

Caro Developments Ltd

**PROPOSED RESIDENTIAL DEVELOPMENT,
CLEGG STREET, LIVERPOOL**

Transport Statement

VN81190

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APPENDICES

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1 INTRODUCTION

1.1.1 Vectos have been appointed by Caro Developments Ltd to provide highways and transport advice in support of a planning application for a proposed residential apartment block on land off Clegg Street, Liverpool.

1.1.2 This Transport Statement (TS) provides information on the traffic and transport planning aspects of the development proposals and forms supplementary information to assist in the determination of a planning application.

1.2 Development Site

1.2.1 The location of the development site is shown in **Drawing Numbers VN81190-G100**, with **VN81190-G101** presenting the site in a more strategic context.

1.2.2 The application site is currently occupied by light industrial units and is located around 1.5 kilometres to the north of Liverpool City Centre. Vehicular access to the site is currently achieved directly from Clegg Street.

1.3 Development Proposals

1.3.1 The development proposals consist of the demolition of existing buildings and redevelopment to provide 127 residential apartments.

1.3.2 The development will provide a total of 27 car parking spaces and 76 cycle parking spaces.

1.4 Planning Background

1.4.1 The development site benefits from consent for a residential apartment scheme for 93 residential dwellings (LPA ref: 17F/3307).

1.5 Scope of Assessment

1.5.1 The scope of the analysis in this TS has been informed by pre-application discussions with the Local Highway Authority, Liverpool City Council (LCC). The relevant correspondence has been included as **Appendix A** of this report.

1.6 Report Structure

1.6.1 Following this introductory chapter, the remainder of this TS is structured as follows:

- **Section 2: Policy Context** – outlines the national and local policy relevant to the proposed development;
- **Section 3: Baseline Conditions** – describes the accessibility of the site by all modes of transport, discusses the existing site and reviews the accident record on the immediate highway network;
- **Section 4: Proposed Development** – sets out the development proposals, access and servicing strategy;
- **Section 5: Highway Operation** – outlines the trip generation of the proposed scheme and discusses the impact of development traffic on the operation of the wider highway network;
- **Section 6: Summary and Conclusions** – summarises the findings of the TS and provides the report conclusions.

2 POLICY CONTEXT

2.1 Overview

- 2.1.1 This section of the report provides an outline of national and local policy applicable to the development site. It is important that the TS is in accordance with such guidance and that the principles of the development are consistent with local and national policies.

2.2 National Planning Policy Framework

- 2.2.1 The main source of national policy regarding the transport planning aspects development can be found in the Department of Communities and Local Government 'National Planning Policy Framework' which was published in July 2018, replacing the previous NPPF published in March 2012.
- 2.2.2 At the heart of the Framework is a presumption in favour of sustainable development. In accordance with national policy, it is considered that the development constitutes a sustainable form of development within walking and cycling distance of local residential development and public transport links.
- 2.2.3 As part of promoting sustainable transport, paragraph 108 of the revised NPPF states that in assessing applications for development, it should be ensured that:
- a) *appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location.*
 - b) *safe and suitable access to the site can be achieved for all users; and*
 - c) *any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.*
- 2.2.4 Paragraph 109 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*'.

2.3 Merseyside Local Transport Plan 3 (2011)

2.3.1 The Merseyside Local Transport Plan 3 (MLTP3) runs between 2011 and 2024. The document sets out the vision for the Merseyside region which is to be:

“A city committed to a low carbon future, which has a transport network and mobility culture that positively contribute to a thriving economy and the health and wellbeing of its citizens and where travel is the option of choice.”

2.3.2 To achieve this vision the LTP sets out six goals which aim to support the city region, these are to:

- Help create the right conditions for sustainable economic growth by supporting the priorities of the Liverpool City Region, the Local Enterprise Partnership and the Local Strategic Partnerships;
- Provide and promote a clean, low emission transport system which is resilient to changes to climate and oil availability;
- Ensure the transport system promotes and enables improved health and wellbeing and road safety;
- Ensure equality of travel opportunity for all, through a transport system that allows people to connect easily with employment, education, healthcare, other essential services and leisure and recreational opportunities;
- Ensure the transport network supports the economic success of the city region by the efficient movement of people and goods; and
- Maintain our assets to a high standard.

2.4 Ensuring a Choice of Travel (2008)

2.4.1 This is a Supplementary Planning Document (SPD) developed in partnership with the Merseyside Local Authorities and Merseytravel in order to provide consistent guidance to developers on access and transport requirements for new development across the wider Merseyside area.

- 2.4.2 It identifies thresholds to determine the scale of development which is then used to identify planning requirements for subsequent planning applications. For residential developments (C3), a proposed scale of over 50 dwellings is considered to be 'major' based on LCC's criteria.
- 2.4.3 Guidance is then provided on the level of car parking required based on development location and type. This also includes disabled parking provision as well as cycle parking.
- 2.4.4 All new development proposals are required to demonstrate that they are accessible by all transport modes. To assist, a Minimum Accessibility Standard Assessment (MASA) is provided to guide developers when assessing the accessibility of their site to help to identify appropriate accessibility improvements that may be necessary.
- 2.4.5 This TS will demonstrate that the proposed development is fully compliant with both national and local planning policy guidelines.

3 BASELINE CONDITIONS

3.1 Overview

- 3.1.1 This section of the report provides information on the baseline conditions in the vicinity of the site, providing a review of the existing site and surrounding highway network, including accident records, as well as an appraisal of the accessibility of the site by sustainable modes of travel.

3.2 Existing Site

- 3.2.1 The application site is currently occupied by light industrial units and is located around 1.5 kilometres to the north of Liverpool City Centre. Vehicular access to the site is currently achieved directly from Clegg Street.
- 3.2.2 The site is bound by green space to the north, Clegg Street to the east, newly developed student accommodation to the south and Great Homer Street to the west.
- 3.2.3 To the north of the site, an approved mixed-use scheme known locally as 'Project Jennifer' is being developed on land between Great Homer Street and Scotland Road. LCC's draft 'Core Strategy' (2012) identifies that this development will create a new, comprehensive district centre which will consist of retail, leisure and employment opportunities to assist with overall regeneration aims within the city.

3.3 Local Highway Network

- 3.3.1 As previously noted, the main site access is provided from Clegg Street. This provides a connection to Prince Edwin Street. Prince Edwin Street connects with St Anne/Great Homer Street to west via Fox Street and Netherfield Road South to the east.

Clegg Street

- 3.3.2 Clegg Street provides direct access to the proposed development site. It has a width of approximately 5.1 metres and is provisioned with a footway and street lighting on its eastern side.

3.3.3 Traffic calming measures in the form of speed humps are in place along the carriageway and it is subject to a 30mph speed restriction.

3.3.4 The majority of Clegg Street does not have any parking restrictions in place. However, a short section of double yellow lines is present close to its junction with Prince Edwin Street.

Prince Edwin Street

3.3.5 Prince Edwin Street runs in an east-west direction to the south of the site and forms the major road of a priority T-junction it shares with Clegg Street. It is approximately 7.5 metres in width with wide footways and street lighting on either side of the carriageway. The road forms a priority T-junction with Fox Street to west and Netherfield Road South to the east.

3.3.6 This section of highway is subject to a 30mph speed restriction and a combination of speed humps and speed cushions are in place along its length.

3.3.7 Prince Edwin Street is subject to parking restrictions close to junctions with other minor roads along its length as well as along the frontage of Millstead School.

Iliad Street

3.3.8 Iliad Street runs parallel to Clegg Street terminating at a turning head at its northern end. The road is approximately 6 metres wide with footways and street lighting on both sides of the carriageway. It forms the minor arm a priority T-junction it shares with Prince Edwin Street.

3.3.9 This section of highway is subject to a 30mph speed restriction and also provides traffic calming provision.

B5186 St Anne Street / Great Homer Street

- 3.3.10 The B5186 runs in a north-south direction along the western boundary of the proposed development site and is a major route into Liverpool City Centre. In the vicinity of the site, northbound and southbound traffic are separated by a central reservation and dedicated right turn pockets are provided for traffic turning into Fox Street and Great Nelson Street.
- 3.3.11 Wide footways are provided on either side of the carriageway with a formal signalised pedestrian crossing facility provided immediately to the south of the Fox Street junction. A wide on-carriageway cycle lane is provided in both directions.
- 3.3.12 The road is subject to a 30mph speed restriction.

3.4 Accident Data Record

- 3.4.1 A review of accident data for the most recent five year period has been conducted for a study area which includes Prince Edwin Street, St Anne/Great Homer Street, Fox Street and Netherfield Road South.
- 3.4.2 This information has been sourced from online records of accident statistics made available by UK Local Authorities on CrashMap, a national database of traffic accidents. A summary is presented in **Table 3.1**.

Year	Slight	Serious	Fatal
2012	3	0	0
2013	2	0	0
2014	0	1	0
2015	0	0	0
2016	0	0	0
Total	5	1	0

Source: CrashMap [Accessed September 2017]

Table 3.1: Crash Map Accident Data Summary

- 3.4.3 As shown in **Table 3.1**, the available data indicates that a total of six accidents were recorded in the study area over a five year period. Of these incidents, the vast majority resulted in only slight injury, with only one incident resulting in serious injury.

3.4.4 It is noted that there were no accidents recorded on Prince Edwin Street including at its junctions with Clegg Street and Iliad Street.

3.4.5 Given the nature of the local highway network in the vicinity of the site, in particular the B5186 which provides a principle connection to Liverpool City Centre, the overall number of recorded accidents is considered to be low.

3.4.6 It is therefore concluded that there are no known highway design features that contribute to the occurrence of accidents and therefore no specific safety issues that need to be addressed as part of the development proposals.

3.5 Accessibility by Sustainable Modes of Travel

3.5.1 The following paragraph consider the accessibility of the site by sustainable modes of travel.

3.5.2 As outlined in **Section 3** LCC have an adopted Supplementary Planning Document entitled 'Ensuring Choice of Travel'. This document requires developments to be assessed using an Accessibility Assessment pro-forma.

3.5.3 The Accessibility Assessment contains a series of questions relating to walking, cycling, public transport and vehicle accessibility. A minimum required 'score' for each of these travel modes is assigned for each development based on their land use type, size and location. A development is then awarded 'points' based on the answers to the accessibility questions within each travel mode section.

