

Transport Baseline Assessment

Halsnead Masterplan SPD

January 2017

Knowsley Metropolitan Borough Council

Municipal Buildings
Huyton
L36 9UX

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1 Introduction

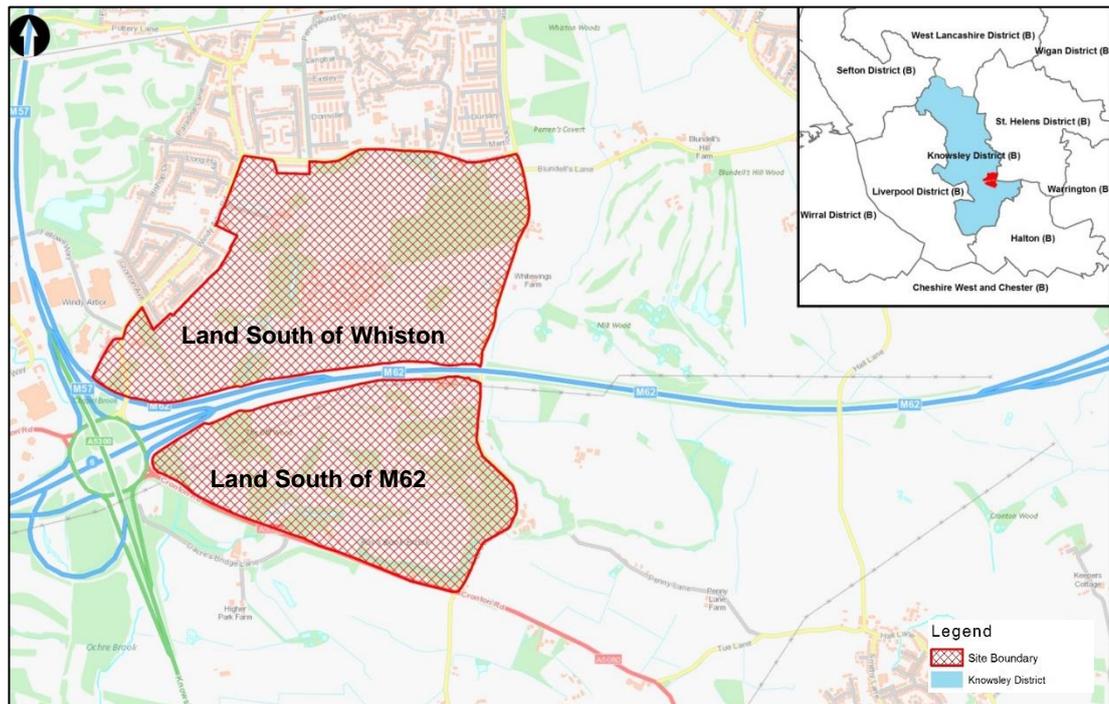
1.1 Background

- 1.1.1 Mott MacDonald and Turley have been commissioned by Knowsley Metropolitan Borough Council (KMBC) to produce a masterplan Supplementary Planning Document (SPD) to help guide delivery of a Sustainable Urban Extension (SUE), covering two sites formerly known as “Land south of Whiston” located to the north of the M62 as well as “Land south of the M62”. These two sites have collectively been termed ‘Halsnead’.
- 1.1.2 The SUE was until recently designated as Green Belt land however on adoption of the Local Plan Core Strategy (2016) it was allocated for development. The Local Plan Core Strategy (SUE2) identifies the largest SUE locations as needing additional planning guidance and the site under consideration in this report forms the largest and most complex SUE. The Local Plan identifies that this SUE has the capacity to accommodate upwards of 1,500 new homes, at least 22.5 hectares of employment land, and a new country park.
- 1.1.3 The preparation of the masterplan is currently at baseline stage and a range of evidence has been collected from a number of different disciplines to inform an up to date evidence base for the study area. This evidence is presented within a series of coordinated studies which ensure the constraints and opportunities are fully understood to inform the development of a deliverable masterplan.

1.2 Site Location

- 1.2.1 The site consists of two parts, a northern part and a southern part, with the two separated by the M62. There are multiple land ownerships across the SUE making a comprehensive masterplan important to ensure that development expectations are managed and there is a common design framework to make best use of the site. The final masterplan will practically function as a planning instrument, both as a guide to developers and as a material planning consideration to help bring development proposals into conformity. Together the two parts of the site total 176 hectares of development land. The site can be seen in Figure 1 below.

Figure 1.1: Site Location



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- 1.2.2 The site is bounded by existing residential development to the west and north and by Foxes Bank Lane to the east, a rural road which provides an underpass under the M62. The south of the site is bordered by the A5080 Cronton Road, with the south eastern corner of the site being bounded by the former Cronton Colliery. Currently in the centre of the northern part of the site is Halsnead Park, a mobile home park. Adjacent to this is a medium sized lake and surrounding woodland.
- 1.2.3 In support of site development at this location a sustainable access scheme is proposed as part of the LCR Sustainable Transport Enhancement Package (STEP), funded through the Local Growth Fund, to link the site with Whiston Station. The scheme includes public realm improvements for walking, cycling, bus and taxi access to fully integrate the station with the local area, specifically the hospital.

- 1.2.4 Highways England are currently carrying out widening works to upgrade the footway/cycleway to a minimum of 2m at the Tarbock Island gyratory serving the M62 and M57 south west of Whiston. This scheme will reduce north-south severance for active modes between the two development sites and connect planned residential development with planned employment. Highways England are also investigating the feasibility of reopening the former mineral line bridge to the east of Tarbock island, which would provide a direct connection between the two sites for sustainable modes.

