

Report

Transport Assessment

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Pall Mall, Liverpool



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Table of contents

1	Introduction	6
2	Consultation with Liverpool City Council	7
2.1	Scope of Assessment.....	7
3	Policy Review.....	8
3.1	Overview.....	8
3.2	National Planning Policy Framework	8
3.3	Liverpool Local Plan – Pre-submission Draft (2018).....	9
3.4	Liverpool Unitary Development Plan (2002).....	9
3.5	Ensuring a Choice of Travel SPD	10
3.6	Merseyside Local Transport Plan 3 (2011)	10
3.7	Policy Summary	11
4	Existing Conditions.....	12
4.1	Site Context	12
4.2	Local Highway Network.....	12
4.2.1	Pall Mall.....	13
4.2.2	Bixteth Street	13
4.2.3	Edmund Street.....	13
4.2.4	Tithebarn Street	13
4.2.5	St Paul's Square	13
4.3	Historical Accident Record	14
4.4	Sustainable Access Audit.....	15
4.4.1	Walking.....	15
4.4.2	Cycling.....	17
4.4.2.1	CityBike Scheme.....	19
4.4.3	Bus.....	19
4.4.3.1	ArrivaClick.....	20
4.4.4	Train	20
4.4.5	Taxi	21
4.4.6	Car Club	21
4.4.7	Minimum Accessibility Standard Assessment (MASA).....	21
5	Proposed Development.....	23
5.1	Development Description	23
5.2	Vehicular Access Strategy.....	24

5.2.1	Vehicular Access	24
5.2.2	Proposed Traffic Regulation Orders	25
5.2.3	Servicing Management Plan.....	27
5.3	Pedestrian and Cycle Access	27
5.4	Parking Provision	28
5.4.1	Car Parking.....	28
5.4.2	Motorcycle Parking	29
5.4.3	Cycle Parking.....	29
5.4.4	Coach and Taxi Drop Off.....	30
5.5	Anticipated Highway Works Schedule	30
6	Anticipated Travel Demand	31
6.1	Introduction	31
6.2	Trip Rates	31
6.2.1	Office Trip Rates.....	31
6.2.2	Hotel Trip Rates.....	32
6.3	Person Trip Generation	33
6.3.1	Office.....	33
6.3.2	Hotel.....	34
6.4	Multi-modal Trip Generation	35
6.4.1	Mode Split - Office	35
6.4.2	Mode Split - Hotel	38
7	Car Park Assessment.....	40
7.1	Estimated Car Parking Demand	40
7.2	Existing Car Park Survey.....	40
8	Summary and Conclusions.....	42

Table of figures

<i>Figure 4.1: Site Location</i>	12
<i>Figure 4.2: Accident Locations</i>	14
<i>Figure 4.3: Walking Catchment Areas for Public Transport Use</i>	16
<i>Figure 4.4: Walking Catchment Areas for Common Facilities and Walking to Work</i>	17
<i>Figure 4.5: Cycling Catchment Areas for Cycling to Work</i>	18
<i>Figure 5.1: Building Locations within Development</i>	23
<i>Figure 5.2: Pedestrian Access to the development</i>	27

Appendices

- Appendix A – Scoping Correspondence
- Appendix B – Main Office Area Location
- Appendix C – Accident Data
- Appendix D – LCC Cycle Map
- Appendix E – MASA
- Appendix F – Masterplan Layout
- Appendix G – Adopted Highway Boundary Plan
- Appendix H – Swept Paths of Car Park Accesses
- Appendix I – TRO Changes Plans
- Appendix J – Servicing Management Plan
- Appendix K – Illustrative Highway Works Extent
- Appendix L – TRICS Data
- Appendix M – Framework Travel Plan
- Appendix N – Car Park Survey Data

1 Introduction

This Transport Assessment (TA) has been prepared by Sweco on behalf of Kier Property Developments Limited and CTP Limited to support a hybrid planning application, with means of access to be determined, for the redevelopment of land at Pall Mall in Liverpool city centre for mixed commercial land uses.

The site comprises the overspill section of the existing Pall Mall Exchange Pay & Display (NCP) car park and the land formerly occupied by gardens and public realm, which lies adjacent to the Exchange Building between Pall Mall, Bixteth Street and Edmund Street.

The site lies within the Main Office Area of the city centre, as identified in the Local Plan pre-submission draft 2018. The development and associated public realm proposals will represent an extension to the existing Central Business District of the city, which lies to the west of the site.

The purpose of this report is to appraise the local highway authority Liverpool City Council (LCC), of the anticipated highways and transport impacts of the proposals.

In line with best practice, the TA has been prepared with reference to the National Government Transport Planning Practice Guidance (PPG) document 'Travel plans, transport assessments and statements in decision-taking' and the revised 'National Planning Policy Framework (NPPF)' (19th February 2019) Chapter 9 – Promoting Sustainable Transport, as well as our own experience of supporting similar development proposals.

Following this introduction, the TA is structured as follows:

Chapter 2 provides a summary of the scoping discussions held with the highways development control officer at LCC;

Chapter 3 reviews the adopted national and local transport planning policy framework;

Chapter 4 considers existing conditions relevant to the development site. It provides a description of the site and its location and the surrounding highway network. It also presents the results of the walking, cycling and public transport appraisals and summarises a review of the personal injury accident record for the surrounding highway network of interest;

Chapter 5 provides a description of the development proposals and the access strategy. It provides a Schedule of Highway Improvement Works and traffic management changes including Traffic Regulation Orders (TRO). It also identifies a Servicing Management Plan covering the various buildings;

Chapter 6 provides an estimation of the daily trip generation for all modes and provides details of the Framework Travel Plan;

Chapter 7 presents the car parking assessment which takes account of current usage at public car parks within walking distance of the site, the likely changes to parking supply and the additional parking demands associated with the proposed development.

Chapter 8 provides a summary of the key elements of the TA and draws together the conclusions made.

2 Consultation with Liverpool City Council

2.1 Scope of Assessment

Scoping discussions were held with the highways development control officer of LCC at meetings on 4th and 10th May 2018 and a Scoping Statement was subsequently prepared for agreement.

In summary, it was agreed with LCC that the hybrid planning application will need to be supported by a full TA, including a Framework Travel Plan. However, given that the development proposals comprise largely 'car free' development, LCC confirmed that there was no requirement to undertake operational analyses of junctions on the adjacent highway network. Instead, the TA will need to focus on sustainable transport options and pedestrian / cycle / public transport accessibility.

The TA will therefore follow standard guidance and include the following:

- A car parking study;
- A review of existing Traffic Regulation Orders in the vicinity of the site;
- A review of accessibility and linkages to the site by sustainable transport modes;
- An examination of the most recent five years personal injury accident record for the highways network of interest;
- A Framework Travel Plan;
- A schedule of proposed highway works and details of proposed works and measures to improve sustainable transport linkages to the site; and
- A Servicing Management Plan.

Regular discussions were held with LCC as the scheme developed and was refined. A final pre-application meeting was held on 25th April 2019 to re-confirm the scope of assessment and agree points of detail regarding the intended access strategy.

Copies of the agreed Scoping Statement and the associated correspondence with LCC are included as **Appendix A**.

3 Policy Review

3.1 Overview

This section of the TA provides an examination of current transport and land use policies at the national and local level where they relate to the proposed development. In particular, this section reviews the following documents, and notes where appropriate the strategies that may be needed to ensure the proposed development is consistent with these policies:

- National Planning Policy Framework (NPPF);
- Liverpool Local Plan - Pre-Submission Draft (2018)
- Liverpool Unitary Development Plan (2002)
- Ensuring a Choice of Travel SPD
- Merseyside Local Transport Plan 3 (2011)

3.2 National Planning Policy Framework

The National Planning Policy Framework: (NPPF), published in February 2019, sets out national planning policies in England.

The purpose of the policies within NPPF is to achieve sustainable development, with a presumption that development should be allowed to proceed without delay if it meets the criteria under the roles of delivering economic, social and environmental objectives. In addition, NPPF states that development proposals according with an up to date Plan should also be approved.

With regard to the promotion of sustainable transport, NPPF states that transport issues relating to development proposals should be considered at an early stage so that

- a) 'the potential impacts of development on transport networks can be addressed;
- b) opportunities from existing or proposed transport infrastructure.....are realised – for example in relation to the scale, location or density of development that can be accommodated;
- c) opportunities to promote walking, cycling and public transport use are identified and pursued;
- d) the environmental impacts of traffic and transport infrastructure can be identified, assessed and taken into account – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains;

NPPF further states that:

'The planning system should actively manage patterns of growth in support of these objectives. 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.’

It does, however, recognise that the opportunities to maximise sustainable transport solutions will vary and this should be taken into account in decision making.

In assessing applications for development, NPPF states that 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.’

Development generating ‘significant’ numbers of movements is required to provide a Travel Plan and should be supported by a Transport Assessment (TA) or Transport Statement (TS). NPPF goes on to state that:

‘Development should only be prevented or refused on highway grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.’

The Pall Mall site is ideally located to take advantage of the available sustainable transport modes and therefore the proposed development accords well with the policies outlined above. The planning application for the proposed development will also be supported by a Framework Travel Plan to encourage travel by sustainable transport modes once the development is occupied.

3.3 Liverpool Local Plan – Pre-submission Draft (2018)

The pre-submission draft of the Liverpool Local Plan outlines LCC’s key aims for development in Liverpool up to 2033.

The document was consulted on between 26th January 2018 and 9th March 2018 and is the latest iteration of the plan. This version has now been submitted to the Planning Inspectorate for the purposes of independent examination. The main areas of the document relevant to the proposed development are summarised below.

Section 6 sets out a vision and objectives for Liverpool City Centre. A key policy (CC 19) is to bring “underutilised and vacant land/ buildings back into productive use”.

Section 14 ‘Sustainable Transport and Accessibility’ outlines a number of policies that emphasise the need for developments to maximise the existing transport infrastructure, especially sustainable modes, including walking, cycling, taxis and public transport.

3.4 Liverpool Unitary Development Plan (2002)

Whilst the Local Plan is still emerging, planning applications are currently decided with reference to policies contained within the Unitary Development Plan (UDP).

Chapter 11 of this document relates to transport and focuses on the importance of sustainable travel modes in meeting Liverpool's transport needs.

The chapter places emphasis on improved bus and rail facilities as well as recognising the important contribution taxis make to meet the transport needs in Liverpool.

The chapter promotes cycling as an efficient and non-polluting mode of transportation with a commitment to identify cycle routes in Liverpool and provide sufficient cycle parking. It also states that improved lighting, surfacing and road crossings can help to promote walking in the city.

Furthermore, the chapter recognises that controls on car parking are important in order to reduce the reliance on private cars.

3.5 Ensuring a Choice of Travel SPD

The Ensuring a Choice of Travel Supplementary Planning Document provides guidance to developers on the access and transport requirements for new development across Merseyside. It has been formulated in partnership with the other Merseyside local authorities and Merseytravel and was adopted in December 2008.

