

Hillmore Developments Limited

**PROPOSED MIXED-USE DEVELOPMENT
ST. JAMES COURT, LIVERPOOL**

Transport Assessment

VN50542

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1 INTRODUCTION

1.1 Background

- 1.1.1 Vectos has been commissioned by Hillmore Developments Limited to prepare a Transport Assessment to accompany a proposed mixed-use development in Liverpool. The site is located approximately 1.5km to the south of Liverpool city centre in the area known as the Baltic Triangle.
- 1.1.2 The Baltic Triangle is a redevelopment area that consists of a variety of land uses including historical warehousing, industrial, commercial and residential development. The development site is located to the south of this area, bordered by St. James Street to the east, Greenland Street to the south and New Bird Street to the north. Commercial development exists to the west. **Plan 1** shows the location of the site in relation to the city centre and **Plan 2** shows the local highway network in more detail.
- 1.1.3 The site currently consists of a single building that has been subdivided into a number of commercial units. Pedestrian and vehicular access to these businesses is taken from both Greenland Street and New Bird Street with hardstanding provided to cater for delivery vehicles and servicing.
- 1.1.4 It is proposed to construct a mixed-use development consisting of 157 residential apartments above 670sqm of commercial units which are envisaged would provide B1 use. The commercial floor space would be divided into four separate units. The residential properties and two of the commercial units would be accessed by pedestrians from St. James Street with the two remaining commercial units being accessed from Greenland Street. The sole vehicular access would be provided on Bird Street, providing access to 32 car parking spaces (including 3 disabled bays) and 48 secure cycle parking spaces at a lower ground level. **Plan 3** shows the layout of the ground and lower ground floors, including all of the access arrangements.

1.2 Initial Scoping

- 1.2.1 Initial discussions were held with Liverpool City Council (LCC) and a pre-application response was provided dated 14th May 2015. This confirmed that the scale of development would require a Transport Assessment and a Minimum Accessibility Standard Assessment (MASA).
- 1.2.2 It specifically requested that information be provided regarding the management of the car parking spaces and that car and cycle parking provision will need to reflect the standards found in the Council's Supplementary Planning Document '*Ensuring a Choice of Travel*' (2008).

1.3 Report Detail

1.3.1 This Transport Assessment has been prepared to outline the predicted traffic impact of the new development proposals. It should be read in conjunction with the Travel Plan prepared by Vectos as well as the Design and Access Statement (DV Architects) and the Planning Statement (Planning Conditions Ltd).

1.3.2 In line with both local and national planning policy, industry best practice and initial guidance provided by LCC Highways, the TA includes:

- Context of the site;
- Site accessibility review;
- Policy Context;
- Description of development proposals including a MASA;
- Consideration of traffic impact; and
- Conclusions.

2 SITE CONTEXT

2.1 Site Location

2.1.1 The site is located approximately 1.5km to the south of Liverpool city centre, as shown in **Plan 1**. It falls within the Baltic Triangle area of Liverpool, which is the area bounded by Liver Street, Parliament Street and Chaloner Street/Wapping. The area has seen much regeneration in recent years and forms an important part of the city being located close to the waterfront, Paradise Street and Rope Walks development areas.

2.1.2 Development in this area consists of commercial development including flexible office/employment space at ground floor level and some residential development. This reflects guidance provided in LCC's '*Baltic Triangle Planning Framework*' (2008) which seeks to ensure that development in this area is brought forward in a comprehensive and coordinated way, following best practice principles or urban regeneration and design.

2.1.3 The site currently consists of a single low rise building that has been subdivided into eight commercial units providing approximately 1,000sqm of light industrial B2 use class. Pedestrian and vehicular access to these businesses is taken from both Greenland Street and New Bird Street with each unit having a roller shutter to allow vehicles and deliveries direct access.

2.2 Local Highway Network

2.2.1 The site is bordered by Greenland Street to the south, St. James Street to the east, and New Bird Street to the north. Commercial development exists to the west. **Plan 2** shows the location of the site in relation to the local highway network.

Greenland Street

2.2.2 Greenland Street provides the southern boundary of the site and is a single carriageway road with a 30mph speed limit. It is a no through road at its eastern end with bollards and footway preventing through vehicular access onto St. James Street. It provides the minor arm of a priority junction with Jamaica Street at its western end.

- 2.2.3 Footways are provided along both sides of Greenland Street although these are regularly intersected by private driveways and parking for local businesses. Street lighting is only provided along the northern footway, which provides the better, less disrupted route.
- 2.2.4 A wide area of hardstanding is provided along the site frontage, allowing delivery vehicles associated with the existing commercial units to park off the highway. This area is protected by the provision of a single yellow line along the adopted carriageway. On-street car parking is restricted through the creation of Traffic Regulation Orders (TROs) that allow the following:
- Unrestricted parking (1800-0800hrs);
 - Short stay parking for less than 2 hours with no return within an hour (0800-1800hrs); and
 - Unrestricted parking for those vehicles with a Business Permit (0800-1800hrs).

St. James Street

- 2.2.5 The A561 St. James Street passes along the northern edge of the Baltic Triangle area in a north western to south eastern direction. It forms a signalised junction with Great George Street to the south east which in turn provides good linkages across the city including to the south, east and north. To the north west, St. James Street forms a mini roundabout junction with Jamaica Street and Park Lane, which continues towards Paradise Street and the city centre.
- 2.2.6 The City's Outer Controlled Parking Zone begins at the south eastern end of St. James Street, meaning that all car parking along its length is controlled. In the vicinity of the development site, double yellow lines are prevalent along St. James Street and on-street car parking is restricted in an identical way to Greenland Street with the issuing of business parking permits.
- 2.2.7 St. James Street benefits from continuous footpaths along both sides of the carriageway, is lit and has dropped kerbs at each junction to aid pedestrian movement.

New Bird Street

- 2.2.8 New Bird Street runs parallel to Greenland Street but on the opposite side of the development site to the north. It provides a similar function, although New Bird Street provides vehicular access to St. James Street with a 30mph speed limit. Footways are provided along both sides of the carriageway although they are regularly disrupted by private accesses and off-street parking areas. The southern footway is lit.

2.2.9 Again, a wide area of hardstanding is provided along the site frontage, allowing delivery vehicles associated with the existing commercial units to park off the highway, protected by the provision of a single yellow line along the adopted carriageway. On-street car parking is restricted through the creation of TRO's that allow the following:

- Unrestricted parking (1800-0800hrs);
- Short stay parking for less than 2 hours with no return within an hour (0800-1800hrs); and
- Unrestricted parking for those vehicles with a Business Permit (0800-1800hrs).

2.3 Accident Review

2.3.1 A review of accident data over the most recent five year period has been conducted using online records of accident statistics made available by UK Local Authorities on CrashMap, a national database of traffic accidents. A review of data for the most recent five year period has been conducted.

2.3.2 The available data suggests that there has been one slight accident on Greenland Street in the vicinity of the junction with St. James Street which occurred in 2013. This involved two vehicles resulting in one casualty. An additional accident was recorded New Brid Street in the vicinity of the junction with St. James Street in 2010. It should be noted that none of these accidents involved pedal cycles, motorcycles or pedestrians.

2.3.3 A total of four accidents have been experienced at the St. James Street/Great George Street signalised junction over the past five years. Three of these accidents were recorded as being slight with a single serious accident involving a pedal cycle in 2014.

2.3.4 In the wider area, the main cluster of accidents is at the Great George Street/Upper Parliament Street junction. The data suggests that a number of accidents were recorded at or in the vicinity of the junction with only one recorded as being serious. This is a large junction which accommodates a high volume of traffic. Based on data sourced from the DfT, Upper Parliament Street has an annual average daily flow (AADF) of approximately 20,000 vehicles. As such, the accident rates at this junction are considered to be low at this location.

- 2.3.5 Given the nature of the local highway network in the vicinity of the site, with Great James Street, Great George Street and Upper Parliament Street all providing key links around Liverpool, the overall accidents rates are considered to be low. It is therefore considered 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 proposal.

3 SITE ACCESSIBILITY

3.1.1 This section provides information on the accessibility of the site and identifies opportunities to actively promote walking, cycling and public transport as sustainable travel modes. It references nationally accepted guidelines for walking and cycle distances and identifies local services and facilities in the area which may reduce the need to travel .

3.2 Walking

3.2.1 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 1km, with the preferred maximum distance of 2km. Walking can also be promoted as part of a multi-modal journey, particularly with public transport.

3.2.2 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.

3.2.3 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 minutes and 24 minutes walk respectively. An indicative walking catchment is illustrated in **Plan 4**.

3.2.4 The 1km catchment encompasses a large area to the south of Liverpool city centre including retail, employment and leisure opportunities as well as a major transport interchange at Liverpool ONE. When considering a 2km catchment, the area covers the majority of the city centre and employment opportunities.

3.2.5 As previously noted, 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 (i.e. dropped kerbs and tactile paving) to facilitate connectivity with the city centre and formal crossing facilities at junctions (i.e. Great George Street/Upper Parliament Street junction). In addition, there have been a number of recent improvements to pedestrian infrastructure in the area associated with adjacent development and regeneration of this area of Liverpool, particularly along Jamaica Street.

