DTPC

Report No. J765/TA
January 2018

PROPOSED
RESIDENTIAL ACCOMMODATION
BRASSEY STREET, LIVERPOOL

TRANSPORT ASSESSMENT

PROPOSED
RESIDENTIAL ACCOMMODATION
BRASSEY STREET, LIVERPOOL

TRANSPORT ASSESSMENT

CONTROLLED DOCUMENT

DTPC No:		**J765 TA**	
Status:	Final	*Copy No:*	
	Name	*Signature*	*Date*
Approved:	Alan Davies	***AD***	January 2018

Revision Record		
Rev.	*Date*	*Summary of Changes*
A		

DTPC (Northwest) LLP The Studio 3 Philips Road, Weir, Bacup, Lancashire, OL13 8RH
T: 01706 872323, M: 07521560109 E – info@dtpc.uk.com www.dtpc.uk.com

PROPOSED
RESIDENTIAL ACCOMMODATION
BRASSEY STREET, LIVERPOOL

TRANSPORT ASSESSMENT

C O N T E N T S

Page

Appendix C Linsig outputs

1. INTRODUCTION

DTPC has been appointed Eloquent Group Ltd to provide transport and highway advice for the traffic and transportation implications associated with the proposed residential accommodation Brassey Street, Liverpool.

The application relates to a site located in the urban area currently unused but with access which will be redeveloped.

In order to advise the highway authority, this report provides information on the scope of traffic and transport planning aspects of the development proposals, and forms supplementary information to assist in the determination of the planning application.

It deals solely with the proposals for the area within the red line plan.

The TA discusses the following issues:

- Site and Local Area
- Existing Highway Conditions
- Development Proposals
- Access Considerations
- Summary & Conclusions.

This report has been prepared solely in connection with the proposed development as stated above. As such, no responsibility is accepted to any third party for all or any part of this report, or in connection with any other development.

2. NATIONAL AND LOCAL POLICY GUIDANCE

National Policy

Increasing travel choice and reducing dependency on car travel is an established aim across all areas of government policy development, documents and guidance alongside addressing climate change and reducing CO_2 emissions. Travel planning to date has focused on reducing single occupancy car use to specific destinations. Recent national guidance has broadened this, outlining the potential for Residential Travel Plans and addressing trips generated from individual origins (homes) to multiple and changing destinations. The Department for Transport (DfT) also published "Smarter Choices – Changing the Way We Travel" focusing on softer education and persuasive measures which are a key element of travel plans.

National planning policy ensuring that development plans and planning application decisions contribute to delivery of development that is. It states that development should ensure environmental, social and economic objectives would be achieved together over time.

It will also contribute to global sustainability, by addressing the causes and impacts of climate change, reducing energy use and emissions by encouraging development patterns that reduce the need to travel by car and impact of transporting goods as well as in making decisions in the location and design of development.

Future of Transport 2004

2004, Department for Transport (DfT) published a long-term strategy (*Future of Transport* White Paper) which examines the factors that will shape travel and transport over the next thirty years. It sets out how the Government will respond to the increasing demand for travel, maximising the benefits of transport while minimising the negative impact on people and the environment.

Central to the strategy is the need to bring transport costs under control, the importance of shared decision making at local, regional and national levels to ensure better transport delivery, and ***improvements in the management of the network to make the most of existing capacity***.

National Planning Policy Framework

Abstracts are provided for reference, the ***bold italics*** are added to emphasise the key policies related to the development:

Achieving sustainable development

7 There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:

- an economic role – ***contributing to building a strong, responsive and competitive economy***, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation; and by identifying and coordinating development requirements, including the provision of infrastructure;
- a social role – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services that reflect the community's needs and support its health, social and cultural well-being; and
- an environmental role – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including

moving to a low carbon economy.

The presumption in favour of sustainable development

14 At the heart of the National Planning Policy Framework ***is a presumption in favour of sustainable development***, which should be seen as a golden thread running through both plan-making and decision-taking.

For decision-taking this means

- approving development proposals that accord with the development plan without delay; and
- where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:
    - ***any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole***; or
    - specific policies in this Framework indicate development should be restricted

Core planning principles

1 7 W ithin the overarching roles that the planning system ought to play, a set of core land-use planning principles should underpin both plan-making and decision-taking.

- ***encourage the effective use of land by reusing land that has been previously developed (brownfield land), provided that it is not of high environmental value;***
- ***actively manage patterns of growth to make the fullest possible use of public transport, walking and cycling***, and focus significant development in locations which are or can be made sustainable; and
- take account of and support local strategies to improve health, social and cultural wellbeing for all, and deliver sufficient community and cultural facilities and services to m eet local needs***.***

Promoting sustainable transport

29 Transport policies have an important role to play in facilitating sustainable development but also in contributing to wider sustainability and health objectives. Smarter use of technologies can reduce the need to travel. The transport system needs to be balanced in favour of sustainable transport modes, giving people a real choice about how they travel. However, the Government recognises that different policies and measures will be required in different communities and opportunities to maximise sustainable transport solutions will vary from urban to rural areas.

32 All developments that generate significant amounts of movement should be supported by a Transport Statement or Transport Assessment. Plans and decisions should take account of whether:

- ***the opportunities for sustainable transport modes have been taken up depending on the nature and location of the site, to reduce the need for m ajor transport infrastructure***;
- ***safe and suitable access to the site can be achieved for all people***; and
- improvements can be undertaken within the transport network that cost effectively limit the significant impacts of the development. ***Development should only be prevented or refused on transport grounds where the residual cumulative impacts of development are severe***.

34 Plans and decisions should ensure developments that generate significant movement are located where the need to travel will be minimised and the use of sustainable transport modes can be

maximised. However this needs to take account of policies set out elsewhere in this Framework, particularly in rural areas.

35 Plans should protect and exploit opportunities for the use of sustainable transport modes for the movement of goods or people. Therefore, developments should be located and designed where practical to

- accommodate the efficient delivery of goods and supplies;
- give priority to pedestrian and cycle movements, and have access to high quality public transport facilities;
- create safe and secure layouts which minimise conflicts between traffic and cyclists or pedestrians, avoiding street clutter and where appropriate establishing home zones;
- incorporate facilities for charging plug-in and other ultra-low emission vehicles; and
- consider the needs of people with disabilities by all modes of transport.

36 A key tool to facilitate this will be a Travel Plan. All developments which generate significant amounts of movement should be required to provide a Travel Plan.

37 Planning policies should aim for a balance of land uses within their area so that people can be encouraged to minimise journey lengths for employment, shopping, leisure, education and other activities.

38 For larger scale residential developments in particular, planning policies should promote a mix of uses in order to provide opportunities to undertake day-to-day activities including work on site. W here practical, particularly within large-scale developments, key facilities such as primary schools and local shops should be located within walking distance of most properties.

39 If setting local parking standards for residential and non-residential development, local planning authorities should take into account:

- the accessibility of the development;
- the type, mix and use of development;
- the availability of and opportunities for public transport;
- local car ownership levels; and
- an overall need to reduce the use of high-emission vehicles.

40 Local authorities should seek to improve the quality of parking in town centres so that it is convenient, safe and secure, including appropriate provision for motorcycles. They should set appropriate parking charges that do not undermine the vitality of town centres. Parking enforcement should be proportionate.

41 Local planning authorities should identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice.

Decision-taking

186 Local planning authorities should approach decision-taking in a positive way
to foster the delivery of sustainable development. The relationship between decision-taking and plan-making should be seamless, translating plans into high quality development on the ground.

187 ***Local planning authorities should look for solutions rather than problems,*** and decision-takers at every level should seek to approve applications for sustainable development where possible. ***Local planning authorities should work proactively with applicants to secure developments that improve the economic, social and environmental conditions of the area***.

Local Transport Planning Policy

Policy T6, Cycling

The City Council will promote and support initiatives designed to maximise the role of cycling as a transport mode by:

• Introducing appropriate traffic calming and speed reduction measures on designated cycle routes and areas of high cycle usage; and

• Ensuring that secure cycling parking facilities are provided at locations regularly visited by the public and requiring new developments to provide secure cycle parking facilities.

The proposed development will incorporate suitable amounts of cycle parking to meet the needs of their uses.

Policy T7, Walking and Pedestrians

The City Council will implement measures to encourage walking as a mode of transport and to make the pedestrian environment safer and more convenient by:

• Improving signing, lighting, surfaces, visibility and crossing places throughout the City and particularly within the City Centre, District Centres and other shopping centres;

• Improving access and mobility for all pedestrians, and particularly disabled people and carers with small children;

• Catering for pedestrians' needs in the design of all new highway improvement schemes, traffic management schemes, the road maintenance programme, and giving consideration to the provision of safe and convenient walking routes through all major development and redevelopment sites; and

• Investigating the possibility of introducing traffic calming measures and speed reduction measures in areas where heavy pedestrian flows are experienced or can be anticipated.

In relation to the above the area has local measures which have included improved pedestrian crossing facilities.

Policy T12, Car Parking Provision in New Developments

All new developments including changes of use, which generate a demand for car parking will be required to make provision for car parking on site, to meet the minimum operational needs of the development. Additional space for non-operational car parking will be permitted up to a maximum standard. This will be determined by:

• The nature and type of use;

• Whether off-site car parking would result in a danger to highway and pedestrian safety;

• Whether the locality in which the proposed development is located is served by public car parking facilities;

• Whether off-site parking would result in demonstrable harm to residential amenity; and

• The relative accessibility of the development site by public transport services.

The proposed development is seen as a natural extension to the local offer and will form the basis of shared trips in the area.

The roads in the immediate area of the development have excellent public bus connections, and the City Centre is within an easy walking distance.

Summary

The overriding theme of national policy is that developments must be accessible by sustainable means of transport and accessible to all members of the local community. Local policy is to echo the sustainability sentiment of national policy.

The proposed development is located on brownfield land in the urban environment which makes it a sustainable use of land as well improving local amenity. Also, the development will incorporate uses with good linkages to local facilities and infrastructure which will promote sustainability by reducing the number of car trips to local facilities.

Furthermore there are:

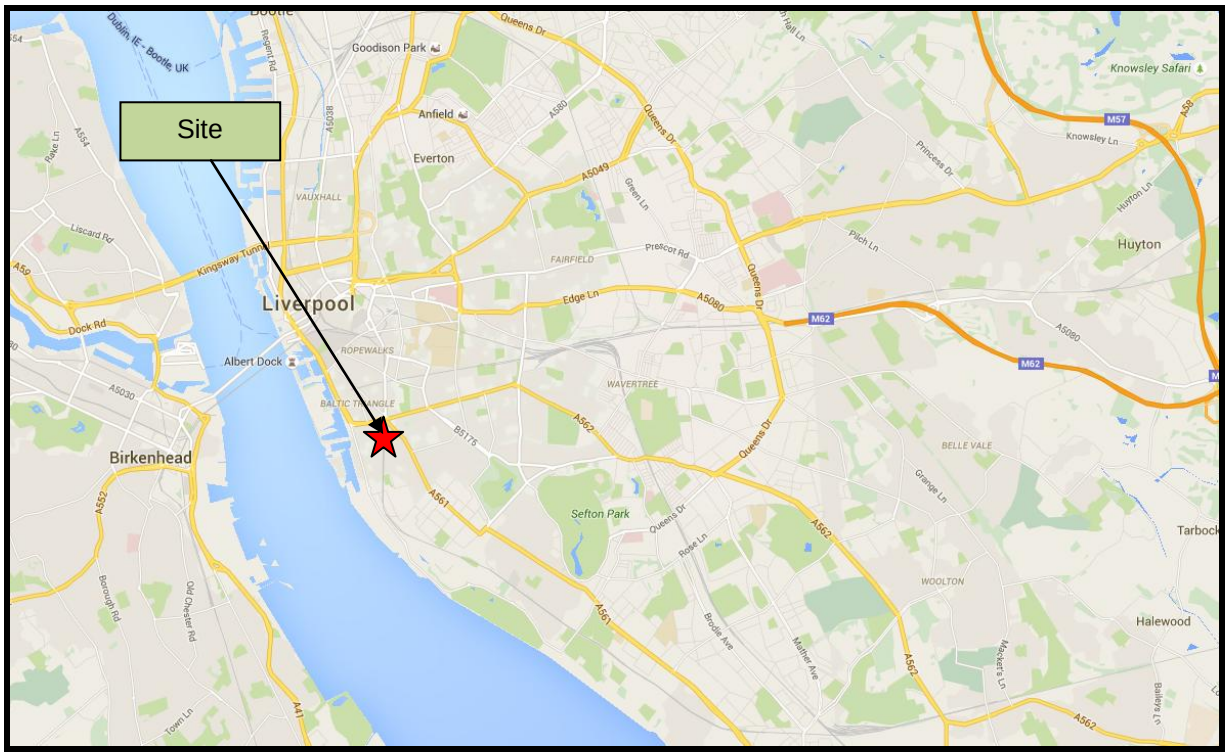
Pedestrian and cycle linkages to a number of locations and facilities are available, frequent public transport services to other major centres and interchanges, and adequate parking provision all ensure that this development is as sustainable, as required in local and national policy.

