



J000300-TA01c
OCTOBER 2022

Land at South Heywood, Rochdale

Outline Planning Application At South
Heywood Plot 3 for 40,000sqm of B8 Use
for Warehousing & Distribution with all
Matters Reserved Other Than Access

Transport Assessment

Prepared on behalf of:

**Russells South Heywood
(Commercial) Limited**

EXECUTIVE SUMMARY

Introduction & Planning Background

- i. This Transport Assessment (TA) report has been prepared by Focus Transport Planning (Focus TP) on behalf of Russells South Heywood (Commercial) Ltd to consider highways and transport matters associated with an outline planning application for an additional 40,000sqm of B8 distribution and warehousing floorspace at the South Heywood Development Area (SHDA), Heywood, Rochdale. The application scheme relates to a 40,000sqm unit at Plot 3 South Heywood and would increase the total employment area across the full SHDA from the currently consented position of 135,460sqm (14% B2 / 86% B8) to 175,460sqm (18,960 sqm B2 (11.3% total floor area) / 156,500sqm B8 (88.7% total floor area)).
- ii. The Plot 3 application site forms part of the consented South Heywood Employment Area (SHEA), which itself forms part of the wider SHDA. The application site represents land consented for employment development as part of the 'hybrid' planning permission associated with the wider SHDA. This hybrid scheme was amended in 2021 to reflect a change in the employment area land use schedule to allow up to 116,500sqm of B8 floorspace and 18,960sqm of B2 floorspace (from 94,820sqm B8 & 40,640sqm B2). NB - The total permitted employment floorspace remained unchanged at 135,460sqm.
- iii. In highway assessment terms, the extant SHDA consent represents the 'planning fallback' position for the surrounding area, as there can be a high degree of certainty as to the future deliverability of key consented elements - given that the SHLR is due to be opened in November 2022 and reserved matters planning applications have been submitted and approved for initial phases of the employment and residential development elements (2 residential phases have been commenced). Any assessment of the highway network operational effects of the proposed Plot 3 application scheme changes to the employment element of the wider SHDA (additional 40,000sqm of employment floorspace) should therefore be undertaken both as; a) a stand-alone operational capacity assessment - to understand the ability of the network to accommodate development traffic; and, for context, b) via reference to the accepted network operational position established with respect to the consented planning position. This comparison to the consented position is important, in terms of identifying the 'impact' of the application scheme with respect to the critical 'severe' test identified in para 111 of NPPF and whether there would be any requirement for additional network mitigation measures over and above those already established and secured to support the wider SHDA consent.
- iv. For clarity, the key comparison test considered as part of the suite of assessment work included in this TA report is the difference between the two scenarios set out below:
 - *Baseline Do-Minimum 'Consented' Scenario at 2038 Future Year: i.e. Growthed Background Network Traffic Demand + SHLR + Agreed Committed Development + Consented SHDA (inc 135,460sqm employment).*

- *Baseline + Development ‘Do Something’ Cumulative Development Scenario at 2038 Future Year: i.e. Growthed Background Network Traffic Demand + SHLR + Agreed Committed Development + Consented SHDA + Additional 40,000sqm of B8 employment at Plot 3 (total of 175,460sqm employment).*

- v. This comparative assessment work has been undertaken at the 2038 future year - as this represents the previously agreed point at which all of the SHDA works could be expected to be completed - thereby representing the point of maximum South Heywood development related highway network impact. The use of a 2038 future year approach is also consistent with the network impact assessment modelling carried out to support the original SHDA consent and the SHLR related operational assessments.

Results of 2038 ‘Baseline Consented’ Network Operational Assessment

- vi. Review of the results of this 2038 ‘Baseline Consented’ network assessment exercise demonstrates that the immediate highway network to the application site can be expected to operate with satisfactory performance - including for full delivery of the consented SHDA & SHLR and supporting highway improvement measures. This conclusion mirrors the position identified in 2016 /2017 and which informed the decision by RBC to grant consent to the wider SHDA scheme. Whilst the review has highlighted some locations which could be expected to be at or approaching practical capacity by 2038, such conditions have previously been identified to take place more as a reflection of underlying background demand and would not be the subject of material changes in performance as a result of ‘worst case’ SHDA traffic and do not represent circumstances that were considered to represent ‘severe’ highway network impact.

Application Scheme Principles

- vii. The application scheme effectively represents a ‘drop in’ application to the employment zone forming part of the consented SHDA and seeks outline planning consent (all matters reserved other than access) for a 40,000sqm (430,556sqft) employment (logistics) warehouse (use class B8) unit at ‘Plot 3’. The proposed development would provide a significant regional or national base for a distribution / logistics operator, offering a Grade A sustainable development of high-quality design, set within an attractive landscaped setting.
- viii. Vehicle access to the wider highway network from Plot 3 would be taken via connections to the SHEA estate road linking to Pilsworth Road to the north west corner of the SHDA. The location of this access point is identified on both the wider SHDA parameter plan and the proposed Plot 3 parameter plan and would be delivered as a high-standard ghost-island T-junction layout as part of committed enhancement works for the western section of Pilsworth Road programmed to be delivered by RBC in Spring 2023.
- ix. Final parking provision would likely be tailored to final end-user requirements, but it is anticipated that parking levels would be provided to at least 85% of identified RBC maximum general parking provision and 100% of minimum cycle / motorcycle parking standards.

Development Traffic Generation

- x. In order to ensure the assessment of maximum potential future network operational impact of the application scheme, development traffic generation estimates have been prepared on the basis of the same robust 85th percentile trip rates utilised to inform the original SHDA consent. The results of the development trip demand exercise suggests that the application scheme (40,000sqm additional B8 employment floorspace) could be expected to generate of the order of 124 (61 HGVs) additional vehicle movements (in + out) in the AM peak period and 123 (51 HGVs) vehicle movements in the PM peak, when compared to the consented SHDA scheme. This represents an overall net change in peak hour consented overall SHDA related development traffic movements of circa 9.6% to 10.0%. Just under half of these additional peak hour vehicle movements could be expected to be HGV delivery vehicles.

Results of 2038 'Do-Something' (Baseline Consented + Plot 3 Application Scheme Increase in B8 Floorspace) Network Operational Assessment

- xi. The immediate study area network is not predicted to experience substantive changes in total traffic demand associated with the delivery of the application scheme. Once assigned across the wider study network, additional development traffic translates into the majority of study links being anticipated to experience only slightly increased levels of total traffic demand (all vehicles) under 'Do-Something' conditions, when compared to the planning fallback case - well below a 5% threshold (most link increases being less than +2.5% of 2038 'Baseline Consented' traffic levels - representing two-way link changes of less than 1 vehicle every 1 - 2 minutes).
- xii. A review of predicted changes in HGV traffic levels over the highway network identifies higher levels of predicted percentage change. Greatest change levels (i.e. over 10% increase in HGV traffic levels compared to 2038 'Baseline Consented' conditions) are identified to take place on those key local distributor road routes linking to the strategic highway network - such as SHLR and Pilsworth Road. These routes have been specifically designed to accommodate employment related traffic and HGVs as part of the SHLR scheme and the programmed improvements to the western section of the Pilsworth Road corridor.
- xiii. Detailed modelling of the direct network operational effects of these predicted changes in traffic identifies that:
 - No additional local network links are predicted to experience traffic demand in excess of 95%+ of guideline capacity thresholds as a result of the application scheme, when compared to the consented 2038 'Baseline Consented' scenario.
 - The delivery of the application scheme would not give rise to a requirement for development related slip road merge / diverge capacity improvements at either M62 J19 or M66 J3.
 - The SHLR corridor and associated improved junctions would provide an appropriate level of operational performance to accommodate 2038 'Do-Something' traffic conditions. All SHLR related junctions are predicted to operate with some level of spare capacity and the LINSIG testing does not identify the potential for substantive queueing or congestion.

- The levels of additional application scheme traffic predicted to be experienced at M66 J3 & M66J19 do not give rise to a material detrimental change in operational performance, that would require the implementation of additional junction capacity mitigation measures.

Development Traffic Related Environmental Effects

- xiv. The potential highways and transport related environmental impact of the day-to-day traffic implications of the Plot 3 application scheme (additional 40,000sqm of B8 employment development at SHDA) has been assessed via reference to the methodology set out in the Institute of Environmental Assessment (now Institute of Environmental Management & Assessment - IEMA) document “Guidelines for the Environmental Assessment of Road Traffic”. Reference to IEMA screening guidelines would suggest that overall changes in traffic flow over the immediate local network associated with the application scheme would not give rise to a material change in environmental conditions. Indeed, no local study links are predicted to experience a net increase of over 2.5% (AADT) as a result of the development proposals, when compared to the 2038 ‘Baseline Consented’ future year conditions. Such changes in total flow demand are well below both IEMA Rule 1 & Rule 2 screening thresholds.
- xv. When considered in terms of changes in HGV flows only, local development traffic related environmental effects are still only likely to be of a ‘negligible’ impact classification. Maximum HGV increases are predicted on the SHLR corridor, which represents a purpose-built district distributor road route, which has been specifically designed to accommodate high levels of general and commercial HGV traffic, including segregated walking and cycling facilities and dedicated safe crossing points. It is ultimately concluded that any development related traffic effects would therefore not be significant when considered in environmental impact terms.

Development Construction Traffic Related Effects

- xvi. It is considered unlikely that Plot 3 related construction traffic would give rise to a material / severe operational or environmental effects on the local highway network. In fact, construction traffic levels would be considerably lower than trip demand associated with the day-to-day operation of the completed facility, including fewer HGV trips, and therefore could be expected to be satisfactorily accommodated by local routes.
- xvii. Furthermore, any construction traffic related effects are effectively temporary in nature (only occurring during the construction period and varying in intensity depending on prevailing tasks) and therefore are best addressed by appropriate short-term bespoke mitigation measures developed to address specific issues. Construction industry good practice requires that such mitigation / management measures are identified and delivered in line with details set out in via a Construction Traffic Management Plan (CTMP) prepared to support the delivery of the scheme.
- xviii. A CTMP for the Plot 3 application site would be prepared and would form part of a Construction Environmental Management Plan (CEMP), covering all aspects of the delivery of the wider SHDA construction works, with this approach designed to coordinate construction to minimise any potential for cumulative effects.

Conclusion

- xix. Given the review of anticipated future operational highway conditions and reference to appropriate guideline assessment standards / thresholds, it is concluded that the delivery and operation of the application scheme (additional 40,000sqm of B8 land use at SHDA) would not result in a severe impact on operational or environmental conditions over the local highway network, the critical highways test identified in the NPPF. Additional development traffic levels would be generally low when compared to accepted future Baseline Consented network conditions and the identified main road routes serving the site are of a suitable standard to accommodate predicted traffic and have few immediate sensitive receptors. Indeed, much of the local highway network has been upgraded specifically to allow for the accommodation of such traffic levels. It is therefore concluded that there is no requirement for additional development related off-site highway improvement works to support the application scheme over and above those already proposed to support the wider SHDA and that the proposals represent acceptable development in highways and transport terms.

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1.0 INTRODUCTION

1.1 Overview

- 1.1.1 This Transport Assessment (TA) report has been prepared by Focus Transport Planning (Focus TP) on behalf of Russells South Heywood (Commercial) Limited to consider highways and transport matters associated with an outline planning application (all matters reserved except access) for an additional 40,000sqm of B8 distribution and warehousing floorspace at the South Heywood Development Area (SHDA), Heywood, Rochdale. The application scheme relates to a 40,000sqm unit at Plot 3 South Heywood and would increase the total employment area for delivery across the full SHDA from the currently consented position of 135,460sqm (14% B2 / 86% B8) to 175,460sqm (18,960 sqm B2 (10.8% total floor area) / 156,500sqm B8 (89.2% total floor area)).
- 1.1.2 The TA report has been prepared to apprise the Local Planning & Highway Authority (Rochdale Borough Council - RBC) and Strategic Road Network (SRN) authority (National Highways) as to the changes in general traffic & heavy goods vehicle (HGV) demand levels expected to be generated by the proposals and the assignment of SHDA employment traffic over the local highway network. The report also provides a comprehensive assessment of the future operational performance of the surrounding highway network and its ability to safely & efficiently accommodate predicted development traffic levels, including a comparison to baseline conditions associated with the delivery of the SHDA under its existing consents.
- 1.1.3 The report is to be submitted alongside an outline planning application for the proposals and reflects guidance for transport assessment set out in National Planning Policy Guidance (NPPG) "Travel Plans, Transport Assessments and Statements in Decision Taking". This guidance notes that Travel Plans, Transport Assessments and Statements are all ways of assessing and mitigating the negative transport impacts of development in order to promote sustainable development.

They are required for all developments which generate significant amounts of movements.

1.1.4 Transport Assessments and Transport Statements primarily focus on evaluating the potential transport impacts of a development proposal and may propose mitigation measures where these are necessary to avoid unacceptable or “severe” impacts. Travel Plans can play an effective role in taking forward those mitigation measures which relate to on-going occupation and operation of the development. Transport Statements & Transport Assessments can be used to establish whether the residual transport impacts of a proposed development could be “severe”, which is the critical threshold for determining whether a project should be refused on highways ground, in accordance with guidance set out in NPPF Para 111.

1.1.5 The scope and nature of issues considered within this TA report reflects the extent of matters which are understood to be of material interest to local stakeholders following pre-application scoping discussions with RBC officers during Summer 2022. The carrying out of such pre-application consultation reflects good practice for the traffic and transport appraisal of development projects, as set out in NPPG which states in paragraph 14 of “Travel Plans, Transport Statements and Travel Plans” (Ref: 42-014-20140306).

1.1.6 **Appendix TA1** to this report sets out the TA Scoping Note prepared and circulated to RBC in Summer 2022, setting out the highways assessment approach to be adopted in support of the outline planning application, the proposed extent of network analysis and the pre-application response provided by officers.

1.2 Report Structure

1.2.1 The structure of the remainder of this TA report is therefore as follows:

- A description of the location of the application site & a review of planning history & relevant transport related planning policy.

- A review of site accessibility, both in terms of existing and proposed vehicle connections and accessibility by alternative travel modes to the private car (walking / cycling / public transport).
 - A review of predicted future year (2038) highway network operational performance under established 'Baseline Consented' conditions - including for the delivery of the SHDA in line with the existing consented masterplan (135,460sqm employment development).
 - A review of the application scheme and the key associated amendments to the consented SHDA, including an assessment of the anticipated 'net' changes in travel demand and local traffic assignment.
 - A comprehensive review of future year (2038) 'Do-Something' highway network operating conditions, including for the effects of the application scheme in the context of the wider SHDA (175,460sqm total employment) - including both link and junction capacity assessment and an analysis of predicted nearby motorway junction and slip road performance.
 - A review of key highways and traffic matters associated with the construction of the application scheme, including a review of anticipated delivery phasing, and likely traffic demand associated with construction staffing and deliveries.
 - A review of the extent of development traffic related environmental effects across the identified study area.
- 1.2.2 The TA report should be read alongside the other relevant supporting planning application documents i.e. Planning Statement & other technical documents, considering transport related noise & air quality, along with the consented Framework Travel Plan (**Appendix TA12** to this report) for the wider SHDA, the principles of which would be applied to the operation of the proposed additional development floorspace.

2.0 SITE LOCATION AND PLANNING HISTORY

2.1 Site Location & Existing Use

- 2.1.1 The Plot 3 application site forms part of the consented South Heywood Employment Area (SHEA), which itself forms part of the wider SHDA. The strategic locational context of the SHDA is illustrated in **Figure TA1** to this report. This plan identifies that the South Heywood area represents an urban fringe location, located in close proximity to both the M62 and M66 motorways, which themselves link to the M60 Manchester Orbital Motorway at nearby Simister Interchange (M62 J18). These strategic motorway links provide excellent connections across the north of England, with Lancashire, Greater Manchester, Merseyside and West Yorkshire all located within a potential one-hour drive of the site. Indeed, M62 J19 to the immediate south east of the SHDA is estimated to lie within a 90-minute drive of up to 12 million people.
- 2.1.2 **Figure TA2** provides a more local context to the SHDA location and in particular identifies the residential edge of the adjacent settlement of Heywood and the extent of surrounding established employment areas, including Heywood Distribution Park, Birch Industrial Estate, Hareshill Business Park & Pennine Business Park. **Figure TA2** also highlights the main local access road routes of Pilsworth Road, Hareshill Road and the alignment of the proposed South Heywood Link Road (SHLR), A6045 Manchester Road / Heywood Old Road, A6046 Middleton Road and M62 J19.
- 2.1.3 The Plot 3 site is located to the north-western corner of the SHDA, bounded by Brightly Brook and the alignment of Pilsworth Road to the north, the SHEA Plot 1 area to the east, the remainder of the consented SHEA to the south and agricultural fields to the west (these fields forming part of the draft JPA1.1 employment allocation - see para 2.3.5 to 2.3.8 to this report).
- 2.1.4 The area proposed for Plot 3 employment development as part of the SHDA is primarily associated with existing agricultural land. Due to this previous use,

vehicle access to the area is currently limited to agricultural field access points or internal field connections. Delivery of the proposed SHDA therefore identifies the requirement for the delivery of a comprehensive new site access strategy, including the formation of new dedicated junctions to serve future employment development plots (see sections 3.2 & 5.2 to this report).

2.2 Site Planning Status

2.2.1 The Plot 3 application site benefits from forming part of the employment area approved under the 'hybrid' planning consent associated with the wider South Heywood Development Area (RBC planning application ref: 16/01399/HYBR). This consent includes for the following key development elements:

- *Detailed Planning Consent:* Circa 2km new link road, known as the South Heywood Link Road (SHLR), between M62 J19 and Pilsworth Road. Route details include new access junctions to serve residential and employment elements of the South Heywood Development Area, full signalisation and improvement of the M62 J19 roundabout, new traffic signal junction at SHLR / Manchester Road junction, signalised improvement of the junction of Hareshill Road / Pilsworth Road and a ghost-island improvement of the Pilsworth Road / Heywood Distribution Park access.
- *Outline Planning Consent:* Mixed use employment (1,458,080sqft (GIA) B2 / B8 industrial & warehousing development (split as 30% B2 (circa 40,640sqm) / 70% B8 (circa 94,820sqm))) and residential development scheme (up to 1000 units) including ancillary school, small local retail parade and playing fields.

2.2.2 The 2016 planning submission to support the SHDA proposals included for a detailed TA report, prepared by consultant Axis. This TA was based on network traffic modelling informed via a bespoke SATURN model (the South Heywood Traffic Model - SHTM), with highway network capacity analysis undertaken for an agreed future assessment year of 2038. The use of a 2038 model year ensured for the assessment

of the combined effects of both the delivery of the proposed SHLR infrastructure and the operation of all proposed development associated with the SHDA.

2.2.3 Paragraph 9.38 & 9.39 to the 2016 TA concluded that:

“9.38 The delivery of the completed Link Road scheme and supporting full mixed-use development would result in both local background traffic re-assignment and the generation of additional traffic demand. In practice the combination of these issues would result in highway network related benefits in some locations when compared to the equivalent ‘Do-Minimum’ forecasts and increases in traffic at other points on the network. Key locations predicted to experience higher traffic volumes would be directly targeted by supporting local traffic management measures to address matters such as HGV access, vehicle speeds and general traffic conditions and it is considered that any residual effects would not be severe.....

9.39 Any localised increases in traffic must be balanced against the improved traffic conditions predicted for those key network areas such as Heywood Town Centre, Hopwood and Birch. When viewed across the South Heywood study area as a whole, it is concluded that the network-wide residual effects of the delivery of the Link Road and supporting mixed use development would be broadly positive. Indeed, the results of the network modelling & assessment work set out in this TA suggest that the delivery of the Link Road and supporting development can meet the core objectives of:

- Reduced overall traffic congestion and the inappropriate routing of HGVs through Heywood Town Centre and immediate areas.***
- Help to alleviate congestion on the surrounding motorway network, by providing a route which avoids sections of the congested M62 / M66 corridors and Simister Island***
- Reduce journey times and distance travelled (with associated beneficial environmental factors) related to freight and commuter traffic travelling between the motorway network and existing / proposed South Heywood development areas.***
- Promote the potential for new economic development at South Heywood.***

2.2.4 The formal SHDA TA report was supported by subsequent additional Highway Technical Notes (HTNs), prepared in response to queries from key highway stakeholders on specific highways technical and design issues. Planning consent for

the SHDA scheme was granted on 31 March 2020, subject to the terms of a S106 legal agreement and a range of planning conditions. The S106 agreement primarily relates to funding contributions for a range of items, including the delivery of the SHLR and local bus services. Condition 43 to the consent requires that all sizeable employment units at the SHDA site are required to be supported by a Travel Plan, to be submitted by the site operator and agreed with the Council prior to first occupation, viz:

“43. Prior to the occupation of any approved buildings of Use Class B2 or B8, a subsidiary Full Travel Plan(s) (FTP) for that particular building must be submitted to and approved in writing by the Local Planning Authority, and shall be implemented and reviewed in accordance with the timetable set out in the Framework Travel Plan. The FTP shall then be implemented as approved”

- 2.2.5 As referenced in the above planning condition, the wider SHDA consent is supported by an agreed Site-Wide Travel Plan Framework document which provides guidance on how Travel Plan initiatives for future employment development units should be delivered across the SHEA and how such plans be monitored going forward. The Site-Wide Framework Travel Plan will therefore be used as the reference guide for the preparation of a Travel Plan to support the day-to-day operation of employment development at Plot 3.

Approved Wider SHEA Access

- 2.2.6 Subsequent to the consenting of the SHDA hybrid application, a number of minor amendments to the SHLR design were approved by RBC (Ref: 20/00417/ ANM & 20/000464/ANM), to deliver improvements in route operational performance and safety. These minor amendments included:

- Design responses to matters identified during mandatory Stage 1 & Stage 2 Road Safety Audits.
- Proposed changes to the layout of the consented SHEA eastern spine road connection to Hareshill Road / SHLR (incorporating the Hill Top Road junction serving the adjacent Hareshill Business Park), to upgrade the give-way

staggered crossroads to a traffic signal-controlled arrangement, including integrated pedestrian and cycle crossing facilities.

2.2.7 A copy of the plan of the consented SHLR route corridor, including the above minor amendments is included as **Appendix TA2** to this report, and the most up to date version of the formal parameters plan for the wider SHDA (in line with S96a minor amendment consents) is included as **Appendix TA1** to this report for reference. Review of this information identifies that the SHEA, is located on the northern portion of the wider SHDA and is to be served by two access points:

- A new traffic signal-controlled access from Hareshill Hill Road (SHLR), delivered as part of the combined SHEA / Hareshill Road (SHLR) / Hill Top Road signalised off-set crossroads junction. This junction design includes dedicated signal-controlled right turn lanes from the SHLR for traffic to both the SHEA eastern spine road and Hill Top Road side roads, along with full 'walk-with-traffic' pedestrian / cycle crossing points.
- A new ghost-island priority T-junction access to Pilsworth Road located to the north-western corner of the SHEA to serve future employment development plots (Plot 3).

2.2.8 The consented section of the SHLR corridor between M62 J19 to the south east and Pilsworth Road to the North West of the SHDA is currently under-construction and is understood to be programmed to be opened to public use in early November 2022.

2.2.9 In addition to the above vehicle access connections, the SHDA outline consent identifies a range of sustainable transport improvements across the immediate local catchment, including new / enhanced pedestrian and cycle routes, new bus stops and financial support to new / extended public transport services (see section 3.4 to this report).

Amendments to the SHEA Land Use Schedule

- 2.2.10 Non-material amendment 21/00390/ANM (approved April 2021) to the original Hybrid consent permitted a change to conditions 10, 11 & 13 of the SHDA element of the hybrid consent. The consented change to condition 10 amended the original employment land use schedule to allow for up to 116,500sqm of B8 floorspace and 18,960sqm of B2 floorspace (from 94,820sqm B8 & 40,640sqm B2). NB - The total permitted employment floorspace remained unchanged at 135,460sqm.
- 2.2.11 This amended employment land use mix represents a floorspace ratio of 86% B8 / 14% B2 and is the current prevailing land use position for the SHEA scheme.

2.3 Relevant Transport Related Planning Policy

- 2.3.1 The following paragraphs provide a summary of transport related planning policy issues that are considered relevant to the application scheme. This review includes consideration of transport policy guidance set out in both national transport and local planning policy documentation.

