 It recognises that a Vision-Led approach works in hand with a monitor and manage approach. The document sets out the stages of a Vision-Led approach, notably:
- Establish a vision.
 - Develop scenarios.
 - Generate options.
 - Test options.
 - Produce a vision strategy.
- 3.3.8 The scenario-based approach which forms part of the Circular is a key factor in achieving sustainable development.
- 3.3.9 Within the South Pennines (West) Route Strategy, the Northern Gateway is recognised as an area of growth as designated through GM's PFE Development Plan.
- 3.3.10 In addition to the 'Connecting the Country' and relevant route strategies, NH sets out their role in supporting the economy through the Strategic Road Network Economic Overview.
- 3.3.11 On Transport Assessments, the document states:
- "Transport assessments should be carried out in line with prevailing government guidance and industry standards in agreement with us, through pre-application and scoping. Where modifications to the SRN are proposed, schemes must be subject to road safety, environmental and any other relevant assessment.*
- Local authorities and developers also need to ensure that their proposals comply with requirements for access, design and audit as set out in the Design Manual for Roads and Bridges (DMRB)"*
- 3.3.12 Early engagement is also recommended and in the case of the development proposals, extensive and regular discussions with NH have been ongoing for the JPA1.1 Allocation (including the Application Site) since before 2022.

Economic Role of National Highways

- 3.3.13 The 2023⁴ document provides a summary of the multi-functional economic role of the Strategic Road Network (SRN) and highlights the four key areas through which NH can help to support the UK economy, notably:
- Role 1: Resilient, reliable and value for money connectivity for SRN reliant sectors.
 - Role 2: Strategic Connectivity: Supporting international trade and inter-regional connections.

³ [Planning for the future - A guide to working with National Highways on planning matters](#)

⁴ [cre24_0135-srn-economic-overview-final.pdf \(nationalhighways.co.uk\)](#)

- Role 3: Planning and placemaking: Ensuring the right development in the right places.
- Role 4: A catalyst for growing social value and boosting prosperity.

3.3.14 NH subsequently have a role to support the delivery of PfE and taking forward the JPA1.1 Allocation (including the Application Site), which forms an integral part of its future growth ambitions.

3.4 Active Travel England

3.4.1 Development within the JPA1.1 Allocation (including the Application Site) will seek to maximise levels of walking and cycling and align internal provision with high quality corridors in the surrounding network.

3.4.2 In July 2023, Active Travel England (ATE) became a Statutory Consultee for development proposals equal to or exceeding 150 housing units, 7,500m² of floorspace or an area of five hectares. They will form an important consultee in determining the appropriate interventions to come forward in support of the development of the site.

3.4.3 Since the formation of the organisation, several areas of guidance have been published which will be considered in the development of the JPA1.1 Allocation.

Planning Application Assessment Toolkit

3.4.4 In July 2023, ATE published the Planning Application Assessment Toolkit and associated User Manual⁵. These documents can be used by assessors to determine whether the level of active travel provision promoted by a developer is adequate and in line with local policy requirements and relevant technical guidance.

3.4.5 Paragraph 1.2 of the Assessment User Manual states:

“The ATE Planning Application Assessment Toolkit is not in itself the determinant of a planning application. Its purpose is to allow the user to assemble the evidence and assess the development proposal against current expectations. Users are expected to use their professional judgement in providing an evidence-based recommendation.”

3.4.6 To comply with all sections of the ATE Assessment, a Transport Assessment should provide information on:

- Multi-modal trip generation.
- Qualitative analysis of sustainable travel infrastructure in the surrounding area and the impact of the proposals on these networks.
- Detail of proposed improvements to active travel infrastructure and any other strategies to enable an increase in walking and cycling rates.

3.4.7 In addition to the above, the ATE Assessment requires Travel Plans to “clearly outline the mode share targets, proposed measures, monitoring strategy and remedial measures in the event these are not met”.

⁵ [Active Travel England: planning application assessment toolkit - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/active-travel-england-planning-application-assessment-toolkit)

3.5 Public Transport Policies

- 3.5.1 Since July 2022, further guidance has emerged in relation to the provision of bus services and infrastructure across the country, and this is summarised below.

National Bus Strategy: 2024 Bus Service Improvement Plans Guidance

- 3.5.2 The statutory framework for the delivery of the National Bus Strategy at the local level is through the production of Bus Service Improvement Plans (BSIPs). These documents were published in October 2021, when still impacted by the implications of COVID.
- 3.5.3 In January 2024, additional guidance was published to provide the basis upon which local transport authorities could review the BSIPs⁶.
- 3.5.4 At the heart of the guidance is the need for the BSIPs to have a vision for buses which aligns with the National Bus Strategy and at a local level, the Local Transport Plan. As part of this, the guidance states that buses must be an attractive option for more people, and be more frequent, faster and more reliable, cheaper, easier to use and understand, better integrated with other modes, greener and more accessible.

LTN 1/24: Bus User Priority

- 3.5.5 In March 2024, the DfT published LTN 1/24 on Bus User Priority⁷. The note builds upon the National Bus Strategy (published in March 2021) to focus on how bus services can be improved, whilst also being cognisant on the impact on other road users. It supersedes LTN 1/97: Keeping Buses Moving.
- 3.5.6 The guidance provides a basis for supporting and prioritising buses and their passengers within an integrated road network. It sets out key design principles and redefines bus priority to focus on the bus user and a whole-journey experience. Local authorities are expected to demonstrate that they have given due consideration to this guidance when designing schemes that qualify for dedicated Government funding.
- 3.5.7 This guidance focuses on providing advice and information on how to take schemes from planning through to successful delivery, and on what range of measures and techniques can be used to support better bus user priority across the whole passenger journey.

3.6 Summary

- 3.6.1 The national planning and transport policy context is evolving. There is an ever-increasing emphasis on user experience, active travel and public transport modes. Whilst, guidance recognises that the needs of motorists cannot be ignored, it also looks to rebalance the focus and emphasis of investment, towards prioritising travel choice and sustainable modes.
- 3.6.2 The TA will have regard to the recent policy and guidance updates and will follow a Vision-Led approach in line with the NG TFD, emphasising active and sustainable travel modes.

⁶ [bus-service-improvement-plans-guidance-to-local-authorities-and-bus-operators-2024.pdf](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/123456/bus-service-improvement-plans-guidance-to-local-authorities-and-bus-operators-2024.pdf) (publishing.service.gov.uk)

⁷ [Local Transport Note 1/24: Bus User Priority](https://publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/123457/local-transport-note-1-24-bus-user-priority.pdf) (publishing.service.gov.uk)

4.0 Local Policy and Guidance Updates

4.1 Overview

- 4.1.1 A detailed overview of the relevant planning policy is set out within the Planning Statement (prepared by Turley) which supports the Application. This section captures changes in local highways and transportation policy context since the original TA Scoping Note was issued in July 2022. This section highlights changes in *local* policy of relevance to the Proposed Scheme and the JPA1.1 Allocation Site coming forward. This TA has regard to the policies, guidance and policy updates set out in this section.

4.2 Places for Everyone Joint Development Plan

Adoption of the Plan

- 4.2.1 The PfE Joint Development Plan was adopted on 21 March 2024. NG is allocated under Policies JPA 1.1 (Heywood / Pilsworth) and JPA 1.2 (Simister / Bowlee).
- 4.2.2 In allocating Northern Gateway, the Planning Inspector has ensured that the bringing forward of the allocation satisfies the requirements of the NPPF, which was in place at the time of their consideration.
- 4.2.3 Regarding Transport Assessments, PfE (paragraph 10.75) states the following:
- “Where a Transport Assessment is required, this should start with a vision of what the development/allocation is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision.”*

- 4.2.4 This reflects how PfE is in line with recent updates to the planning system and reinforces the approach that the application will take.

Inclusion of the Northern Gateway in the Plan

- 4.2.5 Like all sites at PfE, the JPA1.1 Allocation Site had to undergo stringent assessment to be allocated. It was tested and modelled and ultimately deemed acceptable subject to mitigations that are highlighted in PfE.
- 4.2.6 Evidence was provided by the GMCA, TfGM and the NGDV to support the JPA1.1 Allocation Site and demonstrate how it could provide benefits for GM, how it could be delivered sustainably and how it can support the vision for long term development of the city region.
- 4.2.7 Opportunities to provide rebuttals and comments towards the allocation of sites in PfE have been numerous across the consultation period. In promoting the JPA1.1 Allocation Site, Locality Assessment Reports (LARs) presented evidence on matters such as traffic impact, sustainable accessibility, active travel and viability.
- 4.2.8 The Planning Inspector appointed to assess PfE scrutinised that evidence and in allocating the JPA1.1 Allocation Site, has confirmed that the development satisfies the tests set out in the NPPF which requires confirmation on the acceptability and sustainability of site allocations. As such, it

can be said that the JPA1.1 Allocation Site is accepted to be deliverable, viable and sustainably located.

Viability Assessment

- 4.2.9 A viability assessment was part of the evidence scrutinised by the Planning Inspector and demonstrated a level of investment at which the development would remain viable. That will have informed the decision on the acceptability of the site for allocation, cognisant of the expectations for wider funding to deliver the strategic mitigations which were being considered at that time.

The PfE Expectation for Mitigation

- 4.2.10 The full mitigation strategy for the Proposed Scheme is discussed later in this TA in **Section 14**. It comprises delivering and / or funding Public Transport and Active Travel measures emerging from TfGM strategies, highways improvements on the local and strategic networks, and on-site infrastructure which promotes active and sustainable travel.

- 4.2.11 The overall strategy incorporates the PfE Policy JPA1.1 requirements for the new development within the JPA1.1 Allocation Site. Those relating to transport are:

“1. Be in accordance with a comprehensive masterplan, design code and infrastructure phasing and delivery strategy, in line with Policy JP-D1 'Infrastructure Implementation', that has been agreed with the local planning authorities.

3. Make provision for new and improved sustainable transport and highways infrastructure having regard to the indicative transport interventions set out in Appendix D in accordance with Policy JP-C8.

6. Ensure the design and layout allows for effective integration with surrounding communities, including active travel links and connections to local services, employment opportunities and over the M62 to proposed new development at Simister/Bowlee (JPA1.2).

- 4.2.12 The Proposed Scheme will adhere to the requirements of this policy and Policy C8. Those and the mitigations referred to in “Appendix D” of PfE, will be addressed in this TA, see **Sections 14**.

Promoting Sustainable Travel

- 4.2.13 A key change in the direction set out in Circular 01/22 compared to the previous version (Circular 02/13) is the prominence in which sustainable travel should be given. This is set out in principle in Paras 11 to 17 of the Circular with further references through the remainder of the policy document in relation to how this is reflected in the plan-making and decision-taking stages.

- 4.2.14 Circular 01/22, in Para 49, specifically states the need to set out assumptions for forecast traffic levels to ‘avoid the default factoring up of baseline traffic’. In the context of the Northern Gateway development, this will include giving due consideration to the GM Transport Strategy 2040 which sets out a target mode shift for public transport and active travel from the baseline of 39% to 50% by 2040. Para 23 of the Circular goes on to state that:

‘The general principle should be accepted where proposals would include measures to improve community connectivity and public transport accessibility, and this will be weighed against any negative safety, traffic flow, environmental and deliverability considerations,

impacts on the permeability and attractiveness of local walking, wheeling and cycling routes, and alternative options to manage down the traffic impact of planned development...'

4.3 Greater Manchester Local Transport Plan – Renewing Our Vision

- 4.3.1 In December 2023, a report was produced which detailed how the vision for the Local Transport Plan would be updated. It will inform stakeholder engagement on the Plan throughout 2025⁸.

4.4 TfGM's NG Transport Framework Document (NG TFD)

- 4.4.1 In January 2025, TfGM presented their first draft NG TFD (**Appendix A**). It describes realistic and aspirational forecasts of likely car traffic and active travel, public transport, policy, funding matters and approach to mitigation. The Framework guides the development of the NG Allocations in the context of the GM Transport Strategy and sets out the NG "Transport Vision".
- 4.4.2 This TA has been produced to accord with the NG TFD vision and the GM Transport Strategy vision.
- 4.4.3 The NG TFD sets out three scenarios, as follows:
- **Scenario 1:** Business as usual (Assessments using Average Trip Rates)
"Transport patterns are still mostly car-dominated, to satisfy conventional land use and travel demands."
 - **Scenario 2:** Achievable transport vision (developed by TFD, optimal scenario for planning)
"This should represent the most likely, balanced, and affordable sustainable transport package. This will be developed using an iterative assessment of transport interventions, their viability, cost, and their likely impacts."
 - **Scenario 3:** Ambitious Vision-Led scenario with impacts from wider 2040 strategy
"Ambitious Transport intervention package containing interventions and strong car parking management to achieve long term sustainable travel and more ambitious GM Right Mix targets (incl. tram-train, wider network upgrades)"
- 4.4.4 TfGM also identified the extent of public transport and active travel mitigation measures which they considered would be necessary in order to achieve the various Scenario's level of car use.
- 4.4.5 The NG TFD quantifies walking, cycling and public transport trip volumes and distributions. It identifies infrastructure priorities and confirms that TfGM have agreed to progress priorities through to concept design. It acknowledges that the active travel and public transport mitigations introduced for NG will also pick up trips from other developments and towns and it sets out an indicative Transport Program with phasing of infrastructure.
- 4.4.6 It presents seven conclusions, and it will be seen from this TA that the development proposals accord with all seven.

⁸ [GMCA 20231215 Local Transport Plan Refreshing Our Vision \(greatermanchester-ca.gov.uk\)](https://greatermanchester-ca.gov.uk/GMCA20231215LocalTransportPlanRefreshingOurVision)

4.5 Public Transport Policy & Funding

- 4.5.1 The context within which bus services are funded and operate has evolved with pace since July 2022, not least in terms of the BSIPs and associated grants, and the franchising of bus services across Greater Manchester.
- 4.5.2 In October 2023, following the cancellation of the section of HS2 north of West Midlands (HS2 2B) an initial £150m of the £1 billion (to be spent over 5 years) to be diverted to public transport funding was made available to authorities under the BSIP Phase 3.
- 4.5.3 Of this £150m, Greater Manchester Combined Authority received £16.309m for the FY24/25 (in addition to their original BSIP Phase 1 allocation). The allocation of this funding can be used for public transport support such as reintroducing evening services, improving frequencies or adding new routes.

4.6 Northern Gateway Development Framework (NGDF) SPD

- 4.6.1 In order to support the delivery of the JPA1.1 Allocation Site, Bury and Rochdale Councils have produced the 'NGDF' SPD, which establishes the parameters against which future planning applications (including this Application) will be considered and identifies the necessary infrastructure required to support the development of the JPA1.1 Allocation Site. The NGDF SPD was adopted by BC on 5 March 2025 and by RMBC on 18 March, and is therefore now a material consideration in the determination of all planning applications relating to the JPA1.1 Allocation Site, including this Application.
- 4.6.2 The NGDF SPD is consistent with the wider GM Transport Strategy 2040.

4.7 Bus Franchising

- 4.7.1 TfGM have introduced their franchised bus network. The network launched with Tranche 1 covering its first routes on 24 September 2023, this focused on the north-west of the region but included a small number of routes within Bury and Rochdale.
- 4.7.2 Tranche 2 launched on 24 March 2024 and included buses in Rochdale becoming part of the network along with some parts of Bury. The final part of the transition to bring the full network under local control is Tranche 3 which was launched on 5 January 2025.

4.8 Summary

- 4.8.1 The transport policy context is evolving. The Proposed Scheme comprises part of the JPA 1.1 Allocation Site, which is allocated for employment and residential provision in PfE and is therefore deemed to be acceptable in principle terms of scale, delivery, and sustainable accessibility.
- 4.8.2 The TA has regard to recent policy and guidance updates, to the NG TFD and SPD and will follow a Vision-Led approach emphasising active and sustainable travel modes.

5.0 Site Context and Existing Conditions

5.1 Overview

- 5.1.1 This section describes the site location, existing land use and the existing highway / transport network in relation to the **Proposed Scheme** (the Application Site as opposed to the larger JPA 1.1 Allocation Site element of the Northern Gateway). It also considers the existing accessibility of the Application Site to sustainable transport facilities, on foot, by cycle and public transport. The sustainable transport network was described in the PfE LAR but have been updated for 2025 and are described below.

5.2 Site Location

- 5.2.1 The location of the Application Site is shown on **Plan 1**.
- 5.2.2 The Application Site is located approximately 4km southeast of Bury Town Centre and 7.5km southwest of Rochdale Town Centre.
- 5.2.3 It is also in close proximity to Heywood (2.5km), Whitefield (4km) and Middleton (4.5km).
- 5.2.4 The Application Site is bounded by Brightley Brook and Pilsworth Road to the north, by Birch Industrial Estate and the committed SHMA to the east, by the M62 to the south and by Whittle Brook to west. QEII Way to the north is existing highway infrastructure which has been delivered as advance mitigation for JPA1.1
- 5.2.5 The JPA1.1 Allocation Site extends further to the west of the Application Site crossing Whittle Brook and is bounded by the M66 in the west. It also extends further to the northeast of the Application Site as the land to the north east is the location of the committed SHMA.
- 5.2.6 The JPA1.1 Allocation Site is described in detail in the PfE evidence (LAR) which underpin the PfE allocation.

5.3 Strategic Highway Network

- 5.3.1 The location of the Application Site in relation to the strategic highway network is shown on **Plans 1 and 2**.
- 5.3.2 **Plan 2** also shows that the Application Site is located in close proximity to the SRN. Existing routes to and from the SRN are via M66 J2, M66 J3, M62 J19 and to a lesser extent via M60 J19. In describing the SRN, it should be noted that NH are currently progressing a Development Consent Order (DCO) for the upgrading of Simister Island, M62 J18. As described in later sections, those works have been incorporated in both the Do Minimum and Do Something future scenarios, in line with the scenarios scheduled in the Scope.

5.4 Local Highway Network

- 5.4.1 The location of the Application Site in relation to the local highway network is shown on **Plan 2**.

- 5.4.2 **Plan 2** illustrates that the Moss Hall Road / Whittle Lane corridor extends through the Application Site on a north to south alignment.
- 5.4.3 To the north, Moss Hall Road connects to the Pilsworth Road / Moss Hall Road / Hareshill Road / Queen Elizabeth II corridor. A significant portion of this corridor has recently been constructed to accommodate the SHMA.
- 5.4.4 To the south, Whittle Lane connects to the Manchester Road / Heywood Old Road corridor, which provides a route between Bowlee and Heywood.
- 5.4.5 The LAR sets out information on the local highway network. The LAR formed the foundation for the allocation of the JPA 1.1 Allocation Site in transport terms. The KS were party to the processes at PfE as part of the adoption process.

Personal Injury Accident Analysis

- 5.4.6 As part of the ES, a highway safety review was undertaken using data obtained from ‘Crashmap’ for a five-year period from 2018 to 2023, comprising the most recent data freely released by the Department for Transport (DfT).
- 5.4.7 ‘Crashmap’ uses data collected by the police regarding the occurrence of Personal Injury Accidents. This data is approved by the National Statistics Authority and report on by the DfT each year.
- 5.4.8 The Crashmap extracts are shown in **Appendix B** and across the 21 links reviewed on the local highway network, 29 incidents were recorded. Of these, 17 were classified as slight, 10 as serious, and 2 as fatal. The number of incidents per road link averaged between 0 and 2 per year, with no notable clusters identified. QEII link has only been open since end of 2022 and therefore accidents stats for this link are limited.
- 5.4.9 Given the location and volume of traffic operating on the local highway network, the incidents recorded over a five-year period do not indicate any untypical accident patterns.

5.5 Accessibility on Foot and by Cycle

- 5.5.1 The NG TFD sets out mapping, analyses and text to describe existing Active Travel particulars from a strategic context, highlighting the difficulties for pedestrians and cyclists due to distance and poor existing provision on site. It presents walking and cycling distribution and catchment data.
- 5.5.2 There is limited walking and cycling infrastructure provision within the site in the existing situation due to the area being largely undeveloped. As the masterplan for the site is implemented, new routes will be delivered to/from and across the site.
- 5.5.3 **Plan 3** shows the existing pedestrian infrastructure within the vicinity of the Application Site.
- 5.5.4 **Plan 4** shows the existing cycle infrastructure within the vicinity of the Application Site.
- 5.5.5 Due to the size of the Application Site, there are limited existing residential areas from which future staff may choose to travel on foot. From the nearest edge of the site, the local areas from which a journey on foot could be reasonable are; Heap, Heywood, South Heywood, Langley, Simister,

Unsworth and Hollins. The size of the site is such that many of these areas are well beyond a 2km walk from the furthest edge of the application site.

5.5.6 Residents of Heywood, the majority of Middleton, Higher Blackley, Unsworth, Whitefield, Redvales and Fishpool can reach the Application Site within a 5km cycle.

5.5.7 In addition to those area, residents of the remainder of Bury, the majority of Rochdale, Royton, Chadderton, Crumpsall, Prestwich, Radcliffe and Little Lever can reach the Application Site within a 10km e-bike cycle.

5.5.8 In terms of the local existing connections into the Allocation site, starting in the north and working clockwise, the existing connections are via:

1. Moss Hall Road / Heap Brow provides a connection to Heap in the north.
2. The Moss Hall Road / Pilsworth Road / Hareshill Road / Queen Elizabeth Way corridor provides connections to the north and east, including connections to the residential components of the South Heywood Masterplan Area.
3. Pilsworth Road between the A58 (in Heywood) and the Moss Hall Road / Pilsworth Road / Hareshill Road / Queen Elizabeth Way corridor provides a connection to Heywood in the north east.
4. Manchester Road & Heywood Old Road connect to Whittle Lane, all of which provide connections from the south east.
5. Simons Lane provides a connection from the south, and is also a Public Footpath for the majority of its length.
6. An un-named road between Simister Lane and Egypt Lane provides a connection from the south, and is also a Public Right of Way.
7. Hills Lane provides a connection from the west via Pike Fold Golf Club.
8. An M66 underpass provides a pedestrian connection to the west, adjacent to Castle Brook High School in the form of a Public Footpath.
9. Castle Road provides a connection to the west, in the form of a Restricted Byway which leads to two Public Footpaths.
10. Aviation Road provides a connection to the west, in the form of a Bridleway which leads to a Restricted Bypass.
11. Pilsworth Road west of the Pilsworth Road / Moss Hall Lane – North (Fowler Welch) junction, provides pedestrian connections towards Bury / Hollins / Unsworth and Redvales in the west.
12. From Pilsworth Road, between the M66 J3 and Pilsworth Road / Moss Hall Lane – North (Fowler Welch) junction, there is a Bridleway which was closed in 2006, with a maximum closure times of 19 years identified. This leads south from Pilsworth Road towards the site.

5.5.9 The infrastructure on many of these is quite poor and not practical for intensive future use to support NG without being upgraded.

5.5.10 In terms of pedestrian and cycle infrastructure on the highway-based connections:

- The Moss Hall Road / Heap Brow corridor between Heap and Pilsworth Road North features a footway to one side of the carriageway. The footway is of varying width and condition. The crossing points feature some dropped kerbs.
- The Pilsworth Road / Moss Hall Lane / Harehills Road / QEII corridor between M66 J3 and M62 J19 provides a combined footway / cycleway to one side of the road throughout. Additionally, along some sections of the corridor, a footway is also provided on the opposite side of the road.
- Pilsworth Road between Harehills Road and Bury Street (i.e., extending north towards Heywood), has footways to both sides of the road, with dropped kerbs at crossing points.
- Moss Hall Road, to the south of the former Three Arrows Public House, features a footway on one side of the road as far as the Birch Business Park. Whittle Lane, to the north west of its junction with Heywood Old Road, has a footway on one side of the road for approximately 900m. There is a 600m stretch of the Moss Hall Lane / Whittle Lane corridor where footways are absent.
- The Manchester Road / Heywood Old Road corridor features footways throughout and some cycle lanes contained within the carriageway.
- Simons Lane, the unnamed road between Simister Lane and Egypt Lane, Castle Road and Aviation Way are discussed in the following section as those are PROWs.

5.6 Public Rights of Way

5.6.1 The PROWs within the Application Site, within the JPA1.1 Allocation Site and leading to the JPA1.1 Allocation Site, are all illustrated on **Plan 5**.

5.6.2 **Plan 5** illustrates that there are 4 PROWs within the Application Site, those are:

- | | |
|----------------|-------------------------|
| 13. Bury: 2WHI | 15. Bury: 4WHI |
| 14. Bury: 3WHI | 16. Rochdale: Hey-Fp-74 |

5.6.3 **Plan 5** illustrates that there are a further 16 PROWs within the JPA1.1 Allocation Site, those are:

- | | |
|-----------------|--------------------------|
| 17. Bury: 5WHI | 25. Bury: 89BUR |
| 18. Bury: 6WHI | 26. Rochdale: Hey-Fp-72 |
| 19. Bury: 7WHI | 27. Rochdale: Hey-Fp-75 |
| 20. Bury: 8WHI | 28. Rochdale: Hey-Fp-142 |
| 21. Bury: 9WHI | 29. Rochdale: Hey-Fp-164 |
| 22. Bury: 46WHI | 30. Rochdale: Hey-Fp-165 |
| 23. Bury: 87BUR | 31. Rochdale: Hey-Fp-166 |
| 24. Bury: 85BUR | 32. Rochdale: Hey-Fp-166 |

- 5.6.4 Although outside the JPA1.1 Allocation Site, PRoW Bury 50PRE provides a route towards the JPA1.1 Allocation Site from Simister in the south, via a bridge over the M62.
- 5.6.5 Additionally, PRoWs Bury 79BUR, 82BUR and 1WHI provide routes to the JPA1.1 Allocation Site from the north, via the landfill site. These PRoWs are currently subject to a temporary closure which has been extended to 2028.
- 5.6.6 A PRoW walk over survey has been carried out in order to capture the current condition of these PRoWs. The survey report and findings are attached in **Appendix C**. The survey was undertaken in the summer of 2024.
- 5.6.7 A surveyor walked the PRoWs across and some way beyond the extent of the Application and JPA1.1 Allocation Sites.
- 5.6.8 The surveyor recorded the typical level of provision along each route and noted occurrences of seeing other people using the routes. The latter could only ever be a spot count within the view of the surveyor as they walked the routes.
- 5.6.9 The general findings were that the existing PRoW on site were overgrown, purposely blocked in some locations, not well maintained and very little used. The surveyor encountered only 3 other pedestrians in their time walking the routes.
- 5.6.10 The route map, photographs and tabulated statistics in **Appendix C** convey the observations.
- 5.6.11 The scale of the JPA1.1 Allocation Site (including the Application Site) both in terms of walk distance and isolation together with the poorly maintained condition of the routes undoubtedly contributes to the existing PRoWs being very little used, even in summer.

