



# University of Manchester: The Relocation of The Limes, Fallowfield Campus

## Transport Statement *For University of Manchester*

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| Issue number               | P03                           | Name |
| Prepared by                | Syed Rahi BSc (Hons) MSc      |      |
| Checked by                 | Neil Bayliss-Rowe BSc (Hons)  |      |
| Approved by                | Sam Denby BA (Hons) MSc CMILT |      |

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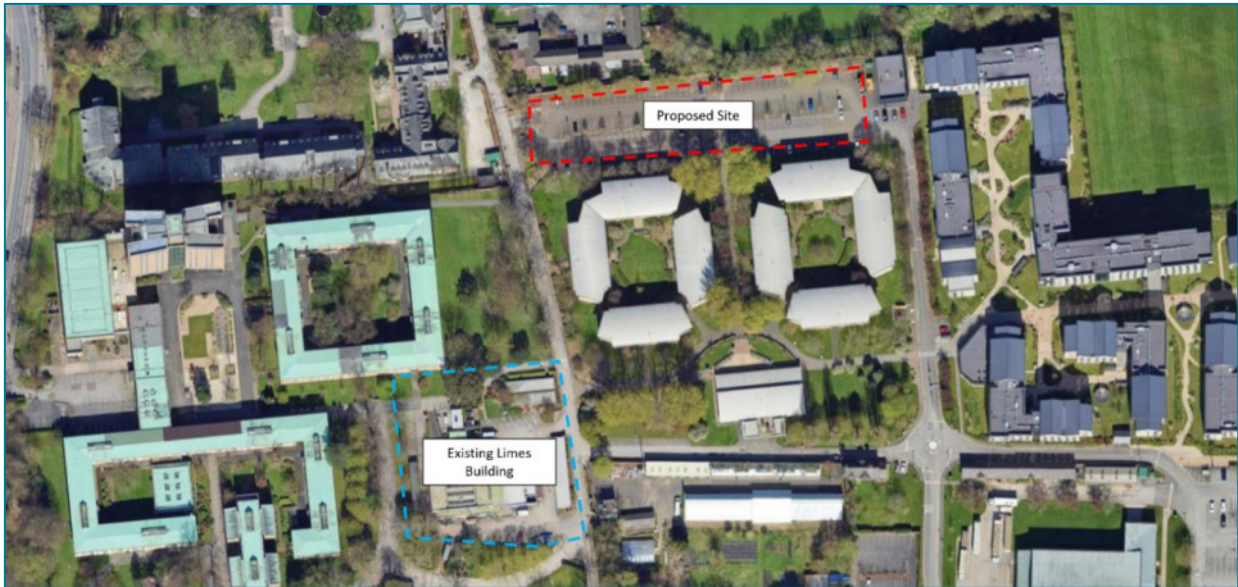
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# 1. Introduction

## 1.1 Background

- 1.1.1 Hydrock have been commissioned by the University of Manchester to support the relocation of the Limes Building within the University of Manchester's Owens Park Campus. The building will move from its current setting to an area used for car parking adjacent to the campus' energy centre.
- 1.1.2 The proposed development will combine the University's Catering Central Processing Unit (CPU), Maintenance Services Unit (MSU) Environmental Services Unit (ESU) and Residences Team to form a facility consisting of facility management stores and workshops, catering facilities, staff workspaces and storage facilities.
- 1.1.3 The proposal will also include associated parking, servicing and landscaping. The relocation of the site will not result in an increase in staff numbers.
- 1.1.4 The site is located within Manchester's Owens Park Campus, approximately 4.9km (by bike) from Manchester City Centre. The proposed site will be accessed from Whitworth Lane and Chancellors Way. The site falls under the jurisdiction of Manchester City Council (MCC).
- 1.1.5 The current and proposed location of the Limes Building is presented in **Figure 1.1**.

Figure 1.1: Site Location



Source: Google Earth ©

- 1.1.6 This TS will consider the impact of the proposed development on the local highway network.

## 1.2 Structure of Report

- 1.2.1 This TS has been developed in accordance with the now superseded Department for Transport's [DfT's] March 2007 "Guidance on Transport Assessment" document and gives due regard to the National Planning Practice Guidance (NPPG) "Transport Evidence in Plan Making" document.

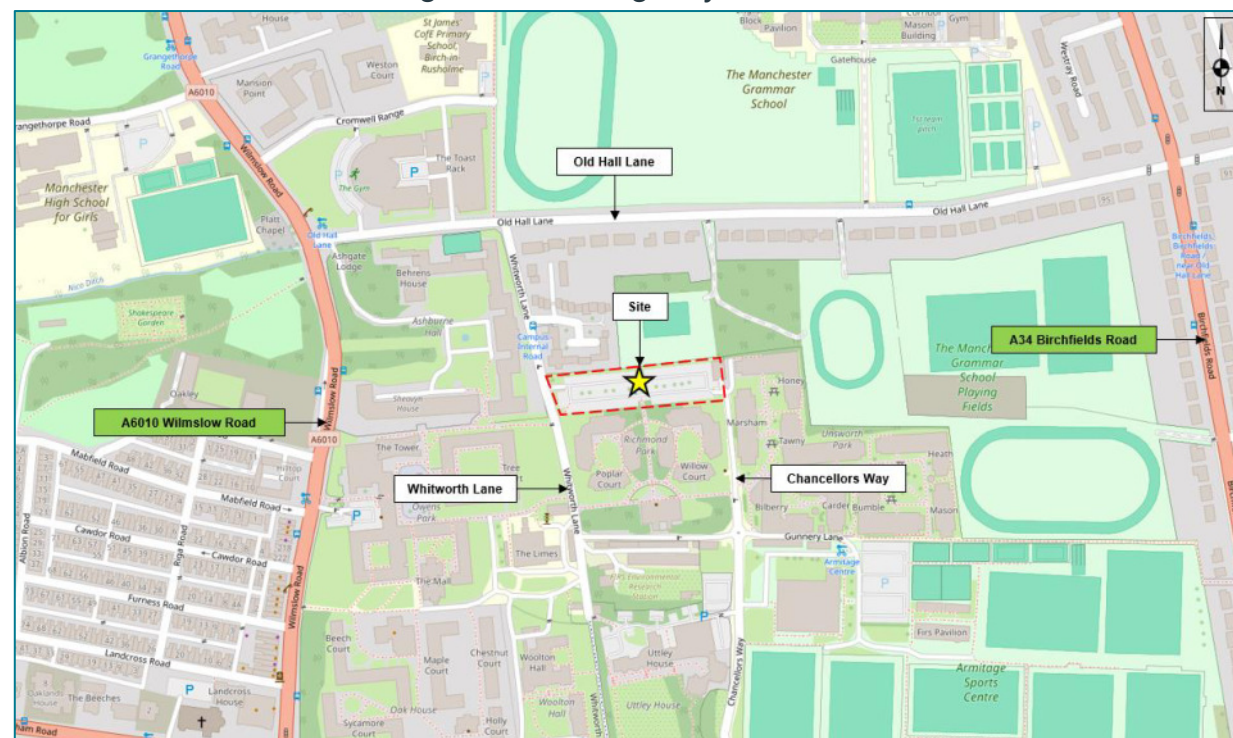
- 1.2.2 This report seeks to conclude that the proposed development can be accommodated without detriment to the operational capacity or safety of the local highway network and that it can be suitably accessed on foot, by bicycle and by local public transport services
- 1.2.3 This report comprises seven sections, including this introduction:
  - » Section 2 offers a site description and review of the existing conditions;
  - » Section 3 considers the national and local transport policy;
  - » Section 4 assesses the sustainable accessibility of the site;
  - » Section 5 outlines the development proposals;
  - » Section 6 summarises the traffic impact of the development; and,
  - » Section 7 sets out the summary and conclusions.

## 2. Existing Conditions

### 2.1 Site Location and Local Highway Network

- 2.1.1 The site will be located on an existing car park, which currently has a capacity for 130 vehicles. This allocation is shared between the Energy Centre, Richmond Park student accommodation and other university land uses. The current car parking provision is noted to be surplus to demand and could be rationalised to allow for part of the car park to be developed.
- 2.1.2 The car park is bounded by existing residential dwellings and open grassland to the north, existing student halls to the east and south, and Whitworth Lane to the west. The site is approximately 4.9km (by bike) from Manchester City Centre, within Manchester University's Owens Park Campus.
- 2.1.3 The site is currently accessed from existing accesses via Whitworth Lane and Chancellors Way.

**Figure 2:1 Local Highway Network**



Source: OpenStreetMap

### 2.2 Whitworth Lane

- 2.2.1 Whitworth Lane bounds the western site boundary and currently provides access into the existing car park. The road measures approximately 5.5-metres-wide, however, this narrows to approximately 4.5-metres-wide closer to the car park access. This does include for the existing 1-metre-wide cycle lane present on the western side of the road. The road is governed by a 20mph speed limit, which reduces further to 5mph as it passes the car park access (travelling southbound). The road becomes a pedestrian shared footpath as it approaches the B5093 Moseley Road. Whitworth Lane also acts as an access road for Redshaw Close.
- 2.2.2 Traffic Regulation Orders [TROs] in the form of double yellow lines are present along the road, which prevent parking or stopping along the road at any time. There are also existing speed bumps present within proximity to the car park access.

- 2.2.3 There are footpaths measuring up to 1.7-metres-wide present on the both sides of the road leading south from Old Hall Lane, however these become intermittent, with the majority of the western side of the road not having any footpaths beyond the Redshaw Close / Whitworth Lane junction. As outlined above, the road does have existing cycle infrastructure in place, with a cycle lane being present on the western side of the road. Approximately 220m south of the car park access, the road becomes a shared pedestrian footpath, measuring approximately 4-metres-wide. Street lighting is present along the road.
- 2.2.4 **Figure 2.2** below presents the existing conditions on Whitworth Lane.

**Figure 2:2: Whitworth Lane**



Source: Google Maps ©

### 2.3 Old Hall Lane

- 2.3.1 To the north of the site and connected to Whitworth Lane, Old Hall Lane is a single carriageway road that is governed by a 20mph speed limit. It measures approximately 9.5-metres-wide at the widest, to 7-metres-wide. The road runs in an east / west alignment. Traffic calming measures in the form of an existing priority give way and speed bumps are present on the road. On-street car parking is present on the road.
- 2.3.2 TROs are present in the form of a single yellow line along the south side of the road. As noted above, there are also traffic calming measures imposed on the road. An existing taxi pick-up/drop-off area is also present on the road, adjacent to the existing Gym Group building. A "school keep clear" zone is also present on the road, adjacent to the Manchester Grammar School access.
- 2.3.3 There are approximately 2-metre-wide footpaths present on both sides of the highway, with a 1m grass verge present to further distance pedestrians from the road. There is existing cycle infrastructure present on the road. Tactile paving, dropped kerbs and street lighting is also present on the road.

2.3.4 **Figure 2.3** below presents the existing conditions along Old Hall Lane.

**Figure 2.3: Old Hall Lane**



Source: Google Maps ©

## 2.4 Chancellors Way

- 2.4.1 Chancellors Way is classed as a private road and provides access to the site from the east. It measures approximately 5-metres-wide and offers travel in a north / south alignment. There is an existing mini-roundabout present along Chancellors Way, approximately 120m south of the car park access. Access towards the site (northbound), is controlled by an existing gated access. There are speed bumps present on the road to control traffic speeds. TROs in the form of double yellow lines are present along the length of the road.
- 2.4.2 There are approximately 2-metre-wide footpaths present on the eastern side of Chancellors Way. These extend from the B5093 Moseley Road northbound just beyond the mini-roundabout. There is also an existing zebra crossing present north of the mini-roundabout junction. Tactile paving, dropped kerbs and street lighting is present on the road.
- 2.4.3 **Figure 2.4** below presents the existing conditions along Chancellors Way.

**Figure 2.4: Chancellors Way**



Source: Google Maps ©

## 2.5 B5093 Moseley Road

- 2.5.1 The B5093 Moseley Road is a dual carriageway that runs in an east / west alignment, connecting from the A6010 to the A34. It is governed by a 40mph speed limit and measures approximately 15-metres-wide. This width includes for the central reservation, on-street cycle lanes, and on-street parking bays.
- 2.5.2 TROs in the form of double yellow lines are present on the road.
- 2.5.3 There are shared footpaths present on both sides of the road, measuring at least 3-metres-wide. There are also existing cycle lanes present on both sides of the road, measuring approximately 1-metre-wide. There are several pedestrian crossing points present on the road, which use the central reservation as a pedestrian refuge area. Tactile paving, dropped kerbs and street lighting is present on the road. There are also signalised crossing points present at the crossroad junctions with Chancellors Way, Balmoral Road (to the east), and A6010 and Wilbraham Road to the west.

2.5.4 **Figure 2.5** below presents the existing conditions on the B5093 Moseley Road.

Figure 2.5: B5093 Moseley Road



Source: Google Maps ©

2.6 Accident Analysis

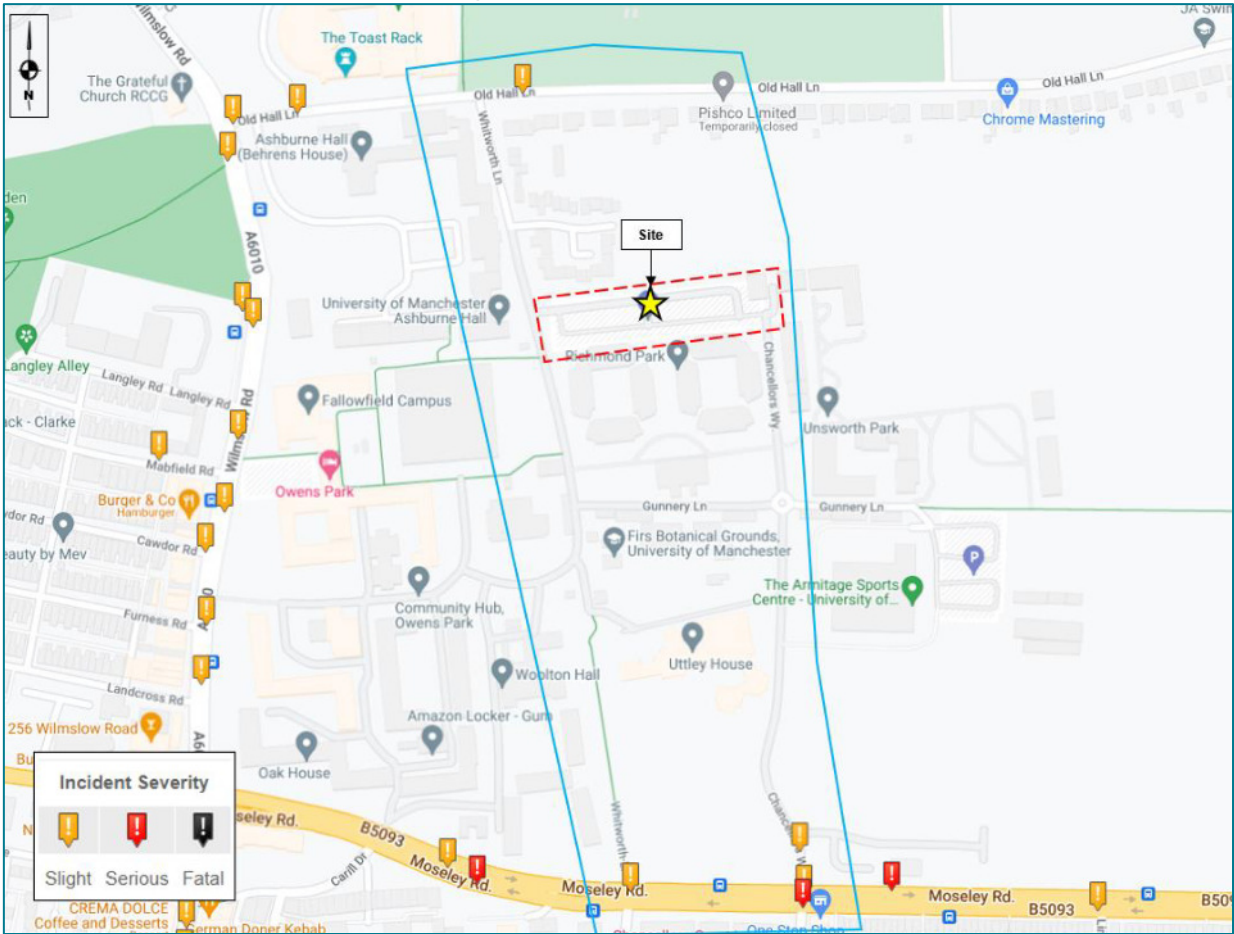
2.6.1 The DfT document “Guidance on Transport Assessment” states that:

*“Critical locations on the road network with poor accident records should be identified. This is to determine if the proposed development will exacerbate existing problems or, if proposed, whether highway mitigation works or traffic management measures will help to alleviate the problems”.*

2.6.2 A review of the Personal-Injury Accidents [PIAs] recorded within the study area has been undertaken using the most recently available five-year data (1st January 2018-31st December 2022) available from the Crashmap dataset, which is informed from the DfT database.