3. SITE DESCRIPTION

Site location context

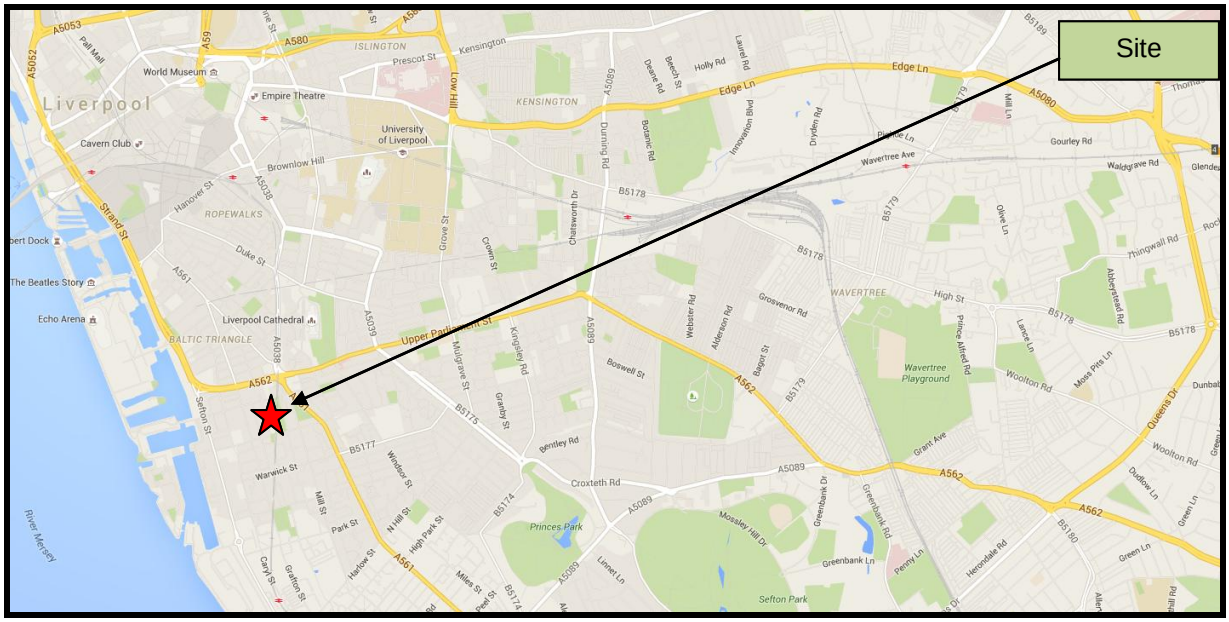
The site is situated approximately 1.5 km south of Liverpool City Centre in a mixed use area with residential to the southerly on the edge of the City Centre Strategic Investment Framework.

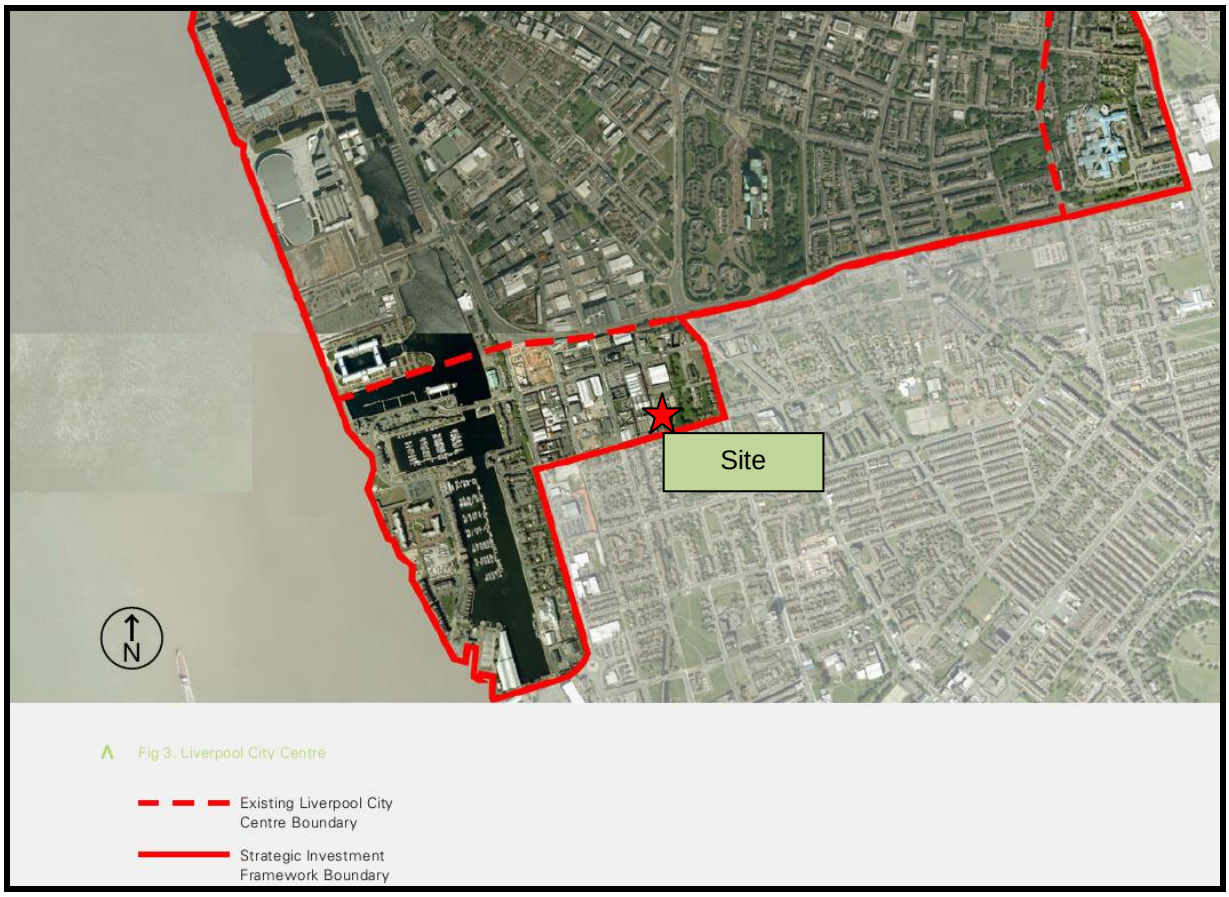
The site is highly accessible by a variety of modes and is also within a reasonable walking/cycling distance of a wide variety of city centre facilities and attractions.



Site location plan in relation to neighbouring settlements and locally below

From the site, the A562 corridor to the north and the A5080 to the north gives the most convenient access to the primary radial route corridors in Liverpool.





City Centre Strategic Investment Framework

The site is to the south of the main Baltic Triangle offer.

Local Highway Provision

All the roads in the area are of a reasonable carriageway width appropriate for their usage, with footpaths and street lighting. They serve primarliy an urban catchment containing local services/retail units and employment. From site observation the area has a typical traffic flow charateristic associated with an urban area i.e. distinct AM and PM flow periods.

A detailed photographic record of the local access and setting is provided below for future reference

View east along Hill Street towards site and away from junction.

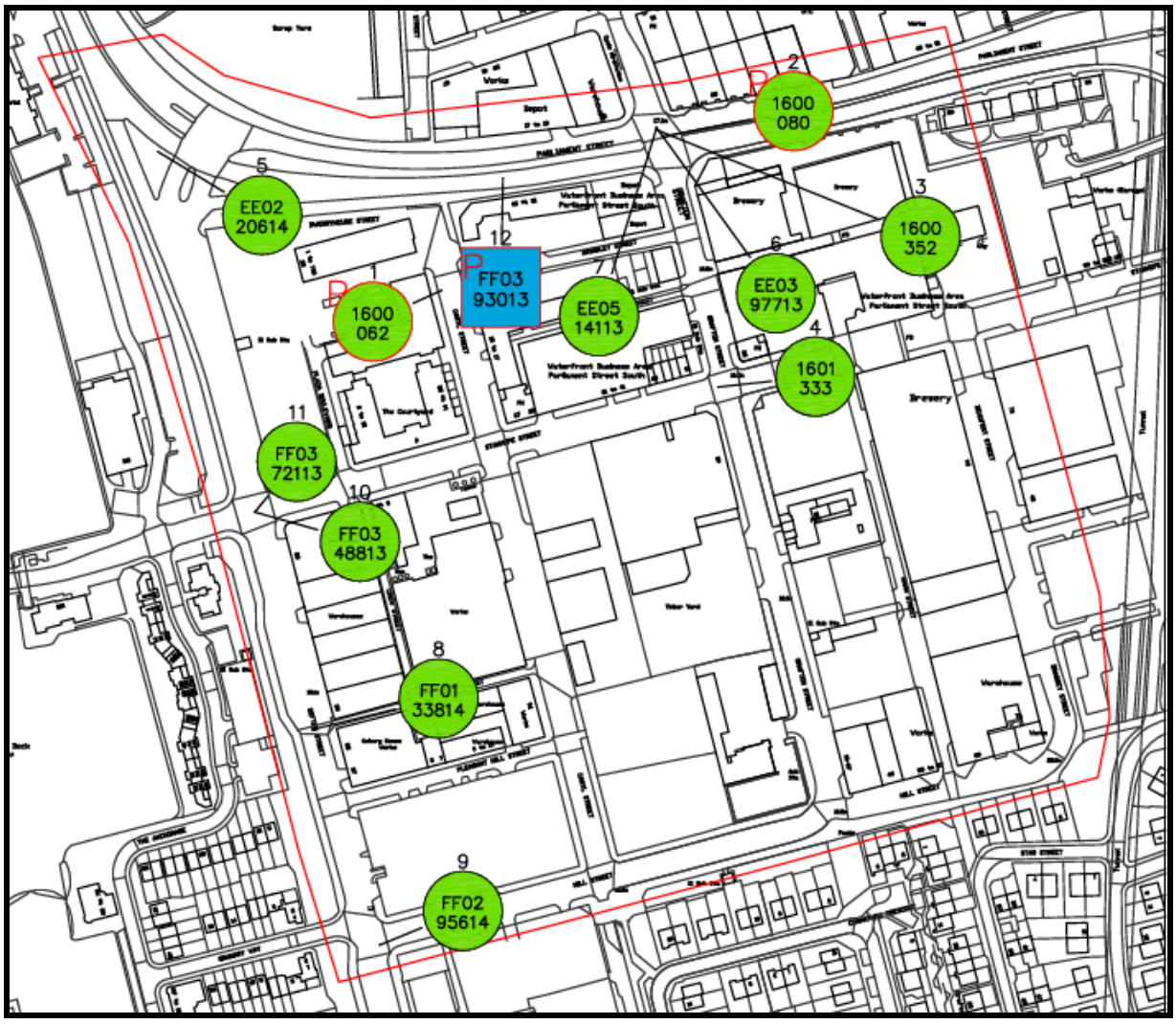
View along Grafton Street to Hill Street and away

Hill Street east towards site.

Hill Street bend and access location

Accident review

Reference to the latest data supplied from LCC has ben received and shown below.



The following details are provided for the events recorded, of the 12 recorded 5 occurred in 2013, 3 in 2014, none in 2015 and 4 in 2016 to date.

This would suggest there are no trends that affect the area. Of the latest 2016 events 3 occurred in January during darkness.

1 was reverse out from a unit hitting passer-by, 1 pedestrian crossing road and struck at signalised junction, 1 red light running hit vehicle, the final event in April bike had right of way but hit by car.

The 2014 events were typical signalised junction with slow shunts occurring.

