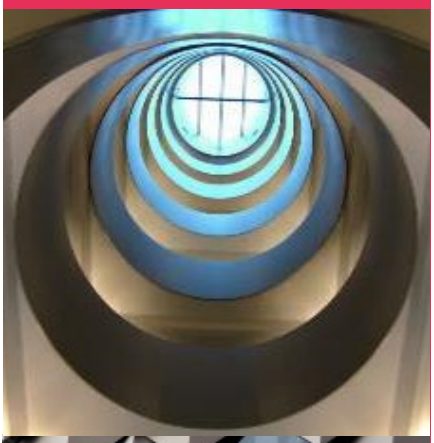
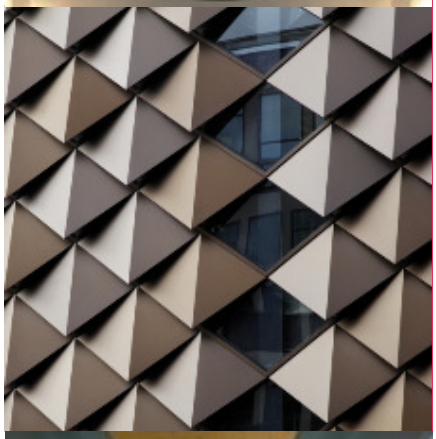




Police and Crime Commissioner for Merseyside - OCC

Transport Assessment

Curtins Ref: TPMA5058
Revision: Final
Issue Date: 14 July 2015

Client Name: Merseyside Police.

Curtins
Curtin House, Columbus Quay
Riverside Drive, Liverpool L2 3DB
0151 726 2000
www.curtins.com

Control Sheet

This report has been prepared for the sole benefit, use, and information for the client. The liability of Curtins with respect to the information contained in the report will not extend to any third party.

Author	Signature	Date
Tom Lavin BA (Hons) Graduate Transport Planner		14 July 2015

Reviewed	Signature	Date
Keith York HNC MCIHT Associate		14 July 2015

Authorised	Signature	Date
Keith York HNC MCIHT Associate		14 July 2015

Table of Contents

Tables

Plans

Plan TPMA5058_001 – Regional Site Location Plan
Plan TPMA5058_002 – Local Site Location Plan
Plan TPMA5058_003 – Pedestrian Catchment Plan
Plan TPMA5058_004 – Cycle Catchment Plan
Plan TPMA5058_005 – Public Transport Accessibility

Drawings

OCC-CUR-XX-00-DR-C-1102_iss1_revP1 – Visitor and Staff Access Routes
OCC-CUR-XX-00-DR-C-1103_iss1_revP1 – MPV Tracking
OCC-CUR-XX-00-DR-C-1104_iss1_revP1 – HGV Tracking Around Site
OCC-CUR-XX-00-DR-C-1105_iss1_revP1 – Crane Track Around Site
OCC-CUR-XX-00-DR-C-1106_iss1_revP1 – Oil tanker to Fuel Depot North Entrance
OCC-CUR-XX-00-DR-C-1107_iss1_revP1 – Oil tanker to Fuel Depot South Entrance
OCC-CUR-XX-00-DR-C-1108_iss1_revP1 – Large Car Tracking
OCC-CUR-XX-00-DR-C-1109_iss1_revP1 – Refuse Vehicle Tracking

Appendices

Appendix A – Proposed Site Plan **TPMA5058_100 - P**rovided by Edge Architects
Appendix B – Taskers Site TRICS Outputs
Appendix C – Traffic Flow Diagrams
Appendix D – Junction Modelling Outputs
Appendix E – MASA
Appendix F – Staff Survey Questions
Appendix G – Smithdown Lane Donor Site response Flows

1.0 Introduction

1.1 Introduction

1.1.1 Curtins has been appointed on behalf of Merseyside Police (MP) to provide traffic and transportation advice in relation to a proposed opening of a new Merseyside Police Operational Command Centre to Leeward Drive, Speke Liverpool. The proposals also seek to provide a coherent parking layout and access to and from the site. **Appendix A** to the rear of this document contains the proposed site plan for the scheme **TPMA5058_100.**

1.2 Purpose of this Report

1.2.1 This Transport Assessment has been prepared to inform Highways Officers at Liverpool City Council (LCC) of all relevant traffic and transportation matters associated with the application.

1.2.2 This report is to be considered alongside a Minimum Accessibility Standard Assessment (MASA), in line with existing LCC policy. This MASA further appraises the accessibility of the site, and its suitability for residential purposes, and can be found in the appendices of this report. This can be found in **Appendix E**.

1.3 Development Proposals

1.3.1 Merseyside Police wish to submit a planning application to develop a new Operational Command Centre located off Leeward Drive in Speke Liverpool.

1.3.2 The planning application proposal is for the creation of a new police Operational Command Centre, with the addition of onsite vehicle movements including refuse vehicle access to provide servicing to the site.

1.4 Scope of the Report

1.4.1 This TA contains the following:

- A description of the site location and the highway network in the vicinity of the site;
- A summary of servicing and access arrangements;
- A review of accessibility by all sustainable modes of travel;
- A Minimum Accessibility Standard Assessment (MASA) as identified in LCC's "Ensuring a Choice of Travel" SPD;
- Information regarding the traffic generated by the proposed development;
- An assessment of the likely impact on the surrounding highway network; and

- A summary of all relevant transportation policy.

1.4.2 The information presented in this TA has been prepared in accordance with NPPF and Planning Practice Guidance, specifically:

- Travel plans, transport assessments and statements in decision-taking; and
- Transport Evidence bases in plan making.

1.5 Structure of the Report

1.5.1 Following this introduction, Section 2 of the report provides a description of the highway network in the vicinity of the site and an assessment of highway safety.

1.5.2 Section 3 of the report summarises the relevant transport planning policy and how the development proposals accord with, whilst Section 4 this provides details of the development proposals.

1.5.3 Section 4 summarises the development proposals of the OCC site.

1.5.4 Section 5 provides details regarding the accessibility of the site by sustainable modes of travel.

1.5.5 Section 6 discusses the Traffic Generation of the site and what assumptions have been made with regards to traffic.

1.5.6 Section 7 presents the results of the capacity assessments and the impact on the highway network is considered.

1.5.7 The report is concluded and summarised in Section 8.

2.0 Site Context and Highway Safety

2.1 Site Location

2.1.1 The development site is located along the eastern side of Leeward Drive in Speke, which is located in the middle of Speke Hall Avenue to the East, Estuary Boulevard to the west connected via Windward Drive. The south of the site is bordered by Estuary Banks with the north being bordered by Estuary House business offices. Leeward Drive runs in a North/South direction. The land is currently undeveloped, **Plan TPMA5058_100** shows the proposed site layout and expected parking and access around the site. The site is around mile north west of Liverpool John Lennon Airport.

2.1.2 **Plan TPMA5058_001** illustrates the location of the site in relation to the surrounding areas, and **Plan TPMA5058_002** shows the site in a more local context relating to the local highway network.

2.2 Existing Access

2.2.1 The existing site access is on the eastern side of Leeward drive and is currently only a gap in the trees onto a field. Leeward drive can be accessed from either Estuary Banks in the south or Estuary Boulevard in the west via Windward Drive. The main access to the site shall be on the eastern side of Leeward Drive opposite the current T junction of Windward Drive / Leeward Drive.

2.3 Surrounding Highway Network

Leeward Drive

2.3.1 Leeward Drive is located along the Eastern side of the development and extends beyond the North and South boundary of the site, stretching from Estuary House in the North and Estuary Banks in the South. The carriageway is approximately 7.5m wide adjacent to the development site.

2.3.2 Currently there is a 2-2.5m wide footway along both sides of the road for the length of the route. The carriageway is a single carriageway in both directions with a 30mph speed limit. At the northern end lies Estuary House business offices, the road has connections to Windward Drive and Estuary Banks.

Windward Drive

2.3.3 Windward is located opposite to the west of the site and runs in an east/west direction as a single carriageway in both directions with a 30mph speed limit. At the western end of Windward Drive is Estuary Boulevard which connects to Speke Road in the North and to Estuary Banks at the roundabout.

2.3.4 There is a 1.75 – 2.25m footway on either side of the road that is only broken on the southern side for access and egress to local businesses. To the north of the road is an undeveloped field and to the south lies local businesses such as 'Kiddy Factory' day care centre and 'Kier Construction Liverpool'.

Estuary Banks

2.3.5 This is a private road that lies to the south of the site and lies between Speke Hall Avenue roundabout to the east and Estuary Boulevard to the west. Both roundabouts provide access to Speke Road however the western direction provides access to local business centres and the eastern direction to Speke Hall Avenue and Liverpool John Lennon Airport.

2.3.6 The carriageway is approximately 9.5m wide with a 3.5-4m centre reservation space which can be used as pocket space for right turning. The route has a 30mph speed limit with 3m wide off carriageway footways, the southern is 3.5m away from the carriageway and the northern is around 14.5m. There is street lighting present along the length of the carriageway edge. There are also bus stops serving both directions approximately 90m west of Leeward Drive, the bus stops are within segregated laybys.

Estuary Boulevard

2.3.7 This route provides connection to Windward drive and then on to the site, the route connects to Speke Road roundabout in the North adjacent to Speke Retail Park and provides access south towards Speke Garston Coastal reserve.

2.3.8 The carriageway is approximately 19.5m wide including a 4.5m central reserve and is a two lane in both directions carriageway. The speed limit is 20mph with 2.5m footways on either side of the carriageway with a grass verge separating the carriageway and footway.

Speke Hall Avenue

2.3.9 Speke Hall Avenue borders the site to the east however there is no proposed direct access onto this road, except for a bollard controlled emergency exit to the north east of the internal access. Towards the north Speke Hall Avenue crosses Speke Road to Hunts Cross and to the south the road offers direct access to Liverpool John Lennon Airport.

2.3.10 The carriageway on both sides has partial bus lanes with the southbound general traffic merging to form a single lane to accommodate the bus lane for approximately 190m, and the northbound carriageway having a bus lane for 220m after a similar merging arrangement from the Estuary Banks roundabout. The southbound general traffic reform's into two lanes and the northbound traffic splits into 2 lanes and then ultimately five lanes at the Speke Road junction. Each lane is approximately 4-4.5m wide with a wide grass verge between each side of the road that at maximum width is approximately 21m.

2.4 Highway Safety

2.4.1 During scoping discussions with Liverpool City Council (LCC) it was agreed that this Transport Assessment should include a physical audit of safety within the surrounding area, in addition to obtaining historical personal injury accident data.