3.5.4 When a development scores lower than the minimum score, proposals to improve accessibility to the site (and therefore its score) should be identified where possible. The SPD does recognise, however, that improvements are not always realistic or achievable and, in those cases, an explanation why this is the case should be provided.

3.5.5 The SPD defines the proposed development as a major development and on this basis the minimum required scores for each mode of travel are as follows:

- Access on foot – minimum required score = 4 points;

- Access by cycle – minimum required score = 5 points;
- Access by public transport – minimum required score = 5 points; and
- Vehicle access and parking – minimum required score = 3 points.

3.5.6 For each travel mode a description of the site's accessibility is provided before a summary of its performance on the Accessibility Assessment is given. A completed version of the Accessibility Assessment is included as **Appendix B** and is referred to within the following sections, and an Access Diagram is provided as **Plan VN81190-G104**.

3.6 Walking

3.6.1 The Institution of Highways and Transportation (IHT) document 'Guidelines for Providing for Journeys on Foot' (2000) contains suggested acceptable walking distances for pedestrians without mobility impairment for some common facilities. The guidelines suggest that an acceptable walking distance for commuting / school purposes is 1 kilometre, with the preferred maximum distance of 2 kilometres. Walking can also be promoted as part of a multi-modal journey, particularly with public transport.

3.6.2 The more recent CIHT document 'Planning for Walking' (2015) affirms this by stating that 80% of journeys shorter than a mile (approximately 1.6km) are made wholly on foot.

3.6.3 An analysis of the pedestrian routes in the area has been completed to identify areas situated within a 1km and 2km catchment, equivalent to a 12 minute and 24 minute walk respectively. This is illustrated in **Plan VN81190-G102**.

3.6.4 The 1 kilometre catchment encompasses a large area to the north of Liverpool City Centre including employment, education and leisure opportunities as well as open green space around Everton Park. When considering the 2 kilometre catchment, the area covers the majority of the city centre including the central business district around Old Hall Street and retail facilities on Church Street and Lord Street. A sample of local facilities within the vicinity of the site is included in **Table 3.2**.

Facility	Approximate Walking Distance
Nursery and Primary School	280 metres
Open Green Space	200 metres
Supermarket	500 metres
University	700 metres
Leisure Centre	1km
High School	1km
Central Library	1km
Hospital	1.2km

Table 3.2: Sample of Local Facilities

3.6.5 The existing pedestrian facilities in the vicinity of the site are of a good standard. Footways are provided in the vicinity of the site with informal crossing facilities including dropped kerbs and tactile paving provided to facilitate connectivity with the city centre. Pedestrian connectivity is further enhanced by formal crossing facilities which are provided on the B5186 St Anne Street.

3.6.6 Overall, it is concluded that the pedestrian network in the area around the site facilitates connectivity with a number of key services (including the city centre) and therefore ensures walking can be actively promoted as a sustainable mode.

3.6.7 The site is therefore considered to be highly accessible on foot.

SPD Accessibility Assessment – Access on Foot Section

3.6.8 As seen in **Appendix B**, the development site is considered to score 4 points against a minimum score requirement of 4 points.

3.6.9 The development is therefore concluded to be suitably located to encourage journeys on foot and as such no further action in this respect is required.

3.7 Cycling

- 3.7.1 The IHT and Department for Transport (DfT) document 'Cycle Friendly Infrastructure: Guidelines for Planning and Design' (1996) provides a guide on suggested cycle speeds associated with cyclists of varying confidence and ability. With reference to the guidance, a catchment of 5km would be available within approximately 20 minutes cycle time, using a speed of 10mph (16kph).
- 3.7.2 The previously adopted PPG13 'Transport' (2001) also identifies that cycling is an effective mode for short trips up to three to five miles (5-8km) with more recent guidance still referencing previous thresholds. For example, the DfT's Local Transport Note 2/08 'Cycle Infrastructure Design' (2008) states that many utility cycle journeys are under three miles although for commuters a trip distance of over five miles is not uncommon. In addition, the document 'Planning for Cycling' (2015) states that the majority of cycling trips are for short distances, with 80% being less than five miles.
- 3.7.3 An analysis of the sites 5 kilometre catchment has been undertaken and is presented as **Plan VN81190-G103**. This plan illustrates that the 5 kilometre catchment encompasses the whole of Liverpool city centre and surrounding suburbs.
- 3.7.4 Within the 5 kilometre catchment, cycle maps produced by LCC have been referenced to highlight the cycle infrastructure in the vicinity of the site. St Anne Street is categorised as being an on-carriageway, signed cycle route with a toucan crossing facility close to the site. This infrastructure assists in providing a link towards Liverpool city centre to the south but also residential communities to the north in Kirkdale.
- 3.7.5 Within 80 metres of the site, Prince Edwin Street provides a link to National Cycle Route 810 which connects Ainsdale rail station and central Liverpool via Formby, Crosby and Stanley Park.
- 3.7.6 Finally, it is noted that LCC operate a cycle hire scheme and sited at over 160 locations throughout Liverpool. This provides a range of tariff packages to enable people to use bikes as a sustainable mode. There are cycle docks located in the vicinity of the University on Byrom Street approximately 600 metres to the south west of the site

- 3.7.7 Overall, it is considered that the development site provides an excellent opportunity for cycling can be promoted as a sustainable mode for a range of journey purposes utilising existing signed routes, advisory cycle lanes and crossing facilities.

SPD Accessibility Assessment – Access by Cycle Section

- 3.7.8 With respect to cycle accessibility the development site scores 5 points thereby meeting the 'minimum' score requirement of the SPD's Accessibility Assessment.
- 3.7.9 It is therefore concluded that no improvements with respect to access by cycle are required.

3.8 Public Transport – Bus

- 3.8.1 The IHT document 'Guidelines for Planning for Public Transport in Developments' (1999) suggests that the maximum walking distance to the nearest bus stop should not exceed 400 metres, and preferably be no more than 300 metres.
- 3.8.2 The closest bus stop with multiple services is located on St. Anne Street within 300 metres of the site along existing walking routes. The northbound and southbound stops provide a lay-by, shelter with seating and timetable information.
- 3.8.3 A summary of the main bus services that serve stops within 400 metres of the site are presented in **Table 3.3**.

No.	Bus Stop	Route	Frequency (mins)					
			Mon-Fri			Sat		Sun
			Peak	Day	Evening	Day	Evening	
26 / 27	St. Anne Street	City Centre – Great Homer Street – Liverpool FC – Toxteth – City Centre	10	10	30	10	30	20/30
53	St. Anne Street	City Centre – Stanley Road – Bootle – Orrell Road - Netherton	5	5	5	5	15	15
58	St. Anne Street	City Centre – Great Homer Street – Walton – Bootle – Netherton	30	30	-	30	-	-
101	St. Anne Street or Fox Street	Vauxhall – City Centre – Everton – Royal Liverpool Hospital	30	30	-	30	-	-
310	St. Anne Street	City Centre – Walton Hospital – Aintree Station – Maghull – Ormskirk - Skelmersdale	30	30	-	30	-	60
345	St. Anne Street	City Centre – Great Homer Street – Walton - Waddicar	30	30	-	30	-	60

Source: Merseytravel [Accessed September 2017]

Table 3.3: Main Bus Services Operating within 400 metres

3.8.4 As can be seen from **Table 3.3** the 26 / 27 service along St. Anne Street is one of the most frequent services in the vicinity of the site and provides a loop service (both clockwise and anti-clockwise) around the city. This ensures that access can be provided to major activity centres in the city.

3.8.5 Service 101 provides a link to Hope University and Royal Liverpool Hospital.

3.8.6 In addition, it should be noted that the 53 service is part of the Quality Bus Network meaning that investment is being focussed to make bus travel more convenient and quicker. Associated with this are more regular buses during the day, improved facilities at bus stops, flexible ticketing and highway improvements.

3.8.7 Overall, it is considered that there are excellent bus facilities surrounding the site, providing a number of very frequent services which are available within easy walking distances and at key travel times. The services are therefore suitable for a variety of trip purposes and as such the site is considered highly accessible by bus.

3.9 Public Transport – Rail

3.9.1 The nearest rail station for National Rail services is Liverpool Lime Street, located approximately 1.2 kilometre to the south of the site. It provides services to St. Helens, Wigan, Preston and Manchester as well as services to Birmingham and London.

3.9.2 The Mersey Rail network is also available within approximately 1.5 kilometres at Moorfields. The Mersey Rail network provides a high frequency service between the city centre and surrounding district centres including Aintree, Southport, Ormskirk and Birkenhead.

3.9.3 Liverpool Lime Street has extensive cycle parking facilities include a number of 'streetpods', which are more secure than typical Sheffield type cycle stands.. In addition, rail service providers from Lime Street that accept bicycles without the need for reservation include Northern and East Midlands which could encourage linked cycle/rail journeys for future site users.

SPD Accessibility Assessment – Access by Public Transport Section

3.9.4 With respect to accessibility by public transport the SPD defines a minimum score requirement of 5 points. As the completed questionnaire in **Appendix B** demonstrates the development site meets this requirement.

3.9.5 This confirms that the site is well very well located to encourage trips by public transport and that no further action with respect to this mode of travel is required.

3.10 Summary

- 3.10.1 The highway network in the vicinity of the site is of an appropriate hierarchy to serve the development, with no accident blackspots have been identified.
- 3.10.2 The review of the accessibility of the site has concluded that it is located in a highly sustainable location, and is therefore development in this location is ideally placed to encourage future residents to undertake trips by walking, cycling or public transport, rather than being reliant on the private car.
- 3.10.3 The sites highly sustainable location is enhanced by virtue of its proximity to Liverpool City Centre, and the wide range of amenities located therein.
- 3.10.4 Finally LCC's, Minimum Accessibility Standard Assessment (MASA) has been completed. This has revealed that the site is highly accessible and benefits from excellent sustainable transport provision.

4 PROPOSED DEVELOPMENT

4.1 Overview

4.1.1 This section of the report describes the development proposals, including details on the proposed access, servicing and parking arrangements at the site.

4.2 Proposed Development

4.2.1 The planning submission supported by this TS proposes a development comprising:

- 127 residential apartments;
- 27 car parking spaces; and
- 76 cycle parking spaces.

4.2.2 The development will be across six floors and will provide two distinct parking areas: one within the curtilage of the building; and another smaller car park on the eastern side of the site.