3.2.6 Overall, it is considered that the pedestrian network previously described 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.

3.3 Cycling

3.3.1 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).

3.3.2 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.

3.3.3 To demonstrate that cycling can be promoted for a range of users of varying ability, a 5km catchment is presented in **Plan 5**. This encompasses the whole of Liverpool city centre and surrounding suburbs.

3.3.4 Within the 5km catchment, cycle maps produced by LCC have been referenced to highlight the cycle infrastructure in the vicinity of the site. Within 150 metres of the site, Jamaica Street is categorised as being an on-carriageway, signed cycle route. This provides a link into Liverpool city centre (via Park Lane) but also further south to the residential areas around Toxteth and St. Michael's.

3.3.5 The nearest National Cycle Route is No. 56 which runs along the waterfront, loops through Liverpool city centre then continues along Duke Street and Hope Street. This provides leisure cycling opportunities around Liverpool and surrounding suburbs.

3.3.6 It is noted that LCC operate a cycle hire scheme and provides over 130 stations throughout Liverpool. This provides a range of tariff packages to enable people to use bikes as a sustainable mode. The nearest cycle hire location is located on Great George Street within 50 metres of the site. Additional locations are provided on Jamaica Street within 200metres of the site. In total, there are 24 available storage bays available in the vicinity of the site.

3.4 Public Transport – Bus

3.4.1 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.

3.4.2 The closest bus stops are located on St. James Street within 100-200 metres of the site. The inbound stop simply provides a flag pole with timetable information with the outbound stop providing a dedicated lay-by, shelter, timetable and perch seating. A summary of the main bus services that serve the stops within 400 metres of the site are presented in **Table 3.1**.

No.	Route	Frequency					
		Mon-Fri			Sat		Sun
		Peak	Day	Evening	Day	Evening	
26/27	City Centre-Great Homer Street-Liverpool FC-Shiel Road-Lodge Lane-Toxteth-City Centre	10mins	10mins	30mins	10mins	30mins	20/30mins
30/30A	Maghull-Aintree-Walton-Vauxhall-City Centre-Dingle	-	-	30mins	-	30mins	30mins
103	Aigburth-Albert Dock-City Centre-Seaforth-Waterloo	30mins	-	-	-	-	-
X1	City Centre-Garstang-Speke-Runcorn-Halton Lea-Windmill Hill	30mins	30mins	-	30mins	-	-

Source: Merseytravel [Accessed October 2015]

Table 3.1: Sample Bus Services within 400 metres

3.4.3 As can be seen from **Table 3.1** the 26/27 service 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.

3.4.4 It should also be noted that there are additional bus stops located on Great George Street which provide a further range of services to the remaining areas of the city as well as Speke, Liverpool John Lennon Airport and Widnes.

- 3.4.5 Overall, it is considered that the bus facilities surrounding the site are good, providing a number of regular services which are available within acceptable distances and at key travel times, suitable for a variety of trip purposes.

3.5 Public Transport – Rail

- 3.5.1 The nearest rail station for National Rail services is Liverpool Lime Street, located approximately 1.5km to the north of the site. It provides services to St. Helens, Wigan, Preston and Manchester as well as services to Birmingham and London.
- 3.5.2 The Mersey Rail network is also available within approximately 1.2km at Liverpool Central Station. The Mersey Rail network provides a high frequency service between the city centre and surrounding district centres including Aintree, Southport, Ormskirk and Birkenhead. Interchange facilities are provided at Liverpool South Parkway enabling connections with National Rail services.

3.6 Summary

- 3.6.1 Based on the review outlined in this section, it is considered that the site is accessible by a range of sustainable modes. This is facilitated given the close links with the city centre. To supplement the review, LCC's Minimum Accessibility Standard Assessment (MASA) has been completed for the proposed new development using the Council's scoring criteria. Details are provided in subsequent sections.

4 POLICY CONTEXT

4.1 National Planning Policy Framework (2012)

- 4.1.1 This document was published in March 2012 by the Department for Communities and Local Government with the purpose of simplifying planning policy to ensure that sustainable development is actively promoted for present and future generations. It replaced PPG13 relating to transport matters.
- 4.1.2 The NPPF states that any development that is sustainable should go ahead, without delay. In accordance with national policy, it is considered that the development constitutes a sustainable form of development within walking and cycling distance of employment, retail and leisure opportunities in the city centre.
- 4.1.3 In addition, development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe.
- 4.1.4 As part of promoting sustainable transport it states that plans and decisions should take account of whether opportunities for sustainable transport modes have been taken up. Safe and suitable access should be achieved for all people with any improvements within the transport network to be cost effective whilst limiting the significant impacts of the development.
- 4.1.5 Finally, the NPPF notes that a key tool to facilitate sustainable transport will be a Travel Plan. It is confirmed that a Travel Plan is to support the development to adhere to this policy.

4.2 Liverpool Local Plan and Core Strategy (2012)

- 4.2.1 The Liverpool Local Plan is currently being prepared and will set out a spatial vision, spatial objectives and strategic policies. The Core Strategy, which has been prepared as a draft, will form the framework for the Local Plan for Liverpool.
- 4.2.2 The Core Strategy has been a work in progress for a number of years with a draft document setting out the key planning policies which will determine how Liverpool develops over the next 15 years. It identifies eight strategic objectives which aim to ensure that by 2028 Liverpool will have a strong economy, residential neighbourhoods that meet housing needs, vital and viable shopping centres, an attractive and safe city with a strong local identity, high quality green infrastructure, efficiently used resources, more sustainable accessibility and improved social inclusion and equal opportunities.

- 4.2.3 The document identifies that the Baltic Triangle has been subject to a huge growth in development interest which has resulted in a spread of city centre living to the city centre fringe. It is also highlighted as a preferred location for mixed-use development including those associated with digital and creative industries.

4.3 Liverpool Unitary Development Plan (2002)

- 4.3.1 In the absence of an updated Local Plan, planning applications are currently decided with reference to policies contained within the Unitary Development Plan (UDP). The UDP will gradually be replaced when the Liverpool Local Plan is adopted but until this time the UDP policies are still used to determine planning applications.
- 4.3.2 Chapter 11 relates to transport and highlights the importance of sustainable travel modes to the operation of the city network. It places emphasis on improved bus and rail facilities as well as recognising the important contribution taxis make to meeting the transport needs in Liverpool. Cycling is to be promoted as an efficient and pollution free mode of transportation with a commitment to identify cycle routes in Liverpool and provide sufficient cycle parking. Improved lighting, surfacing and road crossings can also help to promote walking in the city.
- 4.3.3 The document also recognises that controls on car parking are important in order to reduce the reliance on private car.

4.4 Baltic Triangle Planning Framework (2008)

- 4.4.1 This document is non-statutory planning policy guidance but provides a framework to ensure that development in the Baltic Triangle is brought forward in a comprehensive and coordinated way. The area is identified as a zone of opportunity for investment and future growth.
- 4.4.2 It considers that the Baltic Triangle should retain its employment focus with new business growth (as well as retention of existing) underpinning the vision. The vision also seeks to deliver a mixed-use sustainable area with new retail and leisure opportunities along principal corridors and new residential communities providing a mix of owner-occupied apartment living and housing.

4.5 Ensuring a Choice of Travel (2008)

- 4.5.1 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.
- 4.5.2 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.
- 4.5.3 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.
- 4.5.4 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 maybe necessary.

4.6 Merseyside Local Transport Plan 3 (2011)

- 4.6.1 The latest Local Transport Plan (LTP3) This LTP provides the statutory framework for the policies and plans that will guide the future provision of transport in Merseyside. It highlights an overall strategy which seeks to provide and promote a clean, low emission transport system whilst helping to create the right conditions for sustainable economic growth.

5 DEVELOPMENT PROPOSALS

5.1 Development Scale

5.1.1 This application seeks to reflect development in the local area, which includes a residential apartment building with ground floor commercial space. As noted in the '*Baltic Triangle Planning Framework*' (2008), there is an aspiration for a mix of uses in the area to create a vibrant area within the city that includes residential, commercial and leisure uses.

5.1.2 The development proposals seek to demolish the existing building on the site to enable the construction of a modern, purpose built building containing 157 residential apartments. This will consist of 8 studio apartments, 68 one-bed apartments and 81 two-bed apartments.

5.1.3 On the ground floor, space is to be provided for a number of commercial start-up units envisaged to incorporate B1 use. These provide a total area of approximately 670sqm. The proposed layout is presented in **Plan 3**.

5.1.4 As previously noted, the site is located in an area which has, and continues to be, subject to regeneration and investment in the form of residential apartments and some commercial/retail space. As such, it is considered that the proposed development accords with local guidance to create an exciting, inspirational and safe place to work and visit whilst introducing complimentary residential activity.

5.2 Access

5.2.1 Vehicular access to the site is proposed from New Bird Street. This will provide a ramped access to an area of lower ground car parking. A visibility distance of 43 metres is presented in **Plan 6** which is based on the '*Manual for Streets*' (2007) guidance for a speed limit of 30mph.