National Planning Policy

- 2.3.2 July 2021 National Planning Policy Framework (NPPF) seeks to encourage development which accords with the sustainable transport objectives of minimising the need for travel, particularly road journeys, and promoting the efficient delivery of goods and supplies. Key sustainable policy objectives stated in the NPPF are as follows:

“Transport issues should be considered from the earliest stages of plan-making and development proposals, so that:

a) the potential impacts of development on transport networks can be addressed;

b) 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;

c) opportunities to promote walking, cycling and public transport use are identified and pursued;

d) 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

e) patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.” (Para 104)

“The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health... (para 105)

“...Applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second - so far as possible - to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;

b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;

c) create places that are safe, secure and attractive - which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;

d) allow for the efficient delivery of goods, and access by service and emergency vehicles...”(Para 112)

- 2.3.3 It is considered that the delivery of the application scheme and wider SHDA would help to meet these general sustainable transport policy principles, by locating the proposed employment development adjacent to existing & consented employment & residential areas and at a location that provides connectivity to key local road routes of a suitable standard to accommodate the nature of traffic generated by

the proposed land use. Furthermore, the site would be designed and developed to encourage staff and visitor use of alternative travel modes to the private car where appropriate and practical.

- 2.3.4 Paragraphs 110 and 111 of NPPF also provide guidance on the nature and detail of transport appraisal to be carried out to support development and those key matters to be considered when determining the suitability of development proposals:

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

- a) appropriate opportunities to promote sustainable transport modes can be - or have been - taken up, given the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users; and*
- c) 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.” (Para 110)*

“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.” (Para 111)

“All developments that will generate significant amounts of movement should be required to provide a travel plan, and the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.”(Para 113)

Regional Frameworks and Strategies: ‘Places for Everyone’

- 2.3.5 The Draft Places for Everyone (PfE) Strategic Plan is a combined policy initiative that will ultimately form part of the Development Plan covering nine of the Greater Manchester local authorities, including Rochdale (Stockport SMBC withdrew from the plan process in late 2021). The PfE Plan aims to set out the long-term spatial vision for those participating GM Districts and identifies the amount of housing and employment that needs to be provided within each of the authority areas.

2.3.6 The Plot 3 application site forms part of the ‘Northern Gateway’ Cross Boundary Strategic Allocation as defined by the Publication Draft (August 2021) PfE, falling within the JPA1.1 Allocation “Heywood / Pilsworth (Northern Gateway)”. Relevant sections of the PfE draft policy for the JPA1.1 area note that:

“Development at this site will be required to:

1. Be of sufficient scale and quality to enable a significant rebalance in economic growth within the sub-region by boosting the competitiveness of the north of the conurbation and should;

- i. Deliver around 1,200,000sqm of industrial and warehousing space (with around 700,000sqm being delivered within the plan period). This should comprise a mix of high-quality employment premises in an attractive business park setting in order to appeal to a wide range of business sectors, including the development of an Advanced Manufacturing Park;*
- ii. Deliver around 1,000 additional homes along with a new primary school in the eastern part of the site to support the early delivery of the infrastructure and provide a buffer between existing housing and the new employment development...”*

2. Make provision for new and improved highways infrastructure to enable the proposed level of development to be accommodated, including:

- i. Improvements to Junction 3 of the M66;*
- ii. Improved links between Junction 3 of the M66 and Junction 19 of the M62;*
- iii. Other off-site highway works where these are necessary to ensure acceptable traffic movement...*

3. Support the delivery of improved public transport infrastructure through the site allocation (including Bus Rapid Transit corridors) and close to the allocation (including the potential tram-train on the ELR between Bury & Rochdale) to enhance sustainable transport connectivity to the wider sub-region and adjoining districts and neighbourhoods.

4. Deliver a network of safe and convenient cycling and walking routes through the allocation, designed to national and GM standards of design and construction and local planning requirements;

8. Ensure the design and layout allows for effective integration with surrounding communities, including active travel links and connections to

local services, employment opportunities and over the M62 to proposed new development at Simister / Bowlee (JPA1.2).

- 2.3.7 Supporting text to the JPA1.1 publication draft policy acknowledges the role that development at South Heywood is expected to play in delivering the wider Northern Gateway objectives, viz:

“...The scale of the opportunity will help to deliver a significant jobs boost to wider northern and eastern parts of the conurbation, increasing the economic output from this area and helping to rebalance the Greater Manchester economy. It also includes the potential to deliver a significant amount of new housing as well as an appropriate range of supporting and ancillary services and facilities.

Planning permission has been granted for a scheme to deliver around 135,000 sqm of employment floorspace, 1,000 homes and a new primary school on the eastern part of the allocation at South Heywood and this land is included in the allocation for removal from the Green Belt. As well as delivering an early phase of the employment development this proposal will help to create a more mixed-use urban extension. The new school will not only provide space to accommodate children from the new development but will also help tackle a shortage of local school places. The residential development along with secured public funding is a key element to delivering improved linkages from Junction 19 of the M62. The employment floorspace and homes covered by this planning application are included in the current baseline supply.

Although the allocation has the capacity to deliver a total of around 1,200,000 sqm of new employment floorspace, it is anticipated that around 700,000 sqm of this will be delivered within the plan period (in addition to the 135,000 sqm that has an extant planning permission at South Heywood).”

- 2.3.8 The formal Examination in Public of the publication draft PfE and associated draft allocation sites, is programmed to take place during late 2022 / early 2023.

Greater Manchester Transport Strategy 2040

- 2.3.9 The Greater Manchester Transport Strategy 2040 has been developed by TfGM on behalf of the Greater Manchester Combined Authority (GMCA) and Greater Manchester Local Enterprise Partnership (LEP). This document sets out a plan to establish a fully integrated, high-capacity transport system across Greater

Manchester, including both short-term and long-term infrastructure objectives. The GMTS has helped to inform and shape draft PfE allocations.

2.3.10 The SHDA and Northern Gateway areas are specifically referenced within the GMTS document, with the delivery of the SHLR being identified as an early committed intervention that will support economic and environmental improvement objectives at both the local and city region scales. The SHLR is also included as part of the GMTS Draft Delivery Plan ‘committed schemes’ for the 5-year period 2020 - 2025 (see **Figure TA3**) with an identified project completion date (in the plan text) of end of 2022. This delivery objective is in line with the understood construction date.

2.3.11 The GMTS also identifies that during the period 2020 - 2025 GMCA & TfGM will seek to prepare business cases to allow for the potential early delivery (subject to funding and business case approval) of the following relevant local projects:

- M62 North-East Corridor (Northern Gateway) local bus network improvements
- M62 North-East Corridor (Northern Gateway) express bus corridor
- M62 North-East Corridor (Northern Gateway) distributor road
- Tram-Train Pathfinder project (Rochdale - Heywood).

Local Planning Policy: Statutory Development Plan

2.3.12 The Rochdale Local Plan Core Strategy was adopted by the Council in October 2016. At present the planning policy framework for Rochdale is made up of a combination of Core Strategy policies and a limited number of saved policies from the previous Rochdale Council Unitary Development Plan. The Allocations Plan element to the Local Plan is still at an early stage and is due to be prepared alongside the wider GMSF.

2.3.13 The Local Plan Core Strategy and supporting Transport Strategy (see paragraphs below) identify the need to focus transport investment at those locations where it can be demonstrated to minimise travel need (particularly at peak times),

maximising connectivity (to and from large trip generators), accessibility (by sustainable forms of travel), reliability (predictable travel times) and opportunities to use sustainable forms of travel. In particular the Core Strategy identifies the need to deliver / enhance links which can:

- Improve inter and sub-regional links to neighbouring centres including Manchester City Centre, Manchester International Airport, destinations across the North and further south (including the capital).
- Deliver better access key transport interchange and hub facilities.
- Deliver better access to proposed development focus areas and town centres.

Core Strategy Development Strategy

- 2.3.14 Spatial Strategy Policies SP2 & SP3 of the Core Strategy provide further details and objectives for the Southern Areas of Borough and specifically focus on key growth corridors. Policy SP2 states:

“SP2 - The Spatial Strategy for the Borough

1. In the Manchester fringe, in the south of the borough, where there is good access to existing facilities and infrastructure, the motorway corridor, public transport facilities and the wider Greater Manchester city region we will deliver most new housing, employment and commercial development.

We will focus investment, development and improvements on:

- ***Rochdale, Heywood and Middleton town centres;***
- ***Economic growth corridors / areas;***
- ***Regeneration areas; and***
- ***Key corridors and gateways.”***

- 2.3.15 Policy SP3/H goes on to identify the following priorities for the identified Heywood growth areas:

“SP3/H - The Strategy for Heywood

- 1. Regenerate Heywood town centre;**
- 2. Transform Inner Heywood;**
- 3. Promote economic growth in South Heywood;**
- 4. Improve Roch Valley and Ashworth Valley;**
- 5. Extend East Lancs Railway”**

2.3.16 Policy SP3/H defines the role for South Heywood as being:

- Delivering new economic development on sites within the successful employment areas in the south of the town to maintain their national reputation as a high-quality business location:
- Developing higher value housing to support and complement this economic growth area and promote wider prosperity; and;
- Promoting infrastructure improvements and traffic management to service new and existing development and reduce heavy goods traffic in Heywood town centre and residential areas.

2.3.17 The general employment development strategy for the South Heywood locality is set out in Policy E3 and includes for the following:

“a. Promote the development of the following key sites:

- Heywood Distribution Park - designated as a Simplified Planning Zone (SPZ) it has potential for further major employment development; and
- North of Hareshill Road - land with permission for B1,B2 & B8 development.

b. Support improvements to all existing employment areas within South Heywood to maintain and enhance the quality of employment premises;

c. Promote the area mainly for distribution uses;

d. Promote infrastructure improvements and traffic management to service new and existing development and reduce heavy goods traffic in Heywood town centre and residential areas;

e. Promote the extension of the East Lancs Railway line to Castleton to provide a commuter rail service to and from Manchester, with a new station close to Pilsworth Road (Policy T1b);

f. Promote the provision of bus services from Middleton to improve access to jobs in Heywood.”

- 2.3.18 This employment strategy is further supported by Core Strategy housing policies which seek to provide new residential development close to economic growth corridors to ensure accessible development and create sustainable communities. For example, Policy C2 “Focusing on regeneration areas and economic growth corridors / areas’ states:

“....We will also encourage new housing which is well related to the following economic growth areas....:

4. South Heywood employment area (Policy E3/4)....

Specific sites for new housing will be identified and included within the Allocations DPD.”

- 2.3.19 The supporting text to Policy E3 recognises the core advantages of the South Heywood area in meeting the Council’s economic growth aspirations as being:

- Good access to the M66 at J3 via Pilsworth Road;
- Already has 119 ha of existing Employment Zones containing several distribution estates, including Heywood Distribution Park, a major business park designated as a Simplified Planning Zone (SPZ);
- The potential for improved access to the M62 (via the delivery of SHLR);
- The potential to be served by a new railway station on the East Lancs Railway at Pilsworth Road;
- Close to, and accessible from, areas with high levels of unemployment, such as Darnhill, inner Heywood and Langley in Middleton;
- Can offer major sites available for development on Heywood Distribution Park and Hareshill Road;
- Already identified as location for potential employment growth in Greater Manchester, in particular for logistics, although manufacturing will also be supported.

- 2.3.20 The development strategy for the Plot 3 application site (forming part of the SHDA) has been prepared in accordance with the key principles of the Core Strategy spatial policy and reflects the key growth area status of the surrounding South Heywood locality.

Core Strategy: Transport Specific Policy

- 2.3.21 Key transport and accessibility policies set out in the Local Plan Core Strategy are Policies T1 and T2. These policies concentrate on ensuring accessibility across Rochdale Borough and the promotion of sustainable travel, with key objectives being to:

- Deliver transport improvements at strategic, borough-wide and local levels to support development proposals
- Ensure that development is in the most appropriate and accessible locations;
- Minimise trips, especially single occupancy car journeys, and trip length;
- Promote wider travel choice and increase trips made by sustainable forms of travel, including public transport, cycling and walking;
- Support measures that enhance safety and access for people with impaired mobility,
- Protect traffic-sensitive town centres and residential communities; and,
- Reduce emissions from traffic (particularly NO_x gases, PM₁₀ particulate and CO₂ levels) by encouraging more sustainable travel choices and forms of travel, more active and healthier travel behaviour and taking advantage of technological innovations.

- 2.3.22 Relevant key sections of the Core Strategy transport policies to proposed new development at South Heywood are as follows:

“T1 - Delivering sustainable transport

We will work with relevant agencies to secure strategic, borough-wide and local transport improvements that support our overall spatial strategy.

1. Improving inter and sub-regional links to neighbouring centres including Manchester City Centre and strategic destinations (e.g. Manchester Airport) through:

...b. Strengthened sustainable travel links between Heywood / Castleton and Manchester, including connecting Heywood to the Calder Valley Railway line via East Lancashire Railway to provide all purpose passenger services, while protecting the heritage railway operation;

c. Enhanced Quality Bus Corridors between urban centres and key destinations particularly Middleton and Manchester and key orbital Quality Bus Corridors (QBC's) linking sub-regional centres.

2. Improving access to the public transport network and interchange / hub facilities including:

....e. Enhancing facilities at Heywood Station and provide a new station at Broadfield (to access new and existing development south of Heywood) on East Lancashire Railway;

f. Providing a focal point for bus interchange in Heywood Town Centre and supporting traffic management measures to enhance the area for shoppers and visitors; and

3. Providing access for all to development focus areas and town centres including:

a. Enhanced transport links and access within the M62 corridor to improve sustainable transport access and traffic management, to ease town centre traffic congestion in Heywood and Middleton;

b. Cycle network improvements to establish an attractive continuous network within and though the Borough, linking the township centres, key trip generators (employment areas, education and health facilities) as well as neighbouring centres, beyond the Connect 2 programme;...

...h. Identifying / designating suitable routes for commercial vehicles to access local businesses, minimising conflict with visitors, shoppers, other vulnerable road users and avoiding sensitive communities

4. Reducing the need to travel and make best use of the existing transport infrastructure by:

a. Making best use of the borough's transport assets (roads, footways / cycleways, structures, drainage and verges etc);...

...f. Working with communities, interest groups, logistics and freight operators informally or through freight quality partnerships to minimise impact of commercial traffic on local communities."

“T2 - Improving accessibility

We will improve accessibility by locating development where good access to public transport is available or can be provided, backed by measures to reduce the need for travel and effective provision for cyclists, pedestrians and people with impaired mobility. Development will be appropriately located to minimise the need to travel by car and the number and length of car trips made to access local amenities. Transport improvements will focus access to priority regeneration areas, e.g. town centres, housing regeneration areas and economic growth corridors. We will do this by:

a. Requiring development and infrastructure proposals to satisfy the Council’s accessibility hierarchy.

This requires transport user needs to be considered and addressed in the following priority order:

- i. People with impaired mobility and pedestrians;***
- ii. Cyclists;***
- iii. Public transport (Bus, Heavy and Light Rail) and “clean fuelled” vehicles;***
- iv. Taxi, private hire vehicles;***
- v. Powered two wheeled vehicles;***
- vi. Commercial traffic for local access;***
- vii. Shopping, visitors / tourist and off-peak traffic; and***
- viii. Long stay and peak time commuter traffic.***

...g. We will expect development proposals to financially contribute to transport improvements where additional traffic movements cannot be accommodated on the existing network. Such contributions will support:

- i. Measures to secure modal shift and sustainable travel / behavioural change initiatives;***
- ii. Improvements to public transport and related infrastructure;***
- iii. Other traffic management and local safety measures and/or removal or restriction of parking provision; and***
- iv. Improvements to the highway infrastructure, in combination with (i), (ii) and (iii) when those have been demonstrated to be insufficient;***

Developers will contribute to essential transport infrastructure to service their proposals and measures to alleviate any additional congestion resulting from their proposals on existing bottlenecks.”

- 2.3.23 Review of the above Core Strategy transport policy clearly identifies that any new development at South Heywood should meet key sustainability and accessibility objectives and that any supporting transport infrastructure must be delivered to

avoid material detrimental impact on the surrounding highway and transport network.

Local Highway Policy: Rochdale Borough Transport Strategy (2014 Refresh)

2.3.24 The Rochdale Borough Transport Strategy (RBTs) is a framework to guide the development of transport improvements across the Borough for the Core Strategy period up to 2026. It identifies priority schemes and projects that are likely to be deliverable during the Core Strategy time period. The strategy was initially published in June 2010 and refreshed in March 2014, including an updated action plan and transport policies strengthening the emphasis on delivering economic growth. In terms of the Heywood Township locality, the Transport Strategy identifies the following issues:

- A contained travel pattern with a high proportion of journeys to work made on foot - indicative of low levels of car ownership (registration) and a lack of mobility of the local labour market.
- Travel by bus to and from the township other than Middleton is low and Heywood has no public rail service.
- Rochdale Township, Bury, Manchester and Oldham feature prominently as travel to work origins / destinations with car travel being the dominant commuting mode, reinforcing the lack of appeal of sustainable transport options.
- Lorry movements and HGV routing is a key issue for Heywood Township, particularly to the commercial and distribution industries to the south of the town, but are also perceived to be high along A58 through the town centre. At present commercial traffic mainly accesses the South Heywood commercial areas via M66 Junction 3, a route that is valued by local communities as it avoids residential areas. For haulage operators travelling to and from Yorkshire and the eastern part of the UK this route adds time, fuel costs and generates

additional emissions not released if HGVs were able to access directly from M62 Junction 19.

- 2.3.25 The RBTS highlights existing congestion and HGV routing issues within Rochdale Borough and recognises the need for selected highway improvement solutions to relieve congestion and improve the operational efficiency of the network. Relevant highways and transport network improvement schemes to the South Heywood Development Area and its immediate locality as identified within the RBTS 'Key Projects Action Plan' are as follows:

Future Schemes: 'Short Term'

- South Heywood M62 J19 Link Road & Improvements to Hareshill Road.
- Develop Heywood Freight Quality Partnership.
- Improved bus links to employment areas.
- Heywood Town Centre to Bury Town Centre Cycle Link Improvements.

Future Schemes: 'Medium Term'

- Improved sustainable access to economic growth areas (e.g. South Heywood).
- Heywood Town Centre Pedestrianisation & Traffic Management.
- Heywood Bus Interchange.
- Heywood / Hopwood Traffic Management Scheme.
- A58 Heywood Capacity Improvements.
- Heywood Bus Priority and Congestion Relief Measured.

Future Schemes: 'Long Term'

- M66 J2 to Heywood SPZ Route Improvements.
- M66 J3 Congestion and Capacity Improvements.
- South Heywood Railfreight Spur / Terminal (Study).

Summary

- 2.3.26 The remainder of this TA therefore sets out the development strategy to meet / assist the stated core transport policy / strategy objectives and to demonstrate

how the Plot 3 application scheme and wider SHDA can be delivered to ensure enhanced access to the key identified Heywood growth areas and generate a significant contribution to Rochdale Borough's future economic success.

3.0 REVIEW OF CORE HIGHWAY NETWORK AND REVIEW OF SITE ACCESSIBILITY

3.1 Overview

- 3.1.1 This section of the TA describes the baseline (existing and consented) access position for the Plot 3 application site and wider SHDA. As identified in section 2.1 to this report, the application site is currently undeveloped, but benefits from consent for major employment development as part of the wider SHDA hybrid planning permission. As part of this wider consent, the SHDA is to be served by a range of supporting vehicle and sustainable transport access initiatives, the principles of which are set out below in order to provide a context to the current proposals.

3.2 Existing / Consented Site Vehicle Connections

Existing Access Connections

- 3.2.1 As identified in section 2.1, the Plot 3 application site is primarily associated with land currently used for agricultural use. Due to the nature of this extant use, existing vehicle access is limited to informal field access points from Pilsworth Road or internal field connections. In practice vehicle access to the site is currently infrequent and such low intensity demand can be accommodated by the existing standard of access available.

Future Consented Access Arrangements

- 3.2.2 As part of the consented wider SHDA scheme, the northern land holdings are to be developed for employment land uses and served by two key vehicle access points:
- A new traffic signal-controlled access from Hareshill Hill Road (SHLR) as part of the combined South Heywood Employment Area / Hareshill Road (SHLR) / Hill Top Road signalised off-set crossroads junction.

- A new ghost-island priority T-junction access to Pilsworth Road.

3.2.3 The proposed Plot 3 development area is to be served from the new stand-alone ghost-island connection to be delivered to the SHDA from Pilsworth Road. Details of this proposed access junction are illustrated in **Appendix TA3** to this report. These works are programmed to be delivered by RBC during Spring / Summer 2023 as part of local highway authority enhancement works to the western section of the Pilsworth Road corridor. This works package includes width improvements to Pilsworth Road, extended cycle facilities to the south of this route and the upgrading of the Pilsworth Road / Moss Hall Lane junction to ghost-island T-junction standard. The proposed Plot 3 development will align and connect into these works.

3.3 Description of Surrounding Local Highways Connections

3.3.1 Key local highways connections to the Plot 3 application site at SHDA are as follows:

- **Pilsworth Road (W):** An industrial estate access road of circa 7.5m width, connecting Hareshill Road (SHLR) / Pilsworth Road (NE) to the east to Moss Hall Road / Heap Brow to the north west. Pilsworth Road (W) primarily serves the employment areas of Heywood Distribution Park and Birch Industrial Estate (via a connection to Moss Hall Lane (S)). The route is of 40mph speed limit and is street lit and typically of urban character - with frontage employment development to at least one side.

At a traffic signalised junction to the west of the Heywood Distribution Park, Pilsworth Road (W) provides connections to a direct high standard single carriageway link road route to M66 J3 and Pilsworth / Whitefield (Bury). To the north of this junction, Moss Hall Road (N) provides access to the Quest Park employment area and the local residential area of Heap Bridge. North of the railway bridge over the Heywood - Bury railway line, the route (known at this point as Moss Hall Road / Heap Brow) is subject to an 18-tonne maximum gross weight restriction for the hours 20:00 to 06:00, seven days a week. Heap Brow provides onward local road connections to A58 Bury New Road and M66 J2 and is characterised by a short local 20mph section to the front of Heap Bridge Village Primary School and a short section of steep gradient between the school and the former connection to Lord Street (see **Figure TA4**).

It is proposed that the section of Moss Hall Lane / Heap Brow to the north of the railway line is to be subject to local traffic management improvements,

including extended HGV access restrictions, to be implemented in support of the delivery of the SHLR scheme - see **Figure TA5**.

The eastern section of Pilsworth Road is to be improved as part of the SHLR project works, including for the delivery of a new ghost-island connection with the vehicle access serving the Heywood Distribution Park. This ghost-island connection would also include for a left turn deceleration lane / queuing lane and extended right turn ghost-island queuing lane. The junction of Pilsworth Road / Hareshill Road (SHLR) is to be upgraded to a new traffic signal-controlled T-junction with the priority movement through the junction being altered to Pilsworth Road (W) - Hareshill Road (SHLR), with Pilsworth Road (NE) acting as the side road connection.

- **Pilsworth Road (NE):** A minimum 7.3m local access road connecting Hareshill Road to the south west, to A58 Bury New Road / Bridge Street to the north east. To the north of the Bury - Heywood railway line the route is generally of residential character, including a limited number of 'back of footway' terraced properties. This section of route operates under a 30mph urban speed limit and is characterised by on-street parking, on-street bus stops and connections to other local services (including a school crossing patrol during peak times). The road has been narrowed to single-track width under the railway bridge, which operates under traffic signal controlled 'shuttle' working. South of the railway line the route provides access to a number of large employment units associated with the Broadfield Distribution Centre & Pennine Business Centre.

Pilsworth Road (NE) is subject to an 18-tonne maximum gross weight restriction covering the hours between 20:00 hours to 06:00 hours, seven days a week - with these restrictions originally supported by automatic rising bollard technology. It is proposed that the section of route to the north-east of the railway line is to be subject to local traffic management / traffic calming improvements, including extended HGV access restrictions, to be implemented in support of the delivery of the SHLR scheme - see **Figure TA5**.

- **Hareshill Road:** A circa 7.5m width local distributor road previously linking Pilsworth Road to the north and A6045 Manchester Road / Heywood Old Road to the south. The route was subject to an 18-tonne maximum weight restriction on the section between A6045 Manchester Road and the Hareshill Business Park, enforced by a 7' 6" physical narrowing (using concrete blockers). The majority of this restricted section of route is proposed to be severed / replaced as a through route via the implementation of the consented SHLR (for further details of the SHLR see paragraph 3.3.4 to this report).
- **A6045 Manchester Road:** A6045 Manchester Road to the north of Hareshill Road (SHLR) provides local distributor road connections to Heywood town centre and the A58 corridor and onward connections to A6046 Middleton Road (to M62 J19 and Middleton). The route is circa 9.0m wide and operates under a 30mph speed limit with mature residential development to both sides of the route.