5.7 Accessibility by Public Transport

Buses

- 5.7.1 The NG TFD sets out mapping, analyses and text to describe existing public transport services from a strategic context. Existing route maps and public transport distributions are illustrated based on 2021 census journey to work data.
- 5.7.2 The NG TFD also describes the challenges which the largely undeveloped site faces, the significant opportunities to connect and enhance existing services and local statistics on public transport trip distribution and connectivity.
- 5.7.3 It states that:

“The key centres that neighbour the Northern Gateway (Heywood, Bury, Rochdale, Middleton, Radcliffe, Whitefield, Prestwich) site are relatively well served by frequent bus routes serving the main town centres.

However, the Northern Gateway itself is not currently well-served, which is largely reflected due to the undeveloped nature of the site, and the subsequent limited demand for public transport services in the area at present.”
- 5.7.4 In the existing situation, the nearest existing bus stops to the east side of the allocation site are located on the A6045 Manchester Road near to The Birch Hotel.

- 5.7.5 The bus service that is accessible from the Manchester Road bus stops is summarised below at **Table 5.1**.

Table 5.1: Bus Services at Manchester Road Bus Stops

Route No.	Route Description	Monday to Friday		Saturday	Sunday
		Daytime	Evening	Daytime	Daytime
125	Heywood to Middleton Via Heywood Library, Newhouse Academy, Manchester Road/ Newhouse Road, Birch, Langley Lane, Hollin Lane/ Rochdale Road, Middleton, Bus Station, Rhodes	Hourly	No Service	Hourly	Hourly

- 5.7.6 The 125 service offers opportunities to travel to large residential areas including Heywood and Middleton.
- 5.7.7 The nearest existing bus stops to the west side of the JPA1.1 Allocation Site are located on Parr Lane near to its junction with Castle Road.
- 5.7.8 The bus services that are accessible from the Parr Lane bus stops are summarised below at **Table 5.2**.

Table 5.2: Bus Services at Parr Lane Bus Stops

Route No.	Route Description	Monday to Friday		Saturday	Sunday
		Daytime	Evening	Daytime	Daytime
94	North Manchester General Hospital to Bury Via Crumpsall, Cheetham Hill, Broughton Park, Prestwich, Polefield, Hillock, Unsworth, Hollins, Pilsworth, Heap Bridge, Fishpool	Hourly	Hourly	Hourly	Every 2 hours
97	Bury to Manchester Via Unsworth, Prestwich, Broughton, Manchester	Every 30 mins	Hourly	Every 30 mins	Every 30 mins

- 5.7.9 The bus services that call at the Parr Lane bus stops provide regular and frequent journey opportunities to a large number of residential areas in Bury, Cheetham Hill, Prestwich, Salford and Manchester. Those lie beyond the recognised acceptable walk distance to a bus stop from the Application Site.
- 5.7.10 Furthermore, TfGM operate a Local Link Bus service within Heywood and Middleton. Local Link offers a flexible transport service for local journeys in areas where public transport services are limited. Shared minibus services can be booked between 1 hour and 7 days before travelling. The service aims to pick up the bus user within ten minutes either side of the agreed pick-up time.
- 5.7.11 In a similar way to how the QEII Way is both existing, but advance mitigation to support JPA 1.1, the SHMA will provide £1m through a Section 106 contribution towards bus services. That can be seen as both existing and JPA1.1 advance provision of funding towards Public Transport.

5.8 Summary

- 5.8.1 The existing conditions of the Application Site and the JPA1.1 Allocation Site are very well documented and understood. They have been described within PfE and in initial and evolving public transport and active travel strategies. The overarching reality is that the JPA1.1 Allocation Site (including the Application Site) is large, mostly undeveloped and consequently not well served by public transport and little used by pedestrians or cyclists. It is located adjacent to significant areas of employment and population and is well served by both local road and strategic highway network infrastructure.

6.0 The Proposed Scheme and Northern Gateway

6.1 Overview

- 6.1.1 Northern Gateway will deliver a future-proofed, mixed-use development that provides quality housing, work opportunities and key local facilities. It will create a sustainable new community which is connected by high quality pedestrian and cycle provision and is highly permeable. The mixed-use nature of NG will create a new local community and provide facilities and amenities on-site which will reduce the need to travel off-site and therefore minimise car-based traffic impacts on the existing highway network.
- 6.1.2 NG is emerging entirely in line with the envisaged development which was evidenced at the time of allocating the JPA1.1 and JPA1.2 Allocation Sites through PfE.

6.2 The Proposed Scheme – Land Uses

- 6.2.1 The Proposed Scheme is for up to 600,000sqm of employment floorspace with up to 5,000sqm of supporting uses (as defined by the Uses Schedule).
- 6.2.2 The 600,000sqm employment floorspace comprises:
- B2, E(g)ii and E(g)(iii) 180,000sqm
 - B8 (including Data Centres) 420,000sqm
- 6.2.3 The potential supporting uses, (up to 5,000sqm), are set out in the Uses Schedule submitted with the Application and are summarised in **Table 6.1**.

Table 6.1 – Potential Supporting Uses

Use Class	Use description
C1	• Hotels, boarding and guest houses where no significant element of care is provided (excludes hostels)
E(a)	• Display or retail sale of goods, other than hot food
E(b)	• Sale of food and drink for consumption (mostly) on the premises
E(c)(i)	• Financial services
E(c)(ii)	• Professional services (other than health or medical services)
E(c)(iii)	• Other appropriate services in a commercial, business or service locality
E(d)	• Indoor sport, recreation or fitness (not involving motorised vehicles or firearms or use as a swimming pool or skating rink)
E(e)	• Provision of medical or health services (except the use of premises attached to the residence of the consultant or practitioner)
E(f)	• Creche, day nursery or day centre (not including a residential use)

E(g)(i)	Ancillary offices to carry out any operational or administrative functions which can be carried out in any residential area without causing detriment to the amenity of the area
F1(a)	Provision of education (this will not include schools)
F2(a)	Shops (mostly) selling essential goods, including food, where the shop's premises do not exceed 280 square metres and there is no other such facility within 1000 metres
F2(b)	Halls or meeting places for the principal use of the local community
F2(c)	Areas or places for outdoor sport or recreation (not involving motorised vehicles or firearms)
Sui generis	- fuel stations; 'Alkali work' (any work registerable under the Alkali, etc. Works Regulation Act 1906 (as amended)); - retail warehouse clubs (being a retail club where goods are sold, or displayed for sale, only to persons who are members of that club); - public houses, wine bars, or drinking establishments; - drinking establishments with expanded food provision; and - hot food takeaways (for the sale of hot food where consumption of that food is mostly undertaken off the premises). - Data Centres

6.3 The JPA1.1 Allocation – Land Uses

6.3.1 The JPA1.1 Allocation Site is allocated within PfE for “up to 1,200,000sqm of industrial, advanced manufacturing and warehousing space together with some 1,200 dwellings.”

6.3.2 **Table 6.2** provides an overview of the JPA1.1 Allocation Site and its contents.

Table 6.2 – The JPA1.1 Allocation and its content

JPA 1.1 Area / Land Use	Dev Quantum	Context
Full Allocation		
Industrial	1,200,000 sqm	Full Allocation
Residential	1,200 dwellings	Full Allocation
Sub Area 1: South Heywood Masterplan Area		
Industrial	175,460 sqm	Already approved
Residential	1,000 dwellings	Already approved

Sub Area 2: The Proposed Scheme		
Industrial	c. 600,000 sqm employment uses + c. 5,000 sqm supporting uses	Subject to this application
Sub Area 3: Remainder of JPA 1.1 Allocation Site		
Industrial	c. 424,540 sqm	Excluded from current application
Residential – Castle Road	c. 200 dwellings	Excluded from current application

6.4 Northern Gateway – Land Uses

- 6.4.1 Northern Gateway comprises both the JPA1.1 and JPA1.2 Allocation Sites.
- 6.4.2 The JPA1.1 Allocation Site is summarised at Section 6.3.
- 6.4.3 The JPA1.2 Allocation Site comprises around 1,550 dwellings, together with a two-form primary school and a local centre.

6.5 Proposed Scheme – Access Strategy

- 6.5.1 The means of access to and within the Application Site is a reserved matter and will be confirmed as part of the detailed design stage of the Proposed Scheme.
- 6.5.2 However, the *Parameters Plan: Uses* identifies two potential and existing primary access points which could be delivered as part of the Proposed Scheme, including:
- **Primary Access, Moss Hall Road** – utilising an existing access point from the north, a primary access point will be provided from Moss Hall Road / Pilsworth Road junction. Access to the Birch Industrial Estate will be maintained and provide connection to a primary access corridor to the west of the Proposed Scheme; and
 - **Initial Primary Access, Whittle Lane** – utilising an existing access point from the south, an initial primary access point will be provided from Whittle Lane (and its junction with Heywood Old Road which is outside of the Application Boundary). Access to the Birch Industrial Estate will be maintained and provide connection to the Proposed Scheme. Whittle Lane is subject to an HGV weight restriction. Whittle Lane could include traffic management in the form of shuttle working signals, which would limit the number of vehicles which can travel along it.
- 6.5.3 RMBC and TfGM aspire for Whittle Lane to be closed to all traffic except for Public Transport. Their aspiration has been tested in this TA to inform decision makers of the implication of that closure. The access strategy can be advanced with either Whittle Lane option, (capacity constrained or closed for all except public transport) and should TfGM & RMBC wish to close Whittle Lane, they may do so using their powers and rights as the highway authorities. Without Whittle Lane in the early stages of development, the proposed development area would effectively be served by just one access.

- 6.5.4 Secondary roads will in due course lead off the primary access corridors to service localised Plots. Secondary roads will provide active travel routes connecting to primary access corridors.
- 6.5.5 Pedestrian and cycleway access will be made available throughout the Proposed Scheme, via a combination of segregated routes alongside roads and routes away from roads. Along some routes, pedestrians will be segregated from cyclists and along other routes the pedestrians and cyclists will share facilities.
- 6.5.6 Pedestrian and cycleway access routes will connect to the wider JPA 1.1 Allocation Site and surrounding area. It is assumed that to allow development of the Plots, all existing PRoW across the Application Boundary will be extinguished. A network of replacement PRoW will maintain and improve permeability through the Application Site and throughout the JPA1.1 Allocation Site. The replacement PRoW will be provided to a higher standard than is currently provided across the Application Site, ensuring accessibility for all users.
- 6.5.7 A network of replacement footpaths / cycleways will be delivered with reference to the GMs Streets for All Design Guide (2023).

6.6 Movement Networks

- 6.6.1 The application for the Proposed Scheme is being made in outline (all matters reserved), so there are no plans submitted for approval which illustrate on-site design or layout. The on-site highway infrastructure will be developed at reserved matters stage and will incorporate a clear hierarchy and be in accordance with the recommendations contained within the Design Code submitted with the Application, which encompasses best practice from the Streets for All Design Guide (TfGM), Manual for Streets (Department for Transport (DfT), 2007), its companion guide Manual for Streets 2 – Wider Application of the Principles (DfT, 2010) and LTN 1/20.
- 6.6.2 The on-site secondary highway network should be considered as ‘streets’ and designed as such. There would be an emphasis on people, their movement and how they fulfil three key movement functions. These are:
- Pedestrian, cyclist, public transport and vehicle circulation
 - Access to buildings
 - Public space for human interaction and sociability.
- 6.6.3 The public transport routes will feature bus stops and shelters. The footways and cycleways will be built to best practice and will perform several functions, notably:
- Providing permeability to and through the site
 - Connecting with existing footways and cycleways and Prow routes where they connect into the site
 - Providing a leisure route / circuit to encourage walking and cycling for leisure.
- 6.6.4 The NGDV will safeguard an area of land within the site, for the future delivery of an on-site Transport Interchange.
- 6.6.5 The provision of an on-site shuttle bus, from the Transport Interchange to different areas of the proposed scheme will be explored and this will be addressed through the S106.

- 6.6.6 The NGDV will safeguard areas for hire bike stations (hubs). Hire bikes will improve accessibility around the Application Site and allow bus users to reach individual plots from the main transport interchange.

6.7 Treatment of PRow's

- 6.7.1 The PRow baseline survey is set out in Section 5 of this report. The specific details of any changes to the PRow network will not be known until the Proposed Scheme is developed in detail at reserved matters stage. However, the ability for pedestrians and cyclists to travel through the Application Site will be enhanced and fully embedded into the detailed layout through the provision of new footpaths and cycleways. The standard of the new pedestrian and cycle routes will be far superior to the existing provision and the overall commodiousness of journeys on foot through the Application Site will be improved.

6.8 Parking Provision

- 6.8.1 An appropriate level of car parking provision would be provided as part of the Proposed Scheme. The specific level of car parking (including disabled) will be subject to reserved matters approval at the detailed design stage.
- 6.8.2 Notwithstanding this, parking would generally be provided in accordance with the parking standards of BC and RMBC.

6.9 Proposed Transport Improvements / Mitigation

- 6.9.1 The Proposed Scheme will bring forward mitigation which addresses the impacts of the proposals. Those mitigations will also serve to support the delivery of the wider NG, including both the JPA1.1 and JPA1.2 Allocation Sites. The proposed transport improvements & mitigation which will come forward fall into five categories:
1. Mitigation which has already been delivered to support the JPA1.1 Allocation Site (e.g. the QEII Way which was consented, funded and delivered on the basis of supporting the JPA1.1 Allocation Site).
 2. New on-site infrastructure within the JPA1.1 Allocation Site, including new highways, active travel routes and public transport facilities.
 3. Off-site mitigation, identified through PfE, this TA and/or by BC, RMBC, TfGM and NH as part of wider transport strategies. This includes S278 highway works on the local and strategic road networks, active travel routes or public transport facilities and services, as well as funding towards those items.
 4. Proportional funding towards future, as yet unidentified highways works or future active travel or public transport initiatives, which will emerge from TfGM and GM strategies and which may also serve wider GM Transport Strategy objectives.
 5. Implementation of a Travel Plan.
- 6.9.2 The following sections elaborate on the details and phasing of the proposed transport improvements and mitigation.

7.0 Emerging Mitigation Works and Mitigation Strategies

7.1 Sources informing the need for mitigation

- 7.1.1 There are five principal sources from which the need for mitigation can be derived.
1. The allocation of the JPA1.1 Allocation Site described the mitigations which were considered to be necessary based on the assessments and evidence that informed the decision to allocate. Those are set out in PfE Policy JPA1.1 and PfE Appendix D.
 2. The assessments undertaken by TfGM in their NG TFD which establish the required Public Transport and Active Travel infrastructure and services to support their “Scenario 2” Vision.
 3. Current and best practice design guides to inform the extent and standard of active travel and public transport services on-site.
 4. Planning Policy setting out the need for mitigation and Travel Plan measures.
 5. The numerical assessments of junction performance, merge / diverge arrangements etc undertaken for the SRN and local road network across the multiple development phasing, future year and route options, set out in Section 13 of this TA.
- 7.1.2 In addition to the above it is anticipated that mitigation will also be guided during the determination period by requests from the KS through consultation responses and ongoing Highway Technical Working Group (HTWG) meetings.

7.2 Mitigation Types

- 7.2.1 The mitigation which will come forward falls into five categories as described in the previous section 6.8.
- 7.2.2 There is also Public Transport funding deposited as part of the SHMA (part of the JPA1.1 Allocation), which will be used to improve overall public transport services beyond the existing situation and thus contribute to the NG Public Transport Strategy.
- 7.2.3 The provision of pedestrian and cycle routes on-site will pick up, divert and improve the existing PRow network across the JPA1.1 Allocation Site and the Application Site and which will be extinguished by the Proposed Scheme.

7.3 Highway Infrastructure and Common Highways Mitigation Package

- 7.3.1 Certain identified off-site highway works have been included in all the modelling assessments which test development coming forward. These comprise:
- M60 Junction 18 Simister Island improvement currently being advanced by NH through Development Consent Order. (Also, in the future Do Minimum assessments in line with the Scope)
 - Upgrades and traffic management interventions along Moss Hall Road / Whittle Lane

- The QEII Way, already delivered but included here because it was delivered as mitigation to support JPA1.1. It features in both Do-Minimum and Do Something (With Development) assessments.
- M66 Junction 3 improvements identified by Pell Frischmann on behalf of BC.
- The upgrade of Pilsworth Road and junctions from M66 J3 through to the Pilsworth Road / Moss Hall Lane - South junction, including the Pilsworth Road / Moss Hall Lane - North Junction (known as the Western Access Works).

7.3.2 The latter three elements are referred to as the “Common Highways Mitigation Package” as they are mitigation works associated with the development which are included in all assessments which feature development coming forward. The Simister Island works are also included in all future Do Minimum (DM) and Do Something (DS) assessments, but are not part of the development related Common Highway Mitigation Package as they are works which are currently being advanced by NH.

7.4 Development Phasing and Infrastructure alongside Development

7.4.1 When considering which elements of mitigation will be present or will be required at each stage of development it is important to recognise the following underlying principles of mitigation provision in this case.

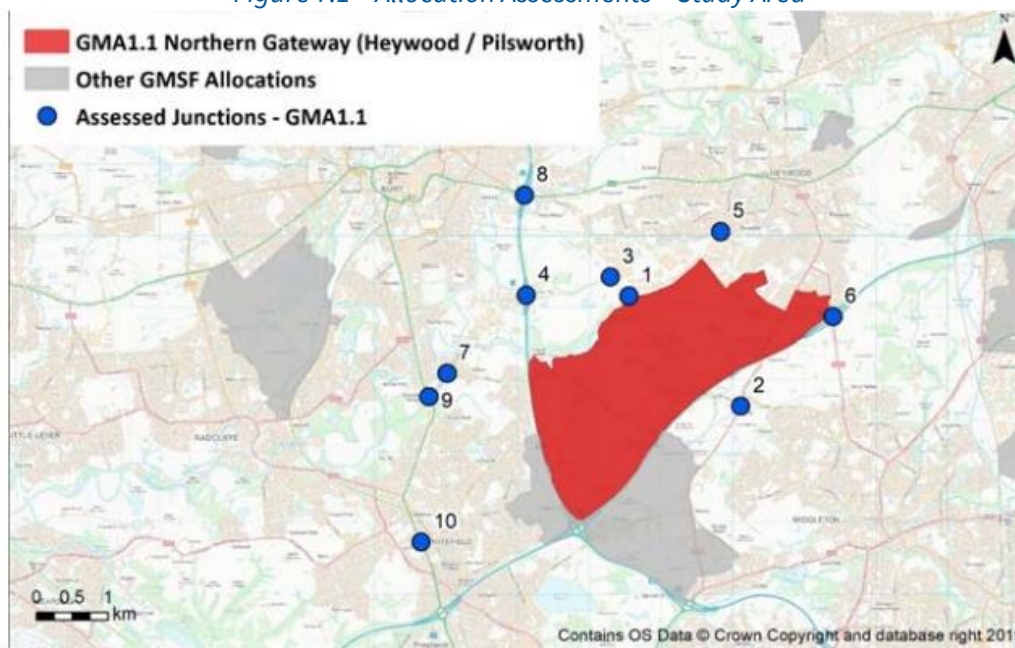
- i. The assessments have been undertaken on the basis that the J18 works, Whittle Lane / Moss Hall Road works and the **Common Highways Mitigation Package** will be delivered in all scenarios and will be in place by 2032.
- ii. The **on-site highway, sustainable and active travel infrastructure (footpaths, cycleways, bus stops and transport hubs)** will be rolled out as the Proposed Scheme develops and so will accompany each stage as it comes forward). The facilities will have to be in place before first occupation of each phase. Footpath and PRoW extinguishments, diversions and replacements will have to be delivered before development takes place.
- iii. A **Travel Plan** will be present from the first occupation of the Proposed Scheme promoting travel by sustainable modes.
- iv. The **Public Transport and Active Travel Strategy elements identified by TfGM within the NG TFD** sufficient to Support Scenario 2, will be funded proportional to the development impacts, as the Proposed Scheme progresses. There should be recognition of the fare revenues from bus services and the wider roles that the mitigations play in delivering wider GM Transport Strategy needs. It will be important to have those elements and bus services in place from first occupation of the Proposed Scheme and introduced at an appropriate level to serve demand whilst not over expending funding too early and having empty services waiting for development to progress and provide patrons.
- v. **Strategic Road Network and Local Roads improvements** if identified in the junction modelling and if agreed to be necessary.
- vi. Funding for **future Public Transport and Active Travel Strategy elements identified by TfGM towards achieving the GMCA 2040** strategy target for sustainable travel will be made subject to viability and it should be recognised that such future initiatives should attract contributions from all other PFE and windfall development too.

- 7.4.2 Extensive modelling of the transport network has been undertaken to identify the mitigation required to facilitate the Proposed Scheme coming forward, together with the wider JPA 1.1 Allocation Site, and cumulative Northern Gateway proposals (which also includes the JPA 1.2 Allocation Site).
- 7.4.3 From a modelling perspective, the QEII link features in both the Do Minimum (DM) and Do Something (DS) scenarios. Although it is mitigation, it has already been delivered. By including it in the DM scenario, the model results do not report the significant benefits of this major element of mitigation. If it was not included in the DM scenarios, they would perform far worse and so the benefits from including it in the DS scenarios would be reported as being far greater benefit.
- 7.4.4 The category 3, 4 and 5 mitigations which seek to achieve the sustainable travel / Vision-Led future are encapsulated in the model scenarios which are titled “Policy On”. These model runs reflect a future scenario where Government and TfGM strategies to reduce vehicular travel have been partly successful, i.e, to TfGM’s Scenario 2 level, reinforced by the JPA1.1 Allocation Site promoting sustainable and active travel and operating a meaningful Travel Plan.
- 7.4.5 The preliminary highway mitigation drawings are set out in **Appendix D** and the table in **Appendix G** identify the particular mitigations which are present in each particular model scenario. N.B. these are the mitigations identified at the time of preparing the TA. The strategic model outputs feed into discreet junction assessments across the study area and results from specific junction assessments may identify additional discreet highway improvement mitigations to be delivered by the development.

7.5 Mitigation identified within the Evidence Base for Places for Everyone

- 7.5.1 As part of the evidence base for PfE, Systra was commissioned by GMCA to prepare Locality Assessment Reports (LAR) for each of the proposed allocations. From a traffic impact perspective, the LARs were informed by strategic modelling carried out in SATURN (for clarity, this relates to the JPA 1.1 Allocation Site as a whole and not the Application Site in isolation). At the time of the allocation modelling, the site was known as GMA1.1, which evolved into JPA1.1.
- 7.5.2 The strategic modelling used a 2017 base model, and the forecast future year assessments were 2025 and 2040.
- 7.5.3 For each of the above assessment periods (2025 and 2040), three test scenario cases were carried out namely:
- Reference Case – Do Minimum with the inclusion of all transport schemes already committed and assumed to be complete in the year of assessment.
 - GMSF ‘Constrained’ – Model takes into account the cost changes of travel.
 - GMSF ‘High Traffic’ - Model doesn’t account for changes in travel costs.
- 7.5.4 The traffic volumes were extracted from SATURN and a study area for individual junction assessments was identified. The study area for individual junction assessments comprised seven local junctions and three strategic junctions (the M66 J3, the M66 J2 and the M62 J19). The study area is illustrated in **Figure 7.1**.

Figure 7.1 – Allocation Assessments – Study Area



7.5.5 The results of the individual junction assessments based on the existing junction layouts are shown in **Excerpt 7.1** and **7.2**. The results shown are the maximum % of capacity reached on any arm of the junction in each of the tested scenarios.

Excerpt 7.1: Local Junction Performance in 2040

Table 10. Results of Local Junction Capacity Analysis Before Mitigation – Year 2040							
No.	Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
1	Moss Hall Road / Pilsworth Road (South)	43%	37%	177%	170%	1157	981
2	A6045 Heywood Old Rd / Whittle Lane	19%	31%	130%	108%	949	432
3	Moss Hall Road / Pilsworth Road (North)	129%	116%	141%	133%	544	525
5	Pilsworth Road / Railway Bridge	74%	74%	84%	69%	399	147
7	Hollins Lane/Hollins Brow	122%	109%	198%	145%	84	66
9	A56 / Hollins Brow	116%	115%	130%	128%	60	35
10	A56 Bury New Road / Moss Lane	74%	74%	85%	79%	15	18

Excerpt 7.2: Strategic Junction Performance in 2040

Table 13. Results of Strategic Junction Capacity Analysis Before Mitigation – Year 2040

No.	Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
4	M66 Junction 3 / Pilsworth Road (New Junction)	N/A	N/A	N/A	N/A	524	499
6	M62 Junction 19/ A6046	115%	117%	164%	120%	590	506
8	M66 Junction 2 / A58	110%	108%	129%	114%	239	155

7.5.6 Following those assessments of the existing junction layouts, a number of mitigations were identified, as shown in **Excerpt 7.3**.

Excerpt 7.3: Mitigations identified within the Locality Assessment Report

16.1.1 The proposed final list of interventions is summarised in the table below. Other supporting local mitigation measures – such as the aforementioned scheme at A56 / Hollins Brow – would need to be added when further details are available.

