

South East Blackburn Growth Corridor

Baseline Conditions Report
November 2019



Quality Management

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1. Introduction and Background

1.1 Background and Context

Capita Real Estate and Infrastructure Ltd has been commissioned by Blackburn with Darwen Borough Council (BwDBC) to prepare a full business case in support of proposed highway and junction improvements around south east Blackburn. This Baseline Conditions Report is written in conjunction with the main business case document to support the strategic case for the scheme, identify existing problems and issues within a defined study area and establish a case for change.

The overall scheme is subject to a funding bid by BwDBC to the Lancashire Local Enterprise Partnership (LEP). The Lancashire LEP represents the body responsible for administering allocated Growth Deal 3 (GD3) funding, the latest round of Growth Deal funding made available by central government.

1.2 Proposed Scheme

The scheme consists of the following highway interventions across south east Blackburn:

- Widening of the A6077 Haslingden Road between Lions Drive and Shadsworth Road to four lanes with associated geometric improvements at junctions;
- Delivery of the Blackamoor Link Road including two new junctions at Roman Road and Blackamoor Road and associated changes at the existing Roman Road / Blackamoor Road junction; and
- Improvements to the Haslingden Road / Old Bank Lane junction to also include a new access to the Royal Blackburn Teaching Hospital.

Works are proposed to start in early 2020 and be complete by March 2021. The project aims to:

- Enable Blackburn with Darwen Borough Councils growth ambitions to be realised without adversely impacting on the existing level of service (congestion) provided by the Haslingden Road corridor and adjoining local highway network;
- Improve air quality at the Blackamoor Road / Roman Road junction to bring nitrogen dioxide levels within the (annual mean) objective as specified in the Air Quality (England) Regulations 2000 (as amended) to enable the revocation of the Blackamoor AQMA;
- Enable further development of employment opportunities by facilitating the delivery of over 47,894sqm of new commercial floorspace creating approximately 3,862 jobs;

- Supporting future housing growth by enabling the delivery of approximately 643 additional houses within the borough; and
- Improve the facilities for walking and cycling along Haslingden Road, providing a safer environment to encourage participation in active travel.

Major transport improvements will act as the catalyst for new housing and commercial development, contributing to the delivery of the Council's adopted Local Plan targets for new housing, businesses and jobs.

1.3 Report Purpose and Aims

The purpose of this report is to establish baseline conditions across a defined study area (see Section 1.4). This is undertaken to develop a detailed understanding of the existing highway, traffic and transport situation across an intervention impact area, building a well-informed business case for the proposed scheme. A solid evidence base of existing highway and land use conditions will serve as a basis for formulating and developing the proposed scheme intervention. Specifically, this report will:

- Identify the main trip generation and attraction locations and land uses within a defined study area;
- Establish local demographic and population characteristics across a defined study area;
- Review current traffic conditions and network performance along key links within a defined study area;
- Provide a review of local and regional development policy and development aspirations across south east Blackburn; and
- Provide a review of the relative sustainable and active travel mode provision across south east Blackburn.

Options for improvement will be developed by considering the need for intervention based on a clear set of locally developed objectives. It is expected that a review of baseline conditions will identify specific transport and development pressures on the local highway network. This will ensure the scheme addresses identified problems and delivers user benefits in the appropriate areas.

1.4 Proposed Study Area

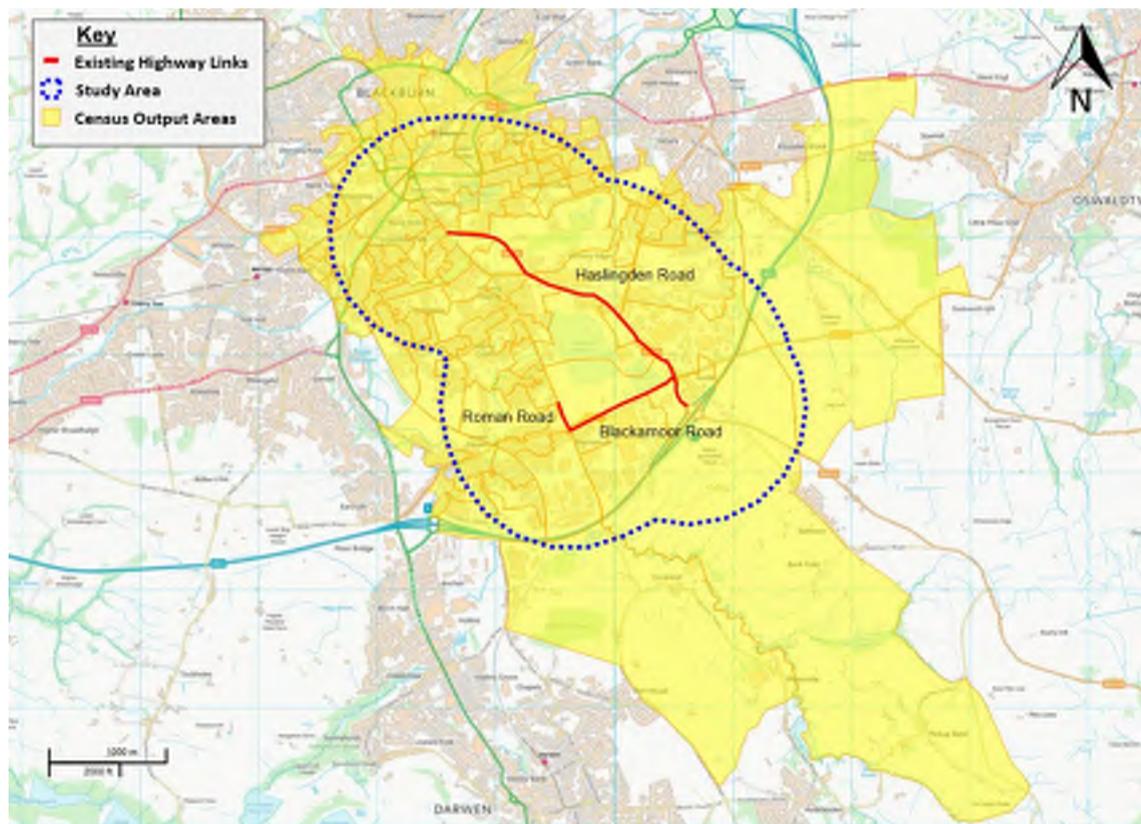
A baseline conditions study area has been established across south east Blackburn around key road links expected to form the focus of scheme interventions. These are defined as follows:

- A6077 Haslingden Road: Between the Grimshaw Park/ Rockliffe Street junction (north) and the M65 J5 (south);

- B6231 Blackamoor Road: Between the Roman Road junction (west) and the Haslingden Road/ Guide junction (east); and
- Roman Road: Between the Newfield Drive junction (north) and the B6231 Blackamoor Road junction (south).

Around these links, a 1km buffer has been established to consider the impacts of an intervention on these links on surrounding areas. Within the 1km buffer impact area, census output areas are identified within the buffer boundary as individual units of spatial aggregation for assessing demographic and land use characteristics across the study area. Key links and the established baseline conditions study area can be found in Figure 1-1.

Figure 1-1 - Baseline Conditions Study Area



1.5 Report Structure

The remainder of this report will take the following structure:

Chapter 2: Study Area Baseline Conditions

Chapter 3: Highway Network Conditions Review

Chapter 4: Local Planning Policy and Development Aspirations

Chapter 5: Sustainable and Active Travel Mode Provision

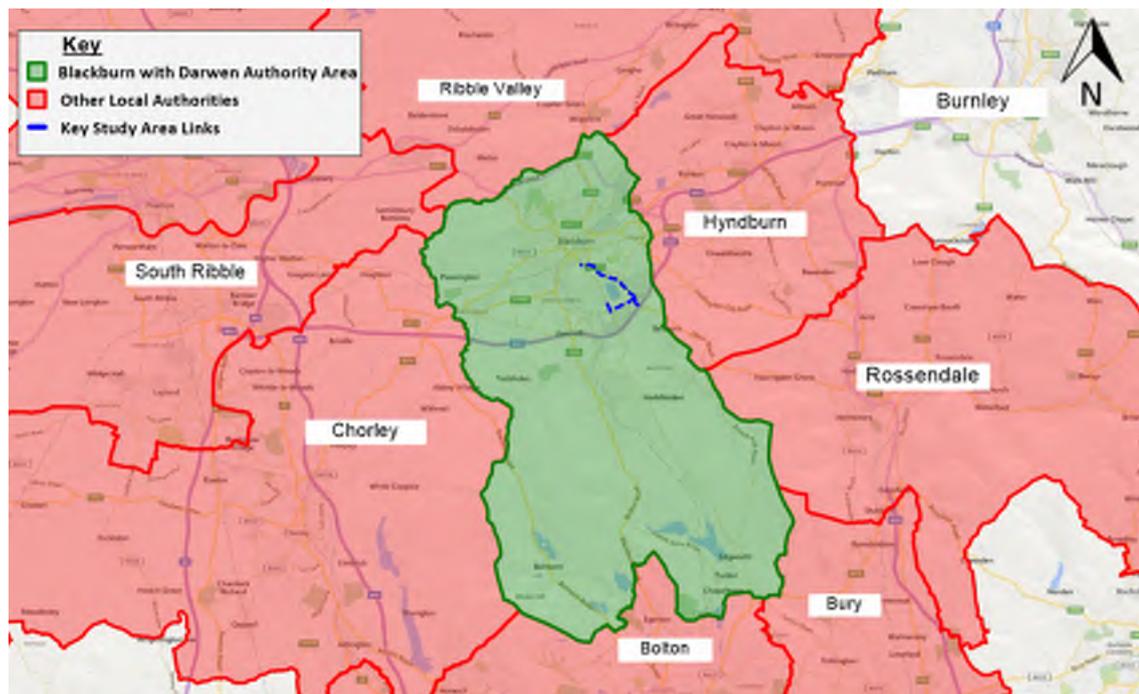
Chapter 6: Summary and Conclusions

2. Study Area Baseline Conditions

2.1 Introduction

This chapter will seek to establish the relative demographic and land use characteristics across the defined study area. This will aid in identifying specific areas of focus for the proposed scheme, identifying potential sources of journey origins and destinations as well as key traffic and travel issues on the local highway network. The south east Blackburn Growth Corridor links identified in Figure 2-1 sit within the BwDBC authority area, which is both the highway and planning authority for the A6077 Haslingden Road and the B6231 Blackamoor Road. The BwDBC authority area is identified in Figure 2-1 below, as well as its position relative to other local authorities.

Figure 2-1 - Blackburn with Darwen Authority Area



2011 Census and Index of Multiple Deprivation (IMD) data will be used to assess the relative social, demographic and land use conditions across the proposed intervention study area as defined in, Section 1.4 (Figure 1-1). 2011 Census data will be obtained from NOMIS to Output Area (OA) level. IMD data published in 2015 is made available from the Department for Communities and Local Government and is available to Lower Super Output Area (LSOA) level.

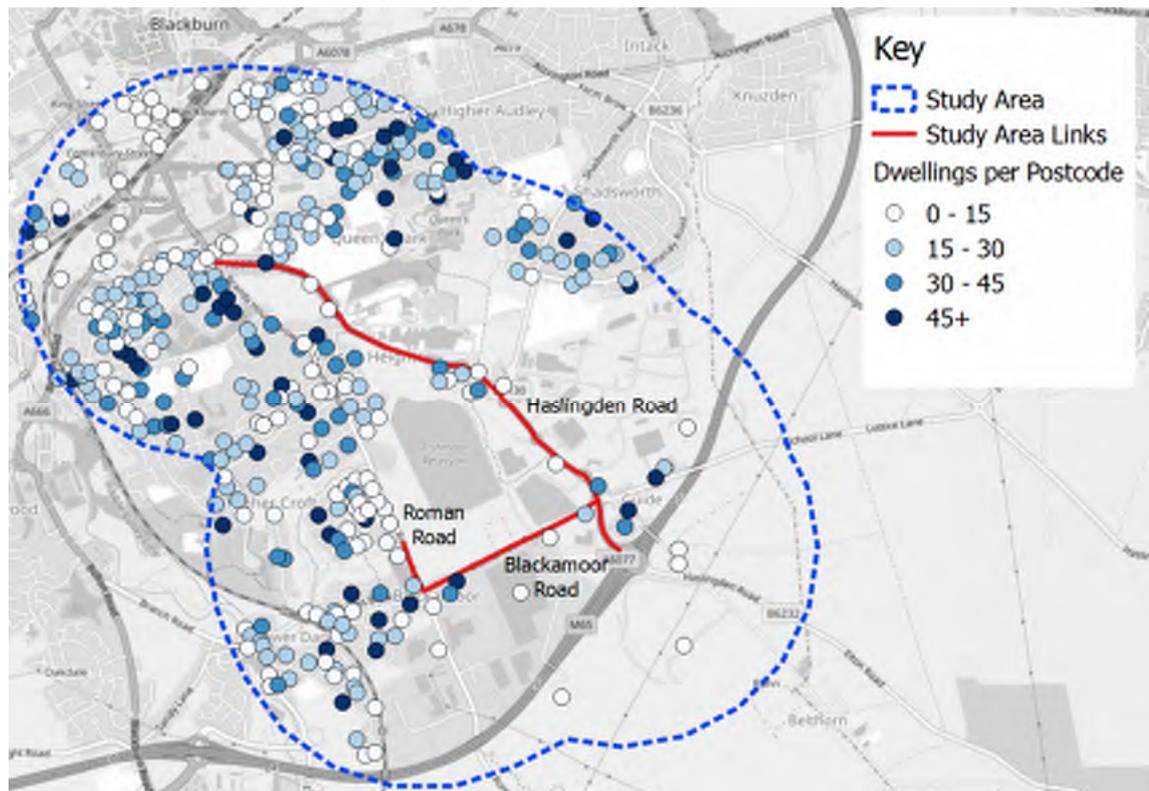
2.2 Study Area Land Uses and Journey to Work Data

2.2.1 Study Area Residential Areas

The relative distribution of residential areas across the scheme study area is identified in Figure 2-2 below. This plots the distribution of postcode centroid locations identified within the 1km buffer and also defines the relative number of dwellings associated with each post code. The postcode distribution identifies specific built up areas within the study area, while the dwelling density associated with each postcode identifies the distribution of residential areas.