The main objectives of the SPD are to

- Ensure a reasonable choice of access by all modes of transport to new development;
- Reduce the environmental impact of travel choices, by reducing pollution, and improving the local environment;
- Improving road safety;
- Promote healthier lifestyles by providing opportunities for people to walk or cycle for work or leisure purposes;
- Reduce the level of traffic growth and congestion on the strategic and local road network; and
- Encourage opportunities to improve the quality of development proposals by better use of space through the provision of less car parking spaces where appropriate

The document also sets out guidance for the Minimum Accessibility Standard Assessment and the parking standards to be adopted for developments. The parking standards supersede those set out in the UDP.

3.6 Merseyside Local Transport Plan 3 (2011)

The Local Transport Plan (LTP) for Merseyside covers the Liverpool City Region. The LTP is a joint plan that is produced by the five Merseyside Local Authorities, Halton Council and Merseytravel, the Integrated Transport Authority for Merseyside. The LTP runs between 2011 and 2024 and sets out the vision for the Merseyside region which is to be:

'A City Region committed to a low carbon future, which has a transport network and mobility culture that positively contribute to a thriving economy and the

health and wellbeing of its citizens and where sustainable travel is the option of choice.'

To achieve this vision the LTP sets out six goals which aim to support the City Region, these are to:

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

However, in 2014, the Liverpool City Region Authorities formed a Combined Authority and produced the Transport Plan for Growth document. This document brings together the existing Merseyside and Halton Local Transport Plans and sets out the City Region's strategic vision and delivery plan for transport. It also looks to foster greater collaborative working across the Combined Authority.

The Plan has a strategic direction for transport which supports growth, regeneration and carbon reduction and its main transport priorities are:

- Growth - this reflects our plans and aspiration for economic growth in the City Region
- Low Carbon - describes our desire to see a clean, low emission and sustainable transport network
- Access to Opportunity - refers to our work in supporting those who wish to access training, education and further learning and employment opportunities.

3.7 Policy Summary

From the above, it can be concluded that the proposed development of the Pall Mall site is fully in accordance with the aims and objectives of national and local transport policy to promote sustainable development.

4 Existing Conditions

4.1 Site Context

The Pall Mall site is located to the north of Liverpool's 'City Centre Boundary', in the centre of the Main Office Area, as shown in **Appendix B**.

The site extends to approximately 2.8 acres (1.16 hectares) and comprises the overspill part of the existing Pall Mall Exchange P&D (NCP) car park and the former gardens and public realm which lies adjacent to the Exchange Building. It is located in a mixed-use area and is bounded to the north east by Pall Mall; to the south east by the Exchange Building; to the south west by Bixteth Street, Edmund Street and the adjacent office and residential building (referred to as the X building); and to the north west by the main part of the NCP car park.

The location of the site is shown in **Figure 4.1**.

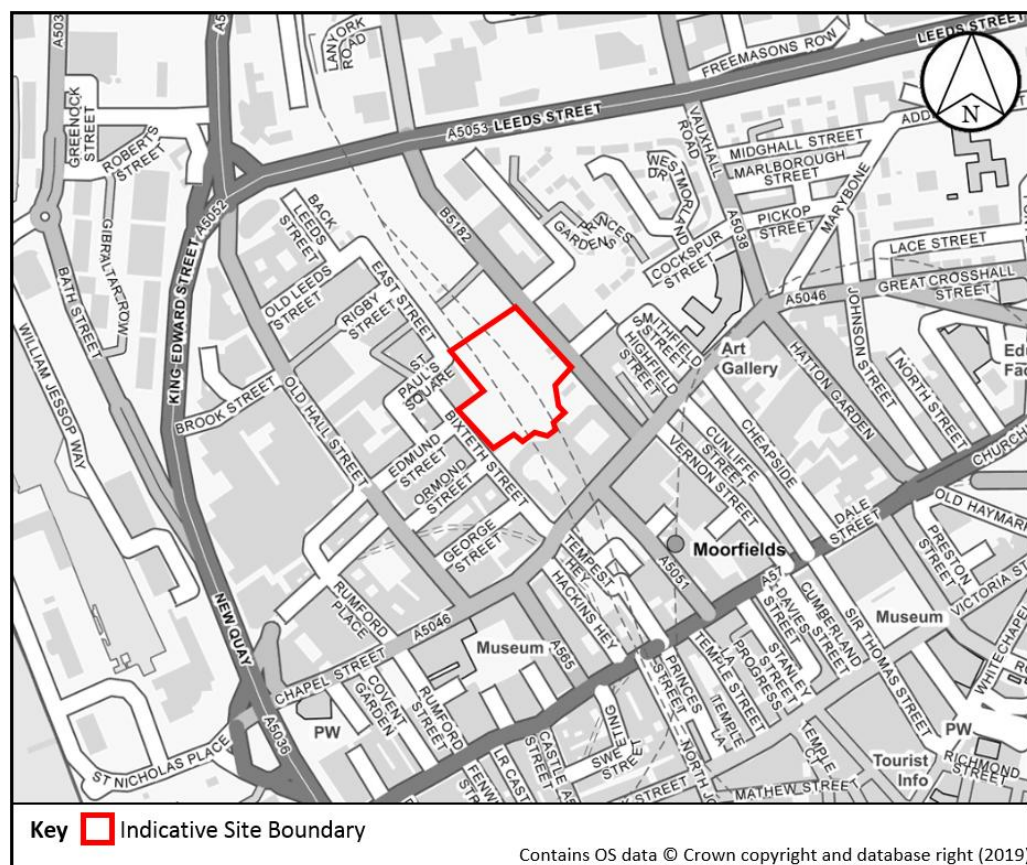


Figure 4.1: Site Location

4.2 Local Highway Network

The local highway network surrounding the site is described below. Each highway is street lit and subject to a 30mph speed limit.

4.2.1 Pall Mall

Pall Mall runs along the north-eastern frontage of the site linking Tithebarn Street to the south and Leeds Street to the north. The carriageway is approximately 11m wide and is suitable for two-way traffic and accommodate parking on both sides of the carriageway. The highway is located within the Outer Controlled Parking Zone, which operates between 8am and 6pm and is controlled by a series of Traffic Regulation Orders (TROs) that are in force along its length. These TROs include parking bays restricted to residents permits only, sections of Limited Waiting restrictions and sections of No Waiting at Any Time (NWAAT) restrictions. Bus stops, marked as bus stop clearways (one northbound and one southbound), are also provided on the site frontage although these are currently not in use.

4.2.2 Bixteth Street

Bixteth Street runs between Tithebarn Street and St Paul's Square and provides access to the south-western frontage of the site. The carriageway is suitable for two-way traffic and has parking on its northern side. The highway is located within the Inner Controlled Parking Zone (ICPZ), which operates between 8am and 6pm, and is controlled by a series of TROs that are in force along its length. These TROs include P&D parking bays and sections of Limited Waiting restrictions.

4.2.3 Edmund Street

Edmund Street runs from Old Hall Street in the south-west to a termination point approximately 32m north-east of Bixteth Street. The section between Old Hall Street and Bixteth Street operates one-way from Old Hall Street (with cyclists permitted to contraflow) and parking is permitted along its southern side. The cul-de-sac section of Edmund Street provides access to part of the split-level car park of the X Building. The highway is located in the ICPZ with P&D parking spaces, Limited Waiting restrictions and NWAAT restrictions in force along its length. The cul-de-sac section is subject to Limited Waiting only restrictions.

4.2.4 Tithebarn Street

Tithebarn Street runs between George's Dock Gates (as Chapel Street west of Exchange Street East) in the west and Vauxhall Road/Hatton Garden in the east. It provides access to the site from the south via either Bixteth Street or Pall Mall. Limited P&D parking is available along the northern frontage with the remainder of the highway restricted by various TROs. Tithebarn Street is also restricted to buses only to the east from its junction with Bixteth Street.

LCC has proposals to alter the layout of Tithebarn Street to improve the cycle infrastructure with the introduction of dedicated cycle lanes along its length.

4.2.5 St Paul's Square

St Paul's Square is accessed from Bixteth Street and runs between East Street and Prussia Street/Earle Street in the west. It operates one-way from its junction with Bixteth Street towards the Prussia Street/Earle Street junction and one-way towards East Street. East Street then continues one-way towards Rigby Street to the north. Each of these streets are signed to permit contra-flow cycling. It is understood from the latest discussions with LCC that there is an aspiration to revoke the TRO and allow the section of St Paul's Square to revert to two-way operation between Bixteth Street and East Street.

4.3 Historical Accident Record

The most recent five-year personal injury accident record for the highway network comprising Tithebarn Street, Pall Mall, A5053 Leeds Street, Bixteth Street and East Street has been reviewed to identify any notable trends, or significant road safety issues. Personal Injury Accident (PIA) statistics for the five-year period between 2014 and 2018 were obtained from LCC.

In total, 13 accidents were reported, all of which were classified as being of 'slight' severity. No fatalities or serious injuries were recorded during this time period.

The locations of the accidents are shown in **Figure 4.2** and a summary of the accident data are included as **Appendix C**. The data indicates that five accidents occurred along Tithebarn Street at its junctions with Bixteth Street, Moorfields and Pall Mall, five occurred at the A5053/ Pall Mall junction and a further three accidents occurred along the A5053 to the east of its junction with Pall Mall

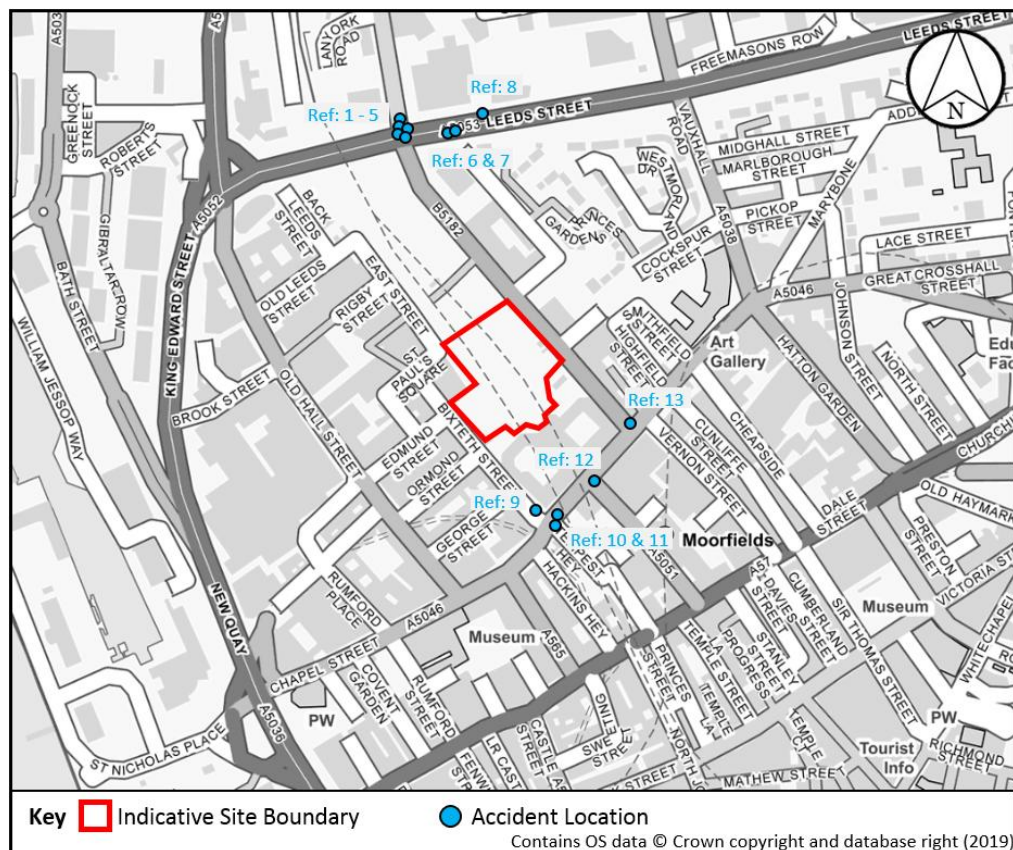


Figure 4.2: Accident Locations

Of the 13 accidents to occur, 24 injuries were recorded, of which two involved pedestrians and none involved cyclists, the remainder involving either drivers, passengers of vehicles or a motorcyclist.

