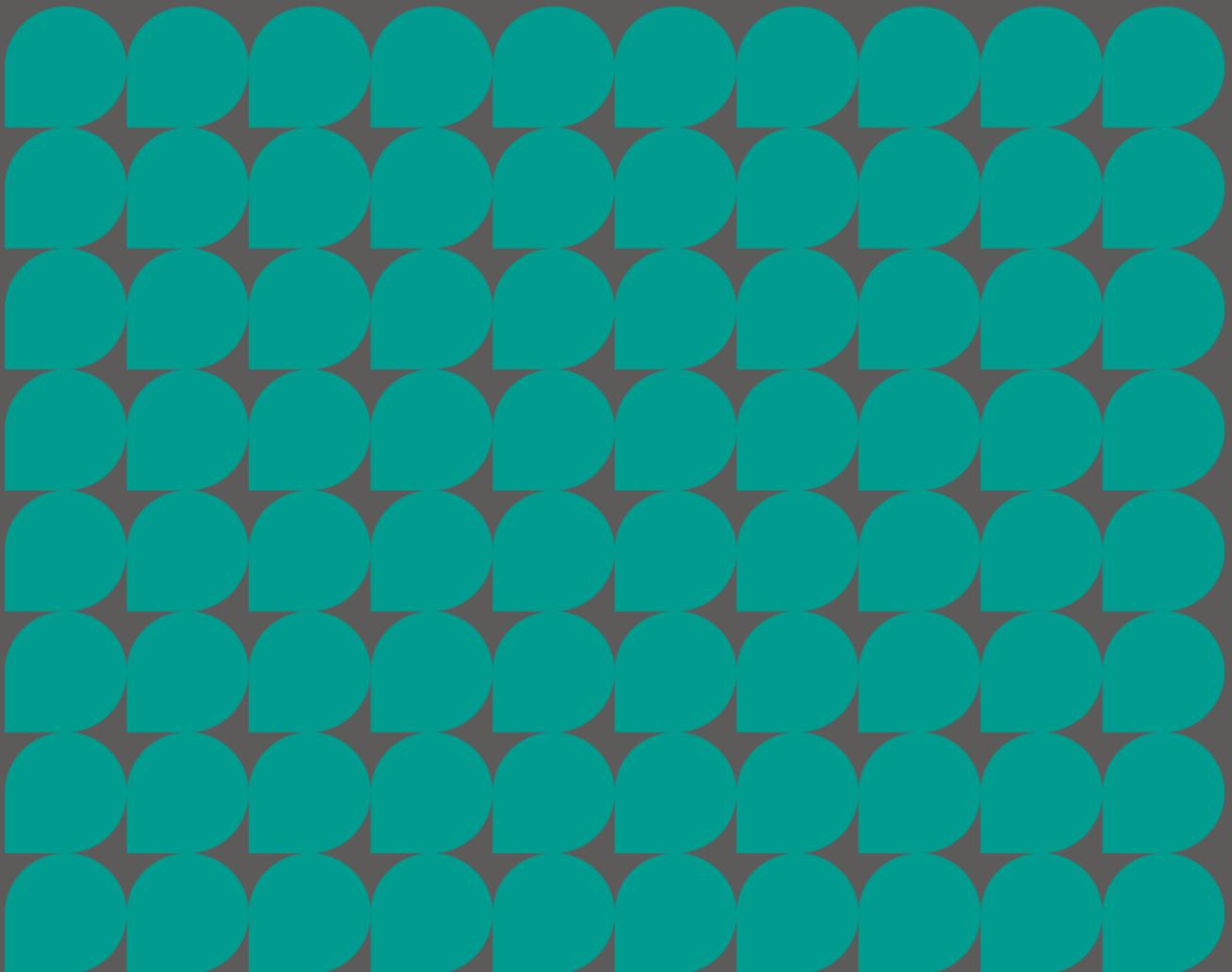


Transport Locality Assessments Addendum

Cross Boundary Allocations Addendum (3): Roundthorn
Medipark Extension and Timperley Wedge

Places for Everyone – July 2021



Review Note

PLACES FOR EVERYONE

GMA 3.1 and GMA3.2 Locality Assessment Update Note

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1. Executive Summary

- 1.1.1 The conclusions of GMA3.1 Roundthorn Medipark and GMA3.2 Timperley Wedge Locality Assessment, November 2020, remain robust. The 2020 assessments gave an initial indication that the traffic impacts of the allocations can be sufficiently mitigated and that the allocations are deliverable with the proposed mitigations in place.
- 1.1.2 These conclusions have been tested again, using updated modelling where necessary, to reflect recent changes – such as Stockport’s withdrawal from GMSF. The review has not identified any significant changes and, on this basis, the conclusions arrived at in the 2020 Locality Assessments are still considered to be valid.
- 1.1.3 As part of the original Locality Assessments for GMA3.1 Roundthorn Medipark extension, GMA3.2 Timperley Wedge and GMA 10 Global logistics it was identified that mitigation was required at M56 junction 6. At that time no mitigation was identified. As part of this review mitigation has been identified for this location. However it should be noted that a study is currently underway which aims to develop a strategic approach to mitigate the significant impacts of developments over and above those considered as part of the Places for Everyone (Pfe) including HS2, NPR and other major development including Airport City in the vicinity of Manchester Airport.
- 1.1.4 M56 Junction 5 was identified in the Locality Assessment November 2020 as requiring improvement, although no mitigation was identified at that stage. Following the change in routing and volumes in and around GMA3.1 and 3.2 it was identified that this junction should be re-examined. This is being considered as part of the parallel Pfe Strategic Road Network (SRN) study.
- 1.1.5 Further work and a full Transport Assessment will be necessary to ensure that potential mitigation measures are designed in more detail and remain appropriate as the allocations move through the planning process. The allocations will also need to be supported by continuing wider transport investment across Greater Manchester

2. Introduction

2.1. Background

2.1.1. Since April 2019, SYSTRA Ltd has been leading, on behalf of the nine Places for Everyone Local Authorities and Transport for Greater Manchester, on the assessment and mitigation of the transport impacts of the development Allocations identified in the Places for Everyone joint development plan (formerly the Greater Manchester Spatial Framework). This work resulted in the publication of a series of Locality Assessments which:

- Forecast the pattern of traffic movement in 2025 and 2040 on the Greater Manchester transport network, both before and after the addition of traffic resulting from the delivery of the GMSF Allocations;
- Assessed the impact of that additional traffic on existing transport infrastructure;
- Identified measures which would mitigate the impact of the additional traffic by examining enhancements to the public transport, active travel and highway network;
- Priced those enhancements on a consistent basis to support the evaluation of the viability of the Plan; and,
- On the basis of the above, confirmed whether or not the Allocation was appropriate from a transport perspective.

2.1.2. Following the withdrawal of Stockport Council from the original Greater Manchester Spatial Framework 2020 Joint Development Plan Document (Joint DPD) preparations, the nine remaining Local Authorities have agreed to use the GMSF as the basis for a new Places for Everyone Plan Joint DPD. This new plan has been prepared on the basis that it will have ‘substantially the same effect’ as the GMSF. Full details of the processes, dates of consultations and key decision meetings are set out in the Topic Papers.

2.1.3. The “Transport Locality Assessment – Cross Boundary Allocations – GMSF 2020” document formed part of the original evidence base which was assembled to support the policies and proposals in the GMSF 2020. Given the basis on which the PfE has been

prepared, the GMSF evidence base remains valid in relation to the PfE 2021. That said, the original Locality Assessment for Roundthorn Medipark and Timperley Wedge has been reviewed in the light of the change from GMSF 2020 to the PfE2021 and this addendum report has been produced to identify any minor amendments. This addendum should therefore be read in conjunction with the “Transport Locality Assessment – Cross Boundary Allocations – GMSF 2020” document made available in October 2020.