2.6.3 **Figure 2.6** below presents the accident study area (outlined in blue).

Figure 2.6: Accident Area



Source: Crashmap ©

2.6.4 **Table 2.1** summarises the accident record severity over the latest five-year period.

Table 2.1 Accident Analysis

Source: Crashmap

| Year/Severity | Slight | Serious | Fatal | Total |
|---------------|--------|---------|-------|-------|
| 2018          | 1      | -       | -     | 1     |
| 2019          | 1      | -       | -     | 1     |
| 2020          | -      | -       | -     | -     |
| 2021          | 2      | 1       | -     | 3     |
| 2022          | -      | -       | -     | -     |
| Total         | 4      | 1       | -     | 5     |

- 2.6.5 Examination of the PIA data has revealed that during the five-year period a total of 4 accidents have occurred within the study area. These are split between 4 slight and 1 serious accident. Considering the volume of traffic moving along the B5093 Moseley Road due to its nature of being a primary B-road, the few recorded incidents can be seen because of the road's nature and not a sign of any highway safety concerns.
- 2.6.6 Whilst all accidents are unfortunate, it is Hydrock's view that given the nature of the road network and subsequently traffic flows, the collisions can be attributed to random fluctuations, with circumstantial factors and weather conditions likely to have been the main causes.
- 2.6.7 Therefore, Hydrock consider the accident history is not a result of existing layout design issues, and concludes that there are no underlying accident concerns within the study area.

3. Transport Policy Context

3.1 Preamble

- 3.1.1 In order to assess the proposals and develop a transport access strategy for the proposed development, it is necessary to review both local and national transport planning guidance.
- 3.1.2 The following sections outline the relevant policy and guidance documents in respect of the proposed development.

3.2 National Planning Policy Framework

- 3.2.1 The NPPF sets out the Government's policies for delivering sustainable development through the planning system. Local authorities are required to take these policies into account when formulating local development plans and when determining planning applications.
- 3.2.2 The most recent NPPF report was published in December 2023 and sets out the Government's planning policies for England and how these are expected to be applied at a local level. The NPPF is a significant material consideration in plan making and decision taking.
- 3.2.3 Paragraph 108 seeks to encourage opportunities to promote walking, cycling and public transport use. This is supplemented by paragraph 109 which states that development should be focused in sustainable locations and offer a genuine choice of transport modes.
- 3.2.4 Development proposals should also give priority to pedestrian and cycle movements and facilitate access to high quality public transport. The needs of people with disabilities and reduced mobility should also be addressed (paragraph 116).
- 3.2.5 Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe.
- 3.2.6 Priority should be given to walking, cycling and public transport movements; conflicts between vehicles and vulnerable road users should be minimised through effective layout design.
- 3.2.7 Having regard to the above objectives, the proposed site access strategy includes measures to connect the site with the adjacent community and sustainable travel network, including existing public transport services. This TA considers the accessibility of the site by all modes and proposes a layout and access strategy that seeks to maximise the use of sustainable modes.

3.3 Planning Practice Guidance: Travel Plans, Transport Assessments and Statements in Decision-Taking

- 3.3.1 In March 2014, the Department for Communities and Local Government [DCLG] in conjunction with the Department for Transport [DfT], released advice on when transport assessments and transport statements are required, what they should contain (which is intended to assist stakeholders in determining whether an assessment may be required) and, if so, what the level and scope of that assessment should be.
- 3.3.2 The advice reflects current Government policy promoting a shift from the 'predict and provide' approach to transport planning to one more focused on sustainability. The document focuses on encouraging environmental sustainability, managing the existing network and mitigating the residual impacts of traffic from the development proposals.

3.4 Manual for Streets [MfS]

- 3.4.1 Manual for Streets (March 2007 and Sept 2010) supersedes Places Streets & Movement and Design Bulletin 32. Manual for Streets should now be used where 85th percentile monitored traffic speeds are less than 37mph.
- 3.4.2 The Manual deals with first principles in respect of what a street is for. It outlines five principal functions, namely:
  - » Place;
  - » Movement;
  - » Access;
  - » Parking; and
  - » Drainage and utilities.
- 3.4.3 A sense of place encompasses a number of characteristics, namely, local distinctiveness, visual quality and human interaction. Of the five functions, place and movement are the most important in determining the character of streets and should be considered together, as opposed to in isolation.
- 3.4.4 In new developments, Manual for Streets highlights those locations with a relatively high place function would be those where people are likely to gather and interact with each other, such as the town centre.
- 3.4.5 In section 3 – the design process highlights that the design of a scheme should follow the user hierarchy shown in **Table 3.1**.

Table 3.1: User Hierarchy (taken from Table 3.2 of MfS, March 2007)

| Consider First |                                                                   |
|----------------|-------------------------------------------------------------------|
|                | Cyclists                                                          |
|                | Public transport users                                            |
|                | Specialist service vehicles (e.g. emergency services, waste etc.) |
| Consider Last  | Other motor vehicles                                              |

Source: MfS (2007)

3.5 Guidelines for Providing for Journeys on Foot

- 3.5.1 Various walking distances are quoted in the Chartered Institution of Highways and Transportation's (CIHT's) "Guidelines for Providing for Journeys on Foot". **Table 3.2** (taken from Table 3.1 of the document) sets out the acceptable walking distances in various contexts:

Table 3:2: Acceptable Walking Distances

| Criteria          | Town Centre (m) | School / Commuters (m) | Elsewhere (m) |
|-------------------|-----------------|------------------------|---------------|
| Desirable         | 200             | 500                    | 400           |
| Acceptable        | 400             | 1,000                  | 800           |
| Preferred Maximum | 800             | 2,000                  | 1,200         |

3.6 Places for Everyone (PfE) - Adopted in March 2024

- 3.6.1 The Places for Everyone Plan was adopted by nine of the Greater Manchester Authorities, including Manchester City Council in March 2024, covering the period between 2022 and 2039. In relation to transport, the Plan aims to deliver connectivity by ensuring both an integrated and accessible transport system. It is supported by the Transport 2040 Delivery Plan.
- 3.6.2 Objective 6 surrounds promoting the sustainable movement of people, goods and information, where it is stated that the Plan will help enhance the existing transport network, focus new development within 800m of sustainable transport hubs and ensure new development is designed to encourage and enable active and sustainable travel. This objective also aims to expand the existing transport network to facilitate new areas of sustainable and inclusive growth.
- 3.6.3 Policies contained in the Places for Everyone Plan that are applicable to the proposed development is Policy JP-C8.

Policy JP-C8 – Transport requirements of new development

- 3.6.4 The policy states that new developments will be required to be located and designed to enable and encourage walking, cycling and public transport use, to reduce the negative effects of car dependency, and help deliver high quality, attractive, liveable and sustainable environments.
- 3.6.5 The above policy aims to achieve by the following:
  - » Prioritising new and enhanced walking, cycling and public transport routes and stops, through and around the site. These routes should
    - a. be direct, safe and convenient;
    - b. connect to nearby facilities, employment areas, public transport stops; and
    - c. improve the coverage, quality and integration of the wider walking and cycling infrastructure and public transport provision;
  - » Making adequate car parking provision, including for disabled drivers and passengers
  - » Ensuring that car parking provision is well integrated and unobtrusive, so it supports the street scene; and where appropriate parking provision is flexible and can be adapted over time to reflect demand.
  - » Incorporating enough secure and covered cycle parking to meet long-term demand from occupiers and visitors in a convenient location that helps to maximise its use, and for workplaces, where appropriate providing:
    - a. Showers, changing facilities and lockers for cyclists and walkers;
    - b. Pool or hire bikes for use by occupiers; and
    - c. Information in advance about facilities to visitors;

- » Promoting the increased provision of ULEV charging infrastructure including meeting any standards set by local plans.

3.7 Greater Manchester Transport Strategy (2040)

- 3.7.1 The Greater Manchester Transport Strategy 2040, published in February 2017, sets out TfGM's sustainable mobility plan for the future and forms Greater Manchester's 4th Local Transport Plan (GMLTP4). Building on its own 2040 Vision, the Strategy provides detail on the priority interventions needed to deliver that Vision. The document highlights several key objectives relevant to the application site:
  - » Reducing the need to travel by car, and the distance travelled.
  - » Making the best use of existing infrastructure, particularly through increasing the density of development close to public transport nodes.
  - » Increasing the use of sustainable transport to reduce the negative impacts of car use. The design of new development needs to make it easier for people to use sustainable modes e.g the availability of safe and direct walk/cycle routes, the provision of secure cycle parking or the availability of EV charging points.
  - » Establish cycling as a recognised and attractive component of the future integrated transport offer. 'Aim to double and double again' the proportion of trips made by bicycle by 2025, with the aspiration that 10% of all trips should be made by bike.
- 3.7.2 The proposed development corresponds with the Greater Manchester Local Transport Plan by providing a high-density residential development within proximity to the city core and associated public transport infrastructure.

3.8 The Bee Network

- 3.8.1 The Bee Network is *Greater Manchester's vision to deliver a joined-up London-style transport system, with buses* beginning to be integrated in 2023. The vision is set to integrate buses, trams, cycling, walking and rail under one umbrella, allowing for seamless sustainable accessibility across the Greater Manchester region. The network will aim to result in a cheaper but more effective system for those looking to travel by public transport. Using the network will be easy via the Bee Network app, which operates using a contactless fares system similar to that used in London.

Bus

- 3.8.2 Following direct pressure from Greater Manchester [GM], the Bus Services Act 2017 was introduced and gave mayors of city-regions the power to introduce a bus franchising scheme in their local area. In March 2021, Greater Manchester Mayor Andy Burnham decided to introduce a franchised network as the best way to improve local bus services in Greater Manchester. This has meant that bus services within Greater Manchester have begun to join the Bee Network, with the first buses coming under local control in Bolton and Wigan, as well as parts of Bury, Salford and Manchester. The aim is to bring all bus services within GM under local control by 2025 as part of the Bee Network, which ties in with other existing public transport. Routes and timetables will eventually be set by Transport for Greater Manchester for the entire city fleet of yellow buses.

## Trains

- 3.8.3 At the time of writing, the Bee Network is focused on bringing all local bus services under local control but in 2025, contactless payment trials on local train services from Stalybridge to Manchester Victoria; and Glossop to Manchester Piccadilly will be undertaken. These trials will lead to the eventual goal of having local trains joining the Bee Network by 2030. This will also coincide with the full integration of cycle hire services also and allow for cycle and train travel to become more cohesive and encourage more linked, multi-modal trips.

## 3.9 Manchester Core Strategy

- 3.9.1 Manchester's Core Strategy was adopted in July 2012 is the key Development Plan Document in the Local Plan. It sets out the long-term strategic policies for Manchester's future development and forms the framework that planning applications will be assessed against.
- 3.9.2 Transport forms one of the six spatial objectives within the document. The overriding objective for transport is to 'Improve the physical connectivity of the City, through sustainable and accessible transport networks, to enhance its functioning and competitiveness and provide access to jobs, education, services, retail, leisure and recreation'. The transport related policies are summarised below.

### Policy T1 - Sustainable Transport

- 3.9.3 The policy states the council's aim to deliver a sustainable, high quality, integrated transport system to encourage modal shift away from car travel to public transport, cycling and walking, to support the needs of residents and businesses and to prepare for carbon free modes of transport. The Council will support proposals that:
- » "Improve choice by developing alternatives to the car.
  - » Promote regeneration and economic vitality by relieving traffic congestion and improving access to jobs and services, particularly for those most in need and for those without a car.
  - » Improve access to transport services and facilities in order to enable disabled people and people with mobility impairments to participate fully in public life.
  - » Improve pedestrian routes and the pedestrian environment.
  - » Improve and develop further Manchester's cycle network (for example the Manchester Cycleway and the Trans Pennine Trail).
  - » Contribute to improvements to the extent and reliability of the public transport network through safe and attractive waiting and interchange facilities, better priority, improved services and information provision.
  - » Improve and develop appropriate road, rail and water freight transport routes and associated intermodal freight transport facilities in order to assist in the sustainable and efficient movement of goods.
  - » Facilitate modes of transport that reduce carbon emissions e.g. by incorporating charging points for electric vehicles, subject to their appropriate design and location.
  - » Would reduce the negative impacts of road traffic, for example, congestion, air pollution and road accident casualties.
  - » Take account of the needs of road users according to a broad hierarchy consisting of, in order of priority:
    - » 1. Pedestrians and disabled people
    - » 2. Cyclists, public transport

- » 3. Commercial access
- » 4. General off-peak traffic
- » 5. General peak time traffic"

### Policy T2 - Accessible Areas of Opportunity and Need

- 3.9.4 The Council will actively manage the pattern of development to ensure that new development:
- » "Is located to ensure good access to the City's main economic drivers, including the Regional Centre, the Oxford Road Universities and Hospitals and the Airport and to ensure good national and international connections
  - » Is easily accessible by walking, cycling and public transport; connecting residents to jobs, centres, health, leisure, open space and educational opportunities. Particular priority will be given to providing all residents with access to strategic employment sites including:
  - » Links between North Manchester residents and key employment locations, including the City Centre, Central Park, Salford Quays and Chadderton Industrial Estate and Trafford Park.
  - » Links within East Manchester to employment locations, Central Park and Eastlands in particular.
  - » Links within Central Area between residents and employment, the Corridor in particular and east/west connectivity for residents in Central Area to employment areas in Trafford and East Manchester.
  - » Maintaining strong links between residential areas in the South and the Regional Centre and improving connectivity with the Airport.
  - » Ensuring good links between Wythenshawe residents and the Airport and further employment opportunities in Stockport, Trafford and the Regional Centre.
  - » Within the City Centre, provides a level of car parking which reflects the highly accessible nature of the location, as well as the realistic requirements of the users of the development. Elsewhere, all new development should provide appropriate car parking facilities, taking account of the guidance in Appendix B, which reflects policy in the Regional Strategy (RS). In all parts of the City proposals should have regard to the need for disabled and cycle parking, in line with Appendix B. If the RS is revoked the Council will continue to use these standards when applying this policy. Standards are set for two different area types:
    - » District Centres
    - » Areas not within the City Centre or District Centres
  - » The car parking standards are maximums and the cycle and disabled car parking standards are minimums. However, the council will take the circumstances of each proposal into account to establish what level of parking is appropriate.
  - » Includes proportionate Traffic Impact Assessments and Travel Plans for all major applications and for any proposals where there are likely to be access or transport issues."