An examination of the location and occurrence of the accidents highlights one cluster of accidents on the highway network serving the site, namely at the A5053/ Pall Mall junction. All of the accidents involved a collision between two vehicles, with no

pedestrians or cyclists involved. Only two incidents occurred (Ref: 2 and 8) since the junction improvements at the A5053/ Pall Mall junction and the addition of an off-road cycle lane along the southern frontage of the A5053 were implemented in 2015.

Furthermore, two accidents occurred in 2018 on the section of Tithebarn Street between its junction with Bixteth Street and Pall Mall (Ref: 10 and 13), while the rest occurred in 2014. Two accidents involved the collision of two vehicles (Ref: 11 and 13), one involved a single vehicle (Ref: 12) and two involved the collision of a single vehicle and a pedestrian (Ref: 9 and 10).

In summary, the information provided for the highway network of interest, both in terms of frequency and types of accident, demonstrates that there are no significant historical road safety issues associated with the highway network of interest which would be exacerbated by the likely traffic generated by the proposed development.

4.4 Sustainable Access Audit

This section provides an accessibility assessment to establish the existing sustainable transport provision serving the site and the surrounding area. The assessment considers access by all sustainable modes and provides details of the available infrastructure and service provision. The assessment recognises that the use of sustainable transport modes will be the main modes of travel to the proposed development.

Information for sustainable transport options throughout the city centre, including walking, cycling, bus and rail options, are administered and promoted by Merseytravel.

4.4.1 Walking

The site is located in the city centre and as such, benefits from a wide network of footways which provide access to high frequency public transport services, the wider city centre area and the adjacent residential areas.

To the south west of the site, Bixteth Street, Old Hall Street and the connecting section of Edmund Street have benefitted from public realm improvements which included the upgrading of footways and kerbs to ensure that dropped kerbs and tactile paving are provided at all crossing points. The road surfacing and street lighting have also been upgraded and street furniture has been rationalised.

To the north west of the site, St Pauls Square and its surrounding highway network benefit from high quality public realm which has been implemented in recent years in tandem with the regeneration of the area.

The footways on Old Leeds Street, Back Leeds Street and Earle Street do not have dropped kerbs at crossing points however these footways are not considered to be key routes between the site and local amenities.

Pall Mall, which runs along the northeast frontage of the site, features dropped kerbs and tactile paving at crossing points and signal controlled crossing facilities are incorporated into its junction with A5036 Leeds Street. This infrastructure enhances pedestrian safety on the walking routes between the site and the privately-operated public car parks lying to the north of Leeds Street, approximately 15 minutes' walk from the site.

To the south of the site, the character of the area means that pedestrian infrastructure is provided to a high standard, with wide footways and dropped kerbs at crossing points. Where routes to key amenities require the need to cross busy roads such as those providing access to railway stations, signalised pedestrian crossing facilities are

provided. For example, to access the site from Liverpool Lime Street (a 15-minute walk away), signalised crossing facilities are provided on the A5038, St Georges Place, Whitechapel, Victoria Street, Dale Street and Tithebarn Street. Adjacent to the site, pedestrian access can also be gained through the Exchange Building.

A walking distance of 5 minutes (400 m) is recommended as a reasonable walking distance to high frequency bus routes in the Institution of Highways & Transportation (IHT) document 'Buses in Urban Developments 2018'. For rail services a walking distance of 10 minutes (800 m) is recommended as a reasonable walking distance in the IHT document 'Planning for Walking 2015'.

Figure 4.3 illustrates the 400 m and 800 m walking catchment areas from the site and public transport nodes within them.

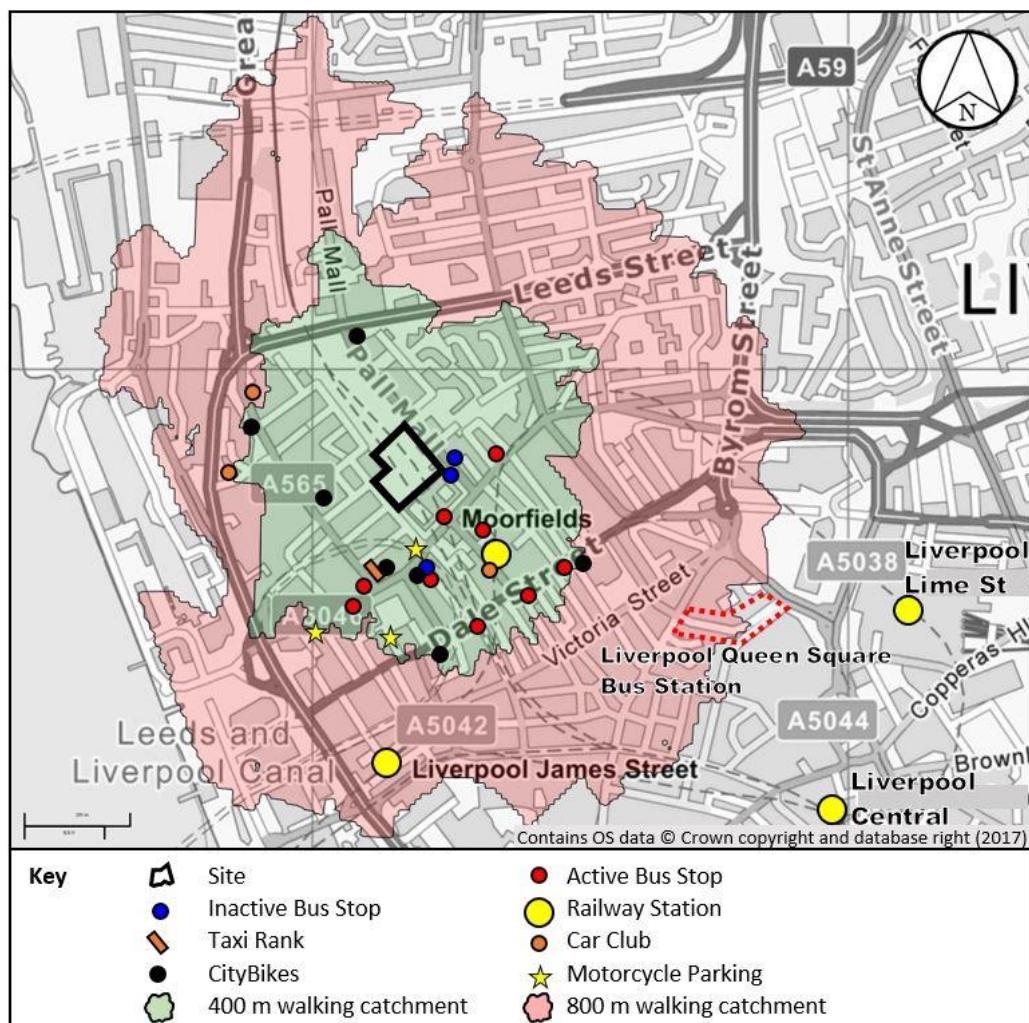


Figure 4.3: Walking Catchment Areas for Public Transport Use

It can be seen from Figure 4.3 that nine bus stops, Moorfield Railway Station and a taxi rank lie within 400 m walking distance of the site, whilst Liverpool James Street Railway Station and Liverpool Queens Square Bus Station lie within 800 m walking distance.

Reference to Table 3.2 of the IHT document, 'Providing for Journeys on Foot (2000)', suggests that the preferred maximum walking distance to common facilities is up to 2 km for commuting.

Figure 4.4 illustrates the 1.2 km and 2 km walking catchment areas from the site.