2.1.4. Since then a number of factors have necessitated a review of the conclusions of those Locality Assessments and revision or confirmations to those findings as appropriate. Those factors include:

- The removal of some Allocations from the Plan;
- Changes to the quantum of development proposed within some Allocations;
- Changes to the scale or type of transport supply (also known as transport mitigation schemes or interventions) proposed close to or within some Allocations;
- The withdrawal of Stockport Council and their associated Allocations from the Greater Manchester Spatial Framework; and,
- Modifications to the reference transport network to include newly committed schemes on the strategic road network (SRN).

2.1.5. These are factors which, taken together, may alter the pattern of traffic movements close to the remaining Allocations and impact on wider traffic movements across the conurbation. As such, it was considered necessary to check that the conclusions of the original assessments remain robust. This note sets out the processes behind, and conclusions of, the review for Roundthorn Medipark and Timperley Wedge. This note identifies whether any of these changes are likely to significantly impact on the conclusions of the original assessments and where needed it sets out an updated technical assessment of the impact of the Allocations in Roundthorn Medipark and Timperley Wedge on the operation of the transport network, and where necessary reviews and revises the transport infrastructure necessary to mitigate the impacts of the site.

2.2. Approach to the production of the Locality Assessment Addendum

2.2.1. Since the completion of the original Locality Assessments in September 2020, a number of factors have necessitated a review of the original conclusions. These include the decision of Stockport Council to withdraw from GMSF 2020, resulting in a number of Allocations and supporting infrastructure schemes being removed from the Plan. Other local authorities have chosen for various reasons to either remove Allocations or to make changes to the amount of development, the development type, its phasing, or the type of supporting infrastructure, all of which may have an impact on the operation of the Allocation and its impact it may generate on the transport network. As a result of this SYSTRA Ltd were asked to look again at the assumptions and conclusions of their original work to reassess its validity.

2.2.2. This work began with an update to the transport model to reflect the changes summarised above in order to obtain a more relevant forecast of likely trip generation and distribution in the two forecast years of 2025 and 2040.

2.2.3. At the outset of the review process it became clear that the level of detail required would vary between allocations. Some would require only a fairly high-level qualitative review while others would require a more detailed quantitative review. There are a number of reasons for this distinction; some of which are Allocation-specific and some related to regional / GM-wide changes.

2.2.4. In terms of the allocation-specific changes, the key considerations in adopting a quantitative review approach were as follows:

- A material change in development quantum as compared to that which was assessed in Summer 2020 (either an increase or a decrease)
- Proposed changes to the transport interventions serving an allocation made after the core assessment in Summer 2020



- Requested changes relating to the analytical approach; e.g modified trip generation rates, increased spatial extent of the study area, sensitivity tests of alternative networks etc.

2.2.5. In terms of the regional / GM-wide changes, the key considerations in adopting a quantitative review approach were as follows:

- The removal of all of the Stockport allocations and the associated reduction in transport demand; most directly relevant to the neighbouring districts
- Changes in the status of major transport infrastructure; for example, the confirmation of the Simister Island highway network improvements was expected to change traffic distribution and flow patterns in the NE area of GM

2.2.6. The outputs of the strategic modelling at the small number of sites which were considered suitable for a qualitative review were compared to the outputs from the previous round of modelling which was used to inform the production of the original Locality Assessment, in those instances where the outputs were considered to be comparable no further work was deemed necessary.

2.2.7. In the majority of cases however, changes between the model outputs indicated that a quantitative review would be necessary. The scope for this was discussed and agreed with officers of the relevant Local Authority and Transport for Greater Manchester before work began.

2.2.8. The outputs from the strategic modelling exercise were inputted into the local junction models developed for the original Locality Assessment work. Where the strategic modelling indicated that new junctions were likely to come under strain in either of the two future year scenarios, these were built using industry standard 'Linsig v3' or 'Junctions 9' software. Traffic signal information, including signal phasing and timings, and lane geometry (alignment, profile and lane position) was obtained from TfGM in order to replicate the junctions as closely as possible.



- 2.2.9. In a manner which replicates the method originally used for the Locality Assessment work, junction performance was tested in both the Reference and PfE Scenarios and, assessed to confirm if the mitigations originally developed for the Allocations remained adequate, needed to be expanded, or in fact could be de-scoped or removed all together as a result of changes in traffic flow and distribution. As with the original work the objective here was to mitigate back to the Reference Case, rather than to reduce traffic flow back to the Base Case. This means that the mitigation may not result in the junction operating within capacity in the forecast year.
- 2.2.10. In a limited number of instances, the updated Locality Assessment work has indicated that traffic flow and distribution may be lower than originally forecast, but the decision has been made not to de-scope or remove a mitigation. This is in order to provide robustness and to future proof the PfE recommendations, recognising that further, more detailed work will be done on a site-by-site basis as part of the planning application process.
- 2.2.11. In addition to reviewing highways scheme, the non-highway and sustainable transport proposals were also reviewed. These included proposals for new or extended bus services, Metrolink extensions and cycling and walking. The transport evidence documents produced for the GMSF/PfE Plan refer to the Bee Network as Greater Manchester's walking and cycling network. Moving forward the Mayor's intention is for trams, buses, trains, taxis and private hire combined with walking and cycling in Greater Manchester to be branded under the terminology of the Bee Network.
- 2.2.12. Whilst this analysis considered primarily the local highway network, SYSTRA is undertaking a separate, parallel exercise in conjunction with TfGM and Highways England to examine wider impacts on the strategic road network (SRN). This parallel exercise is investigating cumulative PfE impacts on the SRN mainline links and is expected to deliver key findings in late Summer 2021. Any allocation-specific impacts, such as those occurring at SRN junctions, have been set out in the Locality Review documentation.

2.3. Conclusion

2.3.1. The Locality Assessment review exercise has confirmed the Transport Locality Assessment work published in October 2020 as robust in the light of recent changes and that the Allocations remain viable from a transport perspective. However, further work, including a full transport Assessment will need to be carried out on each Allocation as it comes forward for planning permission, which will ensure that the mitigation measures are revised in more detail and remain appropriate for the size and type of development.

N.B This note uses the GMSF reference numbers of each of the allocations to link them to the original Locality Assessment documents. For information, the new reference numbers for the Places for Everyone Joint Plan are shown in the table below:

Table 1. Revised allocation reference numbers

Allocation	GMSF 2020 Reference	PfE 2021 Reference
Roundthorn Medipark	GM3.1	JPA3.1
Timperley Wedge	GM3.2	JPA3.2

3. Changes since the publication of the Locality Assessment

3.1 Broad changes

- 3.1.1 When the original Locality Assessment¹ was developed the M56 smart motorway scheme between junctions 6 and 8 had been paused following the announcement of a government led review into smart motorways. Following publication of the Evidence Stocktake Report and Action Plan the sequencing of smart motorway projects is being revised, however the overall smart motorways programme has been allowed to go forward. Highways England will provide more detail on the status of individual smart motorway project in 2021. These developments have resulted the smart motorway scheme for the M56 between junctions 6 and 8 being included within the June 2021 round of modelling. The inclusion of this scheme provided significant additional capacity along the section of the M56 approaching south Manchester and has therefore attracted trips on to the M56 strategic corridor.
- 3.1.2 In December 2020 Stockport Metropolitan Borough Council (MBC) voted to withdraw from the Greater Manchester Spatial Framework process, this has resulted in the removal of B1/B8 employment land and dwellings from the plan. The Stockport sites are located to the north east of the Manchester City Council sites included within PfE Joint development plan and a number of within proximity of the M56 and A555, locations which are impacted by the development of sites within Manchester and Trafford.
- 3.1.3 The table below summarises the changes considered in the locality assessment review and which are relevant to these sites.

