Romal Capital

Plot C-02

Environmental Statement
Volume II: Appendices and Figures

Issue | 13 November 2019

Job number 262812

Ove Arup & Partners Ltd
10th Floor The Plaza
100 Old Hall Street
Liverpool L3 9QJ
United Kingdom
www.arup.com

ARUP

Contents

Appendix 5A

Transport Assessment

SCP

Transportation Planning : Infrastructure Design

Transport Assessment

Plot C02, Central Docks, Liverpool Waters

Liverpool

Romal Capital Limited

November 2019

Doc Ref: CT/18299/TA/02

Prepared by:	Craig Thomson / Jeanne Watrin
Checked by:	Peter Todd

Document Revision Control

Revision	Date	Status	Prepared By	Approved By
00	04.12.18	Final	CT	PT
01	30.10.19	Issue	CT / JW	PT
02	15.11.19	Issue	CT	PT

Colwyn Chambers
19 York Street
Manchester
M2 3BA

T: 0161 832 4400

E: info@scptransport.co.uk
W: www. scptransport.co.uk

CONTENTS

APPENDICES

1.0 INTRODUCTION

Overview

1.1 SCP have been appointed by Romal Capital Limited to provide specialist transport planning and engineering advice in support of the proposed development of Plot C02 of the Central Docks Neighbourhood within the Liverpool Waters Masterplan.

1.2 The proposed development comprises the construction of 538 apartments along with ancillary ground floor commercial uses and associated parking. Further details of the development proposals are provided in Chapter 4 of this report.

1.3 This Transport Assessment (TA) has been prepared to support the planning application and has been developed in accordance with the now superseded Department for Transports (DfT's) March 2007 *"Guidance on Transport Assessment"* document and the National Planning Practice Guidance (NPPG) "Transport Evidence in Plan Making" document. In addition, the scope of this report is consistent with that of the TA submitted as part of the approved Plot C04 and C06 Central Docks application (Application Reference: 17F/1628), also undertaken by SCP, whereby the specific scope was discussed and agreed with Liverpool City Council (LCC) through pre-application correspondence and meetings.

1.4 This report concludes that the proposed development of this site can be accommodated without detriment to the operational capacity or safety of the local highway network and that it can be readily accessed on foot, by bicycle and by local public transport services.

Planning Background

Liverpool Waters

1.5 The Liverpool Waters Masterplan Development was granted planning permission in 2013 (LPA Reference: 10O/2424) and is a 60 hectare site which stretches from the Bramley Moore Docks in the north to the Princes Dock in the south. The Masterplan considers this extensive area as 5 phases or neighbourhoods, each comprising mixed use development consisting of primarily residential and commercial uses.

1.6 A detailed Transport Assessment was submitted with the Liverpool Waters application which considered the impact of the development on the local highway network and identified a package of highway and public transport improvements required to support the development. These enhancement works are detailed within Schedule 2 of the Decision Notice for the Liverpool waters permission.

1.7 The Liverpool Waters masterplan identifies the Central Docks neighbourhood as providing in the region of 3,800 dwellings, 166,000m^2 of office space, two hotels, a number of restaurants and bars, public parks and a range of parking facilities.

1.8 In addition, the masterplan envisaged that the Central Docks neighbourhood would provide a Cruise Liner terminal located at its southern end, however, this area of the site will accommodate the Isle of Man Ferry Terminal which was granted planning permission in April 2019 (Application Reference: 18F/3231). It should be noted that the traffic impacts of the proposed Isle of Man Ferry Terminal have been assessed in the TA submitted with the application and development traffic can be accommodated without detriment to traffic conditions on the local highway network.

1.9 LCC also submitted a full planning application (Application Reference: 17F/2628) for a new Northern Link Road to service development plots within the southern area of Central Docks including C02 and the Isle of Man Ferry Terminal in September 2017, with the application being subsequently granted planning permission in April 2018. The link road will form the main gateway into the Central Docks Neighbourhood and will incorporate a new signalised junction at Waterloo Road.

Plot C02 (Application Site)

1.10 A full planning application (Application Reference: 18F/3247) was submitted to Liverpool City Council in December 2018 for 646 apartments on the application site, although this application has since been revised, reducing the number of apartments to 538. This application follows the first planning application within the Central Docks neighbourhood for Plot C04 and C06 (Application Reference: 17F/1628) which was granted planning approval in December 2017. The two developments will sit alongside the new spine road linking the Isle of Man ferry terminal with Waterloo Road and are a catalyst for the Central Docks regeneration project.

1.11 The application has received a highway-related consultation response to the previously submitted scheme from both LCC and Merseytravel, as presented in **Appendix A** and summarised below:

1.12 LCC have raised concerns regarding the proposed parking provision, noting that it "*should not be less than those developments consented within the Central Dock Neighbourhood Area"*, as well as the cycle parking provision recommending 100% provision. In addition, LCC have requested a £100,000 contribution towards enhancing pedestrian/cycle connectivity and have noted that improvements will be required to the public transport services in the vicinity of the site.

1.13 In addition to the above comments from LCC, Merseytravel have requested LCC ensure:

- An assessment of the local highway network is undertaken;
- Demolition/construction works do not impact on Merseytravel Kingsway Tunnel;
- The proposal has adequate access to the public transport network and fund the provision of public transport infrastructure (i.e. bus stops and bus service);
- The developer creates appropriate access for Merseytravel Merseylink dial-a-ride vehicles and all other demand responsive bus services;
- The development provides good quality walking routes, including to the nearest bus stops; and,
- The developer implements a full travel plan for the site.

1.14 This TA has been prepared to support the planning application and seeks to address the aforementioned comments provided by LCC and Merseytravel.

Structure of This Report

1.15 The structure of this report is as follows:-

i) Chapter 2 – summarises the national and local transport policies, and describes how the proposed development accords with these;

ii) Chapter 3 – describes in detail the site location, existing uses, local highway network and road safety record;

iii) Chapter 4 – defines the development proposals including the proposed access, servicing arrangements and car parking;

iv) Chapter 5 – considers the location of the site with regard to the existing local sustainable transport infrastructure;

v) Chapter 6 – presents estimates of the trip generating potential of the site along with a summary of impact of the development on the local highway network;

vi) Chapter 7 – provides a summary of the transport related Liverpool Waters planning conditions and how the development responds / complies with these; and

vii) Chapter 8 – provides the summary and conclusions to the above chapters.

2.0 POLICY CONTEXT

Overview

2.1 This Chapter provides a summary of relevant national, regional and local transport policies and provides a brief analysis of how the proposed development will contribute towards their aims and objectives.

National Planning Policy Framework

2.2 NPPF is published by the Ministry for Communities and Local Government to set the framework under which local transport, parking and accessibility plans and policies are set. The NPPF has been revised in July 2018 and February 2019.

2.3 At the heart of the National Planning Policy Framework is a presumption in favour of sustainable development which for decision-taking means:

- *"approving development proposals that accord with an up-to-date development plan without delay; or*
- *where the there are no relevant development plan policies, or the policies which are most important for determining the application are out-of-date, granting permission unless:*
  - *the application of policies in the Framework that protect areas or assets of particular importance provides a clear reason for refusing the development proposed; or*
  - *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."*

2.4 In assessing sites that may be allocated for development in plans, or specific applications for development, it should be ensured that:

a) appropriate opportunities to promote sustainable transport modes can be – or have been – taken up, given the type of development and its location;
b) safe and suitable access to the site can be achieved for all users; and
c) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree.

2.5 Importantly, NPPF states that:
'development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe'.

'Within this context, applications for development should:

a) give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;
b) address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
c) create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards;
d) allow for the efficient delivery of goods, and access by service and emergency vehicles; and
e) be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.

All developments that will generate significant amounts of movement should be required to provide a Travel Plan and the application should be supported by a transport statement or assessment so that the likely impacts of the proposal can be assessed. PPG Travel Plans, Transport Assessments and Statements set out the requirements for these documents.

Local Transport Policy – The 3rd Merseyside Local Transport Plan

2.6 The 3rd Merseyside Local Transport Plan (LTP3) covers the period from first activation on 1st April 2011 until 2015. It also provides an overview of the long term strategy for 2024 for the improvement of transport within Merseyside.

2.7 The existing vision of the Merseyside LTP3 is:

A joint plan for the five Merseyside Local Authorities including Liverpool, Knowsley, Sefton, Wirral and St Helens. The LTP has an overall aim to provide "a city region committed to a low carbon future, which has a transport network and mobility culture that positively contributes to a thriving economy and the health and wellbeing of its citizens and where sustainable travel is the option of choice."

2.8 The Merseyside LTP3 has six main goals:

- *Help create the right conditions for sustainable economic growth;*
- *Provide and promote a clean, low emission transport system which is resilient to changes to climate and oil availability;*

- *Ensure the transport system promotes and enables improved health and wellbeing and road safety;*
- *Ensure equality of travel opportunity for all;*
- *Ensure the transport network supports the economic success of the city region by efficient movement of people and goods; and*
- *Maintain assets to a high standard.*

Liverpool Unitary Development Plan

2.9 The Unitary Development Plan (UDP) is a statutory document that guides development within Liverpool. It was adopted in November 2002.

2.10 Under the new planning system, the UDP is a 'saved plan', which means it is a Local Plan Document within the Local Plan framework and will gradually be replaced by the new Local Plan (referred to below).

2.11 The UDP aims to reverse the decline in economic activity, investment and employment Liverpool has experienced. The Waterfront, Docks and Hinterland have been designated as a "*key area in which policies and programmes designed to generate economic revival will be concentrated*".

2.12 The UDP also *"aims to provide a balanced provision of transport infrastructure which:*

- *Provides access to employment, leisure, retail and other facilities for all of the City's residents;*
- *Meets the transport needs of people who are economically and socially disadvantaged;*
- *Allows for the safe, efficient and easy movements of goods into and throughout the City, in order to help secure the regeneration of the local economy;*
- *Protects and enhances the environment through reducing the reliance on the private car;*
- *Promotes, in conjunction with the Passenger Transport Authority, investment in the public transport network and associated facilities;*
- *Improves facilities for cyclists and pedestrians;*
- *Provides a framework for investment in the efficiency of the road system; and,*
- *Reduces the availability of car parking facilities which would attract car borne commuters."*

Liverpool Local Plan

2.13 LCC have prepared a draft Local Plan which will, once adopted, replace the Unitary Development Plan. The Local Plan vision for Liverpool is to become a sustainable, vibrant and distinctive global city at the heart of the City Region by 2033 and provides a long-term spatial vision, strategic priorities and policies for future development in the city over the next 15 to 20 years. A number of strategic priorities have been identified to be delivered by the policies in the Local Plan and include:

- *"Strengthening the city's economy;*
- *Creating residential neighbourhoods which contribute to social and economic regeneration and achieve an overall level of housing growth; and,*
- *Maximising sustainable accessibility"*

2.14 To achieve the long-term vision the Local Plan sets out site allocations for residential, employment, retail and other land uses and development management policies that will be used to determine planning applications in the City. The Local Plan also shows where specific policies apply such as District and Local Centres.

Ensuring a Choice of Travel Supplementary Planning Document (SPD)

2.15 The Supplementary Planning Document (SPD) has been 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. Its overall objectives are:

- Ensure a reasonable choice of access by all modes of transport to new development;
- Reduce the environmental impact of travel choices;
- Improve road safety;
- Promote healthier lifestyle;
- Reduce level of traffic growth; and
- Encourage opportunities to improve the quality of development proposals through the provision of less car parking spaces where appropriate

Summary

2.16 As will be demonstrated later in this report, the proposals adhere to the above national and local transport planning policy requirements.

3.0 EXISTING CONDITIONS

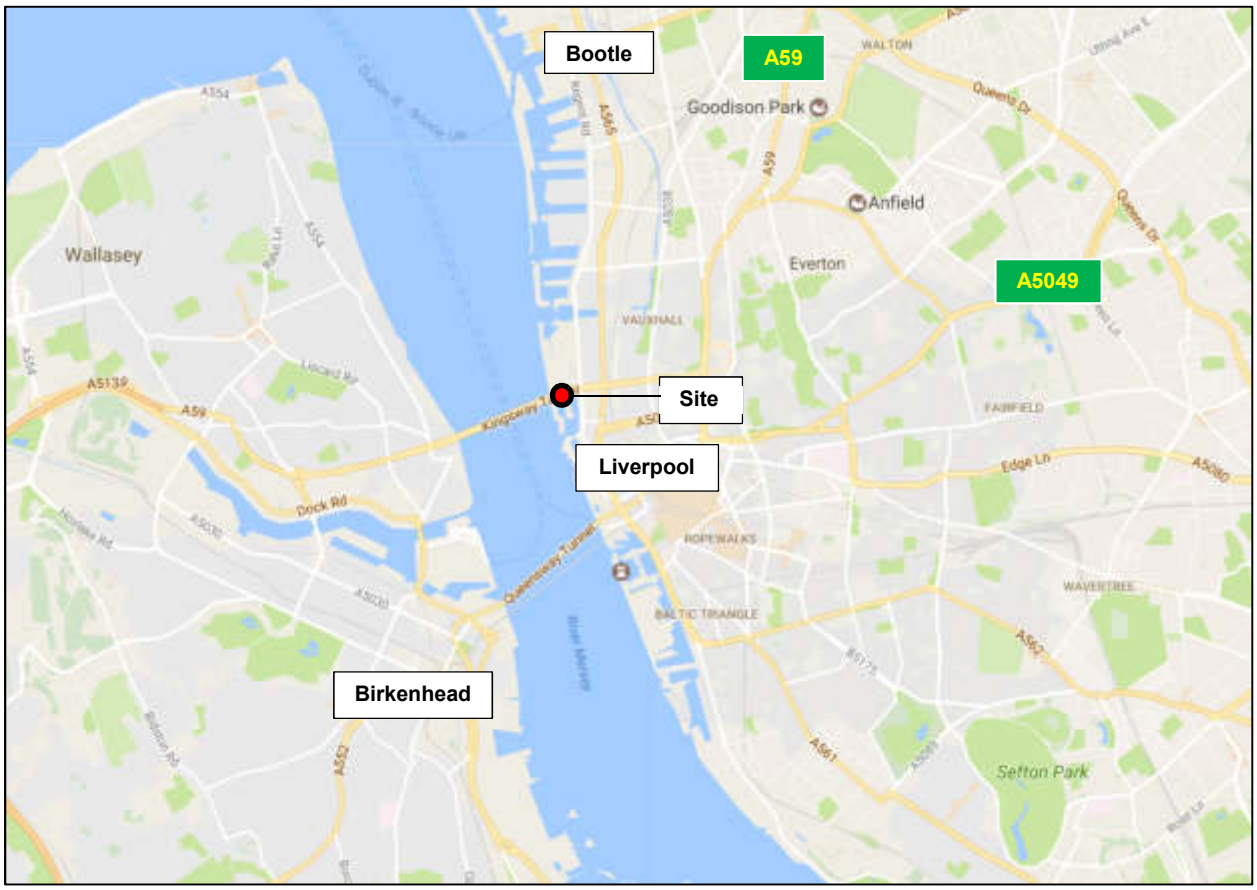
General

3.1 This Chapter provides a detailed description of the location and composition of the site, the local highway network and the road safety record.

Site Location and Composition

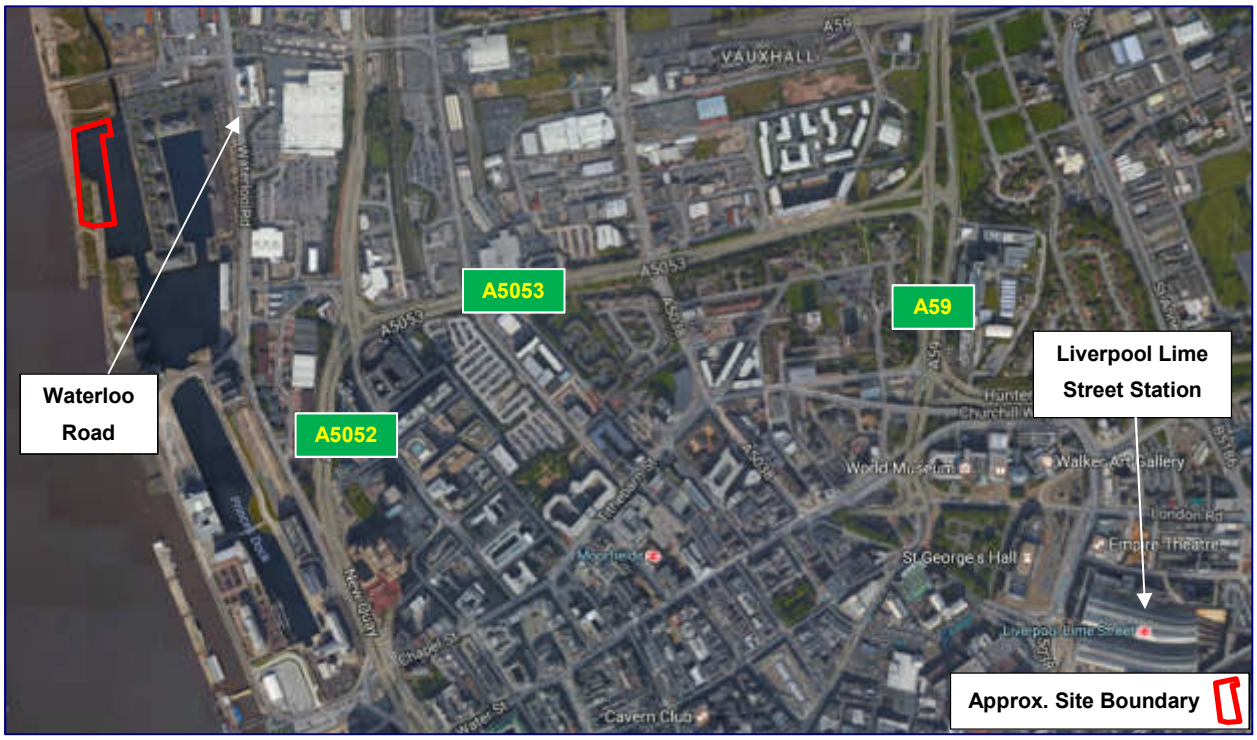
3.2 The application site is located approximately 1.3km to the north-west of Liverpool city centre and is part of Waterloo Quay, comprising of derelict dock and scrub land. The location of the site in relation to the wider highway network is shown on **Figure 3.1** below.

Figure 3.1 – Site Location – Wider Highway Network



3.3 The location of the site in relation to the local highway network is shown in red on **Figure 3.2** below.

Figure 3.2 – Site Location Plan – Local View



3.4 The development site is bound by an area of infill of historic dock to the north, which will be developed as part of the Liverpool Waters Masterplan, and Waterloo Dock to the east. To the south and west, the site is bound by derelict dock and scrub land as well as the river Mersey to the west.

Surrounding Highway Network

Waterloo Road

3.5 Waterloo Road is located approximately 220m to the east of the site and is a strategic link connecting the Central Docks to Liverpool city centre. Waterloo Road, which is subject to a 30mph speed limit, turns into Regents Road in the north, leading to Bootle, and to the south provides a link to Princes Dock and the A5052 New Quay via Bath Street.

3.6 Within the vicinity of the approved Waterloo Road / Northern Link Road signalised junction, Waterloo Road has a carriageway width of approximately 12m and benefits from regularly spaced street lighting columns and footways of over 2m in width on both sides of the carriageway.

3.7 A signal-controlled pedestrian crossing is provided across Waterloo Road, approximately 150m south of the approved Waterloo Road / Northern Link Road signalised junction. There is also a pedestrian refuge located on Waterloo Road, less than 400m south of the approved junction on Waterloo Road.

3.8 A bus stop is located approximately 100m north of the approved signalised junction, on Waterloo Road, and there is a City Bike station located around 120m south of the approved junction. Further details of the accessibility of the site by non-car modes of transport are provided in Chapter 5.

A5052 New Quay

3.9 The A5052 New Quay is located approximately 800m south of the development site and is subject to a 30mph speed limit. The A5052 New Quay is an urban A-road running on the western side of Liverpool city centre by the docks.

3.10 In a southerly direction the A5052 New Quay turns into the A562 which links Liverpool to Widnes and to the north it links with Great Howard Street, leading to Bootle, and the A5053 which joins to the A59 linking Liverpool to Preston.

3.11 The A5052 New Quay carriageway varies in width and benefits from footways of over 2m wide on both sides, dropped kerbs, signalised pedestrian crossings and street lighting.