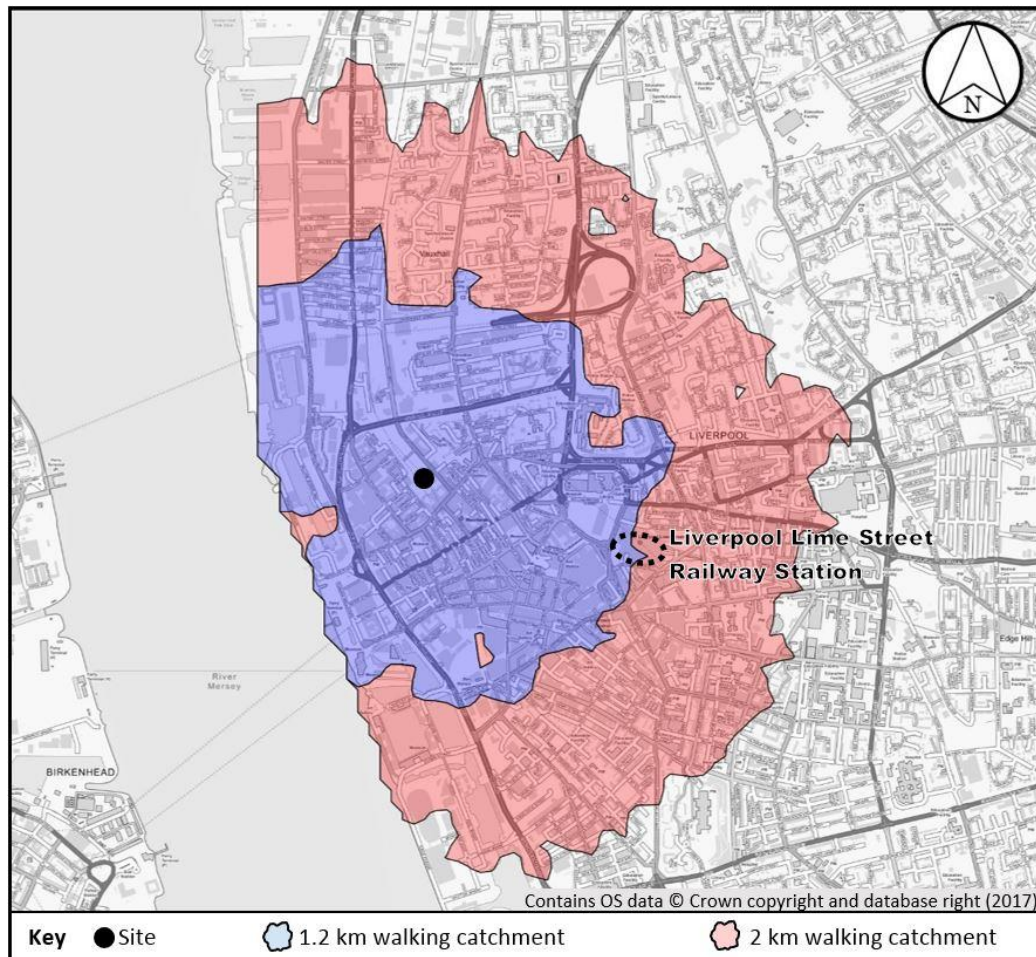


Figure 4.4: Walking Catchment Areas for Common Facilities and Walking to Work

It can be seen from Figure 4.4 that the majority of the city centre is accessible within a 1.2 km walking distance, including, the main city centre amenities, retail provision and leisure offers. Liverpool Lime Street Railway Station lies just within the 1.2km walking distance catchment. It can also be seen that there are numerous residential developments (both existing and approved high-density schemes) within the 1.2km catchment as well as many residential areas immediately surrounding the city centre located within a 2 km walking distance. As such, future employees who live in these areas could easily walk to work.

4.4.2 Cycling

A distance of 5 miles (8 km) is recommended as a suitable distance for which cycling is an ideal mode of transport as recommended in the IHT document 'Planning for Cycling 2015'. Cycling can also form part of a longer journey incorporating public transport.

Cycling provides a good alternative to the private car over such distances, is cheap, offers reliable journey times, is environmentally friendly and promotes improved health through regular exercise.

An 8km cycle catchment area from the site is shown in **Figure 4.5**.

It should be noted that cycle access through the Queensway Tunnel is prohibited at all times, whilst cycle access through the Kingsway tunnel is prohibited between 0700 and 1900hours on weekdays. Considering that the proposed land uses are predominantly office, the majority of commuters will likely travel within these exempt time periods. However, cycles are permitted on Mersey Ferries, as such, cycle access from Birkenhead can be achieved and has been included this assessment although there is an increased journey time due to the ferry crossing.

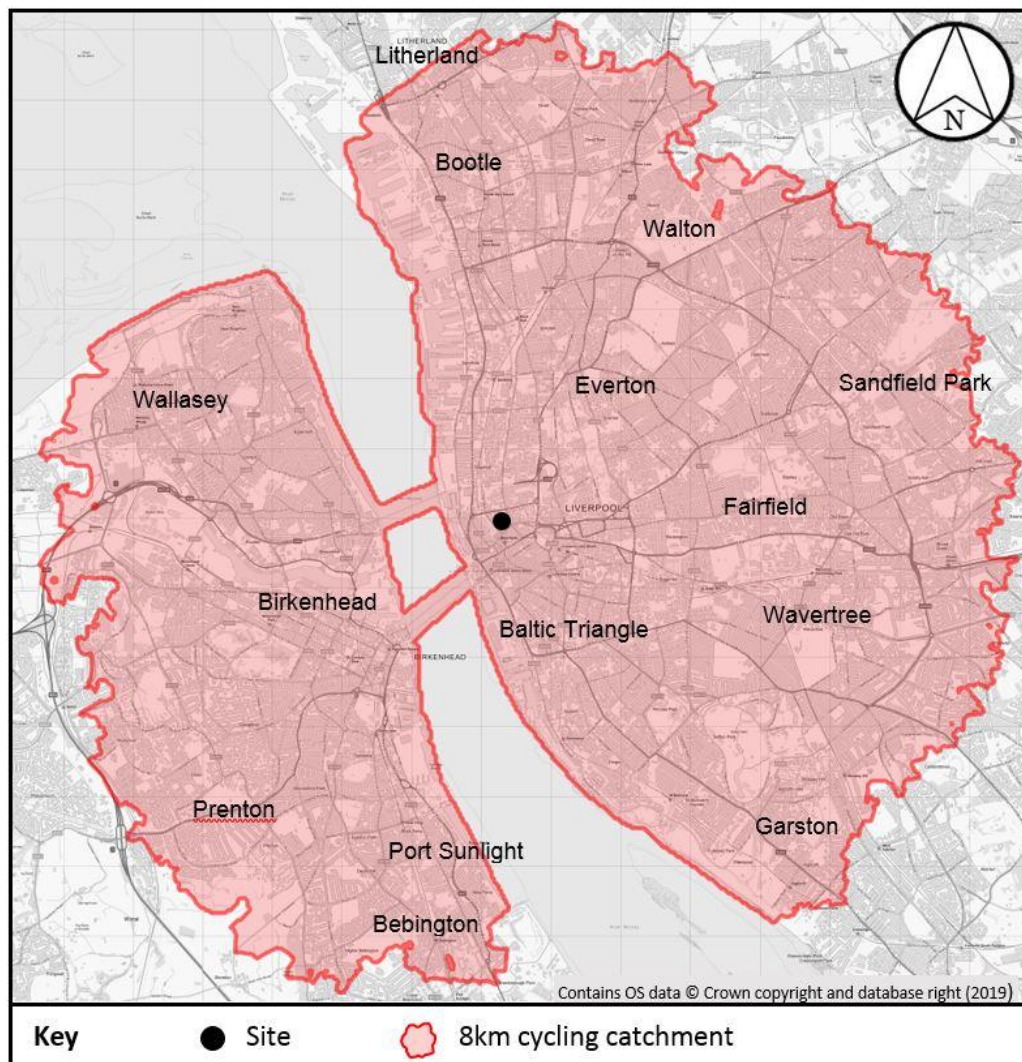


Figure 4.5: Cycling Catchment Areas for Cycling to Work

As shown in Figure 4.5, an 8km cycling catchment takes in a large proportion of the wider Liverpool area external to the city centre extending as far as Litherland to the

north, Sandfield Park to the east and Garston to the south. A large area around Birkenhead including Wallasey, Prenton, Bebbington and Port Sunlight is also within the 8km cycle catchment

The Liverpool Cycling Revolution – A Cycling Strategy for Liverpool 2014 - 2026 states that it is LCCs vision to ensure that all cycle routes are safe, convenient, accessible, comfortable and attractive for all users.

An extract from the Liverpool Cycle Map showing cycle infrastructure in the vicinity of the site is shown in **Appendix D**.

It can be seen from Appendix D that cycle infrastructure in the immediate vicinity of the site is limited. Cycle stands are located on Pall Mall, Tithebarn Street and Old Hall Street and there have been recent improvements to the Leeds Street corridor to the north of the site to promote cycle use. These improvements comprised the provision of a high quality two-way segregated cycle path along the southern frontage of Leeds Street between Pall Mall and the A59 to the east and the introduction of a Toucan crossing across the southern section of Pall Mall at its signal-controlled junction with Leeds Street. Furthermore, dedicated green signals for cyclists were installed on both of the Pall Mall approaches to the Leeds Street junction to facilitate the crossing of Leeds Street, although, these have been turned off in recent months due to noncompliance issues by general motorised traffic.

In addition, cycle routes have also been introduced along Back Leeds Street, East Street and St Paul's Square facilitating a link between Leeds Street and the site. Cyclists are able to cycle in both directions on East Street and St Pauls Square as these streets have been permitted to allow this even though they are one-way for other vehicles. Contra-flow cycling is also permitted on Edmund Street, Ormond Street and Earle Street, all of which allow free flow of cycles through the Main Office Area between Leeds Street and Tithebarn Street.

4.4.2.1 *CityBike Scheme*

Liverpool City Council run a bike sharing programme called CityBike. The programme offers 1,000 bicycles to hire from approximately 90 stations spread across the city. CityBike have flexible membership options ranging from daily and weekly to annually.

The closest CityBike stations to the site are located on Old Hall Street at the Capital Building and outside the access to Moorfields Railway Station. Each bike station has parking provision for up to eight bikes. In addition to these CityBike stations, there are stations located throughout the city which could be attractive to employees for either commuting, or attending business meetings in the city throughout the day.

4.4.3 Bus

As shown in Figure 4.3, the site is located in close proximity to several bus stops served by frequent bus services and which provide access to a range of local destinations. As indicated above, the IHT document 'Buses in Urban Developments' recommends a maximum walking distance of 400 m to a bus stop.

There are three bus stops located on Tithebarn Street within approximately 260 m walking distance and provide access to a combined total of 15 bus services. However, it should be noted that all of the services accessed from these bus stops only operate in the evenings, outside of typical office business hours.

A bus stop is present on Moorfields, just to the southeast of the Tithebarn Street/ Moorfield junction. This bus stop operates in the northbound direction and provides

access to five services which, in combination, provide a frequency of five buses per hour during the peak hours.

Dale Street features three bus stops within the 400 m walking distance. Although these bus stops provide access to duplicated services, many of the services that only stop on Tithebarn Street in the evening also stop on Dale Street throughout the day. These stops provide access to 23 services which, in combination, provide a frequency of more than 25 buses per hour during the peak hours.

In summary, the bus stops along Tithebarn Street provide access to a combined total of 15 bus services that operate only in the evening, outside of office hours. However, the bus stops on Moorfields and Dale Street are within 400 m walking distance and provide access to a total of 26 routes which serve the main corridors of Liverpool and the wider Merseyside area with a high frequency of buses throughout the day.

Finally, Queens Square Bus Station is located approximately 800 m walking distance from the site which provides access to a range of local bus services. Although lying outside of the preferred walking distance to a bus stop of 400 m, the additional distance is highly unlikely to deter a bus user from using this bus station considering the large number of services available.

It should be noted that the bus stops located on Pall Mall immediately adjacent to and opposite the site and the bus stop located on the southern frontage of Tithebarn Street are currently not in use but have been retained by LCC/Merseytravel should any future changes in bus services or routing occur.

4.4.3.1 *ArrivaClick*

ArrivaClick is a new type of bus service that is now operating in Liverpool. It is an on-demand, flexible minibus service that takes multiple passengers heading in the same direction and books them into a shared vehicle which is able to come when and where requested. The system works through a dedicated phone app and covers the majority of the city and wider suburbs. The service operates as a corner-to-corner scheme where the bus will pick you up at a nearby corner and then drop you off within a couple of streets of your requested destination. This ensures that even with multiple pickups, trip times are as efficient as they can be.

Considering the above, it can be concluded the site is well served by buses and the times of the services are suitable for use by employees and visitors to the proposed development.