3.2 Allocation specific changes

- 3.2.1 The table below summarises the changes considered in the locality assessment review and which are relevant to these sites.

Table 2. Allocation specific changes

Allocation	Change	Notes
<p>GMA 3.1 Roundthorn Medipark and GMA 3.2 Timperley Wedge</p>	<p>GMA3.1 Quantum: 2025: Unchanged 2040: Unchanged GMA3.2 Quantum: 2025: Unchanged 2040: Increase of 117 dwellings in June 2021 round modelling Infrastructure: No change to the previously proposed interventions Other: Addition of Smart motorways between junction 8 and 6 on the M56</p>	<p>No change in 2025 No change in 2040 Potentially significant impact – more detailed review of changes in traffic patterns required. No change Potentially significant impact – more detailed review of changes in traffic patterns required.</p>



3.3 Supporting interventions in Trafford and Manchester

3.3.1 Trafford Council, Manchester City Council and TfGM have planned a number of improvements across Trafford and Manchester which are intended to make it easier for people to travel sustainably. This includes public transport and active travel improvements, as well as elements of the Bee Network, a comprehensive cycling and walking network which covers all Districts within Greater Manchester. The overall delivery plan of strategic transport interventions that will support all allocations, and detail of the Bee Network, in Trafford and Manchester are shown in the following images.



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Figure 1. Trafford Delivery Plan