- **A6045 Heywood Old Road:** to the south west of the junction with Hareshill Road (SHLR) is a local A-road standard route serving the local village communities of Birch (local conservation area) and Bowlee. This section of route serves ribbon residential development and is mainly used as a local link between Heywood and M60 J19 (Blackley). The route is also known to operate as an emergency diversion route for the parallel M62 J18 - J19 section of motorway during temporary motorway closure incidents. It is proposed that the section of route through Birch village (30 mph operation) will be the subject of local traffic management improvements, in support of the delivery of the SHLR scheme - see **Figure TA5**.
 - **Whittle Lane / Moss Hall Lane (S):** a local side road to A6045 Heywood Old Road connecting to the south of Birch village, provides local rural lane connections to Birch Motorway Services and Birch Industrial Estate / Heywood Distribution Park via Moss Hall Lane (S). Through HGV trips along Whittle Lane are prohibited via a 24hr 18-tonne maximum gross weight restriction between the access to Birch Services and the connection to Birch Industrial Estate. This weight restriction applies to the narrow rural section of route and is designed to prohibit HGV trips between A6045 Heywood Old Road and the Birch Industrial Estate and wider South Heywood employment areas.
 - **A6046 Middleton Road:** A6046 Middleton Road provides district distributor road connections to M62 J19 and Middleton from Heywood Town Centre. The route is circa 12.0m in width (including hatched central section with regular pedestrian crossing islands), of urban character (virtually constant residential frontage) and operates under a 30mph speed limit.
- 3.3.2 Key connections to the strategic motorway network are available at M62 J19 to the south-east of the application site and M66 J3 to north-west. M62 J19 is of large grade-separated roundabout layout and is currently in the process of being improved to full traffic-signal control, including a new north-western access arm (serving SHLR and including a direct free flow slip from M62 (E) off slip to SHLR) and upgraded pedestrian / cycle path & crossing provision, as part of the package of works to support the delivery of the consented SHLR (see below). Completion of the junction improvement works is anticipated in early November 2022.
- 3.3.3 M66 J3 is of traffic signal controlled double crossroads layout, providing northbound & southbound entry / exit slip road connections to the M66 motorway. The junction is characterised by a widened section of local road network under the motorway over-bridge, accommodating four narrow width traffic lanes (straight on and right turn in both directions). It is anticipated that the delivery of the SHLR

and the new direct connections to M62 J19 that it will deliver from the South Heywood employment zones will provide a level of short-term traffic relief, particularly with respect to HGV traffic - as the new route will provide additional strategic route connections for traffic to / from the south and east, in particular HGV traffic, which must currently use the Pilsworth Road corridor and M66 J3.

3.3.4 As noted above, the immediate local highway network to the Plot 3 application site at the SHDA is programmed to be subject to significant amendment / improvements as part of the delivery of the consented SHLR scheme. Delivery of the SHLR scheme is currently being taken forward by RBC highways and is scheduled to be completed in early November 2022. The detailed alignment of the SHLR route corridor is illustrated in **Appendix TA2** to this report and includes for the following key elements

- A new connection to the M62 J19 grade-separated roundabout, including a 'free flow' lane direct from the M62 eastbound exit slip.
- M62 J19 Roundabout - Comprehensive traffic signal improvement scheme and associated walking / cycling initiatives.
- Construction of a circa 650m new section of Link Road between M62 J19 and A6045 Manchester Road.
- Creation of a new traffic signal-controlled crossroads junction where the proposed Link Road crosses the alignment of A6045 Manchester Road / Heywood Old Road.
- Construction of a new section of Link Road located to the north east of Hareshill Road, joining into a widening of the existing Hareshill Road alignment further west.
- The closure of the existing south eastern section and north western sections of Hareshill Road to form cul-de-sacs and the provision of associated turning head infrastructure at these closure points.
- Improvement of the existing side road access serving the Hareshill Business Park to provide a full 'all movements' junction, available to all traffic.
- New traffic signal off-set crossroads junction off Hareshill Road (SHLR) to serve a new employment standard access to the South Heywood Development Area to the west and incorporating improvements to the existing Hill Top Road connection to the east (secured via August 2020 S96a amendment).

- Re-alignment of the existing Hareshill Road to allow formation of a replacement traffic signalised junction between Hareshill Road (SHLR) and Pilsworth Road at a point to the south-west of its current location.
 - Circa 600m section of localised widening of the existing section of Pilsworth Road to the west of the junction with Hareshill Road to deliver a ghost-island right turn improvement access to Heywood Distribution Park. This junction improvement to include a left turn entry deceleration / queuing lane on Pilsworth Road for traffic entering Heywood Distribution Park from the west.
- 3.3.5 Delivery of the SHLR scheme is also to be supported by a range of local traffic management measures at the locations identified in **Figure TA5**, in order to discourage potential rat-running and the inappropriate routing of HGV traffic. These supporting measures are to be delivered by RBC in parallel to the opening of the SHLR.
- 3.3.6 In addition to the works directly associated with the delivery of the SHLR project, development of the wider SHDA residential area would also trigger the delivery of ghost island highway improvements at the junction of Pilsworth Road (W) / Moss Hall Lane (3-arrows). In practice, as identified in section 3.2.3 to this report, these ghost island improvement works are programmed to be delivered in Spring 2023 as part of wider committed RBC enhancement works to the western section of Pilsworth Road.

3.4 Site Accessibility by Alternative Travel Modes to the Private Car

Pedestrian & Cycle Accessibility

- 3.4.1 Existing pedestrian & vehicle cycle access to the wider SHDA is currently limited to a number of public rights of way (PROW), as illustrated in **Figure TA6** to this report. These PROW routes are typically of an unmade / grass-track standard and, in practice, only practical for pedestrian access.
- 3.4.2 Under the consented SHDA scheme, these existing rights of way are proposed to be incorporated into the consented employment & residential areas, including for diversion / enhancements where necessary and supported by dedicated access

points / crossing points of the SHLR route. The existing network of PROW's are also to be supplemented by new walking and cycling routes to be delivered as part of the key access roads / connections to serve the site (see paragraph 3.2.2 above and section 5.2 to this report). These new access road routes would provide direct connections to further dedicated walking / cycling paths along the SHLR and onward connections through the wider SHDA to existing surrounding employment and residential areas- see **Figure TA7** to this report.

- 3.4.3 All key employment estate roads within the SHEA, including the employment distributor road connection to Pilsworth Road (serving Plot 3) are to be delivered to provide dedicated segregated walking / cycling facilities, which are to connect directly to existing / committed dedicated adopted highway walk / cycle routes.

Public Transport Accessibility

- 3.4.4 As the Plot 3 application site and the wider SHDA is effectively undeveloped, public transport accessibility is currently limited. The site, does however, lie within the area covered by the 'Heywood Local Link' on-call bus service and the route of some additional local bus services pass within a 1.5km walk (services B4 and 163 - see **Figure TA8** to this report).
- 3.4.5 Delivery of the wider SHDA consent is programmed to result in a significant improvement in local public transport connections. The Section 106 legal agreement associated with the SHDA planning consent identifies developer funding contributions of £1.05 million and £0.18 million with respect to new / supplemented bus services & bus service infrastructure respectively - to be implemented following the completion of construction of the SHLR and to support the delivery of initial phases of SHDA.
- 3.4.6 It is anticipated that the above funding commitments would deliver new bus stops and support both new / extended local bus services linking to Heywood town centre and surrounding residential / employment areas, as well as potentially contributions to a new direct bus service between Heywood & Manchester via South

Heywood and Birch (see **Figure TA9** - final details still to be established). Such improved public transport services and infrastructure could also be expected to be supplemented by the additional regional sustainable transport initiatives envisaged for development as part of the GMTS 2040 (new bus routes and options for tram / train services - see section 2.3 to this report).

4.0 REVIEW OF HIGHWAY NETWORK OPERATION UNDER 2038 'BASELINE CONSENTED' DEMAND CONDITIONS (BACKGROUND + SHLR + COMMITTED FUTURE DEVELOPMENT + CONSENTED SHDA (135,460SQM EMPLOYMENT))

4.1 Introduction

4.1.1 As noted in section 2.2 to this report, the application site and surrounding land parcels at South Heywood already benefit from planning permission associated with the wider SHDA scheme. The extant SHDA planning consent (planning application ref: 16/01399/HYBR) includes for:

- *Detailed Planning Consent:* Circa 2km SHLR between M62 J19 and Pilsworth Road.
- *Outline Planning Consent:* Mixed use employment (135,460sqm (GIA) B2 / B8 industrial & warehousing development (split as 14% B2 (18,960sqm) / 86% B8 (116,500sqm))) and residential development scheme (up to 1000 units) including ancillary school, small local retail parade and playing fields.

4.1.2 In highway assessment terms, the above extant development consent represents the core Baseline position for the application site and surrounding area and there can be a high degree of certainty as to the future deliverability of these consented elements - as the construction of the SHLR is ongoing and reserved matters applications have already been submitted for initial phases of both the residential area and employment zone.

4.1.3 Any assessment of the highway network operational effects of the proposed Plot 3 application scheme changes to the employment element of the wider SHDA (i.e. an additional overall 40,000sqm of employment floorspace) should therefore be undertaken both as:

- a) A stand-alone network operational capacity assessment (to understand the ability of the network to accommodate development traffic); and for context,

b) Reference to the accepted network operational position associated with the prevailing SHDA consent.

4.1.4 The comparison to the 'Baseline Consented' position is important, in terms of identifying the 'impact' of the current Plot 3 application when viewed in terms of the critical 'severe' test identified in para 111 of NPPF and whether there would be any requirement for additional mitigation measures over and above those already established and secured to support the prevailing SHDA consent.

4.1.5 For clarity, the key comparison test that is to be considered as part of the suite of assessment work included in this TA report is the difference between the two scenarios set out below:

➤ **Baseline Do-Minimum 'Consented' Scenario at 2038 Future Year:** i.e. Growthed Background Network Traffic Demand + Agreed Committed Development + SHLR + Consented SHDA.

➤ **Baseline + Development 'Do Something' Cumulative Development Scenario at 2038 Future Year:** i.e. Growthed Background Network Traffic Demand + Agreed Committed Development + SHLR + Consented SHDA + Additional 40,000sqm of B8 employment at Plot 3.

4.1.6 In practice this comparative assessment work will be undertaken at the 2038 future year, as this represents the previously agreed point at which all of the SHDA works and development elements could be expected to be completed & operational - thereby representing the point of maximum South Heywood development related highway network effects. The use of a 2038 future year approach is also consistent with the network impact assessment modelling carried out to support the original SHDA consent and the SHLR related operational assessments.

4.1.7 The following paragraphs set out the key modelling assumptions underpinning the 2038 highway network modelling that informs this report and the results of relevant updated 'Baseline Consented' network capacity analysis.

4.2 Network Modelling Assumptions

- 4.2.1 All network assessment work set out within this TA report has been informed via reference to traffic flow forecasts generated from the South Heywood Traffic Model (SHTM) - a bespoke SATURN traffic model, originally prepared by RBC to support the Outline Business Case (OBC) modelling for the SHLR and then subsequently utilised to inform the planning application for the SHDA. The SHTM SATURN model was developed in liaison and agreement with key highway network stakeholders (Transport for Greater Manchester (TfGM), Highways England (HE) and RBC highways) and copies of the Local Network Validation Report (LMVR) and Model Forecasting Reports (MFR) were submitted and audited as part of the review of the 2016 SHDA planning application.
- 4.2.2 The core 2038 SHTM SATURN model network developed to assess the SHDA includes for specific coding to include the following key elements:
- M62 Junction 19 Upgrade (Pinch Point & Sustrans Scheme).
 - M60 / M62 HA Smart Motorways Phase 1.
 - Inclusion of a range of local committed developments identified from an agreed 'risk register' of known planning applications / relevant local plan allocations.
 - Incorporation of appropriate alignment and junction format of the SHLR between M62 J19 and west of Heywood Distribution Park.
 - Incorporation of the effects of supporting traffic management works at a) Moss Hall Lane (N) / Heap Brow, b) Pilsworth Road (NE) and, c) Birch Village to be implemented in parallel with the delivery of the SHLR (see **Figure TA5** to this report).
 - Bespoke modelling of the future operation of the SHDA via inclusion of specific development zone loading points (both residential and employment areas) to the local network in line with the consented SHDA principles plan.
- 4.2.3 In order to ensure directly comparable modelling of the local and strategic traffic effects of the application scheme, new SHTM SATURN modelling has been undertaken for both the 2038 'Baseline Consented' and 'Do-Something' scenarios

identified in paragraph 4.1.5 above. This approach reflects the fact that since the original SATURN modelling was undertaken to inform the 2016 SHDA TA, there have been a number of updates to a) base model reference parameters, b) elements of the originally consented SHLR scheme, and c) SHDA scheme elements. These amendments are summarised below (see also **Appendix TA4** to this report):

Changes to Core Model Parameters:

- Update of the relevant economic growth modelling used for the forecasting of future year background traffic conditions from TEMPRO version v7 to TEMPRO v7.2.
- Update of LGV and HGV to the latest factors set out on the 2018 Road Traffic Forecasts (RTF).

Change to Consented SHLR Scheme:

- Minor amendments to the SHLR alignment and the conversion of the originally proposed Hareshill Road (SHLR) / Employment Area / Hill Top Road junction to signal control layout.

Change to Consented SHDA Scheme:

- Change in predicted SHDA development traffic levels to reflect the April 2021 non material amendment consent which adjusted the employment floorspace B2 / B8 ratio to 14% / 86% (see para 2.2.10 to this report and paragraphs 4.2.4 - 4.2.8 below).

- 4.2.4 With respect to the changes in development traffic demand modelling, predicted development traffic levels associated with the SHDA were presented in the original 2016 Transport Assessment (TA) and subsequently re-calculated at the time of the S96a application. At the request of Highways England (now National Highways), the demand estimates set out in the original 2016 TA report were calculated via reference to highly robust 85th percentile peak hour trip rates as extracted from the TRICS traffic information database at that time. These trip rates are presented in **Table TA4.1** below for reference.

Table TA4.1 - 2016 SHDA Transport Assessment 85th Percentile Trip Rates

All Vehicle Trip Rates (Veh / 100sqm)

Veh / 100sqm	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	0.184	0.502	0.687	0.203	0.198	0.401	0.484	0.309	0.739
B8 Dist	0.191	0.119	0.309	0.169	0.137	0.306	0.108	0.200	0.307
B2 Emp	0.665	0.349	1.014	0.371	0.374	0.744	0.165	0.507	0.672

HGV Trip Rates (HGV / 100sqm)

Trip / 100sqm	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	0.008	0.006	0.015	0.005	0.006	0.011	0.000	0.007	0.007
B8Dist	0.091	0.062	0.153	0.080	0.062	0.142	0.067	0.061	0.128
B2 Emp	0.031	0.029	0.060	0.033	0.038	0.071	0.023	0.016	0.039

4.2.5 In practice it is considered that these historical trip rate estimates are likely to represent a significant over-estimate of ultimate SHDA scheme traffic demand, being well in excess of both a) ‘average’ demand values for the identified core land uses and, b) those trip rates recently utilised by Transport for Greater Manchester (TfGM) to inform the Locality Assessments for large-scale employment & residential allocation sites identified in the publication draft PfE Strategic Plan. Nevertheless, in order to allow for ease of comparison and ensure a consistent assessment approach with the original 2016 TA work for the SHDA, these historical trip rates have been used for the review of development traffic levels presented in the remaining sections of this report.

4.2.6 Application of the 2016 TA historical trip rates to the consented SHDA development quantum (14% B2 / 86% B8 employment floorspace ratio) gives rise to the peak hour development traffic estimates presented in **Table TA4.2** below (see also **Appendix TA5**). Review of the results of this exercise suggests that, based on the robust absolute worst case 2016 TA trip rates, consented SHDA related traffic volumes of circa 1239 (205 HGVs) vehicle movements and 1278 (164 HGVs) vehicle movements could be expected to occur during the traditional weekday AM & PM ‘rush hour’ peak periods respectively.

Table TA4.2 - Consented SHDA Peak Hour Traffic Demand Levels

All Vehicle Trip Demand

Vehs	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	184	502	687	203	198	401	484	309	793
B8 Dist	223	139	360	197	160	356	126	233	358
B2 Emp	126	66	192	70	71	141	31	96	127
Total	533	707	1239	470	429	899	641	638	1278

HGV Trip Demand

HGV	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	8	6	15	5	6	11	0	7	7
B8 Dist	106	72	178	93	72	166	78	71	149
B2 Emp	6	5	11	6	7	13	4	3	7
Total	120	84	205	104	85	190	82	81	164

4.2.7 For the purposes of modelling the 'Baseline Consented' position SHDA employment traffic has been assigned as follows, reflecting the prevailing development strategy for the consented employment plots:

- Via main SHEA employment access junction to SHLR: 103,460sqm (83,600sqm B8 + 19,860sqm B2)
- Via SHEA access to Pilsworth Road (Plot 3): 32,000sqm (32,000sqm B8).

4.2.8 This assignment results in the following SHEA traffic levels modelled using each employment areas access corridor (see also **Appendix TA5**):

- Via main SHEA employment access junction to SHLR:

AM Peak: 287 (83) In / 167 (58) Out
Inter Peak: 213 (74) In / 187 (60) Out
PM Peak: 123 (61) In / 265 (55) Out

- Via Plot 3 employment access junction to Pilsworth Road:

AM Peak: 61 (29) In / 38 (20) Out
Inter Peak: 54 (26) In / 44 (20) Out
PM Peak: 35 (21) In / 64 (20) Out

All vehicles (HGV)

4.2.9 The updating of the modelling for both the 2038 Future Year 'Baseline Consented' and proposed 2038 'Do-Something' scenarios ensures a consistent modelling approach and therefore the most accurate identification of application scheme related highway network effects - as both model scenarios take into account any minor effects on network performance associated with the identified network / growth factor changes. Should the updated 2038 'Do-Something' modelling simply be compared against the results of the original 2016 SHDA TA modelling, then some of the identified differences would not be directly attributable to the application scheme and therefore would not allow for a suitable comparison of 'net' development effects between the two scenarios.

4.3 Network Assessment Methodology

4.3.1 Network operational assessments presented in this TA report have been carried out for the following time periods. These are consistent with the modelling periods considered within the 2016 SHDA TA analysis and, in the case of the AM & PM peak hour model runs, reflect maximum baseline local highway network operating conditions:

- AM Peak: (08:00 - 09:00)
- Inter-Peak (Average hour)
- PM Peak (17:00 - 18:00).

4.3.2 Network operational conditions for the 2038 'Baseline Consented' scenario have been established by reference to the following matters:

- Link capacity assessments (comparison of predicted future year network demand flows to traditional link capacity thresholds and relevant motorway merge / diverge standards); and,
- Detailed network capacity modelling (using appropriate industry standard computer modelling software and agreed model parameters).

- 4.3.3 The network study area modelled in SATURN experiences congestion during peak times, which has the effect of restricting capacity on downstream traffic flows (sometimes referred to as ‘flow metering’). This is an important feature of many road networks, and failure to take it into account can lead to over-estimation of queues and delays at downstream junctions. When extracting traffic flows from SATURN, there is an important distinction to be drawn between ‘demand’ flow on a link (i.e. the flow that would exist if there was no upstream capacity restriction) and ‘actual’ flow (after taking such restrictions into account). Care must be taken to use the correct flow definition in subsequent network appraisal.
- 4.3.4 For clarity, for environmental, link capacity and motorway merge / diverge calculations, the ‘actual’ flow values are most appropriate, as they reflect the actual levels of traffic modelled on individual links and at merges and diverges during each modelled period. For junction capacity assessments, however, ‘demand flow data’ values have been used - to ensure the ‘worst case’ appraisal and help ensure that any capacity-restricting effects of individual junctions is properly reflected in the assessment results.
- 4.3.5 Further information with respect to relevant network assessment criteria and thresholds used in each assessment approach is set out below.

Network Link Operating Capacity (via reference to historical guideline thresholds)

Link Capacity Assessment

- 4.3.6 In order to provide an understanding of future highway network operation under consented 2038 ‘Baseline Consented’ demand conditions, an appraisal of future link capacity issues on the key sections of the study network has been undertaken. This link capacity appraisal has been carried out by comparing future year predicted traffic volumes to the link capacity guidance thresholds set out in the historical DfT document TA79/99 “Traffic Capacity of Urban Roads”. TA79/99 was withdrawn by DfT (March 2020), but at the time of preparation of this TA report

(Summer 2022), no replacement reference document for the assessment of urban link capacity has been published. It therefore remains the most up-to-date guidance available on this matter.

- 4.3.7 TA79/99 sets out the following guidance for the use of the link capacity thresholds in network assessment:

“The capacities given in the tables.... provide a guide for the assessment of an appropriate carriageway width and standard. They may be applied to both the design of new roads and to the improvement of existing roads. The capacities are intended to help designers make a judgement as to which carriageway standard is likely to provide an acceptable level of service within an urban context, when operating close to capacity. The capacities apply to links and take no account of the effects of junctions.”(para 4.1)

- 4.3.8 Link capacity assessments have therefore been carried out for the key highway network study links identified below. This scope of assessment reflects those links agreed to be considered in discussion with RBC highways officers as part of pre-application scoping (see also **Figure TA10** to this report).

Local Road Network

- Ref A: SHLR (A6045 to M62 J19)
- Ref B: SHLR (West of Junction with A6045 Manchester Road)
- Ref C: SHLR (South East of South Heywood Employment Area Junction)
- Ref D: SHLR (South of Pilsworth Road Junction)
- Ref E: Pilsworth Road (Between SHLR and Heywood Distribution Park)
- Ref F: Pilsworth Road (Between Heywood Distribution Park and Plot 3 Access)
- Ref G: Pilsworth Road (Between Plot 3 Access to 3-Arrows Junction)
- Ref H: Pilsworth Road (North of 3-Arrows Junction)
- Ref I: M66 J3 Connector Road (East of Junction with Pilsworth Road)
- Ref J: Moss Hall Lane (North of Junction with Pilsworth Road)
- Ref N: Pilsworth Road (Immediately West of M66 J3)
- Ref O: Moss Hall Lane (Immediately South of 3-Arrows Junction)
- Ref P: Pilsworth Road (North of Junction with SHLR)

- Ref Q: Whittle Lane (west of Junction with A6045 Manchester Road)
- Ref R: A6045 Manchester Road (Immediately North of Junction with SHLR)
- Ref S: A6045 Manchester Road (Immediately North of Junction with SHLR)
- Ref T: A6045 Manchester Road North of Junction with Coronation Avenue)
- Ref U: A6046 Middleton Road (Immediately North of M62 J19)
- Ref V: A6046 Middleton Road (Immediately South of M62 J19)
- Ref Z: Langley Lane (East of Junction with A6045)
- Ref A1: A6045 Manchester Road (Immediately South of Junction with Whittle Lane)

Strategic Road Network

- Ref K1: M66 J3 NB Entry Slip
- Ref K2: M66 J3 SB Entry Slip
- Ref K3: M66 J3 NB Exit Slip
- Ref K4: M66 J3 SB Exit Slip
- Ref L: M66 North of Junction 3 Slip Road Connections
- Ref M: M66 South of Junction 3 Slip Road Connections
- Ref X1: M62 J19 EB Entry Slip
- Ref X2: M62 J19 WB Entry Slip
- Ref X3: M62 J19 EB Exit Slip
- Ref X4: M62 J19 EB Exit Slip
- Ref W: M62 East of Junction 19 Slip Road Connections
- Ref Y: M62 West of Junction 19 Slip Road Connections

- 4.3.9 For the purposes of assessment, it has been assumed that the majority of links within the immediate study network to the application site effectively operate as “Urban All Purpose 3” (UAP3) links, which were previously defined in TA79/99 as follows:

“Variable standard road carrying mixed traffic, with frontage access side roads, bus stops and at-grade pedestrian crossing”

- 4.3.10 “Urban All Purpose 2” (UAP2) classification has been utilised for the calculation of link capacity for the proposed new SHLR route and the remaining key ‘industrial

estate' sections of Pilsworth Road through the existing adjacent South Heywood employment zones - reflecting the 40mph speed limit nature of these routes and the limited frequency of side road access points.