4.4.4 Train

As shown in Figure 4.3, the nearest railway station to the site is Moorfields Railway Station, located approximately 250 m walking distance from the site to the south east. It is a local station serving the city centre and provides connections to a wide range of commuter conurbations, with destinations including Birkenhead, Chester and Southport.

Liverpool James Street is located 750 m walking distance from the site to the south. It is also a local station serving the city centre and provides connections to a duplication of the services provided at Moorfields.

Both railway stations are located within the preferred maximum walking distance to a major fixed public transport node and are a realistic transport mode for commuters.

Liverpool Lime Street Station is located approximately 1.1 km walking distance from the site to the south east. It is the main station serving the city centre and provides connections to a wide range of inter-city routes, with destinations including Manchester, Sheffield, Nottingham and London. It also provides access to an extensive network of local services. Although lying beyond the preferred maximum walking distance to a railway station of 800 m, at a walking speed of 1.4 m/s the additional 300 m required to reach the station would only take approximately 4 minutes. An additional walking time of 4 minutes is highly unlikely to deter a rail user from using this railway station considering the inter-city services available. Liverpool Lime Street is therefore a realistic transport node for both commuters and guests of the hotel. It should be noted that services run between Moorfields and Liverpool Lime Street which can be used at no extra cost as a connecting journey between these stations; however, this only applies in one direction as services do not run from Liverpool Lime Street to Moorfields due to the track arrangement.

4.4.5 Taxi

As shown in Figure 4.3, a taxi rank is provided on Old Hall Street to the north of its junction with Tithebarn Street, approximately 300 m walking distance from the site, and is therefore easily accessible on foot.

4.4.6 Car Club

Enterprise Car Club operates in Liverpool with six cars spread between five locations. Each car has an exclusive car club bay. As shown in Figure 4.3, the closest car club location is on Moorfields, adjacent to the railway station, this location comprises two bays. A further two car club locations are present just over 400 m walking distance to the north-west of the site on Old Hall Street and Brooke Street. Both of these locations comprise of a bay suitable for two vehicles.

Car club schemes allow occasional car use without generating the additional commuter trip into the city by car. The use of this scheme could therefore be attractive to employees who commute using more sustainable modes yet need a car to attend business meetings throughout the day.

4.4.7 Minimum Accessibility Standard Assessment (MASA)

Liverpool City Council Supplementary Planning Document 'Ensuring a Choice of Travel' (2008) requires that a Minimum Accessibility Standard Assessment (MASA) be undertaken as part of Transport Statements for new developments. The MASA is required to assess the accessibility of the development proposals and identify appropriate accessibility improvements that may be necessary to ensure full compliance with accessible requirements.

The Pall Mall site is located to the north of the 'City Centre Boundary', central to the Main Office Area and therefore has been identified as within the 'Urban Centre'. The target and actual scores for each use at the proposed development are provided in Table 4.1 and the full assessment is included as **Appendix E**.

MASA RESULTS

Use	Walking		Cycling		PT		Parking	
	Target	Actual	Target	Actual	Target	Actual	Target	Actual
Office	2	4	5	5	5	5	3	3
Hotel	2	4	5	5	5	5	3	3

Table 4.1 – MASA Results

As shown in Table 4.1, the site location satisfies all LCC's accessibility requirements for both office and hotel land uses.

5 Proposed Development

5.1 Development Description

The development masterplan covers an area of 2.8 acres (1.16 hectares) and comprises the provision of three office buildings (with ancillary uses at ground floor level), a hotel with associated infrastructure and new areas of public realm, which will serve as a replacement for the former gardens.

The development mix and quantum are as set out below:

- Building A (B1 office): 14,480sqm GIA (9,602sqm NIA).
- Building B (Hotel): 13,488sqm GIA (307 rooms).
- Building C (B1 office): 19,672sqm GIA (15,221sqm NIA).
- Building D (B1 office): 9,191sqm GIA (7,075 sqm NIA).

The location of each building is shown indicatively in **Figure 5.1** and a copy of the development masterplan is included as **Appendix F**.

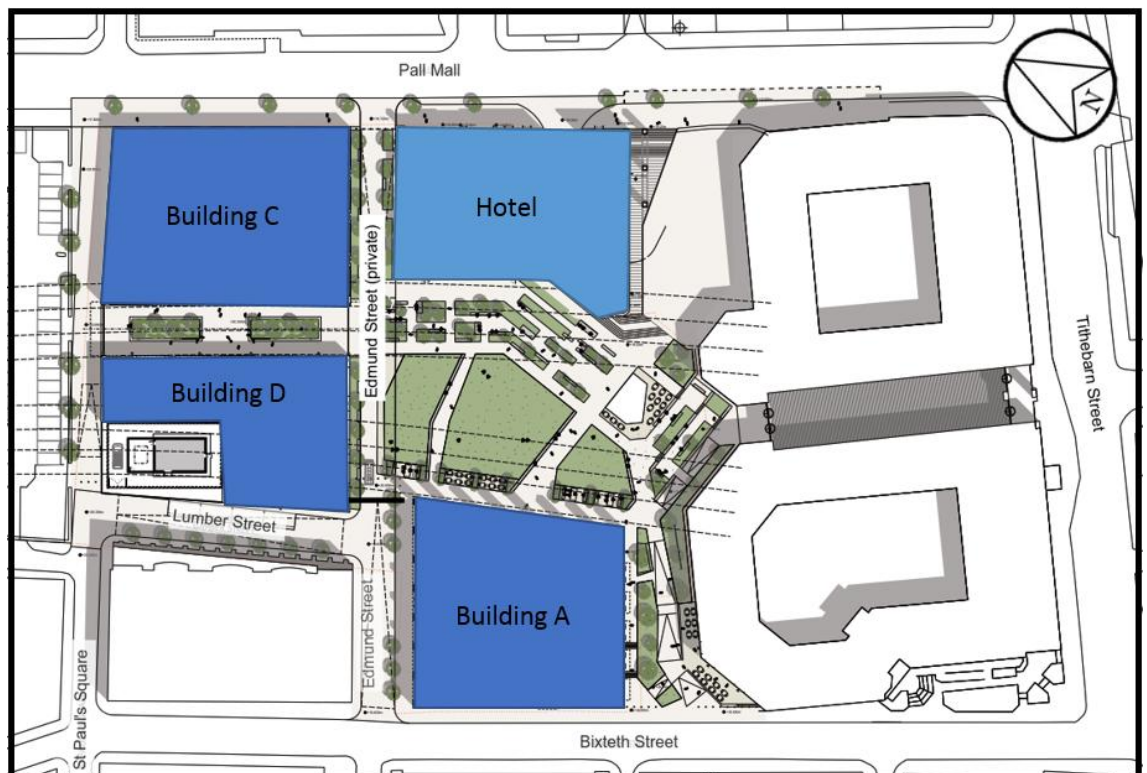


Figure 5.1: Building Locations within Development

As previously stated, a hybrid planning application, with means of access to be determined, is to be submitted. Building A will be a detailed application, whilst the Hotel and Buildings C and D will be submitted in outline.

The development masterplan envisages a largely car free development as only a limited number of parking spaces are to be provided in the basements of Buildings A and C. New pedestrian routes are proposed through the site via the existing and proposed new (private) sections of Edmund Street, the central public realm and a pedestrian bridge adjacent to the hotel linking Pall Mall to the new public realm. These pedestrian routes reflect the key desire lines and will facilitate excellent connectivity between the site, the CBD and the adjacent areas of the city, taking advantage of the sustainable linkages provided as part of the surrounding highway network.

The existing sub-station located on the Bixteth Street frontage will be replaced with a new facility to be located adjacent to Building D. This is subject of a separate planning application which has already been approved by LCC.

5.2 Vehicular Access Strategy

5.2.1 Vehicular Access

With the exception of access to the small basement car parks proposed within Buildings A and C, vehicular access into the masterplan area will be limited to service and delivery vehicles.

Access through the site between Pall Mall and Bixteth Street will be via an extension to Edmund Street which will provide a vehicular and pedestrian link between both highways. This new section of road will be privately maintained, operate one-way from Pall Mall towards Bixteth Street and will have access restricted to service and delivery vehicles via the use of a barrier and intercom system, or similar.

To enable the formation of the new junction of Pall Mall with the new private section of Edmund Street, two residents permit parking spaces will be lost, and the existing bus stop will be moved approximately 5m to the south. NWAAT restrictions will be implemented to cover the junction mouth.

To facilitate access to the publicly maintained section of Edmund Street, a new section of highway will be formed to the rear of the X Building to provide a connection from St Paul's Square. This new section of highway, referred to as Lumber Street, will be constructed to adoptable highway standards and will operate one-way southbound. This new section of highway will also provide access to the new sub-station located adjacent to Building D.

Drawing 119272-AHB-001 included as **Appendix G** shows the proposed limits of adoption on the new section of highway and the section of Edmund Street to be publicly maintained.

Building A has frontages onto Bixteth Street and the existing section of Edmund Street.

All servicing operations for Building A will be undertaken on-street from a service bay located on the southern frontage of the publicly maintained section of Edmund Street. The service point is positioned so as not to restrict access to/egress from the car park of the X Building located on the opposite side of Edmund Street.

Access to the basement car park and cycle parking of Building A will be provided from the Bixteth Street frontage via a ramp operating under a one in/one out system with a shutter-controlled access located to the south of its junction with Edmund Street. To

facilitate safe usage of the entrance, the footway of Bixteth Street will be widened either side of Edmund Street. This will enable a vehicle waiting to enter the car park to pull clear of the Bixteth Street carriageway. The widening of the footway will also reduce pedestrian crossing distances across Bixteth Street thereby providing easier access to the new section of footway to be provided on the southern frontage of Edmund Street which will facilitate pedestrian access into the masterplan area along this key desire line. Swept path analyses of access to and from the car park access ramp is shown on **Drawing 119272-SPA-005** included in **Appendix H**.

To accommodate the car park entrance for Building A and the proposed footway build-outs, the TRO's along the north-eastern side of Bixteth Street will be amended so that no P&D parking is lost. Further information of the proposed changes to the TROs are summarised in Section 5.2.3 below.

Building C and the Hotel have frontages with Pall Mall.

Access to the basement car park and cycle parking for Building C will be taken from Pall Mall via a shutter-controlled entrance. To facilitate safe usage of the entrance, NWAAT restrictions will be implemented to cover the mouth of the junction which will require the removal of four residents permit parking spaces. Swept path analysis of access to and from the ramp is shown on **Drawing 119272-SPA-006** included in **Appendix H**. Servicing for Building C will take place via the private section of Edmund Street.

Servicing for the hotel will take place on-street from a new loading bay located adjacent to the service/car park access for the Exchange Building. The implementation of this bay will require the removal of three residents permit parking spaces.

Servicing for Building D will take place from the private section of Edmund Street.