4.2.3 A site layout plan showing the proposed development has been included as **Appendix C** of this report.

4.3 Access

Vehicular

4.3.1 The internal car parking area on the western side of the site is proposed to be accessed from Clegg Street via a single access point. Access to this car parking area will be controlled via a security gate.

4.3.2 The external car parking area on the eastern side of the site will be accessible from both Clegg Street and Iliad Street.

Pedestrian and Cycle

- 4.3.3 The main pedestrian access point to the site will be provided from Great Homer Street. The access will also serve as the main access point for cyclists. The existing provision for pedestrian and cyclists along Great Homer Street is excellent good, with wide footways, formal crossing points and dedicated on-carriageway cycle facilities. This therefore makes this a suitable access point.

4.4 Parking

Car Parking

- 4.4.1 The proposed development will provide a total of 27 car parking spaces which is equivalent to approximately one space per 4 dwellings.
- 4.4.2 A vehicle tracking exercise has been conducted to demonstrate the manner in which the car parking spaces are envisaged to operate. This is presented in **Drawings VN81190-TR100** and **TR101**.
- 4.4.3 The quantum of parking proposed for the site is considered appropriate for the site for the following reasons:
- Site located on the edge of the city centre within easy walking and cycling distances of local services with excellent public transport provision;
 - Prospective future residents are likely to be aware of the availability of car parking at the site before choosing to reside in the buildings and would be unlikely to choose to reside at this location if they have a car but space is not available; and
 - A Travel Plan to be adopted at the site which will actively promote a range of sustainable travel options.
- 4.4.4 LCC's Supplementary Planning Document '*Ensuring a Choice of Travel*' (2008) provides general (note not minimum) car parking standards, and suggests that flats should be provided with an average of 0.7 spaces per dwelling in city centre locations and 1 space per dwelling outside of the city centre.

- 4.4.5 Importantly the SPD also notes that “lower levels of parking (including car free development) may be encouraged where appropriate”.
- 4.4.6 Given the highly sustainable location of the site on the edge of the city centre, including excellent access to a number of local retail, employment and leisure opportunities, it is considered that it is wholly appropriate that a development in this location provide a lower level of parking provision than generally prescribed by LCC.
- 4.4.7 Furthermore, the extensive opportunities for future residents to undertake journeys by sustainable means that there is no reason to believe that the development would lead to any increase in on-street parking practices around the site.
- 4.4.8 Cycle Parking
- 4.4.9 The proposals include secure parking for 26 bicycles within the curtilage of the apartment building, with covered and secure parking for an additional 50 bicycles proposed next to Iliad Street.
- 4.5 Refuse and Servicing Arrangements**
- 4.5.1 The development will provide a refuse store in the northeast corner. Refuse vehicles will use the existing turning head on Iliad Road to directly access this storage area. As such refuse collection vehicles will be able to stop with 25 metres of the collection area in accordance with Manual for Streets guidelines.
- 4.5.2 This aligns with the servicing strategy agreed with LCC for the residential scheme previously approved on the site (LPA ref: 17F/3307).
- 4.5.3 To demonstrate that the highway network is appropriate to accommodate refuse vehicles an AutoTRACK assessment has been undertaken. This is presented in **Drawing VN81190-TR102** and demonstrates that all required vehicle movements can be safely undertaken.
- 4.6 Highway Stopping Up Order**
- 4.6.1 The delivery of proposed developed will require a short section of highway to be stopped up along Clegg Street. This aspect will be dealt with via a separate application.

4.6.2 **Drawing VN81190-TR103** shows that a large car and box van respectively can use the new arrangement on Clegg Street to perform a turning manoeuvre.

5 HIGHWAY OPERATION

5.1 Overview

5.1.1 This section of the report sets out the trip generation of the proposed development and discusses the likely impact of development traffic on the local highway network.

5.2 Trip Forecasts

5.2.1 Based on the scale of the development and its location on the edge of Liverpool City Centre which is served by a range of sustainable modes of travel, it is considered that demand for car use will be low.

5.2.2 In order to forecast the proposed development's vehicle trip generation, the industry-standard TRICS database has been interrogated for the Residential/ Flats Privately Owned land use. The trip rates are as per those adopted for the assessment of the previously approved residential development on the site (LPA ref: 17F/3307).

5.2.3 A summary of the trip rates derived from this approach and the resulting trip generation has been provided in **Table 5.1**, with the full TRICS outputs included as **Appendix D** of this report.

	Morning Peak (0800-0900hrs)			Evening Peak (1700-1800hrs)		
	Arr	Dep	Total	Arr	Dep	Total
Trip Rate (per dwelling)	0.039	0.091	0.13	0.091	0.067	0.158
Predicted Trips (127 units)	5	12	17	12	9	21

Table 5.1: Forecast Development Vehicle Trip Generation

5.2.4 As shown in **Table 5.1**, the proposed development is forecast to generate 17 two-way vehicle movements in the AM peak period and 21 two-way vehicle movements in the PM peak period.

- 5.2.5 This equates to approximately one additional vehicle trip on the local highway network every 3 minutes. Such changes in traffic flow will in practice be less than is experienced through daily fluctuations and as such it is robustly concluded that the traffic generated by the development will have an imperceptible impact upon the operation of the local highway network.
- 5.2.6 Furthermore, it should be noted that the site is currently occupied by light industrial units which can accommodate a number of vehicle trip movements. If the trip generation of the extant consent were quantified, the net vehicle trip generation of the proposed would be reduced further.
- 5.2.7 It is therefore concluded that no detailed assessment of the traffic impact of the development on the local highway network should be required.

6 SUMMARY AND CONCLUSIONS

6.1 Overview

6.1.1 Vectos have been appointed by Caro Developments Ltd to provide highways and transport advice in support of a planning application for a proposed residential development on land off Clegg Street in Liverpool.

6.1.2 The development proposals consist of the demolition of existing buildings and redevelopment to provide 127 residential apartments.

6.1.3 The development site benefits from consent for a residential apartment scheme for 93 residential dwellings (LPA ref: 17F/3307).

6.1.4 The following pertinent points have been outlined in this Transport Statement:

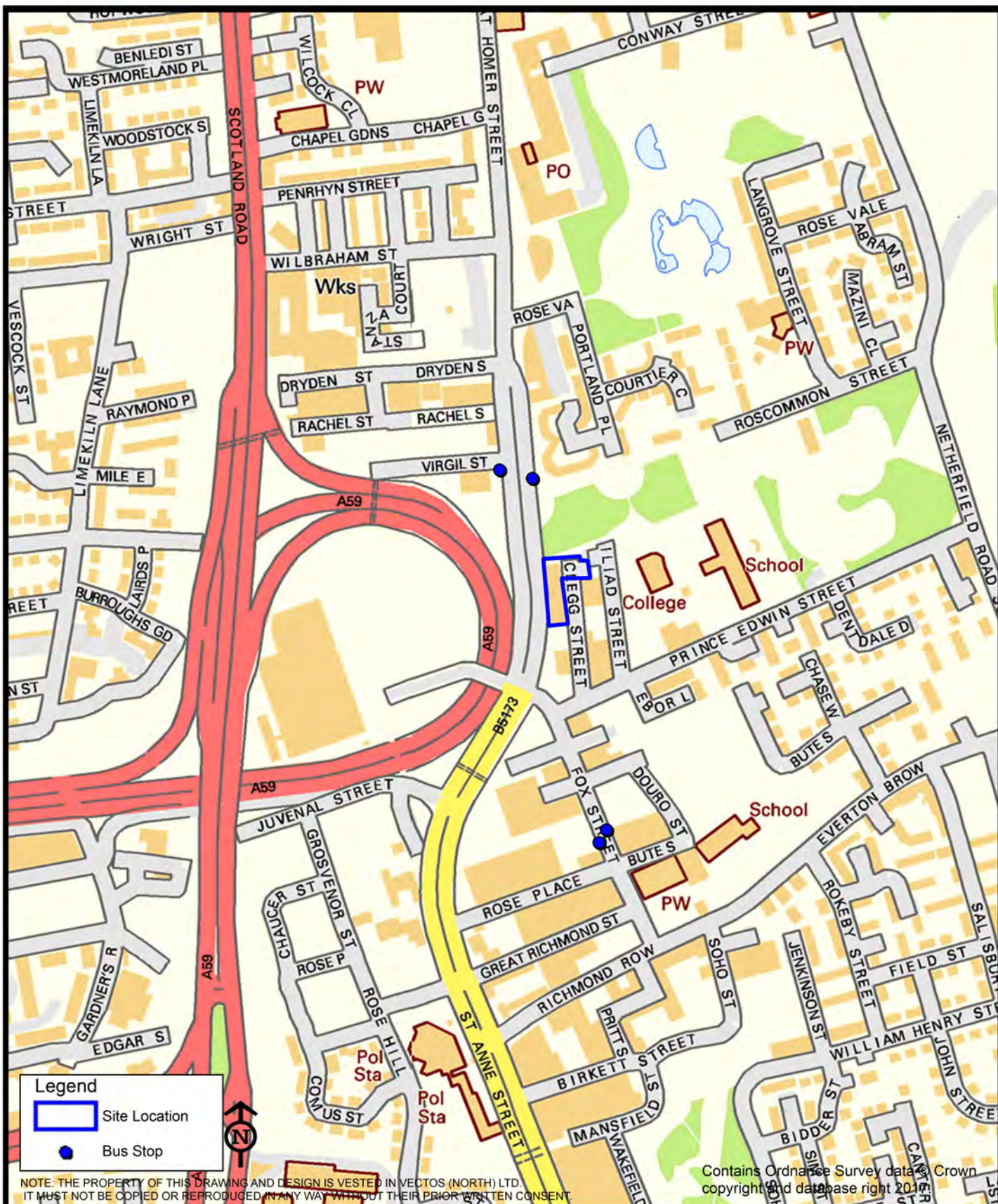
- The site is located on the edge of Liverpool City Centre;
- The highway network in the vicinity of the site is of an appropriate hierarchy to serve the development, with no accident blackspots have been identified;
- The site is very well located to encourage journeys on foot and by bicycle, with a wide range of local employment, retail and leisure opportunities are available within acceptable walking and cycling distances;
- The existing pedestrian and cycle infrastructure is well equipped to safely serve journeys by these modes. The development will provide 76 secure cycle parking spaces to support trips by this mode of travel;
- The site is also very well located to encourage trips by public transport, being located with easy walking distance of numerous high frequency bus services and also within walking and cycling distance of Liverpool Lime Street and Moorfields stations;
- The completed MASA assessment has revealed that the site is in a highly accessible location and benefits from excellent sustainable transport provision;
- A Travel Plan will be adopted for the development to encourage residents to use sustainable modes of travel;

- The development will provide total of 27 car parking spaces. This provision has been concluded to be wholly appropriate given the sustainable location of the development, and reflects LCC's adopted policy that lower level of car parking may be encouraged where appropriate;
- A trip generation exercise has been undertaken which forecast the development would generate 17 and 21 two way vehicle movements in the AM and PM peak periods respectively. It was concluded that this level of traffic would have an imperceptible impact upon the operation of the local highway network, particularly when traffic relating to the existing uses is netted out; and
- Refuse collection to be taken from Iliad Street via an existing turning head arrangement. It has been demonstrated that all required vehicle manoeuvres can be safely undertaken.