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
1	**Road No U Grid 334852E Section Ref 388966N**	SLIGHT	06/01/2016	4	17:45	DRK STU	Unknown	Unknown	U	S.VEH	GV
	SEGMENT (15-91) CARYL STREET								Liverpool		PED
	IP CROSSING ROAD, VEHICLE REVERSED OUT OF A UNIT AND BELIEVED TO NOT OF SEEN PEDESTRIAN - REVERSED INTO HIM 3 TIMES, BELIEVED TO HAVE NOT KNOW HE HAD HIT IP.						Veh1, goods < 3.5t, W -> E				Casualties 1 Vehicles 1
2	**Road No A5037 Grid 334953E Section Ref 389036N**	SLIGHT	08/01/2016	6	07:55	DRK STU	Wet/Damp	Rain	W	S.VEH	
	JUNCTION JAMAICA STREET and PARLIAMENT STREET								Liverpool		PED
	1 VEHICLE / PEDESTRIAN RTC, VEHICLE TRAVELLING ALONG UPS PEDESTRIAN CROSSING ROAD AND COLLIDES WITH VEHICLE, PEDESTRIAN TAKEN TO HOSPITAL POSSIBLE FRACTURE, LATER CONFIRMED AS TENDON / LIGAMENT DAMAGE AND BRUISING AND SWELLING ONLY - SLIGHT INJURY.						Veh1, car, S -> N				Casualties 1 Vehicles 1
3	**Road No A562 Grid 334950E Section Ref 389039N**	SLIGHT	27/01/2016	4	18:46	DRK STL	Dry	Fine Wind		R.TURN	
	JUNCTION JAMAICA STREET and PARLIAMENT STREET								Liverpool		
	VEHICLE 2 LOOKING TO TURN RIGHT. SEES THE LIGHT AHEAD HAVE CHANGED TO STOP THE OPPOSING TRAFFIC AND HE HAS BEGAN TO TURN WHEN V001 HAS ACCELERATED THROUGH A RED ATS AND COLLIDED WITH HIS NEARSIDE AND FAILED TO STOP						Veh1, car, W -> E Veh2, car, E -> N Veh3, car, N -> S				Casualties 1 Vehicles 3

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
4	**Road No U Grid 334978E Section Ref 388922N**	SLIGHT	15/04/2016	6	16:20	L	Dry	Fine		R.TURN	P/C
	JUNCTION GRAFTON STREET/STANHOPE STREET GRAFTON STREET								Liverpool		
	BIKE AND VEHICLE WERE OPISITE SIDES OF THE JUNCTION BOTH ON STANHOPE STREET. BIKE TURNED LEFT INTO GRAFTON STREET HAVING THE RIGHT AWAY. VEHICLE TURNED INTO THE SAME DIRECTION OF THE BIKE INTO GRAFTON STREET AND COLLIDED WITH THE BIKE.						Veh1, car, W -> S Veh2, pedal cycle, E -> S				Casualties 1 Vehicles 2
5	**Road No A562 Grid 334723E Section Ref 389029N**	SLIGHT	01/04/2014	3	16:35	L	Dry	Fine		R.TURN	
	A562 PARLIAMENT STREET, at its Junction with A5036 SEFTON STREET, LIVERPOOL,, MERSEYSIDE,								Liverpool		
	V-1 AND V-2 BEARING RIGHT TO MAKE A RIGHT TURN V-1 IS IN RIGHT LANE V-2 IN LEFT LANE. V-1 HAS SWERVES IN FRONT OF V-2 , V-2 IS FORCED TO SWERVE LEFT AND HITS CENTRAL RESERVATION. V-1 HAS THEN FTS.						Veh1, car, N -> S Veh2, car, N -> S				Casualties 1 Vehicles 2
6	**Road No A562 Grid 334950E Section Ref 389040N**	SLIGHT	21/08/2013	4	13:45	L	Dry	Fine		R.TURN	
	A562 PARLIAMENT STREET, at its Junction with A5040 JAMAICA STREET, LIVERPOOL, MERSEYSIDE, L08665/L01155								Liverpool		
	V1 TURNS RIGHT ACROSS PATH OF V2, WHO HAD RIGHT OF WAY STRAIGHT AHEAD AND BOTH COLLIDE.						Veh1, car, E -> N Veh2, car, W -> E				Casualties 2 Vehicles 2

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
7	**Road No A562 Grid 334950E Section Ref 389040N**	SLIGHT	15/11/2013	6	14:50	L	Dry	Fine			P/C
	A562 PARLIAMENT STREET, at its Junction with Unclassified Road JAMAICA STREET, LIVERPOOL, MERSEYSIDE, L08665/L01155								Liverpool		
	V1 TRAVELLING ALONG PARLIAMENT STREET COLLIDES WITH V2 (TRAVELLING ACROSS PARLIAMENT STREET) FRONT OF V1 COLLIDES WITH REAR OF V2.						Veh1, car, W -> E Veh2, pedal cycle, SE -> NW				Casualties 1 Vehicles 2
8	**Road No A5036 Grid 334793E Section Ref 388766N**	SLIGHT	27/01/2014	2	09:25	L	Wet/Damp	Fine			
	A5036 SEFTON STREET, at its Junction with Unclassified Road PERRY STREET, LIVERPOOL								Liverpool		
	V1 FAILS TO STOP FOR V2 WAITING AHEAD. COLLIDES WITH REAR OF V2. V2 COLLIDES WITH V3						Veh1, car, S -> N Veh2, car, S -> N Veh3, car, S -> N				Casualties 2 Vehicles 3
9	**Road No A5036 Grid 334824E Section Ref 388668N**	SLIGHT	26/05/2014	2	10:31	L	Dry	Fine			M/C P/C
	A5036 SEFTON STREET, at its Junction with Unclassified Road HILL STREET, LIVERPOOL, MERSEYSIDE								Liverpool		
	V1 (PEDAL CYCLIST) FAILS TO STOP IN TIME FOR JUNCTION AND COLLIDES WITH V2.						Veh1, pedal cycle, E -> W Veh2, m/cycle > 500cc, N -> S				Casualties 1 Vehicles 2

No	Location	Severity	Date	Day	Time	Street Lighting	Road Surface	Weather	Pedestrian Direction	Factors	Involved
10	**Road No A5036 Grid 334767E Section Ref 388865N**	SLIGHT	14/07/2013	1	01:10	DRK STL	Dry	Fine		R.TURN	
	A5036 SEFTON STREET, at its Junction with Unclassified Road MARINERS WHARF, LIVERPOOL, MERSEYSIDE, L08773/L08773								Liverpool		
	V2 TRAVELLING ALONG SEFTON STREET TOWARDS CITY, AS HE PASSES THROUGH ATS, V1 TURNS ACROSS HIS PATH. DRIVER OF V1 BELIEVED TO BE UNDER THE INFLUENCE OF ALCOHOL, REFUSED TO PROVIDE SAMPLES TO FME AT RLUH.						Veh1, car, NE -> W Veh2, car, SW -> NE				Casualties 1 Vehicles 2
11	**Road No A5036 Grid 334767E Section Ref 388865N**	SLIGHT	27/07/2013	7	17:45	L	Dry	Fine		R.TURN	
	A5036 SEFTON STREET, at its Junction with Unclassified Road MARINERS WHARF, LIVERPOOL, MERSEYSIDE, L08773/L08773								Liverpool		
	V1 COLLIDES WITH V3 AT JUNCTION OF MARRINERS WHARF AND SEFTON STREET. DRIVER OF V3 LEAVES SCENE AND GETS INTO V2 WHICH MAKES OFF.						Veh1, car, N -> S Veh2, car, S -> E Veh3, car, S -> E				Casualties 2 Vehicles 3
12	**Road No A562 Grid 334880E Section Ref 389017N**	SERIOUS	18/08/2013	1	00:25	DRK STL	Wet/Damp	Fine	N	S.VEH	
	A562 PARLIAMENT STREET, 75 metres west of Unclassified Road GRAFTON STREET, LIVERPOOL, MERSEYSIDE, L08665/L08385								Liverpool		PED
	V1 IS TRAVELLING CITY BOUND. PEDESTRIAN ENTERS CARRIAGEWAY, CROSSING FROM DRIVERS NEARSIDE. VEHICLE STRIKES PEDESTRIAN WITH FRONT OFFSIDE WING AS SHE NEARS CENTRAL RESERVATION. V1 FTS.						Veh1, car, E -> W				Casualties 1 Vehicles 1

Whilst any accident is regrettable incidents of this nature the analysis of accident records has not identified any patterns would not indicate a safety issue arising from the operation of the network at the site access area which requires more detailed consideration as part of this TA other than considering the parking on street.

Summary

The local urban area has a good level of infrastructure in terms of road widths, path provision, st lighting and crossing points. The safety records indicate that the area has some recorded events but not at a level where safety issues would arise requiring intervention.

4. EXISTING NON MOTORISED TRAVEL OPTIONS TO THE SITE

It is important to recognise that national Government guidance encourages accessibility to new developments by non-car travel modes. New proposals should attempt to influence the mode of travel to the development in terms of gaining a shift in modal split towards non car modes, thus assisting in meeting the aspirations of current national and local planning policy.

The accessibility of the proposed development sites by the following modes of transport has, therefore, been considered:

1. Accessibility on foot and cycle;
2. Accessibility by public transport.

Walking and cycling

The proximity of the site in relation to the central core of Liverpool City Centre, pedestrian facilities are numerous and generally of good quality – particularly in areas which have experienced urban realm improvements as part of the City Centre Movement Strategy (CCMS) which seeks to discourage through traffic within the City Centre; has significant improvements to public transport facilities; and wide ranging urban realm / pedestrian enhancements.

The local area has excellent facilities to promote movement of pedestrians, zebra/puffin crossings, wide footways, and directional signage to aid visitors to the area.

The proposed development site is located in the urban area with a range of local land uses, services and facilities.

Experience from good practice in Travel Planning development generally suggests that pedestrians are prepared to walk up to 2kms between home and workplace, provided that accessible footway routes are identified.

ACCEPTABLE WALKING DISTANCES [INSTITUTE OF HIGHWAYS AND TRANSPORTATION]			
Walking Distance	**Local Facilities ***	**District Facilities****	**Other**
Desirable	200m	500m	400m
Acceptable	400m	1000m	800m
Preferred Maximum	800m	2000m	1200m
* Includes food shops, public transport, primary schools, crèches, local play areas			
** Includes employment, secondary schools, health facilities, community / recreation facilities			

Importantly, the 0.8km yellow / 2km brown distance are the 10 and 25 minutes walk journeys covers other education and shopping facilities. There are, therefore, opportunities for residents/students to access a range of shopping, employment, leisure, and service facilities on foot.

For the key urban areas a 400m distance to bus stops based on urban studies corresponds to a walk time of 5 minutes, based upon typical normal walking speed, the site lies well within this distance for the stops shown on St James Place

The CIHT report provides guidance about journeys on foot. It does not provide a definitive view on distances, but does suggest a preferred maximum distance of 2000m for walk commuting trips this extends to cover a considerable part of the urban area.

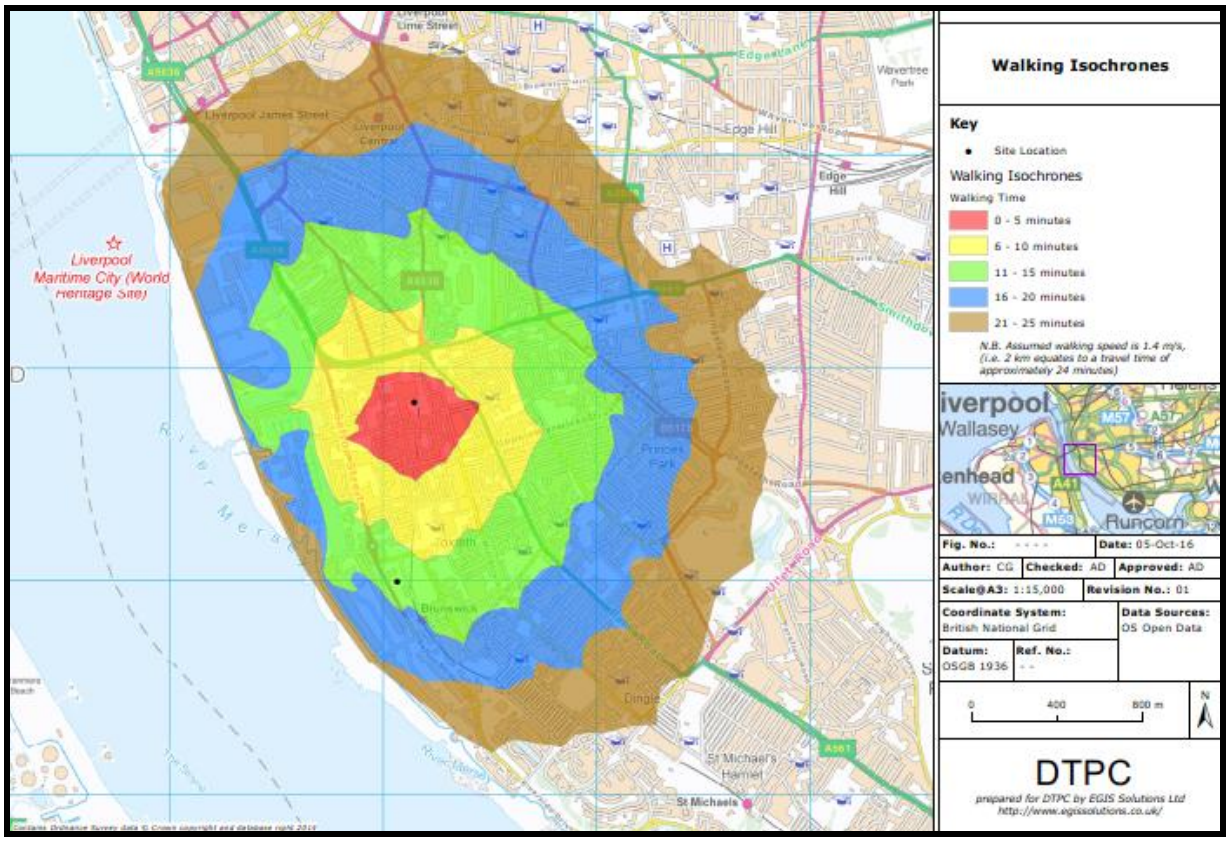
This is supported by the now superseded PPG 13 and the National Travel Survey which suggests that most walking distances are within 1.6km thus accepted guidance states that walking is the most important mode of travel at the local level supporting the above statement.