Table 18. Final List of Interventions

Mitigation	Description
	See below – M66 Link Road & improvements at M62 Junction 19
Supporting Strategic Interventions	
Bus Rapid Transit (BRT) corridor to Manchester city centre	Bus Rapid Transit (BRT) corridor to Manchester city centre and Rochdale via Heywood Old Road/ Manchester Road
Necessary Local Mitigations	
Permeable network for pedestrian and cyclist priority to/from/ within the development	Assumed new or upgraded cycle and pedestrian access, linked to PROWs and the Bee Network, providing connectivity to adjacent local areas and employment/educational opportunities, supported by high quality design for active travel within the allocation area. These will be consistent with Bee Network design standards.(As per the earlier Section 6.5)
Introduction of local bus services to/from/ within the allocation	Assumed local bus services to link the allocation with Metrolink and Rail interchanges and key local centres such as Bury, Heywood, Rochdale and Middleton, supported by permeable design of future development to support bus services within the allocation area.
1. Moss Hall Road / Pilsworth Road (South)	Replace existing three arm priority junction with a three arm roundabout.

	New roundabout, including a 56m (inscribed circle diameter) with two circulating lanes
2. A6045 Heywood Old Rd / Whittle Lane	Additional traffic management measures on Whittle Lane
3. Moss Hall Road / Pilsworth Road (North)	Replace existing three arm signalised junction with a three arm unsignalised roundabout. New roundabout will include a 56m (inscribed circle diameter) with two circulating lanes and a left turn bypass from Pilsworth Road South
7. Hollins Brow / Hollins Lane	Remove mini roundabout arrangement and replace with a 3 arm signalised junction
Pilsworth Road (Between M66 Link Road and "3-Arrows" Junction)	Upgrading to dual carriageway standard – two lanes in each direction with a central reserve
SRN Interventions	
4. M66 Junction 3 / Pilsworth Road	Upgrading to a 4-arm grade separated signalised configuration including widened slip road approaches from the M66 and a 3 lane circulating carriageway
6. M62 J19 / A6046 Heywood Interchange	Removal of at-grade pedestrian / cycle facilities at the SHLR arm and adjacent section of the circulating carriageway and replacing them with a pedestrian / cycle subway.
8. M66 Junction 2 / A58	Addition of a fourth lane to the circulating carriageway of the roundabout.
M66 Link Road	Upgrading existing Pilsworth Road between M66 Junction 3 and Moss Hall Lane to dual carriageway - two traffic lanes in each direction, with a central reservation & cycle/pedestrian provision

7.5.7 Following the above identification of mitigations, the junction assessments were carried out based on the mitigation layouts and the results are shown in **Excerpt 7.4** and **7.5**.

Excerpt 7.4 - Local Junction Performance in 2040: Post Mitigation

Table 12. Results of Local Junction Capacity Analysis After Mitigation – Year 2040							
No.	Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
1	Moss Hall Road / Pilsworth Road (South)	43%	37%	87%	92%	1157	981
2	A6045 Heywood Old Rd / Whittle Lane	19%	31%	39%	30%	949	432
3	Moss Hall Road / Pilsworth Road (North)	128.5%	116.3%	90%	87%	544	525
5	Pilsworth Road / Railway Bridge	73.5%	73.5%	26%	31%	399	147
7	Hollins Lane/Hollins Brow	122%	109%	98%	96%	84	66
9	A56 / Hollins Brow	116.1%	114.6%	123%	121%	60	35
10	A56 Bury New Road / Moss Lane	74.1%	74.8%	92%	72%	15	18

Excerpt 7.5 - Strategic Junction Performance in 2040: Post Mitigation

Table 15. Results of Strategic Junction Capacity Analysis After Mitigation – Year 2040

No.	Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
4	M66 Junction 3 / Pilsworth Road (New Junction)	N/A	N/A	88%	87%	765	822
6	M62 Junction 19 / A6046	115%	117%	123%	120%	383	244
8	M66 Junction 2 / A58	110%	108%	112%	106%	140	104

- 7.5.8 The mitigations which were identified to support JPA1.1 are set out in Appendix D of PfE,.
- 7.5.9 The traffic modelling now being undertaken at Application stage through the Northern Gateway Traffic Model (NGTM), forms the basis of the assessment from which conclusions on traffic impacts and mitigations can be drawn. The above findings from PfE illustrate the level of performance on the network that was anticipated would exist as a consequence of allocating JPA 1.1. When forming a view on the acceptability or otherwise of peak period congestion it is notable that the PfE Allocation was made in the expectation that JPA1.1 would not fully mitigate its impact and three of the ten tested junctions were forecast to operate over-capacity, post mitigation, including M62 J19 and M66 J2.

7.6 Emerging Mitigations to Achieve the Vision-Led / Transport Strategy Sustainable Travel Targets

- 7.6.1 GM and the Government have set strategies to improve sustainable and active travel and reduce vehicular traffic to the point where 50% of journeys are by sustainable modes other than the private car. The Government target is to achieve that by 2030, but the GM Transport Strategy target is set for 2040.
- 7.6.2 Future mitigations to address significant impacts on the road network would most appropriately be directed towards active travel and public transport interests. That said, the Proposed Scheme will need to ensure safe and suitable access.
- 7.6.3 At a strategy level, active travel and public transport strategies being brought forward by TfGM must address the holistic needs of GM and the planned developments coming forward through PfE. As an example, some of the potential public transport schemes are planned to be delivered by local authorities in the area are:
- Bus Rapid Transit between Oldham and Bury (via Middleton and Northern Gateway).
 - Bus Rapid Transit between Heywood and Manchester city centre (via Northern Gateway).
 - Bury - Rochdale QBT Opportunities for bus services to have improved journeys to the NG with improved bus priority connections to Bury and Rochdale.
 - Metrolink extension to Middleton via Rhodes.
 - Tram/train service between Rochdale and Bury (via Heywood), with potential new stations at Broadfield and Heap Bridge close to Northern Gateway.

- 7.6.4 TfGM have been developing the Active Travel and Public Transport Strategies for NG over a number of years. The initial work was carried out by Arup and was presented in November 2022 and that is evolving into the NG TFD (**Appendix A**), which describes the expectations and approach to be taken in bringing forward the development in respect of active travel, public transport, policy, funding and approach to mitigation. The document is a comprehensive Framework to guide the development of the Allocation in the context of the GM Transport Strategy.
- 7.6.5 In addition to setting out the Vision-Led aspirational car trip levels, the TFD also identified a “Scenario 2” which did not fully achieve the future strategy / vision, but which TfGM described as representing the most likely, balanced, and economically viable Vision-Led transport package, which is considered to be a realistic future scenario. TfGM also identified the extent of mitigation measures which they considered would be necessary in order to achieve that Scenario 2 level of car use.
- 7.6.6 There are many other helpful elements of the NG TFD which will be cross referenced in this TA. In relation just to the point on car use, page 29 of the NG TFD illustrates the mode shares anticipated under “Scenario 2”, which are:
- car drivers: 65% for NG (JPA1.1 and JPA1.2) and 56% overall weighted mode share (AM).
 - car passengers: 5% for NG and 9% overall weighted mode share.
 - sustainable travel modes: 30% for NG and 35% overall weighted mode.
- 7.6.7 It should be noted that the “car passenger trips” 5% does not increase the number of vehicles and that car sharing is a sustainable method of travel, in accordance with the NPPF. Thus, the Scenario 2 sustainable travel mode share is actually 35% for NG and 44% overall weighted mode share.
- 7.6.8 Page 40 of the NG TFD illustrates how TfGM anticipate the proportion of development trip car traffic to be 53% (46% weighted average) in the full aspirational Vision-Led Scenario 3.
- 7.6.9 It is important that in bringing forward the Proposed Scheme and the wider JPA1.1 Allocation Site, investment towards active travel and public transport seeks to support the strategic approach rather than just seeking to address traditional highway capacity development impacts. As the JPA1.1 Allocation Site will not be fully built out until 2039 at the earliest, some of those future strategic mitigations are not yet known. In the modelling assessments, in order to forecast the likely conditions in 2039 where the GM, TfGM and Government strategies have been effective, a test known as “Policy On” has been undertaken. The modelling of that has been achieved by reflecting reduced traffic generation to 60% of trips as vehicles and network traffic growth forecasts as detailed in the TASNU.

7.7 Emerging Highway Works Mitigations

- 7.7.1 Elements of highways works mitigations have emerged from the site allocation policy and work advanced by the Districts. In addition, the potential need for and extent of highways works mitigations will be informed by the junction modelling. Across the network it is notable that in the Vision-Led approach, the GM Transport Strategy aims to have fewer vehicular trips in 2040 than were present in 2017. That target subsumes network and P/E growth. Overall, therefore there should be no need for wider mitigations but of course the proposed development will focus

development impacts close to the site. The following sections describe the emerging highways mitigations which are being considered in this TA.

7.8 M66 J3 Motorway Access Mitigation

- 7.8.1 The original assessments of NG within the LARs, which were used as evidence for the site allocations, envisaged a significantly improved motorway junction at M66 J3, which was a grade separated roundabout option, along with an intervention at M62 J19 and at M66 J2. It is understood that around the same time considerations turned to focus on an alternative solution, potentially involving an access to the M62 (subject to detailed future analyses), accompanied with a smaller scale improvement at M66 J3 incorporating active travel facilities.
- 7.8.2 On behalf of BC, Pell Frischmann sifted 16 potential improvement options at this junction and identified the layout attached in **Appendix D** as the preferred solution. WSP Microsimulation (Birmingham) were then commissioned to assess how that layout is likely to operate in the peak hours in the future years 2032 and 2039, using the micro simulation software VISSIM. The WSP Microsimulation Report detailing their findings is included as **Appendix E**.
- 7.8.3 It has been recognised since before the JPA1.1 Allocation Site was identified that a level of junction improvement at M66 J3 would be necessary, not least to incorporate active travel infrastructure. The M66 J3 ‘preferred solution’ layout has been incorporated into the strategic model as part of the “Common Highway Mitigation Package”, in all future assessments which involve development on the JPA1.1 Allocation Site.

7.9 New M62 Motorway Access Mitigation

- 7.9.1 On the basis of the PfE findings, it was envisaged that in order to accommodate the development of the full JPA1.1 Allocation Site a new access solution to the M62 is likely to be required. In order to model the likely effects of such a new junction, a series of scenarios adopt an access solution which was identified by Pell Frischmann, based on the principle of providing a new junction on the site of the existing M62 Birch Services connection to the motorway. The Pell Frischmann layout is attached at **Appendix D** and has been coded into the model scenarios in which a direct M62 access solution is featured. This access is known as The M62 Access Solution. As time has progressed, NH have undertaken some initial PCF analyses of alternative solutions to improve M62 J19 and initial findings there seemed encouraging. Those have not been assessed in this TA but can be investigated further if required.

7.10 M66 J2 Mitigation

- 7.10.1 PfE identified that improvements at M66 J2 may be required. No improvement has been coded into the NGTM. The NGTM modelled traffic volumes have been input into a TRANSYT model of the existing layout as part of this TA. The TRANSYT modelling described later in this TA, is the basis from which conclusions can be drawn in relation to mitigation at this junction. Initial PCF work by NH has identified options which improve M66 J2 but those are not included in the modelling within this TA.

7.11 Local Links Mitigation

- 7.11.1 BC commissioned Pell Frischmann to undertake an assessment of the road network between the now demolished Three Arrows Public House (Pilsworth Road / Moss Hall Road – south junction) and the M66 J3. This road network includes the Pilsworth Road / Moss Hall Lane - North junction. That work has been developed to identify link and junction capacity improvements and to incorporate active travel facilities.
- 7.11.2 The latest design layout for that work at the time of coding the NGTM is attached in **Appendix D** and this element of mitigation is known as ‘The Western Access Works’. That design is well progressed, and funding streams are being investigated. The Western Access Works are included in the “Common Highway Mitigation package”, and feature in all DS modelling scenarios.

7.12 Advance Delivery of Mitigation

- 7.12.1 The Queen Elizabeth II Way (QEII) is a new high standard road which is already in place (opening to traffic in early November 2022). It therefore features in both the Do Minimum (DM) and the Do Something (DS), i.e. without and with development scenarios, which are tested.
- 7.12.2 A review of the funding application which was submitted and which secured funding to deliver this road states that the purpose of the road is to enable development of the JPA1.1 Allocation Site.
- 7.12.3 The interesting point then is that whilst the road is present and features in the DM tests, it is in fact a road intended to enable and hence mitigate the impact of the JPA1.1 Allocation Site.
- 7.12.4 As other development to the north of the road has come forward and already takes access from it, the DM tests cannot remove it in order to test what the DM scenario would have been before it existed. Decision makers should recognise that QEII Way is significant advance mitigation for the JPA1.1 Allocation Site.
- 7.12.5 The SHMA, which is an element of the JPA1.1 Allocation Site, has also made public transport contributions. At the time of drafting this TA those monies remain unspent but are available to use enhancing bus services to JPA1.1.

7.13 Mitigation On Site

- 7.13.1 The Northern Gateway Development Framework (NGDF) Supplementary Planning Document (SPD) was adopted by BC and RMBC in March 2025, and sets out the vision and key principles required for delivering the JPA1.1 Allocation Site. The Proposed Scheme will be developed in compliance with the NGDF SPD. What is important to note, is that the on-site infrastructure will be “future ready” to integrate with and enhance the active travel and public transport facilities and services which emerge over coming years.
- 7.13.2 This planning application for the Proposed Scheme is for outline planning permission (all matters reserved), and as such, permission is not being sought for the detailed on-site layout or means of access at this stage. However, the submitted Parameters Plans for the Proposed Scheme demonstrate possible access points into the Application Site and the maximum developable areas. Furthermore, the submitted Design Code for the Proposed Scheme (prepared by Turley) includes

at Chapter 7, the ‘Movement Design Codes’, including access; street hierarchy; primary streets; secondary streets; active travel; wayfinding; public transport; street furniture; and street trees and planting.

- 7.13.3 These detailed matters will be determined at reserved matters stage, and detailed layouts will be required to feature good pedestrian, cycle and public transport infrastructure.
- 7.13.4 One example of that is in the proposed treatment of PRowS. The comprehensive redevelopment of the Application Site (and wider JPA1.1 Allocation Site) will necessarily require the extinguishment or diversion of PRowS currently present.
- 7.13.5 The Proposed Scheme will connect to the existing PRow where they enter the Application Site and then provide routes around and through the Application Site which will be more commodious than the existing routes and will encourage active travel. The routes will be upgraded to incorporate cycle facilities and will connect to public transport hubs and stops. These facilities cannot be factored into the strategic traffic model or the traffic impact assessment of off-site junctions, other than in the “Policy On” test which reflects a shift in travel mode away from the private car and towards those sustainable uses.

7.14 Potential Access Options as Mitigation

- 7.14.1 There are two other elements of potential mitigation which have been considered. The first relates to the proposed treatment of Whittle Lane. Early discussions with TfGM recorded their wish that Whittle Lane should serve only as a public transport and active travel route. RMBC also sought the closure of Whittle Lane to all traffic except buses, for reasons understood to be related to reducing traffic impact in Birch.
- 7.14.2 Without Whittle Lane as a vehicular access, the Proposed Scheme effectively has only one vehicular access point to the public highway i.e. all traffic via the Moss Hall Lane / Pilsworth Road – South junction (Three Arrows). It is considered important to retain a route which could be used in an emergency situation, e.g. if the Moss Hall Lane / Pilsworth Road – South junction was blocked. It is also considered that Whittle Lane could be capacity restrained, to restrict traffic volumes to acceptable levels. A signalised shuttle working arrangement on the bridge could achieve that. In most model scenarios Whittle Lane has therefore been modelled as being open to traffic, but on the basis of a traffic-signalised controlled metered (capacity throttled down) approach, limiting the potential for rat-run traffic.
- 7.14.3 A further model scenario has been undertaken with Whittle Lane closed to vehicular traffic, to allow decision makers to gauge the relative impacts of either option.
- 7.14.4 The second potential highway access option which has been evaluated is the potential connection known as the South Heywood Link. There may be scope in the future to provide an additional road connection from the Application Site out through the SHMA, connecting to the QEII Way. As the NGDV has no control over the land which would be necessary to deliver such a connection, it has been omitted from the majority of model run scenarios. A sensitivity test has, however, been undertaken to model the effect of including a South Heywood Link option.

8.0 Approach to Assessment

8.1 Overview

- 8.1.1 This section provides an overview of the scoping assessments, the Vision-Led and traditional approaches to assessment, the strategic model and an overview of the assessment of:
- Public Transport and Active Travel
 - Traffic Impact Scenarios
 - Traffic Impacts at junctions and slip roads
 - Construction traffic effects.

8.2 Scoping Assessments

- 8.2.1 The approach to undertaking the traffic impact assessment element of the transportation assessment has been set out in several scoping documents and their addenda. A Preliminary Transport Assessment Scoping Note (PTASN) was prepared by Focus Transport Planning and submitted to the key stakeholders for comment in 2022. No formal comments were received but the document and its contents were discussed frequently at TSG and other meetings, where the general consensus was that it was generally acceptable subject to further consideration of trip rates.
- 8.2.2 Following the appointment of TT, a Transport Assessment Scoping Note Update (TASNU) was produced and circulated to the KS for comment in August 2024. It was reported in early September 2024 that no formal comments had been received, and that the TA would be progressing on the basis of the preliminary and updated scoping notes.
- 8.2.3 Through ongoing meetings with KS, further discussions and refinements took place and an Addendum note was issued in late September 2024, providing further clarity on the scenarios which were to be tested. Those Scoping Notes and the addendum describe how the study area has been defined, how different elements of committed and anticipated infrastructure have been treated in each modelling scenario, and they provide further details on quantum of development, phasing of development and the trip rates which have been used.
- 8.2.4 The Scoping Notes have been submitted as separate documents and are available on the Planning Portal. The September Addendum is presented in **Appendix G**.
- 8.2.5 Formal comments were received from NH and TfGM in December 2024 at which time most of the modelling of the scenarios identified within the Scoping submissions had already been concluded. Nevertheless, the NH comments were responded to, and additional modelling scenarios were added. This TA sets out the results of both the original agreed modelling and the subsequently requested additional scenarios. The following chapter of this TA describes how the scope of assessment evolved further during the few months prior to the submission of the Application.
- 8.2.6 **Appendix G** concisely describes the various model run scenarios which have been undertaken, and which form the traffic impact assessments presented within this TA. It also describes the

model run scenarios which have been undertaken to inform the environmental impact assessment. Those are described more fully later in this chapter.

8.3 Vision-Led and Traditional Approaches to Assessment

- 8.3.1 The planning system in England has recently evolved to now require a Vision-Led approach to development and assessment (NPPF Para 110). The Vision-Led approach is a recognition that the traditional approach of forecasting worst case peak hour traffic conditions and factoring in significant network traffic growth, is out of step with the long-term strategy of reducing reliance on the private car.
- 8.3.2 In setting the scope of assessment with the KS, the more traditional approach whereby full trip rates and robust assumptions on future network traffic growth has also been requested by NH.
- 8.3.3 The Applicant has therefore taken the decision to provide model runs which reflect both assessment approaches. The Vision-Led assessments are labelled “Policy On” and the traditional assessments are labelled “Policy Off”. In line with National and Local Government priorities, the appropriate tests are the Vision-Led assessments.
- 8.3.4 The Vision for NG is towards a sustainable travel and active travel based future, that is achieved by developing mitigation proposals in a way which gives a reasonable prospect of achieving higher public transport and active travel trip demand and thereby lowering vehicular trip demand.
- 8.3.5 The focus is on identifying and funding the right future mitigations which integrate with government strategies for reducing traffic and encouraging active and sustainable travel.
- 8.3.6 Guidance sets out that this is best achieved by setting the future vision for transport & development and validating any underpinning assumptions.
- 8.3.7 The Application has been greatly assisted by TfGM bringing forward their NG TFD, which sets out the public transport and active travel strategies which define the transport Vision for NG.
- 8.3.8 The TfGM NG TFD identified a “Scenario 2” with 65% of NG trips being made by car drivers, to be the most likely Vision-Led position. The TfGM figures how only 5% car passenger travel whereas the Policy Off level is 13% for that sustainable mode. Moreover, the Travel Plan will seek to increase that. If the TfGM estimates for bus, cycle and walking are retained, it must therefore be the case that the Scenario 2 car driver % will more likely be a maximum of 57%. The Policy On assessments as part of the NGTM transport network modelling had already been progressed on the basis of 60% by vehicle driver and therefore is considered to align robustly with the TfGM Scenario 2 approach. It is also considerably higher (more pessimistic) than the overall GMCA ‘Right Mix’ strategy target of 50% vehicle (excluding bus) trip making by 2040.

8.4 Strategic Model

Overview

- 8.4.1 The strategic modelling has been carried out using the NGTM which has been built to a methodology which has been discussed and amended via the input of the TSG. Members of the group include representatives of:

- Transport for Greater Manchester.
- National Highways.
- Bury Council
- Rochdale Metropolitan Borough Council.
- The NGDV,
- the respective transport consultants on behalf of the above representatives, specifically WSP, Pell Frischmann, Focus Transport Planning and latterly Tetra Tech.

8.4.2 The group met 9 times between 2022 and 2024.

8.4.3 The NGTM was developed by the consultancy WSP.

Modelling Agreement

8.4.4 The NGTM is an agreed assessment tool, that all parties recognise as best available information.

8.4.5 The purpose of the TSG meetings was to determine the parameters and detail of the modelling exercise to be undertaken. The minutes of the TSG meetings are summarised in the WSP report Response to NH comments on Base model, has been uploaded to the planning portal.

8.4.6 The model is deemed to validate to DfT Transport Analysis Guidance (TAG), and a Local Model Validation Report (LMVR) has been prepared. In addition, a Modelling Specification Report (MSR) was also circulated to all parties. The Modelling Agreement Statement (MAS) built upon those two documents and the stakeholder inputs at the TSG meetings.

8.4.7 The MAS sought endorsement by all parties in advance of the commencement of the assessment of the proposals. A copy of the MAS is provided in **Appendix H**.

8.4.8 On 28th November 2024, TfGM provided their “SATURN Model Review”, which concludes that:

“Generally, our review indicates that NGTM 2022 baseline model is fit for purpose”

8.4.9 NH provided comments on the LMVR in early 2025 and those were responded to by WSP, the builders of the model. The WSP response has been uploaded to the planning portal.

8.4.10 At the time of finalising this TA, NH provided further comments in response to WSP.

8.4.11 As of March 2025, key stakeholders had still not signed the agreement, although TfGM have confirmed that the NGTM is fit for purpose (see **Appendix K**). At an HTWG meeting, in March 2025, NH confirmed that they would defer to TfGM’s HFAS team for acceptance of the model.

8.4.12 It is therefore considered that the model is suitable for progressing the assessment.

Highways Technical Working Group

8.4.13 Following on from the TSG meetings, on 29th January 2025 a new Highways Technical Working Group was inaugurated. The HTWG effectively comprising the same KS and individuals, met fortnightly to discuss and address highways related matters pertaining to the application, including modelling scenarios, trip rates, Vision-Led approach, junction assessment results and the NG TFD emerging mitigations.

Future Years, Do Minimum Models

- 8.4.14 The Do Minimum (DM) Models are intended to reflect the future conditions if the proposed development and the remainder of the NG allocations do not come forward. There are DM Scenarios for 2032 and 2039, in both the Policy On and Policy Off cases.
- 8.4.15 For the Policy Off cases, the future year DM models have been produced through applying traffic growth from the development log and TEMPro growth. The development log comprises a comprehensive list of allocations, planning applications and prospective sites identified by Bury and Rochdale Council Planning Officers. WSP have prepared a Forecasting Report, which has been uploaded to the planning portal separately and sets out the details.

Future Years, Do Something (With Development) Models

- 8.4.16 The Do Something (DS) Models are intended to reflect the future conditions if the proposed development and the remainder of the allocations come forward. There are DS Scenarios for 2032 and 2039, in both the Policy On and Policy Off cases.
- 8.4.17 The DS models have been produced through applying the respective Proposed Scheme, JPA1.1 allocation and JPA1.1 & JPA1.2 cumulative allocations traffic to the Do Minimum model matrices for network assignment.

8.5 Assessment of Public Transport and Active Travel

- 8.5.1 The assessment of public transport and active travel is being carried out by TfGM and the assessment is set out in the NG TFD (**Appendix A**).
- 8.5.2 The TfGM assessments include a review of baseline statistics, a review of baseline infrastructure and services, a review of multimodal trip rates and trip generation and then the derivation of a public transport and active travel strategy, to deliver the necessary infrastructure and capacity to accommodate levels of pedestrian cycle and bus patronage, consistent with the vision for Northern Gateway. In that regard, their calculations are based on their “Scenario 2”, which they describe as “Realistic”.
- 8.5.3 It has been agreed between the KS that the delivery of active travel and public transport measures will be determined from this TfGM work.
- 8.5.4 The Framework guides the development of NG (comprising the JPA1.1 and JPA1.2 Allocation Sites) in the context of the GM Transport Strategy and contains a page given over to stating the “Transport Vision”. This TA has been produced to assess development in line with delivering that vision.

8.6 Scenarios and Sensitivity Testing

- 8.6.1 **Appendix G** details the 27 modelling scenarios which have been identified for strategic modelling. Strategic modelling was undertaken on 25 of those, as the Giga-scale and TfGM Policy On runs are effectively covered by other runs. Many of those runs were only required to inform scenarios considered as part of the parallel EIA assessments, and so are not referred to in the TA.

- 8.6.2 The scenarios titled DS1 present the impacts of the JPA1.1 Allocation Site alone. It should be noted that the future assessments titled DS3 test the addition of the JPA1.2 Allocation Site as a new development, the impacts of which are encompassed within the DS3 results. Although strategic modelling was undertaken for all these scenarios, only those highlighted green in the table were taken forward for individual junction assessment, as they provided all of the worst-case results and comparison permutations.
- 8.6.3 **Appendix G** also provides details of which year is being tested and the elements of mitigation which have been included or omitted from each test. The table also details the component parts of the sensitivity tests of “Policy On” and the inclusions or omissions of the South Heywood Link and / or allowing vehicles to use Whittle Lane.
- 8.6.4 The key tests in terms of this TA are those for the proposed development quantum by 2039, the cumulative NG allocations coming forward by 2039 and for the earlier phase of just part of the Proposed Scheme being developed by the year 2032.