1.3 Scope of Report

- 1.3.1 This report provides a summary of key baseline issues and work previously undertaken for the Sustainable Urban Extension (SUE) with regards to Transport. Much evidence gathering and option testing was carried out in preparing the draft version of the January 2016 draft SPD (hereafter referred to the '2016 Draft SPD') document and the Knowsley Local Plan. Mott MacDonald has been involved in feasibility and planning studies for these sites for some years. Key documents from which this review draws upon are as follows:-
- South Whiston and Land South of M62 - Infrastructure and Development Options Study 2014; and
 - Land South of Whiston - Transport Assessment 2016
- 1.3.2 Rather than provide a repeat of the baseline and impact modelling information included in the previous Mott MacDonald work, this report draws out the key transport issues raised and how these may be addressed in the masterplan study.
- 1.3.3 Furthermore as the masterplan develops and more detail is known on the proposed quanta of development, phasing and internal circulation, the form and function of the proposed access junctions and internal circulation can be reviewed. It is essential that the development sites are well connected to the existing Whiston sustainable transport network and these linkages will be critical to the masterplan's success. The masterplan work also presents the opportunity to challenge and review the work previously undertaken such as the placemaking and gateway functions of the proposed access junctions.

2 Policy Review

2.1 National Policy

2.1.1 The National Planning Policy Framework (NPPF) sets out the Governments' planning policies for England and how these are expected to be applied. It sets out the Governments' requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their Councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.

2.1.2 With regard to transport, the NPPF (paragraph 32) sets out the following guidelines:

'Plans and decisions should take account of whether:

- *the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for major transport infrastructure;*
- *safe and suitable access to the site can be achieved for all people; and*
- *improvements can be undertaken within the transport network that cost effectively limits the significant impacts of the development. Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.*

Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to:

- *accommodate the efficient delivery of goods and supplies;*
- *give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;*
- *create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;*
- *incorporate facilities for charging plug-in and other ultra-low emission vehicles; and*
- *consider the needs of people with disabilities by all modes of transport.'*

2.2 Regional Policy

- 2.2.1 The Merseyside Local Transport Plan 3 (LTP3) became active on 1st April 2011 and has a vision to provide *“a city region committed to a low carbon future, which has a transport network and mobility culture that positively contributes to a thriving economy and the health and wellbeing of its citizens and where sustainable travel is the option of choice.”*
- 2.2.2 To achieve the vision, six goals have been set which include “ensure the transport system promotes and enables improved health and wellbeing and road safety” and “ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, other essential services and leisure and recreational opportunities.”

2.3 Local Policy

KMBC Local Plan Core Strategy

- 2.3.1 The Local Plan Core Strategy was adopted in January 2016 and sets out the strategic framework for the growth and development of Knowsley up to 2028 and beyond.
- 2.3.2 Policy SUE2c within the Core Strategy relates specifically to the site. In relation to transport in particular, this policy sets out the following requirements:

- a) Safe and convenient highways access for the sites together with a well connected internal road system and traffic mitigation measures, including any measures needed to address the impact of the development on traffic generation in the wider area;*
- b) Provision for public transport, walking and cycling, which enhance linkages within the area and surrounding areas including linkages to the former mineral railway line linking Cronton Colliery and Stadt Moers Park and to Whiston railway station;*

Ensuring a Choice of Travel Supplementary Planning Document (SPD)

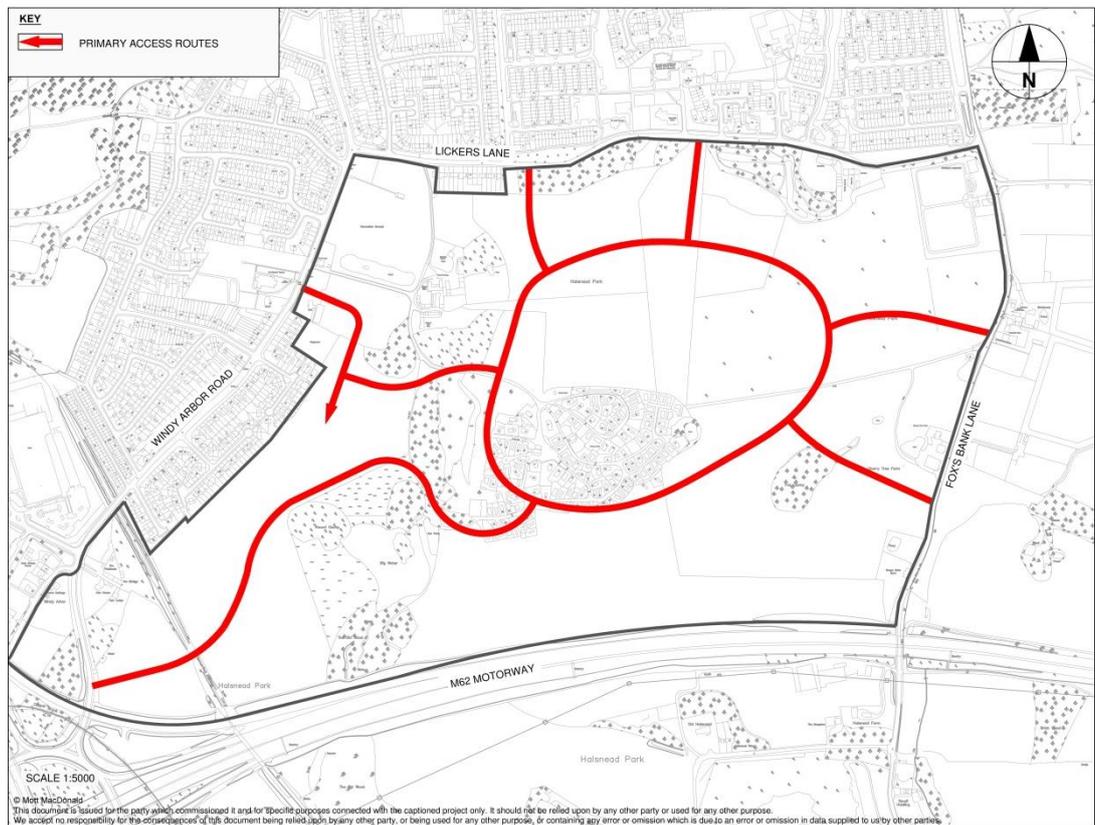
- 2.3.3 This SPD was developed by a collaboration of the Merseyside local authorities and Merseytravel. It provides guidance on the access and transport requirements for new developments in Merseyside.
- 2.3.4 The SPD Objectives are:-
1. Ensure a reasonable choice of access by all modes of transport to new development;
 2. Providing increased choice of access for the end user(s);
 3. Promoting opportunities to maximise the quality or density of the development by saving space through the provision of less car parking spaces where appropriate;
 4. Helping create healthier workforces / residents where people choose to walk or cycle;
 5. Promoting social cohesion and sustainable communities through the creation of streets that encourage social interaction, positively integrate with the built environment, whilst still permitting effective movement of traffic; and
 6. Improved environmental image
- 2.3.5 In accordance with the SPD a Minimum Accessibility Standard Assessment (MASA) should be produced to accompany any planning applications for the site.