- 4.3.11 Guidance on motorway link capacity thresholds is provided in DfT document CD122 "Geometric Design of Grade Separated Junctions". This design guidance notes that for the purpose of designing grade separated junctions and interchanges, the maximum flow per lane for motorway links should be taken as being 1,800 vehicles per hour. Slip road flow capacity per slip road entry lane is typically considered to be 1,350 vehicles per lane. For robustness, simple taper and parallel merge layouts have been considered as representing a single lane entry / exit layout, even in those cases where two lanes are available on the acceleration / deceleration section prior to the merge / diverge nose. It should also be noted that CD122 notes that the above quoted threshold values for motorway lanes do not represent absolute hourly throughput capacity levels, and that traffic levels above such demand thresholds can often take place, but could result in decreasing levels of service and safety.
- 4.3.12 In order to provide a simple 'at a glance' guide to link flow capacity on the study links, a simple colour coded system has been utilised to illustrate the likely future performance of individual link sections, viz:
- 'Green': Links where predicted traffic flows are less than 90% of TA79/99 guideline link capacity threshold value.
 - 'Amber': Links where predicted traffic flows are between 90% - 100% of TA79/99 guideline link capacity threshold value.
 - 'Red': Links where 'Do-Something' traffic flows are predicted to be in excess of 100% of TA79/99 guideline link capacity threshold value.
- 4.3.13 When reviewing the link capacity results, it must be recognised that the threshold values are 'guideline' levels, below which a road classification could typically be

expected to deliver an acceptable level of service. This does not mean that a link cannot operate above such threshold levels without experiencing major congestion effects, but simply that once such a capacity threshold has been exceeded, the potential for problems to occur can be expected to be greater. Ultimately, a significant number of distributor road and motorway routes across major urban areas such as Greater Manchester already operate in excess of such guideline thresholds on a daily basis and still deliver a reasonable level of service and without experiencing unacceptable congestion and delay. The use of the threshold analysis in this report therefore simply helps to identify those links that could be more susceptible to operational issues in future and thus may require some further analysis - such as detailed capacity assessment at key junctions along these routes.

Merge / Diverge Assessment

- 4.3.14 In addition to the individual link capacity assessment, the network analysis set out in this TA also considers the operation of key merge / diverge layouts at M62 J19 and M66 J3 (the immediate motorway junctions at either end of the SHLR / Pilsworth Road corridors). This assessment has been carried out via reference to the merge / diverge criteria set out in CD122 “Geometric Design of Grade Separated Junctions”. This design guidance sets out link flow thresholds for different merge / diverge layouts and provides an assessment tool for comparing observed / predicted traffic to these layout options. Current slip road connection layouts at the key motorway junctions are understood to be as follows (including for recent ‘smart motorway’ improvements on the M62 mainline route):

M62 J19 (Including Completion of M62 J18-20 Smart Motorway Scheme)

- M62 J19 Eastbound Entry-Slip Merge (Link Ref D1):
CD122 Layout A Option 2 Taper Merge (4 lanes on mainline, 2 lane merge).
- M62 J19 Westbound Entry-Slip Merge (Link Ref D2):
CD122 Layout A Option 2 Taper Merge (4 lanes on mainline, 2 lane merge).
- M62 J19 Eastbound Exit-Slip Diverge (Link Ref D3):
CD122 Layout A Option 1 Taper Diverge (4 lanes on mainline).

- M62 J19 Westbound Exit-Slip Diverge (Link Ref D4):
CD122 Layout A Option 1 Taper Diverge (4 lanes on mainline).

M66 J3 (Existing Merge / Diverge Layouts)

- M66 J3 Northbound Entry-Slip Merge (Link Ref H1):
CD122 Layout A Option 2 Taper Merge (3 lanes on mainline, 2 lane merge).
- M66 J3 Southbound Entry-Slip Merge (Link Ref H2):
CD122 Layout A Option 2 Taper Merge (3 lanes on mainline, 2 lane merge).
- M66 J3 Northbound Exit-Slip Diverge (Link Ref H3):
CD122 Layout A Option 1 Taper Diverge (3 lanes on mainline).
- M66 J3 Southbound Exit-Slip Diverge (Link Ref H4):
CD122 Layout A Option 1 Taper Diverge (3 lanes on mainline).

Detailed Network Junction Capacity Modelling (using appropriate computer modelling software).

4.3.15 Network capacity assessment for key junctions across the study area has been undertaken using the following industry standard computer software programs. As identified in paras 4.3.3 & 4.3.4 above, such analysis has been undertaken via reference to model 'demand flow' values and are presented in in pcu's in line with the capacity model program requirements and to fully reflect the capacity influence of large vehicles):

- LINSIG3 (traffic signal junctions).
- JUNCTIONS (PICADY module) (stand-alone give-way junctions).

Interpretation of Results: LINSIG3

4.3.16 LINSIG modelling has been carried out for the following key traffic signalised junctions along the SHLR route and key immediate connecting links, using junction turning movements derived directly from the SHTM model (see also **Figure TA10** to this report):

- Jnt Ref 1: M62 J19 - *Traffic Signal Roundabout*
- Jnt Ref 2: SHLR / A6045 Manchester Road - *Traffic Signal Crossroads*
- Jnt Ref 3: Hareshill Road (SHLR) / South Heywood Employment Area / Hill Top Road - *Traffic Signal Off-Set Crossroads*
- Jnt Ref 4: Hareshill Road / Pilsworth Road - *Traffic Signal T-Junction*
- Jnt Ref 7: Pilsworth Road / M66 J3 Connector Road *Traffic Signal T-Junction*
- Jnt Ref 8: M66 J3 - Traffic Signal Linked Crossroad nodes

4.3.17 For consistency, all of the LINSIG junction models utilised in this TA assessment, except for M66 J3 (Jnt 8) were prepared by TfGM (Urban Traffic Control) and represent those models submitted and audited as part of:

- The 2016 South Heywood Development Area planning application (Jnt Refs: 1, 2, 4 & 7) and;
- S96a non-material amendment application 20/000464/ANM (see para 2.2.6 to this report) (Jnt Ref: 3).

4.3.18 The LINSIG model for M66 J3 is based on a model produced by consultants Pell Frischmann as part of the on-going M66 J3 improvement study on behalf of Bury & Rochdale Councils. This model is based on current traffic signal staging / timing information supplied by TfGM. It therefore represents the most up to date known traffic model available for the review of future junction operational performance at this location.

4.3.19 LINSIG software presents network modelling results in terms of a percentage 'Degree of Saturation' (DoS) value and corresponding predicted traffic queues for each modelled link. For traffic signal-controlled junctions, it is generally accepted that degrees of saturation of 90% or less on individual links represent satisfactory link operation, with values above this threshold representing 'variable operation' and therefore increasing the potential for regular congestion and delay. LINSIG also provides a further reference value, Practical Reserve Capacity (PRC), which provides an overall indicative measure of the general operation of a junction within the network. PRC values of 0% or above are generally considered to represent

acceptable junction operating conditions, with values of less than 0% (negative PRC) indicating a propensity for more variable junction operation and the potential for some congestion and queue build up.

- 4.3.20 It should be noted that negative junction PRC values can be obtained when a number of individual junction arms are operating at less than 100% degree of saturation i.e. the point where theoretical operating capacity is reached on an approach arm, and therefore the PRC value provides only a general guide to overall junction performance.
- 4.3.21 For the purposes of the network modelling included in this TA report, full LINSIG summary output is presented for key assessment runs, setting out information on the operation of individual junction approach arms. The junction PRC value output for each key junction node has been utilised as a first point of reference / guide to overall junction performance for each future year demand scenario.

Interpretation of Results: TRL JUNCTIONS Software (PICADY module)

- 4.3.22 Additional detailed assessment of the operating capacity of other key local 'give-way' junctions has been carried out using industry standard TRL JUNCTIONS (PICADY module) analysis software. This includes for the following locations (see also **Figure TA10**):

- Jnt Ref 5: Pilsworth Road / SHEA (Plot 3) - *Ghost Island T-junction**
- Jnt Ref 6: Pilsworth Road / Moss Hall Lane (3-arrows) - *Ghost Island T-Junction**
- Jnt Ref 9a-d: SHLR / SHDA Residential Access Points - *Ghost Island T-Junctions*
- Jnt Ref 10: Pilsworth Road / Heywood Distribution Park - *Ghost Island T-junction*

* Jnt 5 & Jnt 6 modelling assumes for the delivery of the programmed RBC Pilsworth Road West enhancement works illustrated in **Appendix TA3** to this report.

- 4.3.23 PICADY considers junction performance with respect to the Ratio of Flow to Capacity (RFC) and associated traffic queuing. RFC values for junction approaches

of between 0.00 and 0.85 are generally considered to represent stable and acceptable operating conditions. Values between 0.85 and unity (1.0) represent variable operation (i.e. possible queues building up at the junction during the period under consideration and increases in vehicular delay moving through the junction). RFC values in excess of unity represent overloaded conditions (i.e. congested conditions).

- 4.3.24 Guidance as to the interpretation of PICADY module results identifies that it is possible for a junction to operate with individual RFC levels of above 0.85 without unacceptable congestion and delay taking place. The 0.85 threshold identifies the optimum position at which operational capacity is maximised when viewed against the likely frequency of queuing and delay events. RFC values of above 0.85 simply demonstrate a greater potential for congestion and delay to occur, which must be viewed in the context of the future year horizon under assessment and surrounding general network wide conditions. An RFC of in excess of 0.85 does not, by definition, suggest over-capacity / unacceptable operational junction performance.

4.4 2038 'Baseline Consented' Scenario Link Capacity Assessment

- 4.4.1 This section of the report sets out the results of the link flow capacity analysis for the identified study links under 2038 'Baseline Consented' network demand conditions. Review of these results provides a key understanding of the predicted local traffic patterns that are expected to occur in future as a combination of: a) the delivery of the SHLR connection to M62 J19 and supporting local traffic management measures; b) general increases in background traffic (traffic growth); and, c) the delivery of the consented SHDA (135,460sqm employment (14% B2 / 86% B8 (GIA) and 1,000 dwellings)).
- 4.4.2 AM peak, Inter-Peak and PM Peak predicted 'actual' link flow values for the 2038 'Baseline Consented' scenario for the key study links identified in para 4.3.8 to this report is further summarised in **Appendix TA6**, which provides a comparison to

relevant guideline link capacity thresholds calculated in line with the methodology set out in TA79/99 and CD122.

4.4.3 Review of the results of this link capacity exercise demonstrates the following:

Local Road Network

4.4.4 The majority of the local highway authority study routes are predicted to operate at well below theoretical operating link capacity for 2038 'Baseline Consented' conditions. Only a small number of links are predicted to be approaching guideline threshold levels or show evidence of over-capacity, viz:

- *SHLR between A6045 & M62 J19* - close to threshold capacity conditions (92% - 99% TD79/99 guidance) are predicted in the non-tidal traffic directions in the AM & PM peak. In practice, this is not anticipated to represent an issue of significant concern, as this section of link is likely to operate at higher than TA79/99 UAP2 threshold values as a) the route has no side road connections or other frontage development, which could contribute to flow breakdown, and; b) the westbound lane of this route (the direction identified as being close to capacity) operates with two-lanes over much of the length of this route, providing higher practical capacity than referenced within the robust link capacity modelling referenced in this TA. All other time periods are noted as likely to operate with a good level of spare capacity in both tidal and non-tidal directions.
- *Pilsworth Road North East of South Heywood Development Area* - Close to capacity conditions are predicted on this key local link during rush hour peak periods, reflecting the more restricted one-way traffic signal shuttle working that takes place on the southern section of this route (under the railway bridge). Based on an estimated 2-way link capacity threshold of circa 1100 vehicles per hour (reflecting the effects of shuttle working), it is noted that under predicted 2038 'Baseline Consented' 'rush hour' conditions, this one-way shuttle working section would likely operate at circa 90% - 91% (AM / PM peak)

of guideline capacity. Ultimately such a level of traffic demand does not represent unacceptable operating conditions and indeed, RBC have previously identified that throttled-back link capacity at this location could assist in deterring traffic associated with the SHDA / SHLR from seeking to utilise this route as a 'rat-run' connection towards Heywood town centre and Norden.

- *Pilsworth Road West (South of Park 66 - Bury Council)* - The non-tidal direction sections of Pilsworth Road to the west of M66 J3 (North of Park 66) are predicted to operate at over 100% of guideline directional link capacity for the AM & PM peak hour under 'Baseline Consented' traffic conditions. This section of route is some distance from the Plot 3 / SHDA application site and is unlikely to experience significant changes in future traffic levels as a result of the proposed development (see section 7.2 to this report).

4.4.5 All other local road links within the study area are predicted to operate at within calculated guideline threshold levels for 2038 'Baseline Consented' demand conditions. Indeed, few links are anticipated to show tidal or non-tidal demand in excess of 85% of TA79/99 guideline thresholds.

4.4.6 Based on the above review of issues, it is considered that there is no evidence of predicted substantive network-wide over-capacity conditions on key study links for the 2038 'Baseline Consented' position. Whilst a small number of links are predicted as likely to be at or approaching capacity at the 2038 future year, these links are a) not typically associated with being required to accommodate high levels of SHDA related traffic, b) typically show issues for less critical non-tidal travel directions and, c) would not be experienced across all modelled time periods.

Strategic Road Network

4.4.7 Only a small number of motorway links within the study area could be expected to be operating close to or above CD122 guideline link capacity thresholds (1800

vehicles per available running lane, 1350 per slip road) by 2038. These links are as follows:

- M62 J18 - J19 Westbound (PM Peak Only): 98% capacity
- M62 J19 - J20 Westbound (PM Peak Only): 100% capacity
- M66 J3 - M62 J18 Northbound (PM Peak): 95% capacity
- M66 J3 - M62 J18 Southbound (AM Peak): 94% capacity
- M66 J3 - J2 Northbound (PM Peak Only): 113% capacity
- M66 J3 - J2 Southbound (AM Peak Only): 93% capacity

4.4.8 Each of the above quoted links effectively represents the tidal travel direction in the busiest identified peak period.

4.4.9 In practice the above forecast at or close to capacity operating conditions on these links represents similar results to those identified in the 2016 TA analysis prepared to support the SHDA consent. Given that the majority of these links are only predicted to be at or just under guideline threshold levels for the long-term future year of 2038 and that SHDA related traffic increases on these links were previously noted to be of a generally limited scale (typically less than 1.5% of total traffic volumes), it was concluded at the time of the 2016 TA and informing the subsequent planning consent, that such operating conditions would not represent a practical restraint on development at South Heywood. Notwithstanding this, it is acknowledged that these links do represent locations that will require consideration as part of the review of predicted future traffic conditions taking account of the delivery of the application scheme (see section 7 to this report).

4.4.10 The remainder of the local motorway & slip road links within the identified study area are not forecast to show traffic flow levels above guideline link capacity threshold values for the 2038 'Baseline Consented' scenario.

4.5 2038 'Baseline Consented' Motorway Slip Road Merge / Diverge Assessment

4.5.1 **Appendix TA7** to this report illustrates the results of 2038 'Baseline Consented' slip road merge / diverge analysis for the closest motorway connections to the application site, i.e., M62 J19 and M66 J3. Review of the results of this exercise identifies the following:

- *M62 J19 Slip Roads* - 2038 'Baseline Consented' peak hour traffic flow forecasts are generally predicted to lie within ranges appropriate to be safely and efficiently accommodated by the standard 4 lane mainline taper merge / diverge provision recently delivered at M62 J19 as part of the M62 J18-20 Smart Motorway project. The only slip road connection which is not predicted to operate within these ranges relates to the westbound diverge layout during the busiest PM peak period, which is anticipated to experience flow levels that would potentially require a 5-4 lane drop diverge layout. In practice this higher standard of requirement during the PM peak is a function of the high tidal demand flow that is predicted to be experienced on the M62 westbound mainline by 2038 during this time period (98% - 100% of the theoretical threshold range of a four-lane motorway as identified in section 4.4.7 above). Ultimately these future PM peak predicted conditions were not identified as representing a material operating concern that would call the delivery of the wider SHDA into question. Indeed, it was previously identified that the addition of South Heywood development traffic at this location would not result in a substantive change in demand conditions, with demand on the slip road being typically 40% of single lane slip road link capacity.
- *M66 J3 Slip Roads* - 2038 'Baseline Consented' peak hour traffic flow forecasts are also predicted to generally lie below the guideline threshold ranges associated with the current standard 3 lane mainline taper merge / diverge provision at M66 J3. The only slip road connection which is not predicted to operate within this capacity range relates to the northbound merge layout and only during the busiest PM peak period. This issue is a function of the high baseline northbound tidal flow on the M66 during the PM peak period, which as

identified in section 4.4.7 above, is predicted to be at 113% of the CD122 capacity threshold for a 3-lane motorway by 2038. The merge would operate within typically thresholds at all other times. It was ultimately concluded that such future PM peak predicted conditions did not represent a material operating concern that would call the delivery of the wider SHDA into question.

- 4.5.2 Based on the above review, it is clear that existing merge / diverge provision at the key local motorway junctions is generally of a suitable standard to accommodate 2038 'Baseline Consented' conditions, including for the full delivery of the consented wider SHDA and SHLR. Whilst there is the potential for the guideline merge / diverge thresholds to be exceeded on tidal-flow direction links during the busiest PM peak hour (operation would be within thresholds at other times), this position has previously been identified as being primarily associated with background traffic demand conditions unrelated to development at South Heywood and not as being of sufficient concern as to call the delivery of the wider SHDA into question.

4.6 **2038 'Baseline Consented' Network Junction Operational Capacity Assessments: Traffic Signal Junctions (LINSIG Modelling)**

- 4.6.1 **Appendix TA9** to this report sets out a summary tables detailing the results of the LINSIG operational capacity testing for the traffic signalised junctions within the study area under 2038 'Baseline Consented' demand conditions. The detailed turning information extracted from the SHTM model to inform this junction capacity testing is included as **Appendix TA8** for reference (note this data represents robust modelled 'demand' flows presented in pcu (passenger car unit) format - see para 4.3.3 & 4.3.4). Review of the LINSIG assessment results indicates the following (full LINSIG model printouts can be made available on request):

- *M62 J19 Signalised Roundabout (Jnt 1)*: The proposed traffic signalised roundabout junction improvement is predicted to operate satisfactorily for 2038 'Baseline Consented' conditions under all peak hour scenarios, albeit that the junction has effectively reached overall junction practical reserve capacity

under traditional AM & PM peak rush hour demand - when a small number of links are predicted to exceed 90% capacity operation. Busiest conditions are predicted to occur during the AM peak hour, when a maximum approach link PRC of 93.9% is predicted for the inside SHR approach lane, with a related mean max queue of 17 pcus. Even under such maximum predicted junction operation, the junction PRC value is still only at -4.3%, with the majority of other junction links showing RFC values of under 85% and queuing levels of 10 pcus or less. Maximum queuing is predicted on the A6046 Middleton Road (N) approach (17.5 pcu's over two approach lanes). These results conform with the conclusions drawn previously with respect to the analysis undertaken for the consented SHDA, which was validated at that time by an independent VISSIM model of the junction prepared by Highways England.

- *South Heywood Link Road / A6045 Manchester Road Signalised Crossroads (Jnt 2)*: The proposed traffic signal crossroads design is predicted to operate with a level of spare capacity under 2038 'Baseline Consented' demand conditions. Even under predicted maximum demand conditions (AM Peak) the junction is predicted to operate with a PRC value of 17.6%. Maximum approach link degree of saturation is predicted to be 76.5% for the SHLR westbound (ahead and right) approach lane, with an associated mean max queue of 14.8 pcus. Maximum demand on the A6045 approach arms to the junction is predicted to occur on the Manchester Road (N) approach in the AM peak, with a predicted degree of saturation of 76.1% and mean max queue of 8.3 pcus across two lanes. During off-peak periods the junction is predicted to operate with a good level of spare capacity - up to 48.3% junction PRC.

- *Harehill Road (SHLR) / South Heywood Employment Area / Hill Top Road Signalised Junction (Jnt 3)*: The consented S96a off-set traffic signal crossroads design is predicted to operate with a good level of spare capacity under 2038 'Baseline Consented' demand conditions. Even under predicted maximum demand conditions (AM Peak) the junction is predicted to operate with a PRC value of 21.9%. Maximum approach link RFC is predicted to be 73.3% for the Link Road (E) junction approach arm, with an associated mean max queue of

18.3 pcus. Maximum demand on the proposed SHEA access road approach is predicted to occur during the AM peak (right turn exit lane) with a predicted degree of saturation of 73.8%, with an associated mean max queue of 5.9 pcus. During off-peak periods, the junction is predicted to operate with good level of spare capacity - up to 45.5% junction PRC.

- *Hareshill Road (SHLR) / Pilsworth Road Signalised T-Junction (Jnt 4):* The proposed traffic signal T-junction design to support the SHLR scheme is predicted to operate with a good level of spare capacity under 2038 'Baseline Consented' traffic demand. Even during predicted maximum PM peak demand conditions, the layout is anticipated to operate with a junction PRC of 17.2%, associated with a maximum approach link RFC of 76.8% and mean max queue of 16.8 pcus (Pilsworth Road eastern approach). Off peak operation of the junction suggests a PRC level in excess of 40%.
- *Pilsworth Road / Moss Hall Road Signalised T-Junction (Jnt 7):* The existing traffic signal layout is predicted to operate with a limited degree of spare capacity for 2038 'Baseline Consented' conditions. During AM & PM peak rush hour peak network conditions the layout is predicted to operate with between 2.3% & 5.5% PRC, with maximum approach lane RFC of circa 86.2% for the M66 J3 Connector Road (E) approach during the PM peak. Maximum predicted queuing is predicted to be circa 18 - 19 pcus. Predicted off peak operation at the junction suggests slightly improved operating conditions - related to a predicted junction PRC of 7.2% and maximum queuing of 12 - 15 vehicles.
- *M66 J3 Traffic Signal Linked Crossroads (Jnt 8):* The existing constrained double crossroads traffic signal-controlled layout is predicted to experience over-capacity conditions under 2038 'Baseline Consented' peak hour periods, particularly during the PM peak. A number of the junction approach links are predicted to operate at well over 100% capacity during the PM peak period - primarily both Pilsworth Road approach arms - with significant associated queuing. Junction PRC levels are predicted at -7.4% during the AM peak and -54.9% during the busier PM peak period.

- 4.6.2 Given the long-term future forecast year of these tests (2038) and that this analysis includes for full SHDA consented traffic (based on highly robust 85th percentile development traffic estimates), it is considered that these LINSIG assessment results provide a good level of confidence that the immediate SHLR corridor and associated improved junctions would provide a suitable level of operational performance to accommodate the 2038 'Baseline Consented' scenario. All junctions are predicted to operate with an appropriate level of performance and the capacity testing does not identify the potential for substantive queueing or congestion to occur. These results therefore reflect the general conclusions of the original 2016 SHDA TA analysis.
- 4.6.3 Some future year congestion issues are predicted to occur at M66 J3, particularly during PM peak periods, reflecting the known constrained traffic signal layout at this location. Ultimately the original 2016 SHDA planning application previously identified that SHDA related development traffic effects at this location were anticipated to be limited and would not give rise to additional severe operational effects - with this conclusion reflected by no development funded improvements being required.
- 4.7 **2038 'Baseline Consented' Network Junction Operational Capacity Assessments: Give-Way Junctions (PICADY Modelling)**
- 4.7.1 **Appendix TA10** to this report summarises the results of the PICADY operational capacity assessments undertaken for the key give-way controlled junction locations within the study area (i.e. Jnts 5, 6, 9(a-d) & 10) under 2038 'Baseline Consented' conditions. Full model output of all of these PICADY model runs for AM Peak, Inter-Peak and PM Peak periods can be provided on request. Forecast turning flow information utilised in the modelling is set out in **Appendix TA8**.
- 4.7.2 Review of the results of the PICADY junction capacity testing demonstrates that all of the proposed give-way junctions serving the SHEA site (Jnts 5 & 9(a-d)), are predicted to operate with a level of spare capacity under 2038 'Baseline Consented' demand conditions, with no indication of any substantive congestion

or delay. Indeed, the majority of junctions show maximum ‘give-way’ approach lane RFC values of well below 0.5 and limited queuing (1-2 pcus) - even including for consented development trip demand estimates based on the highly robust 85th percentile development trip rate estimates and the application of a ‘synthesised peaked’ profile to the junction modelling.

