

Strata Homes Yorkshire Ltd
Proposed Residential Development, Liversedge

Transport and Access Appraisal

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Issue



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1 Introduction

1.1 Commission

Fore Consulting Limited (Fore) has been commissioned by Strata Homes Yorkshire Limited (Strata) to provide transport and highways advice in relation to the promotion of a site at Roberttown Lane, Liversedge, West Yorkshire, for a residential development of approximately 240 dwellings.

The purpose of this report is to provide the necessary information on transport and highway matters to allow the identification of the key issues that may affect the future delivery of the site and to enable the site to be promoted through the Local Development Framework (LDF) process for a future residential use. Included in this report is a preliminary design proposal for achieving access to the site, an assessment of the likely traffic generation that would be associated with the development proposals, and a review of the relevant transport and planning policies.

In preparing this submission, an initial meeting was held with Steve Sampson, Group Highways Engineer at Kirklees Council on Wednesday 23 July to discuss the proposals and the likely access issues. Further dialogue will continue to be held as the proposals are progressed through the Local Development Framework.

Full consideration has been given to the key objectives contained in Kirklees Council's (KC's) *Local Development Framework (LDF)*, used as the basis for the appraisal of development plan documents. Particular focus has been placed on sustainable travel, as detailed in KC's supplementary planning documents supporting the LDF. The report also considers the *National Planning Policy Framework (2012)* and the associated updated *Planning Practice Guidance* (published in 2014), which now provide the context for planning policy and guidance in England.

1.2 The Site and Development Proposals

The site comprises an area of land of approximately 9ha which lies between the urban area of Heckmondwike and Roberttown, adjacent to Roberttown Lane. Roberttown Lane forms the north western boundary of the site, which to the south extends to the boundary of the existing Liversedge cricket club pitch. The site boundary runs adjacent to the back of houses situated on the A62 Huddersfield Road, forming the eastern site edge. The location of the site is shown on Figure 1, and in the image shown overleaf.

Image 1: Site Location



1.3 Structure of this Report

This report is structured as follows:

- Chapter 2 describes the existing development, including the current land use and access arrangements. It also examines the existing transport network, including the local highway network, public transport provision, and pedestrian and cycle facilities.
- Chapter 3 presents a summary of the national and local planning and transport policy context for the site.
- Chapter 4 presents an outline of the proposed development and describes how the development will be accessed.
- Chapter 5 estimates the likely traffic generation and mode share associated with the proposed development, and considers the potential impact on the local highway network.
- Chapter 6 presents a summary of the assessments and resulting recommendations.

2 Existing Situation

2.1 Existing Land Use

The proposed site is currently in agricultural use which generates minimal traffic movements, if any, comprising only agricultural vehicles.

Vehicular access for agricultural vehicles to enter the land is currently gained from gated access points on Roberttown Lane. An example of the existing gated accesses is shown on Photograph 1.

Photograph 1: Existing agricultural access point and view along Roberttown Lane



2.2 Pedestrian Facilities

There are a range of local amenities and destinations in the village of Roberttown that are likely to attract walking trips to and from the proposed development, particularly for recreational purposes. The wider pedestrian network links to some amenity and commercial areas, and there is an area of employment with access from Headlands Road which is also within walking distance of the site. The key land uses and destinations are shown on Figure 2.

The Chartered Institution of Highways & Transportation's (CIHT's) *Guidelines for Providing for Journeys on Foot* (2000) suggests acceptable walking distances for commuting or education purposes as follows:

- Desirable: 500m.
- Acceptable: 1.0km.
- Preferred Maximum: 2.0km.

Figure 2 also presents the isochrones for these walk distance thresholds measured from the centre of the site, assuming only formal road crossings and designated footways/footpaths are used. As can be seen, a range of local schools lie within the 2.0km isochrones, including:

- Roberttown Junior and Infant School.
- Norristhorpe Junior and Infant School.
- Headlands Junior and Infant School.
- Spen Valley High School and Sports College.

Importantly, the site surroundings offer excellent pedestrian links to Liversedge and Roberttown village centres which include a range of local facilities and amenities to offer prospective residents. Pedestrian facilities to both Roberttown and Liversedge village centres comprise good quality footways and street lighting provision. In addition, pedestrian crossing facilities (both controlled and uncontrolled) are available throughout the village centres. A wide range of services and shops are available within reasonable walking distance of the site, including:

- Convenience retail stores.
- Cafes, pubs and restaurants.
- Sports clubs and leisure activities, including Liversedge cricket club, playing fields and tennis courts.

In the surrounding vicinity of the site, most vehicle speed limits are 30mph, including Roberttown Lane and Lumb Lane. The A62 is subject to a 40mph speed limit, changing to 30mph at the approach to the A62 / Roberttown Lane junction. This section of highway is subject to traffic calming measures and well signposted.

Photograph 2 shows a pedestrian refuge island with traffic calming measures in place on the A62 Huddersfield Road.

Photograph 2: Existing pedestrian facilities on the A62



The junction of Lumb Lane / A62 Huddersfield Road provides signalised pedestrian crossing facilities with push button units and tactile paving, offering safer pedestrian linkage opportunities to the towns of Norristhorpe and Heckmondwike. Details of these facilities are shown in photographs 3 and 4.

Photograph 3: View towards Lumb Lane approaching the site boundary



Photograph 4: A62 / Lumb Lane junction from the A62 heading south



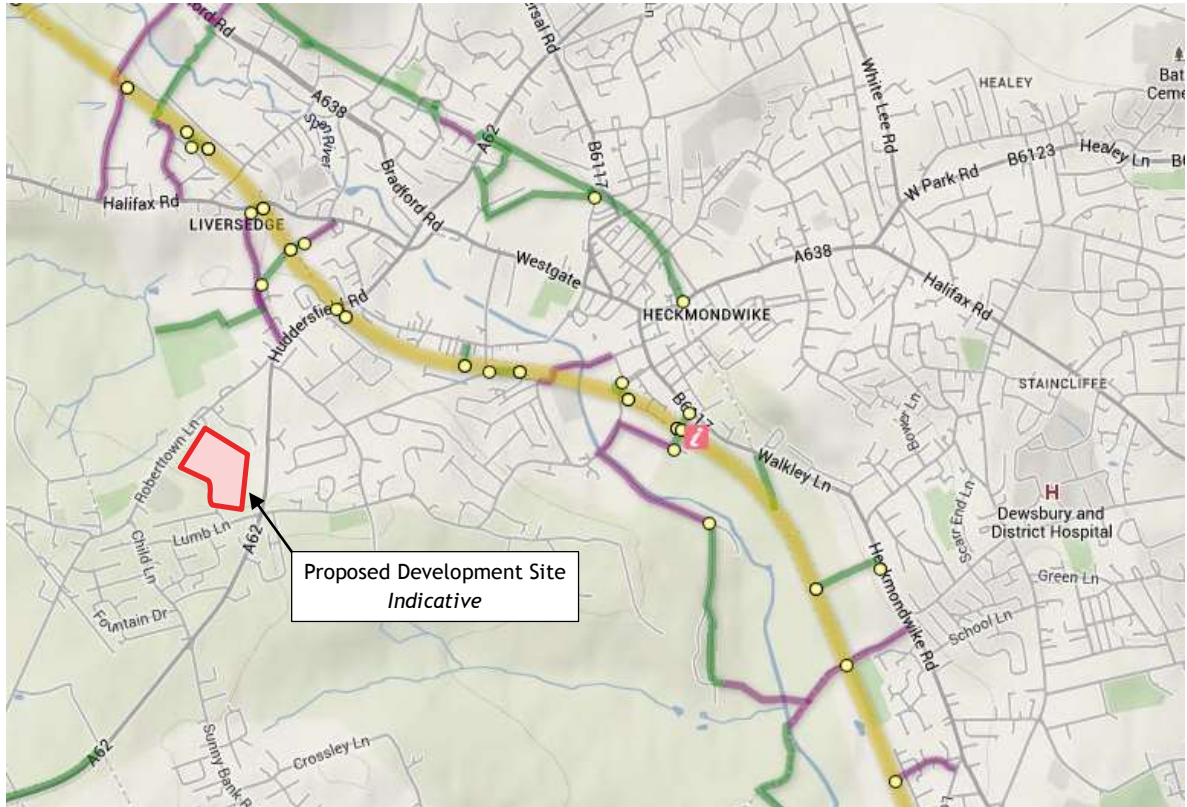
2.3 Cycle Facilities

The site is well located to offer residents the opportunity to safely cycle to work and to local facilities. There is a lack of designated cycle facility provision in the immediate vicinity, but the area is well lit and benefits from good quality carriageways with plenty of width and adequate visibility.

Potential cyclists will benefit from the close proximity of the Sustrans National Cycle Route 66, which can be accessed approximately 800m to the north of the site. This designated and maintained cycle route offers a safe and sustainable transport opportunity for cyclists to travel from the site to Dewsbury, Heckmondwike, Cleckheaton and Bradford.

Details of the cycle routes available to the site are taken from the Sustrans website and are as follows:

Extract from Sustrans cycle route website:



Key:
National Cycle Network route 66 indicated in yellow.
Other off road routes indicated in green.
On-road routes indicated in purple.

Figure 3 illustrates the isochrone for a standard 8km cycling distance from the proposed development site. Huddersfield town centre and surrounding suburbs and towns are readily accessible by bicycle to replace short car trips, providing access to key services as well as the bus and rail stations.

2.4 Public Transport

2.4.1 Bus Services

Planning for Public Transport in Developments states that:

“The maximum walking distance to a bus stop should not exceed 400m and preferably be no more than 300m”.

With regards to the CIHT guidelines, Figure 4 shows the location of those bus stops within 400m from the centre of the proposed site. A summary of the bus services available to the site is also shown in Figure 4, with the service details summarised in Table 1 as follows.

Table 1: Summary of Existing Bus Services

Service	Operator	Destinations Served	Approximate Daytime Frequency (minutes between services)		
			Mon-Fri	Saturday	Sunday
Roberttown Road					
220	Arriva	Leeds, White Rose Centre, Morley, Birstall, Gomersal, Cleckheaton, Hightown, Roberttown, Huddersfield	1 per hour	1 per hour	0
253	Arriva	Wakefield, Flushdyke, Dewsbury, Mirfield, Cleckheaton, East Bierley, Bradford	1 per hour	1 per hour	0
Lumb Lane					
221	Arriva	Leeds, White Rose Centre, Morley, Batley, Heckmondwike, Mirfield	1 per hour	1 per hour	0
223	Arriva	Leeds, White Rose Centre, Morley, Batley, Heckmondwike, Mirfield	1 per hour	1 per hour	1 per hour
229	Arriva	Leeds, Gildersome, Birstall, Batley, Heckmondwike, Hartshead, Huddersfield	2 per hour	2 per hour	1 per hour
A62 Huddersfield Road					
229	Arriva	Leeds, Gildersome, Birstall, Batley, Heckmondwike, Hartshead, Huddersfield	2 per hour	2 per hour	1 per hour

The summary table indicates that the site is adequately served by a choice of existing bus services, with local services on an hourly frequency provided to the surrounding towns and villages, with regular connections to larger towns and cities including Leeds, Bradford and Huddersfield.

2.4.2 Rail Services

Dewsbury, Ravensthorpe and Mirfield rail stations are all situated approximately 3 to 3.5 miles away from the site, and therefore would not be the preferred method of travel to residents intending to walk.

However, considering that car parking facilities are available at Dewsbury and Mirfield, the rail network offers an alternative opportunity for park and ride journeys to the centres of

Leeds, Huddersfield and Manchester. The nearby rail stations are also in good proximity for cyclists to use as a connection to the wider network.

The noted rail stations benefit from an excellent choice of facilities, particularly at Dewsbury, which will further attract sustainable transport users, including:

- Car parking.
- Sheltered cycle storage stands.
- Taxi ranks outside the station.
- Onward travel information services.
- Ticket office / machines.
- CCTV coverage.
- Refreshment facilities.
- Pay phones.
- Post box.
- Impaired mobility facilities / staff assistance.

2.5 Local Highway Network

The development site is situated in the centre of a triangular formation of highway links. Roberttown lane runs adjacent to the western boundary, Lumb Lane along the southern edge, and the A62 Huddersfield Road connects the triangle along the eastern edge.

In the surrounding vicinity of the site, most vehicle speed limits are 30mph, including Roberttown Lane and Lumb Lane. The A62 is subject to a 40mph speed limit, changing to 30mph at the approach to the A62 / Roberttown Lane junction. This section of highway is subject to traffic calming measures and well signposted.

Roberttown Lane is a single carriageway of 8.0m to 8.5m in width along the length of the western site frontage. A footway runs along the western of the carriageway providing a pedestrian route with varying widths of 1.1m to 1.5m. Since the existing land is agricultural and does not attract many pedestrians passing the site, there is grass verge with a stone wall along the existing site frontage.

