

Base Building, Manchester Science Park

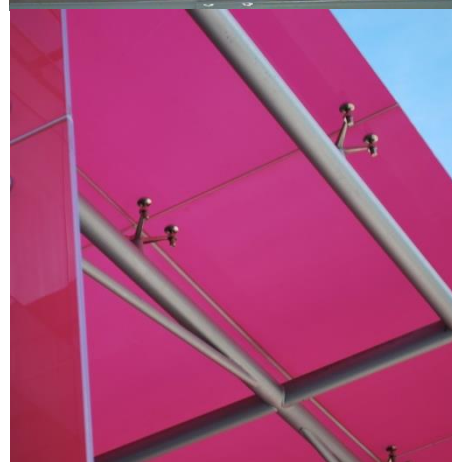
Transport Statement

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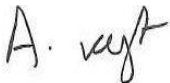
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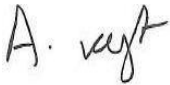
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Table of Contents

1.0	Introduction.....	3
1.1	Project Introduction	3
1.2	Purpose of the Report	3
1.3	Scope of the Report	3
1.4	Structure of the Report.....	4
2.0	Existing Situation	5
2.1	Site Location.....	5
2.2	Existing Use	6
2.3	Existing Access	7
2.4	Surrounding Highway Network.....	7
2.5	Highway Safety	11
3.0	Development Proposals	13
3.1	Overview of Proposals	13
3.2	Proposed Access	13
3.3	Parking	13
3.4	Servicing and Delivery	17
4.0	Accessibility by Sustainable Modes of Travel	18
4.1	Introduction.....	18
4.2	Pedestrian Accessibility	18
4.3	Cycle Accessibility.....	19
4.4	Public Transport Accessibility	22
4.5	Summary	25
5.0	Forecasted Trip Generation	26
5.1	Introduction.....	26
5.2	Existing Trip Generation.....	26
5.3	Forecasted Trip Generation	26
5.4	Net Vehicular Site Impact.....	27
6.0	Transport Planning Policy.....	30
6.1	Introduction.....	30
6.2	National Planning Policy Framework (2019)	30
6.3	National Planning Policy Guidance (NPPG)	31
6.4	Manchester Core Strategy (2012 – 2027).....	31
6.5	Greater Manchester Spatial Framework (GMSF) 2019 (Draft)	32
6.6	Greater Manchester Transport Strategy 2040	32
6.7	Conclusions.....	33
7.0	Summary and Conclusions	34
7.1	Summary	34
7.2	Conclusions.....	35

Figures

Figure 2.1 – Site Location in relation to the regional highway network	5
Figure 2.2 – Site Location in relation to the local highway network.....	6
Figure 2.3 – Extents of Search Area.....	11
Figure 3.1 – Existing Parking Arrangement Along Denmark Road	15
Figure 3.2 – Section 278 Along Denmark Road	15
Figure 3.3 – Section 278 Along Pencroft Way.....	16
Figure 4.1 – Local Cycle Network.....	20
Figure 4.2 – Beelines in the vicinity of the Site	21

Tables

Table 2.1 – Personal Injury Accident Data Summary	11
Table 4.1 – CIHT Recommended Walking Distances.....	18
Table 4.2 – Summary of Bus Service Frequencies from Charles Street and Oxford Road.....	23
Table 4.3 – Summary of Rail Services from Manchester Oxford Road	24
Table 5.1 – Existing Multi-Modal Trip Rates and Split	26
Table 5.2 – Existing Trip Generation.....	26
Table 5.3 – Proposed Development Trip Generation	27
Table 5.4 – Net Vehicular Site Impact.....	28

Plans

Plan 72257-CUR-00-XX-DR-TP-06001-P01 – (Location Plan) Regional Level
Plan 72257-CUR-00-XX-DR-TP-06002-P01 – (Location Plan) Local Level
Plan 72257-CUR-00-XX-DR-TP-06003-P01 – (Accessibility) Indicative Walking Catchment
Plan 72257-CUR-00-XX-DR-TP-06004-P01 – (Accessibility) Indicative Cycle Catchment
Plan 72257-CUR-00-XX-DR-TP-06005-P01 – (Accessibility) Indicative Public Transport Catchment

Drawings

Plan 72257-CUR-00-XX-DR-TP-05002-P03 – (Swept Path Analysis) Large Refuse Vehicle
Plan 72257-CUR-00-XX-DR-TP-05003-P03 – (Swept Path Analysis) 10m HGV
Plan 72257-CUR-00-XX-DR-TP-05004-P03 – (Swept Path Analysis) Large Car

Appendices

Appendix A – Proposed Ground Floor Layout
Appendix B – TRICS Outputs

1.0 Introduction

1.1 Project Introduction

- 1.1.1 Curtins has been appointed on behalf of Bruntwood Sci-Tech Ltd to provide traffic and transportation advice in relation to the development of the existing Base Building within Manchester Science Park (MSP).
- 1.1.2 The proposed development includes the “erection of a five storey building comprising offices (Use Class B1) and ancillary workshop and maker space, together with associated disabled car and cycle parking, landscaping, provision of plant and servicing and related access and highway’s works, and other associated works”.
- 1.1.3 A separate application for Prior Approval of the Proposed Demolition of the existing Base building (MCC reference no: **124417/DEM/2019**) was submitted and approved in August 2019 in advance of the full planning application for the Site.
- 1.1.4 The proposed ground floor layout plan is included in **Appendix A**.

1.2 Purpose of the Report

- 1.2.1 This Transport Statement (TS) has been prepared to inform Highway Officers at Manchester City Council (MCC) with regard to the development proposals and their potential impact on the surrounding area from a traffic and transportation perspective.

1.3 Scope of the Report

Scoping Discussions

- 1.3.1 Based on scoping discussions with MCC Highways and previous experience in this area, the TS contains the following:
 - An audit of accessibility by all modes of travel including walking, cycling, and public transport;
 - A review of highway safety within the vicinity of the Site for the most recent five years;
 - Scale outline drawings of the proposed access strategy for all vehicles;
 - Relevant vehicle tracking drawings to demonstrate the proposed vehicular access and servicing arrangements;
 - Details of proposed car parking arrangements and justification for the provision;
 - Details of future vehicular trips and commentary on any highway impacts; and
 - A review of the relevant local and national transport planning policy.

1.4 Structure of the Report

- 1.4.1 Following on from this introduction, **Section 2** of this report considers the Site location and existing situation, focusing on car parking baseline conditions. **Section 2** also considers the Site location and surrounding highway network, and contains a review of the Personal Injury Accident records within the vicinity of the Site.
- 1.4.2 **Section 3** gives an overview of the development proposals including details on proposed access, car parking, and a servicing and refuse strategy.
- 1.4.3 **Section 4** considers the Site's accessibility by sustainable modes of transport, including walking, cycling and public transport.
- 1.4.4 **Section 5** considers the traffic generation of the proposals.
- 1.4.5 **Section 6** summarises key national and local transport planning policy, and **Section 7** provides a report summary and conclusion.

2.0 Existing Situation

2.1 Site Location

2.1.1 The Site covers an area of approximately 0.5ha. in total and is accessed off and bounded by Greenheys Lane to the west of the Site. In the wider area, to the west and beyond Greenheys Lane, there are existing residential properties located within the Hulme Ward. Greenheys Business Centre occupies the land immediately to the north of the Site, and the Ahmadiyya Mosque is located to the south and separated from the Site by a large surface car park. Rutherford House, a four-storey office building is positioned directly to the east of the Site.

2.1.2 Manchester Science Park (MSP) is located within the defined Manchester City Centre Fringe area and is considered part of the Oxford Road Corridor, an innovation district south of Manchester City Centre, running the length of Oxford Road from St Peter's Square to Whitworth Park. The concentration of major education, health and commercial uses spanning the length of the Oxford Road Corridor means that it operates as a functional extension of Manchester City Centre.

2.1.3 **Figure 2.1** below illustrates the location of the Site in relation to the regional highway network.



Figure 2.1 – Site Location in relation to the regional highway network

2.1.4 **Figure 2.2** illustrates the Site in a more local context relating to the local highway network.

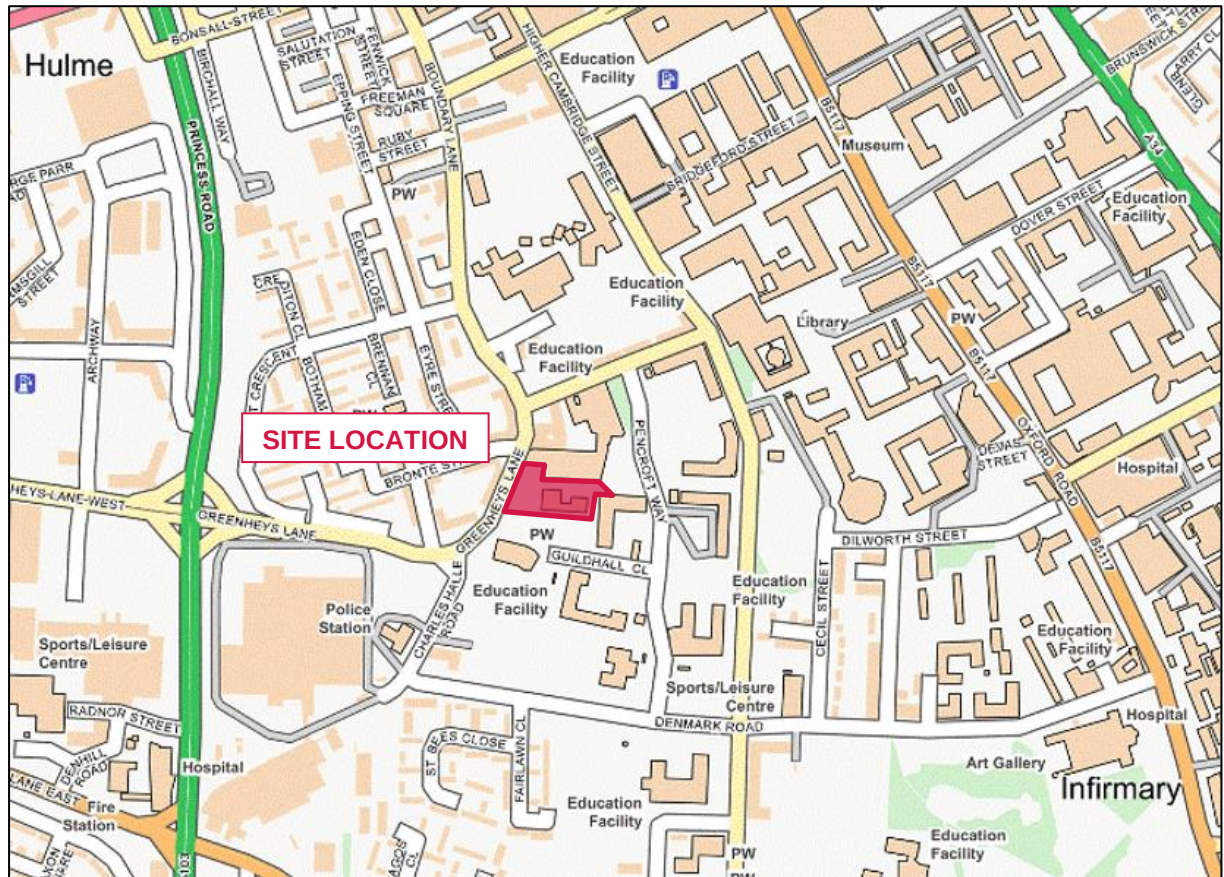


Figure 2.2 – Site Location in relation to the local highway network

2.1.5 **Plan 72257-CUR-00-XX-DR-TP-06001-P01** to the rear of the report illustrates the location of the Site in relation to the surrounding areas, whereas **Plan 72257-CUR-00-XX-DR-TP-06002-P01** shows the Site in a local context relating to the local highway network.

2.2 Existing Use

2.2.1 The Site is currently occupied by the Base building (formerly known as Hillel House), which was refurbished in 2015 to provide small flexible office spaces for a range of creative science and technology companies, which are predominantly small and medium-sized enterprises (SMEs). The existing building comprises a single storey building to the centre of the Site, connected by a link section to an irregularly shaped 3-storey building to the east of the Site.

2.2.2 The refurbished building has provided accommodation on a short-term basis but is nearing the end of its useful life and is not fit for purpose in terms of longer-term use and being attractive to occupiers seeking to locate at MSP.

2.2.3 As such, in accordance with the Manchester Core Strategy and MSP Strategic Regeneration Framework (SRF), an application for Prior Approval of Demolition has been submitted for the demolition

of the existing buildings in advance of the comprehensive redevelopment of the Site for a new commercial building.

- 2.2.4 The Base site also includes an area of existing surface car parking, with 53 parking spaces, and areas of informal green space and tree planting.

2.3 Existing Access

Vehicular Access

- 2.3.1 Vehicular access into the Site is currently provided along the western boundary of the Site off Greenheys Lane. This access serves the 53 on-site parking spaces. There is also a small delivery area to the west of the existing building, adjacent to the parking spaces.

Pedestrian and Cycle Access

- 2.3.2 Pedestrian and cycle access to the building can be taken from the vehicular access. Additionally, due to the permeability of the MSP campus, there are many footpaths of c. 2m in width in between the Greenheys Building and Rutherford House, where pedestrians and cyclists can also access the Site directly from Pencroft Way in the east.

2.4 Surrounding Highway Network

Greenheys Lane

- 2.4.1 Forming the western boundary of the Site, Greenheys Lane commences at a major signalised junction with the A5103 Princess Road west of the Site and extends in an easterly direction for approximately 500m. At its eastern terminus, it branches off into Boundary Lane towards the north and Burlington Street towards the north-east.
- 2.4.2 Princess Road is one of the key arterial routes into Manchester's city centre in addition to providing a connection to the M56 and M60, Greenheys Lane therefore provides an excellent link to the local and strategic highway network.
- 2.4.3 In the vicinity of the Site, the road is a single carriageway with one lane in either direction and is approximately 8.5m in width. There are wide footways of circa 2m on both sides of the road, which are complete with dropped kerbs and tactile paving. Pedestrian infrastructure is in good condition along the road, as the footways are well-maintained, and there is also a pedestrian refuge island further from the Site to facilitate crossing in a safe manner. Towards the south-west of the Site, there is also a guard rail fence to separate the footway from the road.
- 2.4.4 Greenheys Lane is well-lit with streetlights at regular intervals and is subject to a speed limit of 30mph. This is enforced by physical traffic calming measures such as the narrowing of the road at certain points.

On-site observations have indicated that traffic flows are relatively light, and queuing occurs infrequently.

- 2.4.5 Traffic Regulation Orders (TROs) in the form of double yellow parking restrictions are also present on both sides of the road for the entirety of its length, except in permitted areas such as along the shop fronts west of the Site and ahead of the bus stop where there is a disabled parking spot. Parking in this area is in the form of pay and display for up to 1 hour, no return within 1 hour, from Mondays to Fridays (08:00 – 18:00).
- 2.4.6 Along most of Greenheys Lane, there is also a cycle lane in both directions. There is also a bus lane further to the south-west of the Site where the road meets the A5103 Princess Road, in addition to advanced cycle stop lanes at the major junctions.
- 2.4.7 The road also has two pairs of bus stops which host regular bus services to Chorlton, Wythenshawe, Manchester Airport, and Piccadilly Gardens. Most of the bus stops have good infrastructure such as a pole, shelter, seating, and timetable information, whereas one only has a pole.

