

TRANSPORT STATEMENT

Built Group Ltd

Proposed Residential Development at Greenes Road, Whiston

September 2021

Transport Statement
VN212003

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1 Introduction

- 1.1 This Transport Statement (TS) has been prepared by Vectos on behalf of Built Group Ltd to consider highways and transport issues related to a planning application for a proposed residential development of 22 apartments at land on the corner of Greenes Road and Paradise Lane in Whiston, Knowsley.
- 1.2 Whilst the proposed development is relatively small in scale, this TS has been prepared to assist the local planning and highway authority (Knowsley Metropolitan Borough Council – KMBC) in the positive determination of the planning application.

Summary of the Proposals

- 1.3 The proposal is for the construction of 22 new apartments on currently vacant land at the corner of Greenes Road and Paradise Lane in Whiston. A car park for 22 cars will also be provided within the site.
- 1.4 Access will be via a new access junction onto Paradise Lane.

Scope of Report

- 1.5 This TS will consider the following:
- Relevant local and national transport policy and guidance.
 - The site and the local transport conditions.
 - Access to the site by sustainable modes of transport.
 - Proposed access, car and cycle parking arrangements.
 - Deliveries and servicing at the site.
 - The proposed trip generation associated with the site.
 - Assessment of the anticipated effects of the development traffic upon the surrounding highway network.

Report Structure

- 1.6 The remainder of the report is structured as follows:
- Section 2 provides a review of local and national transport policies and guidance relevant to the proposals.
 - Section 3 considers the site location and baseline transport conditions in the vicinity of the site, including an assessment of parking and the highway safety record.

- Section 4 provides an audit of the accessibility of the site by sustainable transport modes, including reference to the KMBC Minimum Accessibility Standard Assessment (MASA).
- Section 5 details the development proposals including access, servicing, car and cycle parking provision.
- Section 6 provides an assessment of the forecast trip generation of the development and consideration of effects upon surrounding transport networks.
- Section 7 provides a framework for a Travel Plan for the development.
- Section 8 provides a summary and conclusion.

2 Transport Policy and Guidance

National Planning Policy Framework

- 2.1 The National Planning Policy Framework (NPPF) was updated on 20th July 2021 and sets out the government's planning policies for England and how these are expected to be applied. This revised Framework replaces the previous version of the NPPF first published in 2012. At the heart of the Framework is a presumption in favour of sustainable development.
- 2.2 As part of promoting sustainable transport, paragraph 110 of the NPPF states that in assessing applications for development, it should be ensured that:
- *“appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location.*
 - *safe and suitable access to the site can be achieved for all users;*
 - *the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code 46; and*
 - *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree”.*
- 2.3 Paragraph 111 goes on to state that, *“development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe”.*
- 2.4 It is considered that the proposed development site accords with the aims of the NPPF as it is well located for access by sustainable transport modes, which helps to maximise the use of public transport, cycling and walking for accessing the site.

Local Policy and Guidance

Knowsley Replacement Unitary Development Plan (UDP) (2016) Saved Policies

- 2.5 The Knowsley Replacement UDP was adopted in June 2006 but much of it has been replaced by the Local Plan Core Strategy. There are 39 UDP Policies that continue to be saved, with those relevant to transport detailed below.
- 2.6 **Policy T7** ‘New Development and Walking and Cycling Routes’ states that:
- “New development should preserve and where possible enhance the walking & cycling network, as it can help enhance and provide access to green corridors & the countryside as well as promoting and encouraging exercise and healthy living for all.*

In considering proposals for new development which will block (either partially or wholly) an existing right of way or other existing or proposed walking or cycling route, a balanced consideration of the following factors will be undertaken:

- a) The contribution that the route makes or will make to the walking and/or cycling network in the area and the harm that would be caused to accessibility between existing uses in the surrounding area if the route were no longer available; and*
- b) Any benefits to community safety or security that could arise from the closure of the route”.*

2.7 It should be noted that there are no Public Rights of Way within the site.

Knowsley Local Plan Core Strategy

2.8 The Local Plan Core Strategy sets out the vision, objectives and policies which will guide development within Knowsley up to the year 2028. **Policy CS7** replaces Policy T6 from the UDP and concerns Transport Networks. It addresses the overall transport strategy for the area, the requirements for new development and strategic transport schemes and programmes.

2.9 In relation to the overall transport strategy, the policy states that:

“Planning powers and other interventions will be used to support a sustainable and integrated transport system that will:

- a) Support the economy by facilitating efficient movement of people and goods within the borough and linking to Liverpool City Centre, the Port of Liverpool, Liverpool John Lennon Airport and other destinations in the surrounding area;*
- b) Help meet the development needs of the borough through to 2028;*
- c) Ensure people can get to where they need to by a choice of walking, cycling and public transport;*
- d) Enhance road safety;*
- e) Seek to reduce carbon emissions; and*
- f) Improve the health and wellbeing of local people”.*

2.10 In relation to requirements for new development, the policy states that:

“New development will be required to be:

- a) Located and designed to prioritise accessibility and sustainable modes of travel through a choice of walking, cycling, public transport, and incorporate access for private vehicles. Where deficiencies are identified, developer contributions will be required to improve the accessibility of the location;*
- b) Located and designed to ensure that larger scale proposals (attracting a lot of visitors, customers and/or employees) are located in the most accessible locations;*

c) Where subject to a planning application, accompanied (except in the case of smaller scale proposals) by Transport Assessments and/or Travel Plans;

d) In compliance with adopted cycle, car, disabled and service vehicle parking standards for different types and scales of new development;

e) Inclusive of measures that will mitigate carbon emissions and improve air quality where appropriate; and

f) Consistent with safeguarding arrangements that secure the operational integrity and safety of Liverpool John Lennon Airport”.

Knowsley Ensuring a Choice of Travel Supplementary Planning Document (SPD) (2010)

2.11 The Ensuring a Choice of Travel SPD aims to show how development can satisfy the requirements of accessibility policies contained within Knowsley’s Development Plan. It aims to assist developers in ensuring that their proposals are accessible, promote sustainable travel patterns and minimise the congestion and pollution caused by vehicles. The main objective of the SPD is to ensure a good choice of travel modes to all new development.

2.12 The SPD contains the Council’s parking standards to be applied to new development. It also sets out expectations for the content of Transport Assessments and Travel Plans prepared in support of proposed developments. The parking standards applicable to residential development are reproduced below.

Land Use	Unit Size	Other Areas (Maximum)
C3 Dwelling Houses	1-bed	1 space
	2-3 bed	2 spaces

Table 2.1: Knowsley Council Car Parking Standards

2.13 The SPD also contains the Minimum Accessibility Standard Assessment (MASA), which is a standardised accessibility assessment scoring system developed in consultation with other Merseyside authorities, and used to help in assessing the accessibility of proposed developments. The results of the assessment can be used to inform potential contributions requested by the Council from developers towards the cost of providing necessary accessibility improvements for pedestrians, cyclists and public transport users.

Summary

2.14 The national and local transport planning policy context for the development has been reviewed. The proposed development meets the transport policy goals set out in the NPPF, being a sustainable development in terms of transport as it is located in an accessible area with good access to everyday facilities and amenities without the need to travel by car.

- 2.15 Local policy reinforces the emphasis placed upon sustainable travel within the NPPF, highlighting the need to design for pedestrians and cyclists as a priority. The proposals have been developed taking into account these policy aims, and thought has been given as to how active travel modes can be promoted through good site layout design.

3 Site Location and Existing Transport Conditions

Site Location

- 3.1 The site comprises vacant land at the corner of Greenes Road and Paradise Lane in the Whiston area within Knowsley Borough Council. The location of the site is shown in **Figure 3.1**.

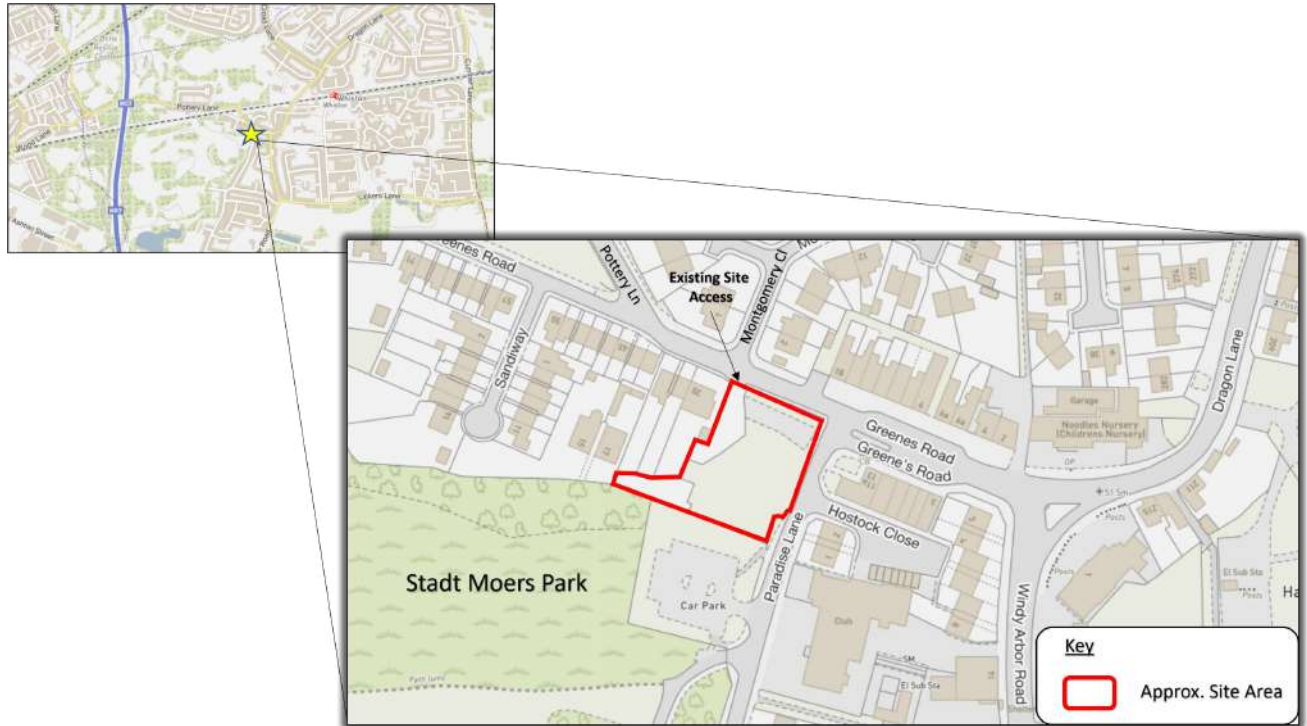


Figure 3.1: Site Location Plan

- 3.2 It can be seen from Figure 3.1 that the site lies within an established residential area at the edge of Stadt Moers Park. Greenes Road forms the northern boundary of the site and Paradise Lane forms the eastern boundary. There are residential properties to the west and Stadt Moers car park lies to the south of the site. To the east along Greenes Road there are some local shops and amenities including a convenience store and several eateries.
- 3.3 Greenes Road forms a signal junction with Dragon Lane and Windy Arbor Road around 90m to the east of the site.
- 3.4 It appears that the site has most recently accommodated industrial / storage type activities, however it is understood that the site has been vacant now for several years.

Surrounding Highway Network

- 3.5 Greenes Road is a primarily residential road extending west from the junction with Windy Arbor Road and becomes Pottery Lane that provides a link to Huyton to the west, after crossing the M57. It is subject to a 30mph speed limit with footways and street lighting along both sides of the road. In the vicinity of the site the carriageway is approximately 6m in width, and there are double yellow line

waiting restrictions on both sides of the road. There is a cul-de-sac (Montgomery Close) accessed on the northern side of Greenes Road opposite the northwest corner of the site.