5.2.2 As part of the development proposals, the existing frontage activity will be removed on New Bird Street and Greenland Street and pedestrian footway will be reinstated. This will remove the occurrence of vehicles manoeuvring in the vicinity of the junction with St. James Street, thereby assisting with road safety objectives in the area and facilitating pedestrian connectivity.

5.3 Parking

Residential Dwellings

- 5.3.1 Given the site location on the edge of the city centre and close to a number of local retail, employment and leisure opportunities, it is considered that the site could provide a lower level of parking provision than generally prescribed by LCC. The provision of lower levels of parking is recognised within LCC's '*Ensuring a Choice of Travel*' (2008) and can be encouraged where appropriate.
- 5.3.2 The proposed development will provide 29 car parking spaces plus 3 disabled parking spaces (equivalent to 10% of the total parking provision) at lower ground level. The spaces are not allocated to individual apartments. Instead, these will be made available to residents upon individual application for a permit on a first come, first served basis.
- 5.3.3 Access to the proposed spaces would be actively monitored and controlled by management at the site. This form of demand management would complement the existing sustainable modes which are available within the vicinity of the site.
- 5.3.4 It should be noted that there is a car club space located on Duke Street, within 1km of the site. This is an existing facility that is available to all residents within Liverpool and provides an alternative option to provide access to a vehicle in the city centre without having to own a vehicle.

Commercial Parking

- 5.3.5 None of the spaces provided within the lower ground car park are to be allocated to the commercial units. As previously noted, there is an existing permit parking scheme for businesses located within the Baltic Triangle which operates on every day of the year.
- 5.3.6 Each business can apply for a number of permits which enables vehicles to park in designated bays on New Bird Street, Greenland Street and Jamaica Street in the vicinity of the site.
- 5.3.7 Given that the local area has already accommodated parking demand associated with industrial uses on the site, it is considered that the proposed development (with reduced floor area) would operate in a similar manner with minimal conflict.

Cycle Parking

- 5.3.8 Cycle parking will be provided within the building with space initially for 48 bicycles in a secure, internal bike store. It should be noted that the demand for cycle parking will be monitored and additional spaces can be provided through the use of various space saving solutions if required.
- 5.3.9 As previously noted, the site is located within 50 metres of LCC's cycle hire scheme which provides ten spaces provided Great George Street. Additional spaces are also provided in the vicinity with fourteen on Jamaica Street, a further four at The Baltic Creative and ten in Cains Brewery Village. This provides an alternative option to promote cycling as a sustainable mode for the proposed development.

5.4 Refuse Collections

- 5.4.1 Internal bin stores are proposed as part of the new development in a central location accessed directly from Greenland Street. Given that the site has previously accommodated refuse collections, and that refuse collections for adjacent developments currently occur on the local network, it is considered that collection could be accommodated as part of existing activities.

5.5 Minimum Accessibility Standard Assessment (MASA)

- 5.5.1 As required by LCC's '*Ensuring and Choice of Travel*' (2008), a MASA has been completed to consider how the development proposals align with LCC's accessibility criteria. The full assessment can be found in **Appendix A**. This supplements the site accessibility review previously discussed in this report.

Access on Foot

- 5.5.2 For access on foot, there is safe pedestrian access to and within the site and for pedestrians passing the site. In addition, there are not considered to be any barriers between the site and local facilities. This is facilitated with the reinstatement of the footways along the site frontage on New Bird Street and Greenland Street as well as providing a dedicated pedestrian entrance to the residential and commercial elements. These links can be seen on **Plan 6**.

5.5.3 The development is not located within 500 metres of a district or local centre and therefore does not acquire the necessary points required by LCC's criteria. Based on LCC's accessibility maps, the nearest location on LCC's accessibility maps around Bold Street, approximately 780 metres walking distance from the site. Despite this, it has previously been noted that the site is located on the edge of the city centre with a number of employment, retail and leisure opportunities available within acceptable walking distances. It should also be noted that the Baltic Triangle area has recently be subject to investment which is not accounted for in LCC's MASA.

5.5.4 Overall, it is considered that although the assessment scoring falls just below the minimum standard defined by LCC, the site is located in a position where walking can be promoted as a sustainable mode. The assessment criteria does not account for the recent investment in the Baltic Triangle area and gradual expansion of city centre-style living (and associated services) to this area, which should be considered when assessing existing and future pedestrian connectivity.

Access by Cycle

5.5.5 The assessment for cycle suggests that the site achieves the minimum standard defined by LCC. There are no safety issues for cyclists turning into or out of the site, as noted in the review of historic accident data in the vicinity of the site.

5.5.6 The site is located within 1 mile of the city centre and is within 400 metres of an existing cycle route on Jamaica Street. Secure, internal cycle storage is proposed with spaces monitored though a Travel Plan and there is convenient access to LCC's cycle hire scheme within 50 metres.

5.5.7 As such, it is considered that the site can promote cycling as a sustainable mode for a variety of trip purposes.

Access by Public Transport

5.5.8 The site assessment achieves the LCC minimum scoring for access by public transport. This is due to the fact that the site is located within 200 metres of bus stops with no major barriers along the main pedestrian routes.

- 5.5.9 There are a number of frequent services which run along St George Street and St. James Street which combine to provide a high frequency service of more than four services per hour. These provide links to a variety of destinations and therefore public transport can be considered as a realistic alternative to private car travel.

Vehicle Access and Parking

- 5.5.10 As previously noted, the development will provide a single vehicular point of access into the main area of car parking and will remove the existing frontage activity in the vicinity of the St. James Street junction.
- 5.5.11 Parking is proposed at the site with a limited supply of spaces actively managed. The level of parking at the site, as previously noted, will assist with overall demand management at the site and the provision of business parking permits provides an option for the commercial units on the ground floor, reflecting existing operations.
- 5.5.12 Servicing has previously been coordinated at the site and bin stores are located centrally within the building with direct access provided on to Greenland Street.

Summary

- 5.5.13 In combination with the review of site accessibility previously presented, it is considered that the site and development proposals provide an excellent opportunity to promote sustainable travel modes, be that walking, cycling or public transport. It should be noted that a Travel Plan has been prepared for this site and will detail targets as well as a range of initiatives to actively promote sustainable modes.

6 TRIP IMPACT

6.1 Residential Trip Impact

6.1.1 Based on the scale of development and location on the edge of the city centre where a variety of sustainable modes can be promoted, it is considered that the demand for car use will be low. In addition, the demand management imposed as a result of parking supply will also assist in minimising vehicular trip activity and impact on the local highway network.

6.1.2 To assist in quantifying the residential trip impact in the peak hours, a review has been conducted using the TRICS database. It should be noted that most of the sites in the TRICS database for privately owned flats have parking provided at a level that is around 100%. Therefore, rather than forecast vehicle trips based on the number of dwellings, the TRICS data has been used to calculate a vehicular trip rate per parking space. A summary is presented in **Table 6.1** with the TRICS data presented in **Appendix B**.

Land Use	Morning Peak (0800-0900hrs)			Evening Peak (1700-1800hrs)		
	Arrival	Departure	Total	Arrival	Departure	Total
Calculated Trip Rate (per parking space)	0.13	0.17	0.30	0.23	0.18	0.40
Predicted Trips (32 spaces)	4	5	10	7	6	13

Table 6.1: Predicted 85th Percentile Vehicular Trip Calculations

6.1.3 The calculated trip rates per parking space have been based on the 85th percentile vehicular trip rates for each of the peak hours. This is to account for some variability in the data and therefore assists in providing a robust assessment. The data in **Table 6.1** suggests that there may be 10-13 vehicular trip movements at the car park access during the peak hours.

6.1.4 It should be noted that prospective future residents are likely to be aware of the availability of car parking at the site before choosing to reside in the building and would be unlikely to choose to reside at this location if they have a car but space is not available.

6.1.5 In addition, the parking restrictions and business permit system which operate on the surrounding local highway network would assist with the overall management of demand as it ensures that parking would not occur on the local highway in the vicinity of the site. This again helps to minimise conflict in the vicinity of the site.

6.1.6 Overall, when combined with the availability of sustainable travel modes and location on the edge of the city centre, it is considered that the vehicular trip impact associated with the residential development proposals would be minimal.

6.2 Commercial Trip Impact

6.2.1 The site has previously operated as a number of small industrial units with regular trip movements on the local highway network in the vicinity of the site. It is likely that these trips will have made use of the business permit system within the Baltic Triangle area.

6.2.2 As a guide, the TRICS database has been interrogated to establish the likely change in weekday peak hour trip movements associated with the existing use and proposed use. A summary is presented in **Table 6.2** with the full TRICS data presented in **Appendix B**.