- 4.7.3 Maximum operating conditions are predicted to take place at the proposed SHLR / South Heywood Residential Development junction ref 9D. AM & PM peak ‘rush’ hour modelling of this junction suggests RFC values for right turn exit traffic from the employment development to be of the order of 0.67 and 0.29 respectively, with an associated queue of circa 1 - 2 pcu’s. Capacity results for the Pilsworth Road / SHEA (Plot 3) ghost island junction (Jnt 5) suggest substantive levels of spare capacity at this location under 2038 ‘Baseline Consented’ network operation, with max RFC of just 0.11 and mean max queue levels of 1 pcu.
- 4.7.4 Review of predicted operation of the proposed ghost-island improvement at the Pilsworth Road / Moss Hall Lane (3 arrows) junction (Jnt 6), also demonstrates that this junction could be expected to operate with a good level of spare capacity for the 2038 ‘Baseline Consented’ scenario. Maximum RFC (0.39) is predicted to take place on the Pilsworth Road (W) mainline under AM peak conditions (trips to Birch Industrial Estate) and on the Moss Hall Lane side road under PM peak demand conditions (associated with employment exit trips from the Birch Industrial Estate - served off Moss Hall Lane) with only limited predicted queuing.
- 4.7.5 Review of 2038 ‘Baseline Consented’ conditions at the Pilsworth Road / Heywood Distribution Centre access (Jnt 10) suggests the potential for some spare capacity at this location. The PICADY modelling suggests maximum RFC taking place during the AM peak (0.65) for the Pilsworth Road right turn into the site, with an associated queue of 2-3 pcus. Such queuing can be easily accommodated within the extended ghost island right turn lane provided at this junction.
- 4.7.6 Ultimately, based on the results of the PICADY modelling, it is concluded that all of the local give-way access points within the study network can be expected to

operate with satisfactory performance under 2038 'Baseline Consented' conditions
- a conclusion in line with the findings of the 2016 TA prepared to consider the original SHLR / SHDA hybrid planning application.

4.8 2038 'Baseline Consented' Network Operational Statement

- 4.8.1 The review of the network capacity testing set out within this chapter demonstrates that the immediate highway network to the Plot 3 application site and wider SHDA can be expected to operate with generally satisfactory performance under 2038 'Baseline Consented' network conditions - including for the opening of the SHLR and full delivery of the consented SHDA committed scheme (135,460sqm total employment floorspace). This conclusion mirrors the position identified in 2016 /2017 as part of the original SHDA TA analysis, which generated no objections from key highway stakeholders, and which informed the decision by RBC to grant consent to the SHDA proposals. Whilst the above review has highlighted some locations which could be expected to be at or approaching practical capacity by 2038, such conditions have previously been identified as likely to occur more as a reflection of underlying background network demand, rather than development traffic and would not be the subject of material changes in performance specifically as a result of additional SHDA traffic movements. They therefore do not represent circumstances that could be expected to result in 'severe' highway network impact as defined in NPPF, reflecting the decision of the LPA / LHA to previously grant consent to the wider SHDA scheme.

5.0 REVIEW OF DEVELOPMENT PROPOSALS

5.1 Development Principles

5.1.1 The application scheme effectively represents a ‘drop in’ application to the employment zone forming part of the consented SHDA and seeks outline planning consent (all matters reserved other than access) for a 40,000sqm (430,556sqft) employment (logistics) warehouse (use class B8) unit at ‘Plot 3’. The proposed development would provide a significant regional or national base for a distribution / logistics operator, offering a Grade A sustainable development of high-quality design, set within an attractive landscaped setting.

5.1.2 As forming part of the wider SHDA development, the Plot 3 site area is already identified by the consented SHDA parameter plan as being suitable for employment use, with commercial building height in this area restricted to 23m above finished floor level. As the principle of commercial development is already approved on the Plot 3 land as part of the current consent, it is therefore important to view the current proposals in the context of the wider SHDA approval - with the current application having the effect of increasing total employment floorspace across the full SHDA from the currently consented total of 135,460sqm to 175,460sqm (to be split 18,960 sqm B2 (10.8% total floor area) / 156,500 sqm B8 (89.2% total floor area)).

5.1.3 A copy of the proposed parameters plan for the Plot 3 site area associated with the current outline planning application is illustrated as **Appendix TA11**.

5.2 Highway Access Arrangements

5.2.1 Vehicle access to the wider highway network from the Plot 3 application site would be taken via connections to the employment estate road linking to Pilsworth Road to the north west corner of the SHDA. The location of this access point is identified on both the previously consented SHDA parameter plan and the proposed Plot 3 parameter plan and would be delivered as a high-standard ghost-island T-junction

layout as part of the RBC Pilsworth West enhancement works, programmed for construction in Spring / Summer 2023 (see section 2.2 to this report).

5.2.2 It is expected that the connecting employment estate road, linking to Pilsworth Road and serving the Plot 3 site would be delivered to reflect typical single carriageway industrial distributor road standards, viz:

- 2 * 3.65m running carriageway lanes.
- 2m verge to each side & 3m footway / cycleway to development side of road.
- 2m verge and landscaping to non-development side of road.

5.2.3 High standard segregated footway / cycleway access would be provided at the main vehicle access points to the proposed development and for the length of the main connecting development distributor roads to Pilsworth Road, including central crossing islands as necessary, to support key desire lines / crossing of wide side road access points.

5.3 Car Parking & Cycle Parking

5.3.1 Car Parking standards for new employment development in Rochdale are set out in Appendix 5 to the 2016 Rochdale Core Strategy. These standards identify the following guidance with respect to proposed B8 (Warehouse & Distribution) employment land use development:

B8 General Industrial

- Car Parking: Maximum of 1 space per 100sqm development
- Cycle Parking: Minimum of 1 space per 850sqm development (min 2 spaces)
- M-Cycle Parking: Minimum of 1 space per 4,00sqm development (min 2 spaces)

5.3.2 Additional general advice is also included in these standards with respect to disabled parking provision, viz:

Disabled parking (in addition to general parking provision):

- Below 12 general spaces: 10% total capacity
- 12 to 200 general spaces: 3 bays or 6% total capacity (whichever greater)
- Over 200 spaces: 4 bays, plus 4% of total capacity.

- 5.3.3 In practice final parking provision to serve the Plot 3 site would be tailored to final end-user requirements. Notwithstanding this, it is anticipated that parking levels would not be delivered at below 85% of identified RBC maximum general parking provision or below 100% of minimum cycle / motorcycle parking standards. Previous discussions with RBC officers have identified that car parking supply levels at 85% of maximum standard or above, would be appropriate at the SHDA site, given the location and nature of employment land uses proposed.

5.4 Service Vehicle / HGV Arrangements

- 5.4.1 All SHDA employment estate roads, including the distributor road serving Plot 3 and linking to Pilsworth Road, will be designed to industrial distributor road standard, including for appropriate lane widths, horizontal radii and local junction layouts suitable to accommodate large articulated HGV service vehicles (see para 5.1 above). These layout parameters will be further validated by vehicle swept path assessment testing of key masterplan features as part of the review of final end-user scheme requirements.

- 5.4.2 The distributor road / Plot 3 junction to be delivered as part of the RBC highways package has been fully swept-path tested for compliance to accommodate maximum large HGV manoeuvring requirements.

5.5 Travel Plan

The future operation of the proposed 40,000sqm B8 unit at SHDA Plot 3 would be supported by the implementation of Travel Plan initiatives tailored to meet the requirements of final business end users. The SHDA consent, including Plot 3 and remainder of the wider employment area, is supported by an agreed Travel Plan

Framework document for the site (see **Appendix TA12** to this report and referenced in condition 33 to the prevailing hybrid planning consent). This Framework document sets out how Travel Plan initiatives are to be delivered across the site.

6.0 TRAFFIC DEMAND IMPLICATIONS OF THE PLOT 3 APPLICATION SCHEME

6.1 Context

6.1.1 This section of the TA report seeks to identify the future level of traffic demand anticipated to be generated by the application scheme. This exercise has also been undertaken using reference to highly robust trip rates extracted from the TRICS traffic information database and utilised to inform the original 2016 / 2017 TA for the consented SHDA (see section 4 to this report). It must be stressed that such an approach will ensure a highly robust assessment of the highway network and development traffic impact and that the continued use of such trip rates is specific to this analysis only, due to the need to provide a direct comparison to the results of historic consented work, and does not represent a precedent for any future highway network assessment work within the South Heywood / Northern Gateway locality.

6.2 'Do-Something' Application Scheme Predicted Traffic Generation

6.2.1 The predicted traffic demand for the proposed Plot 3 B8 employment unit has been calculated via the application of the proposed employment building floor area (40,000sqm) and land use (B8) to the 2016 TA trip rates. This exercise is summarised in **Table TA6.1** below, with further details included as **Appendix TA13**:

Table TA6.1 - Predicted Traffic Generation for 40,000sqm B8 Warehousing Unit

All Vehicles

Land Use	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
40,000 B8	76	48	124	68	55	122	43	80	123

HGVs

Land Use	AM In	AM Out	AM Total	Int-Pk In	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
40,000 B8	36	25	61	32	25	57	27	24	51

6.2.2 This exercise suggests that the proposed B8 unit scheme could be expected to generate of the order of 124 (61 HGVs) vehicle movements (in + out) in the AM peak period and 123 (51 HGVs) vehicle movements in the PM peak.

6.3 Predicted Change in Total SHDA Traffic Demand ‘Do-Something’ v ‘Baseline Consented’

6.3.1 As noted in section 5.1 to this report, the practical wider effect of the Plot 3 proposals would be increase overall employment development quantum at the SHDA from 135,460sqm to 175,460sqm, with the total proposed development quantum across the full SHDA including the Plot 3 application being as follows:

- 1,000 residential dwellings;
- 156,500 sqm (GIA) of B8 (warehouse / distribution) development floorspace;
- 18,960 sqm (GIA) of B2 (general industrial) development floorspace;
- Local centre.

6.3.2 The proposed change would represent a total employment development floorspace of 175,460 sqm, provided at a site wide employment land use ratio of 89.2% B8 / 10.8% B2.

6.3.3 Predicted future development traffic levels associated with the above revised total development quantum at SHDA (including for the Plot 3 application), as calculated via the application of the historical 2016 South Heywood trip rates, are summarised in **Table TA6.2** below:

Table TA6.2 - Peak Hour SHDA Traffic Demand Including for Plot-3 Additional B8 Land Use

All Vehicle Trip Demand

Vehs	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	184	502	687	203	198	401	484	309	793
B8 Dist	299	186	484	264	214	479	169	313	480
B2 Emp	126	66	192	70	71	141	31	96	127
Total	609	754	1363	538	483	1021	684	718	1401

HGV Trip Demand

HGV	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	8	6	15	5	6	11	0	7	7
B8 Dist	142	97	239	125	97	222	105	95	200
B2 Emp	6	6	12	7	8	14	5	3	8
Total	156	109	266	136	110	247	109	105	215

6.3.4 Review of the above information suggests robust absolute worst case traffic volumes for the amended development quantum (including Plot 3) of circa 1363 (266 HGVs) vehicle movements during the traditional weekday AM ‘rush hour’ peak and 1401 (215 HGVs) vehicle movements during the PM peak.

6.3.5 **Table TA6.3** to this report sets out a comparison of the predicted worst case peak hour trip demand totals at SHDA: i.e. Proposed ‘Do-Something’ Development Quantum (Including Plot 3 - see **Table TA6.2**) v ‘Baseline Consented’ SHDA (14% B2 / 86% B8 employment ratio - see **Table TA4.2**).

Table TA6.3 - Predicted Net Change in SHDA Peak Hour Traffic Demand Levels: ‘Do-Something’ Development Quantum (175,460sqm employment) v ‘Baseline Consented’ SHDA (135,460sqm employment)

All Vehicle Trip Demand

Vehs	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	-	-	-	-	-	-	-	-	-
B8 Dist	+76	+48	+124	+68	+55	+122	+43	+80	+123
B2 Emp	-	-	-	-	-	-	-	-	-
Total	+76	+48	+124	+68	+55	+122	+43	+80	+123
%’tage	+14.3%	+6.7%	+10.0%	+14.4%	+12.8%	+13.6%	+6.7%	+12.5%	+9.6%

HGV Trip Demand

Vehs	AM In	AM Out	AM Total	Int-Pk in	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
Residential	-	-	-	-	-	-	-	-	-
B8 Dist	+36	+25	+61	+32	+25	+57	+27	+24	+51
B2 Emp	-	-	-	-	-	-	-	-	-
Total	+36	+25	+61	+32	+25	+57	+27	+24	+51
%’tage	+30.4%	+29.6%	+29.9%	+30.6%	+29.0%	+29.9%	+32.5%	+30.1%	+31.3%

6.3.6 Review of the results of this comparison exercise demonstrates that the proposed additional B8 floorspace delivered at SHDA as under the proposed Plot 3 application could be expected to result in an overall net change in total SHDA peak hour traffic demand of circa 9.6% to 10.0% of consented peak hour traffic volumes. Just under half of these additional peak hour vehicle movements could be expected to be HGV delivery vehicles.

6.4 Predicted SHDA Employment Traffic Assignment via Identified Site Access Points

6.4.1 Based on the proposed SHDA employment area access strategy (Plot 3 to / from Pilsworth Road (40,000sqm B8) & the remainder of the employment area direct to SHLR (Hareshill Road) (116,500sqm B8, 18,960sqm B2)), the application scheme could be expected to give rise to the assignment of SHDA employment traffic to the immediate local highway network as set out in **Table TA6.4 & Table TA6.5** below:

Table TA6.4 - Predicted Employment Area Traffic via Secondary Access (Pilsworth Road - Plot 3): Total Vehicles (HGVs)

Land Use	AM In	AM Out	AM Total	Int-Pk In	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
B8 Dist	76 (36)	48 (25)	124 (61)	68 (32)	55 (25)	122 (57)	43 (27)	80 (24)	123 (51)
TOTAL	76 (36)	48 (25)	124 (61)	68 (32)	55 (25)	122 (57)	43 (27)	80 (24)	123 (51)

Total Vehicles (HGVs)

Table TA6.5 - Predicted Employment Area Traffic via Main Site Access (Hareshill Road (SHLR) Access)

Land Use	AM In	AM Out	AM Total	Int-Pk In	Int-Pk Out	Int-Pk Total	PM In	PM Out	PM Total
B8 Dist	223 (106)	139 (72)	360 (178)	197 (93)	160 (72)	356 (165)	126 (78)	233 (71)	358 (149)
B2 Employ	126 (6)	66 (5)	192 (11)	70 (6)	71 (7)	141 (13)	31 (4)	96 (3)	127 (7)
TOTAL	349 (112)	205 (78)	552 (190)	267 (99)	231 (79)	498 (179)	157 (82)	329 (74)	485 (157)

Total Vehicles (HGVs)

6.4.2 Review of the results of the above exercise demonstrates that the main application site eastern access to Hareshill Road (SHLR) could be expected to accommodate

between circa 80% of all SHDA employment area vehicle traffic and circa 75% of employment area HGV traffic.

6.5 Wider Network Traffic Assignment

- 6.5.1 The effects of the employment area access strategy and the wider development assignment are illustrated in the SATURN model plots included as **Appendix TA15** to this report. These plots (NB - demand flows presented in pcu's) illustrate the predicted assignment of application scheme employment development traffic over the study area highway network for the two SHDA employment area access points. Review of this information illustrates the greatest concentration of employment development traffic movements would be experienced on those key immediate local distributor links of the SHLR and Pilsworth Road, with traffic dispersing over the wider highway network via key strategic junction nodes such as M62 J19 and M66 J3.

7.0 REVIEW OF HIGHWAY NETWORK OPERATION UNDER 2038 ‘DO-SOMETHING’ DEMAND CONDITIONS (BACKGROUND + SHLR + SHDA INCLUDING FOR 40,000SQM AT PLOT 3 (175,460SQM TOTAL EMPLOYMENT FLOORSPEACE))

7.1 Introduction

7.1.1 This section of the TA report considers predicted operating conditions over the study area highway network to the application site and wider SHDA for the 2038 ‘Do-Something’ ‘Baseline Consented’ + Plot 3 scenario. This network analysis has been undertaken for the future assessment year date of 2038 in accordance with the anticipated outline development completion date for the wider SHDA scheme and to provide a direct comparison exercise to the 2038 ‘Baseline Consented’ analysis presented in section 4 to this TA.

7.1.2 In order to ensure a comprehensive assessment of anticipated development traffic effects, this section includes for the following analysis:

- A review of predicted changes in 2038 link flow estimates over the study network between the ‘Baseline Consented’ and ‘Do-Something’ (Baseline + Plot 3) - in order to understand where, and to what extent, material development traffic effects may take place, and;
- Full network operational capacity modelling (AM Peak, Inter-Peak and PM Peak) for the 2038 ‘Do-Something’ scenario, including a review of link capacity, motorway merge / diverge capacity and individual junction operating capacity.

7.1.3 The assessment work set out in this chapter should be viewed in the context of the over-riding guidance for highways assessment as set out in paragraph 111 to the NPPF, viz:

“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.”

7.1.4 The NPPF clearly identifies that development should only be refused in those cases where highways impact would be 'severe' - which is typically understood to mean situations where development is likely to result in a material detrimental 'step change' (our underlining) in circumstances when compared to predicted Baseline / 'Do-Minimum' conditions. Should the operational effects as a consequence of development traffic be marginal in nature, then highway authorities are directed not to seek to prohibit development on highways and traffic grounds.

7.1.5 Whilst the NPPF does not seek to define the nature of what is considered to represent a 'severe' impact, thereby allowing for some flexibility to reflect site specific circumstances, it is clear that the guidance has the effect of setting a 'high-bar' for planning & highway authorities in terms of their ability to identify and successfully sustain objections to planning applications on highways grounds. The very nature of the wording of NPPF paragraph 111 inherently suggests that some measure of highways impact must be viewed as being 'acceptable' and that it is only when a 'severe' detrimental highways position is identified, that a refusal of planning permission on such grounds is appropriate.

7.2 Predicted Changes in Traffic Flow (Link Flow Assessment)

7.2.1 **Appendix TA15** to this report presents a comparison of link flow demand (actual flow in total vehicles / HGVs) across all of the key study area links for the following key assessment scenarios:

- **2038 'Baseline Consented' Scenario:** Growthed Background Network Traffic Demand + Agreed Committed Development + SHLR + Consented SHDA (135,460sqm employment).
- **2038 'Do Something' Cumulative Development Scenario:** Growthed Background Network Traffic Demand + Agreed Committed Development + SHLR + Amended SHDA (175,460sqm to include additional floorspace at Plot 3).

7.2.2 Information is provided for changes in both total vehicle demand on each link as well as predicted changes in HGV demand. To assist the review of this comparison table, the results are colour coded as follows:

- **'Green'**: Links where 2038 'Do-Something' traffic flows are predicted to be lower than 2038 'Baseline Consented' estimates.
- **'Blue'**: Links where 2038 'Do-Something' traffic flows are predicted to be 0% - 10% greater than 2038 'Baseline Consented' estimates.
- **'Amber'**: Links where 2038 'Do-Something' traffic flows are predicted to be 10% - 30% greater than 2038 'Baseline Consented' estimates.
- **'Red'**: Links where 2038 'Do-Something' traffic flows are predicted to be 30+% greater than 2038 'Baseline Consented' estimates.

7.2.3 It should be noted that the exercise set out in **Appendix TA15** provides a direct comparison of actual model flows between the 2038 'Baseline Consented' and 2038 'Do-Something' assessment runs. It therefore includes for both the direct effects of the modelled additional development volumes, as well as reflecting any local traffic assignment effects on underlying baseline traffic levels of the addition of these development volumes. It is possible that these changes to baseline traffic assignment could either slightly off-set or magnify predicted development traffic effects on individual network links. The comparison exercise therefore does not represent a simple 'extra-over' analysis, where development traffic is simply added link by link to baseline volumes, but rather also includes for the ability of the underlying network to 'respond' to changes in development traffic levels through variations in the assignment of non-development traffic movements.

7.2.4 Review of the highway network link flow comparison exercise set out in **Appendix TA15** highlights the following

Changes in Predicted Traffic on the Local Highway Network

7.2.5 The immediate study area sections of the local highway network to the SHDA are not predicted to experience substantive changes in total traffic demand under the

2038 'Do-Something' scenario (including for additional employment floorspace), when compared to the 2038 'Baseline Consented' case. The majority of links are anticipated to experience only slightly increased levels of total traffic demand (all vehicles) under 'Do-Something' conditions, when compared to the planning fallback case - well below a 5% threshold (most link increases being either +/- 2.5% of 'Baseline Consented' traffic levels - representing two-way link changes of less than 1 vehicle every 1 - 2 minutes). This overall conclusion is consistent with the review of anticipated changes in total overall development trip demand between the application scheme and the consented SHDA (see section 6.3 to this report), which identified only relatively small increases in overall traffic volumes as a result of the application scheme.

- 7.2.6 The main changes in link flow (changes in two-way total traffic of circa 25 - 30 vehicles per hour in any direction) identified by the comparison exercise are noted to take place on the SHLR (Hareshill Road) section, i.e. links A - D. This reflects that the majority of overall additional development traffic volumes resulting from the application scheme would utilise the eastern connection direct to Hareshill Road (see section 6.5 to this report). Maximum predicted two-way difference ('Baseline Consented' v 'Do-Something' would be 51 vehicles, on the section of SHLR between A6045 and M66 J19 (Link Ref A) during the AM peak, representing an increase of 2.5% compared to 'Baseline Consented' conditions.
- 7.2.7 Maximum predicted two-way percentage increase (4.1% rise in total vehicles) is identified for the southern section of Whittle Lane during the AM peak, however, this result is more a function of the low predicted baseline trip demand predicted for this link and is related to a small number of actual additional vehicles on the link (14 additional two-way trips) when compared between the 2038 'Do-Something' & 2038 'Baseline Consented' scenarios and therefore is not considered significant.
- 7.2.8 A review of predicted changes in HGV traffic levels over the local highway network identifies higher levels of predicted percentage change. Greatest change levels (i.e. over 10% increase in HGV traffic levels compared to 2038 'Baseline Consented'

conditions) are identified to take place on those key local distributor road routes linking to the strategic highway network - such as SHLR and Pilsworth Road (Links A - H). These routes have been specifically designed to accommodate employment related traffic and HGVs as part of the SHLR scheme and programmed improvements to the Pilsworth Road corridor. Notwithstanding this, the effects of additional HGV traffic volumes are considered as part of network capacity analysis set out within this TA and the detailed assessment of traffic related noise and AQ matters undertaken as part of parallel specialist analysis.

- 7.2.9 Some other more distant links to the SHDA, for example at A6045 Manchester Road north of SHLR and A6046 Hollin Lane south of M62 J19) are predicted to experience HGV changes of between 10% - 20% of 2038 'Baseline Consented' levels. In practice, however, such changes are related to relatively low levels of actual predicted HGV movements, being associated with increased HGV demand of less than 10 two-way movements per hour. Such relatively small increases in HGV traffic levels are not considered likely to be significant, particularly on routes that are predicted to operate with general traffic levels of over 1000 vehicles per hour during AM & PM peak periods.

Changes in Predicted Traffic on the Strategic Highway Network

- 7.2.10 Review of predicted changes in link flows over the strategic highway network demonstrates similar patterns to the review of local network impact, with predicted changes in total actual link flow (vehicles) of less than 5%. Again, this reflects the relatively small increases in trip demand predicted to be generated by the application scheme proposals. NB - some minor reductions in traffic are predicted on some links, reflecting small variations in route assignment of general traffic between the 2038 'Do-Something' and 2038 'Baseline Consented' runs. As noted in paragraph 7.2.3 to this report, in some link cases these variations can effectively off-set the small increases in application scheme demand predicted.
- 7.2.11 Maximum changes in 2038 'Baseline Consented' traffic levels under the 2038 'Do-Something' scenario are predicted to take place on the M62 entry / exit slip roads,

where increases of 10 - 20 trips are identified (1.0% - 4.7% change) and on the M62 west of J19 (26 two-way trips, an increase of 0.2% of Baseline demand). In practice such small levels of trip increase are not expected to result in any material change in network operational performance.

7.2.12 Review of changes in HGV traffic levels demonstrates increases at M62 J19. Again, these increases in HGV traffic relate to less than 15 HGV movements per hour on any link and must be viewed in the context of the predicted minor changes in overall total development traffic levels. It is therefore not anticipated that these changes in HGV flow demand would result in severe changes to consented future strategic highway operating conditions and would not require additional improvements over and above the comprehensive works associated with the delivery of the SHLR and M62 J19 improvements. This conclusion is supported by the results of the detailed junction capacity analysis for M62 J19 as set out in section 7.4 below.

7.2.13 Changes in traffic demand at M66 J3 are anticipated to be generally limited when compared to the 2038 'Baseline Consented' scenario, typically under 2.5% of baseline traffic levels. Whilst some increases in HGV trips are predicted, these are typically at low levels (less than 5 additional HGVs on individual slip roads). It is not considered that such changes in traffic volumes under the 2038 'Do-Something' scenario are likely to give rise to a severe change in future operational performance at this location.