Roberttown Lane connects to Lumb Lane via Child Lane, which joins Roberttown Lane at a mini roundabout junction. Child Lane is a residential link road with footways on both sides and good street lighting provision. Liversedge Cricket Club’s existing cricket field forms the south west boundary point of the site, and gains access from a priority junction with Roberttown Lane.

Photograph 5 shows a view along Roberttown Lane which in terms of highway features and dimensions is typical of the network surrounding the site.

Photograph 5: Roberttown Lane, looking north adjacent to the site



Lumb Lane is a single carriageway residential link road with 2m footways on both sides and a carriageway width of approximately 7.0m. Lumb Lane is home to a number of existing residential properties along both sides and also runs past the southern edge of existing cricket field. The cricket field and existing residential properties along Lumb Lane form the southern site boundary. Street lighting is provided to a high standard throughout this residential part of the town.

Photograph 6 shows a view along Lumb Lane which, in terms of highway features and dimensions, is typical of the network surrounding the site.

Photograph 6: Lumb Lane, looking east



The A62 Huddersfield Road is primarily a single lane carriageway in excess of 7.5m wide over the course of the site boundary. At the junction with Roberttown Lane, a right turn lane and yellow box markings are provided which positively contributes to safety and capacity at the junction. A refuge island with tactile paving and bollards also exists at this junction to safely accommodate pedestrian crossing movements. A right turn lane is provided at the junction with Liversedge Hall Lane. A traffic signal-controlled junction accommodates turning movements and pedestrians crossing between the A62 Huddersfield Road and Lumb Lane.

Footway provision along this section of the A62 is good, with minimum widths of 2m along both sides of the carriageway. This section of highway also benefits from ample street lighting, with signing and lining traffic calming schemes in operation where necessary.

Photograph 7 shows a view along the A62 which, in terms of highway features and dimensions, is typical of the network surrounding the site.

Photograph 7: A62 Huddersfield Road, looking north



3 Transport and Planning Policy

3.1 National Policy

The *National Planning Policy Framework* (NPPF) was published by the Department for Communities and Local Government (DCLG) in March 2012. NPPF provides the national planning policy for England, and replaced the former Planning Policy Guidance (PPG) and Planning Policy Statement (PPS) notes. NPPF states that the role of the planning system is to seek to contribute to achieving sustainable development, and in doing so should therefore perform three roles:

- An economic role, by building a strong, responsive and competitive economy.
- A social role, by supporting strong, vibrant and healthy communities.
- An environmental role, by protecting and enhancing the natural, built and historic environment.

The NPPF sets out a presumption in favour of sustainable development. This effectively means that development proposals that accord with the development plan should be approved without delay. Where the development plan is out-of-date, silent or absent, proposals should be approved unless the adverse impacts would significantly, and demonstrably, outweigh the benefits when assessed against the NPPF, or specific policies in the NPPF indicate development should be restricted (for example, if the site is subject to certain environmental designations).

The NPPF sets out twelve core land-use planning principles that should be taken into account when making planning decisions, including:

“planning should... actively manage patterns of growth to make fullest possible use of public transport, walking and cycling, and focus significant development in locations which are or can be made sustainable”

In particular, Paragraph 32 of the NPPF states that:

“All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. 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 the development are severe.”*

3.2 Regional Policy

West Yorkshire Local Transport Plan 3 (2011-26)

The West Yorkshire Local Transport Plan 3 (LTP3) is the statutory transport policy plan for the West Yorkshire area and sets out the overall vision and objectives for the period 2011-2026. The LTP’s vision for this 15 year period is as follows:

“Working together to ensure that West Yorkshire’s transport system connects people and places in ways that support the economy, the environment and quality of life.”

Moreover this vision is underpinned by the following three guiding principles:

- **Economy** - To improve connectivity to support economic activity and growth in West Yorkshire and the Leeds City Region;
- **Low carbon** - To make substantial progress towards a low carbon, sustainable transport system for West Yorkshire, while recognising transport’s contribution to national carbon reduction plans: and
- **Quality of Life** - To enhance the quality of life for people living in, working in and visiting West Yorkshire.

3.3 Local Policy

A report was submitted to the full Council meeting on 23 October 2013 to consider the withdrawal of the LDF Core Strategy and the preparation of revised proposals. The decisions taken at the meeting were that the Core Strategy be withdrawn and that the Director of Economy, Skills and Environment be authorised to notify the Secretary of State of the Council's decision, also that the proposal to prepare a revised Core Strategy to be submitted for examination in due course.

Kirklees Council Parking Standards

The relevant parking standards in Kirklees that would apply are in accordance with those identified in Policy T19 and Appendix 2 of the Kirklees Unitary Development Plan, and are set out in Tables 1 and 2 below. Parking will be provided in accordance with these standards.

Table 1: Cycle Parking Standards

Use	Minimum Cycle Standard
C3 Dwellings	1 space per unit

Table 2: Maximum Parking Standards for other Single Use Developments

Use	Maximum Parking Standard
C3 Dwellings	Houses < 140sqm - 2 spaces per unit
	Houses > 140sqm - 3 spaces per unit

3.4 Summary

It is considered that the proposed development will operate in a manner in keeping with the local, regional and national policy objectives. The site is suitably located within an existing built up residential village area, and has good quality access to local services and sustainable modes of transport, as a result of its proximity to public transport services.

4 Development Proposals

4.1 The Development

An indicative concept masterplan for the site has been prepared by Signet Planning on behalf of Strata Homes and is attached as Appendix A. The intention is to promote a residential development of approximately 240 dwellings on the site.

4.2 Access Proposals

4.2.1 Vehicular Access Options

There are a number of feasible and deliverable options that are available for the provision of vehicular access to the site. These options include the following:

- Access directly from Roberttown Lane to the north west of the site, by means of a new priority-controlled junction access with a ghost island right turn.
- Access from Lumb Lane via Stanley Road to the south of the site, potentially by extending the existing spur road into the site to the north.
- Access from Roberttown Lane via Richmond Park Avenue to the north of the site, by a new priority-controlled junction to extend into the site to the west.

All of these access options are considered to be feasible and can be delivered within land controlled by Strata Homes.

The current preference would be to form a new primary access directly from Roberttown Lane. The other identified possible access points could be used to supplement this by providing additional connectivity and a secondary access.

4.2.2 Access from Roberttown Lane

An initial vehicular access proposal has been prepared, illustrating a priority junction with a ghost island right turn lane from Roberttown Lane. The preliminary layout is demonstrated on Fore Consulting drawing 3152-SK001-01, which is appended to this report. It has been designed in accordance with local design guidance, taking account of the posted speed limit of 30mph on Roberttown Lane in the vicinity of the site. The access is positioned to provide sufficient visibility considering the current horizontal and vertical alignment along Roberttown Lane. The preliminary layout is considered to be feasible, and could be delivered within land controlled by Strata Homes.

At the point of entry, the width of the development access road will be 5.5m with 6.0m radius at the point of entry. 2.0m footways will be provided adjacent the access road, and continued to link to the external pedestrian infrastructure.

The internal street network will be designed in accordance with local guidance as well as *Manual for Streets*.

The precise form of the access proposals will be confirmed at the planning application stage following collection of traffic flow and speed survey data.

4.2.3 Pedestrian and Cycle Access

In addition to the footways adjacent the proposed access road to Roberttown Lane (as identified above), it is proposed that the number of access points to the development for pedestrians and cyclists is maximised. This will ensure convenient links to the external walking and cycle networks, and encourage local journeys to be undertaken on foot or by cycle from the surrounding areas, rather than by car. At this stage, the indicative concept masterplan makes allowance for additional pedestrian and cycle access points to Roberttown Lane, Stanley Road and towards the A62 Huddersfield Road via Richmond Park Avenue.

Pedestrian and cycle-only links would be as short as possible with good inter-visibility throughout. Links would also be well-lit, as well as being either overlooked or open to view. The intention is for high quality, safe and convenient walking and cycling routes to permeate through the development site.

4.2.4 Public Transport

The site is located where regular bus services pass and stop at various locations surrounding the site. The development will be designed to capitalise on these existing services, ensuring that adequate pedestrian desire lines are provided. The pedestrian access points demonstrated on the concept masterplan would accommodate desire lines to existing bus stops on the A62 Huddersfield Road and

The identified bus services would be supported by promotion of sustainable travel options through implementation of travel planning measures.

4.3 Travel Plan

A Travel Plan will be required to support a future planning application and the coverage and detail of the Travel Plan will reflect the size and nature of the proposed development. This will follow the guidance contained in *The Essential Guide to Travel Planning* (DfT, 2008). Implementation of travel planning will encourage trips to the development to be made by sustainable (non-car) modes of transport where possible.



In developing the Travel Plan, the approach will include identifying, monitoring and reviewing targets, supported by appropriate funding. Targets will be identified to encourage access by non-car modes and to manage demand for car-based travel. The targets will be quantified and detailed in terms of how the targets will be monitored and what the contingency is if the targets are not achieved. The developer will, consequently, be incentivised to take a long-term approach to the provision of sustainable transport to the development.

The Travel Plan will incorporate a clear action plan that will have specific actions in the months leading up to the development opening and beyond. This will facilitate the actions required to develop and maintain the Travel Plan. The Travel Plan will clearly demonstrate the mitigation measures that will be employed to minimise the impact of the development on the local highway network.

5 Trip Generation, Mode Share and Trip Distribution

5.1 Introduction

This Chapter sets out an initial estimate of the likely traffic generation and mode share associated with the development proposals and the methodology used.

5.2 Traffic Generation

Traffic generation for the proposed development has been estimated based on the concept masterplan, which indicates 240 residential dwellings could be provided on the site.

Weekday AM peak hour and PM peak hour average vehicular trip rates for the land use proposed have been derived from the TRICS database, following interrogation for sites based on the criteria identified in Table 3, below.

Table 3: TRICS Search Criteria

Proposed Land Use	TRICS Land Use	TRICS Sub-Category	Location
Residential	Residential (03)	Houses Privately Owned (A)	Suburban Area

The sites selected have been reviewed to ensure the trip rates are comparable to the proposed development in terms of accessibility, scale, location and density. The resulting outputs from the TRICS database are attached as Appendix B. The average vehicular trip rates for the weekday AM peak hour (08:00-09:00) and weekday PM peak hour (17:00-18:00) are summarised in Table 4, below.

Table 4: Average Weekday Vehicular Trip Rates

Land Use	Units	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		Arrivals	Departures	Arrivals	Departures
Residential	1 Dwelling	0.159	0.416	0.394	0.240

The estimated gross vehicular traffic generation for the Weekday AM and PM peak hours has been calculated by applying the trip rates in Table 4, above, to the proposed number of residential dwellings. The results are summarised in Table 5.

Table 5: Gross Average Weekday Vehicular Traffic Generation

Land Use	Units	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
		Arrivals	Departures	Arrivals	Departures
Residential	240 Dwellings	38	100	95	58

The contents of the Table 5 represent the gross vehicular traffic generation from the proposed development for the weekday peak periods.

5.3 Mode Share

For the purposes of this assessment, the majority of trip generation in the peak hours is likely to be associated with commuting journeys. On this basis, mode share data from the 2011 Census (*'Method of Travel to Work for Resident Population'*) has been used to derive an initial baseline mode share for the development proposals. Mode share for Liversedge and Gomersal ward (as the ward in which the site is located) has been used to represent the likely travel characteristics of residents at the site, based on the accessibility of the site by public transport and the highway network. As such, the mode share accurately represents the existing travel characteristics of the site having regard to public transport accessibility and proximity to the local and strategic highway network.

The mode share from this data is summarised in Table 6. 'Work at home' and 'Other' categories have been excluded.

Table 6: Baseline Mode Share (% of journeys by mode)

Mode	Liversedge and Gomersal Ward	West Yorkshire	England
Train, metro, light rail, tram	1%	2%	8%
Bus, minibus or coach	8%	12%	8%
Taxi or minicab	1%	1%	1%
Motorcycle, scooter or moped	1%	1%	1%
Driving a car or van	67%	62%	61%
Passenger in a car or van	9%	8%	7%
Bicycle	1%	3%	3%
On foot	11%	12%	11%
Total	100%	100%	100%

Note: Values may not total to due to rounding

The baseline mode share presented in Table 6 represents the method of travel to work that would be expected to occur without the adoption of a Travel Plan. For the purposes of

the eventual Transport Assessment, a ‘target’ mode share will also be identified. This will be based on the mode share presented above, but will reflect the implementation of travel planning measures to encourage the use of sustainable modes to travel to the development.