- 3.6 Paradise Lane is a residential street forming the eastern boundary of the site. It provides a link to residential areas to the south and can be used as a link through to Windy Arbor Road. It is subject to a 30mph speed limit and is lit. The carriageway width varies in the vicinity of the site, but is at least 4.8m wide. There are double yellow lines in place along both sides of the road adjacent to the site with an access to a cul-de-sac (Hostock Close) also opposite the site. There is footway on both sides of the road, however on the western side adjacent to the site the footway narrows to an effective width of zero such that pedestrians on that side would have to walk in the road.
- 3.7 There is a car parking area for the Stadt Moers Park just to the south of the site, with access to the car park from Paradise Lane.
- 3.8 Paradise Lane forms a three-arm priority junction arrangement with Greenes Road at the northeast corner of the site. The Greenes Road / Windy Arbor Road / Dragon Lane signal junction is approximately 70m to the east of this junction. To the north Dragon Lane connects to the A57 and to the south Windy Arbor Road provides access to the M62 Junction 6 (Tarbock Island roundabout). The Greenes Road / Windy Arbor Road / Dragon Lane junction has recently been upgraded to provide improved highway capacity and enhanced facilities for pedestrians. This is illustrated in **Figure 3.2**.



Figure 3.2: Plan Showing Site in Relation to Upgraded Greenes Road / Windy Arbor Road / Dragon Lane Signal Junction

Existing Site Access

- 3.9 The site has an existing access point from Greenes Road at the northwest corner of the site, opposite Montgomery Close. The access is also shared as the driveway for No. 35 Greenes Road adjacent. No. 35 is also within the applicant's ownership. The site has been vacant for several years and the access point is currently only in use as a driveway for No. 35.
- 3.10 The access is a priority arrangement with lowered kerbs at either side and is shown in **Figure 3.3**.



Figure 3.3: Existing Site Access off Greenes Road

On-Street Car Parking Assessment

- 3.11 An on-street car parking survey was undertaken to capture the on-street parking situation within 200m of the site. This survey followed the principles of the Lambeth parking survey methodology employed in many London Boroughs, and adopted by other local authorities, when assessing car parking effects of new residential development.
- 3.12 200m is approximate to a 2 to 3-minute walk and covers the area where residents of a proposed development may want to park. The survey was undertaken on two weekday mornings in July 2021, between 05:00-05:30, also in line with the Lambeth methodology, which recommends that a snapshot survey between the hours of 0030-0530 should be undertaken on two separate weekday nights (i.e. Monday, Tuesday, Wednesday or Thursday), as this should be when residents are likely to be home and therefore on-street car parking demand should be highest.
- 3.13 The 200m walk catchment from the site covers parts of Greenes Road, Paradise Lane, Dragon Lane, Windy Arbor Road, Montgomery Close, Jubilee Drive and Hostock Close and Pottery Lane. The survey was undertaken on Wednesday 7th and Thursday 8th July 2021 by Total Traffic Surveys Ltd. The full survey results are included at **Appendix A**, whilst a summary for Greenes Road and Paradise Lane is provided in **Table 3.1**.

		Total Parked Vehicles	
		Wednesday	Thursday
Greenes Road	51 unrestricted on-road spaces	21 (41% stress)	19 (37% stress)
Paradise Lane	95 unrestricted on-road spaces	13 (14% stress)	13 (14% stress)

Table 3.1: Summary of Parking Survey Greenes Road and Paradise Lane

- 3.14 It can be seen from Table 3.1 that some on-street parking does occur on Greenes Road and Paradise Lane, but the parking survey revealed a high level of spare capacity for legal on-street car parking on these roads.

Highway Safety Record

- 3.15 A review of the road accident data has been undertaken with reference to the CrashMap online database for the most recent five-year period for which data is available (2016 – 2020). The accident plot is shown in **Figure 3.4**.

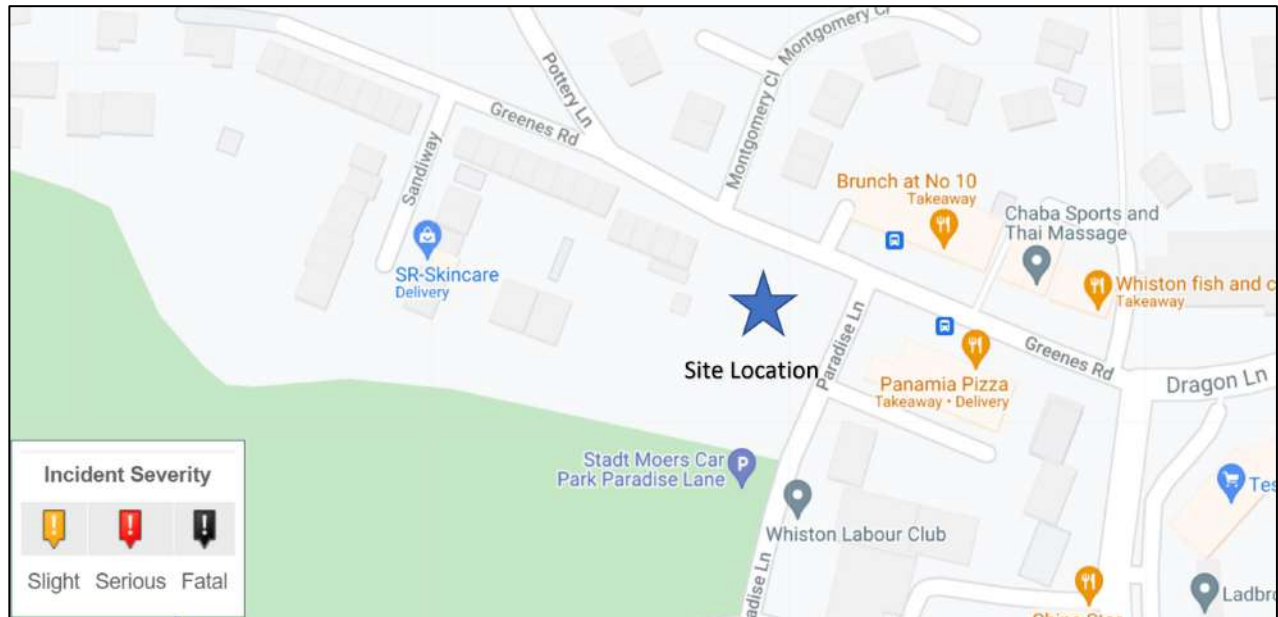


Figure 3.4: Accident Location Plot

- 3.16 It can be seen from Figure 3.4 that there have been no recorded accidents along Greenes Road or Paradise Lane in the vicinity of the site. The accident record does therefore not indicate any highway safety issue that would be materially affected by the development proposals.

Summary

- 3.17 The site comprises vacant land at the corner of Greenes Road and Paradise Lane in the Whiston area, under the jurisdiction of Knowsley Metropolitan Borough Council. The site is generally surrounded by residential land uses to the north and west, with some local shops and amenities also present to the east. To the south of the site is Stadt Moers Park.
- 3.18 The surrounding highway network has been reviewed and the site is well located in relation to the existing highway network. A parking survey has been undertaken and this revealed that some on-street parking does occur on Greenes Road and Paradise Lane, but the parking survey revealed a high level of spare capacity for legal on-street car parking on these roads.
- 3.19 A review of highway safety has been undertaken via reference to accident records on the Crashmap database, and it is concluded that there are no highway safety concerns that would arise from the development proposals.

4 Accessibility Audit

Walking

- 4.1 Guidelines produced by the Institution of Highways of Transportation (IHT) within their document entitled 'Guidelines for Providing for Journeys on Foot', state that the preferred maximum walking distance for developments to town centres is 800m. The same document also identifies a distance of 2km as being a 'preferred maximum' distance for commuting, school and sight-seeing journeys, whilst 400m is the preferred maximum for access to a bus stop and 1.2km a preferred maximum for a number of other facilities.
- 4.2 There are numerous amenities and facilities within a reasonable walking distance of the site, and some of these are summarised in **Table 4.1**.

Local Amenity / Facility	Walk Distance from Site
Bus stops on Greenes Road	<50m
Local Express Convenience Store	<50m
Various Takeaways on Greenes Road	<100m
Dentist, Greenes Road	<100m
Stadt Moers Park	<100m
Noodles Nursery	100m
Tesco Express	120m
Whiston Post Office	170m
Halsnead Primary School	200m
Whiston Health Centre	330m
Whiston Town Hall	430m
Whiston Rail Station	480m
Little Cedars Montessori Ltd	650m
Whiston Willis Primary Academy	1,100m

Table 4.1: Selected Local Amenities Walk Distances

- 4.3 The site is therefore very well located to encourage everyday trips to be made on foot, being within walking distance of a wide range of key amenities and facilities including a supermarket.
- 4.4 There are footways with street lighting along both sides of Greenes Road and controlled pedestrian crossing facilities at the Windy Arbor Road / Dragon Lane signal junction allowing pedestrians to cross all arms of the junction. Dropped kerbs with tactile paving are also provided at this junction.
- 4.5 The pedestrian infrastructure in the vicinity of the site is therefore of a good standard and the development proposals include widening of the existing footways on Greenes Road and Paradise Lane adjacent to the site to enhance the existing provision.

- 4.6 The internal site layout will integrate pedestrian access with the existing footways that are provided along Paradise Lane.

Cycling

- 4.7 It is generally accepted that the bicycle is an effective mode for short trips of up to 3 to 5 miles (5 - 8km). A 5 km cycle catchment from the site would equate to a journey of around 25 minutes at a leisurely cycle speed of 12 km per hour, and this catchment represents the lower threshold of the potential cycle catchment of the site and includes large residential areas such as Whiston, Rainhill, Huyton, Roby, Huyton Quarry, Tarbock, Halsnead Park, Prescot and Ecclestone.

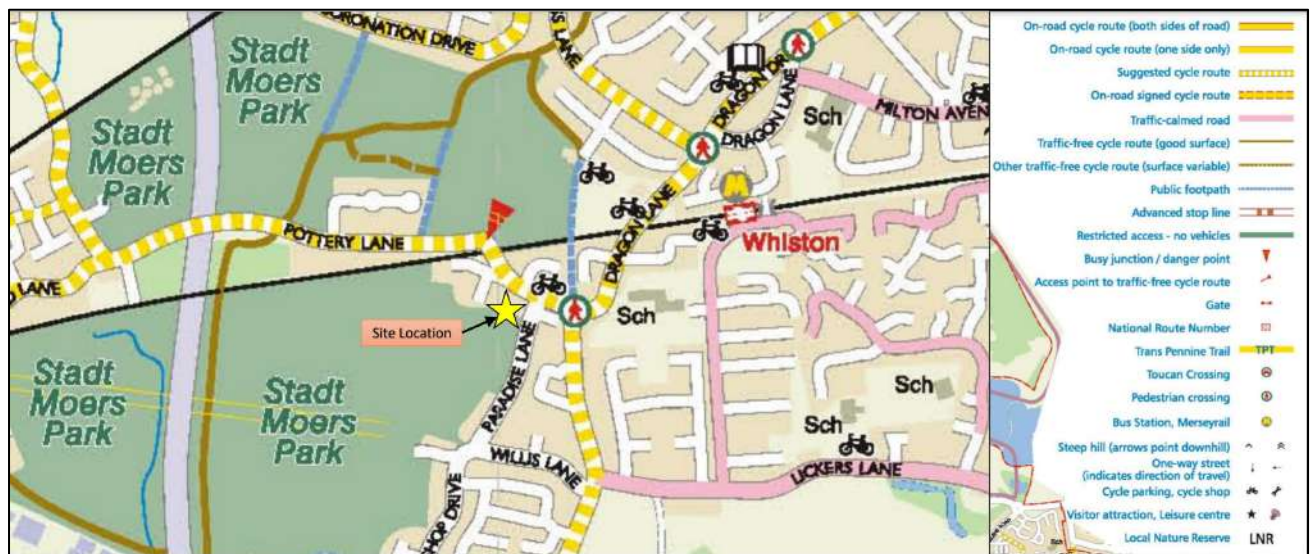


Figure 4.1: Extract from Knowsley Cycle Map

- 4.8 It can be seen from **Figure 4.1** that Greenes Road and Pottery Lane are designated as suggested cycle routes and this extends along Windy Arbor Road and Dragon Lane to connect to the wider area. There is an off-road cycle track within Stadt Moers Park, which forms part of National Cycle Network route 56, and also provides a route into Whiston across Pottery Lane to the west of the site. The Greenes Road / Windy Arbor Road / Dragon Lane signal junction provides Advanced Stop Lines (ASL) for cyclists on two of the approach lanes. Whiston Rail Station is within a circa two-minute cycle journey and there are five cycle hoops provided at the station.
- 4.9 The site is therefore considered to be suitably accessible by cycle.