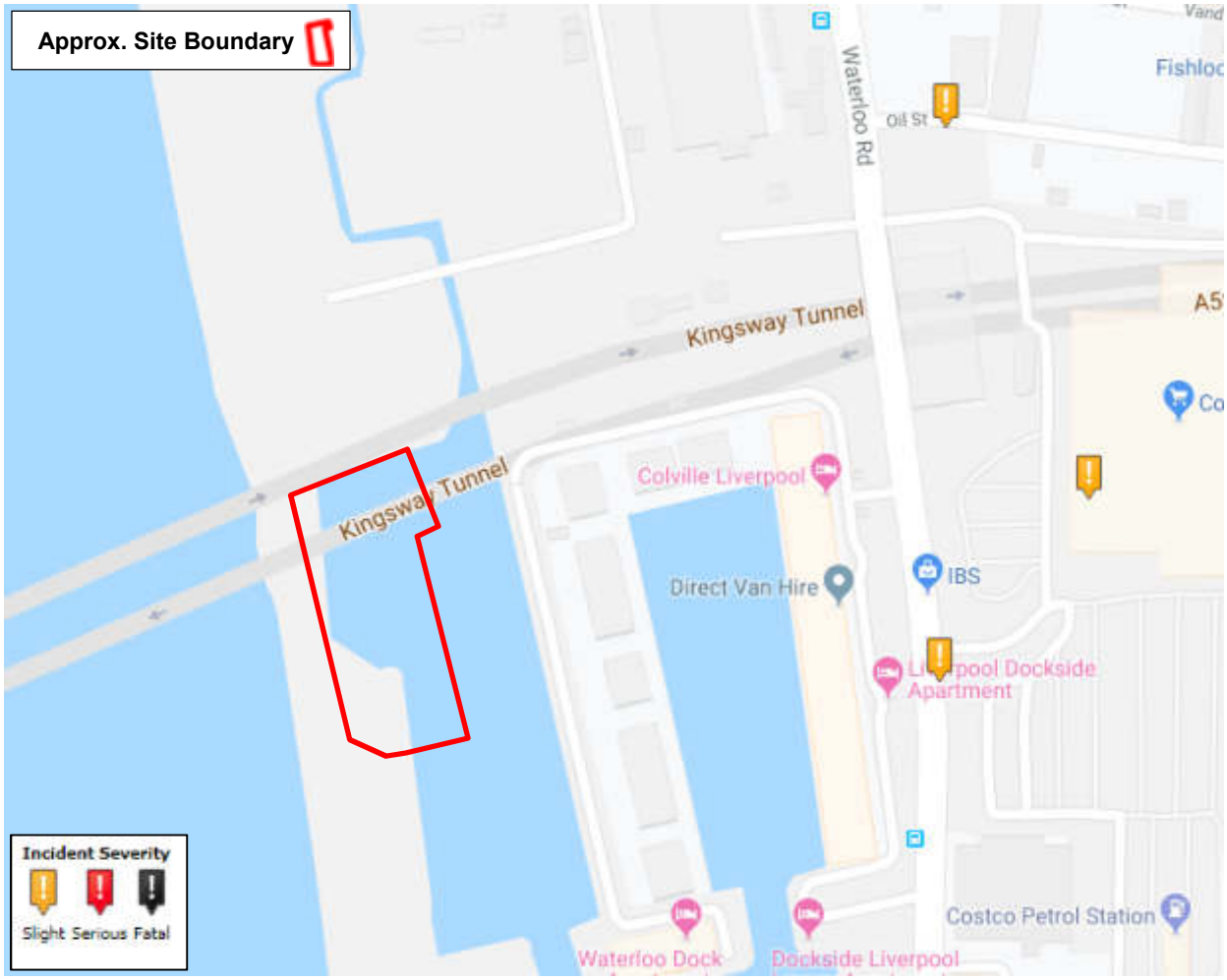
Personal Injury Accident (PIA) Review

3.12 The NPPG 'Transport evidence bases in plan making and decision taking' document states that, *"Critical locations on the road network with poor accident records should be identified. This is to determine if the proposed development will exacerbate existing problems or, if proposed, whether highway mitigation works or traffic management measures will help to alleviate the problems*".

3.13 In order to identify critical locations on the network with a poor accident record, the personal injury accident data for the local area has been obtained from the DfT for the most recently available 5-year period (2014-2018).

3.14 The location and severity of any accidents within the study area during this period, are shown in **Figure 3.3** below:-

Figure 3.3 – Road Safety Plan



3.15 The analysis shows that two accidents have occurred in the study area during the five-year study period, all of which resulted in 'slight' severity injuries. One 'slight' accident occurred in April 2016 on Oil Street, while the other one occurred in October 2016 approximately 200m to the south of the approved signalised junction. Another 'slight' accident occurred within Costco's car park.

3.16 The evidence presented above and illustrated in **Figure 3.3** suggests that the area in the vicinity of the site does not have any recurring highway safety problems that could be affected by the development proposals.

4.0 PROPOSED DEVELOPMENT

General

4.1 The development proposals consist of the construction of 538 apartments along with 400.6m^2 of ground floor commercial uses and associated parking on Plot C02 of the Central Docks Neighbourhood within the Liverpool Waters Masterplan.

4.2 The proposed ground floor commercial floor space will be ancillary to the residential development which comprises a mix of 1-bed, 2-bed and 3-bed apartments along with duplexes and penthouses. The proposed site layout plan is contained in **Appendix B**.

Proposed Access Arrangements

4.3 Vehicular access to the development will be provided from a priority-controlled access located to the north-west of the site, off the approved new spine road linking Waterloo Road to the planned CO2 and Isle of Man Ferry Terminal. The proposed access has a carriageway width of approximately 6m and operates on a two-way basis.

4.4 Junction visibility from the site access conforms to the visibility requirements set out in the Manual for Streets (MfS) for a 30mph road, providing visibility splays that have an 'x' (minor arm setback distance) of 2.4m and a 'y' (major road visibility) distance of 43m in both directions, as shown on drawing SCP\18299\SK01 Rev D at **Appendix C**.

4.5 Pedestrian access will also be provided from the new spine road, as shown on the site layout plans presented in **Appendix B**. Whilst not part of the development proposals, future aspirations for the area include a pedestrian and cycle link between the proposed Isle of Man Ferry Terminal and Princes Parade. As part of the development proposals a pedestrian and cycle link will be provided along the eastern boundary of the site, adjacent to the dock, which will connect to the future link, providing a direct route for pedestrians into the city centre.

Servicing

4.6 The access and internal site layout have been designed to accommodate a large refuse vehicle and a 12m rigid vehicle to avoid servicing and deliveries taking place on the approved link road. A turning head is provided at the south-west of the site to allow vehicles to turn around safely.

4.7 A swept path analysis (drawing SCP\18299\ATR01 Rev D) of a large refuse vehicle and 12m long rigid delivery vehicle has been undertaken and is presented at **Appendix D**. It demonstrates that both vehicles can turn around at the turning head.

Parking

4.8 The car park will provide a total of 165 spaces (including 10 disabled bays) for the residential use which equates to a 31% parking provision. LCC's parking standards are set out in the 'Ensuring a Choice of Travel Supplementary Planning Document' with the car parking standards for apartments in this location being an average of 1 space per dwelling. Whilst it is acknowledged that the proposed provision falls below LCC's standards, this is considered acceptable in this instance for the following reasons:-

- The overall parking provision approved for Plot C04 and C06 (Application Reference: 17F/1628) was approximately 22%. The parking provision proposed as part of this planning application is therefore higher and fulfils LCC's requirement that the parking provision "*should not be less than those developments consented within the Central Dock Neighbourhood Area"*.

- As detailed in the following Chapter, the site benefits from good levels of accessibility, being within easy access of Liverpool city centre (less than 2km walk) and associated facilities, amenities and numerous transport links. It should be noted that as the Central Docks development comes forward the accessibility of the site will be further improved;

- The general thrust of National and Local planning policy is to reduce car borne trips and encourage travel by sustainable modes such as public transport, walking and cycling. In particular, policy advocates locating developments where there is high quality infrastructure and sustainable transport modes can be maximised. The proposed development takes full advantage of this accessible location and, by providing a level of parking below the Council's standards, will help to reduce the reliance on the use of the private car and meet these policy objectives. In addition, measures to promote sustainable travel and minimise car use / parking demand will be promoted in the Travel Plan which is submitted with the application;

- Any prospective purchaser or tenant of the apartments will be in no doubt as to the level of parking provided at the scheme and will therefore decide whether to take up occupancy accordingly;

- The local highway network is well protected by existing Traffic Regulation Orders (TROs), with extensive parking restrictions provided along Waterloo Road. In addition, it is anticipated that the new access road serving the Isle of Man ferry will also be subject to traffic regulation orders to restrict on-street parking. In the unlikely event that overspill parking does occur from the development, it is clear that the key junctions and critical sections of highway in the vicinity of the site are protected by waiting restrictions, which helps to ensure that parking does not result in any road safety or operational issues;

- The existing car ownership levels of the area have been obtained from the 2011 census data for the ward for which the site is located, as summarised below in the Table below. This demonstrates that car ownership levels in the vicinity of the site are low, which is to be expected given the highly sustainable location of the site and close proximity to the City Centre. Whilst it is accepted that car ownership levels are slightly higher than the proposed parking ratio, the Census data does not differentiate between houses and apartments (just 'households'), so does not reflect the typical trend for much lower car ownership levels in apartments. The proposed car parking provision is therefore considered to be reflective of actual car ownership in the area, particularly for the type of dwellings proposed; and,

Vehicle Availability per Household	Output Area - E05000900
No cars or vans in household	62.7%
1 or more cars or vans in household	37.3%

- The principle of reduced levels of parking in locations within Liverpool of comparable (or in some circumstances worse) levels of accessibility to that of this site is well established in Liverpool.

4.9 The proposed car parking provision is therefore regarded as acceptable in this accessible location. It is anticipated that the development is likely to have low car ownership levels.

4.10 In addition to the car parking spaces, 280 no. secure cycle parking spaces will be provided, which equates to a 52% parking provision, along with 9 visitor cycle parking hoops for up to 18 bikes, distributed throughout the site. The cycle parking provision is similar to the cycle parking provision approved as part of Plot C04 and C06 Central Docks application (Application Reference: 17F/1628)

5.0 ACCESSIBILITY

Overview

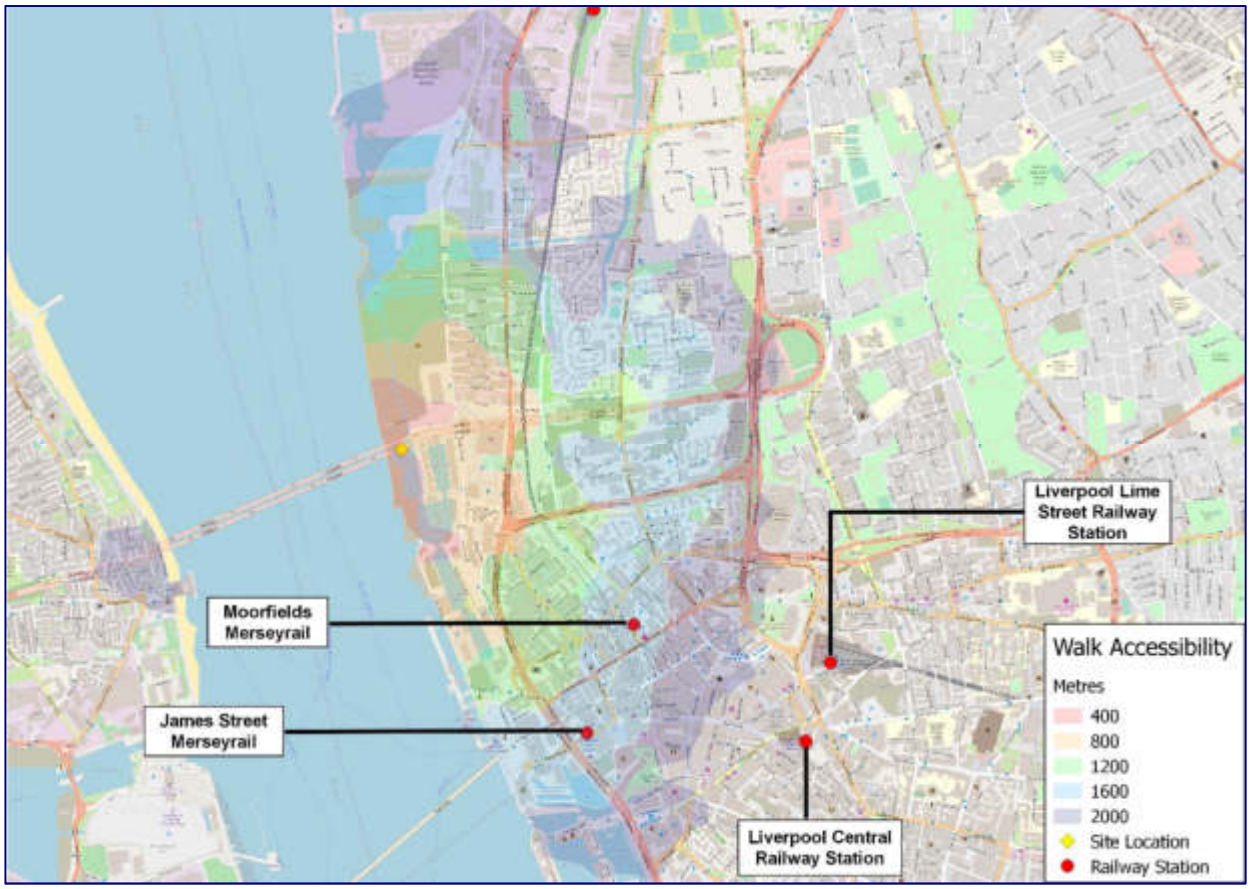
5.1 This Chapter presents a review of the accessibility of the site by walking, cycling and public transport modes.

Pedestrian Accessibility

5.2 The MfS states that walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, it goes on to state that this is not an upper limit and that walking offers the greatest potential to replace short car trips, particularly those under 2km.

5.3 Industry standard GIS TRACC software has been used to assess the accessibility of the development by foot for a 2km walk distance from the site, as shown on **Figure 5.1** below. The plan shows the reachable areas within 400m coloured bands from the site.

Figure 5.1 – Walking Accessibility 2km Isochrone

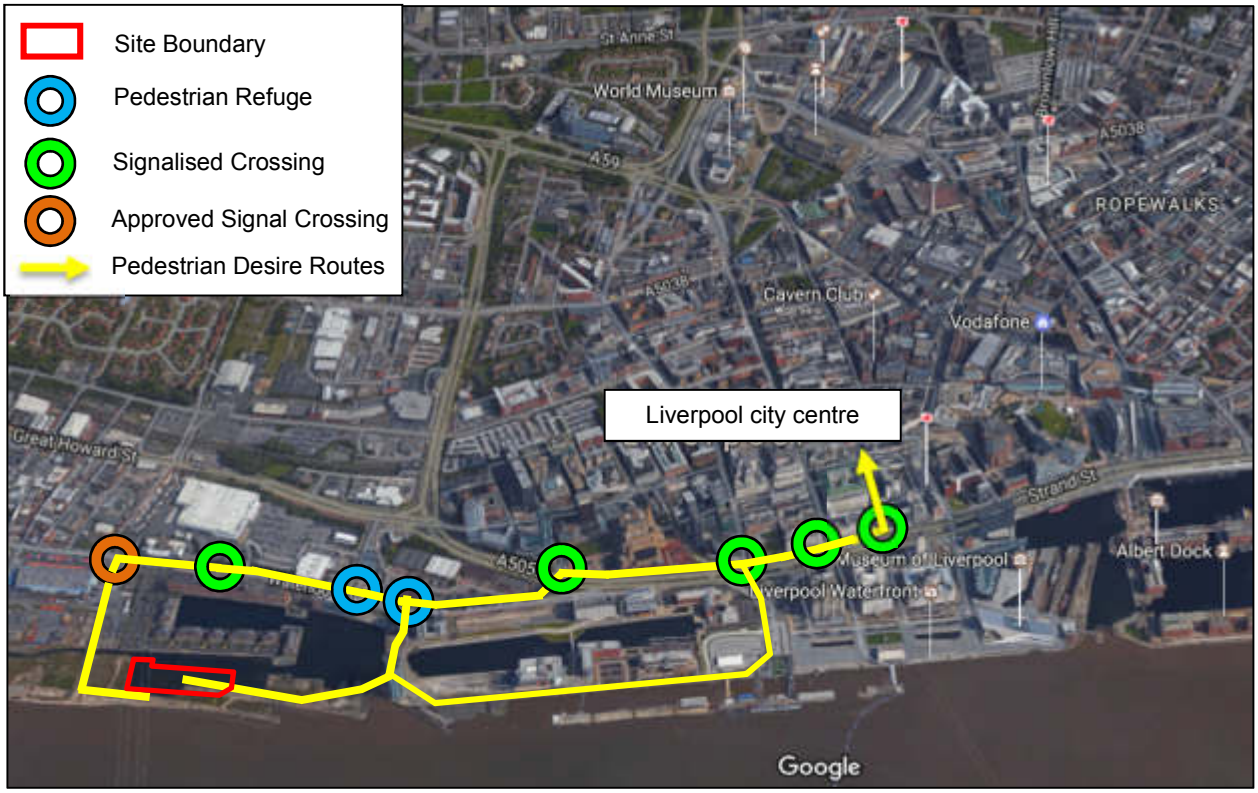


5.4 The site is within acceptable walking distance of Liverpool city centre and the vast array of amenities the city of Liverpool has on offer. The site is also within acceptable walking distance of numerous transport facilities. The closest bus stop is located on Waterloo Road approximately 100m north of the approved Waterloo Road / Northern Link Road junction. Moorfields and James Street Merseyrail stations can both be accessed in under a 19 minute walk time (or <1.4km walk distance).

5.5 The topography of the local area is generally flat and conducive to pedestrian trips, and the area benefits from natural surveillance from the businesses that abut all the main walking routes. The local area is well lit and generally benefits from wide footways and dropped kerbs.

5.6 Pedestrian crossings are provided at various points along Waterloo Road and the A5052 New Quay road on the route to Liverpool city centre, as shown on **Figure 5.2** below. The existing footbridge connecting the Central Docks, where the proposed Isle of Man Ferry Terminal will be located, to Princes Parade will also be refurbished by Peel, providing further pedestrian connections to the surrounding pedestrian network.

Figure 5.2 - Pedestrian Crossing Facilities Plan



5.7 It should also be noted that as part of the approved Northern Link Road connecting Waterloo Road to the planned Isle of Man Ferry Terminal, high quality pedestrian and cycle links will be provided and the junction with Waterloo Road will be significantly upgraded to a signal controlled junction with signalised crossings provided across the link road and the northern and eastern arms of the junction. The location of the approved signal crossing is also shown on **Figure 5.2** above.

5.8 Overall, the site benefits from high levels of accessibility by foot, with Liverpool city centre only a short walk from the site, providing opportunities for linked shopping, leisure and recreation trips as well as transport connections.

5.9 LCC have requested a £100,000 contribution towards enhancing pedestrian/cycle connectivity. However, this is not considered to be justified for the following reasons:-

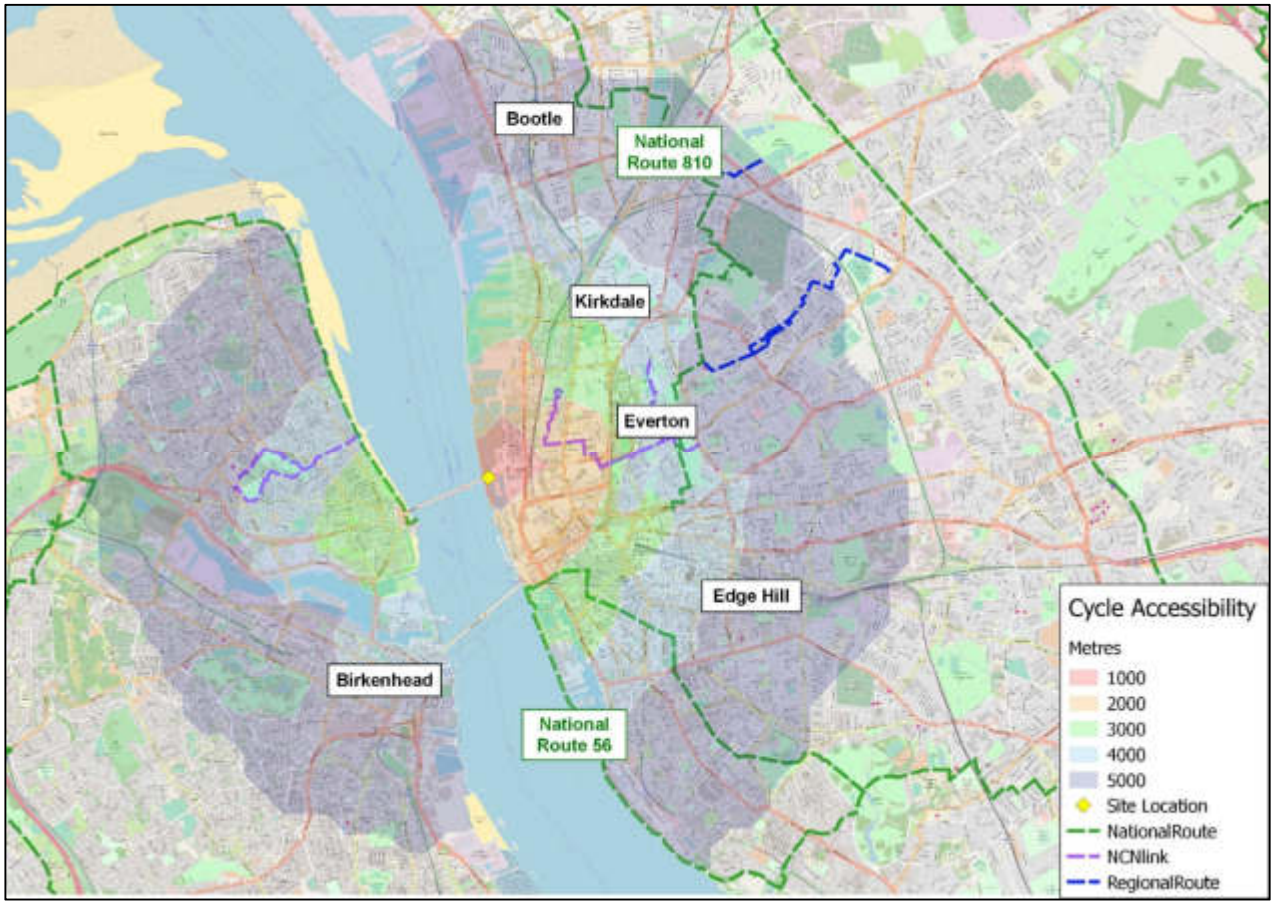
- High quality pedestrian and cycle routes will be introduced as part of the link road in addition signalised crossing at the junction where the link road meets Waterloo Road;
- The development will provide a high-quality pedestrian / cycle walkway along the frontage to the dock which will connect into the footway provided by the IoM ferry to the south and future connections into the wider central docks area to the north;
- The existing pedestrian and cycle infrastructure is considered to be of a good standard with crossings provided at various points along Waterloo Road and the A5052 New Quay road.