3 Site Accessibility

3.1 2016 Draft SPD Site Access Junctions

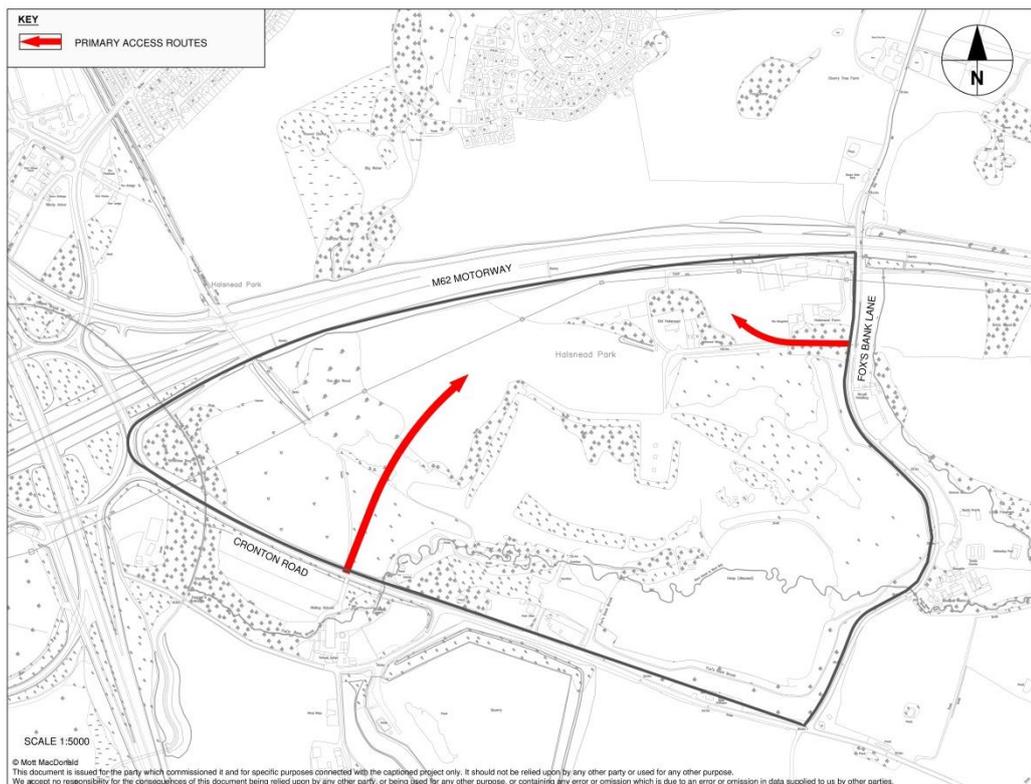
3.1.1 Figure 3.1 and Figure 3.2 illustrate the location of the site access junctions proposed in the 2016 Draft SPD.

Figure 3.1: Land South of Whiston Road Access Strategy (South of Whiston site)



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Figure 3.2: Land South of Whiston Road Access Strategy (South of M62 site)



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3.1.2 The access points are referred to in the 2016 Draft SPD are as follows:

South of Whiston Site

1. Windy Arbor Road, north of M62 Junction 6. Three arm roundabout;
2. Windy Arbor Road, near St Nicholas's Church. Three arm roundabout;
3. Lickers Lane, Pennywood Drive, west of Lickers Lane Wood. Three arm roundabout;
4. Lickers Lane, Croftwood Grove, near the community centre. Four arm roundabout.
5. Fox's Bank Lane, south of Blundell's Lane, opposite Fairchild's Farm. Three Arm roundabout; and

6. Fox's Bank Lane, north of M62, south of Cherry Tree Farm. Three Arm Roundabout

Land South of M62

7. Principal access from Cronton Road;
8. Access to Country Park via a junction on Cronton Road east of Foxes Bank Brook. Three Arm roundabout (not shown on plans above); and
9. Figure 2 above shows a secondary access on Fox's Bank Lane for Emergency vehicles only.

