

November 2020

Transport Locality Assessments

Introductory Note and Assessments –
Salford allocations

GMSF 2020

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1. Background

1.1 Greater Manchester Spatial Framework (GMSF)

1.1.1 The GMSF is a joint plan of all ten local authorities in Greater Manchester, providing a spatial interpretation of the Greater Manchester Strategy which will set out how Greater Manchester should develop over the next two decades up to the year 2037. It will:

- identify the amount of new development that will come forward across the 10 Local Authorities, in terms of housing, offices, and industry and warehousing, and the main areas in which this will be focused;
- ensure we have an appropriate supply of land to meet this need;
- protect the important environmental assets across the conurbation;
- allocate sites for employment and housing outside of the urban area;
- support the delivery of key infrastructure, such as transport and utilities;
- define a new Green Belt boundary for Greater Manchester.

1.1.2 The Plan focuses on making the most of Greater Manchester's brownfield sites, prioritising redevelopment of town centres and other sustainable locations. The Plan is required to demonstrate that Greater Manchester has enough land to deliver the homes and jobs people require up until 2037, and whilst there is an expectation that the focus of development will be on brownfield sites in the early years, it is recognised that some land will need to be released from the green belt to fully meet Greater Manchester's housing and employment requirement.

1.1.3 The comments from the Draft GMSF 2019, together with local and national policy, have helped to inform the Locality Assessments methodology for the Draft GMSF 2020. More information on the consultation comments can be found in the Consultation Statement and within each of the Allocation Locality Assessments.

1.1.4 This document has been prepared as evidence for the GMSF and is part of a suite of documents that examine the implications of the GMSF on transport in Greater Manchester. The other documents are:

- Greater Manchester Transport Strategy 2040 and supporting Five Year Transport Delivery Plan. These documents together set out our strategic aspirations for transport in Greater Manchester and articulate our plan for delivery.
- Greater Manchester Transport Strategy 2040 ‘Right Mix’ Technical Note. This note describes the ‘Right Mix’ transport vision and sets out a pathway to achieving this vision.
- GMSF Existing Land Supply and Transport Technical Note. This describes the distribution and quantity of the Existing Land Supply, identified key growth areas, and considers the relationship of these growth areas to the transport schemes proposed within the Greater Manchester Transport Strategy Delivery Plan.
- GMSF Allocations Strategic Modelling Technical Note. This provides analysis of the potential strategic impact of growth on our transport network in a “policy-off” scenario.

1.2 Policy Context – The National Planning Policy Framework

- 1.2.1 The National Planning Policy Framework sets out the Government’s planning policies for England and Wales and how these are to be applied. It provides a framework for which locally prepared plans for housing and development, such as the GMSF, can be produced.
- 1.2.2 The NPPF makes it clear that transport issues should be considered from the earliest stages of plan-making and development proposals, so that:
- the potential impacts of development on transport networks can be addressed;
 - opportunities from existing or proposed transport infrastructure, and changing transport technology and usage, are realised – for example in relation to the scale, location or density of development that can be accommodated;
 - opportunities to promote walking, cycling and public transport use are identified and pursued;
 - the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains; and
 - patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

- 1.2.3 The NPPF makes clear that when assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:
- appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
 - safe and suitable access to the site can be achieved for all users; and
 - 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.
- 1.2.4 Importantly, NPPF states that: ‘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 would be severe’. (NPPF, Chapter 9, Para 109).
- 1.2.5 In order to ensure that the requirements of the NPPF were fully met and that that these allocations can be brought forward and operate sustainably within the context of the wider transport network, Transport for Greater Manchester (TfGM), on behalf of the ten Greater Manchester Local Planning Authorities, appointed SYSTRA Ltd to oversee the development of Locality Assessments for each site.
- 1.2.6 These Locality Assessments forecast the likely level and distribution of traffic generated by each Allocation and assess its impact on the transport network. Where that impact is considered significant, possible schemes to mitigate that impact and reduce it back to the reference level of operation have been developed, tested and costed. Potential mitigations could include the introduction of new public transport schemes, cycling and walking routes, as well as highway engineering solutions. Where suitable mitigations could not be identified, a decision to either reduce the level of development at the Allocation such that it had a lesser impact on the transport network, or to remove the site from the GMSF completely were considered.
- 1.2.7 It is important to note that the mitigation schemes developed are intended to demonstrate only that significant transport impacts of the Allocation can be appropriately ameliorated. As such they are indicative only, and are not intended to

act as a definitive proposal for the mitigation of any Allocation, which would be developed as part of a Transport Assessment submitted as part of a planning application at a later date.

- 1.2.8 The Locality Assessments are one of a number of pieces of evidence developed in order to assess and evaluate the impact of the GMSF proposals on the transport network and focus only on the sites being allocated in the Plan. The majority of sites proposed for development are actually contained within the existing land supply (ELS) and have been split into three subcategories; Homes (both houses and apartments), Offices, and Industry and Warehousing. A separate “Existing Land Supply and Transport Technical Note” describes the quantity and distribution of the ELS, the key growth areas and the relationship between areas and the transport schemes proposed to serve them.
- 1.2.9 Transport for Greater Manchester has also worked closely with Highways England to understand the impact that the Allocations may have on the Strategic Road Network (SRN). SYSTRA Ltd was asked to carry out an exercise to assign the ‘with GMSF’ traffic flows to an representation of an empty SRN network and to produce network stress maps which identified areas of significant delay on the network, as well as providing detailed breakdowns of GMSF Allocation traffic for key sections of the SRN. This exercise has enabled all parties to move towards a common understanding of where the most significant traffic impacts are likely to occur, and provides a common basis to enable Highways England to make investment decisions as part of future Road Investment Strategy (RIS) planning discussions.

1.3 Policy Context – Greater Manchester Transport Strategy 2040

- 1.3.1 It is important to recognise that the GMSF has been developed with the benefit of an adopted Local Transport Plan – the Greater Manchester Transport Strategy 2040 (hereafter referred to as the 2040 Transport Strategy). The 2040 Transport Strategy has an established long-term vision for transport, of providing *world class connections that support long-term, sustainable economic growth and access to opportunity for all*. The four key elements of this vision are:

- Supporting sustainable economic growth;
- Protecting the environment;
- Improving quality of life for all; and,
- Developing an innovative city region.

1.3.2 The 2040 Transport Strategy was first published in February 2017. The Strategy has undergone a ‘light touch’ refresh to reflect work undertaken and the changed context, since 2017. As well as refreshing the 2040 Transport Strategy, to support the GMSF an updated Five Year Transport Delivery Plan has also been prepared. It sets out the practical actions planned to deliver the 2040 Transport Strategy and achieve the ambitions of the GMCA and the Mayor, providing a coordinated approach to transport investment. It is also intended to inform the development of the Greater Manchester Infrastructure Programme (GMIP).

1.3.3 Covid-19 has had a massive health and economic impact on our city region, affecting every person and every business in our city-region. The impact from the pandemic has not been equal or fair, highlighting inequalities across Greater Manchester. Travel demand remains well below levels prior to the pandemic and, although it is increasing, it is clear that Greater Manchester’s plans for transport and other policy areas will need to be adaptive as the recovery continues.

1.3.4 The aim will be to “lock in” some of the benefits our neighbourhoods, communities, towns and cities have experienced from lower vehicle traffic levels and embracing the opportunities to be more productive through flexible working and accessing services through high quality digital systems. The vision is for a future where walking and cycling are the obvious choice for shorter journeys and where the past dependency on the car is superseded by a reliable and responsive public transport system. Our Five Year Transport Delivery Plan sets out those first steps, from a transport and place making perspective to support leading the recovery and creating a stronger, sustainable and resilient Greater Manchester.

1.3.5 The Our Network policies in the GMSF and in Our Five Year Transport Delivery Plan support the implementation of “Our Network”, a ten-year plan to create an integrated, modern and accessible transport network for Greater Manchester. The Delivery Plan brings together different modes of public transport — bus, tram, rail,

tram-train and cycling and walking in an integrated, easy-to-use system with seamless connections, and simplified ticketing and fares.



- 1.3.6 The Five Year Delivery Plan has been prepared to respond to the transport opportunities and challenges facing Greater Manchester, in parallel with the development of the Greater Manchester Spatial Framework (GMSF). Together, these documents provide an integrated approach to transport and land use planning by identifying the strategic transport interventions required to deliver the scale of growth set out in the GMSF. It also supports the priorities of the Greater Manchester Strategy (2018).
- 1.3.7 A key ambition is to improve our transport system so that, by 2040, 50% of all journeys in Greater Manchester are made by public transport or active travel, supporting a reduction in car use to no more than 50% of daily trips. This will mean one million more sustainable journeys every day in Greater Manchester by 2040, enabling us to deliver a healthier, greener and more productive city-region – this is known as the “Right Mix”. Achieving the Right Mix is expected to lead to zero net growth in motor vehicle traffic in Greater Manchester between 2017 and 2040.
- 1.3.8 Fundamental to delivering the Right Mix will be the adoption of a “Streets for All” framework – to enable more people to walk, cycle and use public transport, and improve reliability for, in particular, buses and freight vehicles on the key route network serving our towns and Regional Centre.

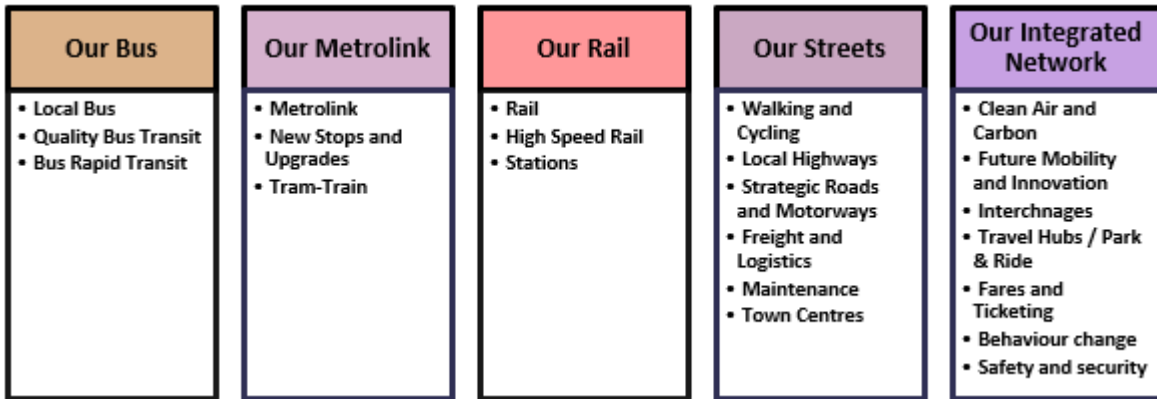
1.3.9 This will be one of the mechanisms used to grow bus patronage alongside:

- Bus Reform
- Integrated Ticketing
- Quality Bus Transit and Bus Corridor Upgrades
- Bus Rapid Transit

1.3.10 Following the introduction of the Bus Services Act (2017), the GMCA asked TfGM to carry out an assessment of a bus franchising scheme, have that assessment reviewed by an independent audit organisation, and carry out a consultation on a proposed franchising scheme which ran from 14 October 2019 to 8 January 2020. The Covid-19 pandemic has had a significant impact on Greater Manchester's bus market, including timetables, revenues, passenger numbers and the public's attitudes to public transport. Due to this, further work will be undertaken to assess the impact of coronavirus on the bus reform process.

1.3.11 Greater Manchester is also delivering the Bee Network - the UK's largest cycling and walking network as a key element in delivering the Right Mix vision. The Combined Authority has allocated £160m between 2018-2022 to fund the first phase of the Bee Network. The network has at its core a programme of new and upgraded pedestrian and cycling crossing points of major roads and other sources of severance, connected by a network of signed cycling and walking routes – known as Beeways – on existing quiet streets. These will be complemented by a number of routes on busier roads where Dutch style cycle lanes protected from motor traffic will be constructed.

1.3.12 Our Five Year Transport Delivery Plan sets out a comprehensive programme of work across all modes and in all Local Authorities which are focused on ensuring the realisation of the 'Right Mix' vision. It contains explanatory text and a summary of the interventions and their stage in the development and delivery process. These include committed, unfunded priorities for the next five years and our longer-term development priorities. The Delivery Plan sections are:



1.3.13 Many of these interventions support the GMSF Allocations directly, whilst others are intended to provide alternatives to private car travel more generally. The schemes demonstrate a clear plan for delivering strategic transport interventions for the first five years of the GMSF plan period, whilst also laying the foundations for longer term investment in sustainable transport across the length of the plan period.

1.3.14 Where relevant, each of the individual Locality Assessments will highlight elements of the Delivery Plan that are particularly relevant to each Allocation or the local area.

1.3.15 Our Five Year Transport Delivery Plan is supported by ten Local Implementation Plans (LIPs) covering the period 2020 to 2025. Each of the ten councils that make up Greater Manchester has its own LIP. The LIPs are designed to ensure local priorities are articulated in the Delivery Plan. The LIPs are included as an appendix to the Delivery Plan. They will be ‘live’ documents for a period of time and will be updated as councils develop and publish transport plans and strategies, or as new schemes are developed or delivered.

1.3.16 For more detail on the Greater Manchester Transport Strategy 2040 and Our Five Year Transport Delivery Plan visit the [TfGM website](#).

1.4 Structure of this Note

1.4.1 This note sets out the process that was implemented to identify the sites considered as suitable for inclusion in the draft GMSF. It also sets out a summary of the Greater Manchester Accessibility Level (GMAL) model which is TfGM’s tool for

assessing the accessibility of sites in public transport terms and which was used in assessing the transport requirements of the Allocations.

1.4.2 An associated exercise was carried out to assess the potential to introduce or extend bus services to the Allocations, and this note sets out the process implemented to assess the likely demand and revenue implications of these new services.

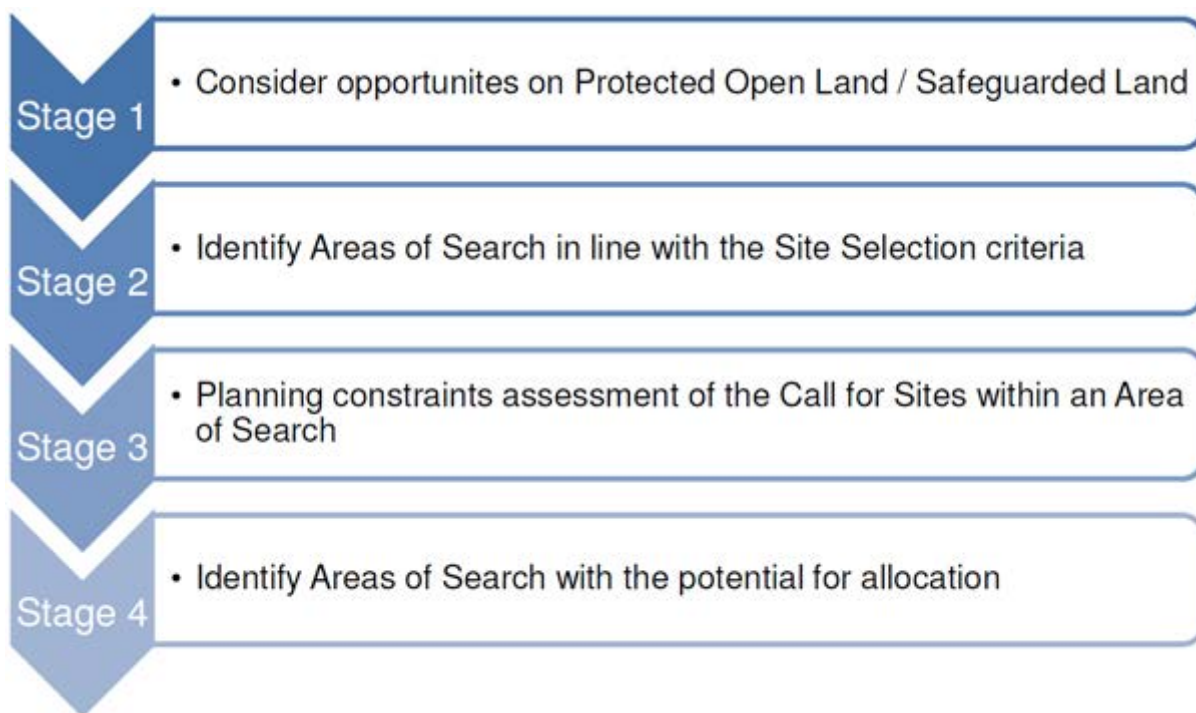
1.4.3 It then explains the approach to strategic modelling which was used to highlight the transport impacts of the Allocations on the transport network, and the process to identify, develop and categorise suggested mitigation schemes.

2. Site Selection

2.1 The Process

1.1.1 The process of identifying and selecting site allocations for the draft GMSF was led by the 10 Greater Manchester Authorities and provided the starting point for further investigation of the preferred sites through the Locality Assessments. It should be noted at the outset that a wide range of planning issues are considered when identifying sites for release, and transport is just one important aspect of this. A Site Selection methodology was developed that included seven criteria informed by the Vision, Objectives and Spatial Strategy in the GMSF 2019, and was used to guide the selection of sites for development within the green belt. A key objective for the process was to demonstrate a clear, consistent and transparent approach to the selection of sites in the GMSF.

1.1.2 The following stages set out the process used to identify the proposed allocations in the GMSF:



1.1.3 Stage One relates to land which is outside of the existing urban area but which is not in the green belt. This includes land which has been identified in Local Authority Local Plans as safeguarded land and/or protected open land (POL). This land is considered to be sequentially preferable to green belt. If stage one does not identify sufficient land to meet the need then it will be necessary to consider sites which are currently in the green belt as part of Stage two.

1.1.4 Stage Two is the identification of broad “Areas of Search” based on the Site Selection Criteria within which call for sites could be assessed. The Site Selection criteria reflect the priorities of the GMSF Spatial Strategy and objectives. The broad Areas of Search approach was chosen because of the volume of call for sites submitted and therefore it was necessary to undertake an initial high level sift to identify only those sites with the potential to meet the GMSF strategy. Sites which did not fall within an Area of Search were not considered to meet the strategy and were therefore excluded from the Site Selection process and not subject to any further assessment.

1.1.5 Based on the GMSF Spatial Strategy, plan objectives and guidance in the NPPF on green belt release, seven Site Selection Criteria were developed to identify the most sustainable sites in the green belt.

- Criterion 1 – Land which has been previously developed and/or land which is well served by public transport.
- Criterion 2 – Land that is able to take advantage of the key assets and opportunities that genuinely distinguish Greater Manchester from its competitors.
- Criterion 3 – Land that can maximise existing economic opportunities which have significant capacity to deliver transformational change and / or boost the competitiveness and connectivity of Greater Manchester and genuinely deliver inclusive growth.
- Criterion 4 – Land within 800 metres of a main town centre boundary or 800m from the other town centres' centroids.
- Criterion 5 – Land which would have a direct significant impact on delivering urban regeneration.
- Criterion 6 – Land where transport investment (by the developer) and the creation of significant new demand (through appropriate development densities), would support the delivery of long-term viable sustainable travel options and deliver significant wider community benefits.
- Criterion 7 – Land that would deliver significant local benefits by addressing a major local problem/issue.

1.1.6 Stage Three is an assessment of the sites within the identified Areas of Search to determine whether development in the Areas of Search would be appropriate, weighing the likely benefits against key planning constraints.

1.1.7 Stage four of the assessment identified proposed allocations within the Areas of Search. These Areas of Search were those which were considered to have no other significant constraints precluding development. Because the Areas of Search were derived from the Site Selection Criteria, it is considered that allocations within them represent the best fit for delivering the GMSF Spatial Strategy.

1.1.8 The Locality Assessments are not proposed to take the place of Transport Assessments (TA) which are a required part of individual Planning Applications. The Locality Assessments are intended to give a high-level assessment of how the site may impact on the surrounding transport network, in the absence of any detailed proposals for the configuration and phasing of a site. As such, they are intended to

highlight any significant 'show stoppers' that would suggest the site was not suitable for further consideration.

2.2 Greater Manchester Accessibility Levels

1.2.1 In order to support analysis of public transport accessibility and to assist in service development, TfGM has developed the [Greater Manchester Accessibility Levels \(GMAL\)](#) model, which provides a detailed and accurate measure of accessibility for any given location in the City Region for public transport (bus, rail and Metrolink), as well as flexible transport services such as Local Link.

1.2.2 GMAL provides a score of a location of between 1 to 8, where 1 represents the lowest level of accessibility and 8 represents the highest.

1.2.3 The GMAL measure reflects:

- Walking time from the point-of interest to the public transport access points;
- The number of services (bus, Metrolink and Rail) available within the catchment;
- The level of service at the public transport access points - i.e. average waiting time; and
- The operating areas of Local Link (flexible transport) services.

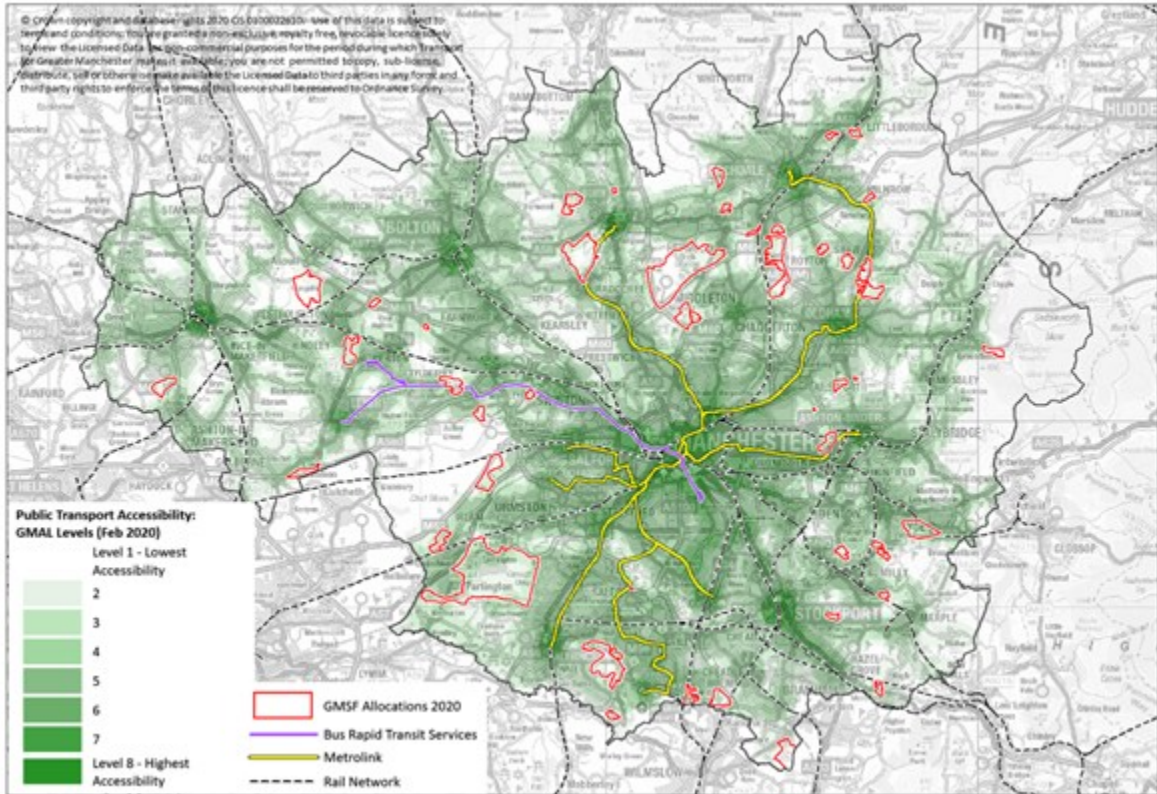
1.2.4 It does not consider:

- The speed or utility of accessible services;
- Crowding, including the ability to board services; or,
- Ease of interchange.

1.2.5 The map below displays the public transport accessibility of allocations within the Greater Manchester Spatial Framework. A representation of the Rail, Metrolink (including the Trafford Park Line completed in March 2020) and Bus Rapid Transit (Vantage bus services) corridors are provided for reference, as well as an indication of public transport accessibility through GMAL.

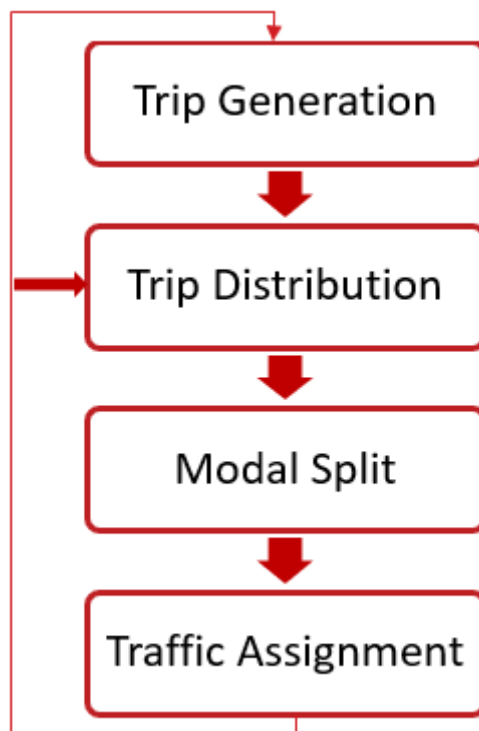
1.2.6 This accessibility data should be considered correct as of February 2020, providing a stable representation of the public transport network before changes in services associated with Covid-19. Since March 2020, public transport services have been under continuous review subject to the requirements of demand, social distancing

and funding. There have been a range of changes made regarding service frequencies across public transport networks, and while there was an initial reduction in services, much of this has now been restored, and this would still represent the areas best served by public transport within a stable service pattern.



3. Approach to Strategic Modelling

2.1 The GMSF Locality Assessments have been produced using data provided from TfGM's Variable Demand Model (GMVDM). This model is a mathematical representation of the transport network, which works by determining all of the origins and destinations of trips within a given area, matching these two together in order to generate a set of journeys, assigning these journeys to a mode (for example, car, bus, or cycling) and then assigning these trips to a route. The model runs numerous 'loops' in order to identify the best path (by generalised cost). This approach is summarised in the diagram below.



2.2 For this project, SYSTRA updated the model in order to produce a number of different scenarios to permit comparison and evaluation.

2.3 TfGM provided the Base Model to SYSTRA representing how the transport network operates at present (in 2017). SYSTRA made some refinements to the Base Model to add detail in the vicinity of some allocations. GMVDM is a strategic model and, as such, does have limitations in terms of investigating localised transport issues.

2.4 SYSTRA then produced a Reference Scenario, including the Existing Land Supply and committed transport infrastructure for two assessment years – 2025 and 2040. This facilitated an understanding of how the transport network was likely to operate in

the future, with the existing land supply identified in the GMSF, but without the introduction of the Allocations proposed in the plan.

- 2.5 Future trip generation to/from the site (i.e. how many people and vehicles will enter or leave the site) was estimated by applying a set of Greater Manchester-wide trip rates derived from an industry database known as TRICS (Trip Rate Information Computer System) to the agreed development quantum for each site. TRICS is a national system for trip generation analysis which allows users to establish potential levels of trip generation for a wide range of development types and scenarios. Trip rates were based on the Trafford Park Metrolink business case and were given for three periods, AM(0700-1000), Inter-Peak (1000-1600) and PM (1600-1900), different rates were also used for town centre and out-of-centre areas. Where Office or Industry and Warehouse was a part of the land use mix, floorspace was converted into a number of jobs, using densities derived from the Homes and Community Agency Employment Density Guide.
- 2.6 The distribution of trips (i.e. where they are going to or coming from) was derived by selecting nearby zones with similar land use characteristics as a proxy and using the existing distribution in the model.
- 2.7 In order to assess the cumulative impact of Greater Manchester allocations on the network, two test model scenarios were undertaken, a 'constrained' and 'high side' assessment. The constrained forecasts could reduce the number of future highway trips due to congestion on the highway network. This constraining process is undertaken by the GMVDM.
- 2.8 In simple terms, the GMVDM takes the unconstrained input demand and adjusts it to reflect changes in the costs of travel over time, due to:
- increased congestion due to the underlying increase in car trips forecast by the National Trip End Model (NTEM) a UK wide forecast of population, employment, car ownership and trip rates, produced by the Department for Transport
 - the inclusion of significant new developments causing additional local congestion
 - changes in values of time and vehicle operating costs
 - changes in public transport fares

- introduction of new public transport services or changes to journeys times / headways for existing services
- introduction of new road infrastructure

2.9 The model adjusts the input demand based on how the cost of travel changes from the base year to the future. For example, for a shopping trip undertaken by car which becomes more congested in future, changes might be:

- travel via a different route
- travel via a different mode, e.g. walk/cycle, bus, Metrolink
- travel to some different shops
- travel at a different time of day
- some combination of the above

2.10 The ‘standard’ development planning approach would generally not assume that future highway trips are constrained by congestion on the highway network. Discussions between SYSTRA and TfGM pointed towards a need to also look at such a ‘high-side’ scenario with the GMSF development scenario which does not take account of future congestion on the road network.

2.11 The outputs of these four Test Cases (“GMSF Constrained” and “GMSF High Side”, for both 2025 and 2040) were used to assess and mitigate the impact of the GMSF Allocations on the Greater Manchester transport network.

2.12 Further iterations of the above process were necessary in the case of some sites. When the process was completed, a comparison was made of the input TRICS trip rates and the output GMVDM development traffic flows, to confirm that both were broadly comparable.

4. Approach to Technical Analysis

4.1 Background

3.1.1 For each of the Site Allocations originally examined, SYSTRA worked with representatives of the ten Greater Manchester Local Authorities, TfGM and site promoters to identify key parts of the transport network (e.g. key road links and

junctions) likely to be impacted by the site. This was achieved by a combination of both professional judgement and local knowledge.

- 3.1.2 In almost all cases the junctions in a road network reach capacity before the road links. Hence, much of the analysis focused on the identified critical junctions. For each of these, a local junction model was built which replicated the current operation of the junction. Signalised junctions were assessed in detail using industry-standard modelling software 'LINSIG Version 3'. Where possible, traffic signal information (i.e. signal phasing and timings) and lane geometry (alignment, profile and lane position) were provided by TfGM to ensure that the local junction models reflected (as far as possible), the operation of the junctions on the ground. 'Junctions 9' software was used to assess priority and roundabout junctions.
- 3.1.3 Junction performance was tested for the "Reference", "GMSF Constrained" and "GMSF High Side" scenarios for both 2025 and 2040. Site traffic impacts were measured relative to the Reference scenario. Where these impacts were considered to be significant, transport mitigation schemes were developed to address these. Through discussions with TfGM and the Combined Authority, it was agreed that where mitigation was required, it should mitigate the impacts back to the Reference Case scenario – i.e. the allocations should mitigate their own cumulative impact rather than seek to mitigate the impact of general traffic growth arising from the Existing Land Supply. It should be noted that mitigating back to this level of operation may not mean that the junction operates within capacity by 2040.

4.2 Approach to identifying Public Transport schemes

- 3.2.1 Public transport interventions have been identified which could support non-car trips to and from the draft Allocation. In some instances sites have been proposed close to current or planned Metrolink stops or current rail stations, and for a majority of sites the introduction of new or extended bus services have been proposed and outline costs developed.
- 3.2.2 In order to develop these proposals, SYSTRA Ltd's bus service experts and TfGM's Operational Planning team held a workshop to identify potential new and improved services for each site, including any existing proposals identified during the early stages of the planning process. The identified services were then defined in more

detail to understand the likely catchments and patronage levels. Patronage was based on TRICS outputs moderated in line with the actual levels of services proposed (e.g. slow and/or low frequency services are unlikely to achieve the patronage implied by the raw TRICS outputs). The patronage forecasts were used to estimate the likely revenue levels to be generated by the new or improved bus service associated with each site.

- 3.2.3 Services were also costed using detailed costing information available to TfGM through its specification of current socially necessary bus services, to establish whether they could operate without subsidy, and, where subsidy was likely to be necessary, to understand the likely cost per passenger. Services with an unacceptably high cost per passenger subsidy were reviewed in order to understand if any changes could be made that would reduce the subsidy, which led to a reduction in the specification of some services.
- 3.2.4 Services which, following review, still had an unacceptably high cost per passenger subsidy were deemed to be unviable and were not included in the Locality Assessments.
- 3.2.5 It should be noted that the working environment for buses is likely to be substantially different in the future, and this exercise was intended to be indicative of the type of bus service that may be possible when an Allocation is developed. The opportunity for bus service improvements will need to be reviewed at the time of submission of the planning application (within the Transport Assessment) as circumstances and opportunities for service improvement may have changed.

4.3 Mitigations and Scheme Development

- 3.3.1 A number of the site allocations have a body of pre-existing planning information associated with them. This body of work includes consideration of how they could best be linked into the transport network. Therefore, for some sites, there were pre-existing proposals for interventions in the form of link roads, new rail or Metrolink stations, or extensions to existing or proposed bus, cycle and walking routes. Where these schemes had a base level of detail (which would allow them to be coded into the model), they could be examined to consider the level of relief they provided to the traffic impacts. In other instances, it was for the Locality

Assessment technical teams to identify possible interventions and off-site mitigations. Typical local mitigations that were considered included:

- priority junctions (both new priority junctions and modification of existing junctions)
- signalised junctions (both new signalised junctions, modification of existing signalised junctions and conversion of priority junctions to signalised arrangement)
- roundabouts (both mini and standard, modification of existing roundabouts and signalisation of standard roundabouts)
- carriageway construction (single and dual carriageway)
- installation of pedestrian / cycle crossings (pelican, toucan, puffin and zebra).

3.3.2 In addition, the team considered the introduction of new bus services, extensions to or increases in frequency for existing bus services, and the possible introduction of Demand Responsive Transport.

3.3.3 In parallel to the identification and costing of local mitigations, a costing exercise was undertaken to identify broad costs for each intervention to understand how these could be delivered and the extent to which they offered value for money. SYSTRA and other third-party consultants have pro-actively engaged with the Local Authorities and other stakeholders such as TfGM and Highways England throughout the assessment process and based on their inputs the list of transport interventions has been refined and consolidated.

3.3.4 In the case of certain allocations, it was necessary to undertake the process described above more than once. In the case of some larger and/or more complex sites, it was necessary to test the effectiveness of the identified mitigations via the GMVDM and to further check that traffic reassignment did not generate additional problems.

3.3.5 Each of the Locality Assessments has considered the full range of mitigations and interventions, from public transport, to highway schemes, to sustainable modes. Some of the sites allocated for development have proven to be more complex than others; due either to their size and composition, their proximity to other sites or their interaction with congested sections of the Strategic Road Network. In these instances, it has been necessary to complete several iterations of the process set out above. For example, mitigations developed for a site may not fully address the

issues identified, and further mitigations and/or reductions in development quantum have been considered in order to identify the correct level of scale. This has in some cases necessitated several rounds of strategic modelling.

3.3.6 In some instances, it was not possible to fully identify interventions which could suitably mitigate the impact of the site on the network. Where this is the case, this became a contributing factor in decisions to either reduce the scale or remove the site completely from the GMSF (Appendix 1 gives a full list of the final GMSF Allocations). In other instances, the proposed intervention made a contribution to mitigating the site, but could not fully ameliorate the impact. In these instances, care has been taken to ensure that the Allocation is not proposed for delivery in the early part of the Plan period, in order to allow further work to be done to improve the transport network, and ensure that the Allocation can be brought forward safely and sustainably.

3.3.7 Mitigations have been grouped in one of four categories depending on their size and significance:

Necessary strategic interventions

3.3.8 These comprise significant interventions that have potential to have strategic benefits – i.e. benefits to the wider network not just the local network. There is a consensus that the intervention is required to support the implementation of a specific site and that the site could not come forward without it

Supporting strategic interventions

3.3.9 These comprise significant interventions; similar in magnitude to those defined in the previous category. These interventions are considered highly desirable and may be required in order to deliver the GMSF at a Plan level but are not necessarily linked to the delivery of any one Allocation.

Necessary local interventions

3.3.10 These are essential for a site to come forward, but do not have a wider strategic impact on the transport network. They are comprised of three main types:

- Site Access – Direct connections between the external road network and the site.

- Local Mitigation – Local transport mitigation measures proposed to address direct impacts of the site. These might comprise road network improvements, localised public transport improvements and measures to support the use of active modes.
- SRN Mitigation – Highway mitigation measures specifically intended to address identified issues on the Strategic Road Network arising from an Allocation.

Supporting local interventions

- 3.3.11 Site Access, Local Mitigation and SRN mitigation which are considered highly desirable but are not essential to the delivery of any one Allocation.
- 3.3.12 It is important to note that the interventions developed are intended to demonstrate only that significant transport impacts of the Allocation can be appropriately ameliorated. As such they are indicative only and are not intended to act as a definitive proposal for the mitigation of any Allocation, which would be developed as part of a Transport Assessment submitted as part of a planning application at a later date.
- 3.3.13 All of the interventions set out in the Locality Assessments are included in Greater Manchester’s Five Year Transport Delivery Plan (or are covered within the associated Local Implementation Plans (LIP) for each local authority). This sets out those transport schemes which will be implemented or developed further across the next five-years in order to deliver on Greater Manchester’s wider economic, social and environmental objectives for transport as set out in 2040 Transport Strategy.
- 3.3.14 The focus of the main Transport Delivery Plan is on those GMSF schemes that have strategic benefits, while the LIP documents enable the local interventions to be incorporated into the local sustainable transport and highway programmes.
- 3.3.15 In all cases, we would expect significant developer funding to enable the delivery of both the strategic and local schemes, and where appropriate other sources of public funding will be sought to help ensure delivery over the plan period. Funding and delivery priorities of the Delivery Plan, over the next 3-5 years, will be reflected in the Greater Manchester Infrastructure Programme (GMIP).

3.3.16 Further iterations of the Delivery Plan will be published at regular intervals, and as sites come forward for development, we would expect to see interventions necessary to ensure new Allocations can be delivered sustainably to be reflected in those iterations. TfGM, the Local Authorities, Highway England and site promoters will work together to ensure that schemes which are brought forward support the City Region's commitment to the Right Mix vision and the ambition to enable more people to walk, cycle and use public transport.

5. Conclusion

4.2 The completion of Locality Assessments on the proposed GMSF Allocations has ensured that each site has been subject to a thorough, robust and consistent evaluation of its likely contribution to transport impacts in Greater Manchester. The sites that have been selected for inclusion in the latest version of the GMSF have been found to be suitable from a transport perspective, and satisfy the requirements of National Planning Policy Framework in that they do not place an unacceptable impact on highway safety or severe impact on the road network. Where necessary, illustrative mitigation schemes have been developed, and their effectiveness in reducing traffic impacts has been demonstrated. Those schemes which have a strategic benefit and are likely to be needed in the next five-year period have been referenced in Our Five Year Transport Delivery Plan and form part of GMIP.

4.3 Nonetheless, it is clear that for some Allocations there is further work to be done in order to develop a solution that fully mitigates the site's impact on the transport network. In these instances care has been taken to ensure that the Allocation is not identified for delivery in the first five years of the Plan, to enable more work to be undertaken to ensure that the site can be delivered in a safe and sustainable matter at a later point in time.

6. GMSF Allocations List

Local Authority	2019 Ref	2019 Title	2020 Ref	2020 Title
Cross Boundary	GMA01.1	Northern Gateway Heywood Pilsworth	GMA1.1	Northern Gateway Heywood Pilsworth
Cross Boundary	GMA01.2	Northern Gateway Simister and Bowlee	GMA1.2	Northern Gateway Simister and Bowlee
Cross Boundary	GMA01.3	Whitefield	Withdrawn	Withdrawn
Cross Boundary	GMA02	Stakehill	GMA2	Stakehill
Cross Boundary	GMA03	Kingsway South	Withdrawn	Withdrawn
Bolton	GMA04	Bewshill Farm	GMA4	Bewshill Farm
Bolton	GMA05	Chequerbent North	GMA5	Chequerbent North
Bolton	GMA06	West of Wingates	GMA6	West of Wingates
Bury	GMA07	Elton Reservoir	GMA7	Elton Reservoir
Bury	GMA08	Seedfield	GMA8	Seedfield
Bury	GMA09	Walshaw	GMA9	Walshaw
Manchester	GMA10	Global Logistics	GMA10	Global Logistics
Manchester	GMA11	Roundthorn MediPark Extension	GMA3.1	Roundthorn MediPark Extension
Manchester	GMA12	Southwick Park	GMA11	Southwick Park
Oldham	GMA13	Ashton Road Corridor	GMA18	Land south of Coal Pit Lane (Ashton Road)
Oldham	GMA14	Beal Valley	GMA12	Beal Valley

Local Authority	2019 Ref	2019 Title	2020 Ref	2020 Title
Oldham	GMA15	Broadbent Moss	GMA14	Broadbent Moss
Oldham	GMA16	Cowlshaw	GMA16	Cowlshaw
Oldham	GMA17	Hanging Chadder	GMA17	Hanging Chadder
Oldham	GMA18	Robert Fletchers	GMA15	Chew Brook Vale (Robert Fletchers)
Oldham	GMA19	South of Rosary Road	GMA19	South of Rosary Road
Oldham	GMA20	Spinners Way	Withdrawn	Withdrawn
Oldham	GMA21	Thornham Old Road	Withdrawn	Withdrawn
Oldham	GMA22	Woodhouses	GMA13	Bottom Field Farm (Woodhouses)
Rochdale	GMA23	Bamford and Norden	GMA20	Bamford and Norden
Rochdale	GMA24	Castleton Sidings	GMA21	Castleton Sidings
Rochdale	GMA25	Crimble Mill	GMA22	Crimble Mill
Rochdale	GMA26	Land north of Smithy Bridge	GMA23	Land north of Smithy Bridge
Rochdale	GMA27	Newhey Quarry	GMA24	Newhey Quarry
Rochdale	GMA28	Roch Valley	GMA25	Roch Valley
Rochdale	GMA29	Trows Farm	GMA26	Trows Farm
Salford	GMA30	Land at Hazelhurst Farm	GMA27	Land at Hazelhurst Farm

Local Authority	2019 Ref	2019 Title	2020 Ref	2020 Title
Salford	GMA31	East of Boothstown	GMA28	East of Boothstown
Salford	GMA32	North of Irlam Station	GMA29	North of Irlam Station
Salford	GMA33	Port Salford Extension	GMA30	Port Salford Extension
Stockport	GMA34	Bredbury Park Extension	GMA31	Bredbury Park Extension
Stockport	GMA35	Former Offerton High School	GMA32	Former Offerton High School
Stockport	GMA36	Gravel Bank Road/Unity Mill	Withdrawn	Withdrawn
Stockport	GMA37	Heald Green	GMA33	Heald Green 1 (West)
Stockport	GMA38	High Lane	GMA35	High Lane
Stockport	GMA39	Hyde Bank Meadows	GMA36	Hyde Bank Meadows
Stockport	GMA40	Griffen Farm/Stanley Green	GMA34	Heald Green 2 (East)
Stockport	GMA41	Woodford Aerodrome	GMA37	Woodford Aerodrome
Tameside	GMA42	Ashton Moss West	GMA38	Ashton Moss West
Tameside	GMA43	Godley Green Garden Village	GMA39	Godley Green Garden Village
Tameside	GMA44	South of Hyde	GMA40	South of Hyde

Local Authority	2019 Ref	2019 Title	2020 Ref	2020 Title
Trafford	GMA45	New Carrington	GMA41	New Carrington
Trafford	GMA46	Timperley Wedge	GMA3.2	Timperley Wedge
Wigan	GMA47	Land South of Pennington	Withdrawn	Withdrawn
Wigan	GMA48	M6 Jctn 25	GMA42	M6 Junction 25
Wigan	GMA49	North of Mosley Common	GMA43	North of Mosley Common
Wigan	GMA50	Pocket Nook	GMA44	Pocket Nook
Wigan	GMA51	West of Gibfield	GMA45	West of Gibfield

Greater Manchester Spatial Framework

Locality Assessment:

Land at Hazelhurst Farm GMA27

Publication Version 2: November 2020

Identification Table	
Client	Salford / TfGM
Allocation	Land at Hazelhurst Farm
File name	GMA27 Salford: Land at Hazelhurst Farm LA 021020
Reference number	GMA27 (GMSF 2020), previously GMA30 (GMSF 2019)

Approval					
Version	Role	Name	Position	Date	Modifications
0	Author	Jessica Harrowsmith	Assistant Consultant	20/08/20	Base report
	Checked by	Huw Williams	Associate Director	27/08/20	
	Approved by	Darren Kirkman	Associate	02/09/20	
1	Author	B Brisbane	TfGM	30/09/20	Consistency edits
	Checked By	Jimmy McManus	Salford City Council	01/10/20	
	Approved By	James Shuttleworth	Salford City Council	02/10/20	

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Allocation Data	
Allocation Reference No.	GMA27 (GMSF 2020) previously GMA30 (GMSF 2019)
Allocation Name	Land at Hazelhurst Farm
Authority	Salford
Ward	Worsley
Allocation Proposal	400 houses
Allocation Timescale	0-5 years <input checked="" type="checkbox"/> 6-15 years <input checked="" type="checkbox"/> 16 + years <input type="checkbox"/>

Glossary

“2025 GMSF Constrained” - is the 2025 forecast case in which the model adjusts the input demand based on how the cost of travel changes from the base year to the future. For example, for a shopping trip undertaken by car which becomes more congested in future, changes might be travel via a different route, mode, location or time of day.