Cycle Accessibility

5.10 Transport policy identifies that cycling represents a realistic and healthy option to use instead of the private car for making journeys up to 5km as a whole journey or as part of a longer journey by public transport.

5.11 GIS TRACC software has again been used to assess the accessibility of the site by bicycle, for a 5km cycle distance and is shown on **Figure 5.3** below:-

Figure 5.3 - Cycle Accessibility 5km Isochrone



5.12 The plan demonstrates that all of Liverpool city centre and the nearby areas of Bootle, Kirkdale, Everton and Edge Hill, amongst others, are all located within the 5km catchment area from the development site. The topography of the area is generally conducive to cycling and the site is therefore well located to encourage cycle journeys for prospective residents.

5.13 There is a City Bike station located on Waterloo Road approximately 120m south of the approved Waterloo Road / Northern Link Road junction which will encourage prospective residents that do not own a bicycle to cycle between the development site and Liverpool city centre.

5.14 **Figure 5.3** also shows the sites proximity to the National Cycle Network Route 56 and 810. The two routes provide a useful connection in a north-west south-east direction from the development site and are made up of sections of both on road and off road cycle routes. Route 810 provides a link from Liverpool city centre to Formby via Crosby and Hightown and route 56 links Liverpool to Birkenhead, Wallasey and New Brighton via the Seacombe Ferry.

5.15 **Figure 5.4** below shows the available cycle facilities in the vicinity of the site.

Figure 5.4 – Cycle Facilities Plan

5.16 As the application site is within an acceptable cycle distance of a range of areas and associated facilities, cycling is considered to be a viable alternative to private car use for prospective residents of site, particularly when secure cycle parking is also being proposed.

Public Transport

5.17 The nearest accessible bus stop to the site is located on Waterloo Road, approximately 100m north of the approved junction.

5.18 In addition, a further bus stop is situated around 300m northeast of the approved junction, on the A565 Great Howard Street. Details of the bus services and frequencies which use these stops are provided in **Table 5.1** below:-

Table 5.1 – Bus Services:

Service No.	Route	Core Frequency of Services
136	Waterloo - Liverpool	Five services Daily – Monday to Friday
800	Speke, Liverpool - Seaforth, Litherland	One service Daily – Monday to Friday
838	Hunts Cross, Liverpool - Seaforth, Litherland	One service Daily – Monday to Friday

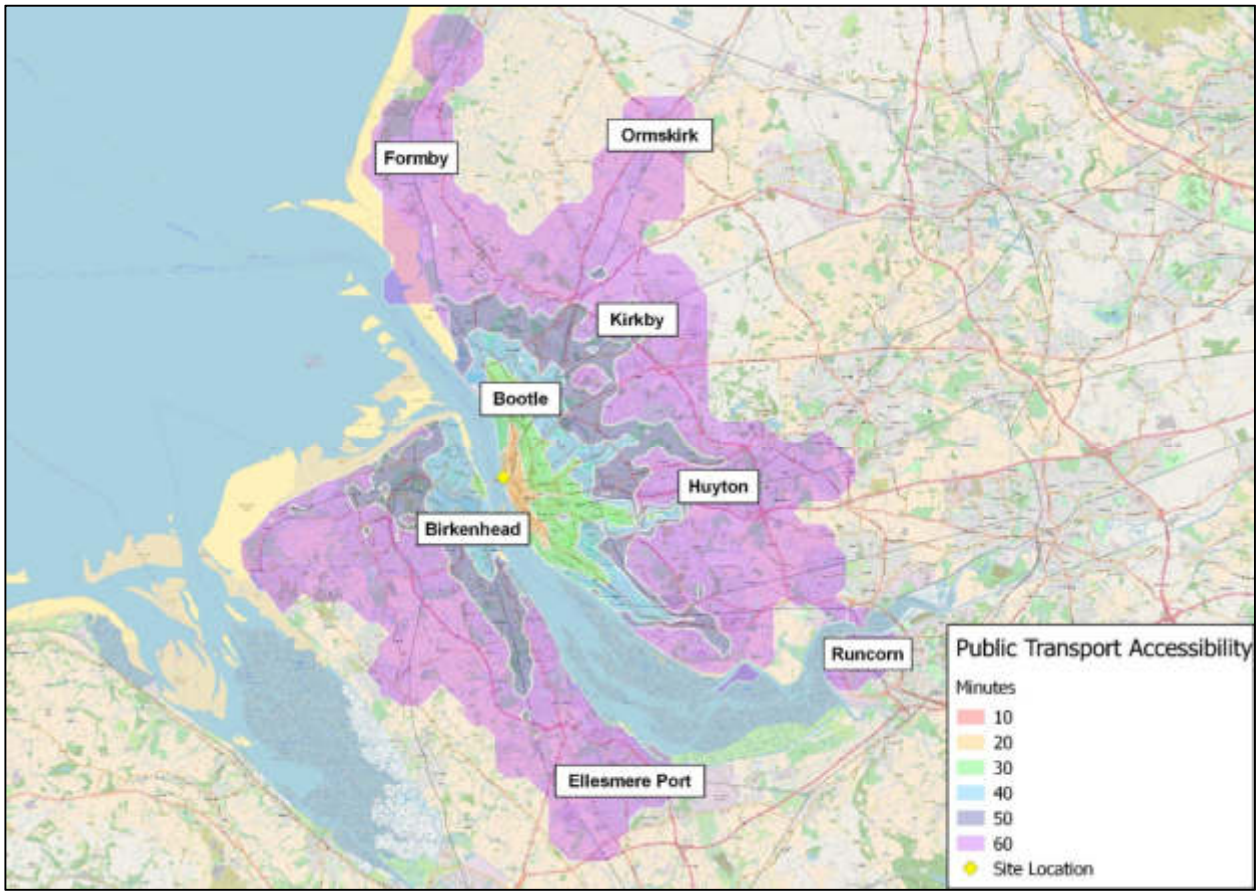
5.19 The above table demonstrates that prospective residents and employees of the site will have access to bus services stopping very close to the site which provide access to key destinations.

5.20 In terms of rail services, Moorfields Merseyrail station and James Street Merseyrail station are located 1.4km southeast of the site and are therefore both well within an acceptable walking and cycling distance. Both railway stations offer regular direct services throughout the week including services approximately every 15 minutes to Southport, Bootle and Hunts Cross. The stations also offer further connecting services to Manchester, Warrington and Birkenhead, amongst others.

5.21 Both Merseyrail stations are well within the acceptable cycling (5km) catchment from the development site and provide good connections to employment and leisure opportunities. Liverpool Lime Street Station is also within the acceptable cycling distance from the site and is the primary rail station in Liverpool that provides connections to locations both regionally and nationally. It is served by East Midlands Trains, London Midland, Merseyrail, Northern, Transpennine Express and Virgin Trains at a high frequency. The above services run directly to Birmingham New Street, Manchester Stations, London Euston and Norwich, amongst others.

5.22 The level of accessibility by public transport has been analysed using GIS TRACC software to assess the accessibility of the site and is shown on **Figure 5.5** below**.** The figure illustrates the distance that can be travelled within 60 minutes by public transport to and from the site, which includes the time taken to walk to the bus stops.

Figure 5.5 – 60 Minute Public Transport Catchment Isochrone



5.23 The above demonstrates that the site is within close proximity to a number of bus and railway links, serving both the local area and other destinations further afield. The figure shows that key areas of Liverpool, Birkenhead, Bootle, Runcorn and Kirkby, amongst others, are in an acceptable 60-minute commute time.

5.24 It is noted that Merseytravel have suggested that the development provides adequate access to the public transport network and fund the provision of public transport infrastructure (i.e. bus stops and bus service). It should be noted that as part of the wider Liverpool Waters development a public transport enhancement Strategy is to be development detailing how the proposed transport improvements will be implemented progressively alongside development. Having regard to this and as no public transport improvements are to be provided as part of the IoM permission, it is not reasonable for this development to fund such improvements.

Summary

5.25 The above assessments demonstrate that the site is in an accessible location with good potential for use of sustainable transport modes, and has a large range of local amenities within close proximity.

Minimum Accessibility Standard Assessment (MASA)

5.26 Notwithstanding the above analysis, the proposed development has also been assessed in terms of its compliance with the "Minimum Accessibility Standard Assessment" (MASA) criteria within LCC's adopted *"Ensuring a Choice of Travel"* SPD.

5.27 The MASA sets out a checklist of accessibility criteria for new developments and sets a minimum score (by use class) for access by foot, cycle, public transport and vehicles. The full detailed MASA report is presented in **Appendix E.**

5.28 The scheme meets or exceeds the minimum score criteria for 'Access by Cycle' and 'Vehicle Access and Parking'. This therefore adds further weight to the view that the development will be accessible.

5.29 The score for 'Access on foot' and 'Access by Public Transport' falls slightly short of the minimum score given the distance to the nearest local or district centre is greater than 500m and the frequency of bus services per hour. MfS states that facilities located within 2km are accessible on foot and therefore the site is within an acceptable walking distance of Liverpool city centre and the vast array of amenities the city of Liverpool has on offer. Notwithstanding this, it should be noted that as the Central Docks development comes forward the accessibility of the site will be further improved with numerous additional facilities located within the docks area. Similarly, as development in the Central Docks and Liverpool Waters comes forward, demand for bus services will increase and new and additional services will become economically viable to bus operators.

5.30 Having regard to the analysis presented in this Chapter, the site is considered to be in an accessible location with a large range of local amenities within close proximity. In addition, the site is well located to encourage travel via sustainable transport modes and the accessibility of the site will increase further when development of the local area comes forward.

6.0 ANTICIPATED HIGHWAY IMPACT

Overview

6.1 This chapter provides an estimate of the multi modal trips generated by the proposed development during the weekday AM and PM peak hours and provides a summary of the anticipated highway impacts on the local highway network.

Trip Generation

6.2 In order to estimate the trip generating potential of the proposed residential development, average trip rates from the industry-standard TRICS Database have been obtained. The selection criteria for the TRICS based trip rates is as follows:-

- Residential;
- Flats Privately owned;
- Multi modal surveys;
- Sites in Greater London and Ireland excluded;
- Selection by number of dwellings (50-154);
- Weekday surveys only; and
- Date range 01/01/2003-18/09/2017
- Only sites in 'Edge of Town Centre' and 'Town Centre' locations have been selected.

6.3 The multi modal TRICS outputs for the proposed development are presented in **Appendix F** and are summarised in **Table 6.1** below:-

Table 6.1 - Estimated Trip Rates (Per Unit) Associated with the Proposed Development

Mode	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Arrivals	Departures	Arrivals	Departures
Vehicles	0.056	0.173	0.162	0.087
Cycles	0.003	0.003	0.004	0.000
Pedestrians	0.023	0.134	0.145	0.060
Pub. Trans.	0.003	0.064	0.052	0.003

6.4 The estimated trip generation associated with the proposed development is therefore as summarised in **Table 6.2** below:-

Table 6.2 – Estimated Trip Generation – 538 Apartments				
Mode	**Weekday AM Peak Hour**		**Weekday PM Peak Hour**	
	Arrivals	**Departures**	**Arrivals**	**Departures**
Vehicles	30	93	87	47
Cycles	2	2	2	0
Pedestrians	12	72	78	32
Pub. Trans.	2	34	28	2

6.5 It should be noted that the above trip generation estimates are considered to be extremely robust given that all the comparator sites in TRICS have significantly higher levels of parking with an average parking provision of 111%.

Anticipated Highway Impacts

6.6 The impact of this development on the operation of the local highway network was considered in detail as part of the wider Liverpool Waters TA. Furthermore, as part of the approved Northern Link Road (Application Reference: 17F/2628) capacity assessments of the new signalised Link Road junction with Waterloo Road were undertaken which demonstrates that this junction will operate within capacity with the Liverpool Waters, which this site falls within, and other committed developments in place.

6.7 Having regard to the above, it is therefore considered that no further detailed assessment of the local highway network is required and that the traffic impact of the scheme is acceptable in planning terms.

7.0 LIVERPOOL WATER CONDITIONS

7.1 This section details the conditions set out by LCC in reference to the planning permission for Liverpool Waters (10O/2424) and reviews the proposed developments adherence to these conditions within **Table 7.1**.

Table 7.1 Liverpool Waters Condition List

Condition Number	Condition	Adherence
10	**Highway & Public Transport Enhancement Strategy -** This strategy is to be submitted and approved demonstrating how the proposed transport improvements will be implemented progressively alongside development.	This TA demonstrates that, with the new link road in place, the site can be safely accessed by all modes of transport. In addition, the TA demonstrates that the proposed development will not have a material impact on the operational capacity or safety of the local highway network and no enhancement measures are therefore required as part of this development.
11	**Detailed Neighbourhood Masterplans** - Details of the proposed access should be described in the submitted Transport Assessment, including pedestrian and service access. Key pedestrian and cycle routes should also be identified within the Transport Assessment to identify how future residents of the development can readily travel to the City Centre and wider areas.	The TA provides details of the proposed site access, complete with a site access drawing, along with details of servicing access arrangements. The TA also highlights key local cycle routes and a key pedestrian route, with a facilities plan, to Liverpool city centre.
40	**Highways & Public Transport Enhancement -** A detailed statement is required setting out how specific highway and public transport enhancement works will be carried out.	Again, the TA demonstrates that the proposed development will not have a material impact on the operational capacity or safety of the local highway network and no enhancement measures are therefore required as part of this development.
41	**Car & Cycle Parking Management Strategy -** Details of the quantity and quality of car & cycle parking should be provided to ensure that the development is supported by the necessary level of car and cycle parking infrastructure in the interests of reducing travel by means of private car, encouraging sustainable patterns of travel, reducing traffic	The TA specifies the number of vehicle and cycle spaces in accordance to LCC guidance details; the ratio of parking; the traffic regulation orders in place on the adopted highway in the vicinity of the site; means of access and egress control to the car park; and the layout and design of the proposed car park.

	congestion and pollution, ensuring inclusive access for all and safeguarding highway and pedestrian safety.	
42	**Detailed Travel Plans -** Prior to the commencement of development within any neighbourhood a detailed Draft Travel Plan should be produced setting out the specific means for delivering sustainable means of travel and assisting in reducing dependency on private car use.	A Travel Plan has been submitted as part of this application, setting out details for a designated Healthy Transport Action Plan and Marketing and Communication Strategy.
71	**Highway Requirements -** No buildings shall be erected until the TA has been approved and any identified measures have been secured to undertake the highway works and public transport enhancements required to ensure a sustainable and co-ordinated form of development that is supported by the necessary highway infrastructure, and safe and convenient forms of public transportation.	The TA demonstrates safe and effective multimodal accessibility to the proposed development site no requirements for highway works or public transport enhancements.
72	**Servicing / Parking Area Restrictions -** All loading, unloading and parking of vehicles associated with the development shall take place within the space allocated for those purposes to avoid servicing from the public realm and highways.	The TA provides details on the proposed servicing and parking arrangements, all of which will take place within the development site off the public highway.

Source: LCC (10O/2424) Decision Notice

8.0 SUMMARY AND CONCLUSIONS

8.1 SCP have been appointed by Romal Capital Limited to provide specialist transport planning and engineering advice in support of the proposed development of Plot C02 of the Central Docks Neighbourhood within the Liverpool Waters Masterplan.

8.2 The development proposals consist of the construction of 538 apartments along with 400.6m^2 of ancillary ground floor commercial uses and associated parking.

8.3 Vehicular access to the development will be provided from a priority-controlled access located to the north-west of the site, off the approved new spine road linking Waterloo Road to the planned Isle of Man Ferry Terminal. The proposed access has a carriageway width of approximately 6m and operates on a two-way basis.

8.4 The access and internal site layout have been designed to accommodate a large refuse vehicle and a 12m rigid vehicle to avoid servicing and deliveries taking place on the approved link road. Swept path analysis demonstrates that both vehicles can manoeuvre within the site safely.

8.5 The personal injury accident data for the most recently available five-year period has been reviewed and does not represent a material concern in the context of the proposed redevelopment.

8.6 The development is compliant with local, regional and national policy as it will promote sustainable modes of travel and reduce the number of car trips to local facilities.

8.7 It has been demonstrated that the development is sustainable with good accessibility to the site provided to those travelling by foot, bicycle and public transport. Policies to encourage travel by sustainable modes are developed further within the Travel Plan that accompanies this application.

8.8 The impact of this development on the operation of the local highway network was considered in detail as part of the wider Liverpool Waters TA. Having regard to this, it is therefore considered that no further detailed assessment of the local highway network is required and that the traffic impact of the scheme is acceptable in planning terms.

8.9 Having regard to the above, it is concluded that there can be no reasonable highway related ground on which to withhold planning approval for the scheme.

S|C|P

APPENDIX A

Liverpool City Council

To: Peter Jones
Development Control
Planning Division
0151 233 3000

From: Stephen Walker
Highway Development Control
Highways & Transportation
0151 233 0321

6th February 2019

Planning Application No:	**18F/3247**
Location:	**Plot C02, Liverpool Waters Central Docks, Liverpool L3 0BT**
Proposal:	**To erect residential development comprising 646 apartments (Use Class C3) and 232 sq.m. of ground floor commercial space (Use Classes A1, A3, A4, B1, D1 or D2) in six blocks of between 10 to 14 storeys in height, with single storey concierge pavilion building, associated partial dock infill, access, parking, servicing, soft and hard landscaping/public open space, including two floating timber jetties and dockside walkway.**

I refer to your memo requesting highway comments.

Response:

Highways requires amended parking provisions; subject to approval and the recommended conditions and a S106 contribution of £100,000 towards improvements to pedestrian/cycle connectivity between the site and the City Centre.

Comments:

Car parking – 115 spaces.
Cycle parking – 333 resident's spaces. 48 external visitor spaces.

The development is for six apartment blocks containing a combined number of 646 apartments together with office, retail, leisure and restaurant/café space at ground floor level. The principle of development has already been approved under the Liverpool Waters outline consent (10O/2424).

Highways notes that the proposal falls well short of the recommended parking provision of 646 spaces by providing only 115 spaces (a 18% provision); a shortfall of 349 spaces.

Furthermore, the proposed level of resident's parking is below that of the adjacent plots within the Central Docks development known as C04 & C06 which offered an overall parking provision of 22%.

Whilst some reduction in parking could be accepted the level proposed falls below the current car ownership levels for the surrounding area and those agreed for neighbouring sites. The proposed level of car parking being offered therefore raises significant concerns that roadspace within the local area will become sought after for parking and the competition for places will likely result in inappropriate parking and oversubscription of the available spaces; this will also impact and limit any visitor parking options.

Highways therefore requires the applicant to review the level of parking being offered against the Transport SPD standards which usually recommend development at the edge of the City Centre provide a 0.7 provision. As a reference point, parking provisions should not be less than those developments consented within the Central Dock Neighbourhood Area and a higher provision is therefore recommended to address any concerns.

The lack of parking also emphasises the developments reliance on alternative means of transport such as walking, cycling and public transport. However, the level of cycle parking is also below the recommended 100% provision of 646 spaces at 333 spaces (a 50% provision) and the level of public transport accessibility is restricted by barriers to movement and the fact that the only convenient all-day bus service, the 101 which ran at half-hourly intervals, has now been withdrawn. The site is therefore remote from bus services.

The site is located in an area earmarked for future development and subject to enhancements required under the outline consent to improve highway and transportation connectivity. However, the site is considered remote from the City Centre by virtue of its distance and the barriers to movement; particularly those created by the A5036 Waterloo Road/Bath Street and the A5052 New Quay/King Edward Street.

Subject to satisfactory improvements to the parking provisions, a contribution of £100,000 would be sought as part of the submitted application; this contribution is consistent with the approach taken to other applications in the vicinity that are subject to the same access limitations where contributions have been sought at the rate of £100,000 per plot.

Servicing is to be carried from within the site and tracking diagrams indicate that the internal layout can cater for the typical movements involved; servicing access includes a route via undercroft access through the six buildings which have a headroom of approximately 5.5m and are therefore sufficient to allow for adequate access by refuse and servicing vehicles.

It is worth highlighting that the red line plan showing the land ownership does not tie into the boundary of the adopted highway and this would normally be a concern in terms of ensuring access to a site. However, the proposal is linked to the design and implementation of a new link road serving the wider site and the new Isle of Man Ferry terminal and a Grampian type condition will be required to ensure that the new road is constructed and available for use before the current application can be delivered.

It is likely that improvements will be required to improve the number of public transport services serving the area and discussions will be required with Merseytravel to ascertain how best this can be delivered.

The proposed dockside walkway running the length of the developments eastern boundary has potential to link with an aspirational pedestrian and cycle route through to Princess Dock. Highways would request this route is maintained as an accessible route and kept free from gates or barriers. It's noted the route is punctuated by reclaimed bounders and rock features, some of which appear to create pinch points along the route. This is evident adjacent to Block F where the dockside walkway turns through a 90° S-bend and these features reduce the useable width of the walkway. Highways would suggest that the proposed rock features and reclaimed boulders are removed from this location so as to open up the route and make it more accessible.

The site plans show the Northern Link Road, which will provide access to the new IOM Ferry Terminal, with a number of raised tables within the carriageway. These features are in conflict with the proposed access arrangements for the development and would not be able to be installed as shown. The Highway Authority has taken the view that the carriageway design for the Northern Link Road is yet to be agreed or fixed and as such, any conflict shown between these features and the access junctions into and out of the development can be considered further within the Link Road designs and do not present a highway safety concern.

S106 Obligation:

£100,000 towards improvements to pedestrian/cycle connectivity between the site and the city centre.

Conditions:

1. No development shall take place until a scheme to provide pedestrian and vehicular access between the site and Waterloo Road has been implemented. For the avoidance of doubt the access arrangements shall be as indicated on the submitted drawings.