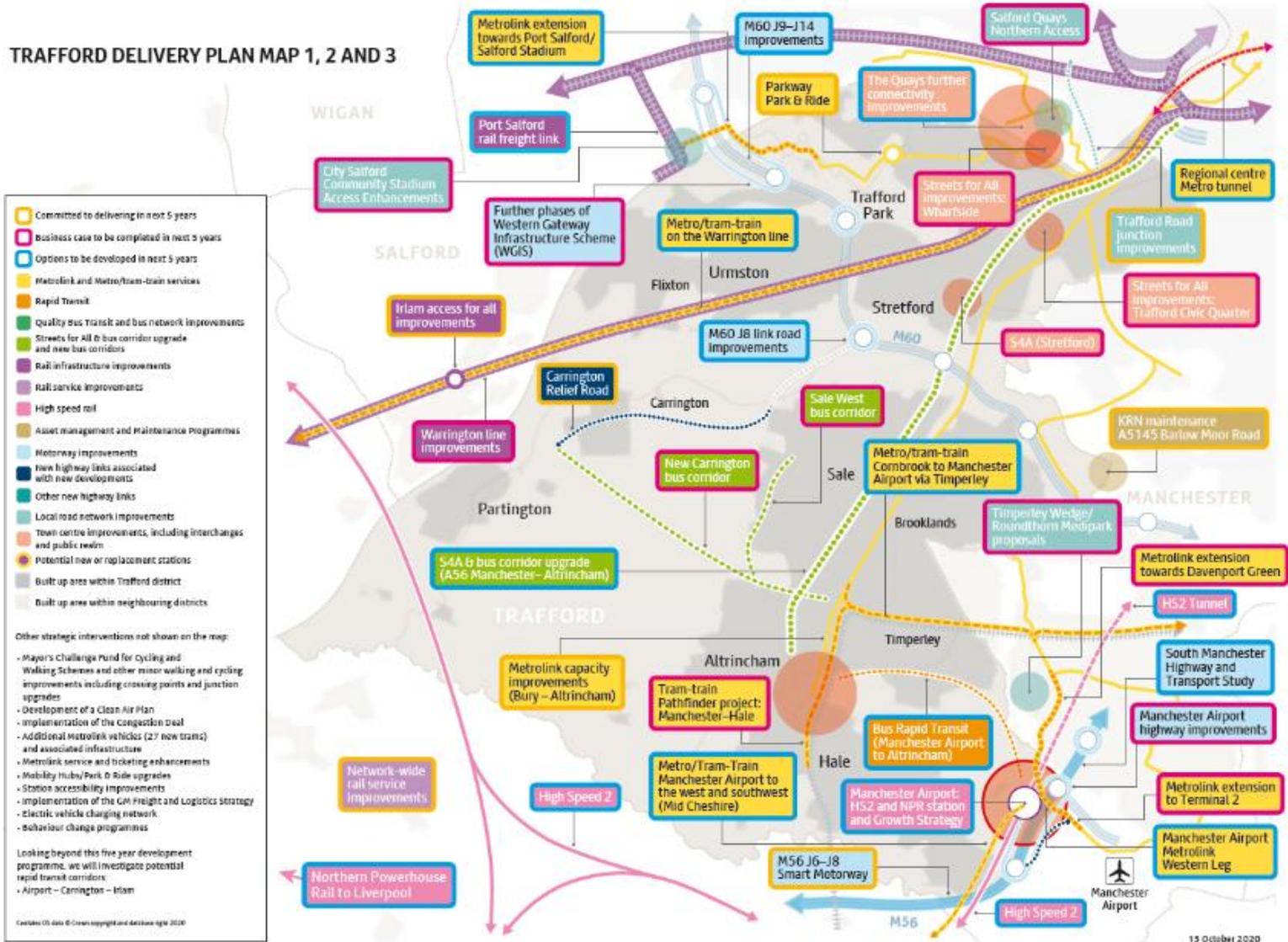


Figure 2. Manchester Delivery Plan

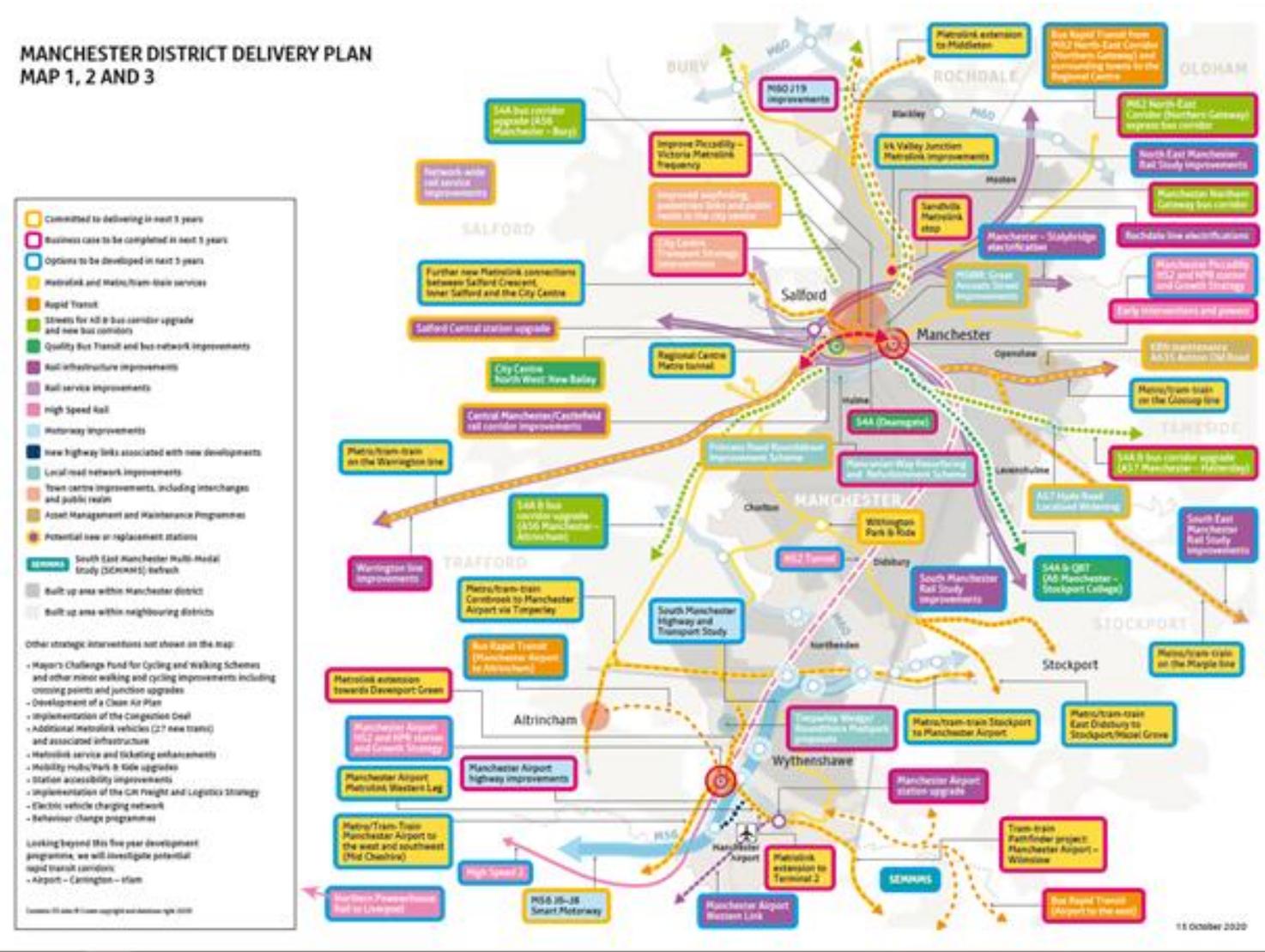


Figure 3. Trafford Bee Network

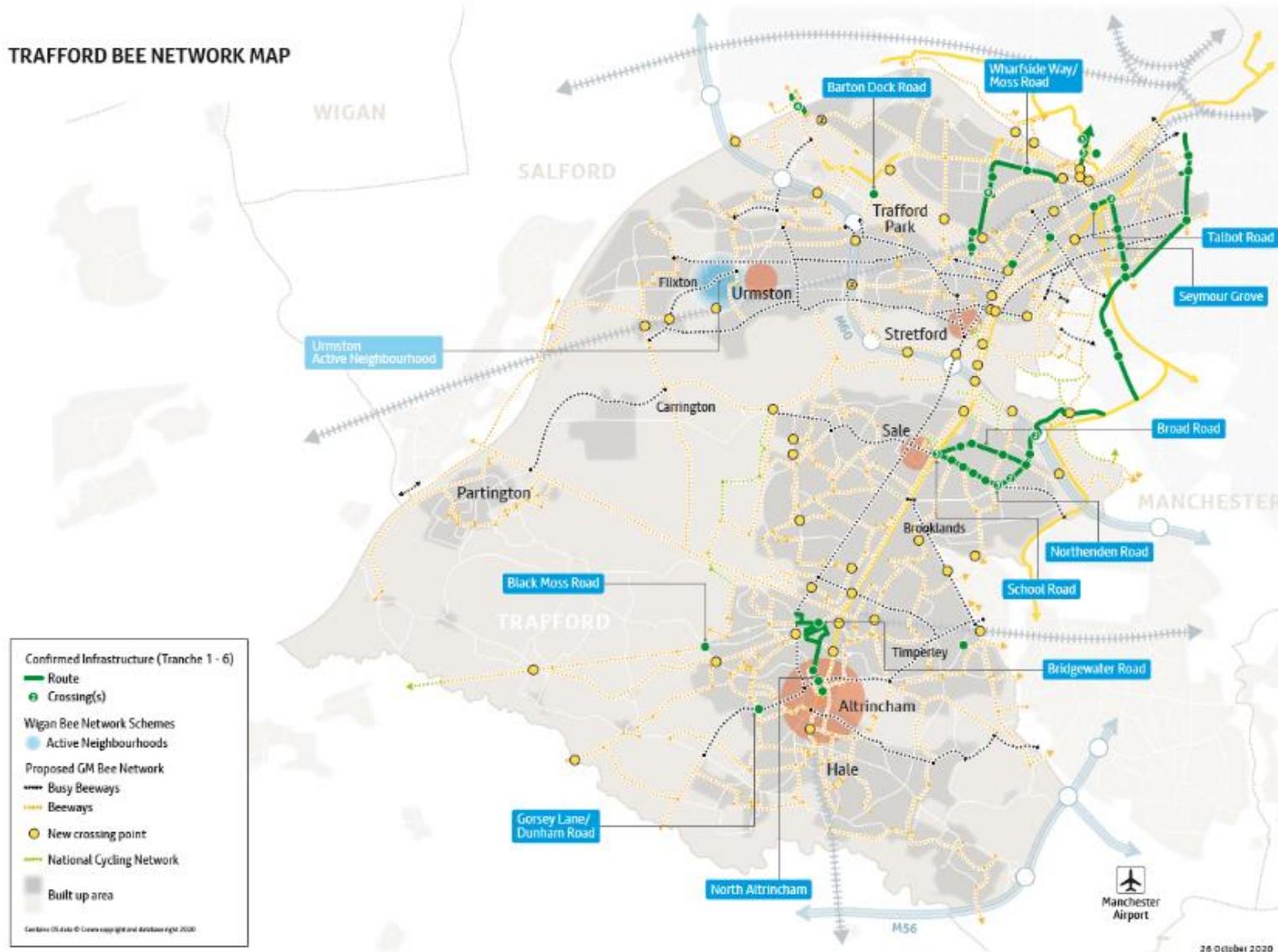
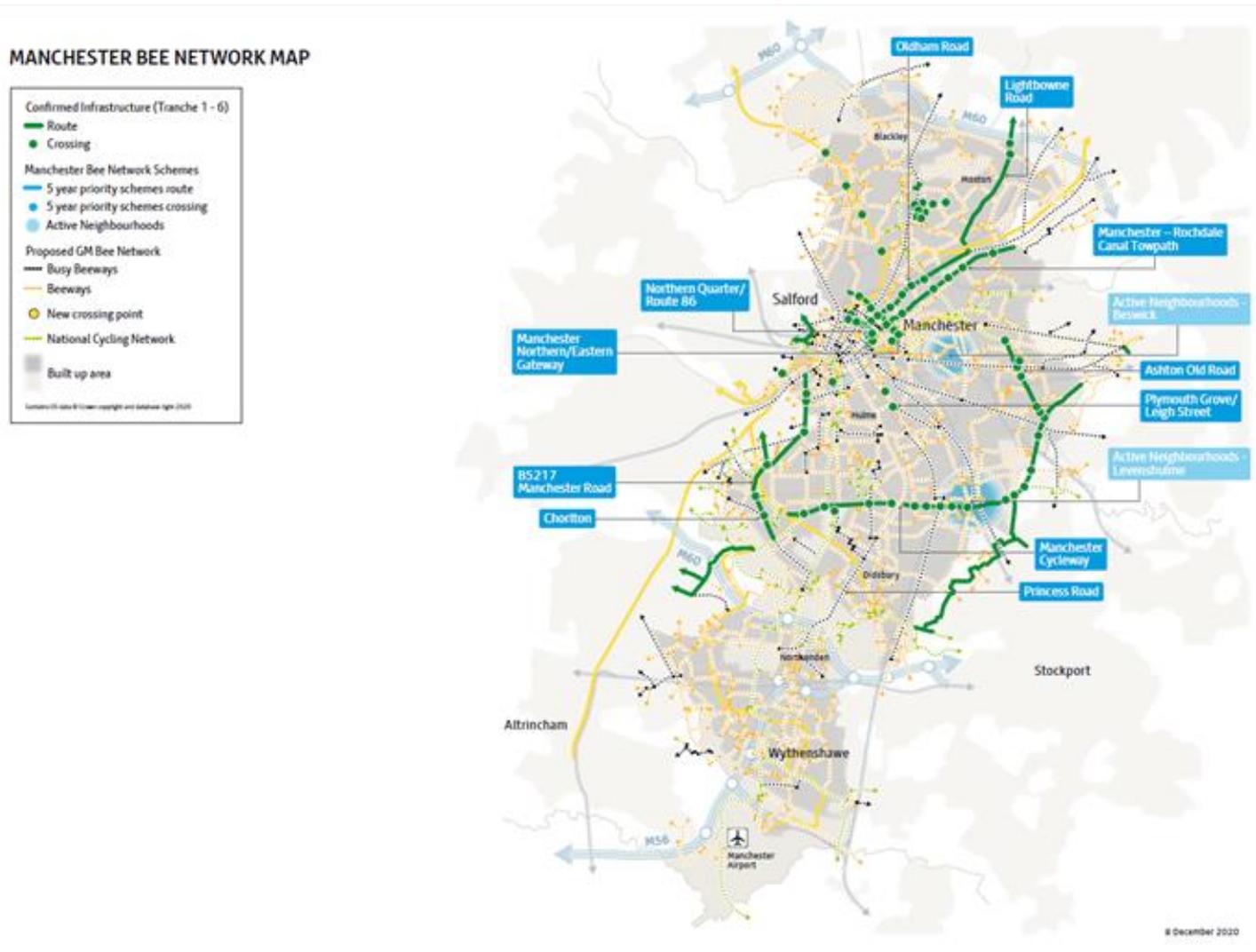