5.4 Trip Generation

Considering the baseline mode share set out in Table 6 and the traffic generation presented earlier in Table 5 for the proposed development, the baseline person trip generation by mode has been estimated. This is set out in Table 7.

Table 7: Baseline Trip Generation by Mode

Mode	AM Peak (08:00-09:00)		PM Peak (17:00-18:00)	
	Arrivals	Departures	Arrivals	Departures
Train, Metro, Light Rail or Tram	0	1	1	1
Bus, minibus or coach	5	13	12	7
Taxi or minicab	0	1	1	1
Motorcycle, scooter or moped	1	2	2	1
Driving a car or van	38	100	95	58
Passenger in a car or van	5	14	13	8
Bicycle	1	2	2	1
On foot	6	17	16	10
Total	57	149	142	87

Note: Values may not total to due to rounding

5.5 Trip Distribution

The trip distribution associated with the development proposals has been calculated using 2001 Census data (*‘Persons Aged 16-74 in employment: Method of Travel to Work - Car Driver’*), considering journeys originating from the Heckmondwike ward.

The number of trips to each ward have been calculated as a percentage of the total and then assigned to routes on the local highway network to derive the trip distribution from the proposed development. Where a choice of routes is available, the proportion of trips using each route has been split, to reflect the likely preferred choice of drive time and drive distance. The resulting trip distribution is set out in Table 8, overleaf.

Table 8: Trip Distribution

Ref	Destination	Trip Distribution (% of all journeys)
1	A62 Huddersfield Road (West)	10%
2	Church Road (West)	9%
3	Sunny Bank Road (East)	5%
4	Norristhorpe Lane (East/South)	7%
5	A62 Huddersfield Road (North)	68%
5a	<i>A638 Bradford Road (Cleckheaton)</i>	14%
5b	<i>A638 Frost Hill (Heckmondwike)</i>	31%
5c	<i>A62 Leeds Road (North of A638 junction)</i>	23%
Total		100.0%

5.6 Traffic Assignment

Traffic generation associated with the proposed development has been assigned to the network using the trip distribution set out in Table 8. All development traffic has been assigned to arrive and depart via a single point of vehicle access on Roberttown Lane, as described in chapter 4.2 of this report. Where a range of possible routes are available, trips have been split by proportion as a reflection of the distance and journey time between the route options.

The resulting Development Traffic Flows can be seen on Figure 5 and Figure 6 for weekday AM and PM peak hour, respectively.

5.7 Impact on the Local Highway Network

The development traffic flows presented on Figure 5 and Figure 6 are summarised in Table 9, overleaf. Specifically, the table highlights links on the local road network where development traffic is expected to exceed 30 two-way peak hour vehicle trips. This threshold is indicated in *Guidance on Transport Assessment* (DfT, 2007) as a useful point of reference for identifying where traffic impacts of development are likely to warrant detailed consideration as part of a Transport Assessment.

Table 9: Development Traffic (Two-Way Flow by Link)

Link		AM Peak (08:00-09:00)			PM Peak (17:00-18:00)		
		Arr	Dep	2-Way	Arr	Dep	2-Way
Roberttown Lane	<i>Between site access and A62 junction to the north east</i>	28	72	99	68	41	109
	<i>Between the site access and Child Lane to the west</i>	10	28	38	26	17	43
	<i>Between Child Lane roundabout and Church Lane to the west</i>	7	19	26	18	11	30
Far Common Road/ Roberttown Lane	<i>Between Church Lane and A62 Huddersfield Road to the west</i>	3	10	14	10	6	16
A638	<i>Bradford Road towards Cleckheaton</i>	5	14	19	13	8	21
A638	<i>Frost Hill towards Heckmondwike</i>	12	31	44	30	18	48
A62 Leeds Road	<i>A62 to Leeds, to the north-east of A638 Bradford Road</i>	9	23	31	22	13	35
A62 Huddersfield Road	<i>Between A638 Bradford Road and A649 Halifax Road</i>	26	68	94	65	39	104
	<i>Between A649 Halifax Road and Roberttown Lane junction</i>	26	68	94	65	39	104
	<i>Between the Roberttown Lane and Sunny Bank Road junctions</i>	2	3	5	3	2	5
	<i>Between Sunny Bank Road and Far Common Road to the west</i>	0	0	0	0	0	0
	<i>To the west of Far Common Road</i>	3	10	14	10	6	16
Norristhorpe Lane	<i>To the east</i>	3	7	10	7	3	10
Sunny Bank Road	<i>To the south</i>	2	5	7	5	3	8

Note: Totals may not add up to sum of components due to rounding.

The likely impact of the trip generation associated with the development proposals has been considered for the weekday AM and weekday PM peak hour periods.

From the table above, the development proposals are likely to have a localised peak hour impact on the highway network at some locations. As can be seen, an increase in two-way traffic flows of over 30 vehicles in the peak hour scenarios is likely on several road links within the vicinity of the site.

Based on this analysis, and adopting a threshold of above 30 two-way development trips, it is expected that the development proposals will have an impact at the following junctions:

- A62 Leeds Road / A638 Bradford Road traffic signal junction.

- A62Huddersfield Road / A649 Halifax Road traffic signal junction.
- A62 Huddersfield Road / Roberttown Lane priority junction.
- Roberttown Lane / Child Lane roundabout junction.

The impacts identified above may change depending on the number and location of vehicle access points to eventually be provided as part of the development; this will require further consideration as part of a Transport Assessment for submission as part of an eventual planning application.

However, at this stage, with appropriate mitigation including the preparation of a suitable Travel Plan, it is considered that the additional development traffic could be adequately accommodated on the local road network without adversely impacting on the safe and efficient flow of traffic. There is no reason therefore in transport terms as to why the site cannot come forward for development and be allocated for residential use.

6 Summary and Recommendations

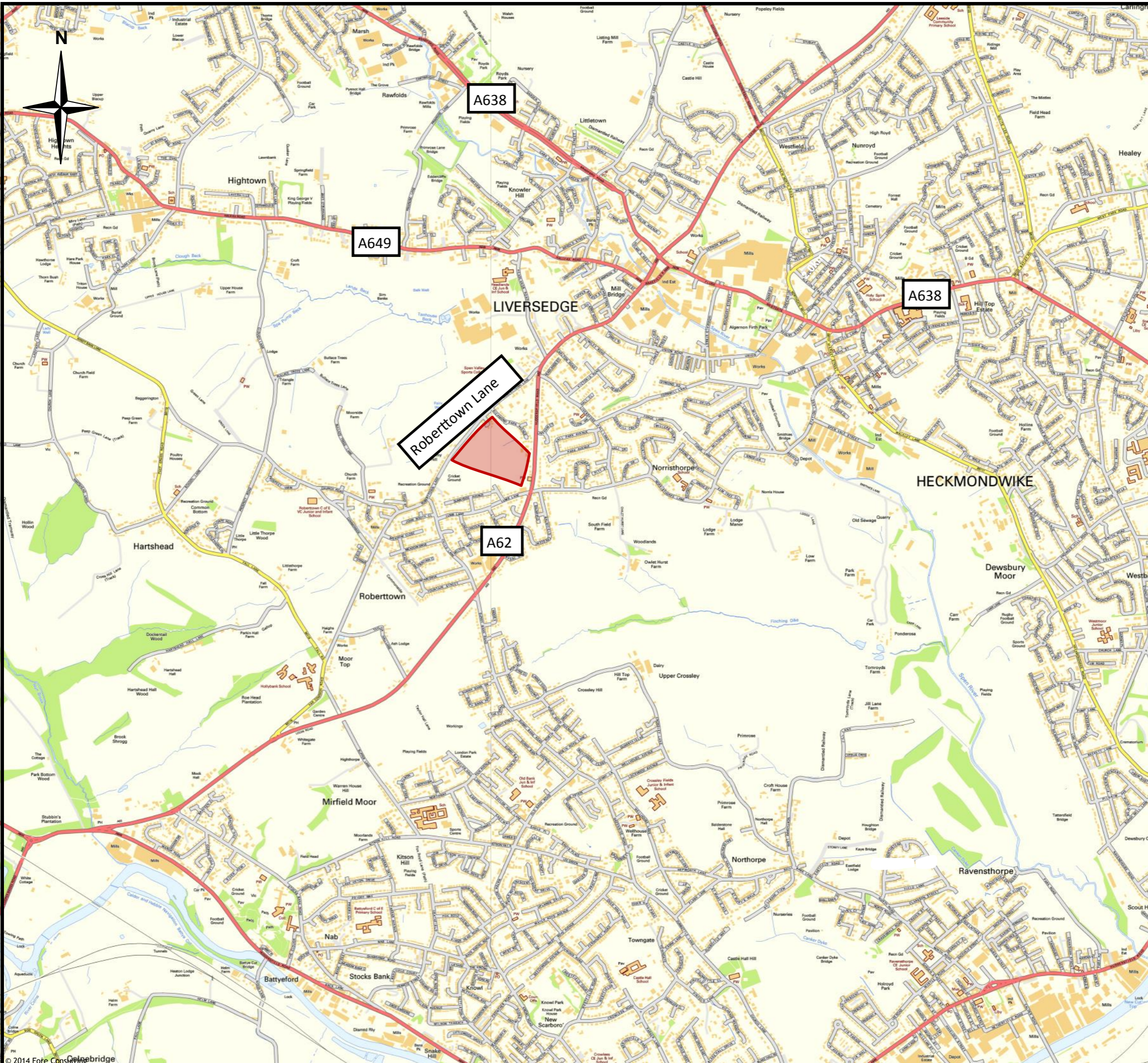
This report has been prepared to assess the transport and highways implications of residential development on land at Roberttown Lane, Liversedge. Importantly, at this stage in the planning process, it is necessary to provide information on transport and highway matters to allow the identification of key issues that may affect the future delivery of the site and to enable it to be promoted through the LDF process.

Based on the assessments undertaken, it is considered that the site is deliverable from a transport and highway perspective, for the follow key reasons:

- With a potential development of 240 residential dwellings, the site could be served by a single point of vehicular access from Roberttown Lane.
- However, it is recommended that two vehicular points of access should be pursued to ensure accessibility and permeability is maximised, and to spread the impacts of development across the network. The design of these access junctions accords with the relevant design standards and is within land under the control of the landowner and/or adopted highway.
- The site is located within a reasonable walking distance of existing bus stops, providing public transport links to Huddersfield, Bradford, Leeds and other regional facilities.
- A range of local services are provided in the surrounding towns and villages, all of which are within a reasonable walking distance from the proposed development.
- The proposals accord with both national and local transport policy. In particular, residents of the proposed development would be able to access local facilities, utilise existing bus services.
- Any additional vehicular traffic, with appropriate mitigation, should be capable of being accommodated without detrimental impact on the adjacent road network.

In conclusion, with appropriate mitigation the development proposals should therefore be able to be satisfactorily accommodated by the local transport network and there is no reason in terms of transport or access why the site should not continue to be promoted for residential use. There are no barriers in transport terms to the future allocation of land in this location for housing, and the site should therefore be promoted for residential use in the LDF process.