6.2 Transport Statement Conclusions

- 6.2.1 This Transport Statement has demonstrated that the proposed development site is sited in a highly sustainable location in accordance with NPPF guidelines. The report has also demonstrated that the proposals would have an imperceptible impact upon the operation of the local highway network, and by virtue of this no detrimental impact upon highway safety.
- 6.2.2 The National Planning Policy Framework states 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"*.
- 6.2.3 This report has demonstrated that the development would not have an unacceptable impact on highway safety, nor would the residual cumulative impact of the development would be severe. On this basis there are no material reasons why the proposed development should not be granted planning consent on highways or transportation grounds.

PLANS



CLIENT:

Caro Developments Ltd

PROJECT TITLE:

Clegg Street, Liverpool

DRAWING TITLE:

Site Location (Local Context)



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

DRAWN:

TO

CHECKED:

RW

DATE

03.12.18

SCALE:

1:5,000 at A4

DRAWING NO:

VN81190-G100

REVISION:

.

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



- Legend
- SiteLocation
 - Pedestrian Catchment
 - 0 - 1 km
 - 1km - 2 Km
 - Bus Stop

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CLIENT:

Caro Developments Ltd

PROJECT TITLE:

Clegg Street, Liverpool

DRAWING TITLE:

Pedestrian Catchment with Local Routes

SCALE:

N.T.S

DRAWN:

TO

CHECKED:

RW

DATE:

03.12.18



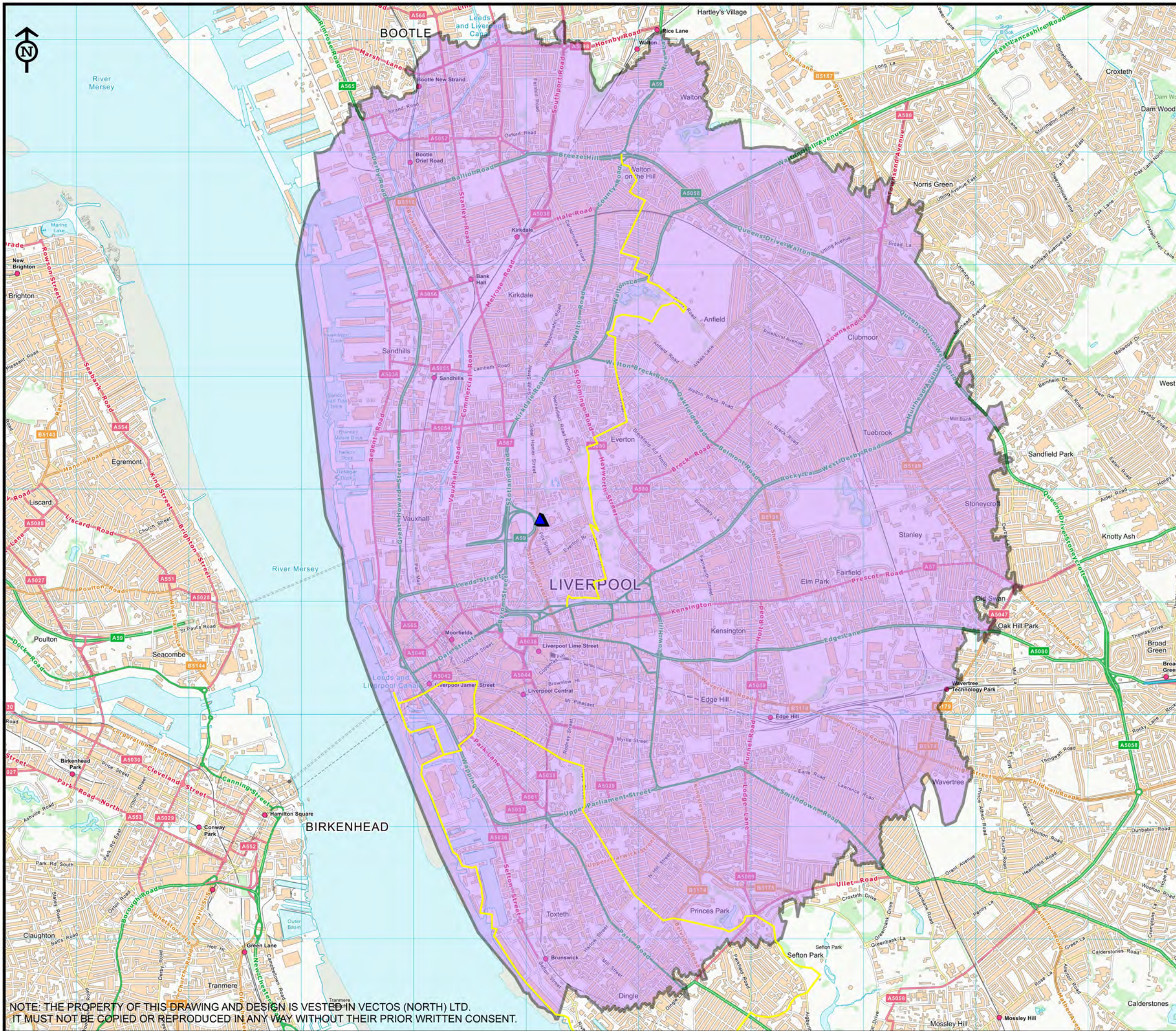
Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWING NO:

VN81190-G102

REVISION:

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Legend

▲ Site Location

Cycle Catchment

0 - 5km

— National Cycle Route

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CLIENT:

Caro Developments Ltd

PROJECT TITLE:

Clegg Street, Liverpool

DRAWING TITLE:

Cycle Catchment with Local
Routes

SCALE:
N.T.S

DRAWN:	TO	CHECKED:	RW	DATE:	03.12.18
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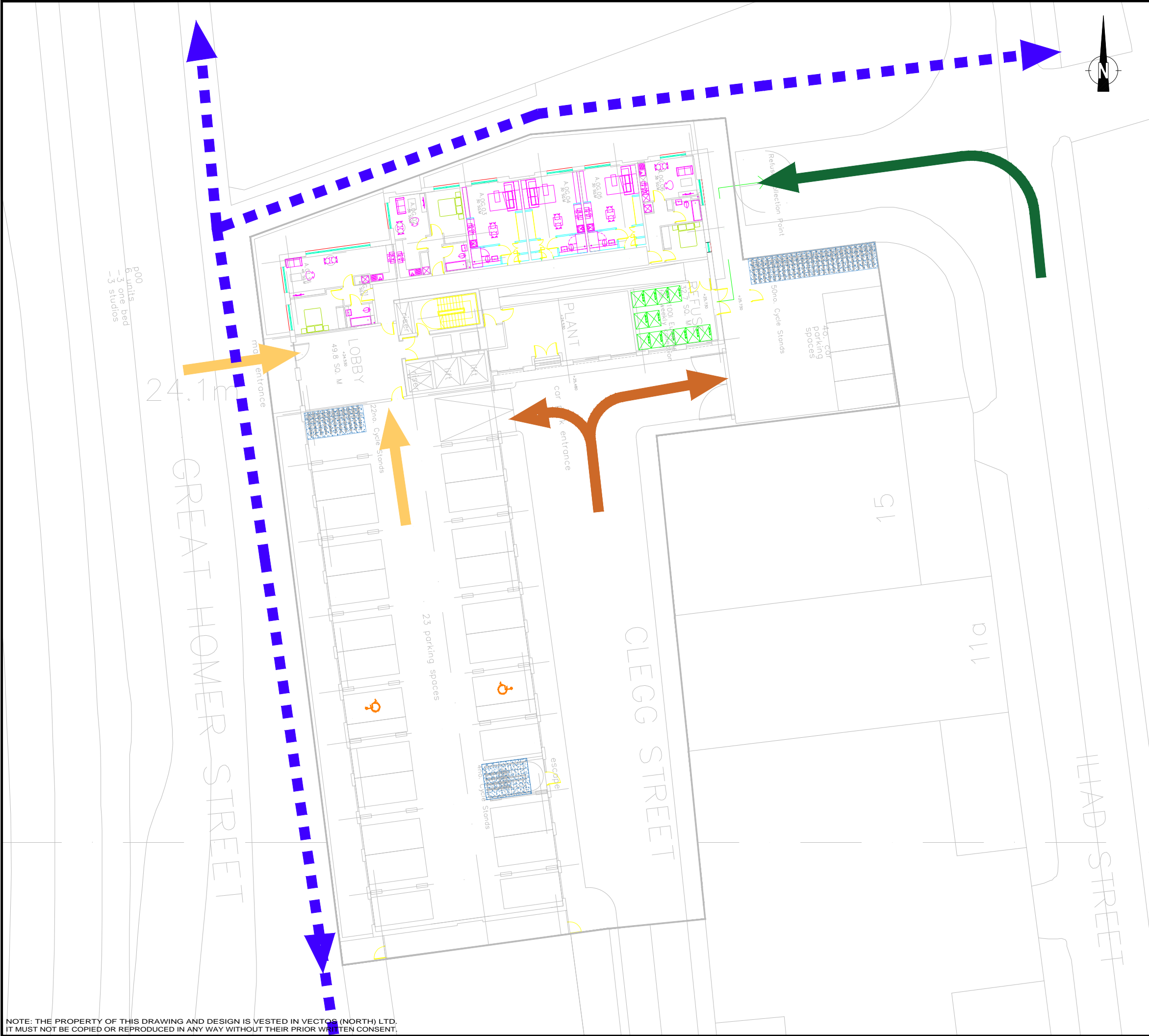
Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 228 1008 e:manchester@vectos.co.uk

DRAWING NO:

VN81190-G103

REVISION:

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Notes:

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2. White lining is indicative only.