## 3.10 Manchester City Council Parking Standards

- 3.10.1 Appropriate parking standards are recommended by the City Council for all new developments to reflect demand and simultaneously encourage alternative travel choices. The parking standards for the site can be found within the Manchester Core Strategy 2012-2027 report and are presented below in **Table 3.3**.

Table 3:3: Manchester Parking Standards

| Land Use             | Maximum Number of Car Parking Spaces                | Minimum Number of Spaces Required for:             | Cycles (Citywide)                      |
|----------------------|-----------------------------------------------------|----------------------------------------------------|----------------------------------------|
|                      | Areas not within the City Centre or District Centre | Disabled People's Parking as % of total (citywide) |                                        |
|                      |                                                     | Up to 200 in total                                 |                                        |
| B2: General Industry | 1 space per 45sqm                                   | Individual bays for each disabled employee plus 2  | 1 space per 450sqm minimum of 2 spaces |

Source: Manchester City Council (MCC) Core Strategy

- 3.10.2 The council recognises the need to promote sustainable travel and as such the parking standards aim to reflect current demand whilst striving to limit overprovision and discourage out of town developments.
- 3.10.3 Consistent with Policy T2 of the Core Strategy, the proposed parking provision should be sufficient to satisfy demand, while simultaneously acting as a mechanism for demand management and encouraging sustainable travel behaviour.

3.11 Summary

- 3.11.1 The above policy review summarises both local and national transport policies relevant to the proposed development site. As such it sets out the context in which the proposed development needs to be compliant.
- 3.11.2 The proposed development will be designed to satisfy the key objectives within NPPF by being able to promote more sustainable transport choices and reduce reliance on travel by private car.
- 3.11.3 Access on foot, cycle and public transport is discussed in the following section of this report.

## 4. Sustainable Accessibility

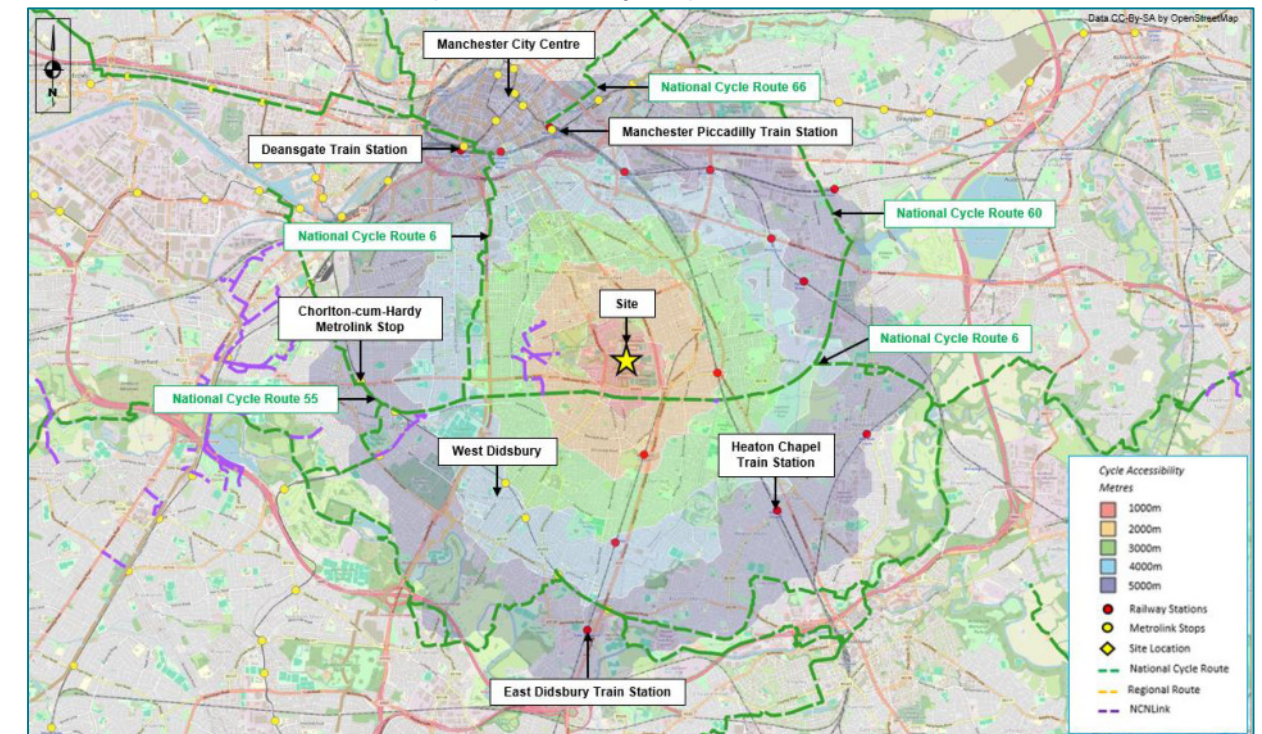
### 4.1 Accessibility by Foot

- 4.1.1 Walking is the most important mode of travel at the local level and offers the greatest potential to replace short car trips, particularly those under 2km. The guidance on the preferred maximum walking distances to amenities is given in the Chartered Institution of Highways and Transportation [CIHT] document 'Providing for Journeys on Foot' (2000).
- 4.1.2 In terms of commuting journeys by foot, the desirable distance is 500m, the acceptable distance is 1km and the preferred maximum is 2km. However, the distance that people are prepared to walk depends upon many factors; there are obvious physical factors such as age, health and disabilities, along with factors concerning the quality of the route and the environment.
- 4.1.3 In relation to shorter trips in particular, the CIHT publication Planning for Walking (section 2.1) states that "across Britain about 80% of journeys shorter than 1 mile are made wholly on foot."
- 4.1.4 Manual for Streets [MfS] emphasises this advice, stating that "walkable neighbourhoods should have a range of facilities available within 800m." However, this distance is not regarded as the upper limit for walking journeys, and MfS uses the principle that walking offers the greatest potential to replace short car trips, particularly those under 2km in length.
- 4.1.5 The location of development is within reach of the public transport network which is particularly important in terms of encouraging travel by this mode and supporting the viability of public transport services.
- 4.1.6 The local highway network facilitates pedestrian movements through the provision of footways on Whitworth Lane, Chancellors Way, and Old Hall Lane.
- 4.1.7 **Figure 4.1** shows the 2km catchment from the development, which illustrates the areas which lie within a reasonable walking distance. A copy of the walking catchment is provided in **Appendix A**.

### 4.2 Accessibility by Cycle

- 4.2.1 It is widely recognised that cycling can act as a substitute for short car journeys, particularly those up to 5km in length. This is consistent with the statement in LTN 1/20 Cycle Infrastructure Design (paragraph 2.2.2) that states:
- "two out of every three personal trips are less than five miles in length – an achievable distance to cycle for most people, with many shorter journeys also suitable for walking."
- 4.2.2 A round trip on a waymarked leisure route could easily involve distances of 20 to 30 miles. Experienced cyclists will often be prepared to cycle longer distances for whatever journey purpose. The topography within proximity to the site is considered relatively flat and conducive to encourage cycling.
- 4.2.3 **Figure 4.2** below presents an extract of the 5km cycling catchment from the development. A copy of the cycling catchment is provided in **Appendix A**. 5km is equivalent to a typical cycle time of 15-20 minutes, making it an achievable distance for most people.

Figure 4.1: 5km Cycling Catchment



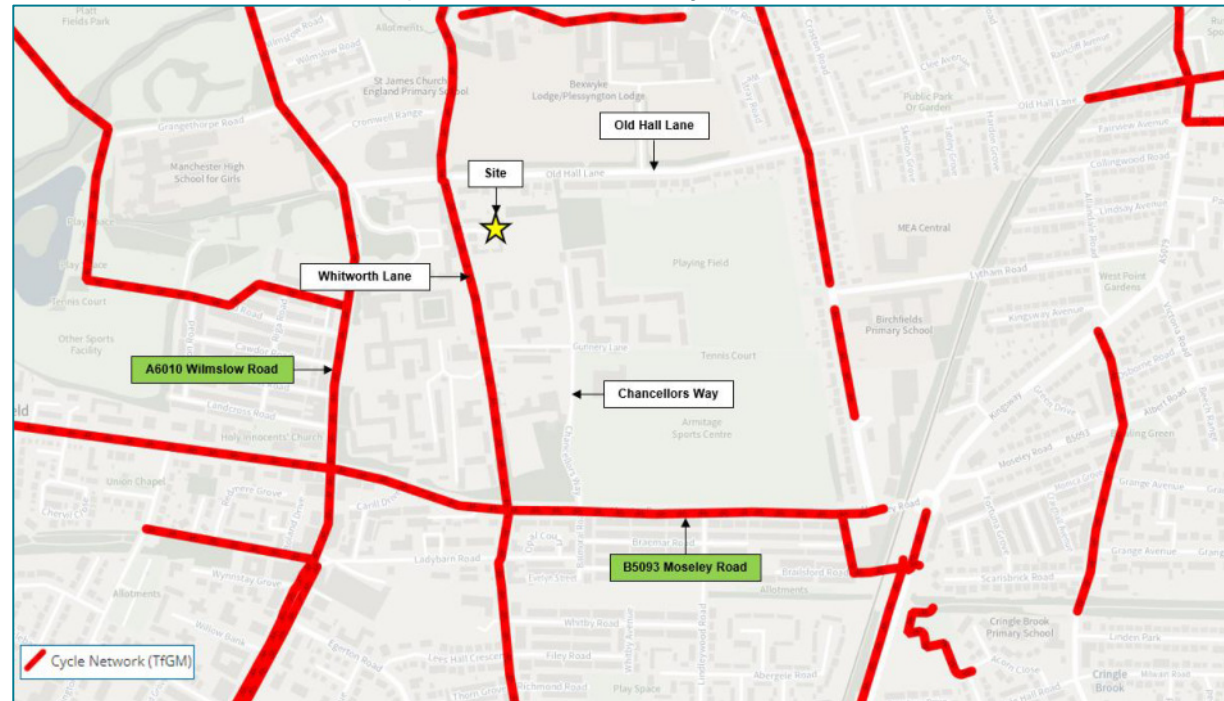
Source: CC-BY-SA by OpenStreetMap

- 4.2.4 **Figure 4.2** demonstrates that a wide range of local areas including Manchester City Centre and residential areas such as, West Didsbury are within the 5km catchment. There are also several Tram and Train Stations such as Deansgate, Levenshulme, and Manchester Piccadilly within the 5km cycling distance, which open up further travel as part of a longer multi-modal trip.
- 4.2.5 Within proximity to the site, National Cycle Networks [NCN], 6 and 66 are accessible within the 5km catchment. A brief summary of the NCN routes can be seen as follows:
- » NCN 6: Route 6 of the National Cycle Network passes through Watford, Luton, Milton Keynes, Northampton, Market Harborough, Leicester, to Sheffield, Manchester and Lancashire to Windermere;
  - » NCN 55: Route 55 of the National Cycle Network is open between Stoke-On-Trent and Marple, and around Stockport, Manchester, and Wigan; and
  - » NCN 66: Route 66 of the National Cycle Network runs from central Manchester to Spurn Head via Bradford, Leeds, York, Beverley, and Kingston upon Hull. Please see route description below for details of open sections.

#### TfGM Cycle Map

- 4.2.6 **Figure 4.3** below provides an extract from the TfGM Accessibility Map, which details the local cycle network present surrounding the proposed development site. The map illustrates that there are several local cycle routes surrounding the site.

### Figure 4:2: TfGM Local Cycle Routes



Source: TfGM Accessibility Map

4.2.7 In summary, cycling would be a viable mode of transport for those looking to commute from the site.

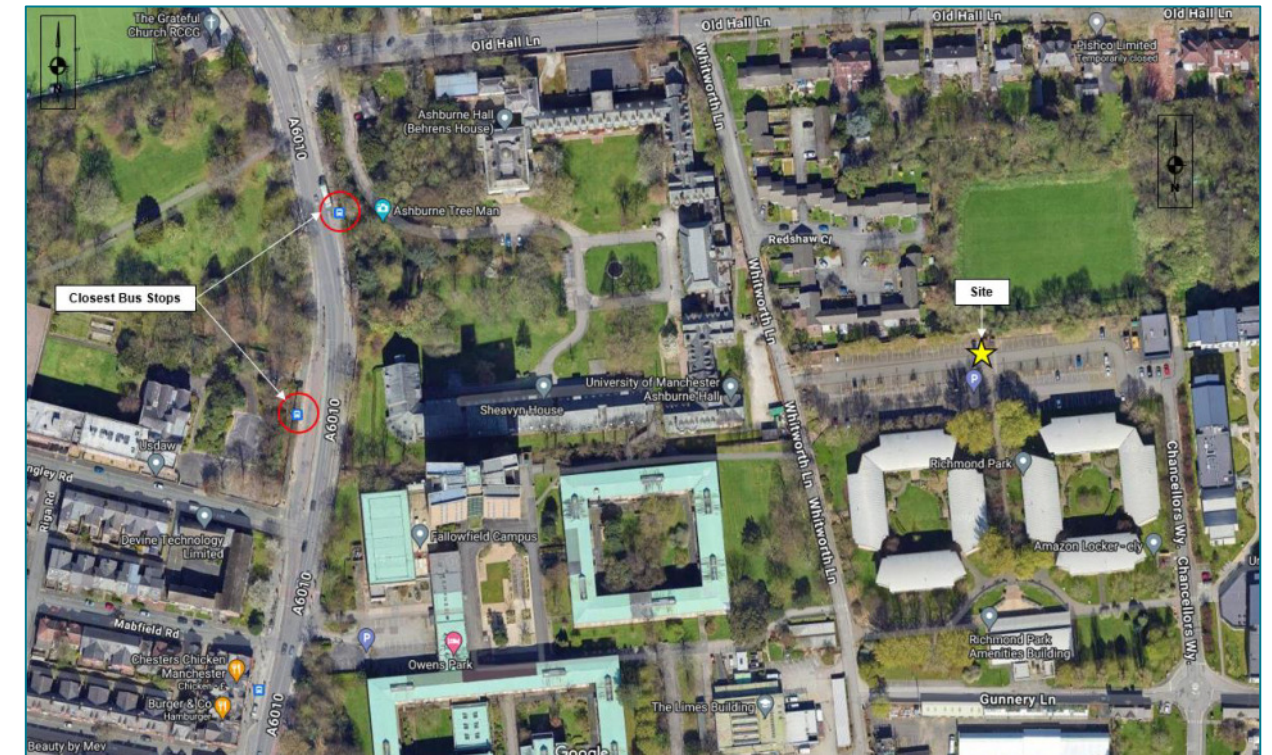
### 4.3 Accessibility by Bus

4.3.1 As outlined above, the nearest bus stop is located approximately 500m to the west of the site along the A6010 Wilmslow Road. This stop provides access to a large number of services, which is operated by Greater Manchester's Bee Network (detailed in Section 3.8 above). These bus stops help facilitate pedestrian movements of the potential staff and visitors of the site.