Land Use	Morning Peak (0800-0900hrs)			Evening Peak (1700-1800hrs)		
	Arrival	Departure	Total	Arrival	Departure	Total
Existing B2 Industrial Trip Rates (per 100sqm)	0.78	0.27	1.05	0.00	0.82	0.82
Existing B2 Industrial Trips (1,000sqm)	8	3	11	0	8	8
Proposed B1 Trip Rates (per 100sqm)	1.54	0.16	1.70	0.16	1.54	1.70
Proposed B1 Trips (670sqm)	10	1	11	1	10	11
Net Trip Impact	+2	-2	0	+1	+2	+3

Table 6.2: Predicted Vehicular Commercial Trip Calculations

6.2.3 The reduction in industrial/commercial floor space is likely to result in a similar level of trip movements in the peak hours when compared with the previous uses. The net trip impact and demand for on-street parking is therefore considered to be minimal.

6.2.4 It should be noted that the trip rates for the proposed development are based on offices within the TRICS database. The proposed development is seeking to provide a level of flexibility for the commercial units with start-up activities likely to be the main occupiers linked to creative industries. As such, the predicted trip movements associated with the commercial units may well be lower than 'traditional' office space suggested by TRICS. The indicative assessment is therefore considered to be robust.

6.3 Summary

6.3.1 This section has reviewed the predicted trip impact associated with the development proposals. The location of the site within acceptable walking distance to the city centre and availability of other sustainable modes (i.e. cycle routes, cycle hire and public transport) in close proximity to the site ensures private car travel can be minimised. These factors enable a lower parking provision to be considered which also assists in managing peak hour vehicular movements on the local highway network.

6.3.2 It is concluded that the trip impact associated with the residential dwellings would be minimal in the peak hours and the commercial units are predicted to operate with a similar level of demand to the previous uses. It is therefore considered that the trip impact associated with the proposed development in the peak hours would be minimal.

7 SUMMARY AND CONCLUSION

7.1.1 Vectos has been commissioned by Hillmore Developments Limited to prepare a Transport Assessment to accompany a proposed development in Liverpool.

7.1.2 It is proposed to construct a residential development consisting of 157 residential apartments with associated landscaping around the site and a small number of managed car parking spaces. The proposals also include four ground floor units (approximately 670sqm in total) providing space for commercial business use, in keeping with LCC's '*Baltic Triangle Planning Framework*' (2008). The report is summarised as follows:

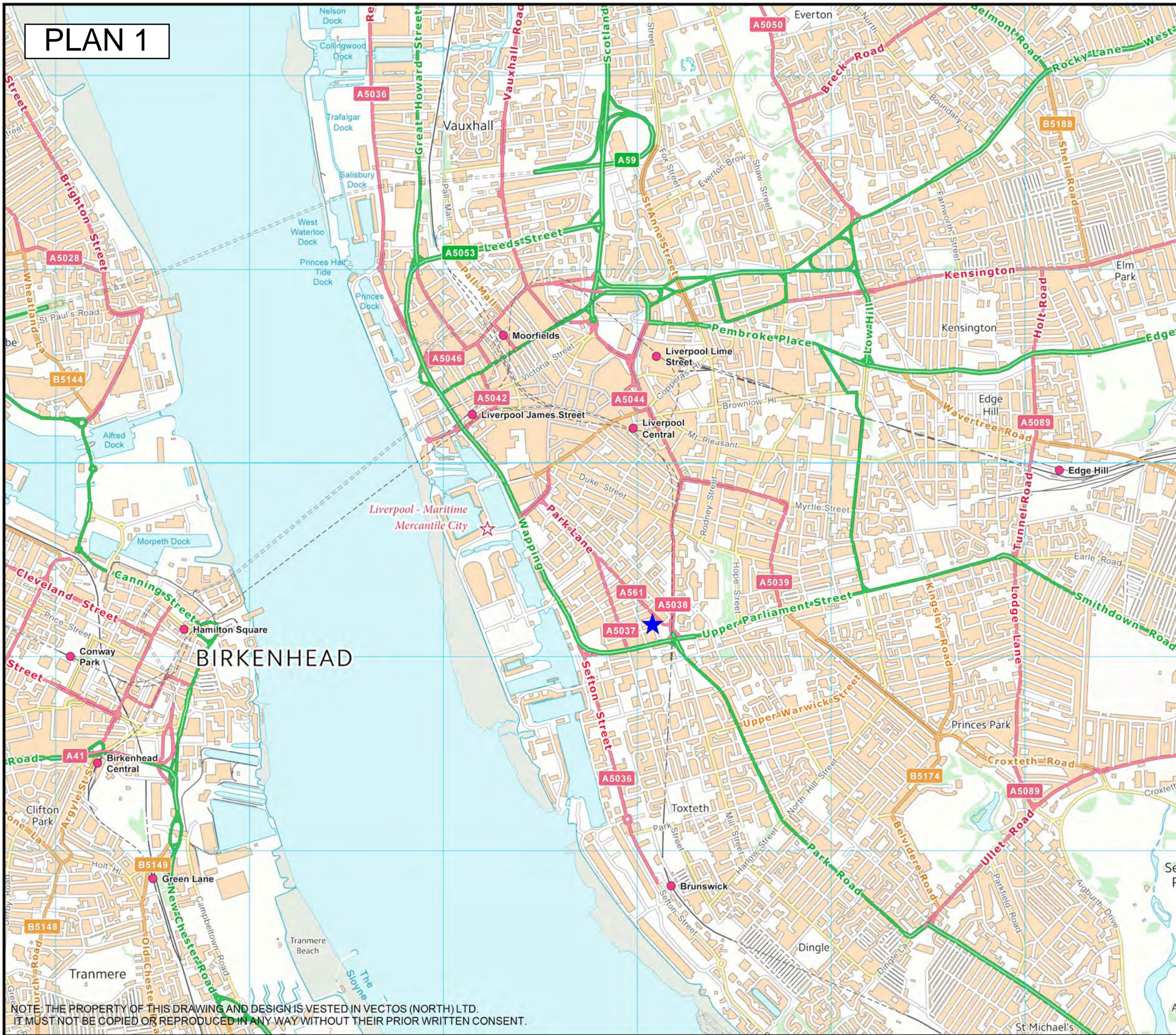
- Site located on the edge of the city centre;
- Local area subject to a planning framework with recent improvements and investment in pedestrian and cycle facilities in the vicinity of the site;
- A range of local employment, retail and leisure opportunities available within acceptable walking and cycling distances;
- Public transport located within acceptable walking distances at Liverpool ONE with local bus stops within 200 metres of the site;
- Few accidents recorded in the immediate vicinity of the site;
- Development to provide 157 residential apartments and ground floor units for local business;
- 32 parking spaces to be made available within the site on a lower ground level with access provided from New Bird Street;
- Cycle parking to be provided for residential apartments with demand monitored as part of the Travel Plan;
- Refuse collections to be coordinated from Greenland Street;
- Travel Plan to be provided to promote sustainable modes;
- Predicted 10-13 vehicular movements in the peak hours associated with the proposed residential dwellings; and
- Net trip impact associated with the commercial units predicted to be minimal given historic operation.

- 7.1.3 Overall, it is considered that the development proposals would not adversely affect the safe and efficient operation of the local highway network. The site is located within a location where sustainable travel modes can be promoted and therefore it is concluded that the development is acceptable from a transport perspective.

PLANS

Plan 1 – Site Location

PLAN 1



Key
★ Site Location

Rev A: 30.10.15, Updated Client Details

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CLIENT:

Hillmore Developments Ltd

PROJECT TITLE:

St James Court, Liverpool

DRAWING TITLE:

Site Location
(Wider Context)