   Reason: To ensure that the sufficient measures are taken such that the highway network can accommodate the development and that the traffic generated does not exacerbate unsatisfactory highway or transportation conditions.

2. The development shall not be implemented until the surface water drainage of the site has been designed to prevent the discharge of water on to the public highway. The drainage design shall be submitted to and approved in writing by the Council as Local Planning Authority.

Reason: To prevent unnecessary surface water from being deposited on to the highway thus causing a potential source of danger to other road users.

3. Except for site clearance and remediation no development shall take place until a scheme for the design and construction of the site accesses has been submitted to and approved in writing by the Council as Local Planning Authority. The accesses shall be designed in accordance with the principles set out in the approved drawings. For the avoidance of doubt, the site access points shall include pedestrian crossing points and tactile paving.

   The approved scheme shall subsequently be constructed and completed prior to first occupation. The accesses shall be kept available for use at all times.

   Reason: In order that the Council is satisfied that the highway works are carried out to the appropriate standard and to enable vehicles to enter and leave the premises in a safe manner without causing a hazard to other road users in the interests of road safety.

4. The swept paths shown on the approved plans for access by service vehicles shall be kept free of all obstructions and shall be available for use at all times.

   Reason: In the interests of road safety as vehicles reversing into the highway cause a hazard to other road users.

5. Prior to first occupation/use of the premises, parking provision in line with the Council's current standards shall be provided in accordance with details which shall have first been submitted to and approved in writing by the Council as Local Planning Authority. The approved parking provision shall be kept free for that specific use thereafter. Notwithstanding the provisions of the Town and Country Planning Act (General Permitted Development) Order 1995 (or any Order revoking or re-enacting that Order) no Building works, which reduce this provision, shall take place except following the express grant of planning permission by the Council.

   Reason: To ensure adequate parking provision is made thereby avoiding hazards caused by indiscriminate parking and to encourage the benefit of natural surveillance and security in order to actively deter criminal activity, including vandalism.

6. The parking spaces indicated on the approved plans shall be provided for the use of residents, occupiers and visitors of this development only and shall not be sold, leased or hired out to any third party.

   Reason: To ensure that appropriate provision for parking vehicles is made and maintained, thereby avoiding hazards caused by indiscriminate parking.

7. The development shall not be brought into use until the areas indicated on the submitted plans to be set aside for cycle parking have been provided in accordance

with the details and specifications shown. The cycle parking shall be retained as such thereafter.

Reason: To ensure that adequate provision is made for parking cycles on the site; and to establish measures to encourage non-car modes of transport.

8. No works shall take place on the site at all until a method statement comprehensively detailing the phasing and logistics of demolition/construction has been submitted to and approved in writing by the Council as Local Planning Authority.

The method statement shall include, but not be limited to:

Construction traffic routes, including provision for access to the site
Entrance/exit from the site for visitors/contractors/deliveries
Location of directional signage within the site
Siting of temporary containers
Parking for contractors, site operatives and visitors
Identification of working space and extent of areas to be temporarily enclosed and secured during each phase of demolition/construction
Temporary roads/areas of hard standing
Schedule for large vehicles delivering/exporting materials to and from site
Storage of materials and large/heavy vehicles/machinery on site
Measures to control noise and dust
Details of street sweeping/street cleansing/wheelwash facilities
Details for the recycling/disposing of waste resulting from demolition and construction works
Hours of working
Phasing of works including start/finish dates

The development shall be carried out in accordance with the approved plan, unless otherwise agreed in writing with the Council as Local Planning Authority.

Reason: To ensure that adequate on-site provision is made for construction traffic, including allowance for the safe circulation, manoeuvring, loading and unloading of vehicles, as well as parking, and to reduce impact on residential amenity and the general amenity of surrounding occupiers.

9. The development shall not be occupied until the owners and occupiers of the site have appointed a Travel Plan Co-ordinator. The Travel Plan Co-ordinator shall be responsible for the implementation, delivery, monitoring and promotion of the Travel Plan, including the day-to-day management of the steps identified to secure the sustainable transport initiatives. The details (name, address, telephone number and email address) of the Travel Plan Co-ordinator shall be notified to the Council as Local Planning Authority upon appointment and immediately upon any change.

Reason: To ensure that an approved Travel Plan is implemented, in order to establish sustainable, non-car modes of transport.

10. Prior to the occupation of any dwelling, a Residential Travel Plan shall be submitted to and approved in writing by the Council as Local Planning Authority. The Plan shall include immediate, continuing and long-term measures to promote and encourage alternative modes of transport to the single-occupancy car. For the avoidance of doubt, the Travel Plan shall include, but not be limited to, the following:

    a) Production and distribution of an information pack for residents detailing travel options and information for all modes of travel
    b) Information on existing transport policies, services and facilities, travel behaviour and attitudes
    c) Access for all modes of transport
    d) Resource allocation including Travel Plan Co-ordinator and budget
    e) A marketing and communications strategy
    f) Appropriate measures and actions to reduce car dependence and encourage sustainable travel
    g) An action plan including a timetable for implementation of each of each of the above
    h) Mechanisms for monitoring, reviewing and implementing the travel plan

    The Approved Residential Travel Plan shall be implemented in accordance with the timetable contained therein and shall continue to be implemented as long as any part of the development is occupied.

    An annual report shall be submitted to the council no later than 1 month following the anniversary of the first occupation of the development for a period of 5 years. The annual report shall include a review of the Residential Travel Plan measures, monitoring data and an updated action plan.

    Reason: To maximise opportunities for travel by modes of transport other than the private car, and to ensure that the development is sustainable.

11. Prior to first occupation of the development hereby permitted a servicing and waste management strategy shall be submitted to, and approved in writing by, the Council as Local Planning Authority. For the avoidance of doubt the strategy shall set out design and operational proposals for servicing and the storage, transfer and collection of waste ensuring that appropriate arrangements are made and that logistical requirements are appropriately considered and addressed. The strategy shall be subsequently implemented in accordance with the approved details.

    Reason: To ensure that adequate on-site provision is made for servicing and waste management collection including allowance for the storage, transfer and collection of waste to reduce impact on residential amenity and the general amenity of surrounding occupiers.

Informatives:

1. If a street name and/or property numbering is required as part of this development, developers are required to contact Liverpool City Council who are the street naming and property numbering authority to arrange for addresses to be attributed to the development. Developers or property owners cannot attribute property numbers or addresses themselves, these can only be undertaken by the Council. Attributing addresses can take approximately 6 weeks to progress from application therefore applicants must give themselves sufficient time and are advised to make an early application to enable the process to be completed so that an address can be issued and used. In the first instance, the applicant is required to contact the Council's Highway Development Control Team on 0151 233 0324 or email HDC@Liverpool.gov.uk to be advised further on the processes and information requirements. Please note there is a fee for this process which shall be advised upon application.

Stephen Walker
Highway Development Control

Merseytravel

P.O. Box 1976
Liverpool L69 3HN
Tel: 0151 330 1005
mail@merseytravel.gov.uk

Our ref: CS/JP/JG
Your ref: 18F/3247

Contact: Mrs Julie Phillips
Tel: 0151 330 1035
Email: julie.phillips@merseytravel.gov.uk
Date: 25 January 2019

Mr P Jones
Planning and Building Control
Liverpool City Council
Cunard Building
Water Street
Liverpool L3 1AH

RECEIVED
25 FEB 2019

Dear Mr Jones

To erect residential development comprising 646 apartments (Use Class C3) and 232 sq.m. of ground floor commercial space (Use Classes A1, A3, A4, B1, D1 or D2) in six blocks of between 10 to 14 storeys in height, with single storey concierge pavilion building, associated partial dock infill, access, parking, servicing, soft and hard landscaping/public open space, including two floating timber jetties and dockside walkway. Plot C02 Liverpool Waters Central Docks Waterloo Quay Liverpool L3 OBT

Thank you for your correspondence dated 13 December 2018 which relates to the above significant residential planning application and in response to this communication Merseytravel would wish to offer the following comments.

Firstly, Merseytravel notes the intention to include at least 115 car parking spaces within the development and would therefore wish to request Liverpool City Council require the developer to ensure that all traffic likely to be generated by such a car parking provision, together with all servicing and other traffic away from the development, could be accommodated within the local highway network without resulting in congestion that would impede the passage of bus services in or around the Liverpool Waters area as part of the development's Overall Programme.

As should form part of TA.

Secondly, Merseytravel would with to request that Liverpool City Council require the developer to ensure that all demolition and construction works be carried out in a manner that would not cause any adverse impact upon the integrity, safety or operation of the Merseytravel Kingsway Tunnel which lays beneath the development site. Furthermore Merseytravel would wish to request that the development in its final format should satisfy the same standards and Merseytravel is fully prepared to provide any advice and guidance to the development or Liverpool City Council in respect of these two requirements.

?

Cont'd...

ALLOCATED TO	P5	
MVM	YES	NO
OBJ / SUPP	COMM	OTHER
COMMITTEE	YES	NO
ACKNOWLEDGE	YES	NO
REPLY	YES	NO

Thirdly, in order to ensure the proposed site would have adequate access to the public transport network, Merseytravel would wish to request Liverpool City Council require the developer to fund the following measures;

(a) the construction and instalation of appropriate bus stop infrastructure along the new development access; and

(b) the provision of funding for an appropriate bus service to the development from the completion of the one hundredth residential unit on the site these service should be in line with the wider Liverpool Walrus commitments and should provide suitable links to the City Centre and the Merseyrail network.

(c) the upgrade of bus infrastructure on Waterloo Road close to the development.

Fourthly, in order to ensure the development would accord with Equalities legislation and so that all opportunities within the site would be open to all members of the local community and to ensure that all residential units within the development could be rendered homes fit for lifetime use, Merseytravel would wish to request Liverpool City Council require the developer to create appropriate access for Merseytravel Merseylink dial-a-ride vehicles and all other demand responsive bus services to all residential units within the site.

Fifthly, Merseytravel would wish to request that Liverpool City Council require the developer to create good quality, well-lit walking routes from the development's primary entrance/exits and the nearest bus stops which are likely to be located upon the development's access road and Waterloo Road.

Sixthly, Merseytravel notes and welcomes the inclusion of a draft travel plan within the application materials. In order to ensure the detail of this plan is realised and the development could be brought forward in a sustainable manner Merseytravel would wish to request that Liverpool City Council require the developer to complete and implement a full travel plan for the site which would effectively promote the use of sustainable travel including public transport, to all residents and users of the development.

I trust that the above comments clarify Merseytravel's views in respect of this application, however should you require any further information or assistance from ourselves on the matter, please do not hesitate to contact me.

Yours sincerely

J Phillips.

Julie Phillips
Planning Assistant

S|C|P

APPENDIX B

block A | block B

block C | block D

COMMERCIAL
CYCLE STORE
FFL + 8.050
BIN STORE
PLANT
SUB STATION
PLANT
BIN STORE
CYCLE STORE
FFL + 8.400
COMMERCIAL
UNDER CROFT
+8.10

SUB STATION
CLN
PLANT
FFL + 8.050
RECEPTION
BIN STORE
SUB STATION
PLANT
BIN STORE
FFL + 8.400
COMMUNAL SPACE
CYCLE STORE

+7.207
1863mm

BUS STOP

RIVER MERSEY

Mean High Water

RIVER MERSEY

- cores/ reception/ circulation
- one bed
- two bed
- three bed
- four bed
- penthouse
- ground floor duplex
- ancillary

C02 SITE
GROUND FLOOR PLAN

scale 1:250 0 10m

NOTES
1. This drawing is copyright of Ollier Smurthwaite Architects Ltd
2. Do not scale this drawing
3. Figured dimensions only

rev.	date		drn	aud
-	00.00.00	-	-	-

drawing status: PLANNING

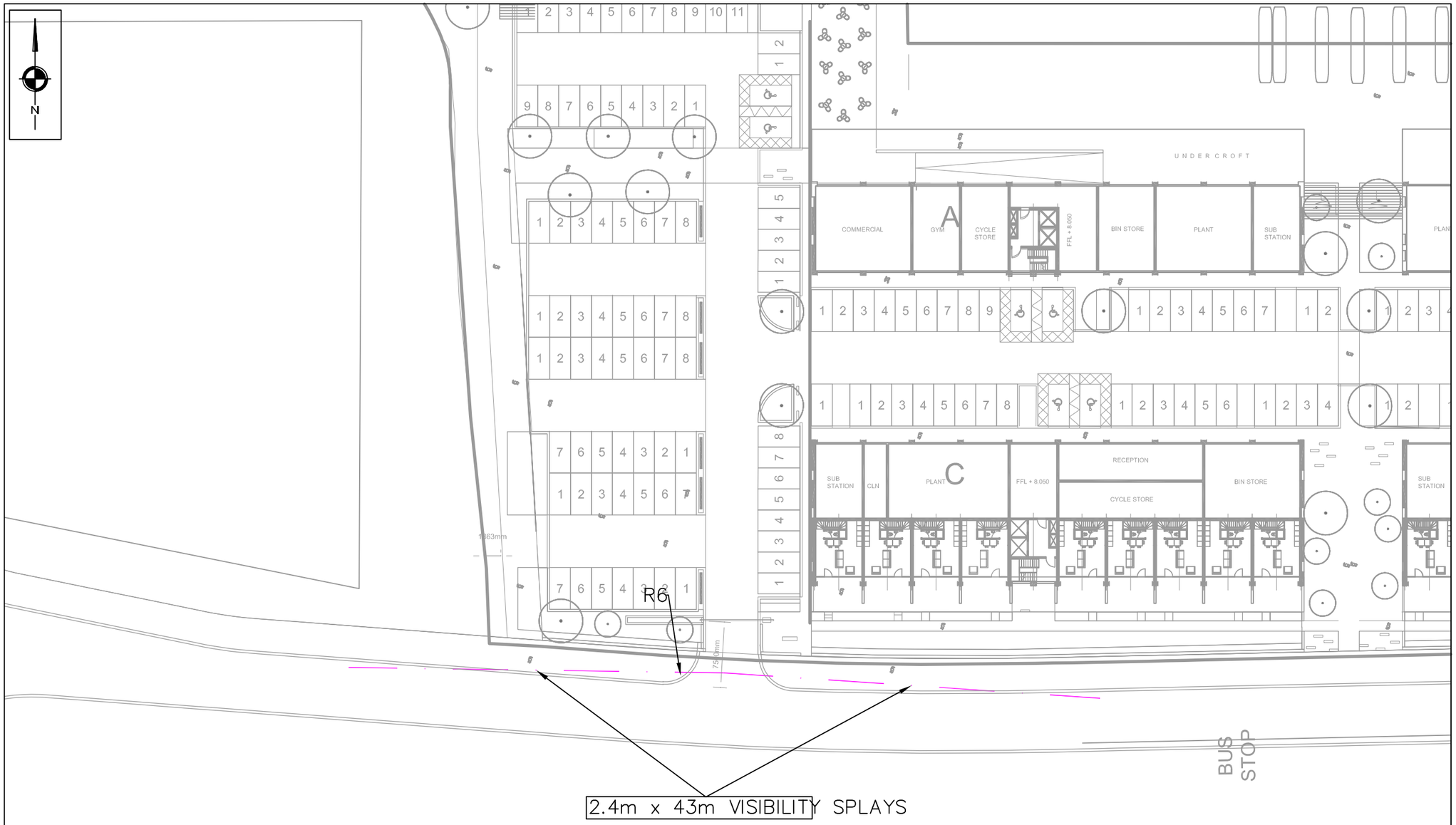
Second Floor
40 King Street
Manchester
M2 6BA
0161 833 0838
info@olliersmurthwaite.com
www.olliersmurthwaite.com

OLLIER SMURTHWAITE ARCHITECTS

Client	ROMAL CAPITAL	Scale	Drawn	Checked	Date	Issue
		1:250@A1	YM	YM	20.09.19	-
Job title	PLOTS C02 CENTRAL DOCKS, LIVERPOOL	Job number	Drawing number			
Drawing title	PROPOSED GROUND FLOOR SITE PLAN	A476	A476_P_100			

S|C|P

APPENDIX C



NOTES

REVISIONS

REV	DESCRIPTION	DATE	BY
C	REVISED SITE LAYOUT	22.10.19	JH
D	REVISED SITE LAYOUT	30.10.19	BH

S|C|P
Transportation Planning : Infrastructure Design
Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400, www.scptransport.co.uk, Email info@scptransport.co.uk

Client Name:
ROMAL CAPITAL LIMITED

Project Title:
CENTRAL DOCKS, LIVERPOOL

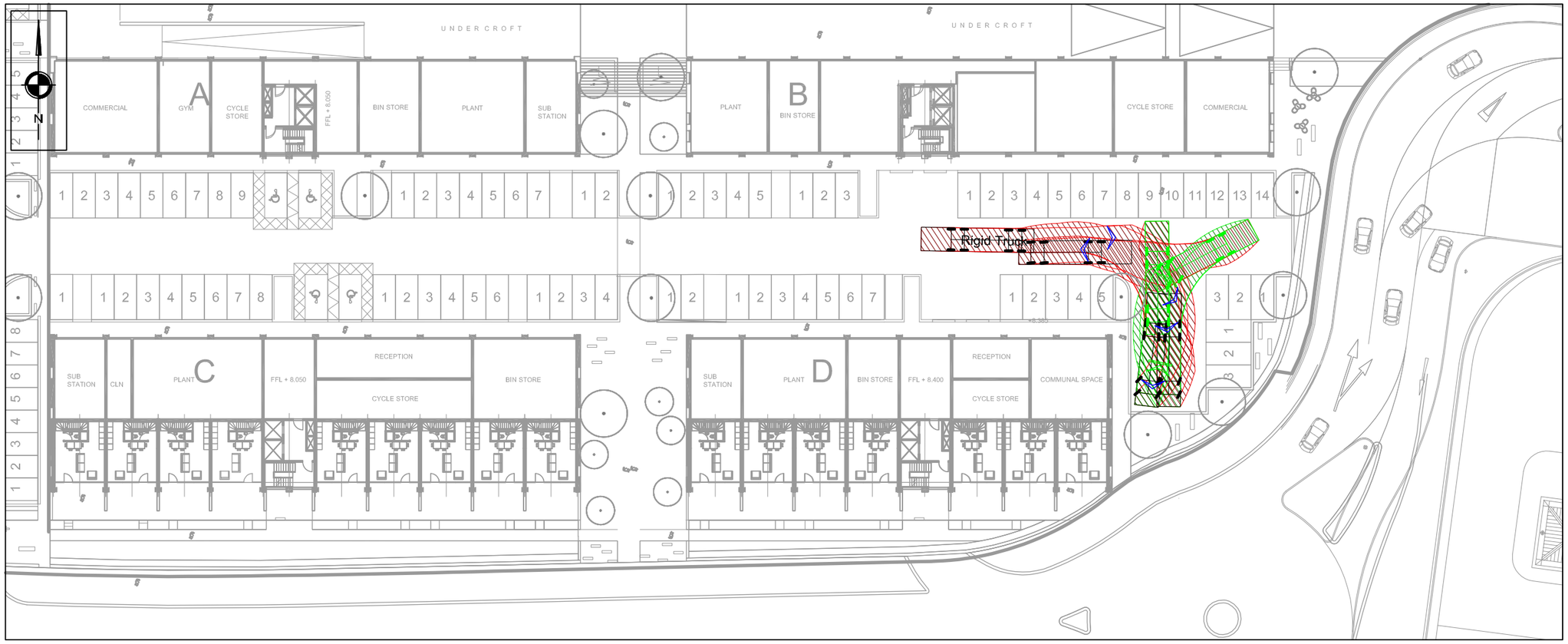
Drawing Title:
SITE ACCESS ARRANGEMENT

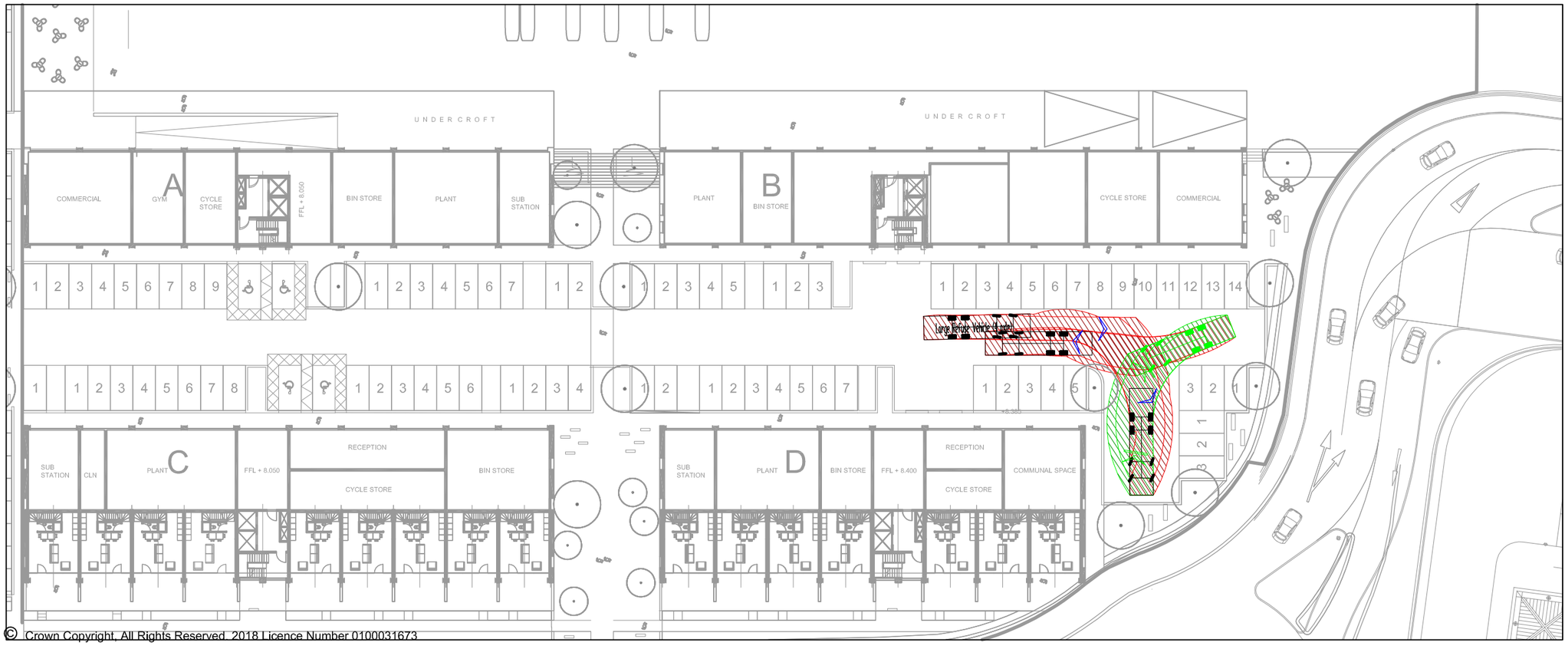
Drawn By:	Date:
JH	22.10.2019
Checked:	Scale:
CT	1:500 @ A3
Status:	Approved/Unapproved:
PLANNING	-