4.3.2 Considering both bus stop locations, the site has access to bus travel to Manchester Airport, East and West Didsbury, Stockport, Sale, Manchester Piccadilly, Ancoats and Middleton, amongst others.

4.3.3 A map illustrating the closest bus stops in relation to the development location are provided in **Figure 4.4** below. The bus stops along Wilmslow Road consists of a bus shelter with timetable information on.

### Figure 4:3: Bus Stop Map



Source: Google Maps ©

4.3.4 The frequency of the services from the local bus stops within the 800m threshold are presented in **Table 4.1**. For simplicity and to avoid double counting the frequencies are taken at the nearest available stop for each service. The AM and PM peak for the weekday are 08:00-09:00 and 17:00-18:00.

Table 4.1: Bus Timetable Summary

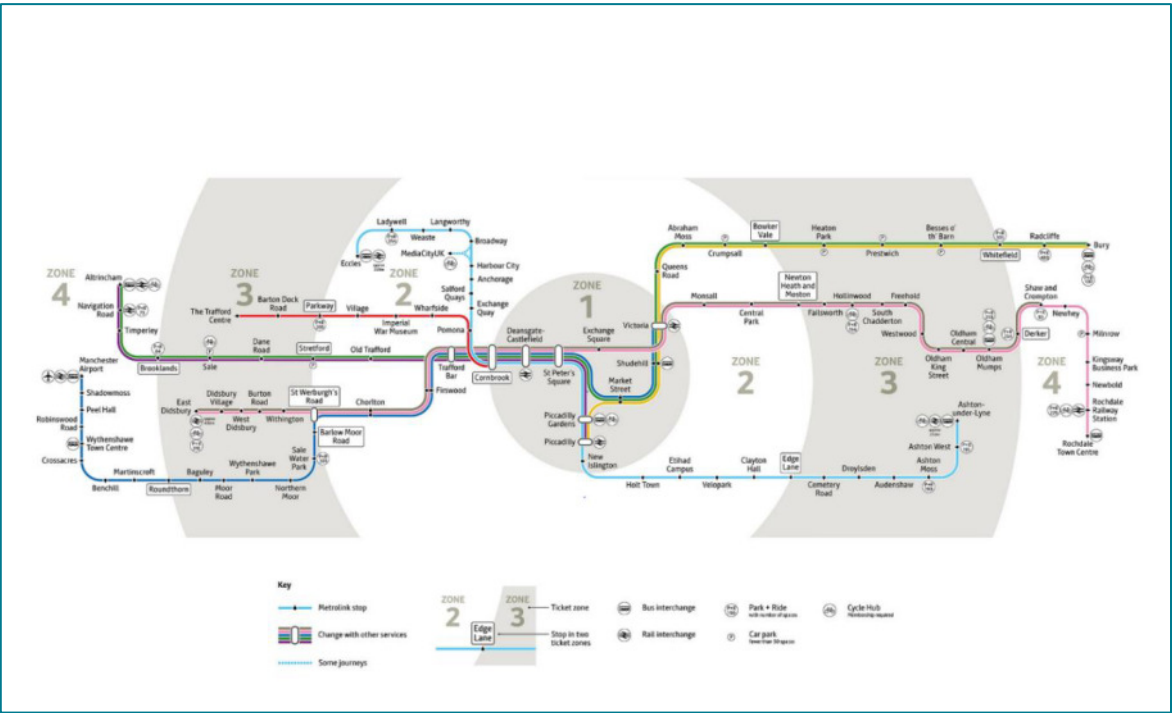
| Service | Route                           | Monday – Friday |         |         |       |         |
|---------|---------------------------------|-----------------|---------|---------|-------|---------|
|         |                                 | First           | AM Peak | PM Peak | Last  | Per Day |
| 41      | Sale - Middleton                | 05:36           | 3       | 3       | 23:58 | 50      |
|         | Middleton - Sale                | 05:03           | 3       | 3       | 23:23 | 50      |
| 42      | Stockport - Piccadilly Gardens  | 04:59           | 2       | 2       | 23:54 | 49      |
|         | Piccadilly Gardens - Stockport  | 05:53           | 1       | 1       | 23:53 | 48      |
| 42A     | Reddish - Manchester            | 06:57           | 1       | 1       | 19:06 | 23      |
|         | Manchester - Reddish            | 05:58           | 2       | 2       | 18:16 | 23      |
| 42B     | Woodford - Manchester           | 06:12           | 2       | 1       | 20:40 | 20      |
|         | Manchester - Woodford           | 06:22           | 1       | 1       | 22:05 | 21      |
| 42C     | Handforth - Manchester          | 08:09           | 1       | 1       | 20:15 | 15      |
|         | Manchester - Handforth          | 06:32           | 1       | 1       | 18:28 | 13      |
| 43      | Manchester - Manchester Airport | 06:27           | 5       | 6       | 05:57 | 110     |
|         | Manchester Airport - Manchester | 05:42           | 5       | 5       | 05:42 | 107     |
| 142     | East Didsbury - Manchester      | 06:55           | 6       | 6       | 03:42 | 157     |
|         | Manchester - East Didsbury      | 06:36           | 6       | 6       | 04:14 | 172     |
| 143     | West Didsbury - Manchester      | 06:37           | 18      | 18      | 23:37 | 200+    |
|         | Manchester - West Didsbury      | 07:29           | 14      | 18      | 03:55 | 200+    |
| 147     | West Didsbury - Ancoats         | 07:26           | 2       | 2       | 20:46 | 27      |
|         | Ancoats - West Didsbury         | 07:27           | 2       | 2       | 20:13 | 26      |
| Total   | -                               | -               | 75      | 79      | -     | 1311    |

Source: Traveline.info

- 4.3.5 **Table 4.1** above demonstrates that the site is served by frequent bus services, with over 1000 buses passing near the site in the weekday, with 75 and 79 buses passing during the AM and PM peaks respectively. The volume of buses offers very regular and convenient opportunities for travel.
- 4.3.6 The early start times and the availability of the services in the peak hour are conducive to commuters travelling from the development.

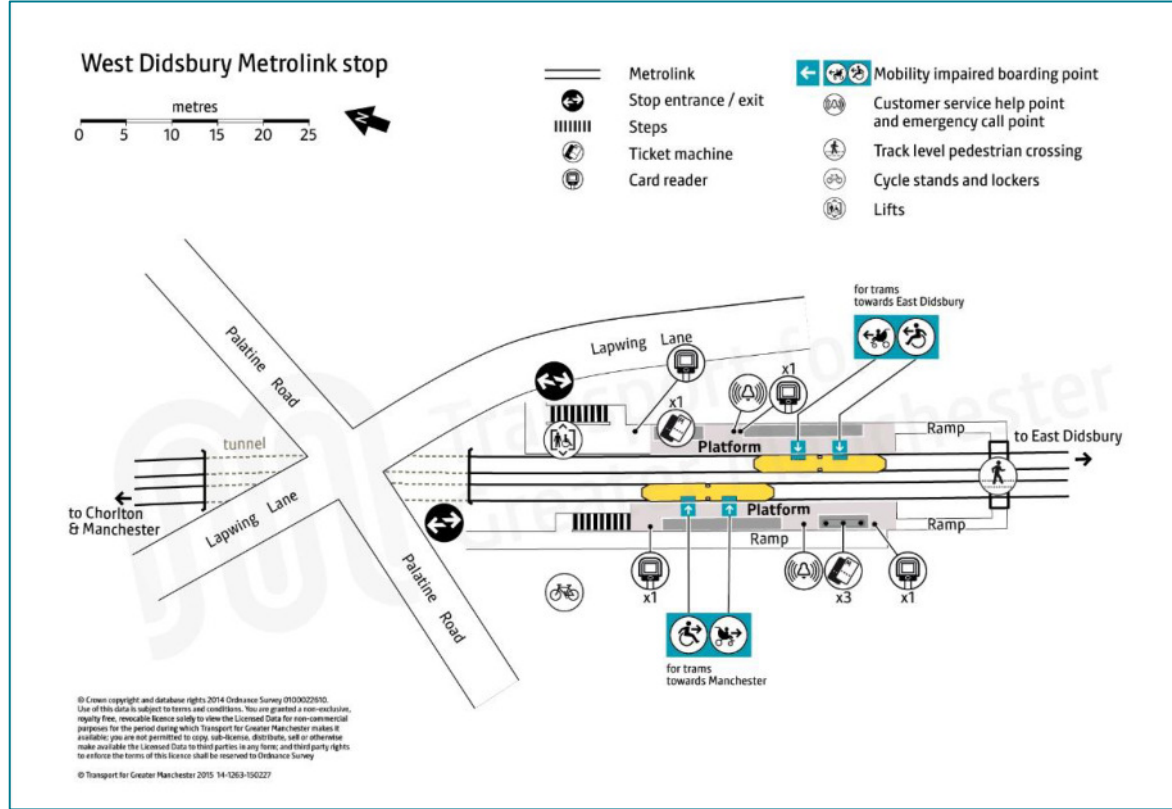
- 4.3.7 It is therefore concluded that the development benefits from very good access by bus, offering an attractive mode of transport. Given the frequency of the services available and the proximity of the bus stops, this has the potential to provide a significant alternative to single occupancy car journeys.
- 4.4 **Access by Metrolink**
- 4.4.1 The nearest Metrolink stop is located approximately 3.2km to the south west of the site at West Didsbury Metrolink Stop. Although this is outside of the 2km walking catchment, it is still well within the 5km cycling catchment and could therefore be considered for staff and visitors to cycle to the site as part of a multi-modal linked journey.
- 4.4.2 West Didsbury Metrolink Stop provides connections to Shaw & Crompton, East Didsbury, Exchange Square and Rochdale. This stop is served by the Pink Line.
- 4.4.3 The West Didsbury Metrolink is located in Zone 3 offering frequent services (every 8-15 minutes during peak times). Interchanges are possible at Cornbrook, Deansgate Castlefield, St Peter's Square and Manchester Victoria.
- 4.4.4 At these interchanges, travel to a wide range of destinations on other lines of the Metrolink network is available as well as travel to Deansgate Train Station, Manchester Piccadilly Train Station and Manchester Victoria Train Station all located in Zone 1. These train stations offer travel to local and national destinations.
- 4.4.5 Metrolink offers significant benefits for long distance travel using a sustainable mode of transport. The pedestrian and cycle friendly conditions in the vicinity of the site further encourage its use and make it a viable alternative.
- 4.4.6 **Figure 4.5** illustrates the Metrolink network map including zoning system while **Figure 4.6** shows a map of the West Didsbury Metrolink Stop and the available facilities, which include shelters and seating, digital timetabling information, ticket machines, customer information and emergency call point, cycle stands and lockers, lifts and ramps which facilitate access and boarding for mobility impaired users.

Figure 4.4: Metrolink Network Map



Source: TfGM

Figure 4.5: West Didsbury Metrolink Stop Map



Source: TfGM

4.5 Access by Rail

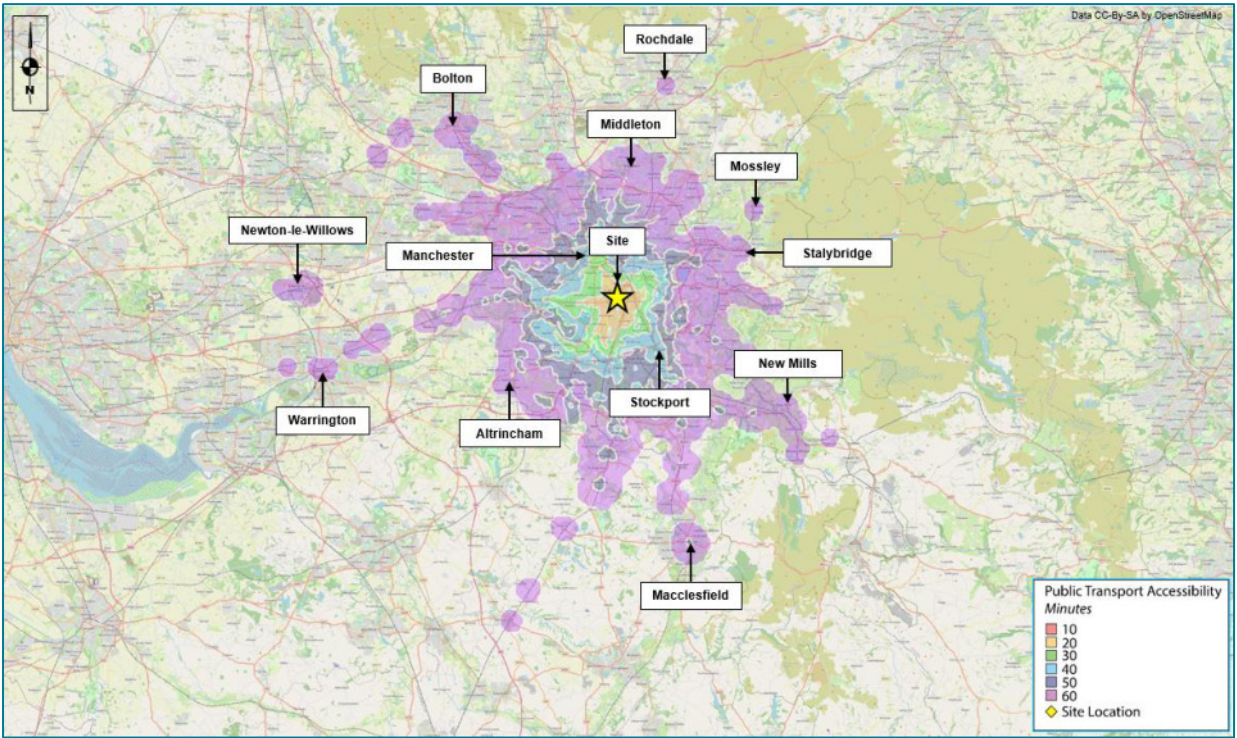
4.5.1 The closest train station is Levenshulme Train Station, located approximately 1.7km east of the site. The station is served by Northern Railways, which offer services to a wide variety of destinations such as Manchester Piccadilly, Buxton, Crewe, Hazel Grove, Alderley Edge. Services to Manchester Piccadilly depart from the station approximately once every 15-30minutes, with services to Crewe departing hourly. Services to Hazel Grove, Buxton and Alderley Edge also depart hourly.