SCALE:
1:25,000 at A3

DRAWN: PJ	CHECKED: PW	DATE: 26.Oct.15
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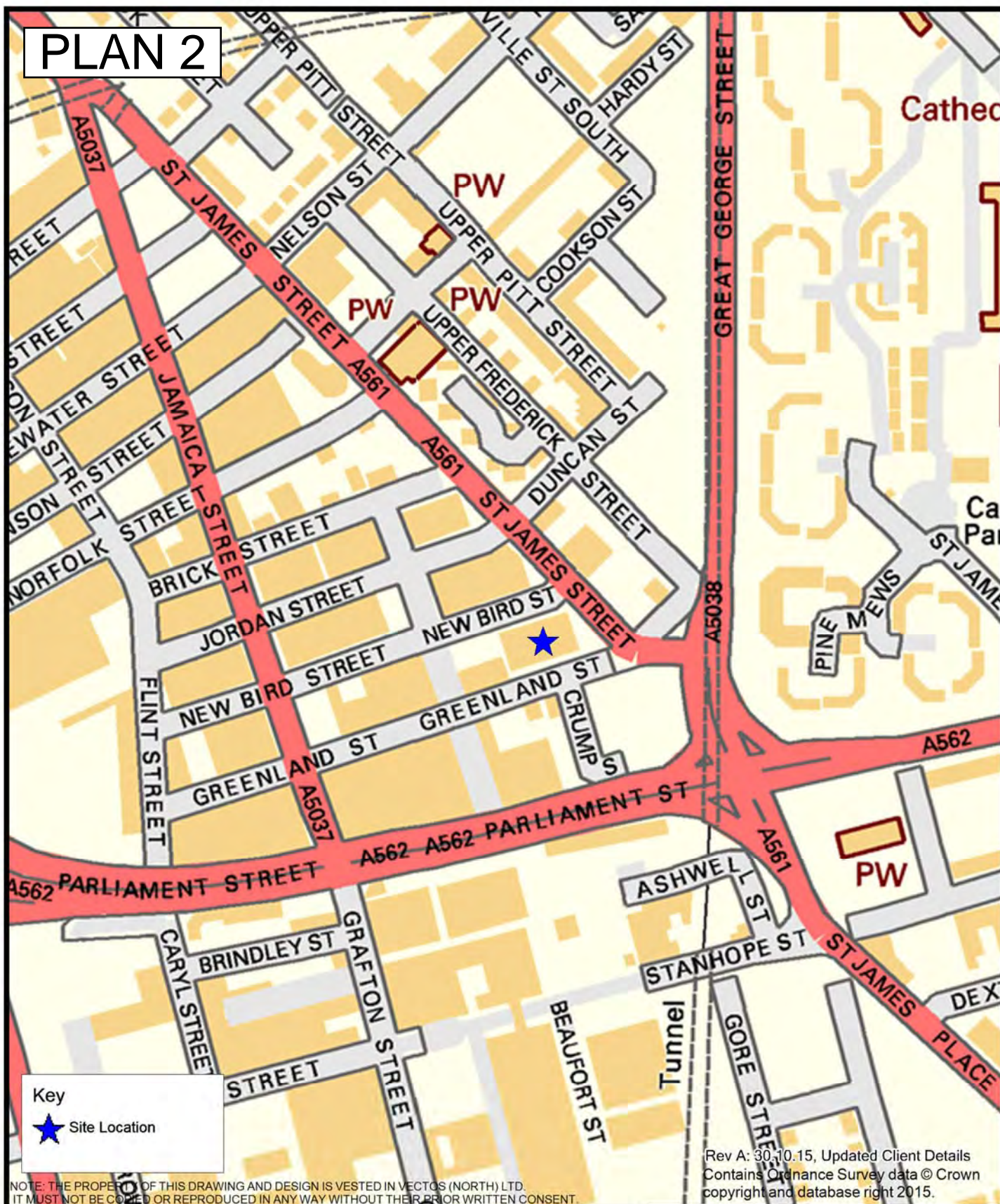
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Plan 2 – Local Highway Network

PLAN 2



Key

★ Site Location

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CLIENT:

Hillmore Developments Ltd

DRAWING TITLE:

Site Location (Local Context)

PROJECT TITLE:

St James Court, Liverpool

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SCALE:

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VN50542-101

REVISION:

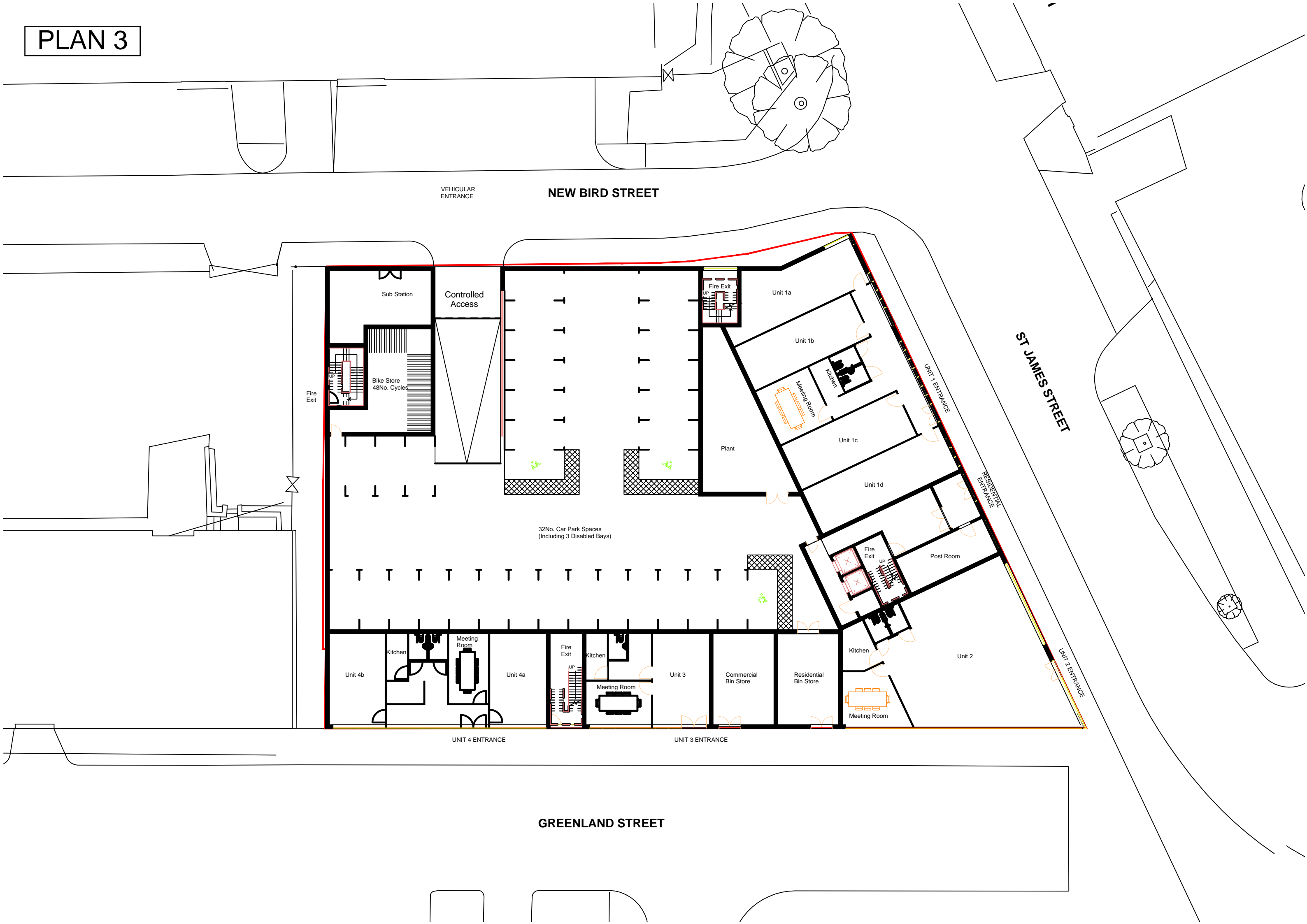
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Plan 3 – Proposed Site Layout