8.7 Assessment of Impacts at Junctions and Slip Roads

- 8.7.1 The forecast traffic volumes output from the NGTM for the various modelled scenarios, were then used to undertake discrete bespoke modelling of individual junction performance. Depending upon the layout and method of control at each junction, the following individual junction modelling tools have been employed:
- Junctions 9 for priority junctions
 - LinSig for simple signal junctions
 - Transyt for complex signal junctions
 - VISSIM for small junction networks
- 8.7.2 NH have also confirmed that the impacts of NG on Simister Island (M62 J18) will need to be reflected but that detailed operational capacity modelling is not required. An assessment is detailed later in this TA.
- 8.7.3 Additionally, merge / diverge calculations have been carried out at slip roads on the SRN junctions within the study area (M66 J2, M66 J3, M62 J19 and proposed M62 Access Solution, in line with the approach in CD122 ‘Geometric Design of Grade Separated Junctions’ in DMRB.

8.8 Assessment of Construction Traffic Effects

- 8.8.1 In developments which are constructed in full before they open, there may be a question as to whether the construction phase impacts could be greater than the final operational phase traffic volumes. In the case of the Proposed Scheme, which is the subject of the Application, that will not be the case. The Proposed Scheme represents only a proportion of the overall JPA1.1 Allocation Site and will have a build out period of around 15 years.
- 8.8.2 In the case of bringing forward the full JPA1.1 Allocation Site, the build out will span more than 15 years, to perhaps even 2 decades. During that time individual employment units will become operational whilst others will be under construction and others will not have commenced construction. An obvious conclusion which can be drawn is that no early or mid-phase

construction will result in traffic volumes which are greater than may be expected to take place under the full JPA1.1 Allocation Site operational phase scenario. Construction traffic will be a temporary occurrence and will vary over time through the different phases of construction for each unit.

- 8.8.3 Similarly, the traffic generated by final construction phases of the JPA1.1 Allocation Site will be a small proportion of the traffic volumes which will have already become established from the proportion of the JPA1.1 Allocation Site which has been constructed up to that point in time. For those reasons no construction traffic impact assessments have been undertaken since they will be less traffic intensive than the scenarios which have been tested. Moreover, construction traffic can be managed through Construction Traffic Management Plans (secured via planning conditions).

8.9 Approach to Assessment Summary

- 8.9.1 The approach to assessment was to undertake all assessments to the agreed scope using an agreed model across an agreed set of development scenarios.
- 8.9.2 The intention is to be able to identify likely operational conditions on the realistic prospect that the sustainable travel strategies identified for NG and the wider GM sub-region are effective in delivering the Vision-Led approach. The LHA's and NH have however also required undiscounted trip rates and network traffic growth to be tested.
- 8.9.3 The assessments are therefore robust and allow comparison of peak hour and interpeak conditions without and with the Proposed Scheme, the full JPA1.1 Allocation Site and NG cumulatively.
- 8.9.4 The assessments seek to gauge the benefits and dis-benefits of providing additional road linkages through either South Heywood Link or by retaining the use of Whittle Lane by traffic, in a capacity constrained role.
- 8.9.5 The approach gives the decision makers sufficient information to form a view on what the development traffic impacts are likely to be and then upon what mitigations might be required and whether those should be in the form of highway improvement works, contributions towards highway works or future active travel and public transport strategies.

9.0 Scope Evolution and Revised Assessment Methodology

9.1 Overview

- 9.1.1 Having sought comments on the scope, comments were received in late 2024 / early 2025.
- 9.1.2 The comments fall into the categories of reaffirming the scope approach, querying data or parameters and requesting further work.
- 9.1.3 Even though the assessments were well advanced, it has been possible to take on board most of the comments within this TA.
- 9.1.4 This section of the TA seeks to describe how the scope of assessment has evolved.

9.2 Evolution of the Policy On Assessment

- 9.2.1 The TASNU suggested that the Policy On development vehicle trip rates for NG would be set at 50% of the total people trip rates, in line with the GM Transport Strategy. The TASNU also set out the Policy On approach to background traffic.
- 9.2.2 At a virtual meeting between TT & TfGM in November 2024, TfGM reiterated that the Vision-Led assessment should have primacy in the planning system. That is referred to as the “Policy On” tests in this TA. TfGM confirmed that they were undertaking work to identify the likely proportion of development car trip users which could be expected to be present in such a Policy On assessment and they said that was likely to be slightly higher than TT had identified in the TASNU and addendum.
- 9.2.3 TfGM did indeed present that work in January 2025 in the NG TFD, with the NG car driver mode share set at 65% in Scenario 2 (**Appendix A**). Back in November, TT were aware from the TfGM meeting that TfGM may request higher development vehicle content in Policy On, than was set out in the TASNU (based on the GM Transport Strategy) and therefore sought to revise the Policy On development vehicle trip component for NG up from 50% to 60%. It is this level of vehicle traffic which was then progressed to underpin the Policy On assessments contained in this TA.

9.3 Northern Gateway Development Transport Framework Document

- 9.3.1 In addition to setting out Vision-Led aspirational vehicle trip levels for the NG development, the NG TFD identified a “Scenario 2” which did not fully achieve their future strategy / vision, but which they described as representing the most likely, balanced, and economically viable Vision-Led transport package... a realistic future scenario. Helpfully TfGM also identified the extent of mitigation measures which they considered would be necessary in order to achieve that Scenario 2 level of car use.
- 9.3.2 The TfGM NG TFD identified a “Scenario 2” with 65% of NG trips being made by car drivers, to be the most likely Vision-Led position. The TfGM figures how only 5% car passenger travel whereas the Policy Off level is 13% for that sustainable mode. Moreover the Travel Plan will seek to increase that. If the TfGM estimates for bus, cycle and walking are retained, it must therefore be the case that the Scenario 2 car driver % will more likely be a maximum of 57%. The Policy On assessments

as part of the NGTM transport network modelling had already been progressed on the basis of 60% by vehicle driver and therefore is considered to align robustly with the TfGM Scenario 2 approach. It is also considerably higher (more pessimistic) than the overall GMCA 'Right Mix' strategy target of 50% vehicle (excluding bus) trip making by 2040.

- 9.3.3 Comparing with those two estimates, it is considered that the revised TT scope approach which tests 60% of trips as vehicular is appropriate. TfGM say the Scenario 2 should be used to plan future public transport services and the highway improvements including Western Access, M66 J3 and M62 J19. The Applicant is content with that, on the basis that the assessments which have been undertaken as Policy On and the wide range of other tests, with far higher levels of development traffic, will allow a view to be reached on the likely impacts on the highway network from a Scenario 2 future.

9.4 National Highways Comments

- 9.4.1 NH prepared a document titled Northern Gateway Transport Assessment Scoping Note Review. The document is dated November 2024 and was received by the Applicant and their Consultants on the 12th December 2024.
- 9.4.2 At an overview level, the response from NH provides many points of re-affirmation on the proposed scope, requested clarification and stress testing on some parameters such as trip rates and took the opportunity to state NHs position on delivering mitigation.
- 9.4.3 Although the report was received three months after technical assessments had been commenced, TT have been able to take on board NH requests and comments wherever possible and can confirm the Applicant's willingness to discuss any outstanding points through the determination period.
- 9.4.4 TT prepared a response (TTN10) and submitted it to the planning authorities and NH in January 2025. A copy of that response is attached as **Appendix I**.
- 9.4.5 The response thanked NH for their agreements, provided data to answer queries on B8 trip rates, Giga Scale Trip Rates and 12-hour trip rates and demonstrated how any variations in data would not materially affect the results.
- 9.4.6 NH also requested details regarding the proxy site which was used to obtain the Advance Manufacturing trip rates. That detail was included in the Focus Transport Planning PTASN (July 2022), which stated:

"It is likely that a substantive proportion of the JPA1.1 site will be targeted to deliver Advanced Manufacturing (AM) land-use (in excess of 100,000sqm of proposed planning application employment floorspace). AM is a comparatively new employment land use, with few major established sites available for reference within traditional trip generation databases. Direct trip demand data is, however, available for the Waverley Advanced Manufacturing Park (Waverley AMP) Rotherham - one of the largest AM developments in the UK and directly operated by one of the NGDV partners (Harworth Group). The Waverley AMP development represents a brownfield regeneration project in South Yorkshire, located to the east of the built-up area of Sheffield / Rotherham and close to M1 J33. It is therefore considered to

represent a good reference site, as it includes for the nature & scale of AM uses anticipated to be delivered at JPA1.1.”

- 9.4.7 Furthermore, the proxy site is located adjacent to a major trunk road connection. The AM trip rates utilised are based on a review of a range of employment units at the Waverley Site, including the Rolls Royce engine facility and other hi-tech manufacturing businesses.
- 9.4.8 Alongside TT’s response to NH comments, a parallel response prepared by WSPs Strategic Modelling Team, with respect to comments raised by NH on the NGTM Base Model. The WSP response is included as **Appendix J**. The general message was that the Assessments are well advanced, the original scope is robust and if there are any remaining issues, they can be considered in the determination period.

9.5 TfGM and Districts Acceptance of Model

- 9.5.1 TfGM commissioned HFAS on behalf of BC and RMBC to review the NGTM Base Model in order to provide confidence to the Councils that the model is fit for purpose for forecasting. The NGTM base model review was carried out by TfGM’s Highways Forecasting and Analytical Services (HFAS) Team and the findings of that review were reported in November 2024, (TfGM HFAS Report 2259). A copy of that report is attached as **Appendix K**. The report details the review including checks on the network coding, matrices and the model validation detailed in the LMVR. It concludes that they:

“...can have confidence in the 2022 Northern Gateway Transport Model for use in forecasting the strategic highway impacts of the Northern Gateway development sites and for use in feeding into the Transport Assessment”.

9.6 Identification of Further Sensitivity Tests

- 9.6.1 The TASNU and Addendum identified 4 sensitivity tests. It was always understood that further sensitivity tests could emerge as the Proposed Scheme evolved towards the Application. By January 2025, a further 5 sensitivity tests had been identified to provide additional detail on specific aspects, such as testing the Proposed Scheme Quantum, and an additional Policy On test as requested by TfGM. Two further scenarios were investigated but were dismissed.
- 9.6.2 The additional tests are illustrated in the table presented in **Appendix G**. They all incorporate the M66 J3 and Simister Island and Western access works and sought to test:
- **Run 21:** The cumulative JPA1.1 and JPA1.2 Allocation Sites in a “Policy On” scenario where a new junction onto the M62 was not delivered.
 - **Run 22.1:** The Proposed Scheme quantum of development (rather than the whole JPA1.1 Allocation Site) in a scenario where a new junction onto the M62 is delivered.
 - **Run 22.2:** The Proposed Scheme quantum of development (rather than the JPA1.1 Allocation Site), Policy Off, in a scenario where a new junction onto the M62 is not delivered.
 - **Run 22.3:** Proposed Scheme quantum of development, Policy On, in a scenario where a new junction onto the M62 is not delivered.

- **Run 25:** The full vision, comprising the full Northern Gateway development (i.e. JPA1.1 and JPA1.2 Allocation Sites cumulatively), Policy On, Whittle Lane as public transport / active travel only, a new junction onto M62 and the South Heywood Link open.

9.7 Model Refinements

- 9.7.1 When the first results were obtained from the model it was observed that more traffic than expected was forecast to route through M66 J3 and Whittle Lane. The Applicant had the benefit of a purpose-built detailed microsimulation model at the M66 J3 so it was possible to adjust the strategic model to more accurately reflect the more detailed, forecast operational limits at this location to address this matter.
- 9.7.2 In initial DS testing, Whittle Lane was left as existing and was found to be performing as an attractive route to and from the south. The Applicant is aware that TfGM would like that route to be reserved for just buses and active travel. The implications of that are evaluated in the agreed Scenarios. The Applicant is also aware that Whittle Lane could also serve as an effective emergency access or, as a general vehicular access with measures delivered to reduce capacity and restrict overuse by cars.
- 9.7.3 The measure to reduce capacity could be a signalised, shuttle working section of carriageway at the bridge over the M62 and the model has been adjusted to reflect that and Scenarios which feature that arrangement are labelled as Whittle Lane ‘Open - Capacity Limited’ in **Appendix G**.
- 9.7.4 The initial results showed overuse of Whittle Lane, so the model has been adjusted to reflect the presence of proposed chicane / shuttle working arrangement on Whittle Lane and that restricts / meters the level of car use to a lower level.

9.8 Summary

- 9.8.1 Over a period of several years, extensive time and effort has been invested in providing detailed information and methodologies to define the scope of this Transport Assessment. Extensive discussions have taken place at TSG and HTWG meetings and the scope has evolved to take on board comments provided by stakeholders.

10.0 Multimodal Trip Generation

10.1 Overview

10.1.1 This section sets out:

- the land use quanta which have been assessed across the various scenarios,
- the multimodal trip generation rates
- the traffic generation of the land use quanta assessed
- the development traffic loading within the NGTM.

10.1.2 It should be noted that the Policy Off (non-Vision Led) trip rates were first presented within the FTP PTASN, which was submitted to the Councils and NH in July 2022. The FTP PTASN included trip rates for Advanced Manufacturing, B1(c), B8, B2 and Residential land uses.

10.1.3 Under the current land use classifications:

- Advanced Manufacturing is now E(g)(ii)
- B1(c) is now E(g)(iii) and

10.1.4 The FTP trip rates therefore cover the proposed land uses of E(g)(ii), E(g)(iii), B8, B2. The FTP rates also included the residential rates, to cover the residential aspect of the wider allocation.

10.2 Quantum of Development Assessed

10.2.1 The land use quanta assessed are:

- Early Delivery Proposed Scheme: 395,000 sqm of employment (**Table 10.1**)
- Early Delivery Cumulative JPA1.1 and 1.2: 395,000sqm of employment & 473 houses (**Table 10.2**)
- Proposed Scheme: 600,000sqm of employment (See **Table 10.3**)
- Full JPA1.1 Allocation: 1,025,000sqm of employment + 200 dwellings (See **Table 10.4**)
- Full Cumulative JPA1.1 and 1.2JPA1.1: 1,025,000sqm of employment + 1,750 dwellings (See **Table 10.5**)

Table 10.1: Early Delivery Proposed Scheme Land Uses

Land Use	B2	B8	E(g)(iii)	E(g)(ii)	Residential	Total
Floorspace sqm	31,632	315,921	10,280	37,167	0	395,000sqm
%	8.01%	79.98%	2.60%	9.41%		100.00%

Table 10.2: Early Delivery Cumulative JPA1.1 and JPA1.2 Land Uses

Land Use	B2	B8	E(g)(iii)	E(g)(ii)	Residential	Total
Floorspace sqm	31,632	315,921	10,280	37,167	473 dwellings	395,000sqm
%	8.01%	79.98%	2.60%	9.41%		100.00%

Table 10.3: Full Proposed Scheme Land Uses

Land Use	B2	B8	E(g)(iii)	E(g)(ii)	Residential	Total
Floorspace sqm	75,896	420,000	15,560	88,545	0	600,000sqm
%	12.65%	70.00%	2.59%	14.76%		100.00%

Table 10.4: Full JPA1.1 Allocation Land Uses

Land Use	B2	B8	E(g)(iii)	E(g)(ii)	Residential	Total
Floorspace Sqm	129,655	717,500	26,582	151,264	200 dwellings	1,025,000 + 200 dwellings
%	12.6%	70.0%	2.6%	14.8%		100.00%

Table 10.5: Full JPA1.1 and JPA1.2 Allocations Land Uses

Land Use	B2	B8	E(g)(iii)	E(g)(ii)	Residential	Total
Floorspace Sqm	129,655	717,500	26,582	151,264	1750 dwellings	1,025,000 + 17500 dwellings
%	12.6%	70.0%	2.6%	14.8%		100.00%

10.3 Trip Rates

10.3.1 The Policy 'On' and 'Off' trip rates are set out in detail in **Appendix L**.

10.4 Trip Generation: Policy On

10.4.1 The "Policy On" trip generation is set out in detail in **Appendix L**.

Application Quantum: 600,000sqm Industrial

10.4.2 The overall trip generation associated with the Proposed Scheme quantum has been extracted from **Appendix L** and is provided as **Table 10.6**.

Table 10.6 - Proposed Scheme Quantum: 600,000sqm Industrial – Trip Generation – Policy On

Method of Travel	AM Peak (0800-0900)			Interpeak (Av. 1000-1600)			PM Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Total Sustainable	532	143	674	245	319	564	104	473	577
Total Vehicles	798	223	1012	367	479	846	156	710	866
Total People	1329	365	1686	612	798	1410	260	1183	1443

JPA1.1 Allocation Site (Less South Heywood Masterplan Area) Quantum: 1,025,000sqm Industrial + 200 Dwellings

10.4.3 The trip generation associated with the JPA1.1 Allocation Site (Less the South Heywood Masterplan Area) has been extracted from **Appendix L** and is provided as **Table 10.7**.

Table 10.7 – JPA1.1 Allocation Site (Less South Heywood Masterplan Area) Quantum: 1,025,000sqm Industrial + 200 Dwellings – Trip Generation – Policy On

Method of Travel	AM Peak (0800-0900)			Interpeak (Av. 1000-1600)			PM Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Total Sustainable	925	313	1238	439	562	1000	225	829	1054
Total Vehicles	1388	484	1857	658	842	1500	338	1243	1581
Total People	2313	797	3096	1097	1404	2501	563	2072	2635

Policy On Trip Generation Summary

- 10.4.4 The Policy On trip generation as set out in **Tables 10.6** and **10.7** have been set such that 40% of the people trips are being carried out using sustainable methods of travel.
- 10.4.5 The Policy On trip rates have not been applied to the early delivery phase of 395,000sqm...to reflect a robust scenario where Vision-Led mitigations and aspirations have not taken effect yet.

10.5 Trip Generation: Policy Off (Average Rates)

- 10.5.1 The “Policy Off” trip generation is set out in detail in **Appendix L**.

Initial Phase: 395,000sqm Industrial

- 10.5.2 The overall trip generation associated with the initial phase of the Proposed Scheme has been extracted from **Appendix L** and is provided as **Table 10.8**.

Table 10.8 – Proposed Scheme Initial Phase: 395,000sqm Industrial – Trip Generation – Policy Off

Method of Travel	AM Peak (0800-0900)			Interpeak (Av. 1000-1600)			PM Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Total Sustainable	144	40	184	59	79	138	36	163	198
Total Vehicles	584	187	770	305	373	678	127	494	621
Total People	728	226	954	364	452	816	163	657	820

Proposed Scheme Quantum: 600,000sqm Industrial

10.5.3 The overall trip generation associated with the Proposed Scheme quantum has been extracted from **Appendix L** and is provided as **Table 10.9**.

Table 10.9 – Proposed Scheme Quantum: 600,000sqm Industrial – Trip Generation – Policy Off

Method of Travel	AM Peak (0800-0900)			Interpeak (Av. 1000-1600)			PM Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Total Sustainable	279	66	345	114	161	275	63	322	385
Total Vehicles	1050	291	1341	498	637	1135	198	860	1058
Total People	1329	357	1686	612	798	1410	260	1183	1443

JPA1.1 Allocation Site (Less South Heywood Masterplan Area) Quantum: 1,025,000sqm Industrial + 200 Dwellings

10.5.4 The trip generation associated with the whole JPA1.1 Allocation Site (Less South Heywood Masterplan Area) has been extracted from **Appendix L** and is provided as **Table 10.10**.

Table 10.10 – JPA1.1 Allocation Site (Less South Heywood Masterplan Area) Quantum: 1,025,000sqm Industrial + 200 Dwellings – Trip Generation – Policy Off

Method of Travel	AM Peak (0800-0900)			Interpeak (Av. 1000-1600)			PM Peak (1700-1800)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
Total Sustainable	489	196	685	216	288	504	146	571	717
Total Vehicles	1824	586	2410	881	1116	1997	417	1501	1918
Total People	2313	782	3096	1097	1404	2501	563	2072	2635

Policy Off Trip Generation Summary

10.5.5 The Policy Off trip generation as set out in **Tables 10.8** and **10.9** show that when average trip rates are applied, on average across the 3 peak periods, 23% of all people trips to be carried out using sustainable methods of travel.

10.6 Development Loading

- 10.6.1 The development traffic has been loaded onto the highway network at 8 zones, within the NGTM. An exercise has been carried out to determine potential plot sizes in the vicinity of each loading zone, and then the development traffic has been split based on the size of the area each zone provides access to. This is then applied into development matrix. Full details are set out in the WSP Strategic Modelling (Leeds) – NGTM forecasting report.

10.7 Trip Rates and Traffic Generation Summary

- 10.7.1 Trip rates were first presented to the Councils, National Highways and TFGM in July 2022. They have subsequently been discussed at TSG meetings, reviewed (TASNU) and reaffirmed following NH comments.
- 10.7.2 The Policy Off (Average) trip rates were initially identified. The Policy Off Rates were presented in the PTASN and the TASNU.
- 10.7.3 NH reviewed the Policy Off trip rates and provided comments in December 2024. The NH comments were addressed by TT in February 2025.
- 10.7.4 The Policy On trip rates have been derived through:
- Taking the Total Person Trip Rates from the Policy Off (Average) Trip Rates
 - Adopting 60% of all trips as being by vehicle drivers (excl bus).
 - The LGV and HGV rates have not been amended, as those are associated with operational vehicles.
- 10.7.5 The Proposed Scheme is forecast to generate the following people trips:
- AM peak hour (0800-0900): 1686 trips
 - Interpeak (average 1000-1600): 1410 trips
 - PM peak hour (1700-1800): 1443 trips
- 10.7.6 Under the Vision in Policy On, the Proposed Scheme, is forecast to generate the following non vehicle driver trips:
- AM peak hour (0800-0900): 674 trips
 - Interpeak (average 1000-1600): 564 trips
 - PM peak hour (1700-1800): 577 trips
- 10.7.7 Under the Vision, the Proposed Scheme is forecast to generate the following vehicle driver trips:
- AM peak hour (0800-0900): 1012 trips
 - Interpeak (average 1000-1600): 846 trips
 - PM peak hour (1700-1800): 866 trips

11.0 Traffic Impact Assessment - Strategic Modelling

11.1 NGTM Model Runs

- 11.1.1 The NGTM model runs were initially set out in the TASNU, they were then revised in the TASNU Addendum and issued again to the stakeholders via email and presented at the HTWG meetings in February and March 2025.
- 11.1.2 As the modelling progressed, additional and alternate model run requirements were identified. An updated version of the NGTM model run matrix is included as **Appendix G**.
- 11.1.3 **Appendix G** shows that 27 model runs have been carried out, which covers both the TA and EIA requirements. Each model run has been carried out for the AM and PM peak hours, as well as for the inter-peak.
- 11.1.4 All scenarios which include development include the Common Highway Mitigation Package which comprises the QEII way (already delivered), the M66 J3 improvements, the Western Access improvements.
- 11.1.5 All DS scenarios also include works to Whittle Lane, either as a capacity constrained access (Shuttle Working Signals on the bridge over the M62) or closed to general vehicle traffic (Public Transport only). They also include the Simister Island NH DCO scheme.
- 11.1.6 The model runs which are assessed within the TA are set out in **Tables 11.1** and **11.2**.

Table 11.1: Core Tests

Run 0	2022 Baseline
	2039 Do Minimum Policy On
Run 5	2032 Do Minimum
Run 6	2032 Do Something 1a • Policy Off (Non Vision-Led) • including 395,000sqm of the JPA1.1 Allocation Site • excluding the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link Closed
Run 8	2032 Do Something 3a • Policy Off (Non Vision-Led) • including 395,000sqm of the JPA1.1 Allocation Site & 473 dwellings within JPA1.2 Allocation Site expected to be built in 2032 • excluding the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link Closed

Run 10	2039 Do Minimum
Run 11	2039 Do Something 1a • Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site • excluding the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link Closed
Run 12	2039 Do Something 1b • Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site • including the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link Closed
Run 13	2039 Do Something 3a • Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site • excluding the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link Closed
Run 14	2039 Do Something 3b • 3b Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site • including the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link Closed

Table 11.2 Sensitivity Tests

Run 17	2039 Do Something 3 - S1 – Whittle Lane • Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site • excluding the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane Closed – Public Transport Only Link and South Heywood Link Closed
Run 18	2039 Do Something 1 - S2.1 – South Heywood Link • Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site • including the M62 Access solution • including Common Highway Mitigation Package and J18 DCO works • Whittle Lane capacity constrained and South Heywood Link connection provided.
Run 19	2039 Do Something 3 – S2.2 – South Heywood Link • Policy Off (Non Vision-Led) • including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site

	- including the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane capacity constrained and South Heywood Link connection provided.
Run 20	2039 Do Something 3 - S.3.1 – Policy On - Policy On (Vision-Led) - including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site - including the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane capacity constrained and South Heywood Link Closed
Run 21	2039 Do Something 3 - S.3.2 – Policy On - Policy On (Vision-Led) - including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site - excluding the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane capacity constrained and South Heywood Link Closed
Run 22.1	2039 Do Something 1 - S.4.1 – Proposed Scheme Quantum with M62 Access - Policy Off (Non Vision-Led) - including the Proposed Scheme traffic generation - including the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane capacity constrained and South Heywood Link Closed
Run 22.1	2039 Do Something 1 - S.4.2 – Proposed Scheme Quantum without M62 Access - Policy Off (Non Vision-Led) - including the Proposed Scheme traffic generation - excluding the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane capacity constrained and South Heywood Link Closed
Run 22.3	2039 Do Something 1 - S.4.3 – Proposed Scheme Quantum Policy On - Policy On (Vision-Led) - including the Proposed Scheme traffic generation - excluding the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane capacity constrained and South Heywood Link Closed
Run 25	2039 Do Something 3 - S.6 – Overall Future Vision - Policy On (Vision-Led) - including all of the JPA1.1 Allocation Site & all of the JPA1.2 Allocation Site - including the M62 Access solution - including Common Highway Mitigation Package and J18 DCO works - Whittle Lane closed (public transport only) and South Heywood Link connection provided.