“2040 GMSF Constrained” - as above, but for a 2040 forecast year

“2025 GMSF High-Side” - is the 2025 forecast case in which the model does not adjust the input demand based on how the cost of travel changes. In this scenario congestion does not lead to a reassignment of traffic, and therefore road traffic flow will generally be higher.

“2040 GMSF High-Side” - as above, but for a 2040 forecast year

“2025 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2025

“2040 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2040

AADT - Annual average daily traffic, is a measure used in transportation planning to quantify how busy the road is

Bee Network - is a proposal for Greater Manchester to become the very first city-region in the UK to have a fully joined-up cycling and walking network: the most comprehensive in Britain covering 1,800 miles.

Bus Rapid Transit - is a bus-based public transport system designed to improve capacity and reliability relative to a conventional bus system. Typically, a BRT system includes roadways that are dedicated to buses, and gives priority to buses at junctions where buses may interact with other traffic

Existing Land Supply - these are sites across the county that have been identified by each local planning authority across Greater Manchester and are available for development

Greater Manchester Variable Demand Model (GMVDM) - the multi-modal transport model for Greater Manchester. This transport model provides estimates of future year transport demand as well as the estimates of travel behaviour changes and new patterns that the Plan is likely to produce. These include changes in choices of routes, travel mode, time of travel and changes in journey destinations for some activities such as work and shopping.

“LRN” (Local Road Network) All other roads comprise the Local Road Network. The LRN is managed by the local highways authorities

National Trip End Model (NTEM) - is a Department for Transport forecast that ensures that measures of population, jobs and trips made by various mode are consistent across the whole of Great Britain.

Rapid transit services - refers to high frequency, high capacity metro style transport services including Metrolink and Bus Rapid Transit.

“SRN” (Strategic Road Network) The Strategic Road Network comprises motorways and trunk roads, the most significant ‘A’ roads. The SRN is managed by Highways England.

“TfGM” - Transport for Greater Manchester, the Passenger Transport Executive for Greater Manchester

Urban Traffic Control (UTC) - is a specialist form of traffic management that, by coordinating traffic signals in a centralised location, minimises the impact of stop times on the road user.

1. Allocation Location & Overview

- 1.1.1 This Locality Assessment (LA) is one of a series being prepared for proposed allocations within Greater Manchester in order to confirm the potential impacts.
- 1.1.2 This LA provides an assessment for the Greater Manchester Allocation 27 Land at Hazelhurst Farm; its purpose is to identify the likely transport and highways impacts of the allocation and formulate appropriate mitigation strategies to support the inclusion of the allocation in to the GMSF.
- 1.1.3 The allocation Land at Hazelhurst Farm is proposed to accommodate 400 homes. The allocation is situated within the City of Salford immediately south east of the M60 at Junction 14 (A580 East Lancashire Road). The land is bound to the west by protected woodland, the M60 and residential developments off Greenleach Lane. To the north of the allocation is the A580 East Lancashire Road and to the east and south is further residential development. The A580 East Lancashire Road provides highway connections between Greater Manchester's Regional Centre to the east and Liverpool to the west, running parallel with the M62. Beyond the A580 East Lancashire Road to the north is the Wardley Business Park and the St Mary's Roman Catholic Cemetery, which is locally listed. At the Northern end of the business park is Moorside railway station, approximately 1.6km away, the closest station to the allocation.
- 1.1.4 The existing land use of the allocation is predominantly agricultural with protected woodland (Worsley Woods site of biological importance) on the western edge. The woodland acts as a sound barrier from traffic on the M60 and Junction 14. The allocation also comprises of wetlands (Spring Dam) which is a priority habitat.
- 1.1.5 No existing highway infrastructure is present on the land, however, there are a number of residential roads leading up to the allocation boundary which could potentially be utilised to provide vehicle access. In close proximity to the allocation are major roads including the M60 and M61 motorways and the A580 East Lancashire Road dual carriageway. Immediately to the east and south of the site are residential streets with limited access with 30mph speed limits. Hazlehurst Road connects the A580 East Lancashire Road (to the north) with the A572 Worsley Road affording access to the M60 at Junction 13 (west) and the A6 (to the east).
- 1.1.6 Please note all boundaries shown were correct at time of writing, but for definitive boundary information refer to the GMSF allocation maps.

2. Justification for Allocation Selection

- 2.1.1 The Site Selection process has been led by the 10 Greater Manchester Authorities and provided the starting point for further investigation of the preferred allocations through the Locality Assessments. To identify potential development sites for allocation, a Site Selection methodology has been developed. The methodology includes seven Site Selection criteria which have been informed by the Vision, Objectives and Spatial Strategy in the GMSF 2019. These have been used to guide the selection of sites within the Green Belt for development. A key outcome from the Site Selection process is to demonstrate a clear, consistent and transparent approach to the selection of sites in the GMSF.
- 2.1.2 The Land at Hazelhurst Farm allocation is located within the existing residential area of Swinton and benefits from close proximity to stops for the Leigh-Salford-Manchester bus rapid transit service which runs, at this point, along the A580 East Lancashire Road to the north of the allocation. The busway provides excellent adjacent public transport accessibility to the employment and leisure opportunities in the Regional Centre.
- 2.1.3 Given the availability of these public transport connections, the site was selected for inclusion within the GMSF on the basis of criteria 1 (Land which has been previously developed and/or land which is well served by public transport) of the GMSF site selection criteria detailed. Further information can be found within the GMSF site selection topic paper.

3. Key Issues from Consultation

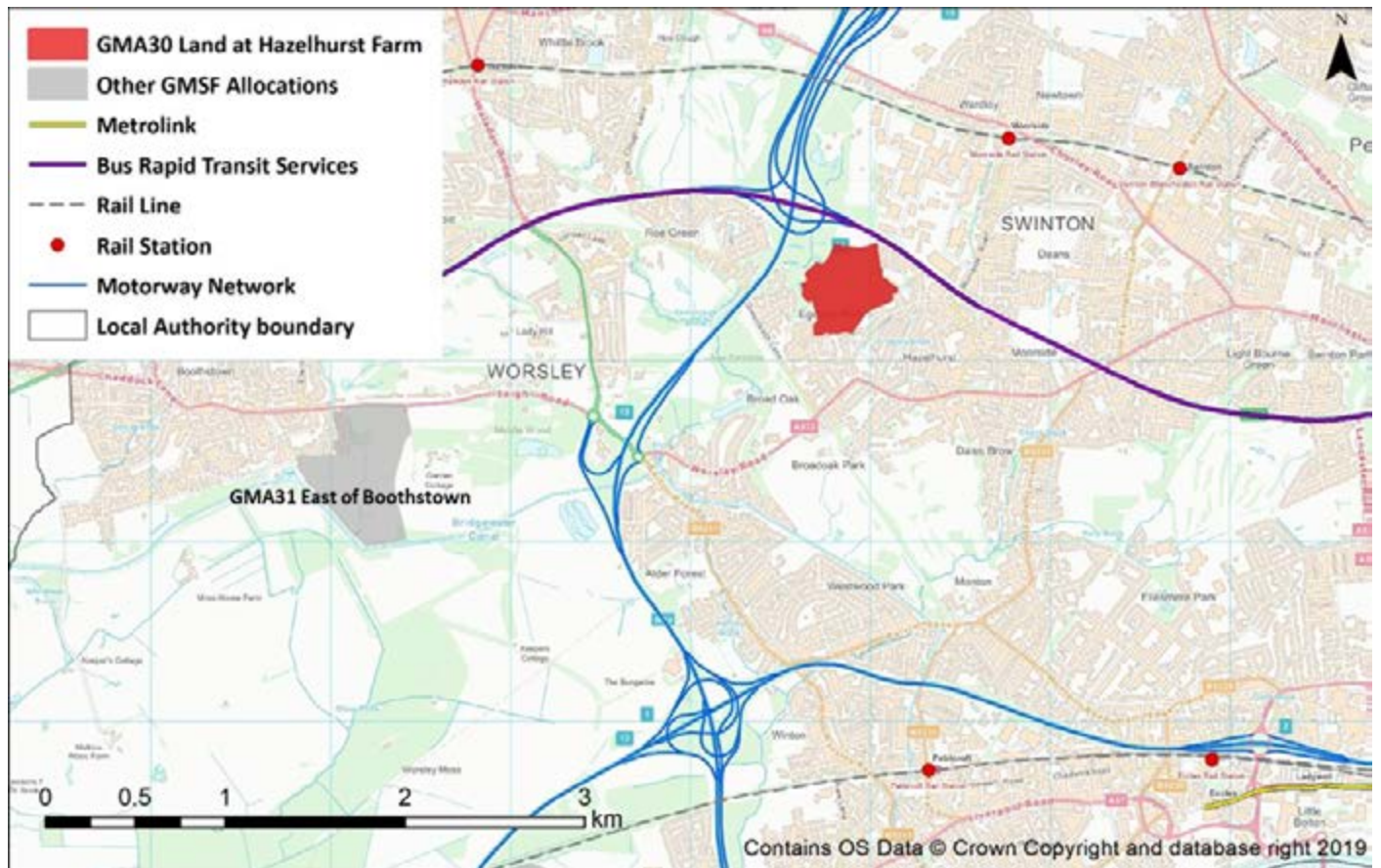
- 3.1.1 The Greater Manchester Plan for Homes, Jobs and Environment (Spatial Framework) consultation ran from 14th January to 18th March 2019. Representations submitted in response to the proposed allocation Land at Hazelhurst Farm, included transport related issues of: congestion, highway/Junction capacity, public transport, active travel and air quality.
- 3.1.2 Concerns were raised that the development of the allocation would exacerbate congestion on the local and strategic highway network with insufficient information provided over the impact GMSF will have.
- 3.1.3 Comments suggested that the local infrastructure is inadequate in the Worsley/ Boothstown area and major investment is required in public transport and highway infrastructure to address the increasing demand.

- 3.1.4 Public transport in the area is considered to be inadequate with overcrowding already an issue on the Vantage services. Moorside station was also identified as lacking parking and facilities for disabled users.
- 3.1.5 From a site specific perspective, concerns were raised over the perceived lack of suitable access points to the allocation given its proximity to the A580 East Lancashire Road and the M60. The width of Hazelhurst Road was also raised as an issue.
- 3.1.6 Safety during the construction phase was highlighted, in particular for pedestrians.
- 3.1.7 From an Air Quality perspective, concerns were raised during the consultation due to the generation of increased traffic and the loss of green infrastructure.
- 3.1.1 Further information on the consultation responses can be found in [the GMSF Consultation Report \(October 2019\)](#).

4. Existing Network Conditions and Allocation Access

- 4.1.1 This Section summarises the existing access to the allocation. Figure 1 indicates the location of the allocation, other GMSF allocations in the neighbouring area and its context regarding access to the highway network and public transport opportunities.

Figure 1 Allocation Location: Land at Hazelhurst Farm



Note: All boundaries/references shown were correct at time of writing – for definitive boundary / referencing information refer to the GMSF allocation maps.

4.2 Existing Local Access

- 4.2.1 Hazelhurst Road connects the A580 East Lancashire Road (to the north east of the allocation) with the A572 Worsley Road to the south of the allocation. A number of local access roads lead from Hazelhurst Road and Greenleach Lane towards the allocation. At present, a left in/left out arrangement is available (to access the A580 East Lancashire Road) between Burton Grove and Stanton Drive and on to Partington Street/ Richmond Drive.
- 4.2.2 The traffic calmed Hazelhurst Road connecting the A580 East Lancashire Road with the A572 Worsley Road is 7 metres wide with footways on either side of the carriageway. Partington Street which leads from Hazelhurst Road to Richmond Drive is 6m wide. A priority Junction connects Hazelhurst Road with Moorside Road which is approximately 35 metres from the signalised crossroads of the A580 East Lancashire Road/ Moorside Road Junction.

4.2.3 The southern portion of Hazlehurst Road connects with the A572 Worsley Road via a wide, priority Junction. Hazelhurst Road is restricted to vehicles less than 7.5tonnes in weight with parking on both of sides of the carriageway, in particular at the northern end where the highway capacity is constrained.

4.2.4 Land at Hazelhurst Farm is also well positioned in terms of access to the strategic road network with Junction 14 of the M60 located immediately north west of the allocation. Alternatively, Junction 13 of the M60 can be accessed from the A572 Worsley Road, within 2km of the centre of the allocation.

4.3 Accidents and Collision Overview

4.3.1 Collision analysis has been undertaken within 1km of the allocation for the most recent 5 year period (2015 and 2019 inclusive). Table 1 provides a summary of the collisions by severity.

Table 1. Collision Data within 1 km of Land at Hazelhurst Farm

Fatal	Serious	Slight	Total
1	10	62	73

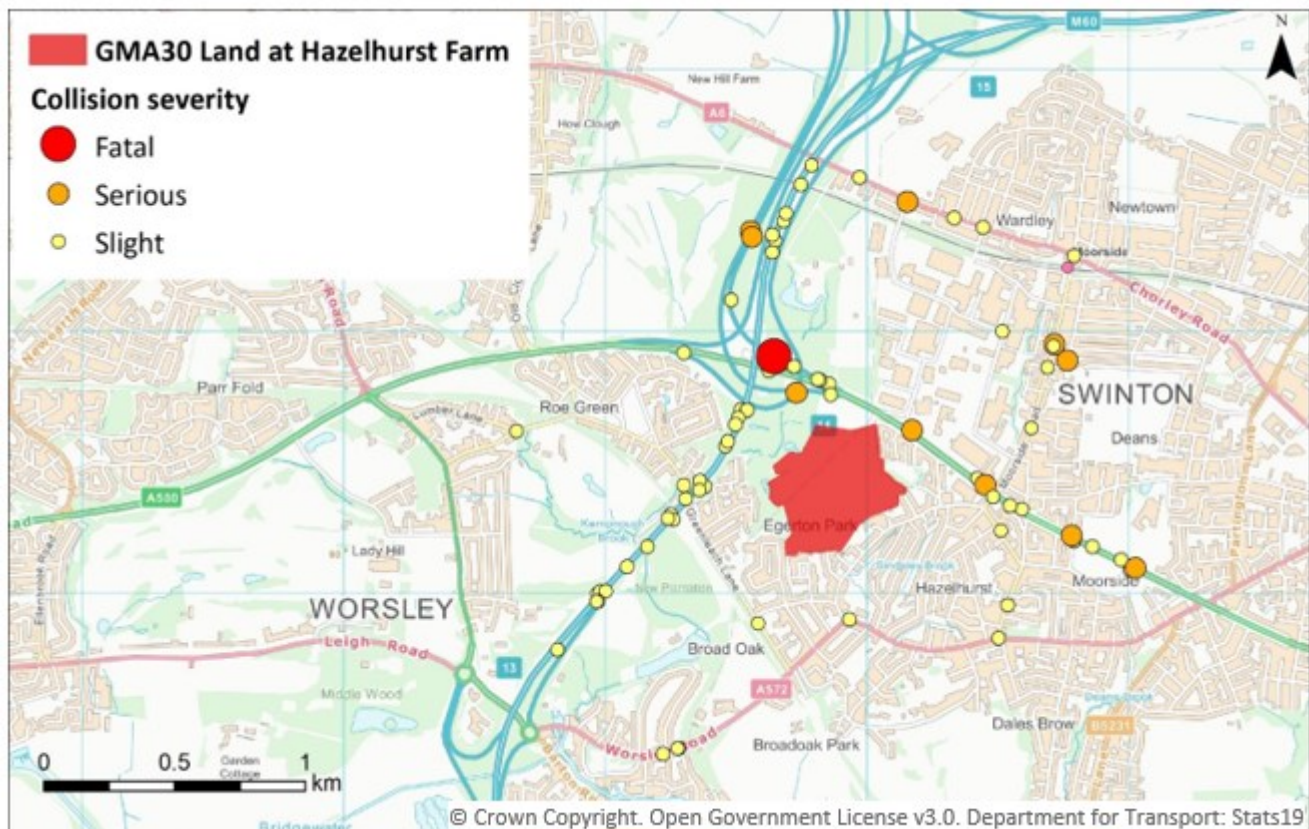
4.3.2 It can be seen that one fatal collision was recorded on the M61 diverge approaching the A580 East Lancashire Road eastbound. Ten serious collisions were recorded with a further 62 slight collisions.

4.3.3 Figure 2 provides an illustrative indication of where the collisions occurred. It can be seen that most collisions occur at junctions with a cluster around the A580 East Lancashire Road/ Moorside Road/ Hazelhurst Road Junction.

4.3.4 The fatal collision involved two vehicles with a pedestrian casualty. Pedestrian casualties were also recorded on the A6 Manchester Road, west of St Ambrose Barlow RC High School, at the Moorside Road/ Shakespeare Road Junction and on Moorside Road adjacent to the Church of the Holy Rood.

4.3.5 The serious collision at the A6 Manchester Road/ Holloway Drive Junction involved a pedal cycle casualty with further pedal cycle casualties recorded at the A6 Manchester Road/ Arundel Street and A580 East Lancashire Road/ Broadbent Street junctions.

Figure 2 Collision Analysis

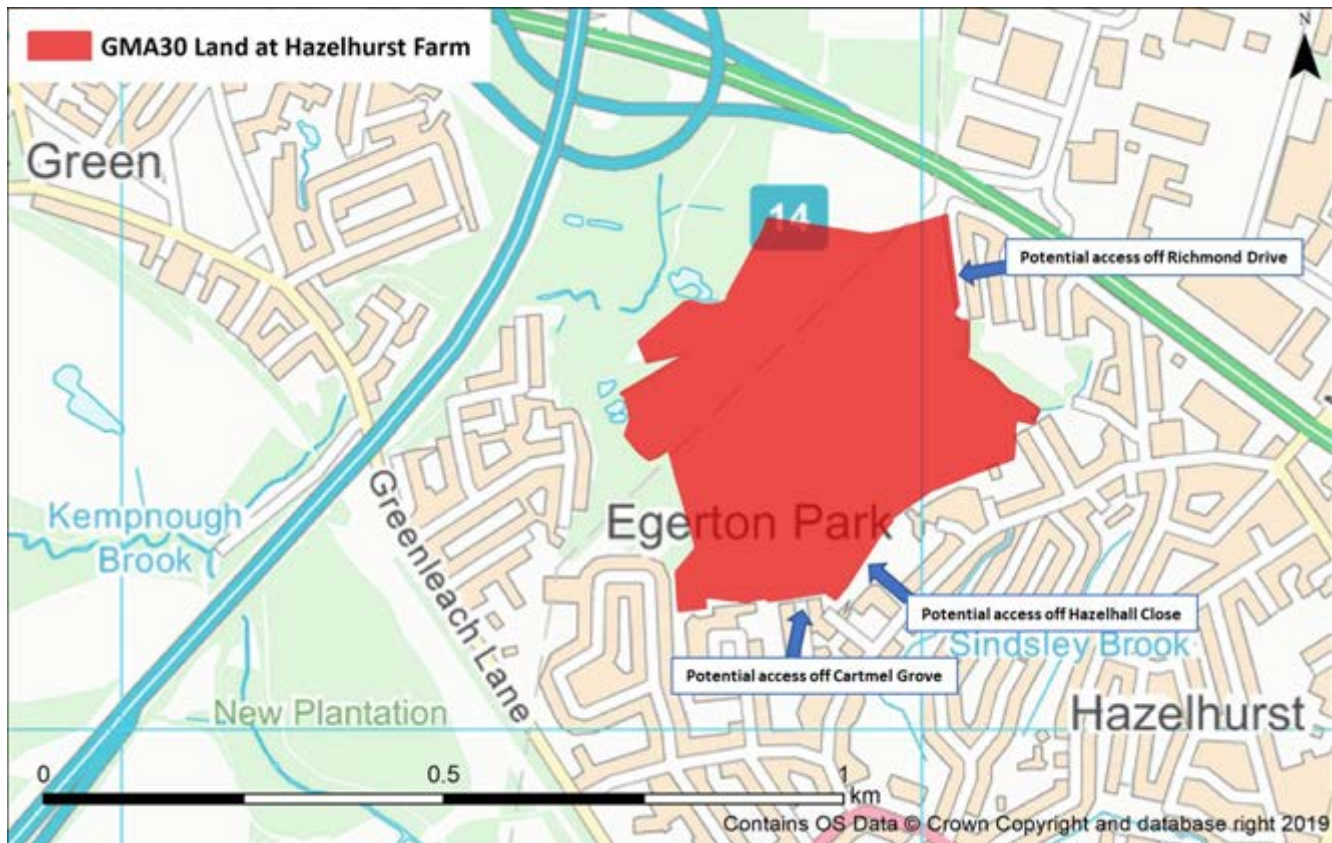


5. Proposed Access to the Allocation

5.1.1 Having undertaken an access appraisal, engineers have identified a number of potential access points to/ from the allocation. The main access could be provided from Cartmel Grove as the land is within the ownership of the site promoter. An alternative access at the south of the allocation could also be provided from Hazelhall Close. It is understood that the land owner would like to provide an access via Richmond Drive to the north of the allocation, however, Salford Council have concerns over this access and its proximity to the left in/ left out arrangement with the A580 East Lancashire Road (between Stranton Drive and Burton Grove). A minimum of two access junctions will need to be provided.

5.1.2 Figure 3 indicates the potential accesses for the allocation.

Figure 3 Allocation Access Arrangements



- 5.1.3 At Planning Application stage, an assessment of the required number of site access junctions will need to be undertaken to confirm that they operate satisfactorily in capacity terms. However, it is considered that a minimum of two site accesses will be required to serve the allocation. This will assist with the dispersal of any impact across the network while providing a primary and secondary access in the event of an emergency.
- 5.1.4 Visibility assessments at the allocation access junctions will also need to be undertaken at Planning Application stage to ascertain their suitability to accommodate additional traffic. Visibility splays will be based upon available design standards including Manual for Streets. Consideration of waiting restrictions around the radii of junctions will need to be considered in heavily parked areas (such as Hazelhurst Road north).
- 5.1.5 Provision of an access on to Richmond Drive is anticipated to result in an increase in traffic using the existing left in/left out arrangement to/ from the A580 East Lancashire Road. This is likely to raise road safety concerns. Consideration should be given to the closure of this access point. If this is likely to be unacceptable, then the suitability of an access point on to Richmond Drive is questioned.

- 5.1.6 Cartmel Grove is a residential street 5.5m wide and it may be appropriate to restrict this access to pedestrians, cyclists and emergency vehicles only.
- 5.1.7 This site access arrangements have been developed to illustrate that there is a practical option for site access in this location and to develop indicative cost estimations. It is assumed that a detailed design consistent with Greater Manchester's best practice Streets for All highway design principles will be required at the more detailed planning application stage.

6. Multi-modal accessibility

6.1 Overview

- 6.1.1 The development of access and active travel across Greater Manchester is a central tenet of the GMSF, to be realised through the establishment and continued improvement of the cycle and walking network.
- 6.1.2 An assessment of the accessibility of the allocation, by all modes of transport, has been undertaken so as to establish if it would meet with prevailing sustainable transport policies.
- 6.1.3 It highlights the opportunities for employees, residents and visitors to travel to and from the allocation by modes of travel other than in a privately owned car.
- 6.1.4 Greater Manchester Accessibility Levels (GMAL) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester's Local Link (flexible transport service), taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region. The accessibility index score is categorized into eight levels, 1 to 8, where level 8 represents a high level of accessibility and level 1 a low level of accessibility. The allocation has a GMAL score of Level 4.
- 6.1.5 It is anticipated that as the allocation is developed and a permeable network of walk/ cycle links is adopted, accessibility to public transport will be greatly improved, in particular as LSM services are located within 800m of the centre of the allocation.

6.2 Walking and Cycling

- 6.2.1 The main local destinations likely to generate walking and cycling trips are Swinton Town Centre to the east of the allocation (2.0km) the local shops at Clovelly Road (0.9km), Broad Oak Primary School (0.65km) and Moorside School and St Charles RC Primary (2.0km), Moorside High School (2.0km) and Walkden Co-op Academy (1.4km).
- 6.2.2 National Cycle Route 55 (NCN55) runs to the south of the allocation linking Manchester with Wigan via Eccles and Walkden/Tyldesley offering an attractive route away from traffic. There are steps and wheeling ramps at Alfred Avenue and Broad Oak Road. The route provides an excellent albeit unlit traffic free connection to Walkden Co-op Academy, having benefitted from significant walking and cycling investment in recent years, including high quality resurfacing.
- 6.2.3 There is a shared use cycleway along the westbound side of the A580 East Lancashire Road. This is of substandard width in places with evidence of pavement parking and constrictions near bus stops. New signal crossings of the A580 East Lancashire Road and the slipway to the M61 northbound have recently been completed. There is a ramped footbridge/cycleway across the A580 East Lancashire Road to the east of Moorside Road
- 6.2.4 There is an existing East – West right of way across the allocation from Richmond Drive and Hazelhurst Fold to Hawthorne Drive.
- 6.2.5 The main cycling flows in the area, (identified by Propensity to Cycle Tool) are focussed around Swinton and Eccles. The [Propensity to Cycle Tool](#) (PCT) was designed to prioritise investments and interventions to promote cycling by highlighting where cycling is currently common and where it has the greatest potential to grow.

6.3 Public Transport

- 6.3.1 The A580 East Lancashire Road has frequent bus services to and from Manchester via First Greater Manchester's V1/ V2 and V4 services. The bus stops are located within easy walking distance of the allocation. No bus services are provided along Hazelhurst Road, however local services are provided on Moorside Road (services 66 and 484). Service number 66 travels along the A572 Worsley Road (Eccles to Swinton).

- 6.3.2 The Leigh – Salford – Manchester (LSM) busway scheme runs services adjacent to the allocation with stops located approximately 200m from the north west corner of the proposed development. Toucan crossing facilities are provided on the A580 East Lancashire Road and M61 slip to connect with the Wardley Park & Ride site which has an eastbound stop. The westbound stop is just 300m from the allocation, opposite the park & ride site.
- 6.3.3 It is anticipated that residents will walk/ cycle to the park and ride site as opposed to driving due to its immediate proximity. The park & ride site includes sheltered and secure waiting and cycle parking facilities, and is served by high specification, high frequency bus services, and with associated bus priority infrastructure along the route, affording excellent access to the Regional Centre.
- 6.3.4 A park and ride facility is also being delivered at Walkden station (less than 3km away from the allocation) which will be able to accommodate 107 car parking spaces with a new cycle shelter for approximately 30 bikes.
- 6.3.5 Moorside station is located approximately 1.5km to the north of the proposed site which has hourly services to and from Manchester. Moorside station does not have parking facilities. Provision for pedestrians/ cyclists is provided over the A580 East Lancashire Road via a footbridge.
- 6.3.6 Table 2 identifies the current accessibility of public transport for the future residents of Land at Hazelhurst Farm, exploring the proximity, and the frequency of travel during peak hours.

Table 2. Accessibility of and proximity to public transport

Mode	Nearest Stop / Station	Distance (km)	Peak Hour Frequency (Mins)
Bus	Wardley Park & Ride	0.5	4
Rail	Moorside	1.5	60
Metrolink	Eccles	3.5	12

- 6.3.7 Bus stops on the A580 East Lancashire Road provide frequent, fast and reliable services to destinations including the Regional Centre, Leigh and intermediary destinations, with further rail-based public transport opportunities located within cycling distance or access via Park & Ride. Opportunities for rapid onward regional and national travel are provided through interchange at major Regional Centre transport hubs such as Manchester Piccadilly. There are also a range of

lower frequency existing local services that offer the potential for service improvements associated with increased travel demand.

6.4 Proposed

- 6.4.1 Walking and cycling opportunities are an important consideration with schools located in close proximity to the proposed development.
- 6.4.2 Greater Manchester's walking and cycling infrastructure plan, the "Bee Network" includes improvements to cycle networks in Monton, Worsley, Walkden and new links to the RHS Garden Bridgewater east of Boothstown. Both networks can be reached from NCN55. The RHS Links scheme is funded by the Mayor's Challenge Fund and will provide a high quality route connecting Walkden, Worsley, and Boothstown. This includes the following elements:
- A traffic-free route along the north of the Bridgewater Canal linking Worsley and Boothstown to the RHS Garden
 - A north-south route from RHS Bridgewater to Walkden Rail Station and a link to the A580 Guided Busway
 - Addressing north-south severance barriers by providing new crossings on the A580, A572, A575, B5211, Occupation Lane and Birch Road
- 6.4.3 A proposed Bee Network route links the A580 East Lancashire Road and NCN55 via Hazelhurst Road and Longley Drive and an improved pedestrian & cyclist crossing is proposed across the A580 East Lancashire Road at Moorside Road. Further detail on walking and cycling proposals across Salford are contained within the 2040 5-Year Delivery Plan and Salford's Local Implementation Plan.
- 6.4.4 Vantage bus rapid transit services are expected to be popular with new residents for travel between the allocation and the Regional Centre. The potential of expanding and improving the rapid transit services is being explored by TfGM as a way of improving accessibility by public transport to the allocation. This should include direct walking and cycling routes to the A580 East Lancashire Road, to access the closest bus rapid transit stops providing direct access to the Regional Centre. rail station and an increase in the number of services running to withstand the increased volume of users.
- 6.4.5 Allocation 30 of the Revised Draft GMSF (Hazelhurst Farm) required that any development of the allocation should:

- Be designed to encourage the use of nearby public transport services, in particular on the Leigh to Salford to Manchester bus rapid transit service, with high quality pedestrian routes and off site pedestrian crossings that connect all parts of the site to nearby bus stops (criterion 3)
- Incorporate attractive public rights of way through the site (criterion 4)

6.4.6 On this basis, the following recommendations to promote sustainable transport to and within the site include:

- Segregated cycling and walking access at the proposed access points
- Improved pedestrian and cyclist crossing facilities at all arms of A580 East Lancashire Road/Moorside Road Junction
- Ramped cycle and disabled access to NCN55 at Greenleach Lane (at Broad Oak Road).
- Pedestrian and cyclist priority within the development and sufficient secure cycle parking for all dwellings
- Safe crossing of A572 Worsley Road near Broad Oak Primary school

7. Parking

7.1.1 Salford's Publication Local Plan: Development Management Policies and Designation document (February 2020) proposes the following maximum parking standards for residential dwellings:

- 1 bed dwelling - 1 space.
- 2-3 bed dwellings - 1.5 spaces per dwelling.
- 4 bed dwelling - 2 spaces per dwelling.

7.1.2 A mix of dwellings would be expected across the allocation and, based on these standards the maximum number of car parking spaces provided on the site could be between 600 and 800.

7.1.3 With regards to bicycle parking, the Publication Local Plan proposes minimum standards as follows;

- 1 bed dwelling - 1 space.
- 2-3 bed dwellings - 2 spaces per dwelling.
- 4 bed+ dwelling - 3 spaces per dwelling.

7.1.4 In accordance with these standards, the minimum number of spaces required could be between 800 and 1,200 spaces.

8. Allocation Trip Generation and Distribution

- 8.1.1 The strategic modelling component of the GMSF Locality Assessments have been produced using data provided from TfGM's Variable Demand Model (GMVDM). An overview of the modelling process can be found within the introduction to the Locality Assessments.
- 8.1.2 Future trip generation to/from the allocation (i.e. how many people and vehicles will enter or leave the site) was estimated by applying a set of GM-wide trip rates to the agreed development quantum for each site. The distribution of trips (i.e. where they are going to or coming from) was derived by selecting nearby zones with similar land use characteristics as a proxy and using the existing distribution in the model.
- 8.1.3 Four Test Cases ("GMSF Constrained" and "GMSF High Side", for both 2025 and 2040) were used to assess and mitigate the impact of the GMSF Allocations on the Greater Manchester transport network.
- 8.1.4 The 'standard' development planning approach would generally not assume that future highway trips are constrained by congestion on the highway network. Discussions between SYSTRA and TfGM pointed towards a need to also look at a 'high-side' scenario with the GMSF development scenario which does not take account of future congestion on the road network. The 'GMSF High Side' is considered to be a worst case and the modelling work has been undertaken using these 'high side' flows.
- 8.1.5 For the purposes of the testing the impact of the allocation through the strategic model, a total of 400 dwellings have been assumed to be built out by 2040. The GM transport modelling suite has a 2040 forecast year, as such it uses 2040 trajectory data as proxy for 2037 full build-out, this is not considered to materially impact on the analysis or conclusions of this report. All phasing plans information contained in this Locality Assessment is indicative only and has only been used to understand the likely intervention delivery timetable. Final trajectory information and the final allocation proposal is contained in the GMSF Allocation Topic Paper. The agreed development quantum for the Land at Hazlehurst Farm allocation is shown in Table 3, while the estimated traffic generation for the high scenario is shown in Table 4.

Table 3. Development Quantum

Residential	Houses	50	400
Residential	Apartments	0	0
Total		50	400

Table 4. Allocation Traffic Generation

Year	AM Peak Hour Departures	AM Peak Hour Arrivals	PM Peak Hour Departures	PM Peak Hour Arrivals
2025 GMSF Constrained	17	5	9	18
2025 GMSF High-Side	17	7	11	18
2040 GMSF Constrained	131	40	65	138
2040 GMSF High-Side	138	55	84	138

Units are in PCU (passenger car units/hr)

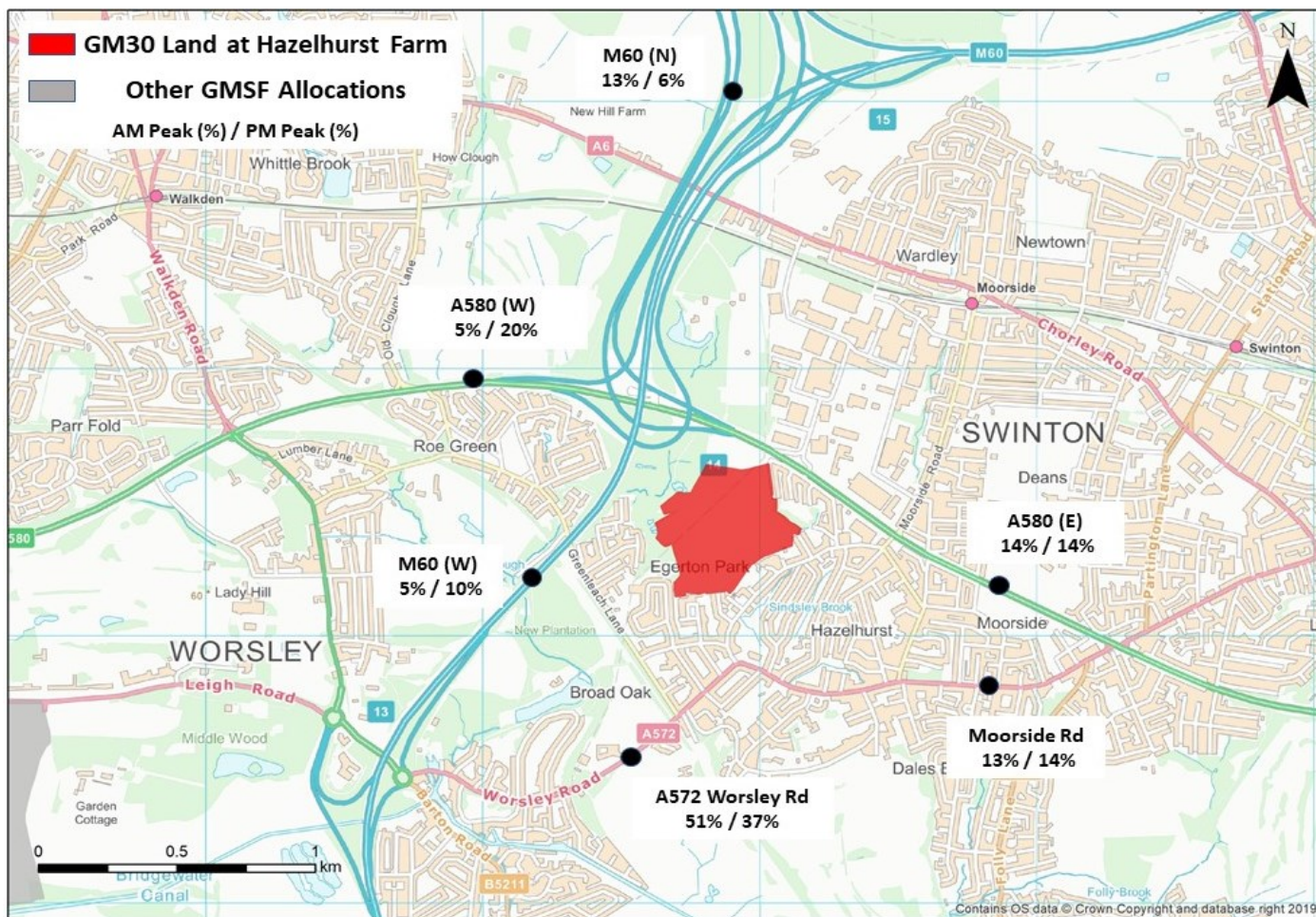
8.1.6 Table 5 and Figure 4 indicate the distribution of traffic on the network to and from the allocation in the peak model periods which are 0800-0900 (AM peak) and 1700-1800 (PM Peak). It can be seen that in both the AM and PM Peak hours that the majority of traffic is originating or destined for the A572 Worsley Road and ultimately the M60 south and north. The model predicts that very little traffic in the AM peak will use the A580 East Lancashire Road west and this is likely to be as a consequence of the congestion along this corridor and the frequency of public transport services providing a better alternative than private car use.

Table 5. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)

Route	AM Peak Hour	PM Peak Hour
A572 Worsley Road	51%	37%

M60 (South)	5%	10%
A580 (West)	5%	20%
M60 (North)	13%	6%
A580 (East)	14%	14%
Moorside Rd (N)	13%	14%

Figure 4 Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)



8.1.7 Analysis has also been undertaken to assess the level of impact of traffic travelling to/ from the allocation will have on neighbouring authorities (outside GM). No material impact is considered to affect neighbouring authorities.

9. Current Highway Capacity Review

9.1 Existing Network

9.1.1 Hazelhurst Road running north-south to the east of the allocation is the main road which will take traffic to and from the allocation, affording access to more strategic routes. Hazelhurst Road at the northern end (adjacent to Partington St) is narrow with on street parking on either side of the carriageway further reducing capacity. At the southern end, the carriageway is less constrained. Hazelhurst Road is traffic calmed along its length through the use of speed humps.

9.1.1 The A580 East Lancashire Road runs east-west to the north of the allocation connecting the Regional Centre with the west of the city as well as national connections via the M60. A number of junctions along the corridor experience significant congestion, in particular during peak periods.

9.1.2 Based on the configuration of the existing highway network and the planned access strategy, eight junctions have been identified for assessment, six on the local network with a further two on the strategic network. These are identified in Figure 5.

- 1. A580 East Lancashire Road/Moorside Road
- 2. A572 Worsley Road/ Moorside Road
- 3. A572 Worsley Road/ B5231 Folly Lane
- 4. A580 East Lancashire Road/ A572 Worsley Road
- 5. A6 Chorley Road / Moorside Road / Moss Lane
- 6. M60 Junction 13
- 7. A580 East Lancashire Road / A575 Walkden Road
- 8. M60 Junction 14

Figure 5 Assessed Junctions



10. Treatment of Cumulative Impacts

- 10.1.1 In order to assess the cumulative impact of GM allocations on the network, two model runs were undertaken, a 'constrained' and 'high side' assessment. The constrained forecasts could reduce the number of future highway trips due to congestion on the highway network. This constraining process is undertaken by the Greater Manchester Variable Demand Model (GMVDM).
- 10.1.2 The transport impacts of the allocation need to be considered cumulatively with other GMSF site allocations. Hence, both the constrained and high side model runs take account of traffic associated with all GMSF allocations in proximity to the allocation.
- 10.1.3 GMSF-wide traffic uses the A580 East Lancashire Road as a key radial route in and out of the Regional Centre. Analysis of traffic flows from the model indicates that the following allocations contribute to the overall impact at junctions along the A580 East Lancashire Road.
- East of Boothstown
 - North of Mosley Common
- 10.1.4 The East of Boothstown allocation is proposed for 300 homes and is situated on Leigh Road adjacent to the Royal Horticultural Society site at Bridgewater. The East of Boothstown allocation will generate over 100 departures in the AM peak at 2040 (equivalent number arriving in the PM peak) with 60% of the traffic originating or destined for the M60 north via Junction 13 of the M60. The combination of traffic associated with both allocations generates little traffic on the A580 East Lancashire Road and the issues associated with these junctions in the 'with GMSF' scenario are associated with development farther afield.
- 10.1.5 North of Mosley Common is allocated for 1200 homes in GMSF. The allocation is situated in Wigan District approximately 4.5km west of the Land at Hazelhurst Farm. In the AM peak at 2040, the allocation is anticipated to generate 370 arrivals and departures with the majority originating on or destined for the A580 East Lancashire Road east.

11. Allocation Access Assessment

- 11.1.1 Vehicular access to the Land at Hazelhurst Farm allocation would be as per the access strategy set out in Chapter 5.

11.1.2 Allocation access arrangements that are consistent with Greater Manchester's best practice 'Streets for All' highway design principles will be required at the more detailed planning application stage.

12. Impact of Allocation Before Mitigation on the Local Road Network

12.1.1 In order to understand a worst case impact of the GMSF, the 'high side' runs from the GMVDM were used to derive with GMSF development flows for 2040. These flows were then entered into Junction based models for the junctions identified in Section 9. Flows from a 2040 reference case scenario (including local authority current land supply with proposed GMSF allocations) were also extracted to provide a comparison between the operation of those junctions in the 2040 reference case and the 2040 with GMSF development scenarios.

12.1.2 The 'with GMSF' scenario has been assessed against a Reference Case which assumes background growth and includes the housing and employment commitments from the districts. It has been agreed for the purposes of GMSF that where mitigation is required, it should mitigate the impacts back to a reference case scenario. It should be noted that mitigating back to this level of impact may not mean that the Junction operates within capacity.

12.1.3 These assessments were then used to identify the junctions where there was considered to be a substantial impact, relative to the operation of the Junction in the 2040 reference case, and hence where mitigation was considered to be required in order to bring GMSF sites forward.

12.1.4 This Section looks at the impact on the network at the junctions highlighted in Section 9. Signalised junctions were assessed in detail using industry-standard modelling software LINSIG version 3 Traffic signal information was obtained from TfGM Urban Traffic Control (UTC). Junctions 9 software was used to assess priority and roundabout junctions.

12.1.5 For reference, a figure of between 85% and 99% illustrates that the Junction is nearing its operational capacity, and a figure of 100% or over illustrates that flows exceed the operational capacity at the Junction and increased vehicle queuing and delay are likely to occur.

12.1.6 The following table summarises the results of the individual junctions models assessing the junctions on the Local Road Network (LRN). The table also provides an indication of the traffic generated through each of the junctions in the GMSF High scenario at 2040. Results for SRN junctions are provided in Section 15.

Table 6. 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	A580 East Lancashire Road/Moorside Road	95%	113%	97%	117%	50	34
2	A572 Worsley Road/ Moorside Road	61%	97%	66%	92%	28	37
3	A572 Worsley Road/ B5231 Folly Lane	189%	171%	191%	174%	29	34
4	A580 East Lancashire Road/ A572 Worsley Road	138%	160%	143%	161%	42	42
5	A6 Chorley Road / Moorside Road / Moss Lane	105%	122%	97%	106%	4	3
7	A580 East Lancashire Road / A575 Walkden Road	217%	136%	227%	205%	2	3

12.1.7 As shown in the table above, the majority of the junctions are operating above capacity in both the reference case and with GMSF High scenario at 2040, with the exception of the A572 Worsley Road/ Moorside Road Junction. Whilst the situation at the Junction does deteriorate, it is within capacity at 2040 in the GMSF High scenario and as a consequence, no mitigation has been investigated as the Junction.

12.1.8 In addition, the following junctions do not require mitigation as the Junction already operates over capacity in the reference case scenarios and the additional traffic generated in the GMSF High scenario does not detrimentally affect the capacity of the Junction.

- 1. A580 East Lancashire Road/Moorside Road
- 3. A572 Worsley Road/ B5231 Folly Lane
- 4. A580 East Lancashire Road/ A572 Worsley Road
- 5. A6 Chorley Road / Moorside Road / Moss Lane

12.1.9 This leaves the A580 East Lancashire Road / A575 Walkden Road Junction which is over capacity in the reference case and with GMSF High scenario at 2040. Whilst there is a noticeable difference between the situation in the reference case when compared with the GMSF scenario (PM peak), the flows associated with the allocation are negligible, as indicated in table 6. As a consequence, no mitigation has been investigated as the Junction.

13. Transport Interventions Tested on the Local Road Network

13.1 Specific Junction Mitigation Measures

13.1.1 The proposed mitigation schemes which are set out in this Section are designed to mitigate the impact of GMSF only, the schemes are not designed to solve pre-existing congestion on the local network.