3.2 Form, Function and Phasing of Access Junctions

- 3.2.1 The *Land South of Whiston- Transport Assessment 2016* indicates that access junctions will be roundabouts. We consider that the designs were undertaken in this way so as to achieve high capacity junctions which would accommodate development traffic and background traffic growth.
- 3.2.2 Clearly the form and function of each of the access points should be reviewed as the masterplan progresses in terms of their place-making/gateway functions as well as their convenience and safety for cyclists and pedestrians.
- 3.2.3 Once more detail on phasing and the location of development quanta across the site is known, the capacity requirements of site access junctions will become clearer. The requirements and function for each site access junction will become more defined and the design for each, based on the results of junction modelling and pedestrian and cycle requirements can be refined.

3.3 2016 Draft SPD Off-Site Highway Works

- 3.3.1 The off-site works stated in the 2016 Draft SPD are listed below but it should be noted some works are included which were not included in the *Land South of Whiston- Transport Assessment 2016* and vice versa.
 - Signalisation and improvements to Lickers Lane/Windy Arbor Road junction;
 - Signalisation at the Lickers Lane/Foxes Bank Lane junction;
 - Widening of Windy Arbor Road at the Dragon Lane junction;
 - Improvements to the Stoney Lane/Dragon Lane/Meadway junction;

- Signalisation at Stoney Lane/Cumber Lane;
- Improvements to Cronton Road/Foxes Bank Lane;
- Improvements to M62 Junction 6 Tarbock Island;
- Blundells Lane; and
- Former Mineral Railway

3.4 Form and Phasing of Off Site Highway Works

3.4.1 The need for improvements at these locations was mainly identified through a traffic modelling approach which identified where existing junctions would be pushed close to capacity or over capacity on account of development. Improved pedestrian and cycle facilities were also incorporated, where possible into the designs. When reviewing the highway improvements it will be important that the improvements do not detract from pedestrian or cycle requirements at the junctions and the need for more road capacity at junctions do not come at the cost of other road users.

3.4.2 As the masterplan progresses and more certainty is known on the final quanta of development and where development is to be located- further transport modelling may be required. This modelling would help to inform the masterplan team of the trigger points of when the improvements above are needed (if at all). Once the impact of the masterplan is known for the specific time periods a phasing plan can be drawn up. The design of any junction improvements or infrastructure provision can also be refined based on the modelling results.

3.5 2016 Draft SPD Internal Circulation

3.5.1 The 2016 Draft SPD layout indicates an internal circulation route for the south Whiston site which connects all accesses with each other to avoid the site being a cul-de-sac development and help integrate it with the wider urban network. The route ensures that all vehicular accesses into the site are connected to each other. The internal routes would ensure that the development site is permeable by bus, walking and cycling.

- 3.5.2 The employment site south of the M62 would be accessed via a single junction from Cronton Road. An internal distributor road would be constructed to serve the individual development plots.
- 3.5.3 A detailed layout plan showing individual development plots and secondary and tertiary routes serving these is not yet developed but will be as the masterplan progresses.

3.6 Form and Phasing of Internal Circulation

- 3.6.1 The phasing of the internal circulation routes is unknown at present and subject to modelling work at the appropriate time. In preparing phasing plans and deciding trigger points when new circulation infrastructure is needed care should be taken so that in interim periods the site development remains as well connected as possible to the existing urban fabric and internal circulation is as permeable as possible.

4 Accessibility

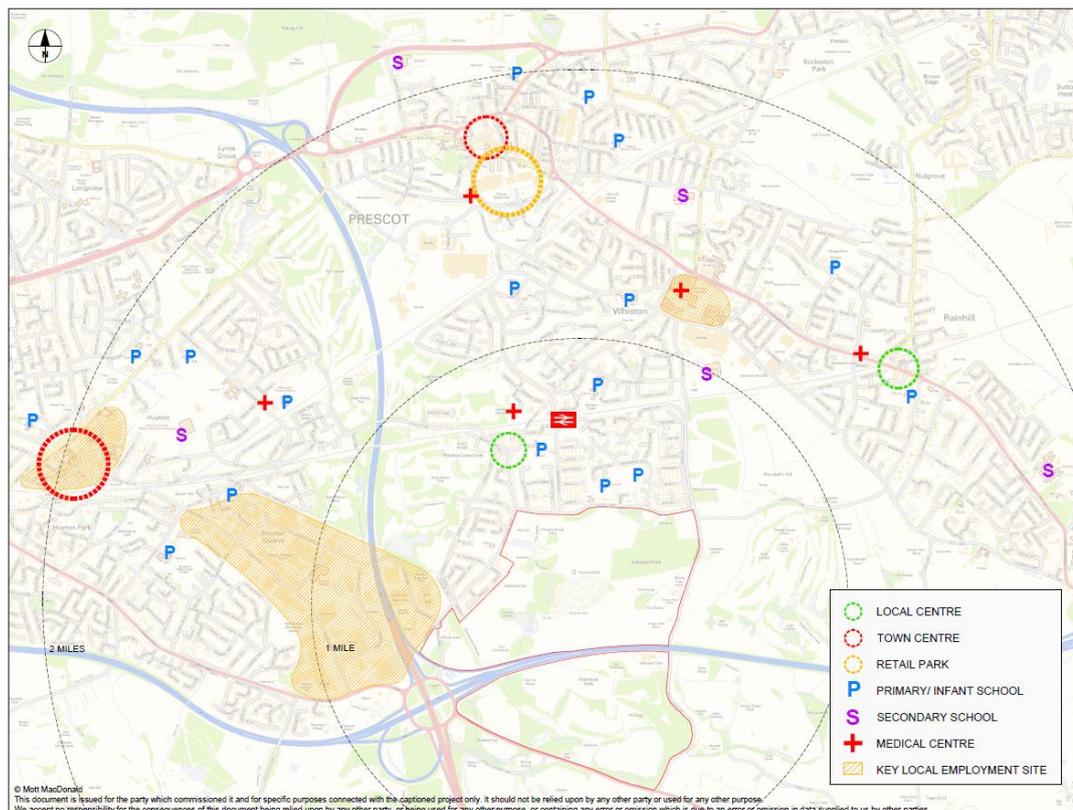
4.1 Overview

4.1.1 As part of the work undertaken for the *Land South of Whiston - Transport Assessment 2016*, a general review of accessibility was undertaken. Whilst this was comprehensively covered in past studies, key points are considered here with reference to the masterplan study.