11.2 NGTM SATURN Model Outputs

11.2.1 To inform the traffic impact assessments, and the sifting analysis, the following datasets have been extracted from the model:

- **Volume of Traffic** – Changes in the number of vehicles on the network with and without the development in place and how interventions may influence the distribution of traffic across the network.
- **Turning Movements** – Turning movements at the 18 junctions have been extracted from the strategic model for inputting into individual junction models. WSP Strategic Modelling Team (Leeds), have provided these, in Origin Destination (OD) matrices format. The OD matrices are attached in **Appendix M** and have been used in the individual junction analysis in **Section 12**.
- **Routing** – WSP Strategic Modelling Team (Leeds), have undertaken Select Link Analysis of the development Site Access Roads to determine the routing of development trips on the network. The resultant trip distribution diagrams are presented in **Appendix N**.

12.0 Traffic Impact Assessment – Junction Analysis - Overview

12.1 Overview

- 12.1.1 This chapter provides an over of the individual junction modelling and SRN merge / diverge assessments which have been undertaken.
- 12.1.2 This chapter details study area identification, the study area sifting, how junction performance is reported, the full results Technical Notes, the overview results tables and an introduction to the merge / diverge assessments.

12.2 The Study Area – As set out in the TASNU

- 12.2.1 The junctions which have been identified as potentially requiring assessment are listed below and were illustrated on FTP Plan HTN as part of the original FTP PTASN, which has been reproduced as **Plan 7**.

Detailed Junction Operational Assessment:

1. M62 J19 interchange & slip road
2. A6045 Manchester Road / Queen Elizabeth II Way (QEII Way)
3. QEII Way / Hareshill Road / SH residential & local centre
4. Hareshill Road / Hill Top Road
5. Hareshill Road / Pilsworth Road
6. Pilsworth Road / A58 Bury St
7. Pilsworth Road / Heywood Distribution Centre
8. Pilsworth Road / JPA1.1 & SHDA employment
9. Pilsworth Road / Moss Hall Lane - South (3-arrows)
10. Pilsworth Road / Moss Hall Lane - North (Fowler Welch)
11. M66 J3 Interchange & slip road
12. M66 J2 Interchange & slip roads
13. Whittle Lane / A6045 Manchester Road
14. A6045 Manchester Road / Langley Lane
15. Langley Lane / A6046 Hollins Lane
16. A6045 Manchester Road / Coronation Avenue
17. Hollins Brow / Hollins Lane
18. Hollins Brow / A56 Manchester Road

Other Locations for Potential Consideration Subject to More Detailed Review of Development Traffic Assignment:

19. M60 J18 Interchange and slip road

- 20. M62 J20 & slip roads
- 21. M60 J19 and immediate sections of the A576 corridor
- 22. A576 Middleton Road / A6045 Heywood Old Road
- 23. A58 Rochdale Road / B6221 Wash Lane traffic signals.

12.3 Sifting to Identify Junctions Requiring Assessment

- 12.3.1 The TASNU set out how the junctions identified above will be further sifted to establish if any could be omitted from the individual junction assessments on the basis that they experience immaterial impact traffic increases. That process sought to determine if the development causes a significant level of traffic increase and in order to gauge that the two tests which have been applied to the above junctions, as they are forecast to operate in the NGTM outputs are:
- Is the junction subject to an increase of one trip per minute or more, on any arm/approach?
 - Is the junction subject to a 5% or more increase in traffic between the 'Do Minimum' and 'Do Something' traffic volumes, in any of the assessed peak periods?
- 12.3.2 The intention was that should a junction exhibit a lower increase than described in either of the above two tests, then it would not be subject to further assessment.
- 12.3.3 The OD matrix traffic volumes provide the link flows on approach to each junction. The approach arm link flows have been tabulated for the various assessment scenarios, along with a comparison of the DM vs the DS in each case. The two sifting rules have then been applied to the DM vs DS traffic volumes differences to identify the junctions to be included in the assessment.
- 12.3.4 The approach arm link flow comparison and sifting analysis is contained within **Appendix O**. That analysis has been carried out using the 2039 Do Something Traffic Volumes (Runs 10, 11, 12, 13 & 14), which are the traffic models which contain the highest level of traffic.
- 12.3.5 Following the two sifting tests, none of the junctions were sifted out. There are however further considerations in setting the study area for individual junction assessment.
- 12.3.6 From the list in Section 12.2,
- Junction reference 3 represents a junction option under consideration at the time of the preparation of the original FTP PTASN, the principle of which has subsequently been dropped by the developers of the SH project and no longer forms part of South Heywood Masterplan Area proposals. The SH development has therefore been assessed on the basis of the consented masterplan scheme.
 - Junction reference 20 only triggers the sifting criteria in one AM peak hour scenario. Furthermore, NH have commented that this junction is required for assessment as part of the JPA1.2 Allocation Site proposals (not the subject of this TA).
 - Junction reference 21, NH have commented that this junction is required for assessment as part of the JPA1.2 Allocation Site proposals (not the subject of this TA).
 - Junction reference 19 (the M60 / M62 Junction 18 – Simister Island) is the subject of an ongoing Development Consent Order Application.

- 12.3.7 The study area for individual junction assessments therefore comprises 19 junctions, plus a review of the impacts at the M62/M60 Junction 18 (Simister Island).
- 12.3.8 For the 19 junctions which require individual junction assessments, individual junction models have been built using relevant industry standard analysis software (Junctions 9 / LinSig / Transyt / VISSIM).
- 12.3.9 Due to the number of scenarios and the model file size, it has not been possible to export model outputs. Given this, the individual model files will be provided to the KS.

12.4 Junction Assessments - Key Performance Indicators

- 12.4.1 The junction analysis has been carried out using:
- Junctions 9 for priority T junctions and crossroads (PICADY)
 - Junctions 9 for priority roundabouts (ARCADY)
 - LinSig for signalised junctions
 - Transyt for the M62 Junction 19 and the M66 Junction 2 (including Wash Lane junction).
 - VISSIM for M66J3
- 12.4.2 For Junctions 9 (ARCADY and PICADY), the key junction performance indicators are:
- 'Ratio of Flow to Capacity' (RFC) values, where a value of 1.00 indicates that the junction is operating at its theoretical capacity
 - Max queue lengths (MQ) measured in passenger car units (PCU).
 - Average delays provided in sec/PCU
- 12.4.3 For LinSig, the key junction performance indicators are:
- Degree of Saturation (DegSat) values, where a value of 100% indicates that the junction is operating at its theoretical capacity.
 - Mean Max Queue lengths (MMQ) measured in passenger car units (PCU).
 - Average delays provided in sec/PCU
- 12.4.4 For Transyt, the key junction performance indicators are:
- Queue lengths (Q) measured in passenger car units (PCU).
 - Average delays provided in sec/PCU
- 12.4.5 For VISSIM, the key junction performance indicators are:
- Queue lengths (Q) measured in passenger car units (PCU).
 - Journey Times

12.5 Junction Assessments – Full Results

- 12.5.1 For each scenario and at each junction, the key performance indicators as reported in the full model outputs (**Appendix P**), have been extracted and are presented in Tabulated format for ease of reference.
- TIA1:2022 Baseline / 2039 Do Minimum Policy On – Run 0
 - TIA2:2032 DM Without M62 Access Solution – Run 5

- TIA3:2032 DS1 Without M62 Access Solution – Run 6
- TIA4:2032 DS3 Without M62 Access Solution – Run 8
- TIA6:2039 DM Without M62 Access Solution – Run 10
- TIA7: 2039 DS1 Without M62 Access Solution - Run 11
- TIA8: 2039 DS1 With M62 Access Solution - Run 12
- TIA9:2039 DS3 Without M62 Access Solution – Run 13
- TIA10: 2039 DS3 With M62 Access Solution – Run 14
- TIA11: 2039 Whittle Lane Sensitivity – Run 17
- TIA12: 2039 DS1 - With M62 Access Solution - Run 18
- TIA13: 2039 South Heywood Sensitivity – Run 19
- TIA14: 2039 DS3 With M62 Access Solution Policy On (TT) scenario – Run 20
- TIA15: 2039 Without M62 Access Solution Policy On – Run 21
- TIA16: 2039 DS1 With M62 Access Solution Exc JPA 1.2 - Run 22.1
- TIA17: 2039 DS1 Without M62 Access Solution Exc JPA 1.2 - Run 22.2
- TIA18: 2039 DS1 Without M62 Access Solution Exc JPA 1.2 - Run 22.3
- TIA19: 2039 DS3 With M62 Access Solution - Run 25

12.6 Junction Assessments Summary Results

- 12.6.1 In all, the assessment of 19 junctions, across 3 peak and interpeak periods, and across 25 scenarios (TA, ES and sensitivity scenarios), for each junction approach / link, would result in over 6000 results, each citing, degree of saturation, delay and a queue forecast.
- 12.6.2 The challenge is understanding what the results show. To overcome this challenge, first the key assessment scenarios have been isolated and then the worst operational capacity results on the worst performing arm of each junction have been presented. Those results in terms of % capacity (Ratio Flow to Capacity / Degree of Saturation) values are set out in **Appendix Q** and have reduced to 855 results. Those allow a consideration of whether the worst performing link in a junction is forecast to become overloaded, and whether that would be happening, even without the bringing forward of the Proposed Scheme or the whole JPA1.1 or JPA1.2 Allocation Sites. The results allow the level of development impact to be gauged at a high level. The full details of the junction assessments have been described in **Section 12.5** of this TA and the full results can be interrogated further if required.
- 12.6.3 Although this TA presents results for all scenarios, the number of scenarios considered in the more detailed investigations into junction performance, queues and delays, have been reduced in line with the request of the KS. Where operational capacity assessment results indicate junctions performing over capacity in those key scenarios, the results for queuing and delay have been further investigated and reported.
- 12.6.4 Tables have been prepared to present the summary results. These tables show the maximum % level of operational performance on any arm of the junction in each scenario and they are presented as follows:

Appendix Q: All Tested Scenarios

Appendix R: Runs 0, 20, 21, 25

Appendix S: Runs 10, 13, 14

Appendix T: Runs 12, 14

Appendix U: Runs 5, 8

Appendix V: Runs 14, 19

Appendix W: Runs 17, 13

Appendix X: Run 21, 22.3

Appendix Y: Run 13, 22.2

12.7 Merge Diverge Assessments

- 12.7.1 The numerous assessment scenarios provided the traffic volume forecasts for the SRN mainline, diverge and merge traffic streams. Those flow forecasts have been used to evaluate the adequacy of the existing merge and diverge lane arrangements at M66 J2, M66 J3 and M62 J19. Merge and diverge assessments have also been undertaken for M62 J18, although the junction improvement being brought forward for that junction by NH under DCO has been designed to accommodate all PfE development.
- 12.7.2 A comprehensive merge / diverge assessment has been undertaken covering all the relevant with development scenarios for all the connector roads in the study area, see **Appendix Z**.
- 12.7.3 **Appendix Z** shows the location of each of the connector roads, the form of the merge / diverge Including the number of lanes on the connector road, and on the mainstream of the motorway upstream and downstream of the junction.
- 12.7.4 For each merge / diverge, the existing layout diagram from CD122 is reproduced along with an aerial image of the current merge / diverge. The traffic flows on the motorway mainline and the merge / diverge are given in a table covering all scenarios. These flows are then plotted on the relevant merging / diverging diagram from CD122, with the area of the graph representing the current layout outlined in red. A summary table is then given for each merge / diverge Identifying the layout suggested for each flow scenario and whether the existing layout is adequate. In the majority of cases the existing arrangements are adequate.
- 12.7.5 The outputs of the assessment are shown graphically identifying merges / diverges where further investigation may be required. It should be noted that in some cases the arrangement type which has been identified as being necessary, is not the arrangement type which exists. It can be seen that in many of those cases, if the traffic volumes increased further, the requirement would move to the arrangement type which already exists. In such cases that has not been identified as a shortcoming. Finally, a table summarises the output of the assessments identifying each scenario which may warrant further investigation.

12.8 Request to Report Results from Fewer Scenarios

- 12.8.1 At the Highways Technical Working Group meeting 2 (13th February 2025), the KS were keen to reduce the overall quantum of analysis to just several key scenarios. At that point in time, the modelling scenarios had already been progressed and individual junction modelling had been undertaken. Although this TA presents results for all the scenarios listed above, the number of scenarios considered in the more detailed investigations into junction performance, queues and delays, have been reduced in line with that HTWG request.

13.0 Traffic Impact Assessment – Junction Analysis - Key Findings

13.1 Introduction

- 13.1.1 This section sets out the key findings from the junction assessments. It provides an overview of the M66 Junction 3 VISSIM modelling which has been undertaken by WSP Microsimulation (Birmingham Office), commentary of the development impacts at the M62 Junction 18 and then the key findings from the 19 individual junction models which have been carried out by TT in the Policy On, Policy Off and Sensitivity Test Scenarios.
- 13.1.2 It also provides the merge / diverge assessments for the strategic road network junction slip roads.

13.2 M66 Junction 3 VISSIM Modelling

- 13.2.1 The VISSIM Assessments undertaken by WSP Microsimulation (Birmingham) are presented in their report attached as **Appendix E**.
- 13.2.2 As a precursor to setting out individual junction modelling results which follow in this section, the M66 J3 results can be described separately. The findings of the M66 J3 VISSIM modelling are as follows:
- In the 2039 Policy On DS (Run 21), which includes the cumulative development and excludes the M62 access solution, the proposed junction improvement results in significant junction operational improvements over the existing layout in the Base.
 - In the 2039 Policy Off DS (Run 14), which includes the cumulative development and the M62 access solution, the proposed junction improvements result in betterments over the 2039 Policy Off DM on the existing layout. In terms of queues, those reduce on 3 out of the 4 arms. The arm subject to an increase in queuing is the M66 Northbound off-slip and the maximum DS queue is 233m. NH have described the safe operation maximum queue, as 260m.
- 13.2.3 When considering the various scenarios, which follow, it should be recognised that the M66 J3 is forecast to operate well and better than the base case, with the proposed mitigation in place. The proposed mitigation is suitable in all cases.

13.3 M60 Junction 18 (Simister Island)

- 13.3.1 National Highways are bringing forward a junction improvement at Simister Island through the Development Consent Order (DCO) process. Junction layout plans submitted to the DCO inquiry were used to code that future scheme into the NGTM Saturn model used in this TA. The traffic forecasts produced by the NGTM, therefore take account of the future junction layout.
- 13.3.2 Moreover, the NH DCO scheme takes account of Northern Gateway, as the modelling which has informed the NH DCO submission included traffic associated with PfE.
- 13.3.3 The NH DCO evidence has been reviewed and the 2044 AM, interpeak and PM peak hour traffic volumes have been extracted and those are compared against NTGM highest (Policy off cumulative development) traffic flows in **Table 13.1**.

Table 13.1. Simister Island Junction Traffic flow comparison

Link Desc.	Run 13			Run 14			National Highways Simister Island Modelling (2044)			NH minus Run 13			NH minus Run 14		
	AM Peak	Inter Peak	PM peak	AM Peak	Inter Peak	PM peak	AM Peak	Inter Peak	PM peak	AM Peak	Inter Peak	PM peak	AM Peak	Inter Peak	PM peak
EB Approach to Off Slip	7087	6705	7916	7077	6699	7728	7637	7070	8468	+550	+365	+552	+560	+371	+740
EB Intra-Junction	4125	4141	4557	4031	4069	4333	4189	4140	4953	+64	-1	+396	+158	+71	+620
EB Off Slip	2962	2564	3359	3046	2630	3396	3448	2930	3515	+486	+366	+156	+402	+300	+119
On	1639	1286	1520	1465	1108	1305	1694	1978	1788	+55	+692	+268	+229	+870	+483
WB Approach to Off Slip	5521	5291	5883	5309	5347	6077	5715	5951	6292	+194	+660	+409	+406	+604	+215
Intra-Junction	3914	4192	4578	3783	4280	4726	4617	4852	5043	+703	+660	+465	+834	+572	+317
Off	1607	1099	1305	1527	1067	1352	1098	1099	1249	-509	0	-56	-429	+32	-103
On	1693	1502	1718	1830	1432	1596	2751	2752	3573	+1058	+1250	+1855	+921	+1320	+1977
NB Approach to Off Slip	4486	3455	4605	4467	3461	4591	5810	5205	6742	+1324	+1750	+2137	+1343	+1744	+2151
Intra-Junction	3037	2438	3434	2956	2453	3431	2970	2240	3365	-67	-198	-69	+14	-213	-66
Off	1450	1017	1172	1511	1008	1160	2840	2965	3377	+1390	+1948	+2205	+1329	+1957	+2217
On	1570	1393	1621	1632	1346	1589	1617	1573	1780	+47	+180	+159	-15	+227	+191
SB Approach to Off Slip	5045	3598	4779	5044	3362	4467	5218	4378	4818	+173	+780	+39	+174	+1016	+351
Intra-Junction	3109	1792	2696	3216	1764	2675	3637	2620	2859	+528	+828	+163	+421	+856	+184
Off	1936	1806	2083	1829	1597	1792	1581	1758	1959	-355	-48	-124	-248	+161	+167
On	1001	546	889	930	576	988	648	758	728	-353	+212	-161	-282	+182	-260

- 13.3.4 It can be seen that the traffic flows upon which the case for the DCO has been promoted are higher than the highest flows derived from the cumulative development scenarios. In simple terms, the DCO scheme will accommodate the PFE developments including JPA1.1 and JPA1.2.

13.4 Individual Junction Models - Do Minimum Tests

- 13.4.1 The highway network has been tested in the years 2032 and 2039 in order to forecast the likely peak hour operational conditions on the network without the JPA 1.1 or JPA 1.2 Allocation Sites being developed. Those tests provide future year baseline conditions against which the impacts of the allocations can be gauged.

2039 Do Minimum – Policy On (Run 0)

- 13.4.2 The Run 0 testing (**Appendix Q**) shows that all but one of the junctions within the study area are forecast to operate within capacity. The only junction forecast to exceed its capacity is the M66 J2, with a highest capacity result of 101% in the AM peak hour.

2032 Do Minimum – Policy Off (Run 5)

- 13.4.3 The Run 5 testing identified that four junctions across the study area are forecast to operate in excess of their capacity in the peak hours. Those were:

- M62 J19, 115% AM peak
- the A58 Bridge Street / Pilsworth Road 118% AM peak
- Pilsworth Road / Moss Hall Road - South – 102% AM peak
- M66 J2 113% AM Peak and 100% PM peak

- 13.4.4 Again, an important finding is that without the Policy On strategy, elements of the study area highway network are forecast to be overloaded in 2032, even without further development.

2039 Do Minimum – Policy Off, Non- Vision-Led (Run 10)

- 13.4.5 The Run 10 testing identified that the same four junctions across the study area are forecast to operate in excess of their capacity in the peak hours, and to a greater extent than in 2032. Those were:

- M62 J19, 152% AM peak
- the A58 Bridge Street / Pilsworth Road 126% AM peak
- Pilsworth Road / Moss Hall Road - South 102% AM peak
- M66 J2 124% AM Peak and 108% PM peak

- 13.4.6 An important finding is that without the Policy On strategy, elements of the study area highway network are forecast to be significantly overloaded in 2039, even without further development.

13.5 Individual Junction Models - Vision-Led, Policy On Assessments

Assessment Comparison 1

2039 Do Minimum - Run 0 vs 2039 Do Something (Full Cumulative Allocations JPA1.1 & JPA1.2, With and Without the M62 Access Solution) - Runs 20 and 21

- 13.5.1 The results for Runs 0 vs 20 & 21 have been extracted from the overview table and are provided in **Appendix R**. Full modelling results are found in **TIA1**, **TIA14** and **TIA15**.
- 13.5.2 The DM (Run 0) results show that the local highway network within the study area is forecast operate adequately in 2039 in the Vision-Led scenario.
- 13.5.3 In Run 0, out of the 18 junctions assessed individually, only M66 J2 is forecast to become overloaded and that is by only 1% and only in the AM peak hour. Effectively, all junctions are forecast to operate within capacity.

Run 20 - 2039 Vision-Led Do Something -Full Cumulative Allocations JPA1.1 & JPA1.2, With the M62 Access Solution

- 13.5.4 The DS with the M62 Access Solution (Run 20) results do show a worsening in peak hour performance with the addition of the development, but the forecast operational levels may be considered to be tolerable.
- 13.5.5 Of the 18 junctions assessed, 15 are forecast to operate within 90% capacity in all three peak hours.
- 13.5.6 The three junctions which are forecast to operate close to, at, or over capacity are:
- A58 Bridge Street / Pilsworth Road is forecast to operate at 102.8% of capacity in the AM peak hour.
 - M66 J2 is forecast to operate at 104% in the AM peak hour and 101% in the PM peak hour.
 - The A56 Manchester Road / Hollins Brow is forecast to operate at 98.3% in the AM peak hour and 91.5% in the PM peak hour.
- 13.5.7 **Table 13.2** provides queues and delays at the A58 Bridge Street / Pilsworth Road junction, for the arms which are forecast to operate over 90% capacity.

Table 13.2: Queues and Delays at A58 Bridge Street / Pilsworth Road (Run 0 vs Run 20)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
Pilsworth Road Right Left	97	137	+40	2:06	2:46	+0:40
A58 Bridge Street (W) Ahead Right	163	217	+54	1:24	2:05	+0:41

- 13.5.8 At the A58 Bury Road / Pilsworth Road, **Table 13.2** shows that queue and delay increases are forecast. The longest queue occurs on the A58 Bridge Street (Western Arm), and that totals 217m in the DS (Run 20), up from 163m in the DM (Run 0). The largest delay occurs on Pilsworth Road, and totals 2min:46sec in the DS (Run 20), which is a 40 second increase over the DM (Run 0). These forecast queue and delay impacts are not significant.
- 13.5.9 **Table 13.3** provides queues and delays at the M66 J2, for the arms which are forecast to operate over 90% capacity.

Table 13.3: Queues and Delays at M66 Junction 2 (Run 0 vs Run 20)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
M66 Northbound Off-Slip, N/S Lane	200	661	+461	1:57	4:52	+2:55
M66 Northbound Off-Slip, Middle Lane	174	169	-5	1:51	1:49	- 0:02
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	93	122	+29	1:25	1:43	+0:18
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	83	162	+79	1:11	2:02	+0:51
PM peak hour						
M66 Northbound Off-Slip, N/S Lane	98	445	+347	1:07	3:46	+2:39
M66 Northbound Off-Slip, Middle Lane	93	128	+35	0:59	1:22	+0:23
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	37	70	+33	0:23	0:51	+0:28
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	37	88	+51	0:19	1:09	+0:50

- 13.5.10 At the M66 J2, **Table 13.3** shows that the northbound off-slip is forecast to be subject to the greatest impact, with a maximum queue of 661m in the DS (Run 20), which is 461m greater than the DM (Run 0). The slip road arrangement is a lane drop, which commences 710m from the NB slip road stop line at the gyratory. Considering the DMRB suggested deceleration length of 110m, the queuing length on this slip road is therefore 600m and the 661m queue in the DS (Run 20) does exceed that queue limit by 61m. The DS test here includes all JPA1.1 and JPA1.2 traffic and the wider network model includes the M62 Access Solution. Given this, some form of improvement is expected to be required at this junction, when the wider allocation is delivered. The Proposed Scheme / Application Quantum test (Run 22.3) forecasts the queue to be within the queue limit, as demonstrated later in this section. In terms of the delay, the largest delay is forecast in the AM peak hour on the northbound off-slip, and total 4min:52sec in the DS (Run 20), which is a 2min:55sec increase over the DM (Run 0).
- 13.5.11 The results in **Table 13.3** also indicate that additional queuing within the circulatory carriageway of the gyratory is forecast to be 162m in the DS (Run 20) AM peak, and the delay increases are less than a minute.
- 13.5.12 **Table 13.4** provides queues and delays at the A56 Manchester Road / Hollins Brow junction, for the arms which are forecast to operate over 90% capacity.

Table 13.4: Queues and Delays at A56 Manchester Road / Hollins Brow (Run 0 vs Run 20)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
Hollins Brow Left Right	75	115	+40	0:45	1:27	+0:42
Manchester Road (N) Left Ahead	83	149	+66	0:33	0:56	+0:24
PM peak hour						
Hollins Brow Left Right	91	91	0	0:46	0:48	+0:02
Manchester Road (N) Left Ahead	86	91	+5	0:34	0:37	+0:03

13.5.13 At the A56 Manchester Road / Hollins Brow junction, **Table 13.4** indicates that in the AM peak hour, the Manchester Road northern arm is forecast to be subject to the largest queue. The queue in the DS (Run 20) is forecast to be 149m, which is 66m longer than in the DM (Run 0). A 149m queue would not block back to Lawrence Street and in any case, the Lawrence Street junction features a keep clear road marking, so should a queue extend to this junction, the queue would not block the minor arm of the junction. In terms of delays in the AM peak, the largest delay is forecast to occur on the Hollins Brow arm, totalling 1min:27sec in the DS, which is a 42 second increase over the DM. These forecast queues can be accommodated on the network and delay impacts are not significant.

13.5.14 The results in **Table 13.4** also demonstrate that the cumulative allocations will have entirely immaterial impacts during the PM peak hour.

13.5.15 In summary, the Run 20 DS, which includes the M62 Access Solution, the full JPA1.1 & JPA1.2 allocations, in Policy On, suggests that all junctions will operate within acceptable limits with the exception of the M66 J2, where the queue on the northbound off slip and on the circulatory carriageway in the AM peak hour would exceed the available queueing space. The M66 northbound off slip delay is 4min:52min.

Run 21 - 2039 Vision-Led Do Something -Full Cumulative Allocations JPA1.1 & JPA1.2, Without the M62 Access Solution

13.5.16 The DS without the M62 Access Solution (Run 21) results show a worsening in peak hour performance with the addition of the development.