4.6 Accessibility by Public Transport

4.6.1 A calculation has been undertaken, using GIS software - Basemap's Visography (TRACC) program, to illustrate the distance that can be travelled within 60 minutes by public transport to and from the proposed development site. The time includes the walk to the bus stops or railway station and demonstrates that key areas such as Manchester, Warrington, Newtown-le-Willows, Stockport, and Macclesfield are all within a 60-minute public transport journey.

4.6.2 **Figure 4.7** below provides an extract of the public transport 60-minute catchment area. A copy of the full plan is provided within **Appendix A**.

Figure 4.6: 60-minute Public Transport Catchment



Source: CC-BY-SA by OpenStreetMa

4.7 Conclusion

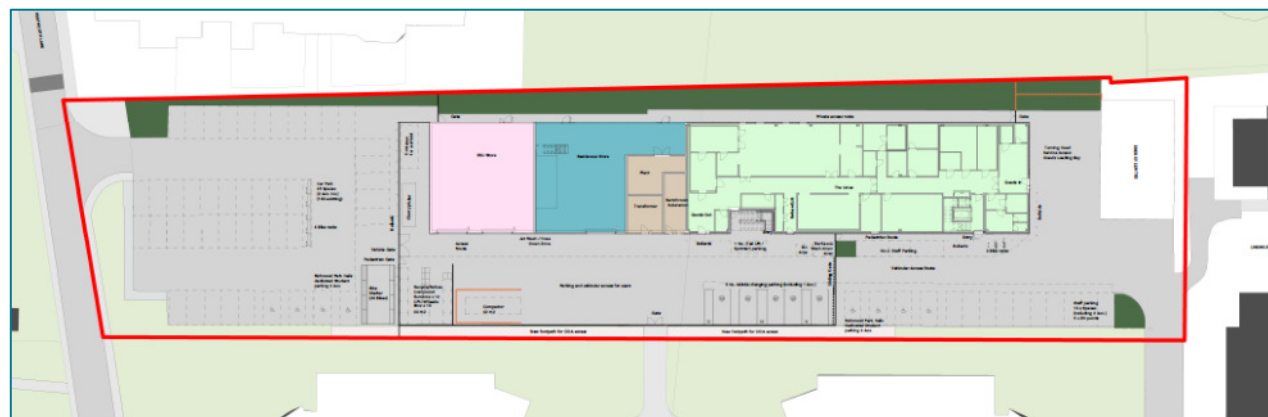
4.7.1 In summary, the proposed residential development site is located in an accessible location in Manchester, and is well located to make use of the existing public transport network and pedestrian, and cycle routes.

## 5. Development Proposal

### 5.1 Introduction

- 5.1.1 The proposed development will relocate the existing Limes facility to an adjacent site within the University of Manchester's Owens Park Campus. The building will move from its current setting to an area used for car parking adjacent to the campus' energy centre.
- 5.1.2 The proposed development will combine the University's Catering Central Processing Unit (CPU), Maintenance Services Unit (MSU), Environmental Services Unit (ESU) and Residences Team to form a facility consisting of facility management stores and workshops, catering facilities, staff workspaces and storage facilities.
- 5.1.3 The site will be divided into two main sections. The western part is designated for parking, while the eastern section houses the building, which will be split into the main building and the external stores.
- 5.1.4 The Gross Floor Area [GFA] for the proposed building development is 1,785sqm.
- 5.1.5 The proposed ground floor layout is presented in **Figure 5.1** and provided in **Appendix B**.

**Figure 5.1 Proposed Site Layout**



Source: Buttress

### 5.2 Site Access Arrangements

#### *Vehicular Access*

- 5.2.1 A proportion of an existing car park is to be retained to the west of the site and will be accessed from Whitworth Lane only. The car park will retain 45 car parking spaces including 4 accessible spaces.
- 5.2.2 Vehicles will access and egress the eastern portion of the site via Chancellor's Way.
- 5.2.3 A 2.5m high vehicle gate is provided between the car parking area and The Limes servicing area for emergency service use. This route would also be used for student move in and move out arrangements at the beginning and end of the academic year.

#### *Pedestrian and Cycle Access*

- 5.2.4 A new 1.5m DDA pedestrian footpath will be provided along the southern edge of the site, which will link into the existing footpaths through Richmond Park student halls.
- 5.2.5 Access into the eastern portion of the site will be controlled by gated entry from the footpath.
- 5.2.6 A private access route, 1.2m in width and subsequently widening to 1.7m, will be provided along the northern boundary of the proposed building development. Pedestrian access gates will be present to prevent unauthorised access.
- 5.2.7 A pedestrian route will be provided from the proposed sliding gate within the eastern portion of the site to the entrance of the proposed Limes building. This can be accessed using the pedestrian gate via the access route from the car parking area or via Chancellors Way.

### 5.3 Parking Provision

- 5.3.1 The existing car park currently has a capacity for 130 vehicles shared between the Energy Centre, Richmond Park student accommodation and other university land uses. The current car parking provision is noted to be surplus to demand and could be rationalised to allow for part of the car park to be developed.
- 5.3.2 It is understood that there is currently an over provision of car parking, which is primarily used during student move in and move out events. As such the University of Manchester would like to ensure that a proportion of car parking is maintained.

#### *Car Parking*

- 5.3.3 The relocation of the Limes Building will result in the reconfiguration of the existing car parking area. The proposed car parking provision is demonstrated below.

Western side of the site:

- » 45 car parking spaces will be provided, inclusive of 4 accessible car parking space.
- » It is noted that Richmond Park Halls will be allocated 2 dedicated accessible car parking spaces.

Eastern side of the site:

- » 14 car parking spaces for staff car parking inclusive of 2 accessible car parking bays;
- » 2 accessible car parking space will be dedicated to Richmond Park Halls for student parking;
- » 5 electric vehicle (EV) car parking space will be provided inclusive of 1 accessible EV parking bay; and
- » 1 parking space will be provided for Tail Lift/Sprinter parking.
- 5.3.4 The total number of car parking spaces provided will be 66 car parking spaces and 1 Tail Lift/Sprinter parking.
- 5.3.5 The overall car parking provision represents a reduction of 64 spaces (49%)
- 5.3.6 Swept path analysis for a large car is presented in **Appendix C** demonstrating that the vehicle can access the both the western and eastern parts of the site, manoeuvre, and exit the site in a forward gear.

#### *Cycle Parking*

- 5.3.7 A sheltered and secured cycle parking store will be provided in the car parking area adjacent to the accessible parking spaces which will accommodate 20 cycle parking space.
- 5.3.8 There will be 7no. cycle racks provided for staff and students outside the entrance to the main building.

#### *5.4 Servicing*

- 5.4.1 The primary goods loading area/turning head is provided to the east of The Limes, close to the access from Chancellor's Way. This area provides sufficient space for turning manoeuvres to be undertaken to service the site.
- 5.4.2 Refuse will be stored within the refuse and recycling store located to the south west of the proposed ESU store. Refuse bins will then be relocated to the goods loading area on collection days and serviced by a 12.2m refuse vehicle.
- 5.4.3 A compactor vehicle will utilise the proposed goods loading area, and reverse to the compactor. The compactor will be emptied periodically and with the presence of a banksman.
- 5.4.4 The site will accommodate a number of smaller operational vehicles that will be managed by the University. These vehicles will be housed within the Stores building, whilst others will be accommodated with the service yard. All vehicle movements can safely be accommodated and manoeuvred within the site.
- 5.4.5 Swept path analysis for a 12.2m Refuse Vehicle and a 9.8m Compactor Vehicle is presented in **Appendix D**, which demonstrates that the vehicles can access, manoeuvre and egress the site in a forward gear.

#### *5.5 Emergency Access*

- 5.5.1 Emergency access will be gained from Chancellor's Way. A vehicle gate is provided to allow emergency vehicles access through the site. The swept path analysis for a fire tender manoeuvring through the site and exiting in a forward gear is provided in **Appendix E**.

6. Trip Generation

6.1 General

- 6.1.1 This section of the report considers the trip generation levels associated with the proposed relocation of the Limes Building and the impact it will have on the local highway network.
- 6.1.2 The Gross Floor Area [GFA] for the proposed building development is 1,785sqm. It should be noted that the existing site is currently in operation within the campus and the trips associated with this use will be transferred to the new Limes building. The relocation of the site will not result in an increase in staff numbers.
- 6.1.3 To determine the number of trips generated by the proposed use at the site, a trip generation exercise has been undertaken. With regards to the potential vehicle trips associated with the proposed development, the weekday morning (08:00 - 09:00) and weekday evening (17:00 - 18:00) peak hours have been assessed.

6.2 Proposed Trip Generation - Warehousing (Commercial) Land Use - GFA 1,785sqm

- 6.2.1 The Trip Rate Information Computer System [TRICS] version 7.11.2 has been used to derive the predicted vehicle trip generation for the proposed Class E land use, for the weekday morning and evening peak hours.
- 6.2.2 The TRICS database is an industry accepted tool for predicting the likely number of trips from a proposed development by comparing the site with existing developments of a similar size and characteristic within the UK. The database was interrogated to determine the trip rates for the weekday morning and evening peaks.
- 6.2.3 In order to obtain the appropriate trip rates for the proposed development, the 02/ - Employment/ F - Warehousing (Commercial) land use category has been selected. Sites within Greater London and Ireland have been omitted from the calculation.
- 6.2.4 The results of this TRICS interrogation are shown in **Table 6.1**, whilst the TRICS outputs for Class E land use are presented in **Appendix F**. In the following table the trip rates are given per sqm.

Table 6:1 Proposed Warehousing (Commercial) (1,785sqm) Trip Rates

| Employment/ F - Warehousing (Commercial) | Weekday AM Peak (08:00-09:00) |            | Weekday PM Peak (17:00-18:00) |            |
|------------------------------------------|-------------------------------|------------|-------------------------------|------------|
|                                          | Arrivals                      | Departures | Arrivals                      | Departures |
| Trip Rates                               | 0.068                         | 0.067      | 0.033                         | 0.123      |

- 6.2.5 The above trip rates shown in **Table 6.1** have been applied to the proposed warehousing (commercial) GFA of 1,785sqm to determine the trip generation associated with the development scheme.

- 6.2.6 The resultant trip generation is shown in Table 6.2 below.

Table 6:2: Proposed Warehousing (Commercial) 1,785sqm Trip Generation

| Proposed (Total Vehicles) | Weekday AM Peak (08:00-09:00) |            | Weekday PM Peak (17:00-18:00) |            |
|---------------------------|-------------------------------|------------|-------------------------------|------------|
|                           | Arrivals                      | Departures | Arrivals                      | Departures |
| Trip Generation           | 1                             | 1          | 1                             | 2          |

*\*Note: Results subject to rounding*

- 6.2.7 It can be seen from the above table that the proposed development of this nature is expected to generate the following two-way trips:
- » 2 in the morning peak;
  - » 3 in the evening peak;
- 6.2.8 Clearly based on the trips presented above, the proposed relocation of the Limes Building would not have a material impact on the local highway network.
- 6.2.9 In addition to the above, it should also be reiterated that the site is considered to be within an area that benefits from good levels of accessibility including sustainable travel modes and local amenities, and therefore this provides a key advantage in providing a real alternative to car travel (e.g. for journeys to work) and as such promotes the aim of reducing car travel.
- 6.3 Summary
- 6.3.1 Based on this review, it is considered that there would not be a severe impact on the local road network.