Pedestrian Desire Lines	
Vehicle Access	
Public Entrance	
Service Vehicle Access	
Proposed Cycle Parking	

REV.	A	Site layout amended	TO	RW	10.12.18
		DETAILS	DRAWN	CHECKED	DATE

CLIENT:

Caro Developments Ltd

PROJECT:

Clegg Street, Liverpool

DRAWING TITLE:

Access Diagram

SCALES:

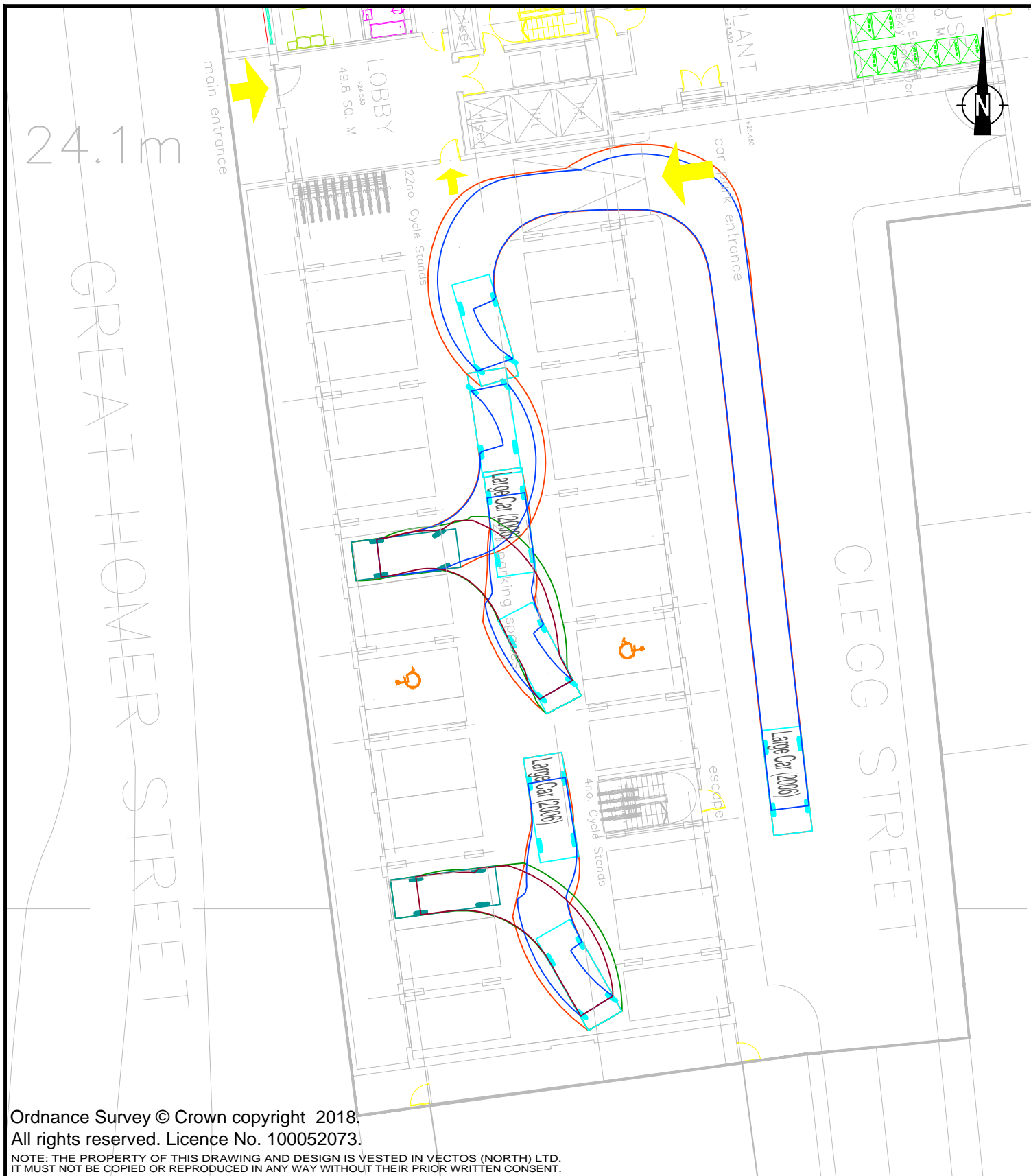
N.T.S.

DRAWN:	TO	CHECKED:	RW	DATE:	10.12.18
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4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008 e: manchester@vectors.co.uk

DRAWING NUMBER:	VN81190-G104	REVISION:	A
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DRAWINGS



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REV.	DETAILS	DRAWN	CHECKED	DATE
A	Site layout amended	TO	PT	07.12.18

Notes:			
1. This is not a construction drawing and is intended for illustrative purposes only.			
2. White lining is indicative only.			
Large Car (2006)		Medium Sized Car	
Overall Length	5.079m	Overall Length	4.319m
Overall Width	1.872m	Overall Width	1.686m
Overall Body Height	1.525m	Overall Body Height	1.466m
Min Body Ground Clearance	0.310m	Min Body Ground Clearance	0.228m
Max Track Width	1.831m	Max Track Width	1.591m
Lock to lock time	4.00s	Lock to lock time	4.00s
Kerb to Kerb Turning Radius	5.900m	Kerb to Kerb Turning Radius	5.042m

Clegg Street, Liverpool - Revised Application

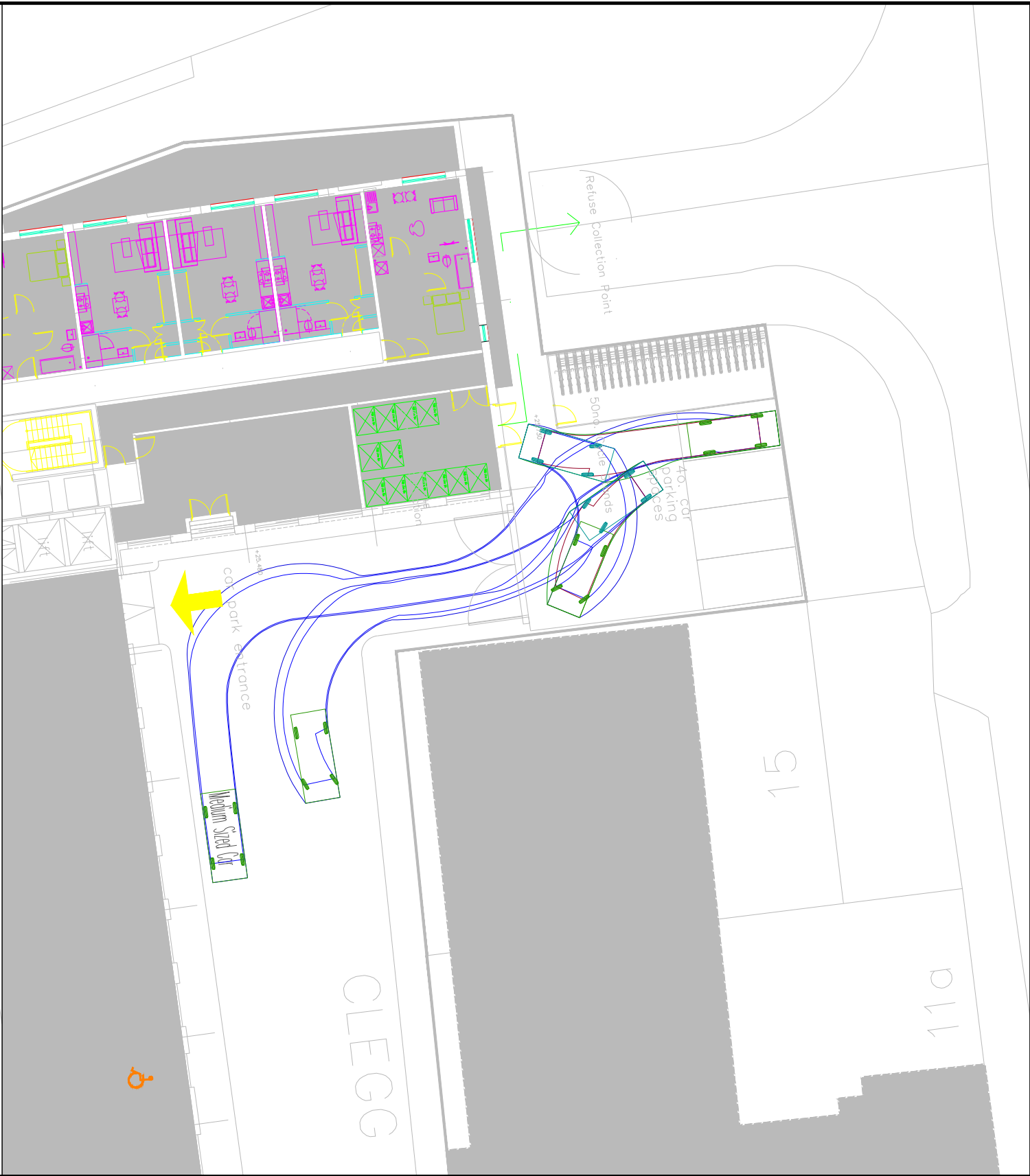
Caro Developments

Swept Path Analysis - Internal Car Park



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

DRAWN:	CHECKED:	DATE:	SCALES:	DRAWING NUMBER:	REVISION:
TO	RW	10.12.18	1:500 at A3	VN81190-TR100	A



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REV.	DETAILS	DRAWN	CHECKED	DATE
.

Notes:

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2. White lining is indicative only.