The DfT identify that 78% of walk trips are less than 1km in length, (DfT Transport Statistics GB).

Importantly, the 2km walk catchment also extends to cover the full residential and employment area. There are, therefore, significant opportunities for travel on foot.

Clearly, there is also potential for walking to form part of a longer journey for residents via the bus services.

In conclusion, the proposed application site can be considered as being accessible on foot.



Walk Catchments

Clearly, there is also potential for walking to form part of a longer journey for residents and employees to and from the proposed development.

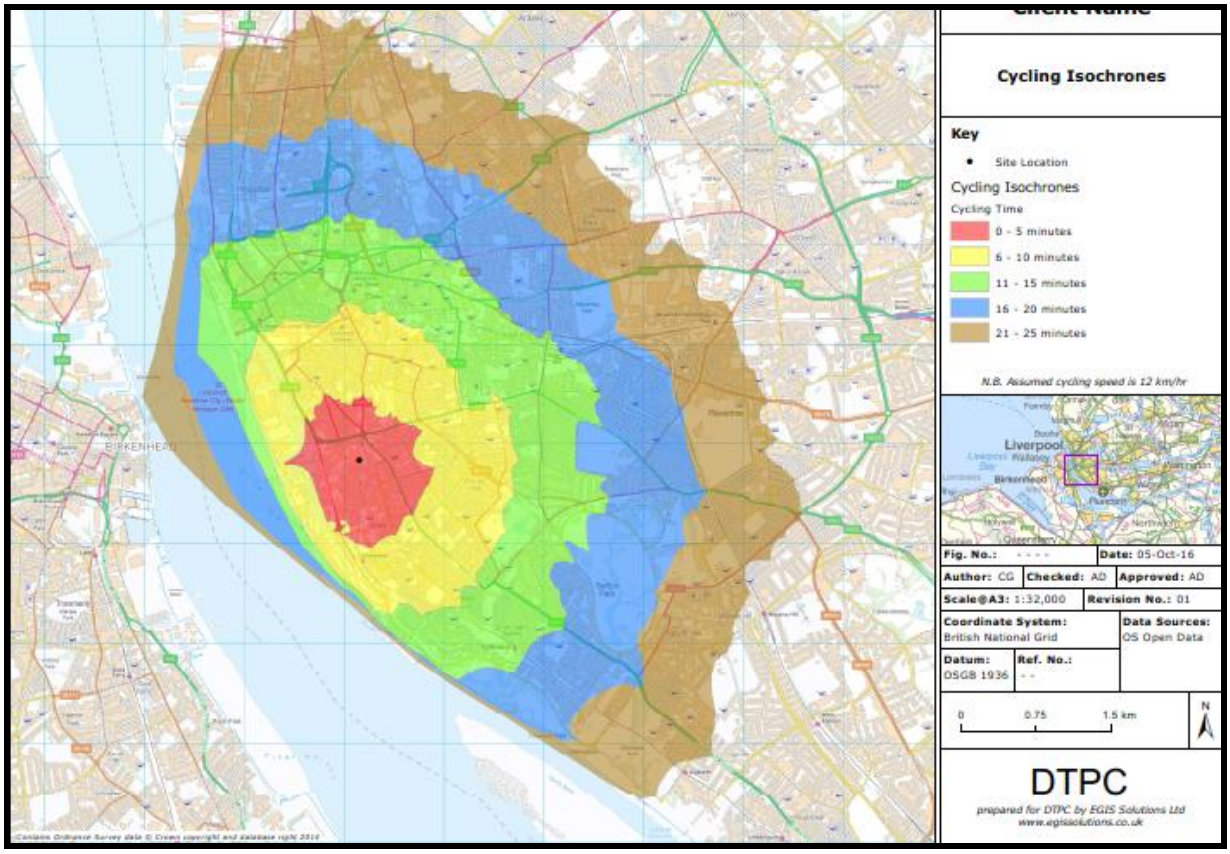
<u>There are existing pedestrian routes in the vicinity of the site that will assist the accessibility of the site for pedestrians.</u>

Historic Guidance and perceived good practice suggests: “Cycling also has potential to substitute for short car trips, particularly those under 5km and to form part of a longer journey by public transport” The CIHT guidance ‘Cycle Friendly Infrastructure’ (2004) states that: “Most journeys are short.

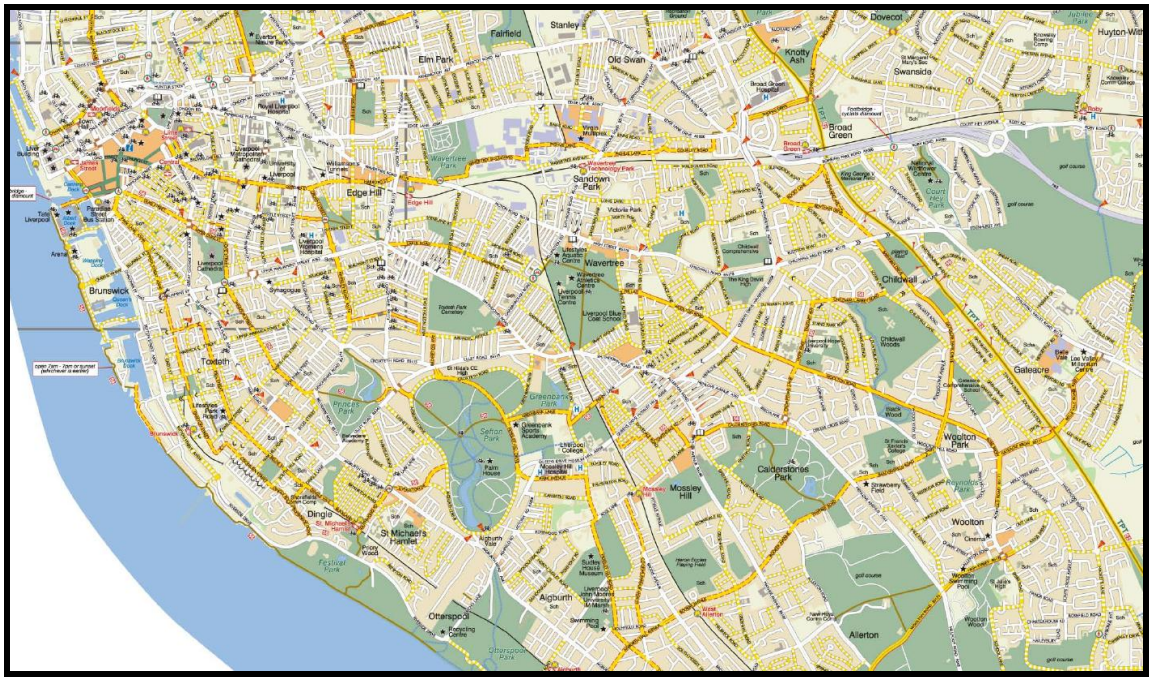
Three quarters of journeys by all modes are less than five miles (8km) and half under two miles (3.2km) (DOT 1993, table 2a). These are distances that can be cycled comfortably by a reasonably fit person.” (para 2.3)

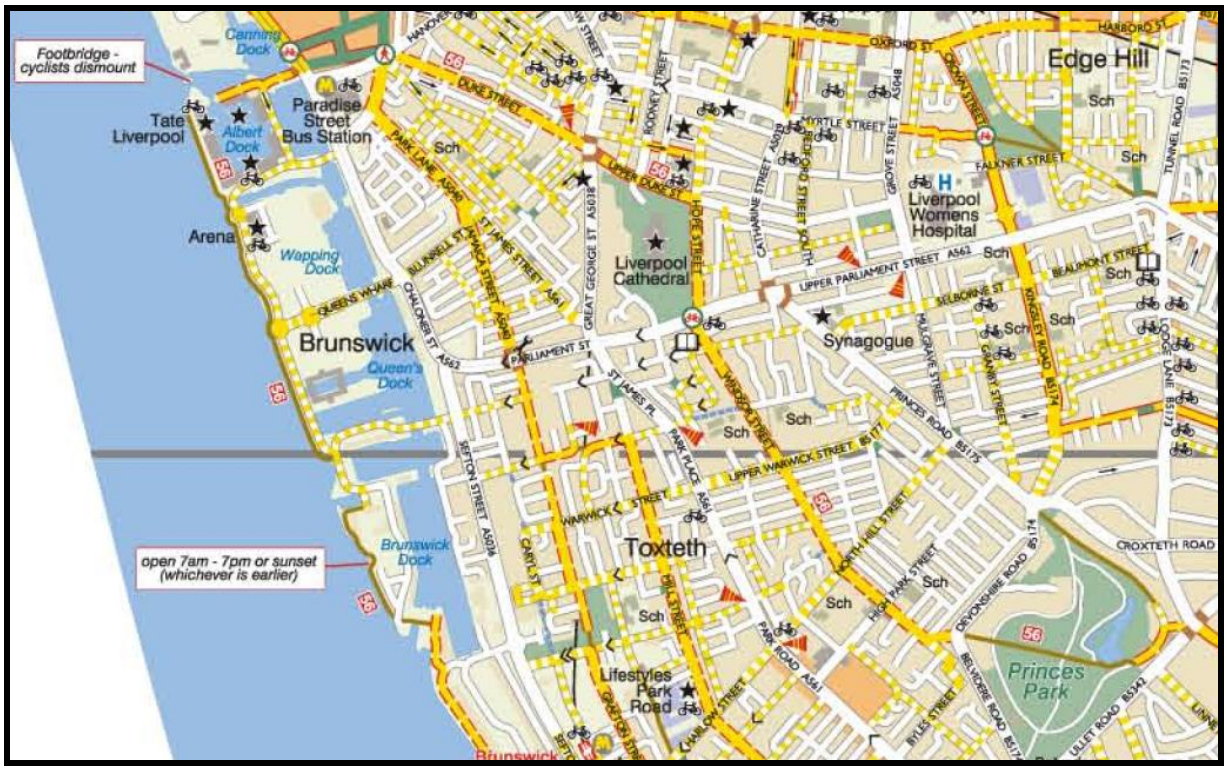
The National Travel Survey NTS (undertaken annually by the DfT) has identified that bicycle use depends on topography, but a mean distance of between 5 – 10 kilometres is considered a reasonable travel distance between home and workplace. For the purposes of this report the national guidance of 5km has been used.

The brown area indicates the 5 km distance. It incorporates a substantial part of the adjacent urban areas, which means the development site is well linked to the wider area.