5.2.2 Proposed Traffic Regulation Orders

As outlined above, a number of TROs will need to be amended/revoked and some new TROs will need to be introduced to support the proposed access strategy. A summary of the proposed changes are detailed below. The existing and proposed TROs are also illustrated in **Drawings 119272-TRO-001** and **119272-TRO-002** included as **Appendix I**:

Pall Mall

- Introduction of loading bay immediately south of Exchange Building service/car park access requiring the loss of three residents permit parking spaces. A maximum of 30 minutes loading/unloading will be permitted Monday to Sunday between 8am and 6pm. This is consistent with loading facilities in the adjacent area.
- Introduction of NWAAT restrictions on Pall Mall at its junction with the new section of Edmund Street, extending to 10m from the edge of carriageway on each side of the access. This will result in two residents permit parking spaces being lost.

- Relocation of the northbound bus stop by 5m to the south so that it sits between the new Edmund Street access and the Exchange Building service access.
- Introduction of NWAAT restrictions on Pall Mall at its junction with the proposed basement car park access for Building C, extending to 10m from edge of carriageway on each side of the access. This will result in four residents permit parking spaces being lost.
- Overall, nine residents permit parking spaces will be lost to the provide loading and access facilities for the proposed development. It is intended that these spaces will be re-provided on streets within the immediate vicinity with six spaces to be provided on Cockspur Street West. Discussions with regard to the location of the three remaining spaces to be re-provided are on-going with LCC to determine suitable locations. It is anticipated there will be no net loss of residents permit parking in the area.

Bixteth Street

- A 26m section of existing P&D parking (five spaces) and 22m of limited waiting are to be replaced with approximately 29m of P&D parking (two sections of 12m and 17m) and two sections of NWAAT restrictions (9m and 7m) plus loading restrictions on the 9m section of NWAAT which is adjacent to the Building A pedestrian entrance. Although the lengths of parking are slightly different, no loss of parking is envisaged.
- NWAAT restrictions including no loading restrictions at the junction of Bixteth Street and Edmund Street to cover the pedestrian crossings and the car park access to Building A.

Edmund Street

- Limited waiting on southern side replaced with 26m loading bay and NWAAT restrictions with loading restrictions.
- Limited waiting on northern side replaced with NWAAT and loading restrictions.
- One way westbound.

Lumber Street

- This new street will require NWAAT restrictions with loading restrictions on both sides of the carriageway except for a 20m section of P&D parking on its northern side adjacent to Building D.
- The NWAAT restrictions with loading restrictions will extend into St Pauls Square and East Street to prevent blocking of junction.
- One-way southbound.
- It should be noted that the operation of this new highway as one-way away from St Paul's Square will not have an impact on LCCs aspiration to revoke

the TRO and allow St Paul's Square to revert to two-way operation between Bixteth Street and East Street.

5.2.3 Servicing Management Plan

A Servicing Management Plan has been prepared for the masterplan area. This Plan provides details of the service point for each building, the servicing routes and the maximum size typical service vehicles likely to require access. It also includes the results of swept path analyses to demonstrate the suitability of each facility. A copy of the Plan is attached in **Appendix J**.

5.3 **Pedestrian and Cycle Access**

Pedestrians will have multiple access points into the public realm of the masterplan area. The locations of these pedestrian access points have been provided to allow maximum penetration into and through site along the key desire lines. The accesses are shown on **Figure 5.2** and are summarised below:

- Three from Pall Mall, including a new pedestrian bridge over the Exchange Building service area adjacent to the hotel, the new section of Edmund Street, both of which lead to the main public realm area; and an access to the north of Building C leading to the public area between Buildings C and D;
- An access from Bixteth Street in a similar location to that formerly serving the gardens;
- Access to the main public realm area via Edmund Street and a new footway that runs adjacent to Building A, which is a minimum width of 3m where it passes the loading bay;
- An access at the corner of Lumber Street and St Paul's Square adjacent to the sub-station/Building D leading to the public area between Buildings C and D; and
- An access to connect through the existing Exchange Building that links the main public realm area with Tithebarn Street

It is intended that the new (private) section of Edmund Street will provide a high quality traffic free and direct route for cyclists between Pall Mall and Bixteth Street.

This will also facilitate access to the visitor cycle parking which will be located at convenient points within the public realm. Cyclists will be required to dismount if deviating from this route. It should be noted that whilst the new section of Edmund Street will be one-way for service vehicles, it will operate as a two-way link for cyclists and pedestrians.

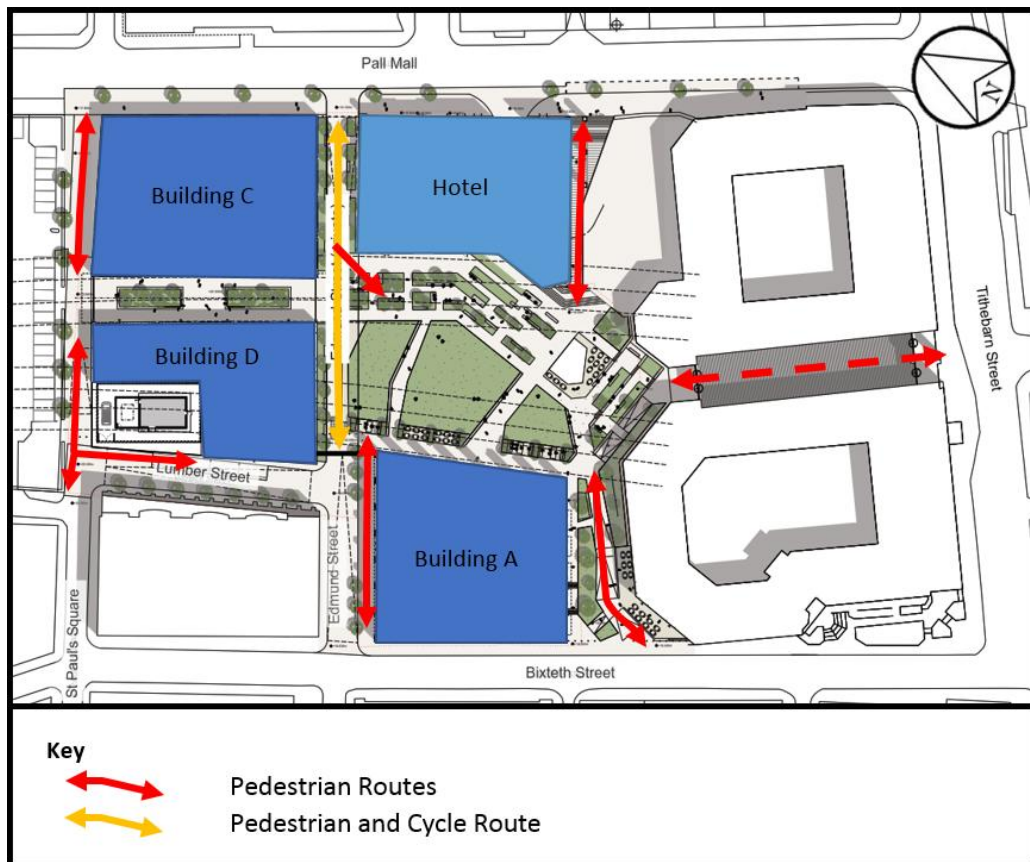


Figure 5.2: Pedestrian and Cycle access to the development

5.4 Parking Provision

LCC's Supplementary Planning Document 'Ensuring a Choice of Travel' (2008) (SPD) provides guidance on the parking requirements for each land use type.

In line with the promotion of a sustainable, largely car free scheme, it is proposed that the development will have limited basement parking in Buildings A and C. No other car parking will be provided in the masterplan area.

5.4.1 Car Parking

Building A will provide 24 parking spaces within the basement of the building. A similar number of spaces is anticipated in Building C, although this will be confirmed at reserved matters stage.

The SPD provides guidance on the minimum requirements for disabled parking and the maximum provision for staff/operational parking for each land-use. Those relating to Building A are for B1 office which state the following:

- Staff/Operational: Maximum 1 space per 40sqm (city centre – single office)
- Disabled: 1 space per disabled employee, plus 2 spaces or 5% of the maximum standard

The proposed level of staff/operational of 24 parking spaces within the Building A falls well below the maximum standards outlined by the SPD and therefore complies with the guidance.

With regard to disabled parking, it is proposed that 2 disabled spaces will be provided. which corresponds with the SPD guidance.

Two spaces will also have electric charging facilities which is 5% of the total parking available and is consistent with current LCC guidelines. All other spaces within the car park will be constructed so that they are retro-fittable to electric charging spaces in the future.

The limited parking provision proposed will also help to promote use of sustainable travel modes; however, it is acknowledged that some employees may drive and will make use of the available public parking provision in the vicinity of the site. A review of the available public parking local to the site is reported in Chapter 7 of this report.

5.4.2 Motorcycle Parking

The SPD sets out guidance on the provision of motorcycle parking spaces.

Those relating to Building A are for B1 office which state the following:

- Staff/Operational: Maximum 1 space per 875sqm (city centre – single office)

Based on the NIA for Building A (9,602sqm), the SPD would require the development to provide a maximum of 11 motorcycle parking spaces. The proposals will provide space for up to five motorcycles in the basement level which is within the maximum standard. A similar number of spaces is anticipated in Building C, although this will be confirmed at reserved matters stage.

No other motorcycle parking will be provided within the masterplan area. However, additional free motorcycle parking is available elsewhere in the city centre including Burgess Street Car Park, Exchange Passage West and Old Church Yard, all of which are within a short walk from the masterplan area.

5.4.3 Cycle Parking

The SPD sets out guidance on the minimum provision of cycle parking spaces.

Those relating to Building A are for B1 office which state the following:

- Staff: 1 secure covered space and locker per 400sqm
- Customer/Visitors: 1 space per 300sqm

Based on the NIA for Building A (9,602sqm), the SPD would require the development to provide a minimum of 24 cycle spaces for staff and 32 for customers/visitors. The proposals will provide a total of 132 cycle spaces for staff in the basement level along with eight showers and segregated changing facilities. This quantity is significantly above the minimum standard required and emphasises the promotion of sustainable travel to the site. Although an issue for the reserved matters applications, a similar level of cycle parking is anticipated for Buildings C and D.

The level of cycle parking for the hotel will be provided to an appropriate level to be agreed with LCC at reserved matters stage

With regards to external visitor cycle parking, it is proposed that Sheffield stands will be provided in appropriate locations throughout the new public realm.

5.4.4 Coach and Taxi Drop Off

The SPD suggests that hotels should provide drop-off facilities for coaches and taxis although this is rare within the city centre due to obvious constraints.

For taxis, the recommendation is two spaces for developments over 2,500sqm with coach parking being subject to requirements as determined by the Transport Assessment.

This issue has been discussed with the council and it is agreed that it is not proposed to provide a dedicated taxi facility on Pall Mall for the hotel in order to minimise impact on the existing residents permit parking provision. However, a taxi rank is provided on Old Hall Street, adjacent to the entrance to Moorfields Railway Station, approximately 250m walking distance from the proposed hotel location.