Drawing No.	Rev.
SCP/18299/SK01	D

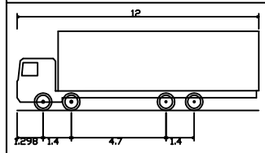
S|C|P

APPENDIX D



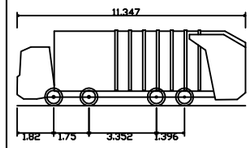


NOTES



Rigid Truck

Overall Length	12.000m
Overall Width	2.500m
Overall Body Height	3.928m
Min Body Ground Clearance	0.412m
Track Width	2.471m
Lock to Lock Time	6.00s
Kerb to Kerb Turning Radius	11.900m



Large Refuse Vehicle (4 axle)

Overall Length	11.347m
Overall Width	2.500m
Overall Body Height	3.751m
Min Body Ground Clearance	0.304m
Track Width	2.500m
Lock to Lock Time	6.00s
Wall to Wall Turning Radius	11.330m

REVISIONS

REV	DESCRIPTION	DATE	BY
C	REVISED SITE LAYOUT	22.10.19	JH
D	REVISED SITE LAYOUT	30.10.19	BH

S|C|P
Transportation Planning : Infrastructure Design
Colwyn Chambers, 19 York Street, Manchester, M2 3BA, Tel 0161 832 4400, www.scptransport.co.uk, Email info@scptransport.co.uk

Client Name:
ROMAL CAPITAL LIMITED

Project Title:
CENTRAL DOCKS, LIVERPOOL

Drawing Title:
SWEPT PATH ANALYSIS OF TURNING HEAD

Drawn By: JH	Date: 22.10.2019
Checked: CT	Scale: 1:500 @ A3
Status: PLANNING	Approved/Unapproved: -

Drawing No. SCP/18299/ATR01 | Rev. D

S|C|P

APPENDIX E

Minimum Scores

3.11 The minimum standard scores which are detailed have been developed through open and transparent testing by partner authorities and stakeholders on Merseyside. The scores have been tried and tested by transport and development professionals on real life developments.

Table 3.1: Minimum Levels of Accessibility: Minimum Scores for 'Medium' 'Large' and 'Major' Developments

Development Type	Location (see key below)	Development Size	Minimum score for walking	Minimum score for cycling	Minimum score for public transport	Minimum score for vehicle access
A1 Retail D2 Assembly & Leisure	Urban Centre	Major & Large	2	5	5	3
		Medium	2	3	3	2
	Other Urban	Major & Large	4	5	6	2
		Medium	4	3	4	1
A3 Restaurants & Cafes A4 Drinking Establishments A5 Hot Food Takeaway	Urban Centre	All	1	4	4	3
	Other Urban	All	4	5	4	1
A2 Financial and Professional Services	Urban Centre	Major & Large	2	5	5	3
		Medium	2	4	5	2
	Other Urban	Major & Large	4	5	6	1 or 3 (2)
		Medium	4	4	4	1
B1 Business (including educational sites)	Urban Centre	Major & Large	2	5	5	3
		Medium	2	4	5	2
	Other Urban	Major & Large	4	5	6	1 or 3 (2)
		Medium	4	4	4	1
B2 Industrial Uses	Urban Centre	Major & Large	n/a	n/a	n/a	n/a
		Medium	2	4	4	1
	Other Urban	Major & Large	2	3	5	1 or 3(2)
		Medium	2	2	4	1
B8 Storage and distribution	Urban Centre	Major & Large	n/a	n/a	n/a	n/a
		Medium	2	4	4	1

Development Type	Location (see key below)	Development Size	Minimum score for walking	Minimum score for cycling	Minimum score for public transport	Minimum score for vehicle access
	Other Urban	Major & Large	2	3	5	1 or 3(2)
		Medium	2	2	4	1
C1 Hotels	Urban Centre	Major & Large	2	5	5	3
		Medium	2	3	5	3
	Other Urban	Major & Large	4	5	5	1
		Medium	4	3	4	1
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
C2 and D1 Residential and non-residential institutions (medical centres, museums and galleries, public halls and meeting places)	Urban Centre	All	2	5	5	3
	Other Urban	All	4	5	6	1

Notes:

(1) Urban Centres = Urban Centres in Liverpool are the City Centre (as defined by the Liverpool Vision City Centre boundary in Appendix F), and District Centres as shown on the UDP/LDF proposals map.

Other Urban = The areas that are not in the City / District Centres.

(2) In locations outside of the main centres, if reduced parking standards can not be applied with on-street parking controls (score 3), then the maximum parking level may be sought (score 1)

Minimum Accessibility Standard Assessment

Minimum Accessibility Standard Assessment

Proposal:

Address:

Completed By:

Access Diagram

Has a diagram been submitted which shows how people move to and through the development and how this links to the surrounding roads, footpaths and sight lines? (This can be included within the Design and Access Statement, see Section 2.25.) If a diagram has not been submitted your application may not be processed.	**Yes / No**

Access on Foot			**Points**	**Score**
Safety	Is there safe pedestrian access to and within the site, and for pedestrians passing the site (2m minimum width footpath on both sides of the road)? If no your application must address safe pedestrian access.			Yes / No
Location	Housing Development: Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F) 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	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. • 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**
	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	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)	
Summary	Box A: **Minimum Standard** (From Table 3.1)	4	**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	0
		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	0
	Medium (two or three bus services or trains an hour)		1	
	Low (less than two bus services or trains an hour)		0	
Other	The proposal contributes to bus priority measures serving the site		1	
	The proposal contributes to bus stops, bus interchange or bus or rail stations in the vicinity and/or provides bus stops or bus interchange in the site		1	
	The proposal contributes to an existing or new bus service		1	
			Total (B):	

Summary	Box A: **Minimum Standard** (from Table 3.1)	5	**Comments or action needed to correct any shortfall**
	Box B: **Total Score**	1	

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	3	**Comments or action needed to correct any shortfall. If conditions are appropriate for the reduced level of parking (see section 4), but this has not been provided, please explain why.**

S|C|P

APPENDIX F

Calculation Reference: AUDIT-726001-180711-0708

TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:

02	**SOUTH EAST**		
	EX	ESSEX	1 days
	SC	SURREY	1 days
04	**EAST ANGLIA**		
	NF	NORFOLK	1 days
	SF	SUFFOLK	1 days
06	**WEST MIDLANDS**		
	WM	WEST MIDLANDS	1 days
07	**YORKSHIRE & NORTH LINCOLNSHIRE**		
	WY	WEST YORKSHIRE	1 days
08	**NORTH WEST**		
	CH	CHESHIRE	1 days
	GM	GREATER MANCHESTER	1 days
	MS	MERSEYSIDE	1 days
11	**SCOTLAND**		
	SA	SOUTH AYRSHIRE	1 days
	SR	STIRLING	1 days

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

Secondary Filtering selection:

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

Parameter: Number of dwellings
Actual Range: 51 to 154 (units:)
Range Selected by User: 50 to 154 (units:)

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/03 to 18/09/17

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	2 days
Wednesday	1 days
Thursday	5 days
Friday	2 days

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

Selected survey types:

Manual count	11 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 undertaking using machines.

Selected Locations:

Town Centre	1
Edge of Town Centre	10

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	2
Residential Zone	4
Built-Up Zone	3
No Sub Category	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.

Secondary Filtering selection:

Use Class:

C3	11 days

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

Population within 1 mile:

10,001 to 15,000	7 days
15,001 to 20,000	2 days
25,001 to 50,000	2 days

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

Population within 5 miles:

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

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

Car ownership within 5 miles:

0.6 to 1.0	4 days
1.1 to 1.5	7 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	11 days

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

PTAL Rating:

No PTAL Present	11 days

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

LIST OF SITES relevant to selection parameters

1 **CH-03-C-01** **BLOCKS OF FLATS** **CHESHIRE**
NEW CRANE STREET

CHESTER
Edge of Town Centre
Residential Zone
Total Number of dwellings: 60
Survey date: FRIDAY *17/10/08* *Survey Type: MANUAL*

2 **EX-03-C-02** **BLOCK OF FLATS** **ESSEX**
WESTCLIFF PARADE
WESTCLIFF
SOUTHEND-ON-SEA
Edge of Town Centre
Residential Zone
Total Number of dwellings: 94
Survey date: TUESDAY *22/10/13* *Survey Type: MANUAL*

3 **GM-03-C-02** **BLOCK OF FLATS** **GREATER MANCHESTER**
WHITWORTH STREET W.

MANCHESTER
Town Centre
Built-Up Zone
Total Number of dwellings: 154
Survey date: THURSDAY *13/10/11* *Survey Type: MANUAL*

4 **MS-03-C-01** **BLOCKS OF FLATS** **MERSEYSIDE**
WAPPING ROAD
WAPPING DOCK
LIVERPOOL
Edge of Town Centre
Development Zone
Total Number of dwellings: 114
Survey date: THURSDAY *16/10/03* *Survey Type: MANUAL*

5 **NF-03-C-01** **BLOCKS OF FLATS** **NORFOLK**
PAGE STAIR LANE

KING'S LYNN
Edge of Town Centre
Built-Up Zone
Total Number of dwellings: 51
Survey date: THURSDAY *11/12/14* *Survey Type: MANUAL*

6 **SA-03-C-01** **BLOCK OF FLATS** **SOUTH AYRSHIRE**
RACECOURSE ROAD

AYR
Edge of Town Centre
Residential Zone
Total Number of dwellings: 51
Survey date: TUESDAY *16/09/14* *Survey Type: MANUAL*

7 **SC-03-C-01** **FLATS** **SURREY**
HEATHCOTE ROAD

CAMBERLEY
Edge of Town Centre
Residential Zone
Total Number of dwellings: 140
Survey date: MONDAY *21/07/08* *Survey Type: MANUAL*

8 **SF-03-C-01** **BLOCKS OF FLATS** **SUFFOLK**
STATION HILL

BURY ST EDMUNDS
Edge of Town Centre
Built-Up Zone
Total Number of dwellings: 85
Survey date: THURSDAY *18/12/14* *Survey Type: MANUAL*

LIST OF SITES relevant to selection parameters (Cont.)

9	**SR-03-C-01**	**FLATS**		**STIRLING**
	FORTHSIDE WAY			
	STIRLING			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:		80	
	Survey date: WEDNESDAY		*18/06/14*	*Survey Type: MANUAL*
10	**WM-03-C-03**	**FLATS**		**WEST MIDLANDS**
	LODE LANE			
	SOLIHULL			
	Edge of Town Centre			
	No Sub Category			
	Total Number of dwellings:		60	
	Survey date: FRIDAY		*21/09/07*	*Survey Type: MANUAL*
11	**WY-03-C-01**	**BLOCK OF FLATS**		**WEST YORKSHIRE**
	EAST STREET			
	CROWN POINT			
	LEEDS			
	Edge of Town Centre			
	Development Zone			
	Total Number of dwellings:		127	
	Survey date: THURSDAY		*13/11/03*	*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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED

MULTI-MODAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	92	0.026	11	92	0.109	11	92	0.135
08:00 - 09:00	11	92	0.056	**11**	**92**	**0.173**	11	92	0.229
09:00 - 10:00	11	92	0.062	11	92	0.083	11	92	0.145
10:00 - 11:00	11	92	0.076	11	92	0.082	11	92	0.158
11:00 - 12:00	11	92	0.058	11	92	0.078	11	92	0.136
12:00 - 13:00	11	92	0.090	11	92	0.072	11	92	0.162
13:00 - 14:00	11	92	0.067	11	92	0.094	11	92	0.161
14:00 - 15:00	11	92	0.083	11	92	0.086	11	92	0.169
15:00 - 16:00	11	92	0.085	11	92	0.064	11	92	0.149
16:00 - 17:00	11	92	0.102	11	92	0.071	11	92	0.173
17:00 - 18:00	**11**	**92**	**0.162**	11	92	0.087	**11**	**92**	**0.249**
18:00 - 19:00	11	92	0.126	11	92	0.067	11	92	0.193
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.993			1.066			2.059

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:	51 - 154 (units:)
Survey date date range:	01/01/03 - 18/09/17
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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

MULTI-MODAL CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	92	0.000	**11**	**92**	**0.005**	11	92	0.005
08:00 - 09:00	11	92	0.003	11	92	0.003	11	92	0.006
09:00 - 10:00	11	92	0.003	11	92	0.003	11	92	0.006
10:00 - 11:00	11	92	0.003	11	92	0.005	**11**	**92**	**0.008**
11:00 - 12:00	11	92	0.003	11	92	0.001	11	92	0.004
12:00 - 13:00	11	92	0.002	11	92	0.005	11	92	0.007
13:00 - 14:00	11	92	0.000	11	92	0.000	11	92	0.000
14:00 - 15:00	11	92	0.001	11	92	0.000	11	92	0.001
15:00 - 16:00	11	92	0.003	11	92	0.002	11	92	0.005
16:00 - 17:00	11	92	0.000	11	92	0.001	11	92	0.001
17:00 - 18:00	**11**	**92**	**0.004**	11	92	0.000	11	92	0.004
18:00 - 19:00	11	92	0.003	11	92	0.000	11	92	0.003
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.025			0.025			0.050

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:	51 - 154 (units:)
Survey date date range:	01/01/03 - 18/09/17
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

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

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	92	0.013	11	92	0.045	11	92	0.058
08:00 - 09:00	11	92	0.023	**11**	**92**	**0.134**	11	92	0.157
09:00 - 10:00	11	92	0.027	11	92	0.095	11	92	0.122
10:00 - 11:00	11	92	0.038	11	92	0.050	11	92	0.088
11:00 - 12:00	11	92	0.048	11	92	0.062	11	92	0.110
12:00 - 13:00	11	92	0.072	11	92	0.077	11	92	0.149
13:00 - 14:00	11	92	0.073	11	92	0.059	11	92	0.132
14:00 - 15:00	11	92	0.068	11	92	0.053	11	92	0.121
15:00 - 16:00	11	92	0.075	11	92	0.050	11	92	0.125
16:00 - 17:00	11	92	0.110	11	92	0.083	11	92	0.193
17:00 - 18:00	**11**	**92**	**0.145**	11	92	0.060	**11**	**92**	**0.205**
18:00 - 19:00	11	92	0.091	11	92	0.032	11	92	0.123
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.783			0.800			1.583

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:	51 - 154 (units:)
Survey date date range:	01/01/03 - 18/09/17
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MULTI-MODAL PUBLIC TRANSPORT USERS
Calculation factor: 1 DWELLS
BOLD print indicates peak (busiest) period

	ARRIVALS			DEPARTURES			TOTALS		
Time Range	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	11	92	0.001	11	92	0.049	11	92	0.050
08:00 - 09:00	11	92	0.003	**11**	**92**	**0.064**	**11**	**92**	**0.067**
09:00 - 10:00	11	92	0.004	11	92	0.021	11	92	0.025
10:00 - 11:00	11	92	0.006	11	92	0.010	11	92	0.016
11:00 - 12:00	11	92	0.015	11	92	0.009	11	92	0.024
12:00 - 13:00	11	92	0.004	11	92	0.012	11	92	0.016
13:00 - 14:00	11	92	0.006	11	92	0.013	11	92	0.019
14:00 - 15:00	11	92	0.006	11	92	0.003	11	92	0.009
15:00 - 16:00	11	92	0.025	11	92	0.004	11	92	0.029
16:00 - 17:00	11	92	0.030	11	92	0.009	11	92	0.039
17:00 - 18:00	**11**	**92**	**0.052**	11	92	0.003	11	92	0.055
18:00 - 19:00	11	92	0.021	11	92	0.002	11	92	0.023
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.173			0.199			0.372

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:	51 - 154 (units:)
Survey date date range:	01/01/03 - 18/09/17
Number of weekdays (Monday-Friday):	11
Number of Saturdays:	0
Number of Sundays:	0
Surveys automatically removed from selection:	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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

Appendix 5B

Travel Plan

SCP

Transportation Planning : Infrastructure Design

Travel Plan

Proposed Mixed Use Development

Plots C02, Central Docks, Liverpool Waters, Liverpool

Romal Captial Limited

November 2019

Doc Ref: CT/18299/TP/02

Prepared by:	Craig Thomson / Jeanne Watrin
Checked by:	PT

Document Revision Control

Revision	Date	Status	Prepared By	Approved By
00	03.12.18	Final	CT	PT
01	30.10.19	Issue	CT / JW	PT
02	15.11.19	Issue	CT	PT

Colwyn Chambers
19 York Street
Manchester
M2 3BA

T: 0161 832 4400

E: info@scptransport.co.uk
W: www. scptransport.co.uk

CONTENTS

1.0 INTRODUCTION

Background

1.1 The development proposals consist of the construction of 538 apartments along with 400.6m^2 of ground floor commercial uses and associated parking on Plot C02 of the Central Docks Neighbourhood within the Liverpool Waters Masterplan.

1.2 This travel plan aims to cover all uses at the site, including both residential and commercial uses. The application primarily features residential apartments with smaller areas of commercial floorspace. As such, this travel plan focuses on the residential aspect of the scheme, although many of the measures included in this document can be usefully applied to the occupiers of the commercial floorspace.

1.3 This travel plan sets out the developer's commitment to reducing the number of vehicular trips generated by the development and identifies the key measures which will be developed as part of the travel plan implementation.

1.4 This travel plan relates solely to the proposed development on plot C02 of Liverpool Waters. However, it is anticipated that this travel plan will be replaced by the wider Liverpool Waters Travel Plan as and when it comes forward.

Travel Plan Approach

1.5 The main emphasis of this travel plan will be on the journeys made by residents and staff at the site.

1.6 Implementing a travel plan can bring a number of benefits to a site, including helping to minimise the potential increase in traffic resulting from a development, helping to manage and reduce carbon emissions, and assisting with promotion of healthy lifestyles. As a result, a travel plan forms a key stage in the forward planning process. A travel plan is a 'living document' that should be regularly reviewed to ensure its effectiveness.

1.7 This travel plan focuses on influencing greater use of sustainable transport by residents and staff when travelling to and from the site, and will establish and promote the sustainable transport links available. The travel plan will also suggest measures to reduce reliance on single occupancy private vehicle use and to reduce the overall need and distance that residents and staff travel.

2.0 TRAVEL PLAN BACKGROUND

2.1 Travel plans are dynamic, living documents that should be updated regularly to ensure that the aims and objectives represent the current situation in respect of travel and access. A development-related travel plan will normally be prepared alongside a transport assessment. The travel plan should then continue to be implemented, for the life of the development.

2.2 Travel plans are designed to be flexible to suit individual sites and their individual local characteristics. As such, they should be developed with consideration for the scale of the development and the likely impact on travel behaviour as a result of any potential measures.

Travel Plan Benefits

2.3 Travel plans can result in a variety of benefits to the occupiers of a development and the wider community, as well as address a range of issues, including:

- Promote healthy lifestyles and sustainable, vibrant communities;
- Provide adequately for all users, with a variety of mobility needs;
- Reduce demand for car parking, thereby enabling more efficient land use;
- Reduce pressure on highway capacity, particularly at peak times;
- Improve social inclusion;
- Cut carbon emissions and their contribution to climate change;
- Reduce road danger and protecting vulnerable road users; and
- Improve local air quality, while reducing noise pollution.

2.4 A travel plan provides benefits to all parties, including the developer, the site occupants and the local authority, which can help in gaining widespread commitment to its implementation and continuing operation.

Policy Context

2.5 Travel plans are secured through a policy framework that extends from national through to local level when dealing with new development proposals.

2.6 Travel plans are currently secured within the planning system within the context of the government's **National Planning Policy Framework** (NPPF). The NPPF was revised in 2018 and further updated in February 2019. This last update did not alter anything in relation to transportation policy but did clarify that the presumption in favour of sustainable development would not apply if there was a negative impact on habitats.

2.7 The NPPF aims to provide a framework within which locally-prepared plans for housing and other development can be produced. The framework aims to streamline the planning process, making it more accessible at neighbourhood and community level and simplifying the decision making process.

2.8 The NPPF aims to promote sustainable transport, and ensure that transport issues are considered from the earliest stages of plan making and development proposals so that:

- The potential impacts of development on transport networks can be addressed.
- Opportunities from existing or proposed transport infrastructure, and changing transport technology and usage are realised.
- Opportunities to promote walking, cycling and public transport use are identified and pursued.
- The environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account.
- Patterns of movements, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places.

2.9 Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health.

2.10 The document states that all developments which generate significant amounts of movement should be required to provide a travel plan, and that the application should be supported by a transport statement or transport assessment so that the likely impacts of the proposal can be assessed.