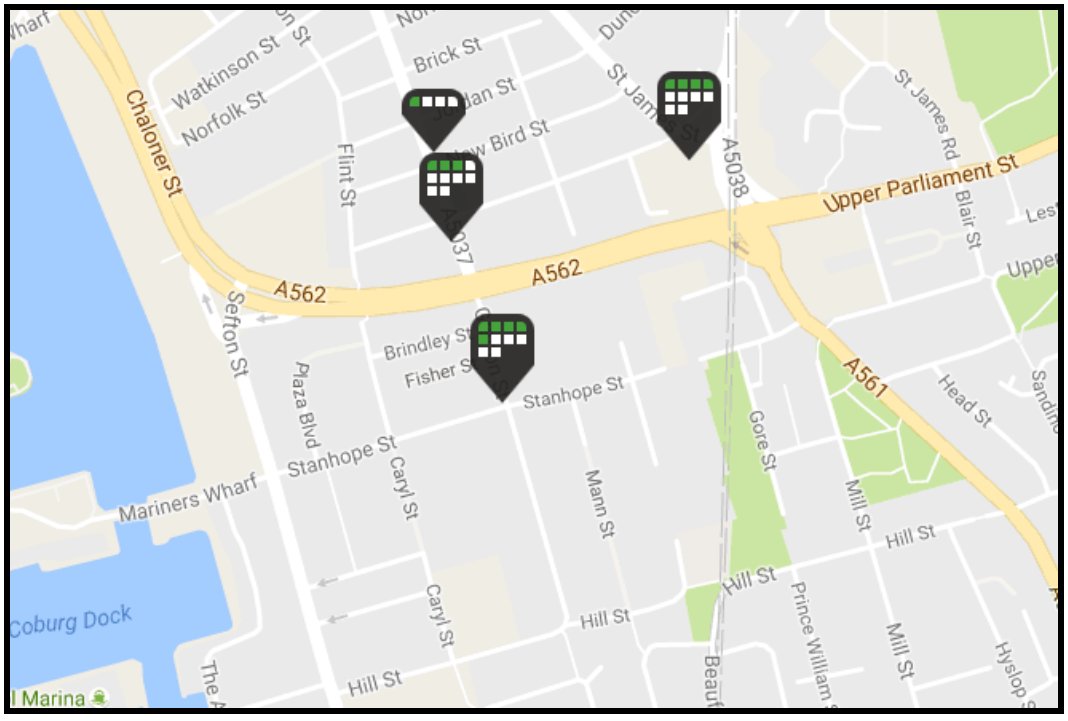


Cycle Catchments





Cycle parking has been provided at nodes of activity – including retail and leisure centres and at various locations around the area. The site will add to this provision.



Therefore, there are a variety of leisure, employment and amenity attractions within the cycle catchment area that can access the site. In conclusion, the proposed application site can be considered as being served by the cycle network and is therefore accessible by cycle.

Public Transport

An effective public transport system is essential in providing good accessibility for large parts of the population to opportunities for work, education, shopping, leisure and healthcare in the town and beyond.

The CIHT 'Guidelines for Planning for Public Transport in Developments' (March 1999) set out that, in considering public transport provision for development, three questions need to be addressed:

"What is the existing situation with respect to public transport provision in and around the development?

What transport provision is required to ensure that the proposed development meets national and local transport policy objectives?

Are the transport features of the development consistent with the transport policy objectives, and if not, can they be changed to enable the policy objectives to be achieved?" (para 4.18).

As shown in the walking section the development site is located well within 400 metres from the nearest bus stops.

The bus stops closest to the site are along Grove St James Place and Sefton Street.

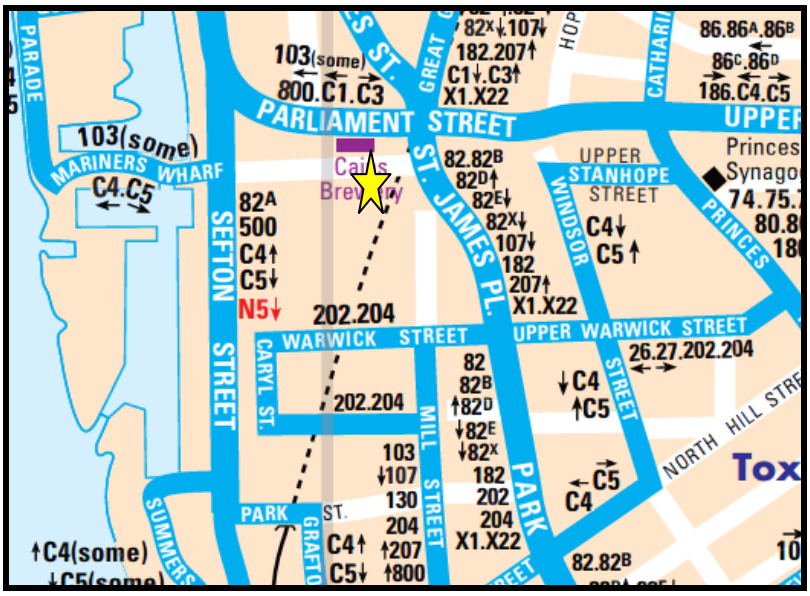
The bus stops to the west of the site are located along Sefton Street approximately 350m from the centre of the site. These bus stops are served by bus services 82A, C4 and C5 which provide access to destinations including Liverpool, Runcorn and Widnes,

Service	Route	Weekday	Saturdays	Sundays / Bank Holidays
82A	Liverpool - Palace Fields (Halton)	30 mins	30mins	30 mins
C4/C5	Dingle Mount – City Centre Circular	30 mins	30 mins	30 mins

Other bus stops within 400m of the site are east of the site on St James Place these bus stops are served by bus services 26, 30, 30A, 82, 103, 442 and TX1A.

Service	Route	Weekday	Saturdays	Sundays / Bank Holidays
26	Liverpool - Fairfield	10 mins	20mins	20 mins
30/30A	Princes Park – Liverpool – Walton – Moss Side	60 mins	60 mins	60 mins

82	Speke – Garston - Liverpool	10 mins	10 mins	20 mins
103	Thornton – Liverpool – Aigburth Vale	30 mins	N/A	N/A
442	Dingle – Liverpool - Woodchurch	60 mins	60 mins	60 mins
TX1A	Liverpool – John Lennon Airport	120 mins	120 mins	120 mins



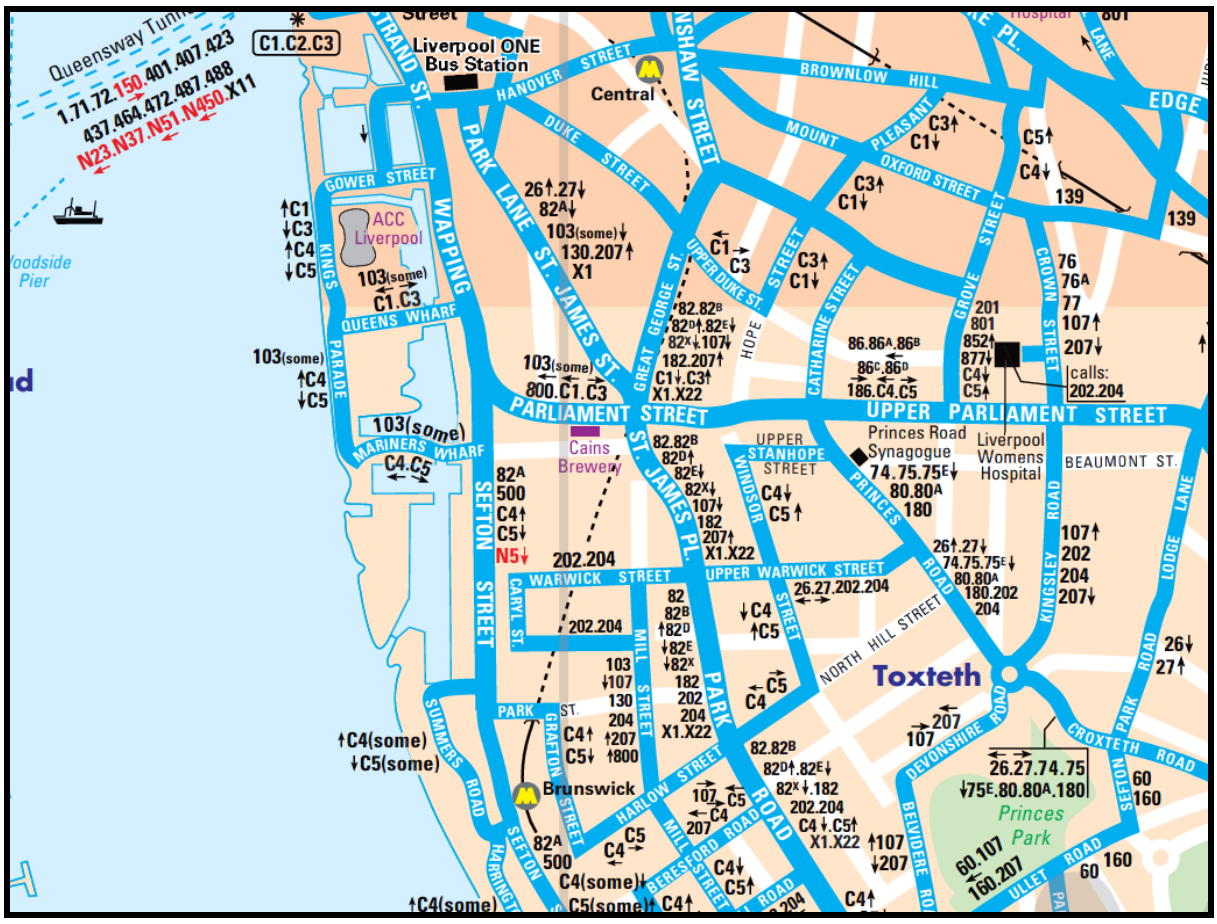
Local bus routes

Rail network

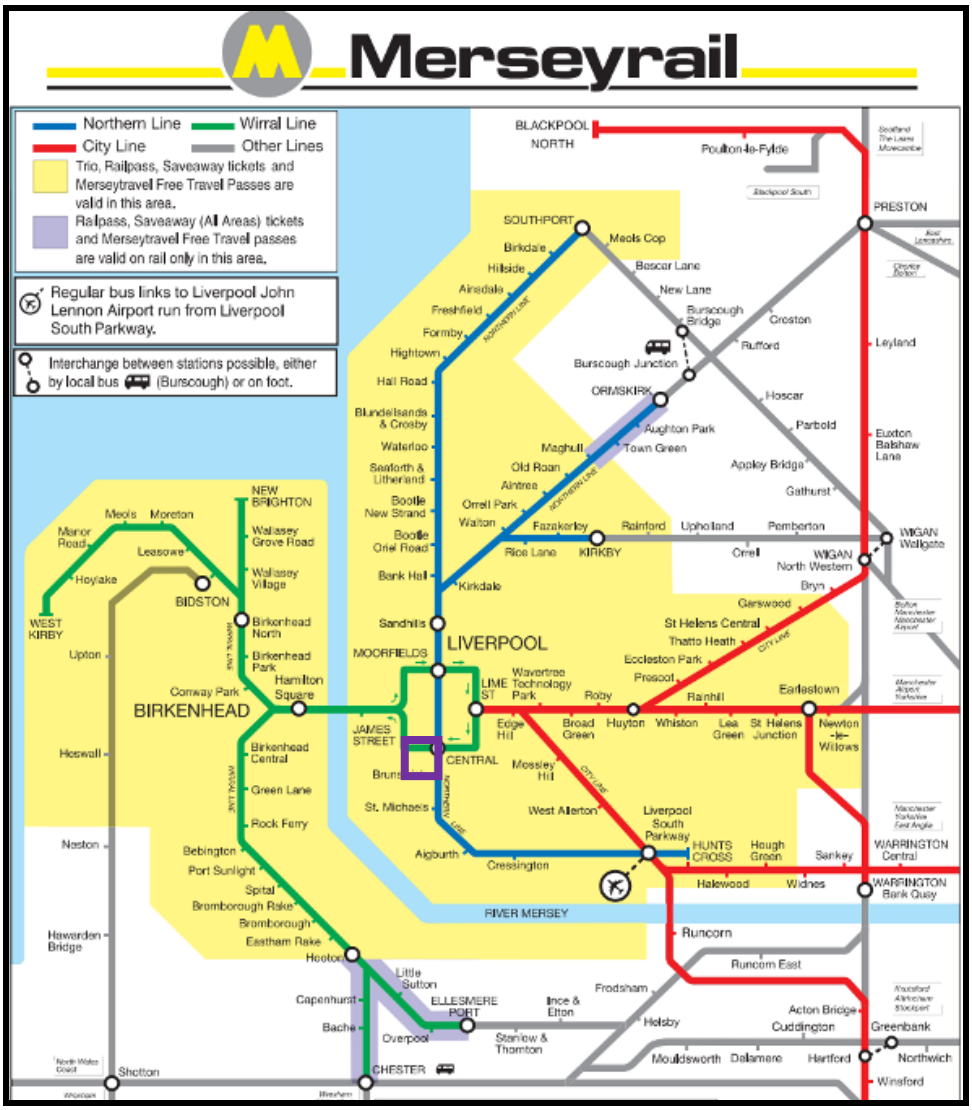
The local rail station rail services, Brunswick railway station is located approximately 1.3km to the south of the site, with Liverpool Central railway station also located approximately 1.8km from the site and is therefore well within an acceptable walking and cycling distance.