13.5.17 Of the 18 junctions assessed, 14 are forecast to operate within 90% capacity in all three peak hours.

13.5.18 The four junctions which are forecast to operate close to, at or over capacity are:

- M62 J19 is forecast to operate at 117% in the AM peak hour
- A58 Bridge Street / Pilsworth Road is forecast to operate at 105.8% of capacity in the AM peak hour.
- M66 J2 is forecast to operate at 101% in the AM peak hour and 100% in the PM peak hour.
- The A56 Manchester Road / Hollins Brow junction is forecast to operate 103.9% in the AM peak hour and 91.9% in the PM peak hour.

13.5.19 **Table 13.5** provides queues and delays at the M62 J19, for the arms which are forecast to operate over 90% capacity.

Table 13.5: Queues and Delays at M62 J19 (Run 0 vs Run 21)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
M62 Westbound Offslip, O/S Lane	72	738	+666	0:45	8:14	+7:29
A6046 Middleton Road Northbound, N/S Lane	24	89	+65	0:29	2:29	+2:00
A6046 Middleton Road Northbound, O/S Lane	36	426	+390	0:41	6:49	+6:08
Circulatory between M62 WB off slip and Middleton Road, O/S Lane	90	348	+258	0:15	1:55	+1:40

13.5.20 At the M62 J19, **Table 13.5** shows that in the DS without the M62 Access Solution (Run 21), this junction is forecast to be subject to significant queuing and delays in the AM peak hour. Both the longest queue and the largest delay occur on the M62 westbound off-slip, and those are forecast to be 738m and 8min:14sec respectively in the DS (Run 21). The total queue of 738m on the M62 westbound slip road exceeds the queue limit, which is 280m (480m slip length, minus 90m taper, minus 110m deceleration length). The long queues and large delays do not occur in the DM, therefore the impacts are associated with the cumulative Northern Gateway proposals.

13.5.21 The Middleton Road (southern arm, northbound movement) is also forecast to be subject to a long queue (426m) and a large delay (6min:08sec).

13.5.22 The circulatory between the M62 westbound off slip and Middleton Road is forecast to become oversaturated, with queues which cannot be contained within this section of the gyratory. Blocking back to other arms of the junction would occur.

13.5.23 The findings show that without the M62 Access Solution, the existing layout of the M62 J19 would not be capable of accommodating the full cumulative development of JPA1.1 and JPA1.2, in Policy On.

13.5.24 For the M62 J19 to operate adequately with the full allocations coming forward, some form of intervention at this junction is required. That could be the M62 Access Solution or improvements at J19, such as those which National Highways are investigating. The investigation is at Project Control Framework (PCF) Stage 0 and there are currently 3 options being considered, which are the M62 Access Solution (tested under Run 20), and 2 alternative interventions at M62 J19.

13.5.25 **Table 13.6** provides queues and delays at the A58 Bridge Street / Pilsworth Road, for the arms which are forecast to operate over 90% capacity.

Table 13.6: Queues and Delays at A58 Bridge Street / Pilsworth Road (Run 0 vs Run 21)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
Pilsworth Road Right Left	97	172	+75	2:06	3:25	+1:19
A58 Bridge Street (W) Ahead Right	163	245	+82	1:24	2:43	+1:19

13.5.26 At the A58 Bridge Street / Pilsworth Road, **Table 13.6** shows that that whilst queues and delays are forecast, those are not significant. The longest queue occurs on the A58 Bridge Street (Western Arm), and that totals 245m in the DS (Run 21), up from 163m in the DM (Run 0), i.e., additional 82m of queueing. The largest delay occurs on Pilsworth Road, forecast to be 3min:25sec in the DS, which is only a 1min:19sec increase over the DM. These forecast queue and delay increases are not significant.

13.5.27 **Table 13.7** provides queues and delays at the M66 J2, for the arms which are forecast to operate over 90% capacity.

Table 13.7: Queues and Delays at M66 Junction 2 (Run 0 vs Run 21)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
A58 Bury New Road, Circulating, Middle Lane	78	106	+28	0:13	0:44	+0:31
M66 Northbound Off-Slip, N/S Lane	200	580	+380	1:57	4:20	+2:23
M66 Northbound Off-Slip, Middle Lane	174	169	-5	1:51	1:49	-0:02
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	93	81	-12	1:25	1:05	-0:20
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	83	183	+100	1:11	2:57	+1:46
PM peak hour						
M66 Northbound Off-Slip, N/S Lane	98	331	+233	1:07	2:56	+1:49
M66 Northbound Off-Slip, Middle Lane	93	132	+39	0:59	1:20	+0:21
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	37	94	+57	0:23	1:37	+1:14
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	37	99	+62	0:19	1:17	+0:58

13.5.28 At the M66 J2, **Table 13.7** demonstrates that the northbound off-slip will be subject to the greatest impact, with a maximum queue of 580m in the DS (Run 21), which is 380m greater than the DM. The queuing length on this slip road is 600m. The queue is therefore just contained within that queue limit. In terms of the delay, the largest delay occurs in the AM peak hour and total 4min:20

sec in the DS, which is a 2min:23sec increase over the DM. The slip road queues are therefore within the queue limits, but the forecast delays are such that an intervention should be investigated.

13.5.29 The results in **Table 13.7** also demonstrate that there is additional queuing within the circulatory carriageway of the gyratory, which would exceed the available queueing space.

13.5.30 **Table 13.8** provides queues and delays at the A56 Manchester Road / Hollins Brow junction, for the arms which are forecast to operate over 90% capacity.

Table 13.8: Queues and Delays at A56 Manchester Road / Hollins Brow (Run 0 vs Run 21)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
Hollins Brow Left Right	75	208	+133	0:45	2:42	+1:58
Manchester Road (S) Right	2	11	+9	0:29	3:51	+3:23
Manchester Road (N) Left Ahead	83	418	+335	0:33	2:02	+1:29
PM peak hour						
Hollins Brow Left Right	91	90	-1	0:46	0:49	+0:03
Manchester Road (S) Ahead	19	17	-2	0:34	0:36	+0:01
Manchester Road (N) Left Ahead	86	91	+5	0:34	0:37	+0:03

13.5.31 At the A56 Manchester Road / Hollins Brow junction, **Table 13.8** shows that in the AM peak hour, the Manchester Road northern arm is forecast to be subject to the largest queue. The DS queue is forecast to be 418m, which is 355m longer than the DM queue. This queue would block back to Lawrence Street however, the Lawrence Street junction features a keep clear road marking, so when a queue extends beyond this junction, it would not block the minor arm of the junction. In terms of delays in the AM peak, the largest delay is forecast to occur on the Manchester Road southern arm, totalling 3min:51sec in the DS, which is a 3min:23sec increase over the DM.

13.5.32 The results in **Table 13.8** also demonstrate that the cumulative allocations will have entirely immaterial impacts during the PM peak hour.

13.5.33 In summary, the Run 21 DS assessment of the full JPA1.1 & JPA1.2 allocations in Policy On, excluding the M62 Access Solution, suggests that most junctions will operate within acceptable limits with the exception of the M62 J19, the M66 J2, and Hollins Brow. The M62 J19 is forecast to be subject to significant queues, over the available slip road and circulatory queue limits and long delays. At the M66 J2 the circulatory would be subject to queues in excess of the queueing capacity.

Consideration of 2039 DS Proposed Scheme Quantum, Policy On Without the M62 Access Solution (Run 22.3)

13.5.34 Having established the forecast conditions with full cumulative development, this section seeks to show the lesser impacts that would be associated with just the Proposed Scheme (i.e., 600,000 sqm of employment land uses) against the cumulative JPA1.1 and JPA1.2 Allocations. Both tests are in 2039, with Policy On and without the M62 Access Solution.

- 13.5.35 The overview results for Runs 22.3 vs 21 are provided in **Appendix X**. Full modelling results are found in **TIA18, TIA15**.
- 13.5.36 The 2039 Policy On test for the Proposed Scheme quantum (Run 22.3), without a M62 access solution in place, unsurprisingly shows a lesser impact as compared to the impacts of the cumulative development of the JPA1.1 and 1.2 Allocation Sites.
- 13.5.37 In Run 22.3, of the 18 junctions assessed, 14 are forecast to operate within 90% capacity in all three peak hours.
- 13.5.38 The four junctions which are forecast to operate close to, at or over capacity (over 90%) are:
- The M62 J19, which is forecast to operate at 103% in the AM peak hour, reducing from 117% in Run 21.
 - The A58 Bridge Street / Pilsworth Road junction, which is forecast to operate at 96.4% in the AM peak hour, reducing from 105.8% in Run 21.
 - The M66 J2, which is forecast to operate at 101% in the AM peak hour and 99% in the PM peak hour, similarly, to Run 21 where it is forecast to operate at 101% and 100% in the AM and PM peak hours respectively.
 - The A56 Manchester Road / Hollins Brow, which is forecast to operate at 96.4% in the AM peak hour and 90.7% in the PM peak hour, reducing from 103.9% and 91.9% in Run 21, in the AM and PM peak hours respectively.
- 13.5.39 **Table 13.9** provides the forecast queues and delays at the M62 J19, for the arms which are forecast to operate over 90% capacity.

Table 13.9: Queues and Delays at M62 J19 (Run 21 vs Run 22.3)

Arm	Queues (metres)			Delays (Min:Sec)		
	Run 21	Run 22.3	Diff.	Run 21	Run 22.3	Diff.
AM peak hour						
M62 Westbound Offslip, O/S Lane	738	115	-623	8:14	0:59	-7:15
A6046 Middleton Road Northbound, N/S Lane	89	89	0	2:29	2:28	-0:01

- 13.5.40 At the M62 J19, **Table 13.9** shows that with only the Proposed Scheme included in the DS (Run 22.3), in the Policy On, without M62 Access Scenario (Run 22.3), this junction is forecast to operate significantly better than in the DS cumulative allocations scenario (Run 21).
- 13.5.41 The queue on the M62 westbound off-slip is forecast to reduce from 738m (Run 21) to 115m (Run 22.3). This queue is now contained within the 280m queue limit on the slip road. The delay on this arm reduces to just 59 seconds.
- 13.5.42 Middleton Road is still forecast to be subject to queues and delays in Proposed Scheme assessment (Run 22.3), however those are typically half the level forecast in Run 21. The queue of 229m can be accommodated on Middleton Road and the average delay on this arm is 3min:41sec.

13.5.43 The circulatory between M62 WB off slip and Middleton Road is forecast to be subject to a 259m queue in the outside lane, which would extend around the gyratory as far as the M62 eastbound on-slip, within the available queuing length.

13.5.44 **Table 13.10** provides queues and delays at the A58 Bridge Street / Pilsworth Road, for the arms which are forecast to operate over 90% capacity.

Table 13.10: Queues and Delays at A58 Bridge Street / Pilsworth Road (Run 21 vs Run 22.3)

Arm	Queues (metres)			Delays (Min:Sec)		
	Run 21	Run 22.3	Diff.	Run 21	Run 22.3	Diff.
AM peak hour						
Pilsworth Road Right Left	172	99	-73	3:25	1:51	-1:33
A58 Bridge Street (W) Ahead Right	245	157	-88	2:43	1:13	-1:30

13.5.45 At the A58 Bridge Street / Pilsworth Road junction, **Table 13.10** shows that that the Proposed Scheme has a significantly lower impact than the cumulative allocations. In the Proposed Scheme assessment, the longest queue occurs on the A58 Bridge Street (Western Arm), and that totals 157m (Run 22.3), down from 245m in the cumulative assessment. The largest delay occurs on Pilsworth Road, and totals 1min:51sec in the Proposed Scheme assessment, which is a reduction of 15 seconds in comparison to the Do Minimum (See **Table 13.2**). The forecast queues and delays in Run 22.3 are lower than the DM (Run 0).

13.5.46 **Table 13.11** provides queues and delays at the M66 J2, for the arms which are forecast to operate over 90% capacity.

Table 13.11: Queues and Delays at M66 Junction 2 (Run 21 vs Run 22.3)

Arm	Queues (metres)			Delays (Min:Sec)		
	Run 21	Run 22.3	Diff.	Run 21	Run 22.3	Diff.
AM peak hour						
A58 Bury New Road, Circulating, Middle Lane	106	96	-10	0:44	0:24	-0:20
M66 Northbound Off-Slip, N/S Lane	580	566	-14	4:20	4:12	-0:08
M66 Northbound Off-Slip, Middle Lane	169	169	0	1:49	1:49	0
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	81	83	2	1:05	1:14	+0:09
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	183	83	-100	2:57	1:12	-1:45
PM peak hour						
M66 Northbound Off-Slip, N/S Lane	331	128	-203	2:56	1:23	-1:33
M66 Northbound Off-Slip, Middle Lane	132	116	-16	1:20	1:10	-0:10
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	94	56	-38	1:37	0:50	-0:46
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	99	88	-11	1:17	1:05	-0:12

- 13.5.47 At the M66 J2, **Table 13.11** demonstrates that the northbound off-slip in the AM peak hour, is forecast to be subject to the longest queue and largest delay, with a maximum queue of 566m in the Proposed Scheme Assessment. The slip road arrangement has a queuing length of 600m and therefore the forecast queue is contained within that queue limit. In terms of the delay, the largest delay occurs in the AM peak hour on the M62 northbound off-slip and total 4min:12sec. Further work will be undertaken to establish whether the delays can be reduced through signal timing changes.
- 13.5.48 The results in **Table 13.11** also demonstrate that there is additional queuing within the circulatory carriageway of the gyratory however the queues are contained within the queuing space available.
- 13.5.49 **Table 13.12** provides queues and delays at the A56 Manchester Road / Hollins Brow junction, for the arms which are forecast to operate over 90% capacity.

Table 13.12: Queues and Delays at A56 Manchester Road / Hollins Brow (Run 21 vs Run 22.3)

Arm	Queues (metres)			Delays (Min:Sec)		
	Run 21	Run 22.3	Diff.	Run 21	Run 22.3	Diff.
AM peak hour						
Hollins Brow Left Right	208	102	-106	2:42	1:14	-1:28
Manchester Road (S) Right	11	2	-9	3:51	0:31	-3:21
Manchester Road (N) Left Ahead	418	120	-298	2:02	0:46	-1:15
PM peak hour						
Hollins Brow Left Right	90	86	-4	0:49	0:45	-0:04
Manchester Road (S) Ahead	17	16	-1	0:36	0:31	-0:05
Manchester Road (N) Left Ahead	91	87	-4	0:37	0:35	-0:02

- 13.5.50 At the A56 Manchester Road / Hollins Brow junction, **Table 13.12** shows that in the AM peak hour, the Manchester Road northern arm is forecast to be subject to the largest queue. The Proposed Scheme, DS (Run 22.3) queue is forecast to be 120m. A 120m queue would not block back to Lawrence Street. In terms of delays associated with the Proposed Scheme (Run 22.3), the largest delay is forecast to occur in the AM peak on the Hollins Brow arm, totalling 1min:14sec. These forecast queues and delays appear to be tolerable and are not significantly different to the DM (**See Table 13.4**).
- 13.5.51 In summary, the Run 22.3 assessment of the Proposed Scheme, in Policy On, excluding the M62 Access Solution, suggests that all junctions will operate within acceptable limits, although there is a delay of 4min:12sec on one approach of the M66 J2.
- 13.5.52 The Proposed Scheme, Policy On test has only been carried out for the Without M62 Access Scenario. Should the M62 Access be delivered prior to the completion of the Proposed Scheme, that would bring benefits to the wider network performance.
- 13.5.53 These operational results show that the Proposed Scheme quantum impacts are acceptable in the key Vision-Led planning scenario.
- 13.5.54 The delivery of the Application quantum would not require the new M62 access junction, but would be part of the traffic generating Cumulative Development which would. Any mitigation required for the bringing forward of both the JPA1.1 and 1.2 Allocation Sites should be proportionally attributed to the Proposed Scheme.
- Run 25 - 2039 Vision-Led Do Something - Full Cumulative Allocations JPA1.1 & JPA1.2, With the M62 Access Solution, Whittle Lane as a public transport link only (closed to general vehicles) and the link to the SHMA included (open)*
- 13.5.55 This scenario provides an assessment of the districts local road Vision, if all aspirations are delivered: Policy On, Western Access, M62 Access Solution, Whittle Lane as a Public Transport only link and the vehicular access via South Heywood open (Run 25). Within this Section the DS (Run 25) capacity results have been compared with the results from the Policy On DM (Run 0).
- 13.5.56 Of the 18 junctions assessed, 14 are forecast to operate within 90% capacity in all three peak hours.

13.5.57 The four junctions which are forecast to operate close to, at or over capacity (over 90%) are:

- A58 Bridge Street / Pilsworth Road is forecast to operate at 114% in the AM peak hour.
- M66 J2 is forecast to operate at 105% in the AM peak hour and 102% in the PM peak hour.
- The A56 Manchester Road / Hollins Brow junction is forecast to operate 99.1% in the AM peak hour and 91.4% in the PM peak hour.
- The A576 Middleton Road / A6045 Heywood Old Road is forecast to operate at 100% in the PM peak hour.

13.5.58 **Table 13.13** provides queues and delays at the A58 Bridge Street / Pilsworth Road, for the arms which are forecast to operate over 90% capacity.

Table 13.13: Queues and Delays at A58 Bridge Street / Pilsworth Road (Run 0 vs Run 25)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
Pilsworth Road Right Left	97	217	+120	2:06	4:38	+2:32
A58 Bridge Street (W) Ahead Right	163	351	+188	1:24	4:47	+3:23

13.5.59 At the A58 Bridge Street / Pilsworth Road, **Table 13.13** shows that that the junction is forecast to be subject to longer queues and longer delays in the DS (Run 25). An interesting comparison is to compare the DS Run 25 with the DS Run 20, which is essentially the same model run, but with Whittle Lane open to all traffic (capacity constrained) and no South Heywood Access.

13.5.60 The Run 20 results are presented in **Table 13.2** and show a maximum queue of 217m (vs 351m in Run 25) and the longest delay is 2min:46sec (vs 4min:47sec in Run 25). This shows that the impact of closing Whittle Lane and opening South Heywood link will result in significant additional queuing and delay in Heywood town centre.

13.5.61 **Table 13.14** provides queues and delays at the M66 J2, for the arms which are forecast to operate over 90% capacity.

Table 13.14: Queues and Delays at M66 Junction 2 (Run 0 vs Run 25)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
A58 Bury New Road, N/S Lane	62	315	+253	0:26	3:07	+2:41
M66 Northbound Off-Slip, N/S Lane	200	586	+386	1:57	4:18	+2:21
M66 Northbound Off-Slip, Middle Lane	174	169	-4	1:51	1:49	-0:02
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	93	58	-35	1:25	0:52	-0:33
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	83	102	+19	1:11	1:28	+0:17
PM peak hour						
A58 Bury New Road, N/S Lane	44	87	+43	0:27	0:58	+0:31
M66 Northbound Off-Slip, N/S Lane	98	482	+384	1:07	4:02	+2:55
M66 Northbound Off-Slip, Middle Lane	93	129	+36	0:59	1:22	+0:23
Circulatory between M66 SB On-slip & M66 NB Off-slip, N/S Lane	37	81	+44	0:23	1:12	+0:49
Circulatory between M66 SB On-slip & M66 NB Off-slip, Middle Lane	37	90	+53	0:19	0:58	+0:39

- 13.5.62 At the M66 J2, **Table 13.14** demonstrates that the northbound off-slip will be subject to the greatest impact, with a maximum queue of 586m in the DS (Run 25), which is 386m greater than the DM (Run 0). The queuing length on this slip road is 600m. The queue is therefore just contained within that queue limit. In terms of the delay, the largest delay occurs in the AM peak hour and totals 4min:18sec in the DS, which is a 2min:21sec increase over the DM. The slip road queues are therefore within the queue limits, but the forecast delays are such that an intervention should be investigated.
- 13.5.63 The results in **Table 13.14** also demonstrate that there is additional queuing within the circulatory carriageway of the gyratory, which would exceed the available queueing space.
- 13.5.64 **Table 13.15** provides queues and delays at the A56 Manchester Road / Hollins Brow junction, for the arms which are forecast to operate over 90% capacity.

Table 13.15: Queues and Delays at A56 Manchester Road / Hollins Brow (Run 0 vs Run 25)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
AM peak hour						
Hollins Brow Left Right	75	113	+38	0:45	1:29	+0:45
Manchester Road (N) Left Ahead	83	156	+73	0:33	1:02	+0:29
PM peak hour						
Hollins Brow Left Right	91	87	-4	0:46	0:46	0:00
Manchester Road (N) Left Ahead	86	89	+3	0:34	0:36	+0:02

- 13.5.65 At the A56 Manchester Road / Hollins Brow junction, **Table 13.15** shows that in the AM peak hour, the Manchester Road northern arm is forecast to be subject to the largest queue. The DS (Run 25) queue is forecast to be 156m. A 156m queue would not block back to Lawrence Street. In terms of delays, the largest is forecast to occur in the AM peak on the Hollins Brow arm, totalling 1min:29sec. These forecast queues and delays appear to be tolerable and are not significantly different to the DM.
- 13.5.66 The results in **Table 13.15** also demonstrate that the cumulative allocations will have entirely immaterial impacts during the PM peak hour.
- 13.5.67 **Table 13.16** provides queues and delays at the A576 Middleton Road / A6045 Heywood Old Road junction, for the arms which are forecast to operate over 90% capacity.

Table 13.16: Queues and Delays at A576 Middleton Road / A6045 Heywood Old Road (Run 0 vs Run 25)

Arm	Queues (metres)			Delays (Min:Sec)		
	DM	DS	Diff.	DM	DS	Diff.
PM peak hour						
A576 Manchester Old Road Ahead Left Right	40	28	-13	0:37	0:18	0:19

- 13.5.68 Although this junction is forecast to operate at capacity, **Table 13.16** demonstrates that the queues and delays will improve in the DS, when compared to the DM.
- 13.5.69 In summary, the Run 25 DS assessment (full JPA1.1 & JPA1.2 allocations in Policy On, including the M62 Access Solution, Whittle Lane as a public transport link and the link to South Heywood) suggests that most junctions will operate within acceptable limits with the exception of A58 Bridge Street / Pilsworth Road junction and the M66 J2. The A58 Bridge Street / Pilsworth Road junction is forecast to be subject to significantly longer queuing and delay, as a result of closing Whittle Lane and providing the South Heywood Link. At the M66 J2 the circulatory would be subject to queues in excess of the queuing capacity.

Policy On, Do Something Testing - Summary

- 13.5.70 The Policy On tests are the appropriate tests for planning purposes and on the basis of these findings it is considered that the traffic impact of the Proposed Scheme, should be regarded as being acceptable. No significant junction improvements beyond those in the identified Common Highways Mitigation Package are required.
- 13.5.71 An improvement at M62 J19 or a new M62 Access junction is likely to be required to support the cumulative development. An intervention to reduce queues and delays at the M66 J2 should also be explored in the delivery of the JPA1.1 and 1.2 Allocation Sites in full.
- 13.5.72 The Policy On tests are based on sustainable travel mitigation being delivered to support the TfGM NG TFD aspirations.

13.6 Non- Vision-Led, Policy Off Assessments (Robust Parameters for National Highways)

Assessment Comparison 3

2039 Baseline – Policy Off (Run 10) Vs 2039 Cumulative Full JPA1.1 and JPA 1.2, With and Without M62 Access Solution (Runs 14 & 13)

- 13.6.1 The purpose of this assessment is to inform consideration of the question, what would operational conditions be like under the robust Policy Off scenario with the full cumulative JPA1.1 and JPA1.2 Allocation Sites coming forward?. That is akin to the scenario envisaged when the Inspector weighed all the evidence, the positive and negative considerations and decided to allocate the sites through PfE. By testing scenarios with and without a new M62 access solution, the effects of introducing that measure can also be gauged.
- 13.6.2 The overview results for Runs 10, 14 & 13 are provided in **Appendix S**. Full modelling results are found in **TIA6**, **TIA10** and **TIA9**. In summary,
- In the 2039 Policy Off DM (Run 10), 12 of the 18 junctions assessed are forecast to operate within 90% capacity in the AM and PM peak hours.
 - In the 2039 Policy Off Cumulative DS Without the M62 Access Solution (Run 13), 7 of the 18 junctions assessed are forecast to operate within 90% capacity in the AM and PM peak hours.
 - In the 2039 Policy Off Cumulative DS With the M62 Access Solution (Run 14), 12 of the 18 junctions assessed are forecast to operate within 90% capacity in the AM and PM peak hours.
- 13.6.3 The difference between the number of junctions forecast to operate over capacity in Run 14 (6 junctions) and in Run 13 (11 junctions) demonstrates the benefit of the M62 Access Solution. I.e., with the Access Solution in place, 5 fewer junctions become overloaded in the Policy Off DS tests.
- 13.6.4 The junctions which feature an arm which is forecast to operate over 90% capacity are summarised in **Table 13.17**, including the high level capacity results (worst case % capacity on any arm)

Table 13.17: Overview of Results in Runs 10, 13 and 14. Worst case capacity on any arm

Jct. Name	AM			PM		
	Run 10	Run 13	Run 14	Run 10	Run 13	Run 14
1. M62 J19	152.0%	173.0%	82.0%	90.0%	96.0%	86.0%

5. Hareshill Rd / Pilsworth Rd	65.8%	91.2%	81.3%	-	-	-
6. A58 Bridge St / Pilsworth Rd	125.8%	155.8%	139.1%	98.7%	108.9%	100.4%
7. Pilsworth Rd / Heywood Distribution Centre	45.0%	98.0%	67.0%	-	-	-
8. Pilsworth Rd / Moss Hall Rd - South	102.0%	77.0%	75.0%	80.0%	101.0%	68.0%
9. Pilsworth Rd / Moss Hall Rd - North	90.4%	66.0%	68.0%	-	-	-
12. M66 J2	124.0%	131.0%	124.0%	108.0%	115.0%	116.0%
14. A6045 Heywood Old Rd / Langley Lane	81.4%	104.4%	73.2%	-	-	-
16. A6045 Manchester Rd / Coronation Avenue	87.8%	99.6%	96.1%	-	-	-
17. Hollins Brow / Hollins Lane	85.0%	100.0%	102.0%	-	-	-
18. Hollins Brow / A56 Manchester Rd	97.1%	100.1%	107.3%	99.1%	110.7%	107.1%
22. A576 Middleton Rd / A6045 Heywood Old Rd	81.4%	92.4%	94.9%	83.3%	92.5%	91.9%

National Highways Junctions

13.6.5 **Table 13.17** shows that the M62 J19 is forecast to be significantly overload in the 2039 DM and the 2039 DS without the access solution (Run 13). The queues and delays are appended to this TA. In summary, in the AM peak hour:

- In the DM (Run 10), the Middleton Road southern arm is forecast to have a 1.1km queue and average delay of 18min:27sec.
- In the DS without M62 Access Solution (Run 13), the M62 westbound off slip is forecast to be subject to a 26min:17sec delay.
- In the DS with M62 Access Solution (Run 14), these overcapacity issues are resolved, as the largest delay on any arm is forecast to be 36 seconds and the longest queue is 138m.