2.11 The NPPF is supported by a number of **Planning Practice Guidance** notes (2014). One such note provides guidance on 'Travel Plans, Transport Assessment and Statements in Decision-Taking'. The guidance specifies that travel plans should be:

- Proportionate to the size and scale of the development;
- Established at the earliest practicable possible stage of a development proposal;
- Be tailored to local circumstances; and
- Be brought forward through collaborative working with the Local Planning Authority, transport operators, along with communities and local businesses where relevant etc.

2.12 The guidance note goes on to provide suggestions for the content of a travel plan in terms of baseline data, the nature of the development, proposals to reduce the need to travel by all modes of transport, and monitoring.

3.0 SITE AUDIT

Existing Site

3.1 The site is located approximately 1.3km to the north-west of Liverpool city centre and is part of Waterloo Quay, comprising of derelict dock and scrub land.

3.2 The development site is bound by an area of infill of historic dock to the north, which will be developed as part of the Liverpool Waters Masterplan, and Waterloo Dock to the east. To the south and west, the site is bound by derelict dock and scrub land as well as the river Mersey to the west. The Liverpool Waters Masterplan will result in the proposed Isle of Man Ferry Terminal to the south of the development site, separated by the recently approved Northern Link Road which will connect the terminal to Waterloo Road running along the western edge of the site.

Development Proposals

3.3 The development proposals consist of the construction of 538 apartments along with 400.6m^2 of ground floor commercial uses and associated parking on Plot C02 of the Central Docks Neighbourhood within the Liverpool Waters Masterplan.

3.4 Vehicular access to the development will be provided from a priority-controlled access located to the north-west of the site, off the approved new spine road linking Waterloo Road to the planned Isle of Man Ferry Terminal.

3.5 Pedestrian access will be provided from the new spine road and, whilst not part of the development proposals, future aspirations for the area include a pedestrian and cycle link between the proposed Isle of Man Ferry Terminal and Princes Parade. As part of the development proposals a pedestrian link will be provided along the eastern boundary of the site, adjacent to the dock, which will connect to the future link, providing a direct route for pedestrians into the city centre.

3.6 The car park will provide a total of 165 spaces (including 10 disabled bays) for the residential use which equates to a 31% parking provision. LCC's parking standards are set out in the 'Ensuring a Choice of Travel Supplementary Planning Document' with the car parking standards for apartments in this location being an average of 1 space per dwelling. Whilst it is acknowledged that the proposed provision falls below LCC's standards, this is considered acceptable in this instance given the sites sustainable location and that it will help to promote travel by sustainable modes.

3.7 In addition, 280 secure cycle parking spaces will be provided, which equates to a 52% cycle parking provision, along with 9 visitor cycle parking hoops for up to 18 bikes, distributed throughout the site.

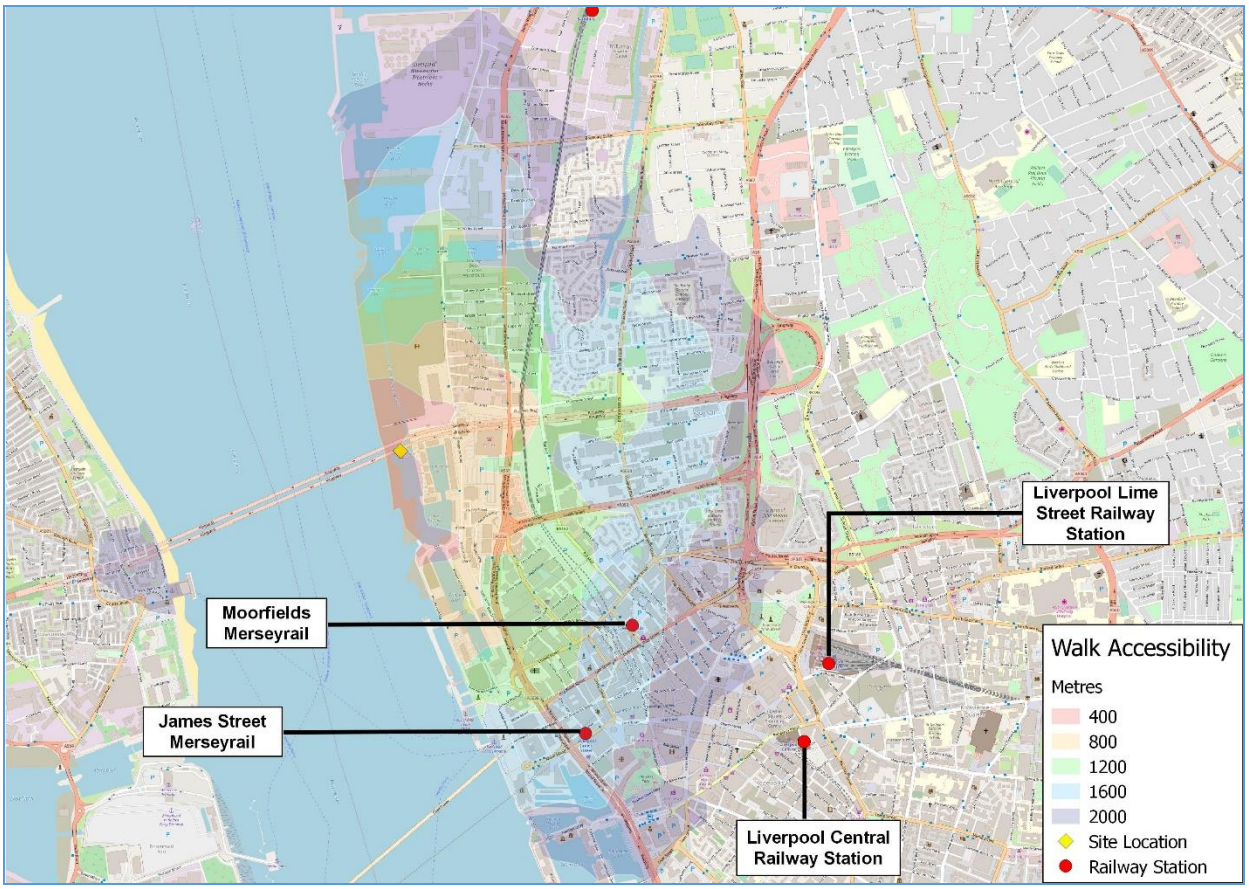
Accessibility

Pedestrian Accessibility

3.8 The MfS states that walkable neighbourhoods are typically characterised by having a range of facilities within 10 minutes' (up to about 800m) walking distance of residential areas which residents may access comfortably on foot. However, it goes on to state that this is not an upper limit and that walking offers the greatest potential to replace short car trips, particularly those under 2km.

3.9 Industry standard GIS TRACC software has been used to assess the accessibility of the development by foot for a 2km walk distance from the site, as shown on **Figure 3.1** below. The plan shows the reachable areas within 400m coloured bands from the site.

Figure 3.1 – Walking Accessibility 2km Isochrone

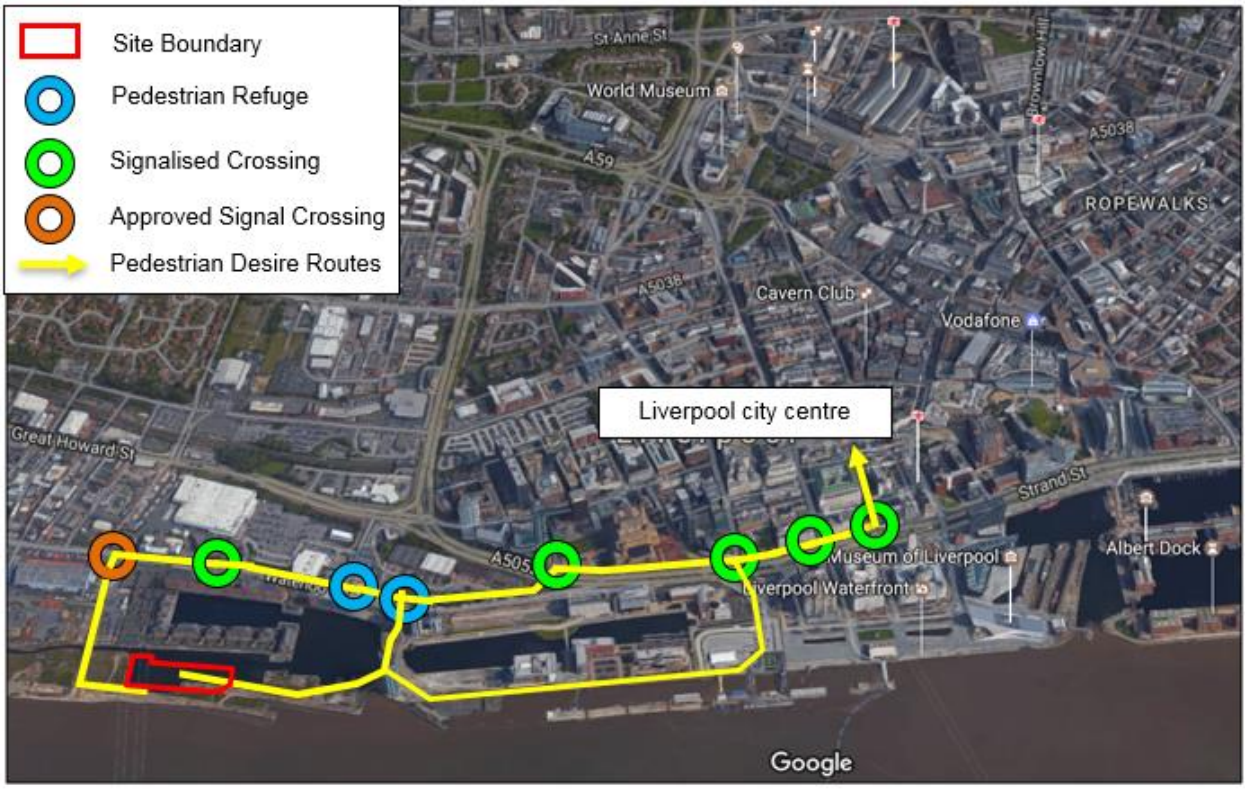


3.10 The site is within acceptable walking distance of Liverpool city centre and the vast array of amenities the city of Liverpool has on offer. The site is also within acceptable walking distance of numerous transport facilities. The closest bus stop is located on Waterloo Road approximately 100m north of the approved Waterloo Road / Northern Link Road junction. Moorfields and James Street Merseyrail stations can both be accessed in under a 19-minute walk time (or <1.4km walk distance).

3.11 The topography of the local area is generally flat and conducive to pedestrian trips, and the area benefits from natural surveillance from the businesses that abut all the main walking routes. The local area is well lit and generally benefits from wide footways and dropped kerbs.

3.12 Pedestrian crossings are provided at various points along Waterloo Road and the A5052 New Quay road on the route to Liverpool city centre, as shown on **Figure 3.2** below. The existing footbridge connecting the Central Docks, where the proposed Isle of Man Ferry Terminal will be located, to Princes Parade will also be refurbished by Peel, providing further pedestrian connections to the surrounding pedestrian network.

Figure 3.2 - Pedestrian Crossing Facilities Plan



3.13 It should also be noted that as part of the approved Northern Link Road connecting Waterloo Road to the planned Isle of Man Ferry Terminal, high quality pedestrian and cycle links will be provided and the junction with Waterloo Road will be significantly upgraded to a signal controlled junction with signalised crossings provided across the link road and the northern and eastern arms of the junction. The location of the approved signal crossing is also shown on **Figure 3.2** above.

3.14 Overall, the site benefits from high levels of accessibility by foot, with Liverpool city centre only a short walk from the site, providing opportunities for linked shopping, leisure and recreation trips as well as transport connections.

3.15 LCC have requested a £100,000 contribution towards enhancing pedestrian/cycle connectivity. However, this is not considered to be justified for the following reasons:-

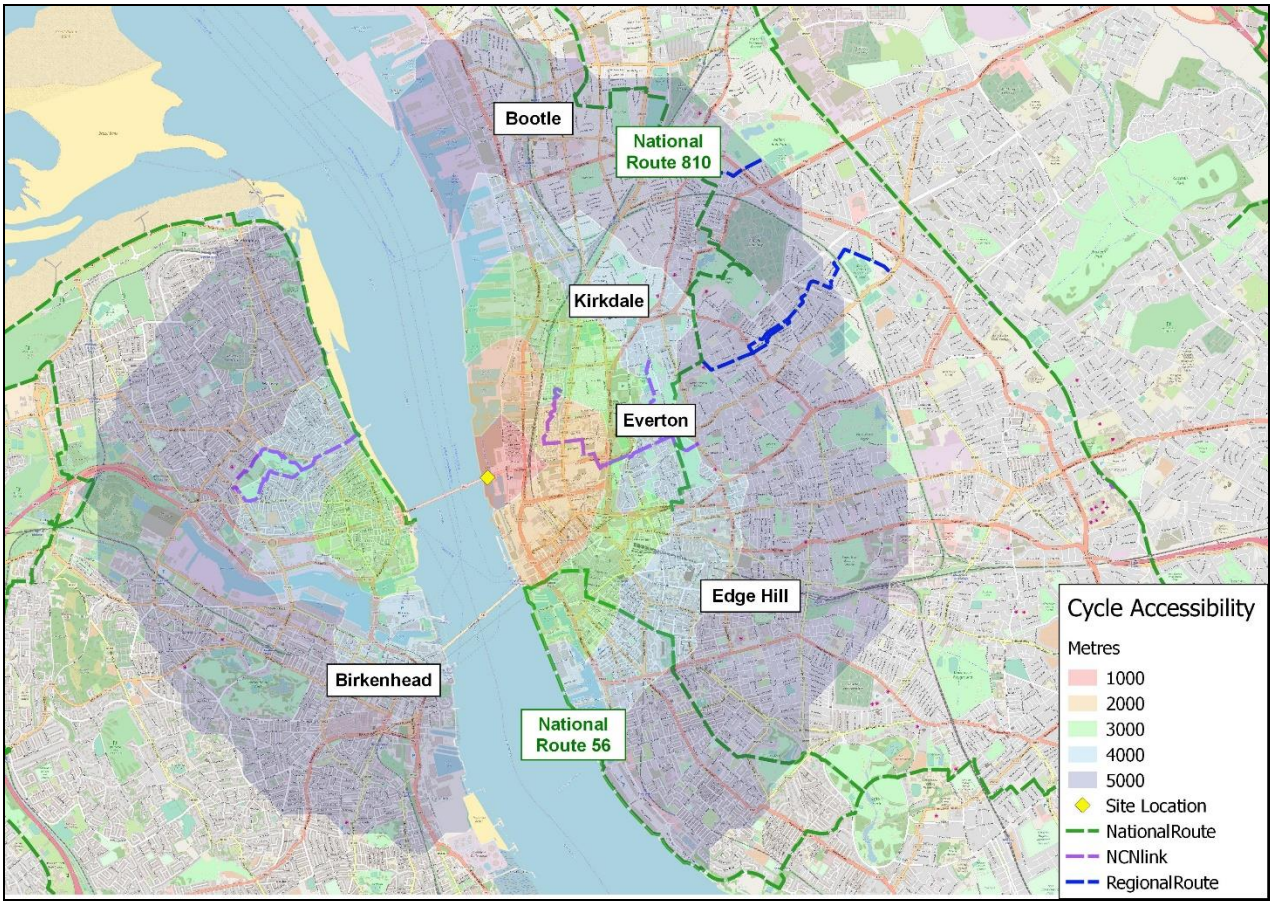
- High quality pedestrian and cycle routes will be introduced as part of the link road in addition signalised crossing at the junction where the link road meets Waterloo Road;
- The development will provide a high-quality pedestrian / cycle walkway along the frontage to the dock which will connect into the footway provided by the IoM ferry to the south and future connections into the wider central docks area to the north;
- The existing pedestrian and cycle infrastructure is considered to be of a good standard with crossings provided at various points along Waterloo Road and the A5052 New Quay road.

Cycle Accessibility

3.16 Transport policy identifies that cycling represents a realistic and healthy option to use instead of the private car for making journeys up to 5km as a whole journey or as part of a longer journey by public transport.

3.17 GIS TRACC software has again been used to assess the accessibility of the site by bicycle, for a 5km cycle distance and is shown on **Figure 3.3** below:-

Figure 3.3 - Cycle Accessibility 5km Isochrone



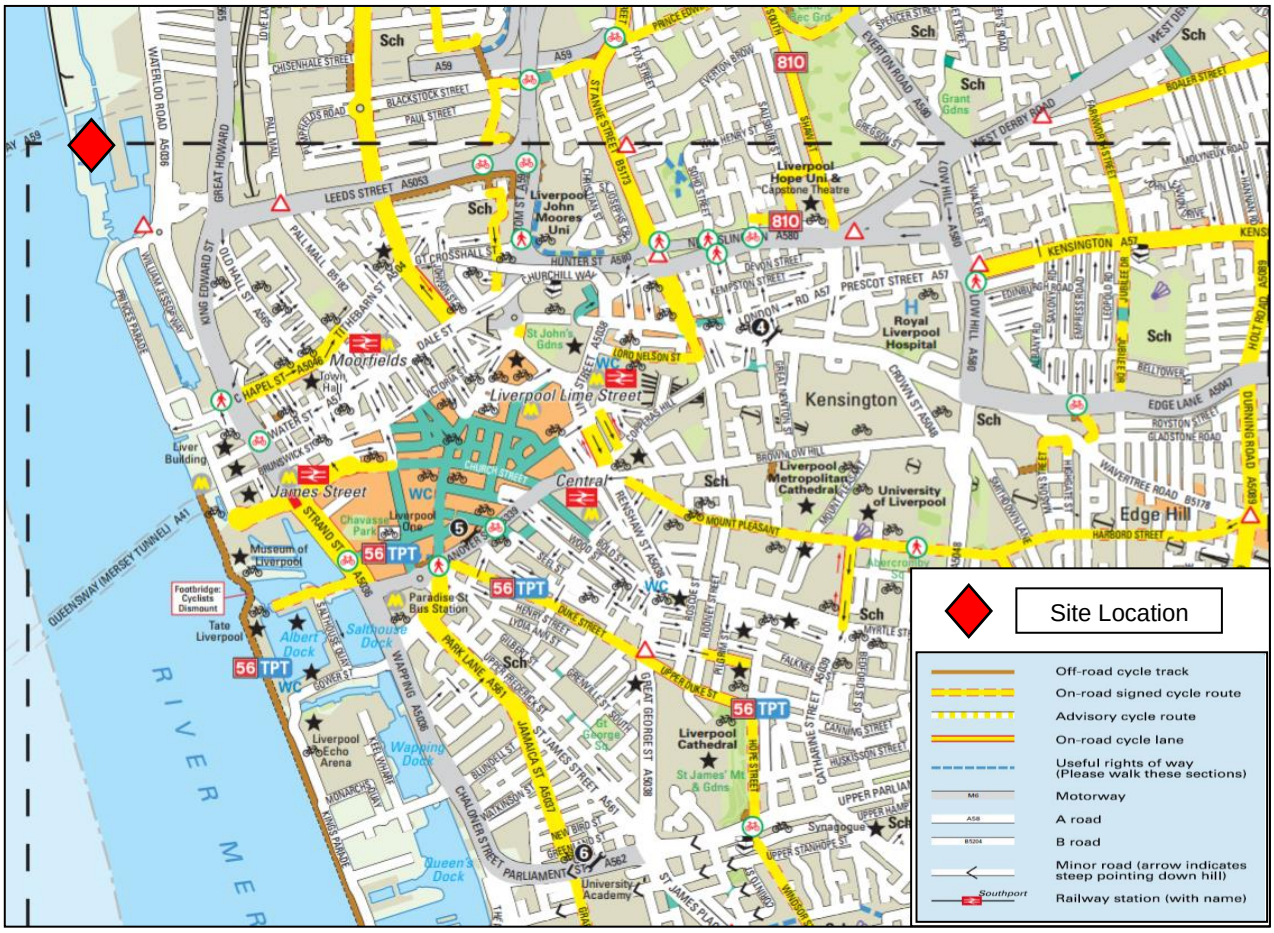
3.18 The plan demonstrates that all of Liverpool city centre and the nearby areas of Bootle, Kirkdale, Everton and Edge Hill, amongst others, are all located within the 5km catchment area from the development site. The topography of the area is generally conducive to cycling, so the site is therefore well located to encourage cycle journeys for prospective residents.

3.19 There is a City Bike station located on Waterloo Road approximately 120m south of the approved Waterloo Road / Northern Link Road junction which will encourage prospective residents that do not own a bicycle to cycle between the development site and Liverpool city centre.

3.20 **Figure 3.3** also shows the sites proximity to the National Cycle Network Route 56 and 810. The two routes provide a useful connection in a north-west south-east direction from the development site and are made up of sections of both on road and off-road cycle routes. Route 810 provides a link from Liverpool city centre to Formby via Crosby and Hightown and route 56 links Liverpool to Birkenhead, Wallasey and New Brighton via the Seacombe Ferry.

3.21 **Figure 3.4** below shows the available cycle facilities in the vicinity of the site.

Figure 3.4 – Cycle Facilities Plan



3.22 As the application site is within an acceptable cycle distance of a range of areas and associated facilities, cycling is considered to be a viable alternative to private car use for prospective residents of site, particularly when secure cycle parking is also being proposed.

Public Transport

3.23 The nearest accessible bus stop to the site is located on Waterloo Road, approximately 100m north of the approved junction.