Figure 4. Manchester Bee Network



4. GMA 3.1 Roundthorn Medipark and GMA 3.2 Timperley Wedge

4.1 Changes to the quantum of development

4.1.1 As outlined in Table 2 above there are no changes to GMA 3.1 Roundthorn Medipark Extension. However the adjacent GMA3.2 Timperley Wedge has an increase of 117 dwellings from the previous modelling analysis. This increase is an increase in 99 houses and 18 apartments. This equates to an increase of 5% of the allocation. This relatively small increase in the size of the allocation will lead to an increase in the number of trips from the site accessing the local road network and SRN within the vicinity of the site.

4.1.2 The latest agreed development quantum is shown in the table below.

Table 3. Updated Development Quantum: GMA3.1 Roundthorn Medipark Extension

Development type	2025 development quantum	2040 development quantum
Houses	0	0
Apartments	0	0
Employment (B1a)	0	86,000sqm
Total	0	86,000sqm employment

Table 4. Updated Development Quantum: GMA3.2 Timperley Wedge

Development type	2025 development quantum	2040 development quantum (cumulative)
Houses	64	1442
Apartments	16	1104
Employment (B1a)	0	0
Total	80 homes	2546 homes

4.2 Transport infrastructure changes

- 4.2.1 The original Locality Assessment identified a series of necessary and supporting infrastructure to support the delivery of these sites. Fundamental to the sites is the delivery of a new spine road through each of the sites respectively. The Timperley Wedge Spine Road is proposed to run north west – south east from Thorley Lane across the M56 to Runger Lane, while the Roundthorn Medipark Spine Road runs north south from Floats Road across Whitecarr Lane to join the Timperley Wedge Spine Road. Both of these schemes are presented as an indicative outline design in the Locality Assessment and no changes have been made to these assumptions at this time.
- 4.2.2 The allocations are supported by the introduction of a Bus Rapid Transit (BRT) scheme from Altrincham to Manchester Airport through the Timperley Wedge site and the Metrolink Western Leg Extension adjacent to the Roundthorn Medipark Extension and through the eastern side of the Timperley Wedge site. These schemes are identified as supporting mitigation in the original Locality Assessment. The Altrincham to Manchester Airport BRT is at an early stage of development and no significant changes to the assumptions about this scheme have been made since the original Locality Assessment. The Metrolink Western Leg, also known as the extension of the Manchester Airport Line, is currently at business case development stage. Again there

are no significant changes to the assumptions for this scheme since the original Locality Assessment was published.

4.2.3 A number of local mitigations are proposed on the local road network including:

- It is proposed that Whitecarr Lane and Clay Lane/Barnacre Avenue are both closed to through traffic to prevent development traffic using these routes to access Simonsway and junction 4 of the M56, access would still be provided for cyclists and pedestrians.
- Dobbinetts Lane/Floats Road – replace the three arm priority junction with a three arm signalised junction. Upgrade Dobbinetts lane to a suitable standard.
- Thorley lane/Runger Lane- addition of a separate left turn stage from Thorley lane to run with Thorley Lane North arm.
- Terminal 2 Roundabout – replace the existing priority roundabout with a fully signalised roundabout.

4.2.4 A mitigation was proposed on the SRN at M56 junction 3a, namely a new free flow bypass lane from the western local road arm to the M56 on the slip and localised widening on the eastern arm.

4.2.5 The original Locality Assessment identified that improvements were required at junctions 5 and 6 of the M56, although no specific mitigation was identified at that stage. A parallel piece of work is currently underway which is examining the impact of PfE on the SRN, this piece of work aims to identify solutions to issues on the SRN as a result of PfE development, where possible findings from this work have been fed into this Locality Assessment Review.

4.3 Updated trip generation and distribution

4.3.1 The estimated traffic generation for both the constrained and high scenarios is shown in Table 5 and 6. Units are in PCU (passenger car units/hr).

Table 5. Updated Allocation Traffic Generation: GMA3.1 – Roundthorn Medipark Extension

	Am peak hour departures	Am peak hour arrivals	Pm peak hour departures	Pm peak hour arrivals
2025 PfE High-Side	0	0	0	0
2040 PfE High-Side	275	1045	767	185

Table 6. Updated Allocation Traffic Generation: GMA3.2 – Timperley Wedge

	Am peak hour departures	Am peak hour arrivals	Pm peak hour departures	Pm peak hour arrivals
2025 PfE High-Side	27	10	16	30
2040 PfE High-Side	744	272	450	834

4.3.2 The development quantum results in broadly minor changes in trip generation since the previous round of modelling. The largest increase at GMA 3.2 Timperley Wedge is approximately 80 arrivals in 2040 PM.

4.3.3 Tables 7 and 8 and Figures 5 and 6 indicate the distribution of traffic on the network to and from these allocations.



Table 7. GMA 3.1 Roundthorn Medipark Extension Updated Allocation Traffic Distribution, 2040 PfE High-Side (Origin/Destination Combined)

Route	AM peak hour	PM peak hour
Thorley Lane (East)	29%	32%
Shay Lane (South)	7%	3%
Grove Lane (West)	1%	2%
Clay Lane (North West)	23%	25%
Southmoor Road (North)	14%	14%
Hollyhedge Road (East)	26%	24%

Table 8. GMA 3.2 Timperley Wedge Updated Allocation Traffic Distribution, 2040 PfE High-Side (Origin/Destination Combined)

Route	AM peak hour	PM peak hour
Thorley Lane (East)	60%	56%
Shay Lane (South)	5%	7%
Grove Lane (West)	1%	1%
Clay Lane (North West)	25%	25%
Floats Road (North)	9%	12%



Figure 5. GMA 3.1 Roundthorn Medipark Extension Updated Allocation Traffic Distribution, 2040 PfE High-Side (Origin/Destination Combined)