2.4.2 A physical audit of safety was conducted on Leeward Drive, Estuary Boulevard, Estuary Banks, Windward Drive and Speke Hall Avenue. Highway safety measures include verges between footway and carriageway on all footways of the assessed roads. Most of the footways are wide and have good visibility to and from the carriageway.

2.4.3 There are three traffic signal controlled junctions in the vicinity of the site which have pedestrian control crossing facilities. These are the main entrance to Speke Retail Park, Speke Hall Road/Speke Hall Avenue and western Avenue/Speke Boulevard Junctions.

2.4.4 No safety issues were recorded during the site audit. Therefore It is not considered that there are any existing highway problems at the surrounding junctions that would be exacerbated by the proposed development

2.5 Liverpool City Council Safety Data

2.5.1 Personal Injury Accident (PIA) data has been obtained from LCC for the period between 1st January 2010 and the 31st December 2014. The study area covers the following locations:

- Speke Road
- Estuary Banks
- Speke Road/ Estuary Blvd Roundabout
- Speke Road/Speke Hall Avenue Signals
- Speke Hall Avenue/Estuary Banks Roundabouts
- Entire Study Area

2.5.2 There were a total of 41 incidents over the four year period provided by LCC of which 38 were slight and 3 were serious. The summary of the results can be seen in Table 2.1.

Highway Safety Record				
Severity	Slight	Serious	Fatal	Total
Roads				
Speke Road	2	0	0	2
Estuary Banks	3	0	0	3
Junctions				
Speke Road/ Estuary Blvd Roundabout	17	0	0	17
Speke Road/Speke Hall Avenue Signals	12	1	0	13
Speke Hall Avenue/Estuary Banks Roundabout	4	2	0	6
Total				
Entire Study Area	38	3	0	41

Table 2.1 – Personal Injury Accident Data summary

2.5.3 Analysis of the accident data has been undertaken and is outlined below.

Speke Road

2.5.4 There have been 2 accidents on the section of Speke Road both of which were categorised as being slight incidences. The incidences do not show any obvious correlation between each other.

Estuary Banks

2.5.5 There have been 3 incidents during the assessment period all of which have been slight accidents. There is no obvious correlation between the causes of the incidents. There were no consistencies between the time of year, weather or any other influencing factor.

Speke Road/ Estuary Blvd Roundabout

2.5.6 This junction contains the highest level of incidences within the assessment area with 17, all of which were slight incidences. 14 of the accidents were located on the roundabout itself and the others were traffic waiting to join or who were leaving the junction. The types of accidents found at this junction are typical to roundabout type junctions.

Speke Road/Speke Hall Avenue Signals

2.5.7 During the assessment period there were 13 incidences at this junction with 12 being slight and one being serious. The serious incident occurred on a Sunday afternoon in October 2010 on during the day on a dry road surface, during dry weather conditions, two of the slight incidences occurred in the same direction and were of the same type (Into the side from the south of a vehicle travelling west to east). Six of the incidents in total occurred during wet weather conditions.

Speke Hall Avenue/Estuary Banks Roundabout

2.5.8 There have been 6 incidences at this junction within the assessment time period; 4 of these were slight and 2 were serious. There is no correlation between the two serious incidences, although both involving cyclists the movements being undertaken do not suggest an issue with the highway is the cause.

Summary

2.5.9 In summary, no significant correlations have been identified to suggest that highway condition, layout or design were significant contributory factors in any of the collisions within the study area. It is considered that the proposed development would not have a material effect on highway safety.

3.0 Transport Planning Policy

3.1 Introduction

3.1.1 This section of the report sets out the key national and local traffic and transport policies that are relevant to this application. Later sections of the report demonstrate how the proposals accord with these policies.

3.2 National Planning Policy Framework

3.2.1 The NPPF sets out national transport planning policy and from the outset the Minister for Planning's Foreword lays the foundations for the policy rationale;

'The purpose of planning is to help achieve sustainable development….

Development means growth. We must accommodate the new ways by which we will earn our living in a competitive world. We must respond to the changes that new technologies offer us. Our lives, and the places in which we live them, can be better, but they will certainly be worse if things stagnate.'

3.2.2 Paragraph 14 states that at the heart of NPPF is:

'A presumption in favour of sustainable development, which should be seen as a golden thread running through both plan making and decision making.'

3.2.3 For decision making a presumption in favour of sustainable development means granting permission:

'Unless any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies.'

3.2.4 Paragraph 23 demonstrates that ensuring the vitality of town centres is a core planning principle, and states that planning policies should:

'Promote competitive town centre environments and set out policies for the management and growth of centres over the plan period.'

3.2.5 In drawing up Local Plans, local planning 'authorities should:

- 'recognise town centres as the heart of their communities and pursue policies to support their viability and vitality;
- define a network and hierarchy of centres that is resilient to anticipated future economic changes;

- define the extent of town centres and primary shopping areas, based on a clear definition of primary and secondary frontages in designated centres, and set policies that make clear which uses will be permitted in such locations;
- promote competitive town centres that provide customer choice and a diverse retail offer and which reflect the individuality of town centres;
- retain and enhance existing markets and, where appropriate, reintroduce or create new ones, ensuring that markets remain attractive and competitive;
- allocate a range of suitable sites to meet the scale and type of retail, leisure, commercial, office, tourism, cultural, community and residential development needed in town centres. It is important that needs for retail, and leisure, office and other main town centre uses are met in full and are not compromised by limited site availability.

3.2.6 In respect of supporting traffic and transportation documentation, Paragraph 32 of the NPPF states that:

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

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

3.2.7 Paragraph 35 of the NPPF states that plans for new development should:

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

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

3.2.8 Paragraph 36 of the NPPF states:

"All developments which generate significant amounts of movement should be required to provide a Travel Plan."

3.2.9 This TA has been accompanied by an Interim Travel Plan which provides a commitment to produce a full Travel Plan upon occupation of the completed development.

3.3 National Planning Policy Guidance

3.3.1 The Government has recently produced the National Planning Practice Guidance (NPPG) to supplement the NPPF. Within the PPG, there is a specific section clarifying the over-arching principles on Travel Plans, Transport Assessments and Transport Statements. There are also sections advising further on each of the three discussed documents.

3.3.2 The guidance on Transport Assessments and Statements re-iterates the circumstances in which either document would usually be required. It is clear that a development of the size and nature of this development requires a full Transport Assessment. It also clarifies the process for establishing a scope for the assessment, and what the document should contain. The NPPG has been considered in the production of this TA.

3.3.3 The guidance on Travel Plans reinforces the requirement for a Travel Plan, the scope of the document, and the need for monitoring to continue the strategy into the future. The NPPG has been considered in the production of the accompanying Interim Travel Plan.

3.4 Core Strategy Publication Version 2008-2028

3.4.1 From a traffic and transport perspective the Core Strategy includes two key statements. Key Statement DMI2: Transport Considerations states that:

'New development should be located to minimise the need to travel. Also it should incorporate good access by foot and cycle and have convenient links to public transport to reduce the need for travel by private car. In general, schemes offering opportunities for more sustainable means of transport and sustainable travel improvements will be supported.'

3.4.2 Key Statement DMG3: Transport and Mobility states that:

'In making decisions on development proposals the Local Planning Authority will, in addition to assessing proposals within the context of the development strategy, attach considerable weight to:

- *The availability and adequacy of public transport and associated infrastructure to serve those moving to and from the development*
- *The relationship of the site to the primary route network and the strategic road network;*

- *The provision made for access to the development by pedestrians, cyclists and those with reduced mobility;*
- *Proposals which promote development in existing developed areas or extensions to them at locations which are highly accessible by means other than the private car;*
- *Proposals which strengthen existing town and village centres which offer a range of everyday community shopping and employment opportunities by protecting and enhancing their vitality and viability; and*
- *Proposals which locate development in areas which maintain and improve choice for people to walk, cycle or catch public transport rather than drive between homes and facilities which they need to visit regularly…..'*

3.5 Merseyside Local Transport Plan

3.5.1 The Local Transport Plan sets out implementation plans for the medium and long term and aims to improve transport within the Merseyside region. The Third Local Transport Plan envisions the following;

"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".

3.5.2 The Local Transport Plan has six goals;

- *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.*
- *Maintain our assets to a high standard.*

3.5.3 As described in **Section 5** of this Transport Statement, the site is considered to be accessible by sustainable modes, including walking, cycling and public transport, and is therefore considered to be consistent with the objectives of the LTP.

3.6 Liverpool City Council Policy: Liverpool Core Strategy

3.6.1 Liverpool City Council in 2012 released a draft document of the 'Liverpool Core Strategy' which outlines the policies that should be taken into consideration when new developments within the city and surrounding areas are being planned and designed.

3.6.2 The Core Strategy includes section 6: 'The Delivery Strategy for Liverpool' and within this section there is the subsection: 'Strategic Policies' which includes the objectives that new developments should consider.

3.6.3 'Strategic Objective Seven - Maximising Sustainable Accessibility' is included in the 'Strategic Policies' subsection and outlines the main objectives and policies that are associated with travel, transport and accessibility of new developments.

3.6.4 Strategic Policy 34 states that:

"Improving Accessibility and Managing Demand for Travel

1. *Development proposals should make the best use of existing transport infrastructure. Where this cannot be achieved, development should be phased to coincide with new transport infrastructure provision.*

2. *Developments which singly or in combination have a significant impact on the movement of people or goods, should, through the provision of Travel Plans, positively manage travel demand and contribute to the improvement of accessibility in general, particularly by more sustainable modes of transport including walking, cycling and public transport."*

3.6.5 **Section 5** of this report shows that the proposed development adjacent to Leeward Drive complies with this policy as there are many existing public transport links available to users of the site, and as there are many ways of accessing the site via sustainable methods of transport.

3.6.6 The Core Strategy DPD which has been under preparation for a number of years will not be submitted as a separate DPD, but will instead, form the framework for the Local Plan for Liverpool.

3.7 Liverpool Local Plan

3.7.1 The Liverpool Local Plan sets out an overarching strategy and development principles for Liverpool to guide development until at least 2028

3.7.2 Planning applications are currently decided upon primarily by using the policies of the Unitary Development Plan (UDP), a statutory document which is a one of the documents that sits within the Local Plan.

3.7.3 Supplementary planning guidance notes (SPG) have been produced to go with the UDP. These give more details about the policies within the UDP.