13.1.2 Also it should be noted that these interventions are not expected to be the definitive solution but rather to demonstrate that a solution is possible at the location. The details of any mitigation schemes will need to be developed as part of the detailed planning process.

13.1.3 The following table provides a summary of the schemes proposed to mitigate the impact of GMSF at the junctions which have been identified through the Junction modelling process.

Table 7. Approach to Mitigation

No.	Junction	Mitigation Approach
1	A580 East Lancashire Road/Moorside Road	Results comparable – no mitigation proposed
2	A572 Worsley Road/ Moorside Road	Results comparable – no mitigation proposed
3	A572 Worsley Road/ B5231 Folly Lane	Results comparable – mitigation has been explored
4	A580 East Lancashire Road/ A572 Worsley Road	Results comparable – no mitigation proposed
5	A6 Chorley Road / Moorside Road / Moss Lane	Results comparable – no mitigation proposed
7	A580 East Lancashire Road / A575 Walkden Road	Cumulative impact – negligible impact from allocation

13.2 A580 East Lancashire Road/Moorside Road

13.2.1 Interventions were considered at the Junction, however, no viable forms of mitigation were considered achievable due to limitations on space. The model is likely to be underestimating the impact at the Junction with traffic ‘rat running’ on to the A580 East Lancashire Road (westbound) between Stranton Drive and Burton Grove to avoid the traffic signals. Salford Council have expressed concerns over this access to A580 East Lancashire Road on safety grounds.

13.2.2 If these trips were re-distributed through the Junction, a total of 65 additional trips would travel through the Junction to or from Land at Hazelhurst Farm. It is considered that these trips could either be absorbed on the network over the 20 years to 2040, would be replaced by active travel and public transport trips given the sustainable transport strategy which has been adopted by the Combined Authority (which is covered in more detail in Section 16), or the need to travel would be reduced against current projections due to increases in home working and internet shopping etc.

13.3 A572 Worsley Road/ Moorside Road

13.3.1 Traffic modelling does indicate that the GMSF High scenario (at 2040) does lead to an increase in traffic through the Junction and therefore capacity is reduced. The Junction does however continue to operate below 100% of its practical capacity.

13.4 A572 Worsley Road/ B5321 Folly Lane

13.4.1 Whilst the results between the reference case and with GMSF High (at 2040) are comparable, mitigation has been investigated at the Junction due to the level of exceedance. Signalising the Junction has been considered with the results provided in Section 14.

13.5 A580 East Lancashire Road/ A572 Worsley Road

13.5.1 Interventions were considered at this junction, although no cost-proportionate mitigations were identified as feasible or justifiable given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation.

13.5.2 At 2040, fewer than 50 two-way trips are expected to travel through the Junction in the AM or PM peak to or from Land at Hazelhurst Farm. It is considered that these trips could either be absorbed on the network over the 20 years to 2040, would be replaced by active travel and public transport trips given the sustainable transport strategy which has been adopted by the Combined Authority (which is covered in more detail in Section 16), or the need to travel would be reduced against current projections due to increases in home working and internet shopping etc.

13.6 A6 Chorley Road / Moorside Road / Moss Lane

13.6.1 As indicated in Table 6, very few trips (under five) pass through the Junction associated with Land at Hazelhurst Farm in either peak. The operation of the junction is also observed to improve with the GMSF scenario.

13.6.2 The strategic model network is congested in the reference case situation and with the addition of new trips on the network (associated with GMSF), certain junctions become even more saturated. As a consequence of this, traffic will look for alternative routes that experience less delay. This can

free up capacity at previously saturated junctions and conversely, add greater pressure to junctions that did experience limited impacts.

13.7 A580 East Lancashire Road/ A575 Walkden Road

- 13.7.1 Interventions were considered at this junction, although no cost-proportionate mitigations were identified as feasible given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation.
- 13.7.2 At 2040, fewer than 10 trips destined for or originating at Land at Hazelhurst Farm are expected to travel through the Junction in the AM peak. It is considered that these trips could either be absorbed on the network over the 20 years to 2040, would be replaced by active travel and public transport trips given the sustainable transport strategy which has been adopted by the Combined Authority (which is covered in more detail in Section 16), or the need to travel would be reduced against current projections due to increases in home working and internet shopping etc.
- 13.7.3 The transport interventions being explored in this Section are purely highway infrastructural interventions and do not take account of the impact public transport improvements could have along the A580 corridor. High frequency services to and from Manchester are already established along the corridor with bus stops located within accessible walking distance.
- 13.7.4 Should the flows associated with the high side modelling forecasts become reality, significant infrastructural changes could be explored at junctions along the A580 East Lancashire Road largely associated with complex cumulative growth.

14. Impact of interventions on the Local Road Network

- 14.1.1 In order to understand whether the mitigation developed for the allocation (and all other allocations within the GMSF) is sufficient to mitigate the worst case impacts of the GMSF identified in Section 12, a second run of the GMVDM with all identified mitigation included, was undertaken. Due to the scale of the models involved, a flow difference plot between the with mitigation and without mitigation model runs was used to identify where there was a significant difference in model flows which may impact on the operation of Junction models. A flow difference plot simply compares two different scenarios, in this instance, with and without mitigation, highlighting areas

where a difference in flows was apparent. Where a significant change was observed, the Junction models were rerun to check that the mitigation identified in Section 13 was still sufficient to mitigate allocation impacts and that all other in scope junctions continued to operate satisfactorily in light of any reassignment due to mitigation schemes.

14.1.2 The A572 Worsley Road/ B5321 Folly Lane improvement was coded into the GMVDM, in advance of a second ‘with mitigation’ run of the model. The outcomes of this model run in relation to GM30 Hazelhurst Farm are presented below. As previously highlighted, the intervention modelled is not expected to be the definitive solution, merely to demonstrate that a solution is workable and to enable costing.

14.1.3 Table 8 below provides a comparison between the operation of the Junction in the 2040 reference case and the 2040 ‘high side’ with mitigation scenarios. The table shows a comparison between the ratio of flow to capacity on the worst case arm at each Junction.

Table 8. Local Junction Capacity Analysis After Mitigation – Year 2040

No.	Junction	Ref Case AM	Ref Case PM	GMSF High AM (No Mitigation)	GMSF High PM (No Mitigation)	GMSF High AM (With Mitigation)	GMSF High PM (With Mitigation)
3	Worsley Road/ B5321 Folly Lane	189%	171%	191%	174%	104%	110%

14.1.4 The signalisation of the Worsley Road/ B5321 Folly Lane Junction has been tested. It should be noted that the Junction has been tested in isolation and not as part of a wider assessment of neighbouring signals. The results of the Junction modelling indicate that the Junction performance is improved in the 2040 with mitigation GMSF scenario compared with the reference case although still operates above capacity.

14.1.5 TfGM UTC have explored similar improvements at the junction previously and do not consider the signalisation of the junction to be of such significant improvement. As a consequence, this specific mitigation scheme is not considered practical. However, In the absence of providing this junction specific mitigation, it is recommended that proportionate contributions should be sought from the allocation to support improvements to mitigate the impacts of the development on the local highway network following detailed analysis that would be undertaken during a Transport Appraisal.

15. Impact and mitigation on the Strategic Road Network

15.1 Overview

15.1.1 In addition to the local highway network, the proximity of the allocation to the Strategic Road Network (SRN) meant that SRN junctions also needed to be considered. The following junctions have been assessed to understand the impact of traffic from the allocation.

- M60 Junction 13
- M60 Junction 14

15.1.2 This chapter covers those impacts where traffic generated by the GMSF allocations meets the Strategic Road Network (SRN). junctions at the interface between the Local Road Network (LRN) and the Strategic Road Network (SRN) have been assessed using a similar approach to that described in the preceding chapters. Wider issues relating to the SRN mainline are being assessed separately as described below.

15.2 Impact of Allocation Before Mitigation on the Strategic Road Network

15.2.1 The following table summarises the results of the assessment of M60 Junction 13 and provides an indication of the level of demand anticipated to travel through the Junction (two-way) to / from the allocation.

Table 9. 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
6	M60 Junction 13	110%	147%	111%	134%	122	156

15.2.2 The strategic modelling results suggests that by 2040, approximately 156 trips will use the SRN at Junction 13 of the M60 during the PM peak.

M60 Junction 13

15.2.3 Local junction modelling was undertaken for Junction 13 of the M60 at the dumbbell roundabouts at Worsley Brow. The assessment indicates that the Junction operates above capacity in the reference case and is broadly comparable in the ‘with GMSF’ scenarios .

15.2.4 A scheme to improve the operation of the roundabouts is currently being introduced at Junction 13 and this is anticipated to improve the operation of the Junction slightly, however, it will not address fundamental issues on the SRN during the peak periods.

15.2.5 The strategic modelling results suggest that by 2040 in the AM peak, 86 trips will use the SRN originating from the allocation with a further 36 trips arriving at the allocation. In the PM peak, the model predicts that 63 trips will leave the allocation destined for Junction 13 with a further 96 trips arriving at the allocation from the M60.

M60 Junction 14

15.2.6 Merge and diverge assessments for the Strategic Road Network are outside the scope of the current commission. However, due to the unconventional nature of M60 Junction 14 which consists of merge and diverge links only, initial merge and diverge assessments, utilising the difference between the 2040 reference case and the 2040 ‘high side’ flows, were undertaken using Design Manual for Roads and Bridges.

15.2.7 Merge and diverge traffic flow assessments have been undertaken as per Figures 3.12 and 3.26 in DMRB CD 122 Geometric design of grade separated junctions. These have been used to determine the required merge and diverge layout for base traffic levels and base + GMSF traffic flows for the Junction merges and diverges to operate safely and within capacity. The assessments have been

completed for both the morning and evening peak traffic flows, with the largest result proposed as the required improvement. Outputs from the assessment are contained in Table 10.

15.2.8 The merge and diverge assessments indicate that the existing provision at Junction 14 is higher than required based on the flows extracted from the Greater Manchester Variable Demand Model (GMVDM). At the A580 Westbound Merge in the PM peak only, an additional lane downstream may be required due to the high merge flow. The increase in flows is cumulative across GMSF with only 12 in the AM and 8 in the PM peak associated with Land at Hazelhurst Farm.

Table 10. Merge/ diverge assessments

No.	Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM
8a	M60 J14 (A580 Westbound Merge)	D 1 to 2	D 1 to 2	D 1 to 2	F 1 to 3
8b	M60 J14 (A580 Eastbound Merge)	D 1 to 2	D 1 to 2	D 1 to 2	D 1 to 2
8c	M60 J14 (A580 Westbound Diverge)	D 2 to 1	D 2 to 1	D 2 to 1	D 2 to 1
8d	M60 J14 (A580 Eastbound Diverge)	D 2 to 1	D 2 to 1	D 2 to 1	D 2 to 1

15.3 Specific SRN Junction Mitigation Measures

15.3.1 No SRN specific mitigation has been tested as a consequence of the negligible impact, in particular at Junction 14 of the M60

15.3.1 SYSTRA is currently consulting with Highways England on behalf of TfGM and the Combined Authority in relation to the wider impacts of the GMSF allocations on the Strategic Road Network (SRN). This consultation is ongoing and it is expected that it will allow Highways England to gain a strategic understanding of where there is an interaction between network stress points and GMSF allocation demand which will facilitate further discussion and transfer of information between TfGM and Highways England (yet to be defined) in reaching agreement and/or common ground relating to the acceptability of GMSF allocations in advance of Examination in Public (EiP).

16. Final list of interventions

16.1.1 The proposed final list of interventions is summarised in Table 11.

Table 11. Final List of Interventions

Mitigation	Description
Site Access	
Allocation access	Further assessment will be required through the planning process to identify the preferred access locations. It is envisaged that x2 priority junctions will be required to service the allocation.
Necessary Local Mitigations	
A580 East Lancashire Road/ Moorside Rd Crossing Improvements	Improved pedestrian and cyclist crossing facilities at all arms of A580/Moorside Road Junction, including the connection to the bus stop on the A580 eastbound and onward routes to Moorside High School and Moorside Station
Worsley Road crossing	Safe crossing of Worsley Road near Broad Oak Primary school
Ramped cycle and disabled access	Ramped cycle and disabled access to NCN55 at Greenleach Lane (at Broad Oak Road) should be considered.
Local Transport Network Improvements	Proportionate local highway and/or sustainable travel improvements to mitigate impacts of the development within the allocation vicinity.

16.2 Traffic Reduction Strategies

16.2.1 The analysis underpinning this Locality Assessment has been undertaken using a standard robust highway modelling approach including reference to predicted future development trip levels based on the historical operation of major employment sites, particularly with respect to traditional AM & PM peak ‘rush hour’ periods. This provides a ‘worst-case’ highway focussed growth scenario. Further information on the highway modelling approach can be found within the Strategic Modelling Technical Note.

16.2.2 There is an increasingly compelling argument that the use of such peak hour demand estimates is overly robust for long term forecasting, particularly if applied wholesale across new strategic development areas. 'Peak spreading' is already a well-recognised feature of recent general traffic growth across Greater Manchester (i.e. only limited traffic growth taking place during critical 'rush hour' periods), with additional travel demand tending to be concentrated on more 'off-peak' periods, when there is spare transport network capacity to accommodate such movements. Furthermore, increases in modern communications technology have increased the potential for home-working / tele-working and reduced the need for business travel and meetings. The notion of '9 to 5' style working is now viewed as an out-dated concept, with staff valuing the benefits of flexible working.

17. Strategic Context – GM Transport Strategy Interventions

- 17.1.1 TfGM and Salford Council have developed a number of wider transport proposals which will support travel around the Allocation area. These include improvements to the Leigh – Salford – Manchester Guided busway in order to increase capacity and frequency.
- 17.1.2 TfGM is leading a study to evaluate the feasibility of potential new Rail and Metrolink station and could lead to a small number of stations being delivered, and could include Little Hulton and Western Gateway in Salford. In addition, a rapid-transit connection is planned from MediaCityUK to Salford Crescent rail station, and new Metrolink connections between Salford Quays, Inner Salford and the Regional Centre.
- 17.1.3 A number of cycling and walking schemes are currently under development making it easier to travel around the area without a car. The Swinton Greenway will deliver a traffic-free, off-road walking and cycling corridor connecting Swinton to Monton, with other links connecting communities into the route. The Monton Cycling and Walking Network will improve on foot and bike access to Monton, by providing new zebra crossings, a two-mile cycling route on quiet streets and a new footway.

- 17.1.4 Greater Manchester also has ambitious plans to develop the Bee Network - the UK's largest cycling and walking network as a key element to delivering on the "Right Mix" vision, and the Combined Authority has allocated £160m between 2018-2022 to fund the first phase of the Bee Network. The network has at its core a programme of new and upgraded pedestrian and cycling crossing points of major roads and other sources of severance, connected by a network of signed cycling and walking routes on existing quiet streets. These will be complemented by a number of routes on busier roads where Dutch style cycle lanes protected from motor traffic will be constructed.
- 17.1.5 The latest version of Greater Manchester's 2040 Delivery Plan sets out a comprehensive programme of work across all modes and in all Districts which are all focused on ensuring the realisation of the 'Right Mix' vision. Many of these interventions support the GMSF Allocations directly, whilst others are intended to provide alternatives to private car travel more generally. The schemes demonstrate a clear plan for delivering strategic transport interventions for the first five years of the GMSF plan period, whilst also laying the foundations for longer term investment in sustainable transport across the length of the plan period.

18. Phasing Plan

- 18.1.1 The initial locality assessments were based on information on new site allocations consolidated by TfGM based on inputs from each of the Districts. This initial exercise focused on the development quanta to be delivered at the end of the plan period.
- 18.1.2 During the course of the locality assessment work in late 2019 / early 2020, the Districts provided input on their expected phasing of the allocations focusing on the milestone years of 2025 and 2040. The expected 2025 development quanta were tested along with those for 2040 to assess their deliverability in terms of transport network capacity. In some cases, the development phasing was amended by the Districts as a result of the technical analysis undertaken. Table 12 indicates the anticipated level of development over the plan period.
- 18.1.3 In respect of the proposed Hazelhurst Farm allocation, it is assumed that, at 2025, only 50 of the 400 dwellings proposed will have been delivered and this is reflected in the modelling work. The traffic associated with this level of development will have a negligible impact on the local and strategic highway network with fewer than 30 trips in either peak in the GMSF High scenario.
- 18.1.4 Table 12 provides an indicative delivery timetable for the identified mitigation measures. It is expected that a more precise implementation timeframe for these schemes being ascertained

through a similar process to that detailed in Section 12 to 15 as part of the five-year review of the plan.

Table 12. Allocation Phasing

Allocation Phasing	2020 25	2025 30	2030 2037	2037+	Total
Allocation Access	50	250	100	0	400
Total	50	250	100	0	400

18.1.5 Table 13 provides an indicative delivery timetable for the identified mitigation measures. It is expected that a more precise implementation timeframe for these schemes being ascertained through a similar process to that detailed in Section 12 to 15 as part of the five-year review of the plan.

Table 13. Indicative intervention delivery timetable

Mitigation	2020 2025	2025 2030	2030 2037
Site Access			
Allocation Access	✓	✓	
Necessary Local Mitigations			
A580 East Lancs/ Moorside Rd crossing facilities	✓		
Worsley Road crossing	✓		
Ramped cycle and disabled access	✓		
Permeable network for pedestrian and cyclist priority within the development	✓		
Local Transport Network Improvements		✓	

19. Summary

- 19.1.1 Land at Hazlehurst Farm is situated within the City of Salford immediately south east of the M60 at Junction 14 (A580 East Lancashire Road). The land is bound to the west by protected woodland, the M60 and residential developments off Greenleach Lane. To the north of the allocation is the A580 East Lancashire Road and to the east and south is further residential development. The A580 East Lancashire Road provides highway connections between Greater Manchester’s Regional Centre to the east and Liverpool to the west, running parallel with the M62.
- 19.1.2 Vehicular access to the allocation will be provided from existing residential streets off Hazelhurst Road through the form of priority junctions. Assessments of these accesses have concluded that they are sufficient to accommodate the expected level of demand and a minimum of two accesses is desirable. The use of Richmond Road in this regard is likely to be dependent on the imposition of appropriate restrictions to prevent vehicles accessing the A580 via the service road accessible to the north.
- 19.1.3 Planning for the allocation aims to maximise its accessibility in relation to the A580 East Lancashire Road, the motorway network and proximity to existing and future public transport opportunities.

- 19.1.4 Bus stops on the A580 East Lancashire Road provide frequent, fast and reliable services to destinations including the Regional Centre, Leigh and intermediary destinations, with further rail-based public transport opportunities located within cycling distance or access via Park & Ride. Opportunities for rapid onward regional and national travel are provided through interchange at major Regional Centre transport hubs such as Manchester Piccadilly. There are also a range of lower frequency existing local services that offer the potential for service improvements associated with increased travel demand.
- 19.1.5 Modelling work has been undertaken using the Greater Manchester Variable Demand Model (GMVDM) with a constrained and high side scenario. The constrained and high side model runs take account of traffic associated with all GMSF allocations. This report has considered the allocation in isolation and the site in context with other nearby allocations such as East of Boothstown and North of Mosley Common.
- 19.1.6 Results from the work modelling work indicate that the allocation in isolation has a limited impact on the A580 East Lancashire Road and A572 Worsley Road. As a consequence of this, no highway mitigation has been deemed necessary to accommodate the additional demand generated to or from the allocation.
- 19.1.7 In the absence of providing Junction specific mitigation, costs should be sought from the allocation to contribute towards as yet unspecified local junction improvements.
- 19.1.8 In order to provide alternatives to private car use, a number of specific walking and cycling improvements have been proposed within this document which would improve accessibility by sustainable modes, these include:
- A580 East Lancashire Road/ Moorside Rd crossing facilities
 - Worsley Road crossing
 - Ramped cycle and disabled access to NCN55 at Greenleach Lane (at Broad Oak Road).
 - The allocation should have a permeable network for pedestrian and cyclist priority within the development.
- 19.1.9 Improving connectivity for sustainable modes throughout the allocation and in proximity to the allocation will allow for greater connectivity to the established public transport network and in particular services running along the A580 East Lancashire Road serving the Regional Centre to the

east. This should alleviate concerns over air quality in the local area with residents encouraged to make use of public transport where possible.

19.1.10 In addition, a series of policies is contained within Greater Manchester's Transport Strategy 2040 aimed at improving air quality across the Region. The aim is to reduce, as far as possible, the emissions from transport, particularly CO₂, NO₂, particulates and noise.

Conclusion

19.1.11 Based on the information contained within this report, we conclude that the traffic impacts of Land at Hazelhurst Farm are less than severe. Whilst the modelling work does forecast that some junctions may experience capacity issues, they are not significantly worse than those experienced in the reference case situation and are as a consequence of cumulative impacts and not solely Land at Hazelhurst Farm. At this stage, the modelling work is considered to be a 'worst case' scenario. It does not take full account of the extensive opportunities for modal shift toward active travel and public transport improvements both locally and across Greater Manchester associated with the significant continued investment proposals within GM's adopted local transport plan, the 2040 Transport Strategy.

19.1.12 In summary, there is an initial indication that the allocation is deliverable. Further work will be needed to substantiate these findings as the allocation moves through the planning process. The allocation would need to be supported by continuing wider transport investment across GM.

Greater Manchester Spatial Framework

Locality Assessment:

East of Boothstown GMA28

Publication Version 2: November 2020

Identification Table	
Client	Salford / TfGM
Allocation	East of Boothstown
File name	GMA28 Salford - Land East of Boothstown LA 021020
Reference number	GMA28 (GMSF 2020), previously GMA31 (GMSF 2019)

Approval					
Version	Role	Name	Position	Date	Modifications
0	Author	Jessica Harrowsmith	Assistant Consultant	23/07/20	Base report
	Checked by	Huw Williams	Associate Director	28/07/20	
	Approved by	Darren Kirkman	Associate Director	03/09/20	
1	Author	B Brisbane	TfGM	30/09/20	Consistency edits
	Checked By	Jimmy McManus	Salford City Council	01/10/20	
	Approved By	James Shuttleworth	Salford City Council	02/10/20	

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Allocation Data	
Allocation Reference No.	GMA28 (GMSF 2020), previously GMA31 (GMSF 2019)
Allocation Name	East of Boothstown
Authority	Salford
Ward	Worsley
Allocation Proposal	300 houses
Allocation Timescale	0-5 years <input checked="" type="checkbox"/> 6-15 years <input checked="" type="checkbox"/> 16 + years <input type="checkbox"/>

Glossary

“2025 GMSF Constrained” - is the 2025 forecast case in which the model adjusts the input demand based on how the cost of travel changes from the base year to the future. For example, for a shopping trip undertaken by car which becomes more congested in future, changes might be travel via a different route, mode, location or time of day.

“2040 GMSF Constrained” - as above, but for a 2040 forecast year

“2025 GMSF High-Side”- is the 2025 forecast case in which the model does not adjust the input demand based on how the cost of travel changes. In this scenario congestion does not lead to a reassignment of traffic, and therefore road traffic flow will generally be higher.

“2040 GMSF High-Side” - as above, but for a 2040 forecast year

“2025 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2025

“2040 Reference Case”- is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2040

AADT - Annual average daily traffic, is a measure used in transportation planning to quantify how busy the road is

Bee Network - is a proposal for Greater Manchester to become the very first city-region in the UK to have a fully joined-up cycling and walking network: the most comprehensive in Britain covering 1,800 miles.

Bus Rapid Transit - is a bus-based public transport system designed to improve capacity and reliability relative to a conventional bus system. Typically, a BRT system includes roadways that are dedicated to buses, and gives priority to buses at junctions where buses may interact with other traffic

Existing Land Supply - these are sites across the county that have been identified by each local planning authority across Greater Manchester and are available for development (it does not include land currently in the Green Belt that is proposed for built development through the GMSF)

Greater Manchester Variable Demand Model (GMVDM) - the multi-modal transport model for Greater Manchester. This transport model provides estimates of future year transport demand as well as the estimates of travel behaviour changes and new patterns that the Plan is likely to produce. These include

changes in choices of routes, travel mode, time of travel and changes in journey destinations for some activities such as work and shopping.

“LRN” (Local Road Network) All other roads (SRN aside) comprise the Local Road Network. The LRN is managed by the local highways authorities

National Trip End Model (NTEM) - is a Department for Transport forecast that ensures that measures of population, jobs and trips made by various mode are consistent across the whole of Great Britain.

Rapid transit services - refers to high frequency, high capacity metro style transport services including Metrolink and Bus Rapid Transit.

Regional Centre - A central area of Greater Manchester which includes an increasing density of trip attractors, jobs and homes. Including the Manchester and Salford City Centre at the centre, it stretches west to include The Quays and parts of Trafford Park, east to include the Etihad Campus, and south to include the universities and hospitals centred around Oxford Road.

“SRN” (Strategic Road Network) The Strategic Road Network comprises motorways and trunk roads, the most significant ‘A’ roads. The SRN is managed by Highways England.

“TfGM” - Transport for Greater Manchester, the local government body responsible for delivering Greater Manchester’s transport strategy and commitments on behalf of the Greater Manchester Combined Authority.

Urban Traffic Control (UTC) - is a specialist form of traffic management that, by coordinating traffic signals in a centralised location, minimises the impact of stop times on the road user.

1. Allocation Location & Overview

- 1.1.1 This Locality Assessment (LA) is one of a series being prepared for proposed allocations within Greater Manchester in order to confirm the potential impacts.
- 1.1.2 This LA provides an assessment for the East of Boothstown allocation; its purpose is to identify the likely transport and highways impacts of the allocation and formulate appropriate mitigation strategies to support the inclusion of the allocation in to the GMSF.
- 1.1.3 The allocation is located in the west of Greater Manchester within Salford. East of Boothstown is located to the east of Boothstown, off the A572 Leigh Road and less than 2km from Junction 13 of the M60. The allocation is bound to the south by the Bridgewater canal and to the north by the A572 Leigh Road. Immediately to the east of the allocation is the Royal Horticultural Society (RHS) Garden Bridgewater due to open in 2021, accessed off the A572 Leigh Road via Occupation Road. The west of the allocation is bound by the residential area of Boothstown. The current land use of the allocation is predominantly agricultural.
- 1.1.4 The A572 Leigh Road, running east-west to the north of the allocation is a 40 mph single carriageway. The Junction with Occupation Road was recently improved to provide access to the RHS Bridgewater and is now a large signalised Junction. This Junction would accommodate traffic from both the RHS and allocation at East of Boothstown. A dedicated left turning lane is provided (westbound) in to the allocation extending some 180 metres eastwards from the Junction. A right turning lane extending approximately 70metres westward from the Junction is also provided on the eastbound approach on A572 Leigh Road. Two traffic lanes are provided from Occupation Road allowing egress from the site.
- 1.1.5 Located adjacent to the M60, the allocation allows for direct connections across northern England, connecting Liverpool and Hull via the M62. The M60 also provides links to the wider UK motorway network including M1, M6 and M61 and M56.
- 1.1.6 The allocation is for 300 low density, high quality homes.

- 1.1.7 Please note all boundaries and allocation reference numbers displayed within this locality assessment were correct at time of writing, but for definitive boundary information refer to the GMSF allocation maps.

2. Justification for Allocation Selection

- 2.1.1 The Site Selection process has been led by the 10 Greater Manchester Authorities and provided the starting point for further investigation of the preferred sites through the Locality Assessments. To identify potential development sites for allocation, a Site Selection methodology has been developed. The methodology includes seven Site Selection criteria which have been informed by the Vision, Objectives and Spatial Strategy in the GMSF 2019. These have been used to guide the selection of sites within the Green Belt for development. A key outcome from the Site Selection process is to demonstrate a clear, consistent and transparent approach to the selection of sites in the GMSF.
- 2.1.2 The allocation is adjacent to the existing residential area of Boothstown and offers one of a small number of opportunities within Greater Manchester to deliver very high value housing in an attractive environment, with the potential to attract skilled workers and boost the competitiveness of the north. For this reason, the site was selected for inclusion within the GMSF on the basis of criteria 7 (Land that would deliver significant local benefits by addressing a major local problem/issue) of the GMSF site selection criteria detailed further within the site selection topic paper.
- 2.1.3 The Land East of Boothstown allocation is considered to have no significant constraints beyond its Green belt location precluding development.

3. Key Issues from Consultation

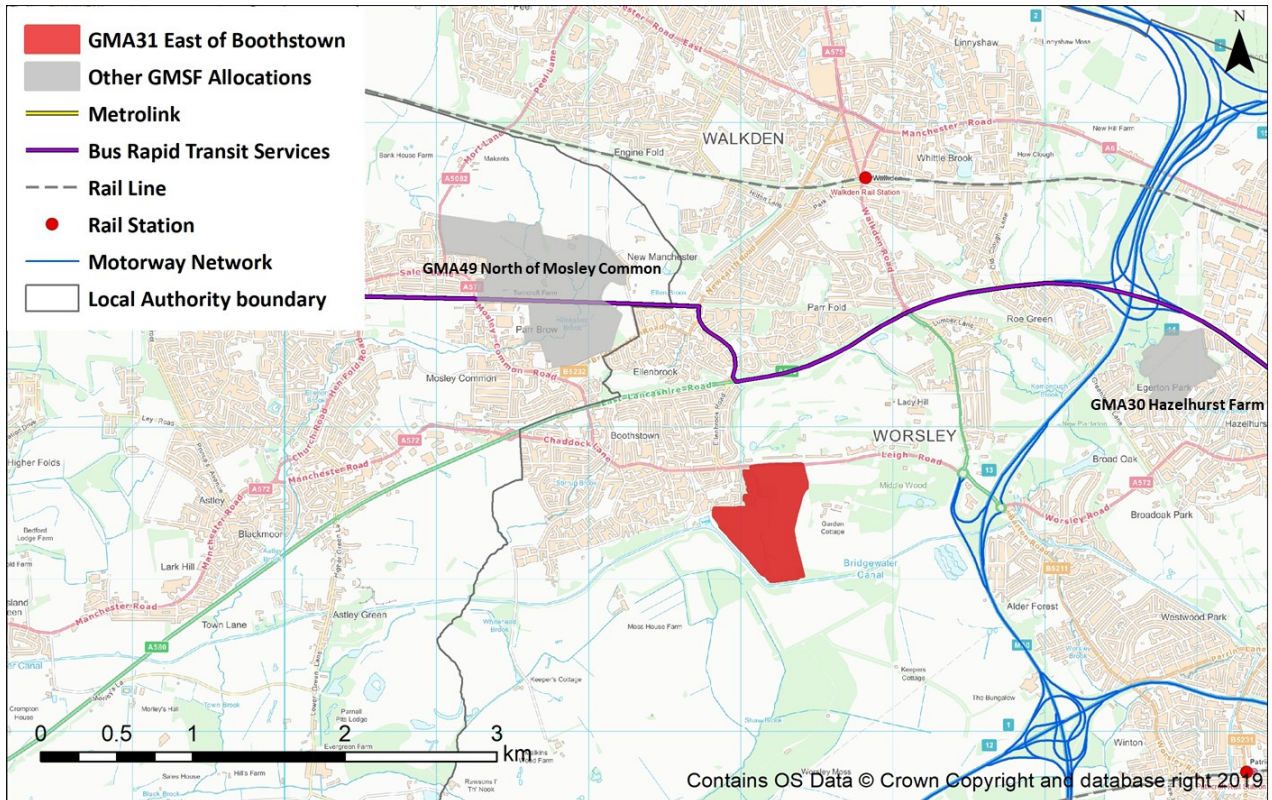
- 3.1.1 The Greater Manchester Plan for Homes, Jobs and Environment (Spatial Framework) consultation ran from 14th January to 18th March 2019. Representations submitted in response to the proposed allocation Land East of Boothstown, included transport related issues of: public transport, air quality, congestion, highway/Junction capacity, and active travel.
- 3.1.2 Inadequate public transport services were identified, in particular with regards to overcrowding on the Vantage service. A reduction in bus services to the area was also raised as a concern.

- 3.1.3 Concerns were raised that the development of the allocation would exacerbate existing levels of air pollution and that there is inadequate infrastructure in place to accommodate the development. It was suggested that infrastructure should be identified and provided before further development is implemented, with too much development occurring in Boothstown and Ellenbrook recently with no infrastructure in place. It was felt that significant investment in the current transport infrastructure is needed prior to any further development in the area.
- 3.1.4 Transport problems that were identified included difficulties exiting Leigh Road onto the roundabouts at Junction 13 of the M60 and significant journey times during the weekday peak period. The cumulative impact of the Royal Horticultural Society Garden Bridgewater and other GMSF allocations in the area were also raised as concerns.
- 3.1.5 From an active mode perspective, responses suggested that traffic issues were a danger to pedestrians.
- 3.1.6 Further information on the consultation responses can be found in the [GMSF Consultation Report \(October 2019\)](#).

4. Existing Network Conditions and Allocation Access

4.1.1 This Section summarises the existing access to the allocation. Figure 1 indicates the location of the allocation, other GMSF allocations in the neighbouring area and its context regarding access to the highway network and public transport opportunities.

Figure 1. Allocation Location: East of Boothstown



Note: All boundaries and reference numbers shown within this report were correct at time of writing – for definitive boundary information refer to the GMSF allocation maps.

4.2 Existing Local Access

4.2.1 Occupation Road extending from A572 Leigh Road has recently been upgraded to accommodate traffic associated with the allocation and the RHS site. Occupation Road prior to the recent upgrade was a single track country lane, however it is now a wide single carriageway road with a large signalised 3 arm Junction at the A572 Leigh Road with controlled pedestrian crossing movements.

- 4.2.2 The A572 Leigh Road to the east connects with the M60 at Junction 13 and to the neighbouring suburbs of Worsley, Alder Forest and Hazlehurst. To the west is the suburb of Boothstown and beyond this, the A580 East Lancashire Road connecting the western districts of GM with the Regional centre.
- 4.2.1 High frequency Vantage bus services to and from the Regional Centre, benefitting from dedicated bus lanes are provided along the A580 East Lancashire Road. The A580 also benefits from having a shared footway/ cycleway with signal controlled crossings at major intersections.
- 4.2.2 A footway is provided along the eastbound carriageway on the A572 Leigh Road connecting Boothstown and Worsley for pedestrians and serving bus stops destined for the Regional Centre. A footway is also provided on the westbound carriageway, east of the A572 Leigh Road/ Occupation Junction affording access to a bus stop approximately 150m from the Junction with services to Wigan and Leigh.
- 4.2.3 The newly installed signal controlled Junction at the A572 Leigh Road Junction with Occupation Road has pedestrian crossing facilities consisting of on demand push button operation, dropped kerbs and tactile paving.
- 4.2.4 In addition, pedestrian access via the footway along the Bridgewater Canal to the south of the allocation provides good connections with Trafford Park to the east and Leigh to the west.

4.3 Accidents and Collision Overview

- 4.3.1 Collision analysis has been undertaken within 1km of the allocation for the most recent five year period (2015 and 2019 inclusive). Table 1 provides a summary of the collisions by severity.

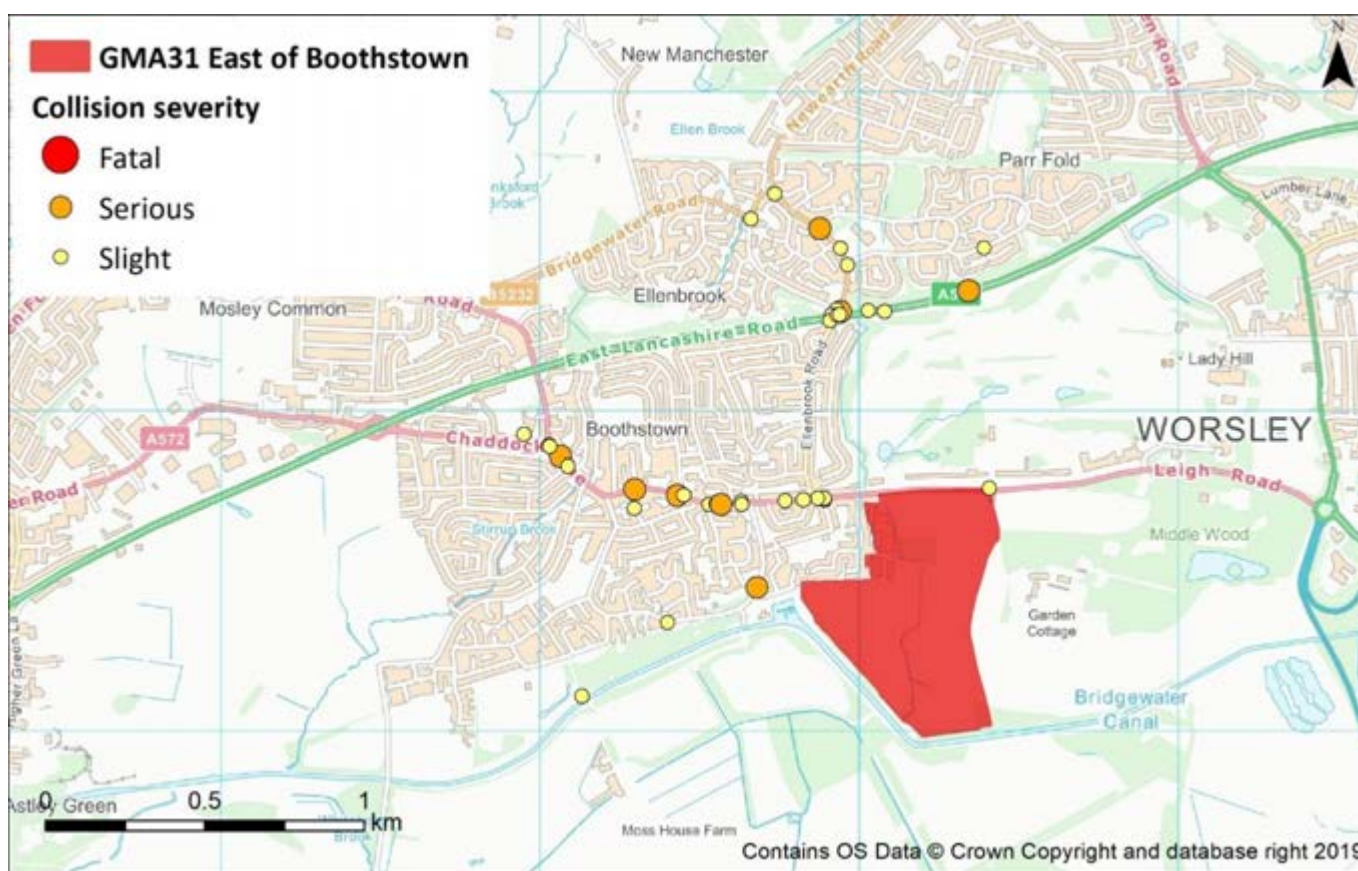
Table 1. Collision Data within 1 km of allocation

Fatal	Serious	Slight	Total
0	8	32	40

- 4.3.2 Table indicates that 40 collisions were reported over the 5 year period with 20% (8) being serious in nature, the remaining collisions were slight. No fatal collisions were recorded.

- 4.3.3 Figure 2 provides an illustrative indication of where the collisions occurred. It can be seen that most collisions occur at junctions with clusters around the A580 East Lancashire Road/ Ellenbrook Road/ B5232 Newearth Road and the A572 Chaddock Lne/ A577 Mosley Common Road junctions.
- 4.3.4 The serious collisions at the A572 Leigh Road/ Standfield Drive, B5232 Newearth Road/ Longwall Avenue junctions and on the A580 East Lancashire Road (south of Parr Fold) all involved pedestrians.
- 4.3.5 A serious collision involving a pedal cycle was observed at the A580 East Lancashire Road/ B5232 Newearth Road Junction.

Figure 2. Collision Analysis

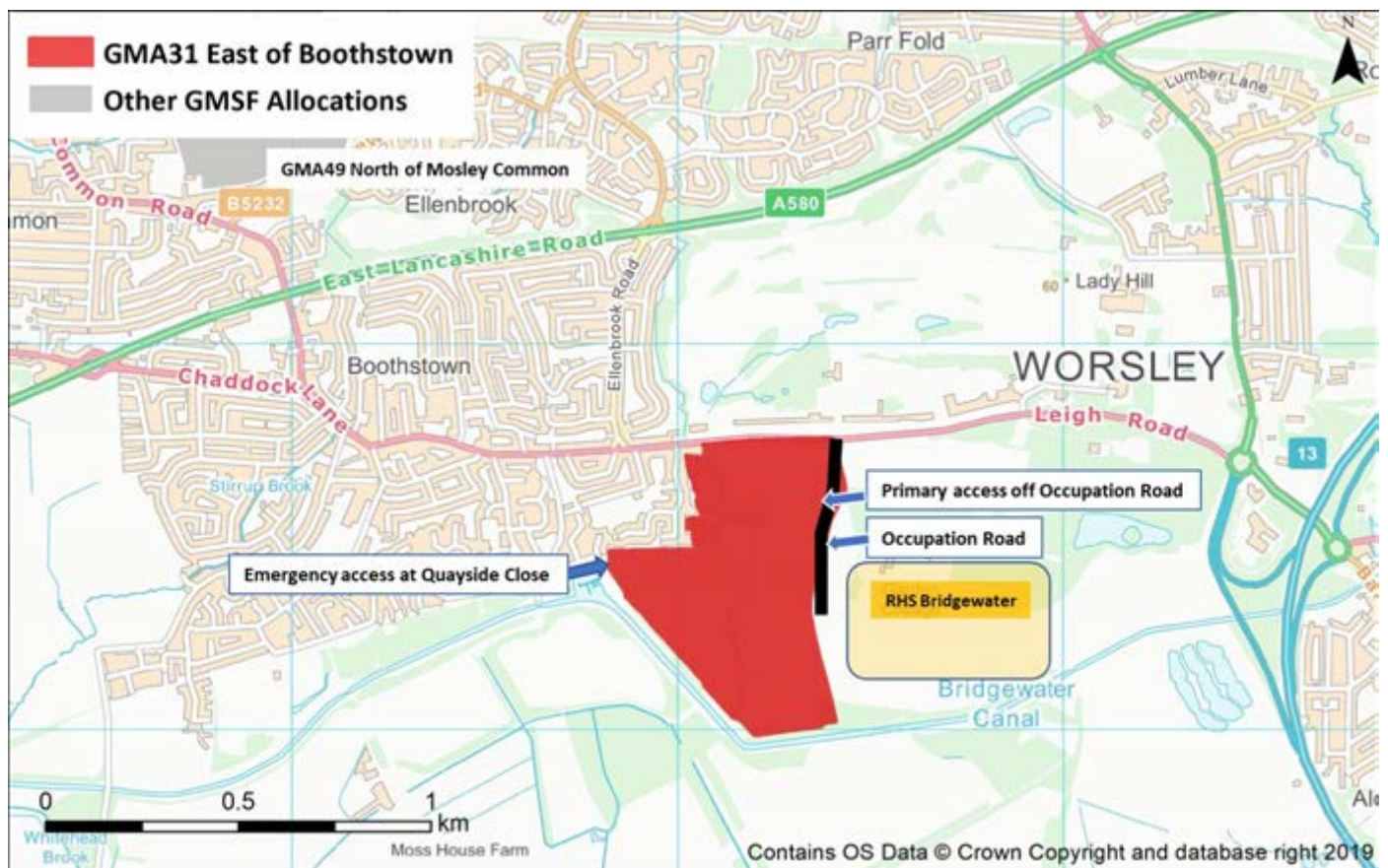


5. Proposed Access to the Allocation

- 5.1.1 Having undertaken an access appraisal, engineers have identified that a priority Junction would be provided from Occupation Road to afford access to and egress from the allocation.

- 5.1.2 This is a new priority Junction on to Occupation Road approximately 100 metres to the south of the new signalised Junction with the A572 Leigh Road. Given the anticipated level of demand to and from the allocation, a ghost island Junction arrangement is considered appropriate at Occupation Road. Occupation Road provides access to the RHS Garden Bridgewater further to the south. The RHS site is anticipated to generate a highly variable level of trips across the year depending on seasonal variations and events etc. However, given the size of its car park, it is anticipated to have the capacity to be a substantial trip generator at specific periods. This is considered to provide further support that the allocation access Junction to the development should be a ghost island Junction to ensure any right turning traffic will not result in blocking back into the A572 Junction.
- 5.1.3 The signalised Junction of Occupation Road and the A580 Leigh Road has been tested in the 2040 future scenario and is considered to operate within capacity.
- 5.1.4 Figure 3 provides an indication of the anticipated forms of vehicular access to and from the allocation.

Figure 3. Allocation Access Arrangements



- 5.1.5 At Planning Application stage, an assessment of the required number of site access junctions will need to be undertaken to confirm that they operate satisfactorily in capacity terms. However, it is considered that two site accesses will be required to serve the allocation, providing a primary and secondary access in the event of an emergency. An access assessment previously undertaken identified the potential for a second emergency access could be taken from Quayside Close to the south west of the allocation. This could have lockable or collapsible bollards and be incorporated into a pedestrian and cycle access point at a suitable location.
- 5.1.6 Visibility assessments at the allocation access junctions will also need to be undertaken to ascertain their suitability to accommodate additional traffic. Visibility splays will be based upon available design standards including Manual for Streets.
- 5.1.7 The allocation access arrangements have been developed to illustrate that there is a practical option for allocation access in this location and to develop indicative cost estimations. It is assumed that a detailed design consistent with Greater Manchester's best practice Streets for All highway design principles will be required at the more detailed planning application stage.