4.2 Local Amenities

4.2.1 Whilst not explicitly a transport consideration, the location and proximity of education, retail and health facilities to the study area clearly has transport implications; particularly when considering the provision for journeys on-foot and in an effort to reduce the need for car ownership and travel.

Figure 4.1: Local Amenities



- 4.2.2 Figure 4.1 above shows the variety of amenities within a two mile radius of the study area. Within 1 mile, there are a number of infant/primary schools, a secondary school, local retail facilities, a medical centre and Whiston train station. The close proximity of these basic services encourages non-car journeys.
- 4.2.3 Within 2 miles, there is a wider variety of retail (food and non-food), medical and education facilities, including four secondary schools. These amenities are predominantly clustered around the town centres of Huyton, Prescott and the local centre of Rainhill.
- 4.2.4 There are also a number of key local employment sites in close proximity, including Huyton Business Park and Whiston Hospital.

Implication for the masterplan

- 4.2.5 It is highly likely that new local amenities will be provided within the development site and this will reduce the need to travel. Connectivity to Whiston Rail Station by all modes is a key issue that should be addressed in the masterplan. It has the potential to be a key asset to the development site. Connection by all modes to other local centres Prescott, Rainhill and Huyton should also be given weight as the masterplan evolves.

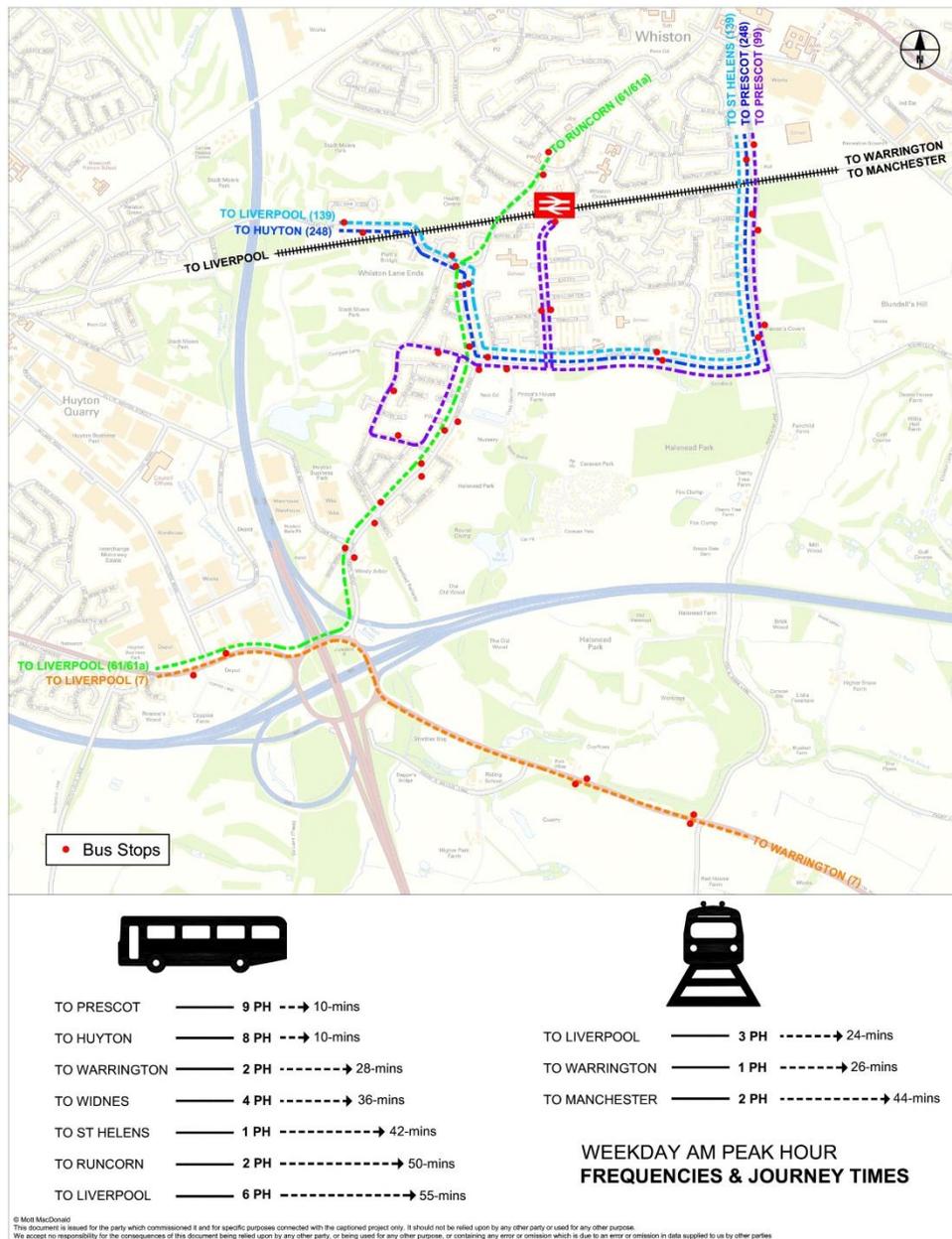
4.3 Public Transport Accessibility

Bus

- 4.3.1 The study area is bound by a number of bus routes, predominantly providing local links to surrounding settlements such as Huyton, Prescott and Rainhill, as well as medium distance services to St Helens, Widnes, Liverpool, Runcorn and Warrington.
- 4.3.2 Three bus routes are located along Lickers Lane, to the north of the study area, with a further route on each of Windy Arbor Road and Cronton Road.
- 4.3.3 The proposed residential area is located around 600m south of Whiston railway station, equating to approximately a 5-minute walk from the northern

edge of the site South of Whiston. It is considered, that once fully developed, dwellings within this land parcel would be no more than 15-minutes' walk from the station.