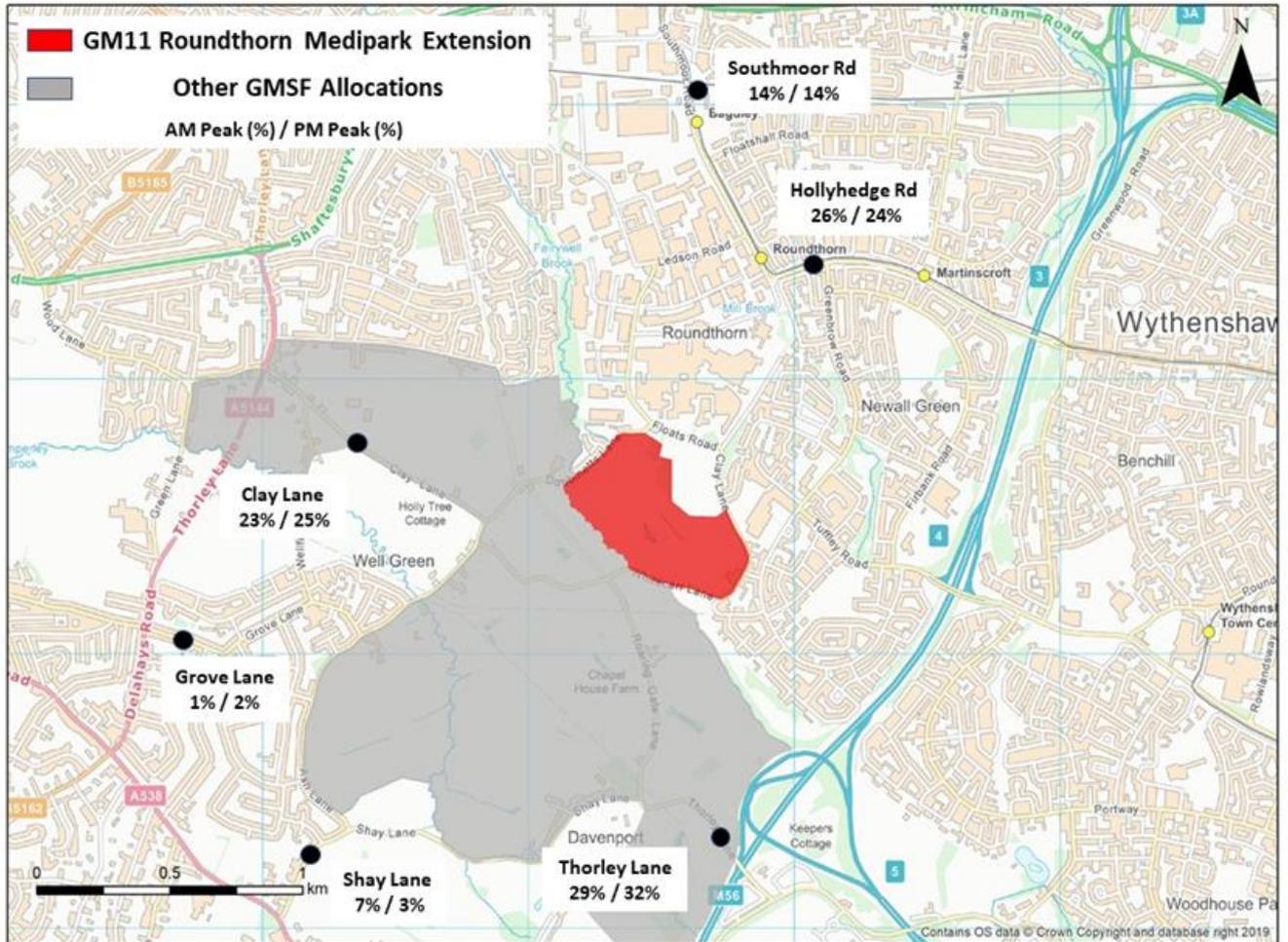
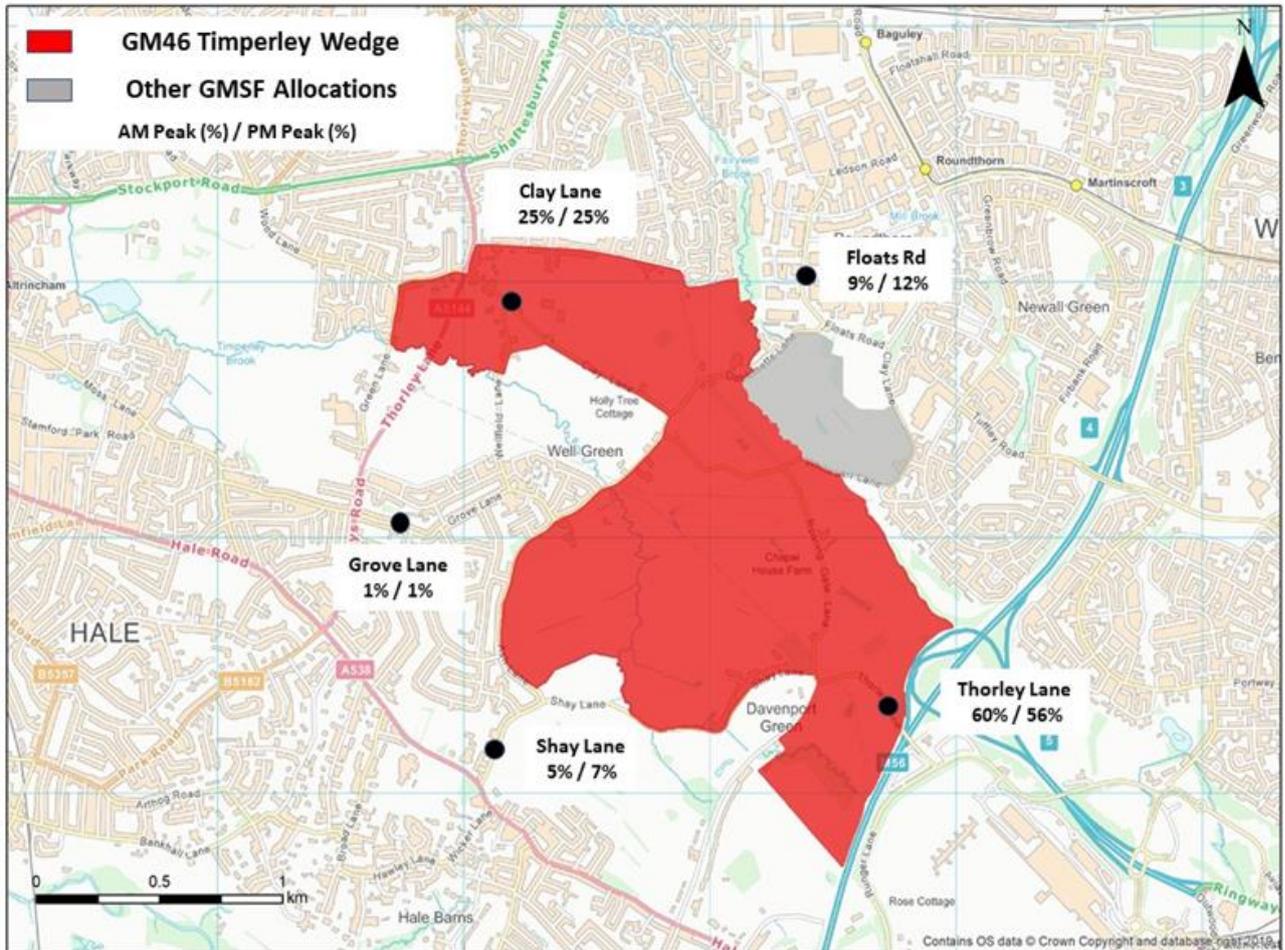


Figure 6. GMA3.2 Timperley Wedge Updated Allocation Traffic Distribution, 2040 P/e High-Side (Origin/Destination Combined)



4.3.4 The revised modelling results in broadly minor changes in trip distribution since the previous round of modelling. With a slightly lower proportion of trips from GMA 3.1 Roundthorn Medipark extension utilising Thorley Lane, Shay Lane, Grove Lane and Clay Lane and a slightly higher percentage of trips using Southmoor Road and Hollyhedge Road. The pattern is slightly different for GMA 3.2 Timperley Wedge with slightly higher percentage using Thorley Lane and Shay lane and slightly lower percentage using Floats Lane.