Figures



Key:

 Site Location

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2 Queen Street
Leeds
LS1 2TW

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enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk



Client:
Strata Homes Yorkshire Ltd

Project:
Land at Roberttown, Liversedge

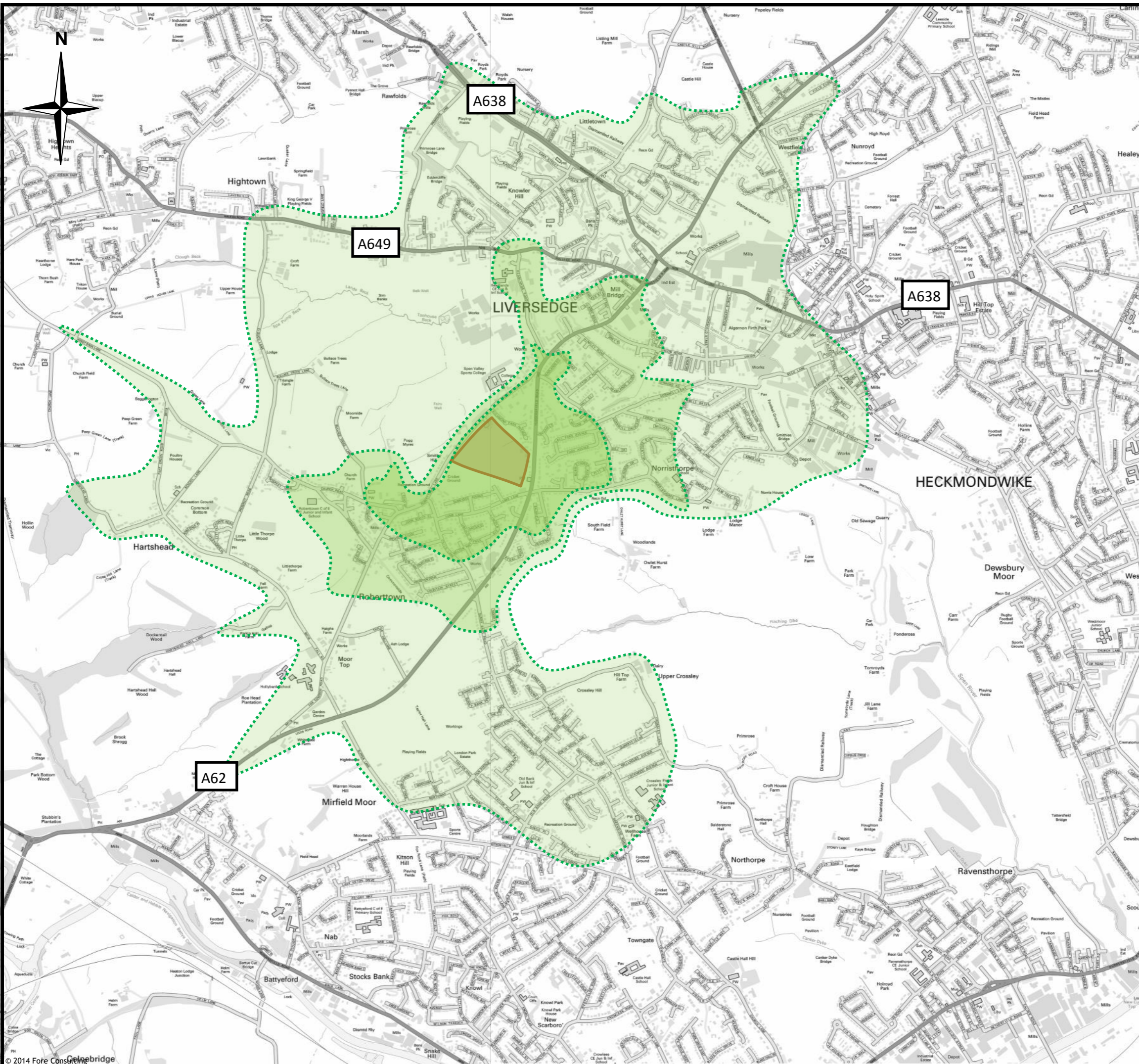
Figure Title:
Site Location

Scale:
Not to Scale





Figure Status:
Draft

Job Number:
3152

Figure Number:
Figure 1



Key:

-  Site Location
-  0.5km Walking Distance Isochrone
-  1.0km Walking Distance Isochrone
-  2.0km Walking Distance Isochrone

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 2 Queen Street
 Leeds
 LS1 2TW

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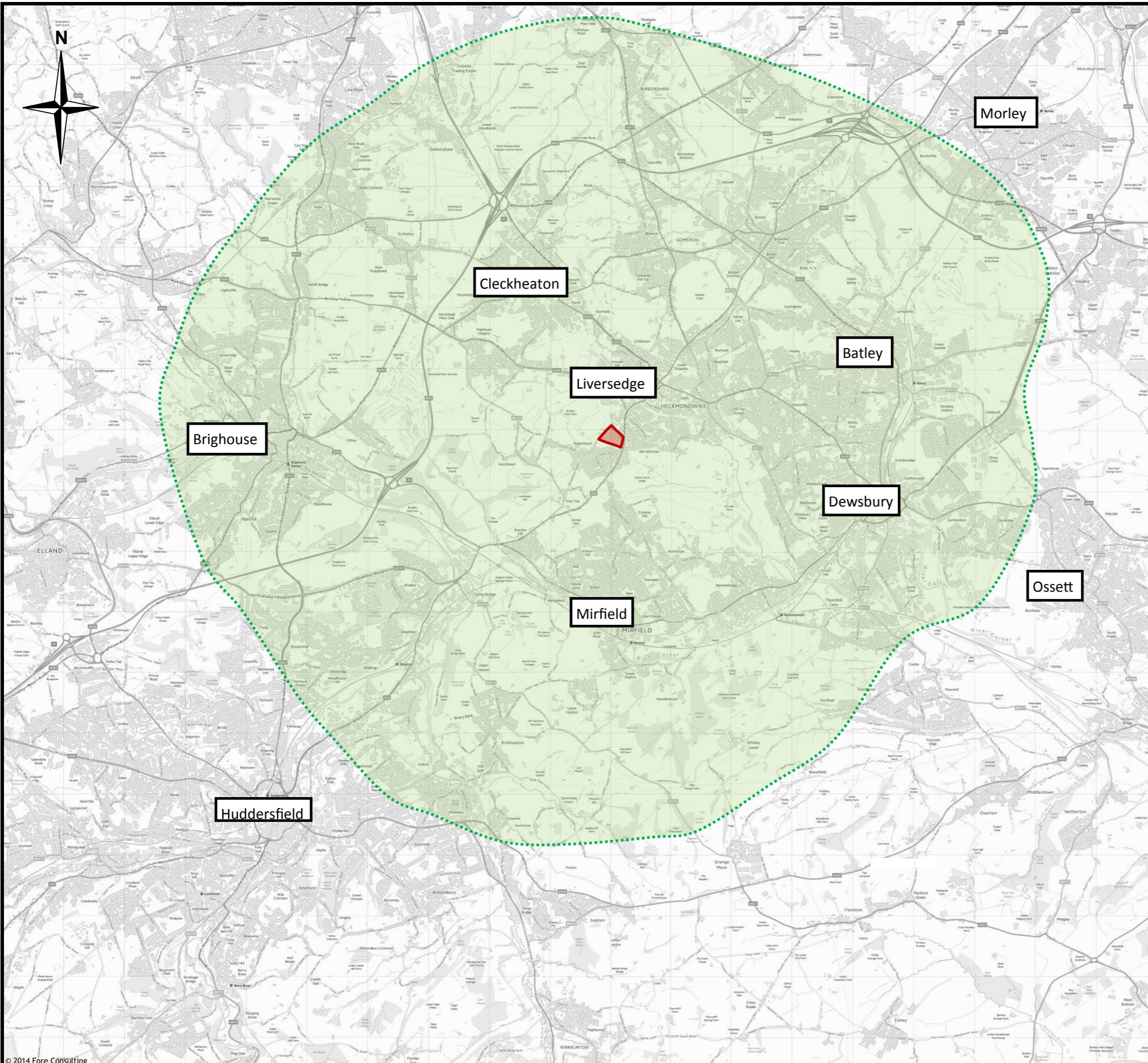
Figure Title:
Pedestrian Catchment

Scale:
 Not to Scale

Figure Status:
 Draft

Job Number:
 3152

Figure Number:
 Figure 2



Key:

 Site Location

 8km Cycle Isochrone

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Leeds
LS1 2TW

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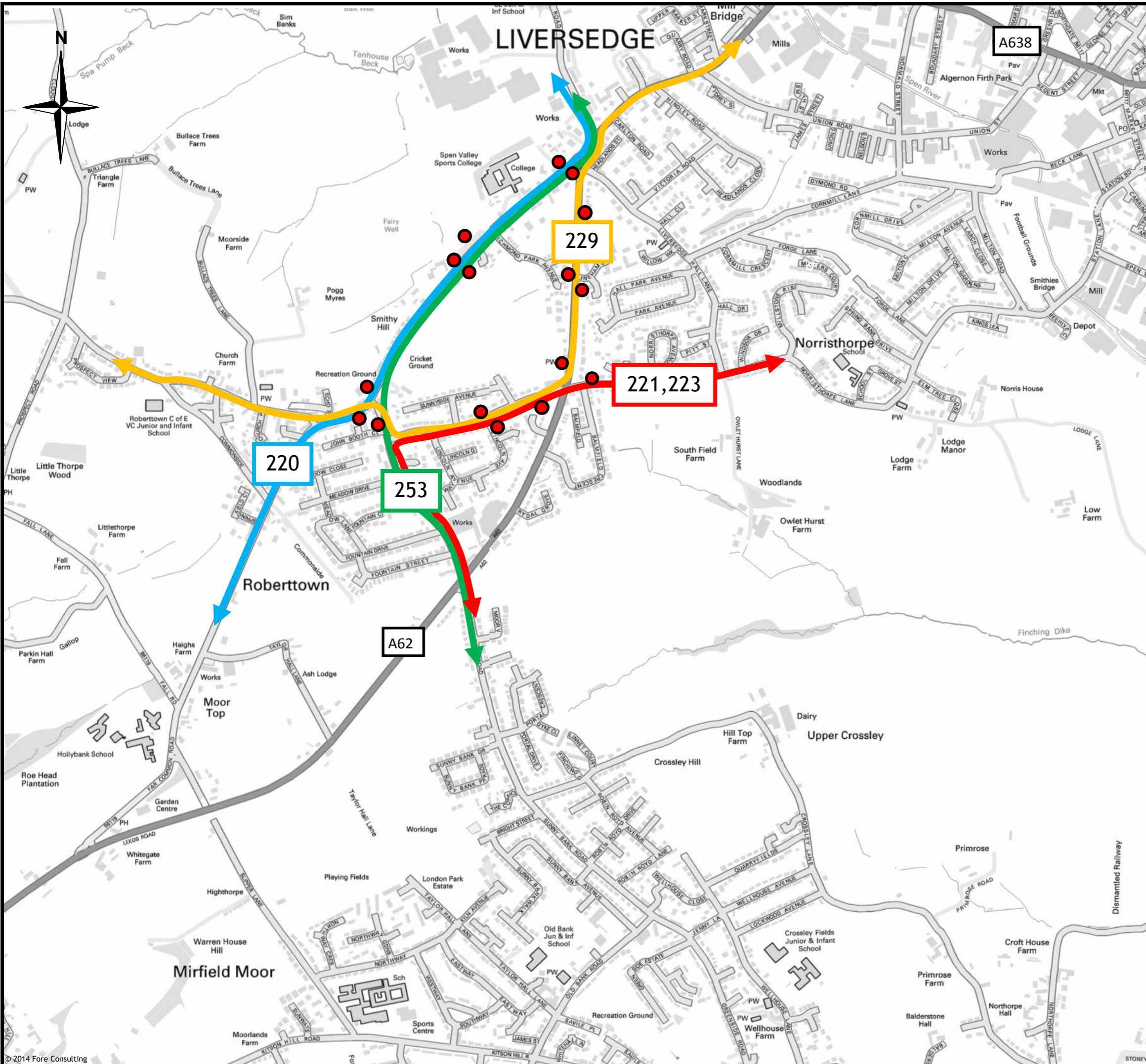
Figure Title:
Cycle Catchment

Scale:
Not to Scale




Figure Status:
Draft

Job Number:
3152

Figure Number:
Figure 3



Key:

-  Site Location
-  Bus Stop
-  Bus Route (Including Service Number)