7.3 Link Capacity Assessment

7.3.1 **Appendix TA16** to this report sets out the results of the link / flow capacity analysis for the identified study links under the 2038 'Do-Something' scenario. By way of context the analysis table illustrated in this Appendix also includes for a direct comparison to the link capacity results for predicted 2038 'Baseline Consented' conditions.

Local Highway Network

- 7.3.2 Review of the 2038 ‘Do-Something’ analysis for local highway network links identifies that no additional local network links are predicted as likely to experience in excess of 95%+ of guideline capacity thresholds for the 2038 ‘Do-Something’ scenario as a result of the delivery of the application scheme, when compared to the 2038 ‘Baseline Consented’ position. Similarly, none of the few local network links predicted to already be operating at above 95% link capacity under the 2038 ‘Baseline Consented’ scenario are predicted to experience a material change in traffic demand as a result of the application scheme proposals.

Strategic Route Network

- 7.3.3 Review of the SRN study links demonstrates that the application scheme is not anticipated to give rise to any additional link capacity issues when compared to 2038 ‘Baseline Consented’ conditions. No additional links are identified to experience link capacity conditions in excess of 95% of guideline thresholds as a result of the delivery of the application scheme.
- 7.3.4 Furthermore, no material changes in link capacity values are predicted for those links already identified to be operating at 95%+ capacity thresholds under 2038 ‘Baseline Consented’ conditions.
- 7.3.5 This analysis would therefore suggest that application scheme traffic related operational effects on the wider SRN are not expected to be severe.

7.4 Motorway Slip Road Merge / Diverge Assessment

- 7.4.1 **Appendix TA17** to this report illustrates the results of the 2038 ‘Do-Something’ slip road merge / diverge analysis for the closest motorway connections to the application site, i.e. M62 J19 and M66 J3. By way of context, this merge / diverge information also includes for a direct comparison to the results for the consented

2038 'Baseline Consented' scenario. Review of this information identifies the following:

- *M62 J19 Slip Roads* - As noted in section 7.3 to this report, the delivery of the application scheme would not result in a significant change in predicted traffic flows on M62 J19 slip roads when compared to the consented 2038 'Baseline Consented' case. This is reflected by the results of the 2038 'Do-Something' merge / diverge analysis which suggests that predicted peak hour traffic volumes would not result in a change in the required standard of provision for any of the junction slip road connections over and above the identified 2038 'Baseline Consented' position. Indeed, ultimately traffic flows on the M62 J19 slip roads are still predicted to be relatively low, being typically less than 850 vehicles per hour (i.e. less than 60% of guideline slip road lane capacity).
- *M66 J3 Slip Roads* - The delivery of the application scheme would result in very minor changes in traffic demand on M66 J3 slip roads when compared to 2038 'Baseline Consented' conditions - typically of the order of well below +/- 5%. Review of the merge / diverge analysis confirms that such changes will not result in a change in required standard of layout provision over and above baseline requirements, even during busiest PM peak demand periods.

7.4.2 Based on the above review, it is concluded that the delivery of the application scheme would not give rise to a requirement for development related slip road merge / diverge capacity improvements at either M62 J19 or M66 J3. Whilst some potential merge / diverge issues are identified for tidal flow directions during the busiest PM peak hour, these are already inherent under accepted 2038 'Baseline Consented' conditions. The effects of the small changes in traffic demand associated with the delivery of the application scheme at these locations would be of a strictly limited nature and do not suggest the need for a step change in infrastructure provision over and above that already required to accommodate 'Baseline Consented' demand.

7.5 Network Junction Operational Capacity Assessments: Traffic Signal Junctions (LINSIG Modelling)

7.5.1 **Appendix TA19** to this report sets out the results of detailed peak hour LINSIG operational capacity testing for the main traffic signalised junctions along the proposed SHLR corridor and adjacent Pilsworth Road under the 2038 'Do-Something' scenario (i.e. including for SHLR, additional application scheme traffic, plus the consented South Heywood residential development (1000 dwellings)). For context, these results have been presented to allow direct reference to the results of comparable junction capacity testing for the 2038 'Baseline Consented' scenario (see also section 4.7 to this report).

7.5.2 The detailed turning count information extracted from the SATURN model to inform the 'Do-Something' junction capacity testing is included as **Appendix TA18** for reference, as well as relevant link flow plots (NB - all traffic as 'demand' model flows and presented in pcus).

7.5.3 Review of the LINSIG assessment results (full LINSIG model printouts available on request) indicates the following:

- *M62 J19 Signalised Roundabout (Jnt 1)*: The proposed traffic signalised roundabout junction improvement is predicted to operate satisfactorily for 2038 'Do-Something' conditions under all peak hour scenarios, albeit that the junction has effectively reached overall junction practical reserve capacity under predicted traditional AM & PM peak rush hour demand - when a number of links are predicted to exceed 90% capacity operation. Busiest operating conditions are predicted to occur during the AM peak hour, when a maximum approach link PRC of 95.7% is predicted for the SHLR inside lane approach, with a related mean max queue of 19 pcus. In practice no material changes in junction operation are identified when compared to the results for the consented 2038 'Baseline Consented' position, with total junction PRC values noted as follows:

AM Peak: 'Baseline Consented' -4.3% PRC, 'Do-Something' -6.4% PRC
Inter Peak: 'Baseline Consented' +3.9% PRC, 'Do-Something' +1.7% PRC
PM Peak: 'Baseline Consented' -1.9% PRC, 'Do-Something' -3.9% PRC

- *South Heywood Link Road / A6045 Manchester Road Signalised Crossroads (Jnt 2)*: The proposed traffic signal crossroads design is predicted to operate with a level of spare capacity under 2038 'Do-Something' demand conditions. Even under predicted maximum demand conditions (AM Peak) the junction is predicted to operate with a PRC value of 12.3%. Maximum approach link degree of saturation is predicted to be 80.1% for the Link Road (E) junction approach, with an associated mean max queue of 16.2 pcus across two lanes. During off-peak periods the junction is predicted to operate with good level of spare capacity, with up to 43.5% junction PRC. Changes in junction operation between the predicted 'Baseline Consented' and proposed 'Do-Something' scenarios are not predicted to be substantive or result in any material worsening of predicted accepted future year operating conditions.
- *Hareshill Road (SHLR) / SHEA / Hill Top Road Signalised Junction (Jnt 3)*: The off-set traffic signal crossroads design layout is predicted to operate with spare capacity under 2038 'Do-Something' conditions, taking account of the changes in employment zone traffic demand patterns as a result of the application scheme amendments. Even under predicted maximum demand conditions (AM Peak) the junction is predicted to operate with a PRC value of 19.2%, with maximum approach link RFC predicted to be 75.5% for the SHLR (E) ahead lane, with an associated queue of 7 vehicles. During off-peak periods the junction is predicted to operate with good level of spare capacity with up to 41.9% junction PRC.
- *Hareshill Road (SHLR) / Pilsworth Road Signalised T-Junction (Jnt 4)*: The proposed traffic signal T-junction design to support the SHLR scheme is predicted to operate with an acceptable level of spare capacity under 2038 'Do-Something' traffic demand. Even during predicted maximum PM peak demand conditions, the layout is anticipated to operate with a junction PRC of

16.0%, associated with a maximum approach link RFC of 77.6% and mean max queue of 17.4 pcus. Off peak operation of the junction suggests a PRC level in excess of 39%. The operational effects of the application scheme are therefore not predicted to be significant at this location.

- *Pilsworth Road / Moss Hall Road Signalised T-Junction (Jnt 7)*: The existing traffic signal layout is predicted to continue to operate with a limited degree of spare capacity for 2038 'Do-Something' demand conditions. During AM & PM peak rush hour peak network conditions the layout is predicted to operate with between circa 3.0% & 1.4% PRC. Predicted off peak operation at the junction suggests slightly improved operating conditions - related to a predicted junction PRC of 5.9% and maximum queuing of 13 - 15 vehicles. Again, there is no evidence of predicted changes in traffic demand associated with the application scheme resulting in any material adverse effects at this location.

- *M66 J3 Traffic Signal Linked Crossroads (Jnt 8)*: Similar to the results for the 2038 'Baseline Consented' scenario, the LINSIG modelling for the 2038 'Do-Something' operation of the M66 J3 existing constrained double crossroads, suggests the potential for significant congestion and queuing during peak periods, in particular during the PM peak. In practice, however, little change in junction operation is predicted between the 'Baseline Consented' and 'Do-Something' scenarios (-7.4% junction PRC to -7.8% in the AM peak and -54.9% to -54.7% junction PRC in the PM peak). This reflects the strictly limited additional application scheme traffic levels predicted to take place at this location. This marginal change is demonstrated by **Table TA7.1** below, which sets out the predicted overall change in total modelled demand flows at the junction between the 'Baseline Consented' and 'Do-Something' scenarios for the AM and PM peak periods. This exercise demonstrates a net total increase of just 30 / 12 pcu movements (AM & PM peak), or a less than 0.97% / 0.37% increase in total peak hour movements through the junction when compared to 2038 'Baseline Consented' conditions.

Table TA7.1 Comparison of Predicted Model Demand Flows at M66 J3 (2038 'Baseline Consented' v '2038 'Do-Something' AM & PM Peak Hours

	AM Peak Base Con	AM Peak Do-Some	AM Peak Diff	PM Peak Base Con	PM Peak Do-Some	PM Peak Diff
M66 SB Exit Slip	557	565	8	635	634	-1
Pilsworth Rd (E)	577	584	7	473	491	18
M66 NB Exit Slip	827	841	14	315	320	5
Pilsworth Road (W)	1132	1133	1	1814	1804	-10
Total	3093	3123	30	3237	3249	12
			0.97%			0.37%

7.5.4 Based on the above results it is considered that the SHLR corridor and associated improved junctions would provide an appropriate level of operational performance to accommodate 2038 'Do-Something' traffic conditions. All junctions are predicted to operate with a degree of theoretical spare capacity, and the LINSIG testing does not identify the potential for substantive queueing or congestion. Whilst M62 J19 is anticipated to be at or approaching practical capacity by 2038, the impact on total junction PRC as a result of the additional application scheme related traffic are predicted to be marginal in nature. Similarly, whilst the current M66 J3 layout could be expected to experience over-capacity conditions during 2038 PM peak periods, the net change in junction performance between 'Baseline Consented' and 'Do-Something' conditions as a result of the application scheme is negligible.

7.5.5 It is therefore concluded that the operational capacity effects of the application scheme at local traffic signal-controlled junctions are unlikely to be 'severe' in nature and therefore no capacity improvements, over and above those already programmed to be delivered to support the originally consented SHDA scheme are required to accommodate predicted application scheme traffic demand levels.

7.6 Network Junction Operational Capacity Assessments: Give-Way Junctions (PICADY Modelling)

- 7.6.1 Appendix TA20** to this report summarises the results of the PICADY operational capacity assessments undertaken for key proposed SHDA vehicle access points (Jnts 5 & 9(a-d)) under 2038 'Do-Something' demand conditions. Review of this testing demonstrates that all locations are predicted to operate with a level of spare capacity under 2038 'Do-Something' Cumulative Development demand conditions, with no indication of any substantive congestion or delay. Indeed, the majority of junctions show maximum 'give-way' approach lane RFC values of below 0.5, with limited queuing (1-2 pcus) - even including for consented development trip demand estimates based on the highly robust 85th percentile development trip rate estimates and the application of a 'surged' profile to the junction modelling.
- 7.6.2** Maximum operating conditions are predicted to take place at residential access junction 9D to the SHLR route - the access serving the largest of the proposed South Heywood residential plots. AM peak 'rush' hour modelling of this junction (including for a 'surged' demand profile) suggests RFC values for traffic existing from the residential development to be of the order of 0.87, with an associated queue of circa 4 pcu's.
- 7.6.3** Review of the proposed ghost island connection to Pilsworth Road, serving the Plot 3 element application site (Jnt 5), demonstrates that that this junction layout would operate with substantive spare capacity for all modelled periods, with maximum approach arm RFC of just 0.15.
- 7.6.4** The results of the PICADY capacity testing for the operation of the proposed ghost-island improvement at the Pilsworth Road / Moss Hall Lane (3-arrows) junction (Jnt 6), demonstrates that this junction layout can be expected to operate with a good level of spare capacity under 2038 'Do-Something' scenario demand conditions. Maximum RFC (0.50, up from 0.42 for 'Baseline Consented' conditions) is predicted to take place on the Moss Hall Lane side road under PM peak demand conditions

(associated with employment exit trips from the Birch Industrial Park - served off Moss Hall Lane), with only limited predicted queuing (1 pcu).

7.6.5 2038 'Do-Something' results for the Pilsworth Road / Heywood Distribution Park junction (Jnt 10) suggests continuing spare capacity at this location, with maximum RFC at 0.65 during the AM peak - for right turn movements into HDP from Pilsworth Road (ghost island access), with an associated queue of 2-3 pcus. The ghost island layout at this junction has been constructed with an extended right turn lane to ensure that queues associated with this movement at peak times can be successfully accommodated.

7.6.6 Ultimately, based on the results of the above PICADY modelling, it is concluded that all of the proposed give-way access points within the study area are capable of accommodating predicted 2038 'Do-Something' traffic conditions. The peak hour assessment runs demonstrate satisfactory operational performance at each of the junction locations and with strictly limited predicted queuing and delay. It is therefore concluded that development traffic impact at these points would not be of a 'severe' nature and that there is no requirement for any improvements in junction layout over and above those already committed and consented in support the delivery of the wider SHDA & SHLR.

7.7 2038 'Do-Something' Network Operational Statement

7.7.1 Review of the network capacity testing set out within this chapter demonstrates that it is not anticipated that the traffic effects of the Plot 3 application scheme would give rise to a substantive change in local highway network conditions when compared to the 2038 'Baseline Consented' reference scenario. In practice, changes in traffic flows on key study links for 'Do-Something' conditions lie within + / - 5% of the 'Baseline Consented' position, with only those links immediately adjacent to the employment area (Hareshill Road (SHLR) and Pilsworth Road) predicted to show any substantive change in flow. These links have been recently upgraded to a modern industrial access road standard as part of the SHLR corridor improvements and capacity testing of those junctions affected by the local re-

assignment demonstrates that they would continue to operate with a good level of spare capacity.

- 7.7.2 Indeed, detailed network capacity testing for the 2038 'Do-Something' traffic conditions, demonstrates that all study area junctions are predicted to operate within acceptable operating capacity thresholds. All of the main traffic signal junctions on the SHLR corridor are predicted to offer some level of practical reserve capacity and similarly all key give-way access points to the SHDA. Whilst the traffic signalised roundabout improvement at M62 J19 can potentially be expected to be approaching practical capacity at the 2038 future year and some of the merge / diver connections at M66 J3 may also be above guideline capacity thresholds, such conditions are also an underlying characteristic of the network operation under the 'Baseline Consented' scenario. Delivery of the application scheme does not give rise to any material adverse change in network performance at these locations.
- 7.7.3 Ultimately, based on the above review, it is considered that there is no evidence to suggest that the application scheme would give rise to any 'severe' highway network operational impacts. It is therefore concluded that there is no requirement for additional improvements over and above those works proposed to deliver access to the site and those programmed / consented works to be delivered in association with the SHLR.

8.0 DEVELOPMENT CONSTRUCTION TRAFFIC MATTERS

8.1 Introduction

8.1.1 This section of the TA report considers the key construction tasks associated with the delivery of the Plot 3 application scheme, the vehicle demand implications of these construction works and likely traffic related effects.

8.1.2 The commissioning and delivery of individual elements of the SHDA can be expected to be undertaken in response to market demand, with units unlikely to be delivered on a speculative 'up-front' basis based on a development fixed programme. Notwithstanding this, it is anticipated that the key elements of the wider SHLR / SHDA project would likely be delivered in line with the following broad timeframes:

- SHLR Construction: Q1 2021 - Q4 2022
- Employment Area: Q2 2023 - Q4 2026
- Residential Area: Q2 2022 - Q4 2038

8.1.3 For the purposes of the appraisal of Plot 3 application scheme construction traffic effects, it has been assumed that delivery of the Plot 3 employment unit would be undertaken over an intensive 60-week delivery programme (65 calendar weeks taking account of seasonal holidays), commencing during Q4 2023 and with a completion target date during Q1 2025.

8.2 Potential for Cumulative Construction Traffic Effects

8.2.1 As noted above, it is anticipated that other parts of the wider SHDA could potentially be delivered alongside the Plot 3 construction works, resulting in the potential for some over-lap of working and combined construction traffic / highway network effects. Whilst some new residential development at South Heywood is likely to come forward during the opening years of the SHDA delivery programme, at a similar time to the anticipated delivery of the Plot 3 scheme, it is understood

that any such initial phases of residential development would be focussed on those land parcels to the south & east of the SHDA (served via A6045 Manchester Road) and therefore some distance (over 1.5km) from the Plot 3 application site. It is therefore considered unlikely that there would be any substantive interaction between application site construction traffic and key construction tasks / effects associated with these initial residential zones.

8.2.2 It is possible that there could also be some interaction with construction traffic demand associated with the delivery of other employment units at SHDA, however, at the time of preparation of this report, there is no tenant commitment / delivery timescale for any these other employment units. Furthermore, as the Plot 3 site is to be served via a stand-alone vehicle access direct from Pilsworth Road, to the north west corner of the SHDA, and over 1km from the access point serving the remainder of the employment area, it is not expected that cumulative South Heywood employment scheme related construction traffic effects / interactions would be of a significant scale.

8.2.3 The remainder of this chapter therefore concentrates on the likely construction traffic effects associated with the delivery of a new employment unit at the Plot 3 site.

8.3 Plot 3 Construction Programme & Logistics

8.3.1 As noted above, in order to provide a realistic estimate of Plot 3 application scheme construction impact, this TA considers a construction programme of circa 65 calendar weeks (Q4 2023 - Q1 2025) - see **Appendix TA21**.

8.3.2 The start date of Plot 3 construction works has been based on the principle of site enabling works not being commenced until the site distributor road connection direct to Pilsworth Road is substantially completed (to be delivered by RBC highways during Q2 - Q4 2023 (see section 3.3.6 to this report)). This approach will ensure that a good standard of access would be available to serve Plot 3 site

construction and help to avoid any conflict between site works and local highway improvement tasks.

- 8.3.3 Review of the Plot 3 construction delivery programme set out in **Appendix TA21** identifies the following anticipated key core elements:

Development Preparation Tasks:

- *Site Establishment* - clearance of site (vegetation, fences, etc), setting up of site compounds, formation and marking of temporary internal site roads, installation of protective site fencing.
- *Earthworks* - preparation of the development unit platforms and key internal highway and drainage features. It is anticipated that site earthworks would be achieved via a cut and fill balance within the site, thereby avoiding the need for significant material import / export. This would assist in minimising HGV trip movements during this phase.
- *Internal Development Area Road Construction* - standard road construction tasks. It is anticipated that internal roads would be initially delivered to binder course, to allow for use in accommodating construction traffic associated with individual units. Final wearing course and 'completion' of relevant sections of internal road routes would be undertaken in parallel to final tenant occupation of the Plot 3 unit.

Employment Unit Construction Tasks

- *Substructure* - typical groundworks tasks including piling for foundations, casting of slabs for individual units, installation of required underground infrastructure such as drainage and service channels and internal site roadways / car parking / vehicle manoeuvring areas.

- *Superstructure* - delivery of the main building structures and shell, including construction of steel frames, installation of mezzanine floors (where relevant) and cladding / skinning of core buildings.
 - *Internal Fit Out* - delivery of internal building partitions, standard M&E tasks, installation of offices, internal decoration, etc. to client specification.
 - *Commissioning* - installation of specialist equipment and supporting technologies, testing of site.
 - *External works* - completion of key supporting ancillary works such as car park surfacing and lining, landscaping, security gates / fencing and related external building details such as signage, lighting, etc.
- 8.3.4 Core construction hours to support the delivery of the application site are proposed to be 07:30 to 17:00 Monday to Friday, with Saturday working only required if necessary. No work is planned for Sundays or Bank Holidays, however, there may be occasions, as is often the case with major construction contracts, when work would need to be undertaken outside of the identified core hours (such as major concrete pours or reception of abnormal loads). It is anticipated that any non-standard working hours related to external works would be controlled by a suitably worded planning condition, whereby the developer could only carry out such work following prior notification and agreement with the planning authority.
- 8.3.5 HGV movements to / from the site would be limited to the core hours outlined above, unless the subject of prior written agreement with the Local Planning & Highway Authority. Any requirement for abnormal loads would be suitably managed via specific agreement and the implementation / observation of an abnormal load strategy developed in line with industry good practice (see also section 8.5) to this report).

8.4 Anticipated Construction Traffic Demand Associated with Plot 3 Construction Activities

Construction Staff Demand

8.4.1 **Figure TA11** to this report illustrates anticipated construction staff demand levels across the Plot 3 construction programme. These estimates have been generated via reference to anticipated staffing levels associated with key programmed construction tasks, based on contractor experience of similar scale projects. Review of this exercise suggests that the preliminary site establishment, earthworks and internal roadworks tasks are unlikely to generate significant construction staff demand, with peak application site construction staff levels occurring towards the end of the construction programme (associated with commercial unit building fit out, commissioning and external works tasks).

8.4.2 Indeed, it is anticipated that total construction staff levels across the site would typically be of the order of 25 - 45 staff for the initial 9 months of site works (up to Summer 2024), rising to circa 50 - 70 staff members for the period Summer 2024 - Winter 2025. Maximum staffing demand is predicted to take place towards the end of the project, as unit is brought towards tenant hand-over (early 2025).

Construction HGV Demand

8.4.3 **Figure TA12** to this report illustrates anticipated construction HGV demand levels across the modelled construction programme. These estimates have again been generated via reference to contractor experience of average daily HGV demand levels for key construction tasks and reference to site specific factors, such as the potential for an internal cut / fill balance across the wider SHDA site, which should minimise HGV trip making over the wider external highway network during this key site preparation / construction task.

8.4.4 Review of the presented construction HGV demand information suggests that, similar to predicted staffing levels, HGV demand is likely to be relatively limited

for the initial phases of the construction programme - with, on average, just 5-10 HGV arrivals per day for the first four months, then rising to circa 10 - 15 HGVs per day for most of the remainder of 2024. Maximum construction HGV demand period is expected to take place during early 2025, when circa 20 HGV movements per day could be expected to take place - associated with the delivery of site external materials, building fit-out and the commissioning of on-site facilities. There may be periods of higher HGV demand, for example during concrete slab pours, however, any such events are likely to be of a short-term nature and would be subject to direct management by the relevant contractor to ensure efficient site access and vehicle turnover.

8.4.5 **Appendix TA22** to this report illustrates general estimates of construction staff / HGV traffic movements to / from the Plot 3 site during the identified maximum construction period (early 2025). This exercise has been based on the following robust 'first principles' assumptions with respect to site operation, which reflect experience of the typical delivery of similar large commercial construction projects, viz:

- Construction staff vehicles to be accommodated on-site within car parking areas associated with the site compounds.
- Typical construction period of 07:30-17:00, but with some staff present on site before and after these general construction task periods - undertaking construction related administration / design / security duties.
- Robust staff vehicle occupancy level of 1.25 staff per vehicle.
- HGV demand taking place during the core day-time period of 07:00-16:00;
- Some limited additional ad-hoc staff / visitor movements throughout the core day-time period.

NB - It should be noted that the above estimates have been prepared on the basis of a single daytime construction shift.

No impact assessment has been carried out for weekend construction operations as such days typically experience much lower levels of baseline traffic demand and no obvious peak demand periods at a level close to those maximums experienced during core weekday 'rush hour' peaks.

8.4.6 Review of the above exercise suggests that predicted maximum construction traffic demand levels associated with the delivery the Plot 3 unit could be expected to be less than 150 vehicle movements per day (in + out) and relatively low during traditional AM & PM 'rush hour' periods - i.e. below 1 vehicle movement per minute. Maximum morning construction related trip movements associated with the site would typically take place before 08:00, with relatively few trip movements taking place during the critical 08:00-09:00 period. Trip movements during the 17:00-18:00 PM peak period could be expected to be of the order of 40 vehicles per hour (in + out). Construction HGV trip levels during key AM & PM peak demand periods are predicted to be negligible (below 5 HGV trips per hour (in + out)).

8.4.7 Based on the above estimates it is considered unlikely that Plot 3 related construction traffic would give rise to a material / severe operational or environmental effects on the local highway network. Indeed, such construction traffic levels would be considerably lower than trip demand associated with the day-to-day operation of the completed facility (see section 6 to this report), including fewer HGV trips, and therefore could be expected to be satisfactorily accommodated by local routes serving the site.