Furthermore, given the city centre location of the development, it is anticipated that a high proportion of trips to/from the hotel would be made on foot. A breakdown of access to the hotel by mode is outlined in the following chapter.

No coach parking is proposed within the masterplan area.

5.5 **Anticipated Highway Works Schedule**

The construction of the site will be undertaken in a phased manner. The first phase will involve the construction of Building A, a section of the public realm and associated highway infrastructure. All other elements of the development will be brought forward in subsequent phases. It should be noted that the relocation of the substation is being undertaken in advance under a separate planning consent already granted by LCC.

A summary of the anticipated schedule of highway works for Phase 1 is outlined below:

- Works on Bixteth Street including construction of footway buildouts at the Edmund Street junction;
- Widening of Edmund Street; and
- The creation of new highway linking between St Paul's Square and Edmund Street.

The future phases of the development will require highway works on the Pall Mall frontage of the site. These include providing the bell mouths for the access to the private section of Edmund Street and the access to Building C car park as well as upgrading of the footway as part of the development works.

Improvement to the adopted highway network will be undertaken under S278 and S38 of the Highways Act 1980. **Drawing 119272-HW-001** attached in **Appendix K** show the proposed extent of highway works. It should be noted that these areas are illustrative at this stage and the exact extent will be determined as part of the detailed design.

6 Anticipated Travel Demand

6.1 Introduction

This section considers travel demand setting out the estimated trip generation on a typical weekday for all modes of transport. In order to estimate the likely trip generation for each mode, the following guidance, data and information has been used:

- TRICs Database
- British Council of Offices - Occupier Density Study 2013; and
- 2011 Census Data – Origin/Designation data set WU03EW - Location of usual residence and place of work by method of travel to work (MSOA level).

6.2 Trip Rates

The likely daily trip generation profile for each mode has been estimated using trip rates derived from the TRICs database. Separate profiles have been derived for the office and hotel elements.

6.2.1 Office Trip Rates

To derive person trip rates for office use, the TRICS database has been interrogated to establish multi-modal trip rates based on the following selections:

- under the 'Employment – Office' category;
- are located within 'Town Centre' only;
- located within England, Wales & Scotland but excluding London
- have limited parking provision (sites with large car parks have been manually excluded);
- surveys recorded on a weekday; and
- trip rates based on 1 trip per employee.

The multi modal trip rates are summarised in Table 6.1 with the full TRICs output provided in **Appendix L**.

PERSON TRIP RATES PER EMPLOYEE – B1 OFFICE

Time Period	Arrivals	Trip Rates	
		Departures	Two-way Total
07:00-08:00	0.145	0.012	0.157
08:00-09:00	0.507	0.034	0.541
09:00-10:00	0.319	0.076	0.395
10:00-11:00	0.194	0.146	0.34
11:00-12:00	0.164	0.192	0.356
12:00-13:00	0.276	0.387	0.663
13:00-14:00	0.43	0.339	0.769
14:00-15:00	0.237	0.2	0.437
15:00-16:00	0.159	0.214	0.373
16:00-17:00	0.104	0.385	0.489
17:00-18:00	0.055	0.463	0.518
18:00-19:00	0.014	0.141	0.155
Daily	2.604	2.589	5.193

Table 6.1: Person Trip Rates per Employee – B1 Office

6.2.2 Hotel Trip Rates

To derive person trip rates for hotel use, the TRICS database has been interrogated to establish multi-modal trip rates based on the following selections:

- under the 'Hotels' category;
- are located within 'Town Centre' only;
- located within England, Wales & Scotland including London
- have limited parking provision (sites with large car parks have been manually excluded);
- surveys recorded on a weekday; and
- trip rates based on 1 trip per bedroom.

The multi modal trip rates are summarised in Table 6.2 with the full TRICs output provided in **Appendix L**.

PERSON TRIP RATES PER ROOM – HOTEL

Time Period	Arrivals	Trip Rates	
		Departures	Two-way Total
07:00-08:00	0.157	0.175	0.332
08:00-09:00	0.147	0.359	0.506
09:00-10:00	0.157	0.223	0.38
10:00-11:00	0.171	0.165	0.336
11:00-12:00	0.135	0.199	0.334
12:00-13:00	0.188	0.18	0.368
13:00-14:00	0.23	0.233	0.463
14:00-15:00	0.265	0.23	0.495
15:00-16:00	0.177	0.251	0.428
16:00-17:00	0.256	0.23	0.486
17:00-18:00	0.324	0.212	0.536
18:00-19:00	0.315	0.28	0.595
19:00-20:00	0.238	0.229	0.467
20:00-21:00	0.191	0.142	0.333
21:00-22:00	0.15	0.103	0.253
Daily	3.104	3.211	6.312

Table 6.2: Person Trip Rates per Room – Hotel

6.3 Person Trip Generation

6.3.1 Office

To estimate the trips likely to be generated by the office element, initially the number of employees in each building was established. The document British Council of Offices - Occupier Density Study 2013 sets out the typical density for offices for areas around the UK and this information has been used to estimate the typical office density.

From this document, it has been established that office developments in the north of England typically have a density of 1 person per 10.1sqm (NIA) with a typical occupancy of 80%. This gives an effective density of 1 employee per 12.6sqm (NIA). This has been applied to the NIA provided for all the office buildings within the development. The estimated employee numbers are summarised in Table 6.3.

ESTIMATED OFFICE EMPLOYEE QUANTITY

Office Building	Size (sqm)	Number of Employees (1 employee per 12.6sqm)
A	9,602	763
C	15,221	1,209
D	7,075	562
Total	31,898	2,534

Table 6.3: Estimated Employee Numbers

The employee numbers in Table 6.3 have been applied to the trip rates for B1 office shown in Table 6.1. The resulting person trip generation is shown in **Table 6.4**.

ESTIMATED PERSON TRIP GENERATION – B1 OFFICE

Time Period	Estimated Trip Generation (Buildings A, C & D)		
	Arrivals	Departures	Two-way Total
07:00-08:00	367	30	397
08:00-09:00	1285	86	1371
09:00-10:00	808	193	1001
10:00-11:00	492	370	862
11:00-12:00	416	487	903
12:00-13:00	699	981	1680
13:00-14:00	1090	859	1949
14:00-15:00	601	507	1108
15:00-16:00	403	542	945
16:00-17:00	264	976	1240
17:00-18:00	139	1173	1312
18:00-19:00	35	357	392
Daily	6599	6561	13160

Table 6.4: Estimated Person Trip Generation – B1 Office

6.3.2

Hotel

The estimated trip generation is based on the 307 rooms as previously defined and using the trip rates derived from the trip rates shown in Table 6.2. The resulting person trip generation is summarised in **Table 6.5**.

ESTIMATED PERSON TRIP GENERATION – HOTEL

Time Period	Estimated Trip Generation (Hotel)		
	Arrivals	Departures	Two-way Total
07:00-08:00	48	54	102
08:00-09:00	45	110	155
09:00-10:00	48	68	116
10:00-11:00	52	51	103
11:00-12:00	41	61	102
12:00-13:00	58	55	113
13:00-14:00	71	72	143
14:00-15:00	81	71	152
15:00-16:00	54	77	131
16:00-17:00	79	71	150
17:00-18:00	99	65	164
18:00-19:00	97	86	183

19:00-20:00	73	70	143
20:00-21:00	59	44	103
21:00-22:00	46	32	78
Daily	951	987	1938

Table 6.5: Estimated Person Trip Generation – Hotel

6.4 Multi-modal Trip Generation

6.4.1 Mode Split - Office

To provide an initial indication of mode split for people travelling to work in this part of the city centre, the 2011 census data, specifically super output areas (MSOA), Liverpool 060 and Liverpool 062 (E02006932 and E02006934), have been interrogated with regard to the primary mode of travel. A summary of the existing mode split is shown in Table 6.6.

2011 CENSUS DATA MODE SPLIT

Mode	Split
Driving	35.8%
Motorcycle	0.5%
Taxi	0.7%
Passenger	4.7%
Train	23.5%
Bus	23.9%
Bicycle	1.5%
Walk	9.3%
TOTAL	100.0%

Table 6.6: 2011 Census Data Mode Split

It can be seen from Table 6.6 that of all primary trips made 40.5% are by car (41.7% by all vehicles (Driving, Passenger, Motorcycle & Taxi)), with 23.5% and 23.9% by train and bus, respectively. The remaining 12.1% of trips are made by other available transport modes. It should be highlighted that cycling to work is relatively low at 1.5% of all primary trips made. However, when considering modal split it needs to be borne in mind that the super output areas cover a much greater area of the city than just the Main Office Area. For example, MSOA area E02006934 covers the areas north of Leeds Street where cheap daily parking and free on-street parking is readily available on a weekday. It therefore follows that the availability of this parking will have influenced the mode choice towards the car.

Given that the proposed development will be virtually car free and is located close to the CBD, the strict application of the mode split from the 2011 census is considered inappropriate. As such, the anticipated mode split for the development has been re-evaluated to take into account the limited parking provision, the anticipated levels of cycle parking for staff (which significantly exceeds the minimum requirements) and the proximity of the site to available public transport. Furthermore, the development

proposals will ultimately be supported by a comprehensive Travel Plan to encourage the use of sustainable transport choices.

The re-evaluated mode split targets are summarised in **Table 6.7** below and this is mirrored in the mode split targets within the Framework Travel Plan included as **Appendix M**.

RE-EVALUATED MODE SPLIT – B1 OFFICE

Mode	Census Data	Development Mode Split Target	Mode Split Difference
Vehicles (Car & M/C)	36.3%	15.0%	-21.3%
Passenger (Car & Taxi)	5.5%	5.5%	0.0%
Train	23.5%	29.9%	+6.4%
Bus	23.9%	30.3%	+6.4%
Bicycle	1.5%	10.0%	+8.5%
Walk	9.3%	9.3%	0.0%
TOTAL	100.0%	100.0%	

Table 6.7: Development Mode Split – B1 Office

Using the data in Table 6.7 and the person trip generation summarised in Table 6.1, the likely trip generation for the office element has been re-evaluated and this is summarised in **Table 6.8**.