4.4 Impact of Allocation before mitigation on the local road network

4.4.1 The expected changes in traffic routings and volumes in and around the GMA3.1 Roundthorn Medipark Extension and 3.2 Timperley Wedge allocations as a result of



the change in development quantum between round 4 and 5 of modelling, removal of Stockport allocations and modifications to committed schemes on the SRN necessitate the reassessment of a number of previously assessed junctions. An exercise was undertaken reviewing the updated strategic model outputs to establish where the noteworthy changes in traffic distribution and impact had occurred. This identified a notable change at 11 junctions (including two SRN junctions), the changes at the other junctions were minimal and did not require reassessment.

- 4.4.2 The changes in quantum of development modelled at 3.2 Timperley Wedge occur in the period between 2025 and 2040. GMA3.1 Roundthorn Medipark extension had no development in the period up to 2025 and GMA3.2 Timperley Wedge has a relatively small amount of development in the period up to 2025. The remainder of this review will therefore focus on the 2040 situation.
- 4.4.3 Table 9 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 site development flows through each respective junction. The table shows a comparison between the ratio of flow to capacity on the worst case arm at each junction as well as the total development flows through the junction. 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.
- 4.4.4 The assessment below is based on outputs from Greater Manchester's Variable Demand Model (GMVDM). While every effort has been made to accurately reflect the existing and planned road networks, it remains a strategic model. It may be the case that subsequent planning applications, utilizing more detailed traffic models / tools, may arrive at slightly different outcomes



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

JUNCTION	2040 ref case AM PEAK HOUR	2040 ref case PM PEAK HOUR	2040 high scenario AM PEAK HOUR	2040 high scenario PM PEAK HOUR	Allocation flows AM PEAK HOUR	Allocation flows PM PEAK HOUR
1.Thorley Lane/Runger Lane	82%	77%	123%	111%	370	293
2.Thorley Lane/Palma Avenue	55%	57%	83%	80%	185	206
3.Thorley lane/Enterprise Way	71%	81%	78%	92%	60	101
4.Terminal 2 Roundabout	95%	101%	59%	53%	62	71
5.M56 Junction 6	119%	111%	125%	116%	256	102
6.Southmoor Road/A560 Altrincham Road	78%	73%	88%	93%	199	84
7.M56 3a	101%	103%	111%	115%	166	151
8.Ringway Road/Airport spur/Outwood Lane	78%	73%	84%	78%	79	8
9.Enterprise Way/A555 Ringway Road	108%	101%	112%	103%	100	87

4.4.5 The results for Terminal 2 roundabout include the mitigation identified within the original locality assessment.

4.4.6 The following junctions all operate under capacity or at a comparable level with the reference case in the with PfE High scenario:

- Thorley Lane/Palma Avenue
- Thorley Lane/Enterprise Way
- Southmoor Road/A560 Altrincham Road
- Ringway Road/Airport spur/Outwood Lane
- Enterprise Way/A555 Ringway Road

4.4.7 Table 10 provides a summary of the indicative schemes proposed in the original locality assessment to mitigate the impact of GMSF at the junctions which were identified as requiring improvements.

Table 10. Approach to mitigation identified in Locality Assessment

Junction	Mitigation Approach
1. Thorley Lane/Runger Lane	Separate left turn stage from Thorley Lane to run with Thorley Lane North arm
2. Thornley Lane/Palma Avenue	Reference and With GMSF results comparable – no mitigation proposed
3. Thorley Lane/Enterprise Way	Reference and With GMSF results comparable – no mitigation proposed
4. Terminal 2 Roundabout	Replace the existing priority roundabout with a fully signalised roundabout.
5. M56 Junction 6	Both allocations impact on this junction. No mitigation identified in this location through original Locality assessment.

Junction	Mitigation Approach
6. Southmoor Road/A560 Altrincham Road	Reference and With GMSF results comparable – no mitigation proposed
7. M56 Junction 3a	A new free flow bypass lane from the western local road arm to the M56 on slip and localised widening on the eastern arm.
8. Ringway Road/Airport spur/Outwood Lane	Reference and With GMSF results comparable – no mitigation proposed
9. Enterprise Way/ A555 Ringway Road	Reference and With GMSF results comparable – no mitigation proposed

4.4.8 Table 11 below provides a comparison between the operation of the in scope junctions in the 2040 reference case and the 2040 ‘high side’ scenarios with the previously identified mitigation in place at each respective junction.

Table 11. Results of Local Junction Capacity Analysis After Mitigation – Year 2040

JUNCTION	2040 ref case AM PEAK HOUR	2040 ref case PM PEAK HOUR	2040 high scenario AM PEAK HOUR	2040 high scenario PM PEAK HOUR
1.Thorley Lane/Runger Lane	82%	77%	96%	86%
2.Thorley Lane/Palma Avenue	55%	57%	83%	80%
3.Thorley lane/Enterprise Way	71%	81%	78%	92%

JUNCTION	2040 ref case AM PEAK HOUR	2040 ref case PM PEAK HOUR	2040 high scenario AM PEAK HOUR	2040 high scenario PM PEAK HOUR
4.Terminal 2 Roundabout	95%	101%	59%	53%
5.M56 Junction 6	119%	111%	125%	116%
6.Southmoor Road/A560 Altrincham Road	78%	73%	88%	93%
7.M56 3a	101%	103%	100%	94%
8.Ringway Road/Airport spur/Outwood Lane	78%	73%	84%	78%
9.Enterprise Way/A555 Ringway Road	108%	101%	112%	103%

4.4.14 The results above demonstrate that the mitigation schemes allow Thorley Lane/Runger Lane to operate within capacity compared to the high scenario without the mitigation. In the case of M56 Junction 3a the mitigation allows the junction to operate in a state that is comparable with the reference in the AM this is at capacity and in the PM the operation is better and operates within capacity. Terminal 2 roundabout with mitigation provides conditions better than reference.

4.5 Impact of the allocation on the SRN

4.5.1 There are a number of other studies underway which are relevant to the impact of PfE on the SRN in this location. Namely:

- The PfE SRN study – This study is examining the impact of PfE on the SRN, this piece of work aims to identify solutions to issues on the SRN as a result of PfE development, where possible findings from this work have been fed into this Locality Assessment Review
- The South Manchester Study - A study is currently underway which aims to develop a strategic approach to mitigate the significant impacts of HS2, NPR and other major development including GMSF and Airport City in the vicinity of Manchester Airport. This multi modal Highway and Transport Study is required to manage access to the Manchester Airport area and develop an approach to mitigating the impact on the M56 which can be implemented in phases over a period of time as developments are realised but which provides a holistic solution. Outputs are not available from this study at this time.