8.5 Construction Traffic Management / Mitigation Measures

8.5.1 Any construction traffic related effects are effectively temporary in nature (only occurring during the construction period and varying depending on prevailing tasks) and therefore are best addressed by appropriate short-term bespoke mitigation measures developed to address specific issues. Construction industry good practice requires that such mitigation / management measures are identified and delivered in line with details set out in via a Construction Traffic Management Plan (CTMP) prepared to support the delivery of the scheme.

8.5.2 A CTMP for the Plot 3 application site would be prepared and would form part of a Construction Environmental Management Plan (CEMP), covering all aspects of the of the delivery of the wider SHDA construction works, with this approach designed

to coordinate construction to minimise any potential for cumulative effects. The Plot 3 CTMP would cover the following issues designed to help to manage construction site traffic, both in terms of overall traffic demand levels and the times of day of day when peak construction traffic demand would be experienced and to ensure the efficient day-to-day operation of the construction site:

- Agreed construction operating hours and vehicle delivery hours.
- Location of proposed construction compounds and lay-down areas.
- On-site construction vehicle parking and manoeuvring.
- Staff parking arrangements and details of supporting staff / operative travel management initiatives, including encouraging staff travel outside of the traditional AM & PM 'rush hour' periods.
- Off-site construction HGV routing.
- Driver incentive / disciplinary procedures to ensure suitable HGV routing.
- Construction HGV haulage route signage strategy.
- Construction vehicle cleansing procedures and details of load sheeting / covered load policy.
- Management and procedures for access by abnormal loads (as relevant).
- Programmed duration and timing of short-term material import / export HGV campaigns such as concrete pours to avoid conflicts with similar major construction events at other locations across the wider SHDA.
- Programmed temporary road closure / temporary traffic management works and details of supporting information campaigns - if relevant.

Construction Abnormal Load Management

- 8.5.3 During the construction phase it may be necessary to accommodate a small number of abnormal load delivery events to the main application site - associated with the delivery of oversized development components or plant. There are well understood procedures for the undertaking of such large / high load events and the applicant / site contractor would work with relevant authorities and stakeholders to secure appropriate approvals for required load events and operate such movements in line with standard good practice guidelines. Specific mitigation / management

measures that would be investigated to deliver acceptable abnormal load events to the application site include:

- Cutting back of any over-hanging vegetation along the routes;
- Temporary removal of street furniture such as islands / signage;
- Liaison with BT / National Power Grid re: planning for any removal / reinstatement of low overhead lines;
- Weekend delivery to minimise traffic disruption;
- Police accompaniment of loads to support contra-flow operation / temporary road closures / temporary suspensions of HGV access restrictions.

9.0 ASSESSMENT OF ANTICIPATED DEVELOPMENT TRAFFIC RELATED ENVIRONMENTAL EFFECTS

9.1 Introduction & Assessment References

- 9.1.1 The potential highways and transport related environmental impact of the day-to-day traffic implications of the Plot 3 application scheme (effectively resulting in an overall additional 40,000sqm of B8 employment development across the wider SHDA employment area) has been assessed via reference to the methodology set out in the Institute of Environmental Assessment (now Institute of Environmental Management & Assessment - IEMA) document “Guidelines for the Environmental Assessment of Road Traffic”. The IEMA guidelines have been prepared to inform the environmental assessment of road traffic associated with major new developments and are designed to assist in the assessment of off-site traffic impacts. Alternative guidelines and established procedures exist for the environmental assessment of new road / highway infrastructure (as set out in Design Manual for Roads and Bridges (DMRB)), however, such procedures are not directly relevant to the case of the proposed Plot 3 development - which would not involve new off-site road construction.

9.2 Assessment Screening Criteria

- 9.2.1 IEMA guidelines suggest the following general guidance in the form of a series of ‘rules of thumb’ when considering the initial appraisal or ‘screening’ of environmental impact and the identification of where more detailed analysis of specific environmental effects might be required:

“Rule 1: Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)

Rule 2: Include any other specifically sensitive areas where traffic flows have increased by 10% or more”

- 9.2.2 With respect to Rule 1 (30% threshold), IEMA guidance notes that traffic forecasting is not an exact science and that it is generally accepted that accuracies of greater than 10% are not achievable. Day-to-day variation of traffic on a route corridor is frequently at least some + or - 10% of data recorded on a single survey date. The IEMA guidelines therefore suggest that, at a basic level, projected changes in traffic of less than 10% would create no discernible environmental impact.
- 9.2.3 IEMA guidance further notes that the most discernible environmental impacts of road traffic are considered to be noise / vibration, severance and pedestrian delay & intimidation. In terms of these potential impacts, IEMA guidance states the following:
- In general, people are unable to perceive a change in noise nuisance for changes in noise levels of less than 3dB(A), such changes requires a “doubling or halving in the level of traffic”.
 - At low flows, increases in traffic of around 30% can double the delay experienced by pedestrians attempting to cross a road.
 - Severance (community disruption) and intimidation are much more sensitive to traffic flow and DfT suggest 30%, 60% and 90% changes in traffic levels should be considered as ‘sight’, ‘moderate’ and ‘substantial’ impacts respectively.
- 9.2.4 Other environmental impacts (e.g.: pollution, ecology, etc.) are considered to be less sensitive to traffic flow changes, and IEMA guidelines recommended that, as a starting point, changes of less than 30% would not require the undertaking of a more detailed assessment of environmental conditions. Where there are major changes in the composition of the traffic flow, say a much greater flow of HGVs, the IEMA guidance identifies that a lower percentage change threshold might be appropriate, and the assessor should use their professional judgement as to whether additional detailed assessment is required on any specific route corridor.
- 9.2.5 Guidance with respect to Rule 2 (10% threshold) identifies that the assessor should consider the inclusion of any other locations or network links where a 10% change in traffic demand is predicted in specific environmentally ‘sensitive’ areas (our

underlining). The IEMA guidelines suggest a 'sensitive' receptor could include accident blackspot locations, conservation areas, hospitals, links with high pedestrian flows, etc. IEMA guidance notes that it would not normally be appropriate to consider links where total traffic flows have changed by less than 10% unless there are significant changes in the composition of traffic, e.g. an usually large increase in the number of heavy goods vehicles. Ultimately the assessor is charged with utilising professional judgement to determine whether further assessment is necessary in such cases. This will also include the need to reflect the 'cumulative' effects of a combination of new development schemes against background conditions. In the case of the immediate study network to the application site, particularly the Pilsworth Road and the SHLR corridors which are primarily of industrial / commercial distributor road character, with few direct frontage properties local close to the operational carriageway edge, it is not anticipated that the Rule 2 threshold would apply. *NB - the subsequent analysis set out in this chapter includes for reference to this threshold value in order to provide a degree of context to the extent of anticipated development effects.*

- 9.2.6 Whilst some routes within the wider study area to the site, such as A6045 Manchester Road and the south-eastern sections of the SHLR do include for elements of continuous residential frontage, it is not considered that such routes represent 'sensitive' links as defined by the IEMA guidelines, due to their distributor road roles, that frontage properties to these routes are generally set well back from the road edge and in the case of the SHLR include for noise mitigation measures installed as part of the recently constructed link road works.
- 9.2.7 For clarity, the assessment work set out in the remainder of this chapter below has been prepared on the industry standard IEMA approach i.e. that a projected change in total traffic or HGV traffic levels of less than the relevant IEMA screening threshold (30%) on each link would not be likely to give rise to a discernible traffic related environmental effect and, in such cases, further detailed assessment would not be required. As noted above IEMA guidance identifies that traffic effects, including air pollution, are typically less sensitive to traffic flow changes and that a 30% change in total traffic flow represents a reasonable threshold for perceptible

impact and thus the inclusion of a link as part of more detailed assessment to determine the extent of effects. The above IEMA guidance, however, does not apply to links that fall within designated Air Quality Management Areas (AQMAs), where more stringent thresholds have been identified by recent guidance produced by the Institute of Air Quality Management (IAQM). For those links that fall within designated AQMAs, IAQM guidance identifies a threshold level for new development traffic on a link of 100 two-way light vehicle movements per day or 25 two-way HGV movements. The consideration of links for detailed traffic related Air Quality assessment is set out in more depth in the parallel Air Quality Assessment report prepared by E3P to support the Plot 3 planning application.

9.3 Matters of Potential Detailed Assessment

9.3.1 Paragraphs 9.2.1 - 9.2.2 to this section of the TA report set out the broad methodology to be adopted for the assessment of any likely significant transport-related environmental effects of the Proposed Development. This includes reference to the preliminary IEMA screening approach for road traffic effects, based on the core 10% and 30% screening thresholds. In those cases where these relevant screening thresholds might be exceeded, Column 3 in Table 2.1 of the IEMA guidelines sets out a list of environmental effects that are appropriate for consideration in further detail.

9.3.2 Definitions of each of the traffic-related environmental effects identified in the IEMA guidelines are summarised below, along with explanatory text relating to assessment criteria. Paragraph 2.4 of the IEMA guidelines notes that not all of the effects listed in column 3 of Table 2.1 to the IEMA guidance are applicable to every development. In the case of the surrounding highway network to the Plot 3 Application site and wider SHDA it is considered that the following matters represent the relevant traffic environmental factors suitable for further review, should preliminary IEMA screening thresholds be exceeded:

- *Pedestrian Delay*: Delay occurring to pedestrians as a result of traffic demand impacting upon their ability to cross the carriageway. The provision of crossing facilities, the geometric characteristics of the road and the traffic volume,

speed and composition are all factors that can determine delay. The IEMA Guidelines advise that quantitative thresholds should be avoided when assessing pedestrian delay impacts, with professional judgment to be used in its place.

- ***Pedestrian Amenity:*** The term pedestrian amenity is described broadly as the relative pleasantness of a journey. It is considered to be affected by traffic flow, speed and composition as well as footway width and the separation/protection from traffic. It encompasses the overall relationship between pedestrians and traffic. There are no commonly agreed thresholds for quantifying the significance of changes, although the IEMA guidelines tentatively suggest that where traffic flows double, a significant effect is likely to be experienced.
- ***Severance:*** The perceived division that can occur within a community when it becomes separated by a major traffic artery. Severance is difficult to measure and by its subjective nature is likely to vary between different groups within a single community. In addition to the volume, composition and speed of traffic, severance is also likely to be influenced by the geometric characteristics of a road, the demand for movement across a road and the variety of land uses on either side. In general terms, according to the IEMA guidelines, changes in traffic flow of 30%, 60% and 90% are regarded as producing 'slight', 'moderate' and 'substantial' changes in severance respectively. DfT guidance also notes that any severance effects at at-grade crossing points of routes experiencing daily traffic demand levels of less than 8,000 vehicles per day are likely to be 'slight'.
- ***Driver Delay:*** Delay generally occurs at junctions where there are opposing movements and where vehicles are required to either give or receive priority. Delay for non-development related traffic can be expected to occur at; a) new site access junctions where main road priority is changed; b) at key intersections within the immediate catchment where the proposal site might contribute significant additional traffic demand, and; c) at existing junctions where side road traffic already struggles to access the mainline, thereby potentially increasing such side road delays. In practice, delay is only likely to be significant at those junction locations when combined background + development traffic levels exceed or approach capacity i.e., the Ratio of Flow to Capacity (RFC) value approaches or exceeds 1.0.
- ***Road Safety:*** Assessments have incorporated a review of collision data and the local prevailing conditions, in particular traffic speed, flow and composition as well as vehicle conflict and pedestrian activity. Professional judgment is used to determine the significance of the effect;
- ***Air Quality and Dust:*** The air quality effects arising from new traffic flow and the environmental implications of dust and dirt generated by such traffic movements. As noted above, IEMA guidance identifies that pollution effects are typically less sensitive to traffic flow changes and that a 30% change in total traffic flow represents a reasonable threshold for perceptible impact and thus

the inclusion of a link as part of more detailed assessment to determine the extent of effects. The relevant effects associated with air quality impacts are considered in more detail in the dedicated air quality chapter of this ES (Chapter 8), the key findings of which are identified in this chapter where relevant.

Traffic related dust and dirt effects for new road or development schemes are typically more related to the construction stage of a project and depend to a large extent on the management practices adopted at the site in question, such as vehicle covers, wheel washing etc. Problems with dust and dirt are unlikely to occur at distances greater than 50m from the main carriageway edge and will diminish the further away from the initial point of contact of vehicles to the highway network.

- *Noise and Vibration:* The environmental implications of noise and vibration arising from changes in traffic flow and additional movements. Research suggests that generally people cannot perceive a change in noise nuisance for changes in noise levels of less than 3dB(A) - such changes require a doubling or halving in the level of traffic. Notwithstanding this, traffic-related noise matters are considered separately within a dedicated noise and vibration report.

9.4 Assessment Significance Criteria

- 9.4.1 The significance level attributed to traffic related environmental impacts assessed are appraised based on the magnitude of change due to the delivery of the development proposals, and the sensitivity of the affected receptor / receiving environment to change. Magnitude of change and the sensitivity of the affected receptor / receiving environment are typically assessed on a scale of major, moderate, slight and negligible impact as set out below.

- Major Beneficial;
- Moderate Beneficial;
- Minor Beneficial;
- Negligible;
- Minor Adverse;
- Moderate Adverse; and,
- Major Adverse.

9.4.2 For guidance, the above impact significance criteria should be considered as follows:

- *Major impact:* where the Proposed Development would have a substantive impact (either positive or negative), resulting in a loss of resource and/or the quality and integrity of a resource or location via a major impact on key characteristics, features or elements;
- *Moderate impact:* where the Proposed Development would have a noticeable impact (either positive or negative), resulting in a loss of resource, but not adversely affecting the integrity (partial impact on key characteristics, features or elements);
- *Minor impact:* where the Proposed Development would result in a small, barely noticeable impact (either positive or negative), resulting in some measurable changes in attributes or one or more key characteristics, features or elements; and,
- *Negligible:* where no discernible impact is predicted as a result of the Proposed Development.

9.4.3 Impacts classified as Major or Moderate are considered as being potentially 'Significant' in environmental assessment terms. Typically changes in baseline traffic demand of less than 30% due to development are not anticipated to result in clearly discernible traffic-related environmental effects and thus form the basis for the screening of potential significant effects. As noted above, a secondary 10% screening threshold has been identified for specific 'sensitive' locations, however, in general this secondary threshold is not considered as being appropriate to the majority of routes forming the local study network to the application site.

9.5 Assumptions / Limitations

9.5.1 The comparative assessment work set out within this chapter has been undertaken for the assessment year of 2038 in line with the network wide operational assessment and effectively considers maximum vehicular activity at the application site, alongside full delivery of the wider SHDA consent (i.e. a total of 175,460sqm of employment development). This allows for a direct comparison of application scheme effects when compared against the 'Baseline Consented' position of full delivery of the wider SHDA, based on 135,460sqm employment floorspace.

9.5.2 The traffic flow data used to inform this assessment is based on the peak hour / inter-peak traffic modelling ('actual' flows) derived from the updated SHTM model runs (see section 4.1 & 4.2 to this report), with network estimates prepared for both 2038 'Baseline Consented' and 2038 'Do-Something' future year scenarios. This peak hour / inter-peak data has been converted to AADT estimates to inform the direct assessment of environmental effects via the application of appropriate local conversion factors as supplied by the SHTM modelling consultants (WSP) and in line with the historical AADT modelling approach undertaken to inform the original 2016 SHDA outline consent:

- AM Peak Hour to AM Peak Period: 2.76 (All vehicles)
- IP Peak Hour to IP Peak Period: 6.00 (All vehicles)
- PM Peak Hour to PM Peak Period: 2.94 (All vehicles)
- 12hr Weekday to 24hr AADT: 1.19 (light vehicles), 1.20 (HGVs).

9.5.3 The development traffic related environmental affects considered within this chapter concentrate on traffic effects for full robust 'worst case' (85th percentile trips rates) operation of the proposed additional employment floorspace at SHDA as delivered by the Plot 3 scheme, post completion on the unit. No detailed assessment of traffic related environmental effects has been carried out for the development construction period, as temporary construction traffic levels at this time have been demonstrated to be significantly lower when compared to the robust estimates of day-to-day operation of the scheme (see section 8.4 to this report). It is therefore reasonable to conclude that, should traffic related environmental effects be demonstrated as being generally acceptable for day-to-day site operation, this conclusion would also apply to any lower intensity temporary construction traffic effects.

9.6 IEMA Threshold Review Results: 'Baseline Consented' v 'Do-Something' Scenarios

9.6.1 The paragraphs below set out the analysis of the core IEMA threshold assessment work, i.e. the comparison of the 2038 future year 'Do-Something' (SHDA including

175,460sqm employment floorspace) network environmental conditions against conditions associated with the 'Baseline Consented' scenario of the committed SHDA (135,460sqm employment). The results of this comparison exercise are set out in **Appendix TA23** to this report.

Review of Predicted Changes in General Traffic Demand

- 9.6.2 Maximum increases in overall traffic flow on the study network as a result of the proposed development are predicted to be less than 5% of 2038 'Baseline Consented' flows, with the majority of study links showing changes of less than +2.5%. Such changes in total flow demand are therefore well below both IEMA Rule 1 & 2 thresholds and therefore, on preliminary review at least, would suggest that the potential for general development traffic related environmental impact is likely to be **'Negligible'**. Further detailed review of HGV impact is set out in the paragraphs below.

Review of Predicted Changes in HGV Traffic Demand

- 9.6.3 **Appendix TA23** to this report also presents predicted changes in baseline two-way HGV demand on local network study links for day-to-day operation of the SHDA scheme, including for the additional overall floorspace associated with the consenting of the Plot 3 application. As with the overall traffic percentage change appraisal set out above, this comparison exercise has been undertaken for 2038 future year scenarios.
- 9.6.4 Review of this HGV impact exercise identifies that a significant proportion of the local study links are not expected to experience changes in HGV levels of in excess of the IEMA Rule 2 10% threshold (for 'sensitive' links). This includes for routes around and connecting to M66 J3 to the west of the application site and sections of the A6045 to the south of the SHLR.
- 9.6.5 A number of study links close to the application site, including immediate sections of the SHLR and Pilsworth Road corridor and links to the east towards M62 J19, do

show HGV increases above the 10% threshold. In practice, however, all of these links show two-way HGV increases of less than 20% and therefore are well below the critical 30% IEMA rule 1 threshold, i.e. the point at which point traffic related environmental impacts could potentially reach discernible levels. Maximum predicted HGV percentage increases in AADT are expected to occur on those sections of the SHLR to the east of the SHDA, with a two-way increase in HGV levels of 16.3% on the section of SHLR between the SHEA / Hill Top Road access and the junction with A6045 Manchester Road (link ref C).

9.6.6 HGV impacts away from the SHLR corridor are generally at much lower levels, with predicted two-way AADT link effects on immediate sections of Pilsworth Road at circa 8 - 9% and impact on the M62 J19 slip roads at circa 7.5% - 14.3%. HGV increases of 14.3% are also predicted on A6046 to the south of M62 J19, however, this percentage impact figure is more a reflection of the relatively low overall baseline HGV levels predicted on this section of route and relates to an increase in HGV traffic on this link of less than 100 movements per day.

9.6.7 Whilst the change in HGV and general traffic levels on the SHLR corridor as a consequence of the delivery of the application scheme are predicted to be well below the critical Rule 1 30% threshold, and therefore unlikely to be greater than 'negligible / minor' in impact, in order to ensure a comprehensive appraisal of development effects, the following paragraphs provide a summary review of the key traffic related environmental criteria identified in section 9.3:

➤ *Pedestrian Delay:* Whilst additional general traffic on any link would lead to reductions in opportunity for pedestrians to cross a road, the predicted levels of additional development traffic demand on sections of the SHLR (typically less than 2.5% increase in total traffic) are not such that it is considered that they would give rise to a material propensity for pedestrian delay. Furthermore, key pedestrian crossing opportunities at major junctions are provided for by dedicated 'walk with traffic' traffic signal phases as part of the general traffic signal staging, with the calling and duration of these stages not affected by increased traffic volumes. It is also worth noting that the section of the SHLR between A6045 Manchester Road and M62 J19 has no frontage development and therefore there is no practical pedestrian crossing demand along this section of route. Impact level: **'Negligible'**

- *Pedestrian Amenity:* The SHLR corridor is to be provided with dedicated segregated footway / cycle facilities to at least one side for the full extent of route (both sides for the core section between A6045 Manchester Road and Pilsworth Road). Such segregated provision would assist in minimising any pedestrian amenity impacts associated of passing traffic, even including for the high proportion of HGV traffic predicted. Impact level: **'Minor adverse'**
- *Severance:* Given that sections of the SHLR is expected to accommodate in excess of 20,000 vehicles per day under 2038 'Baseline Consented' conditions, the route corridor could generate a general community severance effect if not adequately addressed by the layout. As noted, however, the scheme design provides for a significant number of crossing islands along the route, along with dedicated signal-controlled crossing phases at major junctions. On the basis of the high standard and frequency of proposed crossing infrastructure provision, the original Environmental Statement prepared to support the original 2016 SHDA application concluded that the general severance effects would not reach a level in excess of a 'minor adverse' impact. Predicted development related traffic flow increases of less than 2.5% of 'Baseline Consented' conditions are therefore not expected to give rise to greater than **'negligible'** additional severance effects.
- *Driver Delay:* Sections 7.5 & 7.6 to this report has demonstrated that the network operational effects of the proposed development would be generally **'negligible'** in scale, giving rise to only limited increases in junction congestion or queuing.
- *Road Safety:* Due to the high-quality nature of the SHLR corridor and the traffic-signal control nature of the major intersections along the route, with traffic typically proceeding under green traffic signal, it is not anticipated that the relatively small increases in traffic would give rise to significant additional highway safety issues. The proposed site access connection to the wider adopted highway network is to be delivered as a full standard 'ghost-island' T junction layout, included for dedicated right turn lane to minimise conflicts between right turn and through traffic movements. Any increases in road safety effects of the application scheme are therefore considered to be **'negligible'**.
- *Traffic Related Air Quality:* Study area receptors are predicted to experience only marginal increases in 2038 pollutant concentrations. The overall significant of road vehicles exhaust emission impacts was therefore determined as being: **'Negligible'**
- *Noise & Vibration:* The SHLR design includes for a comprehensive package of noise mitigation measures as part of the scheme design. Review of noise levels including for the application scheme demonstrate that required noise levels standards can be achieved, with the application scheme resulting in a **'negligible'** impact.

9.6.8 Based on the above review of detailed issues it is concluded that ‘worst-case’ traffic related environmental effects of the application application scheme on the immediate local road corridors is unlikely to give rise to traffic related environmental effects that are greater than ‘**negligible**’ or ‘**minor**’ significance. This conclusion is supported by the parallel detailed traffic noise and air quality analysis.

9.7 Impact Summary

9.7.1 The above review of predicted operational and environmental impact criteria identifies the following:

- Predicted development traffic demand across the wider network is unlikely to reach significant levels when considered in terms of all vehicle movements. All study links show general development traffic increases of less than 5% of baseline traffic levels. Such changes in total flow demand are therefore well below both IEMA Rule 1 & 2 screening thresholds.
- When considered in terms of changes in HGV flows only, local development traffic related environmental effects are still only likely to be of a ‘**negligible**’ impact classification. Maximum HGV increases are predicted on the SHLR corridor, which represents a purpose-built district distributor road route, which has been specifically designed to accommodate high levels of general and HGV commercial traffic, including segregated walking and cycling facilities and dedicated safe crossing points. Based on this review of issues is ultimately concluded that any Plot 3 development HGV related traffic effects would not be significant when considered in environmental impact terms.

10.0 SUMMARY AND CONCLUSIONS

- 10.1 This Transport Assessment (TA) report has been prepared by Focus Transport Planning (Focus TP) on behalf of Russells South Heywood (Commercial) Ltd to consider highways and transport matters associated with an outline planning application) for an additional 40,000sqm of B8 distribution and warehousing floorspace at the South Heywood Development Area (SHDA), Heywood, Rochdale. The application scheme relates to a 40,000sqm unit at Plot 3 South Heywood and would increase the total employment area across the full SHDA from the currently consented position of 135,460sqm (14% B2 / 86% B8) to 175,460sqm (18,960 sqm B2 (11.3% total floor area) / 156,500sqm B8 (88.7% total floor area).
- 10.2 The report has been prepared to apprise the Local Planning & Highway Authority (Rochdale Borough Council - RBC) and Strategic Road Network (National Highways) as to the changes in general traffic & heavy goods vehicle (HGV) demand levels expected to be generated by the proposed increase in floor-space and the assignment of this additional traffic over the local highway network. The scope and nature of issues considered within the report reflects the extent of matters which are understood to be of material interest to key local stakeholders following scoping discussions with RBC during Summer 2022 and includes for a comparison of 'Do-Something' traffic levels to those traffic volumes and effects envisaged in relation to the consented South Heywood Development Area (SHDA) - the underlying 'Baseline Consented' position for the South Heywood site and application site area.