3.8 Ensuring a Choice of Travel SPD

3.8.1 The Ensuring a Choice of Travel SPD (adopted December 2008) forms one of several statutory documents that sit within the Local Plan. The document provides guidance to developers on the access and transport requirements for new development across Merseyside. The SPD is intended to;

- *Enable the provision of a balanced transport infrastructure which provides access to employment, leisure, retail and other facilities for all the city's residents and visitors; and*
- *Provide a framework for future investment in the City's strategic road and rail network where new development would create additional travel demand.*

3.8.2 The objectives are achieved through components within the document. These components include a Minimum Accessibility Standard Assessment (MASA) and Parking Standards. The MASA is a requirement for new developments and is intended to demonstrate accessibility by all modes. The complete MASA outputs have been discussed throughout Section 4 of this Transport Assessment, and the assessment outputs are included in **Appendix E**.

3.8.3 **Section 5** of this report details the parking arrangements at the proposed development, and how they are considered appropriate for the development.

3.9 Conclusions

3.9.1 In accordance with local and national transport guidance, there are a number of sustainable transport opportunities available to future staff of the proposed development. It is considered that the proposed development is in line with all relevant transportation planning policy.

3.10 Summary

3.10.1 The key theme of sustainability is considered further in Section 5 of this report. With regard to highway impact the results contained in Sections 7 demonstrate that the impact that shall occur on the highway network and their severity.

4.0 Development Proposals

4.1 Introduction

4.1.1 Curtins has been appointed on behalf of Merseyside Police to provide traffic and transportation advice in relation to the site east of Leeward Drive in Speke, Liverpool. The development shall consist of 13,517sqm of gross internal floor space arranged between three main buildings which are:

- The main building 10,789sqm
- The forensics and ancillary block 2,358sqm
- The dog kennels 370sqm

4.1.2 The development will accommodate 1,220 uniformed and none uniform staff many of which work in shift patterns. The site will accommodate the following functions which are currently accommodated over a large geographical area.

- Technical Support Unit (TSU)
- Dedicated Surveillance Unit (DSU)
- Business Support
- Command
- MSOC Command
- Protecting Vulnerable People
- Intelligence
- Lighting suite
- Major Crime
- Forensics
- Special Branch and National Ports Analyst Centre (NPAC)
- Specialist Support and Interventions
- Firearms
- Matrix
- Roads Policing Unit (RPU)

4.2 Parking

4.2.1 There is adequate onsite parking for staff and visitors serviced by an onsite road network organised to support the site wide flows and necessary connectivity with the functions of each building. The new Operational Command Centre site will have a capacity of 359 staff spaces and 14 visitor spaces. Both of these parking areas will be access via a security gate house allowing or denying access to the car parks and guiding staff and visitors to the parking, should they require it.

4.2.2 There is no direct parking policy provided for police operational command centres. If this development where considered as a B1 office it would exceed parking policy numbers but due to the function of the building higher levels of parking are required.

4.2.3 Due to the shift nature of the Police's work patterns as well as the operational requirement for police vehicles, there is a chance that not all units will start and finish their shifts at the same time, however it still remains a possibility. Therefore the provision for parking must be able to accommodate a full staff shift swap. The requirement for the level of car parking for staff and operational vehicles is unavoidable for the OCC site to accommodate and operate effectively.

4.3 Servicing

4.3.1 The proposed new Operational Command Centre shall be serviced via the main access entrance and also via the main exit for larger vehicles including refuse collection, this is due to the constraints of the internal highway network but it is not envisaged to cause an issue.

4.3.2 The internal swept path analysis has been undertaken using AutoTrack software from Autodesk. The vehicles assessed through and around the internal network to their likely destination, and then to the exit, all use the main exit for their entrance unless stated. The vehicles assessed were:

- Matrix HGV
- Refuse Vehicle
- Large mobile Crane
- Oil Tanker (Northern Entrance)
- Large Car (Standard Vehicle Entrance)

4.3.3 The plans of these tracking movements can be found in the drawings section of this transport assessment, prior to the appendices. All of the vehicles assessed where capable of manoeuvring around the site comfortably and within the highway boundary. It is important to note that some of the larger vehicles whose presence on the site would be very occasional, would in some areas use the full width of the 2 way carriageway. Within a privately controlled site, this activity would be acceptable and any further over design of the internal road network would be inappropriate.

5.0 Accessibility by Sustainable Modes of Transport

5.1 Introduction

5.1.1 A key element of national, regional and local policy is to ensure that new developments are located in areas where alternative modes of travel are available. It is important that new developments are not isolated, but are instead located close to complementary land uses. This supports the aims of integrating planning and transport, providing more sustainable transport choices, and reducing overall travel and single occupancy car use.

5.2 Pedestrian Accessibility

5.2.1 The proposed development area is located adjacent to urban and retail areas within Speke and so a level of infrastructure exists already for sustainable travel modes. This includes a significant level of existing pedestrian infrastructure in the surrounding area. The Chartered Institution for Highways and Transportation (CIHT) document entitled *'Providing for Journeys on Foot'* suggests walking distances which are relevant to a variety of planning applications. These are reproduced in **Table 5.1** below.

CIHT Classification	Town Centres (m)	Commuting/School/ Sightseeing (m)	Elsewhere/Local Services (m)
Desirable	200	500	400
Acceptable	400	1,000	800
Preferred Maximum	800	2,000	1,200

Table 5.1 – CIHT Recommended Walking Distances

5.2.2 To assist in summarising the accessibility of the site by foot, an indicative pedestrian catchment plan has been produced. **Plan TPMA5058_003** shows distances of 500m, 1,000m and 2,000m which are termed *'Desirable'*, *'Acceptable'* and the *'Preferred Maximum'* by the CIHT for commuting and school trips, which are considered to be the most common journey purposes.

5.2.3 Within 500m of the site there are a limited services which include a children's nursery, Dobbie's Garden Centre and a Holiday Inn Hotel. There are bus stops along Estuary Banks with destinations including Liverpool City Centre via Aigburth, Allerton and Toxteth to name a few residential areas. The bus routes and accessibility by bus are further discussed in section 5.4. There are no residential properties within 500m of the site.

5.2.4 Further afield within 1,000m walking distance of the site there are a number of services and retail opportunities including additional bus stops with services to further residential areas such as Hunts

Cross and Halewood. Speke Retail Park is within this ca and provides access to food outlets and retail opportunities. There are no residential properties within 1km of the site.

5.2.5 Within a 2,000m radius of the site there are a number of residential properties, which lie mainly to the east of the site towards the centre of Speke but also to the north into Hunts Cross. To the west the catchment stretches and includes an area of Garston including a large section of residential housing. The catchment area stretches towards the Asda in Hunts Cross are which includes a number of retail units and fast food outlets as well as south to Liverpool Airport. This catchment area also includes a number of gymnasiums with two located along Speke Road to the west and two located to the north off Speke Hall Avenue.

5.2.6 In conclusion, the proposed development is within suggested walking distance, of a significant residential population large residential areas allowing walking to be a realistic commuting option for some employees. There are also a number of local services surrounding the facility to be utilised during lunch/tea breaks for staff all within a reasonable walking distance.

5.3 Accessibility by Cycle

5.3.1 In order to assist in assessing the accessibility of the site by cycle, **Plan TPMA5058_004** has been produced to represent a 5km cycle catchment for the site. This distance equates to a journey time of around 25 minutes, while cycling at a speed of 12 kph.

5.3.2 Within a 5km cycling distance from the site lies a number of large residential towns and areas within Liverpool and Knowsley. These areas include Hunts Cross and Liverpool South Parkway Station, Dingle, Aigburth, Garston, Allerton, Gateacre, Woolton, Belle Vale, Hale.

5.3.3 There are a number of cycle routes around the site within 5km providing a cycle only part of a commuting route. National Cycling Route 62 is within the 5km boundary from the site which provides access to Woolton but extends to Southport, forming part of the West Pennine Trail. There are a number of traffic free routes surrounding the site including along Speke Boulevard from the Jaguar Factory to the Job centre at Garston Way. The route along Speke Boulevard also directly connects to the Cycle Route 62 through Hunts Cross providing a majority of cycling to the site form Woolton or Gateacre as off route. Also routes exist through the Allerton Cemetery.

5.3.4 Cycling can be considered to be a mode of choice for some current and future employees of the proposed development, as well as a possible patrol method due to the wide area within a 5km cycle of the station site.

5.4 Accessibility by Bus

5.4.1 Guidance from the Chartered Institution of Highways and Transportation (CIHT) document 'Guidelines for Planning for Public Transport in Development' indicates that ideally, a bus stop should be located within 400m from a new development. **Plan TPMA5058_005** has been produced to demonstrate public transport catchment for the site.

5.4.2 To the south of the site along Estuary Banks there are two bus stops located approximately 300m from the site. The eastbound routes serve Speke and Liverpool John Lennon Airport and the westbound all go to Liverpool City Centre via a number of differing places dependent on route, these include Aigburth, Dingle and Allerton. **Table 5.2** shows the services, routes and frequencies of the buses that service the bus stops along Estuary Banks. The information shown was correct as of the publication date of this report.

Bus Service	Route	Peak Frequency (Minute Interval)		
		Mon – Fri	Sat	Sun/Hols
500	Liverpool John Lennon Airport to Liverpool	30	30	30
786	Liverpool South Parkway - Halewood Academy	1 in the AM 1 in the PM	x	x
80A	Liverpool John Lennon Airport / Speke to Liverpool via Liverpool South Parkway	10	15	20
82A	Halton Hospital to Liverpool via Runcorn, Widnes, Hale, Liverpool John Lennon Airport, Speke and Garston	30	30	30
86A	Liverpool John Lennon Airport / Garston to Liverpool via Liverpool South Parkway	6	10	15
883	Liverpool John Lennon Airport – Hunts Cross – Halewood – Belle Vale - Huyton	60	60	60

Table 5.2 – Summary of Bus Service Frequencies from Speke, near Leeward Drive Bus Stop

5.4.3 **Table 5.2** shows that the site is very accessible via bus and has high frequency services from Liverpool City Centre and Liverpool South Parkway Station. The bus stops for all of these services are located within 400m of the site and deemed accessible by walking.

5.4.4 There is an additional service that serves the stop at the junction of Speke Boulevard and Speke Hall Avenue named the X1 which is an express route between Windmill Hill and Liverpool City Centre. This is a limited stop service and allows commuting to and from the site from Runcorn within 30 minutes as shown on **TPMA5058_005**. Although the bus stop is beyond the CIHT recommended walking

distance of 400m from the site it is less than a kilometre from the site suggesting that this express service from the City Centre and Runcorn could be used as a viable commuter service.