6. Multi-modal accessibility

6.1 Overview

- 6.1.1 The development of access and active travel across the Greater Manchester Region is a central tenet of the GMSF, to be realised through the establishment and continued improvement of the cycle and walking network.
- 6.1.2 An assessment of the accessibility of the allocation, by all modes of transport, has been undertaken so as to establish if it would meet with prevailing sustainable transport policies.
- 6.1.3 It highlights the opportunities for residents and visitors to travel to and from this allocation by modes of travel other than in a privately owned car.

- 6.1.4 Greater Manchester Accessibility Levels (GMAL) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester's Local Link (flexible transport service), taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region. The accessibility index score is categorized into eight levels, 1 to 8, where level 8 represents a high level of accessibility and level 1 a low level of accessibility. East of Boothstown is Level 4 for public transport accessibility.
- 6.1.5 It is anticipated that as the allocation is developed and a permeable network of walk/ cycle links is adopted, accessibility to public transport will be greatly improved.

6.2 Walking and Cycling

- 6.2.1 Definitive footpath 167 runs north-south through the allocation from Poynt Chase to the north bank of the Bridgewater Canal. There is an existing (informal) footpath along the northern bank of the canal. There is also a designated cycle route running along the southern towpath. This cycle route can be accessed via the Vicars Hall Lane bridge crossing, located 250 metres west of the allocation. The only other significant cycling infrastructure is a route along the A580 East Lancashire Road although further improvements are planned as part of the Mayor's Challenge Fund.
- 6.2.2 A footway is provided along the eastbound carriageway on the A572 Leigh Road connecting Boothstown and Worsley for pedestrians and serving bus stops destined for the Regional Centre. A footway is also provided on the westbound carriageway, east of the A572 Leigh Road/ Occupation Junction affording access to a bus stop approximately 150m from the Junction with services to Wigan and Leigh.
- 6.2.3 The nearest primary schools are at St Andrew in Boothstown (0.8km) and Ellenbrook (0.8km), whilst the nearest secondary school is the Co-op Academy in Walkden (3.0km via Worsley Village). A range of shops and local facilities are situated in Boothstown to the west of the allocation. Other local destinations are the existing Marina and RHS Garden (under construction), both adjacent to the allocation.

6.3 Public Transport

- 6.3.1 Boothstown is served by a range of Public Transport services at present with bus stops provided along the A572 Leigh Road serving the Regional Centre to the east and Leigh / Wigan to the west via services 32, 126, 132 and 799. These provide a 30 minute frequency, while the more frequent V1/V2 bus services (Leigh-Salford-Manchester Bus Rapid Transit) run along the A580 East Lancashire Road to the north. The nearest stops are located within 1km of the edge of the allocation, close to the Junction of the A580 East Lancashire Road / B5232 Newearth Road. The local service VH1 serves Booths Hall Way and connects with V1/V2 at the B5232 Newearth Road stops.
- 6.3.2 Wardley Park & Ride site is located within 4km of the allocation. The park & ride site is served by high specification, high frequency bus services, and with associated bus priority infrastructure along the route, affords excellent access to the Regional Centre.
- 6.3.3 A park and ride facility is also being delivered at Walkden railway station (approximately 3km from the allocation) which will be able to accommodate 107 car parking spaces with a new cycle shelter for approximately 30 bikes. The station serves the Regional Centre to the south and Wigan Wallgate to the west with three services per hour.
- 6.3.1 Table 1 identifies the current accessibility of public transport for the future residents of East of Boothstown, exploring the proximity, and the frequency of travel during peak hours.

Table 2. Accessibility of and proximity to public transport

Mode	Nearest Stop / Station	Distance (Km)	Peak Hour Frequency (Mins)
Bus	Leigh Road	0.4	30
Rail	Walkden	3.2	15
Park and Ride (bus)	Wardley	3.9	4

6.4 Proposed

- 6.4.1 Walking and cycle opportunities are an important consideration with schools located in close proximity to the proposed allocation.

- 6.4.1 There is a commitment to deliver a major walking and cycling scheme nearby as part of the Mayor’s Challenge Fund award, with which the development will be expected to integrate. This forms part of the GM Bee Network and is being developed as part of the RHS Bridgewater initiative. This scheme will provide a new path along the northern side of the Bridgewater Canal immediately to the south of the allocation, with connections to the B5211 east of the M60 and a northern connection linking the canal, the RHS Garden, Worsley Village, and Walkden Rail Station with a route towards Walkden Co-op Academy. Further detail on walking and cycling proposals across Salford are contained within the 2040 5-Year Delivery Plan and Salford’s Local Implementation Plan.
- 6.4.2 For East of Boothstown, the potential of extending current bus services 33 and 34 is being explored. This could allow services currently terminating at Worsley Courthouse to extend as far as RHS Bridgewater. Another opportunity could be to extend service 33 (Worsley – Monton – Eccles – Manchester) to an RHS – Worsley – Eccles – Manchester service which would allow for interchange with Metrolink (subject to negotiation with the operator). Additional measures which improve the accessibility and availability of these potential revised services should be considered. This could include safe, direct routes to adjacent stations and an increase in the number of bus services to accommodate the increased volume of users.
- 6.4.3 Transport for Greater Manchester has considered the redevelopment of numerous rail stations within the Salford area with Walkden being the closest. A new park and ride station to be delivered at the station will be of benefit to residents of the allocation as will a review of metro – tram – train services and improvements to the Wigan – Manchester (via Atherton) corridor.
- 6.4.4 Allocation 31 of the Revised Draft GMSF (East of Boothstown) required that any development of the allocation should:
- Ensure good quality access by walking and cycling for all residents to services in Boothstown, bus services on the surrounding road network, the Bridgewater Canal, and Chat Moss to the south.
 - Secure further improvements to the path on the north side of the Bridgewater Canal to provide a high quality walking and cycling route to RHS Garden Bridgewater, Worsley Village and Boothsbank Park.

6.4.5 On this basis, the following recommendations to promote sustainable transport to and within the allocation include;

- New footpath - on the westbound carriageway, west of the A572 Leigh Road/ Occupation Road Junction.
- Segregated pedestrian and cyclist access - to Quayside Close (also a possible emergency vehicle access)
- Towpath connectivity - Traffic free connections to the proposed towpath cycle route on the north bank of the canal, to the crossing of Occupation Road and the route serving RHS Garden Bridgewater, Worsley Village, Walkden Co-Op Academy and the closest rail station at Walkden.
- On site provision - Pedestrian and cyclist priority within the development, minimal car parking provision and sufficient secure cycle parking for all dwellings.
- Safe crossings - of Leigh Road (at Ellenbrook Road) and at Ellenbrook Road (near Ellenbrook Primary School). These will help address road safety hotspots, and provide safe walking routes to local primary schools and the nearest V1/V2 route bus stops.

7. Parking

7.1.1 Salford City Council's Local Plan: Development Management Policies and Designations Document (February 2020) proposes the following maximum car parking standards for residential dwellings:

- 1 bed dwelling - 1 space.
- 2-3 bed dwellings - 1.5 spaces per dwelling.
- 4 bed dwelling - 2 spaces per dwelling

7.1.2 A lower density of development is proposed for the allocation and will provide larger dwellings. The number of car parking spaces provided on the allocation would therefore be expected to be close to the maximum permitted, which would be 600 based on the Local Plan proposed standards.

7.1.3 With regards to bicycle parking the Publication Local proposes minimum provision of:

- 1 bed dwelling - 1 space.
- 2-3 bed dwellings - 2 spaces per dwelling.

- 4 bed+ dwelling - 3 spaces per dwelling.

7.1.4 Given the focus on larger dwellings, the minimum number of bicycle spaces required under the proposed policy could be in the order of 900.

8. Allocation Trip Generation and Distribution

8.1.1 The strategic modelling component of the GMSF Locality Assessments have been produced using data provided from TfGM's Variable Demand Model (GMVDM). An overview of the modelling process can be found within the introduction to the Locality Assessments.

8.1.2 Future trip generation to/from the allocation (i.e. how many people and vehicles will enter or leave the allocation) was estimated by applying a set of GM-wide trip rates to the agreed development quantum for each site. The distribution of trips (i.e. where they are going to or coming from) was derived by selecting nearby zones with similar land use characteristics as a proxy and using the existing distribution in the model.

8.1.3 Four Test Cases ("GMSF Constrained" and "GMSF High Side", for both 2025 and 2040) were used to assess and mitigate the impact of the GMSF Allocations on the Greater Manchester transport network.

8.1.4 The 'standard' development planning approach would generally not assume that future highway trips are constrained by congestion on the highway network. Discussions between SYSTRA and TfGM pointed towards a need to also look at a 'high-side' scenario with the GMSF development scenario which does not take account of future congestion on the road network. The 'GMSF High Side' is considered to be a worst case and the modelling work has been undertaken using these 'high side' flows.

8.1.5 For the purposes of the testing the impact of the allocation through the strategic model, a total of 300 dwellings have been assumed to be built out by 2040. The GM transport modelling suite has a 2040 forecast year, as such it uses 2040 trajectory data as proxy for 2037 full build-out, this is not considered to materially impact on the analysis or conclusions of this report. All phasing plans information contained in this Locality Assessment is indicative only and has only been used to understand the likely intervention delivery timetable. Final trajectory information and the final allocation proposal is contained in the GMSF Allocation Topic Paper. The agreed development quantum for the GMA 31 East of Boothstown allocation is shown in Table 3, while the estimated traffic generation for both the constrained and high scenarios is shown in Table 4.

Table 3. Development Quantum

Residential	Houses	30	300
Total		30	300

Table 4. Allocation Traffic Generation

Year	AM Peak Hour Departures	AM Peak Hour Arrivals	PM Peak Hour Departures	PM Peak Hour Arrivals
2025 GMSF Constrained	10	3	5	11
2025 GMSF High-Side	10	4	6	11
2040 GMSF Constrained	94	27	46	92
2040 GMSF High-Side	103	41	63	92

Units are in PCU (passenger car units/hr)

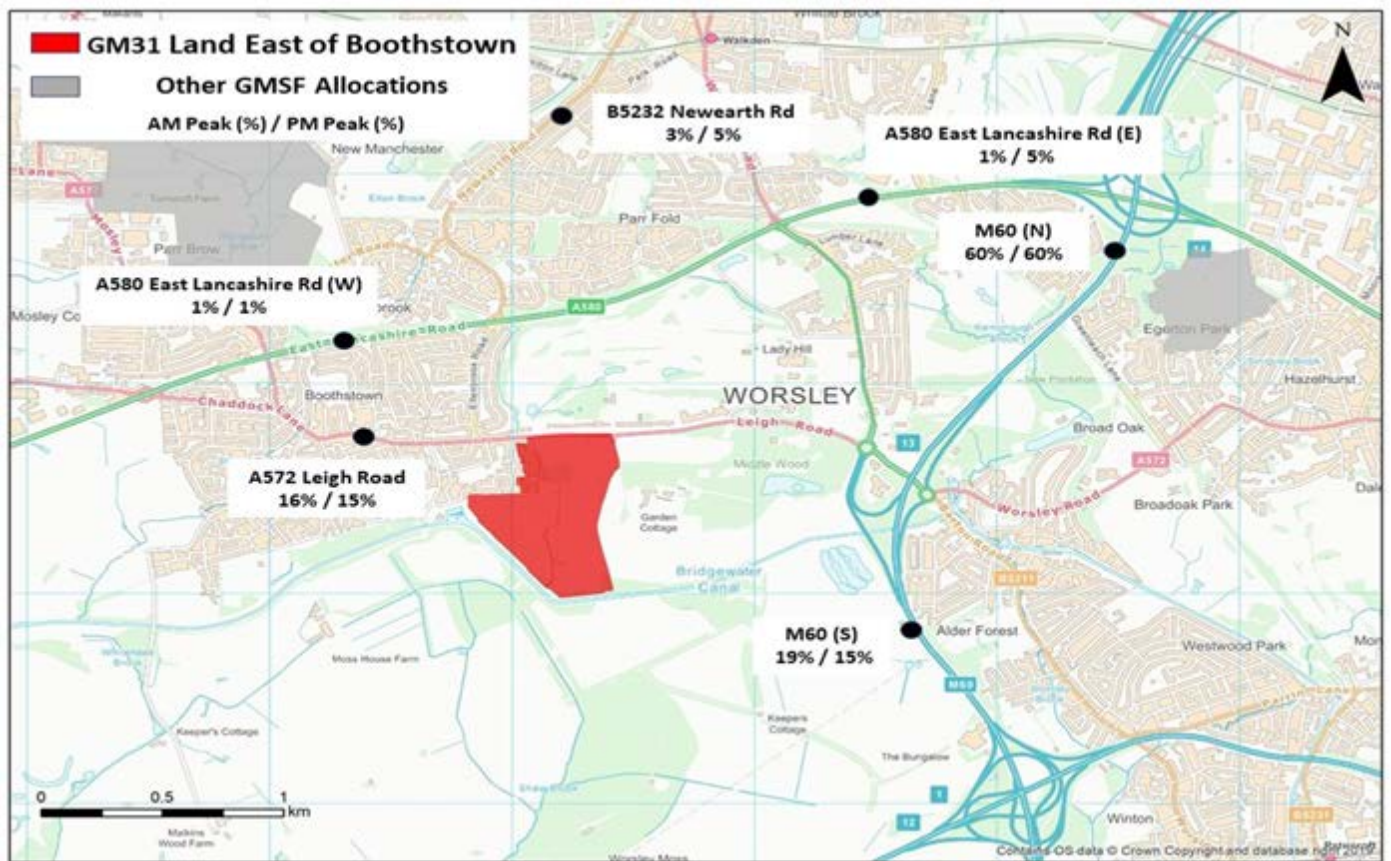
8.1.6 Table 5 and Figure 4 indicate the distribution of traffic on the network to and from the allocation in the peak model periods which are 0800-0900 (AM peak) and 1700-1800 (PM Peak). It can be seen that the model predicts that in both the AM and PM Peak hours that the majority of traffic is

originating or destined for the M60 north with significantly less destined for or originating from the M60 south. The model predicts that very little traffic (in both peaks) will use the A580 East Lancashire Road east or westbound and this is likely to be as a consequence of congestion along the corridor and the frequency of public transport services providing a better alternative than private car use.

Table 5. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)

Route	AM Peak Hour	PM Peak Hour
M60 (North)	60%	60%
M60 (South)	19%	15%
A580 East Lancashire Road (West)	1%	1%
B5232 Newearth Road	3%	5%
A580 East Lancashire Road (East)	1%	5%

Figure 4. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)



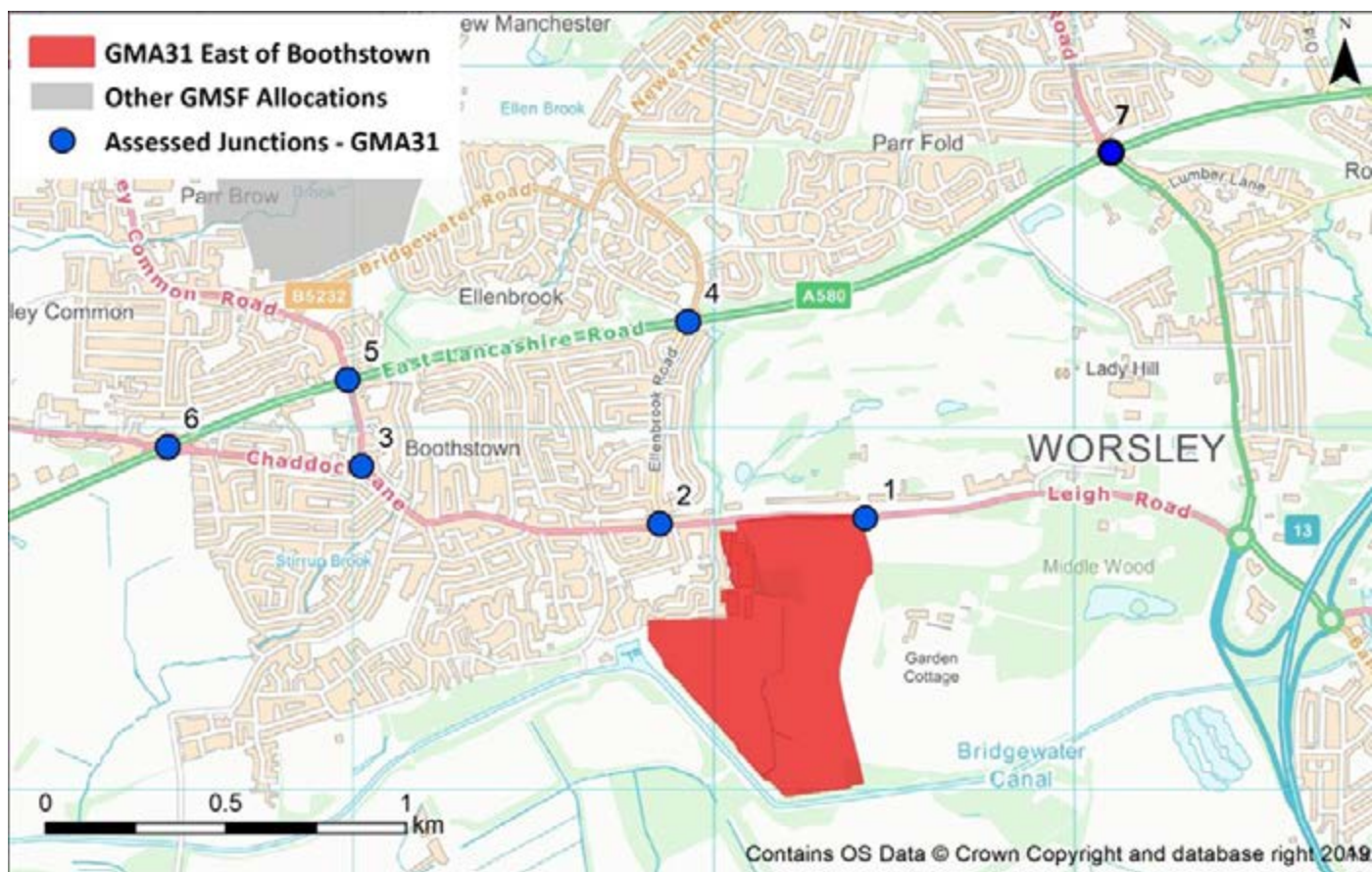
8.1.7 Analysis has also been undertaken to assess the level of impact of traffic travelling to/ from the allocation will have on neighbouring authorities (outside GM). No material impact is considered to affect neighbouring authorities.

9. Current Highway Capacity Review

9.1 Existing Network

- 9.1.1 The A572 Leigh Road running east-west to the north of the allocation is the main road serving the allocation and connecting with the wider area. During the peak periods, A572 Leigh Road is congested, providing an alternative route to the A580 East Lancashire Road and providing access to the Strategic Road Network at Junction 13 of the M60 and the residential areas of Boothstown and Worsley. A572 Leigh Road is a bus route which has a speed limit of 40mph running past the allocation. Leigh Road becomes 30mph east of Falconwood Chase at the eastern edge of Boothstown.
- 9.1.2 The A580 East Lancashire Road also runs east-west further north of the allocation connecting Liverpool with the Regional centre. The A580 East Lancashire Road is heavily congested during peak periods.
- 9.1.3 Based on the configuration of the of the existing highway network and the planned access strategy, seven junctions have been identified for assessment. These are identified in Figure 5 and are:
- 1. A572 Leigh Road/ Occupation Road
 - 2. A572 Leigh Road/ Ellenbrook Road
 - 3. A572 Leigh Road/ A577 Mosley Common Road
 - 4. A580 East Lancashire Road/ B5232 Newearth Road
 - 5. A580 East Lancashire Road/ A577 Mosley Common Road
 - 6. A580 East Lancashire Road/ A572 Chaddock Lane
 - 7. A580 East Lancashire Road/ A575 Walkden Road

Figure 5. Assessed Junctions



9.1.4 In addition to the local highway network, the proximity of the allocation to the Strategic Road Network meant that SRN junctions also needed to be considered. This is detailed further in Section 15, Impact and Mitigation on the Strategic Road Network. The following Junction has also been assessed to understand the impact of traffic from the site.

- M60 Junction 13

10. Treatment of Cumulative Impacts

10.1.1 In order to assess the cumulative impact of GM allocations on the network, two model runs were undertaken, a 'constrained' and 'high side' assessment. The constrained forecasts could reduce the number of future highway trips due to congestion on the highway network. This constraining process is undertaken by the Greater Manchester Variable Demand Model (GMVDM).

10.1.2 The transport impacts of the allocation need to be considered cumulatively with other GMSF site allocations. Hence, both the constrained and high side model runs take account of traffic associated with all GMSF allocations in proximity to the allocation.

10.1.3 GMSF-wide traffic uses the A580 East Lancashire Road as a key radial route in and out of the Regional Centre. Analysis of traffic flows from the model indicates that the following allocations contribute to the overall impact at junctions along the A580 East Lancashire Road.

- GMA30: Hazelhurst Farm
- GMA49: North of Mosley Common

10.1.4 The GMA30 Hazelhurst Farm allocation is proposed for 400 homes and is situated off the A580 East Lancashire Road south east of Junction 14 of the M60. GMA30 Hazelhurst Farm is anticipated to generate 138 departures in the AM peak at 2040 (equivalent number arriving in the PM peak) with over 50% of the traffic originating or destined for the M60 south via Junction 13 of the M60. The combination of traffic associated with both allocations generates little traffic on the A580 East Lancashire Road and the impact associated with these junctions in the ‘with GMSF’ scenario are associated with development farther afield.

10.1.5 Table 6 presents combined flows associated with GMA28 East of Boothstown and GMA27 Land at Hazelhurst Farm through junctions along the A580 East Lancashire Road.

Table 6. Combined GMA27 and GMA28 flows at A580 junctions

No.	Junction	Combined Flows AM Peak	Combined Flows PM Peak
4	A580 East Lancashire Road/ B5232 Newearth Road	15	13
5	A580 East Lancashire Road/ A577 Mosley Common Road	4	6
6	A580 East Lancashire Road/ A572 Chaddock Lane	22	25
7	A580 East Lancashire Road/ A575 Walkden Road	6	4

10.1.6 It can be seen that the impact from both allocations combined is anticipated to be minimal.

10.1.7 GMA49 North of Mosley Common is allocated for 1200 homes in GMSF. The allocation is situated in Wigan District approximately 4.5km west of the GMA30 Hazelhurst Farm allocation and within 3km of GMA30 East of Boothstown. In the AM peak at 2040, the allocation is anticipated to generate 370 arrivals and departures with over half originating on or destined for the A580 East Lancashire Road east.

11. Allocation Access Assessment

11.1.1 Vehicular access to the GMA 31 East of Boothstown allocation as a whole would be as per the access strategy set out in Chapter 5.

11.1.1 Allocation access arrangements that are consistent with Greater Manchester's best practice 'Streets for All' highway design principles will be required at the more detailed planning application stage.

12. Impact of Allocation Before Mitigation on the Local Road Network

12.1.1 In order to understand a worst case impact of the GMSF, the 'high side' runs from the GMVDM were used to derive with GMSF development flows for 2040. These flows were then entered into Junction based models for the junctions identified in Section 9. Flows from a 2040 reference case scenario (including local authority current land supply without proposed GMSF allocations) were also extracted to provide a comparison between the operation of those junctions in the 2040 reference case and the 2040 with GMSF development scenarios.

12.1.2 The 'with GMSF' scenario has been assessed against a Reference Case which assumes background growth and includes the housing and employment commitments from the districts. It has been agreed for the purposes of GMSF that where mitigation is required, it should mitigate the impacts back to a reference case scenario. It should be noted that mitigating back to this level of impact may not mean that the Junction operates within capacity

12.1.3 These assessments were then used to identify the junctions where there was considered to be a substantial impact, relative to the operation of the Junction in the 2040 reference case, and hence where mitigation was considered to be required in order to bring GMSF sites forward.

12.1.4 This Section looks at the impact on the network at the junctions highlighted in Section 9. Signalised junctions were assessed in detail using industry-standard modelling software LINSIG version 3. Traffic signal information was obtained from TfGM Urban Traffic Control (UTC). Junctions 9 software was used to assess priority and roundabout junctions.

12.1.1 The following table summarises the results of the individual Junction models assessing the junctions on the Local Road Network (LRN). The table also provides an indication of the traffic generated through each of the junctions in the GMSF High scenario at 2040. Results for SRN junctions are provided in Section 15.

12.1.2 For reference, a figure of between 85% and 99% illustrates that the Junction is nearing its operational capacity, and a figure of 100% or over illustrates that flows exceed the operational capacity at the Junction and increased vehicle queuing and delay are likely to occur.

Table 7. 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	A572 Leigh Road/ Occupation Road	-	-	56%	68%	144	155
2	A572 Leigh Road/ Ellenbrook Road	87%	109%	99%	104%	38	38
3	A572 Leigh Road/ A577 Mosley Common Road	120%	132%	161%	177%	23	24
4	A580 East Lancashire Road/ B5232 Newearth Road	113%	147%	151%	154%	14	11
5	A580 East Lancashire Road/ A577 Mosley Common Road	112%	142%	128%	126%	3	4
6	A580 East Lancashire Road/ A572 Chaddock Lane	82%	138%	107%	123%	21	23
7	A580 East Lancashire Road/ A575 Walkden Road	218%	136%	227%	205%	5	2

12.1.3 As shown in the table above, the majority of the junctions are operating above capacity in both the reference case and with GMSF High scenario at 2040, with the exception of the A572 Leigh Road/ Ellenbrook Road Junction which operates within capacity in the AM peak.

12.1.4 The A572 Leigh Road/ Occupation Road Junction is modelled as a free flow Junction in the reference case (no signals assumed at the Junction), hence no results provided for the reference case. With the introduction of signals and demand associated with the allocation in the ‘with GMSF scenario’, the Junction is shown to operate within capacity.

12.1.5 Having analysed the Junction modelling in parallel with the flows to/ from the allocation, it is considered that the following junctions do not require mitigation as the Junction either; already operates over capacity in the reference case scenarios and the additional traffic generated in the GMSF High scenario does not detrimentally affect the capacity of the Junction or the impact associated with the allocation is negligible.

- 2. A572 Leigh Road/ Ellenbrook Road
- 3. A572 Leigh Road/ A577 Mosley Common Road
- 4. A580 East Lancashire Road/ B5232 Newearth Road
- 5. A580 East Lancashire Road/ A577 Mosley Common Road
- 6. A580 East Lancashire Road/ A572 Chaddock Lane
- 7. A580 East Lancashire Road/ A575 Walkden Road

12.1.6 The new signalised Junction at A572 Leigh Road/ Occupation Road (reference 1) is shown to operate within capacity and no further mitigation has been investigated.

13. Transport Interventions Tested on the Local Road Network

13.1 Specific Junction Mitigation Measures

13.1.1 The proposed mitigation schemes which are set out in this Section are designed to mitigate the impact of GMSF only, the schemes are not designed to solve pre-existing congestion on the local network.

13.1.2 Also, it should be noted that these interventions are not expected to be the definitive solution but rather to demonstrate that a solution is possible at the location. The details of any mitigation schemes will need to be developed as part of the detailed planning process.

13.1.3 The following table provides a summary of the schemes proposed to mitigate the impact of GMSF at the junctions which have been identified through the Junction modelling process.

Table 8. Approach to Mitigation

No.	Junction	Mitigation Approach
1	A572 Leigh Road/ Occupation Road	Operates satisfactorily – no mitigation proposed
2	A572 Leigh Road/ Ellenbrook Road	Results comparable – no mitigation proposed
3	A572 Leigh Road/ A577 Mosley Common Road	Minimal impact associated with the allocation – scheme has been tested
4	A580 East Lancashire Road/ B5232 Newearth Road	Minimal impact associated with the allocation – no mitigation proposed
5	A580 East Lancashire Road/ A577 Mosley Common Road	Minimal impact associated with the allocation – scheme has been tested
6	A580 East Lancashire Road/ A572 Chaddock Lane	Cumulative impact – negligible impact from allocation
7	A580 East Lancashire Road/ A575 Walkden Road	Cumulative impact – negligible impact from allocation

13.2 A572 Leigh Road/ Occupation Road

13.2.1 As the primary access to the allocation, the signalisation of the Junction has been tested and is shown to operate within capacity. No mitigation is required.

13.3 A572 Leigh Road/ Ellenbrook Road

13.3.1 Interventions were considered at this junction, although no cost-proportionate mitigations were identified as feasible or justifiable given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation.

13.3.2 At 2040, fewer than 40 trips destined for or originating at the allocation are expected to travel through the Junction in the AM peak. It is considered that these trips can be absorbed on the

network over the 20 years to 2040, be replaced by increased active travel and public transport usage, and changes in travel behaviour associated with Greater Manchester's Transport Strategy 2040 and desired vision.

13.1 A572 Leigh Road/ A577 Mosley Common Road

- 13.1.1 Mitigation has been investigated at the A572 Leigh Road/ A577 Mosley Common Road Junction. Signalising the Junction has been considered with the results provided in Section 14. The allocation contributes fewer than 30 trips through the Junction in either peak.

13.2 A580 East Lancashire Road/ B5232 Newearth Road

- 13.2.1 Interventions were considered at this junction, although no cost-proportionate mitigations were identified as feasible or justifiable given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation.
- 13.2.2 At 2040, fewer than 20 trips destined for or originating at the allocation are expected to travel through the Junction in the AM peak. It is considered that these trips can be absorbed on the network over the 20 years to 2040, be replaced by increased active travel and public transport usage, and changes in travel behaviour associated with Greater Manchester's Transport Strategy 2040 and desired vision.

13.3 A580 East Lancashire Road/ A577 Mosley Common Road

- 13.3.1 A joint improvement scheme for the A580 East Lancashire Road/ A577 Mosley Common Road Junction has been developed by Salford and Wigan Councils. The scheme introduces a second approach lane on Mosley Common Road from the north and a dedicated left turning lane into Mosley Common Road north. As part of the scheme, improvements to pedestrian and cycling facilities will also be implemented. Section 106 funds have been secured from adjacent residential developments to improve the operation of the Junction. The scheme has been tested and results are provided in Section 14.

- 13.3.2 Further mitigations were considered at this junction, although no cost-proportionate additions offering benefit were identified as feasible or justifiable given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation.
- 13.3.3 The model predicts that fewer than five trips use the Junction associated with the East of Boothstown allocation at 2040.

13.4 A580 East Lancashire Road/ A572 Chaddock Lane

- 13.4.1 Interventions were considered at this junction, although no cost-proportionate mitigations were identified as feasible or justifiable given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation. Trips to/ from the allocation account for fewer than 30 of the trips at this Junction at 2040.
- 13.5 It is considered that these trips can be absorbed on the network over the 20 years to 2040, be replaced by increased active travel and public transport usage, and changes in travel behaviour associated with Greater Manchester's Transport Strategy 2040 and desired vision.

13.6 A580 East Lancashire Road / A575 Walkden Road

- 13.6.1 Interventions were considered at this junction, although no cost-proportionate mitigations were identified as feasible or justifiable given the marginal demands from the allocation. Further mitigation may be possible in future to address cumulative growth, though this would require 3rd party land-take to be of any significant improvement, and costs would not be proportionate with the marginal demands associated with the allocation.
- 13.6.2 At 2040, fewer than 10 trips destined for or originating at the allocation are expected to travel through the Junction in the AM peak. It is considered that these trips can be absorbed on the network over the 20 years to 2040, be replaced by increased active travel and public transport usage, and changes in travel behaviour associated with Greater Manchester's Transport Strategy 2040 and desired vision.

- 13.6.3 The transport interventions being explored in this Section are purely highway infrastructural interventions and do not take account of the impact public transport improvements could have along the A580 corridor. High frequency services to and from Manchester are already established along the corridor with further improvements being considered.
- 13.6.4 Should the flows associated with the high side modelling forecasts become reality, significant infrastructural changes could be explored at junctions along the A580 East Lancashire Road, largely associated with complex cumulative growth.

14. Impact of interventions on the Local Road Network

- 14.1.1 In order to understand whether the mitigation developed for the allocation (and all other sites within the GMSF) is sufficient to mitigate the worst case impacts of the GMSF identified in Section 12, a second run of the GMVDM with all identified mitigation included, was undertaken. Due to the scale of the models involved, a flow difference plot between the with mitigation and without mitigation model runs was used to identify where there was a significant difference in model flows which may impact on the operation of Junction models. A flow difference plot simply compares two different scenarios, in this instance, with and without mitigation, highlighting areas where a difference in flows was apparent. Where a significant change was observed, the Junction models were rerun to check that the mitigation identified in Section 13 was still sufficient to mitigate allocation impacts and that all other in scope junctions continued to operate satisfactorily in light of any reassignment due to the mitigation schemes.
- 14.1.2 Improvements at the A572 Leigh Road/ A577 Mosley Common Road and A580 East Lancashire Road/ A577 Mosley Common Road junctions were coded into the GMVDM, in advance of a second 'with mitigation' run of the model. The outcomes of this model run in relation to GM31 East of Boothstown are presented below. As previously highlighted, the interventions modelled are not expected to be the definitive solution, merely to demonstrate that a solution is workable and to enable costing.
- 14.1.3 Table 9 provides a comparison between the operation of the Junction in the 2040 reference case and the 2040 'high side' with mitigation scenarios. The table shows a comparison between the ratio of flow to capacity on the worst case arm at each Junction.

Table 9. Results of Local Junction Capacity Analysis After Mitigation – Year 2040

No.	Junction	Ref Case AM	Ref Case PM	GMSF High AM	GMSF High PM	GMSF High AM (With Mitigation)	GMSF High PM (With Mitigation)
3	A572 Leigh Road/ A577 Mosley Common Road	112%	142%	128%	126%	86%	106%
5	A580 East Lancashire Road/ A577 Mosley Common Road	120%	132%	161%	177%	129%	147%

14.1.4 The results of the Junction modelling work indicates that the proposed improvement at the A572 Leigh Road/ A577 Mosley Common Road Junction improves the operation in the ‘with GMSF mitigation’ scenario when compared with the reference case although still operates above capacity in the PM peak.

14.1.5 The improvement at the A580 East Lancashire Road/ A577 Mosley Common Road Junction does not return the Junction back to the reference case situation, however, as discussed in Section 13, East of Boothstown has a negligible impact at the Junction and above the scheme being proposed at the Junction, there is little room for further improvement.

15. Impact and mitigation on the Strategic Road Network

15.1 Overview

15.1.1 This chapter covers those impacts where traffic generated by the GMSF allocations meets the Strategic Road Network (SRN). Junctions at the interface between the Local Road Network (LRN) and the Strategic Road Network (SRN) have been assessed using a similar approach to that described in the preceding chapters. Wider issues relating to the SRN mainline are being assessed separately as described below.

15.1.2 The proximity of the allocation to the Strategic Road Network (SRN) meant that SRN junctions also needed to be considered. The following Junction has been assessed to understand the impact of traffic to/ from the allocation.

○ M60 Junction 13

15.2 Impact of Allocation Before Mitigation on the Strategic Road Network

15.2.1 The following table summarises the results of the assessment of the SRN Junction which is impacted by the allocation and provides an indication of the level of demand anticipated to travel through the Junction (2way).

Table 10. 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
8	M60 Junction 13	110%	147%	111%	134%	101	112

15.2.1 The strategic modelling results suggests that by 2040, approximately 112 trips will use the SRN at Junction 13 of the M60 during the PM peak.

15.2.2 Local Junction modelling was undertaken for Junction 13 of the M60 at the dumbbell roundabouts at Worsley Brow. The assessment indicates that the Junction operates above capacity in the reference case and is broadly comparable in the ‘with GMSF’ scenarios. The reduction in the PM with GMSF scenario has been investigated and is largely as a consequence of traffic seeking alternate routes to avoid the congested network.

15.2.3 A scheme to improve the operation of the roundabouts is currently being introduced at Junction 13 and this is anticipated to improve the operation of the Junction.

15.3 Specific SRN Junction Mitigation Measures

15.3.1 No SRN specific mitigation has been tested as a consequence of the negligible impact associated with the allocation.

Table 11. Approach to Mitigation on SRN

No.	Junction	Mitigation Approach
8	M60 Junction 13	Results comparable – no mitigation proposed

15.3.2 SYSTRA is currently consulting with Highways England on behalf of TfGM and the Combined Authority in relation to the wider impacts of the GMSF allocations on the Strategic Road Network (SRN). This consultation is ongoing and it is expected that it will allow Highways England to gain a strategic understanding of where there is an interaction between network stress points and GMSF allocation demand which will facilitate further discussion and transfer of information between TfGM and Highways England (yet to be defined) in reaching agreement and/or common ground relating to the acceptability of GMSF allocations in advance of Examination in Public (EiP).

16. Final list of interventions

16.1.1 The proposed final list of interventions is summarised in Table 12.

Table 12. Final List of Interventions

Mitigation	Description
Site Access	
Priority Junction	A priority Junction with ghost island will be required to serve the allocation from Occupation Road
Emergency access	An emergency exit is likely be required to the west of the allocation which could tie in with Quayside Close and ultimately, Booths Hall Way (including segregated walking/ cycle access)
Necessary Local Mitigations	
Sustainable Transport Measures	Proportionate sustainable travel and/or local highway improvements that may be identified through detailed master planning.

Footpath along Leigh Road	On the westbound carriageway, west of the A572 Leigh Road/ Occupation Road Junction
Footpath from canal to Occupation Rd access	Traffic free connections to the proposed towpath cycle route on the north bank of the canal, to the crossing of Occupation Road
Leigh Rd active travel crossing	Safe crossing of Leigh Road (at Ellenbrook Road)
Newearth Rd active travel crossing	Safe crossing of Newearth Road (near Ellenbrook Primary School)
Permeable network for active travel priority within the development	

16.2 Traffic Reduction Strategies

- 16.2.1 The analysis underpinning this Locality Assessment has been undertaken using a standard robust highway modelling approach including reference to predicted future development trip levels based on the historical operation of major employment sites, particularly with respect to traditional AM & PM peak 'rush hour' periods. This provides a 'worst-case' highway focussed growth scenario. Further information on the highway modelling approach can be found within the Strategic Modelling Technical Note.
- 16.2.2 There is an increasingly compelling argument that the use of such peak hour demand estimates is overly robust for long term forecasting, particularly if applied wholesale across new strategic development areas. 'Peak spreading' is already a well-recognised feature of recent general traffic growth across Greater Manchester (i.e. only limited traffic growth taking place during critical 'rush hour' periods), with additional travel demand tending to be concentrated on more 'off-peak' periods, when there is spare transport network capacity to accommodate such movements. Furthermore, increases in modern communications technology have increased the potential for home-working / tele-working and reduced the need for business travel and meetings. The notion of '9 to 5' style working is now viewed as an out-dated concept, with staff valuing the benefits of flexible working.

17. Strategic Context – GM Transport Strategy Interventions

- 17.1.1 TfGM and Salford Council have developed a number of wider transport proposals which will support travel around the allocation area. These include improvements to the Leigh – Salford – Manchester Guided busway in order to increase capacity and frequency of the already successful Vantage bus rapid transit services.
- 17.1.2 TfGM is leading a study to evaluate the feasibility of potential new Rail and Metrolink stations and could lead to a small number of stations being delivered, and could include Little Hulton and Western Gateway in Salford. In addition, a rapid-transit connection is planned from MediaCityUK to Salford Crescent rail station, and new Metrolink connections between Salford Quays, Inner Salford and the Regional Centre.
- 17.1.3 A number of cycling and walking schemes are currently under development making it easier to travel around the area without a car. The Swinton Greenway will deliver a traffic-free, off-road walking and cycling corridor connecting Swinton to Monton, with other links connecting communities into the route. The Monton Cycling and Walking Network will improve on foot and bike access to Monton, by providing new zebra crossings, a two-mile cycling route on quiet streets and a new footway.
- 17.1.4 Greater Manchester also has ambitious plans to develop the Bee Network - the UK's largest cycling and walking network as a key element to delivering on the "Right Mix" vision, and the Combined Authority has allocated £160m between 2018-2022 to fund the first phase of the Bee Network. The network has at its core a programme of new and upgraded pedestrian and cycling crossing points of major roads and other sources of severance, connected by a network of signed cycling and walking routes on existing quiet streets. These will be complemented by a number of routes on busier roads where Dutch style cycle lanes protected from motor traffic will be constructed.
- 17.1.5 The latest version of Greater Manchester's 2040 Delivery Plan sets out a comprehensive programme of work across all modes and in all Districts which are all focused on ensuring the realisation of the 'Right Mix' vision. Many of these interventions support the GMSF allocations directly, whilst others are intended to provide alternatives to private car travel more generally. The schemes demonstrate a clear plan for delivering strategic transport interventions for the first five

years of the GMSF plan period, whilst also laying the foundations for longer term investment in sustainable transport across the length of the plan period.

18. Phasing Plan

- 18.1.1 The initial locality assessments were based on information on allocations consolidated by TfGM based on inputs from each of the Districts. This initial exercise focused on the development quanta to be delivered at the end of the plan period, i.e.. by 2040.
- 18.1.2 During the course of the locality assessment work in late 2019 / early 2020, the Districts provided input on their expected phasing of the allocations focusing on the milestone years of 2025 and 2040. The expected 2025 development quanta were tested along with those for 2040 to assess their deliverability in terms of transport network capacity. In some cases, the development phasing was amended by the Districts as a result of the technical analysis undertaken. Table 13 indicates the anticipated level of development over the plan period.
- 18.1.3 In respect of the proposed allocation of East of Boothstown, it is assumed that at 2025, only 30 of the 300 dwellings proposed will have been delivered and this is reflected in the transport modelling. The traffic associated with this level of development will have a negligible impact on the local and strategic highway network with fewer than 20 trips in either peak in the GMSF High scenario.

Table 13. Allocation Phasing

Allocation Phasing	2020 25	2025 30	2030 2037	2037+	Total
Total	30	150	120	0	300

- 18.1.1 Table 14 provides an indicative delivery timetable for the identified mitigation measures. It is expected that a more precise implementation timeframe for these schemes being ascertained through a similar process to that detailed in Section 12 to 15 as part of the five-year review of the plan.

Table 14. Indicative intervention delivery timetable

Mitigation	2020 2025	2025 2030	2030 2037
Site Access			
On Occupation Road and emergency access	✓		
Necessary Local Mitigations			
Sustainable Transport Measures	✓		
Footpath along Leigh Road	✓		
Footpath from canal to Occupation Rd access	✓		
Leigh Rd active travel crossing	✓		
Newearth Rd active travel crossing	✓		
Permeable network for pedestrian and cyclist priority within the development	✓		

19. Summary

19.1.1 The allocation is located in the west of Greater Manchester within Salford. East of Boothstown is located to the east of Boothstown, off the A572 Leigh Road and less than 2km from Junction 13 of the M60. The allocation is bound to the south by the Bridgewater canal and to the north by the A572 Leigh Road. Immediately to the east of the allocation is the Royal Horticultural Society (RHS) Garden Bridgewater due to open in 2021, accessed off the A572 Leigh Road via Occupation Road. The west of the allocation is bound by the residential area of Boothstown. The current land use of the allocation is predominantly agricultural.

19.1.2 The allocation is for 300 low density, high quality homes.

- 19.1.3 Vehicular access to the allocation will be provided from a priority access off Occupation Road. A large signalised Junction is provided at the Junction with A572 Leigh Road which also serves the Royal Horticultural Society Garden Bridgewater, due to open in 2021. A572 Leigh Road is busy during the peak hours with traffic accessing the Strategic Road Network via Junction 13.
- 19.1.4 Modelling work has been undertaken using the Greater Manchester Variable Demand Model (GMVDM) with a constrained and high side scenario. The constrained and high side model runs take account of traffic associated with all GMSF sites. This report has considered the site in isolation and the site in context with other nearby sites such as GMA30 Hazelhurst Farm and GMA49 North of Mosley Common (Wigan).
- 19.1.1 Results from the modelling work indicate that the allocation in isolation has a limited impact on the A580 East Lancashire Road and A572 Leigh Road. As a consequence of this, no highway mitigation has been deemed necessary to accommodate the additional demand generated to or from the allocation.
- 19.1.2 Mitigation has been investigated at the A580 East Lancashire Road Junction with A577 Mosley Common Road and the A572 Leigh Road/ A577 Mosley Common Road Junction. Flows associated with East of Boothstown are considered to be negligible at both junctions and would not constitute funding any improvement. A scheme for the A580 East Lancashire Road Junction with A577 Mosley Common Road is being funded through Section 106 funds which will improve the operation of the Junction, however, there is limited scope to provide any further improvement at the Junction.
- 19.1.3 In the absence of providing Junction specific mitigation, costs should be sought from the allocation to contribute towards as yet unspecified local Junction improvements.
- 19.1.4 In order to provide alternatives to private car use, a number of specific walking and cycling improvements have been proposed within this document which would improve accessibility by sustainable modes, these include;
- Footpath along Leigh Road
 - Footpath from canal to Occupation Rd access
 - A572 Leigh Rd crossing
 - B5232 Newearth Rd crossing

- 19.1.1 Improving connectivity for sustainable modes throughout the allocation and in proximity to the allocation will allow for greater connectivity to the established public transport network and in particular services running along the A580 East Lancashire Road serving the Regional Centre to the east. This should alleviate concerns over air quality in the local area with residents encouraged to make use of public transport where possible.
- 19.1.2 A series of policies is contained within Greater Manchester's Transport Strategy 2040 aimed at improving air quality across the Region. The aim is to reduce, as far as possible, the emissions from transport, particularly CO₂, NO₂, particulates and noise.