Pencroft Way

- 2.4.8 To the east of the Site, Pencroft Way extends on a north to south alignment through the MSP for an approximate length of 420m. The road commences at a priority junction off Burlington Street to the north-east of the Site and terminates at a priority junction with Denmark Road in the south. There are some parking restrictions in place in the form of single yellow lines, but there are also areas where on-street parking is observed.
- 2.4.9 The road is subject to a speed limit of 20mph, which is enforced in the form of physical traffic calming measures such as speed humps and painted road markings. In the vicinity of the MSP, the road is well-lit with street lighting at regular intervals.
- 2.4.10 Pencroft Way comprises a single carriageway with an average width of 7m. There are also footways on both sides of the carriageway, some of which are separated from the road with a wide grass verge, to provide pedestrian access to the individual MSP buildings. These footways also have dropped kerbs.
- 2.4.11 On-site observations suggest that Pencroft Way is lightly trafficked for large parts of the day and the only activity largely relates to the MSP employees/visitors and MSP servicing operations.

Denmark Road

- 2.4.12 Denmark Road runs further south of the Site on an east-west alignment. The road originates at an uncontrolled priority junction with Charles Halle Road south of the Site and for approximately 400m, up to a signalised junction with Lloyd Street North. Denmark Road terminates 500m to the east of this junction at an uncontrolled priority T-junction with Oxford Road. The road also provides access to Pencroft Way, which is one of the main entrances into MSP.

- 2.4.13 The road has an average width of 8.5m and consists of a single lane in each direction with wide footways up to 2.5m on both sides. The road is well-lit with streetlights provided at regular intervals, and good pedestrian infrastructure in the form of designated crossing points at busy junctions, dropped kerbs and tactile paving. There are also advanced cycle stop lanes at every arm of the junction with Lloyd Street North.
- 2.4.14 The road is subject to a speed limit of 20mph, which is enforced using traffic cameras and physical measures such as speed humps and painted road markings.
- 2.4.15 There are a number of different on-street parking restrictions on Denmark Road which include no limitations, 30-minute restrictions and 3-hour restrictions. These are clearly signed, however along other parts of the road, there are TROs in the form of single and double yellow parking restrictions, along with "School – Keep Clear" markings in the school zones.

Burlington Street

- 2.4.16 Burlington Street lies further north of the Site and commences at a priority junction with Higher Cambridge Street and Lloyd Street North to the east, then extends for a length of circa 200m to the west before reaching a bend in the road where it continues as Greenheys Lane. It also provides access to Pencroft Way east of the Site which is one of the main entrances into the Manchester Science Park (MSP).
- 2.4.17 The road comprises a two-way, single carriageway with a width of circa 7m with wide footways of 1.5m on both sides of the road. The footways are also complete with dropped kerbs and are well-maintained for the entire length of the road. Burlington Street is well-lit, with street lighting at regular intervals.
- 2.4.18 Burlington Street is bordered by a several MSP buildings, a residential block, and an upcoming apartment building that is currently undergoing construction. The road is subject to a speed limit of 20mph and has TROs in the form of double yellow parking restrictions on both sides of the road. In permitted areas, there are some on-street parking bays. Parking in this area is in the form of pay and display for up to 3 hours, no return within 1 hour, from Mondays to Fridays (08:00 – 18:00).

Higher Cambridge Street / Lloyd Street North corridor

- 2.4.19 Further east of the Site, the Higher Cambridge Street / Lloyd Street North corridor is an important local distributor route that connects to the Mancunian Way in the north and surrounding residential areas up until Moss Side. It extends on a north/south alignment, of which Higher Cambridge Street commences off the Cambridge Street four-arm roundabout in the north, extending for circa 750m towards the south, and continues as Lloyd Street North at the priority junction with Burlington Street. Lloyd Street North then continues further south for circa 720m and terminates at a signalised junction with Upper Lloyd Street and the B5219 Moss Lane East.

- 2.4.20 The roads consist of a single carriageway with an approximate width of 6.5m and footways of up to 3m wide on both sides of the road. The roads are subject to a speed limit of 20mph near the school zone and have TROs in the form of single and double yellow parking restrictions on both sides of the road, along with “School – Keep Clear” markings in the school zone.
- 2.4.21 The pedestrian infrastructure on both roads are in good condition, with dropped kerbs, tactile paving, and signalised pedestrian/cyclist crossings in the vicinity of the university campus, allowing for easy access for future students. There are also cycle lanes along some parts of the road, along with a bus lane which is restricted to buses, cyclists, and taxis from Mondays to Saturdays between 07:00 and 19:00.
- 2.4.22 There are also bus stops comprising good infrastructure such as shelter, pole, seating, and timetable information. These buses provide services to Piccadilly Gardens, Albert Square, Wythenshawe, Stockport, Newall Green, and Manchester Airport.

B5117 Oxford Road (“Oxford Road Corridor”)

- 2.4.23 Further east of the Site, Oxford Road serves as one of the busiest bus corridors in Europe, extending for approximately 2km in a north to south alignment. The road commences as a continuation of the A34 Oxford Street at a priority junction with New Wakefield Street, and links Manchester City Centre to the university campuses, Manchester Royal Infirmary, Whitworth Park and Rusholme, before terminating at a signalised junction with Moss Lane East and continuing as the B5117 Wilmslow Road.
- 2.4.24 The road comprises a two-way, single carriageway of approximately 14m in width, with two lanes in each direction, one of which is dedicated solely to buses along certain lengths. General traffic is prohibited from travelling through the bus gates between 6am and 9pm from Monday to Sunday, restricting access to sections of the corridor between Hathersage Road and Portland Street. Traffic cameras are used to enforce this restriction.
- 2.4.25 There are also ‘Dutch-style’ segregated cycle lanes along certain lengths of the road, some of which run behind each bus stop. Each bus stop also has a cycle bypass lane with a zebra crossing for pedestrians to walk in between the bus stops and the pavement.
- 2.4.26 Pedestrian infrastructure exists in the form of wide pavements which are in excellent condition and have an average width of 2.5m, complete with dropped kerbs and tactile paving. There is adequate street lighting in regular intervals, along with many signalised toucan crossing points along the entirety of the road to allow pedestrians to cross the road in a safe manner. There is also a pedestrian refuge island present along the road.
- 2.4.27 Oxford Road is subject to a speed limit of 20mph throughout, which is enforced using traffic cameras. TROs are present in the form of double yellow parking line restrictions along the entirety of the road.

2.5 Highway Safety

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Junction/Link	Slight	Serious	Fatal	Totals
Greenheys Lane	2	0	0	2
Greenheys Lane / Burlington Street	1	0	0	1
Charles Halle Road	1	0	0	1
Pencroft Way	0	0	0	0
Denmark Road	1	0	0	1
Totals	5	0	0	5

Page 11

- 2.5.2 There have been a total of 5 accidents in the latest three-year period available, comprising 5 'slight' severity incidents. No serious or fatal accidents have been recorded in the study area and period.
- 2.5.3 Following a review of the records in the vicinity of the Site, it is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development.

3.0 Development Proposals

3.1 Overview of Proposals

- 3.1.1 The proposed development includes the “erection of a five storey building comprising offices (Use Class B1) and ancillary workshop and maker space, together with associated disabled car and cycle parking, landscaping, provision of plant and servicing and related access and highway’s works, and other associated works”.
- 3.1.2 The proposed ground floor layout plan is included in **Appendix A**.

3.2 Proposed Access

- 3.2.1 The existing vehicular access into the Site (unadopted) would be redeveloped into public realm with pedestrian and cycle access to the building and the wider MSP.
- 3.2.2 It is envisaged that a new vehicular access would be created at approximately 30m south of the existing access. This access would allow vehicles to utilise the proposed disabled parking bays to the west of the building and would also serve as a turning head for refuse vehicles’ ingress and egress.
- 3.2.3 Visibility splays of 2.4 x 25m (for a 30mph speed limit per Manual for Streets) can be achieved in both directions. The existing 2m wide footway on both sides of the access would also be maintained.

3.3 Parking

Car Parking

- 3.3.1 Upon completion, the development would provide 3 disabled parking spaces to the west of the building. **Drawing 72257-CUR-00-XX-DR-TP-05004-P03** shows a large car manoeuvring all 3 parking bays, where vehicles can access and egress the site in forward gear. The parking spaces have a dimension of 6m x 3.6m, which is compliant with the standards outlined in the Department for Transport (DfT)’s guidance, titled “Inclusive Mobility”.
- 3.3.2 The number of disabled parking spaces provided has also been calculated as 5% of the previous provision of 53 spaces (rounded up from 2.65 bays). This is in accordance with guidance from both Inclusive Mobility standards and the citywide disabled parking standards set out in Appendix B of the Manchester Core Strategy (2012 – 2027).
- 3.3.3 Any additional car parking requirements for the building would be redirected to the temporary surface car park at Denmark Road (formerly Ripon Street) (comprising 159 spaces) or elsewhere on the MSP site. The car park holds temporary consent which expires on 1st September 2019 (MCC reference no: **106024/FO/2014/S1**).

- 3.3.4 Notwithstanding, as of 9th September 2019, Bruntwood Sci-Tech Ltd have submitted a Transport Statement (TS) as part of a planning application to enable the continuation of use of the car park for a period of five years. The proposed car park would comprise 157 car parking spaces including 10 disabled parking spaces. The TS also confirms that this car park would make an allocation of spaces required by the Base building development.
- 3.3.5 MSP have confirmed that there are currently approximately 812 parking spaces available distributed across the wider MSP campus. With the removal of 53 spaces from Base, there are 759 spaces remaining. Of these 759 spaces, it can be confirmed that 136 are currently vacant. Additionally, one of the MSP tenants (Qiagen) are scheduled to relocate in 2021, freeing up a further 149 spaces.
- 3.3.6 Additionally, based on a number of on-site observations and counts over a six-month period, Curtins can confirm that the car park is currently operating well under capacity. As such, the car park would be able to accommodate the relocation of the 53 spaces from the existing Base building car park along with any new trips generated by the development should this be necessary.
- 3.3.7 In the long-term, as part of the MSP SRF, a new 1,000 space MSCP may be delivered to improve the efficiency of the infrastructure within the MSP by relocating all the existing surface car parks into one single building. The car park will be located on Charles Halle Way, and it has been assessed to confirm that it can accommodate both the reassignment of existing traffic and the increase in trips due to increase in overall floor area of the MSP. At the time of writing, the MSP Masterplan is scheduled to be endorsed by MCC Executive on the 11th September 2019.
- 3.3.8 Additionally, the majority of parking in MSP is mostly controlled by Bruntwood via permits / leases, as such there would not be public parking unless in permitted areas.
- 3.3.9 Notwithstanding, the overall strategy for MSP is to reduce the level of car parking through a combination of initiatives to encourage more employees to travel by sustainable modes. These initiatives are outlined in the accompanying Travel Plan (**Document Reference 72257-CUR-00-XX-RP-TP-002-V02_ITP**).
- 3.3.10 It is understood from scoping discussions that MCC Highways have some concerns about possible parking on nearby residential streets, especially on Denmark Road. However, based on Curtins' prior involvement in the MSP Masterplan, it was found that there are a variety of restrictions in place which limit parking, as illustrated in **Figure 3.1** overleaf:

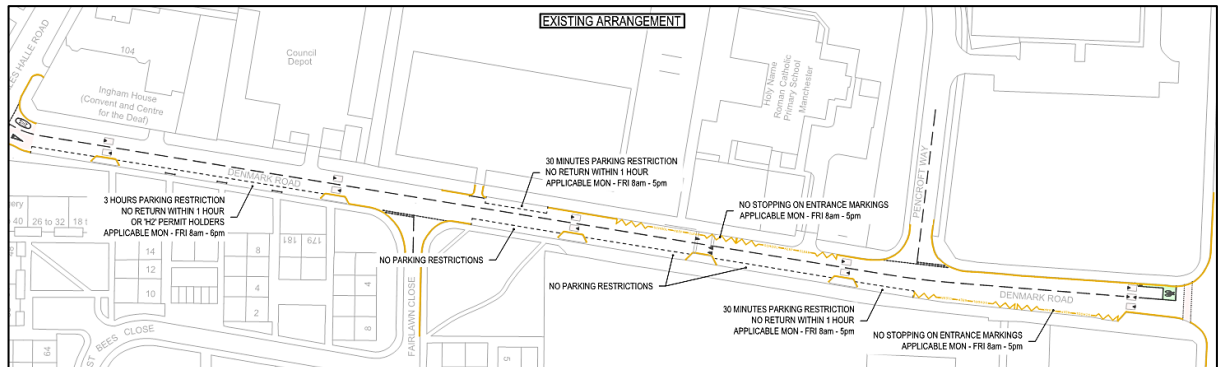


Figure 3.1 – Existing Parking Arrangement Along Denmark Road

3.3.11 However, there are also large areas along the road where on-street parking is allowed. On-site observations have indicated that the on-street parking is well-utilised, and the spaces fill up early in the morning prior to the school start time.

3.3.12 Discussions are being undertaken with Manchester City Council to a revised scheme of Traffic Regulation Orders to provide more short-term parking and alleviate some of the issues that occur with congestion. The proposals are summarised below in **Figures 3.2** and **3.3**:

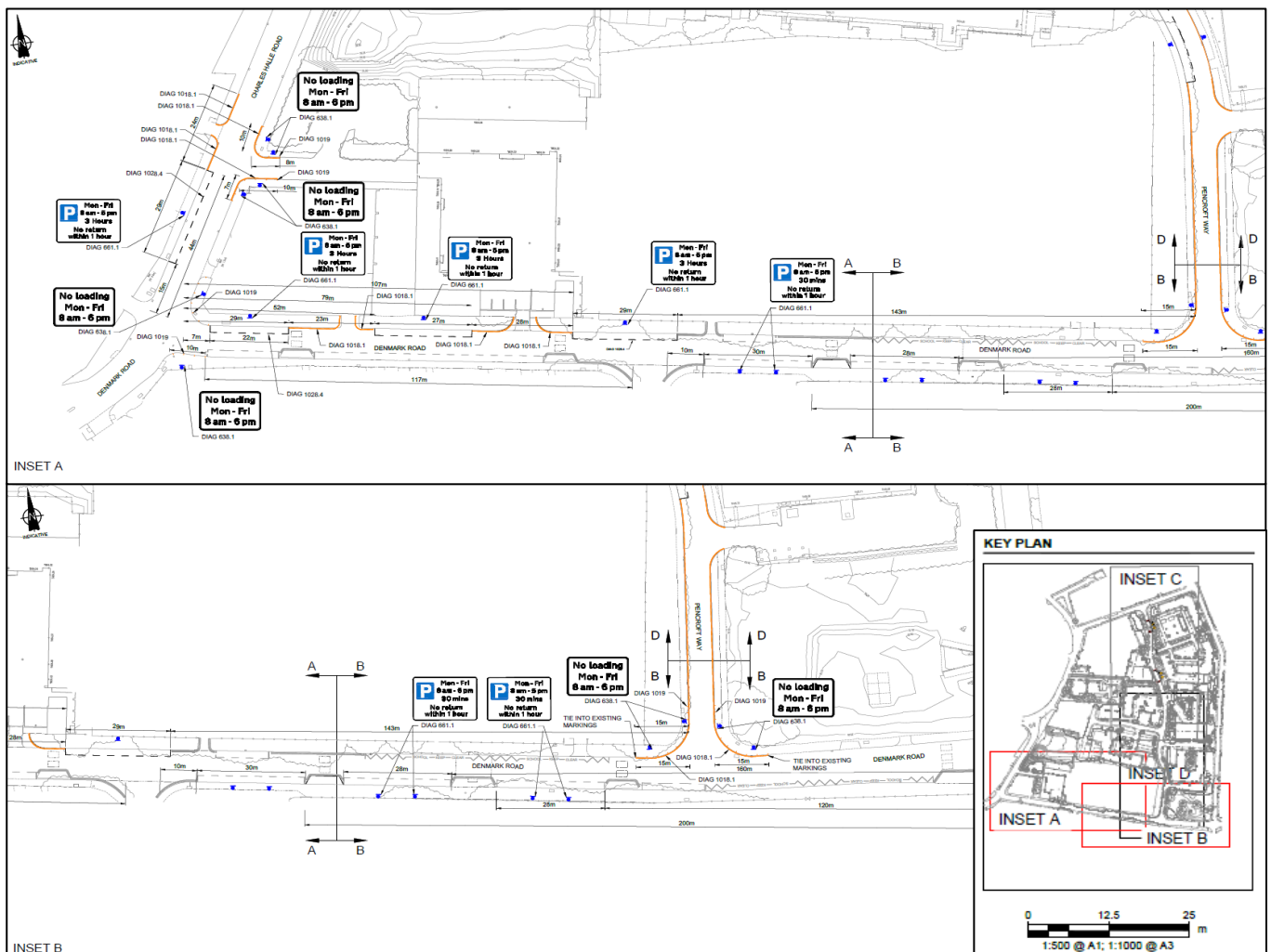


Figure 3.2 – Section 278 Along Denmark Road

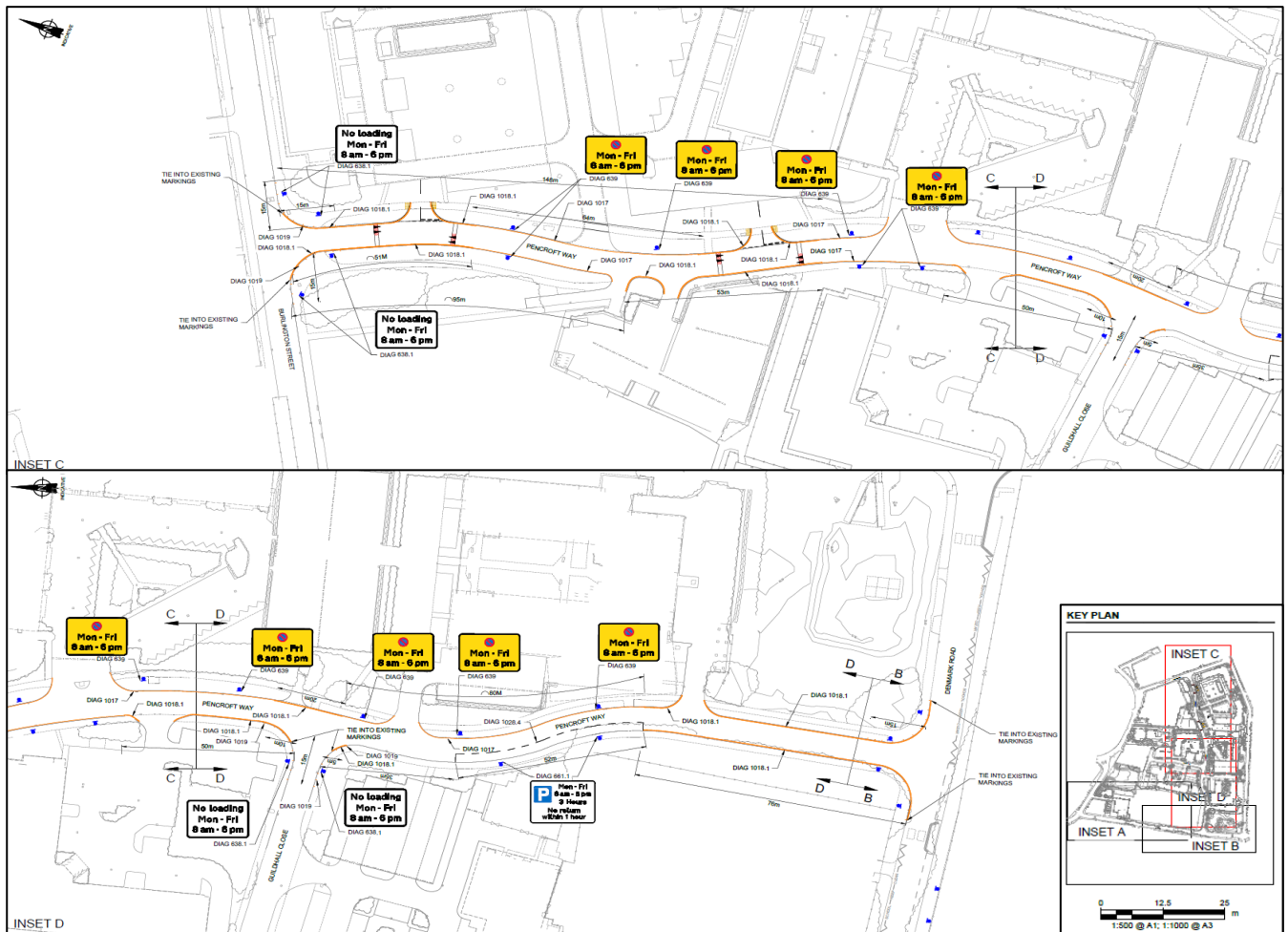


Figure 3.3 – Section 278 Along Pencroft Way

- 3.3.13 Manchester City Council consider parking provision in the city centre on a case-by-case basis, as the maximum standards for car parking do not apply to the city centre (as outlined in Appendix B of the Manchester Core Strategy (2012 – 2027)). Additionally, the dimensions of the disabled parking bays abide by standards of 4.8m x 2.4m as set out in Manual for the Streets (MfS). Therefore, the proposed parking provision is considered to be appropriate to the scale, location and nature of the development.

Cycle Parking

- 3.3.14 Secure cycle parking for 62 bicycles would be provided, in the form of 42 secure storage spaces inside the building and 10 Sheffield cycle hoops outside the building (equivalent to 20 spaces) respectively. This provision satisfies and exceeds MCC's requirements for 1 space per 200m² GFA for office uses (equating to 56 spaces for 11,107m² GFA). There will also be provision of shower facilities and lockers in the building.

3.4 Servicing and Delivery

- 3.4.1 Servicing and deliveries to Base Building would be undertaken from the new vehicular access to the west of the building.
- 3.4.2 **Drawings 72257-CUR-00-XX-DR-TP-05002-P03** and **72257-CUR-00-XX-DR-TP-05003-P03** show that large refuse vehicles and a 10m Heavy Goods Vehicle (HGV) can utilise this access to ingress / egress from the Site in forward gear.
- 3.4.3 For calculation purposes, it has been estimated that the proposed development would have a collection frequency of three times a week for the office uses.
- 3.4.4 It is considered that the frequency of these collections will be arranged after occupation, based on the actual waste generation volumes. The management company will be in charge of monitoring bin usage and adjusting the collection frequency accordingly
- 3.4.5 More details on the waste collection schedule and number of bins proposed are provided in the accompanying Waste Management Strategy (**Document Reference 72257-CUR-00-XX-RP-TP-003-V02_WMS**).

4.0 Accessibility by Sustainable Modes of Travel

4.1 Introduction

4.1.1 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 to ensure that developments are not isolated but are 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 car use.

4.1.2 The accessibility of the proposed development is considered in this context for the following modes of travel:

- Pedestrian Accessibility;
- Cycle Accessibility; and
- Public Transport Accessibility.

4.2 Pedestrian Accessibility

4.2.1 Research has indicated that acceptable walking distances depend on a number of factors, including the quality of the development, the type of amenity offered, the surrounding area, and other local facilities. The Chartered Institution of Highways and Transportation (CIHT) document entitled 'Providing for Journeys on Foot' suggests walking distances which are relevant to this planning application. These are reproduced in **Table 4.1**:

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

Table 4.1 – CIHT Recommended Walking Distances

4.2.2 To assist in summarising the accessibility of the Site by foot, an indicative pedestrian catchment plan has been produced. **Plan 72257-CUR-00-XX-DR-TP-06003-P01** shows distances of 500m, 1,000m and 2,000m which are termed 'Desirable', 'Acceptable' and the 'Preferred Maximum' by the CIHT for commuting trips; which are considered a good approximation for trips associated with the development.

4.2.3 In addition to the entirety of the MSP campus, within the 500m desirable walking distance catchment area there are a wide range of uses including education, health and commercial uses that sit well with MSP. They also contain a variety of retail and leisure uses that offer key amenities to staff at MSP.

- 4.2.4 Further services and facilities are also accessible within the 1,000m catchment - in addition to those already discussed, these include various amenities on Oxford Road such as Manchester Aquatics Centre, pharmacies and healthcare centres, the University of Manchester (UoM), and Manchester Metropolitan University (MMU). There is a close working relationship between, MSP, UoM, MMU and the Central Manchester University Hospitals and given the distances involved, walking is likely to be the primary mode of travel between these facilities.
- 4.2.5 The Site is also in close proximity to the residential neighbourhood of Hulme to the west of the Site, providing easy access to employment opportunities for residents by foot.
- 4.2.6 Along and adjacent to Oxford Road there are a number of additional facilities and services available including cafés, restaurants, bars, take-aways, convenience stores, retail outlets, places of worship, high street banks, All Saints Park, hotels and gym/leisure facilities. It is considered that the majority of everyday facilities and goods can be accessed within a 1,000m walk of the Site.
- 4.2.7 Manchester City Centre is accessible within 2,000m walk from the Site, ensuring that walking is a realistic mode of travel for business meetings and commuting. Access to larger supermarkets and Manchester Royal Infirmary is also achievable.
- 4.2.8 There is already a high pedestrian footfall in the area, and so high-quality pedestrian facilities exist along the main roads, for example a permeable pedestrian / cyclist footpath network throughout the MSP and footways on Pencroft Way which provide direct access to the individual MSP buildings. It is considered that the Site is situated within a highly accessible area, with a number of complimentary land uses within walking distance.

4.3 Cycle Accessibility

- 4.3.1 In order to assist in assessing the accessibility of the Site by cycle, **Plan 72257-CUR-00-XX-DR-TP-06004-P01** presents an 8km cycle catchment for the Site. The 8km cycling distance refers to a recommendation by Cycling England in the document 'Integrating Cycling into Development Proposals' (2009).
- 4.3.2 The 8km catchment encompasses areas such as Cheetham Hill, Broughton, Harpurhey and southern parts of Blackley and Prestwich to the north, the eastern part of Pendlebury, Swinton, Eccles, Trafford Park and Urmston to the west, East Didsbury and the northern parts of Sale and Cheadle to the south and Denton and western parts of Ashton-under-Lyne to the east.
- 4.3.3 Cycle infrastructure in the immediate vicinity of the MSP is reasonable with dedicated cycleways along some sections of Greenheys Lane and Higher Cambridge Street and advanced stop lines for cyclists at a number of junctions surrounding the Site.

- 4.3.4 Being mostly residential in nature, the surrounding roads are considered relatively conducive to cycling. The reduced speed limits and the presence of footways, street lighting, schools and active frontages also encourages low vehicle speeds.
- 4.3.1 Cycling infrastructure beyond the immediate vicinity of the Site is excellent with Oxford Road forming a strategic cycle link from the south into Manchester City Centre. It has recently been through a major renovation as part of the Bus Priority Package where a safe, segregated cycle route has been implemented on both sides of the carriageway. It is considered that Oxford Road could be utilised by staff and visitors to the MSP due to its proximity, convenience and attractiveness of the route. The local cycle network within the vicinity of the Site is reproduced in **Figure 4.1** below:

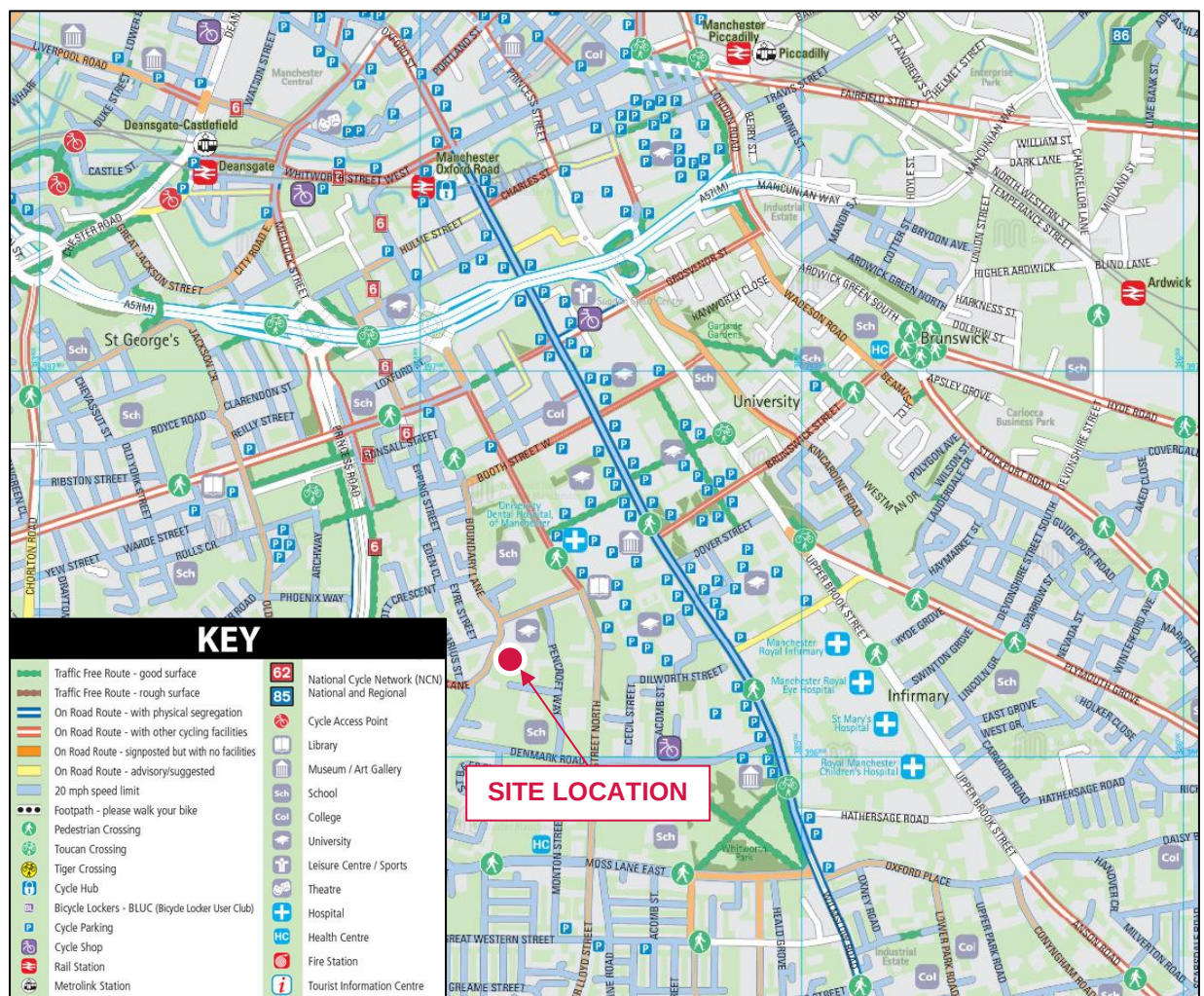


Figure 4.1 – Local Cycle Network

- 4.3.2 The local cycle network shown above is also a part of Greater Manchester's cycling and walking infrastructure proposal, named "Beelines". Beelines are signed routes that mark the most direct and pleasant way to navigate an area on foot or by bike. The Site is in close proximity to the confirmed Beelines network in Manchester City Centre as illustrated in **Figure 4.2** below, allowing future Site users to benefit from the public realm improvements for better safety and quality of commute.