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 Leeds
 LS1 2TW

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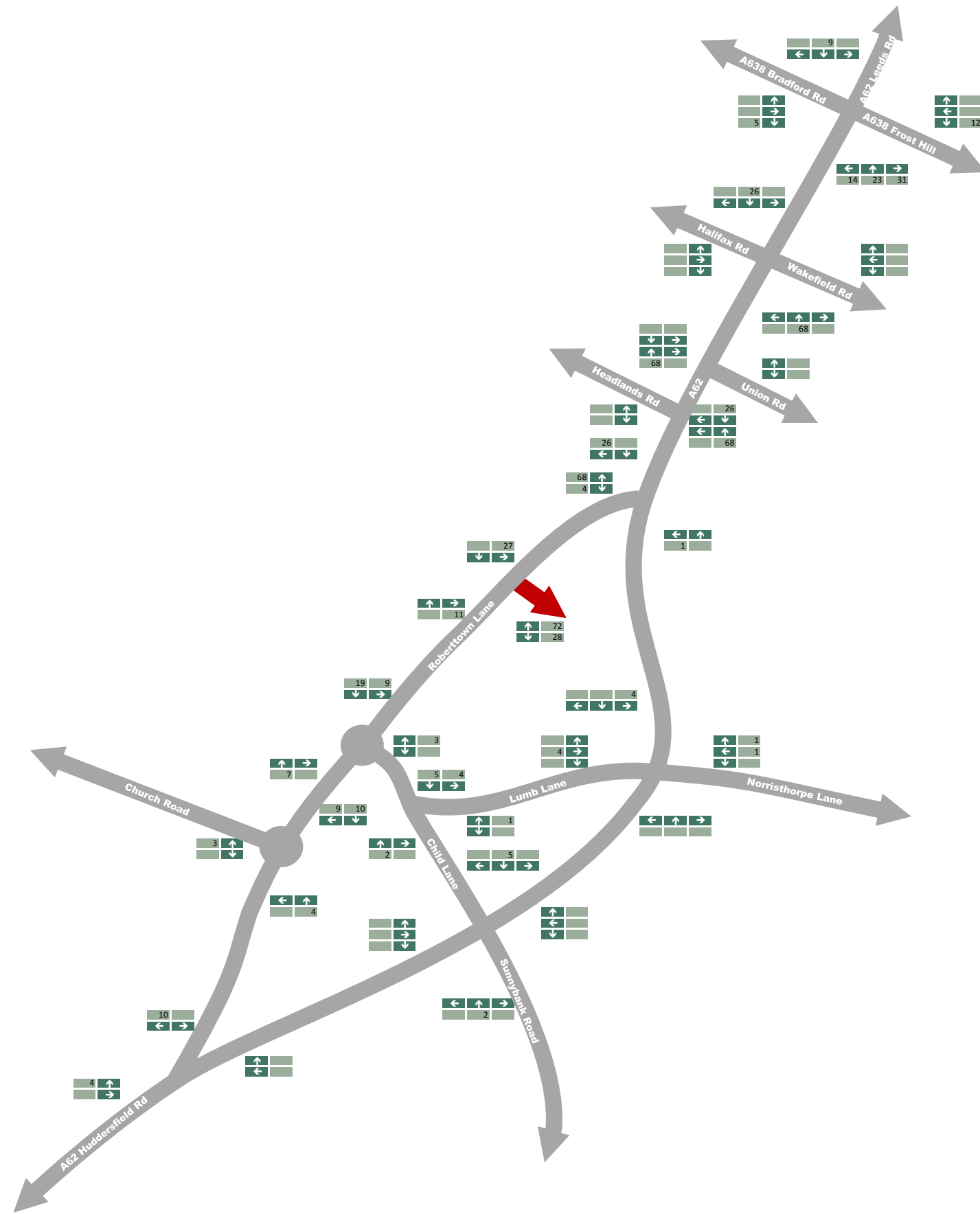
Figure Title:
 Public Transport

Scale:
 Not to Scale





Figure Status:
 Draft

Job Number:
 3152

Figure Number:
 Figure 4



Key:

-  Primary Road
-  Secondary Road
-  Site Access
-  Additional traffic movements not explicitly represented in the network diagram (eg minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

Fore Consulting Limited
 2 Queen Street
 Leeds
 LS1 2TW
 0113 3800 250
 enquiries@foreconsulting.co.uk



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 Strata Homes Yorkshire Ltd

Project:
 Proposed Residential Development, Liversedge

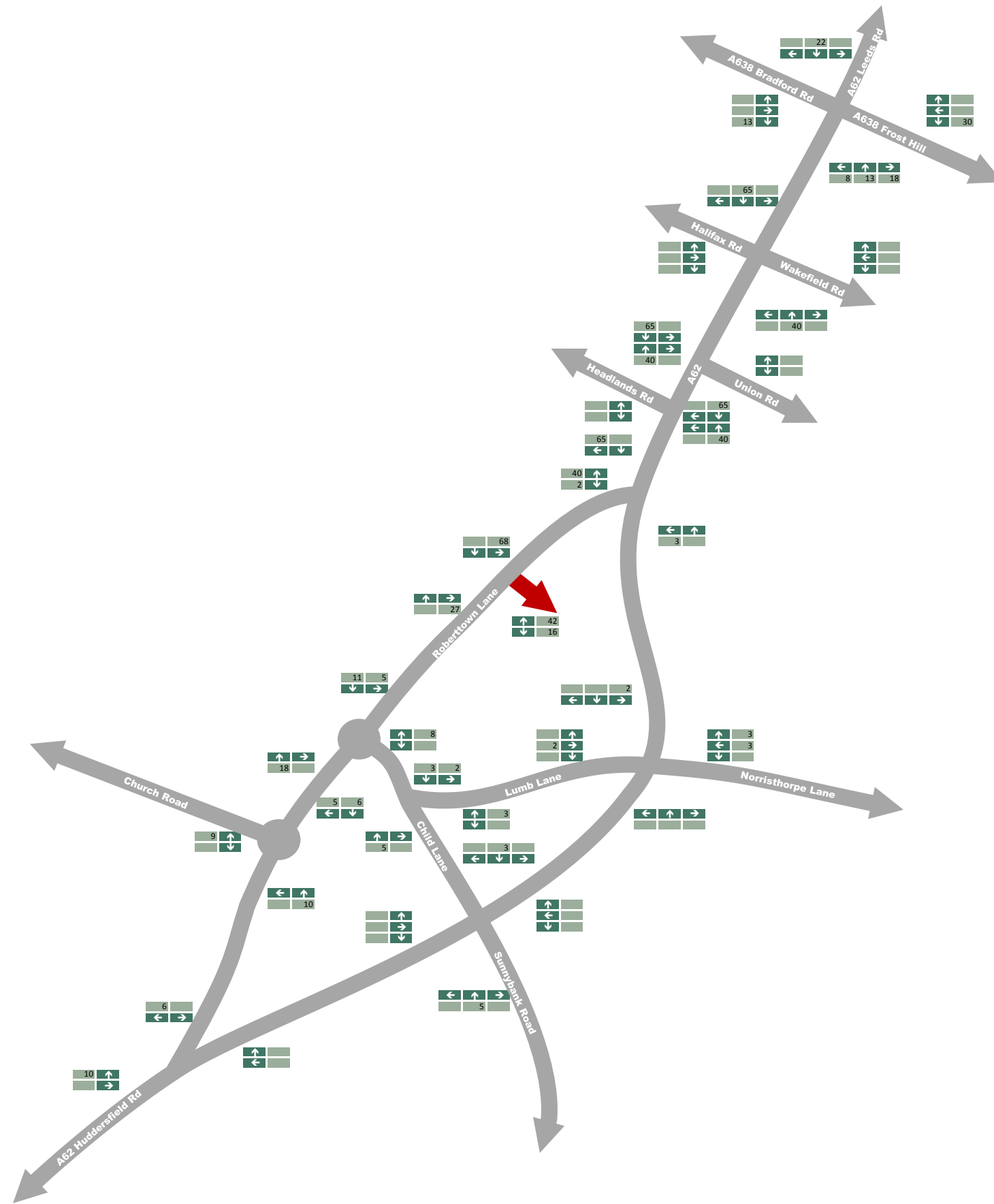
Figure Title:
 AM Peak Hour Development Traffic Flows
 08:00 to 09:00

Scale:
 Not to scale





Figure Status:
 Issue

Job Number:
 3152

Figure Number:
 Figure 5



Key:

-  Primary Road
-  Secondary Road
-  Site Access
-  Additional traffic movements not explicitly represented in the network diagram (eg minor roads)

Note: The number in each arrowhead relates to the route reference used in the Trip Distribution.

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 2 Queen Street
 Leeds
 LS1 2TW
 0113 3800 250
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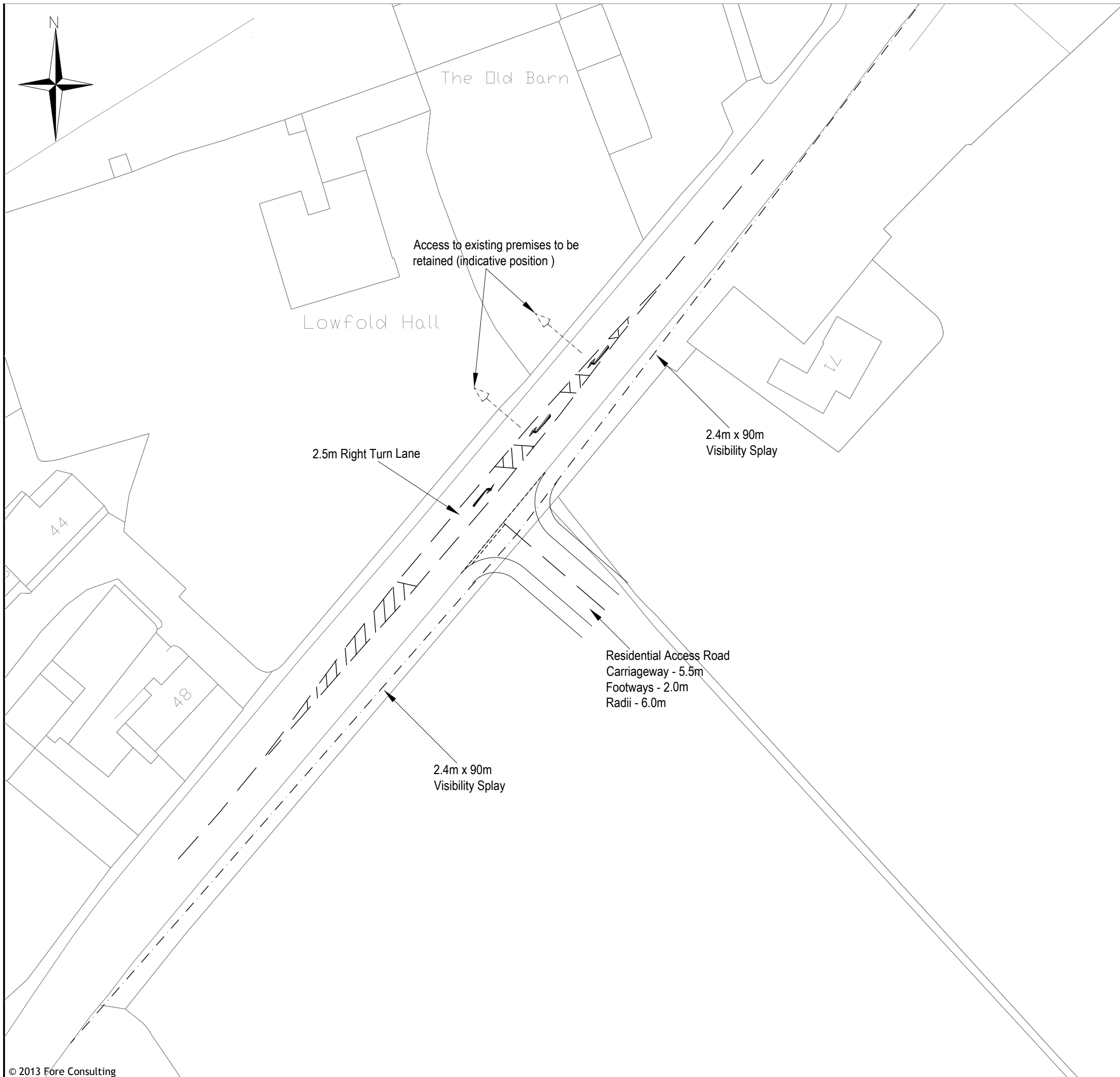
Project:
 Proposed Residential Development, Liversedge

Figure Title:
 PM Peak Hour Development Traffic Flows
 17:00 to 18:00

Scale: Not to scale | Figure Status: Issue

Job Number: 3152 | Figure Number: Figure 6

Drawings



Notes

1. Preliminary layout subject to full topographical survey & detailed design including CDM compliance, statutory undertakers search, diversion requirements, highway drainage provision, land availability and local authority approval.