Conclusion

- 19.1.3 Based on the information contained within this report, we conclude that the traffic impacts of the East of Boothstown allocation are less than severe. Whilst the modelling work does forecast that junctions may experience capacity issues, they are not significantly worse than those experienced in the reference case situation. The modelling work is considered to be a 'worst case' scenario. It does not take full account of the extensive opportunities for mode shift toward active travel and public transport improvements both locally and across Greater Manchester associated with the significant continued investment proposals within GM's adopted local transport plan, the 2040 Transport Strategy.
- 19.1.4 In summary, there is an initial indication that the allocation is deliverable. Further work will be needed to substantiate these findings as the allocation moves through the planning process. The allocation would need to be supported by continuing wider transport investment across GM.

Greater Manchester Spatial Framework

Locality Assessment:

North of Irlam Station GMA29

Publication Version 2: November 2020

Identification Table	
Client	Salford City Council/TfGM
Allocation	North of Irlam Station
File name	GMA29 Salford - North of Irlam Station LA 021020
Reference number	GMA29 (GMSF 2020) previously GMA32 (GMSF 2019)

Approval					
Version	Role	Name	Position	Date	Modifications
0	Author	Jessica Harrowsmith	Assistant Consultant	14/09/20	Base report
	Checked by	Huw Williams	Associate Director	18/09/20	
	Approved by	Darren Kirkman	Associate	23/09/20	
1	Author	B Brisbane / H Williams	TfGM / Systra	30/09/20	Consistency edits
	Checked By	Jimmy McManus	Salford City Council	02/10/20	
	Approved By	James Shuttleworth	Salford City Council	02/10/20	

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Allocation Data	
Allocation Reference No.	GMA29 (GMSF 2020) previously GMA32 (GMSF 2019)
Allocation Name	North of Irlam Station
Authority	Salford City Council
Ward	Irlam
Modelling Analysis	1,100 homes (by 2040)
Policy Proposal	1,100-1,400 homes (by end of plan period 2037)
Allocation Timescale	0-5 years 6-15 years ✓ 16 + years ✓

Glossary

“2025 GMSF Constrained” - is the 2025 forecast case in which the model adjusts the input demand based on how the cost of travel changes from the base year to the future. For example, for a shopping trip undertaken by car which becomes more congested in future, changes might be travel via a different route, mode, location or time of day.

“2040 GMSF Constrained” - as above, but for a 2040 forecast year

“2025 GMSF High-Side” - is the 2025 forecast case in which the model does not adjust the input demand based on how the cost of travel changes. In this scenario congestion does not lead to a reassignment of traffic, and therefore road traffic flow will generally be higher.

“2040 GMSF High-Side” - as above, but for a 2040 forecast year

“2025 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2025

“2040 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2040

AADT - Annual average daily traffic, is a measure used in transportation planning to quantify how busy the road is

Bee Network - is a proposal for Greater Manchester to become the very first city-region in the UK to have a fully joined-up cycling and walking network: the most comprehensive in Britain covering 1,800 miles.

Bus Rapid Transit - is a bus-based public transport system designed to improve capacity and reliability relative to a conventional bus system. Typically, a BRT system includes roadways that are dedicated to buses, and gives priority to buses at junctions where buses may interact with other traffic

Existing Land Supply - these are sites across the county that have been identified by each local planning authority across Greater Manchester and are available for development (it does not include land currently in the Green Belt that is proposed for built development through the GMSF)

Greater Manchester Variable Demand Model (GMVDM) - the multi-modal transport model for Greater Manchester. This transport model provides estimates of future year transport demand as well as the estimates of travel behaviour changes and new patterns that the Plan is likely to produce. These include

changes in choices of routes, travel mode, time of travel and changes in journey destinations for some activities such as work and shopping.

“LRN” (Local Road Network) All other roads (SRN aside) comprise the Local Road Network. The LRN is managed by the local highways authorities

National Trip End Model (NTEM) - is a Department for Transport forecast that ensures that measures of population, jobs and trips made by various mode are consistent across the whole of Great Britain.

Rapid transit services - refers to high frequency, high capacity metro style transport services including Metrolink and Bus Rapid Transit.

Regional Centre - A central area of Greater Manchester which includes an increasing density of trip attractors, jobs and homes. Including the Manchester and Salford City Centre at the centre, it stretches west to include The Quays and parts of Trafford Park, east to include the Etihad Campus, and south to include the universities and hospitals centred around Oxford Road.

“SRN” (Strategic Road Network) The Strategic Road Network comprises motorways and trunk roads, the most significant ‘A’ roads. The SRN is managed by Highways England.

“TfGM” - Transport for Greater Manchester, the local government body responsible for delivering Greater Manchester’s transport strategy and commitments on behalf of the Greater Manchester Combined Authority.

Urban Traffic Control (UTC) - is a specialist form of traffic management that, by coordinating traffic signals in a centralised location, minimises the impact of stop times on the road user.

1. Allocation Location & Overview

- 1.1.1 SYSTRA have been commissioned by Transport for Greater Manchester (TfGM) to provide a series of locality assessments for strategic allocations within the Greater Manchester region in order to confirm their potential impacts on both the local and strategic network, as well as identifying possible forms of mitigation and the promotion of sustainable alternatives to reduce this impact.
- 1.1.2 The North of Irlam Station allocation is located on land to the North of Irlam Station and the Manchester-Liverpool railway line. The allocation is bound to the west by Moss Road, to the south by the railway line and then follows the edge of the urban area eastwards as far as Roscoe Road, the road forming the allocation's eastern boundary. The northern boundary of the allocation follows existing field lines. Beyond the allocation's western, eastern and northern boundaries are open areas of Green Belt land, with the M62 further to the north (around 300m from the allocation at its closest point).
- 1.1.3 This report is based on a modelled assumption of 1100 homes delivered by 2040. Phasing information provided within the report is indicative and would be subject to adopted policy. Due to the complexities on this site associated with the ground conditions, land ownership and transport issues, various yield scenarios were considered during the modelling process. The allocation policy anticipates a yield would be achievable up to 1400 homes, though requirements include the need for further master planning and robust delivery strategy which, amongst other things will consider issues relating to transport. The quantum and phasing of development for the allocation could be adjusted through this delivery strategy to ensure that the impact on the network is minimised. Recognising the limitations of strategic modelling at this location, further detailed work would be anticipated to ensure the impacts of a yield higher than that modelled, would be mitigated appropriately.
- 1.1.4 There are regular bus services running along the A57 Liverpool Road to the south of the allocation providing access to the Regional Centre and destinations along this route include Eccles (with ongoing rail and Metrolink connections) and the Trafford Centre. There is however anecdotal evidence of issues around service reliability and issues of congestion on the route. Irlam railway station to the south of the allocation also provides connections to Trafford Park, the Regional Centre and Liverpool City Centre.

- 1.1.5 The allocation proposes to provide a wide range of housing including accommodation targeted at the elderly.
- 1.1.6 The most appropriate access points for the allocation are likely to be Astley Road and Roscoe Road. Both roads already run directly through the proposed allocation and provide junctions with the B5320 Liverpool Road.
- 1.1.7 Please note all boundaries shown were correct at time of writing, but for definitive boundary information refer to the GMSF allocation maps.

2. Justification for Allocation Selection

- 2.1.1 The allocation will provide a sustainable extension to the existing residential area of Irlam and Cadishead and the additional population will help to support existing shops and services in this area. It has been identified as being most appropriate for development due to its immediately adjacent location next to Irlam rail station, with frequent and direct services that provide easy access to the large number of employment and leisure opportunities in the Regional Centre and Trafford Park. It also benefits from its proximity to Northbank Industrial Park and Irlam Local Centre just to the south, and frequent bus services between Warrington and Manchester City Centre including intermediate destinations such as Port Salford, the Trafford Centre and Eccles to the east.
- 2.1.2 Given the allocation's proximity to Irlam rail station, the allocation was selected for inclusion within the GMSF on the basis of Criterion One (Land which has been previously developed and/or land which is well served by public transport) of the GMSF site selection criteria, as detailed further in the topic paper for this allocation.

3. Key Issues from Consultation

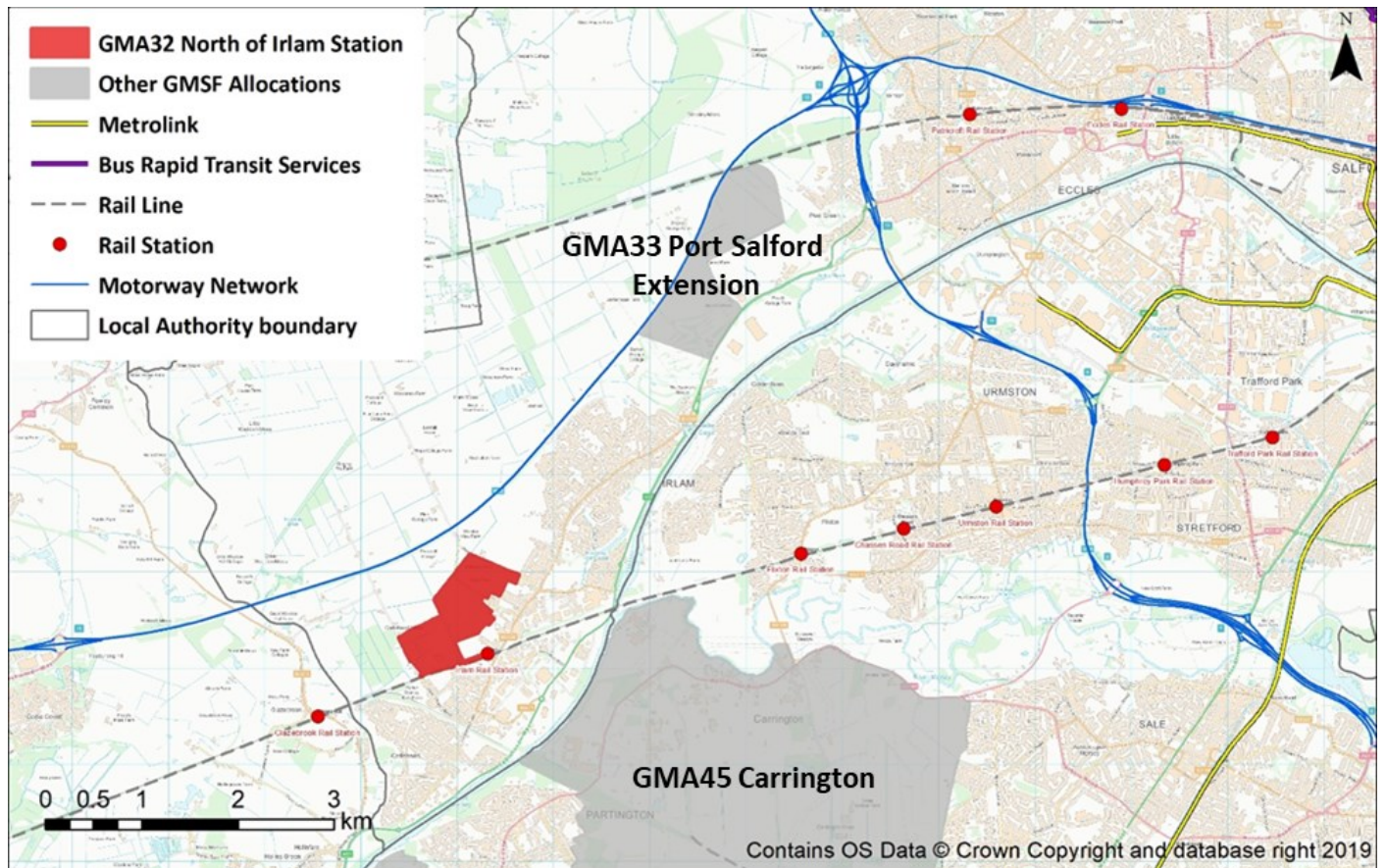
- 3.1.1 The Greater Manchester Plan for Homes, Jobs and Environment (Greater Manchester Spatial Framework – Revised Draft) consultation ran from 14th January to 18th March 2019. The comments made during this consultation relate to the following key transport themes; public transport, highways and HS2. A [full summary of all consultation responses](#) is available on the GMCA GMSF website.

- 3.1.2 A number of key issues were identified at consultation. It was suggested that there is inadequate public transport serving the area and that current bus services are overcrowded and unreliable. Concerns were expressed that Irlam and Glazebrook Stations are not well served with limited parking opportunities at Irlam station. Irlam station is also not fully accessible for disabled passengers.
- 3.1.3 A suggestion was also made regarding the potential extension of a Metrolink or enhanced rail service to Irlam from Port Salford.
- 3.1.4 In terms of the local highway conditions, there were concerns that there is also a significant traffic congestion problem in the area. Locations that were highlighted include Astley Road, (which provides access to two schools), and the toll bridge at Warburton. It was also felt that the roads proposed to be used to access the allocation are residential in nature and cannot currently accommodate two-way traffic.
- 3.1.5 The consultation identified that the area only has one road in and out and events at the AJ Bell stadium and collisions on the A57 and M62 can cause conditions on the network to deteriorate.
- 3.1.6 Furthermore, the proposed access from New Moss Road requires the crossing of a railway bridge, which is only wide enough for one vehicle at a time.

4. Existing Network Conditions and Allocation Access

4.1.1 This section summarises the existing access to the allocation. Figure 1 indicates the location of the allocation, other GMSF allocations in the neighbouring area and its context regarding access to the highway network and public transport opportunities.

Figure 1. North of Irlam Station Location



Note: All boundaries / references shown were correct at time of writing – for definitive boundary / numbering information refer to the GMSF allocation policy maps.

4.2 Existing Local Access

- 4.2.1 There are two roads that currently run through the allocation: Astley Road and Roscoe Road. These roads could provide direct access into and through the allocation, connecting Liverpool Road to Twelve Yards Road and Rindle Road. Moss Road runs along the western edge of the allocation and this becomes New Moss Road before it meets the B3520 Liverpool Road to the south. Moss Road/New Moss Road could provide an additional access point, however, unless very limited in numbers it is likely that a replacement bridge would be required. The condition of these roads deteriorates significantly moving northwards away from the edge of the existing urban area.
- 4.2.2 Astley Road is approximately 6.2m wide with a verge and footway on both sides at its connection with the B5320 Liverpool Road. Cars are observed to partly park on the footways on either side of the road. The northern footpath is 1.8m wide and the southern footpath is 2m wide. To the west of MacDonald Road, the road narrows with a footpath only provided along the westbound carriageway. Astley Road has a 30mph speed limit along its entire length.
- 4.2.3 Roscoe Road runs parallel to Astley Road to the north-east. It is part of a four arm traffic signal controlled Junction with the B5320 Liverpool Road and B5311 Fairhills Road. The B5311 provides access to the A57 Cadishead Way. The width of Roscoe Road varies between 6.3m and 6.7m with 1.4-1.9m footpaths west of Francis Road. To the west of Rose Avenue, the road narrows to a country lane.
- 4.2.4 A mix of on-carriageway cycle lanes and off-carriageway shared cycle/footways are provided along sections of the B5320 Liverpool Road linking Irlam with employment opportunities further north.
- 4.2.5 A shared footway/cycleway is also provided along the A57 Cadishead Way/ Liverpool Road.
- 4.2.6 Bus services run along the B5320 Liverpool Road with a number of bus stops provided within the vicinity of the allocation.
- 4.2.7 Irlam railway station is immediately to the south of the allocation. The furthest parts of the allocation are just over 1km in a straight line distance from this station.

4.3 Accidents and Collision Overview

4.3.1 Collision analysis has been undertaken within 1km of the allocation for the most recent five year period (2014 and 2018 inclusive). Table 1 provides a summary of the collisions by severity.

Table 1. Collision Data within 1km

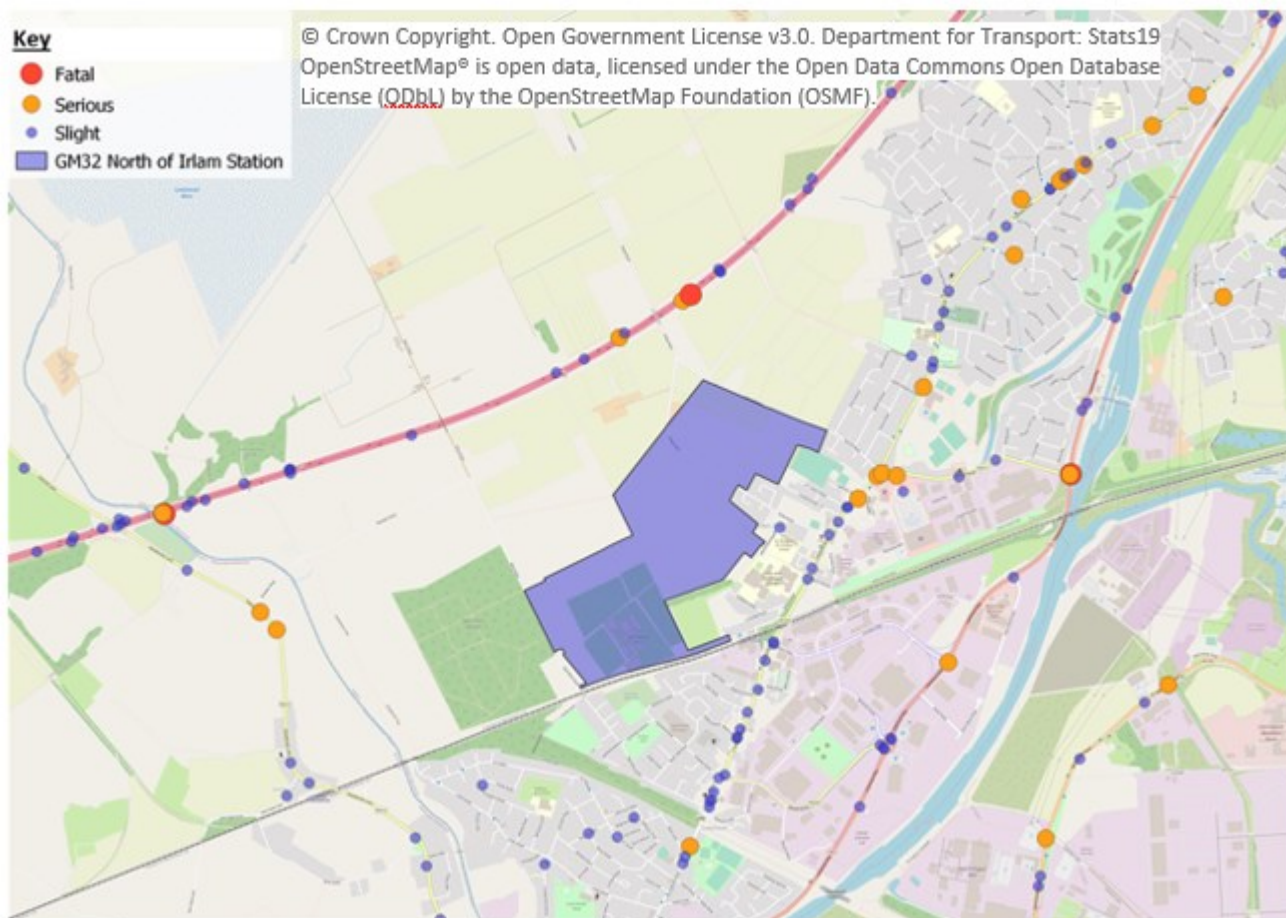
Fatal	Serious	Slight	Total
0	9	30	39

4.3.2 Between 2014 and 2018 inclusive, 39 road traffic collisions were reported along the B5320 between the B5320 Liverpool Road/ A57 Cadishead Way/ A57 Manchester Road roundabout and the B5320 Liverpool Road/ A57 Cadishead Way/ A57 Liverpool Road gyratory and the A57 Liverpool Road/ Stadium Way Junction.

4.3.3 Of the 39, none were fatal, nine were severe with the remainder slight collisions. Seven of the incidents involved pedal cyclists, one of which was serious with a further 20 collisions involving pedestrians. Three of the collisions involving pedestrians were serious.

4.3.4 Figure 2 indicates the location of collisions in the study area.

Figure 2. Collision Analysis

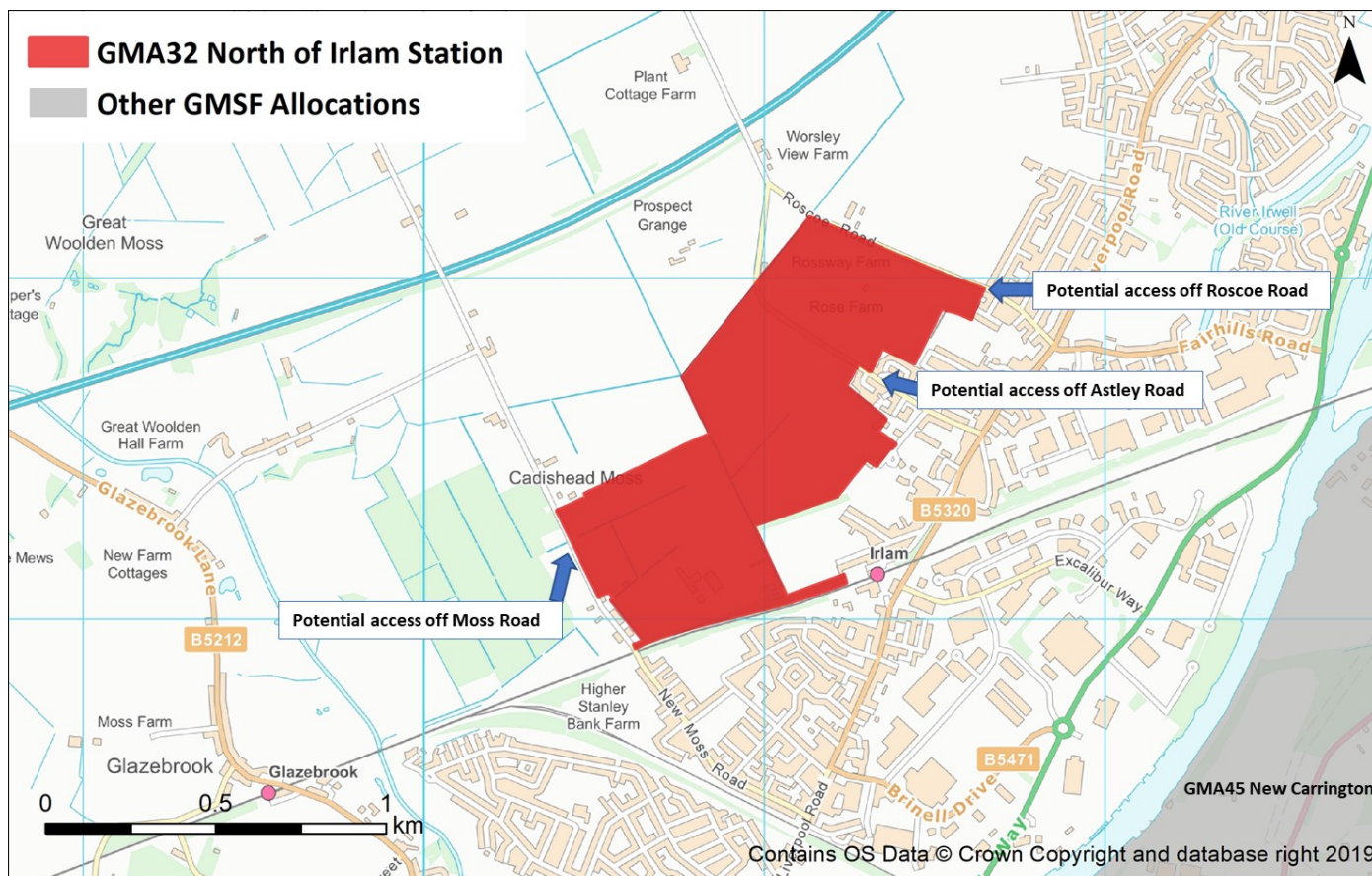


5. Proposed Access to the Allocation

- 5.1.1 Having undertaken an access appraisal, engineers have identified a number of potential access points to/ from the allocation with Roscoe Road and Astley Road as the potential main access points. New Moss Road to the west of the allocation could also be used as an additional access point, however there are limitations to the volume of traffic that could use this potential access with a narrow bridge in place over the railway line. It has been estimated that the construction of a replacement bridge could cost in the order of £1million.
- 5.1.1 Several access points have been reviewed to potentially serve the allocation primarily by using the existing road network or from extending stub ends. From a review of the different options identified, there is considered to be no one option that is suitable to act as a primary access route to carry the substantial volume of development traffic associated with the allocation. There are a range of reasons for this including Junction capacity, road width, road condition, existing on-street parking, lack of footways and constrained visibility.

- 5.1.2 Access to the allocation will therefore need to be provided from a number of access points. Following the trip generation exercise, an assessment of the required number of access junctions will need to be undertaken to confirm that they operate satisfactorily in capacity terms. It is essential that the development layout is segregated to ensure that the dispersal of traffic from the allocation occurs spreading any impact across the network. The suitability of each access point will need to be considered in isolation through individual capacity assessments. Visibility assessments at the access junctions will also need to be undertaken to ascertain their suitability to accommodate additional traffic.
- 5.1.3 The allocation access assessment has been undertaken to confirm that a practical option for access can be achieved and to develop indicative cost estimations. It is assumed that a detailed design consistent with Greater Manchester's best practice Streets for All highway design principles will be required at the more detailed planning application stage.
- 5.1.4 The design should also consider the Bee Network opportunities raised during engagement for Astley Road and Roscoe Road , or an alternative corridor that provides comparable benefits.
- 5.1.5 Astley Road and Roscoe Road to the west of the existing residential areas are narrow lanes running through the proposed allocation.
- 5.1.6 Figure 3 below indicates the potential access locations for the allocation.

Figure 3. Allocation Access Arrangements



6. Multi-modal accessibility

6.1 Overview

- 6.1.1 The development of access and active travel across the Greater Manchester Region is a central tenet of the GMSF, to be realised through the establishment and continued improvement of the cycle and walking network.
- 6.1.2 An assessment of the accessibility of the allocation, by all modes of transport, has been undertaken so as to establish if it would meet with prevailing sustainable transport policies. It highlights the opportunities for employees, residents and visitors to travel to and from the allocation by modes of travel other than in a privately owned car.
- 6.1.3 TfGM summarises public transport accessibility through [Greater Manchester Accessibility Levels \(GMAL\)](#), considering the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester’s Local Link (flexible transport service), taking into account walk access time and service availability. It does not take account of the speed or quality of services. Each point is

given an index score which is categorized into eight levels, 1 to 8, where level 8 represents a high level of accessibility and level 1 a low level of accessibility.

- 6.1.4 The land associated with North of Irlam Station fluctuates between categories 4 and 5 (February 2020). Land nearest to the B5320 Liverpool Road is categorised as a 5 with land further north and therefore further away from existing provision categorised as a 4, representing a middle and higher relative level of cumulative accessibility.
- 6.1.5 GMAL does not at present consider the permeable network of walk/ cycle links which will be introduced as part of the allocation masterplan. Access to public transport opportunities along the B5320 Liverpool Road and at Irlam Station will be

Public Transport

- 6.1.6 There are two main bus services that pass the allocation on the B5320 Liverpool Road; services 67 (Cadishead to the Regional Centre) and 100 (Warrington to the Regional Centre). Both services provide a relatively frequent level of service to and from the Regional Centre operating between 0530 and 2300 with the 67 benefitting from 4 services per hour and the 100 with 2 services per hour.
- 6.1.7 Bus stops are located on either side of the carriageway at regular intervals along the B5320 Liverpool Road.
- 6.1.8 The nearest rail station is Irlam, to the immediate south of the allocation. Two services per hour (in both directions) are provided at Irlam which connects Manchester, Warrington and Liverpool. Journey times are competitive, with access to the city centre within 25 minutes.
- 6.1.9 Irlam station has recently benefitted from investment and provides 66 vehicle spaces on site. Secure cycle parking is also provided with space for 22 bikes.
- 6.1.10 The nearest Metrolink station to the allocation is located at the Trafford Centre (8.5km) to the south of the ship canal. Five services per hour link the Trafford Centre with the Regional Centre with a journey time of approximately 30 minutes. The Trafford Park Line opened in March 2020 and can be reached using service 100 from the allocation with a journey time of approximately 27minutes.

6.1.11 To the north of the ship canal, the nearest Metrolink station to the allocation is at Eccles Interchange, approximately 9.5km to the north east. Five services per hour are provided from the Interchange to the Regional Centre via Salford Quays. Bus service 67 serves Eccles Interchange with a journey time of approximately 35 minutes. Park & ride facilities are provided at Ladywell Metrolink (600m east of Eccles Interchange) which is open 0500-0100. Over 450 spaces are provided on site (22 for disabled drivers).

Walking and Cycling

6.1.12 A definitive bridleway runs along the allocation's western boundary providing access to the wider area. There are numerous footpaths and residential streets in the surrounding area that provide access to the allocation and other amenities. Cyclists and pedestrians can make use of shared off street and on street cycle lanes provided along the B5320 Liverpool Road serving the residential area of Irlam and the railway station which benefits from cycle parking.

6.1.13 A number of schools are located along or in close proximity to the B5320 Liverpool Road as well as employment opportunities to the south of the railway line (Northbank Industrial Park) and retail opportunities to the north. In addition to cycle lanes along the B5320 Liverpool Road, the A57 Liverpool Road has a shared footway/cycleway connecting Irlam and Cadishead to the south with Peel Green, Eccles and Trafford Park to the north and north east linking with key employment areas such as Port Salford and Trafford Waters.

6.1.14 The Manchester Ship Canal severs access to the east and the Metropolitan Borough of Trafford although the introduction of Part WGIS (Western Gateway Infrastructure Scheme) over the ship canal does afford access to the east of the M60 and the Trafford Centre.

6.1.15 From the centre of the allocation, the main local destinations likely to generate walking and cycling trips to and from the allocation are; Irlam and Cadishead Academy (0.4km), St Teresa's RC Primary School (0.4km), Irlam station (0.4km), local shops on Liverpool Road (0.5km) Fairhills Industrial Estate (1.0km), Northbank Industrial Estate (1.0km) and Cadishead Primary School (1.0km).

6.2 Proposed

Public Transport

- 6.2.1 The B5320 Liverpool Road already provides regular bus services to the Regional Centre, and includes interchange at Irlam station to allow multi modal trips. An alternative route to the Regional Centre is also now provided via the Trafford Centre and the Trafford Park Line which can be accessed from the allocation via service number 100.
- 6.2.2 In order to maximise the number of residents using bus (and rail) services, good, direct walking connections will need to be provided through and from the allocation to the B5320 Liverpool Road to take advantage of opportunities to travel by bus and rail.
- 6.2.3 The existing bus provision is good covering early in the morning until late at night for those working shift patterns at employers along the A57 Liverpool Road (predominantly industrial/distribution) or those travelling farther afield for work.
- 6.2.4 There is also scope to improve service frequencies on the 67 and 100 during off peak hours to take advantage of the existing healthy demand. This would further reduce the need to travel by private car along the A57 Liverpool Road.
- 6.2.5 In addition to regular bus services, the expansion of Local Link services could be explored to connect key residential areas (such as Irlam and Cadishead) with Port Salford and Trafford Waters during out of service hours.
- 6.2.6 The GM Transport Strategy 2040 Draft Delivery Plan (2020-25) identifies that in the next five years, further options for improvements and electrification of rail lines will be explored including on the Cheshire Lines Committee (CLC) Corridor between Liverpool and Manchester via Warrington Central. Options will also be developed for Metro/tram-train services on the CLC line to Warrington utilising a city centre tunnel which would significantly improve frequency, capacity and reliability. TFGM is proposing to undertake three tram-train “pathfinder” projects on different routes in Greater Manchester to test the feasibility of this rapid transit technology in the first instance.
- 6.2.7 In the medium term there are plans to improve the capacity and frequency on the CLC line as a key commuter corridor which would directly benefit the allocation and the wider area, specifically for journeys between Liverpool, Warrington and Manchester. Aside from improvements to the service

on the CLC line, it is anticipated that new development will be facilitated along the line and a shift to public transport will be observed. Should this development come forward, it is anticipated that further improvements will be required at the station to ensure enough capacity is provided and that the station is fully accessible. Further detail can be found in the 2040 five-year Delivery Plan.

6.2.8 The Metrolink extension to the Trafford Centre has recently opened affording interchange opportunities between the A57 corridor and the interchange at Trafford Centre. There are opportunities to explore an extension of Metrolink over the ship canal to the AJ Bell Stadium and as far as Port Salford. The Greater Manchester Transport Strategy 2040 Draft Delivery Plan identifies that in the next five years, a business case will be completed for the early delivery of a Metrolink extension in this location.

Walking and Cycling

6.2.9 Walking and cycle opportunities are an important consideration, with schools and numerous employment opportunities located in close proximity of the proposed allocation.

6.2.10 The masterplan for the allocation should:

- Be designed to encourage the use of nearby public transport services, with high quality pedestrian routes and off allocation pedestrian crossings that connect all parts of the allocation to bus stops along the B5320 Liverpool Road and Irlam station;
- Incorporate attractive public rights of way through the allocation connecting with the existing network; and
- Directly link with the proposed Bee Network

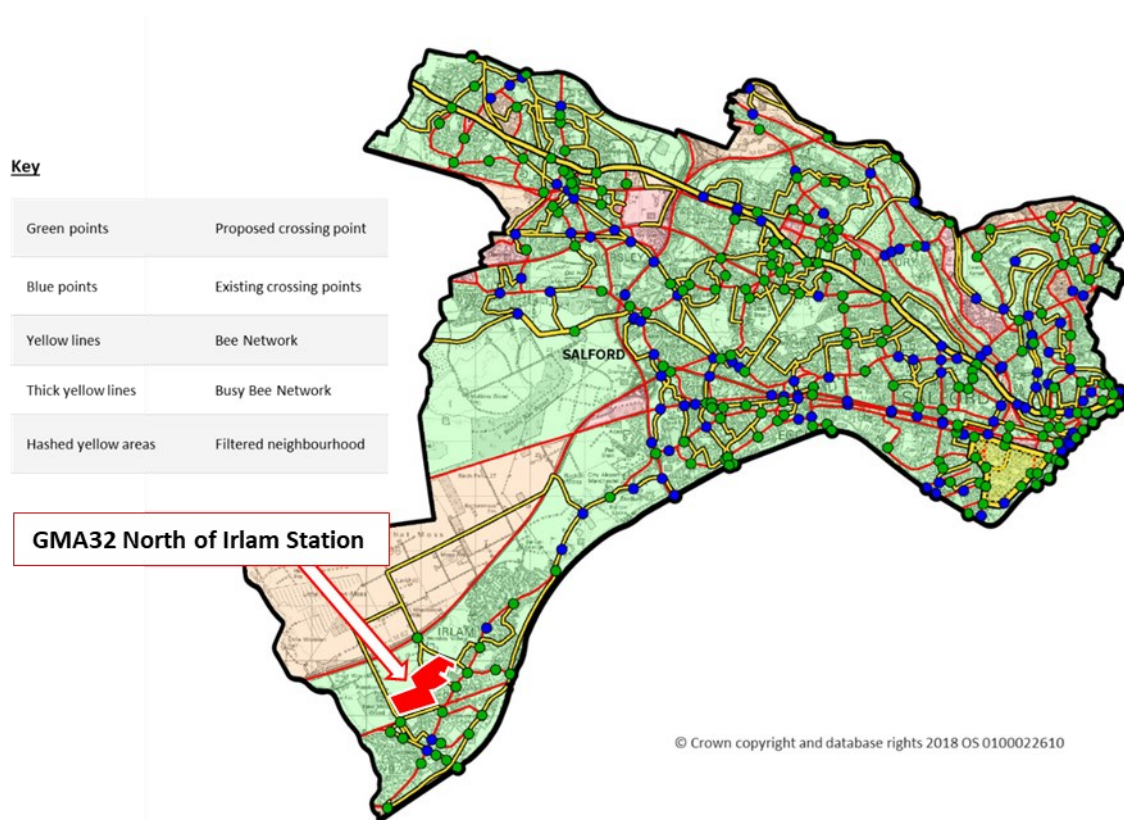
6.2.11 The allocation would be required to incorporate a high quality network of public routes through the allocation, connected into the wider pedestrian and cycling network that provides access to local facilities, public transport services, New Moss Wood and Chat Moss.

6.2.12 Greater Manchester's 'Made to Move' plans to transform Greater Manchester and provide detailed walking and cycling infrastructure to improve health, air quality and congestion across the region.

6.2.13 In Salford, public engagement on the development of the Greater Manchester Bee Network suggested the introduction of a safe walking and cycling corridor along Astley and Roscoe Roads running through the allocation and connecting in with Twelve Yards Road to the north of the M62. The Bee Network could also extend through Irlam and connect with the A57 Liverpool Road at Barton Moss which would provide improved active mode access to Port Salford, Trafford Waters and beyond. New crossing points were suggested to encourage people to make more active mode journeys, reduce severance and improve safety.

6.2.14 A scheme to reinstate the Irlam/ Cadishead viaduct is also being considered which would be open to pedestrians and cyclists. This would open up access to and from the New Carrington allocation (GMA45) for active mode users who are currently constrained by the ship canal. Further detail on walking and cycling proposals across Salford are contained within the 2040 5-Year Delivery Plan and Salford’s Local Implementation Plan.

Figure 4. Salford Bee Network Proposals, 2018



6.2.1 The main recommendations to improve cycling and walking access, and the allocations integration with public transport include:

- Segregated cycling and walking access at the proposed access points of Moss Road, Astley Road and Roscoe Road.
- Provision of direct access to the rear of Irlam Station (from the allocation) should be provided to ensure direct access to the station.
- Pedestrian and cyclist priority within the development, minimal car parking provision and sufficient secure cycle parking for all dwellings.
- Safe walking and cycling routes passing through the allocation, serving the Primary Schools and local shops along the B5320 Liverpool Road with street lighting and surface treatment
- Ensure that cycling/ walking routes link with Bee Network and are of the same standard
- Traffic management measures along New Moss Road, Astley Road and Roscoe Road
- Increase the provision of cycle parking at Irlam station
- Road layouts to incorporate modal filters (such as bollards/ planters or cul-de-sacs) in the road layout design to reduce future risk of rat running by restricting vehicles and creating low traffic neighbourhoods.

7. Parking

7.1.1 Proposed maximum car parking standards, as set out in the Publication Salford Local Plan Development Management and Designations Document (January 2020), are as follows:

- 1 dwelling - 1 space;
- 2-3 bed dwellings - 1.5 spaces per dwelling; and
- 4 bed dwelling - 2 spaces per dwelling.

7.1.2 The maximum number of car parking spaces for the allocation would be 2,800 based on the draft standards and a development of 1,400 dwellings.

7.1.3 With regards to bicycle parking, the Publication Local Plan proposes the following minimum requirements:

- 1 bed dwelling - 1 space;
- 2-3 bed dwellings - 2 spaces per dwelling; and

- 4 bed+ dwelling - 3 spaces per dwelling.

7.1.4 In accordance with these requirements a minimum of 2,800 secure cycle parking spaces would be anticipated based on the delivery of at least 2 bed dwellings.

8. Allocation Trip Generation and Distribution

- 8.1.1 The strategic modelling component of the GMSF Locality Assessments have been produced using data provided from TfGM's Variable Demand Model (GMVDM). An overview of the modelling process can be found in the GMSF Strategic Modelling Technical Note.
- 8.1.2 Future trip generation to/from the allocation (i.e. how many people and vehicles will enter or leave the site) was estimated by applying a set of GM-wide trip rates to the agreed development quantum for each site. The distribution of trips (i.e. where they are going to or coming from) was derived by selecting nearby zones with similar land use characteristics as a proxy and using the existing distribution in the model.
- 8.1.3 Four Test Cases ("GMSF Constrained" and "GMSF High Side", for both 2025 and 2040) were used to assess and mitigate the impact of the GMSF Allocations on the Greater Manchester transport network.
- 8.1.4 The 'standard' development planning approach would generally not assume that future highway trips are constrained by congestion on the highway network. Discussions between SYSTRA and TfGM pointed towards a need to also look at a 'high-side' scenario with the GMSF development scenario which does not take account of future congestion on the road network. The 'GMSF High Side' is considered to be a worst case and the modelling work has been undertaken using these 'high side' flows.
- 8.1.5 For the purposes of testing the impact of the allocation through the strategic model, a total of 1100 dwellings have been assumed to be built out by 2040. The GM transport modelling suite has a 2040 forecast year, as such it uses 2040 trajectory data as proxy for 2037 full build-out, this is not considered to materially impact on the analysis or conclusions of this report. All phasing plan information contained in this Locality Assessment is indicative only and has only been used to understand the likely intervention delivery timetable. Final trajectory information and the final allocation proposal is contained in the GMSF Allocation Topic Paper. The agreed development quantum for the North of Irlam Station allocation is shown in Table 2, while the estimated traffic generation for the high scenario is shown in Table 3.

Table 2. Development Quantum

Use	Use Sub Category	Development Quantum	
		2025	2040
Residential	Houses	80	880
Residential	Apartments	20	220
Total		100	1100

Table 3. Allocation Traffic Generation

Year	AM Peak Hour Departures	AM Peak Hour Arrivals	PM Peak Hour Departures	PM Peak Hour Arrivals
2025 GMSF Constrained	31	9	16	34
2025 GMSF High-Side	32	12	19	34
2040 GMSF Constrained	296	82	143	328
2040 GMSF High-Side	351	135	214	328

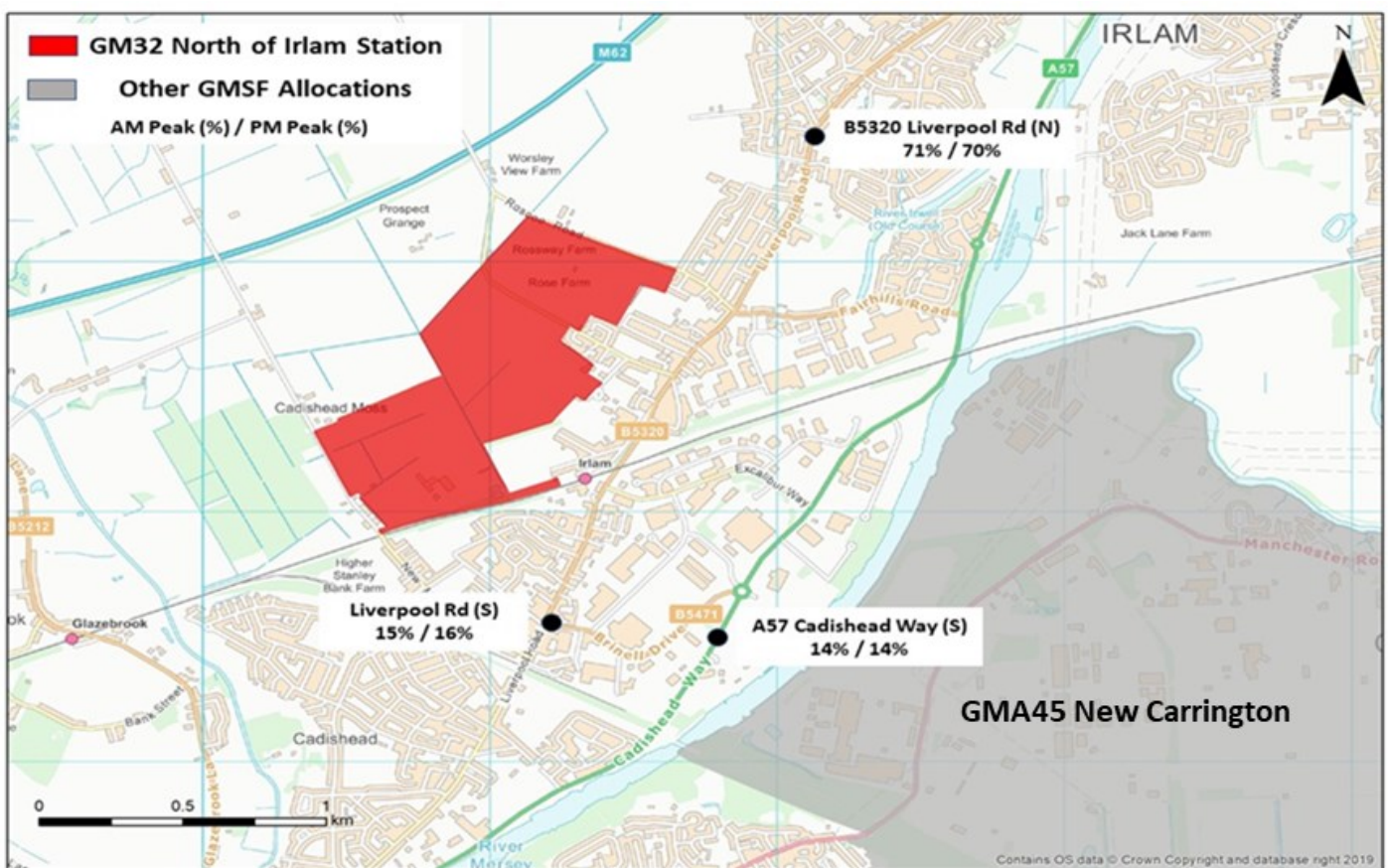
Units are in PCU (passenger car units/hr)

8.1.1 Table 4 and Figure 5 indicate the distribution of traffic on the network to and from the allocation in the peak model periods which are 0800-0900 (AM peak) and 1700-1800 (PM Peak). It can be seen that in both the AM and PM Peak hours that the majority of traffic is originating or destined for the B5320 Liverpool Road (north) and ultimately the M60 south and north. Significantly less traffic is predicted to travel to/ from the A57 Cadishead Way (south) or B5320 Liverpool Road (south).