As is shown, post codes are generally clustered towards the north of the study area towards Blackburn town centre and west of the study area, to the west of Roman Road and Brandy House Brow. There is generally a lower frequency of post codes across areas to the south and east of the study area around Haslingden Road and Blackamoor Road, with a small cluster of higher dwelling density postcodes around Guide Village at the junction between Haslingden Road and Blackamoor Road.

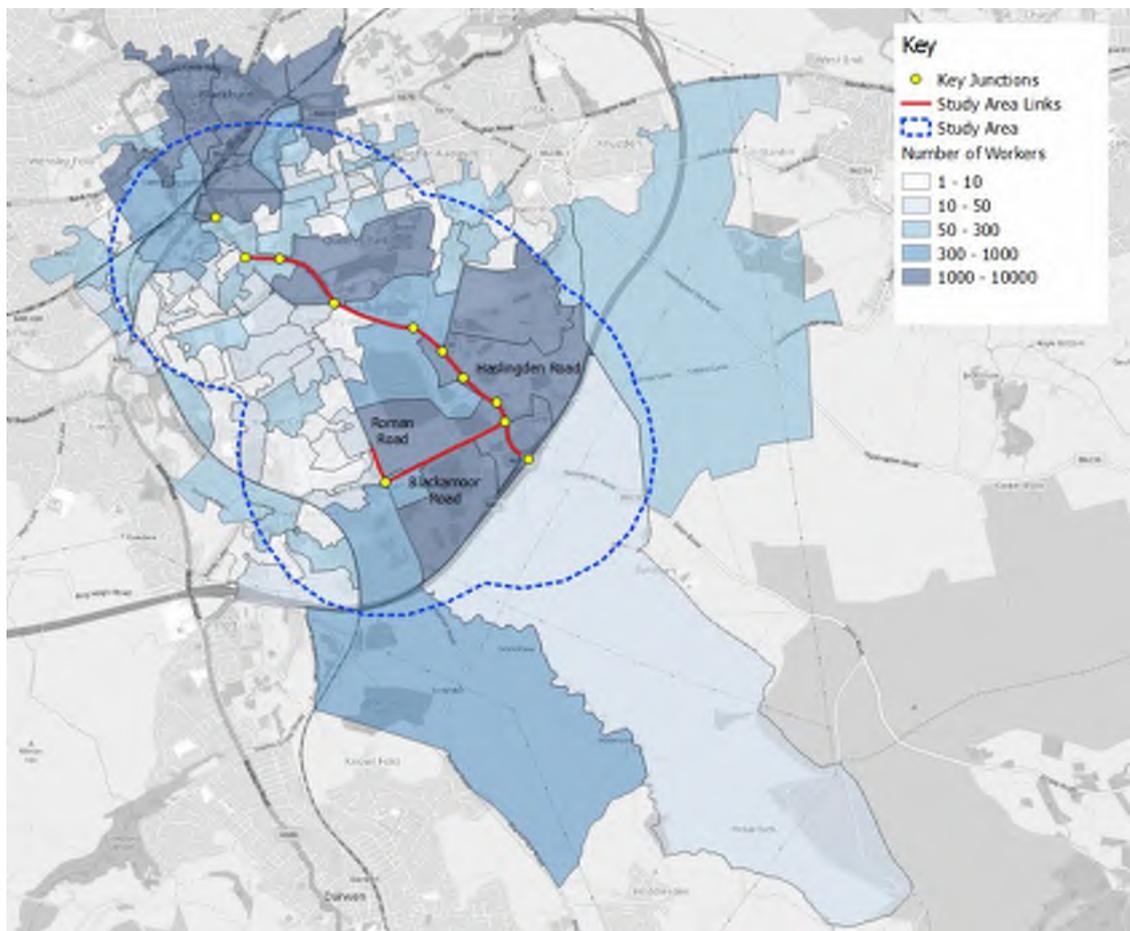
Figure 2-2 - Study Area Postcode Distribution and Dwelling Density



2.2.2 Study Area Employment Areas

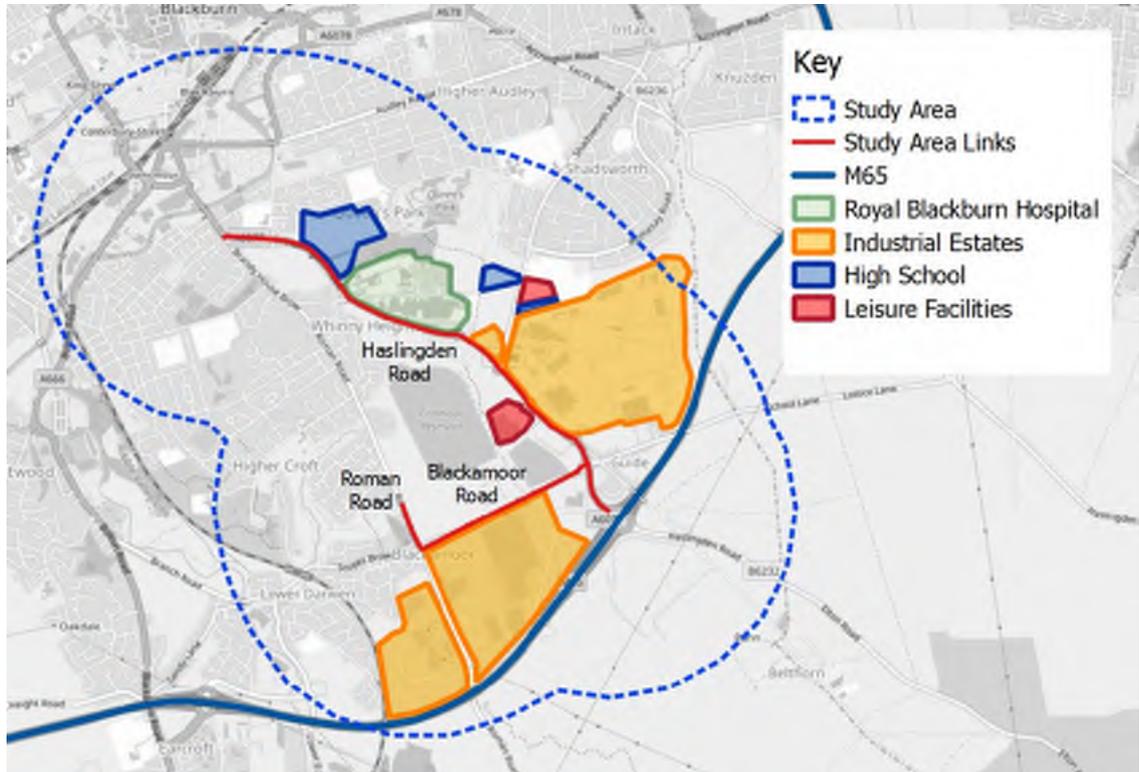
Key employment areas have been identified by plotting the number of people who work in a given census OA across the study area. This has been estimated from census origin-destination method of travel to work data by all modes, defining people’s place of residence (origin) nationally and their place of work (destination) as OAs within the study area. This data is plotted in Figure 2-3 below. As is shown, the density of workers is greatest across OAs towards the south and east of the study areas along Haslingden Road and around Blackamoor Road which contain the Shadsworth Industrial Estate and the Royal Blackburn Hospital.

Figure 2-3 - Study Area Place of Work Distribution



Key trip attractors and employment land uses across south east Blackburn adjacent to key study area links can be found in Figure 2-4 overleaf. These correspond with the place of work destination OAs identified in Figure 2-3, with Royal Blackburn Hospital (RBH), Walker Park, Roman Road and Shadsworth Industrial Estates acting as key employment destinations along Haslingden Road and across south east Blackburn.

Figure 2-4 - Key Travel and Employment Destinations across South East Blackburn



2.2.3 Census Origin-Destination Flow Data

2011 Census origin-destination flow data can be found in Figure 2-5 below. This shows the BwD authority area to have a net influx of workers compared to residents, with areas around BwD, including south east Blackburn, acting as an employment draw from surrounding regions.

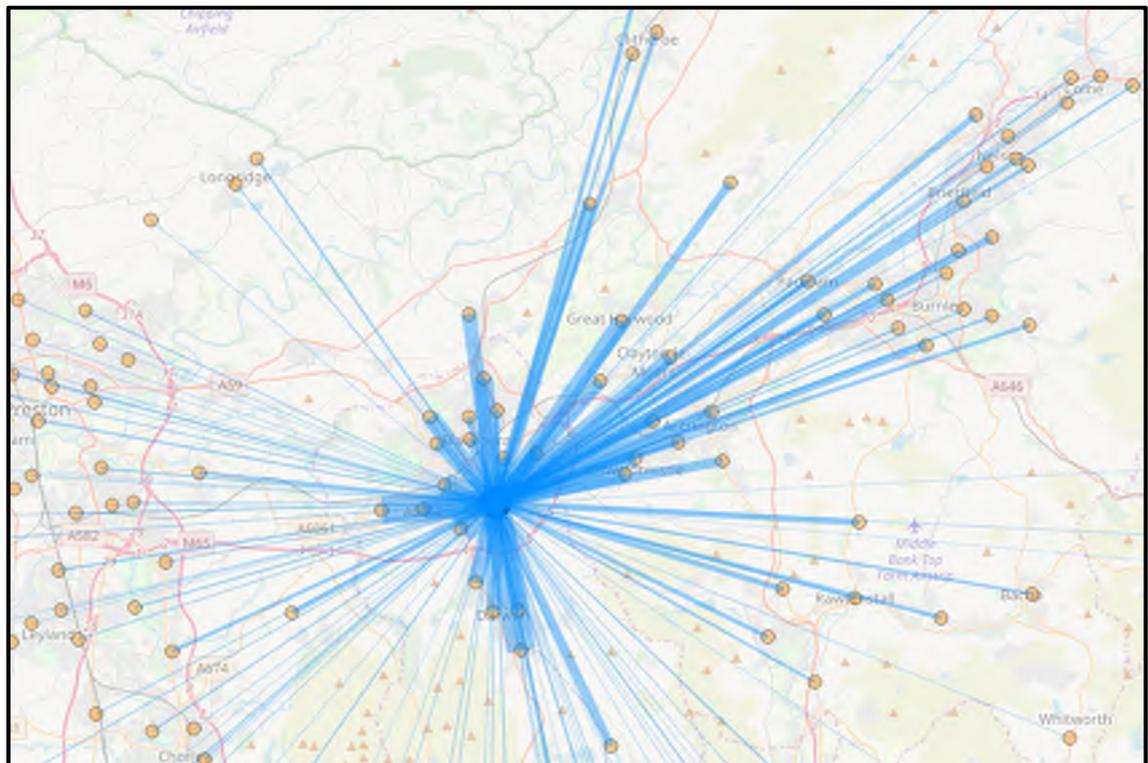
Figure 2-5 - Blackburn with Darwen Origin-Destination Journey to Work Flow Data



Of the top inflow movements identified in Figure 2-5, with the exception of Ribble Valley, each of the identified inflow movements to BwD come from local authority areas to the west, south or east of the south east Blackburn study area. Vehicle trips from these areas are likely to utilise the M65 to travel to the employment destinations identified in Figure 2-5, arriving into the study area either from the south west via Roman Road and Blackamoor Road or from the south via the M65 Junction 5. Vehicle trips from commuting within the BwD authority area from Darwen will also approach the study area from the south east via Roman Road.

Figure 2-6 displays 2011 census origin-destination flows to a more disaggregated level, plotting flow data for census Mid-Super Output Areas (MSOAs) based population weighted centroids. This also includes relative flows from MSOAs within the BwD authority area. Figure 2-6 highlights MSOA *Blackburn with Darwen 011* as the journey to work destination, which covers much of the south east Blackburn study area, including RBH and much of the Shadsworth industrial estate. As is shown, the most prominent movements to *Blackburn with Darwen 011* arrive from the south from MSOAs across Darwen, and from the east from MSOAs across Hyndburn and Burnley.