5.4.5 It is therefore considered that bus travel is a viable mode of transport for the new Police Operational Command Centre site due to the level and wide range of destinations available and the high level of frequency.

Accessibility by Rail

5.4.6 There are two rail stations that are of similar distances from the site however both are beyond the 2km maximum walking distance as stated within the CIHT guidelines shown in table 4.1. The first is Hunts Cross rail station approximately 2.7km north east of the site. Services to and from here are to Oxford Road, Liverpool Lime Street and Southport via Liverpool Central where connections to Wirral Line and Northern Line Services are available.

5.4.7 The second station is Liverpool South Parkway located approximately 3km north west of the site, which offers all the same services as Hunts Cross but also additional ones to and from Manchester, Birmingham, Norwich and Liverpool Lime Street for other destinations including London. Both stations are within a 5km cycling distance and so could form part of a mutli-modal trip involving cycling.

Summary

5.4.8 In conclusion the site is accessible by bus, and bus travel is considered to be a realistic mode of transport for site users. There is also potential for site users to travel by train or by bus with walking as part of a multi-modal trip to and from wider destinations.

5.5 Minimum Accessibility Standard Assessment (MASA)

5.5.1 LCC Supplementary Planning Document (SPD) 'Ensuring a Choice of Travel' recommends that a MASA of development sites should be undertaken by developers in order to ascertain the level of transport connectivity that will be expected by LCC.

5.5.2 The MASA form has been completed with consideration to the complete development of the OCC site, and can be found in **Appendix E** to the rear of this report.

5.5.3 The site exceeds the requirements for access on foot, and access by cycle. The site also meets the required standard for access by public transport.

5.6 Summary

5.6.1 In summary, the site can be considered accessible by a variety of sustainable modes of transport particularly via bus, cycling or as a multi modal trip of cycling and rail.

5.6.2 The proposed development would benefit from existing facilities and services within desirable and acceptable walking distances. The site also benefits from excellent public transport links, with most services accessible well within the 400m of the site.

6.0 Traffic Generation

6.1 Introduction

6.1.1 As part of the assessment of the new Operational Command Centre, analysis of the associated trip generations and the impact on the existing network has been undertaken.

6.1.2 As emergency response times and events do not follow a set pattern, the commuter-based trips have been assessed separately to the operational vehicle activity as the supporting information was best to be individually gathered, collated and analysed.

6.1.3 The trip generation information has been developed using staff travel survey information carried out at existing police operational centres across Merseyside. Survey forms were issued to all staff involved in the relocation to the proposed development. An example of the Staff Travel Survey Form used in this exercise can be found in Appendix G.

6.1.4 In addition, a forecast of the operational traffic generation has been carried out using surveys at the Smithdown Lane site, as a donor site.

6.2 Committed Developments

6.2.1 During scoping discussions with LCC Highways Officers two notable developments in the vicinity of the proposed development site were considered by LCC as being likely to be constructed and will add further traffic onto the network. For a robust and realistic review of the future network, the flows associated with these other sites shall be considered. The two committed developments that have been considered within the this TA are:

- Speke retail park redevelopment with a cinema (7,871sqm additional floor space)
- Project Rose/Taskers Store (4,946sqm floor space)

6.2.2 The Speke retail development flows were found through the Liverpool City Council planning portal as part of a Transport Assessment undertaken for the site in March 2015 and so the flows found in here have been used. The flows used for the Taskers store were developed through TRICS as no existing traffic flow in formation could be found through the planning portal. The traffic distribution is then based upon the existing flow patterns along Speke Hall Road.

6.2.3 The additional flows associated with these developments have been combined with the development traffic from the OCC to provide an overall impact on the junctions and is contained within the junction modelling section of this TA.

6.3 Traffic Growth

6.3.1 The growth factors applied to the traffic survey results to acquire the future year flows were calculated using TEMPRO 7.1.3 datasets. The resulting growth factors can be seen below on table 6.5:

	Background Traffic Growth Factors			
Base Year	Forecast Year	Factors		
		AM	PM	SAT
2015	2017	1.0185	1.008	1.0111
2017	2022	1.0307	1.0117	1.0207

Table 6.1 – TEMPRO Growth Rates

6.3.2 The factors above show the growth factors from TEMPRO 7.1.3 for growth without development to form the base year of 2017 and the future year of 2022. The Regional Transport Forecast Model has also been consulted to extract relevant growth factors for HGV's over the assessed period.

6.4 Development Traffic Forecasting

6.4.1 The two graphs presented below indicates the time split of the expected commuter-based traffic movements to and from the site. These graphs are based upon stated shift times of OCC staff which has been obtained directly from MP.

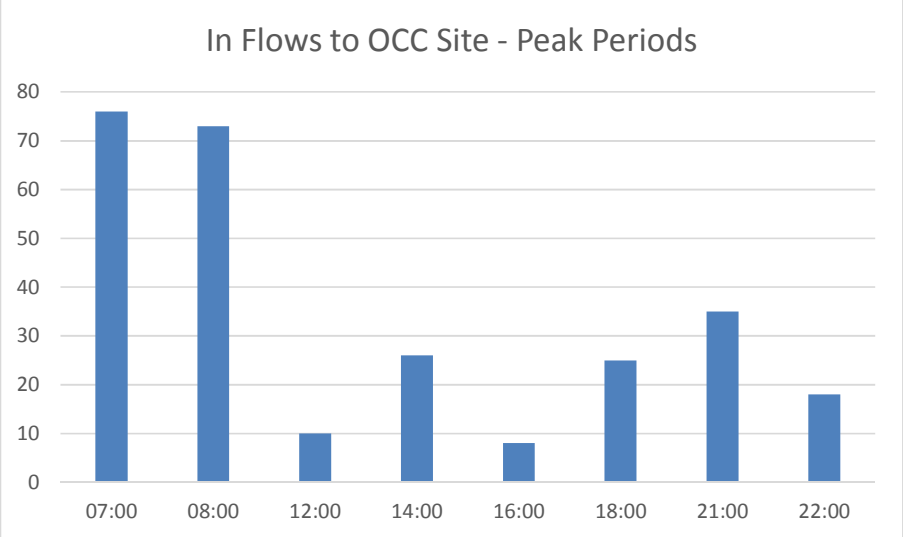


Table 6.2 – Inbound Development Traffic Flow

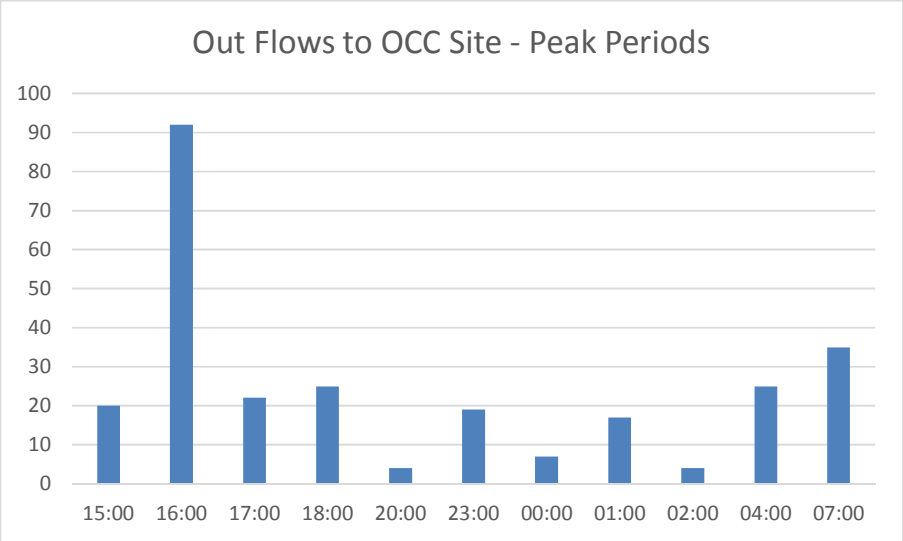


Table 6.3– Outbound Development Traffic Flow

6.4.2 The above graphs demonstrate that the time periods that have been selected to be modelled reflect the highest traffic flow periods for the commuter-based trips to and from the development. These time periods are 08:00 – 09:00 and 16:00 – 17:00 in the weekday peaks.

6.4.3 In addition to the commuter-based traffic movements, it was necessary to develop an understanding of the likely levels of operational traffic movements to and from the site. As mentioned in the introduction to this section of the report, a donor site was the subject of a traffic survey.

6.4.4 The MP facility at Smithdown Lane was selected as the ideal donor site for the purposes of this assessment due to the fact that a number of teams which currently reside here will be subject to a relocation to the new OCC facility in Speke.

6.4.5 At the security lodge associated with the Smithdown Lane facility, a 12 hour survey collected the hourly totals of traffic movements, recording the inbound and outbound movements separately and classifying the vehicle types as 'marked' and 'other.' The full results of this survey can be found in Appendix G.

6.4.6 The peak hour in terms of traffic movements recorded at the Smithdown Lane was 11:30 to 12:30, during which time a total of 25 vehicles were recorded (2-way). Due to the differing scale of the proposed new OCC facility, a scaling factor of 2.0 was applied to the observed peak traffic flow at the Smithdown Lane site.

6.4.7 In addition, because of the ad hoc nature of the timing and intensity of the operational traffic movements, the observed (scaled) peak traffic flow has been applied directly to each of the modelled peak hour periods within the junction capacity assessments presented in the next section of this report.

6.5 Development Trip Distribution

6.5.1 The figures used in order to define the development's trip distribution have been calculated using the following methodology:

- Using the results of the staff travel survey, the home postcode area of the commuters (first part only, e.g. L1) were collated and considered against the likely route of staff to the OCC site in Speke.
- This assessment suggested 13% of staff would originate from the north, 65% from the east, 1% from the south and 21% from the west. Traffic originating from or heading to the north and the east have been assumed to use the traffic signal junction on Speke Road whereas the traffic heading to or originating from the west is assumed will use the roundabout junction on Speke Road. Any southern traffic would not use either junctions and so would not impact the junction capacity assessments.
- As stated earlier, MP provided the proposed shift start and finish times at the OCC which allowed a forecast to be made about the number of staff arriving during a particular hour period. These numbers were then applied to the directional splits identified above.
- The staff survey provided modal splits of based upon their view on the most likely transport method which they would use for their commuter trip to/from the OCC in Speke. This exercise indicated that 80% would elect to travel by private car (for robustness, these were all assumed to be single occupancy trips). This percentage was applied to the forecast movement flows in order to yield the expected commuter-based vehicular movements to and from the OCC.