Both offer regular services in the week approximately every 10 minutes to Southport, Ormskirk, Hunts Cross and Kirkby. The stations also offer further connecting services to Manchester, Wigan, Warrington, Preston and Birkenhead.

They are well within the acceptable cycling (5km) catchment, and provides connections to employment and leisure opportunities from the site.



These services provide an opportunity for the residents to access the wider area from the proposed development via public transport.



Private hire

As with most cities the taxi offering is supplemented by private hire vehicles pre booked for pick up and drop off, ideally suited for evening leisure trips etc.

Summary

In summary, the application site can be considered as having a very good potential to be accessible by walk, cycle and public transport in accordance with planning policy guidance related to urban areas.

5. ACCESSIBILITY ASSESSMENT

The following assessment is based on LCC SPD, score needed below and assessment follows.

C3 Dwelling Houses (For flats with no 'internal circulation', issues, i.e. no car park, reduce walking and cycling target by 1.)	Urban Centre	Major & Large	4	4	5	3
		Medium	2	3	5	3
	Other Urban	Major & Large	4	5	5	1
		Medium	4	3	5	1

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** Y
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 Y
Location	Housing Development: Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F) 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)	Yes	2	2
		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. - 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 Y
			Total (B)	4
Summary	Box A: Minimum Standard (from Table 3.1)	4	**Comments or action needed to correct any shortfall**	
	Box B: Actual Score	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 / No N
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 N
Location	Housing Development: Is the development within 1 mile of a district or local centre (see Accessibility Map 1) Other Development: 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)	5

Summary			
	Box A: **Minimum Standard** (From Table 3.1)	5	**Comments or action needed to correct any shortfall**
	Box B: **Actual Score**	5	

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. • 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	5
			Total (B):	

Summary			Comments or action needed to correct any shortfall
	Box A: **Minimum Standard** (from Table 3.1)	6 accommodation	peak hours 4 buses per hour walk is slightly longer than guidance but no further contribution needed.
	Box B: **Total Score**	5	

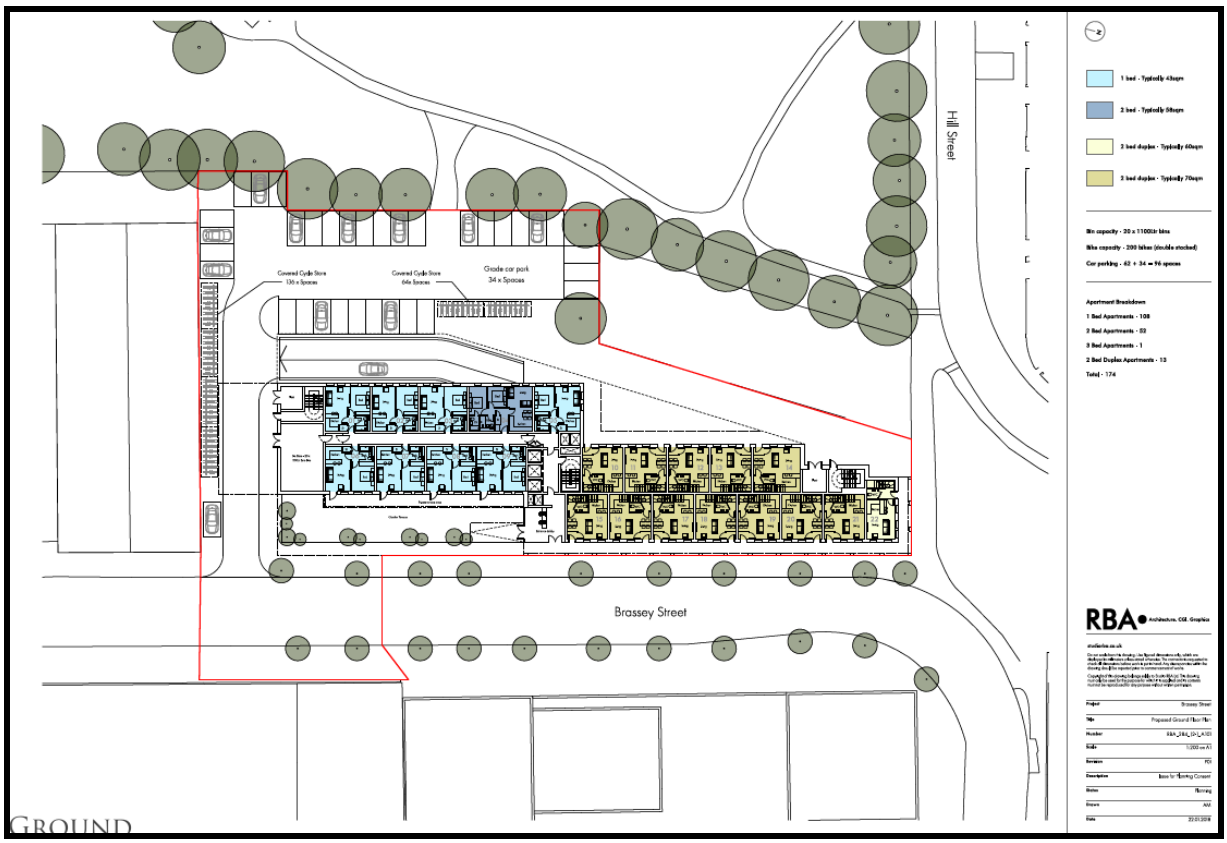
Vehicle Access and Parking		Points	Score
Vehicle access and circulation	Is there safe access to and from the road? If no, you must address safety issues.		Yes
	Can the site be adequately serviced? If no, you must address service issues.		Yes
	Is the safety and convenience of other users (pedestrians, cyclists and public transport) affected by the proposal? If yes, you must address safety issues.		Yes
	Has access for the emergency services been provided? If no, you must provide emergency service provision.		Yes
	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.		
Parking	The off-street parking provided is more than advised in Section 4 for that development type. If yes, parking provision must be reassessed.		/ No
	The off-street parking provided is as advised in Section 4 for that development type	1	Yes 1
	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 / 2
	For development in controlled parking zones:		
	• Is it a car free development?	1	/ 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	0 / No
		Total (B):	

Summary	Box A:		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.
	Minimum Standard (From Table 3.1)	1 accommodation	Parking is lower than policy with focus on non car uses
		3	

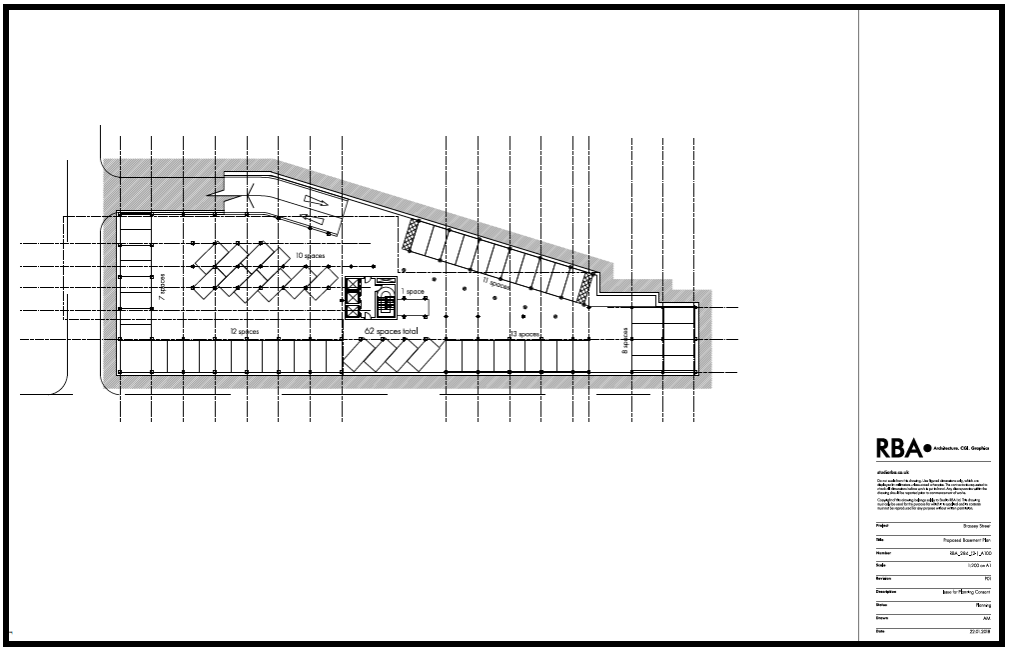
6. THE DEVELOPMENT PROPOSALS AND LAYOUT

Development Proposals

The erection of a 7-8 storeys building comprising a total of 174 apartments, with 34 at grade spaces and 62 subterranean car parking spaces, 200 cycle parking spaces, and landscaped amenity space, and enhancement works to the adjacent public park. Full details in architects drawings



Site Layout

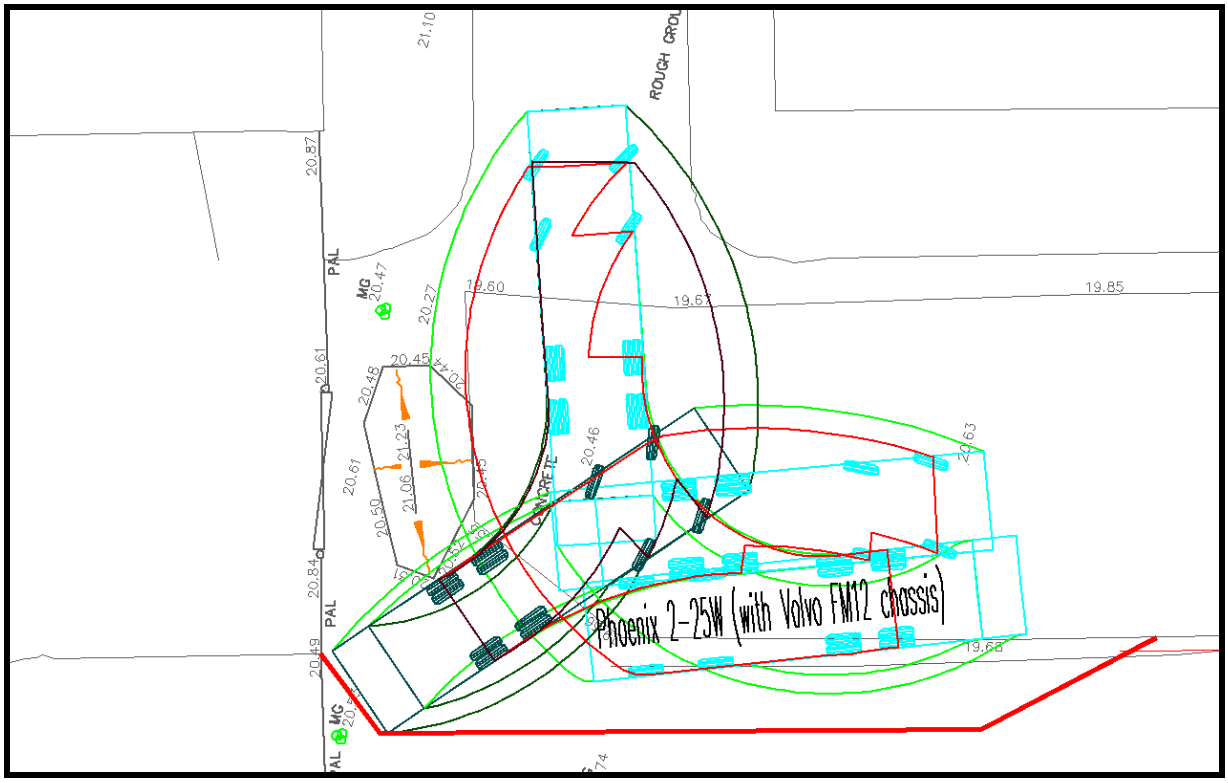


The site provides a new high quality walk route running east west through the site.

The Brassey Street route will be redefined with a 6m route giving access to the servicing areas and car parking offer.

Servicing strategy

The larger deliveries are accommodated using the internal arrangement as shown for a large refuse vehicle.



Car parking Policy and review

The highly accessible nature of the scheme as with most centre type schemes would require staff to use walk/cycle/car share/public transport as their chosen mode of transport. These are set out in the sustainability chapter.