Table 4. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)

Route	AM Peak Hour	PM Peak Hour
B5320 Liverpool Road (North)	71%	70%
A57 Cadishead Way (South)	14%	14%
B5320 Liverpool Road (South)	15%	16%

Figure 5. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)



8.1.2 Analysis has also been undertaken to assess the level of impact of traffic travelling to/ from the allocation will have on neighbouring authorities (outside GM). Table 5 provides the distribution.

Table 5. Distribution of Traffic to Neighbouring Authorities

Authority	AM Peak Hour (Share)	PM Peak Hour (Share)	AM Peak Hour (2way Flow)	PM Peak Hour (2way Flow)
Lancashire/ Cheshire	23%	21%	111	114

8.1.3 The model predicts that in excess of 20% of traffic travelling to/ from the allocation are travelling to or from outside of Greater Manchester with an origin or destination in Lancashire or Cheshire in the 2040 with GMSF scenario.

9. Current Highway Capacity Review

9.1.1 The B5320 Liverpool Road runs north-south to the east of the allocation connecting Cadishead with Barton Moss. Cadishead and Irlam are effectively bypassed by the A57 Cadishead Way with the B5320 Liverpool Road providing local access. The B5320 Liverpool Road is a single carriageway 30mph road affording access to local amenities, housing and industrial estates.

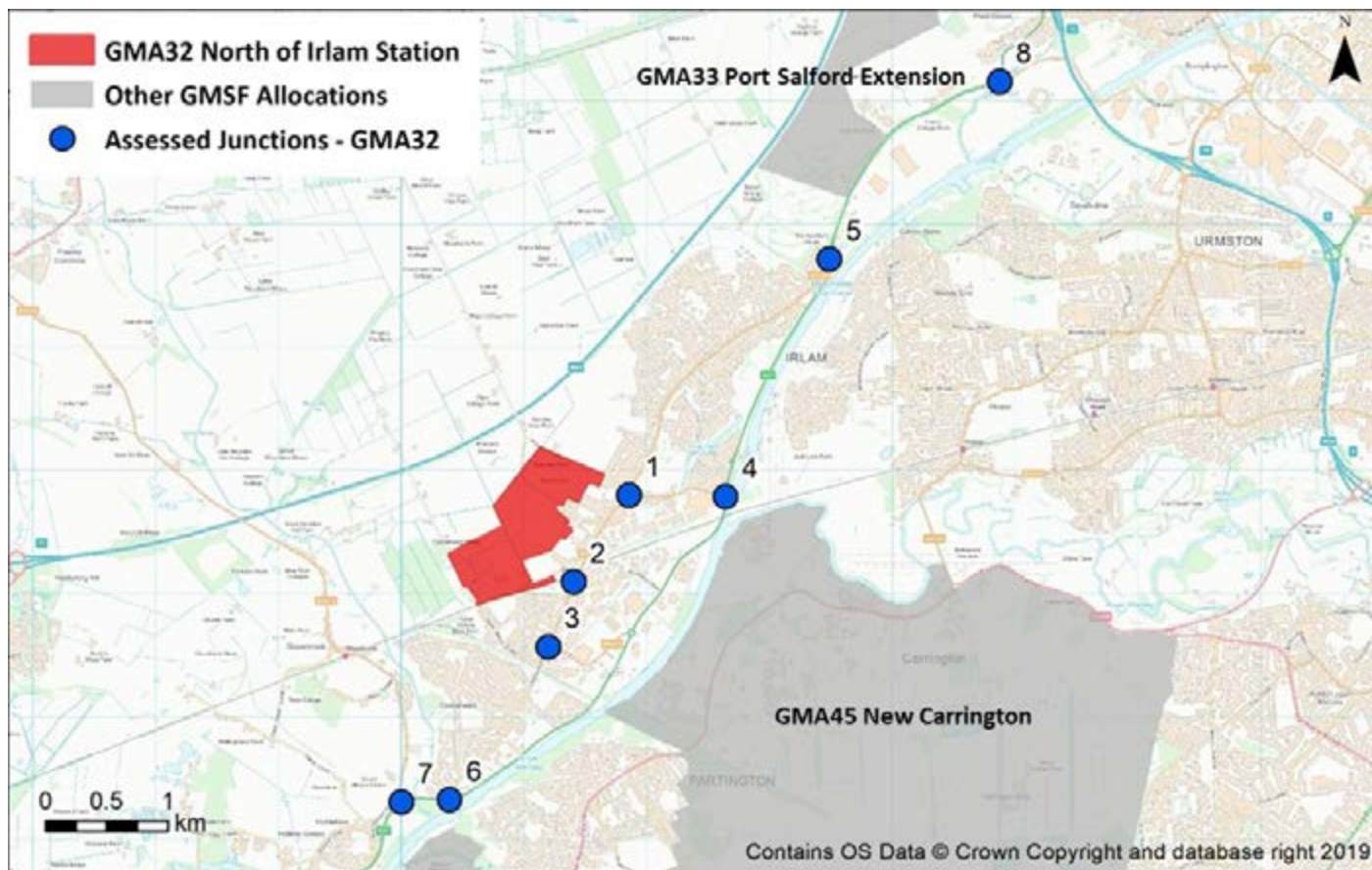
9.1.2 The A57 Cadishead Way is a single carriageway 50mph road built to a modern standard running parallel with the River Mersey, with a shared footway/ cycleway provided along the northbound carriageway.

9.1.3 Roscoe Road and New Moss Road run north to south along the allocations western and eastern boundaries. These roads become narrow country lanes northwards beyond the existing urban area. Both roads traverse the M62 from the B5320 Liverpool Road with New Moss Road terminating at a farm. New Moss Road is constrained by a railway bridge north of the Rowson Drive playing fields. Roscoe Road continues northwards affording access to a network of country lanes, farms and rural businesses.

9.1.4 Astley Road runs parallel with Roscoe Road connecting the B5320 Liverpool Road with Roscoe Road to the south of the M62. To the east of MacDonald Road, on street car parking limits the capacity of the road which is exacerbated during school pick up and drop off times as Irlam and Cadishead Academy and St Teresa’s RC Primary School are accessed via MacDonald Road.

- 9.1.5 To the west of the allocation, the M62 runs east to west between Liverpool and Manchester. The nearest direct access onto the strategic road network is provided at Junction 11 of the M60 (6km) or at Junction 21 of the M6 (8km).
- 9.1.6 Slow moving traffic is witnessed during the peak hours along the A57 Liverpool Road with traffic travelling to and from the M6 at Junction 21 and the residential areas of Cadishead and Irlam. With limited route choice available, the A57 Liverpool Road/ Cadishead Way and to a lesser extent B5320 Liverpool Road, provide access to the large industrial area east of Irlam, Port Salford and Trafford Park via Junction 11 of the M60.
- 9.1.7 A number of junctions in proximity to the allocation where additional traffic could have an impact on their operation have been identified as indicated in figure 6.
- 1. B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road
 - 2. B5320 Liverpool Road / Excalibur Way
 - 3. B5320 Liverpool Road / B5471 Brinell Drive
 - 4. A57 Cadishead Way / B5311 Fairhills Road
 - 5. B5320 Liverpool Road / A57 Liverpool Road/ A57 Cadishead Way
 - 6. A57 Manchester Road / B5320 Liverpool Road/ A57 Cadishead Way
 - 7. A57 Manchester Road / B5212 Glazebrook Lane
 - 8. A57 Liverpool Road/ Stadium Way

Figure 6. Assessed Junctions



10. Treatment of Cumulative Impacts

- 10.1.1 In order to assess the cumulative impact of GM allocations on the network, two model runs were undertaken, a 'constrained' and 'high side' assessment. The constrained forecasts could reduce the number of future highway trips due to congestion on the highway network. This constraining process is undertaken by the Greater Manchester Variable Demand Model (GMVDM).
- 10.1.2 The transport impacts of the allocation need to be considered cumulatively with other GMSF site allocations. Hence, both the constrained and high side model runs take account of traffic associated with all GMSF allocations in proximity to the allocation.
- 10.1.3 The constrained and high side model runs take account of traffic associated with all GMSF allocations. Within 4km of the North of Irlam Station allocation is Port Salford Extension which is allocated for 320,000sqm of employment. Therefore, at a local level, the transport impacts of the allocation need to be considered cumulatively with the GMSF allocation Port Salford Extension.

- 10.1.4 For reference, it should be noted that the 'full' Western Gateway Infrastructure Scheme (WGIS) has been included within both the reference case and 'with GMSF scenarios' as the likelihood of the scheme coming forward is considered to be reasonably foreseeable. The introduction of full WGIS is part of the consent for the Port Salford and Trafford Waters permissions. Further information on WGIS is contained in the uncertainty log contained within the Strategic Modelling Technical Note.
- 10.1.5 The North of Irlam Station allocation is forecast to generate approximately 480 to 545 two-way vehicle trips during the morning and evening peak hours (GMSF High side at 2040). The Port Salford Extension is expected to generate approximately 1200 to 2000 two-way vehicle trips during the morning and evening peak hours (GMSF High side 2040). The combined impact of these trips will have a more significant impact on the network than that of the allocation in isolation, hence the need to assess the cumulative impact.
- 10.1.6 In the AM peak GMSF High side 2040, 20% of traffic destined for Port Salford Extension is expected to travel from the A57 Manchester Road south along Cadishead Way with less than 1% travelling along the B5320 Liverpool Road. All other traffic travelling from GMA33 Port Salford Extension uses the A57 Liverpool Road north to and from the M60. There are anticipated to be approximately 750 origins from Port Salford Extension in the AM peak with 16% destined for the A57 Cadishead Way south travelling against the tide of traffic.
- 10.1.7 In the PM peak at 2040 (GMSF High side), the Port Salford Extension allocation is expected to generate 400 arrivals, of which, 13% travel from the south with traffic split between the B5320 Liverpool Road and the A57 Cadishead Way. Departures from Port Salford Extension are anticipated to be in the region of 815 trips, of which 17% use the A57 Liverpool Road south with less than 1% using the B5320 Liverpool Road. The remaining 83% use the A57 Liverpool Road north to access the M60 and beyond.

11. Allocation Access Assessment

- 11.1.1 Vehicular access to the North of Irlam station allocation would be as per the access strategy set out in Chapter 5.

11.1.2 Allocation access arrangements delivered should be consistent with Greater Manchester's emerging best practice 'Streets for All' highway design principles that effectively balances the needs of 'movement' and 'place' . It is expected that these proposals would be refined in further detail at a detailed planning application stage in accordance with further master planning conducted for the allocation.

12. Impact of Allocation Before Mitigation on the Local Road Network

12.1.1 In order to understand a worst case impact of the GMSF, the 'high side' runs from the GMVDM were used to derive with GMSF development flows for 2040. These flows were then entered into Junction based models for the junctions identified in Section 9. Flows from a 2040 reference case scenario (including local authority current land supply with proposed GMSF allocations) were also extracted to provide a comparison between the operation of those junctions in the 2040 reference case and the 2040 with GMSF development scenarios.

12.1.2 The 'with GMSF' scenario has been assessed against a Reference Case which assumes background growth and includes the housing and employment commitments from the districts. It has been agreed for the purposes of GMSF that where mitigation is required, it should mitigate the impacts back to a reference case scenario. It should be noted that mitigating back to this level of impact may not mean that the Junction operates within capacity.

12.1.3 These assessments were then used to identify the junctions where there was considered to be a substantial impact, relative to the operation of the Junction in the 2040 reference case, and hence where mitigation was considered to be required in order to bring GMSF sites forward.

12.1.4 This Section looks at the impact on the network at the junctions highlighted in Section 9. Signalised junctions were assessed in detail using industry-standard modelling software LINSIG version 3 Traffic signal information was obtained from TfGM Urban Traffic Control (UTC). Junction 9 software was used to assess priority and roundabout junctions.

12.1.5 For reference, a figure of between 85% and 99% illustrates that the Junction is nearing its operational capacity, and a figure of 100% or over illustrates that flows exceed the operational capacity at the Junction and increased vehicle queuing and delay are likely to occur.

12.1.6 The following table summarises the results of the individual junctions models assessing the junctions on the Local Road Network (LRN). The table also provides an indication of the traffic generated through each of the junctions in the GMSF High scenario at 2040.

Table 6. Results of Local Junction Capacity Analysis Before Mitigation

Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
1.B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road	78%	96%	133%	130%	437	329
2.B5320 Liverpool Road / Excalibur Way	61%	71%	57%	76%	132	162
3.B5320 Liverpool Road / B5471 Brinell Drive	108%	112%	106%	140%	74	86
4.A57 Cadishead Way / B5311 Fairhills Road	187%	231%	201%	547%	12	18
5.B5320 Liverpool Road / A57 Liverpool Road/ A57 Cadishead Way	93%	96%	98%	100%	339	376
6.A57 Manchester Road / B5320 Liverpool Road/ A57 Cadishead Way (Cadishead Way Circulatory)	67%	66%	69%	78%	140	161
7.A57 Manchester Road / B5212 Glazebrook Lane	71%	76%	77%	80%	140	161
8. A57 Liverpool Road/ Stadium Way	88%	90%	121%	109%	333	375

12.1.1 As shown in the table above, two of the junctions are operating above capacity in both the reference case and with GMSF High scenario at 2040 - B5320 Liverpool Road / B5471 Brinell Drive and A57 Cadishead Way / B5311 Fairhills Road.

12.1.2 The B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road and A57 Liverpool Road/ Stadium Way junctions are observed to operate within capacity at 2040 in the reference case, however, are over capacity in the 'with GMSF' scenario.

12.1.3 The table also highlights junctions where the impact between the reference case and 'with GMSF' scenario is considered to be negligible and as a consequence, where no mitigation has been considered. Highway mitigation schemes have not been considered at the following junctions;

- 2. B5320 Liverpool Road / Excalibur Way
- 5. B5320 Liverpool Road / A57 Liverpool Road/ A57 Cadishead Way
- 6. A57 Manchester Road / B5320 Liverpool Road/ A57 Cadishead Way (Cadishead Way Circulatory)
- 7. A57 Manchester Road / B5212 Glazebrook Lane

13. Transport Interventions Tested on the Local Road Network

13.1.1 The proposed mitigation schemes which are set out in this Section are designed to mitigate the impact of GMSF only, the schemes are not designed to solve pre-existing congestion on the local network.

13.1.2 Also it should be noted that these interventions are not expected to be the definitive solution but rather to demonstrate that a solution is possible at the location. The details of any mitigation schemes will need to be developed as part of the detailed planning process.

13.1.3 The following table provides a summary of the schemes proposed to mitigate the impact of GMSF at the junctions which have been identified through the Junction modelling process.

13.1.4 Table 7 below provides a summary of the junctions relevant to North of Irlam Station and the approach to mitigation.

Table 7. Approach to Mitigation

No.	Junction	Mitigation Approach
1	B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road	Mitigation required. Due to constrained highway envelope, further testing undertaken
2	B5320 Liverpool Road / Excalibur Way	Reference and With GMSF results comparable – no mitigation proposed
3	B5320 Liverpool Road / B5471 Brinell Drive	Mitigation investigated due to deterioration from reference case to GMSF. Proposed mitigation is to re-phase signals to call Prospect Road every other cycle. Junction performance is improved when Prospect Road is called every other cycle but queues still remain in the with GMSF high 2040 PM peak.
4	A57 Cadishead Way / B5311 Fairhills Road	Mitigation investigated due to deterioration from reference case to GMSF. Junction performance is improved when signalised (including footway widening & pedestrian crossings) but queues are still substantial.
5	B5320 Liverpool Road / A57 Liverpool Road/ A57 Cadishead Way	Reference and With GMSF results comparable – no mitigation proposed
6	A57 Manchester Road / B5320 Liverpool Road/ A57 Cadishead Way (Cadishead Way Circulatory)	Reference and With GMSF results comparable – no mitigation proposed
7	A57 Manchester Road / B5212 Glazebrook Lane	Reference and With GMSF results comparable – no mitigation proposed
8	A57 Liverpool Road/ Stadium Way	Mitigation required. Substantial junction already in place – Further investigation required to establish scheme capable of accommodating cumulative GMSF traffic, in line with the requirements of Port Salford Extension.

1. B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road

- 13.1.5 The B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction is a signalised Junction operating at capacity in the PM reference case. Analysis of the high 'with GMSF' scenario shows that by 2040 the Junction operates significantly above capacity, with a considerable number of trips passing through the Junction in both the AM and PM peak periods.
- 13.1.6 437 no of trips travel through the Junction in the AM peak destined for or originating at North of Irlam Station with a further 329 in the PM peak period.
- 13.1.7 The coarse zoning configuration of the strategic model leads to an unrealistic distribution of traffic through the Junction which has been examined with further information presented in section 14.

2. B5320 Liverpool Road / Excalibur Way

- 13.1.8 The B5320 Liverpool Road / Excalibur Way Junction is a signalised Junction operating within capacity in the reference case and is broadly comparable in the 'with GMSF' scenarios. As a consequence, no mitigation has been investigated as the Junction still operates within capacity at 2040.

3. B5320 Liverpool Road / B5471 Brinell Drive

- 13.1.9 The B5320 Liverpool Road/ B5471 Brinell Drive Junction is observed to operate above capacity in both the reference case and with GMSF High scenarios.
- 13.1.10 The GMVDM predicts that 74 trips associated with North of Irlam Station will travel through the Junction in the AM peak with a further 86 in the PM peak.
- 13.1.11 As a consequence of this increase, mitigation has been explored at the Junction and further information is provided in section 14.

4. A57 Cadishead Way / B5311 Fairhills Road

- 13.1.12 The A57 Cadishead Way / B5311 Fairhills Road Junction is a priority Junction operating significantly above capacity in the reference case.

13.1.13 With the addition of GMSF traffic, the situation deteriorates with a further 12 trips travelling through the Junction in the AM peak and 18 in the PM peak (from North of Irlam Station). In addition, 380 no of trips are observed to travel through the Junction to or from GMA33 Port Salford Extension in the AM peak and 158 in the PM Peak.

13.1.14 Mitigation has been investigated and further information is provided in section 14.

5. B5320 Liverpool Road / A57 Liverpool Road/ A57 Cadishead Way

13.1.15 The GMSF high scenario is broadly comparable with the reference case with fairly minimal increases in RFC considering the quantum of development being proposed in the local area (from North of Irlam Station and GMA33 Port Salford Extension).

13.1.16 339 no of trips travel through the Junction in the AM peak destined for or originating at North of Irlam Station with a further 376 in the PM peak period.

Based on the modelling results, no mitigation is proposed at the Junction due to fairly minor increases in RFC.

6. A57 Manchester Road / B5320 Liverpool Road/ A57 Cadishead Way (Cadishead Way Circulatory)

13.1.17 The A57 Manchester Road / B5320 Liverpool Road/ A57 Cadishead Way Junction is a roundabout operating within capacity in the reference case and is broadly comparable in the GMSF high scenario. As a consequence, no mitigation has been investigated as the Junction still operates within capacity at 2040.

7. A57 Manchester Road / B5212 Glazebrook Lane

13.1.18 The A57 Cadishead Way / Glazebrook Lane Junction is a signalised Junction operating within capacity in the reference case and is broadly comparable in the GMSF high scenario. As a consequence, no mitigation has been investigated as the Junction still operates within capacity at 2040.

8. A57 Liverpool Road/ Stadium Way

13.1.19 A considerable deterioration is observed at the A57/ Stadium Way Junction between the reference case and with GMSF High scenario. The AM peak rises from 88% in the reference case to 121% in the GMSF High scenario. In the PM peak, an increase from 90% to 109% is observed.

13.1.20 From North of Irlam Station, strategic modelling suggests 333 vehicles could pass through the junction in the AM peak to/from the allocation with a further 375 in the PM peak. The modelling indicates however that this is a relatively small contribution compared to GMA33 Port Salford Extension where approximately 1630 vehicles could travel through the Junction in the AM peak and a further 1040 in the PM peak, and therefore an intervention at this location is not considered necessary for North of Irlam Station to proceed.

13.1.21 The existing junction is substantial and has recently been constructed as an element of Part-WGIS in order to accommodate additional traffic generated by the permitted Port Salford development. Mitigation has been explored at the Junction and whilst there is land surrounding the Junction, it is anticipated a substantial alteration would be required to accommodate the additional development traffic. It is anticipated that further work completed through the delivery of GMA33 Port Salford Extension will consider these impacts appropriately, addressing the need for specific infrastructure in this location.

14. Impact of interventions on the Local Road Network

14.1.1 In order to understand whether the mitigation developed for the allocation (and all other allocations within the GMSF) is sufficient to mitigate the worst case impacts of the GMSF identified in Section 12, a second run of the GMVDM with all identified mitigation included, was undertaken. Due to the scale of the models involved, a flow difference plot between the with mitigation and without mitigation model runs was used to identify where there was a significant difference in model flows which may impact on the operation of Junction models. A flow difference plot simply compares two different scenarios, in this instance, with and without mitigation, highlighting areas where a difference in flows was apparent. Where a significant change was observed, the Junction models were rerun to check that the mitigation identified in Section 13 was still sufficient to mitigate allocation impacts and that all other in scope junctions continued to operate satisfactorily in light of any reassignment due to mitigation schemes.

14.1.1 Table 8 below provides a comparison between the operation of the Junction in the 2040 reference case and the 2040 'high side' with mitigation scenarios. The table shows a comparison between the ratio of flow to capacity on the worst case arm at each Junction. A detailed summary of the local Junction modelling can be made available on request.

Table 8. Local Junction Capacity Analysis After Mitigation – Year 2040

No.	Junction	Ref Case AM	Ref Case PM	GMSF High AM (No Mit)	GMSF High PM (No Mit)	GMSF High AM (With Mit)	GMSF High PM (With Mit)
1.	B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road	78%	96%	133%	130%	91%	116%
3.	B5320 Liverpool Road / B5471 Brinell Drive	108%	112%	106%	140%	94%	102%
4.	A57 Cadishead Way / B5311 Fairhills Road	187%	231%	201%	547%	108%	103%

14.1.2 It can be seen from table 8 that the situation in the 'with mitigation' GMSF High side scenario (with mitigation) in both the AM and PM peaks improves to a level which is an improvement on the reference case at the B5320 Liverpool Road / B5471 Brinell Drive and A57 Cadishead Way / B5311 Fairhills Road junctions. Parity is not achieved at the B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction as a high proportion of traffic still uses the B5320 Liverpool Road to travel north, regardless of point of entry on to the B5320 Liverpool Road.

- 14.1.3 As discussed previously, the coarse zoning system in the strategic model was leading to an unrealistic distribution of traffic on the local network with all traffic entering and leaving the allocation via the B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction.
- 14.1.4 A number of potential access/ egress points to and from the allocation are likely to be required and in order to better represent the distribution of traffic, a manual exercise was undertaken to distribute flows via multiple access/ egress points.
- 14.1.5 The primary access/ egress points and distribution considered for this exercise were Roscoe Road (40%), Astley Road (40%) and Moss Road (20%). Traffic on the network was subsequently adjusted to take account of these revised distributions to test the impact on the three junctions discussed in section 13 as requiring mitigation.
- 14.1.6 It should be noted that the distributions applied were for testing purposes only and could be different as and when a masterplan for the allocation is developed. This test is merely to demonstrate the impact of distributing traffic across several accesses in order to better assess the impact at key junctions on the network where limitations in the strategic model were observed.
- 14.1.7 Re-phasing the signals is shown to work in the Junction models, however, TfGM Urban Traffic Control (UTC) have raised concerns on safety grounds over the impact at the B5320 Liverpool Road / B5471 Brinell Drive Junction as Prospect Road would only be called every other cycle. Further mitigation has been explored at the Junction, however, the Junction is constrained with limited opportunity for reconfiguration.
- 14.1.8 Further tests were undertaken whereby the maximum intergreen (the clearance time between a green period terminating on the pedestrian phase and the start of a green signal traffic phase) on the pedestrian crossings were reduced from 15 to 10 seconds at the B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction. The modelling indicated that the situation at the Junction further improved in the AM and PM peaks. These signal changes are generic changes based on the available information and more detailed work would be required based on controller records to justify the reduction in intergreens at the Junction.
- 14.1.9 In addition to the test where intergreens were reduced, an assessment was also undertaken returning the Roscoe Road arm of the B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction to 2 way operation. The results of the test are presented below in Table 9.

Table 9. Local Junction Capacity Analysis After Mitigation – Year 2040 (2way Roscoe Road)

No.	Junction	Ref Case AM	Ref Case PM	GMSF High AM (No Mitigation)	GMSF High PM (No Mitigation)	GMSF High AM (With Mitigation)	GMSF High PM (With Mitigation)
1.	B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road	78%	96%	133%	130%	82%	107%

14.1.10 It can be seen that returning the Roscoe Road arm of the Junction to 2 way operation improves the situation at the Junction in modelling terms. Reverting the arm back to 2 way operation would negate the need for traffic to rat run through Rose Avenue, Baines Avenue and Francis Road to access the B5320 Liverpool Road. There is considered to be enough room at the Junction to revert the arm back to two-way operation, however, further assessment will be required as the Masterplan for the allocation emerges in order to find the most satisfactory junction operation.

14.1.11 It is understood that the allocation policy requirements are to include the need for a masterplan and robust delivery strategy which, amongst other things will consider issues relating to transport. The quantum and phasing of development for the allocation could be adjusted through this delivery strategy to ensure that the impact on the network is minimised. Recognising the limitations of strategic modelling at this location, further detailed work would be anticipated to deliver these, or comparable network improvements within the vicinity, to mitigate impacts within this location.

15. Impact and mitigation on Strategic Road Network

15.1 Overview

- 15.1.1 This chapter covers those impacts where traffic generated by the GMSF allocations meets the Strategic Road Network (SRN). Junctions at the interface between the Local Road Network (LRN) and the Strategic Road Network (SRN) have been assessed using a similar approach to that described in the preceding chapters. Wider issues relating to the SRN mainline are being assessed separately as described below.
- 15.1.2 SYSTRA is currently consulting with Highways England on behalf of TfGM and the Combined Authority in relation to the wider impacts of the GMSF allocations on the Strategic Road Network (SRN). This consultation is ongoing and it is expected that it will allow Highways England to gain a strategic understanding of where there is an interaction between network stress points and GMSF allocation demand which will facilitate further discussion and transfer of information between TfGM and Highways England (yet to be defined) in reaching agreement and/or common ground relating to the acceptability of GMSF allocations in advance of Examination in Public (EiP).
- 15.1.3 Junction 11 of the M60 is the main Junction that traffic originating at or destined for allocation North of Irlam would use. The following table provides a summary of the flows & RFC's.

Table 10. Results of Local Junction Capacity Analysis Before Mitigation

Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
M60 Junction 11	134.6%	113.6%	144.6%	127.4%	333	375

M60 Junction 11

- 15.1.4 The local Junction modelling work indicates that at 2040, M60 Junction (inclusive of full Western Gateway Infrastructure Scheme - WGIS) is operating above its capacity in both the AM and PM peaks in the reference case and ‘With GMSF’ High side. The addition of GMSF traffic (which isn’t solely attributable to North of Irlam Station) shows conditions deteriorate further.
- 15.1.5 Traffic originating at or destined for North of Irlam Station accounts for 333 trips through the Junction in the AM peak and 375 in the PM peak period at 2040 (approximately 20% of GMSF traffic) . A further 1,347 trips tin the AM peak and 961 in the PM peak period (at 2040) are associated with GMA33 Port Salford Extension.
- 15.1.6 Further discussions will be held with Highways England to clarify the impact of development traffic at Junction 11 of the M60. The Junction is severely constrained with limited available land to consider alternative mitigation above and beyond full WGIS. These discussions will focus on the impact of traffic from across GM and not solely from North of Irlam Station as it’s likely that mitigation on a strategic scale will be required at this location.
- 15.1.7 As indicated in section 8, 111 trips in the AM and 114 trips in the PM (2 way) are expected to travel to/ from the Warrington Council area via the M6 at Junction 21. This Junction is at the periphery of the model and no further details on routing are available.

16. Final list of interventions

- 16.1.1 This section of the report reports the final list of interventions required to enable the allocation to come forward.

Mitigation	Description
Site Access	
Primary access to the allocation likely to be required from Astley Road and Roscoe Road with secondary/ emergency access also required.	Multiple accesses required to afford access/ egress to and from the allocation due to constraints (limited road widths/ on street parking, lack of footways etc).
Supporting Strategic Interventions	
CLC line capacity improvements	Improvements to heavy rail services/electrification due for Strategic Outline Business Case (SOBC) development.
Tram-train services on CLC line	Rail improvements - Cheshire Lines Committee (CLC) line – longer term mitigation proposed to deliver metro-style services penetrating city centre via metro tunnel.
Necessary Local Mitigations	
B5320 Liverpool Road / B5471 Brinell Drive Junction Improvement	Improvement at B5320 Liverpool Road / B5471 Brinell Drive Junction, subject to detailed analysis through Transport Assessment.
A57 Cadishead Way / B5311 Fairhills Road Junction Improvement	Improvement at A57 Cadishead Way / B5311 Fairhills Road Junction. Strategic modelling indicates that signalisation could be an effective mitigation, subject to detailed analysis through Transport Assessment.
B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction Improvement	B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road. Further work will be required to identify the most suitable form of junction improvement. Strategic modelling indicates potential to deliver junction improvements here or comparable highway network improvements within the vicinity, subject to detailed analysis through Transport Assessment.
Bridge replacement	To afford access via Moss Lane. Should access be provided via Moss Lane, it is anticipated that the existing bridge will need to be replaced.
Station Access - Active Travel Improvements	Pedestrian/ cycle access from station to allocation.

Mitigation	Description
Irlam Bee Network Links	Pedestrian & cycling improvements to create connections and compliment surrounding Bee Network proposals to improve access to local facilities.
Cycle parking at Irlam station	To promote cycling from the allocation to the station through increased provision.
Supporting Local Mitigations	
A57 Liverpool Road/ Stadium Way Junction improvement	Improvement at A57 Liverpool Road/ Stadium Way Junction, subject to detailed analysis through Transport Assessment.
Improvements to bus services	Expansion of the Local Link services could be explored to connect key residential areas with Port Salford during off-peak hours. Increasing bus frequency to reduce overcrowding issues during peak periods. Subject to delivery of allocation and services serving Port Salford extension.
Cheshire Line Connection / Trafford Green Way – Walking & Cycling Improvements	Cadishead viaduct reinstated for active mode travel between the Metropolitan Boroughs of Salford and Trafford, providing Bee Network connections across the Manchester Ship Canal.
Traffic calming & parking management	Assess further traffic calming opportunities on B5320 Liverpool Road and potential for park & ride upgrade at Irlam station.
SRN Interventions	
M60 Junction 11	Further discussions to be held with Highways England following parallel impact study.

16.2 Traffic Reduction Strategies

16.2.1 The analysis underpinning this Locality Assessment has been undertaken using a standard robust highway modelling approach including reference to predicted future development trip levels based on the historical operation of major employment sites, particularly with respect to traditional AM & PM peak ‘rush hour’ periods.

16.2.2 There is an increasingly compelling argument that the use of such peak hour demand estimates is overly robust for long term forecasting, particularly if applied wholesale across new strategic development areas. 'Peak spreading' is already a well-recognised feature of recent general traffic growth across Greater Manchester (i.e. only limited traffic growth taking place during critical 'rush hour' periods), with additional travel demand tending to be concentrated on more 'off-peak' periods, when there is spare transport network capacity to accommodate such movements. Furthermore, increases in modern communications technology have increased the potential for home-working / tele-working and reduced the need for business travel and meetings. The notion of '9 to 5' style working is now viewed as an out-dated concept, with staff valuing the benefits of flexible working.

17. Strategic Context – GM Transport Strategy Interventions

- 17.1.1 TfGM is leading a study to evaluate the feasibility of potential new Rail and Metrolink station and could lead to a small number of stations being delivered, and could include Little Hulton and Western Gateway in Salford.
- 17.1.2 Over the next 5 years, the Castlefield rail corridor will see capacity expansion which will accommodate forecast levels of employment growth in the Regional Centre. Whilst not adjacent to the allocation, it will make journeys in and round the Regional centre more efficient.
- 17.1.3 The Greater Manchester Transport Strategy 2040 in its Vision for Bus identifies key areas for improvement which include achieving network integration with regards to routing, timing, interchange and multi-modal travel. Passengers will be offered an improved customer experience through making the network more navigable and incorporating a simplified fares system that offers value for money.
- 17.1.4 Longer term solutions consist of a city centre metro tunnel to facilitate improved rapid transit throughout Greater Manchester and improved services on shorter-distance suburban lines by conversion to metro/ tram train operation.

- 17.1.5 Highways England is also addressing capacity issues on the Strategic Road Network as part of the North West Quadrant Study. The study is currently being undertaken and it is anticipated that over the next five years, it will be complete and potentially deliver emerging early interventions such as Junction improvements on the M60 and complementary improvements on the local transport network.
- 17.1.6 Greater Manchester also has ambitious plans to develop the Bee Network - the UK's largest cycling and walking network as a key element to delivering on the "Right Mix" vision, and the Combined Authority has allocated £160m between 2018-2022 to fund the first phase of the Bee Network. The network has at its core a programme of new and upgraded pedestrian and cycling crossing points of major roads and other sources of severance, connected by a network of signed cycling and walking routes on existing quiet streets. These will be complemented by a number of routes on busier roads where Dutch style cycle lanes protected from motor traffic will be constructed.
- 17.1.7 The latest version of Greater Manchester's 2040 Delivery Plan sets out a comprehensive programme of work across all modes and in all Districts which are all focused on ensuring the realisation of the 'Right Mix' vision. Many of these interventions support the GMSF Allocations directly, whilst others are intended to provide alternatives to private car travel more generally. The schemes demonstrate a clear plan for delivering strategic transport interventions for the first five years of the GMSF plan period, whilst also laying the foundations for longer term investment in sustainable transport across the length of the plan period.
- 17.1.8 For further information see the latest version of the 2040 Delivery Plan.

18. Phasing Plan

- 18.1.1 The initial locality assessments were based on information on allocations consolidated by TfGM based on inputs from each of the Districts. This initial exercise focused on the development quanta to be delivered at the end of the modelling period, i.e.. by 2040.
- 18.1.2 During the course of the locality assessment work in late 2019 / early 2020, the Districts provided input on their expected phasing of the allocations focusing on the milestone years of 2025 and 2040. The expected 2025 development quanta were tested along with those for 2040 to assess their deliverability in terms of transport network capacity. In some cases the development phasing

was amended by the Districts as a result of the technical analysis undertaken. Different yields and phasing options have been considered during the process having regard to multiple ownership and ground conditions issues on this allocation. There have been adjustments to the expected phasing since early 2020, however, these have not been taken account of in the transport and modelling work.

18.1.3 At 2025, only 100 homes have been considered within the modelling work undertaken, generating 40 and 50 2 way trips in the AM and PM peaks respectively. It is understood that the allocation policy requirements for North of Irlam are to include the need for a masterplan and robust delivery strategy which, amongst other things will consider issues relating to transport. The quantum and phasing of development for the allocation could be adjusted through this delivery strategy to ensure that the impact on the network is minimised. .

18.1.4 The data used for the transport modelling (4th round) is set out in table 11. An indication of when mitigation is likely to be required is provided in Table 12. While the GM transport modelling suite has a 2040 forecast year, it uses 2040 trajectory data as proxy for 2037 full build-out, this is not considered to materially impact on the analysis.

Table 11. Modelled and Allocation Policy Phasing

Modelled Phasing	2025	2040
Houses (Units)	80	880
Apartments (Units)	20	220
Total	100	1100

Table 12. Indicative intervention delivery timetable

Mitigation	2020 2025	2025 2030	2030 2037
Allocation Access			
Provision of access	✓		
Supporting Strategic Interventions			
CLC line capacity improvements		✓	
Tram-train services on CLC line			✓
Necessary Local Mitigations			
B5320 Liverpool Road / B5471 Brinell Drive Junction - junction improvement	✓		
A57 Cadishead Way / B5311 Fairhills Road Junction - junction improvement	✓		
B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road - junction improvement		✓	
Bridge replacement (should Moss Road be considered a suitable means of access/ egress)		✓	
Station Access - Active Travel Improvements		✓	
Irlam Bee Network Links		✓	
Cycle parking at Irlam station		✓	
Supporting Local Mitigations			
A57 Liverpool Road/ Stadium Way Junction improvement		✓	
Improvements to bus services		✓	
Cheshire Line Connection/ Trafford Greenway - Irlam/ Cadishead viaduct walking & cycling improvements		✓	
Traffic management & parking management	✓		

Mitigation	2020 2025	2025 2030	2030 2037
SRN Interventions			
M60 Junction 11		✓	
North West Quadrant Study (NWQS)		✓	

18.1.5 It is anticipated the higher yield would need to be reflected in any further detailed modelling and the masterplan/ delivery strategy proposed for the site. It is advisable that following each phase of development, network conditions are assessed to ensure that the next phase is deliverable and does not adversely affect the local highway network in and around Irlam.

19. Summary & Conclusion

19.1.1 The North of Irlam Station allocation was tested on 1100 dwellings and is allocated to comprise up to of 1400 dwellings over the plan period. It is anticipated the higher yield would need to be reflected in any further detailed modelling and the masterplan/ delivery strategy proposed for the site. The allocation is located between the M62 and the Manchester-Liverpool railway line, to the north of Irlam station. The allocation is bound to the south by the railway and the north by the M62. The allocation is located between Moss Road in the west and Roscoe Road to the east. For the purposes of testing the impact of the allocation through the strategic model, a total of 1100 dwellings have been assumed to be built out by 2040. The GM transport modelling suite has a 2040 forecast year, as such it uses 2040 trajectory data as proxy for 2037 full build-out, this is not considered to materially impact on the analysis or conclusions of this report.

19.1.2 The allocation is well served in terms of public transport opportunities with regular bus services between Irlam and the Regional Centre and Irlam station located immediately south of the allocation boundary.

19.1.3 The allocation proposes to provide a wide range of housing including accommodation targeted at the elderly. It will also provide at least 25% of the dwellings as affordable housing.

19.1.4 The most appropriate access points for the allocation are Roscoe Road and Astley Road. Both links already run directly through the proposed allocation and provide junctions with the B5320 Liverpool Road. As a Masterplan for the allocation is developed, further access points are likely to

be identified and further work will be required to assess their suitability. It is anticipated that restrictions will be placed on the number of homes for different land parcels to ensure that rat running through existing residential streets is minimised and traffic uses the most appropriate accesses.

- 19.1.5 Modelling work has been undertaken using the Greater Manchester Variable Demand Model (GMVDM) with a constrained and high side scenario. The constrained and high side model runs take account of traffic associated with all GMSF allocations.
- 19.1.6 A 'with GMSF' scenario has been assessed against a Reference Case which assumes background growth and includes the housing and employment commitments from the districts. Specific junctions have been assessed to understand the impact of the allocation on junctions along the B5320 Liverpool Road and the A57 Cadishead Way/ Liverpool Road.
- 19.1.7 A phased approach to development will be applied for the allocation. This approach will allow Salford Council to assess traffic conditions at each phase to ensure that the network is capable of accommodating the levels of demand associated with subsequent phases. The phasing and quantum of development at North of Irlam can be adjusted to ensure that the development has a limited impact on the network, allowing the Authority to control when mitigation is introduced where required.
- 19.1.8 The following schemes are considered to be necessary to bring the allocation forward as part of the GMSF:
- Improvement at B5320 Liverpool Road / B5471 Brinell Drive Junction;
 - Improvement at A57 Cadishead Way / B5311 Fairhills Road Junction;
 - Improvement at the B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road Junction;
 - Walking & cycling improvements to/ from and within the allocation and provision of direct access to Irlam station;
 - Increased provision of cycle parking at Irlam station

Conclusion

- 19.1.9 The allocation does provide good access to public transport either by rail or bus services to and from the Regional Centre and industrial estates to the west of the Regional Centre. This will be

further enhanced through improvements to bus service frequencies, the development of capacity improvements and the potential for tram train services on the CLC line. In addition to public transport improvements, the area will also benefit from the introduction of the Bee network which will provide improved provision for pedestrians and cyclists to access local amenities and employment areas, further reducing the dependency on private car use.

- 19.1.10 In terms of strategic transport modelling, some difficulties were encountered in terms of realistically representing the transport network adjoining North of Irlam. Furthermore, there are uncertainties pertaining to wider network changes resulting from delivery of the nearby Port Salford allocation. As such, further more detailed modelling work is recommended for this allocation. This further work should also test the yield permutations (1100 to 1400 homes) referenced earlier in this report.
- 19.1.11 Whilst deemed to be manageable, the masterplan and delivery strategy should seek to minimise localised impacts at junctions with the B5320 Liverpool Road and in particular, the junction at B5320 Liverpool Road / Roscoe Road / B5311 Fairhills Road. Issues at the A57 Liverpool Road/ Stadium Way Junction and on the SRN, in particular the M60 at Junction 11 are a consequence of the cumulative impacts with Port Salford Extension and will require further assessment in conjunction with Highways England. .
- 19.1.12 It is understood that the allocation policy requirements are to include the need for a masterplan and robust delivery strategy which, amongst other things will consider issues relating to transport. The quantum and phasing of development for the allocation could be adjusted through this delivery strategy to ensure that the impact on the network is minimised.
- 19.1.13 At this stage, the modelling work undertaken is considered to be a 'worst case' scenario as it does not take full account of the extensive opportunities for active travel and public transport improvements in the local area. Whilst localised issues have been identified through the modelling process, these aren't considered to be insurmountable with further detailed work (in line with the Transport Assessment process) and the emergence of a Masterplan for the allocation addressing these issues to ensure that the allocation is deliverable.

Greater Manchester Spatial Framework

Locality Assessment:

Port Salford Extension GMA30

Publication Version 2: November 2020

Identification Table	
Client	Salford City Council/TfGM
Allocation	Port Salford Extension
File name	GMA30 Salford - Port Salford Extension LA 021020
Reference number	GMA30 (GMSF 2020), previously GMA33 (GMSF 2019)

Approval					
Version	Role	Name	Position	Date	Modifications
0	Author	Jessica Harrowsmith	Assistant Consultant	08/09/20	Base report
	Checked by	Huw Williams	Associate Director	14/09/20	
	Approved by	Darren Kirkman	Associate	16/09/20	
1	Author	B Brisbane	TfGM	30/09/20	Consistency edits
	Checked By	Jimmy McManus	Salford City Council	01/10/20	
	Approved By	James Shuttleworth	Salford City Council	02/10/20	

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Allocation Data	
Allocation Reference No.	GMA30 (GMSF 2020), previously GMA33 (GMSF 2019)
Allocation Name	Port Salford Extension
Authority	Salford City Council
Ward	Irlam
Allocation Proposal	320,000 sqm of Industrial / Warehousing
Allocation Timescale	0-5 years <input type="checkbox"/> 6-15 years <input checked="" type="checkbox"/> 16 + years <input checked="" type="checkbox"/>

Glossary

“2025 GMSF Constrained” - is the 2025 forecast case in which the model adjusts the input demand based on how the cost of travel changes from the base year to the future. For example, for a shopping trip undertaken by car which becomes more congested in future, changes might be travel via a different route, mode, location or time of day.

“2040 GMSF Constrained” - as above, but for a 2040 forecast year

“2025 GMSF High-Side” - is the 2025 forecast case in which the model does not adjust the input demand based on how the cost of travel changes. In this scenario congestion does not lead to a reassignment of traffic, and therefore road traffic flow will generally be higher.

“2040 GMSF High-Side” - as above, but for a 2040 forecast year

“2025 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2025

“2040 Reference Case” - is the Do Minimum scenario which includes delivery of all transport schemes already committed and assumed to be completed by 2040

AADT - Annual average daily traffic, is a measure used in transportation planning to quantify how busy the road is

Bee Network - is a proposal for Greater Manchester to become the very first city-region in the UK to have a fully joined-up cycling and walking network: the most comprehensive in Britain covering 1,800 miles.