PLAN 3



Plan 4 – Walking Catchment

PLAN 4

The map shows the Liverpool Maritime Mercantile City (LMMC) area, which is highlighted in blue. The area is bounded by the Mersey River to the west and the city center to the east. Key roads and landmarks are labeled, including the A5036, A5038, A5037, A5039, A5042, A5044, A5046, A5053, A5028, A5029, A5030, A5031, A5032, A5033, A5034, A5035, A5036, A5037, A5038, A5039, A5040, A5041, A5042, A5043, A5044, A5045, A5046, A5047, A5048, A5049, A5050, A5051, A5052, A5053, A5054, A5055, A5056, A5057, A5058, A5059, A5060, A5061, A5062, A5063, A5064, A5065, A5066, A5067, A5068, A5069, A5070, A5071, A5072, A5073, A5074, A5075, A5076, A5077, A5078, A5079, A5080, A5081, A5082, A5083, A5084, A5085, A5086, A5087, A5088, A5089, A5090, A5091, A5092, A5093, A5094, A5095, A5096, A5097, A5098, A5099, A5100, A5101, A5102, A5103, A5104, A5105, A5106, A5107, A5108, A5109, A5110, A5111, A5112, A5113, A5114, A5115, A5116, A5117, A5118, A5119, A5120, A5121, A5122, A5123, A5124, A5125, A5126, A5127, A5128, A5129, A5130, A5131, A5132, A5133, A5134, A5135, A5136, A5137, A5138, A5139, A5140, A5141, A5142, A5143, A5144, A5145, A5146, A5147, A5148, A5149, A5150, A5151, A5152, A5153, A5154, A5155, A5156, A5157, A5158, A5159, A5160, A5161, A5162, A5163, A5164, A5165, A5166, A5167, A5168, A5169, A5170, A5171, A5172, A5173, A5174, A5175, A5176, A5177, A5178, A5179, A5180, A5181, A5182, A5183, A5184, A5185, A5186, A5187, A5188, A5189, A5190, A5191, A5192, A5193, A5194, A5195, A5196, A5197, A5198, A5199, A5200, A5201, A5202, A5203, A5204, A5205, A5206, A5207, A5208, A5209, A5210, A5211, A5212, A5213, A5214, A5215, A5216, A5217, A5218, A5219, A5220, A5221, A5222, A5223, A5224, A5225, A5226, A5227, A5228, A5229, A5230, A5231, A5232, A5233, A5234, A5235, A5236, A5237, A5238, A5239, A5240, A5241, A5242, A5243, A5244, A5245, A5246, A5247, A5248, A5249, A5250, A5251, A5252, A5253, A5254, A5255, A5256, A5257, A5258, A5259, A5260, A5261, A5262, A5263, A5264, A5265, A5266, A5267, A5268, A5269, A5270, A5271, A5272, A5273, A5274, A5275, A5276, A5277, A5278, A5279, A5280, A5281, A5282, A5283, A5284, A5285, A5286, A5287, A5288, A5289, A5290, A5291, A5292, A5293, A5294, A5295, A5296, A5297, A5298, A5299, A5300, A5301, A5302, A5303, A5304, A5305, A5306, A5307, A5308, A5309, A5310, A5311, A5312, A5313, A5314, A5315, A5316, A5317, A5318, A5319, A5320, A5321, A5322, A5323, A5324, A5325, A5326, A5327, A5328, A5329, A5330, A5331, A5332, A5333, A5334, A5335, A5336, A5337, A5338, A5339, A5340, A5341, A5342, A5343, A5344, A5345, A5346, A5347, A5348, A5349, A5350, A5351, A5352, A5353, A5354, A5355, A5356, A5357, A5358, A5359, A5360, A5361, A5362, A5363, A5364, A5365, A5366, A5367, A5368, A5369, A5370, A5371, A5372, A5373, A5374, A5375, A5376, A5377, A5378, A5379, A5380, A5381, A5382, A5383, A5384, A5385, A5386, A5387, A5388, A5389, A5390, A5391, A5392, A5393, A5394, A5395, A5396, A5397, A5398, A5399, A5400, A5401, A5402, A5403, A5404, A5405, A5406, A5407, A5408, A5409, A5410, A5411, A5412, A5413, A5414, A5415, A5416, A5417, A5418, A5419, A5420, A5421, A5422, A5423, A5424, A5425, A5426, A5427, A5428, A5429, A5430, A5431, A5432, A5433, A5434, A5435, A5436, A5437, A5438, A5439, A5440, A5441, A5442, A5443, A5444, A5445, A5446, A5447, A5448, A5449, A5450, A5451, A5452, A5453, A5454, A5455, A5456, A5457, A5458, A5459, A5460, A5461, A5462, A5463, A5464, A5465, A5466, A5467, A5468, A5469, A5470, A5471, A5472, A5473, A5474, A5475, A5476, A5477, A5478, A5479, A5480, A5481, A5482, A5483, A5484, A5485, A5486, A5487, A5488, A5489, A5490, A5491, A5492, A5493, A5494, A5495, A5496, A5497, A5498, A5499, A5500, A5501, A5502, A5503, A5504, A5505, A5506, A5507, A5508, A5509, A5510, A5511, A5512, A5513, A5514, A5515, A5516, A5517, A5518, A5519, A5520, A5521, A5522, A5523, A5524, A5525, A5526, A5527, A5528, A5529, A5530, A5531, A5532, A5533, A5534, A5535, A5536, A5537, A5538, A5539, A5540, A5541, A5542, A5543, A5544, A5545, A5546, A5547, A5548, A5549, A5550, A5551, A5552, A5553, A5554, A5555, A5556, A5557, A5558, A5559, A5560, A5561, A5562, A5563, A5564, A5565, A5566, A5567, A5568, A5569, A5570, A5571, A5572, A5573, A5574, A5575, A5576, A5577, A5578, A5579, A5580, A5581, A5582, A5583, A5584, A5585, A5586, A5587, A5588, A5589, A5590, A5591, A5592, A5593, A5594, A5595, A5596, A5597, A5598, A5599, A5600, A5601, A5602, A5603, A5604, A5605, A5606, A5607, A5608, A5609, A5610, A5611, A5612, A5613, A5614, A5615, A5616, A5617, A5618, A5619, A5620, A5621, A5622, A5623, A5624, A5625, A5626, A5627, A5628, A5629, A5630, A5631, A5632, A5633, A5634, A5635, A5636, A5637, A5638, A5639, A5640, A5641, A5642, A5643, A5644, A5645, A5646, A5647, A5648, A5649, A5650, A5651, A5652, A5653, A5654, A5655, A5656, A5657, A5658, A5659, A5660, A5661, A5662, A5663, A5664, A5665, A5666, A5667, A5668, A5669, A5670, A5671, A5672, A5673, A5674, A5675, A5676, A5677, A5678, A5679, A5680, A

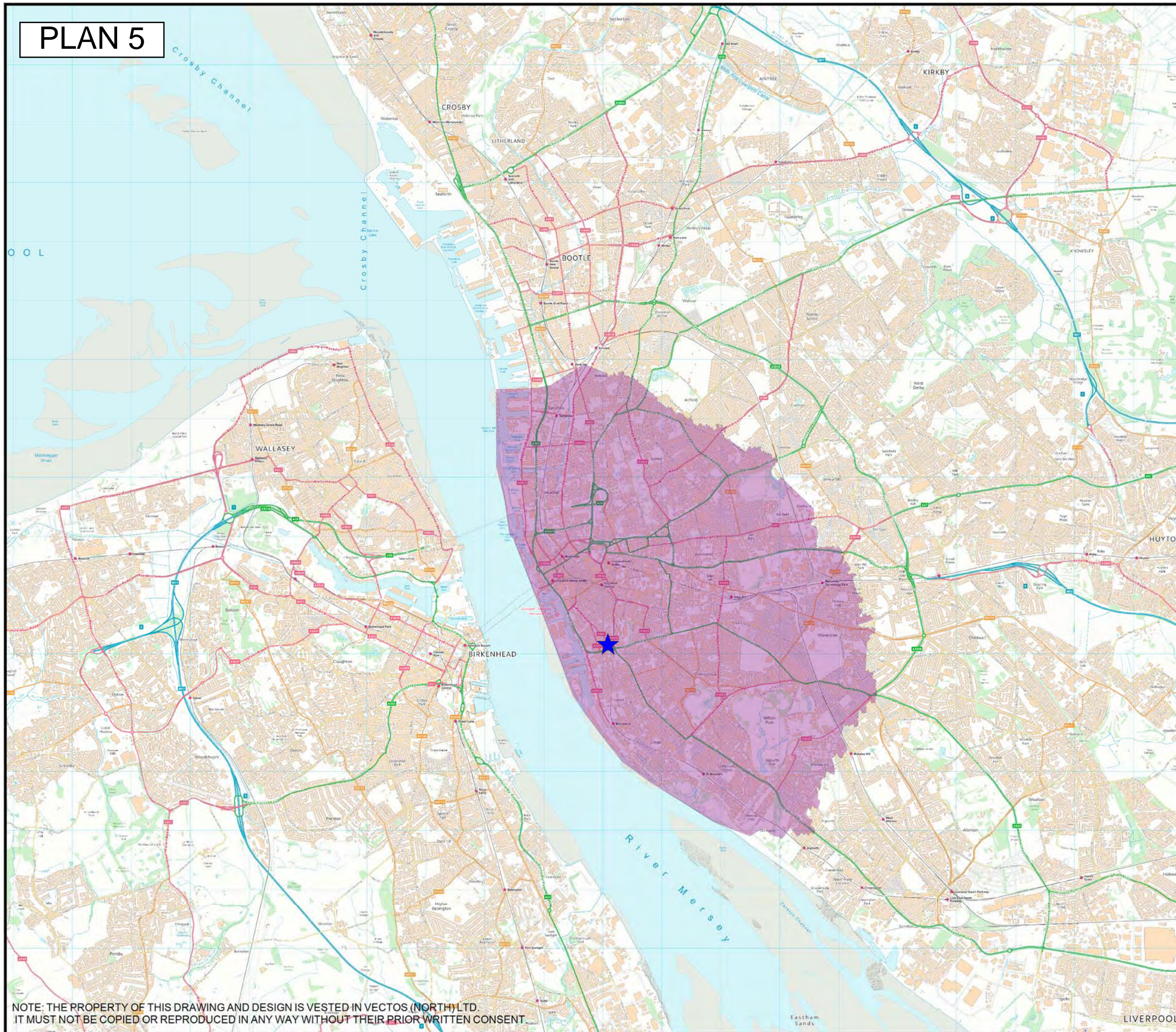
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Plan 5 – Cycling Catchment

PLAN 5



Key



Site Location

Cycle Catchment

0 - 5 Km

Rev A: 30.10.15, Updated Client Details

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CLIENT:

Hillmore Developments Ltd

PROJECT TITLE:

St James Court, Liverpool

DRAWING TITLE:

5km Cycle Catchment

SCALE:

1:50,000 at A3

DRAWN:

PJ

CHECKED:

PW

DATE:

26.Oct.15



Oxford Place, 61 Oxford Street, Manchester M1 6EQ
t:0161 22801008 e:manchester@vectos.co.uk

DRAWING NO:

VN50542-103

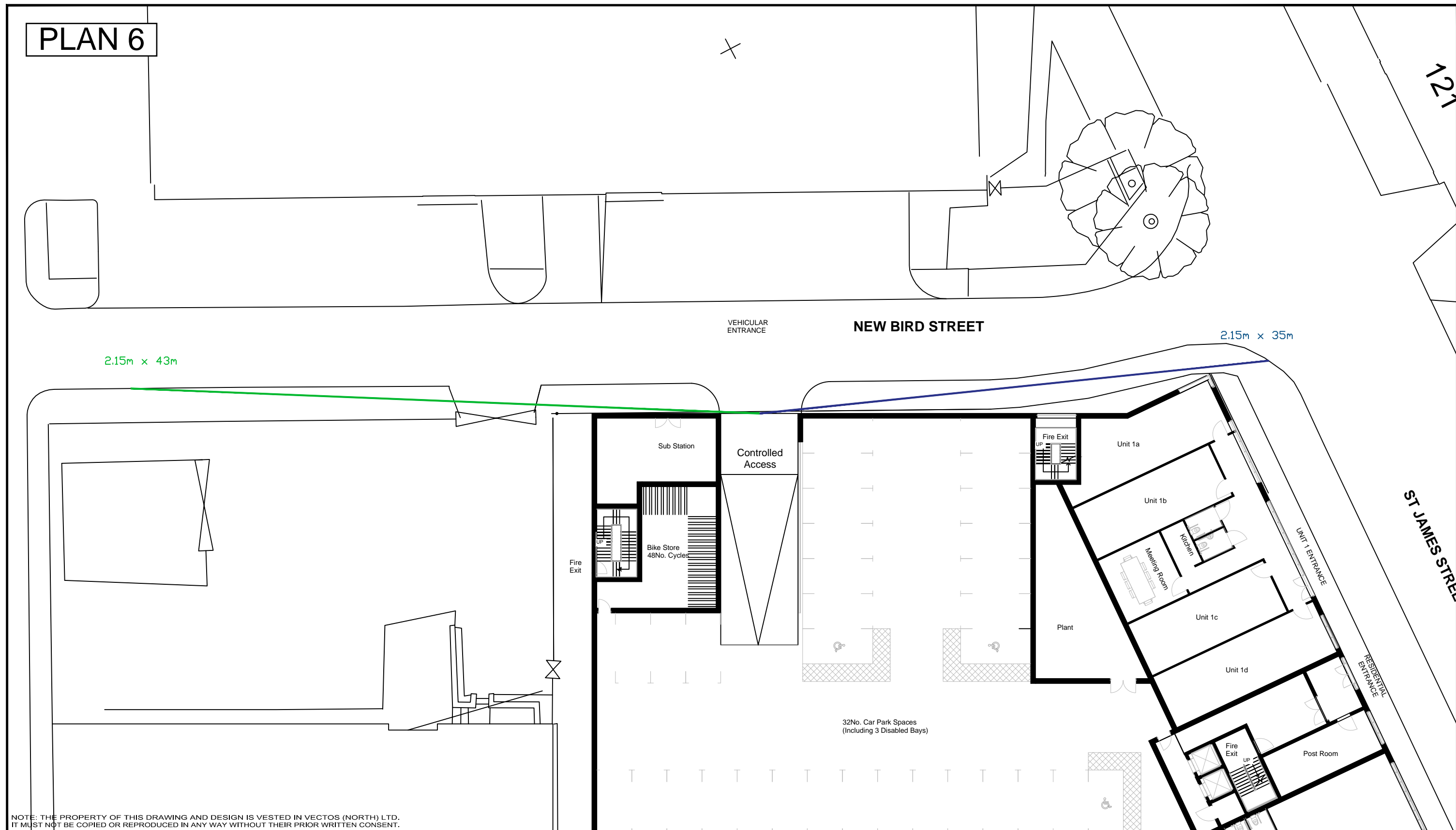
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Plan 6 – Proposed Site Access

PLAN 6



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REV.	DETAILS	DRAWN	CHECKED	DATE	Notes:	St James Court, Liverpool		Hillmore Developments Ltd	
A	Updated Site Layout	PJ	PW	4.Nov.15	1. This is not a construction drawing and is intended for illustrative purposes only. 2. White lining is indicative only.	Visibility Splay at Site Access		 4th Floor Oxford Place, 61 Oxford Street, Manchester, M1 6EQ 0161 228 1008 e: manchester@vectos.co.uk	
DRAWN: PJ		CHECKED: PW		DATE: 28.Oct.11		SCALES: 1:250 at A3		DRAWING NUMBER: VN50542-100	
								REVISION: A	

APPENDICES

Appendix A – Minimum Accessibility Standard Assessment

3 Minimum Accessibility Standard Assessment

Address: St James Court, Liverpool				
Completed By: St James Court, Liverpool				
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	<u>Housing Development:</u> Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F) <u>Other development:</u> Is the density of existing local housing (i.e. within 800m) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)	Yes	2	0
		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. <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 barriers	-2	1
		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 Site is not within 500m of a district or local centre based on LCC's Accessibility Maps. However, it is on the edge of the city centre and is located in an area of the city which has and continues to be subject to regeneration and investment	
	Box B: Actual Score	2		

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 / No
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 / No
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	2	2
		No	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	1	1
		No	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?		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	1	1
		No	0	
			Total (B)	
Summary	Box A: Minimum Standard (From Table 3.1)	4	Comments or action needed to correct any shortfall	

3 Minimum Accessibility Standard Assessment

	Box B: Actual Score	5	Cycle routes are located on Jamaica Street and cycle parking is provided within the site in a secure store. The site is also located within 50m of LCC's cycle hire scheme which provides further flexibility when promoting cycling.		
--	----------------------------	---	---	--	--

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 Site located within 200m of bus stops on St James Street which provide a high frequency service to a number of destinations around the city centre and inner suburbs.	
	Box B: Total Score	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

	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	<p>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.</p> <p>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. Parking spaces in the site to be actively managed with business units utilising existing permit systems in the vicinity (as per previous operations).</p>

Appendix B – TRICS Data

TRICS 7.2.3

Trip Rate P Number of dwellings

32 spaces
proposed

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Ranking Type: TOTALS Time Range: 08:00-09:00

85th/15th Percentile Survey Not Highlighted

Rank	Site Ref	Description	Town/City	DWELLS	Day	Date	Vehicle Trips			Parking Spaces Per Dwelling	Parking Spaces	Trip rate per Space		
							Arrivals	Departures	Totals			Arr	Dep	Total
1	WM-03-C-03	FLATS	SOLIHULL	60	Friday	21/09/2007	3	27	30	1.50	90	0.03	0.30	0.33
2	CH-03-C-01	BLOCKS OF FLATS	CHESTER	60	Friday	17/10/2008	6	16	22	0.95	57	0.11	0.28	0.39
3	DC-03-C-01	BLOCKS OF FLATS	WEYMOUTH	27	Tuesday	08/07/2008	4	5	9	1.11	30	0.13	0.17	0.30
4	SC-03-C-01	FLATS	CAMBERLEY	140	Monday	21/07/2008	8	36	44	1.00	140	0.06	0.26	0.31
5	LU-03-C-01	BLOCKS OF FLATS	DROGHEDA	52	Thursday	12/09/2013	5	9	14	1.23	64	0.08	0.14	0.22
6	EX-03-C-02	BLOCK OF FLATS	SOUTHEND-ON-SEA	94	Tuesday	22/10/2013	9	9	18	1.01	95	0.10	0.10	0.19
7	MG-03-C-01	BLOCK OF FLATS	MONAGHAN	28	Friday	06/09/2013	0	5	5	1.21	34	0.00	0.15	0.15
8	EX-03-C-01	FLATS	SOUTHEND-ON-SEA	6	Tuesday	22/10/2013	0	1	1	1.67	10	0.00	0.10	0.10
9	KD-03-C-01	BLOCK OF FLATS	KILDARE	32	Friday	22/05/2009	0	5	5	1.09	35	0.00	0.14	0.14
10	WT-03-C-01	FLATS	ATHLONE	86	Wednesday	20/06/2007	1	12	13	1.00	86	0.01	0.14	0.15
11	LU-03-C-02	BLOCK OF FLATS	DUNDALK	33	Monday	16/09/2013	0	5	5	0.94	31	0.00	0.16	0.16
12	FS-03-C-01	BLOCK OF FLATS	MOLD	30	Monday	06/07/2009	2	2	4	1.00	30	0.07	0.07	0.13
13	SA-03-C-01	BLOCK OF FLATS	AYR	51	Tuesday	16/09/2014	2	4	6	1.75	89	0.02	0.04	0.07
14	LU-03-C-03	BLOCK OF FLATS	DUNDALK	20	Monday	16/09/2013	0	0	0	0.85	17	0.00	0.00	0.00

AM PEAK	Arr	Dep	Total
Average	0.04	0.15	0.19
85th %	0.13	0.17	0.30
Average Trips	1	5	6
85th % Trips	4	5	10