Fore Consulting Limited
 2 Queen Street
 Leeds
 LS1 2TW

0113 380 0250
 enquiries@foreconsulting.co.uk
 www.foreconsulting.co.uk



Client:

Strata Homes Ltd

Project:

Land at Roberttown, Liversedge

Drawing Title:

Potential Site Access

Scale:

1:500 @ A3

Drawing Status:

Draft

Job Number:

3152

Drawing Number:

3152/SK001/001

Appendix A

Site Plan



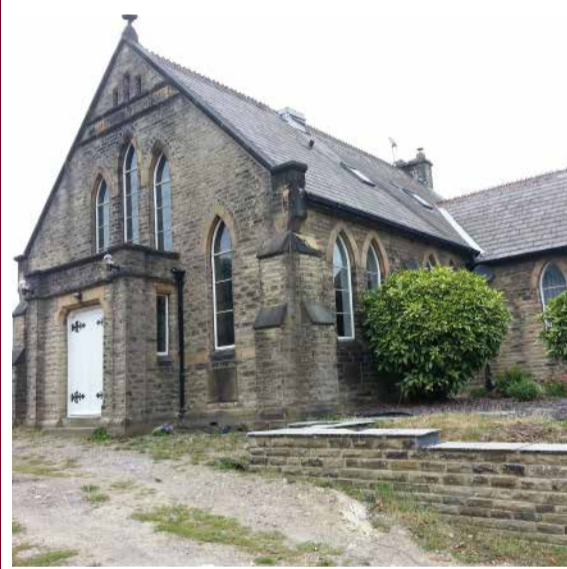
SIGNET PLANNING

Vision | Strategy | Action

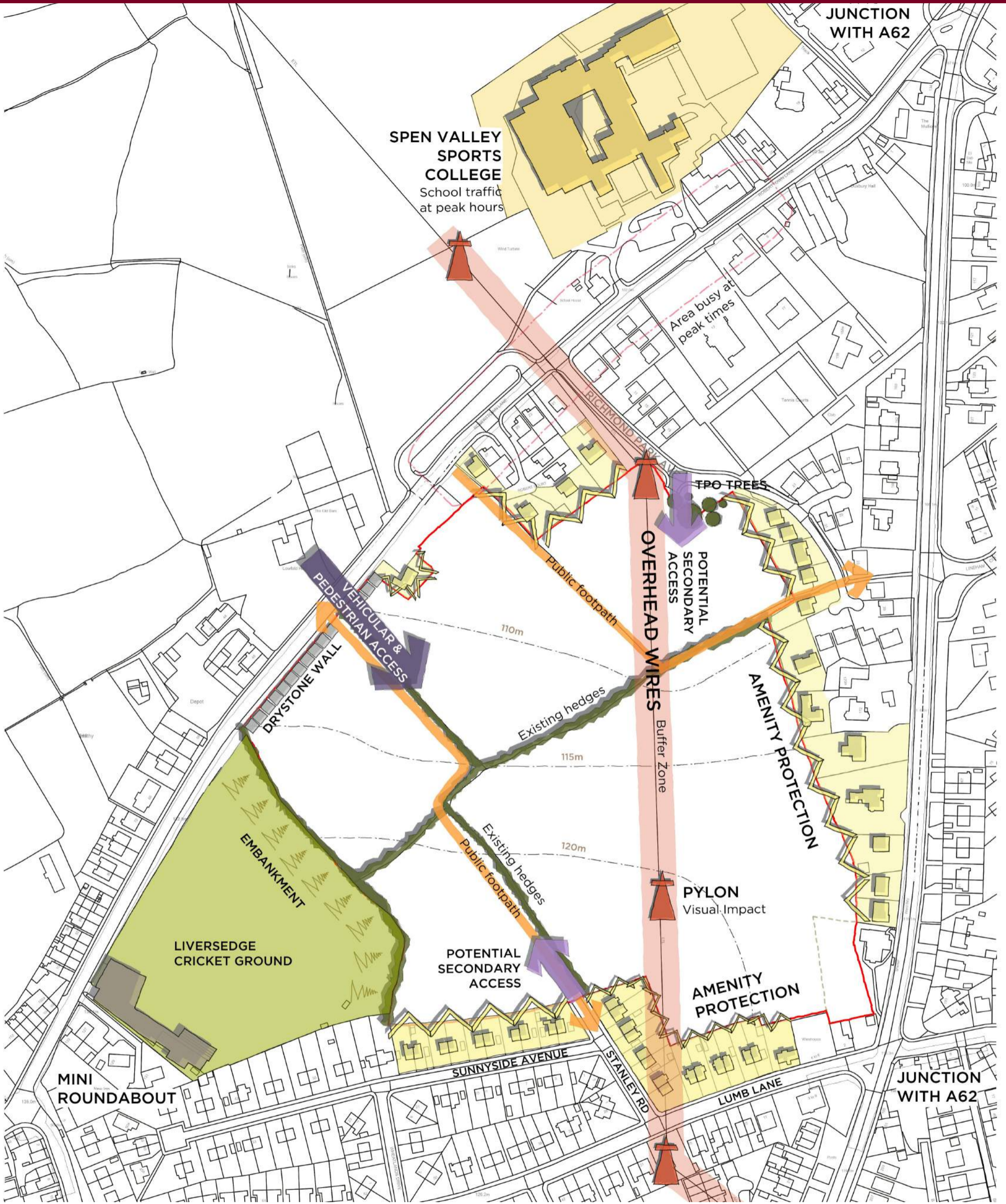


Concept Masterplan Document

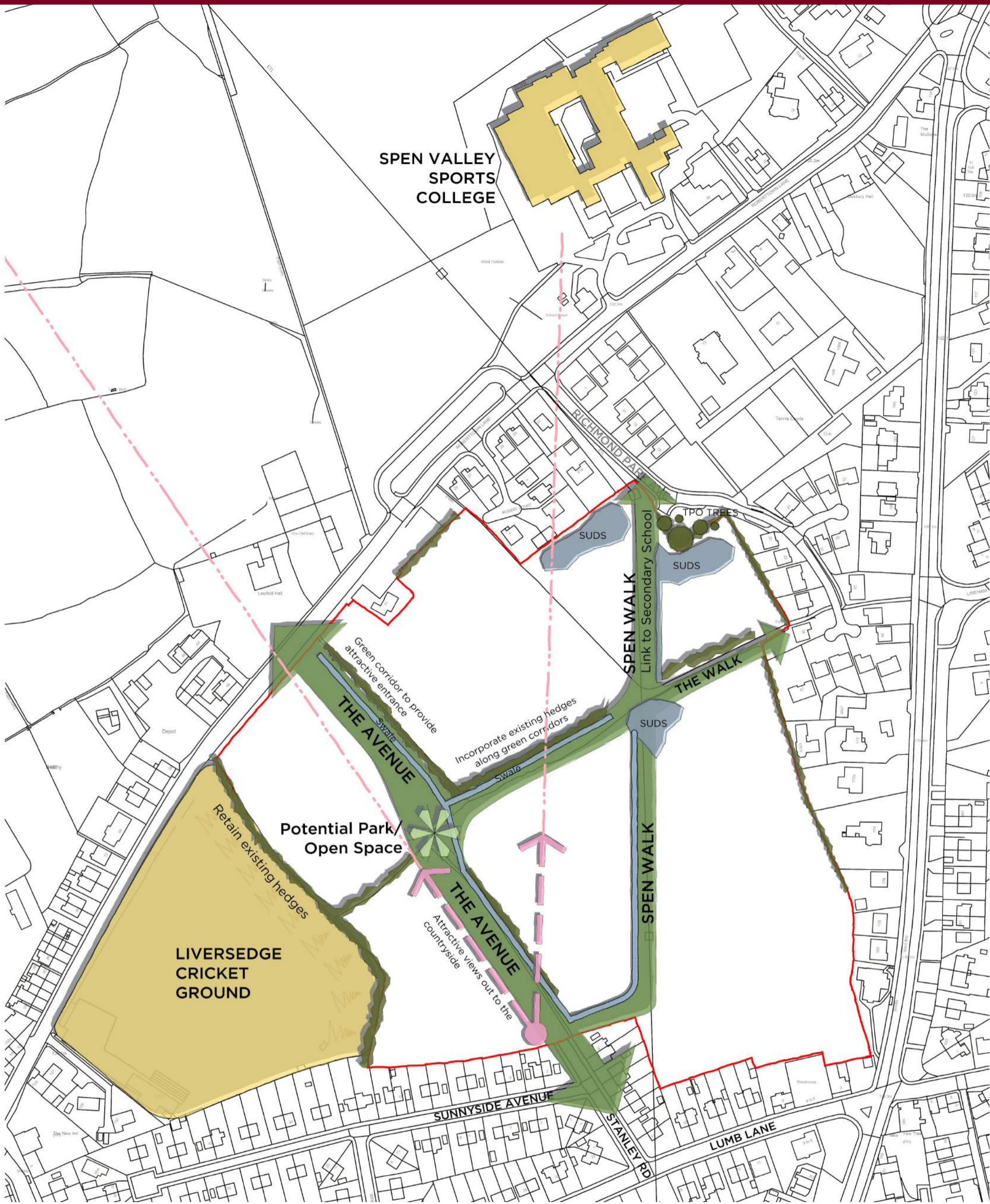
Promotion of Residential Development on Land at Roberttown, Liversedge