Figure 4.2: Local Bus Routing



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Rail

- 4.3.4 Whiston Station offers frequent services to Manchester Victoria, Warrington Bank Quay and Liverpool Lime Street. In the weekday AM peak, there are 3 trains per hour (tph) to Liverpool, 1 tph to Warrington and 2 tph to Manchester. Clearly, this regular level of service in such close proximity to the study area would provide a real asset, especially for commuter journeys.
- 4.3.5 Whiston station also features a small transport interchange, allowing local bus services to call directly at the station. There is also a pick-up/drop-off loop and a 43 space car park.

Implications for masterplan

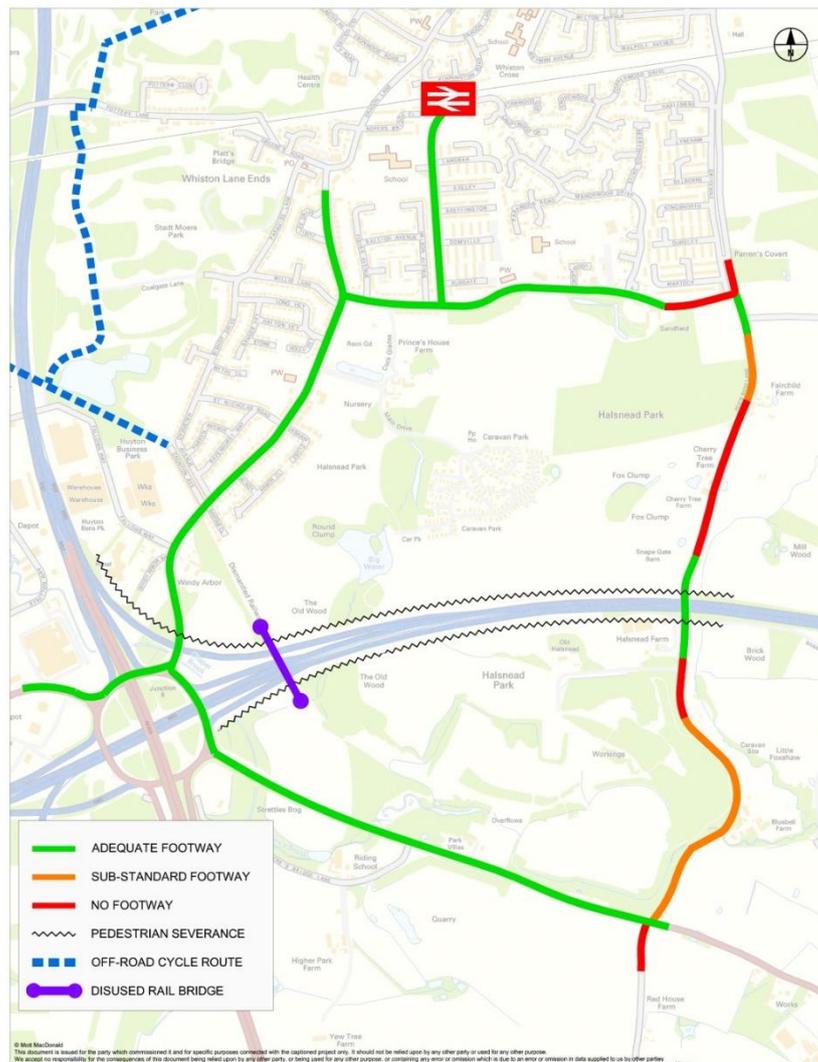
- 4.3.6 The internal layout of the site should be designed so that it is permeable by bus and that appropriate primary roads are navigable by bus. Where possible it may be desirable to avoid creating large cul-de-sacs which are unattractive to bus operators.
- 4.3.7 Connections by all modes to Whiston Rail Station should be considered as the masterplan evolves. Convenient connections to the Station will encourage sustainable travel as well as making the site a more attractive place to live. At present, of all the local services only service 99 (Prescot Circular) stops at Whiston train station. With increased population and demand for public transport demand for stopping bus services at Whiston Station will increase.

4.4 Active Travel Modes

- 4.4.1 Key walking and cycling infrastructure in the vicinity of the study area is shown below.