Figure 2-6 - Census Origin-Destination Plot from Surrounding Areas



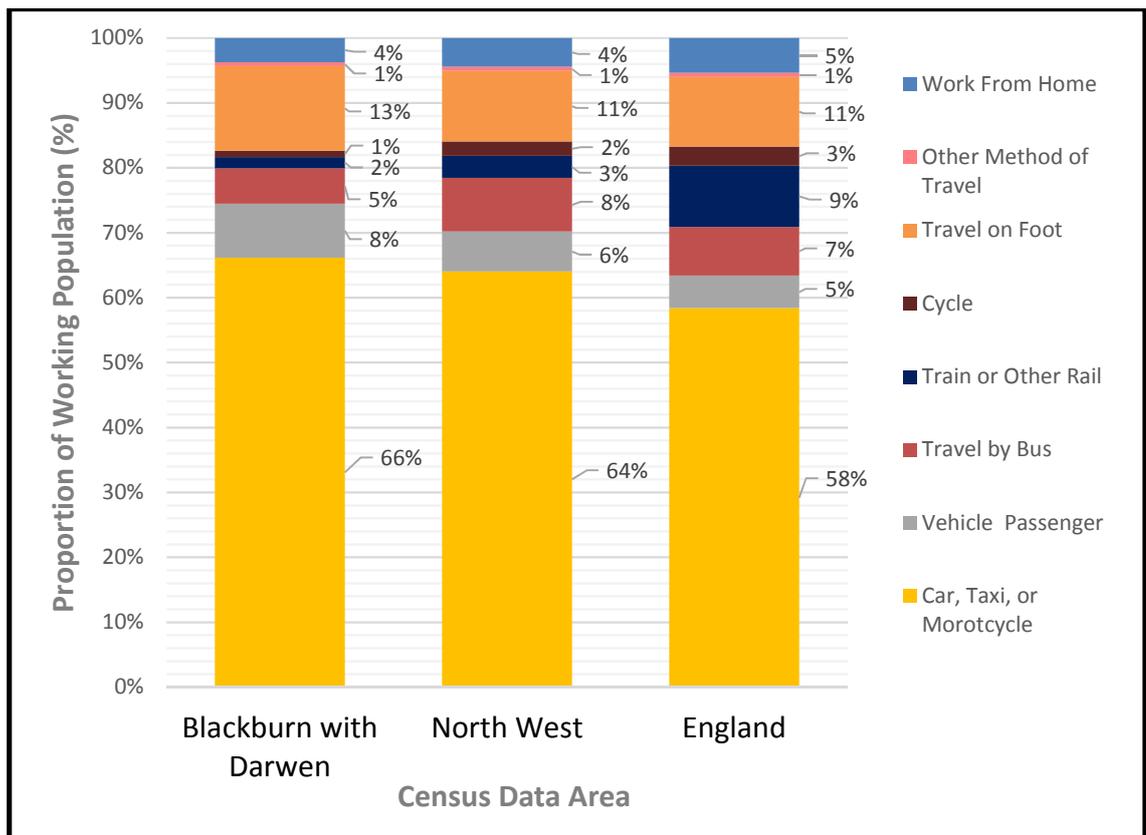
2.2.4 Method of Travel to Work Data

2011 Census Method of Travel to Work data has been plotted for the BwD local authority area to illustrate the relative proportion of each transport mode used as the preferred method of travel to work. This is compared to similar regional (North West) and national (England) travel mode data in Figure 2-7.

As is shown, a greater proportion of individuals travel to work by car or van, both as a driver and passenger, as compared to regional and national averages. In contrast, a significantly lower proportion of individuals travel to work using public transport, notably by rail, with only 2% of people traveling to work by rail across BwD as compared to 9% nationally.

Travel by active travel modes (walking and cycling) across BwD is relatively similar to regional and national averages, with a slightly lower proportion cycling, yet a greater proportion travelling on foot.

Figure 2-7 - Blackburn with Darwen Relative Method of Travel to Work

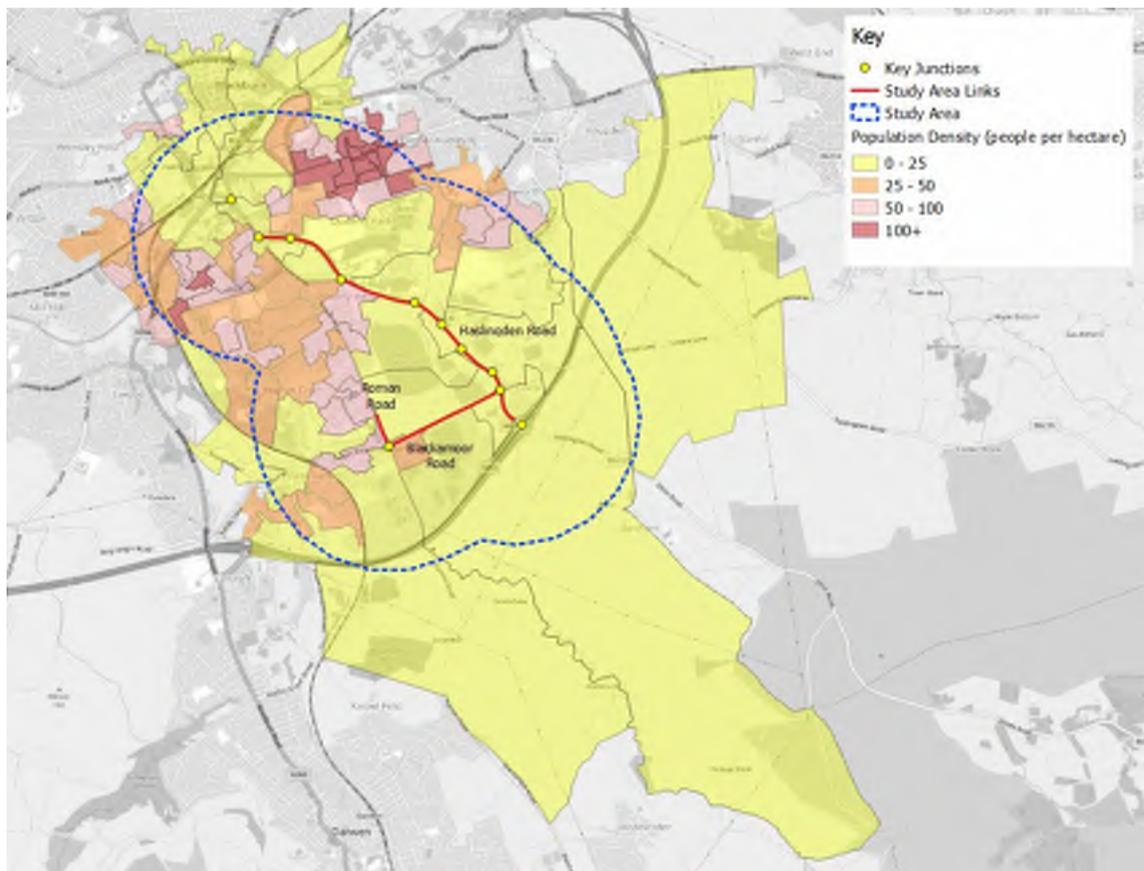


2.3 Study Area Demographics

2.3.1 Study Area Population Density

The Relative population density across Output Area (OAs) within the study area can be found in Figure 2-8 below. OAs with the greatest density generally correlate with areas with a high frequency and high postcode dwelling density identified in Figure 2-2. As is shown, Population density is highest in OAs towards the north and west of the study area, likely to indicate more residential areas to the east of Roman Road and to the north of Haslingden Road closer to Blackburn town centre. Areas to the south and east of the study area correspond to area with non-residential land uses, as identified in Figure 2-4, and more rural areas to the south of the M65.

Figure 2-8 - Study Area Relative Population Density

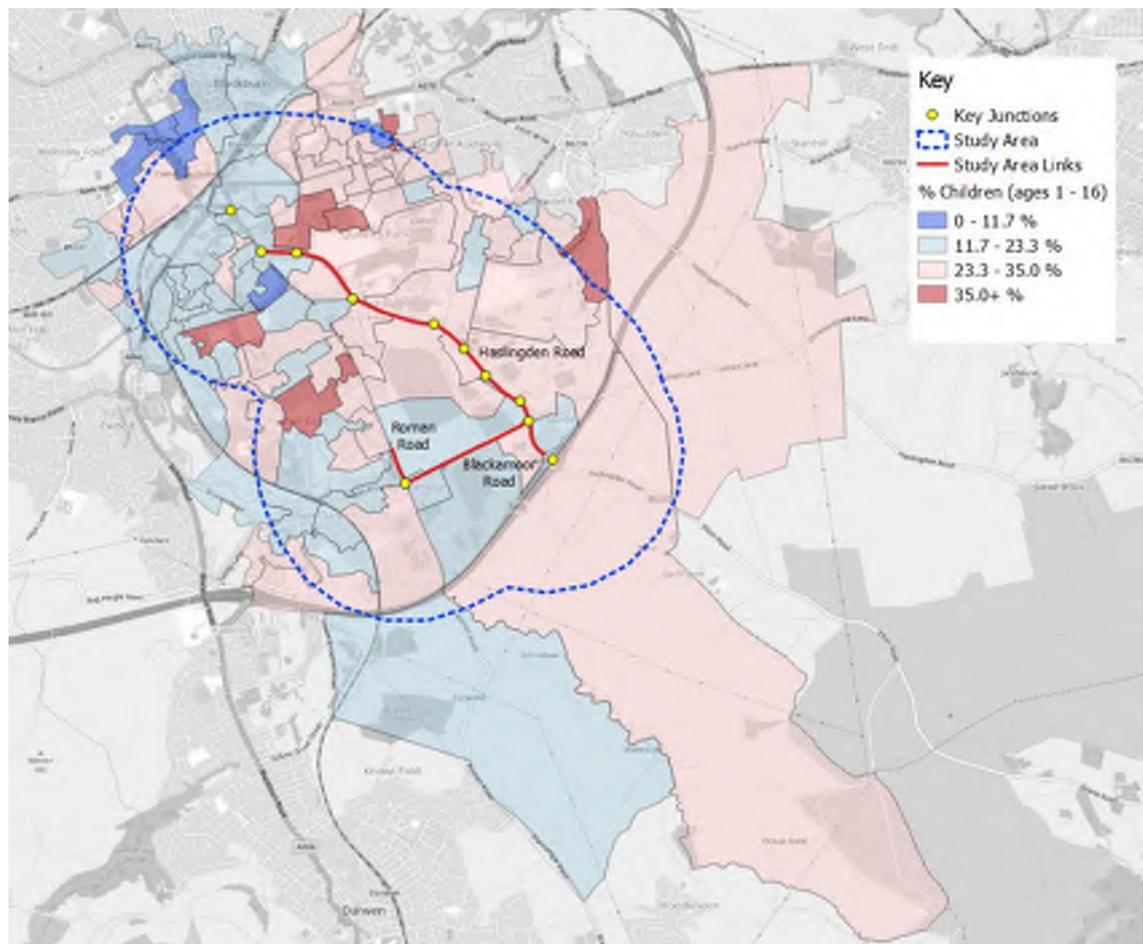


2.3.2 Study Area Age Distribution

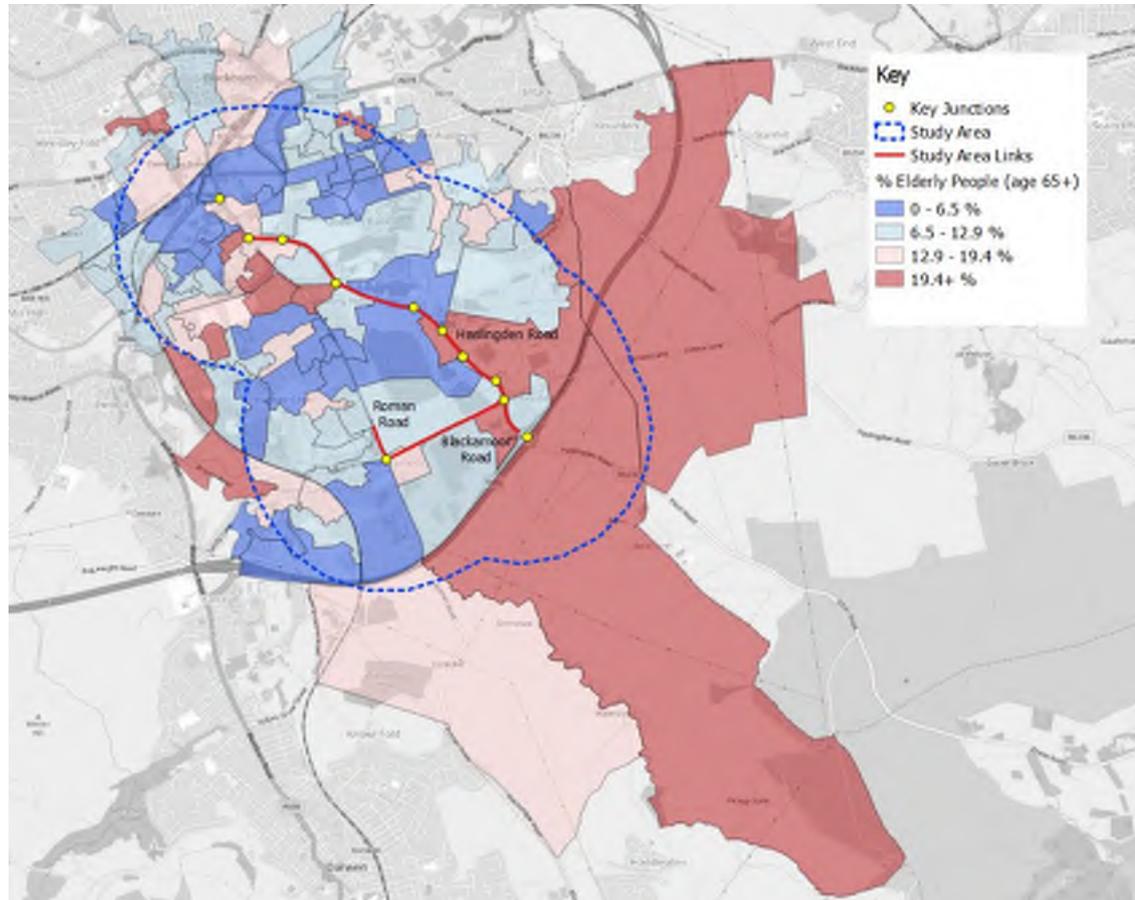
The proportion of the total BwD population aged 1 – 16 is 23.3%, compared to a national average of 18.9%. Figure 2-9 below indicates the relative portion of children (ages 1 – 16) across OAs within the study area above (red) and below (blue) the BwD average. This indicates

relatively little trend in the relative proportion of children across the study area. OAs with a below average proportion of children aged under 16 can be generally be found towards the north and west of the study area towards Blackburn town centre. Area with a greater proportion of children above the BwD average can be found towards the east of the study area east of Haslingden Road.