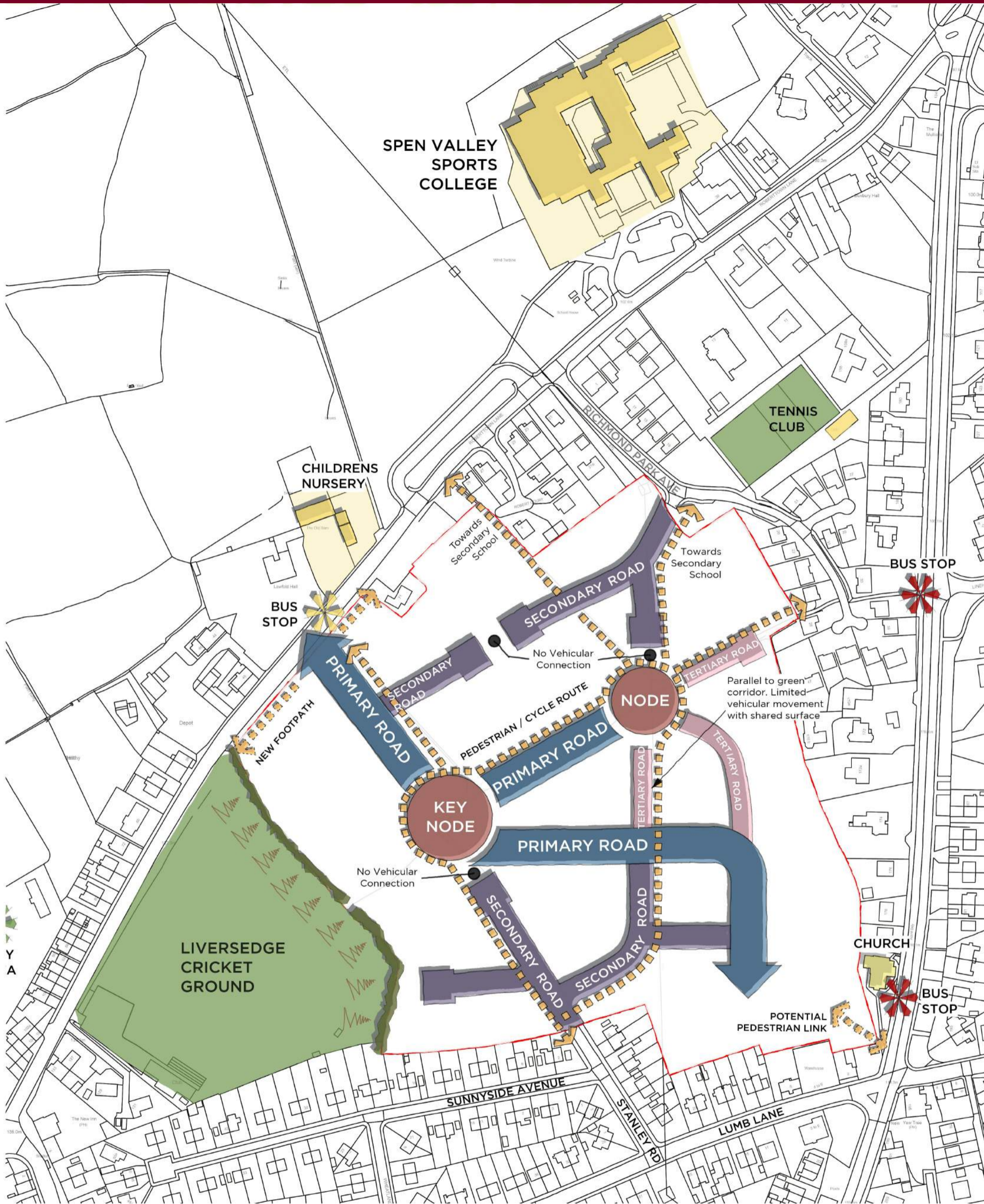
on behalf of Strata Homes Yorkshire Ltd



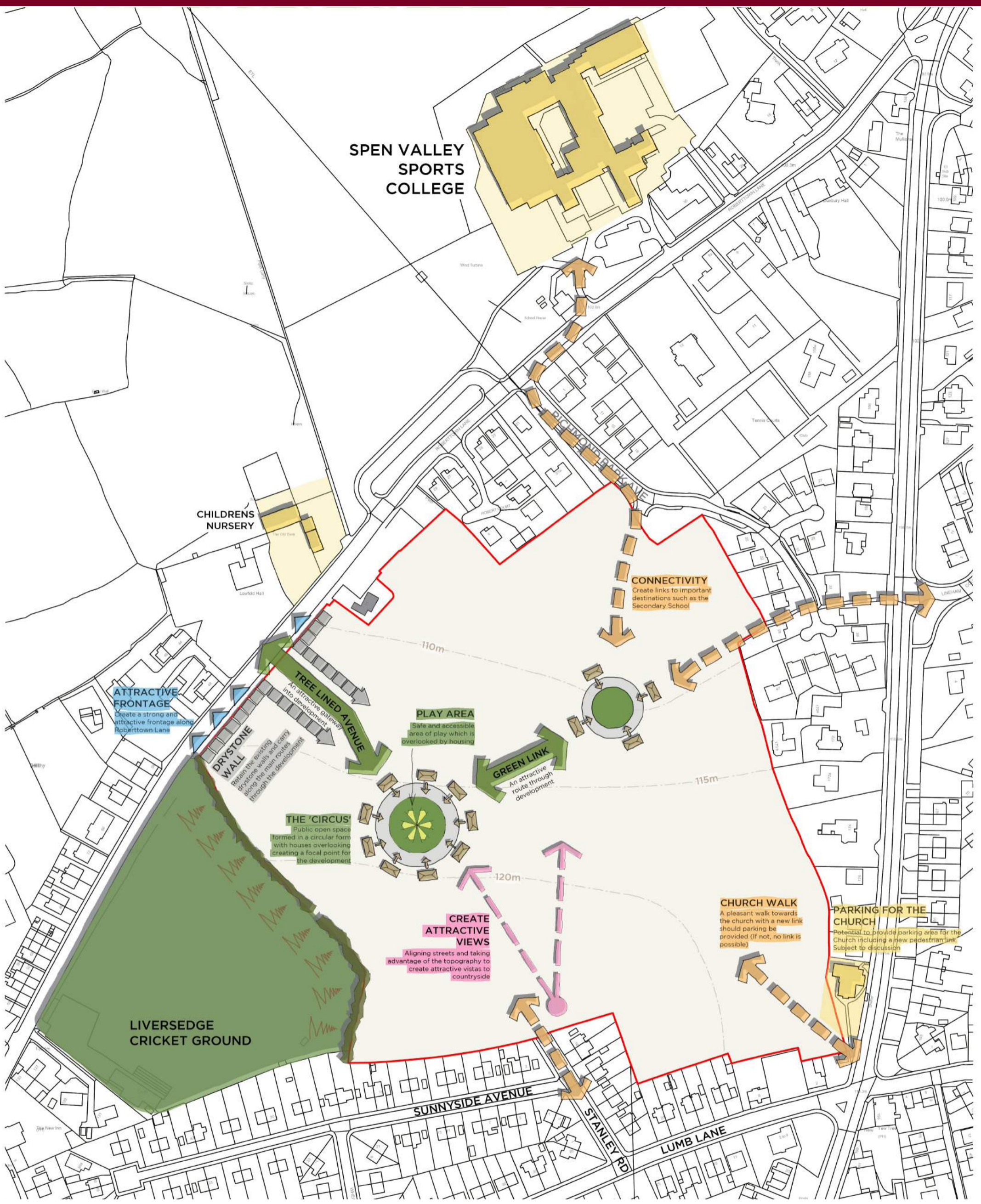
Parameters Plan



Green Infrastructure Framework



Movement Framework



**SPEN VALLEY
SPORTS
COLLEGE**

**CHILDRENS
NURSERY**

**ATTRACTIVE
FRONTAGE**
Create a strong and
attractive frontage along
Roberttown Lane

**DRYSTONE
WALL**
Retain the existing
drystone walls and carry
along the main routes
through the development

THE 'CIRCUS'
Public open space
formed in a circular form
with houses overlooking
creating a focal point for
the development

PLAY AREA
Safe and accessible
area of play which is
overlooked by housing

GREEN LINK
An attractive
route through
development

CONNECTIVITY
Create links to important
destinations such as the
Secondary School

**CREATE
ATTRACTIVE
VIEWS**
Aligning streets and taking
advantage of the topography to
create attractive vistas to
countryside

CHURCH WALK
A pleasant walk towards
the church with a new link
should parking be
provided (If not, no link is
possible)

**PARKING FOR THE
CHURCH**
Potential to provide parking area for the
Church including a new pedestrian link.
Subject to discussion

**LIVERSEGE
CRICKET GROUND**

SUNNYSIDE AVENUE

STANLEY RD

LUMB LANE

Placemaking Framework



Land Use Framework





SPEN VALLEY SPORTS COLLEGE

The primary route through the development with swales, stone walls and tree planting running parallel to the road, incorporating the existing hedgerows. A strong building line to encloses the street, directing views towards 'The Circus'

Maintaining existing pedestrian route towards important destinations such as Spen Valley Sports College

New wetland planting incorporating a surface water balancing area

Maintaining existing pedestrian route to the east

'The Courtyard' and 'The Square' are stable/barn style buildings set in squares which is in keeping with the rural character of the area

Balancing pond creates an attractive feature of the 'village green'

3 storey buildings orientated to face over the attractive views across the countryside to the north.

LIVERSEDGE CRICKET GROUND

'The Circus' is a public space formed in a circular form with houses overlooking and incorporating a play area, creating a focal point for the development.

Narrow green corridor, providing a cycle/pedestrian route towards 'The Circus' and through the development

Potential to provide a parking area for the Church

Concept Masterplan

up to 240 dwellings

Appendix B

TRICS Output Data

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : A - HOUSES PRIVATELY OWNED
 MULTI-MODAL VEHICLES

Selected regions and areas:

01	GREATER LONDON	
	BT BRENT	1 days
02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	WL WILTSHIRE	1 days
04	EAST ANGLIA	
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	2 days
	NT NOTTINGHAMSHIRE	1 days
06	WEST MIDLANDS	
	WM WEST MIDLANDS	2 days
	WO WORCESTERSHIRE	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	NY NORTH YORKSHIRE	1 days
08	NORTH WEST	
	LC LANCASHIRE	1 days
10	WALES	
	CF CARDIFF	1 days
11	SCOTLAND	
	FI FIFE	1 days
	HI HIGHLAND	1 days
	SR STIRLING	1 days
12	CONNAUGHT	
	GA GALWAY	1 days
13	MUNSTER	
	WA WATERFORD	1 days
15	GREATER DUBLIN	
	DL DUBLIN	1 days
17	ULSTER (NORTHERN IRELAND)	
	AR ARMAGH	1 days

Filtering Stage 2 selection:

Parameter:	Number of dwellings
Actual Range:	77 to 290 (units:)
Range Selected by User:	77 to 310 (units:)

Public Transport Provision:

Selection by:	Include all surveys
---------------	---------------------

Date Range:	01/01/05 to 22/10/12
-------------	----------------------

Selected survey days:

Monday	8 days
Tuesday	6 days
Wednesday	2 days
Thursday	1 days
Friday	5 days

Selected survey types:

Manual count	22 days
Directional ATC Count	0 days

Selected Locations:

Suburban Area (PPS6 Out of Centre)	9
Edge of Town	13

Selected Location Sub Categories:

Residential Zone	22
------------------	----

Filtering Stage 3 selection:

Use Class:

C3	22 days
----	---------

Population within 1 mile:

1,001 to 5,000	2 days
5,001 to 10,000	1 days
10,001 to 15,000	4 days
15,001 to 20,000	8 days
20,001 to 25,000	2 days
25,001 to 50,000	5 days

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	4 days
75,001 to 100,000	2 days
100,001 to 125,000	3 days
125,001 to 250,000	7 days
250,001 to 500,000	2 days
500,001 or More	2 days

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	8 days
1.1 to 1.5	13 days

Travel Plan:

No	22 days
----	---------

LIST OF SITES relevant to selection parameters

1	AR-03-A-01 BIRCHDALE MANOR	MIXED HOUSES		ARMAGH
	LURGAN			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		153	
	Survey date: TUESDAY		15/06/10	Survey Type: MANUAL
2	BT-03-A-01 KENTON ROAD	SEMI DETACHED		BRENT
	BRENT			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		82	
	Survey date: TUESDAY		20/11/07	Survey Type: MANUAL
3	CF-03-A-02 DROPE ROAD	MIXED HOUSES		CARDIFF
	CARDIFF			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		196	
	Survey date: FRIDAY		05/10/07	Survey Type: MANUAL
4	DL-03-A-06 UPPER KILMACUD ROAD	DETACHED		DUBLIN
	DUNDRUM			
	DUBLIN			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		147	
	Survey date: FRIDAY		30/04/10	Survey Type: MANUAL
5	EX-03-A-01 MILTON ROAD	SEMI -DET.		ESSEX
	CORRINGHAM			
	STANFORD-LE-HOPE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		237	
	Survey date: TUESDAY		13/05/08	Survey Type: MANUAL
6	FI-03-A-03 WOODMILL ROAD	MIXED HOUSES		FIFE
	DUNFERMLINE			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		155	
	Survey date: MONDAY		30/04/07	Survey Type: MANUAL
7	GA-03-A-02 BOHERMORE	TERRACED		GALWAY
	TOWNPARKS			
	GALWAY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		185	
	Survey date: TUESDAY		19/09/06	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

8	HI-03-A-11	BUNGALOWS		HIGHLAND
	STEVENSON ROAD			
	INSHES			
	INVERNESS			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		85	
	Survey date:	MONDAY	05/06/06	Survey Type: MANUAL
9	LC-03-A-22	BUNGALOWS		LANCASHIRE
	CLIFTON DRIVE NORTH			
	BLACKPOOL			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		98	
	Survey date:	TUESDAY	18/10/05	Survey Type: MANUAL
10	LN-03-A-01	MIXED HOUSES		LINCOLNSHIRE
	BRANT ROAD			
	BRACEBRIDGE			
	LINCOLN			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		150	
	Survey date:	TUESDAY	15/05/07	Survey Type: MANUAL
11	LN-03-A-02	MIXED HOUSES		LINCOLNSHIRE
	HYKEHAM ROAD			
	LINCOLN			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		186	
	Survey date:	MONDAY	14/05/07	Survey Type: MANUAL
12	NF-03-A-02	HOUSES & FLATS		NORFOLK
	DEREHAM ROAD			
	NORWICH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		98	
	Survey date:	MONDAY	22/10/12	Survey Type: MANUAL
13	NT-03-A-03	SEMI DETACHED		NOTTINGHAMSHIRE
	B6018 SUTTON ROAD			
	KIRKBY-IN-ASHFIELD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		166	
	Survey date:	WEDNESDAY	28/06/06	Survey Type: MANUAL
14	NY-03-A-06	BUNGALOWS & SEMI DET.		NORTH YORKSHIRE
	HORSEFAIR			
	BOROUGHBRIDGE			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		115	
	Survey date:	FRIDAY	14/10/11	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

15	SF-03-A-01	SEMI DETACHED		SUFFOLK
	A1156 FELIXSTOWE ROAD			
	RACECOURSE			
	IPSWICH			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		77	
	Survey date:	WEDNESDAY	23/05/07	Survey Type: MANUAL
16	SF-03-A-02	SEMI DET./TERRACED		SUFFOLK
	STOKE PARK DRIVE			
	MAIDENHALL			
	IPSWICH			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		230	
	Survey date:	THURSDAY	24/05/07	Survey Type: MANUAL
17	SR-03-A-01	DETACHED		STIRLING
	BENVIEW			
	STIRLING			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		115	
	Survey date:	MONDAY	23/04/07	Survey Type: MANUAL
18	WA-03-A-02	DETACHED		WATERFORD
	MAYPARK LANE			
	WATERFORD			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		290	
	Survey date:	MONDAY	17/11/08	Survey Type: MANUAL
19	WL-03-A-01	SEMI D./TERRACED W.	BASSETT	WILTSHIRE
	MAPLE DRIVE			
	WOOTTON BASSETT			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		99	
	Survey date:	MONDAY	02/10/06	Survey Type: MANUAL
20	WM-03-A-01	TERRACED		WEST MIDLANDS
	FOLESHILL ROAD			
	FOLESHILL			
	COVENTRY			
	Suburban Area (PPS6 Out of Centre)			
	Residential Zone			
	Total Number of dwellings:		79	
	Survey date:	FRIDAY	03/02/06	Survey Type: MANUAL
21	WM-03-A-03	MIXED HOUSING		WEST MIDLANDS
	BASELEY WAY			
	ROWLEYS GREEN			
	COVENTRY			
	Edge of Town			
	Residential Zone			
	Total Number of dwellings:		84	
	Survey date:	MONDAY	24/09/07	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