13.6.6 **Table 13.17** shows that the M66 J2 is forecast to be significantly overloaded in all three scenarios (Run 10, 13 and 14). The queues and delays are appended to this TA.

13.6.7 In the AM peak hour:

- In Run 10,
 - M66 northbound off slip, queue = 1.23km, delay = 10min:08sec.
 - A58 Bury New Road, queue = 366m, delay = 3min:01sec.
- In Run 13,
 - M66 northbound off slip, queue = 1.20km, delay = 10min:25sec.
 - A58 Bury New Road, queue = 1.1km, delay = 10min:46sec.
- In Run 14,
 - M66 northbound off slip, queue = 1.23km, delay = 10min:08sec.
 - A58 Bury New Road, queue = 672m, delay = 5min:45sec.

13.6.8 In the PM peak hour:

- In Run 10,
 - M66 northbound off slip, queue = 582m, delay = 4min50sec.
 - A58 Bury New Road, queue = 366m, delay = 3min:01sec.
- In Run 13,
 - M66 northbound off slip, queue = 642km, delay = 7min:44sec.

- A58 Bury New Road, queue = 1.1km, delay = 6min:29sec.
- In Run 14,
 - M66 northbound off slip, queue = 798m, delay = 6min:48sec.
 - A58 Bury New Road, queue = 630m, delay = 6min:17sec.

13.6.9 These queue and delay results at the M62 J2 are significant and show that that if transport strategy does not take effect, this junction will be unacceptably congested even without the development in 2039.

Western Access Junctions

13.6.10 **Table 13.17** shows the merit of the Western Access Junctions, i.e, Pilsworth Road / Moss Hall Lane – South and Pilsworth Road / Moss Hall Lane - North. These junctions (existing layout) are forecast to be over (Pilsworth Road / Moss Hall Lane – South) and approaching (Pilsworth Road / Moss Hall Lane - North) capacity in the 2039 DM, even without the NG development coming forward. At Pilsworth Road / Moss Hall Lane – South, the Moss Hall Road (southern) arm, which incidentally is the site access arm for the proposed scheme, is forecast to be subject to 2min:39sec queue in the DM. This delay will clearly increase significantly if development traffic was added to this junction, without an improvement in place. The introduction of the mitigation layouts (Common Highway Mitigation Package) in Runs 13 and 14 demonstrates the benefits of these improvement works.

Other Local Road Junctions

13.6.11 At the other local junctions, there are some large queues and delays forecast, such as:

- the A58 Bridge Street / Pilworth Road junction featuring a 685m queue and a 9min:54sec delay on its western arm in the AM peak (Run 14).
- the Heywood Distribution Park access road being subject to a delay of 3min:27sec for vehicles egressing the site in the AM peak (Run 13)
- at the A6045 Heywood Old Rd / Langley Lane, the Langley Lane arm being subject to a queue of 168m and a delay of 2min:32sec in the AM peak (Run 13)
- The Hollins Brow arm of the Hollins Lane / Hollins Brow junction being subject to a 168m queue and a 1min:40sec delay in the AM peak (Run 14)
- The Manchester Road Northern arm of the Manchester Road / Hollins Brow junction being subject to a 636m queue and a 3min:45sec delay in the PM peak (Run 13).

13.6.12 The above are a number of examples of the queues and delays occurring in the Policy Off scenarios. A significant portion of the impact is attributable to background growth and these impacts cannot be mitigated by highway works due to the lack of highway land available. Given this, it is imperative that the vision is to enhance and promote sustainable modes of travel, to accord with policy and to rely on the junction assessments presented in the previous Policy On section.

2039 Policy Off Testing - Summary

- 13.6.13 In summary, in Policy Off, the M62 J19 is significantly overloaded and subject to long queues and large delays in the DM and the DS without M62 Access Solution, however it is resolved if the M62 Access Solution is brought forward.
- 13.6.14 The queue and delay results at the M62 J2 are significant and show that that if transport strategy does not take effect, this junction will be unacceptably congested even without the development in 2039.
- 13.6.15 The assessments of the Pilsworth Road / Moss Hall Lane – South and Pilsworth Road / Moss Hall Lane - North junctions show the merit of the Western Access proposals. These junctions (existing layout) are forecast to be over (Pilsworth Road / Moss Hall Lane – South) and approaching (Pilsworth Road / Moss Hall Lane - North) capacity in the 2039 DM, even without the NG development coming forward. There are no capacity issues with the implementation of the mitigation schemes.
- 13.6.16 The other local junction assessments show some significant queues and delays which cannot be mitigated by highway works due to the lack of highway land available. Given this, it is imperative that the vision is to enhance and promote sustainable modes of travel, to accord with policy and to rely on the junction assessments presented in the previous Policy On section.

Assessment Comparison 4 – Application Quantum, Policy Off

2039 DS Proposed Scheme Quantum, Without M62 Access Solution (Run 22.2) vs

2039 DS, Cumulative JPA1.1 & JPA1.2 Allocations, Policy Off, Without M62 Access Solution (Run 13)

- 13.6.17 This test comparison shows the differences in impacts between the Proposed Scheme quantum and the cumulative quantum of the JPA1.1 and JPA1.2 Allocation Sites in the Policy Off case where a new M62 access is not delivered.
- 13.6.18 The full cumulative results in Run 13 showed significant over capacity performance at 4 junctions. The run 22.2 results for just the proposed application quantum still show significant overcapacity results at those junctions. This is demonstrated in **Appendix Y**. Without delving into queues and delays it is clear that in the Policy Off case, the proposed application quantum could not come forward without a new M62 Access and without an improvement at M66 J2. A number of the junctions on the local highway network would also be significantly congested.

Assessment Comparison 5 – Phase 1 Test, Policy Off

2032 DM (Run 5) vs 2032 DS First phases of JPA1.1 and JPA1.2, Without M62 Access Solution (Run 8)

- 13.6.19 The purpose of this Policy Off test is to establish the impacts if a proportion of the JPA1.1 Allocation Site (i.e 395,000sqm) was developed and opened by 2032.
- 13.6.20 Run 8 presents a cumulative assessment to 2032 which also assesses 473 homes being delivered on the JPA1.2 Allocation Site by 2032. As the point of the assessment is to gauge what conditions would be like before a new access solution to the SRN is delivered, the Do Something test does not include a new SRN access junction.

- 13.6.21 The key operational capacity results from Runs 8 and Run 5 have been presented in **Appendix U**.
- 13.6.22 The Run 5 DM shows that four junctions are forecast to operate over capacity even without the Phase 1 proposals coming forward. The Run 8 DS Early Delivery test shows that three junctions are forecast to operate over capacity. The junction which has improved is the Pilsworth Road / Moss Hall Lane – South junction, and that is due to the implementation of the Western Access Scheme.
- 13.6.23 The junctions forecast to operate over capacity are the M62 J19, the A58 Bridge Street / Pilworth Road junction and the M66 J2.
- The M62 J19 features a 1.2km queue and a 17min:15sec delay on the M62 westbound off slip in the AM peak hour.
 - The A58 Bridge Street / Pilworth Rd junction features a 618m queue and a 8min:17sec delay on the A58 Bridge Street western arm in the AM peak hour.
 - The M66 J2 features a 912m queue and a 7min:16sec delay on the M66 northbound off slip in the AM peak hour.
- 13.6.24 These queues and delays are beyond acceptable limits in the Policy Off test. However, these assessments do not replicate any of the beneficial Policy On or Vision-Led measures which will be emerging and which will serve to improve operational conditions.
- 13.6.25 As set out previously, the Run 22.3 assessment of the Proposed Scheme (600,000sqm), in Policy On, excluding the M62 Access Solution, suggests that all junctions will operate within acceptable limits, although there is a delay of 4min:12sec on one approach of the M66 J2.
- 13.6.26 If 395,000sqm of the Proposed development was to be tested in Policy On, the impacts would be lower than those in Run 22.3, given that 395,000sqm will generate a lower level of traffic to 600,000sqm proposed scheme test.

13.7 Sensitivity Testing

- 13.7.1 Sensitivity Tests have been carried out to inform considerations of:
- Impacts from just the JPA1.1 Allocation Site as compared to the cumulative JPA1.1 and JPA1.2 Allocation Sites impacts.
 - The inclusion of a South Heywood Link.
 - Whittle Lane Open (limited vehicular capacity) vs Whittle Lane closed to vehicular traffic except buses.
- 13.7.2 These further sensitivity tests have been conducted (as set out in the agreed scope), just to allow the decision maker to gauge the effectiveness and worth of the elements being tested

Sensitivity Test 1: JPA1.1 Allocation Impacts compared with JPA1.1 & JPA1.2 Cumulative Allocations Impacts

2039 DS Policy JPA1.1 (Run 12) Vs Cumulative JPA1.1 and 1.2 impacts (Run 14)

- 13.7.3 The key operational capacity results from Runs 12 and 14 have been presented side by side in **Appendix T**. The extent to which operational conditions are better if only the JPA1.1 Allocation Site is present can be seen.

- 13.7.4 This demonstrates that a proportion of the mitigation identified to support the delivery of Northern Gateway (cumulative) should be attributed to JPA 1.2 Allocation Site.

Sensitivity Test 2: The inclusion of a South Heywood Link

2039 Cumulative Do Something assessment (Run 19), Vs Run 14, (the same assessment without South Heywood Link)

- 13.7.5 The key operational capacity results from Runs 19 and Run 14 have been presented side by side in **Appendix V**. The levels of operational performance show only marginal differences. The benefits of providing the South Heywood Link in the context of these two assessments appear to be immaterial. In fact, the Pilsworth Road / Bury St junction worsens operational performance by 7%
- 13.7.6 The inclusion of a link such as South Heywood would potentially open up new public transport routes and would provide active travel and vehicular route choice, but it offers no material network traffic operational benefits.

Sensitivity Test 3: Whittle Lane Open (limited vehicular capacity) Vs Whittle Lane closed to vehicular traffic except busses

Whittle Lane Sensitivity Test (Run 17 Vs Run 13)

- 13.7.7 TfGM and RMBC have indicated that they would ultimately prefer Whittle Lane (which connects to Heywood Old Road), serve as an active travel and public transport only link.
- 13.7.8 The Run 13 model (cumulative assessment with no M62 access present) was chosen as the base upon which to base the Whittle Lane link closure sensitivity test. That will show the greatest impacts which could arise from the Whittle Lane closure. This is a policy off scenario.
- 13.7.9 It should be noted that none of the model scenarios feature Whittle Lane running at its full existing capacity. Left unconstrained, Whittle Lane is a direct access to Birch and Heywood Old Road. Mindful of the aspiration to encourage active travel and of the concerns voiced by residents of Birch over traffic increases, in all scenarios where Whittle Lane is open to just cars and buses, a signalised shuttle working section is introduced on the bridge over the M62, to limit the capacity of the route to control traffic levels. The point to be aware of when reviewing the results which follow is that the test compares Whittle Lane closed to Whittle Lane capacity limited. Had Whittle Lane been tested as being fully open, the differences would be significantly greater.
- 13.7.10 The key operational capacity results from Runs 13 and 17 (both Policy Off, cumulative development, 2039, no M62 Access) have been presented side by side in **Appendix W**. The extent of the impacts arising from closing Whittle Lane (Run 17) to car traffic as opposed to just limiting its capacity (Run 13) and maintaining car traffic can be seen.
- 13.7.11 Unsurprisingly, closing Whittle Lane improves the operation of the Heywood Old Road / Whittle Lane junction and at two other junctions with Langley Lane. All other junctions experience a worsening in operational performance.
- 13.7.12 With Whittle Lane closed, vehicular traffic volumes increase to the north on to the Pilsworth Road / QEII Way corridor, the Western Access Links, the M66, Moss Hall Brow and on Pilsworth Road towards the A58 Bridge Street in Heywood. With Whittle Lane closed, 6 junctions experience peak

operational performance levels over 105%, as compared to 3 junctions in the Whittle Lane open but capacity restrained scenario.

- 13.7.13 The decision on whether to close Whittle Lane to car traffic is one that the highway authorities may choose to make. These Policy Off assessments do not replicate any of the beneficial Policy On or Vision-Led measures which will be emerging and which will serve to improve conditions. Moreover they test the full allocations of JPA1.1 and JPA 1.2 rather than just the application quantum. Both those aspects will result in worse forecast results than would exist in the Policy On, application quantum tests. Nevertheless, the comparison shows how, if Whittle Lane access is removed and all traffic accesses to the north, via the Pilsworth Road / Moss Hall Lane – South junction, operational conditions in that direction significantly worsen.
- 13.7.14 The applicant supports the initiative to encourage sustainable and active travel, and this sensitivity test gives the decision makers the detail of the traffic impact consequences of closing one of the development accesses and should assist in their considerations.

13.8 Comparison with results contained within the PfE evidence which underpinned the allocation

- 13.8.1 The allocations were made in the knowledge of highways and transport related evidence from all parties at that time. Having now assessed the development impacts in detail it is pertinent to ask whether the likely traffic impacts from the development are better or worse than were envisaged at the time when the site was allocated.
- 13.8.2 Section 7 of this TA presents excerpts from the PfE evidence describing the year 2040 post mitigation levels of operation that were weighed in the balance when allocating the sites. **Excerpts 7.4 and 7.5** show that the A56 / Hollins Brow was forecast to operate at 123% and 121% in the AM and PM peak hours respectively based on the existing layout. The evidence suggested mitigation at this junction would need to be added when further details are available.
- 13.8.3 The M62 junction 19 was forecast to operate at 123% and 120% in the AM and PM peak hours respectively, post mitigation.
- 13.8.4 The M62 junction 2 was forecast to operate at 112% and 106% in the AM and PM peak hours respectively, post mitigation.
- 13.8.5 In the appropriate Policy On Vision-Led planning system tests, the impacts are lower than were thought would transpire by 2040 at the time of allocating the site. In the robust non- Vision-Led Policy Off assessments with the cumulative developments of the JPA1.1 and JPA 1.2 Allocation Sites, with a new M62 access solution, impacts are significantly reduced at the M62 J19, slightly higher than previously identified at M66 J2 and lower than was previously thought would exist at and Hollins Brow / A56.

13.9 Merge / Diverge Assessments

- 13.9.1 In Run 21, for the full Cumulative development in 2039 Policy On tests, without an M62 Access solution in place, all existing merge / diverge arrangements are adequate apart from the M66 J2 Northbound and Southbound Diverges. Those are very close to the threshold of acceptability. The

same shortcoming but to a greater extent exists in the 2039 Policy off tests, both with and without a new M62 access (Runs 13 and 14). The M66 J2 northbound merge also requires an intervention in the 2039 Policy Off PM peak hour case. For those cases it is clear that the Do Minimum scenario traffic volumes exhibit the same shortcomings. The findings are that the M66 J2 northbound merge and diverges are on the threshold of acceptability for the 2039 Policy on Vision-Led scenario without a new M62 access in place (Run 21). In the policy off tests, they would require upgrading, but would require upgrading in any event to accommodate the policy off do minimum volumes.

- 13.9.2 On the basis that changes to merge / diverge arrangements may not be necessary to accommodate the 2039 Policy On, full NG development, it is considered that there should be no requirement to alter merge / diverge arrangements to accommodate just the Proposed development. It can be seen that in the Vision-Led 2039 cumulative assessments, upgrades should not be necessary.

14.0 Phasing

14.1 Overview

- 14.1.1 Infrastructure in the Common Highways Mitigation Package and the on-site road layouts and accesses are to be provided in all assessments which deliver development.
- 14.1.2 The Policy On assessments demonstrate no need for further off-site highway improvements for the Proposed development. For the cumulative development a new M62 access (Or M62 J19 improvement to be determined through PCF) will be required and mitigation at M66J2 is likely to be required.
- 14.1.3 In respect of the M62 J19 which reaches 117% in the JPA1.1 and JPA1.2 cumulative assessment an alternative mitigation to avoid the need for a new M62 access may be possible and work will be undertaken to establish if that performance could be improved by re-configuring lane markings to better manage lane usage.
- 14.1.4 The Policy On assessments acknowledge the public transport and active travel strategies being developed by TfGM. Mitigation funding from the Proposed Scheme should be directed towards bringing forward those measures.
- 14.1.5 The Policy Off tests show significantly overcapacity results across the network even with a new M62 access. They are not the appropriate Vision-Led tests for planning purposes, but they do highlight the pros and cons of the sensitivity test options such as Whittle Lane Closure, a South Heywood Link and of a new direct access to the M62. The local road network is forecast perform significantly worse if Whittle Lane is closed to car traffic completely and the South Heywood Link has been found to offer no material traffic relieving effect. It would however deliver more choice of routing for bus and active travel and vehicles.

14.2 Development Phasing and Infrastructure alongside Development

- 14.2.1 When considering which elements of mitigation will be present or will be required at each stage of development it is important to recognise the following underlying principles of mitigation provision in this case.
 - i. The assessments have been undertaken on the basis that the Common Highways Mitigation Package will be delivered in all scenarios which feature development and will be in place by 2032.
 - ii. The on-site highway, sustainable and active travel infrastructure (footpaths, cycleways, bus stops and transport hubs) will be rolled out as the site develops and so will accompany each stage as it comes forward. The facilities will have to be in place before first occupation of each phase. Footpath and PRoW extinguishments, diversions and replacements will have to be delivered before development takes place.
 - iii. A Travel Plan will be present from the first occupation of the proposed development promoting travel by sustainable modes.

- iv. The Public Transport and Active Travel Strategy elements identified by TfGM sufficient to Support Scenario 2, will be funded proportional to the development impact and needs, as development progresses. It will be important to have those elements and bus services in place from first occupation of the development and introduced at an appropriate level to serve demand whilst not over expending funding too early and having empty services waiting for development to progress and provide patrons.
- v. Funding for future Public Transport and Active Travel Strategy elements identified by TfGM towards achieving the GMCA 2040 strategy target for sustainable travel will be made subject to viability and proportional to development impacts. It should be recognised that such future initiatives should attract contributions from all other PfE and windfall development too and other city region funding aimed at achieving the 2040 GM strategy.
- vi. NH will play a key role in determining whether SRN mitigations (such as potential lane re-configurations at M66 J2, the improvement identified by Bury Council at the M66 J3, or intervention to relieve M62 J19, either an improved J19 or a new M62 access junction) are required and in the timing and design of those.

14.2.2 It is envisaged that there could be a tension between funding the measures in the NG TFD towards the Vision-Led objectives, and funding traditional highways improvements on the SRN or Local roads. The Inspector at PfE allocated the sites on the basis that they would be acceptable and deliverable, within the scope of the financial viability evidence. Wherever funding is directed, it must be contained to within those limits.

14.2.3 For the avoidance of doubt, the Vision-Led planning system favours promoting the Sustainable and Active Travel initiatives over improving road capacity solutions.

14.2.4 Whilst it is recognised that it is appropriate for the Proposed Scheme to contribute to future active travel, public transport or even road building works, it must be recognised that such works will also serve the wider GMCA and SRN networks and that TfGM, NH and the Highway Authorities will seek funding from other developers and other sources to assist in delivering those mitigations too. Where the provision of mitigation is deemed to be necessary to enable the Proposed Scheme, but would also be attributable to the wider Northern Gateway (or other sites), a proportional cost share mechanism should be established to ensure that other parties who benefit from the mitigation also contribute to its provision.

14.2.5 The envisaged phasing of mitigation is as follows:

- **Phase 1: 395,000 sqm (JPA1.1) & 473 dwellings (JPA1.2) 2032**

The non- Vision-Led Policy Off assessments for JPA1.1 and JPA1.2 suggest that 4 junctions will be overloaded, and would be overloaded even without development. This interim stage poses an interesting decision point for bringing forward just 395,000 sqm of floorspace. The Policy On assessment of just the Proposed Scheme in 2039 (600,000 sqm), suggests that junctions should be operating adequately with a potential need to reduce delay at M66 J2. On that finding, it is considered that the 395,000 sqm Phase 1 development to 2032 should not require mitigation other than that set out in points i-iv above.

- **Phase 2: 600,000 sqm (JPA1.1) in 2039**

The Policy On assessments for full cumulative development of JPA1.1 and JPA1.2 by 2039 show that with the points i-iv in place no additional mitigation other than perhaps with a potential need to improve delay at M66J2 should be required.

- **Phase 3: full allocation in 2039**

The Policy On assessments for full cumulative development by 2039 show that with the mitigation identified to support Scenario 2, only J19 and M66 J2 are likely to become overloaded. Additional mitigation (above that in the points i-iv is required at J19 and if a new M62 access is forthcoming that would resolve the issue and leave just a potential need to reduce a queue and improve delay at M66 J2.

In Run 25, the impact of closing Whittle Lane and providing the South Heywood Link is that the A58 Bridge Street / Pilsworth Road junction is subject to significantly longer queues and delays.

- 14.2.6 The Applicant will provide a draft Heads of Terms (for a S106 Agreement) setting out a strategy to capture the mitigation phasing described above.
- 14.2.7 That is likely to describe how a series of potential highway mitigation measures have been identified, including infrastructure already delivered in anticipation of Northern Gateway (i.e. QEII Way), new onsite highways infrastructure and offsite highways mitigation (to both the strategic and local road network), as well as active travel measures, public transport improvements and travel plans.
- 14.2.8 The scope of mitigation, funding mechanisms, phasing, and responsibility for delivery will be agreed with relevant stakeholders during the course of determination of the Application.
- 14.2.9 As set out in this TA, the Proposed Scheme is of a national scale and is capable of delivering very significant benefits. A substantial upfront financial investment will be required to pump-prime and deliver the scale of development proposed, to the quality required by PfE and the NGDF SPD, including the wider mitigation measures identified in policy (including PfE, NGDF SPD and the emerging Northern Gateway IPDS) and through technical assessment work.
- 14.2.10 The Proposed Scheme represents an early phase of delivery of the wider JPA1.1 Allocation Site, helping to kick start realisation of the strategic vision for Northern Gateway. However, early investment and the consequent growth benefits which derive from development may not be realised if the early phases of the Proposed Scheme were required to deliver or fund all section 106 requirements and infrastructure asks, some of which will also serve the wider JPA1.1 Allocation Site and the wider growth aspirations within PfE, as well as addressing existing capacity constraints.
- 14.2.11 Where this is shown to be the case, a proportionate contribution towards section 106 requirements should be applied to the earlier phases of the Proposed Scheme reflecting the up-front costs of pump-priming the scheme, and reflecting the fact that the scale of investment in the delivery of early phases may not be recouped over the lifetime of the Proposed Scheme, whether through revenues generated by the operation of the Proposed Scheme or through enhancements in land value - thereby presenting viability constraints. This is more likely to occur in the early stages of delivery, but will be kept under review throughout the delivery of the Proposed Scheme.

- 14.2.12 On this basis, the Applicant commits to evidencing, as necessary, the costs of pump-priming the Proposed Scheme, any investment that is to be made ahead of when it may actually be needed, and any ensuing viability issues, so that a suitable strategy can be agreed with the Councils and other relevant stakeholders to addressing this during determination of the Application, in accordance with PfE Policy JP-D2.

15.0 Summary and Conclusions

15.1 Overview

- 15.1.1 Tetra Tech has been commissioned by Northern Gateway Development Vehicle LLP (NGDV) to provide transport planning advice in relation to an outline planning application (all matters reserved) for up to 600,000sqm of industrial land uses with up to 5,000sqm of supporting land uses ('the Proposed Scheme'), within the 'JPA1.1 Allocation Site', which comprises part of Northern Gateway (NG) in Greater Manchester (GM), and spans the boundary between Bury and Rochdale Councils.
- 15.1.2 Northern Gateway comprises:
- The JPA1.1 Allocation Site, which is allocated for around 1,200,000 sqm of industrial and warehousing floorspace (with around 935,000 sqm being delivered within the plan period to 2039), around 1,200 new homes, a new primary school and an appropriate range of supporting and ancillary services and facilities, such as a new local centre, hotel, leisure and conference facilities, as well as new and improved sustainable transport, active travel and highways infrastructure and multifunctional green and blue infrastructure. A portion of the JPA1.1 Allocation Site is already approved under planning permission 16/01399/HYBR, for 175,460sqm of employment floorspace, 1000 dwellings and a primary school ('the South Heywood Masterplan Area'). As part of the South Heywood Masterplan Area, mitigation in the form of the QEII Way, as well as contributions to public transport enhancements, have already been delivered to support the wider JPA1.1 Allocation Site. The residual land uses within the JPA 1.1 Allocation Site, therefore comprise 1,025,000sqm of industrial land use, 200 dwellings and ancillary uses.
 - The JPA1.2 Allocation Site, which is allocated for around 1,550 dwellings, together with a two-form primary school and a local centre.
- 15.1.3 The Proposed Scheme comprises just 600,000sqm of employment land uses (with 5,000sqm of supporting land uses), which in vehicular trip generating terms amounts approximately 44.5% of the total number of trips generated by NG. The Application for the Proposed Scheme is made in outline (with all matters reserved), so approval is not being sought in detail for on or off-site highway works or access.
- 15.1.4 Due to the scale and complexity of NG, the assessment work is being carried out with significant input from the various stakeholders, such as TfGM preparing the NG 'Transport Framework Document' (TFD) and National Highways (NH) progressing their PCF process in relation to Strategic Highway Network (SRN) modifications. As such, the mitigation strategy for NG is evolving.
- 15.1.5 This TA assesses the impacts of the Proposed Scheme in isolation, the JPA1.1 Allocation Site in isolation and a "cumulative assessment" which includes the impacts of both the JPA1.1 and JPA1.2 Allocation Sites. This TA provides assessments of reasonable scenarios (Policy On Scenarios) in accordance with the NPPF requirements and identifies appropriate mitigation for the Proposed Scheme in isolation, an early phase (to 2032) of the Proposed Scheme in isolation, and the cumulative impact of the whole of NG (i.e. both of the JPA1.1 and JPA1.2 Allocation Sites). A

significant portion of the mitigation will require funding from the government, alongside proportionate contributions addressed through the S106 agreement, subject to re-appraisal at each phase of development.