6.5.2 Table 7.3 below presents the vehicular trip generation for the combined OCC building, adding together the commuter-based trips and the operational trips, along with the committed Taskers retail development and the Speke Retail Park cinema development. This trip generation data has been split via the route that people will take to access/egress the area.

Development Traffic Flows						
Origin/Destination	Fri AM in	Fri AM Out	Fri PM in	Fri Pm Out	Sat in	Sat Out
North	8	9	0	9	3	9
East	38	9	0	56	14	9
West	12	12	0	27	4	12

Table 6.4 – Trip Generation Figures

7.0 Highway Impact

7.1 Introduction

7.1.1 As part of considering the overall impact of the OCC development the impact upon the existing highway network is required to be undertaken. The following section contains the 2017 and 2022 results of the peak hour capacity assessments of the highway network based on the analysed and interpreted traffic figures.

7.2 Scope of Assessment

7.2.1 During a scoping meeting with LCC the following key points were agreed for the assessment:

7.2.2 Surveys would be undertaken of the existing traffic flows on Friday and Saturday the 15th/16th May 2015. The times agreed for the survey to be undertaken were 07:00 – 09:30 and 15:30 – 18:30 on the Friday and 11:00 – 14:30 on the Saturday. The resultant traffic flows are shown in **Appendix C.**

7.2.3 The survey locations that have been assessed for the site were:

- Speke Road/Estuary Boulevard Roundabout near to Speke retail Park
- Speke Hall Avenue/Speke Hall Road signal junction adjacent to Dobbies Garden Centre.

7.2.4 Two committed developments have been considered in line with the assessment of the junctions, as outlined in the previous section of this report, To recap, these are the Taskers Store along Speke Hall Road and the refurbishment of Speke retail shopping park, incorporating a new cinema, restaurants and retail.

7.2.5 Capacity assessments have been undertaken at the previously mentioned junctions using standalone software packages.

7.2.6 The years to be assessed shall be the opening year of 2017 and 5 years hence to 2022 which will then have the development added to the network.

7.3 Methodology

7.3.1 As mentioned earlier in this document the junctions that have been assessed are:

- Speke Retail/Estuary Boulevard 4 arm roundabout
- Speke Hall Road/Speke Hall Avenue signalised junction

7.3.2 The traffic signal and the roundabout junction have both been modelled using industry standard software packages relevant to their type. The roundabout junction has been assessed using ARCADY 7 and the traffic signalised junctions was modelled using LinSig 3.2.

7.3.3 Both models were constructed using Ordnance Survey mapping / topographical survey base data and on-site observations. Traffic signal timing data was obtained through LCC's highway department and uses the current phasing and staging within the controller specification.

7.3.4 The junction models are included in **Appendix D** and the associated results are also summarised below.

7.4 Interpretation of Results and Impacts

7.4.1 For roundabouts, ARCADY results refer to the Ratio of Flow to Capacity (RFC) and the queue length predicted on each arm of the junction. An RFC of 1.00 indicates that the arm in question is operating at its theoretical capacity, whilst an RFC of 0.85 or less indicates that the arm is operating within its practical capacity.

7.4.2 For traffic signal controlled junctions, LinSig results refer to the Degree of Saturation (DoS) and Mean Maximum Queue (MMQ) predicted in each lane of the junction. A DoS of 100% indicates that the lane in question is operating at its theoretical capacity (point of saturation), whilst a DoS of 90% or less indicates that the lane is operating within its practical capacity.

7.5 Model Results

7.5.1 Full outputs of each modelling exercises can be found in **Appendix D**.

Speke Retail / Estuary Boulevard Roundabout

7.5.2 The Speke Retail / Estuary Boulevard Roundabout provides access from the A561/Speke Road to the rear entrance of Speke Retail Park as well as the Estuary business park to the south of the junction. The results of the Arcady assessment is highlighted below.

7.5.3 **Table 7.1 - 2017 Base**

	Friday AM		Friday PM		Saturday Peak	
Road Name	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Speke Retail (N)	0.15	0.18	0.58	1.35	0.61	1.57
Speke Road (E)	0.72	2.67	0.85	5.76	0.73	2.76
Estuary Blvd (S)	0.28	0.42	0.53	1.14	0.18	0.22
Speke Road (W)	0.84	5.49	0.81	4.39	0.62	1.73

7.5.4 **Table 7.2 - 2022 Base**

Road Name	Friday AM		Friday PM		Saturday Peak	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Speke Retail (N)	0.16	0.19	0.59	1.44	0.63	1.71
Speke Road (E)	0.74	3.01	0.87	6.34	0.75	3
Estuary Blvd (S)	0.29	0.45	0.54	1.2	0.19	0.24
Speke Road (W)	0.87	6.85	0.82	4.78	0.64	1.86

7.5.5 **Table 7.3 - 2022 Base with Development Traffic**

Road Name	Friday AM		Friday PM		Saturday Peak	
	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Speke Retail (N)	0.18	0.22	0.61	1.54	0.65	1.81
Speke Road (E)	0.75	3.02	0.88	6.99	0.77	3.32
Estuary Blvd (S)	0.31	0.44	0.57	1.31	0.21	0.26
Speke Road (W)	0.89	7.21	0.83	4.68	0.65	1.81

7.5.6 As shown above the modelling results indicate that the Speke Road (W) arm of the roundabout is operating marginally above capacity in 2022 during the AM peak period without the addition of any development traffic. The same is true in the reverse direction during the PM peak in 2022 for the Speke Road (E) arm. The additional of the OCC development traffic causes no material increase in the modelled results.

Speke Hall Avenue Traffic Signal Controlled Junction

7.5.7 The Speke Hall Avenue junction has been assessed using Linsig and the results of the assessment are shown below.

7.5.8 **Table 7.4 – 2017 Base**

Road Name	Friday AM		Friday PM		Saturday Peak	
	DoS	MMQ (PCU)	DoS	MMQ (PCU)	DoS	MMQ (PCU)
Speke Hall Road (N)	96%	9.3	97%	12	87%	10.8
Speke Road (E)	100%	42.9	98%	32	78%	13.8
Speke Hall Ave (S)	89%	5.5	100%	21.8	85%	5.6
Speke Road (W)	63%	9.4	78%	12	89%	20.4

7.5.9 **Table 7.5 – 2022 Base**

Road Name	Friday AM		Friday PM		Saturday Peak	
	DoS	MMQ (PCU)	DoS	MMQ (PCU)	DoS	MMQ (PCU)
Speke Hall Road (N)	102%	18.1	96%	13.1	89%	11.6
Speke Road (E)	104%	63.3	100%	35.6	91%	14.5
Speke Hall Ave (S)	93%	6.4	101%	24.3	87%	5.9
Speke Road (W)	67%	10.2	79%	12.8	90%	22

7.5.10 **Table 7.6 – 2022 Base with Development Flows**

Road Name	Friday AM		Friday PM		Saturday Peak	
	DoS	MMQ (PCU)	DoS	MMQ (PCU)	DoS	MMQ (PCU)
Hillfoot Avenue (N)	104%	19.8	103%	18.1	96%	16.9
Speke Road (E)	105%	67.7	105%	52.2	97%	15.6
Speke Hall Ave (S)	101%	9.7	107%	38.1	91%	7
Speke Road (W)	70%	10.5	83%	14.5	96%	27.3

7.5.11 The modelling results for the signal controlled junction in the 2017 base scenario indicate that 3 out of the 4 arms are operating beyond the 90% threshold in both the AM and PM peak periods and with the addition of traffic growth to arrive at the 2022 base year, these degrees of saturation increase by a few percentage points. The addition of the development traffic creates a further increase in the degree of saturation, seeing a maximum rise of 8% however in most instances the increase is around 5%.

7.5.12 With respect to the forecast queueing at the two modelled junctions, the majority of arms modelled do not experience significant increases in queue lengths, particularly given that most approach arms contain several traffic lanes and so any queueing is generally distributed across multiple traffic lanes.

7.5.13 Where there are instances of the modelled queues increasing more notably, such instances correlate with arms of the junctions which have a degree of saturation in excess of 100%. In such cases, the software is less accurate in its forecasting of the queue length in comparison to what would be the actual queue length in reality.

7.6 Summary

7.6.1 The above analysis demonstrates that whilst the junctions currently experience some congestion and delay, the addition of the development traffic does not create a material impact upon the junction and such impacts cannot be considered to be severe.

8.0 Sensitivity Test

8.1 Introduction

8.1.1 Due to the previously described ad hoc nature of the operational traffic activity associated with the OCC, along with the potential for staff members' travel habits to alter, a sensitivity test has been undertaken, without prejudice to the results and conclusions drawn from the primary junction capacity assessments presented in the preceding section of this report.

8.1.2 This sensitivity test will consider a higher volume of development traffic activity than that which was included in those primary junction capacity assessments. Accordingly, an extra 50% of the total forecast development traffic (commuter-based and operational) has been added to the highway network in order to observe the resulting variations in the junction capacity assessment results.

8.1.3 This sensitivity test has been undertaken for the sake of robustness and to act as a guide to the Highway Authority in developing its view of the traffic impacts, particularly with regard to how sensitive (or otherwise) a particular junction may be to such alterations in traffic generation levels.

8.1.4 The same methodology was used to develop the traffic generation flows used in this sensitivity test, the only difference being the application of a multiplication factor of 1.5 in order to reflect a 50% uplift in development traffic activity around the OCC site. To reiterate, although this sensitivity test has been undertaken it is believed that the primary assessment set out in the preceding section of this report (i.e. without the 50% increase in development traffic) is a more realistic representation of the likely impacts of the proposed development upon the surrounding highway network.