Medium Sized Car
Overall Length 4.319m
Overall Width 1.686m
Overall Body Height 1.466m
Min Body Ground Clearance 0.228m
Max Track Width 1.591m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 5.042m

Clegg Street, Liverpool

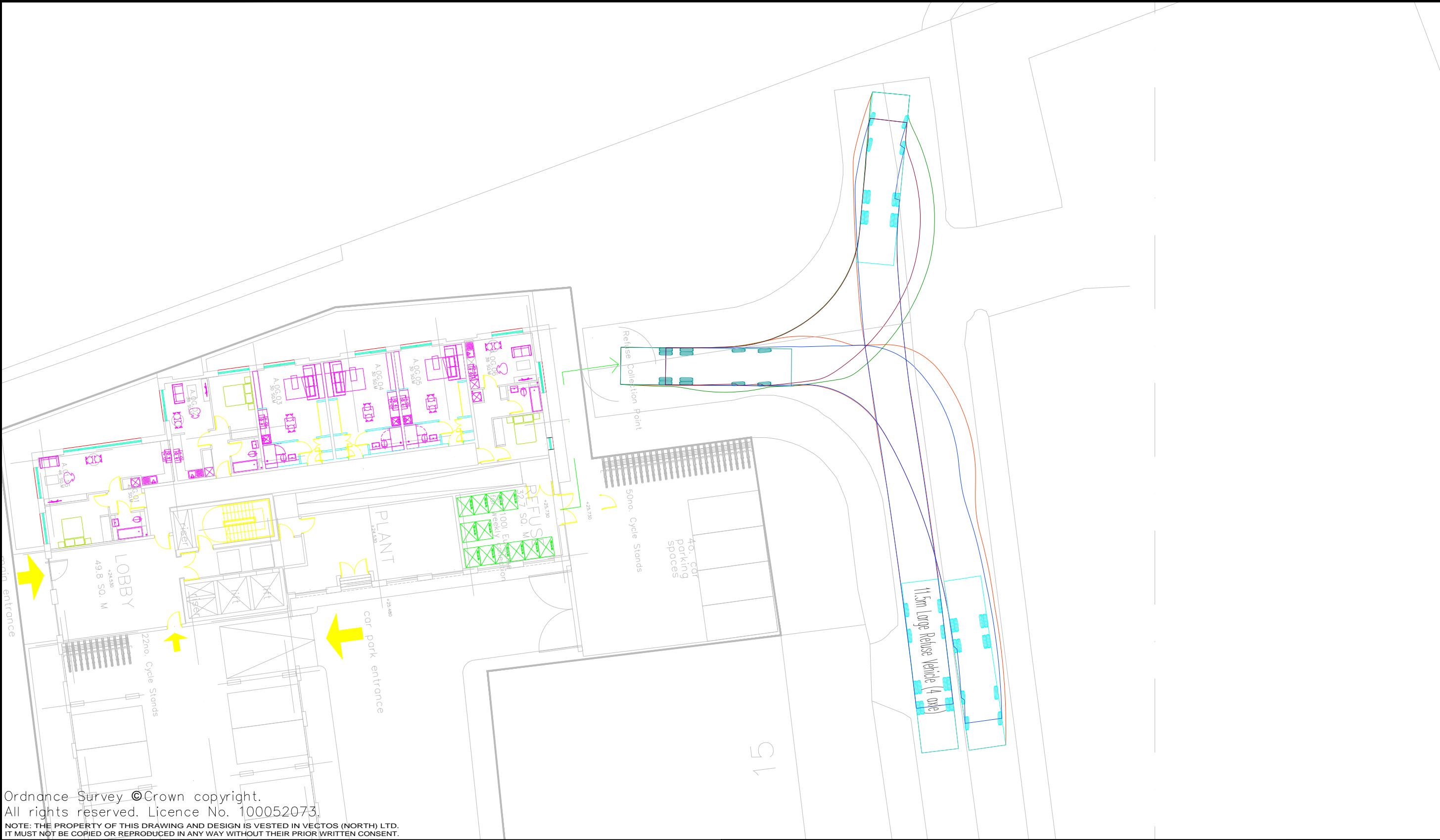
Medium Car Swept Path Analysis: External Car Park

DRAWN:	CHECKED:	DATE:	SCALES:
TO	RW	10.12.18	1:250 at A3

Caro Developments Ltd

3rd Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008
e: manchester@vectos.co.uk

DRAWING NUMBER:	REVISION:
VN81190-TR101	.



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REV.	DETAILS	DRAWN	CHECKED	DATE
.		.	.	.

Notes:

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

2. White lining is indicative only.

11.5m Large Refuse Vehicle (4 axle)

Overall Length	11.500m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to lock time	6.00s
Wall to Wall Turning Radius	11.330m

Clegg Street, Liverpool

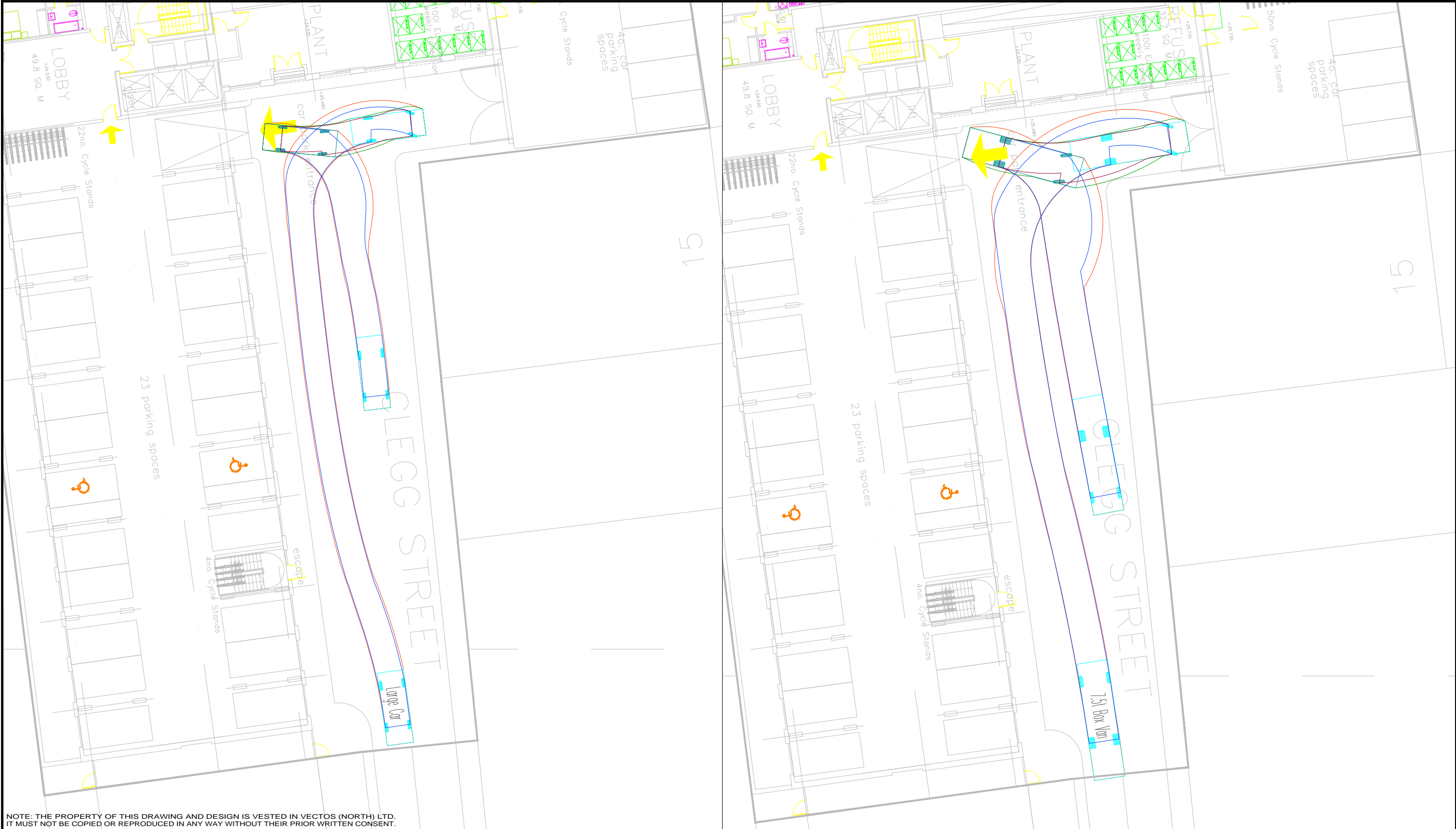
Caro Developments Ltd

Large Refuse Vehicle Swept Path Analysis

3rd Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ
0161 228 1008
e: manchester@vectos.co.uk

DRAWN:	CHECKED:	DATE:	SCALES:
TO	RW	10.12.18	1:250 at A3

DRAWING NUMBER:	REVISION:
VN81190-TR102	.



REV.	DETAILS	DRAWN	CHECKED	DATE
.		.	.	.

Notes:

- This is not a construction drawing and is intended for illustrative purposes only.
- White lining is indicative only.

7.5t Box Van
Overall Length 8.010m
Overall Width 2.100m
Overall Height 3.550m
Min Body Ground Clearance 0.350m
Track Width 2.064m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 7.400m

Large Car
Overall Length 4.988m
Overall Width 1.793m
Overall Height 1.502m
Min Body Ground Clearance 0.287m
Track Width 1.700m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 6.200m

Clegg Street, Liverpool				Caro Developments Ltd	
Large Car & 7.5t Box Van Swept Path Analysis					
3rd Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ 0161 228 1008 e: manchester@vectos.co.uk				DRAWING NUMBER: VN81190-TR103	
DRAWN: TO		CHECKED: RW		DATE: 11.12.18	
SCALES: 1:250 at A3		REVISION: .			

APPENDICES

APPENDIX A – SCOPING CORRESPONDENCE

From: [Hernandez, Jeff](#)
To: [Hayes, John](#)
Cc: [Dingwall, Andy](#)
Subject: RE: Clegg Street
Date: 05 November 2018 11:11:31
Attachments: [image005.png](#)
[image006.png](#)

John,

In terms of car parking the previous scheme has 32 car parking spaces to be provided for the 93 residential units, a provision of 34% when compared to the SPD on Parking and we considered this acceptable. Although, the proposed changes in the number of units are not ideal this percentage figure will reduce by around 9% to 25%. I assume the parking will remain the same as it is fixed and there is no scope to provide any more.

I therefore accept the parking provision as it stands (providing this has not changed) associated with the new number of units given the fact that 92% of the units are studio/one bed apartments that will reduce the likelihood for further parking demand at the site.

Overall I therefore see the proposed changes as being acceptable for a development of this scale given the site constraints and accessibility of the site.