Walking

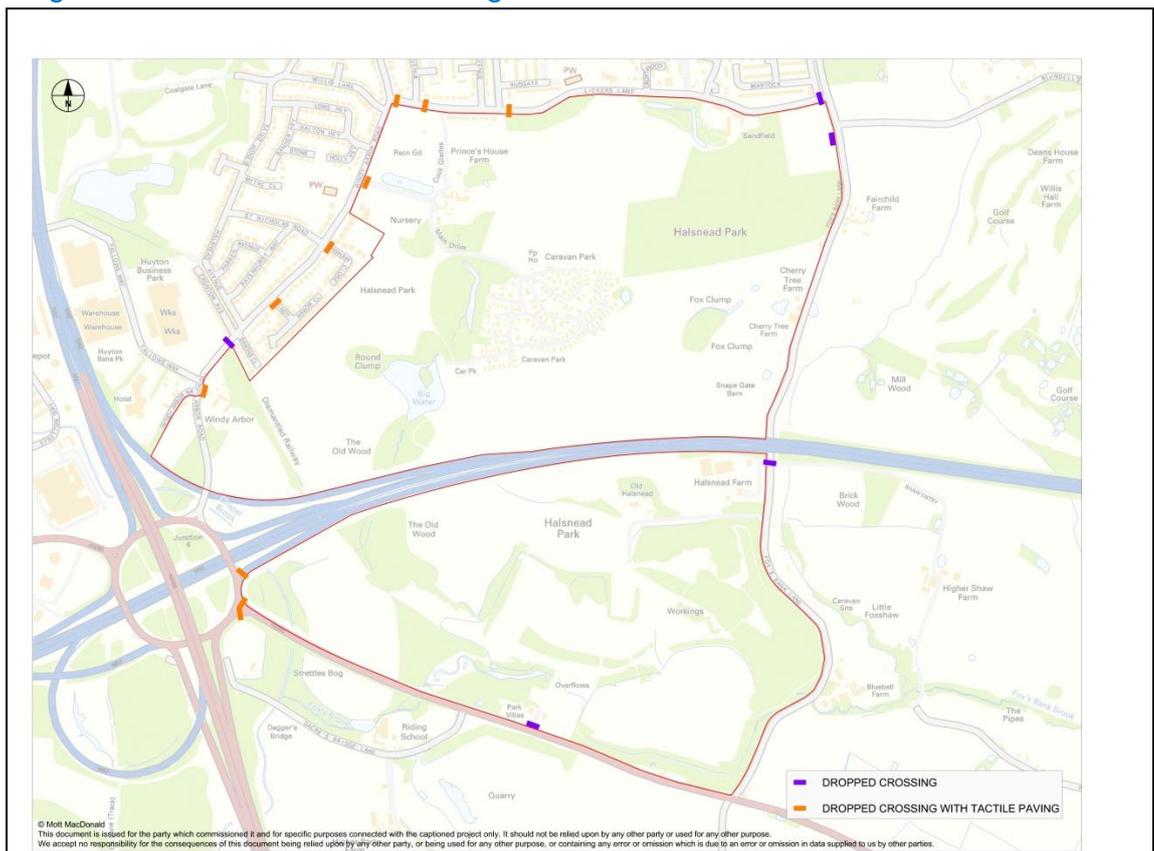
Figure 4.3: Walking and Cycling Connectivity



4.4.2 At the local level, walking provides the most important mode of travel. It is considered that the key desire lines for those travelling on-foot will be linking north, towards the railway station, education facilities or Whiston local centre. At present there are no Public Rights of Way (PROW) across the site. The closest is located in St Helens in the vicinity of Blundells Hill Golf Club. The site will be connected to this PROW via Blundells Lane.

- 4.4.3 It is particularly important to consider how the location of access points to the study area cater for pedestrian desire lines towards these amenities.
- 4.4.4 There are a number of dropped crossings around the edge of the study area and but no signalised crossings provided within the immediate vicinity. The intensification of pedestrian movements, particularly across Lickers Lane and the junction of Windy Arbor Road/Lickers Lane, will certainly require improved pedestrian crossing provision.

Figure 4.4: Pedestrian Crossing Locations



- 4.4.5 The existing disused railway line which runs through the site provides an opportunity to provide a sustainable travel route. The alignment runs north – south across the M62 via an existing bridge. A route here is proposed as part of the approved proposals for a Country Park on the land south of the M62 (15/00191/FUL) and also is included in Core Strategy policy (SUE2c)

Cycling

- 4.4.6 Whilst formal cycling infrastructure in the vicinity of the study area is scarce, National Cycle Network route 56 runs adjacent to the site to the north-west. This provides a traffic free route north-south around Whiston.
- 4.4.7 The disused railway track and bridge that spans the M62 provides the potential to link the study area directly into this cycle route.

Implications for masterplan

- 4.4.8 The 2016 Draft SPD stipulates there should be the following pedestrian / cycle routes provided as a minimum:-
1. East–west, north of the M62 buffer;
 2. North–south along the disused rail link;
 3. North–south through Old Wood North SBI via Princes’ Farm to Lickers Lane; and
 4. North–south through to Lickers Lane between Lickers Lane Wood and Sandfield Park
- 4.4.9 The routes above will provide a cycle / pedestrian connection to the Lickers Lane / Pennywood Drive junction for access to Whiston Rail Station. The design of this junction (which is also a site access junction) should be designed to encourage crossing by pedestrians and cycles to and from the train station.
- 4.4.10 The disused rail link will provide connection towards the exiting national Cycle Route 56 Whiston and Stadt Moers Park to the north, and across the railway bridge to the proposed Country Park and employment uses south of the M62.
- 4.4.11 Only one east west connection is proposed in the 2016 Draft SPD, parallel to the M62. In developing the masterplan scope for additional east west links should be considered.

5 Indicative Costs and Phasing

5.1 Indicative Costs

5.1.1 As part of the work undertaken for the Land South of Whiston - Transport Assessment 2016, indicative costings for the 2016 Draft SPD works to provide site access junctions and off-site highway works were provided to Knowsley Council. The costs exclude land purchase, utilities, drainage and abnormal ground conditions. Costs to provide internal road infrastructure within the site is also excluded away from the junctions themselves. Furthermore the costs exclude the following offsite schemes named in the 2016 Draft SPD:-

- Improvements to M63 Junction 6 Tarbock Island;
- Blundells Lane; and
- Former Mineral Railway.