Figure 2-9 - Study Area Distribution of Children (Ages 1 – 16)



The proportion of the total BwD population aged 65 and over is 12.9%, compared to a national average of 16.3%. Figure 2-10 below indicates the relative portion of elderly people (aged 65+) across OAs within the study area above (red) and below (blue) the BwD average. Similar to the distribution of children across the study area, there is generally a mixed distribution of below and above average proportions of elderly people across the study area. The majority of OAs are shown to be below both the BwD and national average proportion of elderly people, indicating relatively few elderly residents live within the potential impact area of the scheme.

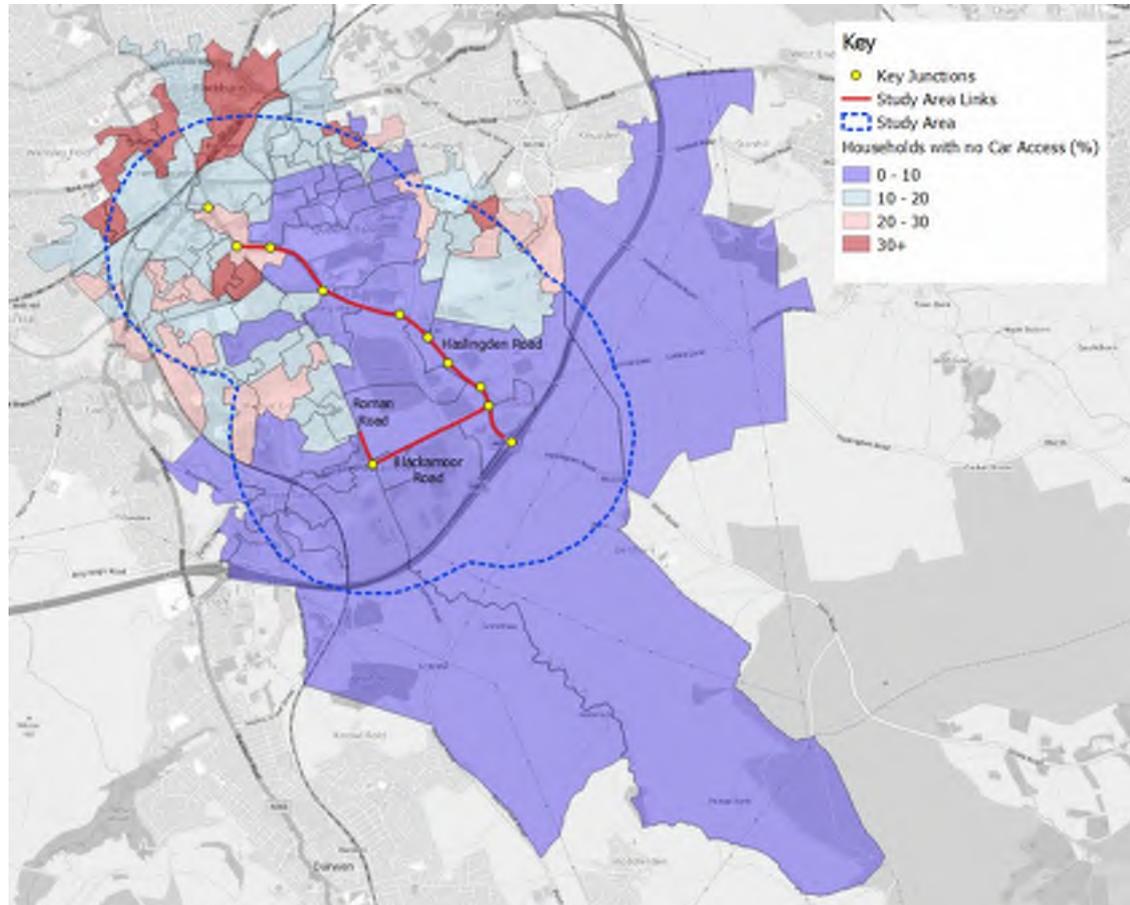
Figure 2-10 - Study Area Distribution of Elderly People (Aged 65 and over)

2.3.3 Levels of Car Ownership

The variation in relative car ownership across the study area is defined in Figure 2-11 below. This highlights the relative proportion of the population across OAs within the study area with no car ownership recorded at a given household.

A contrasting spatial distribution is shown across the study area, with a lower proportion of households with no car access to the south and east. These generally correlate with OAs shown to have a lower population density in Figure 2-8 and are generally located in more rural areas away from population centres, where alternative transport modes to private car are less readily available.

The relative proportion of households with no car ownership increases towards the north of the study area across Blackburn town centre, where dwellings are less likely to have off-street parking available and travel by alternative modes is more feasible.

Figure 2-11 - Study Area Distribution of Households with no Car Access (%)

2.4 Index of Multiple Deprivation Data

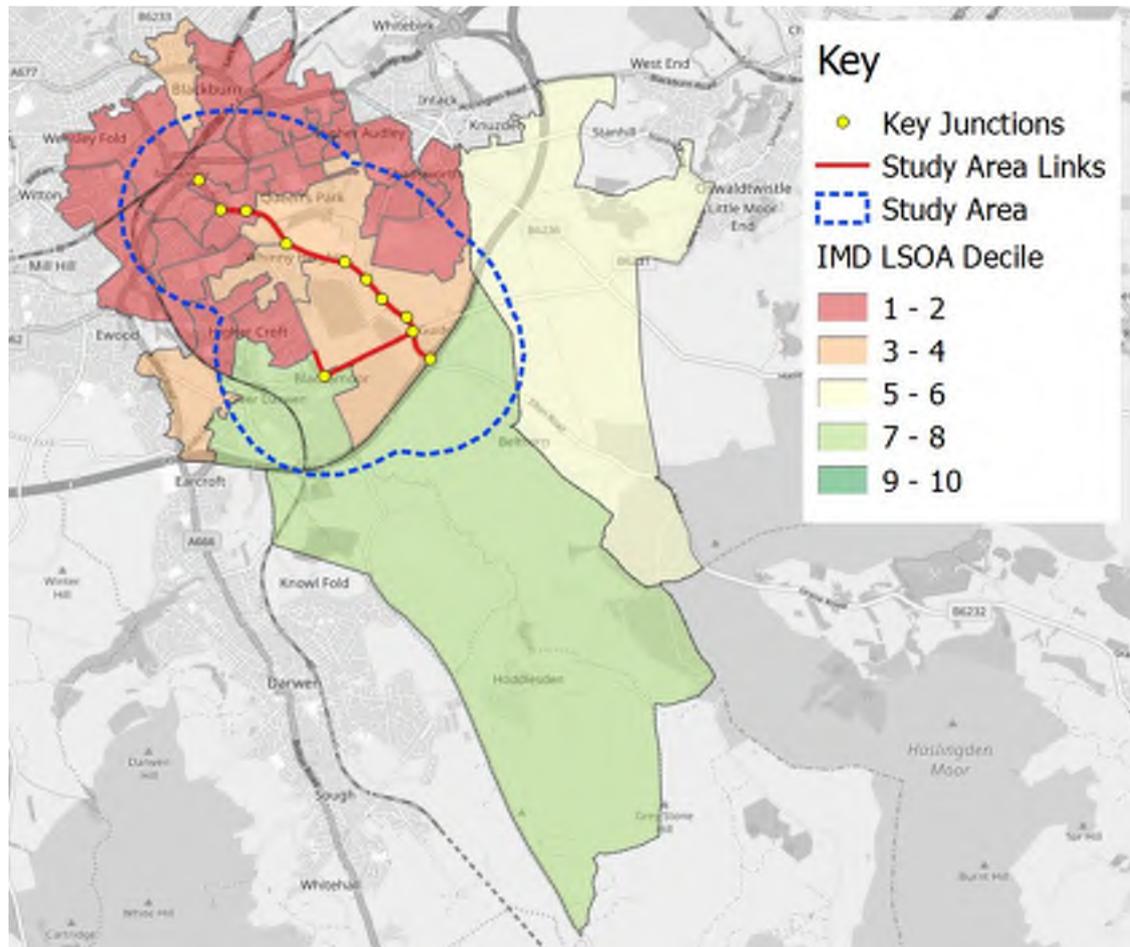
Levels of economic deprivation across the study area have been estimated using 2015 Index of Multiple Deprivation (IMD) data obtained from the Department for Communities and Local Government (DCLG). This data is available at Lower Super Output Area (LSOA) level across England. LSOAs are ranked from 1 (most deprived) to 32,844 (least deprived). IMD data is also split into deciles (1 to 10), representing the most deprived 10%, 20% or 30% (and so on) of areas across England.

Across the study area, LSOAs within the study area boundary are identified using a similar methodology used to identify OAs in Figure 1-1. A total of 26 LSOAs are identified within the study area. Figure 2-12 highlights the relative distribution of IMD deciles (1 to 10) to indicate the levels of deprivation within the study area as compared to other areas nationally.

As is shown, the majority of study area LSOAs are shown to be classified in the lowest two deciles, with 18 out of 26 LSOAs considered to be within the most 10% and 20% deprived nationally. These are clustered towards the north of the study area towards Blackburn town

centre. None of the LSOAs within the study area classified in the highest two deciles (9 and 10), considered the 20% least deprived areas nationally. Overall, this indicates a relatively high level of social and economic deprivation across south east Blackburn within the study area boundary.

Figure 2-12 - Study Area Index of Multiple Deprivation LSOA Deciles



3. Highway Network Conditions Review

3.1 Introduction

This chapter will review baseline traffic and highway conditions along key highway routes across south east Blackburn. This will review traffic flow data from a number of sources, as well as assess the relative causes and drivers of congestion during peak travel time periods.

3.2 Highway Network Review

3.2.1 *The A6077 Haslingden Road and the M65 Junction 5*

The A6077 Haslingden Road forms a main arterial route across south east Blackburn connecting the town centre to the M65 motorway. The A6077 starts at a gyratory in the Townsmoor area of Blackburn town centre, where it meets the A666 and A6078. It heads south east away from the town centre providing access to RBH and a number of industrial estates (see Figure 2-4) before terminating at the M65 Junction 5. Traffic flows along the route have steadily increased since the M65 opened in 1997.

The A6077 Haslingden Road and junctions approaching the M65 Junction 5 have been intermittently upgraded and improved over the years as traffic flows have increased. Junctions along Haslingden Road between Old Bank Lane and Lions Drive were both added and upgraded to roundabout junctions in 2004 to facilitate development at RBH and across Shadsworth Industrial Estate. Over the most recent 10 years, a number of highway interventions and minor schemes have been implemented in the area to improve traffic flows and junction efficiency.

Between 2010 and 2011, Haslingden Road between its junction with Lions Drive and the B6231 School Lane was widened from S2 to S4 carriageway to relieve congestion between the two then roundabout junctions. Improvements were also made to the M65 junction 5, with the addition of part-time signals to a number of approach arms and widening of the M65 southbound off-slip, as well as widening of the Haslingden Road exit arm from the roundabout to provide two exit lanes towards Blackburn.

Between 2014 and 2016, further improvements were made to Haslingden Road and its junction with the B6231 School Lane (Guide Junction), funded through the Local Authority Pinch Point Fund. This converted the Guide Junction from a roundabout to a full signalised junction with give-way left turn movements, as well as improvements to Haslingden Road between Guide Junction and the M65 Junction 5 from S3 to S4 Carriageway, providing two lanes in both directions.

More recently, The M65 Junction 5 has been improved as part of the National Pinch Point Fund initiative. This involved upgrading part time traffic signal provision to full signalisation on all approach arms, aimed at improving traffic management through the junction during peak periods. Following the delivery of this scheme, a political decision was taken to deactivate the signals on the B6232 approach, as these were deemed to provide no benefit. Despite this, significant queuing can still be observed along this approach during peak periods.