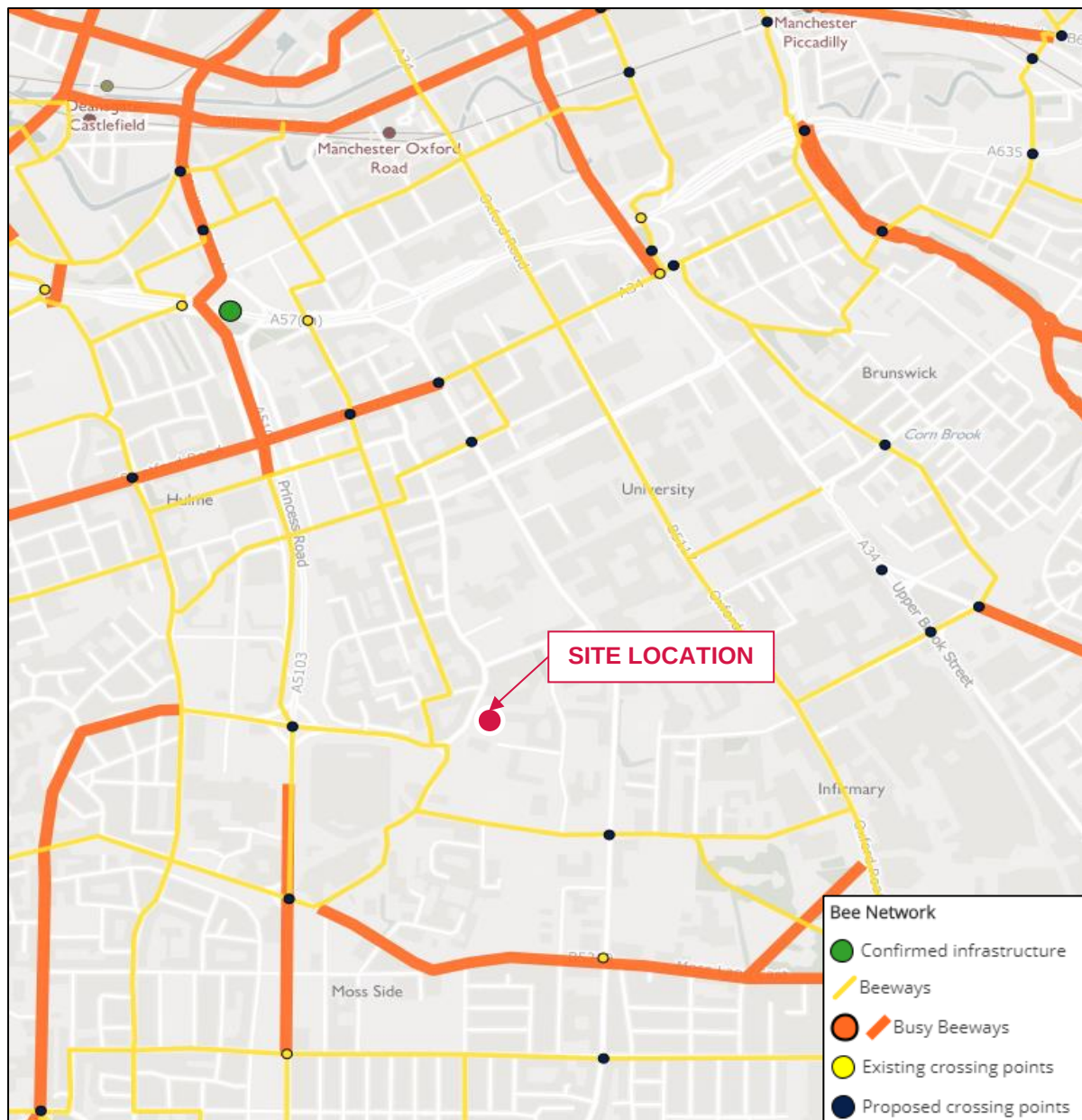


Figure 4.2 – Beelines in the vicinity of the Site

- 4.3.3 National Cycle Route 6 to the west of the Site can be accessed directly off Greenheys Lane. Route 6 passes through Watford, Luton, Milton Keynes, Northampton, Market Harborough, Leicester, Derby, Nottingham, Worksop, Sheffield, Manchester, Blackburn, Preston, Lancaster, Kendal and Windermere, and will connect London and Threlkeld in Cumbria when complete.
- 4.3.5 Based on previous experience and surveys in this area, it is noted that circa 30% of MSP staff lives within a 5km radius of the Site, it is considered that there is a real opportunity for cycling as a sustainable mode of travel.

4.4 Public Transport Accessibility

4.4.1 The Site is well situated to take advantage of existing public transport infrastructure within Manchester city centre. **Plan 72257-CUR-00-XX-DR-TP-06005-P01** demonstrates the areas accessible via public transport within 20, 40 and 60 minutes of the Site. Accessibility by bus and rail are considered further below.

Bus Accessibility

4.4.2 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.

4.4.3 The nearest northbound bus stop is located directly across the road from the Site along Greenheys Lane. There is a southbound bus stop approximately 30m to the north of the existing Site access hosting the same bus services. There are also more bus stops along Oxford Road at an approximate 650m walk to the east of the Site. **Table 4.2** details the services that call at these stops, and their associated frequencies:

Bus Service	Route	Peak Hourly Frequency		
		Mon – Fri	Sat	Sun/Hols
From Greenheys Lane:				
85	Manchester – Moss Side – Alexandra Park – Chorlton	10 mins	15 mins	20 mins
85A	Manchester – Alexandra Park – Chorlton – Arrowfield Road	10 mins	10 mins	20 mins
101	Manchester – Hulme – Moss Side – Northenden – Baguley – Wythenshawe	15 mins	15 mins	30 mins
102	Manchester – Moss Side – Wythenshawe – Wythenshawe Hospital	40 mins	40 mins	Hourly
103	Manchester – Moss Side – Wythenshawe – Peel Hall – Manchester Airport	40 mins	30 mins	Hourly
108	Timperley – Brooklands – Northern Moor – Northenden – Moss Side – Manchester	3 in the AM	-	-
733	Cheetham Hill – Whalley Range High School	1 in the AM 1 in the PM (school bus)	-	-
746	Ashton – Droylsden – Openshaw – Loreto College			
From Oxford Road:				
15	Manchester – Rusholme – Firswood – Stretford – Urmston – Davyhulme – Flixton	20 mins	30 mins	Hourly
18	MRI – Manchester – Collyhurst – Middleton – Langley – Middleton	10 mins	10 mins	15 mins
41	Manchester – Rusholme – West Didsbury – Northenden – Sale – Altrincham	10 mins	20 mins	20 mins

Bus Service	Route	Peak Hourly Frequency		
		Mon – Fri	Sat	Sun/Hols
42	Manchester – MRI – Withington – Didsbury – Stockport	40 mins	30 mins	Hourly
42A	Manchester – Rusholme – East Didsbury – Reddish	40 mins	30 mins	Hourly
42B	Manchester – East Didsbury – Bramhall – Woodford	30 mins	30 mins	Hourly
43	Manchester – Withington – Northenden – Wythenshawe – Manchester Airport	10 mins	30 mins	30 mins
53	Cheetham Hill – Gorton – Rusholme – Old Trafford – Salford Quays – Pendleton	30 mins	30 mins	Hourly
111	Manchester – MRI – Moss Side – Withington Community Hospital – Southern Cemetery	10 mins	15 mins	30 mins
142	Manchester – MRI – Fallowfield – The Christie – East Didsbury	10 mins	10 mins	10 mins
143	Manchester – University of Manchester – West Didsbury – Sale	10 mins	10 mins	15 mins
147	Piccadilly Rail Station – University of Manchester – MRI – Fallowfield – Withington – West Didsbury	10 mins	-	-
191	Manchester – Longsight – Levenshulme – Stockport – Stepping Hill – Hazel Grove	20 mins	-	-
197	Manchester – Longsight – Levenshulme – Green End – Stockport	20 mins	20 mins	Hourly
797	Burnage High School – Manchester (school bus)	1 in the PM	-	-
V1 Vantage	Leigh – Tyldesley – Manchester – MRI	15 mins	15 mins	30 mins
V2 Vantage	Atherton – Tyldesley – Manchester – MRI	20 mins	20 mins	30 mins

Table 4.2 – Summary of Bus Service Frequencies from Charles Street and Oxford Road

- 4.4.1 The above table demonstrates that there are a number of bus services that provide regular access to a variety of destinations across Greater Manchester throughout the week and during weekends.
- 4.4.2 Oxford Road, a 10 minutes' walk from the Site, is a strategic bus corridor and one of the most heavily used bus routes in Europe. Oxford Road has been through a major renovation recently with the goal of improving the environment whilst promoting the use of public transport.
- 4.4.3 Transport for Greater Manchester (TfGM) continues working on the development of the Bus Priority Package. The scheme aim is to enable more people to enjoy faster, more punctual and more reliable bus services from a wider area across Greater Manchester. It is considered this scheme will have a positive impact on the MSP and its benefits will include:
- Enable faster, more punctual and reliable bus services;

- Improve routes to key employment, education, health, leisure and retail destinations;
- Enable more passengers to get to their destination in a single bus journey;
- Improve links to other locations by making the public transport network more accessible through better access to other bus services, and the rail and Metrolink networks;
- Stimulate increased investment along the routes and support current and emerging business and commercial centres; and
- Improve local links for pedestrians and cyclists.

Rail Accessibility

4.4.4 The nearest train station is Manchester Oxford Road, located at approximately 1.6km to the north of the Site. This distance is out of the walking catchment; however, future employees can board the 85, 85A, 101, 102, or 103 bus service on Greenheys Lane which would call at the station, thus forming a multi-modal journey. A summary of rail services from the station is summarised in **Table 4.3**:

Destination	Service Frequency		
	Peak Weekday	Peak Saturday	Peak Sunday
Alderley Edge	4	Every 2 hours	1
Blackpool North	3	1	1
Chester	2	2	3
Crewe	4	2	3
Liverpool Lime Street	6	4	3
Manchester Airport	6	2	3
Middlesbrough	2	2	1
Newcastle	2	2	1 in the AM & PM
Nottingham	1	1	2
Preston	3	2	2
Southport	2	2	1

Table 4.3 – Summary of Rail Services from Manchester Oxford Road

- 4.4.1 The trains that service Manchester Oxford Road run regularly for 7 days a week from a number of different locations across the whole of the United Kingdom; this provides frequent access for students of the Site and is a viable alternative to private car use.
- 4.4.5 Alternatively, Manchester Piccadilly station to the north-east of the Site is a major transport interchange, being the main rail hub of the northwest of England. It provides regional and national frequent services with trains departing to London every 20 minutes, with an average journey time of 2 hours 10 minutes. Many of the buses that call along the Oxford Road bus stops also serve the Manchester Piccadilly station.
- 4.4.6 The High Speed Rail 2 (HS2) is a high-speed rail network which will allow enhanced connections to London and Birmingham, halving the current travel time, and Europe via the successful HS1. The

delivery of a HS2 Station alongside the existing Manchester Piccadilly will have a substantial positive impact on driving forward a wider commercial and regeneration plan for the Oxford Road Corridor.

4.4.7 The Northern Hub is a Network Rail plan to stimulate economic growth in the north of England through better connections between key towns and cities. The Northern Programme is a series of targeted upgrades to the railway in the north of England. It will allow hundreds more trains to run each day and provide space for millions more passengers a year. The Hub will bring service improvements and economic benefits across the whole north of England which could be hugely beneficial for the MSP. These include:

- Over £4bn worth of wider economic benefits to the region and potentially 20,000 to 30,000 jobs;
- The ability to double into the Trafford Park freight terminals;
- Two new fast trains per hour between Manchester Victoria and Liverpool;
- More frequent services between Manchester and Leeds (six per hour);
- Faster passenger services across the TransPennine route – improving journey times of up to 15 minutes between Manchester Victoria to York via Leeds;
- Journey times between Liverpool and Manchester could be reduced by 10-15 minutes;
- New direct services from across the north to Manchester Airport; and
- Faster journey times to Sheffield and the East Midlands, Bradford, Halifax, Hull, Newcastle and the North-East.

4.4.8 It is considered the Site is accessible via rail.

4.5 Summary

4.5.1 It is considered the Site is highly accessible by sustainable modes of transport, which are also usable by those with limited mobility and are wheelchair accessible. The surrounding area exhibits good levels of pedestrian and cycling infrastructure, and there are a number of public transport opportunities within acceptable walking distance of the Site.

5.0 Forecasted Trip Generation

5.1 Introduction

5.1.1 The following section contains trip generation analysis based on the proposed development during the weekday AM and PM peak hours.

5.1.2 In order to undertake the assessment, the TRICS database has been used. TRICS is the industry recognised tool for calculating the anticipated future trip demand of a proposed development. The database contains multi-modal surveys of varying land uses in multiple destinations across the UK, including hotel land uses.

5.2 Existing Trip Generation

5.2.1 The existing use of the building can be classified as 11,473 sq ft (approx. 1,066m² GFA) of business park office premises (Use Class B1). The level of trips generated by the existing planning uses of the Site have been estimated using multi-modal peak hour trip rates obtained from surveys of sites of a similar size and nature. The full search criteria used in the TRICS database are presented in **Appendix B. Table 5.1** below summarises this. All trip rates are per 100m² GFA:

TRICS – B1	Average TRICS Trip Rates AM (08:00 – 09:00)				Average TRICS Trip Rates PM (17:00 – 18:00)			
	Arrive	Depart	Total	Modal Split (%)	Arrive	Depart	Total	Modal Split (%)
Vehicles	1.151	0.142	1.293	75%	0.081	0.811	0.892	72%
Cyclists	0.143	0.018	0.161	9%	0.024	0.108	0.132	11%
Pedestrians	0.114	0.027	0.141	8%	0.03	0.119	0.149	12%
Public Transport	0.093	0.047	0.14	8%	0.005	0.059	0.064	5%

Table 5.1 – Existing Multi-Modal Trip Rates and Split

5.2.2 From **Table 5.1** above, the total number of trips currently generated can be found. This is provided in **Table 5.2**:

1,066 sqm GFA	Trip Generation AM (08:00 – 09:00)			Trip Generation PM (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Vehicles	12	2	14	1	9	10
Cyclists	2	0	2	0	1	1
Pedestrians	1	0	2	0	1	2
Public Transport	1	1	1	0	1	1

Table 5.2 – Existing Trip Generation

- 5.2.3 The number of vehicle trips generated by the existing planning uses could equate to 14 and 10 two-way movements respectively in the normal AM and PM peak periods (08:00 – 09:00 and 17:00 – 18:00).
- 5.2.4 However, it must be noted that the majority of the sites (detailed in **Appendix B**) are not entirely representative of Manchester City Centre conditions and as such, the existing trip generation is likely to be lower than predicted.