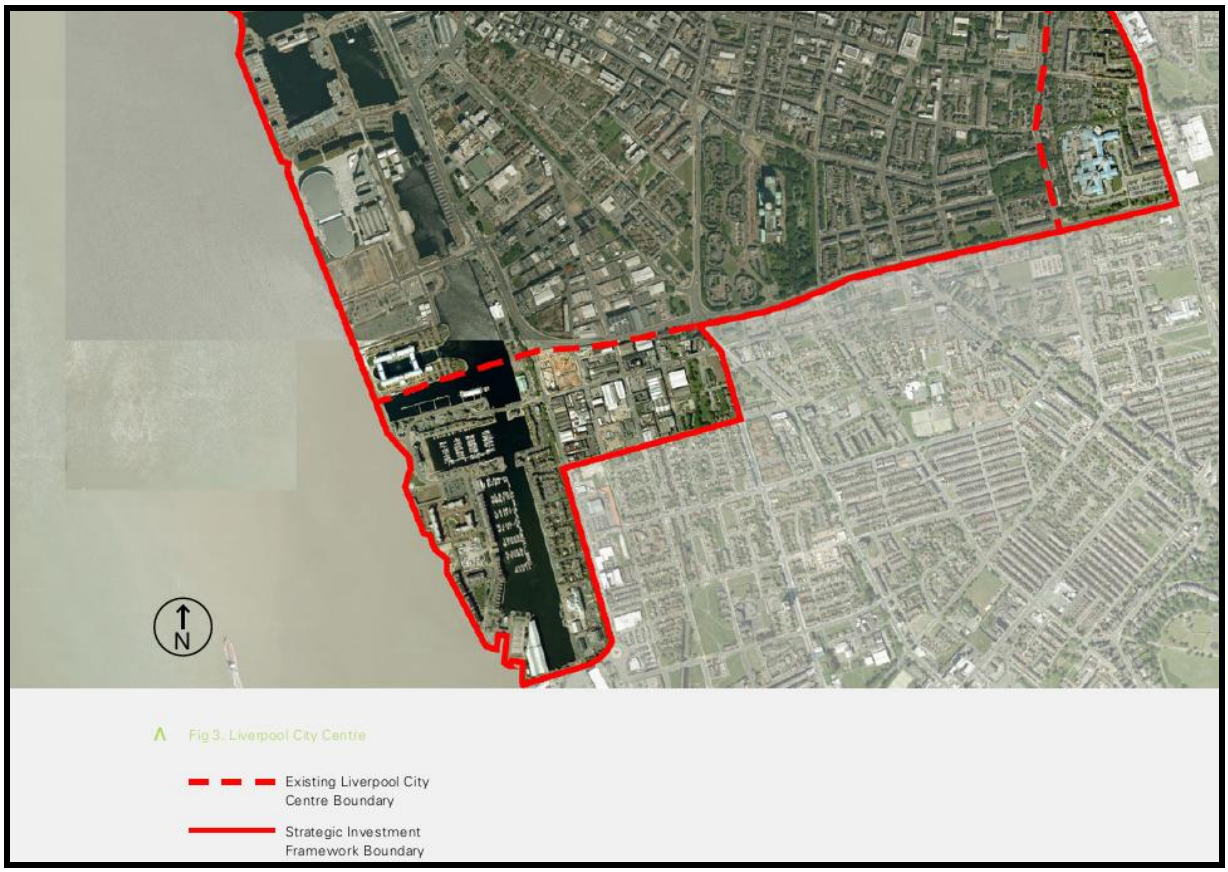
As stated before car parking for visitors to the accommodation or those using the area as a shared trip/employees car sharing etc can use the local parking offer, this is provided as on street parking.

The site is offering 96 spaces:

Based on the policy following ratios have been referred to.

C3 - Dwelling Houses	
Vehicle Type	**Standard**
Cycles	Houses – No minimum Flats – 1 secure space for every 1 flat, plus 1 visitor cycle stand per 10 units Sheltered Housing – 1 secure staff cycle space per 10 units, plus cycle parking for visitors
People with disabilities	Wheelchair housing – 1 space per dwelling, with dimensions suitable for use by people with disabilities. General housing – where justified by the likely occupancy of the dwelling and reserved for use by people with disabilities, above a threshold of 5 units, 1 space per 10 units or part therefore, with dimensions suitable for use by people with disabilities.
General Car Parking (Guideline)	Car Free: 0 spaces per dwelling City Centre: Flats – Average of 0.70 space per dwelling Outside the City Centre: Flats – 1 space per dwelling Houses – Average of 1.5 spaces per dwelling

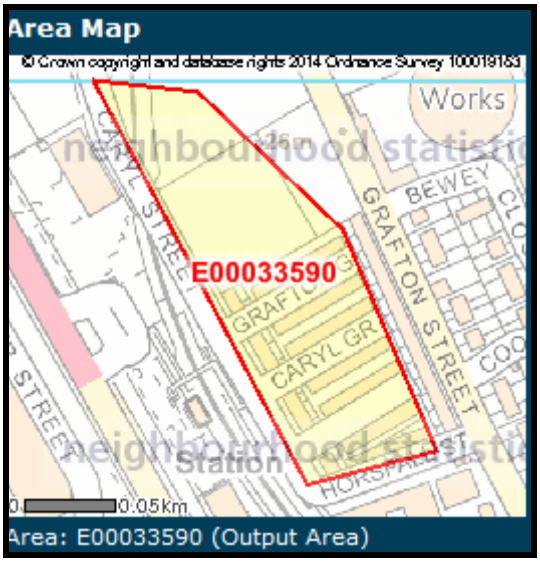
The site is on the edge of the outer parking zone/City Boundary.



The site is a sustainable location. The policy requirement of 0.7 space per flat would equate to a maximum demand of 174 car spaces.

The site offers 96 spaces for 174 residential as 0.55 per unit. Based on current understanding.

Census data shows the area has lower car ownership reflective of its location and accessibility.



Car or Van Availability (QS416EW)	E00033590		Liverpool		North West	
	Output Area		Metropolitan District		Region	
All Households	79	%	206515	%	3009549	%
No Cars or Vans in Household	35	44	95281	46	841667	28
1 Car or Van in Household	36	46	78775	38	1279984	43
2 Cars or Vans in Household	7	9	27031	13	707398	24
3 Cars or Vans in Household	0	0	4358	16	138371	20
4 or More Cars or Vans in Household	1	1	1070	1	42129	1
All Cars or Vans in Area	60	76	150781	73	3296604	110

The ownership shows 56% car ownership reflecting the accessibility.

Method of Travel to Work (QS701EW)	E00033590		Liverpool		North West	
	Output Area		Metropolitan District		Region	
All Usual Residents Aged 16 to 74	70	%	196630	%	3228744	%
Work Mainly at or From Home	1	1.4	5258	2.7	144079	4.5
Underground, Metro, Light Rail, Tram	1	1.4	1102	0.6	20719	0.6
Train	16	22.9	9962	5.1	89429	2.8
Bus, Minibus or Coach	5	7.1	38601	19.6	267140	8.3
Taxi	2	2.9	2777	1.4	26302	0.8
Motorcycle, Scooter or Moped	0	0.0	794	0.4	19988	0.6
Driving a Car or Van	29	41.4	95678	48.7	2021199	62.6
Passenger in a Car or Van	7	10.0	11805	6.0	197661	6.1
Bicycle	2	2.9	4062	2.1	70557	2.2
On Foot	6	8.6	25208	12.8	351807	10.9
Other Method of Travel to Work	1	1.4	1383	0.7	19863	0.6

The car use is around 42% indicating lower parking demand.

Liverpool Unitary Development Plan 2006-2016

Whilst the UDP itself cannot implement new transport schemes or control transport services, its land use policies must link to and support the transport objectives and proposals of the LTP. In this respect the UDP will have two key roles to play:

- *Protect sites for new transport proposals; and*

- *Ensure that the design and location of all other new development contributes to more sustainable travel patterns.*

Policies influencing the location, density, design and mix of land uses are found throughout the UDP and are used to help reduce the need to travel and the length of journeys. For instance, development that would generate significant travel demand should be located in the City Centre or district centres, and any alternative location must have ready access by public transport, cycling or walking. Appropriate sites must be allocated for such development where possible.

Policy T12, Car Parking Provision in New Developments

All new developments including changes of use, which generate a demand for car parking will be required to make provision for car parking on site, to meet the minimum operational needs of the development. Additional space for non-operational car parking will be permitted up to a maximum standard. This will be determined by:

• The nature and type of use;

• Whether off-site car parking would result in a danger to highway and pedestrian safety;

• Whether the locality in which the proposed development is located is served by public car parking facilities;

• Whether off-site parking would result in demonstrable harm to residential amenity; and

• The relative accessibility of the development site by public transport services.

Abstracts from the SPD

The Local Transport Plan for Merseyside 2006/7–2010/11, Supplementary Planning Guidance Note 8, provides the current parking standards to be adopted throughout Merseyside. Table 7.1 contains a summary of the parking standards and the number of spaces required within the development in-line with the published standards.

4.15 When dealing with residential parking, a request will be made for developers to make provision for a ratio of 0.70;1 parking spaces to dwellings.

Where a developer is unable to achieve this , or where this is not desirable, a request for access to be improved by other modes, either through contributions or direct improvements on the ground, will be made.

4.16 We may encourage lower levels of parking, along with adequate support for walking, cycling, public transport and travel plans, where:

- The development is in an accessible location (such as within the City Centre, District or Local Centre), or where there is good public transport access (see accompanying Accessibility Maps, map 2);

- Initiatives to reduce traffic are planned for, or are being introduced, in the area; and

- There is adequate off-street parking within 400m or potential for shared use of spaces (for example, in mixed-use developments).

Policy summary

Key items for reference in support of the site reduced parking offer.

All new developments including changes of use, which generate a demand for car parking will be required to make provision for car parking on site, **to meet the minimum operational needs of the development.**

Whether off-site car parking would result in a danger to highway and pedestrian safety;

Whether off-site parking would result in demonstrable harm to residential amenity; and

The relative accessibility of the development site by public transport services.

4.15 When dealing with residential parking, a request will be made for developers to make provision for a ratio of 0.70 parking spaces to dwellings.

Where a developer is unable to achieve this , or where this is not desirable, **a request for access to be improved by other modes, either through contributions or direct improvements on the ground, will be made.**

4.16 We may encourage lower levels of parking, along with adequate support for walking, cycling, public transport and travel plans, where:

The development is in an accessible location (such as within the City Centre, District or Local Centre), or where there is good public transport access (see accompanying Accessibility Maps, map 2);

There is adequate off-street parking within 400m or potential for shared use of spaces (for example, in mixed-use developments).

The Grafton Street application has been approved with lower parking levels of 49% of policy.

Cycling

Cycling is sustainable fast, efficient and can lead to a healthier life style. The promotion of cycling needs to be encouraged through a series of publicity campaigns. A number of organisations improve cycle access to their site by working in partnership with local authorities and cycling groups such as Sustrans (www.sustrans.org.uk).

Consideration will be given when forward planning to:

- Increase the provision of safe, secure parking as demand grows
- Provide lockers, access to changing/drying facilities and showers for staff

In order to further encourage the use of cycling the following measures would also be implemented:

- Promote and publicise cycling – producing cycle maps promoting safe cycle routes to the home
- Cycle user groups will ensure that the voice of cyclist is heard and will help liaise with the Council as required. BikeBudi and local BUG groups should be investigated

Promotion tools to encourage cycling include Bike to Work Weeks this can also coincide with a police tagging scheme.

Liverpool's cycle hire scheme "Citybike". Citybike is the largest public bicycle sharing scheme outside of London – with 160 bike stations in operation across Liverpool with a range of tariff options available, including a student membership discount. More information, including a map of the existing live bike stations, can be found on the Citybike webpage: http://www.citybikeliverpool.co.uk/LandingPage.aspx

The proposed spaces are in the ground floor secure areas for residents and not have a minimum that said a total of 200 cycles spaces are provided. The census shows the use of cycles at less than 5% of the commute trips, the offer is over policy andmore than local use suggests.

In conclusion, the proposed application site can be considered as being served by the cycle network and is therefore accessible by cycle.

7. TRIP GENERATION, TRAFFIC FLOWS AND ASSESSMENT

Introduction

In summary the agreed methodology for assessing the Brassey Street development was to use the Grafton Street scheme, which comprised residential and retail units, to use as a base upon which to layer the Brassey Street development trips on.

Although considered on the high side for the location and compared to other developments in the area the residential trip rates, distribution used by the Grafton Street development will also be utilised so that a direct comparison can be made. The assessment is thus considered robust.

The key junction agreed that have been assessed are:

- A562 Parliament Street / Sefton Street signalised junction
- A562 Parliament Street / Grafton street signalised junction

Appendix A contains flow diagram extracted from the TA report submitted in support of the Grafton Street development. These have been used as the basis of the assessment in this report.

The aforementioned signalised junctions were originally tested using LINSIG version 3. To assess traffic flows at the junction values are inputted into the programme in an Origin Destination matrix.