In addition to this I note the section 106 has been signed that relates to contributions towards the costs of a parking study and pedestrian and cyclist connectivity improvements. This will go some way in improving the area from a traffic/highway point of view.

Regards

Jeff Hernandez | Principal Engineer – Highways Development Control

Liverpool City Council | Cunard Building | Water Street | Liverpool | L3 1AH

T: 0151 233 0321 | **E:** jeff.hernandez@liverpool.gov.uk

Liverpool City Council | Cunard Building | Water Street | Liverpool | L3 1AH

cid:image001.jpg@01D42422.492D4AA0



APPENDIX B – MINIMUM ACCESSIBILITY STANDARD ASSESSMENT

3 Minimum Accessibility Standard Assessment

Address: Clegg Street, Liverpool					
Completed By: Vectos					
Access Diagram					
Has a diagram been submitted which shows how people move to and through the development and how this links to the surrounding roads, footpaths and sight lines? (This can be included within the Design and Access Statement, see Section 2.25.) If a diagram has not been submitted your application may not be processed.				Yes No	
Access on Foot				Points	Score
Safety	Is there safe pedestrian access to and within the site, and for pedestrians passing the site (2m minimum width footpath on both sides of the road)? If no your application must address safe pedestrian access.				Yes No
Location	Housing Development: Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F)		Yes	2	2
	Other development: Is the density of existing local housing (i.e. within 800m) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)		No	0	
Internal Layout	Does 'circulation' and access inside the sites 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	1
			No	0	
External Layout	Are there barriers between site and local facilities or housing which restrict pedestrian access? (see Merseyside Code of Practice on Access and Mobility) e.g.		There are barriers	-2	1
	<ul style="list-style-type: none"> No dropped kerbs at crossings or on desire lines; Steep gradients; A lack of a formal crossing where there is heavy traffic; Security concerns, e.g. lack of lighting. 		There are no barriers	1	
Other	The development links to identified recreational walking network (see Accessibility Map 1). If no, please provide reasons why not.				Yes No
				Total (B)	
Summary	Box A: Minimum Standard (from Table 3.1)	4		Comments or action needed to correct any shortfall	
	Box B: Actual Score	4/4			

Access by Cycle			Points	Score
Safety	Are there safety issues for cyclists either turning into or out of the site or a road junctions within 400m of the site (e.g. dangerous right turns for cyclists due to the level of traffic)? If yes, you must address safety issues in your application.			Yes <input checked="" type="radio"/> No <input type="radio"/>
Cycle Parking	Does the development meet cycle parking standards, in a secure location with natural surveillance, or where appropriate contribute to communal cycle parking facilities? If no, you must address cycle parking standards and cycle parking facilities.			Yes <input type="radio"/> No <input checked="" type="radio"/>
Location	<u>Housing Development:</u> Is the development within 1 mile of a district or local centre (see Accessibility Map 1) <u>Other Development:</u> Is the density of local housing (e.g. within 1 mile) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)	Yes	<input checked="" type="radio"/> 2	2
		No	<input type="radio"/> 0	
Internal layout	Does 'circulation' and access inside the site reflect direct and safe cycle routes; with priority given to cyclists where they meet motor vehicles?	Yes	<input checked="" type="radio"/> 1	1
		No	<input type="radio"/> 0	
External Access	The development is within 400m of an existing or proposed cycle route (see Accessibility Map 1 in Appendix F) and / or proposes to create a link to a cycle route, or develop a route?		<input checked="" type="radio"/> 1	1
	The development is not within 400m of an existing or proposed cycle route (see Accessibility Map 1 in Appendix F)		-1	
Other	Development includes shower facilities and lockers for cyclists	Yes	<input checked="" type="radio"/> 1	1
		No	<input type="radio"/> 0	
			Total (B)	
Summary	Box A: Minimum Standard (From Table 3.1)	5	Comments or action needed to correct any shortfall	

3 Minimum Accessibility Standard Assessment

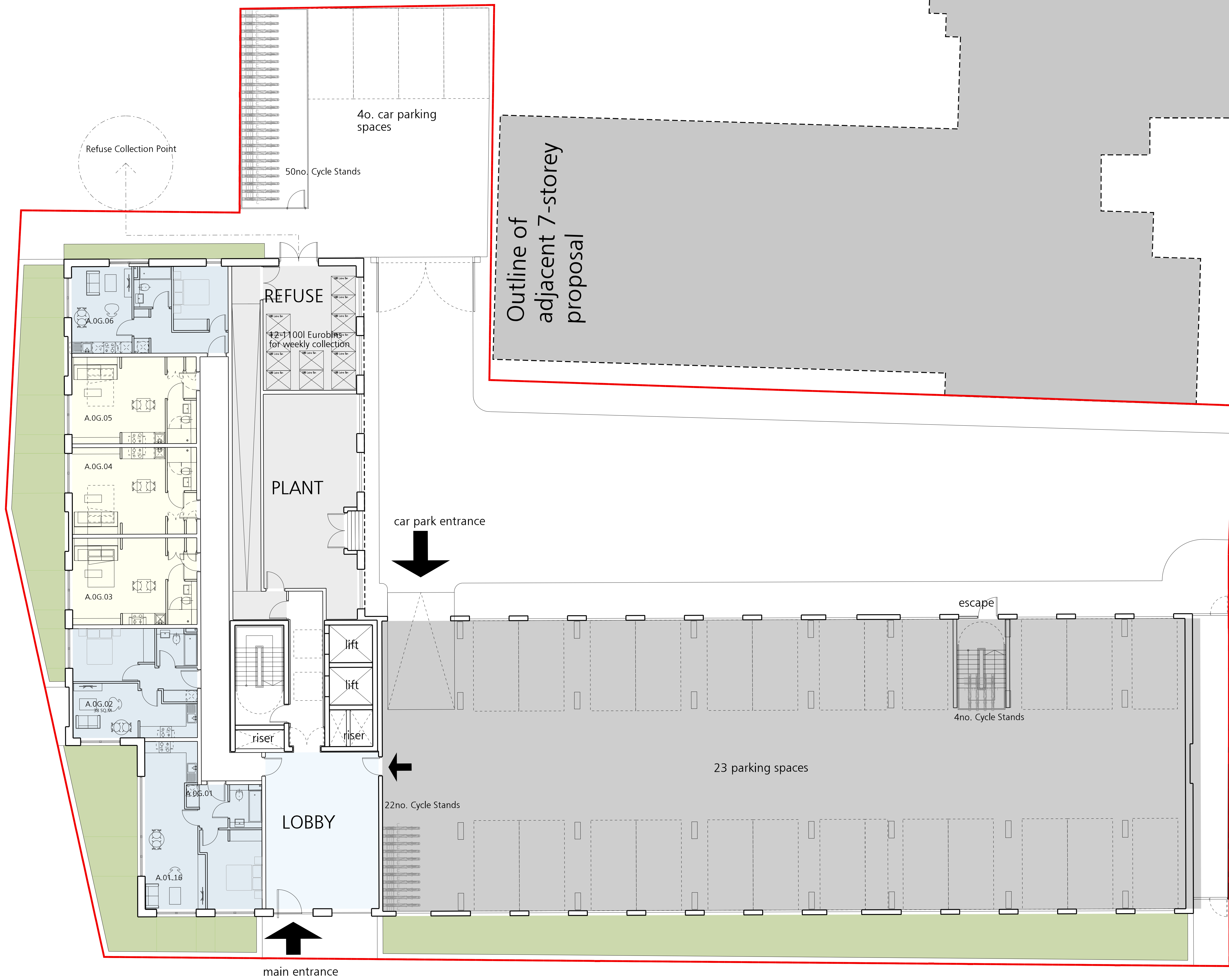
	Box B: Actual Score	5/5	Cycle parking used will be monitored through the implementation of a Travel Plan document. If required, cycle parking provision could be increased to meet demand	
Access by Public Transport			Points	Score
Location and access to public transport	Is the site within a 200m safe and convenient walking distance of a bus stop, and/or within 400m of a rail station? (See Accessibility Map 2 in Appendix F).	Yes	2	2
		No	0	
	Are there barriers on direct and safe pedestrian routes to bus stops or rail stations i.e. <ul style="list-style-type: none">• A lack of dropped kerbs;• Pavements less than 2m wide;• A lack of formal crossings where there is heavy traffic; or• Bus access kerbs.	There are barriers	0	1
		There are no barriers	1	
Frequency	High (four or more bus services or trains an hour)		2	2
	Medium (two or three bus services or trains an hour)		1	
	Low (less than two bus services or trains an hour)		0	
Other	The proposal contributes to bus priority measures serving the site		1	
	The proposal contributes to bus stops, bus interchange or bus or rail stations in the vicinity and/or provides bus stops or bus interchange in the site		1	
	The proposal contributes to an existing or new bus service		1	
			Total (B):	

Summary	Box A: Minimum Standard (from Table 3.1)	5	Comments or action needed to correct any shortfall	
	Box B: Total Score	5/5		
Vehicle Access and Parking			Points	Score
Vehicle access and circulation	Is there safe access to and from the road? If no, you must address safety issues.			Yes / No
	Can the site be adequately serviced? If no, you must address service issues.			Yes / No
	Is the safety and convenience of other users (pedestrians, cyclists and public transport) affected by the proposal? If yes, you must address safety issues.			Yes / No
	Has access for the emergency services been provided? If no, you must provide emergency service provision.			Yes / No
	For development which generates significant freight movements, is the site easily accessed from the road or rail freight route networks (i.e. minimising the impact of traffic on local roads and neighbourhoods) (see Accessibility Map 3 in Appendix F)? If no, please provide an explanation.			Yes / No
Parking	The off-street parking provided is more than advised in Section 4 for that development type. If yes, parking provision must be reassessed.			Yes / No

3 Minimum Accessibility Standard Assessment

	The off-street parking provided is as advised in Section 4 for that development type	1	Yes / No
	The off-street parking provided is less than 75% of the amount advised in Section 4 for that development type (or shares parking provision with another development)	2	Yes / No
	For development in controlled parking zones:		Yes / No
	● Is it a car free development?	1	Yes / No
	● Supports the control or removal of on-street parking spaces (inc provision of disabled spaces), or contributes to other identified measures in the local parking strategy (including car clubs)	1	Yes / No
Total (B):			
Summary	Box A: Minimum Standard (From Table 3.1)	3	Comments or action needed to correct any shortfall. If conditions are appropriate for the reduced level of parking (see section 4), but this has not been provided, please explain why. Parking supply proposed given location of the site on the edge of the city centre with a variety of sustainable modes that can be promoted ahead of private car use.