Improvements to undertake widen the circulatory to provide 3 lanes were also included within the original NPPF proposals and associated traffic modelling. At the time geological surveys could not be undertaken to enable technical approval of the widening works and as such these were not undertaken which impacted on the effectiveness of the full signalisation scheme.

3.2.2 *Roman Road/ B6231 Blackamoor Road*

The Roman Road/ B6231 Blackamoor Road junction forms a four-arm signalised junction to the south west of Haslingden Road. Each approach arm has a single lane with the exception of the Roman Road approach from the south, which has two lanes.

The junction is constrained by the proximity of nearby properties, creating tight vehicle turning radii through the junction, an average cross section of 8.0m and a carriageway width of around 6.0 to 6.5m. There are no pedestrian facilities other than dropped kerbs, despite the residential nature of the junction and nearby amenities, with below standard footway widths below 1.5m around the junction. Pedestrians are currently forced to cross the junction during inter-green signal periods at busy times.

The junction forms a key link between the M65 at junction 5 and the industrial developments on Roman Road, with a high proportion of HGVs traversing the junction. Restrictive geometries adversely impact manoeuvrability at the junction, with larger vehicles struggling to meet the required turning radii. In 2016, stop lines were moved further back from the junction to allow greater turning space for HGVs. Improved lane markings and extended lane lengths on the Roman Road approach from the south were also added.

The junction is also part of an Air Quality Management Area (AQMA), with consideration of the impact on air quality needed for any proposed intervention at the junction and each of its approach arms.

3.3 Traffic Data Review

Despite the historical highway schemes and interventions described above over recent years, high levels of congestion, queueing and traffic delay are known to occur at along both Haslingden Road and at the Roman Road/ B6231 Blackamoor Road junction during peak travel

period. This section reviews recent traffic count and flow data from across the study area to establish baseline traffic flow conditions.

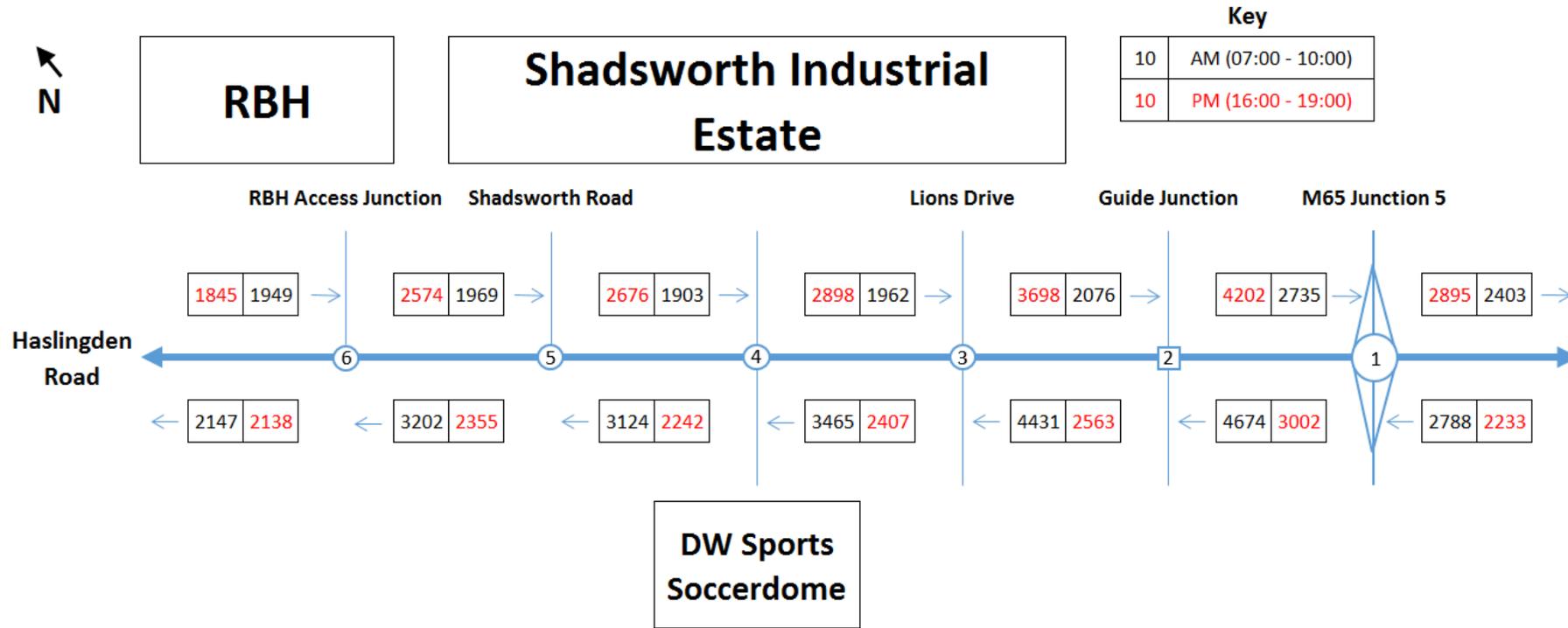
3.3.1 *Classified Count Data – A6077 Haslingden Road*

A manual classified count (MCC) was undertaken at a number of junctions along Haslingden Road in May 2017 for AM (07:00 – 10:00) and PM (16:00 – 19:00) time periods, undertaken in support of a local planning application. A total of six junctions along Haslingden Road between the M65 junction 5 to the south and the RBH access junction to the north were surveyed, these are detailed as follows:

- Junction 1 - M65 Junction 5;
- Junction 2 - The Haslingden Road / Blackamoor Road / School Lane (B6321) Junction;
- Junction 3 - The Haslingden Road / Lions Drive Roundabout (Beehive Junction);
- Junction 4 - The Haslingden Road / DW Sports Soccerdome Access Junction;
- Junction 5 - The Haslingden Road / Shadsworth Road Junction; and
- Junction 6 - The Haslingden Road / Royal Blackburn Hospital Access Junction.

A review of MCC data at these junctions highlights the relative traffic flow patterns through junctions along Haslingden Road. A clear tidal flow movement through Haslingden Road junctions between AM and PM peak travel periods can be identified. Dominant traffic movements flow towards Blackburn town centre, RBH and Shadsworth Business Park during the AM peak, with a reversal during the PM peak period. This tidal flow pattern is shown in Figure 3-1 overleaf, which highlights total three-hour vehicle movements across both AM and PM periods along the Haslingden Road corridor.

Figure 3-1 - 2017 Baseline MCC Haslingden Road Tidal Flow Pattern



3.3.2 *Journey Time Data Review*

Traffic journey time and speed data across a number of key links across the study area has been obtained from TomTom for the month of April 2019. These Routes are detailed as follows:

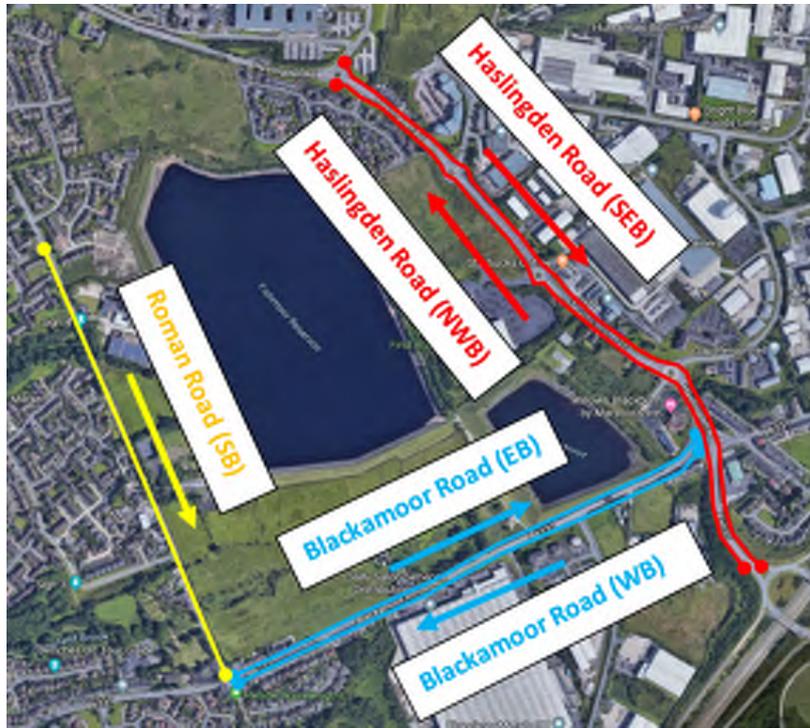
- **The A6077 Haslingden Road:** Between its junction with Grimshaw Park to the north and the M65 Junction 5 to the south;
- **The B6231 Blackamoor Road:** Between its junction with Haslingden Road to the east and its junction with Roman Road to the west; and
- **Roman Road:** Between its junction with Grimshaw Park to the north and its junction with Blackamoor Road to the south.

Data has been obtained for both directions along specified routes, providing journey time and speed data for all passenger vehicles traveling along the defined route with an active TomTom device. Data is averaged across a three-day (Tuesday - Thursday) period, providing weekday average speeds for various intra-day time intervals.

Analysis of TomTom data has defined five journey time routes along key link sections across south east Blackburn. These are shown in Figure 3-2 overleaf and summarised as follows:

- **Blackamoor Road Eastbound** (between its junctions with Roman Road and the A6077 Haslingden Road);
- **Blackamoor Road Westbound** (between its junctions with the A6077 Haslingden Road and Roman Road);
- **Roman Road Southbound** (between its junctions with Fishmoor Drive and Blackamoor Road);
- **A6077 Haslingden Road South East Bound** (between its junction with RBH and the M65 Junction 5);
- **A6077 Haslingden Road North West Bound** (between the exit from the M65 Junction 5 and its junction with RBH);

Figure 3-2 - TomTom Journey Time Routes



Along the routes defined above, the relative travel time along each of the routes is defined in Table 3-1 overleaf. The relative change from the defined Inter-peak (IP) period shows a significant increase in travel times along all routes during AM and PM peak travel periods, particularly along Haslingden Road in both directions and Roman Road Southbound.

Table 3-1: TomTom Journey Time Data Summary

| Travel Time (s) | | | | | | | | |
|---------------------------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Route | Distance (m) | 0700-0800 | 0800-0900 | 0900-1000 | 1000-1600 | 1600-1700 | 1700-1800 | 1800-1900 |
| Blackamoor Road (EB) | 952 | 132 | 173 | 106 | 112 | 142 | 153 | 90 |
| Blackamoor Road (WB) | 902 | 121 | 150 | 103 | 107 | 169 | 221 | 110 |
| Roman Road (SB) | 869 | 134 | 193 | 97 | 106 | 318 | 433 | 116 |
| Haslingden Road (SEB) | 1236 | 168 | 184 | 146 | 143 | 282 | 302 | 162 |
| Haslingden Road (NWB) | 1242 | 172 | 173 | 139 | 135 | 168 | 180 | 152 |
| Travel Time change from IP period (s) | | | | | | | | |
| Route | Distance (m) | 0700-0800 | 0800-0900 | 0900-1000 | 1000-1600 | 1600-1700 | 1700-1800 | 1800-1900 |
| Blackamoor Road (EB) | 952 | 20 | 60 | -7 | 0 | 30 | 41 | -22 |
| Blackamoor Road (WB) | 902 | 14 | 43 | -4 | 0 | 62 | 114 | 3 |
| Roman Road (SB) | 869 | 28 | 87 | -8 | 0 | 213 | 327 | 10 |
| Haslingden Road (SEB) | 1236 | 24 | 41 | 2 | 0 | 138 | 158 | 18 |
| Haslingden Road (NWB) | 1242 | 37 | 38 | 4 | 0 | 33 | 45 | 18 |

3.4 Highway Capacity and Congestion Issues

3.4.1 Link Stress

In order to consider the requirement for link improvements along Haslingden Road and across south east Blackburn, an assessment of link capacity has been undertaken based on the standards set out in TA 79/99 DMRB Vol 5 Sec 1, *Traffic Capacity of Urban Roads*. This Advice Note gives the maximum hourly vehicle capacity for various types of urban trunk road and includes corrections for traffic compositions above 15% HGVs. TA 79/99 states that the capacities listed may be used as a guide to the capacities of existing urban roads, and for assessing the likely effect on capacity of proposed changes to specific road features including carriageway width.

An assessment of the road type has been made based on the guidance contained within TA 79/99. The capacities listed assume a 60/40 directional split in traffic flows. Table 3-2 overleaf details the carriageway standard for a number of link sections along Haslingden Road, as well as the theoretical link capacities under baseline traffic demands from the most recent MCC available. The analysis uses the highest demand in either peak to present the most robust assessment possible. Link sections are defined between the following Junctions:

- Junction 1 - M65 Junction 5;
- Junction 2 - The Haslingden Road / Blackamoor Road / School Lane (B6321) Junction (Guide Junction);
- Junction 3 - The Haslingden Road / Lions Drive Roundabout (Beehive Junction);

- Junction 4 - The Haslingden Road / DW Sports Soccerdome Access Junction;
- Junction 5 - The Haslingden Road / Shadsworth Road Junction;
- Junction 6 - The Haslingden Road / Royal Blackburn Hospital Access Junction; and
- Junction 7 - The Haslingden Road / Old Bank Lane Junction.