4.5.2 The expected changes in traffic routing and volumes in the vicinity of GMA 3.1 Roundthorn Medipark Extension and 3.2 Timperley Wedge necessitate the reassessment of 3 previously assessed junctions. These are:

- M56 Junction 6
- M56 Junction 3a
- M56 Junction 5

4.5.3 The results in the previous locality assessment are considered to remain valid for M56 Junction 4.

4.5.4 M56 Junction 5 is being considered as part of the parallel PfE SRN study and outputs for this location are not available at this time. A key issue in this location is the general level of growth that is forecast at this location outside of PfE, this equates to in the region of 1000 additional trips in both the AM and PM by 2040. In comparison the level of growth in this location generated by the PfE allocations is in the region of 250

to 350 additional trips in the AM and PM by 2040. The purpose of the Locality Assessment is to identify the improvements required as a result of PfE not to address existing issues. At M56 junction 5 this approach is particularly problematic due to the need for an improvement in this location even without PfE allocations, secondly due to the nature of the junction i.e. free flow on and off slips connecting with the end of the A555 route.

4.5.5 Table 12 below presents the updated junction capacity using flows from the latest high scenario run of the GMVDM, which takes account of the changes summarised in section 3.2. The same caveats regarding the use of GMVDM model outputs, as set out in Section 4.4, also apply here. That is, it may be the case that subsequent planning applications, utilizing more detailed traffic models / tools, may arrive at slightly different outcomes.

Table 12. Junction Capacity Analysis before Mitigation – Year 2040

JUNCTION	2040 ref case AM PEAK HOUR	2040 ref case PM PEAK HOUR	2040 high scenario AM PEAK HOUR	2040 high scenario PM PEAK HOUR	Allocation flows AM PEAK HOUR	Allocation flows PM PEAK HOUR
5.M56 Junction 6	119%	111%	125%	116%	256	102
7.M56 Junction 3a	101%	103%	111%	115%	166	151

4.5.6 The local junction modelling indicates PfE flows have a negative impact on the operation of both junctions. Although it is clear from the reference scenario that both junctions are already over capacity by 2040 without PfE.



4.6 Review of interventions on the SRN

- 4.6.1 As outline in table 10 the following mitigation scheme was identified in the previous locality assessment relating to the SRN:
- M56 junction 3a - A new free flow bypass lane from the western local road arm to the M56 on slip and localised widening on the eastern arm.
- 4.6.2 M56 junction 6 was identified in the previous locality assessment as requiring mitigation, however mitigation was not identified. The South Manchester Study outlined above will develop an approach to mitigating the impact of HS2, NPR and other major development including GMSF and Airport City in the vicinity of Manchester Airport on the M56, the mitigation will be designed such that it can be implemented in phases over a period of time as developments are realised but which provides a holistic solution.
- 4.6.3 It has been requested by Highways England that a 'PfE only' solution is provided in this location to take account of the uncertainty surrounding the other developments such as HS2. M56 Junction 6 has therefore been revisited through this locality assessment review to establish a solution for this junction which addresses the impact of PfE in this location. It is important to note that this location is significantly over capacity in the reference case and that the impact of PfE whilst worthy of further investigation is not the root cause of the capacity issues at this location, these are as a result of the general growth of background traffic over the period up to 2040.
- 4.6.4 A programme of junction upgrades known as the rainbow works are included in the reference scenario at M56 junction 6 works (including improvements at M56 junction 6 include the removal of the roundabouts, the installation of traffic signals and changes to the slip roads). Mitigation at this junction takes this as the baseline i.e. it is assumed that the rainbow works have been built and the current round about layout has been changed to signalised junctions. The 'PfE only' mitigation presented as part of this locality assessment review is a redesign of the pedestrian and cycle infrastructure proposed as part of the rainbow works in proximity of M56 junction 6.

- 4.6.5 Since the original rainbow works were designed, a significant junction upgrade has been introduced to the east of M56 junction 6, this includes toucan crossing facilities at the junction of Wilmslow Road/Sunbank Lane. The mitigation for M56 junction 6 provides an upgrade of the pedestrian/cycling facilities between Sunbank Lane and M56 junction 6 adjacent to the east bound carriageway in the form of new footway and cycleway infrastructure to provide a more direct and convenient route for pedestrians and cyclists travelling along Wilmslow Road. Conversely the pedestrian and cycle crossing facilities proposed on the Wilmslow Road arm of M56 junction 6 rainbow works upgrade will not be implemented, that movement is now provided for at Wilmslow Road/Sunbank Road junction toucan crossing. The crossing facilities proposed on Runger Lane will be provided to the north of the junction with corresponding footway and cycleway provision adjacent to the northbound Runger Lane carriageway. See Appendix A for an indicative outline design of this mitigation.
- 4.6.6 The justification for this approach is the significant improvement in walking and cycling facilities provided at the Wilmslow Road/Sunbank Lane junction which supersede the facilities at Junction 6 in terms of the Airport Orbital route and provide a more direct and appropriate route for both pedestrians and cyclists from key generators in that location. Whilst providing additional capacity for vehicles at M56 Junction 6.
- 4.6.7 It is important to note that this mitigation is unlikely to form the actual mitigation delivered at this location, as the previously referenced study looking at the impacts of HS2, NPR and other major developments including PfE and Airport City in the vicinity of Manchester Airport is developing a holistic solution which can be built out in line with the development timeframes. However the PfE only mitigation does provide a workable mitigation appropriate to demonstrate solution.

4.7 Impact of the changes on the SRN

- 4.7.1 As noted above the mitigation set out in the preceding section is required to mitigate the impact of the PfE development flow and bring the junctions back to operate in line with or better than the reference case.

4.7.2 Table 13 below presents the updated junction capacity illustrating the impact of the identified mitigation. It is worth noting that in both instances the with mitigation scenario is better than the reference case.

Table 13. Junction Capacity Analysis after Mitigation – Year 2040

JUNCTION	2040 ref case AM PEAK HOUR	2040 ref case PM PEAK HOUR	2040 high scenario AM PEAK HOUR	2040 high scenario PM PEAK HOUR
5.M56 Junction 6	119%	111%	114%	108%
7.M56 Junction 3a	101%	103%	100%	94%

4.7.8 The table below confirms the mitigation associated with SRN junctions as a result of the PfE developments.

Table 14. Approach to mitigation identified in Locality Assessment review

Junction	Mitigation Approach
5. M56 Junction 6	Redesign of pedestrian and cycle facilities associated with rainbow works in this location, including new two way cycle and pedestrian facilities between Sunbank Lane and junction 6 adjacent to the east bound carriageway and not including the pedestrian and cycle crossing facilities on the Wilmslow Road arm of M56 junction 6 in the rainbow works. Relocation of Toucan crossing on Runger Lane.
7. M56 Junction 3a	A new free flow bypass lane from the western local road arm to the M56 on slip and localised widening on the eastern arm.



4.8 GMA 3.1 and 3.2 Concluding Remarks

- 4.8.1 The conclusions of the previous Locality Assessment remain robust.
- 4.8.2 The previous assessment concluded that these developments, both in isolation and in consideration of the cumulative impacts with other nearby PfE allocations is expected to materially impact both the strategic and local road networks. Mitigation schemes were developed and tested to address the network congestion impacts at both the strategic and local road networks. The schemes were shown to mitigate the impact of the allocation trips and to restore the network to a similar state as that found in the reference scenario.
- 4.8.3 This review has reassessed the impact at a number of junctions where modelling showed flows had changed. However analysis has found that the previous conclusion and mitigations remain robust.
- 4.8.4 Additional mitigation has been identified at M56 junction 6. A reassessment of M56 Junction 5 is required. Due to the nature of that junction, the reassessment is being undertaken as part of the parallel PfE SRN Study.
- 4.8.5 Further review may be necessary as the allocation moves through the planning process should the allocation be approved. The allocation would need to be supported by continuing wider transport investment across Greater Manchester.



APPROVAL

Version	Name		Position	Date	Modifications
1	Author	Huw Williams/ Amy Sykes	Associate Directors	23/06/2021	First Draft for Comment
	Checked by	Darren Kirkman	Project Manager	23/06/2021	
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