3.24 In addition, a further bus stop is situated around 300m northeast of the approved junction, on the A565 Great Howard Street. Details of the bus services and frequencies which use these stops are provided in **Table 3.1** below:-

Table 3.1 – Bus Services:

Service No.	Route	Core Frequency of Services
136	Waterloo - Liverpool	Five services Daily – Monday to Friday
800	Speke, Liverpool - Seaforth, Litherland	One service Daily – Monday to Friday
838	Hunts Cross, Liverpool - Seaforth, Litherland	One service Daily – Monday to Friday

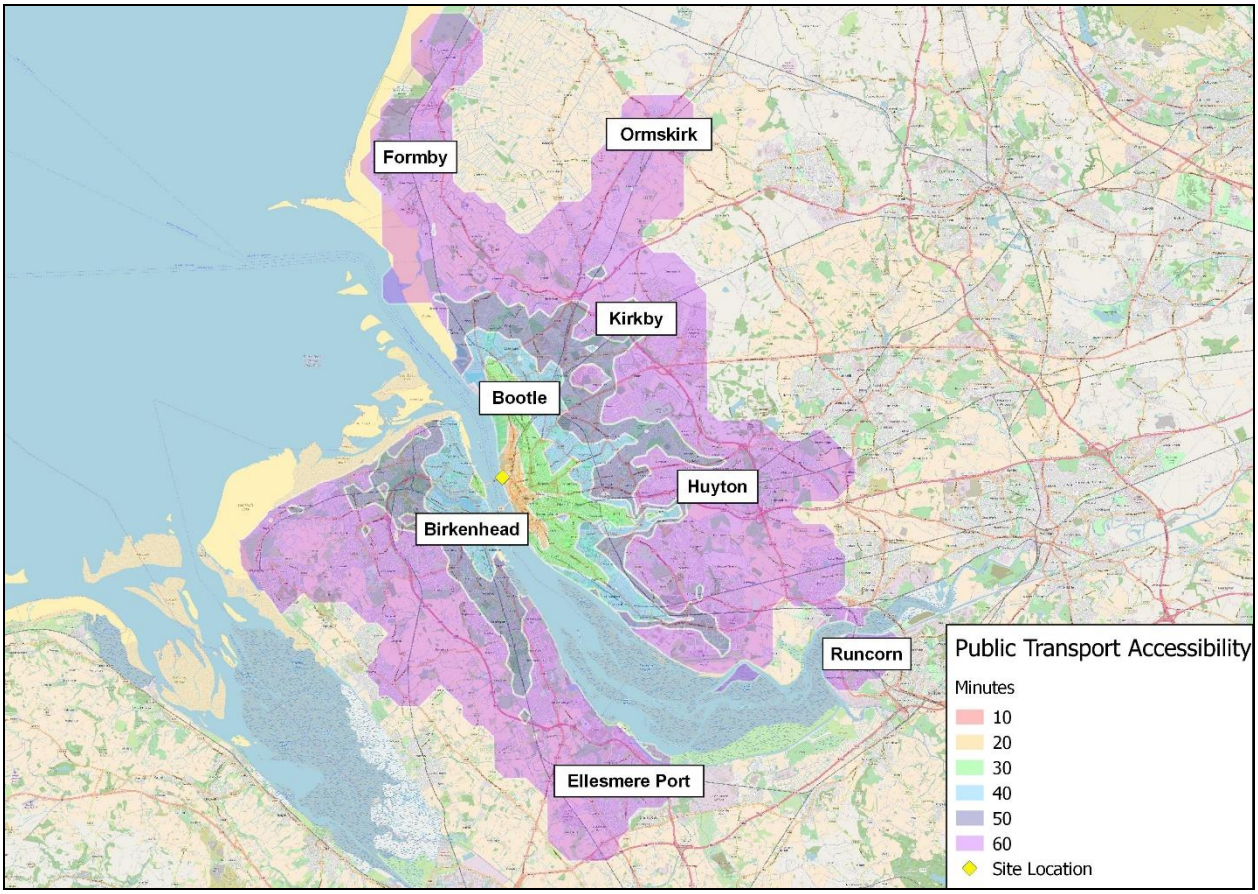
3.25 The above table demonstrates that prospective residents and employees of the site will have access to bus services stopping very close to the site which provide access to key destinations.

3.26 In terms of rail services, Moorfields Merseyrail station and James Street Merseyrail station is located 1.4km southeast of the site and are both therefore well within an acceptable walking and cycling distance. Both railway stations offer regular direct services throughout the week including services approximately every 15 minutes to Southport, Bootle and Hunts Cross. The stations also offer further connecting services to Manchester, Warrington and Birkenhead, amongst others.

3.27 Both railway stations are well within the acceptable cycling (5km) catchment from the development site, and provide good connections to employment and leisure opportunities. Also, Liverpool Lime Street Station is within the acceptable cycling distance from the site and is the primary rail station in Liverpool that provides connections to locations both regionally and nationally. It is served by East Midlands Trains, London Midland, Merseyrail, Northern, Transpennine Express and Virgin Trains at a high frequency. The above services run directly to Birmingham New Street, Manchester Stations, London Euston and Norwich, amongst others.

3.28 The level of accessibility by public transport has been analysed using GIS TRACC software to assess the accessibility of the site and is shown on **Figure 3.5** below**.** The figure illustrates the distance that can be travelled within 60 minutes by public transport to and from the site, which includes the time taken to walk to the bus stops.

Figure 3.5 – 60 Minute Public Transport Catchment Isochrone



3.29 The above demonstrates that the site is within a close proximity to a number of bus and railway links, serving both the local area and other destinations further afield. The figure shows that key areas of Liverpool, Birkenhead, Bootle, Runcorn and Kirkby, amongst others, are in an acceptable 60-minute commute time.

3.30 It is noted that Merseytravel have suggested that the development provides adequate access to the public transport network and fund the provision of public transport infrastructure (i.e. bus stops and bus service). It should be noted that as part of the wider Liverpool Waters development a public transport enhancement Strategy is to be development detailing how the proposed transport improvements will be implemented progressively alongside development. Having regard to this and as no public transport improvements are to be provided as part of the IoM permission, it is not reasonable for this development to fund such improvements.

Summary

3.31 The above assessments demonstrate that the site is in an accessible location with good potential for use of sustainable transport modes, and has a large range of local amenities within close proximity.

4.0 TRAVEL PLAN ADMINISTRATION

Travel Plan Coordinator

4.1 The travel plan will be managed by a travel plan coordinator (TPC). The TPC will provide a key role in delivering a successful travel plan for the development. The TPC role for the residential development would most commonly be overseen by a Management Company, which in time could evolve to be overseen by the residents of the site themselves.

4.2 The TPC role will be established prior to the opening of the development, and will act as the fulcrum for the development of the travel plan measures and the day to day operation of the plan. Once appointed, the TPC will act as the main contact for the travel plan and will be responsible for implementing plan measures, involving new residents, maintaining a database and monitoring the effects of implementation.

4.3 The TPC will inform the LPA and the appropriate local public transport operators of their contact details. Similarly, the TPC will obtain the contact details of the owners and complete a 'Contact' form to provide easy reference when dealing with travel plan matters.

4.4 The TPC will be the first point of contact for all residents and other outside organisations in all matters regarding travel to and from the site, therefore the TPC will set up a file for all correspondence relating to each travel plan, and keep it up-to-date.

4.5 If required, the TPC will nominate other people to whom travel plan duties can be delegated; however, the designated TPC will retain overall responsibility for all matters pertaining to the travel plan for each element of the development. The TPC will record details of nominated persons along with their delegated duties within each respective travel plan file, if necessary.

4.6 The primary target of the travel plan will be to replace private car journeys with other means of more sustainable transport. The majority of private car journeys are commuter trips made to and from a workplace; this therefore represents a useful starting point to target.

Funding

4.7 Appropriate funding will be allocated by the developer at the start of the travel plan process to cover the costs involved in administering the travel plan over an agreed time period.

4.8 The funding will cover all costs relating to the TPC, implementation of measures, marketing of the travel plan, annual monitoring and submission of a review to LCC. The funding stream will allow the travel plan to operate for a minimum of five years, subject to LCC requirements.

5.0 TRAVEL SURVEY

5.1 Travel surveys are undertaken in order to understand how residents travel, how they would like to travel and what would encourage them to make those changes; repeat surveys are used to monitor ongoing travel patterns, over time.

5.2 As part of the travel plan, regular residents' travel surveys will be required. The survey responses provide an indication of what targets would be most appropriate, and which measures would be most successful in helping to achieve them.

5.3 The surveys will be produced by the TPC and disseminated to residents (and staff at the commercial units) within three months of first occupation of the site, to collect the following data:

- Destination postcode (residents) / Origin postcode (staff);
- Typical working patterns;
- Mode of travel to work;
- Measures that would encourage use of active travel modes or public transport;
- Barriers to use of active travel modes / public transport.

5.4 The TPC will strive to achieve a 30% return rate for surveys. The survey responses will be entered into a spreadsheet to enable modal shift to be tracked over time, and provide guidance on which measures are most likely to encourage modal shift. The findings will be used to update the travel plan and to confirm or modify the identified targets and measures. The travel plan will be resubmitted to LCC within 3 months of the survey closing.

5.5 The TPC will agree the annual targets with the LPA within 1 month of submission of the survey review reports. The agreed short-term annual targets will form the basis of the annual review and monitoring process to gauge the effectiveness of the travel plan.

5.6 All data collected from the travel survey will be subject to the provisions of the Data Protection Act. To ensure confidentiality, the TPC alone will manage the database and be responsible for the release of information, with all data being used solely for travel plan purposes.

Future Surveys

5.7 Changes to existing travel patterns, as derived from the data, will inform the annual review process. The annual review will summarise the data collected, and propose revised initiatives and measures where targets have not been met, including a revised action plan.

5.8 The TPC will undertake a survey annually (at the same time of year), and submit the results of the annual review to LCC for review and discussion, within 3 months of the monitoring period. Surveys will be undertaken for the first five years of the development, following occupation. The TPC will be responsible for the surveys, together with delivery of the travel plan.

6.0 TRAVEL PLAN TARGETS

Objectives

6.1 Objectives are required to give a travel plan direction and focus. Targets are measurable and help to indicate whether the high-level objective aspirations have been met. Targets should be linked to objectives and be SMART (Specific, Measurable, Achievable, Realistic and Time-related). Indicators determine whether the targets have been met and thus if objectives have been achieved, and as such will also be used to highlight the progress of the travel plan.

6.2 The travel plan recognises that there is not one specific mode of transport suitable for all residents and staff and that there need to be a number of alternatives in place. The travel plan is intended to promote flexibility and choice, focusing efforts on encouraging a reduction in car use rather than prohibiting it.

6.3 This travel plan has been prepared to achieve the following objectives:

- Reducing the transport impact of the development, by reducing reliance upon the car and improving awareness and usage of alternative modes;
- Increasing opportunities for residents, by promoting walking, cycling, public transport and car sharing;
- Minimising the total travel distance of residents and staff;
- Promoting healthy lifestyles and sustainable, vibrant communities, accessible by all.

Modal Share Targets

6.4 Baseline travel surveys will be carried out and analysed by the TPC, which will establish the existing travel patterns of residents / staff and will inform the initial year one Modal share targets. The targets will be updated following annual travel survey analysis to ensure they are representative of SMART targets based on the actual population.

Indicators

6.5 The TPC will be responsible for implementing measures at the site, which are set out in an action plan later in this report. The measures will be reviewed annually following monitoring, to identify whether the programmed measures are the most appropriate, and if not, what replacement measures need to be identified. Any new measures will be set out in a revised action plan, alongside timescales for implementation.

6.6 Milestones to assess progress against the travel plan objectives and targets include:

- Issue of travel information to residents upon site occupation;
- Uptake of the various measures, including interest in car sharing.

6.7 Further milestones are programmed into the implementation timescale and will be reviewed on an ongoing basis.

7.0 TRAVEL PLAN MEASURES

7.1 A travel plan is the management tool for implementing measures that promote sustainable transport. A successful and cost-effective travel plan is one that implements measures that are relevant and realistic to the development. Consultation with residents is therefore key to achieving support from those who the measures are targeted at and avoiding measures which may be unpopular.

Travel Awareness

7.2 Good accurate information on the range of services and travel initiatives available will be a critical element of a successful travel plan.

7.3 The TPC will make new residents aware of the existence of the travel plan by providing them with a welcome pack summarising the travel plan, both within the sales suite prior to rental / purchase, as well as upon occupation of the property. This will help to ensure that sustainable travel patterns are created from the outset.

7.4 The welcome pack information would include, though not exclusively, the following:

- An introductory leaflet providing a summary of the travel plan, listing any key measures along with the contact details of the TPC;
- A map showing the location of the development in relation to the local area, highlighting key local facilities such as health, education and shopping within easy walking distance of the site;
- Public transport information, including:
  - A map showing the location of the accommodation in relation to the local area, highlighting nearby bus stops, and tram and train stations;
  - Details of existing bus services from nearby stops.
- Active travel information, including:
  - A map showing local cycle and walking routes;
  - The location of Citybike stations;
  - Details of local bike repair shops/retailers, along with available training and maintenance sessions.
- Information about car sharing;
- Details of local taxi firms.

7.5 Travel information noticeboards (TIBs) will be installed in communal areas, as well as within the commercial units, to encourage resident and staff travel via sustainable modes. They will provide up-to-date travel information, promotion of sustainable travel events including Bike Week / Walk to Work Week, and contact details for the TPC.

7.6 The TPC will promote and encourage participation in national and local events, organised by others, aimed at promoting awareness of sustainable transport. The range of events that will be promoted will be agreed and co-ordinated with LCC.

Walking

7.7 The TPC will encourage walking by implementing the following initiatives:

- Raise awareness of the health benefits of walking through promotional material on noticeboards and in welcome pack;
- Provide a map showing walking routes, indicating distances and times at appropriate intervals to the site;
- Promote the www.walkit.com website for journey planning on foot (http://walkit.com/cities/liverpool/).
- Liaise with a local taxi firm to provide competitive rates in case of emergency to replace a regular walk journey; and
- Promote walking to walk, for example, using national events such as Walk to Work Week (May, annually) (www.walktoworkweek.org.uk/).

Cycling

7.8 The TPC will encourage cycling by implementing the following initiatives:

- Promote the availability of cycling information, including route maps and useful tips and guidance, on the Sustrans website (http://www.sustrans.org.uk/) as well as on the Merseytravel website (http://www.merseytravel.gov.uk/travelling-around/cyclingandwalking/Pages/Cycling.aspx)
- Provide information to residents/staff on any local cycle proficiency 'Bikeability' courses;
- Encourage signing up to the 'BikeBUDi' scheme which offers a journey matching service for those who would like a cycling partner to help build confidence, skill level etc.
- Promote Bike Week in June (http://bikeweek.org.uk/);
- Investigate interest in setting up a Bicycle User Group to encourage residents to cycle to work;

- Provide details of the Citybike scheme including docking station locations and tariffs (https://www.citybikeliverpool.co.uk/) ; and
- To assist in improving conditions for cycling locally, the TPC will establish contact with the cycling officer at LCC to ensure that up-to-date information is available regarding cycle routes and other facilities for cyclists in the vicinity of the site.

Public Transport Information

7.9 The TPC will encourage use of public transport by implementing the following initiatives:

- Provide up-to-date public transport information including route maps within welcome packs and on noticeboards;
- Provide details of websites and telephone advice services to enable residents/staff to obtain details on their individual journeys, including Merseytravel's travel website (http://www.merseytravel.gov.uk/Pages/Welcome.aspx). Liaise regularly with public transport operators to ensure that information remains valid; and
- Work with the local authority to ensure local bus stops remain to an acceptable standard.

Car Sharing and Car Clubs

7.10 The TPC will set up an informal car sharing scheme within 3 months of occupation of the site. Information about the scheme will be placed in the welcome pack and on noticeboards.

7.11 Should sufficient demand be present, the TPC will set up a 'formal' car share scheme for residents using online software. Interest in a formal scheme will be assessed as part of the first annual review of the travel plan.

7.12 The TPC will also promote the potential for car club usage. Enterprise Car Club currently operates in close proximity to the site and reduces the need for private car ownership.

Marketing Summary

7.13 The TPC will be responsible for providing residents and staff with an overview of the travel plan in order to promote a range of modes of transport and increase awareness of the alternative modes.

7.14 As noted above, the following marketing tasks will be undertaken as part of the travel plan implementation:

- Development of materials to promote the travel plan, including a welcome pack providing a summary of the travel plan and key measures for implementation, to be disseminated to residents upon initial interest in the properties, as well as upon occupation;
- Resident and staff travel information noticeboards will be set up, to promote new and ongoing measures along with events, for example, linked to Bike Week and European Mobility Week. Noticeboards will be maintained by the TPC on a biannual basis, or as required.
- Updated information will be communicated to residents and staff, to identify any changes in bus timetabling, local area facilities, cycle training and maintenance courses etc.

8.0 PLAN MONITORING AND REVIEW

8.1 To establish the success of the travel plan, an effective monitoring and review process must be agreed. Monitoring will ensure that there is compliance with the travel plan, assess the effectiveness of the measures and provide the opportunity for review of targets.

Monitoring

8.2 Monitoring of the plan is important for the following reasons:

- It demonstrates to the local authority the effectiveness of measures implemented and the progress being made towards travel plan objectives;
- It justifies the commitment of the TPC and of other resources;
- It maintains support for the travel plan by reporting successes;
- It helps to identify any deficiencies within the travel plan, including any measures that are not effective; and
- The data can be shared with any other nearby residential travel planning sites, as well as inform the local authority and public transport operators of local travel patterns.

8.3 The surveys will be used to monitor the number of residents (and staff) walking, cycling, travelling by car and public transport to and from the site. The results will then be used to identify initial mode share targets.

8.4 The TPC will monitor travel patterns associated with the site on a regular basis. Surveys will take place on an annual basis for the first five years of site operation.

Reviewing

8.5 The TPC will undertake an annual review of the travel plan following monitoring, in conjunction with LCC. This review will be important in assessing the effectiveness of measures implemented, to identify areas where modification may be necessary. In particular the following will be assessed:

- The level of car / non-car usage at the site; and
- Comments received from residents and staff.

8.6 The TPC will use data collected during the survey to compare the mode share statistics to the targets set for the development. The TPC may choose to revise the targets, with agreement with the local authority, in order to maintain a realistic travel plan goal.

8.7 The TPC will also use spot check data and may choose to remove ineffective measures and/or initiatives and implement new measures, in agreement with the local authority.

8.8 The TPC will prepare a progress report to include the results of monitoring, details and success of measures implemented and an action plan for the forthcoming period. This will be submitted to the local authority for their review and agreement within 3 months of surveys being undertaken. This will take place for the first five years; any further reporting will be undertaken by agreement with the local authority.

9.0 ACTION PLAN

9.1 The action plan follows, and includes measures, monitoring and marketing actions to be implemented, timescales for implementation, responsibilities and an indication of the budget required in order to deliver each action.

Action	Target Date	Responsibility	Budget Indication
Initial Setup – Prior to Occupation			
Appointment of TPC	At least 1 month prior to site occupation	Developer	Staff time
Exchange contact details with relevant LCC Officers	At least 1 month prior to site occupation	TPC	Staff time
Obtain public transport info, maps, car sharing information etc. to provide to residents & staff	At least 1 month prior to site occupation	TPC	Staff time
Procure and produce information to provide to residents & staff	2 weeks prior to site occupation	TPC	Staff time + materials
Negotiate with local taxi firm for reduced price travel	2 weeks prior to site occupation	TPC	Staff time
Upon Occupation			
Issue travel info to residents and staff	Upon occupation	TPC	Staff time + printing
Ensure travel noticeboards are erected and populated, and further leaflets/info are available	Upon occupation	TPC	Staff time + noticeboards
Within 3 Months of Occupation			
Issue travel survey to residents/staff; analyse and issue final travel plan to LCC within 3 months of survey completion	Within 3 months of occupation	TPC	Staff time
Promote any local area cycle training and cycle maintenance sessions	Within 3 months of occupation	TPC	Staff time
Set up informal car share scheme	Within 3 months of occupation	TPC	Staff time

Ongoing Tasks			
Provides updates re any service or provision changes with regard to local transport	6 monthly to align with seasonal timetable changes	TPC	Staff time
Implement measures in line with requirements / interest, including promotion of national annual events such as Bike Week and Walk to Work Week	Ongoing	TPC	Staff time
Annual Monitoring / Review			
Conduct repeat travel survey at same time of year as baseline survey, for four years	For four years after baseline survey completed	TPC	Staff time + printing
Analyse responses, produce progress report and submit to LA	Within 1 months of survey completion	TPC	Staff time
Report updates to residents & staff using noticeboards	Within 1 month of analysis taking place	TPC	Staff time + printing
Continue regular monitoring as set out and agreed with LA	As agreed with LA	TPC	Staff time

10.0 CONCLUSION

10.1 This travel plan reviews the existing transport facilities at the development site and identifies a range of measures for implementation by the travel plan coordinator to reduce overall car usage and promote the use of sustainable transport modes.

10.2 Through the delivery of the measures discussed within this travel plan, the objectives identified will be fulfilled. These include:

- Reducing the transport impact of the development, by reducing reliance upon the car and improving awareness and usage of alternative modes;
- Increasing opportunities for residents, by promoting walking, cycling, public transport and car sharing;
- Minimising the total travel distance of residents and staff; and
- Promoting healthy lifestyles and sustainable, vibrant communities, accessible by all.

10.3 This document will assist in ensuring that the development is sustainable.

Appendix 6A

Air Quality Assessment Inputs

6A Air Quality Appendix

Assessment Inputs

The proposed development has the potential to introduce future site users to poor air quality, as well as the potential to cause impacts during the construction and operational phases of the development. Dispersion modelling using ADMS Roads was therefore undertaken to predict NO2, PM10 and PM2.5 concentrations across the site and at sensitive locations both with and without the development in place, to consider potential impacts and assess site suitability for the proposed end-use.

The model requires input data that details the following parameters:

- Assessment area;
- Traffic flow data;
- Vehicle emission factors;
- Spatial co-ordinates of emissions;
- Street width;
- Meteorological data;
- Roughness length; and
- Monin-Obukhov length.