Link sections built to an S4 carriageway standard are highlighted in green. Table 3-2 highlights a number of link sections along Haslingden Road between the Guide Junction (Junction 2) and the Shadsworth Road Junction (Junction 5) are either approaching or are already over capacity in the 2017 Baseline. This indicates that link sections are providing constraint on to traffic flow, exacerbating congestion issues and increasing delay for vehicle users.

Table 3-2 - Haslingden Road Link Stress

| Link Section | Link Standard (TA 79/99) | Theoretical Capacity (veh/hr) | Busiest One-Way Hourly Flow (veh/hr) | Relative Capacity (%) |
|--|--|-------------------------------|--------------------------------------|-----------------------|
| M65 Junction 5 (J1) - Haslingden Road (J2) | UAP1 - Carriageway width considered 13.5m single carriageway | 2800 | 1883 | 67% |
| Haslingden Road J2 – J3 | UAP1 - Carriageway width considered 14.6m single carriageway | 3050 | 1729 | 57% |
| Haslingden Road J3 – J4 | UPA3 - Carriageway width considered 7.3m | 1300 | 1316 | 101% |
| Haslingden Road J4 – J5 | UPA3 - Carriageway width considered 7.3m | 1300 | 1199 | 92% |
| Haslingden Road J5 – J6 | UPA3 - Carriageway width considered 7.3m | 1300 | 1266 | 97% |
| Haslingden Road J6 – J7 | UPA3 - Carriageway width considered 7.3m | 1300 | 852 | 66% |

Traffic flows are forecast to increase along the Haslingden Road in future years, with strong housing growth and economic development aspirations across south east Blackburn (see

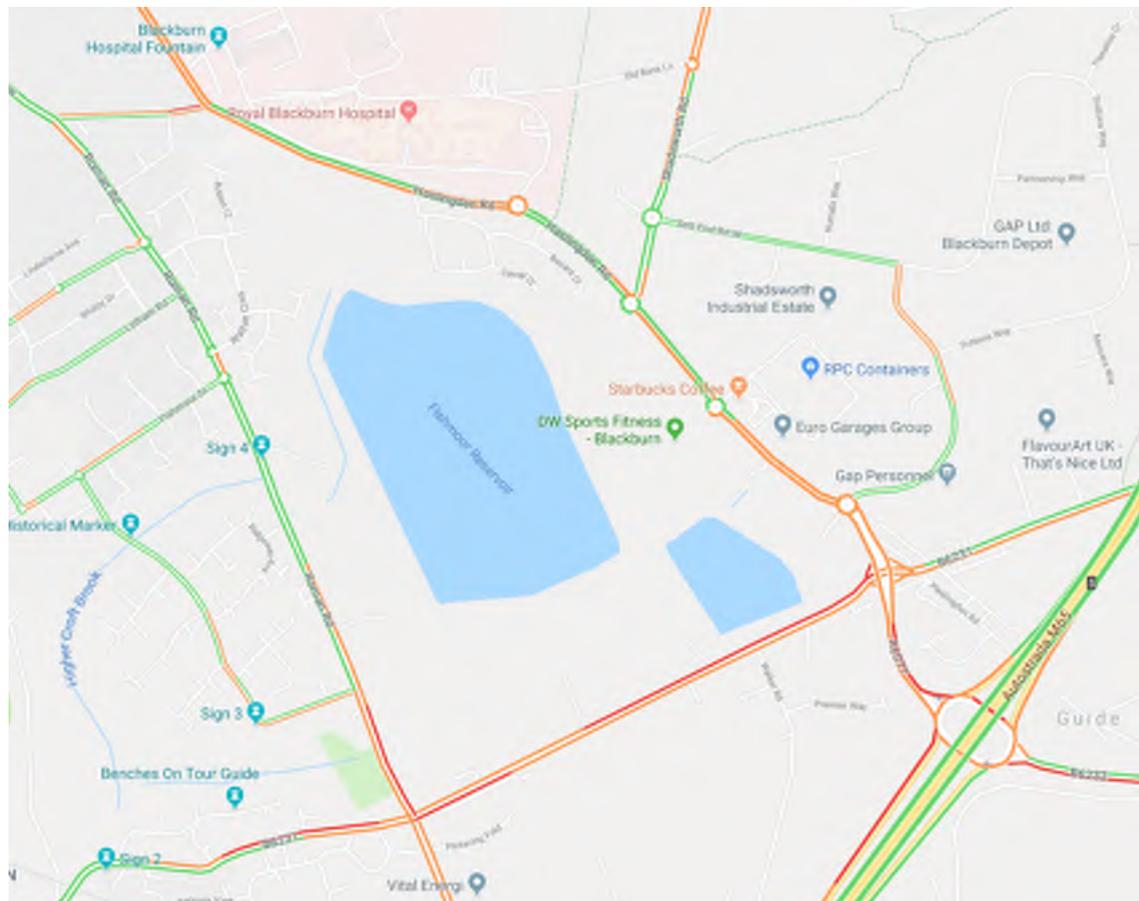
Section 4.3). To provide an initial future forecast of traffic flow conditions, TEMPro growth factors for the BwD local authority area have been applied to the link flows defined in Table 3-2 across a number of future years. The relative future year forecast flow along each link section is compared to its theoretical capacity to identify the relative residual capacity in future years, listed in Table 3-3 overleaf. Link sections built to an S4 carriageway standard are highlighted in green. This indicates that all link sections between the Guide Junction (Junction 2) and the Shadsworth Road Junction (Junction 5) are forecast to be at or above capacity by 2026.

Table 3-3 - Haslingden Road Future Forecast Link Stress

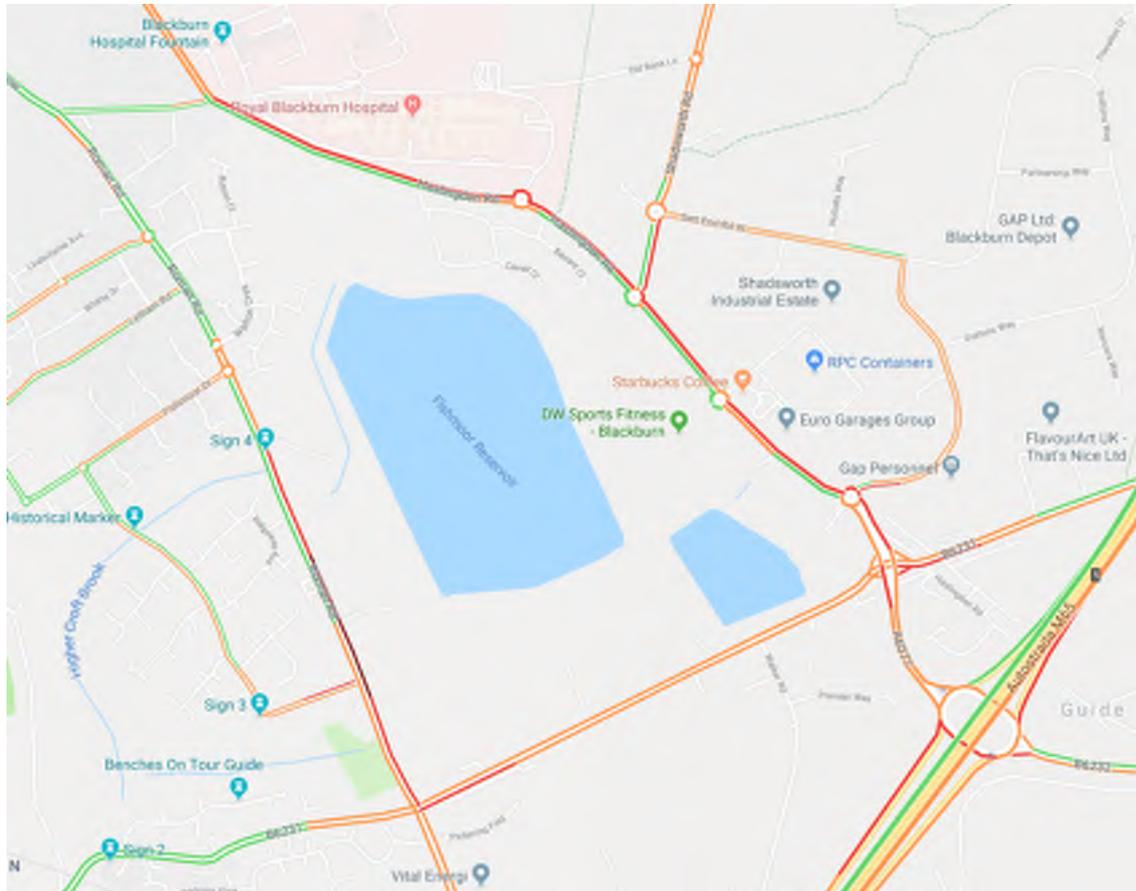
| Link Section | Future Forecast Relative Capacity (%) | | | | |
|--|---------------------------------------|------|------|------|------|
| | 2017 | 2021 | 2026 | 2031 | 2036 |
| M65 Junction 5 (J1) - Haslingden Road (J2) | 67% | 70% | 73% | 75% | 78% |
| Haslingden Road J2 – J3 | 57% | 59% | 61% | 63% | 65% |
| Haslingden Road J3 – J4 | 101% | 106% | 110% | 113% | 117% |
| Haslingden Road J4 – J5 | 92% | 96% | 100% | 103% | 106% |
| Haslingden Road J5 – J6 | 97% | 102% | 105% | 109% | 112% |
| Haslingden Road J6 – J7 | 66% | 68% | 71% | 73% | 76% |

3.4.2 Typical Traffic Congestion

Typical traffic congestion data made available online via Google has been reviewed across the south east Blackburn study area. This gives an estimate of the general level of traffic and delay along specific link sections for a given time period. Figure 3-3 (AM peak) and Figure 3-4 (PM peak) indicate similar traffic flow and congestion patterns identified in Section 3.3. For the AM peak, relative conditions at 08:30 highlight slow moving traffic and congestion along Blackmoor Road on the approach to both the Guide Junction and around the M65 Junction 5.

Figure 3-3 - Typical AM (08:30) South East Blackburn Traffic Congestion

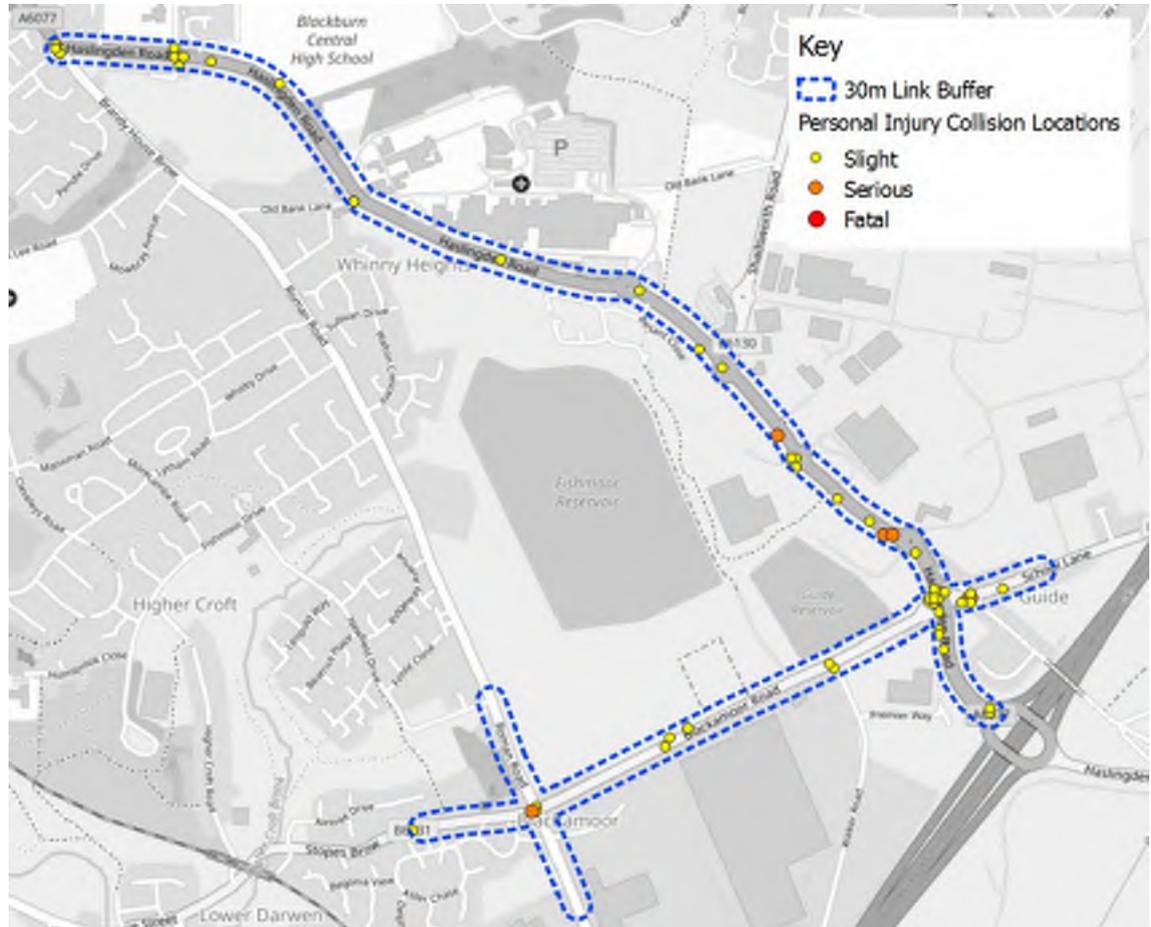
In relation to the PM peak highlighted in Figure 3-4 the tidal flow is clearly defined along Haslingden Road, with significant congestion and slow-moving traffic extending back from the Blackamoor Road Junction past RBH and beyond. This is likely to be generated by people traveling from place of work destinations along Haslingden Road, including RBH and Shadsworth Industrial Estate towards the M65. Significant congestion and delay is also shown to be occurring along from the Roman Road southbound approach to its junction with the B6231 Blackamoor Road, likely generated by high traffic volumes and delay at the signalised junction.