ESTIMATED OFFICE TRIP GENERATION BY MODE SPLIT (RE-EVALUATED)

Time Period	Vehicles (15.0%)			Passenger (5.5%)			Train (29.9%)			Bus (30.3%)			Bicycle (10.0%)			Walking (9.3%)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
07:00-08:00	55	5	60	20	2	22	110	9	119	111	9	120	37	3	40	34	3	37
08:00-09:00	193	13	206	71	5	76	384	26	410	390	26	416	129	9	138	120	8	128
09:00-10:00	121	29	150	44	11	55	241	58	299	245	58	303	81	19	100	75	18	93
10:00-11:00	74	56	130	27	20	47	147	111	257	149	112	262	49	37	86	46	34	80
11:00-12:00	62	73	135	23	27	50	124	145	269	126	148	274	42	49	91	39	45	84
12:00-13:00	105	147	252	38	54	92	209	293	502	212	298	510	70	98	168	65	91	156
13:00-14:00	164	129	293	60	47	107	325	256	582	331	261	591	109	86	195	101	80	181
14:00-15:00	90	76	166	33	28	61	180	151	331	182	154	336	60	51	111	56	47	103
15:00-16:00	60	81	141	22	30	52	121	162	282	122	164	287	40	54	94	37	50	87
16:00-17:00	40	146	186	15	54	69	79	292	371	80	296	376	26	98	124	25	91	116
17:00-18:00	21	176	197	8	65	73	42	350	392	42	356	398	14	117	131	13	109	122
18:00-19:00	5	54	59	2	20	22	10	107	117	11	108	119	4	36	40	3	33	36

Table 6.8: Trip Generation by Mode Split (Census Data)

The additional public transport trips and increased cycle usage show in Table 6.8 will be absorbed by the excellent public transport provision located in the immediate area and catered for by the significant cycle provision proposed within the development. Additionally, in order to achieve the low level of vehicular trips to the site, a Travel Plan will be used to promote sustainable travel to the site from the outset.

6.4.2 Mode Split - Hotel

The mode split for the hotel element of the development has been derived from TRICs data used to generate the person trips outlined earlier. The estimated mode split is summarised in **Table 6.9**.

TRICS DATA MODE SPLIT FOR HOTEL

Mode	Split
Driving	27.0%
Passenger	13.4%
Public Transport Users	17.1%
Bicycle	0.8%
Walk	41.7%
TOTAL	100.0%

Table 6.9: TRICs Data Mode Split for Hotel

It can be seen from Table 6.9 that of all primary trips made 41.7% walk and 17.1% use public transport. However, given that there are no public transport facilities located directly outside the hotel (the existing bus stops on Pall Mall are currently not in use) it is assumed that the all public transport users will walk from the closest available public transport node (bus stop or train station). Therefore, the primary trips made by walking would increase to 58.9%

It should be highlighted that cycling to a hotel is relatively low at 0.8% of all primary trips made which is to be expected.

The remaining 40.4% of trips are made by people who would drive (27.0%) or be a passenger in a vehicle (13.4%).

Using the mode split in Table 6.9, the estimated person trip generation in Table 6.2 has been split into the respective transport modes which is summarised in Table 6.10.

PRECITED HOTEL TRIP GENERATION BY MODE SPLIT

Time Period	Vehicles (27.0%)			Passenger (13.4%)			PT User (17.1%)			Walk (41.7%)			PT &Walk (58.9%)			Cycle (0.8%)		
	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total	Arr	Dep	Total
07:00-08:00	13	15	28	6	7	13	8	9	17	20	23	43	28	32	60	0	0	0
08:00-09:00	12	30	42	6	15	21	8	19	27	19	46	65	27	65	92	0	1	1
09:00-10:00	13	18	31	6	9	15	8	12	20	20	28	48	28	40	68	0	1	1
10:00-11:00	14	14	28	7	7	14	9	9	18	22	21	43	31	30	61	0	0	0
11:00-12:00	11	16	27	5	8	13	7	10	17	17	25	42	24	35	59	0	1	1
12:00-13:00	16	15	31	8	7	15	10	9	19	24	23	47	34	32	66	0	0	0
13:00-14:00	19	19	38	9	10	19	12	12	24	30	30	60	42	42	84	1	1	2
14:00-15:00	22	19	41	11	9	20	14	12	26	34	30	64	48	42	90	1	1	2
15:00-16:00	15	21	36	7	10	17	9	13	22	23	32	55	32	45	77	0	1	1
16:00-17:00	21	19	40	11	9	20	14	12	26	33	30	63	47	42	89	1	1	2
17:00-18:00	27	18	45	13	9	22	17	11	28	41	27	68	58	38	96	1	1	2
18:00-19:00	26	23	49	13	11	24	17	15	32	40	36	76	57	51	108	1	1	2

Table 6.10: Estimated Hotel Trip Generation by Mode Split (TRICs Data)

7 Car Park Assessment

7.1 Estimated Car Parking Demand

The car parking demand from the proposed development that is likely to use the public car parks that surround the Pall Mall masterplan area has been estimated using the vehicle mode split for both the office and hotel elements. The estimated car park demand is summarised in **Table 7.1**.

ESTIMATED CAR PARK DEMAND

Time Period	Office (vehicle mode split – 15%)			Hotel (vehicle mode split – 27%)		
	Arr	Dep	Occ	Arr	Dep	Occ*
07:00-08:00	55	5	50	13	15	30
08:00-09:00	193	13	230	12	30	12
09:00-10:00	121	29	322	13	18	7
10:00-11:00	74	56	340	14	14	7
11:00-12:00	62	73	329	11	16	2
12:00-13:00	105	147	287	16	15	3
13:00-14:00	164	129	322	19	19	3
14:00-15:00	90	76	336	22	19	6
15:00-16:00	60	81	315	15	21	0
16:00-17:00	40	146	209	21	19	2
17:00-18:00	21	176	54	27	18	11
18:00-19:00	5	54	5	26	23	14
19:00-20:00	0	5	0	20	19	15
20:00-21:00	0	0	0	16	12	19
21:00-22:00	0	0	0	12	9	22

*Hotel car parking demand is assumed to start with an initial occupancy of 32 for guests who have stayed over from the previous night

Table 7.1: Estimated Car Parking Demand

Table 7.1 indicates that a maximum requirement for 342 spaces is anticipated to accommodate the parking demand from the whole Pall Mall proposed development when fully occupied (This would be a 'worst case scenario' given that the Travel Plan will be working to increase the sustainable travel mode share over time).

7.2 Existing Car Park Survey

A survey of usage of all the available publicly accessible off-street car parks within the city centre was undertaken by LCC in October 2018.

This survey provides information on the typical occupancy of car parks within a maximum 15-minute walk of the masterplan area which are likely to be used by future employees within the masterplan area, or potential hotel guests.

The relevant extract from the car park survey comprises 27 car parks within a 15-minute walk from the masterplan area plus the former Liverpool College car park located on Pumpfields Road which is now available for public use. The locations of the car parks are shown in **Appendix N**

In summary, there are currently 7092 spaces available for public use within 15-minutes' walk of the masterplan area. However, this total will reduce in the short/medium term as car parks will be lost to new development. The car parks to be lost include the following

- 240 spaces (220 marked and 20 unmarked) on the overspill area of the Pall Mall Exchange car park, which will be lost to the proposed development;
- 140 spaces at the Pall Mall/Highfield Street car park, which will be lost to a new residential development; and
- 301 spaces at the Fort Knox and Leeds Street car parks, which will be lost to a new residential development.

Taking these reductions into account, the total number of publicly available spaces reduces to 6381. It should of course be recognised that all of these spaces are supplied on a first come, first served, basis and it is clear from the results of the LCC survey that occupancy is influenced by price and to some extent, distance.

The full results of the LCC car park survey are presented in **Appendix N**.

The results in Appendix N show that of the 6381 spaces that were available on the survey date, 71% were occupied at the time of the count leaving 1,873 spaces available. Taking this into account, it can be seen that capacity is available within the car parks to absorb the estimated peak parking demand from the proposed Pall Mall development.

8 Summary and Conclusions

This Transport Assessment has been prepared by Sweco on behalf of Kier Property Developments Limited and CTP Limited to support a hybrid planning application, with means of access to be determined, for the redevelopment of land at Pall Mall in Liverpool city centre for mixed commercial land uses.

The Transport Assessment has been prepared in line with prevailing guidelines and the proposals have been formulated in accordance with local and national transport planning policy.

The development proposals cover an area of 2.8 acres (1.16 hectares) and comprises the provision of three office buildings (with ancillary uses at ground floor level), a hotel with associated infrastructure and a new area of public realm, which will serve as a replacement for the former gardens.

The development will be a sustainable, largely car free development with a limited number of parking spaces available in the basements of Building A and C. A service route will be provided via a section of new private road linking Pall Mall and Edmund Street. New pedestrian routes are proposed through the site linking Bixteth Street and Pall Mall via the new public realm in the centre of the site. A new section of public highway will be provided to allow access to the relocated substation, access for service vehicles for Building A and a new access route for the X Building car park entrance adjacent to the site. This section of new highway will be constructed to adopted standards and subject to a S278/S38 agreement with the council.

An assessment of travel by all sustainable modes to the site has been undertaken with pedestrian, cyclist and public transport facilities identified. A Minimum Accessibility Standard Assessment has also been undertaken. It is concluded that the site is very well located for access to all available sustainable modes of travel. Cyclists have easy access to the surrounding areas via the existing infrastructure provision that surrounds the site. The inclusion of new pedestrian routes through the site will facilitate excellent connectivity between the development, the CBD and the existing bus and train services that are in close proximity. All of which take advantage of the sustainable linkages provided as part of the surrounding highway network. These excellent sustainable connections are also confirmed by the score achieved in the MASA which shows the site is very accessible.

The existing highway network has been reviewed in relation to impact on the Traffic Regulation Orders surrounding the site. No loss of Pay and Display parking is envisaged on Bixteth Street, with a new section of Pay and Display parking provided on the new section of highway on Lumber Street. A new loading bay will also be provided on Edmund Street adjacent to Building A. Nine residents permit parking spaces will be lost along Pall Mall to facilitate the proposed accesses to the development and to provide a loading bay for the Hotel. It is intended that these spaces will be re-provided elsewhere on streets in the vicinity of Pall Mall, subject to agreement with Liverpool City Council, resulting in no loss of residents parking.

A servicing management plan is provided and is supported by swept path analyses which demonstrates the maximum size of vehicle that will service each of the buildings can be accommodated by the proposed infrastructure.

Person trips for the development have been established from trip rates derived from the TRICS database and split by mode share. The mode share for the employment element of the development has been established taking account of census data for

the area, the excellent public transport provision, proposed cycle parking provision and the fact that the development will be virtually car free. The hotel mode share was established from the TRICs database. Overall it has been estimated that 15% of trips generated by the office element of the development will be by car, with the remaining 85% by sustainable modes of transport. The estimated trips by car for the hotel element is 27%. In order to achieve this target level of car use, a Travel Plan will be implemented to promote the sustainable location of the site and encourage sustainable travel choices. A Framework Travel Plan is included within this report.

An assessment of future parking demand at public car parks that are within a 15-minute walk from the site has been undertaken using LCC data collected in 2018. This concludes that there is capacity within the surrounding car parks to cater for the estimated parking demand from the proposed development.

Overall, it is concluded that the proposed development is in a highly sustainable location, with low car parking provision and, as such will have no detrimental impacts on the highway network. Additionally, any future parking demand can be catered for by capacity within the surrounding car park provision.

The existing sustainable infrastructure in the adjacent area and wider city centre, in combination with the new cycle parking and public realm proposed within the masterplan area and implementation of the associated Travel Plan, will ensure that access to the site by a variety of transport modes is easy, safe, and therefore appropriate to accommodate the future travel demands.