Assessment inputs are described in the following subsections.

Dispersion Model

Dispersion modelling was undertaken using the ADMS-Roads dispersion model (version 4.0.1.0). ADMS-Roads is developed by Cambridge Environmental Research Consultants (CERC) and is routinely used throughout the world for the prediction of pollutant dispersion from road sources. Modelling predictions from this software package are accepted within the UK by the Environment Agency and DEFRA.

Assessment Area

Ambient concentrations were predicted over the proposed development site and surrounding highway network. One Cartesian grid was included in the model over the area NGR: 333340, 333590 to 391170, 391420 at height of 1.5m to represent the ground floor level for 2021 opening year scenario.

Results were subsequently used to produce contour plots within the Surfer software package.

It should be noted that although the grid only covered the proposed site, road links were extended in order to ensure the impact of all relevant vehicle emissions in the vicinity of the development were considered.

Reference should be made to Figure 6.6 within Appenidx 6.1 for a graphical representation of the assessment grid extents.

Traffic Flow Data

Traffic data for use in the assessment, including development flows, was provided by SCP Transport Planning, the appointed Transport Consultants for the scheme.

The provided data did not include a number of roads within the surrounding road network. As such, 24-hour Annual Average Daily Traffic (AADT) flows and fleet composition, was obtained from the Department for Transport (DfT). The Dft Matrix web tool enables the user to view and download traffic flows on every link of the A-road and motorway network in Great Britain for the years 1999 to 2017. It should be noted that the DfT matrix is referenced in DEFRA guidance LAQM (TG16) as being a suitable source of data for air quality assessments and is therefore considered to provide a reasonable representation of traffic flows in the vicinity of the site.

Growth factors provided by the Trip End Model Presentation Program (TEMPRO) software package were utilised to allow for conversion from the obtained 2016 traffic flow to 2018, which was used to represent the baseline and verification year. Vehicle speeds were estimated based on the free flow potential of each link and local speed limits. Road widths were estimated from aerial photography and UK highway design standards. A summary of the verification traffic data is provided in Table AII.1 and the traffic data used in the DM and DS scenarios is provided in Table All.2.

Reference should be made to Figure 6.6 within Appendix 6.1 for a graphical representation of the road link locations.

A summary of the traffic data used in the verification scenarios is provided in Table AII.1.

Table AI.1 2018 Traffic Data

Road Link		**Road Width (m)**	**24-hour AADT Flow**	**HDV Prop. (%)**	**Mean Vehicle Speed (km/h)**
L1	Regent Road	12.2	11,593	3.2	48.3
L2	Waterloo Road	10.2	11,722	3.2	48.3
L3	Waterloo Road/Bathstreet Roundabout slowdown	14.0	11,722	3.2	24.1
L4	Bath Street	8.9	11,722	3.2	48.3
L5	Bath street Slowdown	7.5	5,861	3.2	16.1
L6	Bath street Speedup	5.7	5,861	3.2	24.1
L7	King Edwards Street/Bath Street Speed up	5.6	5,861	3.2	24.1
L8	Kings Dock Street	5.5	1,644	4.4	32.2
L9	Kings Dock Street to Chaloner Street	5.5	1,644	4.4	16.1
L10	Upper Parliament Street, West Bound	11.0	9,380	1.8	16.1
L11	Parliament Street, West Bound	6.4	12,790	2.0	32.2
L12	Chaloner Street, North Bound	15.0	16,710	3.0	16.1

Road Link		Road Width (m)	24-hour AADT Flow	HDV Prop. (%)	Mean Vehicle Speed (km/h)
L13	Wapping, North Bound	8.0	16,710	3.0	32.2
L14	Wapping to Strand Street, North Bound	9.0	22,540	3.8	32.2
L15	Strand Street to George's Dock Gate, North Bound	14.0	23,385	3.1	24.1
L16	Traffic Lights King Edward Street	14.0	23,385	3.1	24.1
L17	New Quay South Bound	14.0	23,385	3.1	24.1
L18	Strand Street to George's Dock Gate, South Bound	10.5	23,385	3.1	24.1
L19	Wapping, South Bound	8.5	16,710	3.0	32.2
L20	Chaloner Street, South Bound	11.0	16,710	3.0	24.1
L21	Parliament Street, East Bound	7.0	12,790	2.0	32.2
L22	Parliament Street to Upper Parliament Street, East Bound	14.0	12,790	2.0	16.1
L23	Upper Parliament Street, East Bound	8.0	9,380	1.8	32.2
L24	Jamaica Street to Parliament Street	9.0	1,981	3.0	16.1
L25	Jamaica Street	6.0	1,981	3.0	32.2
L26	Jamaica Street to Park Lane	7.0	1,981	3.0	16.1
L27	Park Lane to Jamaica Street	8.0	5,986	5.5	16.1
L28	Park Lane	9.0	5,986	5.5	32.2
L29	Park Lane to Liver Street North Bound	5.0	2,993	5.5	16.1
L30	Park Lane to Liver Street South Bound	8.5	2,993	5.5	16.1
L31	Pardise Street	10.0	9,334	16.8	24.1
L32	Liver Street, South Bound	6.0	4,667	16.8	16.1
L33	Liver Street to Strand Street South Bound	7.0	2,334	16.8	16.1
L34	Liver Street to Strand Street North Bound	7.0	2,334	16.8	16.1
L35	Liver Street, North Bound	6.0	4,667	16.8	16.1
L36	Liver Street from Strand Street	9.0	4,667	16.8	16.1
L37	St James Street to Park Lane	7.0	5,685	5.9	16.1
L38	St James Street	6.0	5,685	5.9	32.2
L39	St James Street to Great George Street	10.5	5,685	5.9	16.1
L40	Great George Street from Parliament Street	7.5	5,464	6.5	16.1
L41	Great George Street to Parliament Street	15.0	5,464	6.5	16.1
L42	Great George Street past St James Street	16.0	10,929	6.5	24.1
L43	Great George Street	9.0	10,929	6.5	40.2
L44	Great George Street to Upper Duke Street	13.0	10,929	6.5	16.1
L45	Berry Street from Upper Duke Street	12.0	10,929	6.5	16.1

Road Link		Road Width (m)	24-hour AADT Flow	HDV Prop. (%)	Mean Vehicle Speed (km/h)
L46	Berry Street	20.0	10,929	6.5	32.2
L47	Berry Street to Leece Street	13.0	10,929	6.5	16.1
L48	Renshaw Street to Leece Street	10.0	10,897	17.0	16.1
L49	Renshaw Street	6.0	10,897	17.0	24.1
L50	Leece Street to Renshaw Street	15.0	6,858	10.9	24.1
L51	Leece Street	22.0	6,858	10.9	24.1
L52	Water Street	18.0	6,961	9.2	24.1
L53	Dale Street	18.0	6,961	9.2	32.2
L54	St Nicholas Place	11.0	11,693	3.1	16.1
L55	Sefton Street	11.0	23,323	4.2	32.2
L56	Sefton Street to Parliament Street	22.0	11,661	4.2	24.1
L57	Sefton Street to Chaloner Street	7.0	11,661	4.2	24.1
L58	King Edwards Street Northbound	11.4	17,286	2.0	48.3
L59	King Edwards Street Traffic Lights	8.5	17,286	2.0	48.3
L60	King Edwards Northbound	7.9	17,286	2.0	16.1
L61	Leeds Street Eastbound Traffic Lights	10.2	11,465	1.7	16.1
L62	Leeds Street Eastbound	8	11,465	1.7	48.3
L63	King Edwards Street/Great Howard Street	6	1,729	2.0	24.1
L64	Great Howard Street Northbound	9.2	9,105	2.2	48.3
L65	Great Howard Street Speed up	8.9	9,105	2.2	32.2
L66	Great Howard Street Traffic Lights	10.2	11,877	2.2	16.1
L67	Great Howard Street Southbound	7.3	11,877	2.2	48.3
L68	Great Howard Street	11.1	20,982	2.2	48.3
L69	King Edward Street Southbound Traffic lights	11.3	11,724	2.1	24.1
L70	King Edward Street Southbound	10.8	11,724	2.1	48.3
L71	King Edward Street Southbound Speed Up	11.8	11,724	2.1	32.2
L72	King Edward Street Southbound Traffic Lights	16.2	11,724	2.1	16.1
L73	Leeds Street Westbound Speed up	7.3	10,471	1.9	32.2
L74	Leeds Street Westbound Traffic Lights	10.2	10,471	1.9	16.1
L75	Leeds Street Westbound	7.4	10,471	1.9	48.3

The road width and mean vehicle speed shown in Table AII.1 remained the same for the 2020 and 2022 scenario. A summary of the 2020 Construction Year traffic data is shown in Table AII.2

Table AII.2 2020 Construction Year Traffic

Road Link		DM		DS	
		24-hour AADT Flow	HDV Prop. (%)	24-hour AADT Flow	HDV Prop. (%)
L1	Regent Road	20,620	1.94	20,716	2.24
L2	Waterloo Road	21,231	1.91	21,326	2.20
L3	Waterloo Road/Bathstreet Roundabout slowdown	21,231	1.91	21,326	2.20
L4	Bath Street	21,231	1.91	21,326	2.20
L5	Bath street Slowdown	10,616	1.91	10,663	2.20
L6	Bath street Speedup	10,616	1.91	10,663	2.20
L7	King Edwards Street/Bath Street Speed up	10,616	1.91	10,663	2.20
L76	Link road Slowdown	3,362	0	3,553	0
L77	Link Road	3,362	0	3,553	0
L78	Link Road Onto Roundabout	3,362	0	3,553	0
L79	Link road Slowdown	3,362	0	3,553	0
L80	Link Road	3,362	0	3,553	0

A summary of the 2022 Opening Year traffic data is shown in Table AII.3

Table AII.3 2022 Opening Year Traffic

Road Link		DM		DS	
		24-hour AADT Flow	HDV Prop. (%)	24-hour AADT Flow	HDV Prop. (%)
L1	Regent Road	20,760	1.94	21,148	1.91
L2	Waterloo Road	21,375	1.91	22,048	1.85
L3	Waterloo Road/Bathstreet Roundabout slowdown	21,375	1.91	22,048	1.85
L4	Bath Street	21,375	1.91	22,048	1.85
L5	Bath street Slowdown	10,688	1.91	11,024	1.85
L6	Bath street Speedup	10,688	1.91	11,024	1.85
L7	King Edwards Street/Bath Street Speed up	10,688	1.91	11,024	1.85
L76	Link road Slowdown	3,385	0	4,445	0
L77	Link Road	3,385	0	4,445	0
L78	Link Road Onto Roundabout	3,385	0	4,445	0

Road Link		DM		DS	
		24-hour AADT Flow	HDV Prop. (%)	24-hour AADT Flow	HDV Prop. (%)
L79	Link road Slowdown	3,385	0	4,445	0
L80	Link Road	3,385	0	4,445	0

Emission Factors

Emission factors for each link were calculated using the relevant traffic flows and the Emissions Factor Toolkit (version 9.0.1) released in 2018, which incorporates updated COPERT 5 vehicle emissions factors for NOx and vehicle fleet information.

There is current uncertainty over NO2 concentrations within the UK, with roadside levels not reducing as previously expected due to the implementation of new vehicle emission standards. Therefore, 2018 emission factors have been utilised for the prediction of pollution levels for all scenarios in preference to the development opening year in order to provide a robust assessment.

Meteorological Data

Meteorological data used in this assessment was taken from Liverpool meteorological station over the period 1st January 2018 to 31st December 2018 (inclusive). Liverpool meteorological station is located at approximate NGR: 34364, 381770, which is approximately 14.03km south-east of the proposed development.

All meteorological records used in the assessment were provided by Atmospheric Dispersion Modelling (ADM) Ltd, which is an established distributor of data within the UK. Reference should be made to Figure 6.5 within ES Section 6.1 for a wind rose of utilised meteorological data.

Roughness Length

A roughness length (z_0) of 1m was used in this dispersion modelling study. This value of z_0 is considered appropriate for the morphology of the assessment area and is suggested within ADMS-Roads as being suitable for ‘cities, woodlands’.

A z_0 of 0.2m was utilised to represent the morphology of the meteorological station location and is suggested as being suitable for 'agricultural areas (min)'.

Monin-Obukhov Length

The Monin-Obukhov length provides a measure of the stability of the atmosphere. A minimum Monin-Obukhov length of 30m was used in this dispersion modelling study. This value is considered appropriate for the nature of the assessment area and the meteorological station and is suggested within ADMS-Roads as being suitable for 'cities and large towns', respectively.

A Monin-Obukhov length of 10m was used to represent the meteorological station location and is suggested within ADMS-Roads as being suitable for 'small towns > 50,000'.

Background Concentrations

Table AII.4 displays the specific background concentrations as predicted by DEFRA, utilised to represent the condition across the development site and the monitoring locations used within the verification process.

Table AII.4 Predicted Background Pollutant Concentrations

Site Grid Reference	Pollutant	2018 Predicted Background Concentration (µg/m3)
333455, 391303	NOx	29.58
	NO2	19.87

Table AII.5 displays the predicted background concentrations by DEFRA used in the operational phase assessment for the sensitive receptor locations.

Table AII.5 Predicted Background Pollutant Concentrations for Receptors

Receptor Grid Square	Receptors	Pollutant	Predicted Background Concentration (µg/m3)
			2018
333500, 391000	R1 to R5	NOx	29.58
		NO2	19.87
		PM10	10.97

Similar to emission factors, background concentrations for 2018 were utilised in preference to predicted background concentrations for the development opening year. This provided a robust assessment and is likely to overestimate actual pollutant concentrations during the operation of the proposals.

NO_x to NO_2 Conversion

Predicted annual mean NOx concentrations from the dispersion model were converted to NO_2 concentrations using the spreadsheet provided by DEFRA, which is the method detailed within LAQM (TG16).

Verification

The predicted results from a dispersion model may differ from measured concentrations for a large number of reasons, including:

- Estimates of background concentrations;
- Uncertainties in source activity data such as traffic flows and emission factors;

- Variations in meteorological conditions;
- Overall model limitations; and
- Uncertainties associated with monitoring data, including locations.

Model verification is the process by which these and other uncertainties are investigated and where possible minimised. In reality, the differences between modelled and monitored results are likely to be a combination of all of these aspects.

For the purpose of this assessment model verification was undertaken for 2018, using traffic data, meteorological data and monitoring results from this year.

LCC undertakes monitoring of NO_2 concentrations at seven location suitable for verification purposes within the assessment extents. The road contribution to total NOx concentration was calculated from the monitored NO_2 result for use in the verification process. This was undertaken following the methodology contained within DEFRA guidance LAQM (TG16)[2].

The dispersion model was run with the traffic input data previously detailed for 2018 to predict the NOx concentration at the monitoring locations. The results are shown in Table AII.6.

Table AII.6 NO_2 Verification Results

LCC ID	Monitoring Location	Modelled Road NOx Concentration (µg/m3)	Monitored Road NOx Concentration (µg/m3)	Difference (%)
T2	Leeds Street/Pall Mall Road Sign	6.93	15.19	-12.81%
T5	Covent Garden/Dale Street Lamp Post RH side	6.93	6.98	3.58%
T6	Strand Street/Water Street Junction-Road sign L2	26.80	38.02	-12.81%

This indicated that a verification factor of **1.4098** was as shown in Graph 1 required to be applied to all NOx modelling results, showing the model has a tendency to **overestimate** pollutant concentrations throughout the assessment extents.

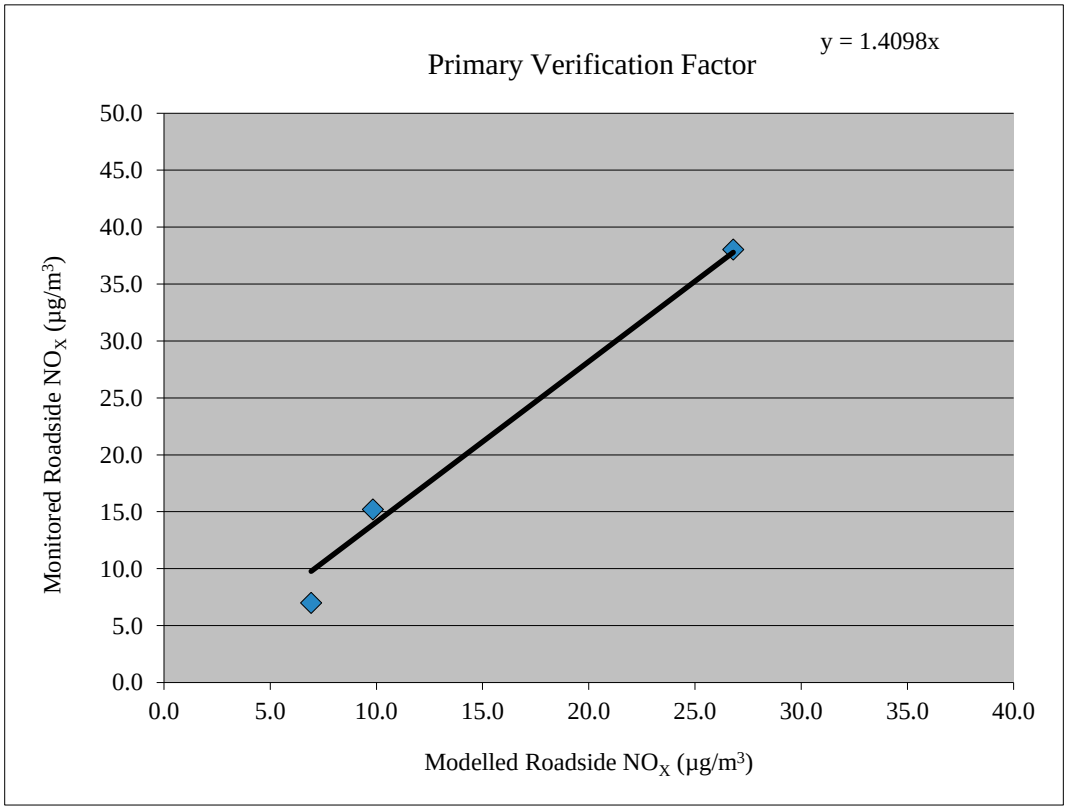


Table AII.7 presents the monitored annual mean NO_2 concentrations and the adjusted modelled total NO_2 concentration based on the above verification factor. Exceedances of the relevant AQO are highlighted in **bold.**

Table AII.7. 2018 NO2 Monitoring Results

LCC ID	Monitoring Location	Monitored NO2 Concentration (µg/m3)	Adjusted Modelled Total NO2 Concentration (µg/m3)	Difference (%)
T2	Leeds Street/Pall Mall Road Sign	45.00	44.90	0.22%
T5	Covent Garden/Dale Street Lamp Post RH side	31.00	32.34	-4.32%
T6	Strand Street/Water Street Junction-Road sign L2	32.00	31.37	1.96%

Appendix 7A

Definition of Acoustic Terms

Appendix 7A: Definition of Acoustic Terms

The Decibel

The decibel is the basic unit of noise measurement and is denoted dB. Technically, it is a means of expressing the difference in noise level between the measured noise and a standard level of noise. Most often the threshold of human hearing is used as the standard reference but is really should be stated. The threshold of human hearing is a sound pressure of 20μPa or a sound power of 1pW.

A sound pressure level or SPL should be expressed in dB(re. 20μPa). A sound power level or SWL should be expressed in dB(re. 1pW). If the reference levels are omitted, it will often (but not always) be safe to assume that they are referenced to the threshold of human hearing.

A-Weighting and dB(A)

The human hearing system responds differently to different frequencies. The A-weighting system takes account of this by emphasising mid and high frequencies more than low frequencies to given an overall level. An A-Weighted noise level, therefore, reflects the way normal, healthy hearing would perceive the overall level of the noise. The basic unit is dB(A), although other systems of expressing an A-weighted level are discussed below.

Other weighting systems, such as C-Weighting, denoted dB(C), reflect the human hearing system's response at higher noise levels.

Equivalent Continuous Sound Level, L_{eq}

This is a kind of mean noise level.

The unit is dB L_{eq}. For A-weighted levels the unit is dB(A) L_{eq} or, in more modern units, dB L_{Aeq}. The Noise at Work Regulations use $L_{eq(s)}$ which refers to a sample level.

Maximum Level, L_{max}

This is the maximum level reached (usually for a fraction of a second) in the measurement period.

The unit is dB L_{max}. For A-weighted levels the unit is dB(A) L_{max} or, in more modern units, dB L_{Amax}.

Statistical (Percentile) Levels, L_n

During a measurement of fluctuating noise, it is often useful to establish the levels exceed for a percentage of the time. L_n is the index representing the level exceeded for n% of the measurement period.

The unit is dB L_n. For A-weighted levels, the unit is dB(A) L_n or, in more modern units, dB L_{An}.

Common examples are as follows :-

dB L_{A90} is the A-weighted level exceeded for 90% of the time and is often used to describe the underlying background noise.

dB L_{A50} is the A-weighted level exceed for 50% of the time. Mathematically, it is the median, another kind of average.

dB L_{A10} is the A-weighted level exceeded for 10% of the time and has traditionally been used to describe the intermittent highs in the noise climate such as passing cars or aircraft.

Frequency Analysis

Here the audible frequency range is divided up into bands and the noise level is expressed in each frequency band form low pitches to high pitches.

Octave Band analysis is where the frequency range is divided into 8 bands from 63 Hz to 8kHz, or sometimes into 10 bands from 31.5 Hz to 16kHz.

1/3 Octave Band analysis provides more detailed subdivision into 24 bands from 50 Hz to 10kHz, or sometimes into 30 bands from 20Hz to 20kHz.

Narrow Band analysis takes this further with the possibility of many thousands of bands, possibly only 1Hz wide, or even less.

In all types of frequency analysis, the level in each band can be expressed in terms of L_{eq}, L_{max}, L_n, etc. as defined above.