Figure 3-4 - Typical PM (17:30) South East Blackburn Traffic Congestion

3.5 Personal Injury Collision Data Review

Personal Injury Collision (PIC) Data has been obtained and analysed from DfT Road Safety Data utilising the STATS19 dataset. This dataset is updated biannually by the DfT drawn from police traffic collision records. Data has been assessed across the most recent complete five-year period from 2013 to 2017. Across the main study area, collisions have been considered around key study area links and junctions along Haslingden Road and around the Roman Road/ Blackamoor Road Junction. A 30m buffer has been defined around these link sections to detect collisions occurring along specified links, which is highlighted in blue in Figure 3-5 overleaf. As is shown, no fatal PICs are shown to have occurred within the defined area of interest within the 2013 to 2017 time period. Across the area a total of 64 collisions occurred within the five-year time period, 58 of which were considered 'Slight' and only six considered 'Serious'.

Figure 3-5 - Personal Injury Collision Locations



Collisions tend to be most densely clustered towards the southern extent of Haslingden Road around its junction with Blackmoor Road (Guide Junction), as well as on link sections and junctions along Haslingden Road between Lions Drive and Shadsworth Road. PIC data broken down by severity and year of occurrence is detailed in Table 3-4. This indicates a relatively consistent collision profile across the five-year period, peaking in 2015 before declining again in 2016 and 2017.

Table 3-4 - Personal Injury Collisions by Year

| Year | Slight | Serious | Fatal | Total |
|-------------|---------------|----------------|--------------|--------------|
| 2013 | 9 | 2 | 0 | 11 |
| 2014 | 17 | 0 | 0 | 17 |
| 2015 | 15 | 1 | 0 | 16 |
| 2016 | 8 | 1 | 0 | 9 |
| 2017 | 9 | 2 | 0 | 11 |
| Total | 58 | 6 | 0 | 64 |

In relation to collisions around the Guide Junction, a total of 18 collisions occurred at or within 30m of the junction over the five-year period between 2013 and 2017. It is noted that this junction was upgraded from a roundabout junction to a signalised junction opening in January 2016, with significant construction work occurring during 2015. Seven of the 18 collisions occurring at Guide junction occurred in 2015, with an increased collision rate likely to have occurred during construction of the upgraded junction.

4. Local Planning Policy and Development Aspirations

4.1 Introduction

This chapter will establish the local planning and development policy context of south east Blackburn, providing a summary of local and regional planning and transport policy documents. This will set the baseline highway and traffic conditions detailed above in the context of the relevant local transport objectives. This chapter will also establish the proposed growth and development aspirations across south east Blackburn, identifying committed, statutory and potential future development sites.

4.2 Local Planning and Development Policy

A number of regional and local planning and development policy documents relevant to the south east Blackburn study area are reviewed below in relation to south east Blackburn and proposed future growth ambitions for the area.

4.2.1 *East Lancashire Highways and Transport Masterplan*

The East Lancashire Highways & Transport Masterplan was adopted in February 2014 and aims to align economic and transport objectives across East Lancashire. The Masterplan is designed around five core principles, all of which would be supported either directly or indirectly by improving highway and traffic conditions across the south east Blackburn study area. These five principles are:

- Support the economic development of East Lancashire and of the country as a whole;
- Work to address deprivation;
- Promote community resilience;
- Increase healthy behaviour; and
- Reduce our carbon footprint.

Previous highway improvements schemes detailed above in Section 3.2 along Haslingden Road and across south east Blackburn are identified in the Masterplan, including the *Haslingden Road Corridor Improvements* funded through the Local Authority Pinch Point Programme. The Masterplan also includes proposals for the *Fishmoor Link Road*, which forms falls within the remit of the current scheme, aimed at reducing congestion and improving access to local business parks.

4.2.2 *Blackburn with Darwen Local Plan*

The Blackburn with Darwen Local Plan is broken down into two parts. The first details the BwD Core Strategy document (adopted in 2011) and is the borough's overarching planning document. The Core Strategy is one of targeted growth, directing new development in the urban areas of Blackburn and Darwen. However, there is a significant risk that new development which is intended to boost local and regional economies could be stifled if there is insufficient infrastructure to support it.

The Local Plan Part 2 was adopted in December 2015 and aims to shape the future development of Blackburn with Darwen in order to create jobs, attract and retain a skilled labour force, and strengthen the Borough's competitive position in the North West. It identifies strategic land allocations which are essential to delivering these objectives; and sets out development management policies which will be used in assessing planning applications.

4.2.3 *Blackburn with Darwen Local Transport Plan 3 (2011-2021)*

Blackburn with Darwen Borough Council's Third Local Transport Plan (LTP3) is a long-term strategic document covering the period 2011-2021 and is the key mechanism for articulating and delivering transport policy at a local level. The plan highlights a number of key issues within the borough to be addressed over the lifespan of the plan, including the following:

- The borough's young population and its relationship to the growth of car use and road accidents;
- Peak time congestion and traffic levels;
- Poor localised air quality and intrusive noise;
- The effects of long-standing deprivation;
- The ongoing requirement to generate jobs, improve wage and skill levels; and
- The need to create sustainable communities through economic restructuring and regeneration.

A number of these borough wide issues have been identified in Chapters 2 and 3 within the current study area across south east Blackburn. In addressing the key issues highlighted above, the document also identifies a number of Transport goals, objectives and priorities, which include the following:

- **Goal 1: Support the economy** – Including objectives to:
 - o Maintain and improve the condition and attractiveness of the transport infrastructure;
 - o Reduce congestion and delay;

- Ensure good accessibility and effective travel plans for new development;
 - Develop transport access to employment; and
 - Work with partners to develop economic growth and bring forward new development.
- **Goal 2: Tackle climate change** – Including objectives to:
 - Develop and maintain an efficient and sustainable transport system; and
 - Promote the use of more efficient vehicles and vehicle operation;
- **Goal 3: Increase safety and security** – Including objectives to:
 - Implement measures across the highway network to reduce the number and severity of casualties;
 - Change the behaviour of road users through education, engineering and enforcement to reduce casualties; and
 - Implement projects to reduce child casualties and casualties in areas of deprivation.
- **Goal 4: Promote equality of opportunity** – Including objectives to:
 - Improve access to employment opportunities; and
 - Work with the health sector to make sure that people can connect with the health provision they need.
- **Goal 5: Promote quality of life, health and the natural environment** – Including objectives to:
 - Maintain and improve infrastructure to promote better quality of life and sustainable and active travel;
 - Manage traffic to reduce its impact, including noise and air pollution, on people's wellbeing; and
 - Manage traffic to reduce its impact on cohesion and social inclusion within the community.

4.3 Proposed Development Sites and Local Plan Site Allocations

Further to the existing traffic and congestion issues along key route links within the study area, various committed and proposed development sites have been identified along the Haslingden Road corridor and more widely across the study area. This includes a number of strategic housing site allocations, as well as employment sites across existing the existing industrial estate areas identified in Figure 2-4.

A number of committed developments have been identified across study area. A list of developments considered committed can be found in Table 4-1 below. As of May 2019, these developments are either currently under construction, in a pre-construction phase or have been recently granted planning permission.

Table 4-1 - Identified Committed Developments

| Site ID | LP Ref. | Planning App | Site Name | Site Type | Number of Homes | Employment Area |
|---------|---------|--------------|-------------------------------------|-----------------------------|-----------------|------------------------|
| A | 13/9 | 10/19/0555 | Premier Way (Walker) Business Park | Employment | - | 2.6 ha |
| B | - | 10/18/0800 | Roman Road (Nr Davyfield Site) | Employment | - | 2400 (m ²) |
| C | - | 10/18/0075 | School Lane | Housing | 45 | - |
| D | 13/7 | 10/16/1303 | Shadsworth Plot C | Employment | - | 1.9 ha |
| E | - | 10/09/0414 | Haslingden Road (Brandy House) Site | Housing | 103 | - |
| F | - | 10/17/1083 | Old Bank Lane (New RBH) Car Park | Other (Redistribution Only) | - | - |
| G | 13/8 | 10/18/0871 | EG Waterside (Parcel A) | Employment | - | 4.7 ha |
| H | - | 10/16/0838 | Beechwood Garden Centre Site | Housing | 13 | - |
| I | - | 10/07/0766 | Crossfield Street | Housing | 27 | - |

A number of potential future developments have been identified across the immediate scheme impact area. A list of developments considered committed can be found in Table 4-2 overleaf.

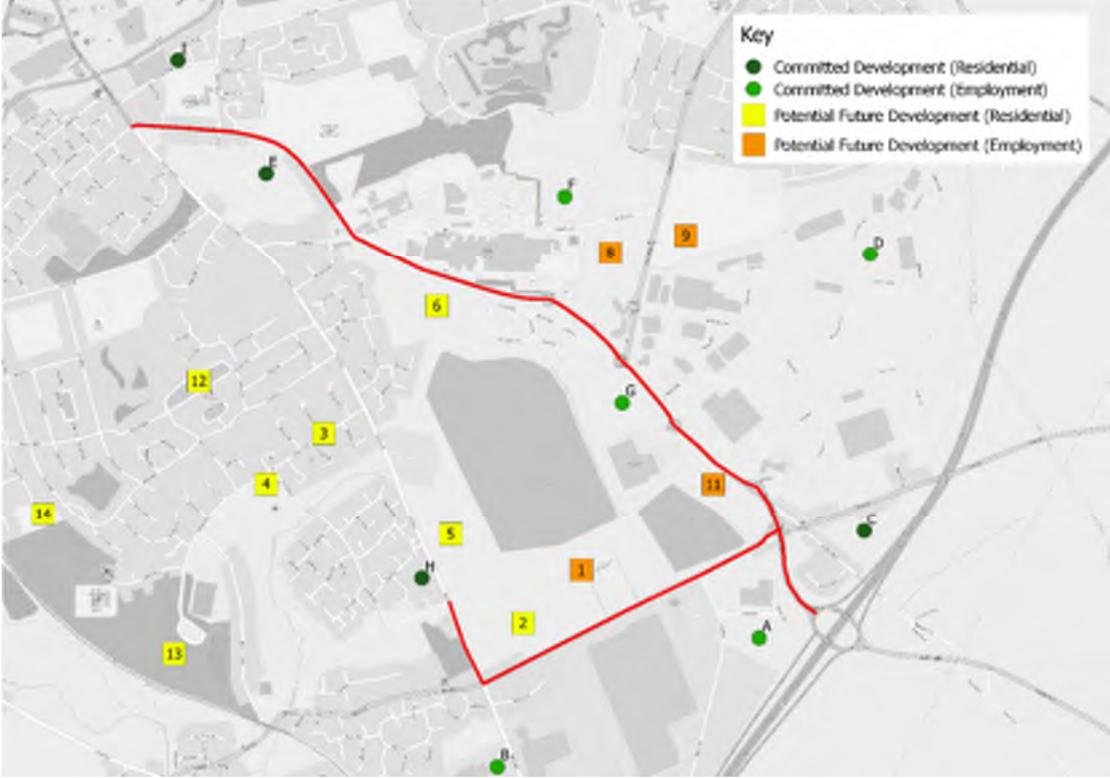
Table 4-2: Potential Future Development Sites

| Site ID | LP Ref. | Site Name | Site Type | Number of Homes | Employment Area |
|---------|-------------|---|------------|-----------------|-----------------|
| 1 | 16/8 | Blackamoor Road Development Site | Employment | - | 3.7 ha |
| 2 | 16/8 | Blackamoor Road Development Site | Housing | 70 | - |
| 3 | 28/6 | Fishmoor Drive (Parcel 1) - Former THL Land | Housing | 201 | - |
| 4 | 28/6 | Fishmoor Drive (Parcel 2) - Former T2000 | Housing | 65 | - |
| 5 | 28/6 + 16/8 | Fishmoor Drive (Parcel 3) Newfield School | Housing | 101 | - |
| 6 | 16/7 | Haslingden Road (Fishmoor Reservoir) Site | Housing | 140 | - |
| 7 | 16/11 | Johnson Road | Housing | 70 | - |
| 8 | 13/6 | Medipark Site | Employment | - | 3.8 ha |
| 9 | - | TIBS / Fmr Blakewater College (Employment) | Employment | - | 4.0 ha |
| 11 | 13/8 | Waterside Employment Site (Parcel B) | Employment | - | 1.6 ha |
| 12 | 28/6 | Manxman Road, Highercroft | Housing | 45 | - |
| 13 | 28/6 | Fishmoor Drive (Parcel 4) - South Site | Housing | 200 | - |
| 14 | 28/6 | Fishmoor Drive (Parcel 5) - Longshaw HOP | Housing | 30 | - |

In relation to the Haslingden Road Fishmoor Reservoir Site (Local Plan ref. 16/7), the BwD Local Plan Part 2 States “*Contribution towards improvements to local highways network in the locality*” as a key development consideration for site 16/7. In relation to the Blackamoor Road site (Local Plan ref. 16/8), the BwD Local Plan Part 2 States that “*Necessary for the development to incorporate and contribute towards a new Fishmoor Link Road to improve connectivity between Blackamoor Road and Roman Road*”. These emphasise the requirement for highway interventions across south east Blackburn within the study area in order to ensure the development potential of the area is realised.