8.2 Results

8.2.1 **Table 8.1 - 2022 Base with 50% Extra Development Traffic**

	Friday AM		Friday PM		Saturday Peak	
Road Name	RFC	Max Queue	RFC	Max Queue	RFC	Max Queue
Speke Retail (N)	0.18	0.22	0.61	1.54	0.65	1.82
Speke Road (E)	0.76	3.05	0.88	6.99	0.77	3.33
Estuary Blvd (S)	0.31	0.45	0.59	1.41	0.21	0.27
Speke Road (W)	0.89	7.41	0.83	4.68	0.65	1.82

8.2.2 **Table 8.2 – 2022 Base with 50% Extra Development Flow**

Road Name	Friday AM		Friday PM		Saturday Peak	
	DoS	MMQ (PCU)	DoS	MMQ (PCU)	DoS	MMQ (PCU)
Hillfoot Avenue (N)	104%	19.8	103%	18.1	96%	16.9
Speke Road (E)	105%	67.7	107%	59.7	97%	15.3
Speke Hall Ave (S)	105%	12.5	109%	46.2	94%	8.2
Speke Road (W)	70%	10.5	85%	15.2	96%	27.3

8.3 Summary

8.3.1 The sensitivity test of an extra 50% of development traffic does not increase the RFC (for the roundabout), the DoS (for the traffic signal junction) or queue lengths in a material manner, if at all, when compared to the impacts presented in the primary assessment results.

8.3.2 Therefore it is suggested that this sensitivity test does not identify any new impacts in terms of the function of either junction, over and above the primary impact assessment results, and any impacts therefore remain unable to be classed as severe in their nature.

9.0 Summary and Conclusions

9.1 Summary

9.1.1 Curtins has been appointed on behalf of Merseyside Police to provide traffic and transportation advice in relation to a new Operation Command Centre located off Leeward Drive in Speke, Liverpool. The site will consist of 359 staff parking spaces and 309 operational vehicle spaces.

9.1.2 A review of the accident data in the vicinity of the site suggests that no significant correlations are present to indicated that the highway condition or layout were significant contributory factors in any of the collisions within the study area. It is considered that the proposed development would not have any significant impact on the highway network.

9.1.3 It has been demonstrated that the development conforms to and supports both national and local policy and meets key requirements set out in the National Planning Policy Framework.

9.1.4 An assessment of the accessibility of the site by sustainable modes of transport has been undertaken and it has been demonstrated that, the site is accessible by cycle and by walking to a wide population base. The site is also well served by local bus services particularly between Liverpool City centre as well as many other suburbs of Merseyside. Whilst Liverpool South Parkway train station is beyond the recommended 2km maximum distance from the site (being 2.7km from the site) this could yet be a feasible distance for some users of the development, should a multi modal method be considered incorporating the use of a bicycle.

9.1.5 The additional traffic anticipated to be generated by the proposed development has been calculated using robust first principle and 'donor site' methods and capacity assessments were carried out at the following two junctions:

- Speke Retail Park Roundabout using Arcady;
- Speke Hall Avenue / Speke Hall Road Avenue Traffic Signals.

9.1.6 The modelling results for the signal controlled junction and roundabout junction indicate that they currently experience some congestion and delay during the modelled weekday peak periods and with the addition of traffic growth to arrive at the 2022 base year, this congestion is forecast to increase slightly by virtue of natural increases in background traffic levels without the addition of any development traffic.

9.1.7 The addition of the development traffic is forecast to create some further nominal increases in congestion and delay, however such increases are not considered likely to have a material effect upon the operation of the two junctions.

9.1.8 Due to the previously described ad hoc nature of the operational traffic activity associated with the OCC, along with the potential for staff members' travel habits to alter, a sensitivity test has been undertaken which adds an extra 50% of development traffic to the highway network.

9.1.9 This sensitivity assessment is presented without prejudice to the results and conclusions drawn from the primary junction capacity assessments described above.

9.1.10 The results of the sensitivity test do not identify any new impacts in terms of the function of either junction, over and above the primary impact assessment results, and any impacts therefore remain unable to be classed as severe in their nature.

Conclusion

9.1.11 Based on the positive findings of this report it is considered that there are no highways and transportation reasons to refuse planning permission for the proposed development.

Plans

Drg No:	Rev:
TPMA5058_001	/

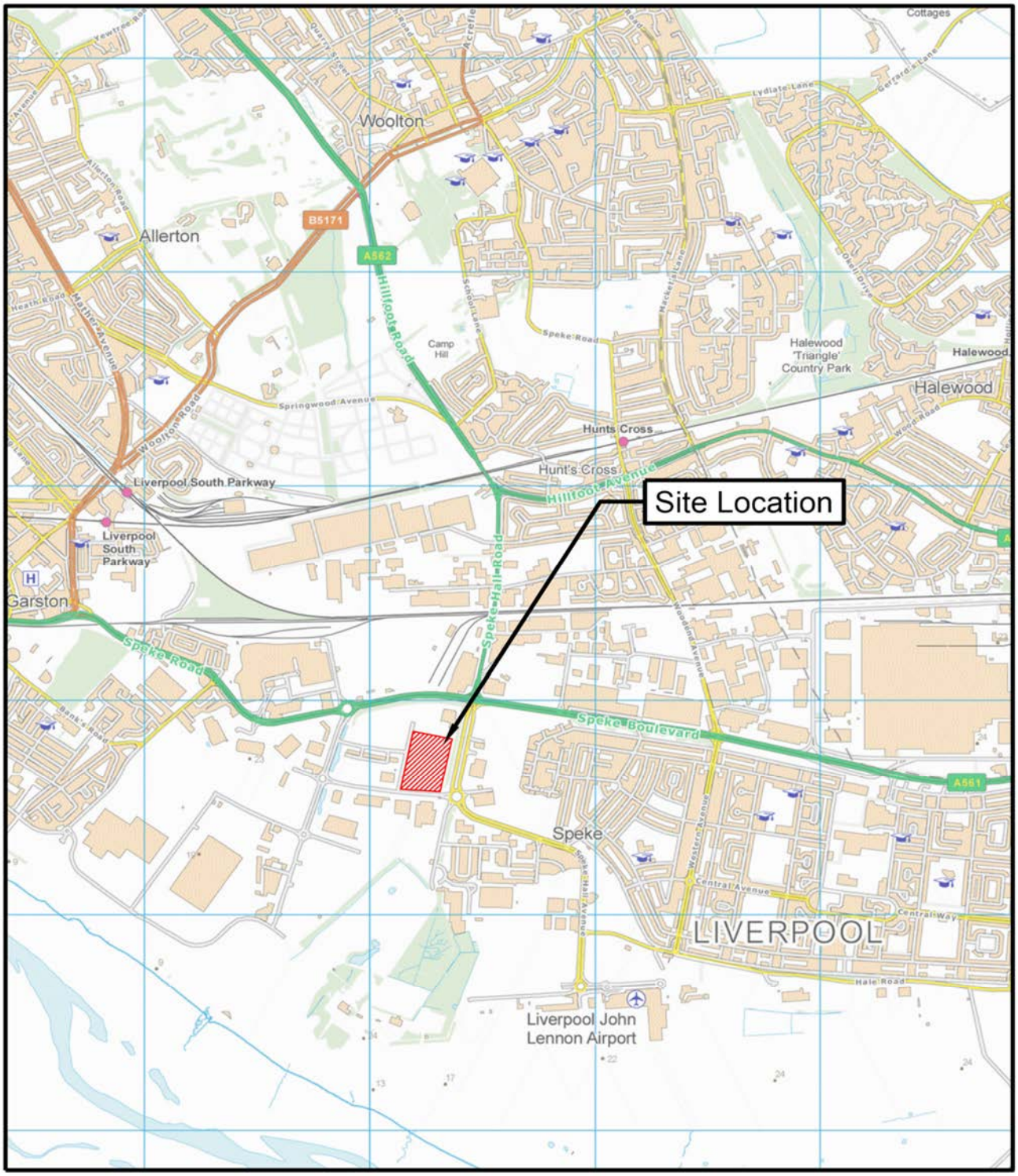
Project:	Merseyside Operational Command Centre
Drg Title:	Regional Site Location Plan
Drawn:	CR
Checked:	TL
Scale:	NTS

curtins

Curtins Consulting Ltd,
Merchant Exchange
17-19 Whitworth Street West, Manchester M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com

Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
Birmingham • Bristol • Cardiff • Douglas • Edinburgh • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

version 1.3

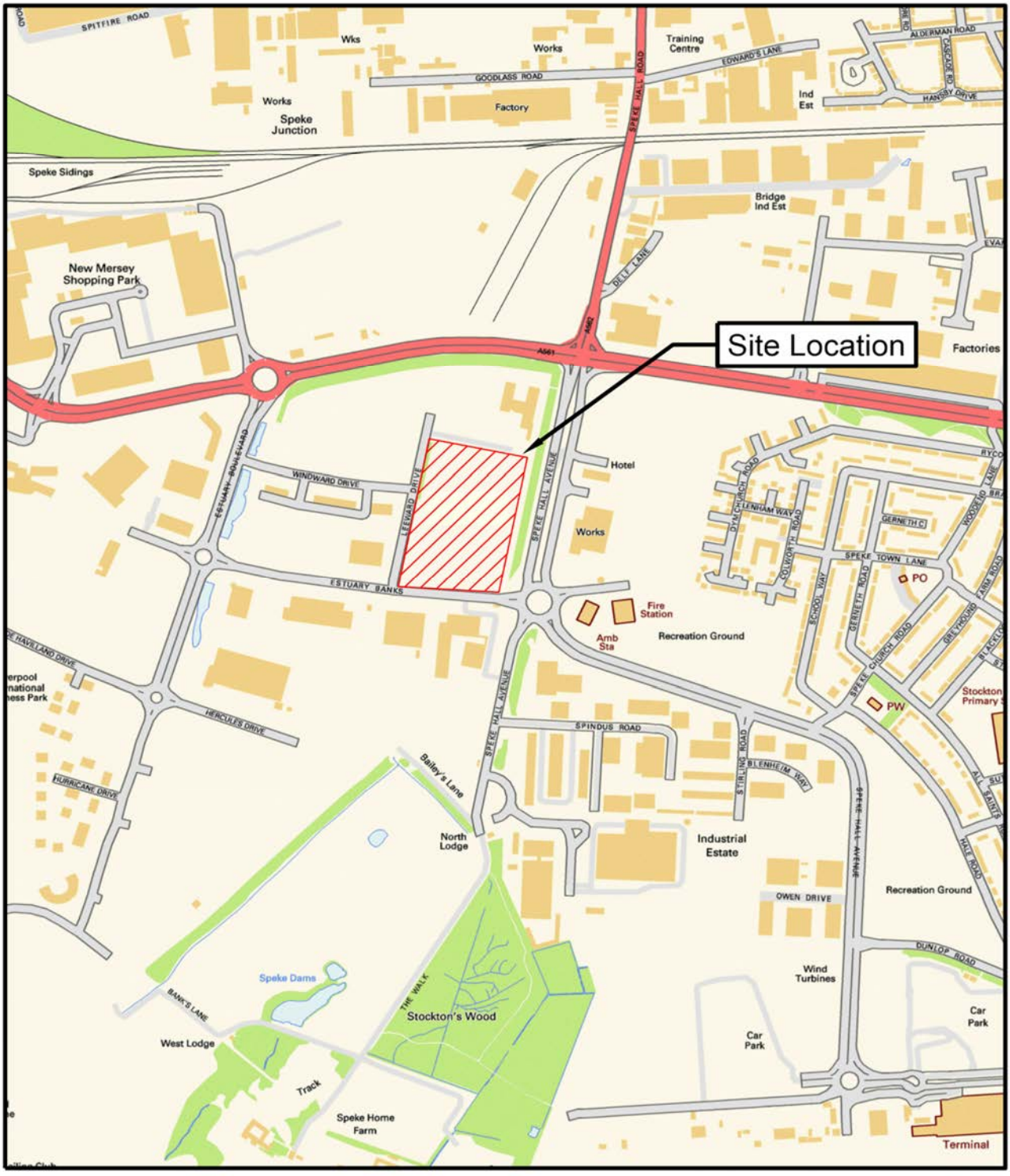


Drg No:	Rev:
TPMA5058_002	/

Project:	Merseyside Operational Command Centre
Drg Title:	Local Site Location Plan
Drawn:	CR
Checked:	TL
Scale:	NTS