Table 5.1: Sustainable Urban Extension: Site Access Costs

Site Access, Internal Roads and Off-site Works Budget Estimates

Roundabout Site Access Options			
	Location	Construction	Fees and Risk Total
Site Access 1	Windy Arbor Road (south)	£724,162	£340,356 £1,064,519
Site Access 2	Windy Arbor Road (north)	£861,701	£404,999 £1,266,700
Site Access 3	Lickers Lane (west)	£612,338	£287,799 £900,136
Site Access 4	Lickers Lane (east)	£590,682	£277,620 £868,302
Site Access 5	Fox's Bank Lane (north)	£490,550	£230,559 £721,109
Site Access 6	Fox's Bank Lane (middle)	£492,342	£231,401 £723,743
North Site Sub-total			£5,544,509
Site Access 7	Fox's Bank Lane (south)	£55,833	£26,241 £82,074
Site Access 8	Cronton Road, New Business Estate	£1,403,687	£659,733 £2,063,420
South Site Sub-total			£2,145,494
Site Access Total			£7,690,002

Table 5.2: Sustainable Urban Extension: Off-Site Access Costs

Off-site Works				
	Location	Construction	Fees and Risk	Total
Junction 1	Lickers Lane / Windy Arbor Road	£569,532	£267,680	£837,213
Junction 2	Dragon Lane / Windy Arbor Road	£515,031	£242,065	£757,095
Junction 3	Lickers Lane / Fox's Bank Lane	£242,479	£113,965	£356,444
Junction 4	Stoney Lane / Cumber Lane	£276,569	£129,987	£406,556
Junction 5	Dragon Lane / Stoney Lane	£195,738	£91,997	£287,735
Junction 6	Fox's Bank Lane / Cronton Road / Prescott Road	£971,111	£456,422	£1,427,533
Off-site Total				<u>£4,072,577</u>

6 Other Transport Issues

6.1 Overview

6.1.1 In this section, a discussion of other masterplanning issues which will impact on transport is provided. Through the masterplan, the project team will aim to resolve these issues so that the site can be successfully delivered within anticipated timescales.

6.2 Delivery Issues

6.2.1 The fractured land ownership of the development sites present potential deliverability issues in terms of transport infrastructure costs and how these can be funded. A range of scenarios are possible here:=-

- Initial costs to install site access junctions and internal road circulation borne by the Council, to be repaid by developer through contributions as development comes forward;
- Contributions calculated based on development impact / number of peak hour journeys to be generated by each individual development; and
- Contributions could be based on a flat rate per dwelling unit or metre squared development

6.2.2 The estimated cost to provide the site access junctions plus off site highway works is close to £12 million. This cost does not include works to construct the internal road network, cycleways / footways and other internal infrastructure. These high upfront costs may prove prohibitive to some developers.

6.2.3 Close collaboration and discussion with the Council and the masterplan team will need to take place to decide the most appropriate funding mechanism for the developments.

6.2.4 These delivery considerations need to be informed by (and be consistent with) wider delivery/viability considerations.

6.3 Further Transport Work Required

6.3.1 Due to the development of the Country Park as an integral part of the wider development and the proximity of rural areas, consideration should be given to the planning of equestrian routes.

- 6.3.2 At the planning application stage, further work will need to be undertaken to assess the transport impact of the masterplan site and the capacity of the access junctions. This work will involve traffic surveys, an analysis of trips generated and distributed to and from the masterplan site by the proposed development, capacity analysis of proposed junctions and an assessment of the proposed development's impact on the wider road network.
- 6.3.3 An application has been undertaken by the Council to the Liverpool City Region Single Investment Fund (SIF) to secure financial assistance for infrastructure measures, which have been identified as requirements to mitigate the masterplan site's impact on the local road network.

7 Conclusions and Recommendations

- 7.1.1 A transport review has been undertaken of the baseline work carried out to support the Draft South of Whiston and Land South of M62 Sustainable Urban Extension- Supplementary Planning document. The previous studies undertaken are comprehensive and present a clear picture of underlying baseline.
- 7.1.2 The preparation of a masterplan for the development sites present the opportunity to challenge and review the previous work and the development principles they established. The review has identified a number of areas which will need to be addressed in the ongoing masterplan work. A summary of these issues is presented below:-
- Site access junctions should be reviewed in terms of their ability to accommodate pedestrian and cycle movements. At present all junctions are designed as roundabouts, these typically do not provide as good a connection for pedestrians and cyclists as other forms of junction.
 - Pedestrian connectivity to the existing urban fabric of Whiston, especially on Windy Arbour Road and Licker's Lane will be essential to the success of the masterplan.
 - The current draft off site highway work proposals includes proposals to improve pedestrian and cycle connectivity. The need to provide for these modes should not be lost with the next round of transport modelling.
 - Internal circulation routes should make the site as permeable as possible. The current draft layout connects all sites access junctions through the internal network. When developing phasing plans care should be taken so that the site is as permeable as possible during early stages and interim periods.
 - Whiston Rail Station has the potential to be a key asset to the development. The development should be well connected to the station by all modes.
 - Transport modelling work to be undertaken as part of a separate commission will help identify phasing and trigger points for transport infrastructure works. Mott Macdonald will work closely with Knowsley Council in identifying optimum phasing.
 - It is considered that no further transport baseline studies are required at this stage to inform the masterplan. Work previously undertaken for the

2016 Draft SPD and Knowsley Local Plan is sufficient for the purposes of the masterplan.

- The next steps in terms of transport work include option testing and then developing the movement framework for the masterplan.