Public Transport – Bus and Rail

- 4.10 Guidance published by the IHT 'Planning for Public Transport in Developments', recommends that the maximum distance to a bus stop from new development should be 400m – roughly equating to a five-minute walk.
- 4.11 The nearest bus stops are located within 100m of the site on Greenes Road and there are also stops within 400m of the site on Windy Arbor Road. These stops are served by numerous bus services, and an extract from the Liverpool Bus Map is shown in **Figure 4.2**.

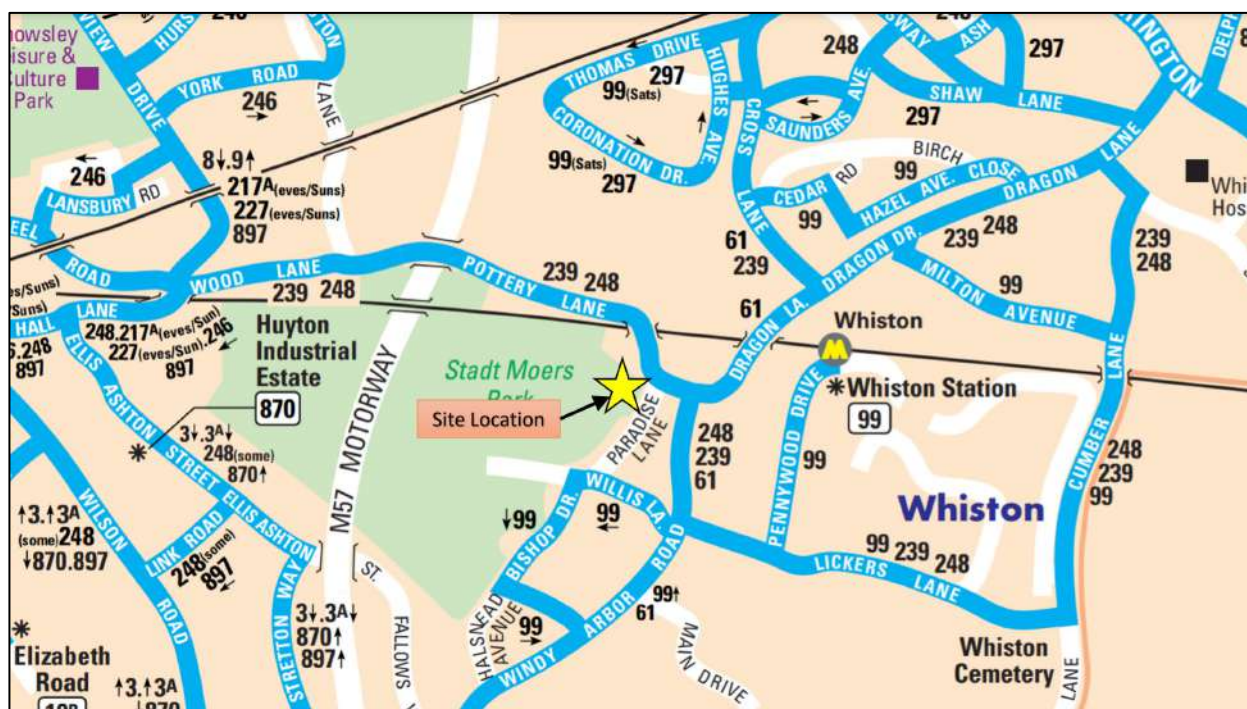


Figure 4.2: Extract from Liverpool Bus Map

- 4.12 The public bus services available from the stops on Greenes Road and Windy Arbor Road are summarised in **Table 4.2**.

Service	Route	Typical Frequency
Greenes Road		
239	Prescot – Broadgreen Hospital Circular	40 mins
248	Huyton – Prescot Circular	60 mins (early morning / evening only)
Windy Arbor Road		
61	Liverpool – Halton Hospital	40 mins
239	Prescot – Broadgreen Hospital Circular	40 mins
248	Huyton – Prescot Circular	60 mins (early morning / evening only)

Table 4.2: Summary of Public Bus Services Within 400m of the Site

- 4.13 It can be seen from Table 4.2 that the bus services available within 400m of the site provide connections to a wide range of local destinations including the Liverpool City Centre, Huyton, Halton, Broadgreen Hospital and Prescot. All services operate on weekdays with the 61 also operating on Saturdays and Sundays and the 239 and 248 also operating on Saturdays.
- 4.14 The bus stops on Greenes Road provide a flagpole arrangement with timetable information. Those on Windy Arbor Road provide boarding kerbs, shelters, seating and timetable information.

- 4.15 The closest rail station to the site is Whiston Rail Station, which is located around a 480m walk distance away to the northeast and can be accessed via the footways on Greenes Road, Dragon Lane, Ropers Bridge Close and a short footpath link to the station entrance. This is an acceptable walk distance to rail stations according to the IHT document 'Guidelines for Providing for Journeys on Foot'. Whiston lies on the Crewe – Liverpool line with direct connections provided to many local and regional destinations including Liverpool Lime Street, Edge Hill, Roby, Huyton, St Helens Junction, Manchester Piccadilly and Wilmslow.
- 4.16 Travel by bus and rail therefore represents a feasible option for journeys to and from the site, which will help to facilitate sustainable and active travel amongst future residents.

Minimum Accessibility Standard Assessment (MASA)

- 4.17 A MASA has been carried out to provide an indication of the site's accessibility using the Council's accessibility tool. The completed MASA is provided at **Appendix B** with a summary provided in **Table 4.3**.

	Walking	Cycling	Public Transport	Vehicle Access / parking
Target Score (medium residential development in 'other urban' location)	4	3	5	1
Actual Score	4	3	4	1

Table 4.3: MASA Summary

- 4.18 Table 4.3 shows that the site scores well for the MASA, meeting or exceeding the target score in all but the public transport categories. Whilst the public transport score is below the target of 5, as detailed in this section, the site is considered to be highly accessible by public transport with bus services available from Greenes Road and Windy Arbor Road within 400m of the site and rail services available from Whiston Station within 480m of the site. The existing bus infrastructure has been found to be of a good standard. Given these facts and the small scale of the residential development proposals, it would not be necessary for a contribution to be made to public transport to make the development acceptable in planning terms.

Travel Plan

- 4.19 A Travel Plan Framework is provided in Section 7 of this report, to outline the potential measures that could be employed at the proposed development to help promote journeys by active travel and public transport modes amongst residents and visitors.

Summary

- 4.20 The site is very well located to facilitate everyday trips by foot, being within walking distance of a wide range of key amenities and facilities. The pedestrian infrastructure in the vicinity of the site is of a good standard and those using the site will benefit from this provision. The existing controlled

crossing facilities at the Greenes Road / Windy Arbor Road / Dragon Lane signal junction will facilitate safe crossing of these roads.

- 4.21 The site is within a short walk of bus stops on Greenes Road and Windy Arbor Road, and services provide direct connections to a wide range of destinations including Liverpool City Centre, Prescot and Huyton. Whiston Rail Station is easily accessible from the site to the northeast, providing links to local and regional destinations such as Liverpool Lime Street, Edge Hill, Roby, Huyton, St Helens Junction, Manchester Piccadilly and Wilmslow. Travel by bus and rail therefore represents a feasible option for journeys to and from the site, which will help to facilitate sustainable and active travel amongst future residents.
- 4.22 A MASA has been undertaken for the site, in line with Knowsley Council's policies, and the site scores well for all areas. Whilst the public transport score is below the target of 5, as detailed in this section, the site is considered to be highly accessible by public transport with bus services available from Greenes Road and Windy Arbor Road within 400m the site and rail services available from Whiston Station within 480m of the site.

5 Development Proposals

Proposals

- 5.1 The planning application is made in detail and seeks permission for a residential development of 22 one and two-bed apartments contained within three blocks. Car and cycle parking will be provided within the site. A copy of the proposed site layout plan is provided at **Appendix C** to this report.
- 5.2 The apartments will comprise of:
- 10 x 1-bed apartments.
 - 12 x 2-bed apartments.

Access

- 5.3 The development's main car park will be accessed via a new priority T-junction on Paradise Lane approximately 23m south of the junction with Greenes Road. The junction entrance will be 6m wide and comprise of 5m corner radii. The proposed junction will provide access to 20 car parking spaces. Suitable visibility splays can be provided at the access, in line with Manual for Streets guidance, as shown in **Drawing VN212003-D100 Rev A**. A 2.4m ('x' distance) by 43m ('y' distance) visibility from the proposed site access junction to the south on Paradise Lane can be achieved. To the north the visibility splay is shown as 2.4m by 23m to the Paradise Lane / Greenes Road junction. This is considered to be an acceptable arrangement as there is a clear sightline for a greater distance than 23m from the site entrance towards approaching traffic on Greenes Road to the east of Paradise Lane, and vehicles approaching the entrance on Paradise Lane from Greenes Road to the west of the site will be turning right into Paradise Lane at speeds that are appropriate for a Stopping Sight Distance (SSD) of 23m.
- 5.4 Two further car parking spaces will be provided off Paradise Lane at the southeast corner of the site. The footway provision on the southern side of Greenes Road and western side of Paradise Lane will be improved to provide a 2m wide footway running along the site frontage, with dropped kerbs and tactile paving at the access crossing point, including dropped kerbs to connect with the footway on the opposite side of Paradise Lane. The footway provision will facilitate safe access to the site for pedestrians.
- 5.5 The existing site access on Greenes Road will be reinstated as footway.

Servicing

- 5.6 Given the limited space within the car park, refuse collection is expected to occur from the site entrance off Paradise Lane, with space available for the refuse vehicle to pull into the access bell mouth whilst the collection occurs. There is sufficient remaining space in the carriageway for vehicles to proceed north-south on Paradise Lane past the site whilst the refuse vehicle is in this position, as demonstrated in **Drawing VN212003-TR100 Rev A**.
- 5.7 Bin storage areas will be located within around 25m of the vehicle at the site entrance on Paradise Lane in general accordance with recommended transfer distances provided in Manual for Streets.

Parking

- 5.8 The relevant parking standards are those contained within the KMBC 'Ensuring A Choice of Travel Supplementary Planning Document' and are reproduced below.

Land Use	Unit Size	Other Areas (Maximum)
C3 Dwelling Houses	1-bed	1 space
	2-3 bed	2 spaces

Table 5.1: KMBC Parking Standards

- 5.9 Car parking will be provided in line with these standards with one space per apartment including three disabled spaces, and the proposed 22 car parking spaces for the site is approximately 65% of maximum standards. It is appropriate to provide less than the maximum provision for the 2-bed apartments given the highly accessible location of the site, with good opportunities for travel by non-car modes and the availability of amenities and facilities within walking distance, as detailed earlier in section 4. Also, the results of the car parking survey that was undertaken on the roads in the vicinity of the site show that there are opportunities to accommodate some additional on-street car parking without having a severe impact on residential amenity and highway safety.
- 5.10 A secure, covered cycle store will be located at the western end of the car park, providing long-stay parking space for 24 cycles. Additionally, ten of the ground floor apartments can accommodate a bike within the store under the stairs within the apartment, bringing the total of long-stay cycle parking spaces to 34. This meets the Council's minimum allocated cycle parking requirement for residential use, which is one space per one-bed dwelling and two spaces per two-bed dwellings.
- 5.11 Visitor cycle parking spaces have also been provided for within the site layout, with space for six cycles accommodated via three Sheffield stands – one at the front of Block A and two at the front of Block B. These provide for convenient access to the buildings. The proposed level of cycle parking is considered an appropriate level of provision to encourage and facilitate cycle use amongst residents and visitors.