Given that we are assessing these junctions it has been considered appropriate to convert the flows in the flow diagrams, in Appendix A, directly into matrices. From here the flows can be manipulated to derive the future year base case plus the Brassey Street development.

Appendix B contains the matrices. The table below details the zones for each junction used in the matrices. It should also be noted that the zones correspond directly with the LINSIG model inputs used to assess both the Grafton Street and the Brassey Street developments.

Arm	A562 Parliament Street / Sefton Street signalised junction	A562 Parliament Street / Grafton Street signalised junction
A	A562 Parliament Street east	A562 Parliament Street west
B	A562 Parliament Street west	Jamaica Street
C	Sefton Street	A562 Parliament Street east
D		Grafton Street

Table 1: Matrix Zones

The table below details the matrices in Appendix B and a comment is provided how the matrices have been manipulated to derive the Future year base case plus Brassey Street flows at the two signalised junctions.

Matrix Row ID	Title	Comment
1	Grafton Street TA Weekday Peak Base 2015 Flows	Taken from Appendix 8 of Grafton Street TA.
2	SCP Weekday Peak Base 2015 Flows Growthed to 2021 using Tempro	Matrix 1 x Tempro Growth Rate see table below.
3	Grafton Street TA Defined Committed Development Flows	Taken from Appendix 8 of Grafton Street TA.
4	Cain's Brewery Committed Development Trips as defined by Grafton Street TN	Taken from Appendix 2 of Grafton Street TN.
5	Grafton Street TA Defined Development Flows - Considered as Committed Flows in	Taken from Appendix 8 of Grafton Street TA.

	DTPC Assessment of Brassey Street Development	
6	2021 Base Flows	Matrices 1 + 2 + 3 + 4 + 5
7	Distribution Based on Grafton Street TA	Taken from Appendix 8 of Grafton Street TA.
8	Assignment of Brassey Street Development Using Grafton Street TA Distribution	Based on Matrix 7 and Brassey Street Proposed Development Flows (see table below)
9	2021 Base Plus Brassey Street Development	Matrices 6 + 8
10	Assignment of Grafton Street Development Based on Sensitivity Test Scenario	Taken from Appendix 2 of Grafton Street TN.
11	Distribution Based on Grafton Street TN Sensitivity Test Scenario	Taken from Appendix 2 of Grafton Street TN.
12	Assignment of Brassey Street Development Using Grafton Street TN Sensitivity Test Distribution	Based on Matrix 11 and Brassey Street Proposed Development Flows
13	Sensitivity Test - 2021 Base Plus Brassey Street Development	Matrices 6 - 5 + 10 +12

TA – Transport assessment
TN - Technical Note

Table 2: Matrix Tables Summary

Committed Development

In relation to the Grafton Street development, set out the committed development that was taken into account. Within the Grafton Street TA the committed development included:

- New China (LPA Ref: 15O/1998)
- The Quarter' Development (15F/0787)

The highway authority following submission of the Grafton Street TA made queries one which was the incorporation of one further development which is known as Cain's Brewery.

Sensitivity Test

As noted above the highway authority also requested that a sensitivity test also be undertaken by assigning more development traffic to and from the A562 Parliament Street / Grafton street signalised junction. This test has also been undertaken.

Traffic Growth

In order to obtain matrix 2, i.e. SCP Weekday Peak Base 2015 Flows Growthed to 2021 using Tempro, TEMPRO growth rates for the weekday AM and PM Peaks have been obtained from the TEMPRO V7.0 program. TEMPRO utilises National Trip End Model (NTEM) 7 dataset and National Trip Model (NTM) Annual Forecasts (AF) 15.

The table below details the 2015 to 2021 growth rates for the local area.

Area		**Weekday TEMPRO Growth Rate**	
		AM Peak	**PM Peak**
Region	NW	1.0882	1.0863
County	Merseyside	1.0897	1.0866
Authority	Liverpool	1.1050	1.1027

Table 3: TEMPRO Growth Rates

For robustness the Liverpool growth rates have been used to derive base traffic flows for the study network in 2021.

Trip Generation & Distribution

The traffic flow figures in Appendix A sets out the normal and sensitivity distribution used to assign the Brassey Street development flows.

The table below sets out the residential trips rates from the Grafton street TA and the original offer of B1 office trip rates on site from the approved Tribecca TA

Peak Period	Grafton Street Agreed Residential Trip Rates		Agreed B1 Trip Rates associated with Tribecca Development - 15O/1998	
	Arr	Dep	Arr	Dep
AM	0.066	0.207	1.293	0.219
PM	0.19	0.289	0.195	1.046

Table 4: Agreed Residential and B1 office Trip Rates

The table below summarises the derived trip rates for the Brassey Street development comprising of 246 dwellings and 1875sqm Gross Floor Area (GFA) of B1 office.

Peak Period	Derived Residential Trips Based 246 Dwellings		Derived B1 Office Trips Based on a GFA of 1875sqm GFA		Total Brassey Street Development Flows	
	Arr	Dep	Arr	Dep	Arr	Dep
AM	16	51	24	4	40	55
PM	47	71	4	20	50	91

Table 5: Brassey street Development Trips

The number of units has been reduced to 174 and the commercial removed however to be very robust the above trip rates have been retained.

Junction Assessments

So that a like for like comparison could be undertaken the modelling software programme LINSIG model output from the Grafton Street TA were used. LINSIG is standard industry modelling software programme for assessing signalised junctions. In addition the software TRANSYT14 can also be used to assess the signalised junctions.

Unfortunately the model outputs within the Graton Street development TA were not complete. On this basis the highway authority were contacted so that either a full model output or signals data is obtained to aid the completion of the LINSIG models. Appendix C contains the signals data.

In order to validate the models and initial assessment was undertaken of the base 2020 + committed development flows + Total Grafton Street development flows. In summary there are minor discrepancies between the models outputs using the same flows. Neither the signals data provided by the highway authority or the Grafton Street model outputs will identify how the models can be updated to rectify the minor discrepancy.

These notwithstanding the models are considered to be suitable to allow the highway authority to assess on a like for like basis with the Grafton Street development.

Using matrices 9 and 13 in Appendix B the signalised junction have been assessed using LINSIG

A562 Parliament Street / Sefton Street Signalised Junction

The Grafton Street development used a cycle time of 180 seconds in all of their assessment runs. For comparison purposes the same cycle time has been used in the assessment runs summarised below.

Lane Description	Base 2020 + Committed Development Flows + Total Grafton Street Development Flows			
	AM		PM	
	DoS	MMQ	DoS	MMQ
Parliament St (East) Right	80.40%	21	82.70%	18
Parliament St (East) Right	80.80%	21	82.90%	18
Parliament St (East) - Left Turn Left	24.30%	6	27.60%	7
Sefton St Ahead	46.60%	12	52.20%	13
Sefton St Ahead	47.30%	13	52.60%	14
Sefton Street - Right Turn Right	69.8 : 69.8%	8	84.4 : 84.4%	11
Parliament St (West) Left	24.70%	6	44.90%	14
Parliament St (West) Left	26.30%	7	46.20%	15
Parliament Street (West) - Right Turner Ahead	82.8 : 82.8%	31	83.9 : 83.9%	33
Lane Description	**2021 Base plus Brassey Street Development**			
	AM		PM	
	DoS	MMQ	DoS	MMQ
Parliament St (East) Right	87.80%	26	92.00%	25
Parliament St (East) Right	88.00%	27	92.20%	25
Parliament St (East) - Left Turn Left	26.20%	7	29.30%	8
Sefton St Ahead	50.60%	13	57.50%	16
Sefton St Ahead	51.40%	15	57.70%	17
Sefton Street - Right Turn Right	75.7 : 75.7%	9	90.4 : 90.4%	14
Parliament St (West) Left	27.70%	7	52.90%	18
Parliament St (West) Left	29.50%	8	54.20%	20
Parliament Street (West) - Right Turner Ahead	89.5 : 89.5%	40	92.8 : 92.8%	47
Lane Description	**Sensitivity Test - 2021 Base plus Brassey Street Development**			
	AM		PM	
	DoS	MMQ	DoS	MMQ
Parliament St (East) Right	87.80%	26	89.60%	24
Parliament St (East) Right	87.80%	26	89.60%	24
Parliament St (East) - Left Turn Left	26.20%	7	28.90%	7
Sefton St Ahead	49.10%	13	56.60%	15
Sefton St Ahead	49.70%	14	56.70%	16
Sefton Street - Right Turn Right	76.0 : 76.0%	9	90.2 : 90.2%	14
Parliament St (West) Left	28.40%	7	54.10%	19
Parliament St (West) Left	30.30%	9	55.40%	21
Parliament Street (West) - Right Turner Ahead	87.6 : 87.6%	37	90.7 : 90.7%	43

Table 6: A562 Parliament Street / Sefton Street Signalised Junction LINSIG Capacity Results

It is generally considered that a Degree of saturation (DoS) result of less than 90% is acceptable in terms of demonstrating that the junction can operate effectively. As it can be seen the junction will in the PM marginally exceed the desired 90% threshold.

It is also understood that MOVA (Microprocessor Optimisation Vehicle Actuation) is operational at the signals. MOVA will increase the operation effectiveness. Unfortunately LINSIG cannot model the effect of MOVA however it is commonly considered that MOVA can be as effective as increasing capacity by up to 15%. Given this it is considered that the marginal exceedance of the 90% DoS threshold is acceptable.

It is also considered that the cycle time could be increased to release further capacity.

In conclusion it is considered that the Brassey Street development flows can be accommodated at the signalised junction.

A562 Parliament Street / Grafton Street Signalised Junction

The Grafton Street development used a cycle time of 90 seconds in all of their assessment runs. For comparison purposes the same cycle time has been used in the assessment runs summarised below.

Lane Description	Base 2020 + Committed Development Flows + Total Grafton Street Development Flows			
	AM		PM	
	DoS	MMQ	DoS	MMQ
Parliament Street (E) Left Ahead	54.80%	10	53.40%	9
Parliament Street (E) Ahead Right	59.2 : 59.2%	11	55.2 : 55.2%	10
Grafton Street Right Left Ahead	80.20%	9	80.00%	10
Parliament Street (W) Ahead Left	79.00%	20	80.30%	20
Parliament Street (W) Ahead Right	71.70%	2	81.50%	21
Jamaica Street Left Ahead Right	25.30%	3	42.20%	5
Lane Description	**2021 Base plus Brassey Street Development**			
	AM		PM	
	DoS	MMQ	DoS	MMQ
Parliament Street (E) Left Ahead	57.40%	11	58.40%	11
Parliament Street (E) Ahead Right	65.3 : 65.3%	14	65.3 : 65.3%	14
Grafton Street Right Left Ahead	84.10%	11	85.70%	13
Parliament Street (W) Ahead Left	84.50%	23	85.30%	22
Parliament Street (W) Ahead Right	64.20%	2	87.60%	25
Jamaica Street Left Ahead Right	24.00%	3	39.30%	5
Lane Description	**Sensitivity Test - 2021 Base plus Brassey Street Development**			
	AM		PM	
	DoS	MMQ	DoS	MMQ
Parliament Street (E) Left Ahead	57.80%	11	59.60%	11
Parliament Street (E) Ahead Right	63.1 : 65.0%	13	64.2 : 64.2%	13
Grafton Street Right Left Ahead	84.10%	11	85.60%	13
Parliament Street (W) Ahead Left	84.50%	23	89.10%	24
Parliament Street (W) Ahead Right	83.30%	3	89.40%	26
Jamaica Street Left Ahead Right	24.00%	3	39.30%	5

DoS – Degree of Saturation
MMQ – Mean Max Queue

Table 7: A562 Parliament Street / Grafton Street Signalised Junction LINSIG Capacity Results

It is generally considered that a Degree of saturation (DoS) result of less than 90% is acceptable in terms of demonstrating that the junction can operate effectively. As it can be seen the junction will operate with spare capacity with the proposed development in 2021. In addition there are minimal changes in queuing over the 2020 plus Grafton Street development flows case.

Impact During Construction

The development of the site will provide an element of HGV traffic during construction. Whilst this is unavoidable, movements will be restricted where appropriate to hours that would not cause undue disturbance to the local area.

Conclusions

The site access junction has been robustly assessed. Overall it is concluded that the study network will operate with minimal impact over the base case in 2021 with the proposed Brassey street.

8. SUMMARY

The scheme accords with local and national policy to site development adjacent to good transport linkages and other attractions to minimise trips and share trip movements for such a location.

The site has a sustainable location and the layout accords with good practice.

The access accords with good practice

As such the scheme would have little or no impact on the local network and will provide an improvement by reducing the on street parking.

As such it is considered that there are no reasons why the scheme should not be approved from a transportation point of view.