Curtins Consulting Ltd,
Merchant Exchange
17-19 Whitworth Street West, Manchester M1 5WG
t: 0161 236 2394
e: manchester@curtins.com
www.curtins.com
Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
Birmingham • Bristol • Cardiff • Douglas • Edinburgh • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

version 1.3



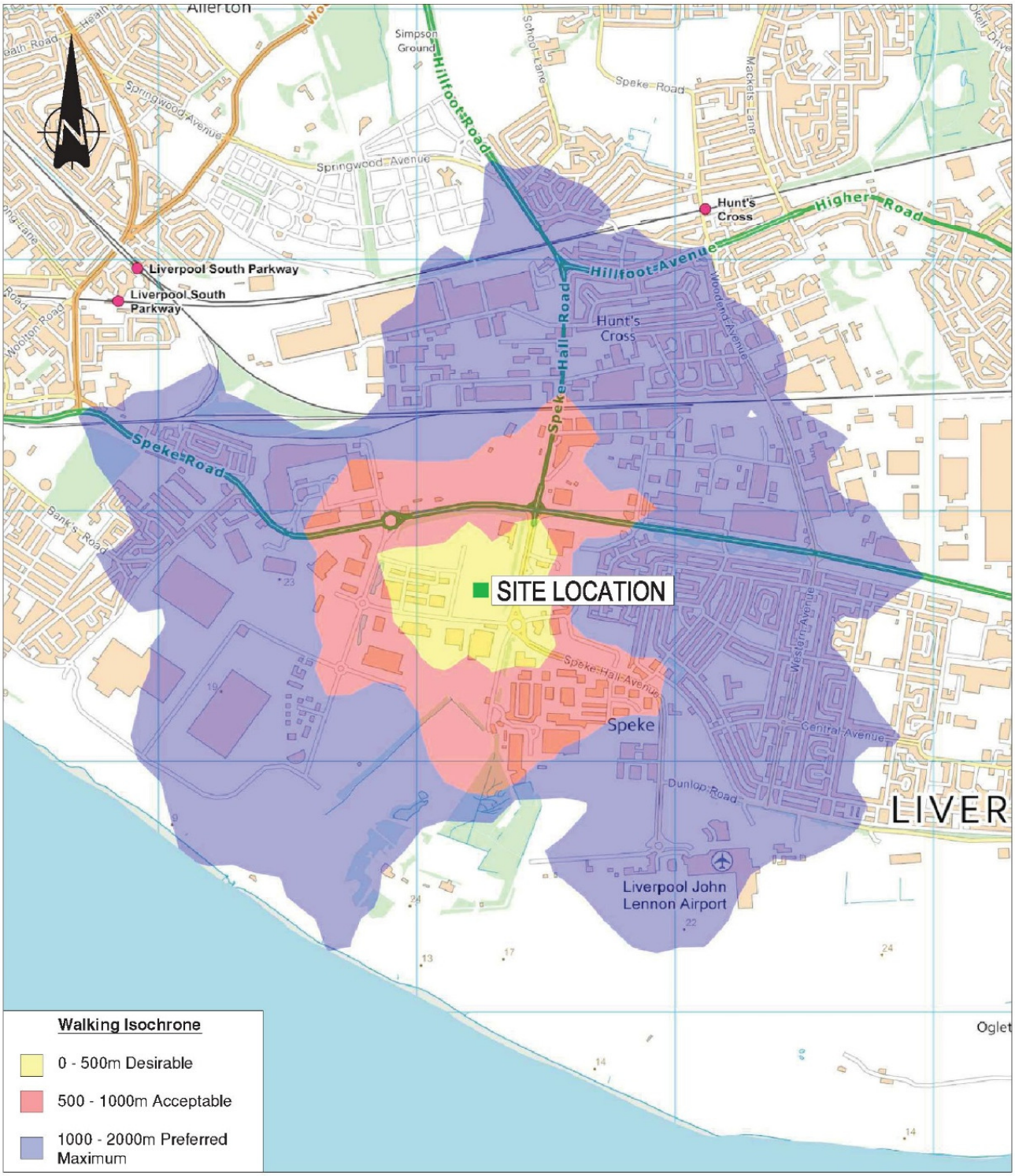
Drg No:	Rev:
TPMA5058 - 003	/

Project:	Merseyside Operational Command Centre
Drg Title:	Walking Distances Catchment Plan
Drawn:	CR
Checked:	TL
Scale:	NTS

curtins

Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth Street West, Manchester M1 5WG
t: 0161 236 2394
e: leeds@curtins.com
www.curtins.com

Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
Birmingham • Bristol • Cardiff • Douglas • Edinburgh • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

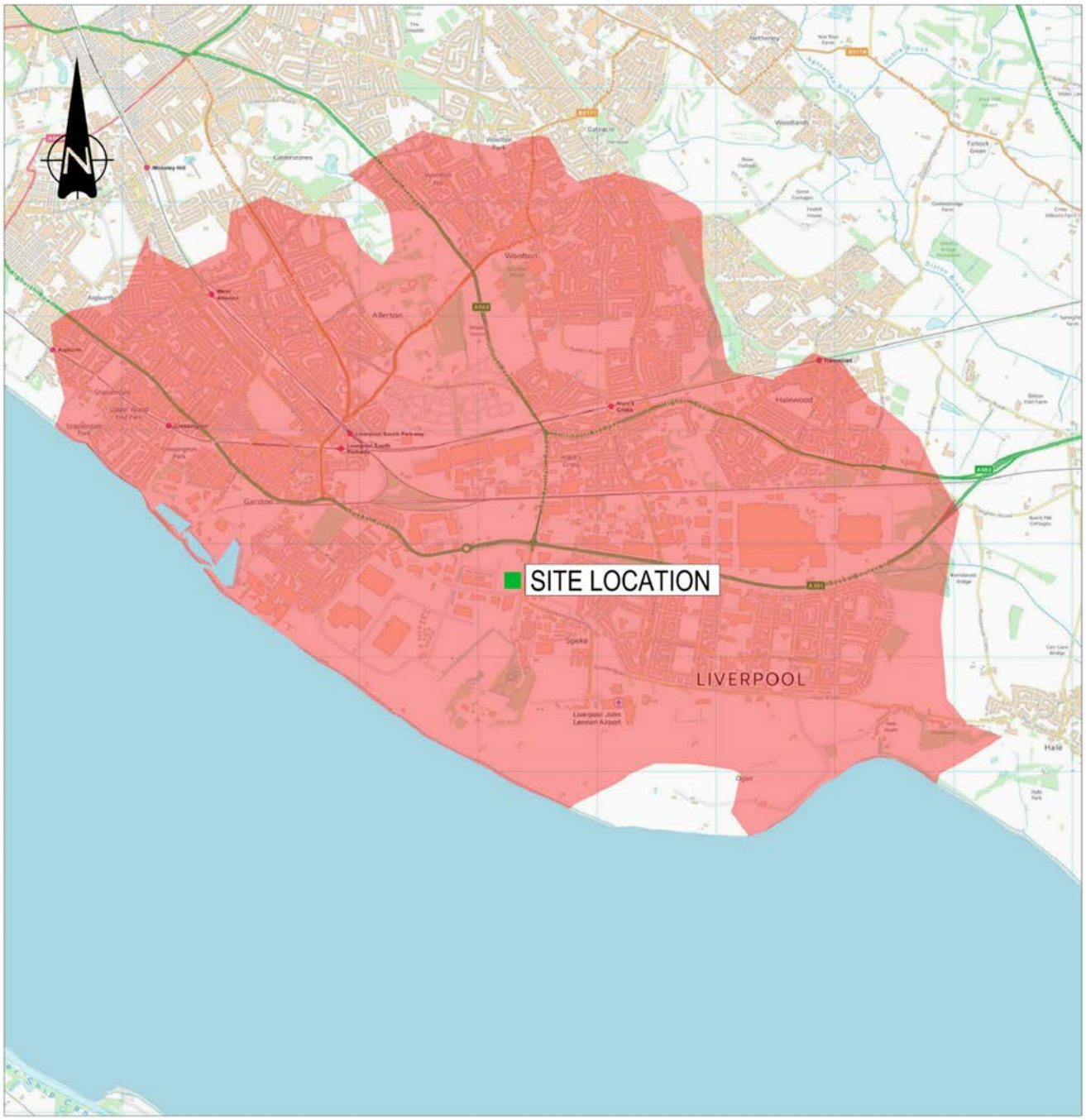


Drg No:	TPMA5058 - 004
Rev:	/
Project:	Merseyside Operational Command Centre
Drg Title:	5km Cycle Catchment Plan
Drawn:	CR
Checked:	TL
Scale:	NTS

curtins

Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth Street West, Manchester M1 5WG
t: 0161 236 2394
e: leeds@curtins.com
www.curtins.com

Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
Birmingham • Bristol • Cardiff • Douglas • Edinburgh • Kendal • Leeds • Liverpool • London • Manchester • Nottingham