Site Location, Existing Use & Planning Status

- 10.3 The Plot 3 application site forms part of the consented South Heywood Employment Area (SHEA), which itself forms part of the wider SHDA. The SHDA site represents an urban fringe location, located in close proximity to both the M62 and M66 motorways, which themselves link to the M60 Manchester Orbital motorway at nearby Simister Interchange (M62 J18).

- 10.4 The application site represents land consented for employment development as part of the 'hybrid' planning permission associated with the wider SHDA (RBC planning application ref: 16/01399/HYBR). This wider consent includes for the following key development elements:
- *Detailed Planning Consent:* Circa 2km new link road, known as the South Heywood Link Road (SHLR), between M62 J19 and Pilsworth Road. Route details include new access junctions to serve residential and employment elements of the SHDA, full signalisation and improvement of the M62 J19 roundabout, new traffic signal junction at SHLR / Manchester Road junction, signalised improvement of the junction of Hareshill Road / Pilsworth Road and a ghost-island improvement of the Pilsworth Road / Heywood Distribution Park access.
 - *Outline Planning Consent:* Mixed use employment (1,458,080sqft (GIA) B2 / B8 industrial & warehousing development (split as 30% B2 (circa 40,640sqm) / 70% B8 (circa 94,820sqm))) and residential development scheme (up to 1000 units) including ancillary school, small local retail parade and playing fields.
- 10.5 Subsequent to the consenting of the SHDA / SHLR hybrid application, a number of minor amendments to the SHLR design were approved by RBC (Ref: 20/00417/ ANM & 20/000464/ANM), to deliver improvements in route operational performance and safety, including traffic signalisation of the main employment area access at Hill Top. At the time of writing of this report the construction of the SHLR is well progressed on site, with the route understood to be programmed for completion and opening to the public in early November 2022.
- 10.6 A further non-material amendment 21/00390/ANM (approved April 2021) to the original hybrid planning consent permitted a change to conditions 10, 11 & 13 of the SHDA element. The consented change to condition 10 amended the original employment land use schedule to allow up to 116,500sqm of B8 floorspace and 18,960sqm of B2 floorspace (from 94,820sqm B8 & 40,640sqm B2). NB - The total permitted employment floorspace remained unchanged at 135,460sqm. This

amended employment land use mix represents a floorspace ratio of 86% B8 / 14% B2 and is the current prevailing land use position for the SHEA scheme.

- 10.7 The delivery of the consented SHDA and SHLR (including S96a amendments) as set out above, represents the ‘planning fallback’ position for the application scheme land and surrounding area.

Site Accessibility

- 10.8 The Plot 3 application site is primarily associated with land currently used for agricultural use. Due to the nature of this extant use, existing vehicle access is limited to informal field access points from Pilsworth Road or internal field connections. In practice vehicle access to the site is currently infrequent and such low intensity demand can be accommodated by the existing standard of access available.
- 10.9 As part of the consented wider SHDA scheme, the employment area is to be served by two key vehicle access points:
- A new ghost-island priority T-junction access to Pilsworth Road - serving the plot 3 site.
 - A new traffic signal-controlled access from Hareshill Hill Road (SHLR) as part of the combined SHEA / Hareshill Road (SHLR) / Hill Top Road signalised off-set crossroads junction - serving all remaining SHEA employment areas.
- 10.10 The Pilsworth Road access point would represent a stand-alone access point, solely for the purpose of accessing the Plot 3 application site - no through vehicle connection internal to the SHEA is to be provided between the two vehicle access points.
- 10.11 The immediate local highway network to the application site is programmed to be subject to significant amendment / improvements as part of the delivery of the

consented SHLR scheme. These works, programmed to be completed by early November 2022, would deliver a new direct connection to M62 J19, including full traffic signalisation of this junction and free flow slip to the M62 J19 eastbound off-slip, as well as improvements to a range of other key local junctions and supporting traffic management works.

- 10.12 As part of the wider SHDA consent, the applicant has agreed to pay a \$106 contribution of over £1million to support new / enhanced public transport services. In addition to this, the delivery of the SHDA will provide upgrades to local public rights of way, alongside dedicated walking & cycling routes as part of internal site access roads. All of these programmed sustainable transport improvements will benefit the Plot 3 development proposals.

Review of Future Year Baseline Highway Network Operating Conditions - 'Baseline Consented' Scenario (Background + SHLR + Committed Development + Consented SHDA (135,460sqm Total Employment))

- 10.13 In highway assessment terms, the extant SHDA consent represents the 'planning fallback' position for the surrounding area, as there can be a high degree of certainty as to the future deliverability of key consented elements - given that the SHLR is due to be opened in November 2022 and reserved matters planning applications have been submitted and approved for initial phases of the employment and residential development elements (2 residential phases have been commenced). Any assessment of the highway network operational effects of the proposed Plot 3 application scheme changes to the employment element of the wider SHDA (additional 40,000sqm of employment floorspace) should therefore be undertaken both as; a) a stand-alone operational capacity assessment - to understand the ability of the network to accommodate development traffic; and, for context, b) via reference to the accepted network operational position established with respect to the consented planning position. This comparison to the consented position is important, with respect to identifying the 'impact' of the application scheme in terms of the critical 'severe' test identified in para 111 of NPPF and whether there would be any requirement for additional network

mitigation measures over and above those already established and secured to support the wider SHDA consent.

10.14 For clarity, the key comparison test considered as part of the suite of assessment work included in this TA report is the difference between the two scenarios set out below:

➤ *Baseline Do-Minimum ‘Consented’ Scenario at 2038 Future Year:* i.e. Growthed Background Network Traffic Demand + SHLR + Agreed Committed Development + Consented SHDA (inc 135,460sqm employment).

➤ *Baseline + Development ‘Do Something’ Cumulative Development Scenario at 2038 Future Year:* i.e. Growthed Background Network Traffic Demand + SHLR + Agreed Committed Development + Consented SHDA + Additional 40,000sqm of B8 employment at Plot 3 (total of 175,460sqm employment).

10.15 In practice this comparative assessment work has been undertaken at the 2038 future year - as this represents the previously agreed point at which all of the SHDA works could be expected to be completed - thereby representing the point of maximum South Heywood development related highway network impact. The use of a 2038 future year approach is also consistent with the network impact assessment modelling carried out to support the original SHDA consent and the SHLR related operational assessments.

10.16 Review of the results of this 2038 ‘Baseline Consented’ network assessment exercise demonstrates the following:

➤ *Link Capacity:* There is no evidence of substantive over-capacity conditions on key study links for the 2038 ‘Baseline Consented’ position. Whilst a small number of links are predicted as likely to be approaching capacity at the 2038 future year, these links are not typically associated with high levels of SHDA related traffic and would not be experienced across all modelled time periods.

Furthermore, many of the local links identified in the analysis relate to issues for non-tidal directional demand.

- *Merge / Diverge:* Existing merge / diverge provision at the key local motorway junctions is generally of a suitable standard to accommodate 2038 'Baseline Consented' conditions, including for the full delivery of the consented wider SHDA and SHLR. Whilst there is the potential for the guideline merge / diverge thresholds to be exceeded on tidal-flow direction links during the busiest PM peak hour (operation would be within thresholds at other times), this has position has previously been identified as being primarily associated with background traffic demand conditions unrelated to development at SHDA and not identified as being of sufficient concern to call into question the delivery of the wider SHDA scheme.
- *Junction Capacity:* The SHLR corridor and associated improved junctions would provide a suitable level of operational performance to accommodate 2038 'Baseline Consented' scenario traffic demand. All junctions on the SHLR corridor, including M62 J19, are predicted to operate with an appropriate level of performance with a limited potential for substantive queueing or congestion. Some significant future year congestion issues are predicted to occur at M66 J3, particularly during PM peak periods, reflecting the constrained traffic signal layout of this junction. The original 2016 SHDA application previously noted, however, that SHDA development traffic effects at this location were anticipated to be limited.
- All of the proposed give-way access points to the SHDA, including the Pilsworth Road access directly serving the plot 3 site could be expected to demonstrate satisfactory operational performance under 2038 'Baseline Consented' conditions. Similarly, spare capacity conditions can also be expected to occur at the Pilsworth Road / Moss Hall Lane (3-arrows) junction & at the nearby Heywood Distribution Park connection to Pilsworth Road.

- 10.17 Ultimately the 2038 'Baseline Consented' network capacity testing demonstrates that the immediate highway network to the application site can be expected to operate with satisfactory performance - including for full delivery of the consented SHDA & SHLR and supporting highway improvement measures. This conclusion mirrors the position identified in 2016 /2017 and which informed the decision by RBC to grant consent to the wider SHDA scheme. Whilst the review has highlighted some locations which could be expected to be at or approaching practical capacity by 2038, such conditions have previously been identified to take place more as a reflection of underlying background demand and would not be the subject of material changes in performance as a result of 'worst case' SHDA traffic and do not represent circumstances that were considered to represent 'severe' highway network impact.

Review of Key Application Scheme Element - Highway Access Arrangements

- 10.18 The application scheme effectively represents a 'drop in' application to the employment zone forming part of the consented SHDA and seeks outline planning consent (all matters reserved other than access) for a 40,000sqm (430,556sqft) employment (logistics) warehouse (use class B8) unit at 'Plot 3'. The proposed development would provide a significant regional or national base for a distribution / logistics operator, offering a Grade A sustainable development of high-quality design, set within an attractive landscaped setting.
- 10.19 As forming part of the wider SHDA development, the Plot 3 site is already identified on the approved SHDA parameter plan for employment use, with building height restricted to 23m above finished floor level. It is therefore important to view the proposals in the context of the wider SHDA. The application scheme would have the effect of increasing total employment floorspace across the full SHDA from the currently consented total of 135,460sqm to 175,460sqm (to be split 18,960 sqm B2 (10.8% total floor area) / 156,500 sqm B8 (89.2% total floor area)).
- 10.20 Vehicle access to the wider highway network from Plot 3 would be taken via connections to the SHEA estate road linking to Pilsworth Road to the north west

corner of the SHDA. The location of this access point is identified on both the wider SHDA parameter plan and the proposed Plot 3 parameter plan and would be delivered as a high-standard ghost-island T-junction layout as part of committed enhancement works for the western section of Pilsworth Road programmed to be delivered by RBC in Spring 2023. The connecting SHEA estate road serving Plot 3 would be delivered to reflect typical single carriageway industrial distributor road standards, including segregated footway / cycleway access.

- 10.21 Final parking provision would likely be tailored to final end-user requirements, but it is anticipated that parking levels would be provided to at least 85% of identified RBC maximum general parking provision and 100% of minimum cycle / motorcycle parking standards. Previous discussions with RBC officers have identified that such car parking supply levels would be appropriate at the SHDA site, given the location and nature of employment land uses proposed - which are considered unlikely to give rise to overspill parking or generate an over-supply of parking area.
- 10.22 The future operation of the application scheme would be supported by the implementation of Travel Plan initiatives tailored to meet the requirements of the final end user. The wider SHDA consent, including the application scheme area, is already supported by an agreed Travel Plan Framework document for the site and the principles of this site wide Travel Plan Framework would be applied to the application scheme development..

Predicted Application Scheme Traffic Demand

- 10.23 In order to ensure the assessment of maximum potential future network operational impact of the application scheme, development traffic generation estimates have been prepared on the basis of the same robust 85th percentile trip rates utilised to inform the original SHDA consent. In practice it is considered that this trip generation modelling approach is likely to identify a robust worst-case estimate of anticipated development scheme traffic demand, as the historical B8 trip rates are well in excess of both a) 'average' demand values for relevant land uses and, b) those trip rates recently utilised by Transport for Greater Manchester

(TfGM) to inform the Locality Assessments for draft large-scale employment allocation sites associated with the Greater Manchester Strategic Framework (GMSF). It is also understood that interested occupiers associated with the larger B8 units at the site, have indicated that they would generally expect to operate with 'off-peak' shift patterns, thereby potentially further reducing development impact during key modelled 'rush hour' peak times.

- 10.24 The results of the development trip demand exercise suggests that the application scheme (40,000sqm additional B8 employment floorspace) could be expected to generate of the order of 124 (61 HGVs) additional vehicle movements (in + out) in the AM peak period and 123 (51 HGVs) vehicle movements in the PM peak, when compared to the consented SHDA scheme. This represents an overall net change in peak hour consented overall SHDA related development traffic movements of circa 9.6% to 10.0%. Just under half of these additional peak hour vehicle movements could be expected to be HGV delivery vehicles.
- 10.25 Under the proposed 'Do-Something' scenario the proposed employment development traffic (175,460sqm) would access the local highway network as follows:
- Access to / from Pilsworth Road: Plot 3 only (40,000sqm B8);
 - Access to / from Hareshill Road (SHLR): Remainder of employment area (116,500sqm B8, 18,950 B2)
- 10.26 This predicted traffic assignment results in circa 20% of all SHDA employment related traffic and circa 25% of predicted employment HGV volumes utilising the Pilsworth Road (Plot 3) access connection to the wider adopted highway network.

Review of 2038 'Do-Something' Network Operating Conditions (Background + SHLR + Committed Development + Consented SHDA + Plot 3 (175,460sqm Total Employment))

- 10.27 The immediate study area network is not predicted to experience substantive changes in total traffic demand associated with the delivery of the application scheme, with total additional traffic levels of the order of just 2 additional vehicle movements per minute during peak 'rush hour' demand periods. Once assigned across the wider study network, this translates into the majority of study links being anticipated to experience only slightly increased levels of total traffic demand (all vehicles) under 'Do-Something' conditions, when compared to the planning fallback case - well below a 5% threshold (most link increases being less than +2.5% of 2038 'Baseline Consented' traffic levels - representing two-way link changes of less than 1 vehicle every 1 - 2 minutes).
- 10.28 Review of predicted changes in overall link flows over the strategic highway network demonstrates similar patterns to the review of local network impact, with predicted changes in total actual link flow (vehicles) of less than 5%. Maximum changes in 2038 'Baseline Consented' traffic levels under the 2038 'Do-Something' scenario are predicted to take place on the M62 entry / exit slip roads, where increases of 10 - 20 trips are identified (1.0% - 4.7% change) and on the M62 west of J19 (26 two-way trips, an increase of 0.2% of Baseline demand). In practice such small levels of flow increases are not expected to result in any material change in network operational performance.
- 10.29 A review of predicted changes in HGV traffic levels over the local highway network identifies higher levels of predicted percentage change. Greatest change levels (i.e. over 10% increase in HGV traffic levels compared to 2038 'Baseline Consented' conditions) are identified to take place on those key local distributor road routes linking to the strategic highway network - such as SHLR and Pilsworth Road. These routes have been specifically designed to accommodate employment related traffic and HGVs as part of the SHLR scheme and the programmed improvements to the western section of the Pilsworth Road corridor.

10.30 Review of the results of the network capacity testing for the 2038 'Do-Something' development scenario demonstrates:

- *Link Capacity:* No additional local network links are predicted to experience traffic demand in excess of 95%+ of guideline capacity thresholds as a result of the application scheme, when compared to the consented 2038 'Baseline Consented' scenario. Similarly, none of the few local network links predicted to already be operating at above 95% link capacity under 2038 the 'Baseline Consented' scenario are predicted to experience a material change in traffic demand as a result of the application scheme proposals.
- *Motorway Merge / Diverge:* The delivery of the application scheme would not give rise to a requirement for development related slip road merge / diverge capacity improvements at either M62 J19 or M66 J3. Whilst some potential merge / diverge issues are identified for tidal flow directions during the busiest PM peak hour, these are already inherent under 2038 'Baseline Consented' conditions. The effects of the small changes in traffic demand associated with the delivery of the application scheme at these locations would be of a strictly limited nature and do not suggest the need for the delivery of a step-change in infrastructure provision over and above that already required to accommodate accepted baseline demand.
- *Junction Capacity:* the SHLR corridor and associated improved junctions would provide an appropriate level of operational performance to accommodate 2038 'Do-Something' traffic conditions. All SHLR related junctions are predicted to operate with some level of spare capacity and the LINSIG testing does not identify the potential for substantive queueing or congestion. Whilst the M62J19 is anticipated to be approaching practical capacity by 2038, the impact on junction PRC as a result of application scheme related traffic changes are predicted to be marginal in nature. It is therefore concluded that the operational capacity effects of the application scheme on the SHLR / Pilsworth Road corridors would not be 'severe' and that no improvements, over and above those already programmed to be delivered in support of the wider SHDA

scheme, are required to accommodate predicted development traffic demand levels.

2038 'Do-Something' analysis of M66 J3 identifies that the current constrained double traffic signal crossroads layout could be expected to operate with substantive congestion and queuing, particularly during PM peak periods. In practice, however, these results are similar to 2038 'Baseline Consented' junction operational performance, the levels of additional application scheme traffic predicted to be experienced at this location do not give rise to a material detrimental change in operational performance, that would require the implementation of additional junction capacity mitigation measures.

- Results of the PICADY junction capacity testing for the proposed SHDA site access junctions, demonstrate that all of the proposed give-way access points to the SHDA, including the Pilsworth Road access serving the Plot 3 site, could be expected to demonstrate satisfactory operational performance under 2038 'Do-Something' conditions. Similarly, spare capacity conditions can also be expected to occur at the Pilsworth Road / Moss Hall Lane (3-arrows) junction & at the nearby Heywood Distribution Park connection to Pilsworth Road.

- 10.31 Based on the results of the junction capacity modelling, it is concluded that the key study area highway network is capable of accommodating predicted 2038 'Do-Something' traffic conditions. The peak hour assessment runs demonstrate satisfactory operational performance at the majority of individual junction locations, with acceptable levels of queuing and delay. Whilst over-capacity conditions are predicted at M66 J3, this reflects underlying 'Baseline Consented' junction performance, with the application scheme resulting in only marginal changes in junction operation. It is therefore concluded that application scheme traffic impact would not be of a 'severe' nature, when viewed in network operational performance terms, and that there is no requirement for any additional network improvements over and above those works already committed and consented in support the delivery of the wider SHDA & SHLR.

Development Construction Traffic Effects

- 10.32 The commissioning and delivery of individual elements of the SHDA can be expected to be undertaken in response to market demand, with units unlikely to be delivered on a speculative 'up-front' basis based on a development fixed programme. For the purposes of the appraisal of Plot 3 application scheme construction traffic effects, it has been assumed that delivery of the Plot 3 employment unit would be undertaken over an intensive 60-week delivery programme (65 calendar weeks taking account of seasonal holidays), commencing during Q4 2023 and with a completion target date during Q1 2025.
- 10.33 Whilst it is anticipated that some other elements of the wider SHDA could potentially be delivered alongside Plot 3 application scheme construction work, it is not considered that any cumulative construction traffic impacts would likely be significant - given that the Plot 3 site would be served by a stand-alone access located over 1km from other access points serving SHDA. Furthermore, overall construction traffic effects associated with the Plot 3 scheme are unlikely to be of significant intensity.
- 10.34 Initial site construction works would be programmed to only commence following substantive completion of the programmed site access junction connection works to Pilsworth Road. This will ensure that a good standard of access would be available to serve site construction and avoid any conflict between site works and junction improvement tasks. Core construction hours to support the delivery of the application site would be 07:30 to 17:00 Monday to Friday, with Saturday working only required if necessary. No work would typically take place on Sundays or Bank Holidays, without prior written agreement with RBC. HGV movements to / from the site would be limited to the core hours outlined above, again unless the subject of prior written agreement with the Local Planning & Highway Authority.
- 10.35 Anticipated construction staff demand levels across the Plot 3 construction programme have been estimated based on contactor experience of similar projects. Review of this exercise suggests that the preliminary site establishment,

earthworks and internal roadworks tasks are unlikely to generate significant construction staff demand, with peak application site construction staff levels occurring towards the end of the construction programme (associated with commercial unit building fit out, commissioning and external works tasks).

- 10.36 Indeed, it is anticipated that total construction staff levels across the site would typically be of the order of 25 - 45 staff for the initial 9 months of site works (up to Summer 2024), rising to circa 50 - 70 staff members for the period Summer 2024 - Winter 2025. Maximum staffing demand is predicted to take place towards the end of the project, as unit is brought towards tenant hand-over (early 2025). Similar to predicted staffing levels, HGV demand is likely to be relatively limited for the initial phases of the construction programme - with, on average, just 5-10 HGV arrivals per day for the first four months, then rising to circa 10 - 15 HGVs per day for most of the remainder of 2024. Maximum construction HGV demand period is expected to take place during early 2025, when circa 20 HGV movements per day could be expected to take place - associated with the delivery of site external materials, building fit-out and the commissioning of on-site facilities.
- 10.37 In practice, maximum construction traffic demand levels associated with the delivery of the Plot 3 unit could be expected to be less than 150 vehicle movements per day (in + out) and relatively low during traditional AM & PM 'rush hour' periods - i.e. below 1 vehicle movement per minute. Maximum morning construction related trip movements associated with the site would typically take place before 08:00, with relatively few trip movements taking place during the critical 08:00-09:00 period. Trip movements during the 17:00-18:00 PM peak period could be expected to be of the order of 40 vehicles per hour (in + out). Construction HGV trip levels during key AM & PM peak demand periods are predicted to be negligible (below 5 HGV trips per hour (in + out)).
- 10.38 Based on the above estimates it is considered unlikely that Plot 3 related construction traffic would give rise to a material / severe operational or environmental effects on the local highway network. Indeed, construction traffic levels would be considerably lower than trip demand associated with the day-to-

day operation of the completed facility, including fewer HGV trips, and therefore could be expected to be satisfactorily accommodated by local routes.

- 10.39 Any construction traffic related effects are effectively temporary in nature (only occurring during the construction period and varying in intensity depending on prevailing tasks) and therefore are best addressed by appropriate short-term bespoke mitigation measures developed to address specific issues. Construction industry good practice requires that such mitigation / management measures are identified and delivered in line with details set out in via a Construction Traffic Management Plan (CTMP) prepared to support the delivery of the scheme.
- 10.40 A CTMP for the Plot 3 application site would be prepared and would form part of a Construction Environmental Management Plan (CEMP), covering all aspects of the of the delivery of the wider SHDA construction works, with this approach designed to coordinate construction to minimise any potential for cumulative effects.

Development Traffic Related Environmental Effects

- 10.41 The potential highways and transport related environmental impact of the day-to-day traffic implications of the Plot 3 application scheme (additional 40,000sqm of B8 employment development at SHDA) has been assessed via reference to the methodology set out in the Institute of Environmental Assessment (now Institute of Environmental Management & Assessment - IEMA) document “Guidelines for the Environmental Assessment of Road Traffic”. Reference to IEMA screening guidelines would suggest that overall changes in traffic flow over the immediate local network associated with the application scheme would not give rise to a material change in environmental conditions. Indeed, no local study links are predicted to experience a net increase of over 2.5% (AADT) as a result of the development proposals, when compared to the 2038 ‘Baseline Consented’ future year conditions. Such changes in total flow demand are well below both IEMA Rule 1 & Rule 2 screening thresholds.

- 10.42 When considered in terms of changes in HGV flows only, local development traffic related environmental effects are still only likely to be of a ‘negligible’ impact classification. Maximum HGV increases are predicted on the SHLR corridor, which represents a purpose-built district distributor road route, which has been specifically designed to accommodate high levels of general and commercial HGV traffic, including segregated walking and cycling facilities and dedicated safe crossing points. It is ultimately concluded that any development related traffic effects would therefore not be significant when considered in environmental impact terms.

Summary

- 10.43 Given the review of anticipated future operational highway conditions and reference to appropriate guideline assessment standards / thresholds, it is concluded that the delivery and operation of the application scheme (additional 40,000sqm of B8 land use at SHDA) would not result in a severe impact on operational or environmental conditions over the local highway network, the critical highways test identified in the NPPF. Additional development traffic levels would be generally low when compared to accepted future Baseline Consented network conditions and the identified main road routes serving the site are of a suitable standard to accommodate predicted traffic and have few immediate sensitive receptors. Indeed, much of the local highway network has been upgraded specifically to allow for the accommodation of such traffic levels. It is therefore concluded that there is no requirement for additional development related off-site highway improvement works to support the application scheme over and above those already proposed to support the wider SHDA and that the proposals represent acceptable development in highways and transport terms.