Summary

- 5.12 The planning application is made in detail and seeks permission for a residential development of 22 apartments. Car parking will be provided within the site in accordance with KMBC standards. Allocated cycle parking for each apartment is to be provided in line with the KMBC standards, with an appropriate level of visitor cycle parking also accommodated within the site. Refuse collection is expected to occur from the site entrance off Paradise Lane, with space available for the refuse vehicle to pull into the access bell mouth whilst the collection occurs.

6 Traffic Impact

Overview

- 6.1 Having established that the development site is highly accessible by modes of transport other than the private car, the following section of this report will discuss the potential traffic generation of the proposals as well as providing an assessment of the general impact on the local highway network.

Forecast Development Traffic Flows

- 6.2 The development proposals will consist of 22 apartments. To establish the peak hour vehicular trip rates for the proposed residential use reference has been made to the latest TRICS database (7.8.2) searching for apartment developments of similar scale.
- 6.3 The TRICS output is summarised below in **Table 6.1** and provided in full at **Appendix D**.

	Vehicles – Trip Rates			Trip Forecasts (22 dwellings)		
	Arr	Dep	2 way	Arr	Dep	2 way
AM Peak	0.050	0.155	0.205	1	4	5
PM Peak	0.188	0.11	0.298	4	3	7

Table 6.1: Forecast Peak Hour Vehicle Trips

- 6.4 It can be seen from Table 6.1 that the proposed residential development is forecast to generate a total of five trips in the morning peak hour and seven in the evening peak hour. In the morning peak this averages at an additional vehicle trip every 12 minutes and in the evening peak one every nine minutes. As such, the development is not expected to give rise to any perceptible change in the operation of the local highway network.

Summary

- 6.5 A trip forecasting exercise for the proposed development has been undertaken based upon TRICS trip rates. This has demonstrated that the proposals are expected to generate just five two-way vehicle trips in the weekday morning peak hour and seven in the evening peak hour, and this will have no perceptible effect upon the operation of the local highway network.
- 6.6 It is therefore concluded that the vehicle trips expected to be generated by the development will not result in a severe impact and can be safely accommodated on the surrounding highway network.

7 Travel Plan Framework

Introduction

- 7.1 This section of the report sets out a Framework Travel Plan for the proposed residential development, which could be taken forward and developed into a more detailed Travel Plan if required following the occupation of the development, at which point accurate baseline travel information could be obtained.

Travel Plan Approach

- 7.2 Travel Plans are an important tool in order to facilitate sustainable development. Together with Transport Assessments / Statements, they provide the mechanism for assigning and managing multi-modal access to development sites.
- 7.3 The benefits of a Travel Plan include an increased choice of transport mode and reduced journey times. Benefits should include a strong emphasis towards the personal advantages of using sustainable transport initiatives and include cost saving, time saving and social benefits.
- 7.4 The development and implementation of the Travel Plan should be a dynamic process subject to a continuous cycle of action monitoring and review. This should be achieved in order to give the Travel Plan a recognisable direction and focus towards its goals. It is therefore vital that objectives are set out for both the developer and occupiers of the development.

Key Travel Plan Policy

- 7.5 The future Travel Plan will be developed with reference to specific policy and guidance. This will ensure that a high-quality Travel Plan is developed. The documentation includes:
- National Planning Policy Framework.
 - Good Practice Guidelines: Delivering Travel Plans through the Planning Process.
 - Travel Plans, Transport Assessments and Statements in Decision-Taking.
 - Making Residential Travel Plans Work: Guidelines for New Development.
 - Knowsley Ensuring a Choice of Travel SPD (2010).

- 7.6 Within the Department for Transport (DfT) guidance ‘Good Practice Guidelines: Delivering Travel Plans through the Planning Process’, the Travel Plan pyramid sets out the various facets of a Travel Plan that are key to ensuring the Travel Plan is successful. The pyramid within the aforementioned guidance is reproduced in **Figure 7.1**.



Figure 7.1: The Travel Plan Pyramid

Aim of the Travel Plan

- 7.7 The aim of the Travel Plan will be to minimise the number of car trips generated by the development as well as encourage residents and visitors to use sustainable modes of transport.
- 7.8 Whilst the scope of the detailed Travel Plan is to be agreed at a later date, it is certain that the Travel Plan would include a number of objectives and identify a range of measures that are to be implemented in order to achieve these objectives.

Travel Plan Objectives

- 7.9 In summary, the objectives of the Travel Plan would include the following:
- To provide residents with convenient, safe and viable alternatives to the car in order to access the site as well as local destinations and amenities.
 - To regularly monitor the means of travel used by residents to encourage transfer to the most sustainable modes, as achieved through the implementation of the Travel Plan.
 - To reduce the environmental impact of the site as a whole, and promote a commitment to environmental values.

7.10 The following is a sub-set of objectives, which are reflective of the aforementioned overarching objectives:

- To raise awareness amongst residents of the detrimental impacts of car use in order to encourage the use of alternatives. This would be achieved by promoting benefits such as cost savings and health advantages etc.
- To encourage safe and viable alternatives to single occupancy car trips for trips generated by the residential development.
- To ensure the ongoing development and implementation of sustainable travel practices in the longer term.

Targets

- 7.11 The success of the Travel Plan will be measured against a series of targets. However, as the development is not operational and baseline travel surveys have not yet been undertaken, it is not possible to set targets. This section therefore sets out the process for establishing appropriate targets.
- 7.12 Appropriate targets for a residential development mainly surround the reduction of vehicle trips, especially in the peak hours. Indicators of this target include monitoring the number walking, cycling, bus and rail trips to and from the site. It should be noted that specific aims of the Travel Plan must take account of factors including housing occupancy, the residential composition and realistic transport options available to residents and visitors.
- 7.13 Guidance produced by the DfT suggests that the main target should be to reduce the number of car trips generated by the site per day. It is also suggested that targets could also be set for other modes of transport, for example, bus patronage or walking trips.
- 7.14 Following the completion of the baseline travel surveys, a range of targets would be developed, with a view to:
- Promoting healthy lifestyles and sustainable, vibrant communities.
 - Minimising the number of single occupancy car trips generated by the site.
 - Providing adequately for those with mobility difficulties.
 - Maximising the number of trips made by sustainable modes.
 - Supporting access to and from the site by residents.
- 7.15 It is important that the targets are SMART (Specific, Measurable, Achievable, Relevant and Time-based) and meaningful to residents.

Measures

- 7.16 The Travel Plan's proposed measures need to be linked with its targets and desired outcomes. It would therefore be necessary to implement a number of "hard" and "soft" measures in order to achieve such outcomes. The measures would be part of an action plan with timescales for delivery and individuals responsible identified, and could include:
- The distribution of maps to residents showing safe walking and cycling routes.
 - On-site provision of public transport information, including bus routes and rail services.
 - Car share promotion including events with opportunities for finding a match amongst residents.
 - Access to electric charging points and car club vehicles.
 - Providing the service of personal travel advice.
 - Publication and effective distribution of both the Travel Plan and specific initiatives.

Cycling

- 7.17 Residents may wish to cycle, and in addition to being able to accommodate bikes within dwellings, consideration will be given to the potential provision of some visitor cycle parking within the development. Other measures could include:
- Production of maps showing cycle routes and facilities.
 - Arrange organised cycle rides for residents.

Walking

- 7.18 Walking offers many health benefits and fits in well with the growing interest in a healthy lifestyle. As mentioned earlier in this report, the walking facilities surrounding the development site are of a good standard and should encourage travel on foot with the proposed development providing improved footway infrastructure and connections along the site frontage. Walking maps and information on access to local amenities could be made available to users of the site along with other potential measures.

Public Transport

- 7.19 The following initiatives will be considered to encourage uptake of trips by bus and rail modes:
- Seek to negotiate discounted / free travel passes from local public transport operators.
 - Provision of public transport information and timetables for residents.

Car Sharing

- 7.20 Car sharing offers significant benefits not just for the environment but also financially. Therefore, consideration will be given to organising a car sharing scheme that is specifically aimed at finding matches amongst residents who would be able to car share when travelling to and from their daily commutes and other journeys.

The Travel Plan Co-ordinator

- 7.21 It would be necessary to appoint a Travel Plan Co-ordinator for the development prior to it becoming operational to deliver the Travel Plan initiatives and prepare associated action plan. The Travel Plan will be implemented under the control of a Travel Plan Co-ordinator who will drive the work forward, promote the measures and be a key contact point for residents. Initially, the Travel Plan Co-ordinator role could be the responsibility of the developer or the Housing Association involved with the site.
- 7.22 As well as ensuring the success in terms of improving modal split, the Travel Plan Co-ordinator should liaise with residents to ensure the promotion of sustainable alternatives. The Travel Plan Co-ordinator should also liaise with the Local Planning Authority on a regular basis to obtain information and share ideas. This would also provide the opportunity to review the Travel Plan on a periodic basis to monitor its effectiveness and to agree new measures required to meet the Travel Plans aims, objectives and targets.
- 7.23 The following bullet points summarise the role of the Travel Plan Co-ordinator:
- To be the key decision maker on day-to-day matters of implementation of the Travel Plan.
 - Liaise with users of the site as well as external organisations, stakeholders, the Council, Merseytravel and public transport operators in the local area.
 - To provide a point of contact for residents in relation to travel advice.
 - To promote the use of travel modes other than the car, including the distribution of publicity material and travel information.
 - Ensuring that all relevant information is available to users and that up-to-date information is clearly displayed and distributed.
 - To co-ordinate the implementation of Travel Plan measures.
 - Data collection, surveys, monitoring and report production.

Promotion and Communication

- 7.24 The Travel Plan Co-ordinator will be responsible for the promotion of the Travel Plan and for the communication of its targets and objectives to residents. The following measures could be undertaken to ensure that this is done:
- Provide information in communal areas around the site.

- Provide residents with a Travel Information Brochure on available travel options.
- Promote and reinforce the aims of the Travel Plan to users on a regular basis.

Monitoring

7.25 Once the site is operational, then it would be necessary to monitor the plan on a regular basis. This would be one of the roles of the Travel Plan Co-ordinator, and the likely steps would include:

- Post occupation travel survey.
- Annual Progress reviews (including travel surveys).
- Liaison with KMBC / Travel Plan Officer.