The locations of committed and potential future development sites are highlighted in Figure 4-1 overleaf.

Figure 4-1 - Location of Committed and Potential Future Development Sites



5. Sustainable and Active Travel Mode Provision

5.1 Introduction

This section will review the relative provision of sustainable and active travel modes across south east Blackburn, as well as their potential suitability and feasibility for travel to key trip attractors such as RBH and industrial estate areas. Good provision, or lack of, could help to explain the high proportion of trips made by private car across BwD (see Figure 2-7).

5.2 Public Transport Provision

5.2.1 *Travel by National Rail Services*

Blackburn Railway Station lies at the northern extent of the study area towards Blackburn Town centre. The station has benefited from recent significant investment over recent years, as well as a rejuvenated pedestrianised environment and crossing facilities outside the station.

The station hosts regular services to local National Rail Stations as well as Stations in larger population centres across the north of England, including Manchester, Leeds, York and Preston. During weekdays, rail services run to Preston and Darwen approximately every 30 minutes, as well as Accrington and Burnley approximately every 20 minutes. Services to Manchester run approximately every 60 minutes.

Travel to and from key destinations within the study area is highly impractical by rail services. RBH is located approximately 2.3km from the nearest rail station along the most direct pedestrian route. Shadsworth Industrial Estate is located approximately 3.4km away.

5.2.2 *Travel by Bus*

Key routes across the study area are served by a number of bus services connecting to Blackburn town centre and surrounding locations. Along Haslingden Road, a number of bus routes connect key locations such as RBH and the Shadsworth Industrial Estate with Blackburn town centre. The number 22 Valleyline service¹ runs between Clitheroe and Shadsworth, travelling via Blackburn town centre, RBH and the Shadsworth Industrial Estate. This runs with an approximate 30-minute frequency each weekday, with an approximate 12-minute timetabled journey time between RBH and Blackburn town centre. In addition, the number 481 service²

¹ <http://lancashirebus.co.uk/cmsUploads/route/files/valleylinettconcertinaNOV18WEB.pdf>

² <http://www.lancashirebus.co.uk/cmsUploads/route/files/IrwellLinecombinedWEB.pdf>

runs between Blackburn and Bury, also running along Haslingden Road on weekdays and calling at RBH. This operates with an approximate hourly frequency on weekdays with 13-minute timetabled journey time between RBH and Blackburn town centre.

More widely across the study area, no bus services run along the B6231 Blackamoor Road providing connections to industrial estates to the south of the road and residential areas around Guide. Around the Roman Road/ Blackamoor Road junction, no bus services operate on routes to the south and west of the junction through residential areas or around the Roman Road Industrial estate, reducing alternatives to the private car as a transport mode to wider destinations. An infrequent service connects housing areas to the north of the junction along Roman Road to Blackburn town centre.

5.2.3 *RBH Shuttle Bus*

The East Lancashire Hospitals NHS Trust offers a free transport service between RBH, Burnley General Hospital (BGH) and Pendle Community Hospital (PCH) for staff, patients and visitors. On weekdays, this operates between RBH and BGH with an approximate 30-minute frequency in mornings and evenings and a 45-minute frequency during the day. The service operates with an hourly frequency on weekends.

5.3 Active Travel Modes

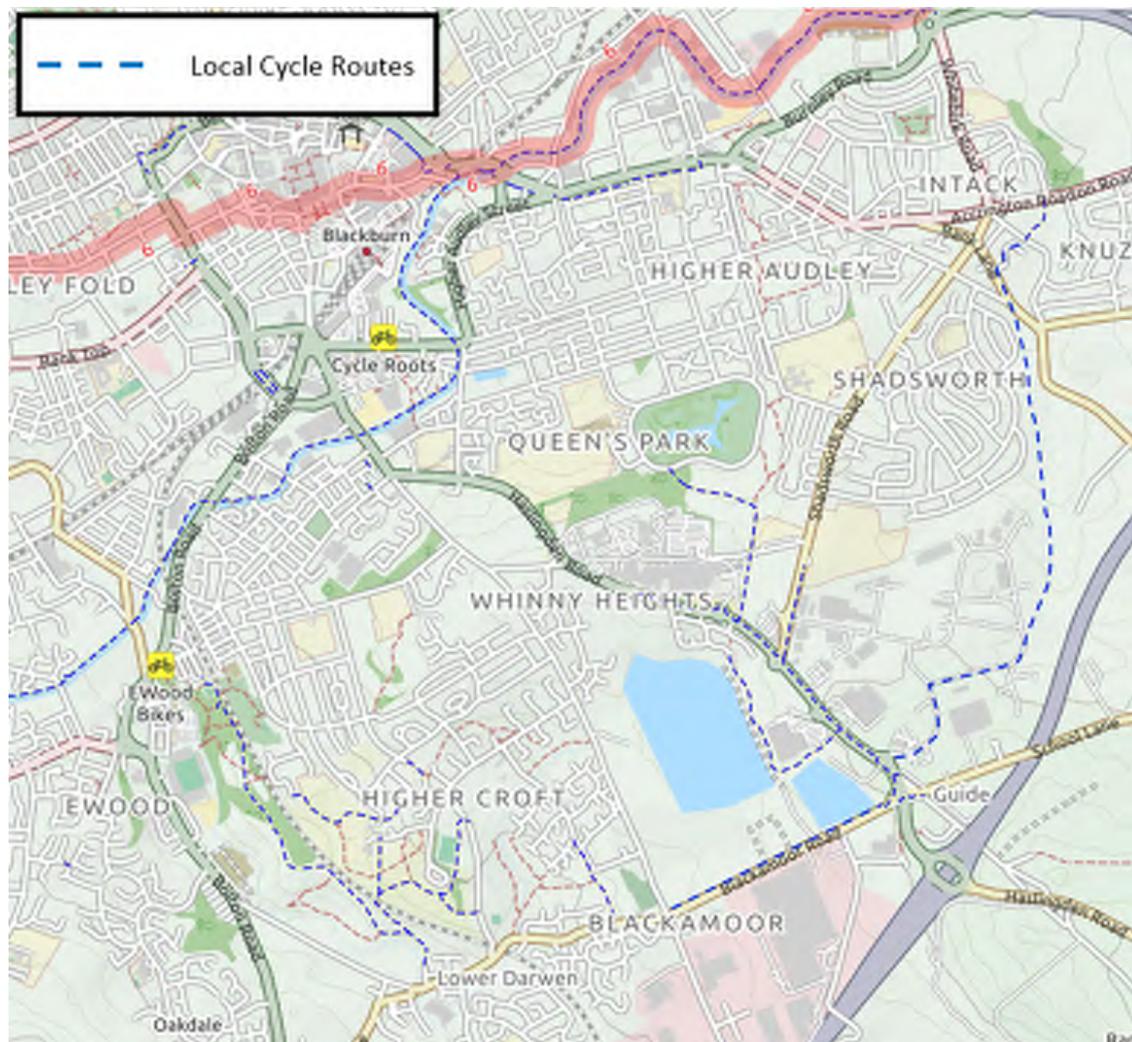
5.3.1 *Cycling Provision*

A number of cycle routes can be identified across the study area and more widely across the BwD authority area. Sustrans National Cycle Route 6 runs west-east across Blackburn with Darwen through Blackburn town centre, the route of which can be seen highlighted in red in Figure 5-1 overleaf. This route lies just to the north of the identified south east Blackburn study area.

Within the study area across south east Blackburn, a number of on and off-road local cycle routes extend along Haslingden Road and Blackamoor Road. These form part of the Weavers Wheel cycle network, which represents a number of local cycling routes connecting around the BwD authority area³. These are identified by the blue dashed lines in Figure 5-1 overleaf.

³ https://www.bwdconnect.org.uk/wp-content/uploads/2015/11/Cycling-On-and-Off-the-Weavers-Wheel_Jul18.pdf

Figure 5-1 - BwD Cycle Routes



In addition to the current highway scheme, proposals for new cycle routes within the study area around the Fishmoor Reservoir are currently being developed, looking to connect existing local cycle routes and Weavers Wheel routes with residential and employment areas across south east Blackburn. This falls outside current scheme proposals and is to be funded through Local Transport Plan funding and S106 developer contributions.

5.3.2 *Walking Provision*

Areas across the identified study area are located towards the edge of Blackburn and have a semi-rural feel as a result, with routes generally designed to cater for journeys around industrial estate areas and connecting Blackburn town centre with the M65 Junction 5. Along Haslingden Road, there is currently a continuous footway running down both sides of the carriageway along

its entire length, however this varies in width and condition. This connects into the various residential areas, industrial estate areas and RBH. For part of the route on the south-east bound side of the carriageway this forms a shared footway, with part of the Weavers Wheel cycle network running adjacent to Haslingden Road (see Figure 5-1).

As mentioned in Section 5.2, key trip destination locations such as RBH and the Shadsworth Industrial Estate are located approximately 2.5km walking distance from Blackburn town centre meaning an extended journey on foot to these destinations from the town centre. Pedestrian routes along Haslingden road between key employment destinations and Blackburn town centre are also located on a prolonged steep gradient, reducing the feasibility and attractiveness of utilising this route by active travel modes.

The B6231 Blackamoor Road has a footway running down a single side adjacent to the westbound lane along its entire length between its junction with Haslingden Road in the east and its junction with Blackamoor Road in the west. This is on the opposing side of the carriageway to industrial estate areas and employment sites, with no crossing facilities for pedestrians across Blackamoor Road. Adjacent to the eastbound carriageway, a footway extends approximately 290m from the Roman Road/ Blackamoor Road junction where residential dwellings are accessed directly from Blackamoor Road.

As mentioned in Section 3.2, there are no pedestrian facilities bar tactile paving at the Roman/ Blackamoor Road junction, with below standard footways between 1.0 and 1.5m around the junction.

6. Summary and Conclusions

6.1 Report Summary

This report provides a detailed review of the baseline traffic, transport and relative land use conditions across a study area defined across south east Blackburn around the A6077 Haslingden Road and the B6231 Blackamoor Road. It has been written in support of and in conjunction with the business case for the proposed GD3 scheme for south east Blackburn.

A review of the relative land uses across the defined study area identified a high number of employment areas and trip attractors located along Haslingden Road and Blackamoor Road. Residential areas were generally located away from these locations to the west and north of the study area towards Blackburn town centre.

A review of census journey to work data identified the Blackburn with Darwen authority area to have a net inflow of individuals working in the authority area, with high numbers of individuals commuting to the authority from surrounding areas. In addition, IMD data assessed across the study area shows the majority of LSOAs to be amongst the 10% and 20% poorest nationally, with high levels of deprivation across south east Blackburn.

A review of baseline traffic data for 2017 highlights a tidal traffic flow pattern along Haslingden Road across AM and PM peak travel periods, with the majority of traffic flowing north west bound in the AM peak towards industrial estate areas and RBH, and south east bound in the PM peak away from these areas towards the M65 Junction 5. A review of journey time data, traffic speed data and link stress reveals high levels of congestion along Haslingden Road during these time periods, with significant queuing and delay across key study area links.

A review of planning and development data across south east Blackburn reveals a number of statutory housing and employment site allocations within the study area boundary, with strong growth and development aspirations developments expected to come forward over the next 10 years. Trips generated by these developments are expected to require use of both Haslingden Road and the Roman Road/ Blackamoor Road junction for access to key residential and employment areas across the study area and wider region.

6.2 Key Conclusions

Key conclusions from this baseline conditions report are summarised as follows:

- A number of key trip attractors and destinations, including several industrial estate areas and RBH, generate a tidal traffic flow pattern along Haslingden Road and generally across the study area;
- Significant congestion and delay has been observed following a review of baseline traffic and travel data, focused along Haslingden Road and associated junctions, as well as around the Roman Road/ Blackamoor Road junction;
- Traffic flows are forecast to increase in future years, with a number of growth and development sites identified across the south east Blackburn study area; and
- Trips generated by further development sites are likely to face increased delay and extended journey times from existing congestion issues along Haslingden Road and at the Roman Road/ Blackamoor Road junction.

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