Bus Rapid Transit - is a bus-based public transport system designed to improve capacity and reliability relative to a conventional bus system. Typically, a BRT system includes roadways that are dedicated to buses, and gives priority to buses at junctions where buses may interact with other traffic

Existing Land Supply - these are allocations across the county that have been identified by each local planning authority across Greater Manchester and are available for development

Greater Manchester Variable Demand Model (GMVDM) - the multi-modal transport model for Greater Manchester. This transport model provides estimates of future year transport demand as well as the estimates of travel behaviour changes and new patterns that the Plan is likely to produce. These include

changes in choices of routes, travel mode, time of travel and changes in journey destinations for some activities such as work and shopping.

“LRN” (Local Road Network) All other roads comprise the Local Road Network. The LRN is managed by the local highways authorities

National Trip End Model (NTEM) - is a Department for Transport forecast that ensures that measures of population, jobs and trips made by various mode are consistent across the whole of Great Britain.

Rapid transit services - refers to high frequency, high capacity metro style transport services including Metrolink and Bus Rapid Transit.

“SRN” (Strategic Road Network) The Strategic Road Network comprises motorways and trunk roads, the most significant ‘A’ roads. The SRN is managed by Highways England.

“TfGM” - Transport for Greater Manchester, the Passenger Transport Executive for Greater Manchester

Urban Traffic Control (UTC) - is a specialist form of traffic management that, by coordinating traffic signals in a centralised location, minimises the impact of stop times on the road user.

Western Gateway Infrastructure Scheme (WGIS) – The scheme involves an expansion of the A57, linking the road to the Trafford Centre through the construction of 2.6km of dual carriageway over the Manchester Ship Canal and the construction of a new lifting bridge (Part WGIS). Full WGIS would see further improvements with slip roads linking junctions 10 and 11 of the M60 as well as increasing capacity of the existing roundabout junctions, along with the reconfiguration of the Bridgewater Circle roundabout at the Trafford Centre. A plan illustrating ‘Part’ and ‘Full WGIS’ is included at Appendix A.

1. Allocation Location & Overview

- 1.1.1 SYSTRA has been commissioned by Transport for Greater Manchester (TfGM) to provide a series of locality assessments for strategic allocations within the Greater Manchester region in order to confirm their potential impacts on both the local and strategic network, as well as identifying possible forms of mitigation or the promotion of sustainable alternatives to reduce this impact.
- 1.1.2 The Port Salford Extension allocation is located between the M62 and the A57 Liverpool Road, to the south of Peel Green and north east of Irlam. Immediately south of the allocation is the residential area of Barton Moss and the permitted Port Salford scheme which is currently under construction. The northern part of the allocation is bound to the east by Barton Aerodrome, Peel Green Cemetery and Salford City Academy school. The north of the allocation is bound by the Liverpool-Manchester (Chat Moss) railway line. Barton Moss Road runs north west through the centre of the allocation and uses along it comprise industrial premises, the Barton Aerodrome Heliport and the Barton Moss Secure Care Centre. The southern part of the allocation is bounded by the M62 motorway to the north west, the A57 to the south east and open land designated as Green Belt (formerly the Boysnope Golf Course) to the south. The GMSF allocation is for 320,000sqm of employment land with a focus on logistics activity.
- 1.1.3 In 2009, the Port Salford development, (located to the south of the A57) obtained planning permission for a multi-modal freight interchange, including highway, heavy rail and waterway access. The permission was granted on condition of highway improvements on and linked to the A57 and M60 known as the Western Gateway Infrastructure Scheme (WGIS). WGIS infrastructure is intended to improve the operation of traffic on the M60 and A57 to reduce congestion and improve journey time reliability with the first phase of the improvement opened in 2017 (Part WGIS). A plan illustrating 'Part' and 'Full WGIS' is included at Appendix A.

- 1.1.4 The consent does dictate that only 50% of the existing Port Salford development can come forward until a rail link is in situ in conjunction with the opening of the WGIS scheme. It is understood that a business case for the rail freight link has been prepared and is being progressed through the Governance for Rail Investment Projects (GRIP) process. The rail link, highway improvements (to include full WGIS), canal berths and container terminal associated with the existing Port Salford must be completed and operational before the extension proposed under GMSF Allocation GM33 can commence.
- 1.1.5 Please note all boundaries and reference numbers shown were correct at time of writing, but for definitive boundary information refer to the GMSF allocation maps.

2. Justification for Allocation Selection

- 2.1.1 Port Salford is currently under construction on land between the A57 and the Manchester Ship Canal in Irlam. Port Salford will be the UK's first inland tri-modal freight facility, with a combination of water, rail and road connections, and as such is a unique asset and opportunity for Greater Manchester. The allocation to the north of the A57 will provide for a significant expansion to Port Salford, providing around an additional 320,000sqm of floorspace, taking advantage of this unique asset and boosting the competitiveness of the conurbation.
- 2.1.2 The allocation was therefore selected for inclusion within the GMSF on the basis of meeting 3 of the GMSF site selection criteria. Criterion 2 includes land that is able to take advantage of the key assets and opportunities that genuinely distinguish Greater Manchester from its competitors. Criterion 5 relates to land which would have a direct significant impact on delivering urban regeneration. In this regard the allocation would provide employment opportunities in proximity to relatively deprived communities. Criterion 6 which relates to land where transport investment (by the developer) and the creation of significant new demand (through appropriate development densities), would support the delivery of long-term viable sustainable travel options and delivers significant wider community benefits. These are detailed further in the topic paper for this allocation.

3. Issues from Consultation

- 3.1.1 The Greater Manchester Plan for Homes, Jobs and Environment (Greater Manchester Spatial Framework – Revised Draft) consultation ran from 14th January to 18th March 2019. The comments made during this consultation relate to the following key transport themes; roads, safety and public transport.
- 3.1.2 For the Port Salford Extension allocation, 148 comments were received. A summary of the transport comments are highlighted below. A [full summary of all consultation responses](#) is available on the GMCA GMSF website.
- 3.1.3 A number of key issues were identified at consultation. It was suggested that phasing of the allocation needs to be linked to development of the inland port, warehousing facility, container terminal and distribution park south of the A57 (i.e. the existing Port Salford site which has extant planning permission).
- 3.1.4 There were also concerns raised regarding the traffic impact of the development, in particular as there is only one road through the area. It was suggested that HGV traffic would add to an already congested road network and that users should rely equally on road, rail and water based modes. Respondents suggested that insufficient investment had been made in the docks and quays to remove road traffic. The M60 and links to the motorway are already very busy, particularly in the morning and evening peak periods. The impact of the allocation would need to be considered cumulatively with the planned housing at Irlam and Carrington.
- 3.1.5 Consultation responses also raised concerns over air pollution and that this could be made worse by future development.
- 3.1.6 Road safety was also raised as an issue, with some respondents noting regular road traffic collisions on the roads in and out of Irlam and Cadishead which can cause road closures and subsequent congestion.
- 3.1.7 With regards to public transport, it was suggested that there are limited bus stops available in the area and existing services are cancelled or delayed due to congestion. Respondents also noted that rail investment would only be able to address current issues with regards to capacity.

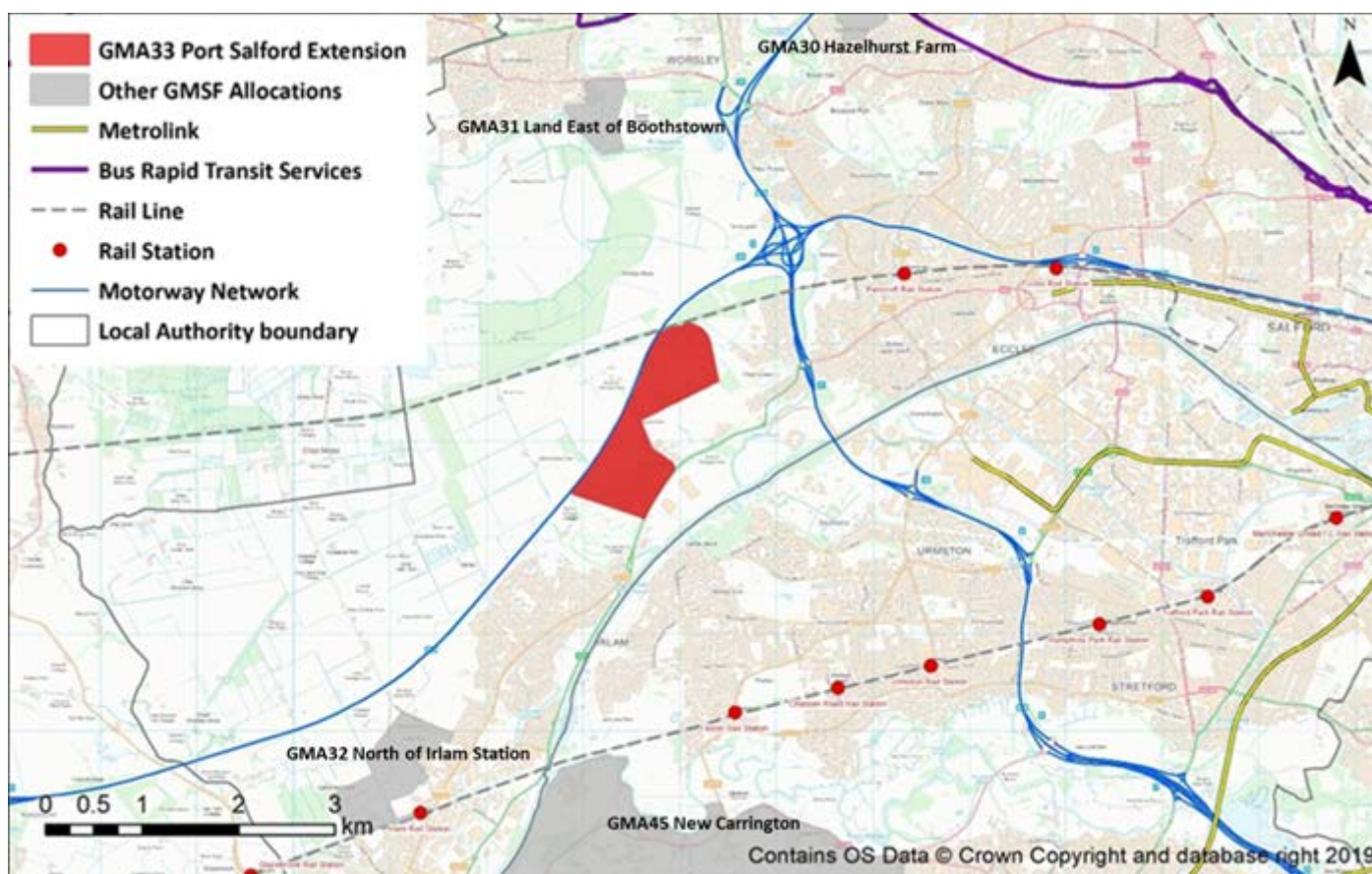
3.1.8 In addition to concerns being raised over the allocation, supportive comments were also received. There was a belief that the allocation would support the business case for infrastructure improvements including proposed link road from the A57 to the M62; expansion of Trafford Park Metrolink; Park and Ride and Junction 12 of the M60; and a new Western Gateway Rail station.

3.1.9 Respondents also welcomed the opportunity to use the ship canal to transport products down the ship canal in order to remove traffic from the highway. Respondents were also supportive of a Metrolink extension to and through the area.

4. Existing Network Conditions and Allocation Access

4.1.1 This section summarises the existing access to the allocation. Figure 1 indicates the location of the allocation, other GMSF allocations in the neighbouring area and its context regarding access to the highway network and public transport opportunities.

Figure 1. Port Salford Extension Allocation Location



Note all boundaries and referencing numbering shown were correct at time of writing – for definitive boundary information refer to the GMSF allocation maps.

4.2 Existing Local Access

- 4.2.1 Currently the allocation is only accessible via Barton Moss Road. Barton Moss Road crosses the M62 via an overbridge connecting onto Twelve Yards Road and a series of narrow country lanes to the north of the M62. To the south of the M62, Barton Moss Road is a narrow country lane connecting to the A57 Liverpool Road facilitating access to the M60 to the east and Irlam/ Cadishead to the west. The A57 Liverpool Road is a dual carriageway with a speed limit of 50mph.
- 4.2.2 The A57 Liverpool Road already has a presence of B2 / B8 employment uses along its corridor.
- 4.2.3 Whilst freight movements are the primary focus of the allocation, consideration of how employees access the allocation is also required. From an active mode perspective, the A57 Liverpool Road has a shared footway/cycleway connecting the proposed allocation with Irlam and Cadishead to the south and Peel Green to the north. The Manchester Ship Canal severs access to the east and Trafford although the introduction of the Part WGIS scheme over the ship canal does afford access to the east of the M60 and the Trafford Centre, including a range of off-carriageway infrastructure including new footways and cycleways through a mixture of shared and segregated space. The Trafford Centre provides an increasingly well-developed hub of local facilities and public transport services.
- 4.2.4 In addition to the A57 Liverpool Road, a mix of on-carriageway cycle lanes and off-carriageway shared cycle/footways are provided along sections serving the residential area of Irlam and the railway station which benefits from a dedicated high quality and secure cycle hub. To the east of the M60 is Patricroft rail station which can also be accessed using the on street cycling infrastructure.
- 4.2.5 There are two main bus services that pass the allocation on the A57 Liverpool Road; services 67 (Cadishead to the City Centre via Eccles and Pendleton) and 100 (Warrington to the City Centre via into Trafford Centre and Eccles). Both services provide a good services to/from the City Centre with the 67 benefitting from 4 services per hour and the 100 with 2 services per hour during daytime hours. The services are operational between the hours of 0600 and 2300.

- 4.2.6 The nearest rail stations are located in Patricroft and Irlam, both within 4km of the proposed allocation. Two services per hour (in both directions) are provided at Irlam which connects Manchester and Liverpool via Warrington whilst an hourly service in both directions is provided between Manchester and Liverpool, via Newton-le-Willows. Patricroft and Irlam stations can both be accessed by frequent bus services along the adjacent A57, or fall within a reasonable cycling catchment of the allocation.
- 4.2.7 Metrolink terminus stations are located to the east of the allocation at Eccles Interchange, or to the southeast at the Trafford Centre. Five Metrolink services per hour are provided both from Eccles to the City Centre via Salford Quays, and the Trafford Centre, via Trafford Park, with journey times to the City Centre from these locations of approximately 30 minutes. Both Metrolink stations are accessible by frequent local bus services (as mentioned in 4.1.5) , or by bicycle, and both corridors afford good opportunities to interchange with onward city-region-wide bus, tram and train services across Greater Manchester and beyond.

4.3 Accidents and Collision Overview

A57 Liverpool Road (A57 Cadishead Way/ B5320 Liverpool Rd junction to M60 Junction 11)

- 4.3.1 Between 2014 and 2018 inclusive, 41 road traffic collisions were reported along the A57 from the Cadishead Way/ Liverpool Rd gyratory to M60 Junction 11. Of the 41, 2 were fatal, 11 were serious with the remainder slight collisions. One of the fatal collisions and one of the serious collisions reported on this section of road involved pedestrians. None of the fatal or serious collisions recorded on this section of road involved cyclists. However, 4 of the recorded slight collisions did involve cyclists.
- 4.3.2 There is a cluster of serious and fatal collisions on the A57 to the east of the southern section of the proposed allocation. Within close proximity to the proposed allocation, 7 serious collisions and 1 fatal collision were recorded. This includes both the collisions involving pedestrians (1 fatal and 1 serious).

M60 Junction 11

4.3.3 Between 2014 and 2018 inclusive, 17 road traffic collisions were reported at M60 Junction 11. Of the 17, none were fatal, 1 was serious and the remainder slight collisions. The serious collision did not involve any pedestrians however 1 of the slight collisions did involve pedestrians. None of the collisions recorded on this section of road involved cyclists.

Figure 2. Collision Analysis



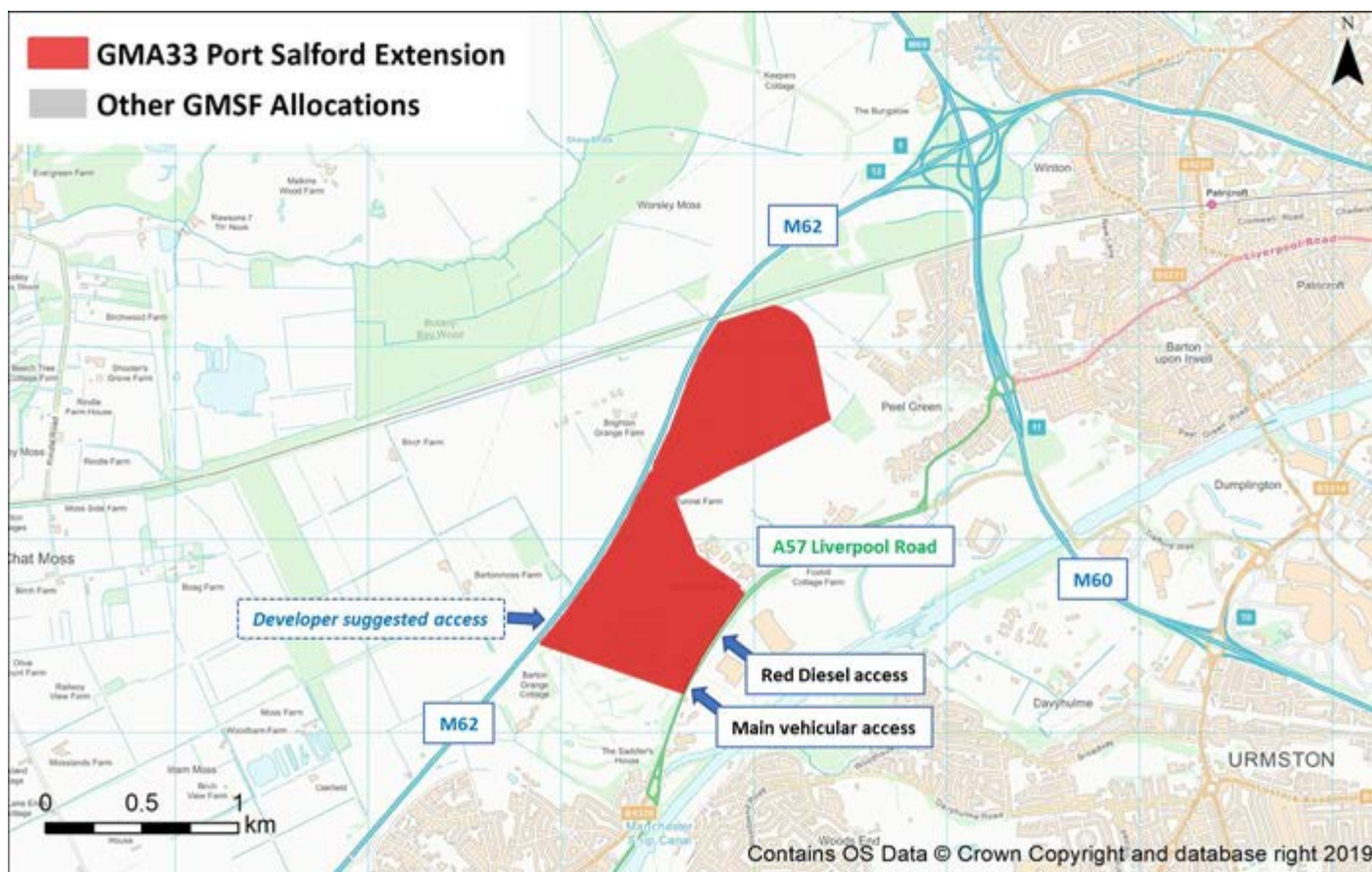
5. Proposed Allocation Access

- 5.1.1 In the Masterplan for the allocation, the main point of access would be provided off the A57 Liverpool Road adjacent to the existing 'Club House', to the north of Rhenus Logistics and south of Makro via a signalised crossroads.
- 5.1.2 An alternative access is also proposed for 'red diesel' vehicles from the signalised junction at Great Bear which would necessitate a new arm at the junction. The intention is that goods will be transported from the allocation across the A57 to the multi modal terminal and due to the short

distances being covered by these vehicles, they could be fuelled by red diesel which is a no-taxed fuel.

- 5.1.3 Figure 3 below indicates the location of the proposed access points to and from the allocation.
- 5.1.4 The developer has indicated a preference for a new link road connecting the A57 Liverpool Road with a major new junction on the M62 to serve the allocation. The link road hasn't been tested in the strategic modelling work undertaken as the link road and new junction are considered to be 'less than likely' to come forward. The link road is however discussed in various sections through the report.
- 5.1.5 Following QC legal advice, only committed infrastructure with a reasonable prospect of delivery can be assumed to come forward and TfGM/ the Combined Authority's transformative transport and land use policies (known as "the right mix") cannot be assumed to be in place. This approach is consistent across all allocations and all locality assessments are presented in this manner. Discussions are currently taking place between TfGM, Salford Council and Peel (and their consultants) in order to scope out the work required to test the impact the A57 link road and new junction on the M62 would have on the network.
- 5.1.6 At Planning Application stage, an assessment of the required number of site access junctions will need to be undertaken to confirm that they operate satisfactorily in capacity terms. However, it is considered that a minimum of two site accesses will be required to serve the allocation. This will assist with the dispersal of any impact across the network while providing a primary and secondary access in the event of an emergency.
- 5.1.7 Visibility assessments at the allocation access junctions will also need to be undertaken at Planning Application stage to ascertain their suitability to accommodate additional traffic. Visibility splays will be based upon available design standards including Manual for Streets.
- 5.1.8 It is assumed that a detailed design consistent with Greater Manchester's best practice Streets for All highway design principles will be required at the more detailed planning application stage.

Figure 3. Allocation Access Arrangements:



6. Multi-modal accessibility

6.1 Current

- 6.1.1 The development of access and active travel across Greater Manchester is a central tenet of the GMSF, to be realised through the establishment and continued improvement of the cycle and walking network.
- 6.1.2 An assessment of the accessibility of the allocation, by all modes of transport, has been undertaken so as to establish if it would meet with prevailing sustainable transport policies.
- 6.1.3 It highlights the opportunities for employees, residents and visitors to travel to and from the allocation by modes of travel other than in a privately owned car.
- 6.1.4 [Greater Manchester Accessibility Levels \(GMAL\)](#) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester's Local Link (flexible transport service), taking into account walk

access time and service availability. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region. The accessibility index score is categorized into eight levels, 1 to 8, where level 8 represents a high level of accessibility and level 1 a low level of accessibility.

- 6.1.5 The land associated with Port Salford Extension fluctuates between categories 1 and 3 (February 2020). Land nearest to the A57 Liverpool Road is categorised as a 3 with land further north and therefore further away from services on the highway network categorised as a 1. While this represents a range of relatively low levels of public transport accessibility, the selection of direct bus services along the A57, and interchange opportunities provided at the nearby bus, rail and Metrolink stations provide onward via high quality services across the city-region
- 6.1.6 It is anticipated that as the allocation is developed and a permeable network of walk/ cycle links is adopted, accessibility to public transport will be greatly improved, in particular to regular services along the A57 Liverpool Road which interchange with the recently opened Trafford Park Metrolink station.

Walking and Cycling

- 6.1.7 From an active mode perspective, the A57 Liverpool Road has a shared footway/cycleway connecting the proposed allocation with Irlam and Cadishead to the south and Peel Green to the north via a mixture of on-highway and traffic free routes, including the recently completed [Port Salford Greenway](#) providing onward access to Worsley. The Manchester Ship Canal severs access to the east and Trafford although the introduction of the Part WGIS scheme over the ship canal does afford off-carriageway shared walking and cycling access to the east of the M60 and the Trafford Centre.
- 6.1.8 Definitive footpaths 29 and 30 run east to west through part of the allocation and along its boundary adjoining Barton aerodrome to the south. Definitive footpath 31 runs through the allocation north to south along Barton Moss Road and connecting with the 'Salford Trail'.
- 6.1.9 In addition to the A57 Liverpool Road, on street cycle lanes are also provided along the B5320 Liverpool Road serving the residential area of Irlam and the railway station which benefits from cycle parking. To the east of the M60 is Patricroft rail station which can also be accessed using the on street cycling infrastructure.

6.1.10 The topography of the local area is flat lending itself to walking and cycling as a form of commute and street lighting is provided along the extent of the A57 Liverpool Road, however Liverpool Road is a busy route during peak hours.

Public Transport

6.1.1 Existing public transport access to and from the allocation is summarised in Section 4.1.

6.2 Proposed

Walking and Cycling

6.2.1 Walking and cycle opportunities are an important consideration, in particular for those working at and living in proximity to the proposed allocation.

6.2.2 The Masterplan for the allocation should:

- Be designed to encourage the use of nearby public transport services, with high quality pedestrian routes and off allocation pedestrian crossings that connect all parts of the allocation to bus stops along the A57.
- Incorporate attractive public rights of way through the allocation connecting with the existing network
- Directly link with the proposed Bee Network

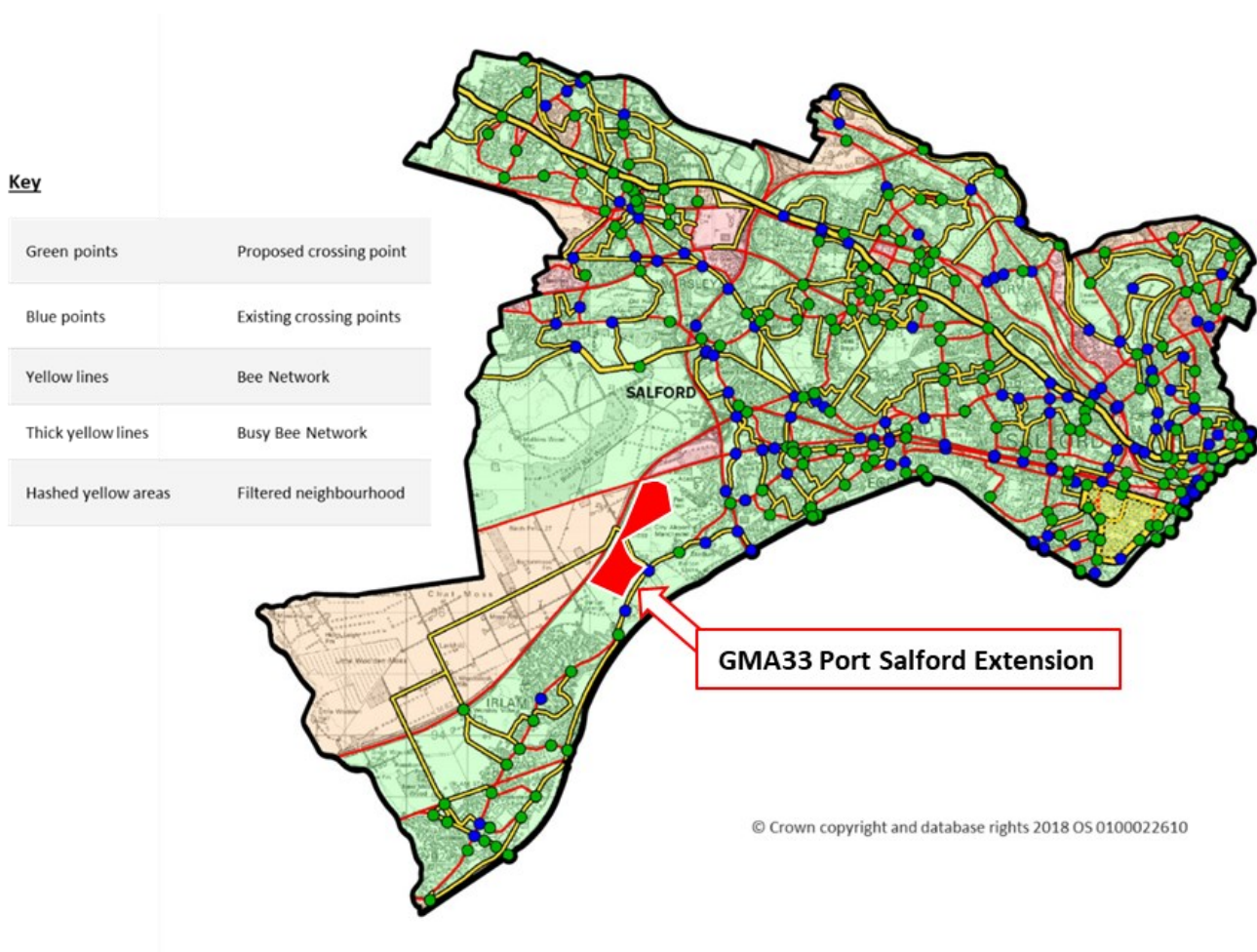
6.2.3 The allocation would be required to incorporate a high quality network of public routes through the proposed development, connected into the wider pedestrian and cycling network that provides access to local facilities, public transport services, Irlam, Peel Green and beyond.

6.2.4 Greater Manchester's 'Made to Move' plans to transform Greater Manchester and provide detailed walking and cycling infrastructure to improve health, air quality and congestion across the region.

6.2.5 In Salford, public engagement on the development of the Bee Network suggested the introduction of a safe walking and cycling corridor along A57 Liverpool Road with new crossings provided to encourage people to make more active mode journeys, to reduce severance and improve safety.

6.2.6 A scheme to reinstate the Irlam/ Cadishead viaduct is also being considered which would be open to pedestrians and cyclists. This would open up access to and from the New Carrington allocation (GMA45) for active mode users who are currently constrained by the ship canal. This would subsequently connect in with the A57 Cadishead Way and the wider Bee network. Further detail on walking and cycling proposals across Salford are contained within the 2040 5-Year Delivery Plan and Salford’s Local Implementation Plan.

Figure 4. Salford Bee Network Proposals, 2018



6.2.7 The main recommendations to improve cycling and walking access, and its integration with public transport include:

- Segregated cycling and walking access at the proposed access points on the A57 Liverpool Road.
- High quality pedestrian and cycling infrastructure within the development with minimal employee car parking provision and sufficient secure cycle parking across the allocation.
- Safe walking and cycling routes passing through the allocation.

- Ensure that cycling/ walking routes link with Bee Network and are of the same standard.

Public Transport

- 6.2.8 The A57 already provides regular bus services to the Regional centre, and existing services provide interchange opportunities at Irlam, Eccles and the Trafford Centre to enable longer-distance onward trips.
- 6.2.9 In order to maximise the number of employees using bus services, good, direct walking connections will need to be provided from the allocation to the A57 Liverpool Road to take advantage of opportunities to travel by bus.
- 6.2.10 It is anticipated that a variety of shift patterns will operate from the allocation and as a consequence, it will be essential to provide public transport opportunities that coincide with start and end times of shifts. The existing bus provision does cover early in the morning until late at night and this will need further consideration in advance of development coming forward.
- 6.2.11 There is also scope to improve service frequencies on the 67 and 100 during off peak hours with service 100 penetrating the allocation. Penetration of the allocation allowing buses to pass by employment locations would reduce walking distances for employees to and from the A57 Liverpool Road.
- 6.2.12 In addition to regular bus services, the expansion of the Local Link services should be explored to connect key existing residential areas (such as Irlam, Cadishead and Eccles), and nearby proposed residential areas (such as the allocation of North of Irlam Station) with Port Salford Extension during traditional 'out of service' hours.
- 6.2.13 Local Link operates successfully at other logistics sites across Greater Manchester, notably at Logistics North. Local Link provides door-to-door transport which allows passengers living in areas where the service is active to ring and book shared minibuses to travel anywhere within a Local Link service area. This is considered to be an attractive proposition for this allocation and the wider Port Salford area due to its location in a sparsely populated area with limited destination choice provided from existing services and shift work likely to operate.

- 6.2.14 Existing service frequencies by rail are limited and should be enhanced to provide improved frequencies and conditions for those travelling by rail. The GM Transport Strategy 2040 5-Year Delivery Plan (2020-25) identifies that in the next 5 years, options will be developed for tram/ train services on the Cheshire Lines Committee (CLC) Corridor to Warrington which would improve connectivity. Furthermore, in advance of tram/ train services, there are also plans to improve the capacity and frequency on the CLC line as a key commuter corridor which would benefit the allocation and the wider area, specifically for journeys between Liverpool, Warrington and the Regional Centre, through services calling at Irlam station, and relieving pressures on city-to-city highway links such as the A57 and M62.
- 6.2.15 The Metrolink extension to the Trafford Centre has recently opened affording interchange opportunities between the A57 corridor and the interchange at Trafford Centre. The Port Salford area itself isn't directly connected to rapid transit and with the level of recent and proposed development in the area including that associated with Port Salford, Trafford Waters and the AJ Bell stadium, there are opportunities to explore an extension of Metrolink over the ship canal as far as Port Salford. The recently completed lifting bridge of the Manchester Ship Canal has been future proofed to accommodate a future Metrolink alignment. The Greater Manchester Transport Strategy 2040 and 5-Year Delivery Plan identifies that in the next five years, options will be developed for a Metrolink extension in this location toward Port Salford.
- 6.2.16 As discussed in the opening chapter, the Port Salford Extension allocation is reliant upon the prior delivery of the existing adjacent Port Salford development. This includes the planning conditions of 'Full WGIS', and a freight rail link, as well as the delivery of canal berths and container terminal as part of the development proposal.
- 6.2.17 The intention is for Port Salford to become a tri-modal port which would afford freight movements by road, rail and water. This could in effect lead to journeys being taken from the highway and moved to rail and water-based journeys, however, consideration has to be given to the fact that the Port could attract trips from elsewhere on the network to the local network in order to transfer loads via rail and water. Further work will be undertaken to assess the impact of the

allocation in greater detail, specifically focussed on the introduction of a new junction on the M62 and link road connection to the A57 Liverpool Road.

7. Parking

- 7.1.1 Proposed maximum car parking standards for employment uses are contained within Salford Local Plan: Development Management Policies and Designations (January 2020) are as follows:
- 7.1.2 For B8 Storage and distribution (greater than 10,000sqm;
 - 1 space per 100sqm and a minimum of 1 cycle space per 850sqm
- 7.1.3 On this basis, the maximum number of car parking spaces for the allocation would be 3,200 with a requirement for a minimum of 376 bicycle spaces.

8. Allocation Trip Generation and Distribution

- 8.1.1 The strategic modelling component of the GMSF Locality Assessments have been produced using data provided from TfGM's Variable Demand Model (GMVDM). An overview of the modelling process can be found in the GMSF Strategic Modelling Technical Note.
- 8.1.2 Future trip generation to/from the allocation (i.e. how many people and vehicles will enter or leave the site) was estimated by applying a set of GM-wide trip rates to the agreed development quantum for each site. The distribution of trips (i.e. where they are going to or coming from) was derived by selecting nearby zones with similar land use characteristics as a proxy and using the existing distribution in the model.
- 8.1.3 Four Test Cases ("GMSF Constrained" and "GMSF High Side", for both 2025 and 2040) were used to assess and mitigate the impact of the GMSF Allocations on the Greater Manchester transport network.
- 8.1.4 The 'standard' development planning approach would generally not assume that future highway trips are constrained by congestion on the highway network. Discussions between SYSTRA and TfGM pointed towards a need to also look at a 'high-side' scenario with the GMSF development scenario which does not take account of future congestion on the road network. The 'GMSF High

Side' is considered to be a worst case and the modelling work has been undertaken using these 'high side' flows.

8.1.5 For the purposes of the testing the impact of the allocation through the strategic model, a total of 320,000 sqm of employment floorspace have been assumed to be built out by 2040. The GM transport modelling suite has a 2040 forecast year, as such it uses 2040 trajectory data as proxy for 2037 full build-out, this is not considered to materially impact on the analysis or conclusions of this report. All phasing plans information contained in this Locality Assessment is indicative only and has only been used to understand the likely intervention delivery timetable. Final trajectory information and the final allocation proposal is contained in the GMSF Allocation Topic Paper. The agreed development quantum for the Port Salford Extension allocation is shown in Table 1, while the estimated traffic generation for the high scenario is shown in Table 2.

Table 1. Development Quantum:

Use	Use Sub Category	Development Quantum	
		2025	2040
Industrial	e.g. B2/B8 etc.	0	320,000sqm
Total		0	320,000sqm

8.1.6 As can be seen from Table 1, the development is allocated for 320,000sqm of industrial use (B2/ B8) with no development assumed before 2025.

Table 2. Allocation Traffic Generation:

Year	AM Peak Hour	AM Peak	PM Peak Hour	PM Peak Hour
	Departures	Hour Arrivals	Departures	Arrivals
2025 GMSF Constrained	0	0	0	0
2025 GMSF High-Side	0	0	0	0
2040 GMSF Constrained	531	890	813	279

Year	AM Peak Hour Departures	AM Peak Hour Arrivals	PM Peak Hour Departures	PM Peak Hour Arrivals
2040 GMSF High-Side	741	1232	813	399

Units are in PCU (passenger car units/hr)

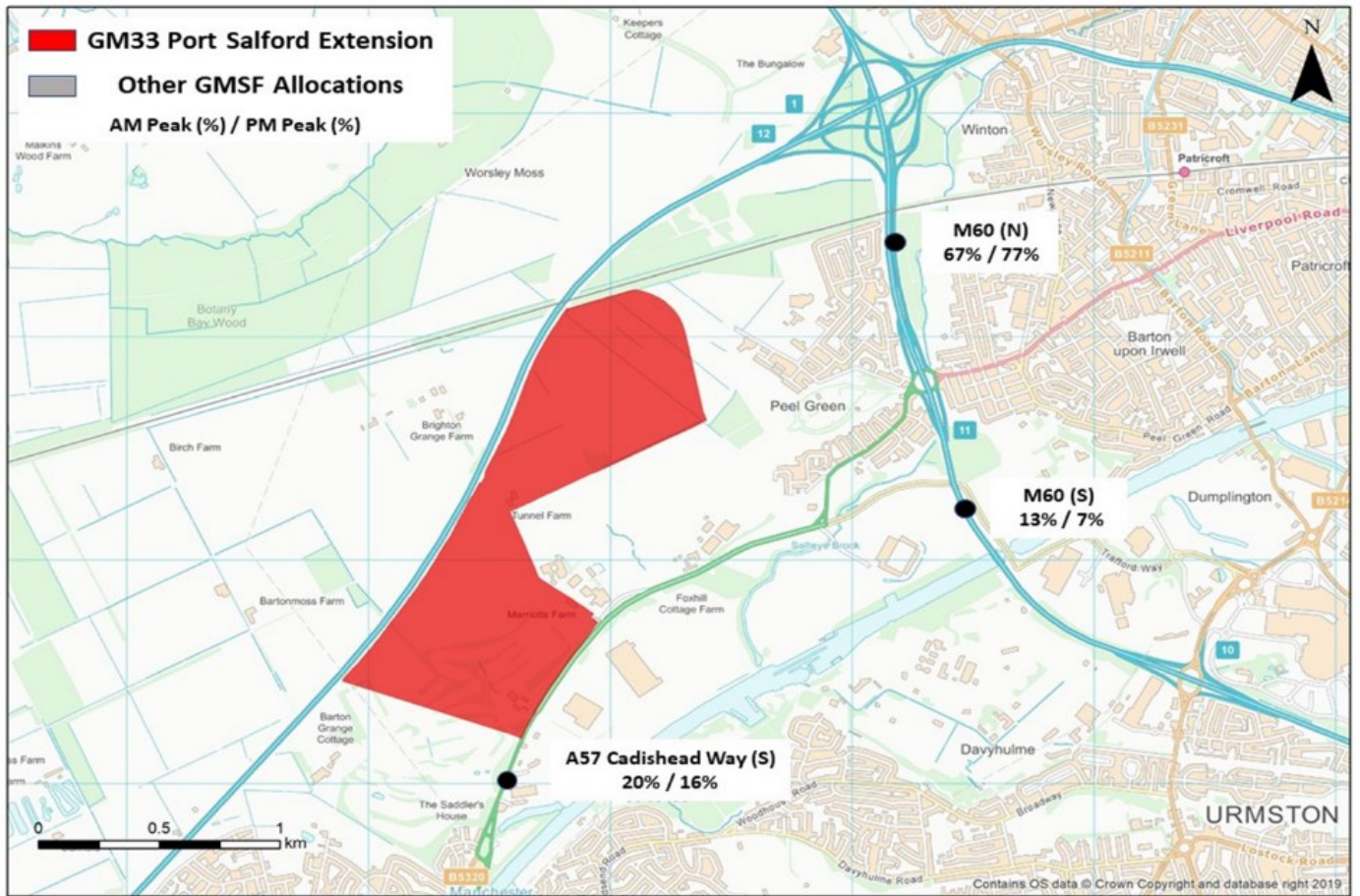
8.1.7 Table 3 and Figure 5 indicate the distribution of traffic on the network to and from the allocation in the peak model periods which are 0800-0900 (AM peak) and 1700-1800 (PM Peak). It can be seen that in both the AM and PM Peak hours that the majority of traffic is originating or destined for the M60 north. The model predicts that very little traffic in the AM peak will use the M60 south.

Table 3. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined):

Route	AM Peak Hour	PM Peak Hour
A57 Cadishead Way (South)	20%	16%
M60 (North)	67%	77%
M60 (South)	13%	7%

8.1.8 Figure 5 provides a visual representation of the distribution across the network.

Figure 5. Allocation Traffic Distribution, 2040 GMSF High-Side (Origin/Destination Combined)



8.1.9 Analysis has also been undertaken to assess the level of impact of traffic travelling to/ from the allocation will have on neighbouring authorities (outside GM). No material impact is considered to affect neighbouring authorities.

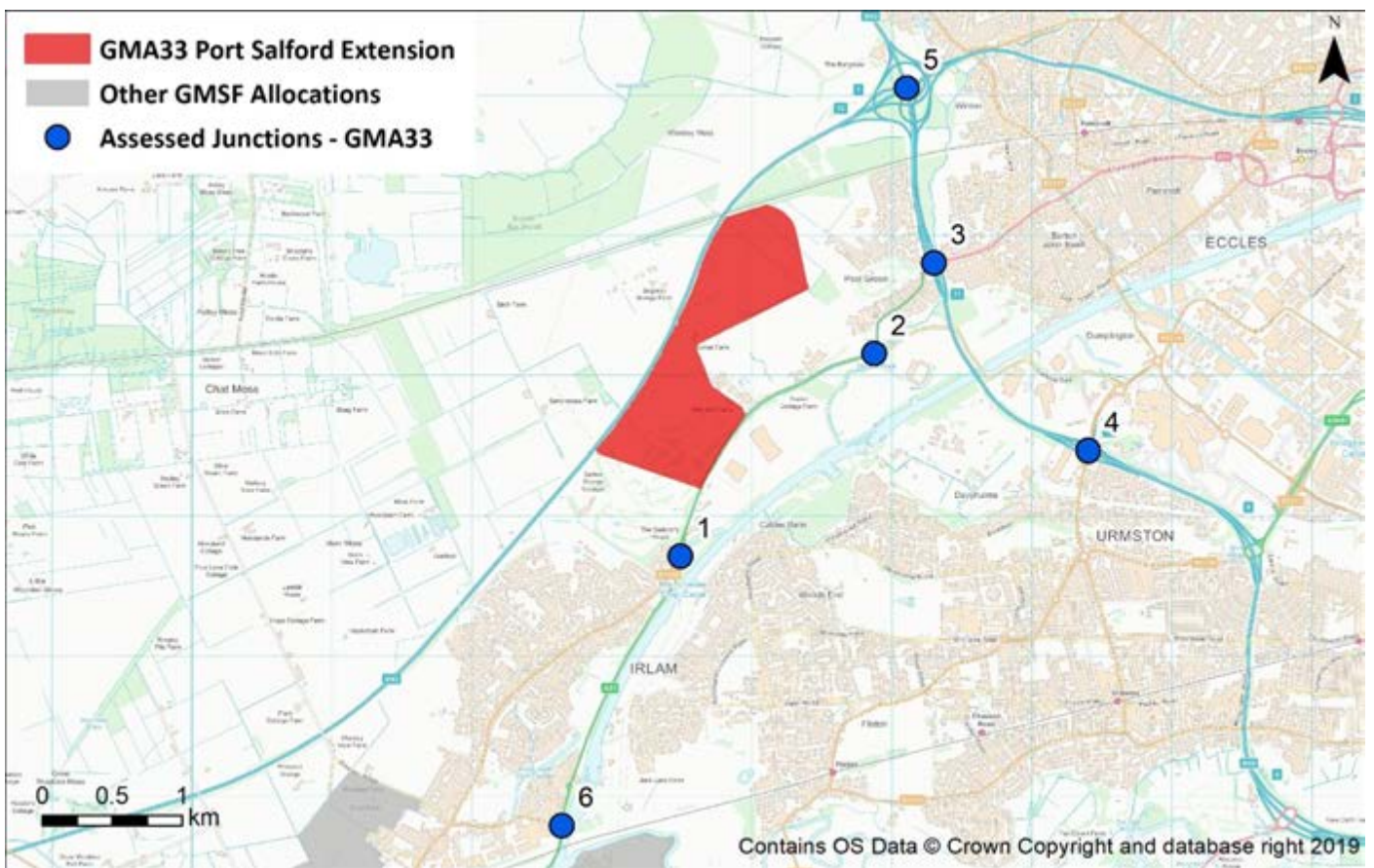
9. Current Highway Capacity Review

- 9.1.1 The A57 Liverpool Road is a dual carriageway 50mph road built to a modern standard running parallel with the River Mersey, with a shared footway/ cycleway provided along the northbound carriageway.
- 9.1.2 To the west of the allocation, the M62 runs east to west between Liverpool and Manchester. The nearest direct access onto the strategic road network is provided at junction 11 of the M60 (within 3km of the centre of the allocation or to the west at junction 21 of the M6 (12km).
- 9.1.3 Slow moving traffic is observed during the peak hours along the A57 Liverpool Road and Cadishead Way with traffic travelling to and from the M6 at junction 21 and the residential areas of Cadishead and Irlam and the M60 at junction 11. In addition to affording access to Cadishead and Irlam, and with limited route choice available, the A57 Liverpool Road/ Cadishead Way provides access to the predominantly industrial areas of Northbank as well as east of Irlam, Port Salford and Trafford Park via junction 11 of the M60.
- 9.1.4 The M60 is congested during peak hours with three junctions (10, 11 and 12) located across a distance of approximately 3km. Junction 10 serves the Trafford Centre and associated retail opportunities on either side of the M60. Junction 11 serves employment opportunities to the west of the M60 including Port Salford and the largely residential Peel Green, Patricroft and Eccles to the east. Junction 12 connects the M60 with the M62 to the west and M602 affording access to the Regional centre to the east.
- 9.1.5 In order to improve congestion and journey times along the M60 and A57 Liverpool Road, the part WGIS scheme has been constructed. The scheme includes 2km of dual carriageway from the A57 to Bridgewater Circle, including a local highway crossing of the Manchester Ship Canal, improved roundabouts at junctions 10 and 11 of the M60 and widened roads leading to the Trafford Centre. Further information on WGIS is provided at Appendix A. Full WGIS has been included within the modelling work in both the Reference Case and 'with GMSF' scenarios.
- 9.1.6 Based on the configuration of the existing highway network and the planned access strategy, six junctions have been identified for assessment, three on the local network with a further three on the strategic network. These are identified in Figure 6.