8 Summary and Conclusion

Summary

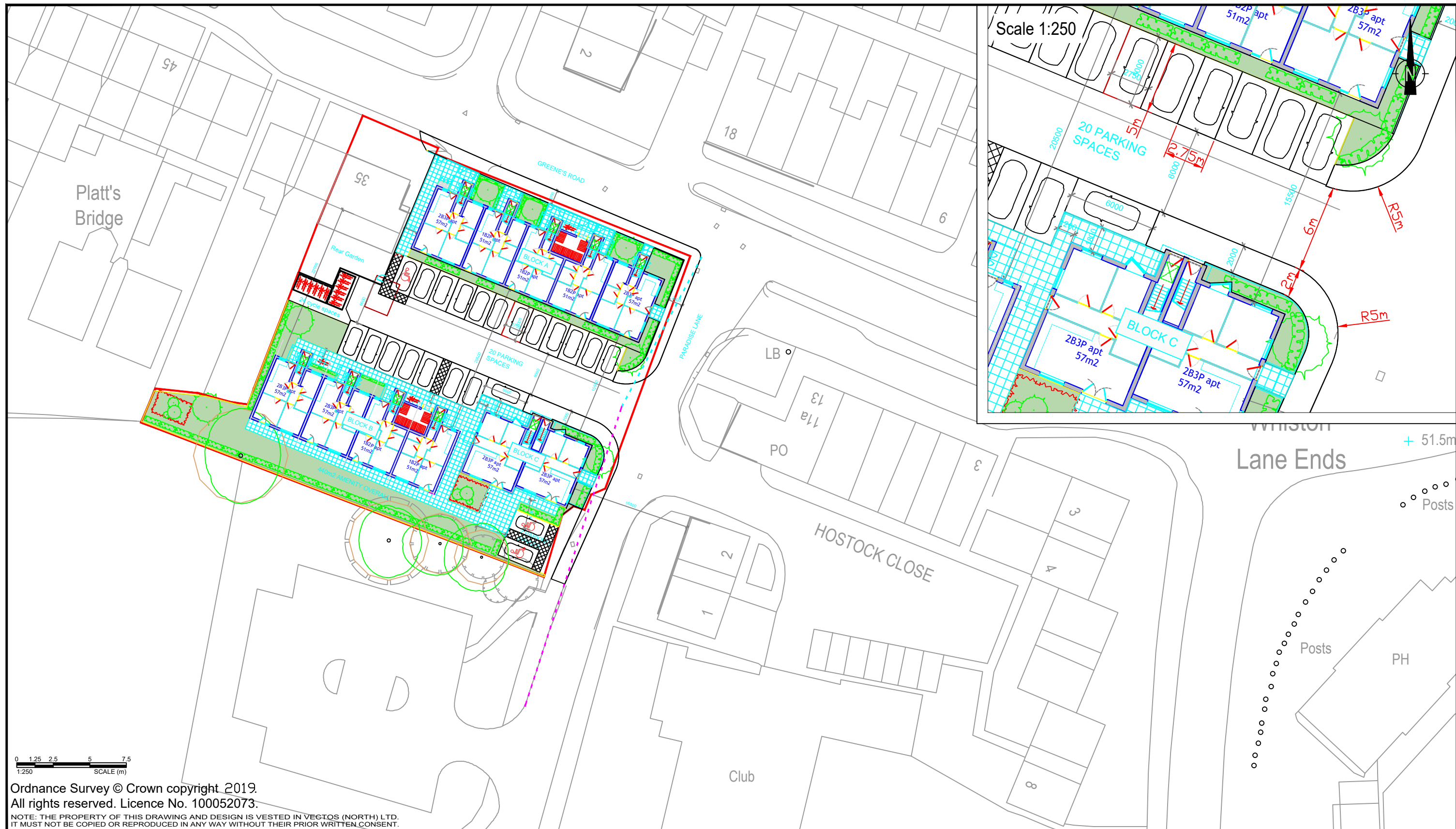
- 8.1 This TS report has been prepared by Vectos on behalf of Built Group Ltd to consider highways and transport issues related to a planning application for a proposed residential development of 22 apartments at land on the corner of Greenes Road and Paradise Lane in Whiston, Knowsley.
- 8.2 The site comprises vacant land at the corner of Greenes Road and Paradise Lane in the Whiston area under the jurisdiction of KMBC. The site is generally surrounded by residential land uses to the north and west, with some local shops and amenities also present to the east. To the south of the site is Stadt Moers Park.
- 8.3 The surrounding highway network has been reviewed and the site is well located in relation to the existing highway network. A parking survey has been undertaken and this showed that some on-street parking does occur on Greenes Road and Paradise Lane, but the parking survey indicated a high level of spare capacity for legal on-street car parking on these roads.
- 8.4 A review of highway safety has been undertaken via reference to accident records on the Crashmap database and it is concluded that there are no highway safety concerns that would arise from the development proposals.
- 8.5 The site is very well located to facilitate everyday trips by foot, being within walking distance of a wide range of key amenities and facilities. The pedestrian infrastructure in the vicinity of the site is of a good standard and those using the site will benefit from this provision. The existing controlled crossing facilities at the Greenes Road / Windy Arbor Road / Dragon Lane signal junction will facilitate safe crossing of these roads.
- 8.6 The site is within a short walk of bus stops on Greenes Road and Windy Arbor Road, and services provide direct connections to a wide range of destinations including Liverpool City Centre, Prescot and Huyton. Whiston Rail Station lies around 480m from the site to the northeast, providing links to local and regional destinations such as Liverpool Lime Street, Edge Hill, Roby, Huyton, St Helens Junction, Manchester Piccadilly and Wilmslow. Travel by bus and rail therefore represents a feasible option for journeys to and from the site, which will help to facilitate sustainable and active travel amongst future residents.
- 8.7 A MASA has been undertaken for the site, in line with Knowsley Council's policies, and the site scores well for all areas. Whilst the public transport score is below the target of 5, as detailed earlier in the report, the site is considered to be highly accessible by public transport with bus services available from Greenes Road and Windy Arbor Road within 400m the site and rail services available from Whiston Station within 480m of the site. The existing bus infrastructure has been found to be of a good standard. Given these facts and the small scale of the development proposals, it would not be necessary for a contribution to be made to public transport to make the development acceptable in planning terms.

- 8.8 A Travel Plan Framework has been provided to outline a range of potential measures that could be introduced at the development to help promote and sustain travel by active travel and public transport modes amongst residents and visitors.
- 8.9 The planning application is made in detail and seeks permission for a residential development of 22 apartments. Car parking within the site is in accordance with KMBC standards, and the provision is considered to be appropriate taking into account the good site location and the associated accessibility characteristics. Allocated cycle parking for each apartment is to be provided in line with the KMBC standards, with an appropriate level of visitor cycle parking also accommodated within the site. Refuse collection is expected to occur from the site entrance off Paradise Lane, with space available for the refuse vehicle to pull into the access bell mouth whilst the collection occurs. The proposed site access junction on Paradise Lane is considered to be a safe and suitable arrangement to serve the residential development, including providing improvements to the pedestrian infrastructure along the site frontage.
- 8.10 A trip forecasting exercise for the proposed development has been undertaken based upon TRICS trip rates. This has demonstrated that the proposals are expected to generate just five two-way vehicle trips in the weekday morning peak hour and seven in the evening peak hour, and this will have no perceptible effect upon the operation of the local highway network.
- 8.11 It is therefore concluded that the trips expected to be generated by the development will not result in a severe impact and can be safely accommodated on the surrounding highway network.

Conclusion

- 8.12 It is concluded that the proposed development is in accordance with national and local transport policies and is acceptable in highways and transport terms.

Drawings



REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site layout updated	WD	TR	10.09.21

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.

2. White lining is indicative only.

2.4 x 43m Visibility Splay

2.4 x 23m Visibility Splay

Greene's Road, Whiston

General Arrangement and Visibility Splays

DRAWN:WD

CHECKED:TR

DATE:19.08.21

SCALE:1:500 at A3 - Unless Shown

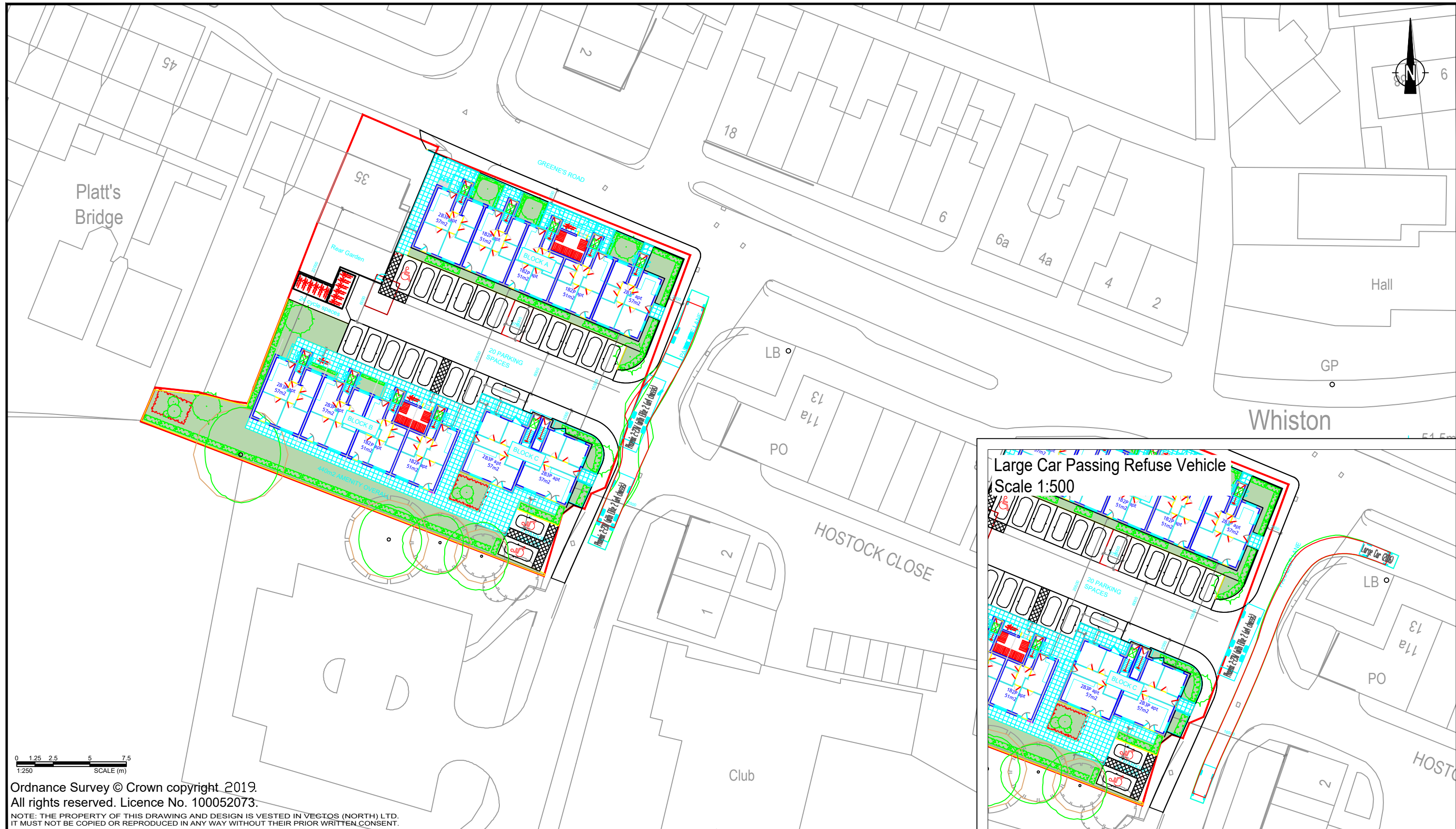
Built Group Ltd

vectos.

4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008 e: manchester@vectos.co.uk

DRAWING NUMBER:VN212003-D100

REVISION:A



0 1.25 2.5 5 7.5
1:250 SCALE (m)

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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site layout updated	WD	TR	10.09.21

Notes:

1. This is not a construction drawing and is intended for illustrative purposes only.

2. White lining is indicative only.

Phoenix 2-23W (with Elite 2 6x4 chassis)

Greene's Road, Whiston

Swept Path Analysis - Refuse Vehicle

Drawn: WD

Checked: TR

Date: 19.08.21

Scales: 1:500 at A3

Built Group Ltd

vectos.