15.2 Policy (Vision-Led Planning)

- 15.2.1 The planning system has evolved to now require proposals and decisions to be Vision-Led. That approach is recognised in NPPF Paragraph 109, and in NH policy 01/2022, which also acknowledges that Vision-Led is the correct assessment approach. In terms of producing a TA, that means assessing a future scenario which recognises the Government and GMCA strategies for reducing reliance on private car travel and promoting sustainable travel. This approach is endorsed in the TA Scope and in the TfGM NG TFD.
- 15.2.2 The TASNU Addendum (4th September 2024) described how in the Policy On assessment, vehicle trip rates will be reduced to the point where they are only 50% of all development trips. That was to align with the GM 2040 Transport Strategy vision.
- 15.2.3 At a meeting with TfGM in November 2024, it was indicated that their emerging preference might be to assess something higher in vehicle trip terms than the GM Transport Strategy Vision of 50%.
- 15.2.4 Given this, TT took the decision to pre-empt the likely TfGM request and increased the 'Policy On' vehicle trips to 60% of all trips. i.e., 10% more development traffic than in the GM Transport Strategy. This is the Policy On test which has been modelled.
- 15.2.5 In the subsequent NG TFD (January 2025), TfGM presented three scenarios.
- 15.2.6 Scenario 1 was based on traditional trip rates, is not vision-led and is not appropriate for planning purposes.
- 15.2.7 Scenario 3 generally aligns with the GM Strategy, citing 53% by car driver.
- 15.2.8 Scenario 2, which TfGM describe as "*the most likely, balanced, and economically viable Vision-Led transport package*", cites 65% by car driver.
- 15.2.9 Interestingly, TfGM also describe a Scenario 2 weighted vision for travel, which has 56% of trips by car driver.
- 15.2.10 The key assessments in this TA were scoped and undertaken well before TfGM presented their three Scenarios. The Policy On assessments in this TA model 60% of trips as vehicle drivers, and so align very well with the TfGM Scenario 2 and weighted average Scenario 2.
- 15.2.11 The assessed Vision-Led approach is described as "Policy On" and is still a robust assessment of impact, since a full Vision-Led assessment aligning with government and GMCA strategy would only have 50% of development trips by vehicles, rather than the 60% which has been tested. The strategy modelling also produced forecast flows for 22 other scenarios described as Policy Off and those have been produced to inform the ES and at the request of National Highways to provide robust sensitivity test results for non Vision-Led assessment cases.

15.3 Existing Conditions

- 15.3.1 The existing conditions are described within the Locality Assessment Reports, i.e., evidence to the PfE examination. The JPA1.1 Allocation Site, within which the Proposed Scheme site sits, is extensive but largely undeveloped land, with minimal traffic generating development and is crossed by public rights of way which are little used. Whittle Lane and Moss Hall Road pass through the JPA1.1 Allocation Site. The exception to that description is the eastern side of the JPA1.1 Allocation Site, where the SHMA is consented and is in the process of either being built out or is operational. The SHMA has been accompanied by the delivery of the Queen Elizabeth II Way, a major road funded on the basis that it was necessary to support the delivery of the JPA1.1 Allocation Site. the approval of development in the SHMA has secured funding towards public transport.

Sustainable Travel

- 15.3.2 As the JPA1.1 Allocation Site is extensive and largely undeveloped, it is not surprising that current public transport services are poor as there is little to serve. TfGM in their NG TFD have assessed challenges, opportunities and the need for Public Transport, at a level which would be consistent with the Scenario 2 Vision-Led Planning case. The NG TFD has also identified an Active Travel strategy to support the Scenario 2 Vision-Led Planning case. It is recognised that the existing active and sustainable travel infrastructure across the wider existing network is limited. That will be improved over time as this and other developments come forward and as TfGM strive to deliver the GMCA 2040 strategy.
- 15.3.3 NG will deliver onsite mitigations in the form of high-quality highways/access, active travel and public transport infrastructure, which is future ready to connect individual phases of development. It will safeguard land for a public transport interchange (to be delivered by TfGM) and provision of active travel Hubs. Off site initiatives which emerge through the TfGM active travel and public transport strategies will be addressed through the S106 agreement, subject to re-appraisal at each RM stage.

15.4 Travel Plan

- 15.4.1 In addition to the active travel and public transport strategies devised by TfGM, a site wide Travel Plan will be implemented to encourage travel by sustainable travel modes. The Travel Plan will set targets which seek to achieve 40% of trips being made by sustainable modes, in line with the NG TFD Scenario 2. The Travel Plan will in fact continue to encourage sustainable travel towards the 2040 transport strategy of 50% of trips being made by sustainable modes.

15.5 On-site Active and Sustainable Travel Transport Infrastructure

- 15.5.1 As the Application is being made in outline, there are no details of on-site layout for which approval is being sought. The planning authorities need to be satisfied that the Application Site will be developed out in such a way that active travel and sustainable travel will be prioritised. For that reason, the Application Site will come forward in line with the Northern Gateway Development Framework (NGDF) Supplementary Planning Document (SPD) which has been adopted to ensure

that on site transport infrastructure will meet prescribed requirements. For transport that includes pedestrian, cycle, public transport, road and travel hub infrastructure.

15.6 Off-site Active and Sustainable Travel Transport Infrastructure

- 15.6.1 TfGM is developing the Active Travel and Public Transport Strategies for Northern Gateway. The initial stage of that work was presented in the draft Arup Reports titled “Transport Strategy” and “Active Travel Masterplan” which set out a range of mitigation options, priorities and funding streams. That work is evolving further and in January 2025 TfGM presented their first draft NG Transport Framework Document, which describes the emerging mitigations, along with the approach to be taken in bringing forward the development in respect of active travel, public transport, policy, funding and mitigation.

15.7 Mitigation Types

- 15.7.1 The mitigation which will come forward falls into five categories:
- i. Mitigation which has already been delivered to support the JPA1.1 Allocation Site (e.g. the QEII Way which was consented, funded and delivered on the basis of supporting the JPA1.1 Allocation Site).
 - ii. New on-site infrastructure within the JPA1.1 Allocation Site, including new highways, active travel routes and public transport facilities.
 - iii. Off-site mitigation, identified through PfE, this TA and/or by BC, RMBC, TfGM and NH as part of wider transport strategies. This includes S278 highway works on the local and strategic road networks, active travel routes or public transport facilities and services, as well as funding towards those items.
 - iv. Proportional funding towards future, as yet unidentified highways works or future active travel or public transport initiatives, which will emerge from TfGM and GM strategies.
 - v. Implementation of a Travel Plan.
- 15.7.2 As an aside, there is also Public Transport funding deposited as part of the SHMA (part of the JPA1.1 Allocation Site), which will be used to improve overall public transport services beyond the existing situation and thus contribute to the NG Public Transport Strategy.
- 15.7.3 In addition to the already delivered QEII Way, the remaining infrastructure types are consistent with the findings of the NG TFD. The provision of pedestrian and cycle routes on site will pick up, divert and improve the existing Public Rights of Way which cross the JPA1.1 Allocation Site and which will be extinguished by the development layout.
- 15.7.4 Certain identified off-site highway works have been included in the assessments which test development coming forward. Those comprise:
- the M60 Junction 18 Simister Island scheme currently being advanced by NH through Development Consent Order (also included in the 2032 and 2039 Do Minimum assessments).
 - M66 Junction 3 improvements identified by Pell Frischmann on behalf of Bury Council.

- The upgrade of Pilsworth Road and Junctions from M66 J3 through to the Pilsworth Road / Moss Hall Lane – South and Pilsworth Road / Moss Hall Lane – North Junction (known as the Western Access Works)

15.7.5 The latter two of those together with the already delivered QEII Way are referred to as the “Common Highways Mitigation Package”.

15.7.6 The assessments also include options for Whittle Lane, Moss Hall Road, a connection highway into the SHMA (South Heywood link) and a new access onto the M62.

15.8 Approach and Agreement to Assessment (Vision-Led planning)

15.8.1 Key Stakeholders including BC, RMBC, TfGM and NH worked collaboratively with the applicant through forums such as the TSG and HTWG for over 3 years.

15.8.2 A TA Scope was circulated in 2022, updated in 2024 and has evolved, addressing and taking on board comments up to the submission of the application.

15.8.3 Traffic forecasts for individual junction assessments have been produced from the Northern Gateway Traffic Model (NGTM), which is based on the Greater Manchester Saturn Model (GMSM), which was used for PfE. The NGTM has evolved through 9 meetings of TSG and subsequent HTWG meetings, which comprised both planning and highway authorities, TfGM and NH.

15.8.4 The NGTM covers the AM peak hour (0800-0900), an average interpeak hour (1000-1600) and a PM peak hour (1700-1800) and is validated to a 2022 Base.

15.8.5 The future year Do Minimum models include all PfE development.

15.8.6 The future years assessed are 2032 and 2039, as agreed with the stakeholders during scoping.

15.8.7 Forecast traffic volumes for various (25) permutations of development quantum, highways arrangements and trip generation levels have been provided. Those outputs have then been used to inform the environmental Impact assessments and to undertake individual junction assessments at 19 junctions on the local and strategic highway network.

15.8.8 The results from those junction models inform considerations of whether highways works mitigations might be needed or whether alternative active travel and sustainable travel mitigations would better serve the 2040 Transport Strategy.

15.8.9 Although the numerous Policy Off tests have been undertaken to provide a traditional worst case assessment, primarily for NH to consider, it is the results from the Vision Led, Policy On tests which represent the reasonable future scenarios which are required by the planning system.

15.9 Model Scenarios and Sensitivity tests

15.9.1 **Appendix G** sets out the comprehensive assessment scenarios which cover the Proposed Scheme, the JPA1.1 Allocation Site and the Cumulative impacts with the JPA1.2 Allocation Site.

15.9.2 All of the DS tests include the “Common Highways Mitigation Package” works described earlier.

15.9.3 As the need for potential highways mitigation works is being assessed, multiple model runs have been carried out to test the proposals under potential modified highway layouts, those include:

- A new M62 access solution
- Whittle Lane both:
 - Capacity constrained – shuttle working
 - Closed to general vehicle traffic (i.e., open for Public Transport only)
- The South Heywood Link present or absent.

15.10 Trip Generation (Policy On and Policy Off)

15.10.1 Trip generation was set out in scoping.

15.10.2 Queries raised after the assessments had been progressed, asked for further clarification on Giga scale uses and B8 rates. Those queries were answered in Transport Technical Note 10 on 7th February 2025 and did not result in a requirement to undertake further assessments.

15.10.3 The Assessments noted to be Policy Off, used traditional trip rates and growth, whereas the Assessments which are noted to be Policy On, test a position which goes some way to the GMCA aspiration of having no more than 50% of trips by car. The Policy On trip rates reflect 60% of all trips by vehicles (excluding trips by bus).

Evaluation of Non-car Trip Volumes

15.10.4 Multimodal trip rates have been obtained and then proportionally applied to the vehicle trip rates, to give the traditional policy off mode splits. This is reflected in the NG TFD Scenario 1.

15.10.5 The Scenario 2 Vision by TfGM increases the mode share for bus uses, cyclists, walking and reduces the mode share for car passengers.

15.10.6 The NGDV Vision aligns closely with the TfGM Scenario 2 values. Discussions are ongoing regarding reflecting increasing the mode share for car passengers, as car sharing will be promoted via the Travel Plan.

15.10.7 Noting that the NG TFD is yet to be finalised, it is proposed that the NG TFD figures will be adopted for public transport and active travel demand.

15.11 Traffic Impact Assessments - Results and Findings

Do Minimum Assessments

15.11.1 The Policy On DM, shows that all bar one of the junctions (M66 J2) within the study area are forecast to operate within capacity.

15.11.2 The tests which reflect traditional trip rates and growth show that by 2039 the network will be significantly overloaded even without development, i.e. the Policy Off DM tests.

15.11.3 Even in the 2032 Policy Off DM test the highest levels of peak hour operation are, 115% at M62 J19, 113% at M66 J2, and 117.8 % at Pilsworth Road/ Bridge Street.

M66 J3 and M60 J18

15.11.4 Assessments of M66 J3 show that the proposed mitigations will accommodate the development traffic in any of the tested scenarios.

- 15.11.5 NH are currently bringing forward an improvement to M60 J18 and their scheme has been designed to accommodate all PfE traffic. A comparison of the NH forecasts against the NGTM forecasts shows that NH tested a higher volume of traffic across the network and a later assessment year.

Vision-Led Policy On Assessments

- 15.11.6 These are the assessments which are relevant for planning purposes, and they acknowledge the TfGM NG Public Transport / Active Travel Strategy for at Scenario 2.
- 15.11.7 The Run 20 DS, which includes the M62 Access Solution and the full JPA1.1 & JPA1.2 allocations, in Policy On, suggests that all junctions will operate within acceptable limits with the exception of the M66 J2, where the queue on the northbound off slip and on the circulatory carriageway in the AM peak hour would exceed the available queueing space. The M66 northbound off slip delay is 4min:52min.
- 15.11.8 If an M62 Access Solution is not included, the Run 21 DS assessment of the full JPA1.1 & JPA1.2 allocations in Policy On, suggests that most junctions will operate within acceptable limits with the exception of the M62 J19, the M66 J2, and Hollins Brow. The M62 J19 is forecast to be subject to significant queues, over the available slip road and circulatory queue limits and long delays. At the M66 J2 the circulatory would be subject to queues in excess of the queueing capacity.
- 15.11.9 When the cumulative development was reduced to reflect just the Proposed Scheme, in Policy On, excluding the M62 Access Solution (Run 22.3), all junctions will operate within acceptable limits, although there is a delay of 4min:12sec on one approach of the M66 J2.
- 15.11.10 The above three assessments suggest that the network would operate adequately for the Proposed Scheme, with an M62 Access Solution in place. No additional highway works to improve capacity should be required, although there may be a need to undertake works at the M62 J2, to reduce delay.
- 15.11.11 The Run 25 has broadly similar results to the Run 20 assessment, with the exception of A58 Bridge Street / Pilsworth Road junction. The impact of closing Whittle Lane and providing the South Heywood Link is that this junction is subject to significantly longer queues and delays.
- 15.11.12 In Run 21, for the full Cumulative development in 2039 Policy On tests, without an M62 Access solution in place, all existing merge / diverge arrangements are adequate apart from the M66 J2 Northbound and Southbound Diverges. Those are very close to the threshold of acceptability.

Non-Vision-Led (Policy Off) Assessments

- 15.11.13 With traditional traffic generation rates, the network is forecast to experience significant congestion notably at the M66 J2, M62 J19, Hollins Brow / Hollins Lane junction, Hollins Brow / Manchester Road junction and the Pilsworth Rd / Bridge Street Junction in the 2039 peak hours, when JPA1.1 and JPA1.2 are fully built out (Run 13). Interestingly, a number of those junctions, along with the Three Arrows junction and M66 J3 are forecast to be well over capacity even if no development comes forward (Run 10).
- 15.11.14 The addition of a new M62 access (Run 14) resolves the M62 J19 issues and relieves the other junctions to some extent but there are still forecast to be overcapacity issues at the M66 J2, Hollins

Brow / Hollins Lane junction, Hollins Brow / Manchester Road junction and the Pilsworth Rd / Bridge Street Junction.

- 15.11.15 The actual quantum of development being applied for was tested in the Policy Off scenarios (Runs 22.1 and 22.2). The run 22.2 results for just the proposed application quantum still show significant overcapacity results at those junctions. In the Policy Off case, the proposed application quantum could not come forward without a new M62 Access and without an improvement at M66 J2. Several of the junctions on the local highway network would also be significantly congested.
- 15.11.16 As an early stage 1 of development, in 2032, 395,000sqm of employment at JPA1.1 was tested. It is considered that a new M62 access would not be in place by 2032, so the Stage 1, 2032 assessments sought to test a cumulative development Policy Off scenario with 395,000sqm of development (and 473 homes at JPA 1.2) to forecast peak hour conditions without a new access to the SRN (Run 8). The addition of Stage 1 development along with the Common Highways Mitigation Package (Run 8) forecasts levels of operation worsening by 29% to, 144% at M62 J19, improving by 1% to 112% at M66 J2. i.e, the early stage development overloads the network in the Policy Off case.
- 15.11.17 In considering whether early phase development should be allowed to proceed it is notable that the longer term position (Policy On Run 22.3) is acceptable, but also the new M62 access solution could be delivered either at or just beyond 2032. Run 14 showed how a new M62 access would resolve issues at J19 and improve issues at M66.
- 15.11.18 These assessments are not the key assessments for Planning purposes, the Policy On tests are.

Sensitivity Tests

- 15.11.19 The addition of a South Heywood link, (Run 19) in the cumulative Policy Off (with M62 access) does not change the Run 14 results to any material extent. The full closure of Whittle lane (Run 17) to traffic, apart from buses makes conditions better at the junction of Whittle Lane with Heywood Old Road and in M62 Access Solution , but significantly worse elsewhere.

Comparison to Allocation Expectations

- 15.11.20 The reason underpinning the allocations was to promote economic growth. JPA1.1 is the largest site in PFE and the surrounding road network is already extremely busy and congested at times. The site was allocated in that knowledge and on the basis of highways and transport related evidence from all parties at that time. Having now assessed the development impacts in detail it is pertinent to ask whether the likely Traffic impacts from the development are better or worse than were envisaged at the time when the site was Allocated.
- 15.11.21 Section 7 of this TA presents excerpts from the PFE evidence describing the year 2040 post mitigation levels of operation that were weighed in the balance when allocating the sites. Excerpt 4 in section 7 reports 123% at Hollins Brow, A56 and Excerpt 5 reports 123% at M62 J19 and 112% at M66 J2
- 15.11.22 In the appropriate Policy On Vision-Led planning system tests, the impacts are lower than were thought would transpire by 2040 at the time of allocating the site. In the robust non Vision-Led Policy Off assessments with the cumulative developments of JPA1.1 and JPA 1.2, with a new M62 access solution, impacts are very similar at M66 J2, and lower than was previously thought would exist at M62 J19 and Hollins Brow / A56.

15.11.23 The finding is that the more detailed assessments in this TA show conditions which are better than were envisaged at the time of allocating the site.

15.12 Development Phasing and Infrastructure alongside Development

15.12.1 Section 14 sets out the underlying principles of mitigation provision in this case. The envisaged phasing of mitigation is as follows:

- **Phase 1: 395,000 sqm (JPA1.1 Allocation Site) & 473 dwellings (JPA1.2 Allocation Site) 2032**

The non- Vision-Led Policy Off assessments for JPA1.1 and JPA1.2 suggest that 4 junctions will be overloaded, and would be overloaded even without development. This interim stage poses an interesting decision point for bringing forward just 395,000 sqm of the Proposed Scheme. The Policy On assessment of just the Proposed Scheme in 2039 (600,000 sqm), suggests that junctions should be operating adequately with a potential need to improve delay at M66J2. On that finding, it is considered that the delivery of an initial phase of 395,000 sqm of floorspace up to 2032 should not require mitigation other than that set out in the Common Highways Mitigation Strategy.

- **Phase 2: 600,000 sqm (JPA1.1 Allocation Site) in 2039**

The Policy On assessments for full cumulative development of JPA1.1 and JPA1.2 by 2039 show that with the mitigation set out at points i-iv in place no additional mitigation would be required, other than perhaps with a potential need to improve delay at M66J2.

- **Phase 3: full allocation in 2039**

The Policy On assessments for full cumulative development by 2039 show that with the mitigation identified to support Scenario 2, only J19 and M66 J2 are likely to become overloaded. Additional mitigation (above that in the points i-iv is required at J19 and if a new M62 access is forthcoming that would resolve the issue and leave just a potential need to reduce a queue and improve delay at M66J2.

In Run 25, the impact of closing Whittle Lane and providing the South Heywood Link is that the A58 Bridge Street / Pilsworth Road junction is subject to significantly longer queues and delays.

15.12.2 The Applicant will provide a draft Heads of Terms (for a S106 Agreement) setting out a strategy to capture the mitigation phasing described above.

15.13 Conclusions

15.13.1 The Applicant (and their appointed consultant team) has worked collaboratively with National Highways, TfGM and Bury and Rochdale councils (as Local Highways Authorities) to assess the highways and transport impacts of the Proposed Scheme, as well as the wider Northern Gateway (comprising the JPA1.1 and JPA1.2 Allocation Sites), which are presented in this Transport Assessment.

15.13.2 The Application for the Proposed Scheme is being made in outline (with all matters reserved) and therefore the detailed design and layout will be developed to promote sustainable travel and serve

pedestrians and cyclists in accordance with the submitted Parameters Plans and Design Code, and will be subject to approval at reserved matters stage.

- 15.13.3 The TA aligns with the Planning system requirements for a Vision-Led approach, with Government and GMCA transport strategies, with the adopted NGDF SPD for developing out the JPA1.1 Allocation Site and with the TfGM NG TFD. The TA additionally presents non Vision-Led assessments with higher levels of traffic to satisfy requests by NH.
- 15.13.4 Having tested Vision-Led (Policy On) and non Vision-led (Policy Off) scenarios across 25 permutations of development quantum, different years of assessment, different elements of mitigation, across 3 peak and interpeak periods at 19 local and strategic road network junctions, all to an agreed and refined scope, with input from all KS, it can be concluded that the Proposed Scheme, and the wider JPA1.1 and JPA1.2 Allocation Sites, have been very comprehensively assessed.
- 15.13.5 This TA therefore presents sufficient information and results to enable an experienced practitioner to consider and form a view on the likely impacts arising from the Proposed Scheme at outline application stage.
- 15.13.6 Development of the JPA1.1 Allocation Site has already commenced with the delivery of South Heywood Masterplan Area. That has brought forward the advance mitigations of the QEII Way and public transport funding. Other emerging mitigations, such as the Western Access and M66 J3, comprise the remainder of the Common Highways Mitigation Package and have been included in all assessments which contain development. Those mitigations should be brought forward.
- 15.13.7 Whittle Lane should be capacity restricted to ensure that traffic volumes on that route remain within acceptable levels. The LHA has indicated that they wish to see Whittle Lane closed to traffic except buses. That can be done, and the assessments show the negative impacts which would arise on other parts of the network from that.
- 15.13.8 The Policy On assessments for the Proposed Scheme in full (i.e. 600,000sqm) show that that with the Common Highways Mitigation Package in place, the delivery of new onsite highway infrastructure as part of the Proposed Scheme, and the implementation of a Travel Plan, alongside other active travel and public transport strategy elements being developed by TfGM, no additional highway works to improve capacity should be required, although there may be a need to undertake works at the M62 J2, to reduce delay.
- 15.13.9 It can therefore also be concluded that bringing forward an early phase of the Proposed Scheme (i.e. 395,000sqm), along with the Common Highways Mitigation Package, should also be deliverable without the need for further highway works.
- 15.13.10 The assessment of the potential impact of the delivery of the total allocated quantum of development across Northern Gateway (i.e. cumulative JPA1.1 and JPA1.2 Allocation Sites), shows that M62 J19 and M66 J2 are forecast to become overloaded, even in the Policy On Scenario with all identified Common Highways Mitigation Package and active travel and travel plan mitigations. The delivery of that full cumulative development will therefore require highway mitigations to address the M62 J19 operational issues.

- 15.13.11 Under full Cumulative development, M62 J19 operation would be resolved by a new access connection to M62 such as has been tested and that would also relieve M66 J2, although mitigation there may also be requested. It is understood that NH may be investigating less costly options to improve M62 J19. There is therefore confidence that the full cumulative development of the JPA1.1 and JPA1.2 Allocation Sites can come forward subject to junction provision or upgrades on the SRN.
- 15.13.12 In Run 25, the impact of closing Whittle Lane and providing the South Heywood Link is that the A58 Bridge Street / Pilsworth Road junction is subject to significantly longer queues and delays.
- 15.13.13 The Policy On, Vision-Led assessments can be regarded as being robust as they contain 60% of person trips by vehicles (excluding buses and car share passengers). The wider GM and Government strategies are working towards a 2040 vision where vehicular traffic reduces to below the levels which were present in 2017. If that Vision is achieved, then the Proposed Scheme can come forward in the knowledge that the network has accommodated higher levels of traffic than will be present in the future.
- 15.13.14 The bus services, footways and cycleways provided by the Proposed Scheme will offer sustainable and active travel choices to those travelling to and from existing communities. The physical mitigation set out in the NG TFD should be in place prior to occupation. The provision of bus services should be brought forward at a delivery rate proportional to meeting the level of demand, and encouraging modal shift to public transport.
- 15.13.15 It is considered that the Proposed Scheme will offer safe and suitable access, a layout and mitigations that promote sustainable and active travel. Those together with bringing forward the Common Highways Mitigation Package and measures in the NG TFD will mitigate its significant impacts on the highway networks. In the Vision Led, “reasonable future scenarios” that have been tested it is clear that for the early phase and proposed development, the residual cumulative impacts of development on the road network after mitigation are not severe.
- 15.13.16 The same will be true when bringing forward the full NG Allocation, noting that it is also likely to necessitate a new M62 Access or M62 J19 upgrade, and interventions to reduce queue and delay at M66 J2.