## 7. Summary and Conclusion

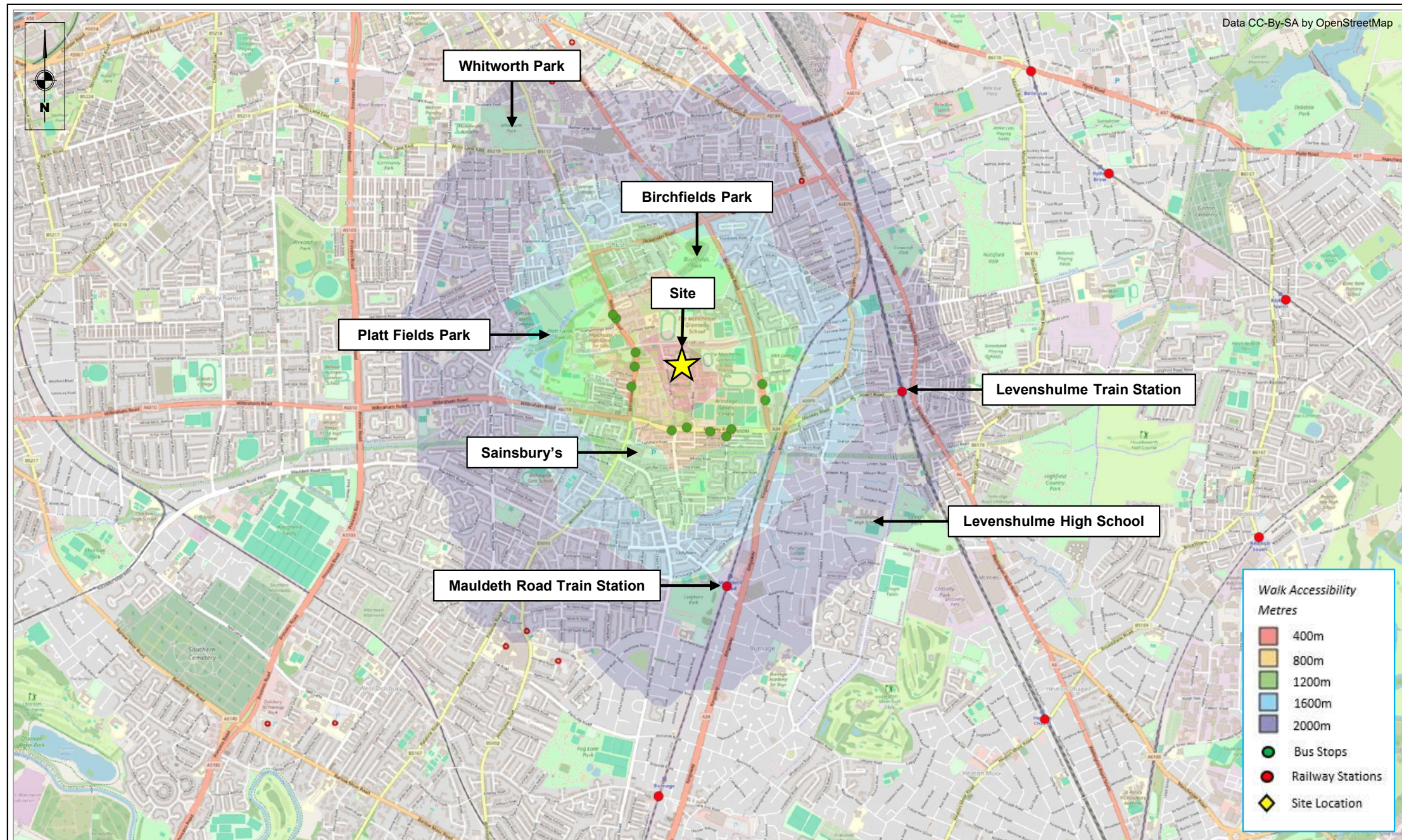
### 7.1 Summary

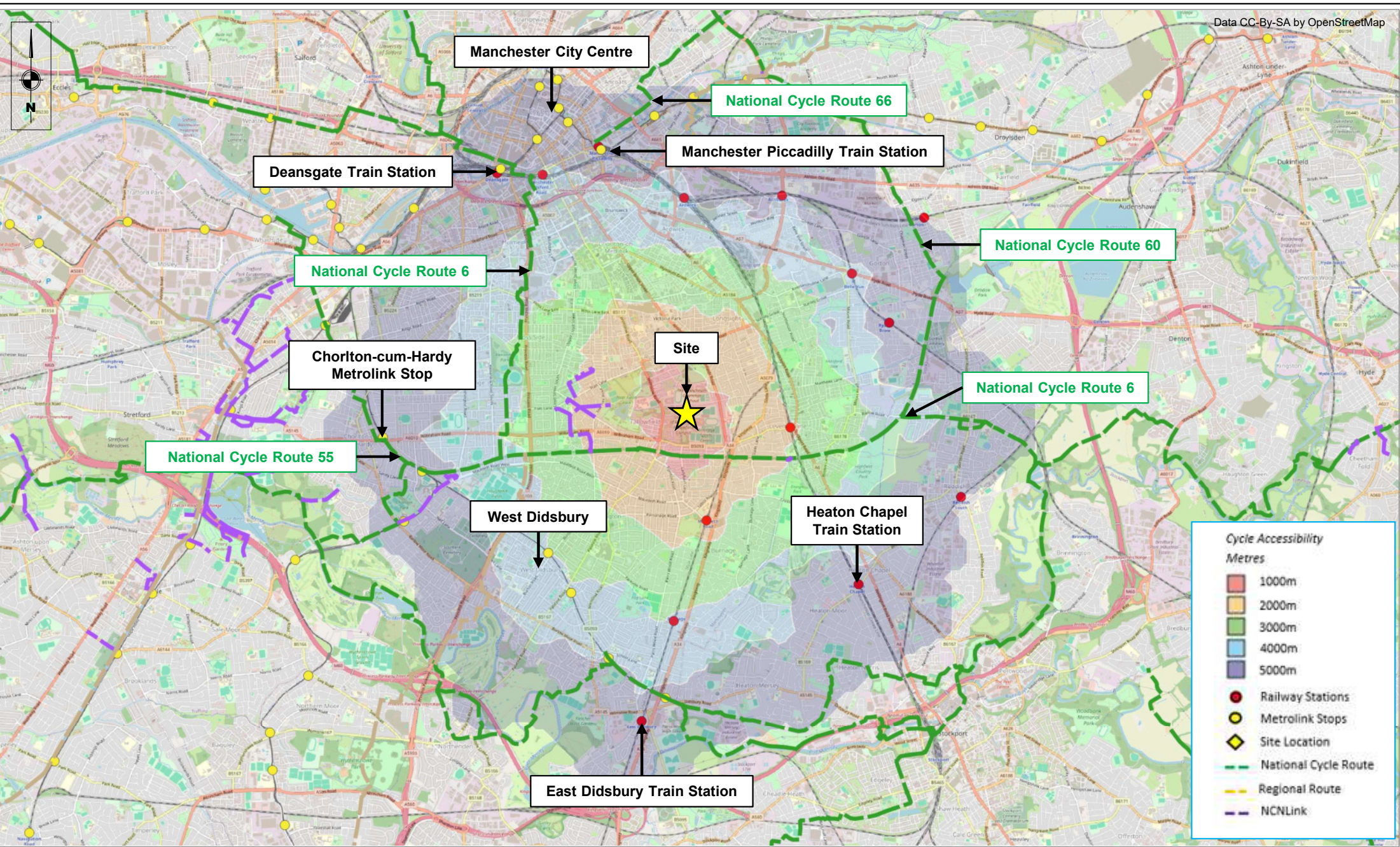
- 7.1.1 Hydrock has been instructed by University of Manchester to prepare a TS in support of a proposed relocation of the Limes Building.
- 7.1.2 The proposed development will relocate the existing Limes facility to an adjacent site within the University of Manchester's Owens Park Campus. The building will move from its current setting to an area used for car parking adjacent to the campus' energy centre.
- 7.1.3 The proposed development will combine the University's Catering Central Processing Unit (CPU), Maintenance Services Unit (MSU), Environmental Services Unit (ESU) and Residences Team to form a facility consisting of facility management stores and workshops, catering facilities, staff workspaces and storage facilities.
- 7.1.4 The site will be divided into two main sections. The western part is designated for parking, while the eastern section houses the building, which will be split into the main building and the external stores.
- 7.1.5 The Gross Floor Area [GFA] for the proposed building development is 1,785sqm.
- 7.1.6 The sustainability assessment shows that the site is accessible by non-car modes. The ability to readily access wider destinations by walking, cycling, bus or rail provides a key advantage in providing a real alternative to car travel (e.g. for journeys to work) and as such promotes the aim of reducing car travel.
- 7.1.7 The trip generation assessments indicate that the likely level of anticipated trips associated with the proposed land use would not lead to a severe impact to either the existing or the future forecast capacity on the local highway network.
- 7.1.8 NPPF states that:  
*"Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe."*

### 7.2 Conclusion

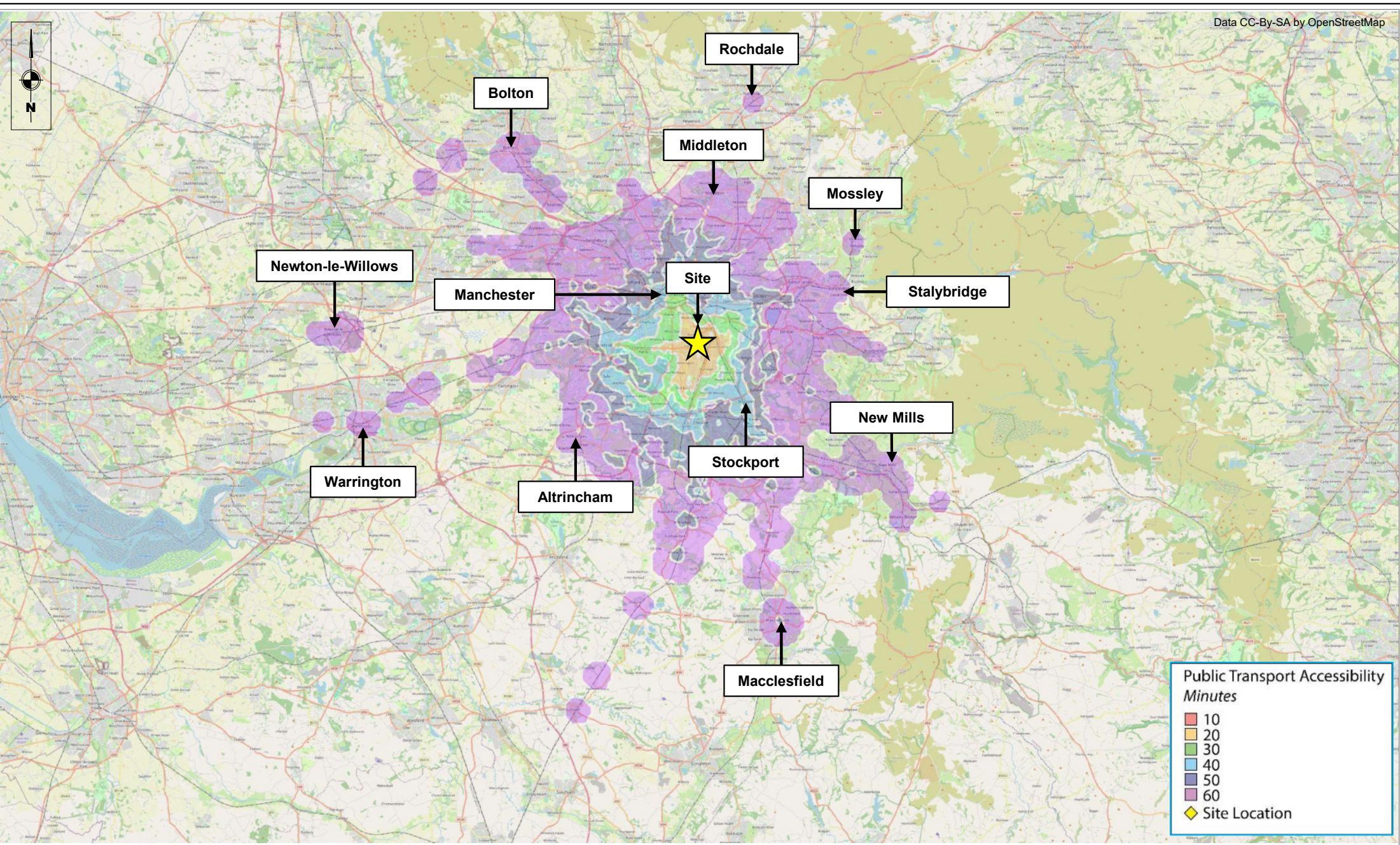
- 7.2.1 Having undertaken a comprehensive analysis of the development site and after reviewing planning policies, it has been demonstrated by this TS that the proposed development accords with highway access design recommendations and sustainable values and hence there is no basis for highway and transportation objections to the proposals.
- 7.2.2 There are no highways or transport related reasons upon which a refusal of the planning application for the proposals would be justified.

## Appendix A Accessibility Figures





|                                                                                    |                                                                                     |                                                       |                          |               |     |             |      |    |             |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------|--------------------------|---------------|-----|-------------|------|----|-------------|
|  | Project Title<br>University of Manchester: The Relocation of The Limes, Fallowfield | Drawing Title<br>Accessibility: 5km Cycling Isochrone | Job Number<br>33445-TMBI | By<br>HT      | Rev | Description | Date | By | Drawing No. |
|                                                                                    |                                                                                     |                                                       | Date<br>23.04.24         | Checked<br>CP | -   | -           | -    | -  | APPENDIX A  |
|                                                                                    |                                                                                     |                                                       | Scale<br>NTS             | Status<br>-   | -   | -           | -    | -  | Figure      |
|                                                                                    |                                                                                     |                                                       |                          |               | -   | -           | -    | -  | 2           |



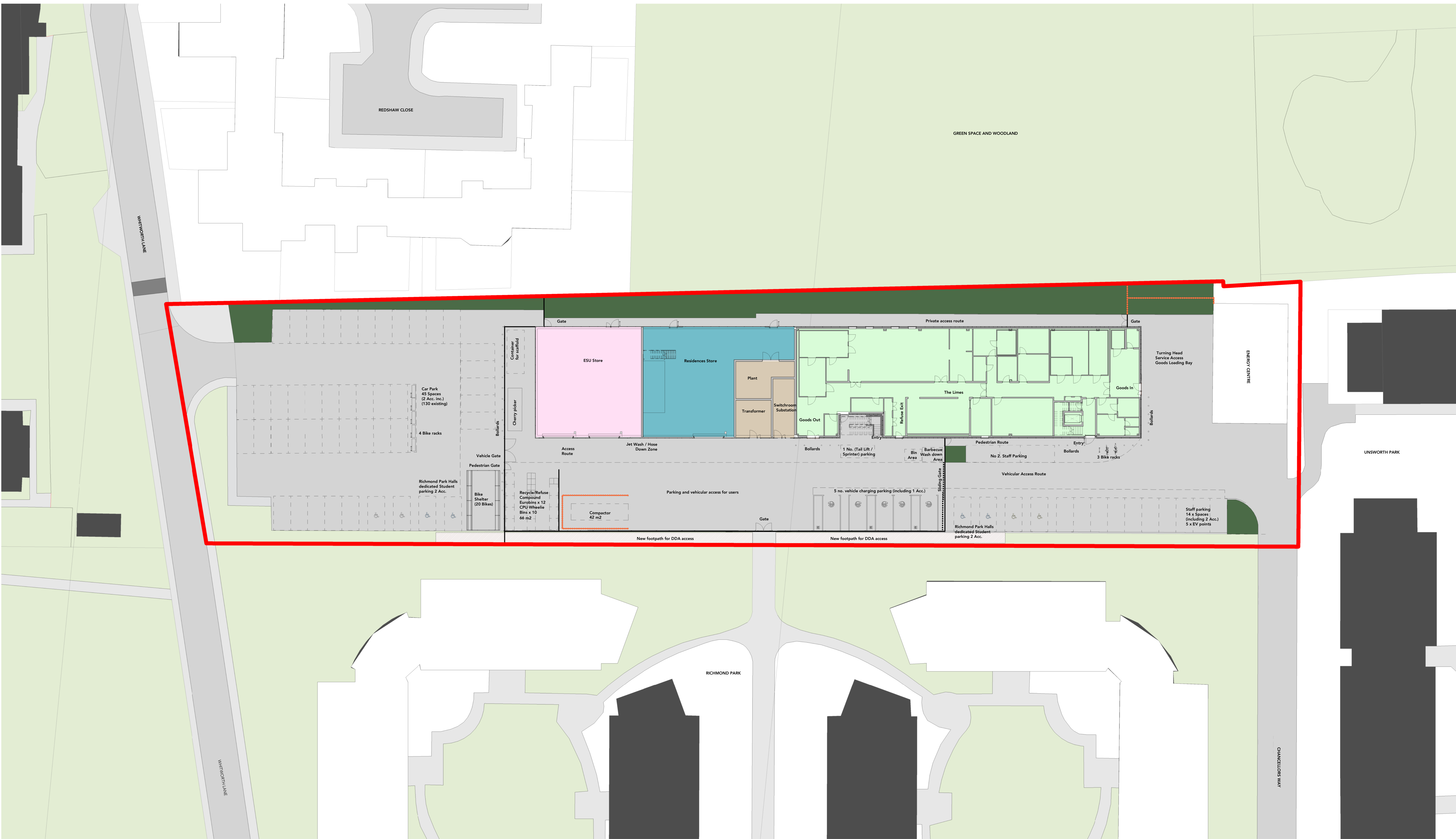
**Public Transport Accessibility**  
*Minutes*

- 10
- 20
- 30
- 40
- 50
- 60

◆ Site Location

|                                                                                    |                                                                                     |                                                        |                          |               |     |             |      |    |                               |
|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------|---------------|-----|-------------|------|----|-------------------------------|
|  | Project Title<br>University of Manchester: The Relocation of The Limes, Fallowfield | Drawing Title<br>Accessibility: 60min Public Transport | Job Number<br>33445-TMBI | By<br>HT      | Rev | Description | Date | By | Drawing No.<br><br>APPENDIX A |
|                                                                                    |                                                                                     |                                                        | Date<br>23.04.24         | Checked<br>CP | -   | -           | -    | -  |                               |
|                                                                                    |                                                                                     |                                                        | Scale<br>NTS             | Status<br>-   | -   | -           | -    | -  |                               |
|                                                                                    |                                                                                     |                                                        |                          |               | -   | -           | -    | -  | Figure<br>3                   |

## Appendix B Site Plan



NOTE:  
All information is based on external survey information. Further information required in terms of existing and extent of retained car parking spaces, bike shelter, trees, planters, gas/groves/mature enclosure, etc. Extent of red line boundary may need to be adjusted to suit proposed road access, turning heads and radius.