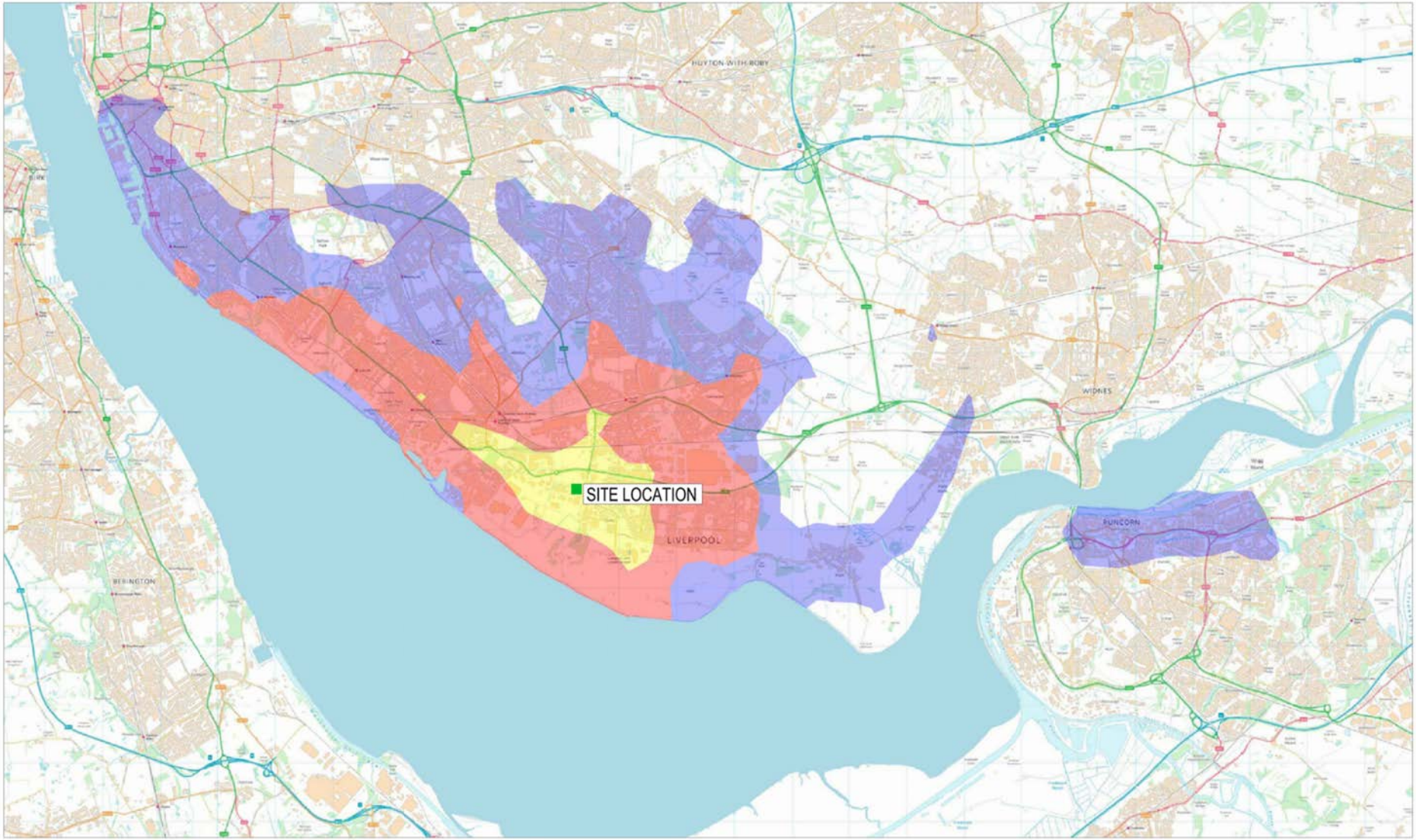


Drg No:	TPMA5058 - 005
Rev:	/
Project:	Merseyside Operational Command Centre
Drg Title:	Public Transport Catchment Plan
Drawn:	CR
Checked:	TL
Scale:	NTS

curtins

Curtins Consulting Ltd,
Merchant Exchange, 17-19 Whitworth Street West, Manchester M1 5WG
t: 0161 236 2394
e: leeds@curtins.com
www.curtins.com

Structures • Civils • Environmental • Infrastructure • Transport Planning • Sustainability • Expert Advisory Services
Birmingham • Bristol • Cardiff • Douglas • Edinburgh • Kendal • Leeds • Liverpool • London • Manchester • Nottingham



Drawings

Appendix A – Proposed Site Plan

Appendix B – Taskers TRICS Output

Appendix C – Flow Diagrams

Appendix D – Junction Modelling Outputs

Appendix E – MASA

Proposal: Merseyside Police Operational Command Centre, MACE, Address: Leeward Drive, Speke, Liverpool Completed by: Tom Lavin, Curtins Consulting				
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
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
Location	Housing Development: Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F) Other development: Is the density of existing local housing (i.e. within 800m) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)	Yes	2	2
		No	0	
Internal layout	Does 'circulation' and access inside the sites reflect direct, safe and easy to use pedestrian routes for all, with priority given to pedestrians when they have to cross roads or cycle routes?	Yes	1	1
		No	0	
External layout	Are there barriers between site and local facilities or housing, which restrict pedestrian access? (see Merseyside Code of Practice on Access and Mobility) e.g. • No dropped kerbs at crossings or on desire lines; • Steep gradients;	There are barriers	1	1

	• A lack of a formal crossing where there is heavy traffic; • Security concerns, e.g. lack of lighting.			
Other	The development links to identified recreational walking network (see Accessibility Map 1). If no, please provide reasons why not.			No – Site is not near a local walking route, also as a police operational command centre this is not seen as a necessity
	Total (B)			4
Summary	Box A: Minimum Standard (from Table 3.1)	4	Comments or action needed to correct any shortfall	
	Box B: Actual Score	4		

	Access by Cycle		Points	Score
Safety	Are there safety issues for cyclists either turning into or out of the site or a road junctions within 400m of the site (e.g. dangerous right turns for cyclists due to the level of traffic)? If yes, you must address safety issues in your application.			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
Location	Housing Development: Is the development within 500m of a district or local centre (see Accessibility Map 1 in Appendix F) Other development: Is the density of existing local housing (i.e. within 800m) more than 50 houses per hectare (see Accessibility Map 4 in Appendix F)	Yes	2	2
		No	0	
				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?	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)	4

Summary	Box A: Minimum Standard (from Table 3.1)	4	Comments or action needed to correct any shortfall
	Box B: Actual Score	4	

Access by Public Transport			Points	Score
Location and access to public transport	Is the site within a 200m walk of a bus or tram stop, and/or within 400m of a transport 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;	There are barriers	0	1
		There are no barriers	1	

	• Pavement less than 2m wide • A lack of formal crossings where there is heavy traffic; or • Bus access kerbs			
Frequency	High (four or more bus services or trains an hour)		2	2
	Medium (two or three bus services or trains an hour)		1	
	Low (less than two bus services or trains an hour)		0	
Other	The proposal contributes to bus priority measures serving the site		1	0
	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	0
	The proposal contributes to an existing or new bus service		1	0
		Total (B)		3
Summary	Box A: Minimum Standard (from Table 3.1)	5	Comments or action needed to correct any shortfall: Site is approximately 270m from the nearest bus stop. CIHT deems this as an accessible distance, if agreed 2 would be added making the score the minimum 5.	
	Box B: Actual Score	3		

Vehicle Access and Parking		Points	Score
Vehicle access and circulation	Is there safe access to and from the road? If no, you must address safety issues.		Yes
	Can the site be adequately serviced? If no, you must address service issues.		Yes
	Is the safety and convenience of other users (pedestrians, cyclists and public transport) affected by the proposal? If yes, you must address safety issues.		No
	Has access for the emergency services been provided? If no, you must provide emergency service provision.		Yes

	For development which generates significant freight movements, is the site easily accessed from the road or rail freight route networks (i.e. minimising the impact of traffic on local roads and neighbourhoods) (see Accessibility Map 3 in Appendix F)? If no, please provide an explanation.		N/A
Parking	The off-street parking provided is more than advised in Section 4 for that development type. If yes, parking provision must be reassessed.		N/A
	The off-street parking provided is as advised in Section 4 for that development type	1	1
	The off-street parking provided is less than 75% of the amount advised Yes / No in Section 4 for that development type (or shares parking provision with another development)	2	2
	For development in controlled parking zones:		
	Is it a car free development?	0	No
	Supports the control or removal of on-street parking spaces	1	Yes
	(inc provision of disabled spaces), or contributes to other identified measures in the local parking strategy (including car clubs)		
		Total (B)	4

Summary	Box A: Minimum Standard (from Table 3.1)	3	Comments or action needed to correct any shortfall
	Box B: Actual Score	4	Parking is below the “guideline” level per the SPD.

Appendix F – Staff Survey Questionnaire Example

Appendix F – Smithdown Lane Response Vehicle Survey

Our Locations

Birmingham
2 The Wharf
Bridge Street
Birmingham B1 2JS
T. 0121 643 4694
birmingham@curtins.com

Bristol
3/8 Redcliffe Parade West
Bristol
BS1 6SP
T. 0117 925 2825
bristol@curtins.com

Cardiff
3 Cwrt-y-Parc
Earlswood Road
Cardiff
CF14 5GH
T. 029 2068 0900
cardiff@curtins.com

Douglas
Varley House
29-31 Duke Street
Douglas Isle of Man
IM1 2AZ
T. 01624 624 585
douglas@curtins.com

Edinburgh
35 Manor Place
Edinburgh
EH3 7DD
T. 0131 225 2175
edinburgh@curtins.com

Kendal
28 Lower Street
Kendal
Cumbria LA9 4DH
T. 01539 724 823
kendal@curtins.com

Leeds
Rose Wharf
Ground Floor
78-80 East Street
Leeds
LS9 8EE
leeds@curtins.com

Liverpool
Curtin House
Columbus Quay
Riverside Drive
Liverpool L3 4DB
T. 0151 726 2000
liverpool@curtins.com

London
Units 5/6
40 Compton Street
London
EC1V 0BD
T. 020 73242240
london@curtins.com

Manchester
Merchant Exchange
17-19 Whitworth Street West
Manchester
M1 5WG
T. 0161 236 2394
manchester@curtins.com

Nottingham
7 College Street
Nottingham
NG1 5AQ
T. 0115 941 5551
nottingham@curtins.com

Registered in England and Wales number: 2054159
Registered office: Curtin House, Columbus Quay, Riverside Drive, Liverpool L3 4DB