5.3 Forecasted Trip Generation

- 5.3.1 The proposed development would also comprise circa 8,508m² NIA of commercial office floorspace (Use Class B1) and as such, have a similar trip rate to that of the existing uses outlined in **Table 5.1** above. The level of trips generated by the proposed development uses are summarised in **Table 5.3** below:

8,508 sqm NIA	Trip Generation AM (08:00 – 09:00)			Trip Generation PM (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Vehicles	98	12	<u>110</u>	7	69	<u>76</u>
Cyclists	12	2	14	2	9	11
Pedestrians	10	2	12	3	10	13
Public Transport	8	4	12	0	5	5

Table 5.3 – Proposed Development Trip Generation

- 5.3.2 The number of vehicle trips generated by the proposed development could equate to 110 and 76 two-way movements in the typical AM and PM peak periods (08:00 – 09:00 and 17:00 – 18:00) respectively.
- 5.3.3 As above, the trip generation is a worst-case scenario and is likely to be lower than forecasted due to TRICS data not being entirely representative of the Site's conditions.

5.4 Net Vehicular Site Impact

- 5.4.1 The following **Table 5.4** indicates the net vehicular impact of the proposed Site.

Land Use	Trip Generation AM (08:00 – 09:00)			Trip Generation PM (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Existing Trip Generation						
Vehicles	12	2	<u>14</u>	1	9	<u>10</u>
Cyclists	2	0	2	0	1	1
Pedestrians	1	0	2	0	1	2
Public Transport	1	1	1	0	1	1
Proposed Development Trip Generation						
Vehicles	98	12	<u>110</u>	7	69	<u>76</u>

Land Use	Trip Generation AM (08:00 – 09:00)			Trip Generation PM (17:00 – 18:00)		
	Arrive	Depart	Total	Arrive	Depart	Total
Cyclists	12	2	14	2	9	11
Pedestrians	10	2	12	3	10	13
Public Transport	8	4	12	0	5	5
Net Site Impact						
Vehicles	+86	+10	+96	+6	+60	+66
Cyclists	+10	+2	+12	+2	+8	+10
Pedestrians	+9	+2	+10	+3	+9	+11
Public Transport	+7	+3	+11	0	+4	+4

Table 5.4 – Net Vehicular Site Impact

- 5.4.2 The proposed development could result in an increase of 96 and 66 two-way vehicular trips in the normal AM and PM peak periods respectively. However, due to the location, the accessible nature of the proposed development, and the lack of on-site parking, the above is a worst-case assessment as less people would be motivated to travel by car.
- 5.4.3 Additionally, in August 2018, Curtins commissioned a survey on employees in MSP to study travel to work patterns (**Document Reference: 67703/Baseline**). In this survey, it was found that 40% of employees travel by car as a driver with an additional 2% travelling as a car passenger. As such, existing travel patterns show that approximately 42% of employees travel to MSP by private car, with the remaining 52% travelling by sustainable modes of travel (cycle, bus, train, Metrolink, walk), 3% travelling via motorcycle, and 3% in an 'Other' category comprising car sharing and private taxi services.
- 5.4.4 Therefore, it is anticipated that the vast majority of trips would be made by public transport, bicycle or on foot, as supported by the projected increase in cyclists, pedestrian footfall and public transport users. This is expected of a development of this nature, especially due to the similarity of the existing and proposed planning uses.
- 5.4.5 In the short-term, any additional car parking requirements for the building would be redirected to the temporary surface car park at Denmark Road (formerly Ripon Street) (comprising 159 spaces) or elsewhere on the MSP site. The car park holds temporary consent which expires on 1st September 2019 (MCC reference no: **106024/FO/2014/S1**).
- 5.4.6 Notwithstanding, as of 9th September 2019, Bruntwood Sci-Tech Ltd have submitted a Transport Statement (TS) as part of a planning application to enable the continuation of use of the car park for a period of five years. The proposed car park would comprise 157 car parking spaces including 10 disabled parking spaces. The TS also confirms that this car park would make an allocation of spaces required by the Base building development.

- 5.4.7 MSP have confirmed that there are currently approximately 812 parking spaces available distributed across the wider MSP campus. With the removal of 53 spaces from Base, there are 759 spaces remaining. Of these 759 spaces, it can be confirmed that 136 are currently vacant. Additionally, one of the MSP tenants (Qiagen) are scheduled to relocate in 2021, freeing up a further 149 spaces.
- 5.4.8 As such, there is no short-term impact to the existing MSP staff, customers, and the surrounding community as the 53 parking spaces at Base building lost as a result of the proposed development, along with any new trips generated by the development, can be accommodated by the existing parking arrangements.
- 5.4.9 In the long-term, as part of the MSP SRF, a new 1,000 space MSCP may be delivered to improve the efficiency of the infrastructure within the MSP by relocating all the existing surface car parks into one single building. The car park will be located on Charles Halle Way. It is envisaged that the increase in traffic would be accommodated by the new MSCP, which has been assessed to confirm that it can accommodate both the reassignment of existing traffic and the increase in trips due to increase in overall floor area of the MSP.
- 5.4.10 On this basis, Curtins do not believe that capacity assessments would be required, and that the highway network is sufficient to accommodate the additional proposed development traffic.

6.0 Transport Planning Policy

6.1 Introduction

- 6.1.1 The following section sets out key local and national transport planning policies, and how the proposals relate to them.

6.2 National Planning Policy Framework (2019)

- 6.2.1 NPPF sets out the current national transport planning policy and outlines the important role that transport policies have to play in facilitating sustainable development.

- 6.2.2 Paragraph 11 states that:

“Plans and decisions should apply a presumption in favour of sustainable development.”

- 6.2.3 For decision taking this means granting permission unless:

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

- 6.2.4 Section 9 of the NPPF is entitled *Promoting Sustainable Transport* and outlines the important role that transport policies have to play in facilitating sustainable development. The section states that:

“The planning system should actively manage patterns of growth ...Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes.”

- 6.2.5 The document emphasises the need for developments to offer a choice of sustainable modes of transport to *“reduce congestion and emissions, and improve air quality and public health”* and provide *“safe and suitable access”* for all users.

- 6.2.6 Paragraph 110 of the NPPF states that applications for development should:

- *“give priority to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services, and appropriate facilities that encourage public transport use;*
- *address the needs of people with disabilities and reduced mobility in relation to all modes of transport; and*
- *create places that are safe, secure and attractive – which minimise the scope for conflicts between pedestrians, cyclists and vehicles, avoid unnecessary street clutter, and respond to local character and design standards.”*

6.2.7 The proposed development is situated in an accessible location. There is good walking and cycling infrastructure adjacent to the Site, and public transport is accessible within an acceptable walking distance.

6.2.8 The proposed development accords with the general principles of the NPPF.

6.3 National Planning Policy Guidance (NPPG)

6.3.1 In addition to the NPPF, a National Planning Policy Guidance (NPPG) document has also been developed by the government. Within this document there is a specific section that clarifies the overarching principles on Travel Plans, Transport Assessments and Transport Statements.

6.3.2 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 Transport Statement. It also clarifies the process for establishing a scope for what the document should contain. The NPPG has been considered in the production of this TS.

6.3.3 The guidance on Travel Plans reinforces the requirement for a Travel Plan, the scope of the document, and need for monitoring to continue the strategy into the future.

6.3.4 The NPPG has been considered in the production of the accompanying Interim Travel Plan (**Document Reference 72257-CUR-00-XX-RP-TP-002-V02_ITP**).

6.4 Manchester Core Strategy (2012 – 2027)

6.4.1 The Manchester Core Strategy promotes similar principles to the NPPF. It contains three specific “Transport” policies, comprising:

- Policy T1 – Sustainable Transport;
- Policy T2 – Accessible areas of opportunity and need; and
- Policy T3 – Strategic Integration.

6.4.2 Policy T1 focuses on sustainable transport and access for all. The accessibility of the Site would encourage users of the proposed development to travel by sustainable modes.

6.4.3 Policy T2 of the Manchester Core Strategy states:

“The Council will actively manage the pattern of development to ensure that new development...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.”

6.4.4 It is considered the proposed parking provision is reflective of the highly accessible nature of the development, whilst considering the realistic requirements of the users. The development would benefit from sustainable transport links across the city centre.

- 6.4.5 Manchester City Council consider parking provision in the city centre on a case-by-case basis, and it is noted that MCC have recently accepted new developments with low or no parking provision in areas that have high levels of public transport in the vicinity and proximity to major city centre areas.
- 6.4.6 It is considered the proposals are in accordance with the transport policies set out in the MCC Core Strategy, whereby the cycle parking provided (56 spaces) satisfies the citywide recommended minimum number of spaces (equating to 56 spaces for 11,107m² GFA).
- 6.4.7 Policy T3 is in relation to strategic integration of developments with the sustainable transport network. The proposed development would not prejudice the implementation of any of the strategic integration projects.

6.5 Greater Manchester Spatial Framework (GMSF) 2019 (Draft)

- 6.5.1 The Greater Manchester Spatial Framework (GMSF) has been prepared to set out the approach to housing and employment land across Greater Manchester for the next 20 years. The plan identifies the amount of new development that will come forward, in terms of housing, offices, and industry and warehousing, and the main areas in which this will be focused.

- 6.5.2 Policy GM6 of the GMSF, titled 'Accessibility', states:

"In order to accommodate the high levels of economic growth and the associated increase in journeys whilst reducing the congestion and environmental impacts that could adversely affect growth... Key elements of this coordinated approach will include:

- *Designing development and neighbourhoods so as to encourage journeys to be made by walking, cycling and public transport;*
- *Locating development so as to reduce the need to travel by car and the distance travelled, and maximise accessibility by public transport;*
- *Using demand management measures to make best use of our existing highways capacity;*
- *Providing safe and convenient cycle routes that connect people to jobs, key services and recreation opportunities, supported by cycle hire and sharing schemes; and*
- *The continued improvement in public realm in town centres and local neighbourhoods to support the maximum number of local journeys in those locations to be made on foot.*

- 6.5.3 The proposed development does not contravene the plans set out by the GMSF, instead it supports the plans by encouraging future employees to travel sustainably whenever possible.

6.6 Greater Manchester Transport Strategy 2040

- 6.6.1 In 2015, TfGM began consulting on a 2040 Vision for Transport to deliver a transport system which enables residents, businesses and visitors in Greater Manchester to travel to a wide range of different

destinations and opportunities, and where sustainable transport can be a viable and attractive alternative to the car.

6.6.2 Under Policy 3, the Transport Strategy states that TfGM will “maintain a conurbation-wide programme of travel choices interventions, supported by journey planning tools and information, to encourage travel behaviour change and mode shift, in order to make the most efficient use of available capacity, particularly during peak periods”. Such interventions comprise:

- *“Encouraging employers to allow home working on some days;*
- *Measures to encourage people to make at least some of their journeys by public transport, walking and cycling;*
- *Physical measures (bus priority measures, reallocating road space for pedestrian and cycling infrastructure, car share schemes, and constraints on long-stay parking in key centres); and*
- *Promotions and marketing to provide people and businesses with the information, training and incentives to make better informed decisions about how, when and where they travel and the impact of their choices.”*

6.6.3 The above measures and additional initiatives have also been provided in greater detail in the accompanying Interim Travel Plan (**Document Reference 72257-CUR-00-XX-RP-TP-002-V02_ITP**).

6.6.4 Under Policy 4, TfGM will also “continue to work with planning authorities and developers to ensure the accessibility of new development by sustainable modes and to reduce the impact on the highway network”. This will be in accordance with the principles of:

- *“Reducing the need to travel by car, and the distance travelled;*
- *Maximising accessibility by sustainable modes;*
- *Making the best use of existing infrastructure, particularly through increasing the density of development close to public transport nodes;*
- *Maximising opportunities to provide additional public transport; and*
- *Designing to encourage active travel.”*

6.6.5 It is considered that the development proposals will not adversely impact the transport network, and instead would support the Transport Strategy by enhancing opportunities for sustainable travel by integrating into existing infrastructure.

6.7 Conclusions

6.7.1 It is considered that the proposed development is in line with national and local transport policies and guidance. The Site is located within an area which has a range of existing local facilities and plenty of sustainable travel choices.

7.0 Summary and Conclusions

7.1 Summary

- 7.1.1 Curtins has been appointed on behalf of Bruntwood Sci-Tech Ltd to provide traffic and transportation advice in relation to the development of the existing Base Building within Manchester Science Park (MSP).
- 7.1.2 The proposed development includes the “erection of a five storey building comprising offices (Use Class B1) and ancillary workshop and maker space, together with associated disabled car and cycle parking, landscaping, provision of plant and servicing and related access and highway’s works, and other associated works”.
- 7.1.3 Curtins has been appointed to prepare this Transport Statement to accompany the planning application for the proposals.
- 7.1.4 A review of baseline conditions and highway safety in the vicinity of the Site has been undertaken. This demonstrates that the Site is highly accessible by sustainable modes of transport. The surrounding area exhibits good levels of pedestrian and cycling infrastructure, and there are several public transport opportunities within acceptable walking distance of the Site. It is not considered that there is an existing safety issue that is likely to be exacerbated by the proposed development.
- 7.1.5 An appropriate TRICS assessment has been undertaken to establish the likely number of vehicular trips associated with the proposed development. The existing 53 spaces which would be lost would be mitigated by the Denmark Road (formerly Ripon Street) temporary surface car park (comprising 159 spaces and is currently operating under capacity) in the short term. This car park holds temporary consent which expires on 1st September 2019, but Bruntwood Sci-Tech Ltd have confirmed that a planning application will be submitted to enable the continuation of use of the car park for a period of five years in August 2019.
- 7.1.6 MSP have confirmed that with the removal of 53 spaces from Base, there is a remainder of approximately 759 parking spaces available distributed across the wider MSP campus. Of these 759 spaces, 136 are currently vacant, and one of the MSP tenants (Qiagen) is scheduled to relocate in 2021, freeing up a further 149 spaces. As such, the removal of 53 spaces has no short-term impact to the existing MSP staff, customers, and the surrounding community.
- 7.1.1 In the long term, as part of the MSP Strategic Regeneration Framework (SRF), a new 1,000 space MSCP may be delivered to improve the efficiency of the infrastructure within the MSP by relocating all the existing surface car parks into one single building. The MSCP will be located on Charles Halle Way. Therefore, it is not considered that the additional traffic from the proposed development would have a significantly detrimental impact on the surrounding highway network.

- 7.1.2 Additionally, future users of the Site are less likely to commute by their own cars due to proposed measures in the accompanying Travel Plan to increase the level of walking, cycling and public transport use to and from the Site, and to reduce reliance on the private car.
- 7.1.7 A review of relevant local and national transport planning guidance has been undertaken. It is considered that the proposed development conforms with such policy.

7.2 Conclusions

- 7.2.1 From a traffic and transportation perspective there are no reasons why the development proposals should not be granted planning approval.