SCALE 1:200

Project Boundary

Key:

Area for new planting/trees (Refer to Turley's details)

Area for new hard landscaping (Refer to Turley's details)

Secure rated Steel PPC perimeter fence compound. With integral lockable sliding gate and Swing Gates. Vehicle & Pedestrian, 2.5m high

Acoustic Wall Barrier (Refer to Acoustician details)

CPU

ESU

Residences

Ancillary Spaces/Plant

P01

18/10/24

PLANNING

Rev

Date

Info

Details

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Buttress

Manchester

41 Bengal Street  
Manchester  
M4 6AF  
0161 256 3303  
www.buttress.net

Leeds

Clockwise, Yorkshire House  
Grook Street, Leeds  
LS1 5SH  
0113 589 7965

Project Title

The Limes Relocation

Client

Rider Levett Bucknall

Location

Fallowfield Campus, Manchester

Drawing ref

Proposed Site Plan (Complete)

Date

03/10/2024 14:25:25

Scale

As indicated

Checker

MB

Size

A0

Job No:

9774

Status

S4

Project

Origin

Volume

Level

Type

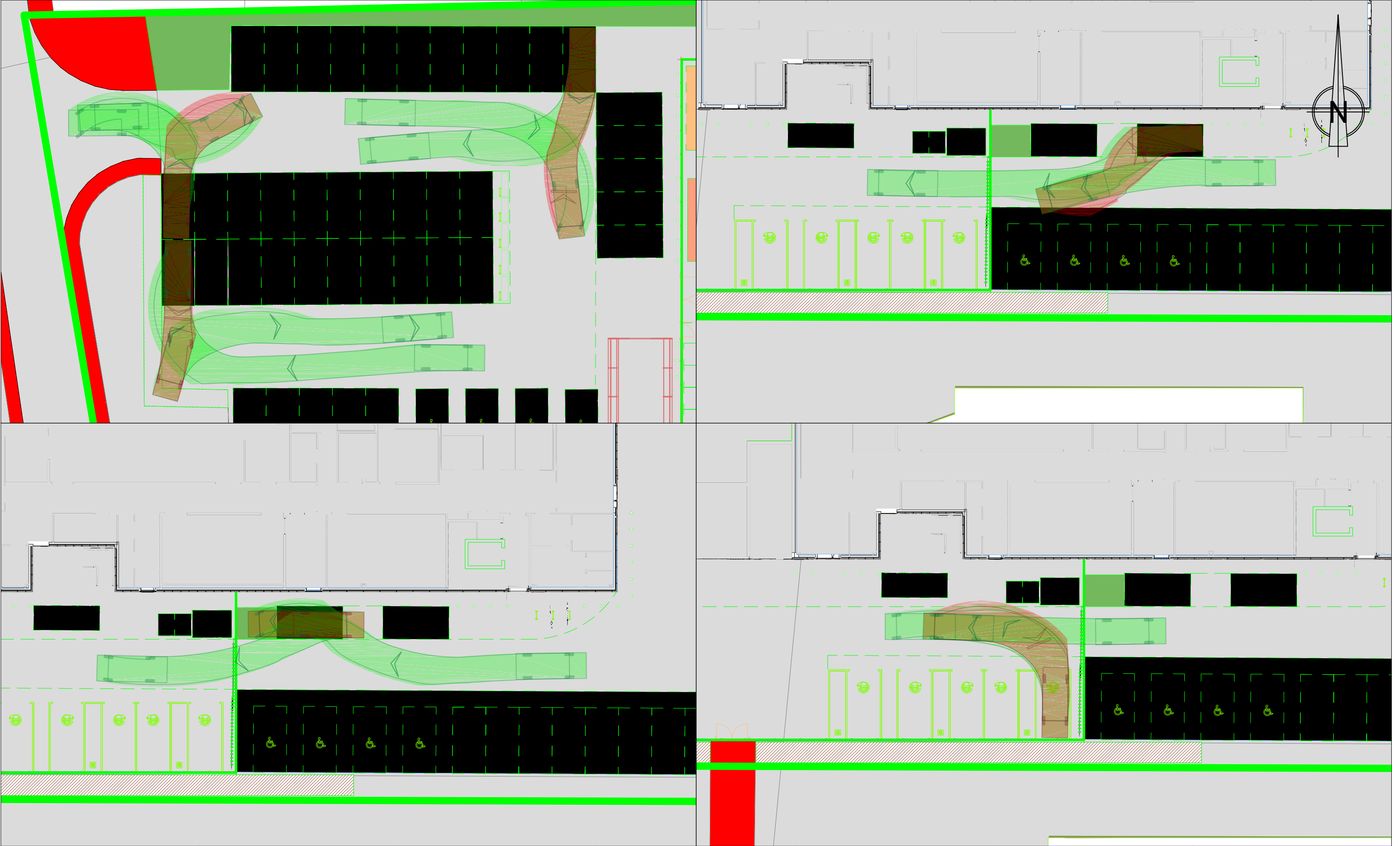
Revision

Number

Rev

LIMES-BUT-MS-R3-DR-A-04101-P01

## Appendix C Swept Path Analysis - Large Car



KEY PLAN

- VEHICLE BODY IN FORWARD GEAR
- VEHICLE BODY IN REVERSE GEAR
- VEHICLE CHASSIS IN FORWARD GEAR
- VEHICLE CHASSIS IN REVERSE GEAR

NOTES

Large Car (2006)  
Overall Length 5.079m  
Overall Width 1.872m  
Overall Body Height 1.525m  
Min Body Ground Clearance 0.310m  
Max Track Width 1.831m  
Lock to lock time 4.00s  
Kerb to Kerb Turning Radius 5.900m

REVISIONS (CONTINUED)

| REVISIONS |             |       |            |       |            |  |
|-----------|-------------|-------|------------|-------|------------|--|
| P02       | FIRST ISSUE |       |            |       |            |  |
| SR        | 03.10.2024  | NBR   | 03.10.2024 | NBR   | 03.10.2024 |  |
| P01       | FIRST ISSUE |       |            |       |            |  |
| SR        | 19.09.2024  | NBR   | 19.09.2024 | NBR   | 19.09.2024 |  |
| REV       | REVNOTES    |       |            |       |            |  |
| DRAWNBY   | DATE-D      | CHKBY | DATE-C     | APPLY | DATE-A     |  |

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University of Manchester: The Relocation of The Limes, Fallowfield

TITLE  
SWEEP PATH ANALYSIS: LARGE CAR

HYDROCK PROJECT NO.  
33445

SCALE @ A3  
1:250

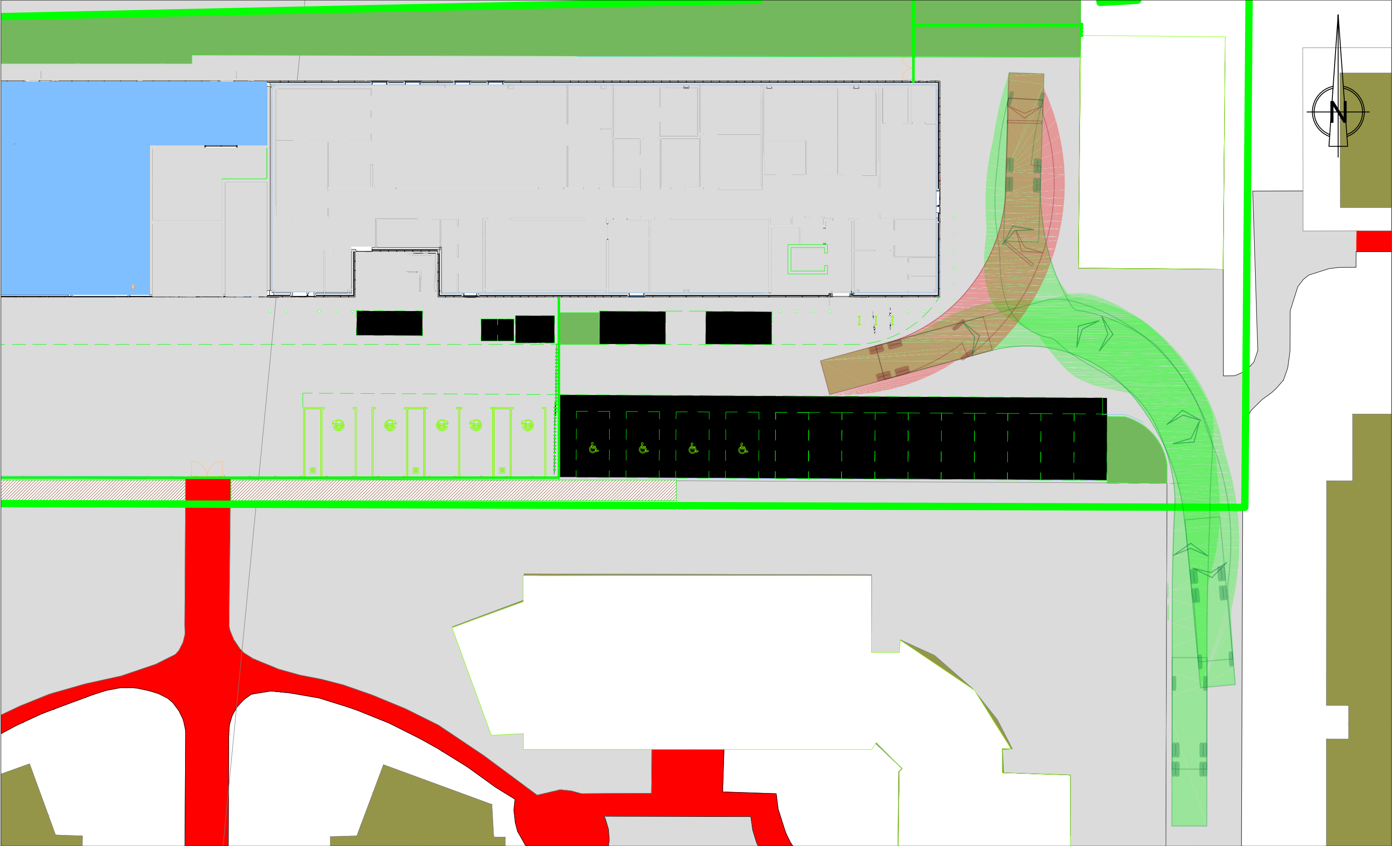
STATUS DESCRIPTION  
SUITABLE FOR APPROVAL

STATUS  
S4

DRAWING NO.  
33445-HYD-XX-XX-DR-TP-3001

REVISION  
P02

## Appendix D Swept Path Analysis - Servicing Vehicles



KEY PLAN

VEHICLE BODY IN FORWARD GEAR

VEHICLE BODY IN REVERSE GEAR

VEHICLE CHASSIS IN FORWARD GEAR

VEHICLE CHASSIS IN REVERSE GEAR

NOTES

Sefton Refuse  
Overall Length 12.200m  
Overall Width 2.530m  
Overall Body Height 3.814m  
Min Body Ground Clearance 0.366m  
Track Width 2.500m  
Lock to lock time 4.00s  
Kerb to Kerb Turning Radius 9.800m

REVISIONS (CONTINUED)

| REV | DATE-D | CHKBY      | DATE-C | APPLY      | DATE-A |            |
|-----|--------|------------|--------|------------|--------|------------|
| P02 | SR     | 03.10.2024 | NBR    | 03.10.2024 | NBR    | 03.10.2024 |
| P01 | SR     | 19.09.2024 | NBR    | 19.09.2024 | NBR    | 19.09.2024 |

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PROJECT

STATUS DESCRIPTION

DRAWING NO.

TITLE

SWEPT PATH ANALYSIS: 12.2M SEFTON REFUSE VEHICLE

HYDROCK PROJECT NO. 33445-TMBI

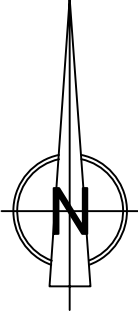
SCALE @ A3 1:250

STATUS S4

REVISION P02



Insert 1 - Vehicle Ingress



Insert 2 - Vehicle Egress

KEY PLAN

- VEHICLE BODY IN FORWARD GEAR
- VEHICLE BODY IN REVERSE GEAR
- VEHICLE CHASSIS IN FORWARD GEAR
- VEHICLE CHASSIS IN REVERSE GEAR

NOTES

Large Refuse Vehicle (3 axle)  
Overall Length 9.86m  
Overall Width 2.45m  
Overall Body Height 3.81m  
Min Body Ground Clearance 0.36m  
Track Width 2.45m  
Lock to lock time 4.00s  
Kerb to Kerb Turning Radius 9.50m

REVISIONS (CONTINUED)

| REVISIONS |             |            |       |            |       |            |
|-----------|-------------|------------|-------|------------|-------|------------|
| P02       | FIRST ISSUE |            |       |            |       |            |
|           | SR          | 03.10.2024 | NBR   | 03.10.2024 | NBR   | 03.10.2024 |
| P01       | FIRST ISSUE |            |       |            |       |            |
|           | SR          | 19.09.2024 | NBR   | 19.09.2024 | NBR   | 19.09.2024 |
| REV       | REVNOTES    |            |       |            |       |            |
|           | DRAWNBY     | DATE-D     | CHKBY | DATE-C     | APPLY | DATE-A     |

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CLIENT

PROJECT

TITLE

SWEPT PATH ANALYSIS: 9.8M COMPACTOR VEHICLE

HYDROCK PROJECT NO.

33445-TMBI

SCALE @ A3

1:250

STATUS DESCRIPTION

SUITABLE FOR APPROVAL

DRAWING NO.