APPENDIX C – SITE LAYOUT PLAN



Rev G - 07.12.2018 - Layout amended for planning submission.
Rev F - 26.09.2018 - Mix of apartments amended.
Rev E - 08.02.2018 - Parking entrance relocated, lland access removed, paving altered.
Rev D - 18.10.2017 - Omitted organised parking bays.
Rev C - 13.10.2017 - Amended car parking spaces.
Rev B - 12.10.2017 - Amended to suit planning comments.
Rev A - 03.10.2017 - Car Parking amended to suit Transport Consultants comments.

PLANNING					
Project Title		Clegg Street, Liverpool		Project No.	
Drawing Title		Ground Floor Plan		Drawing No.	
Client		Caro Developments			
Drawn By	TE	Date	September 2017		
Scale	1:100@A1				
				02-03-001G	
ur Telephone +44(0)151 243 5800				www.fcarchitects.com	
				© F.C.H.	

FALCONER
CHESTER
HALL





APPENDIX D – TRICS OUTPUTS

Calculation Reference: AUDIT-715001-170912-0931

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

04	EAST ANGLIA	
	NF NORFOLK	1 days
08	NORTH WEST	
	CH CHESHIRE	1 days
	GM GREATER MANCHESTER	2 days

This section displays the number of survey days per TRICS® sub-region in the selected set

Secondary Filtering selection:

This data displays the chosen trip rate parameter and its selected range. Only sites that fall within the parameter range are included in the trip rate calculation.

Parameter: Number of dwellings
 Actual Range: 20 to 154 (units:)
 Range Selected by User: 50 to 215 (units:)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 09/11/16

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Thursday	2 days
Friday	2 days

This data displays the number of selected surveys by day of the week.

Selected survey types:

Manual count	4 days
Directional ATC Count	0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaken using machines.

Selected Locations:

Town Centre	2
Edge of Town Centre	2

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Residential Zone	1
Built-Up Zone	3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Secondary Filtering selection:

Use Class:

C3

4 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order 2005 has been used for this purpose, which can be found within the Library module of TRICS®.

Population within 1 mile:

10,001 to 15,000

2 days

25,001 to 50,000

2 days

This data displays the number of selected surveys within stated 1-mile radii of population.

Population within 5 miles:

50,001 to 75,000

1 days

125,001 to 250,000

1 days

500,001 or More

2 days

This data displays the number of selected surveys within stated 5-mile radii of population.

Car ownership within 5 miles:

0.6 to 1.0

2 days

1.1 to 1.5

2 days

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

No

4 days

This data displays the number of surveys within the selected set that were undertaken at sites with Travel Plans in place, and the number of surveys that were undertaken at sites without Travel Plans.

PTAL Rating:

No PTAL Present

4 days

This data displays the number of selected surveys with PTAL Ratings.

LIST OF SITES relevant to selection parameters

1	CH-03-C-01 NEW CRANE STREET	BLOCKS OF FLATS	CHESHIRE
	CHESTER		
	Edge of Town Centre		
	Residential Zone		
	Total Number of dwellings:	60	
	Survey date: FRIDAY	17/10/08	Survey Type: MANUAL
2	GM-03-C-02 WHITWORTH STREET W.	BLOCK OF FLATS	GREATER MANCHESTER
	MANCHESTER		
	Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	154	
	Survey date: THURSDAY	13/10/11	Survey Type: MANUAL
3	GM-03-C-03 FAIRFIELD STREET	BLOCK OF FLATS	GREATER MANCHESTER
	MANCHESTER		
	Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	20	
	Survey date: FRIDAY	14/10/11	Survey Type: MANUAL
4	NF-03-C-01 PAGE STAIR LANE	BLOCKS OF FLATS	NORFOLK
	KING'S LYNN		
	Edge of Town Centre		
	Built-Up Zone		
	Total Number of dwellings:	51	
	Survey date: THURSDAY	11/12/14	Survey Type: MANUAL

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

MANUALLY DESELECTED SITES

Site Ref	Reason for Deselection
CB-03-C-01	Parking Ratio
DC-03-C-01	Parking Ratio
EX-03-C-01	Parking Ratio
EX-03-C-02	Parking Ratio
FS-03-C-01	Parking Ratio
HI-03-C-01	Parking Ratio
SA-03-C-01	Parking Ratio
SC-03-C-01	Parking Ratio
SF-03-C-01	Parking Ratio
SR-03-C-01	Parking Ratio
SR-03-C-02	Parking Ratio
WM-03-C-03	Parking Ratio

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
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	4	71	0.028	4	71	0.084	4	71	0.112
08:00 - 09:00	4	71	0.039	4	71	0.091	4	71	0.130
09:00 - 10:00	4	71	0.049	4	71	0.039	4	71	0.088
10:00 - 11:00	4	71	0.060	4	71	0.042	4	71	0.102
11:00 - 12:00	4	71	0.063	4	71	0.046	4	71	0.109
12:00 - 13:00	4	71	0.053	4	71	0.063	4	71	0.116
13:00 - 14:00	4	71	0.049	4	71	0.077	4	71	0.126
14:00 - 15:00	4	71	0.060	4	71	0.053	4	71	0.113
15:00 - 16:00	4	71	0.046	4	71	0.035	4	71	0.081
16:00 - 17:00	4	71	0.056	4	71	0.053	4	71	0.109
17:00 - 18:00	4	71	0.091	4	71	0.067	4	71	0.158
18:00 - 19:00	4	71	0.056	4	71	0.032	4	71	0.088
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.650			0.682			1.332

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date date range: 01/01/07 - 09/11/16
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 12

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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	4	71	0.000	4	71	0.000	4	71	0.000
08:00 - 09:00	4	71	0.000	4	71	0.000	4	71	0.000
09:00 - 10:00	4	71	0.000	4	71	0.000	4	71	0.000
10:00 - 11:00	4	71	0.000	4	71	0.000	4	71	0.000
11:00 - 12:00	4	71	0.000	4	71	0.000	4	71	0.000
12:00 - 13:00	4	71	0.000	4	71	0.000	4	71	0.000
13:00 - 14:00	4	71	0.004	4	71	0.004	4	71	0.008
14:00 - 15:00	4	71	0.004	4	71	0.004	4	71	0.008
15:00 - 16:00	4	71	0.000	4	71	0.000	4	71	0.000
16:00 - 17:00	4	71	0.000	4	71	0.000	4	71	0.000
17:00 - 18:00	4	71	0.000	4	71	0.000	4	71	0.000
18:00 - 19:00	4	71	0.000	4	71	0.000	4	71	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date date range: 01/01/07 - 09/11/16
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 12

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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	4	71	0.000	4	71	0.000	4	71	0.000
08:00 - 09:00	4	71	0.000	4	71	0.000	4	71	0.000
09:00 - 10:00	4	71	0.000	4	71	0.000	4	71	0.000
10:00 - 11:00	4	71	0.000	4	71	0.000	4	71	0.000
11:00 - 12:00	4	71	0.000	4	71	0.000	4	71	0.000
12:00 - 13:00	4	71	0.004	4	71	0.004	4	71	0.008
13:00 - 14:00	4	71	0.004	4	71	0.004	4	71	0.008
14:00 - 15:00	4	71	0.000	4	71	0.000	4	71	0.000
15:00 - 16:00	4	71	0.000	4	71	0.000	4	71	0.000
16:00 - 17:00	4	71	0.000	4	71	0.000	4	71	0.000
17:00 - 18:00	4	71	0.000	4	71	0.000	4	71	0.000
18:00 - 19:00	4	71	0.000	4	71	0.000	4	71	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.008			0.008			0.016

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date date range: 01/01/07 - 09/11/16
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 12

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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	4	71	0.000	4	71	0.000	4	71	0.000
08:00 - 09:00	4	71	0.000	4	71	0.000	4	71	0.000
09:00 - 10:00	4	71	0.000	4	71	0.000	4	71	0.000
10:00 - 11:00	4	71	0.000	4	71	0.000	4	71	0.000
11:00 - 12:00	4	71	0.000	4	71	0.000	4	71	0.000
12:00 - 13:00	4	71	0.000	4	71	0.000	4	71	0.000
13:00 - 14:00	4	71	0.000	4	71	0.000	4	71	0.000
14:00 - 15:00	4	71	0.000	4	71	0.000	4	71	0.000
15:00 - 16:00	4	71	0.000	4	71	0.000	4	71	0.000
16:00 - 17:00	4	71	0.000	4	71	0.000	4	71	0.000
17:00 - 18:00	4	71	0.000	4	71	0.000	4	71	0.000
18:00 - 19:00	4	71	0.000	4	71	0.000	4	71	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		0.000			0.000			0.000	

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date date range: 01/01/07 - 09/11/16
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 12

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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	4	71	0.000	4	71	0.007	4	71	0.007
08:00 - 09:00	4	71	0.000	4	71	0.007	4	71	0.007
09:00 - 10:00	4	71	0.011	4	71	0.011	4	71	0.022
10:00 - 11:00	4	71	0.007	4	71	0.007	4	71	0.014
11:00 - 12:00	4	71	0.004	4	71	0.000	4	71	0.004
12:00 - 13:00	4	71	0.000	4	71	0.014	4	71	0.014
13:00 - 14:00	4	71	0.000	4	71	0.000	4	71	0.000
14:00 - 15:00	4	71	0.004	4	71	0.000	4	71	0.004
15:00 - 16:00	4	71	0.007	4	71	0.004	4	71	0.011
16:00 - 17:00	4	71	0.000	4	71	0.004	4	71	0.004
17:00 - 18:00	4	71	0.014	4	71	0.000	4	71	0.014
18:00 - 19:00	4	71	0.004	4	71	0.000	4	71	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.051			0.054			0.105

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: $COUNT/TRP*FACT$. Trip rates are then rounded to 3 decimal places.

Parameter summary

Trip rate parameter range selected: 20 - 154 (units:)
 Survey date date range: 01/01/07 - 09/11/16
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys automatically removed from selection: 0
 Surveys manually removed from selection: 12

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.