* based on 32 proposed spaces

TRICS 7.2.3

Trip Rate P Number of dwellings

RANK ORDER for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

Ranking Type: TOTALS Time Range: 17:00-18:00

85th/15th Percentile Survey Not Highlighted

Rank	Site Ref	Description	Town/City	DWELLS	Day	Date	Vehicle Trips			Parking Spaces Per Dwelling	Parking Spaces	Trip rate per Space		
							Arrivals	Departures	Totals			Arr	Dep	Total
1	LU-03-C-03	BLOCK OF FLATS	DUNDALK	20	Monday	16/09/2013	4	6	10	0.85	17	0.24	0.35	0.59
2	WM-03-C-03	FLATS	SOLIHULL	60	Friday	21/09/2007	16	7	23	1.50	90	0.18	0.08	0.26
3	CH-03-C-01	BLOCKS OF FLATS	CHESTER	60	Friday	17/10/2008	13	10	23	0.95	57	0.23	0.18	0.40
4	SC-03-C-01	FLATS	CAMBERLEY	140	Monday	21/07/2008	32	13	45	1.00	140	0.23	0.09	0.32
5	SA-03-C-01	BLOCK OF FLATS	AYR	51	Tuesday	16/09/2014	9	5	14	1.75	89	0.10	0.06	0.16
6	LU-03-C-02	BLOCK OF FLATS	DUNDALK	33	Monday	16/09/2013	8	1	9	0.94	31	0.26	0.03	0.29
7	MG-03-C-01	BLOCK OF FLATS	MONAGHAN	28	Friday	06/09/2013	5	1	6	1.21	34	0.15	0.03	0.18
8	EX-03-C-02	BLOCK OF FLATS	SOUTHEND-ON-SEA	94	Tuesday	22/10/2013	10	8	18	1.01	95	0.10	0.08	0.19
9	DC-03-C-01	BLOCKS OF FLATS	WEYMOUTH	27	Tuesday	08/07/2008	3	2	5	1.11	30	0.10	0.07	0.17
10	KD-03-C-01	BLOCK OF FLATS	KILDARE	32	Friday	22/05/2009	3	2	5	1.09	35	0.09	0.06	0.14
11	LU-03-C-01	BLOCKS OF FLATS	DROGHEDA	52	Thursday	12/09/2013	5	3	8	1.23	64	0.08	0.05	0.13
12	FS-03-C-01	BLOCK OF FLATS	MOLD	30	Monday	06/07/2009	2	2	4	1.00	30	0.07	0.07	0.13
13	WT-03-C-01	FLATS	ATHLONE	86	Wednesday	20/06/2007	9	1	10	1.00	86	0.11	0.01	0.12
14	EX-03-C-01	FLATS	SOUTHEND-ON-SEA	6	Tuesday	22/10/2013	0	0	0	1.67	10	0.00	0.00	0.00

PM PEAK	Arr	Dep	Total
Average	0.14	0.08	0.22
85th %	0.23	0.18	0.40
Average Trips	4	3	7
85th % Trips	7	6	13

* based on 32 proposed spaces

Calculation Reference: AUDIT-715001-151029-1013

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : C - INDUSTRIAL UNIT
 VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	RE READING	1 days
04	EAST ANGLIA	
	SF SUFFOLK	1 days
11	SCOTLAND	
	EB CITY OF EDINBURGH	1 days

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

Filtering Stage 2 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: Gross floor area
 Actual Range: 645 to 1200 (units: sqm)
 Range Selected by User: 300 to 1500 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/07 to 12/07/13

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:

Monday	1 days
Thursday	1 days
Friday	1 days

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

Selected survey types:

Manual count	3 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:

Edge of Town	3
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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:

Industrial Zone	3
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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.

Filtering Stage 3 selection:

Use Class:

B1

3 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:

1,001 to 5,000

1 days

5,001 to 10,000

1 days

15,001 to 20,000

1 days

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

Population within 5 miles:

75,001 to 100,000

1 days

125,001 to 250,000

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

1 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

3 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.

LIST OF SITES relevant to selection parameters

1	EB-02-C-01	BREWERY	CITY OF EDINBURGH
	DRYDEN ROAD		
	LOANHEAD		
	EDINBURGH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	1200 sqm	
	Survey date: MONDAY	16/06/08	Survey Type: MANUAL
2	RE-02-C-01	SHEET METAL FABRICATION	READING
	COMMERCIAL ROAD		
	READING		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	645 sqm	
	Survey date: THURSDAY	22/11/12	Survey Type: MANUAL
3	SF-02-C-01	JOINERY	SUFFOLK
	ANSON ROAD		
	MARTLESHAM HEATH		
	IPSWICH		
	Edge of Town		
	Industrial Zone		
	Total Gross floor area:	1100 sqm	
	Survey date: FRIDAY	12/07/13	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.

TRIP RATE for Land Use 02 - EMPLOYMENT/C - INDUSTRIAL UNIT
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	3	982	0.441	3	982	0.068	3	982	0.509
08:00 - 09:00	3	982	0.781	3	982	0.272	3	982	1.053
09:00 - 10:00	3	982	0.374	3	982	0.170	3	982	0.544
10:00 - 11:00	3	982	0.204	3	982	0.340	3	982	0.544
11:00 - 12:00	3	982	0.136	3	982	0.238	3	982	0.374
12:00 - 13:00	3	982	0.407	3	982	0.475	3	982	0.882
13:00 - 14:00	3	982	0.475	3	982	0.543	3	982	1.018
14:00 - 15:00	3	982	0.272	3	982	0.102	3	982	0.374
15:00 - 16:00	3	982	0.238	3	982	0.272	3	982	0.510
16:00 - 17:00	3	982	0.204	3	982	0.272	3	982	0.476
17:00 - 18:00	3	982	0.000	3	982	0.815	3	982	0.815
18:00 - 19:00	3	982	0.034	3	982	0.170	3	982	0.204
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.566			3.737			7.303

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: 645 - 1200 (units: sqm)
 Survey date range: 01/01/07 - 12/07/13
 Number of weekdays (Monday-Friday): 3
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 0

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.

Calculation Reference: AUDIT-715001-151029-1039

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT

Category : A - OFFICE

VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	HF HERTFORDSHIRE	1 days
09	NORTH	
	TW TYNE & WEAR	1 days
16	ULSTER (REPUBLIC OF IRELAND)	
	DN DONEGAL	2 days

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

Filtering Stage 2 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: Gross floor area
 Actual Range: 232 to 645 (units: sqm)
 Range Selected by User: 186 to 800 (units: sqm)

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/00 to 16/10/13

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:

Monday	1 days
Tuesday	1 days
Wednesday	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:

Edge of Town Centre	4
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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:

Development Zone	1
Residential Zone	1
Built-Up Zone	2

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.

Filtering Stage 3 selection:

Use Class:

B1	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:

1,001 to 5,000	2 days
20,001 to 25,000	1 days
25,001 to 50,000	1 days

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

Population within 5 miles:

5,001 to 25,000	2 days
125,001 to 250,000	1 days
500,001 or More	1 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	3 days
1.1 to 1.5	1 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
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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.

LIST OF SITES relevant to selection parameters

1	DN-02-A-01	ARCHITECTS	DONEGAL
	CONVENT ROAD		
	LETTERKENNY		
	Edge of Town Centre		
	Development Zone		
	Total Gross floor area:	232 sqm	
	Survey date: TUESDAY	15/09/09	Survey Type: MANUAL
2	DN-02-A-02	COUNCIL OFFICES	DONEGAL
	ST ORANS ROAD		
	BUNCRANA		
	Edge of Town Centre		
	Residential Zone		
	Total Gross floor area:	400 sqm	
	Survey date: MONDAY	28/06/10	Survey Type: MANUAL
3	HF-02-A-03	OFFICE	HERTFORDSHIRE
	60 VICTORIA STREET		
	ST ALBANS		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	610 sqm	
	Survey date: WEDNESDAY	16/10/13	Survey Type: MANUAL
4	TW-02-A-01	RADIO STUDIOS	TYNE & WEAR
	CHURCH STREET		
	GATESHEAD		
	Edge of Town Centre		
	Built-Up Zone		
	Total Gross floor area:	645 sqm	
	Survey date: WEDNESDAY	04/05/05	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
MG-02-A-01	Public Access
RO-02-A-01	Public Access

TRIP RATE for Land Use 02 - EMPLOYMENT/A - OFFICE
VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	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	472	0.159	4	472	0.053	4	472	0.212
08:00 - 09:00	4	472	1.537	4	472	0.159	4	472	1.696
09:00 - 10:00	4	472	1.113	4	472	0.424	4	472	1.537
10:00 - 11:00	4	472	0.901	4	472	0.477	4	472	1.378
11:00 - 12:00	4	472	0.742	4	472	1.007	4	472	1.749
12:00 - 13:00	4	472	0.636	4	472	0.583	4	472	1.219
13:00 - 14:00	4	472	0.689	4	472	0.848	4	472	1.537
14:00 - 15:00	4	472	0.636	4	472	0.424	4	472	1.060
15:00 - 16:00	4	472	0.795	4	472	0.848	4	472	1.643
16:00 - 17:00	4	472	0.424	4	472	1.007	4	472	1.431
17:00 - 18:00	4	472	0.159	4	472	1.537	4	472	1.696
18:00 - 19:00	4	472	0.053	4	472	0.371	4	472	0.424
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:		7.844			7.738			15.582	

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: 232 - 645 (units: sqm)
 Survey date range: 01/01/00 - 16/10/13
 Number of weekdays (Monday-Friday): 4
 Number of Saturdays: 0
 Number of Sundays: 0
 Surveys manually removed from selection: 2

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.