4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008 e: manchester@vectos.co.uk

Drawing Number: VN212003-TR100

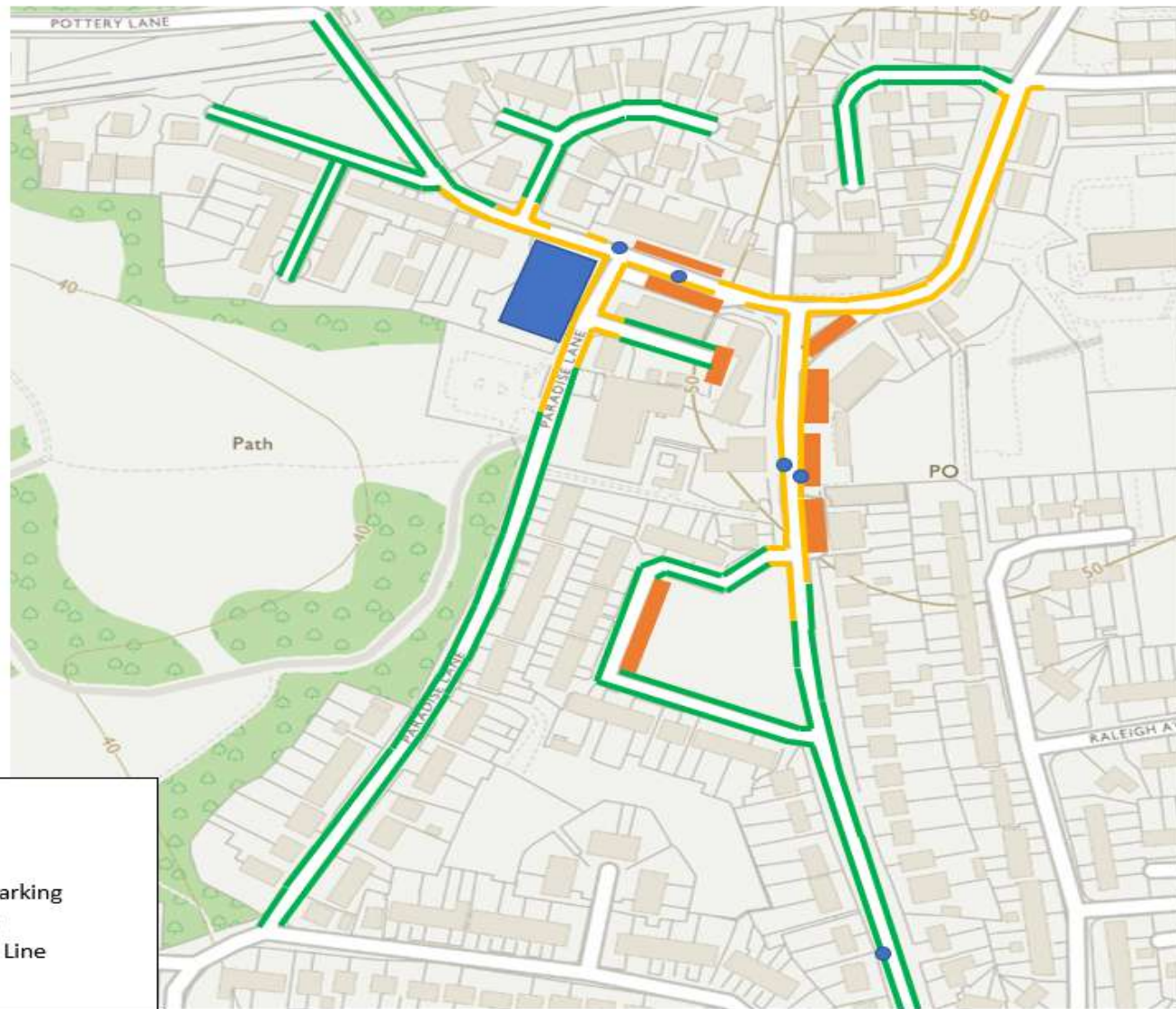
Revision: A

Appendices

Appendix A

Parking Survey Data

Whiston Parking Beat



Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Greenes Road

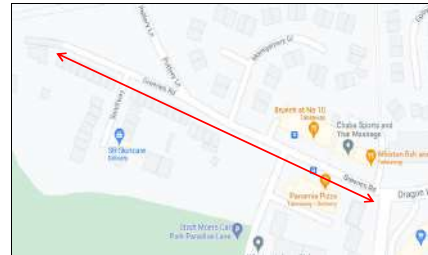
Parking Restrictions:

Parking bays: Yes - Mon - Sat 0800-1800 15mins, No return with 45mins
 Pay and Display: N/A
 Shared Users: N/A
 Loading Bays: N/A
 Double Yellow: Yes
 Cycle / Bus Lane: No
 Bus Stops: Yes

Notes (reasons for any overstress and details of 'Other' parking types):

Some footway parking (recorded separately)

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas							
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop
	Number of Spaces	39	12	0	0	0	0	0	0	0	0	0	7	0	31	0	0	1	0	2
Total Legal Spaces												51	Total Illegal Spaces							41

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
	Metres	195	60	0	0	0	0	0	0	0	0	0	14	0	155	0	0	2	0	20	
Total Legal Space												255	Total Illegal Space								191

Parking Beat Data

Time	Legal Parking Areas											Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress	
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane					Bus Stop
Wednesday	12	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	1	0	0	20	39%	21	41%
Thursday	10	1	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	1	0	0	18	35%	19	37%

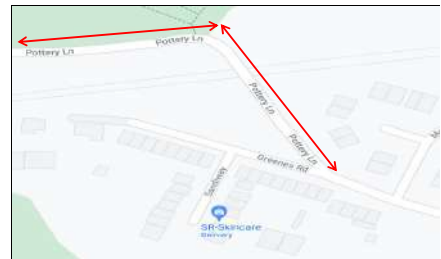
TOTAL TRAFFIC
SURVEYS LTD
DATA COLLECTION

Parking Restrictions:

Notes (reasons for any overstress and details of 'Other' parking types):

None

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas									
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop		
	Number of Spaces	64	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
	Total Legal Spaces												64	Total Illegal Spaces								0

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas											Illegal Parking Areas									
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fwy)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
	Metres	320	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Legal Space:										320	Total Illegal Space:										0

Parking Beat Data

[illegible]

Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Dragon Lane

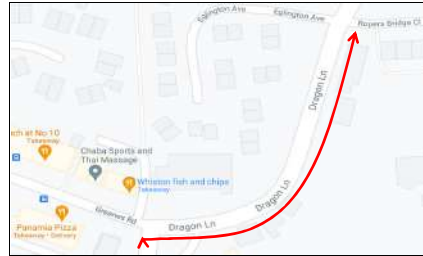
Parking Restrictions:

Parking bays:	No
Pay and Display:	N/A
Shared Users:	N/A
Loading Bays:	N/A
Double Yellow:	Yes
Cycle / Bus Lane:	No
Bus Stops:	No

Notes (reasons for any overstress and details of 'Other' parking types):

Footway parking (recorded separately)

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
	Number of Spaces	0	0	0	0	0	0	0	0	0	0	0	8	0	56	0	0	1	0	0	
Total Legal Spaces											0		Total Illegal Spaces								65

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas												Illegal Parking Areas									
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop		
	Metres	0	0	0	0	0	0	0	0	0	0	0	16	0	280	0	0	2	0	20		
Total Legal Space												0		Total Illegal Space								318

Parking Beat Data

Time	Legal Parking Areas												Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop				
Wednesday	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3	0%	3	0%
Thursday	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	5	0%	5	0%

Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Eglington Ave

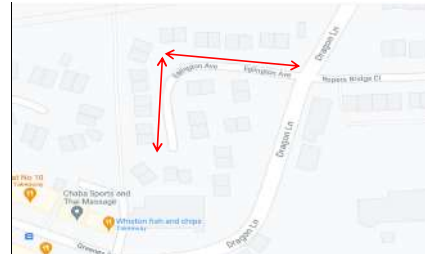
Parking Restrictions:

Parking bays:	No
Pay and Display:	N/A
Shared Users:	N/A
Loading Bays:	N/A
Double Yellow:	No
Cycle / Bus Lane:	No
Bus Stops:	No

Notes (reasons for any overstress and details of 'Other' parking types):

None

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
	Number of Spaces	50	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	0	0	
Total Legal Spaces												50	Total Illegal Spaces								22

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fwy)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
Metres	205	0	0	0	0	0	0	0	0	0	0	0	44	0	0	0	0	0	0	0	
Total Legal Space												205	Total Illegal Space								44

Parking Beat Data

Time	Legal Parking Areas											Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress	
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane					Bus Stop
Wednesday	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	10	20%	10	20%
Thursday	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	11	22%	11	22%

Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Windy Arbor Road

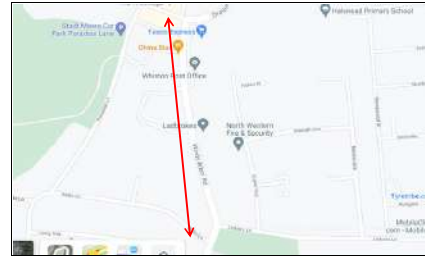
Parking Restrictions:

Parking bays:	Yes
Pay and Display:	N/A
Shared Users:	N/A
Loading Bays:	N/A
Double Yellow:	Yes
Cycle / Bus Lane:	No
Bus Stops:	Yes

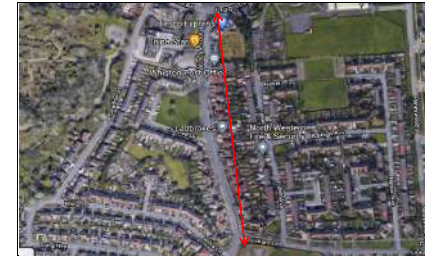
Notes (reasons for any overstress and details of 'Other' parking types):

Some footway parking (recorded separately)

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas							
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop
	Number of Spaces	55	32	0	0	0	0	0	0	0	0	0	31	0	66	0	0	0	0	3
Total Legal Spaces												87	Total Illegal Spaces							100

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas												Illegal Parking Areas							
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop
Metres	275	64	0	0	0	0	0	0	0	0	0	0	62	0	330	0	0	0	0	25
Total Legal Space												339	Total Illegal Space							417

Parking Beat Data

Time	Legal Parking Areas											Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress	
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane					Bus Stop
Wednesday	7	3	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	0	0	0	19	22%	19	22%
Thursday	8	4	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	0	0	20	23%	20	23%

Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Jubilee Drive

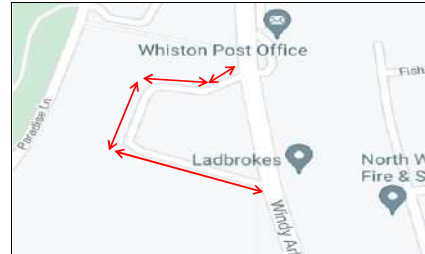
Parking Restrictions:

Parking bays:	Yes
Pay and Display:	N/A
Shared Users:	N/A
Loading Bays:	N/A
Double Yellow:	Yes
Cycle / Bus Lane:	No
Bus Stops:	No

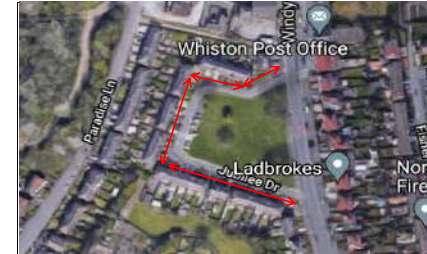
Notes (reasons for any overstress and details of 'Other' parking types):

None

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas							
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop
Number of Spaces	62	13	0	0	0	0	0	0	0	0	0	0	20	0	4	0	0	0	0	0
Total Legal Spaces												75	Total Illegal Spaces							24

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas											Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop
Metres	312	40	0	0	0	0	0	0	0	0	0	0	40	0	20	0	0	0	0	25
Total Legal Space												352	Total Illegal Space							85

Parking Beat Data

Time	Legal Parking Areas												Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fwyay)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop				
Wednesday	11	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	28%	21	28%
Thursday	10	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	20	27%	20	27%

Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Paradise Lane

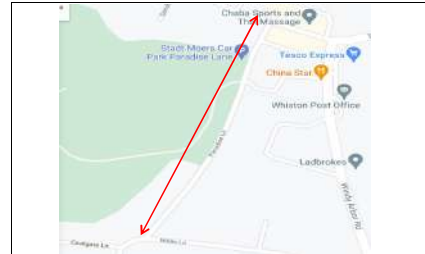
Parking Restrictions:

Parking bays:	No
Pay and Display:	N/A
Shared Users:	N/A
Loading Bays:	N/A
Double Yellow:	Yes
Cycle / Bus Lane:	No
Bus Stops:	No

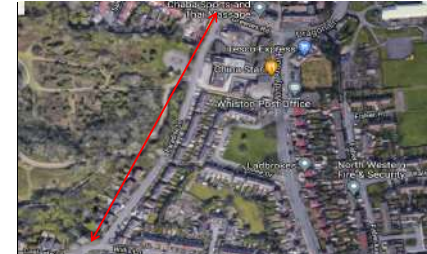
Notes (reasons for any overstress and details of 'Other' parking types):

None

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
	Number of Spaces	95	0	0	0	0	0	0	0	0	0	0	37	0	27	0	0	0	0	0	
Total Legal Spaces												95	Total Illegal Spaces							64	

Restrictions

Parking Inventory (M)

	Legal Parking Areas												Illegal Parking Areas							
Parking Type	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop
Metres	475	0	0	0	0	0	0	0	0		0	0	75	0	134	0	0	0	0	0
Total Legal Space												475	Total Illegal Space							209

Parking Beat Data

	Legal Parking Areas												Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress
Time	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop				
Wednesday	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14%	13	14%
Thursday	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	13	14%	13	14%

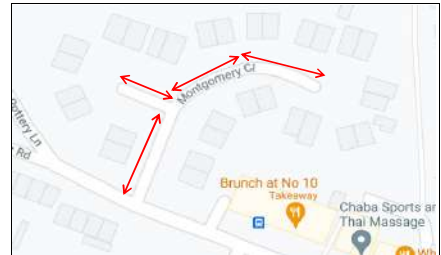
TOTAL TRAFFIC
SURVEYS LTD
DATA COLLECTION

Parking Restrictions:

Notes (reasons for any overstress and details of 'Other' parking types):

None

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas									
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop		
	Number of Spaces	38	0	0	0	0	0	0	0	0	0	0	29	0	2	0	0	0	0	0	0	
	Total Legal Spaces												38	Total Illegal Spaces								31

Restrictions

Parking Inventory (M)

Parking Type	Legal Parking Areas												Illegal Parking Areas									
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fwy)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop		
	Metres	192	0	0	0	0	0	0	0	0	0	0	0	58	0	10	0	0	0	0	0	
	Total Legal Space												192	Total Illegal Space								68

Parking Beat Data

Time	Legal Parking Areas												Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop				
Wednesday	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	18%	7	18%
Thursday	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	16%	6	16%

Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress
7	18%	7	18%
6	16%	6	16%

Total Traffic Surveys Ltd



Client: Vectos
Project Number: TTS-1268-Jul
Date of Survey: Wednesday 7th & Thursday 8th July 2021
Survey Type: Parking Surveys
Road Name: Hostock Close

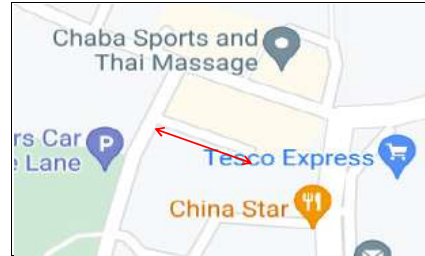
Parking Restrictions:

Parking bays: Yes
 Pay and Display: N/A
 Shared Users: N/A
 Loading Bays: N/A
 Double Yellow: Yes
 Cycle / Bus Lane: No
 Bus Stops: No

Notes (reasons for any overstress and details of 'Other' parking types):

Garages and Parking bays, some kerb parking behind shops

Aerial View:



Street Views:



Parking Inventory

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (F'way)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
Number of Spaces	13	5	0	0	0	0	0	0	0	0	0	0	8	0	8	0	0	0	0	0	
Total Legal Spaces												18	Total Illegal Spaces								16

Restrictions

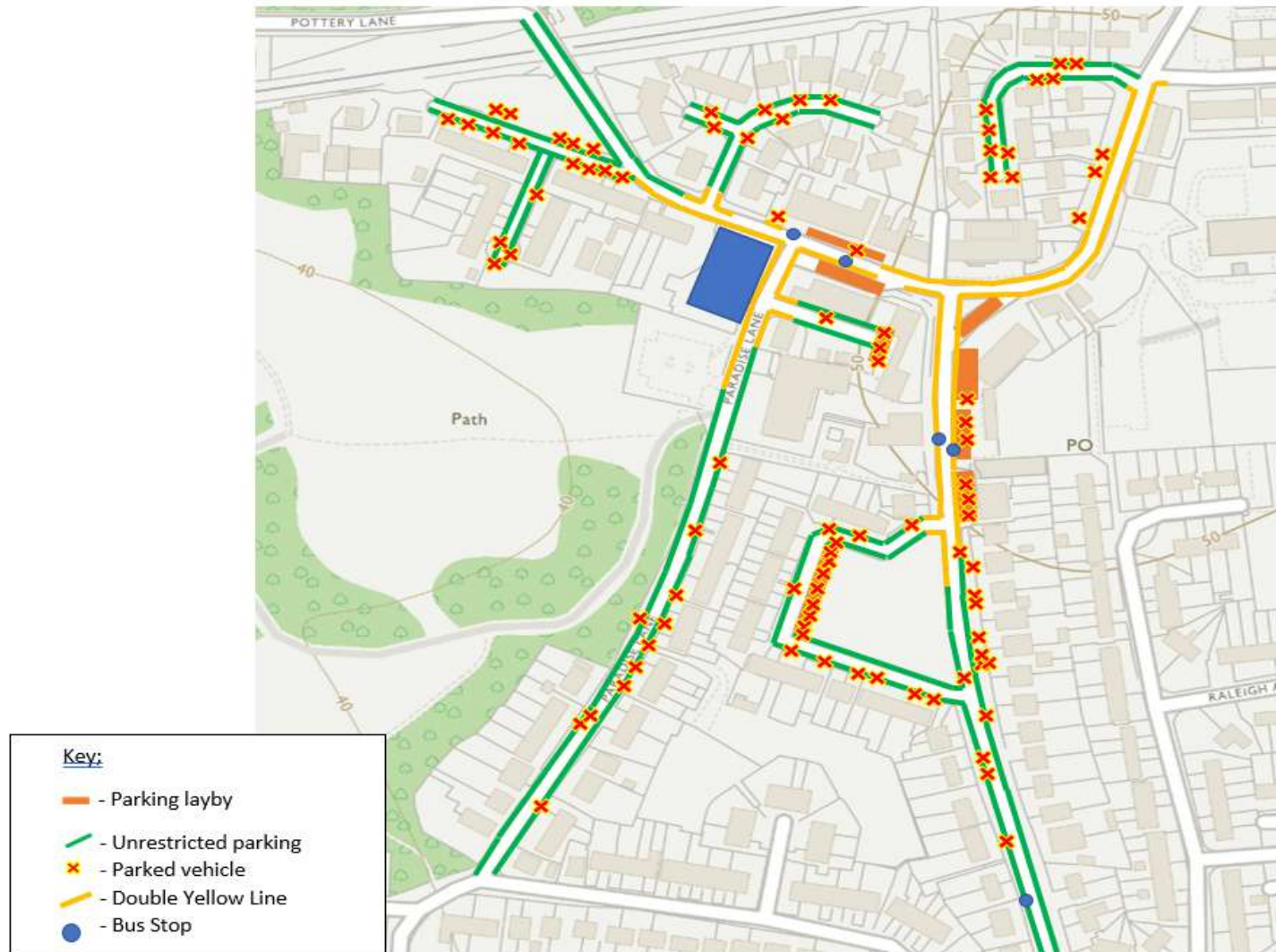
Parking Inventory (M)

Parking Type	Legal Parking Areas												Illegal Parking Areas								
	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (Fway)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane	Bus Stop	
	Metres	27	10	0	0	0	0	0	0	0	0	0	18	0	40	0	0	0	0	0	
Total Legal Space												37	Total Illegal Space								58

Parking Beat Data

	Legal Parking Areas											Illegal Parking Areas								Legally Parked Vehicles	Legal Parking Stress	Total Parked Vehicles	Total Parking Stress	
Time	Un-restricted	Parking Bays	Permit Holder Bays	Pay and Display Bays	Shared User Bays	Disabled Bays	Loading Bays	M/C Bays	Doctor Bays	Car Club Bays	Single Yellow Line	Other (FWay)	Driveway / Drop Kerb	Single Yellow Line	Double Yellow Line	Single Red Line	Double Red Line	Keep Clear / Zig-zag	Cycle Lane / Bus Lane					Bus Stop
Wednesday	1	3	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4	22%	5	28%
Thursday	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	28%	5	28%

Whiston Parking Beat – Parking Beat 1 – Wednesday 7th July 2021 @ 0515



Whiston Parking Beat – Parking Beat 1 – Wednesday 7th July 2021 @ 0515



Appendix B

Completed MASA

MASA – Greenes Road, Whiston

A – Access on Foot			
Location	Is the site within 800m of a district or local centre?	Yes (2 points)	Local Centre to the east within 800m.
Internal Layout	Does circulation and access inside the site reflect direct, safe and easy to use pedestrian routes for all, with priority given to pedestrians when they have to cross roads or cycle routes?	Yes (1 point)	There are clear and direct pedestrian access points leading to the front doors.
External Layout	Are there barriers between site and local facilities or housing, which restrict pedestrian access?	No (1 point)	There is good footway provision leading to the district centre to the east and controlled crossings at the Windy Arbor Road junction.
	Min Score Required	4	
	Actual Score	4	

B – Access by Cycle			
Location	Is the site within 1500m of a district or local centre?	Yes (2 points)	Local Centre to the east within 800m.
Internal Layout	Does the circulation and access inside the site reflect direct, safe cycle routes, with priority given to cyclists where they meet motor vehicles?	Yes (1 point)	Convenient access for cyclists will be provided linking to the cycle store for the apartments.
External Layout	Is the development within 400m of an existing or proposed designated cycle route and / or proposes to create a link to a cycle route or develop a route?	No (-1 point)	Approximately 500m from National Cycle Route 56.
Other	Development includes shower facilities and lockers for cyclists	Yes (1 Points)	Residents would have their own bathrooms.
	Min Score Required	3	
	Actual Score	3	

C – Access by Public Transport			
Location and access to public transport	Is the site within a 200m walk of a bus stop and / or 400m of a rail station	Yes (2 points)	Nearest bus stops around 100m walk from site.
	Are there barriers on direct and safe pedestrian routes to bus stops or rail stations	No (1 point)	There is good footway provision leading to the bus stops on Greenes Road and Windy Arbor Road and controlled crossings.
Frequency	High (4 buses / hr) Medium (2 or 3 buses / hr) Low (less than 2 / hr)	Medium (1 point)	2-3 buses per hour combined from the stops on Greenes Road and Windy Arbor Road.
Other	Contribution to bus stops	0 point	
	Min Score Required	5	
	Actual Score	4	

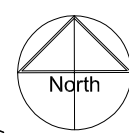
Criteria	Description	Score	Justification
D – Vehicle Access and Parking			
Parking	The off-street parking provided is as advised for the development type.	Yes (1 point)	Parking in accordance with policy.
	The off-street parking is less than 75% of the amount for that development type or shares parking provision with another development)	No (0 points)	
	Min Score Required	n/a	
	Actual Score	N/A	

Appendix C

Proposed Site Layout Plan



18



KEY

- Application Site
- Demolished buildings
- Sewer Easement
- 2m wide footpath to adoptable standards.
- 600mm sq paving slabs, natural grey concrete
- Rowlawn turf/ Amenity

Accommodation
10no. 1bed Apts (51m2)
12no. 2bed Apts (57m2)