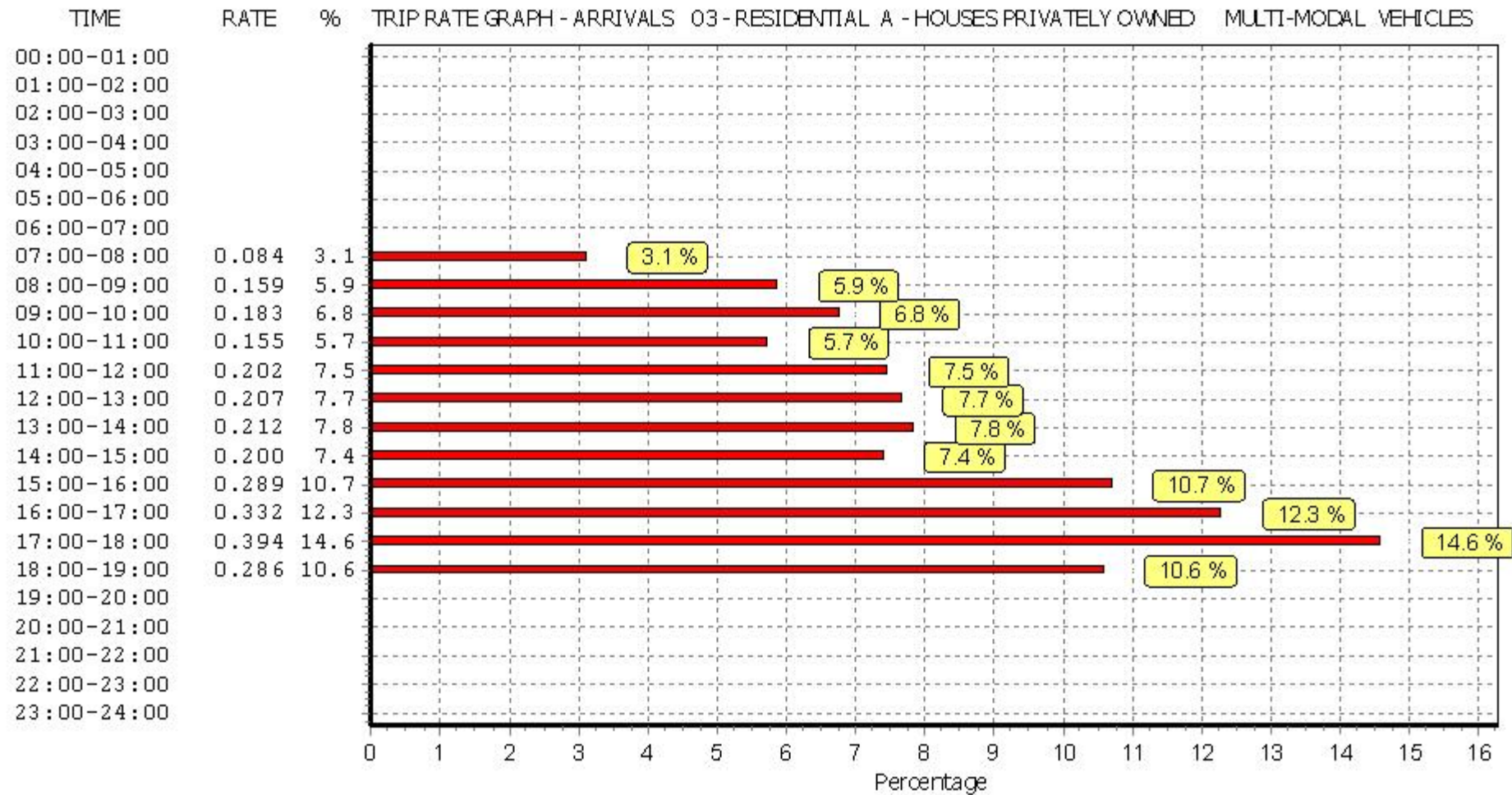
22	WO-03-A-03	DETACHED	WORCESTERSHIRE
	BLAKEBROOK		
	BLAKEBROOK		
	KIDDERMINSTER		
	Suburban Area (PPS6 Out of Centre)		
	Residential Zone		
	Total Number of dwellings:	138	
	Survey date: FRIDAY	05/05/06	Survey Type: MANUAL

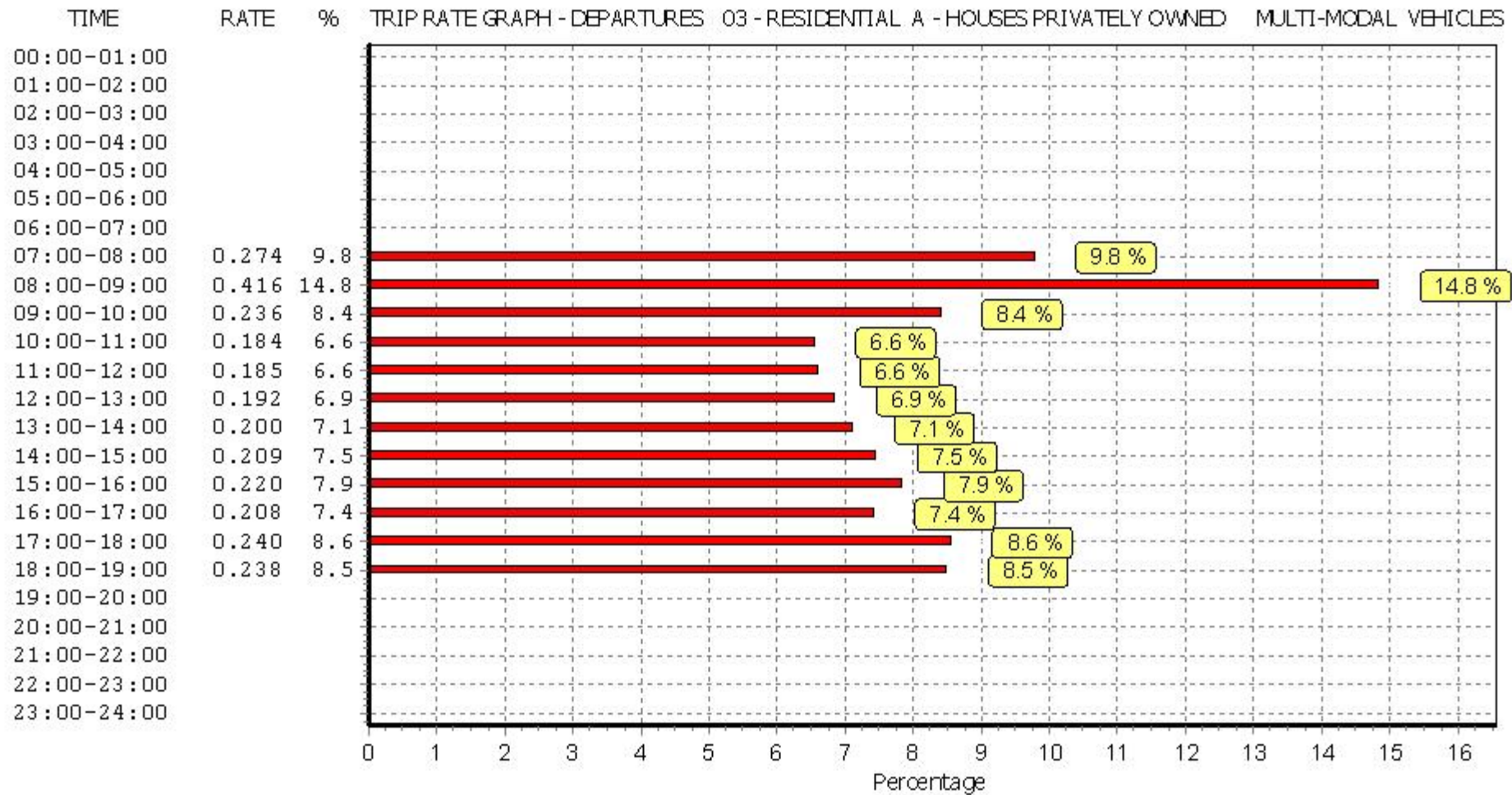
TRIP RATE for Land Use 03 - RESIDENTIAL/A - HOUSES PRIVATELY OWNED
 MULTI-MODAL VEHICLES
 Calculation factor: 1 DWELLS
 BOLD print indicates peak (busiest) period

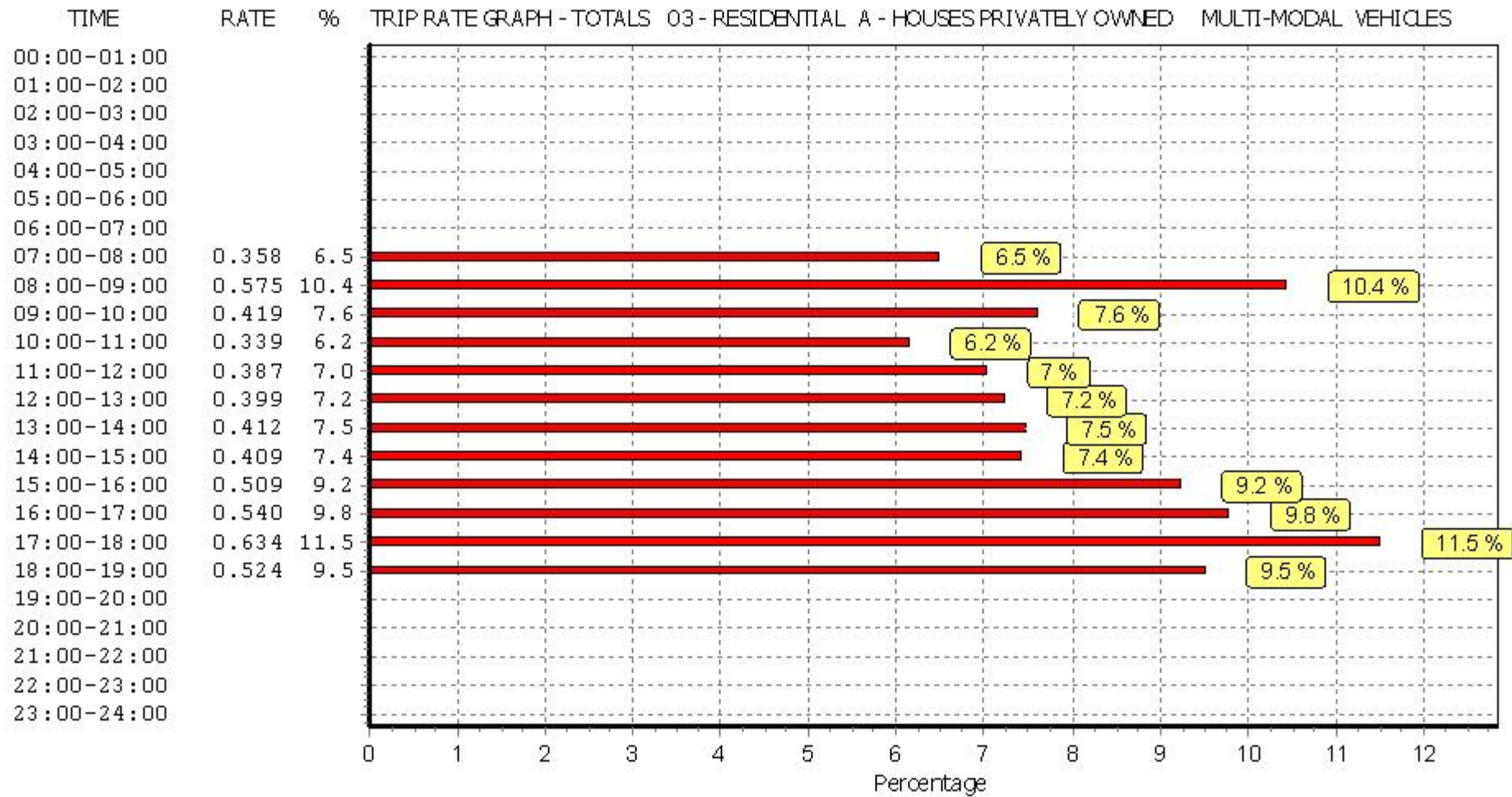
Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	22	144	0.084	22	144	0.274	22	144	0.358
08:00 - 09:00	22	144	0.159	22	144	0.416	22	144	0.575
09:00 - 10:00	22	144	0.183	22	144	0.236	22	144	0.419
10:00 - 11:00	22	144	0.155	22	144	0.184	22	144	0.339
11:00 - 12:00	22	144	0.202	22	144	0.185	22	144	0.387
12:00 - 13:00	22	144	0.207	22	144	0.192	22	144	0.399
13:00 - 14:00	22	144	0.212	22	144	0.200	22	144	0.412
14:00 - 15:00	22	144	0.200	22	144	0.209	22	144	0.409
15:00 - 16:00	22	144	0.289	22	144	0.220	22	144	0.509
16:00 - 17:00	22	144	0.332	22	144	0.208	22	144	0.540
17:00 - 18:00	22	144	0.394	22	144	0.240	22	144	0.634
18:00 - 19:00	22	144	0.286	22	144	0.238	22	144	0.524
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			2.703			2.802			5.505

Parameter summary

Trip rate parameter range selected: 77 - 290 (units:)
 Survey date range: 01/01/05 - 22/10/12
 Number of weekdays (Monday-Friday): 22
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0







Fore Consulting Limited
2 Queen Street
Leeds
LS1 2TW

0113 380 0250
enquiries@foreconsulting.co.uk
www.foreconsulting.co.uk