33445-HYD-XX-XX-DR-TP-3003

STATUS

S4

REVISION

P02

## Appendix E Swept Path Analysis - Fire Tender



KEY PLAN

VEHICLE BODY IN FORWARD GEAR

VEHICLE BODY IN REVERSE GEAR

VEHICLE CHASSIS IN FORWARD GEAR

VEHICLE CHASSIS IN REVERSE GEAR

NOTES

7.9

2.5

3.3

0.14

2.5

4.0

7.75

Pumping Appliance

Overall Length

Overall Width

Overall Body Height

Min Body Ground Clearance

Track Width

Lock to lock time

Kerb to Kerb Turning Radius

7.900m

2.500m

3.300m

0.140m

2.500m

4.00s

7.750m

REVISIONS (CONTINUED)

|     |         |        |       |        |       |        |
|-----|---------|--------|-------|--------|-------|--------|
| REV | DRAWNBY | DATE-D | CHKBY | DATE-C | APPLY | DATE-A |
|-----|---------|--------|-------|--------|-------|--------|

REVISIONS

|     |             |    |            |     |            |     |            |
|-----|-------------|----|------------|-----|------------|-----|------------|
| P02 | FIRST ISSUE | SR | 03.10.2024 | NBR | 03.10.2024 | NBR | 03.10.2024 |
| P01 | FIRST ISSUE | SR | 19.09.2024 | NBR | 19.09.2024 | NBR | 19.09.2024 |

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CLIENT

UNIVERSITY OF MANCHESTER

PROJECT

University of Manchester: The Relocation of The Limes, Fallowfield

TITLE

SWEPT PATH ANALYSIS: FIRE TENDER (7.9M)

HYDROCK PROJECT NO.

33445-TMBI

SCALE @ A3

1:250

STATUS DESCRIPTION

SUITABLE FOR APPROVAL

DRAWING NO.

33445-HYD-XX-XX-DR-TP-3004

STATUS

S4

REVISION

P02

## Appendix F TRICS Output

Calculation Reference: AUDIT-540501-240917-0900

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT  
Category : F - WAREHOUSING (COMMERCIAL)  
TOTAL VEHICLES

Selected regions and areas:

|    |                                |        |
|----|--------------------------------|--------|
| 02 | SOUTH EAST                     |        |
|    | BO BEDFORD                     | 1 days |
|    | HC HAMPSHIRE                   | 1 days |
| 07 | YORKSHIRE & NORTH LINCOLNSHIRE |        |
|    | NY NORTH YORKSHIRE             | 1 days |

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

Primary Filtering selection:

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

Parameter:                      Gross floor area

Actual Range:                      1750 to 3665 (units: sqm)

Range Selected by User:                      700 to 4000 (units: sqm)

Parking Spaces Range:                      All Surveys Included

Public Transport Provision:

Selection by:                                              Include all surveys

Date Range:                      01/01/16 to 19/06/23

This data displays the range of survey dates selected. Only surveys that were conducted within this date range are included in the trip rate calculation.

Selected survey days:

Monday                                              2 days

Thursday                                              1 days

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

Selected survey types:

Manual count                                              3 days

Directional ATC Count                                              0 days

This data displays the number of manual classified surveys and the number of unclassified ATC surveys, the total adding up to the overall number of surveys in the selected set. Manual surveys are undertaken using staff, whilst ATC surveys are undertaking using machines.

Selected Locations:

Edge of Town                                              3

This data displays the number of surveys per main location category within the selected set. The main location categories consist of Free Standing, Edge of Town, Suburban Area, Neighbourhood Centre, Edge of Town Centre, Town Centre and Not Known.

Selected Location Sub Categories:

Industrial Zone                                              3

This data displays the number of surveys per location sub-category within the selected set. The location sub-categories consist of Commercial Zone, Industrial Zone, Development Zone, Residential Zone, Retail Zone, Built-Up Zone, Village, Out of Town, High Street and No Sub Category.

Inclusion of Servicing Vehicles Counts:

Servicing vehicles Included                                              1 days - Selected

Servicing vehicles Excluded                                              2 days - Selected

Secondary Filtering selection:

Use Class:

B8                                              3 days

This data displays the number of surveys per Use Class classification within the selected set. The Use Classes Order (England) 2020 has been used for this purpose, which can be found within the Library module of TRICS®.

Filter by Site Operations Breakdown:

All Surveys Included

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

Population within 1 mile:

|                  |        |
|------------------|--------|
| 5,001 to 10,000  | 2 days |
| 10,001 to 15,000 | 1 days |

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

Population within 5 miles:

|                    |        |
|--------------------|--------|
| 75,001 to 100,000  | 1 days |
| 125,001 to 250,000 | 2 days |

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

Car ownership within 5 miles:

|            |        |
|------------|--------|
| 1.1 to 1.5 | 3 days |
|------------|--------|

This data displays the number of selected surveys within stated ranges of average cars owned per residential dwelling, within a radius of 5-miles of selected survey sites.

Travel Plan:

|    |        |
|----|--------|
| No | 3 days |
|----|--------|

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

PTAL Rating:

|                 |        |
|-----------------|--------|
| No PTAL Present | 3 days |
|-----------------|--------|

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

|                       |     |                                                                                                    |
|-----------------------|-----|----------------------------------------------------------------------------------------------------|
| Covid-19 Restrictions | Yes | At least one survey within the selected data set was undertaken at a time of Covid-19 restrictions |
|-----------------------|-----|----------------------------------------------------------------------------------------------------|

LIST OF SITES relevant to selection parameters

|   |                                                    |                   |                     |
|---|----------------------------------------------------|-------------------|---------------------|
| 1 | BO-02-F-01<br>CAMBRIDGE ROAD<br>BEDFORD            | DRINKS WHOLESALER | BEDFORD             |
|   | Edge of Town<br>Industrial Zone                    |                   |                     |
|   | Total Gross floor area:                            | 3500 sqm          |                     |
|   | Survey date: THURSDAY                              | 15/10/20          | Survey Type: MANUAL |
| 2 | HC-02-F-03<br>WARSASH ROAD<br>PARK GATE            | PPE DISTRIBUTION  | HAMPSHIRE           |
|   | Edge of Town<br>Industrial Zone                    |                   |                     |
|   | Total Gross floor area:                            | 3665 sqm          |                     |
|   | Survey date: MONDAY                                | 27/09/21          | Survey Type: MANUAL |
| 3 | NY-02-F-01<br>GRIMBALD CRAG CLOSE<br>KNARESBOROUGH | REMOVALS SERVICE  | NORTH YORKSHIRE     |
|   | Edge of Town<br>Industrial Zone                    |                   |                     |
|   | Total Gross floor area:                            | 1750 sqm          |                     |
|   | Survey date: MONDAY                                | 19/06/23          | Survey Type: MANUAL |

This section provides a list of all survey sites and days in the selected set. For each individual survey site, it displays a unique site reference code and site address, the selected trip rate calculation parameter and its value, the day of the week and date of each survey, and whether the survey was a manual classified count or an ATC count.

Hydrock Consultants Ltd Tolvaddon Energy Park Camborne

Licence No: 540501

TRIP RATE for Land Use 02 - EMPLOYMENT/F - WAREHOUSING (COMMERCIAL)

TOTAL VEHICLES

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

| Time Range    | ARRIVALS |          |           | DEPARTURES |          |           | TOTALS   |          |           |
|---------------|----------|----------|-----------|------------|----------|-----------|----------|----------|-----------|
|               | No. Days | Ave. GFA | Trip Rate | No. Days   | Ave. GFA | Trip Rate | No. Days | Ave. GFA | Trip Rate |
| 00:00 - 00:30 |          |          |           |            |          |           |          |          |           |
| 00:30 - 01:00 |          |          |           |            |          |           |          |          |           |
| 01:00 - 01:30 |          |          |           |            |          |           |          |          |           |
| 01:30 - 02:00 |          |          |           |            |          |           |          |          |           |
| 02:00 - 02:30 |          |          |           |            |          |           |          |          |           |
| 02:30 - 03:00 |          |          |           |            |          |           |          |          |           |
| 03:00 - 03:30 |          |          |           |            |          |           |          |          |           |
| 03:30 - 04:00 |          |          |           |            |          |           |          |          |           |
| 04:00 - 04:30 |          |          |           |            |          |           |          |          |           |
| 04:30 - 05:00 |          |          |           |            |          |           |          |          |           |
| 05:00 - 05:30 | 1        | 3500     | 0.057     | 1          | 3500     | 0.000     | 1        | 3500     | 0.057     |
| 05:30 - 06:00 | 1        | 3500     | 0.171     | 1          | 3500     | 0.029     | 1        | 3500     | 0.200     |
| 06:00 - 06:30 | 1        | 3500     | 0.086     | 1          | 3500     | 0.086     | 1        | 3500     | 0.172     |
| 06:30 - 07:00 | 1        | 3500     | 0.114     | 1          | 3500     | 0.029     | 1        | 3500     | 0.143     |
| 07:00 - 07:30 | 3        | 2972     | 0.112     | 3          | 2972     | 0.101     | 3        | 2972     | 0.213     |
| 07:30 - 08:00 | 3        | 2972     | 0.045     | 3          | 2972     | 0.034     | 3        | 2972     | 0.079     |
| 08:00 - 08:30 | 3        | 2972     | 0.034     | 3          | 2972     | 0.045     | 3        | 2972     | 0.079     |
| 08:30 - 09:00 | 3        | 2972     | 0.034     | 3          | 2972     | 0.022     | 3        | 2972     | 0.056     |
| 09:00 - 09:30 | 3        | 2972     | 0.000     | 3          | 2972     | 0.000     | 3        | 2972     | 0.000     |
| 09:30 - 10:00 | 3        | 2972     | 0.045     | 3          | 2972     | 0.011     | 3        | 2972     | 0.056     |
| 10:00 - 10:30 | 3        | 2972     | 0.045     | 3          | 2972     | 0.056     | 3        | 2972     | 0.101     |
| 10:30 - 11:00 | 3        | 2972     | 0.157     | 3          | 2972     | 0.056     | 3        | 2972     | 0.213     |
| 11:00 - 11:30 | 3        | 2972     | 0.034     | 3          | 2972     | 0.090     | 3        | 2972     | 0.124     |
| 11:30 - 12:00 | 3        | 2972     | 0.056     | 3          | 2972     | 0.045     | 3        | 2972     | 0.101     |
| 12:00 - 12:30 | 3        | 2972     | 0.045     | 3          | 2972     | 0.056     | 3        | 2972     | 0.101     |
| 12:30 - 13:00 | 3        | 2972     | 0.067     | 3          | 2972     | 0.045     | 3        | 2972     | 0.112     |
| 13:00 - 13:30 | 3        | 2972     | 0.101     | 3          | 2972     | 0.034     | 3        | 2972     | 0.135     |
| 13:30 - 14:00 | 3        | 2972     | 0.101     | 3          | 2972     | 0.045     | 3        | 2972     | 0.146     |
| 14:00 - 14:30 | 3        | 2972     | 0.090     | 3          | 2972     | 0.135     | 3        | 2972     | 0.225     |
| 14:30 - 15:00 | 3        | 2972     | 0.045     | 3          | 2972     | 0.101     | 3        | 2972     | 0.146     |
| 15:00 - 15:30 | 3        | 2972     | 0.056     | 3          | 2972     | 0.280     | 3        | 2972     | 0.336     |
| 15:30 - 16:00 | 3        | 2972     | 0.034     | 3          | 2972     | 0.090     | 3        | 2972     | 0.124     |
| 16:00 - 16:30 | 3        | 2972     | 0.056     | 3          | 2972     | 0.079     | 3        | 2972     | 0.135     |
| 16:30 - 17:00 | 3        | 2972     | 0.022     | 3          | 2972     | 0.045     | 3        | 2972     | 0.067     |
| 17:00 - 17:30 | 3        | 2972     | 0.022     | 3          | 2972     | 0.123     | 3        | 2972     | 0.145     |
| 17:30 - 18:00 | 3        | 2972     | 0.011     | 3          | 2972     | 0.000     | 3        | 2972     | 0.011     |
| 18:00 - 18:30 | 3        | 2972     | 0.011     | 3          | 2972     | 0.011     | 3        | 2972     | 0.022     |
| 18:30 - 19:00 | 3        | 2972     | 0.011     | 3          | 2972     | 0.011     | 3        | 2972     | 0.022     |
| 19:00 - 19:30 | 1        | 3500     | 0.000     | 1          | 3500     | 0.029     | 1        | 3500     | 0.029     |
| 19:30 - 20:00 | 1        | 3500     | 0.000     | 1          | 3500     | 0.000     | 1        | 3500     | 0.000     |
| 20:00 - 20:30 | 1        | 3500     | 0.000     | 1          | 3500     | 0.000     | 1        | 3500     | 0.000     |
| 20:30 - 21:00 | 1        | 3500     | 0.000     | 1          | 3500     | 0.000     | 1        | 3500     | 0.000     |
| 21:00 - 21:30 |          |          |           |            |          |           |          |          |           |
| 21:30 - 22:00 |          |          |           |            |          |           |          |          |           |
| 22:00 - 22:30 |          |          |           |            |          |           |          |          |           |
| 22:30 - 23:00 |          |          |           |            |          |           |          |          |           |
| 23:00 - 23:30 |          |          |           |            |          |           |          |          |           |
| 23:30 - 24:00 |          |          |           |            |          |           |          |          |           |
| Total Rates:  |          |          | 1.662     |            |          | 1.688     |          |          | 3.350     |

This section displays the trip rate results based on the selected set of surveys and the selected count type (shown just above the table). It is split by three main columns, representing arrivals trips, departures trips, and total trips (arrivals plus departures). Within each of these main columns are three sub-columns. These display the number of survey days where count data is included (per time period), the average value of the selected trip rate calculation parameter (per time period), and the trip rate result (per time period). Total trip rates (the sum of the column) are also displayed at the foot of the table.

To obtain a trip rate, the average (mean) trip rate parameter value (TRP) is first calculated for all selected survey days that have count data available for the stated time period. The average (mean) number of arrivals, departures or totals (whichever applies) is also calculated (COUNT) for all selected survey days that have count data available for the stated time period. Then, the average count is divided by the average trip rate parameter value, and multiplied by the stated calculation factor (shown just above the table and abbreviated here as FACT). So, the method is: COUNT/TRP\* FACT. Trip rates are then rounded to 3 decimal places.

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Parameter summary

|                                               |                          |
|-----------------------------------------------|--------------------------|
| Trip rate parameter range selected:           | 1750 - 3665 (units: sqm) |
| Survey date date range:                       | 01/01/16 - 19/06/23      |
| Number of weekdays (Monday-Friday):           | 3                        |
| Number of Saturdays:                          | 0                        |
| Number of Sundays:                            | 0                        |
| Surveys automatically removed from selection: | 0                        |
| Surveys manually removed from selection:      | 0                        |

This section displays a quick summary of some of the data filtering selections made by the TRICS® user. The trip rate calculation parameter range of all selected surveys is displayed first, followed by the range of minimum and maximum survey dates selected by the user. Then, the total number of selected weekdays and weekend days in the selected set of surveys are show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.