TOTAL
22no. apartments

2



Project Greene's Road, Whiston		
Title Proposed Site Plan		
Scale 1:250	Drawing 417-1-SK-001	Rev E
FEASIBILITY		

Appendix D

TRICS Report

Calculation Reference: AUDIT-715001-210803-0800

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
 Category : C - FLATS PRIVATELY OWNED
 TOTAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	1 days
03	SOUTH WEST	
	DC DORSET	1 days
	DV DEVON	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
05	EAST MIDLANDS	
	DS DERBYSHIRE	1 days
08	NORTH WEST	
	MS MERSEYSIDE	1 days
09	NORTH	
	CB CUMBRIA	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days

Primary Filtering selection:

Parameter: No of Dwellings
 Actual Range: 6 to 33 (units:)
 Range Selected by User: 5 to 35 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/13 to 16/10/20

Selected survey days:

Monday	2 days
Tuesday	3 days
Wednesday	2 days
Friday	1 days

Selected survey types:

Manual count	8 days
Directional ATC Count	0 days

Selected Locations:

Edge of Town Centre	2
Suburban Area (PPS6 Out of Centre)	6

Selected Location Sub Categories:

Development Zone	1
Residential Zone	7

Secondary Filtering selection:

Use Class:

C3	8 days
----	--------

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

10,001 to 15,000	2 days
20,001 to 25,000	3 days
25,001 to 50,000	3 days

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	2 days
125,001 to 250,000	2 days
250,001 to 500,000	2 days
500,001 or More	1 days

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	6 days

Travel Plan:

No	8 days
----	--------

PTAL Rating:

No PTAL Present	8 days
-----------------	--------

LIST OF SITES relevant to selection parameters

1	CB-03-C-03 LOUND STREET KENDAL	FLATS & BUNGALOWS	CUMBRIA
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 33 Survey date: MONDAY 09/06/14 Survey Type: MANUAL		
2	DC-03-C-02 PALM COURT WEYMOUTH SPA ROAD	FLATS IN BLOCKS	DORSET
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 14 Survey date: FRIDAY 28/03/14 Survey Type: MANUAL		
3	DS-03-C-03 CAESAR STREET DERBY	BLOCKS OF FLATS	DERBYSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 30 Survey date: WEDNESDAY 25/09/19 Survey Type: MANUAL		
4	DV-03-C-01 BONHAY ROAD EXETER	BLOCK OF FLATS	DEVON
	Edge of Town Centre Residential Zone Total No of Dwellings: 27 Survey date: MONDAY 10/07/17 Survey Type: MANUAL		
5	EB-03-C-01 MYRESIDE ROAD EDINBURGH CRAIGLOCKHART	BLOCKS OF FLATS	CITY OF EDINBURGH
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 32 Survey date: TUESDAY 26/05/15 Survey Type: MANUAL		
6	EX-03-C-01 WESTCLIFF PARADE SOUTHEND-ON-SEA WESTCLIFF	FLATS	ESSEX
	Edge of Town Centre Residential Zone Total No of Dwellings: 6 Survey date: TUESDAY 22/10/13 Survey Type: MANUAL		
7	MS-03-C-03 MARINERS WHARF LIVERPOOL QUEENS DOCK	BLOCK OF FLATS	MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings: 9 Survey date: TUESDAY 13/11/18 Survey Type: MANUAL		
8	SF-03-C-03 TOLLGATE LANE BURY ST EDMUNDS	BLOCKS OF FLATS	SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: 30 Survey date: WEDNESDAY 03/12/14 Survey Type: MANUAL		

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TOTAL 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	8	23	0.066	8	23	0.110	8	23	0.176
08:00 - 09:00	8	23	0.050	8	23	0.155	8	23	0.205
09:00 - 10:00	8	23	0.077	8	23	0.105	8	23	0.182
10:00 - 11:00	8	23	0.055	8	23	0.094	8	23	0.149
11:00 - 12:00	8	23	0.088	8	23	0.077	8	23	0.165
12:00 - 13:00	8	23	0.066	8	23	0.055	8	23	0.121
13:00 - 14:00	8	23	0.072	8	23	0.083	8	23	0.155
14:00 - 15:00	8	23	0.110	8	23	0.116	8	23	0.226
15:00 - 16:00	8	23	0.088	8	23	0.061	8	23	0.149
16:00 - 17:00	8	23	0.127	8	23	0.094	8	23	0.221
17:00 - 18:00	8	23	0.188	8	23	0.110	8	23	0.298
18:00 - 19:00	8	23	0.127	8	23	0.083	8	23	0.210
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.114			1.143			2.257

Parameter summary

Trip rate parameter range selected: 6 - 33 (units:)
 Survey date range: 01/01/13 - 16/10/20
 Number of weekdays (Monday-Friday): 8
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 0

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

TAXIS

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	8	23	0.006	8	23	0.006	8	23	0.012
08:00 - 09:00	8	23	0.000	8	23	0.000	8	23	0.000
09:00 - 10:00	8	23	0.000	8	23	0.000	8	23	0.000
10:00 - 11:00	8	23	0.000	8	23	0.000	8	23	0.000
11:00 - 12:00	8	23	0.000	8	23	0.000	8	23	0.000
12:00 - 13:00	8	23	0.000	8	23	0.000	8	23	0.000
13:00 - 14:00	8	23	0.000	8	23	0.000	8	23	0.000
14:00 - 15:00	8	23	0.000	8	23	0.000	8	23	0.000
15:00 - 16:00	8	23	0.000	8	23	0.000	8	23	0.000
16:00 - 17:00	8	23	0.006	8	23	0.006	8	23	0.012
17:00 - 18:00	8	23	0.000	8	23	0.000	8	23	0.000
18:00 - 19:00	8	23	0.006	8	23	0.006	8	23	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.018			0.036

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

OGVS

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	8	23	0.000	8	23	0.006	8	23	0.006
08:00 - 09:00	8	23	0.006	8	23	0.006	8	23	0.012
09:00 - 10:00	8	23	0.006	8	23	0.006	8	23	0.012
10:00 - 11:00	8	23	0.000	8	23	0.000	8	23	0.000
11:00 - 12:00	8	23	0.000	8	23	0.000	8	23	0.000
12:00 - 13:00	8	23	0.006	8	23	0.006	8	23	0.012
13:00 - 14:00	8	23	0.000	8	23	0.000	8	23	0.000
14:00 - 15:00	8	23	0.006	8	23	0.006	8	23	0.012
15:00 - 16:00	8	23	0.000	8	23	0.000	8	23	0.000
16:00 - 17:00	8	23	0.006	8	23	0.006	8	23	0.012
17:00 - 18:00	8	23	0.000	8	23	0.000	8	23	0.000
18:00 - 19:00	8	23	0.000	8	23	0.000	8	23	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.030			0.036			0.066

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

PSVS

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	8	23	0.000	8	23	0.000	8	23	0.000
08:00 - 09:00	8	23	0.000	8	23	0.000	8	23	0.000
09:00 - 10:00	8	23	0.000	8	23	0.000	8	23	0.000
10:00 - 11:00	8	23	0.000	8	23	0.000	8	23	0.000
11:00 - 12:00	8	23	0.000	8	23	0.000	8	23	0.000
12:00 - 13:00	8	23	0.000	8	23	0.000	8	23	0.000
13:00 - 14:00	8	23	0.000	8	23	0.000	8	23	0.000
14:00 - 15:00	8	23	0.006	8	23	0.006	8	23	0.012
15:00 - 16:00	8	23	0.000	8	23	0.000	8	23	0.000
16:00 - 17:00	8	23	0.006	8	23	0.006	8	23	0.012
17:00 - 18:00	8	23	0.006	8	23	0.006	8	23	0.012
18:00 - 19:00	8	23	0.000	8	23	0.000	8	23	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.018			0.018			0.036

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

CYCLISTS

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	8	23	0.011	8	23	0.017	8	23	0.028
08:00 - 09:00	8	23	0.006	8	23	0.017	8	23	0.023
09:00 - 10:00	8	23	0.011	8	23	0.011	8	23	0.022
10:00 - 11:00	8	23	0.000	8	23	0.000	8	23	0.000
11:00 - 12:00	8	23	0.006	8	23	0.000	8	23	0.006
12:00 - 13:00	8	23	0.000	8	23	0.000	8	23	0.000
13:00 - 14:00	8	23	0.000	8	23	0.006	8	23	0.006
14:00 - 15:00	8	23	0.000	8	23	0.000	8	23	0.000
15:00 - 16:00	8	23	0.000	8	23	0.000	8	23	0.000
16:00 - 17:00	8	23	0.000	8	23	0.000	8	23	0.000
17:00 - 18:00	8	23	0.028	8	23	0.011	8	23	0.039
18:00 - 19:00	8	23	0.006	8	23	0.006	8	23	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.068			0.068			0.136

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

CARS

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	8	23	0.033	8	23	0.083	8	23	0.116
08:00 - 09:00	8	23	0.017	8	23	0.099	8	23	0.116
09:00 - 10:00	8	23	0.033	8	23	0.039	8	23	0.072
10:00 - 11:00	8	23	0.022	8	23	0.055	8	23	0.077
11:00 - 12:00	8	23	0.022	8	23	0.033	8	23	0.055
12:00 - 13:00	8	23	0.033	8	23	0.011	8	23	0.044
13:00 - 14:00	8	23	0.044	8	23	0.061	8	23	0.105
14:00 - 15:00	8	23	0.050	8	23	0.039	8	23	0.089
15:00 - 16:00	8	23	0.050	8	23	0.033	8	23	0.083
16:00 - 17:00	8	23	0.072	8	23	0.050	8	23	0.122
17:00 - 18:00	8	23	0.122	8	23	0.055	8	23	0.177
18:00 - 19:00	8	23	0.077	8	23	0.028	8	23	0.105
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.575			0.586			1.161

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

LGVS

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	8	23	0.006	8	23	0.000	8	23	0.006
08:00 - 09:00	8	23	0.006	8	23	0.006	8	23	0.012
09:00 - 10:00	8	23	0.028	8	23	0.017	8	23	0.045
10:00 - 11:00	8	23	0.006	8	23	0.022	8	23	0.028
11:00 - 12:00	8	23	0.022	8	23	0.017	8	23	0.039
12:00 - 13:00	8	23	0.000	8	23	0.000	8	23	0.000
13:00 - 14:00	8	23	0.006	8	23	0.006	8	23	0.012
14:00 - 15:00	8	23	0.006	8	23	0.006	8	23	0.012
15:00 - 16:00	8	23	0.011	8	23	0.011	8	23	0.022
16:00 - 17:00	8	23	0.017	8	23	0.011	8	23	0.028
17:00 - 18:00	8	23	0.011	8	23	0.022	8	23	0.033
18:00 - 19:00	8	23	0.011	8	23	0.011	8	23	0.022
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.130			0.129			0.259

Vectos (North) Limited 4th Floor, Oxford Place, 61 Oxford St Manchester

Licence No: 715001

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MOTOR CYCLES

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	8	23	0.000	8	23	0.000	8	23	0.000
08:00 - 09:00	8	23	0.000	8	23	0.000	8	23	0.000
09:00 - 10:00	8	23	0.000	8	23	0.000	8	23	0.000
10:00 - 11:00	8	23	0.000	8	23	0.000	8	23	0.000
11:00 - 12:00	8	23	0.000	8	23	0.000	8	23	0.000
12:00 - 13:00	8	23	0.000	8	23	0.000	8	23	0.000
13:00 - 14:00	8	23	0.000	8	23	0.000	8	23	0.000
14:00 - 15:00	8	23	0.000	8	23	0.000	8	23	0.000
15:00 - 16:00	8	23	0.000	8	23	0.000	8	23	0.000
16:00 - 17:00	8	23	0.006	8	23	0.000	8	23	0.006
17:00 - 18:00	8	23	0.000	8	23	0.006	8	23	0.006
18:00 - 19:00	8	23	0.000	8	23	0.006	8	23	0.006
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.006			0.012			0.018

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