- 1. A57 Manchester Road / A57 Cadishead Way / B5320 Liverpool Road
- 2. A57 Liverpool Road / Stadium Way
- 3. M60 Junction 11
- 4. M60 Junction 10
- 5. M60 Junction 12
- 6. A57 Liverpool Road/ B5311 Fairhills Road

9.1.7 Information on the junctions on the strategic network is provided in Section 14.

Figure 6. Assessed Junctions



10. Treatment of Cumulative Impacts

- 10.1.1 The constrained and high side model runs take account of traffic associated with all GMSF allocations. Within 4km of the Port Salford Extension allocation is the North of Irlam Station allocation (GMA29) which is identified for 1400 homes during the GMSF plan period. Therefore, at a local level, the transport impacts of the allocation need to be considered cumulatively with the GMSF allocation North of Irlam Station allocation.
- 10.1.2 The North of Irlam Station allocation is forecast to generate approximately 480 to 545 two-way vehicle trips during the morning and evening peak hours respectively (GMSF High side 2040) based on a modelled scenario of 1100 homes. The Port Salford Extension is expected to generate approximately 2000 two-way trips in the AM peak with a further 1200 in the PM peak (GMSF High side 2040). The combined impact of these trips will have a more significant impact on the network than that of the allocation in isolation, hence the need to assess the cumulative impact.
- 10.1.3 In the AM peak GMSF High side 2040, 70% of the 415 trips originating from North of Irlam are anticipated to travel east, passing Port Salford Extension and destined for locations beyond the M60. Of the 160 trips destined for North of Irlam Station, 60% originate from the M60. These figures are subsequently reversed in the PM peak.

11. Allocation Access Assessment

- 11.1.1 An access assessment has been undertaken based on a signalised crossroads on the A57 Liverpool Road with access provided to the north for the allocation and to the south for Port Salford phase 1 (existing development).
- 11.1.2 An indicative drawing of the main access arrangement on the A57 Liverpool Road (as provided by consultants working on behalf of the developer) is provided at Appendix B.

11.1.3 This arrangement has been tested in LINSIG which is an industry standard software package allowing traffic engineers to model traffic signals and their effect on traffic capacities and queuing. It should be noted that this assessment assumes that all arrivals and departures to and from the allocation use this means of access and no link road is provided connecting with the M62. This is considered to be a worst case scenario. The results for the worst performing arm (W/ARM) from a capacity perspective and Practical Reserve Capacity (PRC) are presented in Table 7. A positive PRC indicates that the junction has spare capacity.

Table 4. Port Salford Extension Allocation Access assessment

Route	GMSF High 2040 AM W/Arm	GMSF High 2040 AM PRC	GMSF High 2040 PM W/Arm	GMSF High 2040 PM PRC
A57 / Allocation Access (as per Appendix B)	185%	-105.0%	135%	-50.2%

11.1.4 The table indicates that the junction is unable to accommodate the level of demand to and from the allocation in the AM and PM peaks, predominantly due to the significant right turning movements from the A57 Liverpool Road east and heavy flow eastbound on the A57 Liverpool Road.

11.1.5 Further junction modelling has been undertaken to attempt to improve the situation at the junction incorporating;

- Additional right turning lane from the A57 Liverpool Road to the allocation
- Two lane access to the allocation
- Wider lanes to enable increased saturation flows.

11.1.6 Whilst these changes do improve the situation at the junction, Table 5 indicates that it does not operate within capacity.

Table 5. A57 Revised access:

Route	GMSF High 2040 AM W/Arm	GMSF High 2040 AM PRC	GMSF High 2040 PM W/Arm	GMSF High 2040 PM PRC
A57 / Allocation Access (with revisions)	134%	-48.5%	128%	-42.2%

A57/ M62 Link Road

11.1.7 An option being explored by the developer for the allocation is a link road from the A57 Liverpool Road to the M62 with a new junction introduced between junctions 11 (Birchwood) and 12 (M60) of the M62.

11.1.8 This would provide access to the allocation midway along the link road via a roundabout.

11.1.9 Whilst the link road hasn't been modelled, traffic flows from GMVDM have been analysed in order to understand the distribution of traffic to and from the allocation and the potential for transfer to the link road and subsequent impact on the local road network.

11.1.10 The select link analysis function in the GMVDM analyses where traffic originates and is destined from a given zone in the model. The function has been used to assess the quantum of traffic that could use the link road should it be introduced. Table 6 indicates the distribution of traffic to and from the allocation on the strategic road network.

Table 6. SRN Distribution:

Route	AM Origins	AM Destinations	PM Origins	PM Destinations
M60 north	77%	64%	79%	82%
M60 south	4%	9%	4%	5%
M62 west	1%	1%	2%	4%
M6 (junction 21) via A57 Manchester Road	10%	13%	9%	8%
Total	92%	87%	94%	99%

11.1.11 As can be seen from Table 6, a significant proportion of traffic to and from the allocation originates from or is destined to use the strategic road network. On this basis, it is concluded that these trips could avoid using the local road network and use a new junction on the M62 should this prove feasible. Further modelling work will be required to assess the impact in greater detail.

11.1.12 Traffic flows have been manually adjusted for the allocation access on the A57 Liverpool Road by reducing the quantum of trips based on the table above. The results for the worst performing arm (W/ARM) from a capacity perspective and Practical Reserve Capacity (PRC) are presented in Table 7. A positive PRC indicates that the junction has spare capacity.

Table 7. Access assessment (with manual distribution):

Route	GMSF High 2040 AM W/Arm	GMSF High 2040 AM PRC	GMSF High 2040 PM W/Arm	GMSF High 2040 PM PRC
A57 / Allocation Access (as per Appendix B)	90%	0.6%	81%	11.1%

11.1.13 It can be seen that the allocation access junction on the A57 Liverpool Road is capable of accommodating the volume of trips at 2040 with the original design but this is reliant on the introduction of a link road and new junction on the M62. This does not however take into the account the impact of traffic re-allocation elsewhere on the network and it is advisable that further, more detailed modelling work is undertaken to fully test the impact of the A57 link road an new junction on the M62.

12. Impact of Allocation Before Mitigation on the Local Road Network

12.1.1 In order to understand a worst case impact of the GMSF, the ‘high side’ runs from the GMVDM were used to derive ‘with GMSF’ development flows for 2040. These flows were then entered into junction based models for the junctions identified in section 8. Flows from a 2040 reference case scenario (including approved Local Plan development from the respective districts) were also extracted to provide a comparison between the operation of those junctions in the 2040 reference case and the 2040 with GMSF development scenarios.

- 12.1.2 These assessments were then used to identify the junctions where there was considered to be a substantial impact, relative to the operation of the junction in the 2040 reference case, and hence where mitigation was considered to be required in order to bring GMSF allocations forward. Through discussions with TfGM and the Combined Authority, it has been agreed that where mitigation is required, it should mitigate the impacts back to the reference case scenario. It should be noted that mitigating back to this level of impact may not mean that the junction operates within capacity by 2040.
- 12.1.3 This section looks at the impact on the network at the junctions highlighted in section 8. Signalised junctions were assessed in detail using industry-standard modelling software LINSIG version 3. Where possible, traffic signal information was requested from TfGM in order to ensure that the local junction models reflected (as far as possible), the operation of the junctions on the ground. Junctions 9 is an industry standard software package used to assess priority and roundabout junctions.
- 12.1.4 Table 8 below provides a comparison between the operation of the in scope junctions in the 2040 reference case and the 2040 'high side' scenarios, as well as the allocation development flows through each respective junction.
- 12.1.5 Table 8 shows the comparison between the ratio of flow to capacity on the worst performing arm at each junction at 2040 for the reference case and with mitigation situation. For reference, a figure of between 85% and 99% illustrates that the junction is nearing its operational capacity (orange), and a figure of 100% or over (red) illustrates that flows exceed the operational capacity at the junction.

Table 8. Results of Local Junction Capacity Analysis Before Mitigation:

Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
1. A57 Manchester Road / A57 Cadishead Way / B5320 Liverpool Road	93%	96%	98%	100%	354	102
2. A57 Liverpool Road / Stadium Way	88%	90%	121%	109%	1620	1080
6. A57 Cadishead Way / B5311 Fairhills Road	187%	231%	201%	547%	330	86

12.1.6 As can be seen from Table 8, the A57 Cadishead Way / B5311 Fairhills Road junction is operating above capacity in the reference case at 2040 without the addition of GMSF related traffic. The junction at present is a priority junction and traffic from the B5311 Fairhills Road is having difficulty accessing the A57 Liverpool Road due to the heavy flow on the A57 Liverpool Road. This leads to a high Ratio of Flow Capacity (RFC) which is exacerbated with the addition of significant development traffic associated with GMSF. With the inclusion of GMSF traffic, two of the junctions exceed the operational capacity or observe an increase between the reference case and with GMSF High scenario with the A57 Manchester Road/ A57 Cadishead Way/ B5320 Liverpool Road reaching capacity.

1. A57 Manchester Road / A57 Cadishead Way / B5320 Liverpool Road

12.1.1 The GMSF high scenario is broadly comparable with the reference case with fairly minimal increases in RFC considering the quantum of development being proposed in the local area (from Port Salford Extension and North of Irlam Station). This assumes that the link road connecting the A57 Liverpool Road with the M62 does not exist.

12.1.2 354 no of trips travel through the junction in the AM peak destined for or originating at Port Salford with a further 102 in the PM peak period.

12.1.3 No mitigation is proposed at the junction due to fairly minor increases in RFC.

2. A57 Liverpool Road / Stadium Way

12.1.4 A considerable deterioration is observed at the A57/ Stadium Way junction between the reference case and with GMSF High scenario. The AM peak rises from 88% in the reference case to 121% in the GMSF High scenario. In the PM peak, an increase from 90% to 109% is observed. This assumes that the link road connecting the A57 Liverpool Road with the M62 does not exist.

12.1.5 1,620 no of vehicles travel through the junction in the AM peak from Port Salford Extension with a further 1,080 in the PM peak.

12.1.6 A substantial new junction has recently been provided at this location as part of a highway infrastructure package, "WGIS", to support the permitted Port Salford development. Further mitigation has been explored at the junction and whilst there is land surrounding the junction, it is anticipated a substantial alteration would be required to accommodate the additional development traffic of Port Salford Extension, subject to the interventions to be delivered on the surrounding highway network. Further work will be undertaken in advance of the Examination in Public to assess the impact of introducing an A57-M62 link road and new junction on the M62. This could have a significant impact at the A57 Liverpool Road/ Stadium Way junction, including a potential reduction in flow at this location. Discussions will continue between all relevant parties to mitigate the impact of the allocation.

6. A57 Cadishead Way / B5311 Fairhills Road

12.1.7 The A57 Cadishead Way / B5311 Fairhills Road junction is a priority junction operating significantly above capacity in the reference case.

12.1.8 With the addition of GMSF traffic, the situation deteriorates with a further 330 no of trips observed to travel through the junction to or from Port Salford Extension in the AM peak and 86 in the PM Peak.

12.1.9 Mitigation has been investigated and further information is provided in Section 13.

13. Transport Interventions Tested on the Local Road Network

- 13.1.1 The proposed mitigation schemes which are set out in this Section are designed to mitigate the impact of GMSF only, the schemes are not designed to solve pre-existing congestion on the local network.
- 13.1.2 Also it should be noted that these interventions are not expected to be the definitive solution but rather to demonstrate that a solution is possible at the location. The details of any mitigation schemes will need to be developed as part of the detailed planning process.
- 13.1.3 The following table provides a summary of the schemes proposed to mitigate the impact of GMSF at the junctions which have been identified through the Junction modelling process.
- 13.1.4 Table 9 provides a summary of the junctions relevant to Port Salford Extension and the approach to mitigation.

Table 9. Approach to Mitigation:

Junction	Mitigation Approach
1. A57 Manchester Road / A57 Cadishead Way / B5320 Liverpool Road	Reference and With GMSF results comparable – no mitigation proposed
2. A57 Liverpool Road / Stadium Way	Mitigation required. Substantial junction already in place – further investigation required to establish scheme capable of accommodating volume of traffic. Further work is being undertaken on Port Salford to test an A57 link road and new junction on the M62 which could have a significant impact at this junction.
6. A57 Cadishead Way / B5311 Fairhills Road	Mitigation investigated due to deterioration from reference case to GMSF. Signalising the junction has been tested in order to provide greater opportunities for traffic to enter/ leave the B5311 Fairhills Road.

14. Impact of interventions on the Local Road Network (where appropriate)

14.1.1 In order to understand whether the mitigation developed for the allocation (and all other allocations within the GMSF) is sufficient to mitigate the worst case impacts of the GMSF identified in section 11, a second run of the GMVDM with all identified mitigation included, was undertaken.

14.1.2 Table 10 below provides a comparison between the operation of the in scope junctions in the 2040 reference case (where no mitigation is provided) and the 2040 'high side' with mitigation scenarios.

Table 10. Results of Local Junction Capacity Analysis After Mitigation:

Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
1. A57 Manchester Road / A57 Cadishead Way / B5320 Liverpool Road*						
2. A57 Liverpool Road / Stadium Way**						
A57 Cadishead Way / B5311 Fairhills Road	187%	231%	147%	188%	376	155

* Junction 1 - A57 Manchester Road / A57 Cadishead Way / B5320 Liverpool Road has not been considered as part of the modelling exercise due to comparable results between the reference case and with GMSF scenarios.

** Junction 2 - A57 Liverpool Road / Stadium Way have been unable to identify any suitable form of mitigation at the junction at present. As discussed, further work is to be undertaken assessing the introduction of additional strategic infrastructure which could have an impact at the junction.

14.1.3 It can be seen from Table 10 that the situation in the 'with mitigation' GMSF High side scenario at 2040 in both the AM and PM peaks at the A57 Cadishead Way / B5311 Fairhills Road junction

improves to a level which is an improvement on the reference case. The junction is however still operating above capacity.

- 14.1.4 As indicated in section 13, mitigation is required at the A57 Liverpool Road / Stadium Way junction, however, it has not been possible to devise a scheme without major reconfiguration or land take. This does not take into account a potential A57 link road and new junction on the M62 which could have a significant impact at the junction.

15. Impact and mitigation on Strategic Road Network

15.1 Overview

- 15.1.1 This chapter covers those impacts where traffic generated by the GMSF allocations meets the Strategic Road Network (SRN). Junctions at the interface between the Local Road Network (LRN) and the Strategic Road Network (SRN) have been assessed using a similar approach to that described in the preceding chapters. Wider issues relating to the SRN mainline are being assessed separately as described below.
- 15.1.2 SYSTRA is currently consulting with Highways England on behalf of TfGM and the Combined Authority in relation to the wider impacts of the GMSF allocations on the Strategic Road Network (SRN). This consultation is ongoing and it is expected that it will allow Highways England to gain a strategic understanding of where there is an interaction between network stress points and GMSF allocation demand which will facilitate further discussion and transfer of information between TfGM and Highways England (yet to be defined) in reaching agreement and/or common ground relating to the acceptability of GMSF allocations in advance of Examination in Public (EiP).
- 15.1.3 The introduction of full WGIS is part of the consent for the Port Salford and Trafford Waters permissions. Full WGIS has been included as part of the reference case and with GMSF modelling scenarios.
- 15.1.4 Junctions 11 and 10 of the M60 are the main junctions that traffic originating at or destined for allocation Port Salford Extension would use. The following table provides a summary of the flows & RFC's at junctions 10 and 11 of the M60.

Table 11. Strategic Network Operation:

Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM	Allocation Flows AM	Allocation Flows PM
4. M60 Junction 11	96%	108%	136%	122%	1347	961
5. M60 Junction 10	135%	114%	145%	127%	259	59

M60 Junction 11

- 15.1.5 The local junction modelling work indicates that at 2040, M60 junction 11 (inclusive of full WGIS) is operating above its capacity in the PM peak. The addition of GMSF traffic (which isn't solely attributable to Port Salford) shows conditions deteriorate further. Port Salford Extension is responsible for 72% of GMSF traffic at 2040.
- 15.1.6 Traffic originating at or destined for Port Salford Extension accounts for 1,347 trips through the junction in the AM peak and 961 in the PM peak period at 2040.
- 15.1.7 Further discussions will be held with Highways England to clarify the impact of development traffic at Junction 11 of the M60. The junction is severely constrained with limited available land to consider alternative mitigation above and beyond full WGIS. These discussions will focus on the impact of traffic from across GM and not solely from Port Salford Extension as it's anticipated that mitigation on a strategic scale will be required at this location.
- 15.1.8 A sensitivity test has been undertaken to determine the impact Port Salford Extension has at the junction and whether the introduction of a new junction on the M62 would alleviate pressure at the junction. All traffic destined for or originating at locations to the north of the junction have been removed from flows at the junction, assuming that they would instead use the link road and the strategic road network as opposed to the A57 Liverpool Road. This manual re-assignment is an indication of what could happen, should a new junction be provided on the M62 for the allocation. It does not consider potential re-assignment of trips from elsewhere on the network. A more detailed modelling exercise should be undertaken to validate these findings.

Table 12. SRN Sensitivity at junction 11:

Junction	GMSF High 2040 AM W/Arm	GMSF High 2040 AM PRC	GMSF High 2040 PM W/Arm	GMSF High 2040 PM PRC
4. M60 Junction 11	97%	-5.5%	108%	-19.9%

15.1.9 It can be observed that the junction returns to the reference case situation with the traffic associated with Port Salford Extension removed from the junction. Further investigation will be required to assess the impact at junction 12 of the M60 as a consequence of any potential re-assignment.

5.M60 Junction 10

15.1.10 At 2040 in the reference case, junction 10 operates above operational capacity in both the AM and PM peaks. With GMSF traffic introduced, the AM peak deteriorates to 145%, whilst the PM increases to 127%.

15.1.11 In the AM peak, 259 no of trips are forecast to travel through the junction to/ from the allocation at 2040 with a further 59 in the PM peak.

15.1.12 As with M60 junction 11, further discussions will be held with Highways England to clarify the impact of development traffic at Junction 10 of the M60. The junction is severely constrained with limited available land to consider alternative mitigation above and beyond full WGIS. These discussions will focus on the impact of traffic from across GM and not solely from Port Salford Extension as it's likely that mitigation on a strategic scale will be required at this location to accommodate GMSF as a whole.

15.1.13 The number of trips using the junction (and the WGIS infrastructure to and from the M60 south) associated with Port Salford is considered to be realistic and on this basis, a sensitivity has not been undertaken.

6.M60 Junction 12

15.1.1 Merge and diverge assessments for the Strategic Road Network are outside the scope of the current commission. However, due to the unconventional nature of M60 junction 12 which

consists of merge and diverge links only, initial merge and diverge assessments, utilising the difference between the 2040 reference case and the 2040 'high side' flows, were undertaken using Design Manual for Roads and Bridges.

15.1.2 Merge and diverge traffic flow assessments have been undertaken as per Figures 3.12 and 3.26 in DMRB CD 122 Geometric design of grade separated junctions. These have been used to determine the required merge and diverge layout for base traffic levels and base + GMSF traffic flows for the junction merges and diverges to operate safely and within capacity. The assessments have been completed for both the morning and evening peak traffic flows, with the largest result proposed as the required improvement. Outputs from the assessment are contained in Table 13.

15.1.3 For each slip road type, the first number is the upstream number of lanes, the letter is the DMRB slip road type and the second number is the downstream number of lanes. A summary of the assessments can be provided on request. Assessments are based on flow information extracted from the strategic model alone and no stand-alone model has been created to assess the junction.

15.1.4 It can be seen that the arrangements required are broadly consistent between the reference case and 'with GMSF' scenarios aside from the northbound merge and diverge where a different arrangement is required in the 'with GMSF high 2040' scenario. It should be noted that these improvements are not required as a consequence of Port Salford Extension traffic in isolation, but the wider GMSF as the modelling indicates that this will be required by 2025.

Table 13. M60 junction 12 Merge/ diverge assessments:

Junction	Reference Case AM	Reference Case PM	GMSF High AM	GMSF High PM
6a.M60 Junction 12 (Eastbound Merge)	E 3 to 4	D 2 to 3	E 3 to 4	D 2 to 3
6b.M60 Junction 12 (Westbound Merge)	E 3 to 4	D 3 to 4	E 3 to 4	D 3 to 4
6c.M60 Junction 12 (Northbound Merge)	E 4 to 5	E 5 to 6	E 5 to 6	E 5 to 6
6d.M60 Junction 12 (Southbound Merge)	E 3 to 4	E 3 to 4	E 3 to 4	E 3 to 4
6e.M60 Junction 12 (Eastbound Diverge)	Flows exceed merge/ diverge assessment	Flows exceed merge/ diverge assessment	Flows exceed merge/ diverge assessment	Flows exceed merge/ diverge assessment

6f.M60 Junction 12 (Westbound Diverge)	D 3 to 2	D 3 to 2	D 3 to 2	D 3 to 2
6g.M60 Junction 12 (Northbound Diverge)	D 5 to 4	D 5 to 4	E 6 to 4	D 5 to 4
6h.M60 Junction 12 (Southbound Diverge)	Flows exceed merge/diverge assessment	D 5 to 4	Flows exceed merge/diverge assessment	Flows exceed merge/diverge assessment

A57/ M62 link road

- 15.1.1 The developer has indicated a preference for a new link road connecting the A57 Liverpool Road with a new junction on the M62 to serve the allocation. The link road hasn't been tested in the strategic modelling work undertaken as the link road and new junction are considered to be 'less than likely' to come forward.
- 15.1.2 Sensitivity tests have however been conducted to understand the potential impact at key junctions impacted by development traffic associated with Port Salford Extension.
- 15.1.3 In addition, discussions are being held with Highways England over the principle of a new junction on the M62 to serve the allocation and potentially unlock capacity on the M60.

16. Final list of interventions

- 16.1.1 This section of the report reports the final list of interventions required to enable the allocation to come forward.

Table 14. Final List of Interventions:

Mitigation	Description
Allocation Access	
Primary access to the allocation from the A57 Liverpool Road	New signalised crossroads on the A57 Liverpool Road. Without a link road connecting with the M62, junction modelling indicates that the junction isn't capable of accommodating the forecast flows

Mitigation	Description
Red Diesel access on A57 Liverpool Road	Additional arm at the A57 Liverpool Road/ Great Bear Port Salford junction
Necessary Strategic interventions	
Full Western Gateway Infrastructure Scheme (WGIS)	Conditioned as part of Port Salford phase 1
Rail freight terminal	Conditioned as part of Port Salford Phase 1
Canal berths & container terminal	Delivered as part of Port Salford Phase 1 development
Link road between A57 Liverpool Road and a new junction on the M62	Developer aspiration to remove traffic from local network
Roundabout on link road to provide access to Port Salford Extension	Developer aspiration to remove traffic from local network
Supporting Strategic Interventions	
CLC line capacity improvements	Improvements to heavy rail services/electrification. Due for Strategic Outline Business Case development.
Tram-train services on CLC line	Rail improvements - CLC line – longer term mitigation providing substantial improvements through Metro services via an onward potential city-centre Metro tunnel
Metrolink extension	Land has been safeguarded on the Port Salford Phase 1 allocation and WGIS has been designed to be enable trams to utilise the bridge to cross the Manchester Ship Canal
Rail Study Improvements	Chat Moss & West Coast Main Line Rail Study Improvements
Necessary Local Mitigations	
Identification of a scheme at the A57 Liverpool Road/ Stadium Way junction	A mitigation scheme will need to be identified to improve conditions at the junction without the A57/ M62 link road in place.
Improvements to bus services	Improve frequencies of services 67 and 100 during off peak hours, including a potential minor service diversion

Mitigation	Description
Walking & cycling improvements	As well as segregated cycling and walking access at the proposed access points, the allocation should benefit from direct walk/ cycleways through the allocation to access bus stops on the A57 Liverpool Road, and link to the Bee Network.
Supporting Local Mitigations	
Improvement at A57 Cadishead Way / B5311 Fairhills Road junction	An indicative signalisation scheme has been developed as a potential improvement scheme at this location.
Improvements to Local Link services	Expansion of the Local Link (demand responsive transport) services should be explored to connect nearby residential areas with Port Salford during out-of-service hours.
Walking & cycling improvements: Cheshire Lines Connection / Trafford Greenway	Irlam/ Cadishead viaduct reinstated for active mode travel between the of the City of Salford and Trafford Metropolitan Borough
SRN Interventions	
New junction on M62	Further discussions required with Highways England to establish principle of new junction on the M62 and agree a pathway to funding and delivery.
M60 Junction 10 Improvements	Further discussions to be held with Highways England following parallel impact study
M60 Junction 11 Improvements	Further discussions to be held with Highways England following parallel impact study
Merge/ diverge improvements at junction 12 of the M60	Assessment indicates issues above the reference case situation. Further discussion is required with Highways England through parallel impact study

16.1.2 As discussed throughout the Locality Assessment, a condition of the first phase of Port Salford (i.e.. that with extant planning permission) is for a rail freight terminal, and full WGIS to be in place before the allocation can be fully developed, while the development will deliver canal berths and a container terminal.

- 16.1.3 The modelling work undertaken has indicated that a strategic intervention will also be required on the highway network to accommodate the forecast flows at 2040. The developer has indicated an aspiration for a link road connecting the A57 Liverpool Road with a new junction on the M62. Whilst this intervention would improve capacity on the local network, a funding source for the scheme is unclear.
- 16.1.4 M60 junctions 11 and 10 are observed to operate over-capacity at 2040. Given that full WGIS is already included as a form of mitigation at the junctions, further discussions will be required with Highways England due to constraints around the junction.
- 16.1.5 A merge/ diverge assessment of junction 12 indicates that the northbound merge and diverges require mitigation above and beyond that required in the reference case.
- 16.1.6 Highways England is also addressing capacity issues on the Strategic Road Network as part of the North West Quadrant Study. The study is currently being undertaken and it is anticipated that over the next five years, it will be complete and potentially deliver emerging early interventions such as junction improvements on the M60 and complementary improvements on the local transport network.

16.2 Traffic Reduction Strategies

- 16.2.1 The analysis underpinning this Locality Assessment has been undertaken using a standard robust highway modelling approach including reference to predicted future development trip levels based on the historical operation of major employment sites, particularly with respect to traditional AM & PM peak 'rush hour' periods.

16.2.2 There is an increasingly compelling argument that the use of such peak hour demand estimates is overly robust for long term forecasting, particularly if applied wholesale across new strategic development areas. 'Peak spreading' is already a well-recognised feature of recent general traffic growth across Greater Manchester (i.e. only limited traffic growth taking place during critical 'rush hour' periods), with additional travel demand tending to be concentrated on more 'off-peak' periods, when there is spare transport network capacity to accommodate such movements. Furthermore, increases in modern communications technology have increased the potential for home-working / tele-working and reduced the need for business travel and meetings. The notion of '9 to 5' style working is now viewed as an out-dated concept, with staff valuing the benefits of flexible working.

17. Strategic Context – GM Transport Strategy Interventions

- 17.1.1 TfGM and Salford Council have developed a number of wider transport proposals which will support travel around the Allocation area.
- 17.1.2 TfGM is leading a study to evaluate the feasibility of potential new Rail and Metrolink stations and could lead to a small number of stations being delivered, and could include Little Hulton and Western Gateway in Salford. In addition, a rapid-transit connection is planned from MediaCityUK to Salford Crescent rail station, and new Metrolink connections between Salford Quays, Inner Salford and the Regional Centre. Interchange improvements are also identified at Eccles, better linking the nearby rail, metrolink, and bus networks that could benefit Port Salford Extension.
- 17.1.3 Improvements to the Castlefield rail corridor (committed within the 5-Year Delivery Plan) will see capacity expansion which will accommodate forecast levels of employment growth in the Regional Centre. Whilst not adjacent to the allocation, it will improve capacity and reliability journeys into and round the Regional centre, improving the attractiveness of public transport for city-to-city trips helping to reduce pressures on highway corridors between Greater Manchester, Warrington and Liverpool, benefitting the Port Salford Area including the A57 and M62 corridors. .
- 17.1.4 The Greater Manchester Transport Strategy 2040 in its Vision for Bus identifies key areas for improvement which include achieving network integration with regards to routing, timing, interchange and multi-modal travel. Passengers will be offered an improved customer experience

through making the network more navigable and incorporating a simplified fares system that offers value for money.

- 17.1.5 Longer term solutions consist of a city centre metro tunnel to facilitate improved rapid transit throughout Greater Manchester and improved services on shorter-distance suburban lines by conversion to metro/ tram train operation. Improvements will also be developed for the key commuting corridor of Chat Moss and the West Coast to provide increased frequency and capacity for journeys to and from the Regional Centre. These would provide further significant improvements to help reduce pressure on city-to-city highway corridors.
- 17.1.6 Greater Manchester also has ambitious plans to develop the Bee Network - the UK's largest cycling and walking network as a key element to delivering on the "Right Mix" vision, and the Combined Authority has allocated £160m between 2018-2022 to fund the first phase of the Bee Network. The network has at its core a programme of new and upgraded pedestrian and cycling crossing points of major roads and other sources of severance, connected by a network of signed cycling and walking routes on existing quiet streets. These will be complemented by a number of routes on busier roads where Dutch style cycle lanes protected from motor traffic will be constructed.
- 17.1.7 The latest version of Greater Manchester's 2040 Transport Strategy and 5-Year Delivery Plan set out a comprehensive programme of work across all modes and in all GM local authorities which are all focused on ensuring the realisation of the 'Right Mix' vision. Many of these interventions support the GMSF Allocations directly, whilst others are intended to provide alternatives to private car travel more generally. The schemes demonstrate a clear plan for delivering strategic transport interventions for the first five years of the GMSF plan period, whilst also laying the foundations for longer term investment in sustainable transport across the length of the plan period.
- 17.1.8 For further information see the latest version of the 2040 Transport Strategy and 5-Year Delivery Plan.

18. Phasing Plan

- 18.1.1 The initial locality assessments were based on information on allocations consolidated by TfGM based on inputs from each of the Districts. This initial exercise focused on the development quantity to be delivered at the end of the plan period. All phasing plan information contained in this Locality

Assessment is indicative only and has only been used to understand the likely intervention delivery timetable. Final trajectory information and the final allocation proposal is contained in the GMSF Allocation Topic Paper.

- 18.1.2 During the course of the locality assessment work in late 2019 / early 2020, the Districts provided input on their expected phasing of the allocations focusing on the milestone years of 2025 and 2040. The expected 2025 development quanta were tested along with those for 2040 to assess their deliverability in terms of transport network capacity. In some cases the development phasing was amended by the Districts as a result of the technical analysis undertaken.
- 18.1.3 It has been assumed that no development will have taken place prior to 2025. Should the allocation come forward, it is likely that this will be phased between 2030 and 2038.
- 18.1.4 At this stage, it is unclear when parcels of land will be delivered across the allocation and the masterplanning process will confirm this.
- 18.1.5 Table 15 indicates when development is likely to be delivered for the allocation. An indication of when mitigation is likely to be required is provided in Table 16.

Table 15. Allocation Phasing:

Allocation Phasing	2020 25	2025 30	2030 2037	2037+	Total
Total (sqm)	0	0	320,000	0	320,000

Table 16. Indicative intervention delivery timetable:

Mitigation	2020 2025	2025 2030	2030 2037
Provision of allocation access		✓	
Full Western Gateway Infrastructure Scheme (WGIS)		✓	
Rail freight terminal		✓	
Canal berths & container terminal		✓	
Link road between A57 Liverpool Road and a new junction on the M62			✓
Roundabout on link road to provide access to Port Salford Extension			✓
Supporting Strategic Interventions			
CLC line capacity improvements		✓	
Tram-train services on CLC line			✓
Metrolink extension			✓
Rail Study Improvements			✓
Necessary Local Mitigations			
Identification of a scheme at the A57 Liverpool Road/ Stadium Way junction		✓	

Mitigation	2020 2025	2025 2030	2030 2037
Improvements to bus services		✓	
Walking & cycling improvements (to/ from and within the allocation)		✓	
Improvement at A57 Cadishead Way / B5311 Fairhills Road junction (delivered as part of North of Irlam allocation)		✓	
Improvements to Local Link services		✓	
Walking & cycling improvements (schemes such as the Cheshire Lines Connection/Trafford Greenway)		✓	
New junction on M62			✓
M60 Junction 11 improvements			✓
M60 Junction 10 improvements			✓
M60 junction 12 improvements	✓		

19. Summary & Conclusion

19.1.1 The Port Salford Extension allocation is planned to comprise of 320,00sqm of employment land with a focus on logistics activity. The allocation is located between the M62 and the A57 Liverpool Road, to the south of Peel Green and north of Irlam. Immediately south of the allocation is the residential area of Barton Moss. The northern part of the allocation is bound to the east by Barton Aerodrome, Peel Green Cemetery and Salford City Academy school. The north of the allocation is bound by the Liverpool-Manchester railway line.

- 19.1.2 There are two main bus services that pass the allocation on the A57 Liverpool Road; services 67 (Cadishead to the City Centre) and 100 (Warrington to the City Centre). Both services provide a frequent service to and from the City Centre with the 67 benefitting from 4 services per hour and the 100 with 2 services per hour from 0530 to 2300.
- 19.1.3 The nearest rail stations are located in Patricroft and Irlam, both within 4km of the proposed allocation. Two services per hour (in both directions) are provided at Irlam which connects Manchester, Warrington and Liverpool whilst an hourly service in both directions is provided between Manchester and Liverpool. Metrolink stops are located at Eccles Interchange and Trafford Centre. Five Metrolink services per hour are provided from the Interchange to the City Centre via Salford Quays. The Trafford Park Line opened in March 2020 and is located to the south of the ship canal. Five services per hour link the Trafford Centre with the Regional Centre with a journey time of approximately 30 minutes. Both Metrolink stations afford good opportunities to interchange with local bus services, providing greater opportunities to travel using public transport.
- 19.1.4 It has been proposed that the most appropriate access point for the allocation is on the A57 Liverpool Road with a signalised crossroads introduced. The developer has also indicated that they have aspirations for a link road connecting the A57 Liverpool Road with the M62 via a new junction on the Strategic Road Network.
- 19.1.5 Whilst freight movements are the primary focus of the allocation, consideration of how employees access the allocation is also required. From an active mode perspective, the A57 Liverpool Road has a shared footway/cycleway connecting the proposed allocation with Irlam and Cadishead to the south and Peel Green to the north. The Manchester Ship Canal severs access to the east and Trafford although the introduction of the Part WGIS scheme over the ship canal does afford access to the east of the M60 and the Trafford Centre.
- 19.1.6 The main recommendations to improve cycling and walking access, and its integration with public transport in relation to links within the allocation are as follows:
- Safe walking and cycling routes passing through the allocation, to access the A57 Liverpool Road.
 - Maintaining existing PROW and upgrading sections that run through the allocation

- Good connectivity with the Bee network

19.1.7 Modelling work has been undertaken using the Greater Manchester Variable Demand Model (GMVDM) with a constrained and high side scenario. The constrained and high side model runs take account of traffic associated with all GMSF allocations.

19.1.8 A 'with GMSF' scenario has been assessed against a Reference Case which assumes background growth and includes the housing and employment commitments from the districts. Specific junctions have been assessed to understand the impact of the allocation on junctions along the A57 Liverpool Road and on the M60 to the east of the allocation.

19.1.9 Bus service improvements in addition to walking and cycling improvements are considered to be necessary to bring the allocation forward as part of the GMSF, however, based on the modelling work undertaken, a strategic intervention is considered to be critical to alleviate the impact of traffic on the local network associated with the allocation.

19.1.10 The following schemes are considered to be supporting of the Port Salford Extension allocation:

- CLC line capacity improvements
- Development of tram-train services on the CLC line
- Metrolink extension to Port Salford
- Irlam/ Cadishead viaduct pedestrian and cycling infrastructure

Conclusion

19.1.11 The establishment of Port Salford, and Port Salford Extension as a tri-modal freight facility providing a hub for distribution will seek to reduce the impact of freight on the wider strategic and local road networks through modal shift to water and rail. However, it will attract more concentrated freight-based vehicle movements within the immediate vicinity of the allocation.

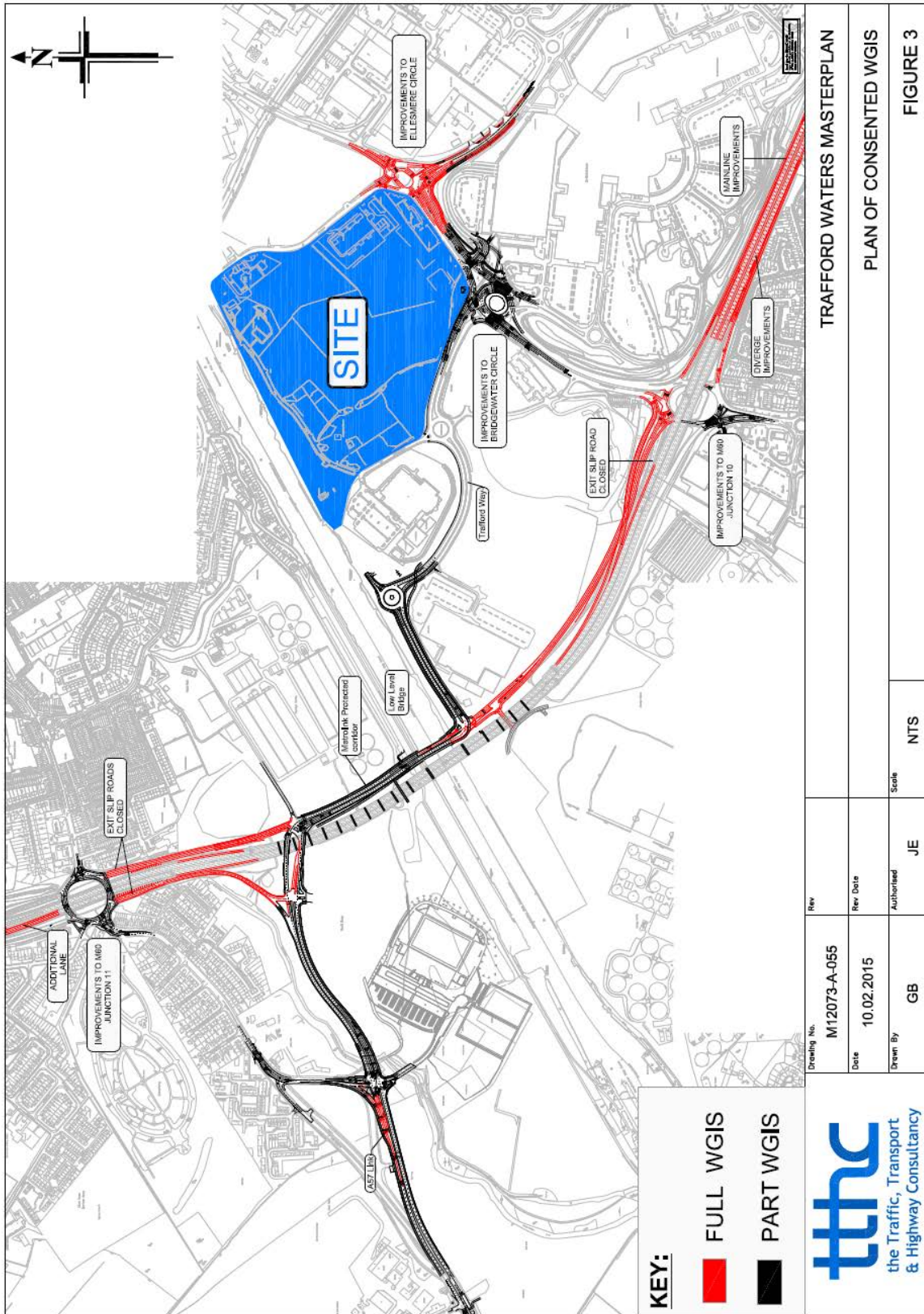
19.1.12 The allocation provides reasonable public transport accessibility through a combination of direct local bus services to and from the City Centre via adjacent neighbourhoods, and access to rapid transit services at nearby rail and Metrolink stations with onward connections across, and beyond Greater Manchester. These will be further enhanced through improvements to bus service frequencies with direct access to the allocation, and the development of new alignments, and service improvements for rapid transit within the vicinity.

- 19.1.13 In addition to public transport improvements, the area will also benefit from the introduction of the Bee network which will provide improved provision for pedestrians and cyclists to access the allocation, further reducing the dependency on private car use. The impacts of these sustainable transport interventions are underestimated in the strategic modelling work undertaken to date which does indicate the need for mitigation on the highway network. At this stage, the modelling work is considered to be a 'worst case' scenario as it does not take full account of the extensive opportunities for active travel and public transport improvements in the local area.
- 19.1.14 Due to the uncertainty over the deliverability of a new junction on the M62 and associated link road to connect with the A57 Liverpool Road, a worst case assessment has been undertaken assuming that access is provided solely from the A57 Liverpool Road. The modelling undertaken indicates that significant issues are forecast to be experienced at junctions 11 and 10 of the M60 despite the assumed completion of WGIS. Whilst Port Salford Extension traffic is not the only contributory factor at these junctions, it does have a significant impact at junction 11 and on subsequent junctions along the A57 Liverpool Road towards the allocation including the A57 Liverpool Road/ Stadium Way junction. There is no immediately identifiable solution at the junction based on the modelling work undertaken to date.
- 19.1.15 Within the Transport Locality Assessments, generic parameters have been applied to account for trip generation and distribution across all GMSF allocations. Following legal advice, only infrastructure with a reasonable prospect of delivery can be assumed to come forward and TfGM/ the Combined Authority's transformative transport and land use policies (known as "the right mix") cannot be assumed to be in place. This approach is consistent across all allocations and all locality assessments are presented in this manner. At present, the locality assessment identifies considerable constraints, both from an infrastructural and cost perspective that would need to be overcome to ensure that Port Salford Extension could be delivered as an allocation in the GMSF.
- 19.1.16 It is acknowledged that whilst this approach applies a consistent and defensible method, this constitutes a worst-case scenario regarding general highway traffic demands for allocations. This is particularly notable for Port Salford Extension, where the purpose of the development is specifically to deliver modal shift from conventional HGV movements toward sustainable transport of goods via water and rail, where associated trip rates were identified and considered for the permitted application of the adjacent Port Salford development.

19.1.17 On this basis, it is recognised that the current locality assessment conclusions do not reflect the most likely level of impact. Further work should be undertaken to assess the allocation in greater detail with a more comprehensive and scheme-specific evidence base established, taking into account the unique nature of the development. The assessment should determine the level of infrastructure required to deliver the allocation and mitigate subsequent impact on the local and strategic highway network appropriately, as well as considering possible impacts on other GMSF allocations. This work should be coordinated with partners such as Highways England who are leading a study into the operation of the Strategic Road Network within Manchester's North West Quadrant, running in parallel with GMSF and has strong geographical connections to the Port Salford study area.

Appendix A – WGIS Infrastructure

(Illustrative/Typical Layout)



Appendix B – A57 Access To Allocation

(Illustrative/Typical Layout, location in Figure 3)