Plans



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Project:

MSP - BASE BUILDING

Status:

PRELIMINARY

Drg Title:

LOCATION PLAN
REGIONAL LEVEL

Drawn By: JM

Checked By: AT

Designed By: JM

Date: 09/08/19

Scale: NTS

Project No:

Originator:

Zone:

Level:

Type:

Discipline: Category / Number: Rev:

72257 - CUR - 00 - XX - DR - TP - 06001 - P01



KEY:



Site

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Project:

MSP - BASE BUILDING

Status:

PRELIMINARY

Drg Title:

LOCATION PLAN
LOCAL LEVEL

Drawn By: JM

Checked By: AT

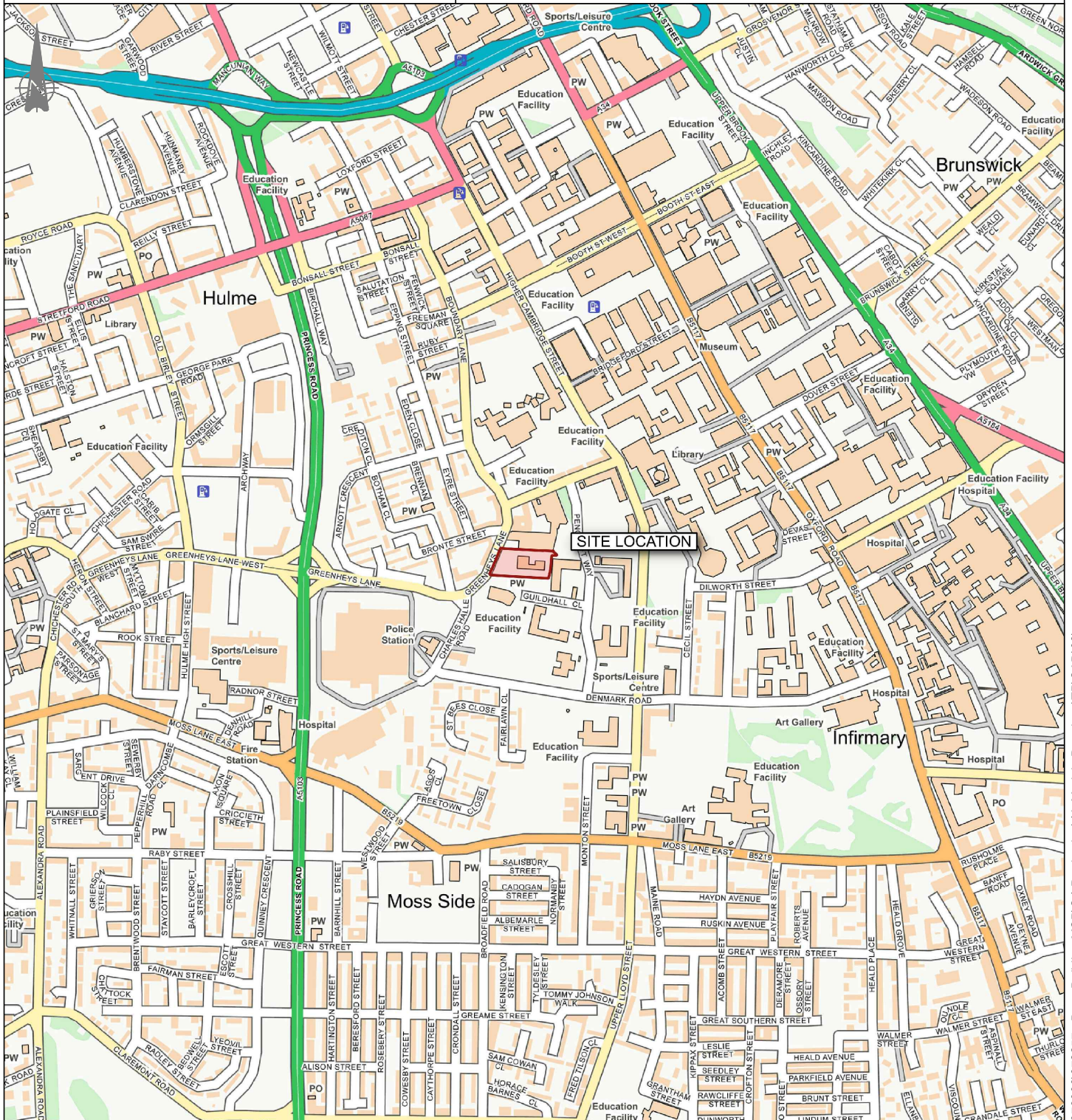
Designed By: JM

Date: 09/08/19

Scale: NTS

Project No: Originator: Zone: Level: Type: Discipline: Category / Number: Rev:

72257 - CUR - 00 - XX - DR - TP - 06002 - P01



KEY:



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Project:

MSP - BASE BUILDING

Status:

PRELIMINARY

Drg Title:

ACCESSIBILITY
INDICATIVE CYCLE CATCHMENT

Drawn By: JM

Checked By: AT

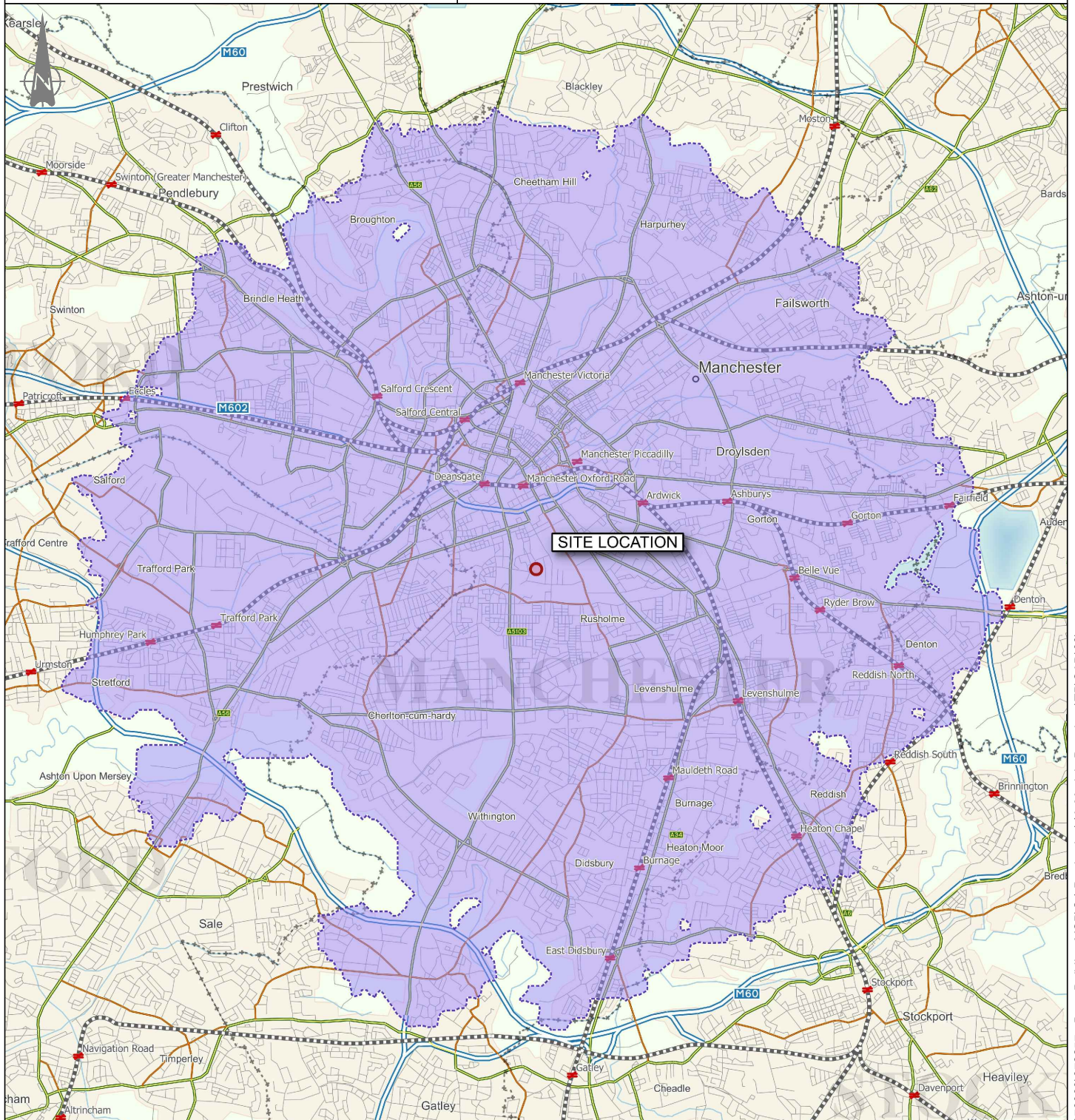
Designed By: JM

Date: 09/08/19

Scale: NTS

Project No: Originator: Zone: Level: Type: Discipline: Category / Number: Rev:

72257 - CUR - 00 - XX - DR - TP - 06004 - P01



KEY: ○ Site

Cycle Catchment:
8000m

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\\mats02\Projects\072001 - 073000\072257 - Base Building MSP\Q4-Production\4A-Models-Drawings\TPICAD\061



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Project:

MSP - BASE BUILDING

Status:

PRELIMINARY

Drg Title:

ACCESSIBILITY
INDICATIVE PUBLIC
TRANSPORT CATCHMENT

Drawn By: JM

Checked By: AT

Designed By: JM

Date: 09/08/19

Scale: NTS

Project No:

Originator:

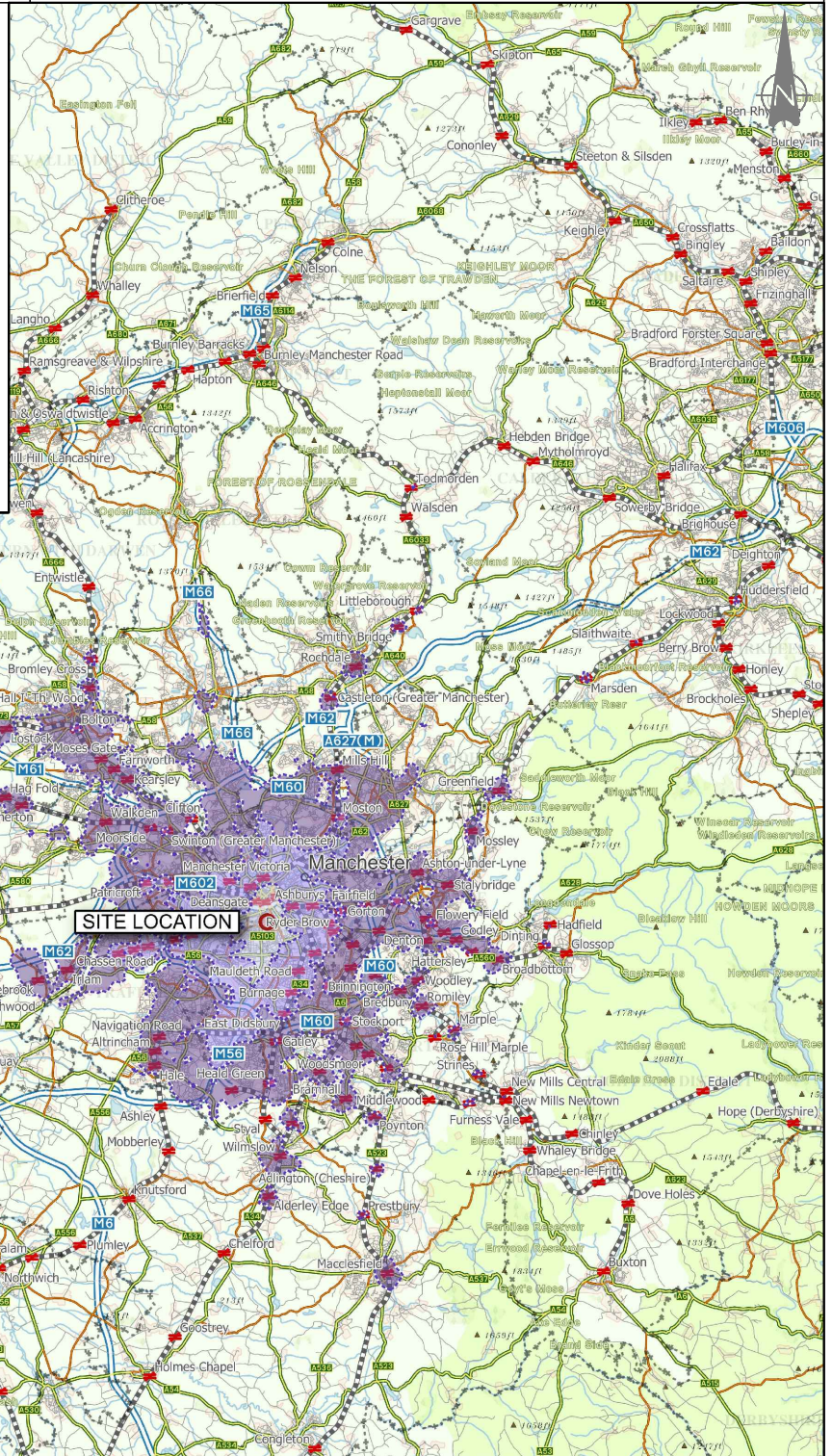
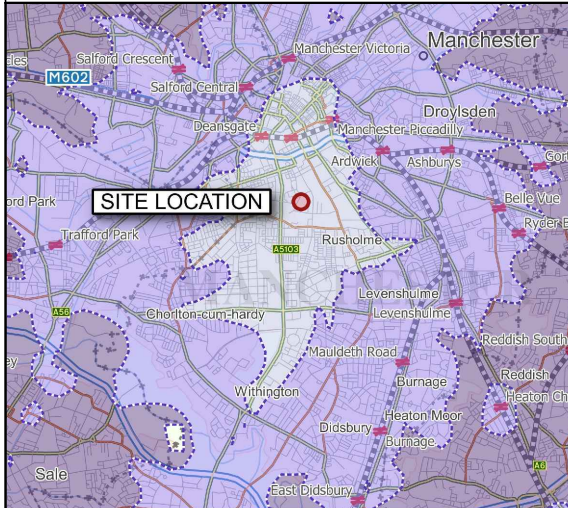
Zone:

Level:

Type:

Discipline: Category / Number: Rev:

72257 - CUR - 00 - XX - DR - TP - 06005 - P01



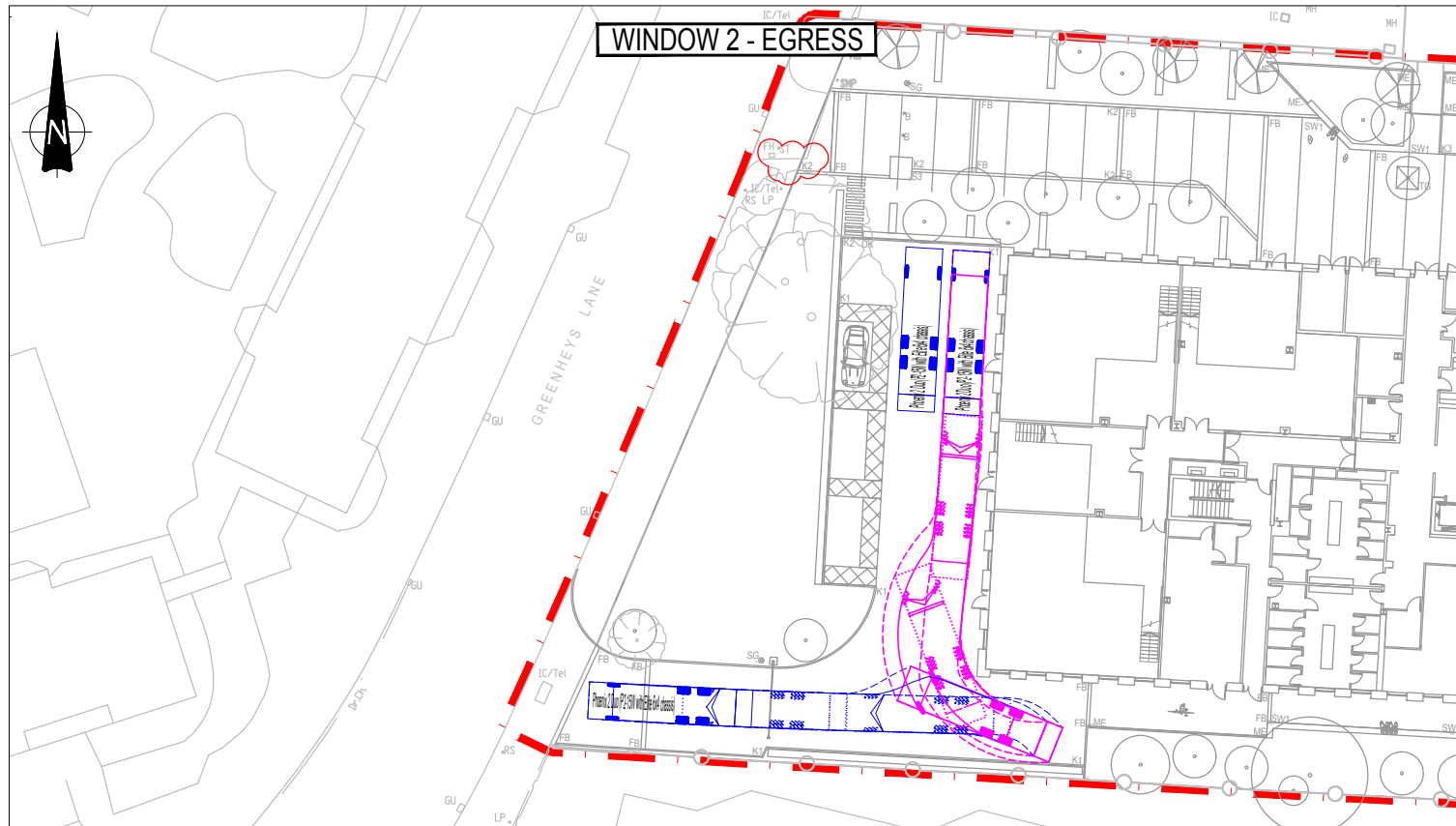
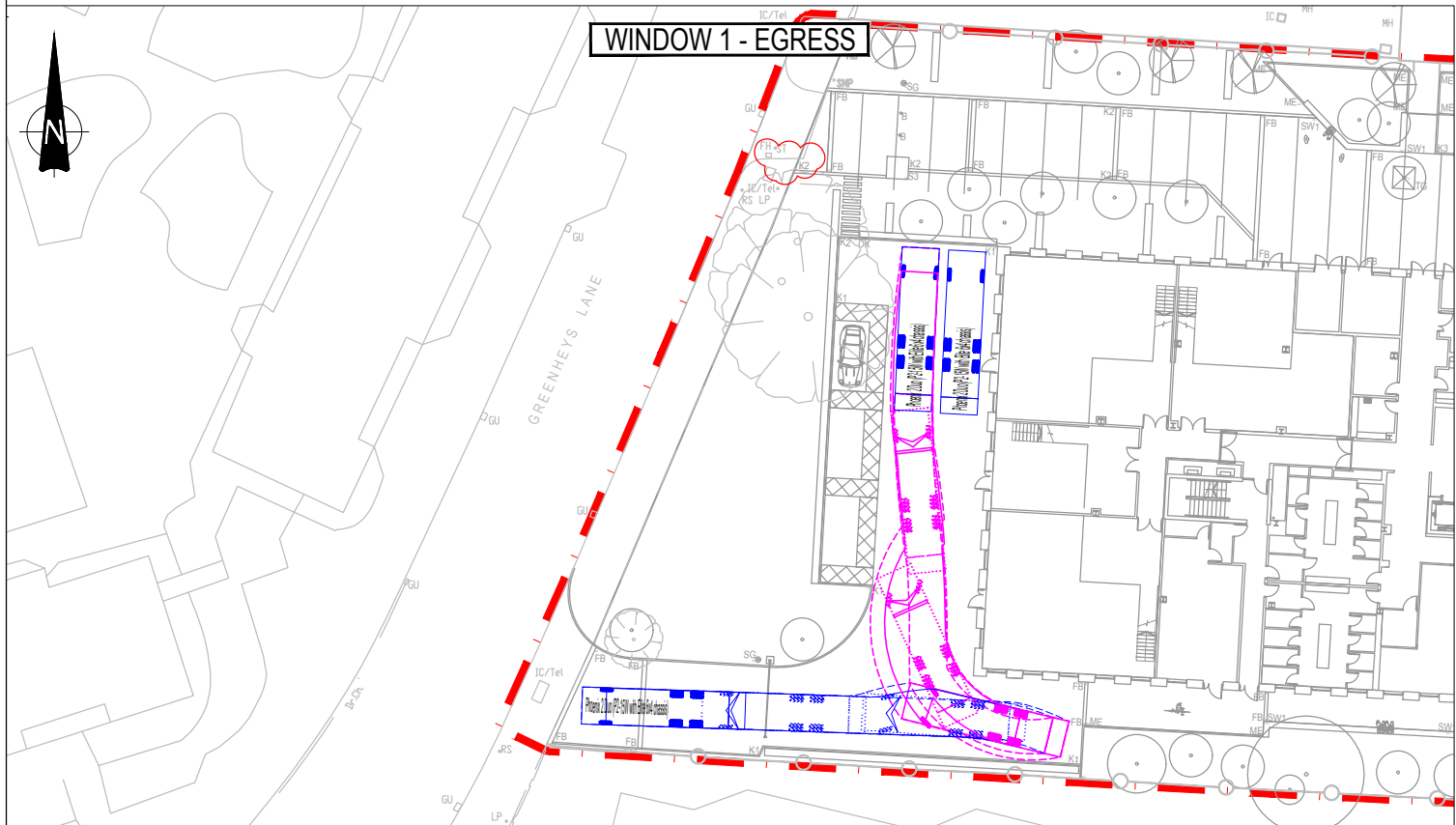
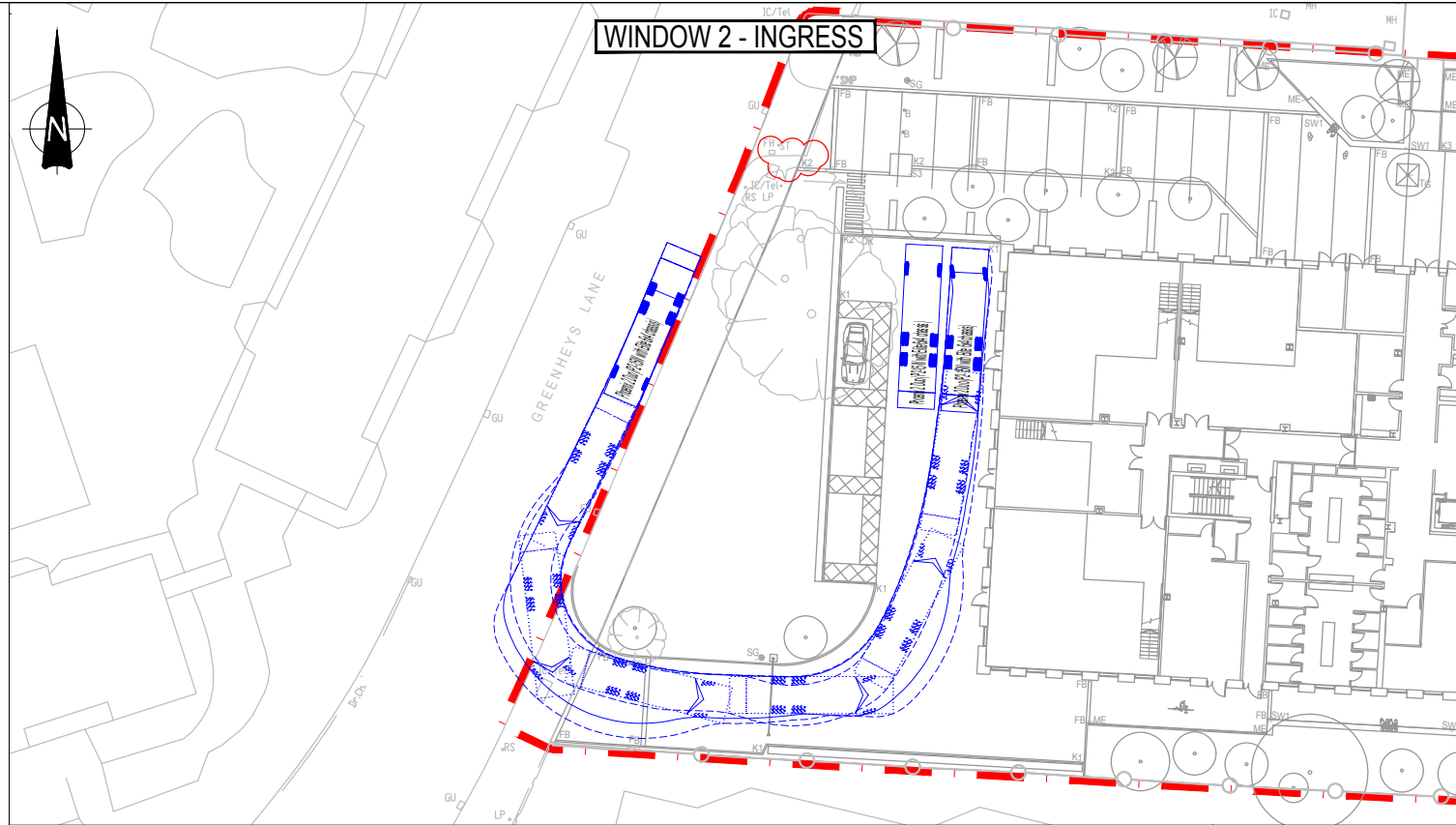
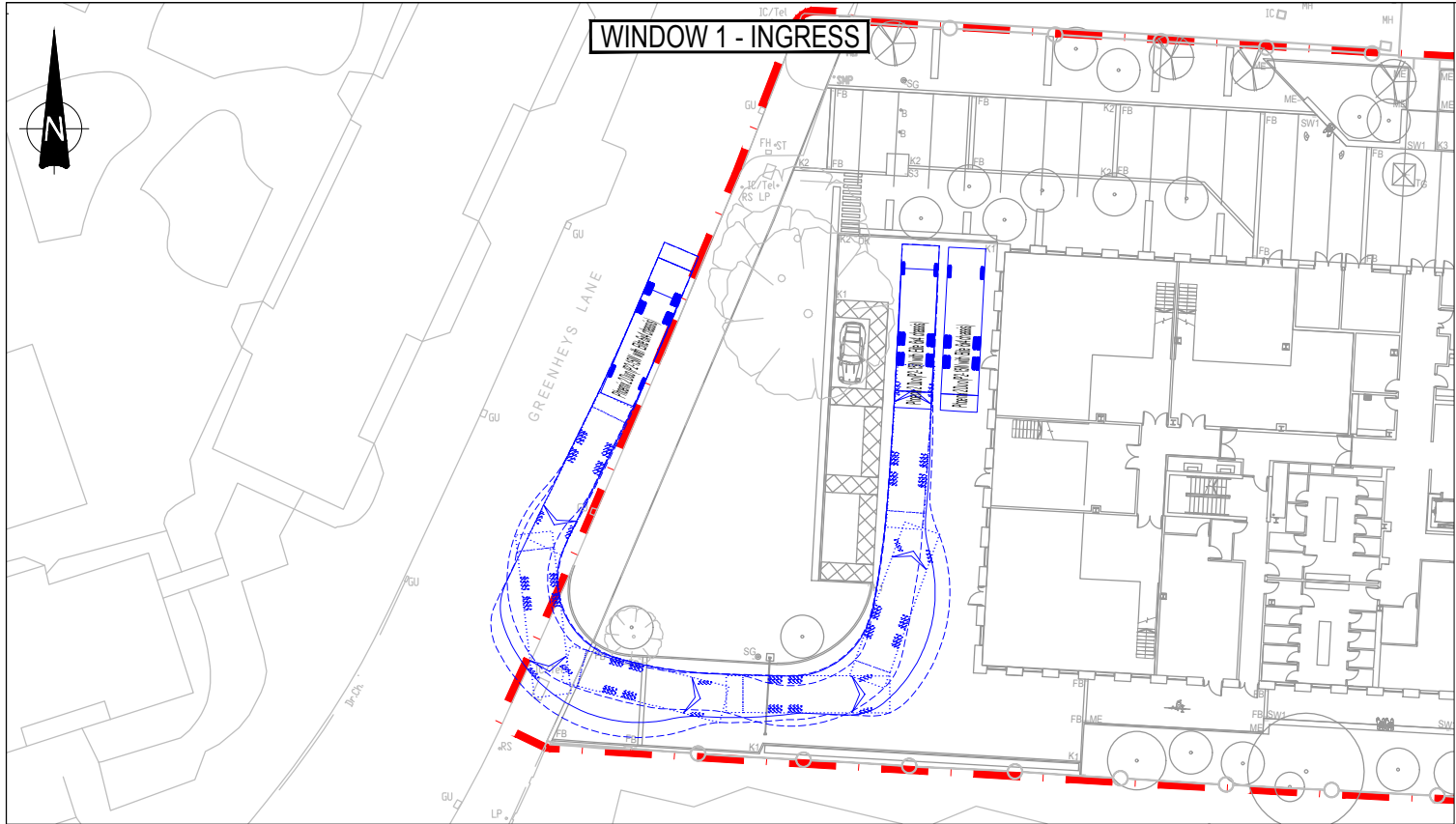
KEY: Site

Public Transport Catchment:

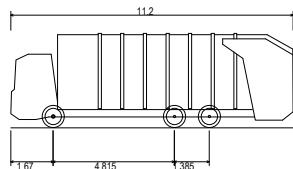
- 20 minutes
- 40 minutes
- 60 minutes

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Drawings



VEHICLE PROFILE:



Phoenix 2 Duo (P2-15W with Elite 6x4 chassis)
Overall Length 11.200m
Overall Width 2.530m
Overall Body Height 3.751m
Min Body Ground Clearance 0.304m
Track Width 2.500m
Lock to lock time 4.00s
Kerb to Kerb Turning Radius 9.500m

P03	Layout updated	12/09/19	JM
P02	Layout updated	05/07/19	JM
Rev:	Description:	Date:	By:

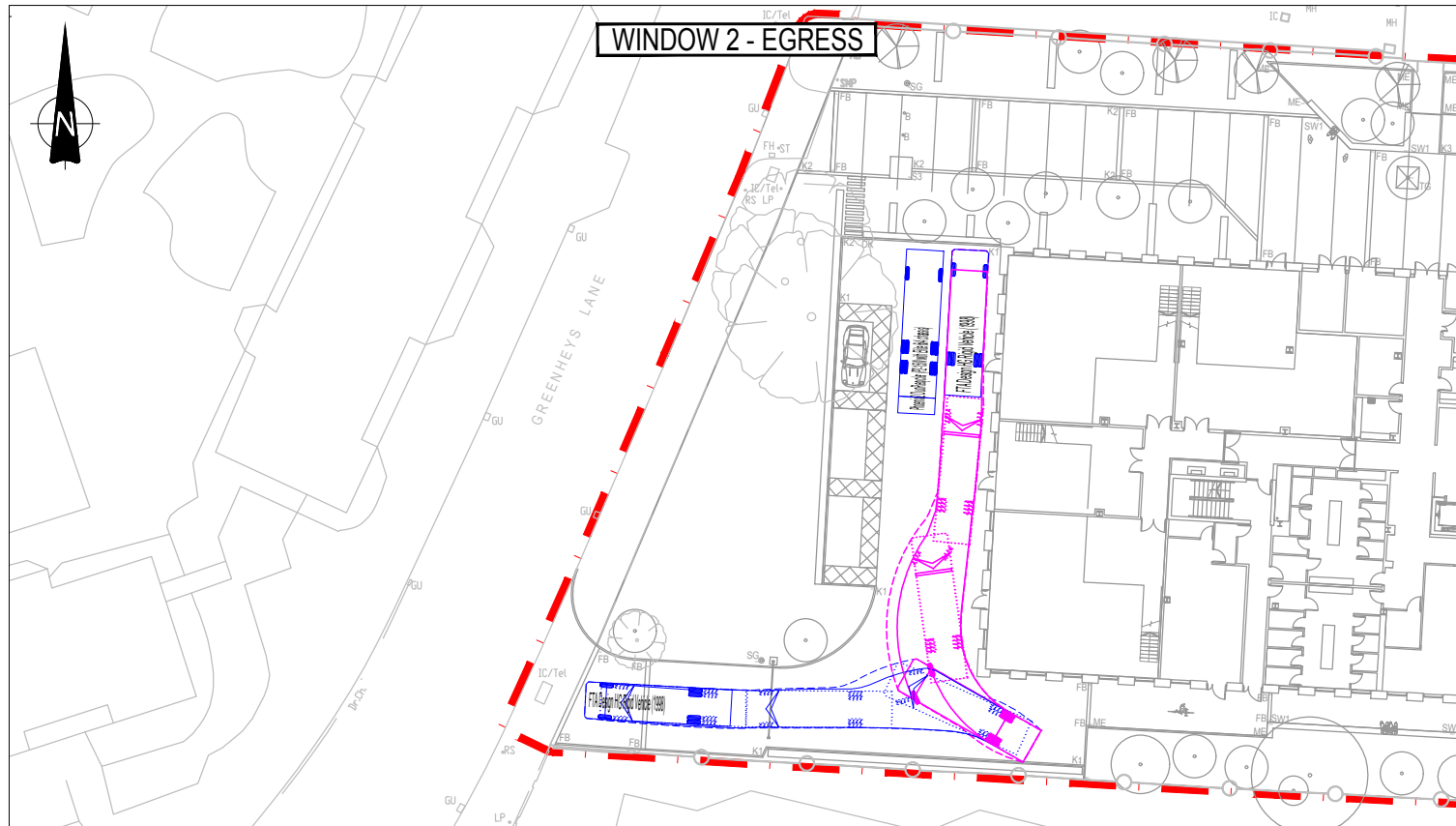
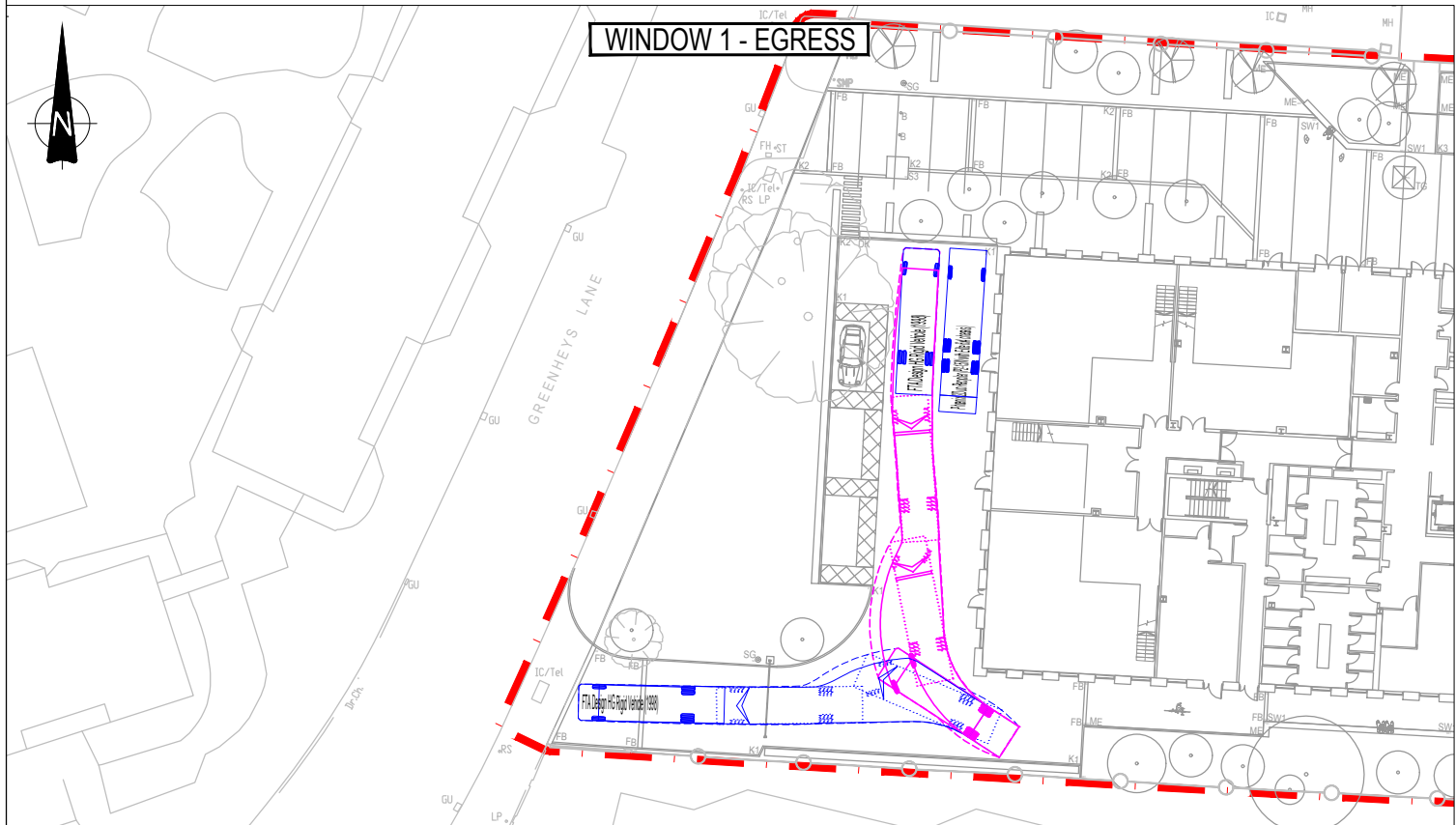
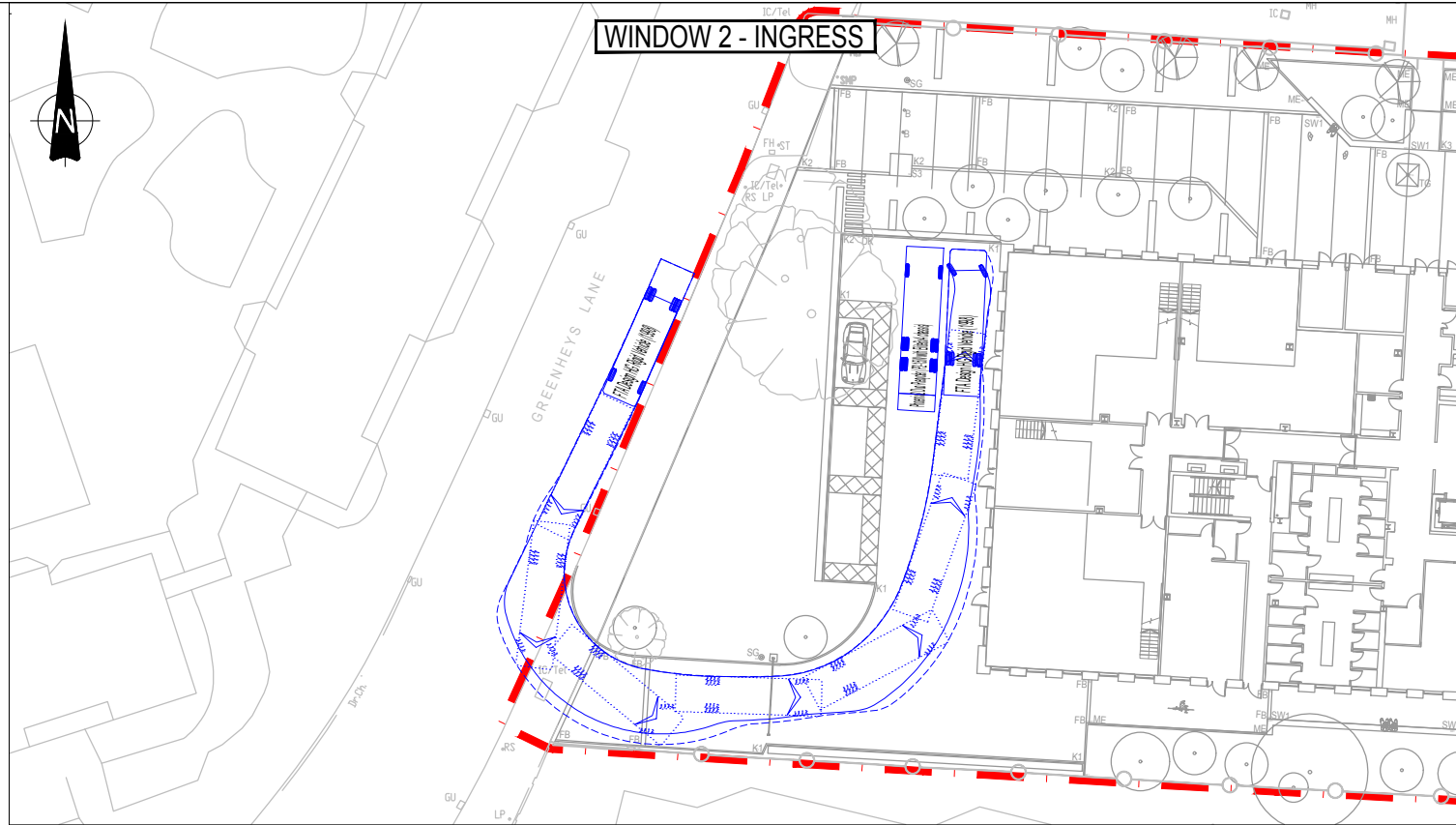
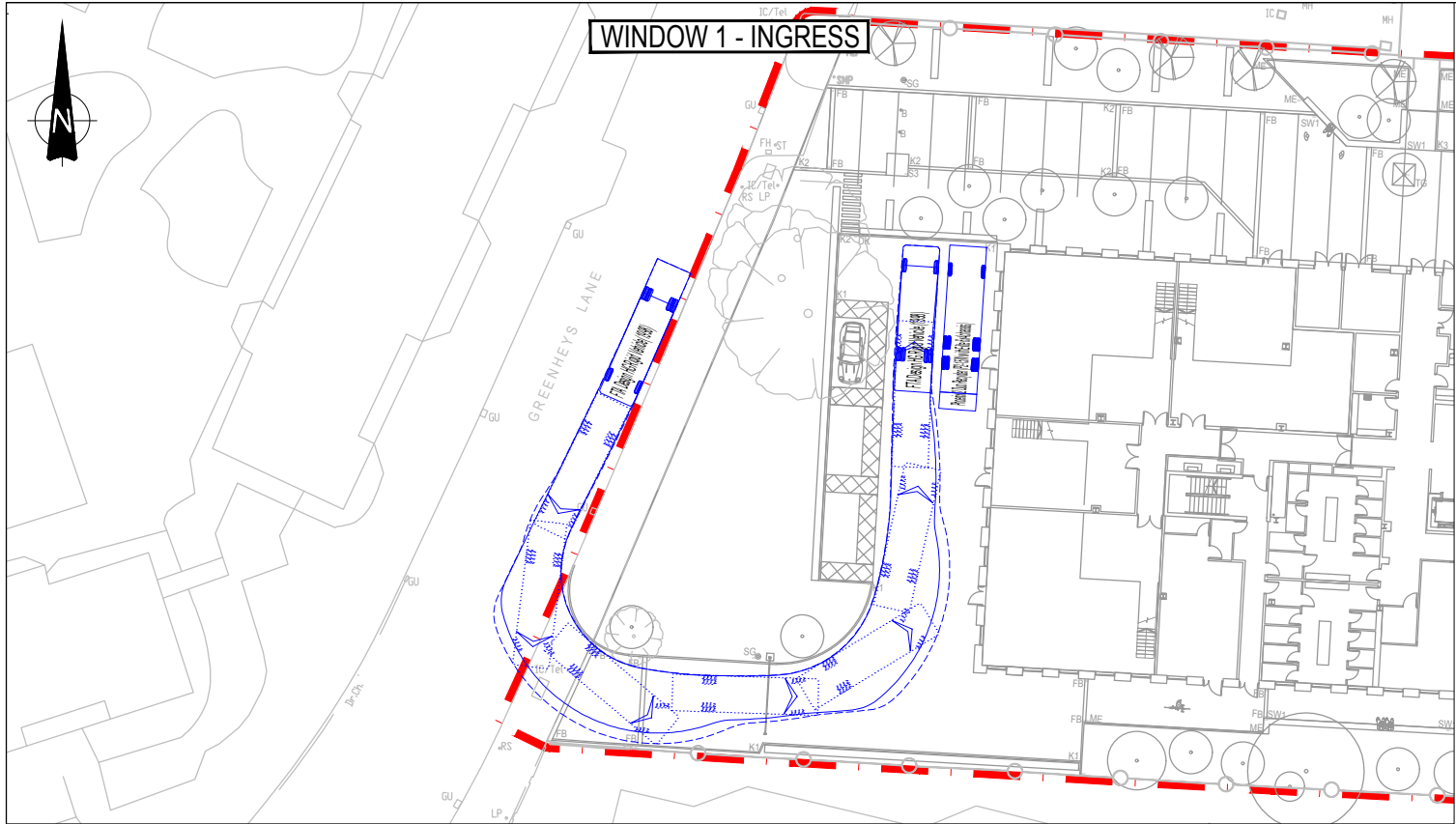


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Project:	BASE BUILDING - MSP				Status:	PRELIMINARY	
Drg Title:	SWEPT PATH ANALYSIS LARGE REFUSE VEHICLE				Drawn By:	JM	Checked By: AV
Project No:	Originator:	Zone:	Level:	Type:	Discipline:	Category / Number:	Rev:
72257	- CUR	- 00	- XX	- DR	- TP	- 05002	-P03
Scale: 1:500					Designed By:	JM	Date: 25/06/19

GENERAL NOTES:



VEHICLE PROFILE:

FTA Design HG Rigid Vehicle (1998)	
Overall Length	10.000m
Overall Width	2.500m
Overall Body Height	3.645m
Min Body Ground Clearance	0.440m
Track Width	2.470m
Lock to lock time	3.00s
Kerb to Kerb Turning Radius	11.000m

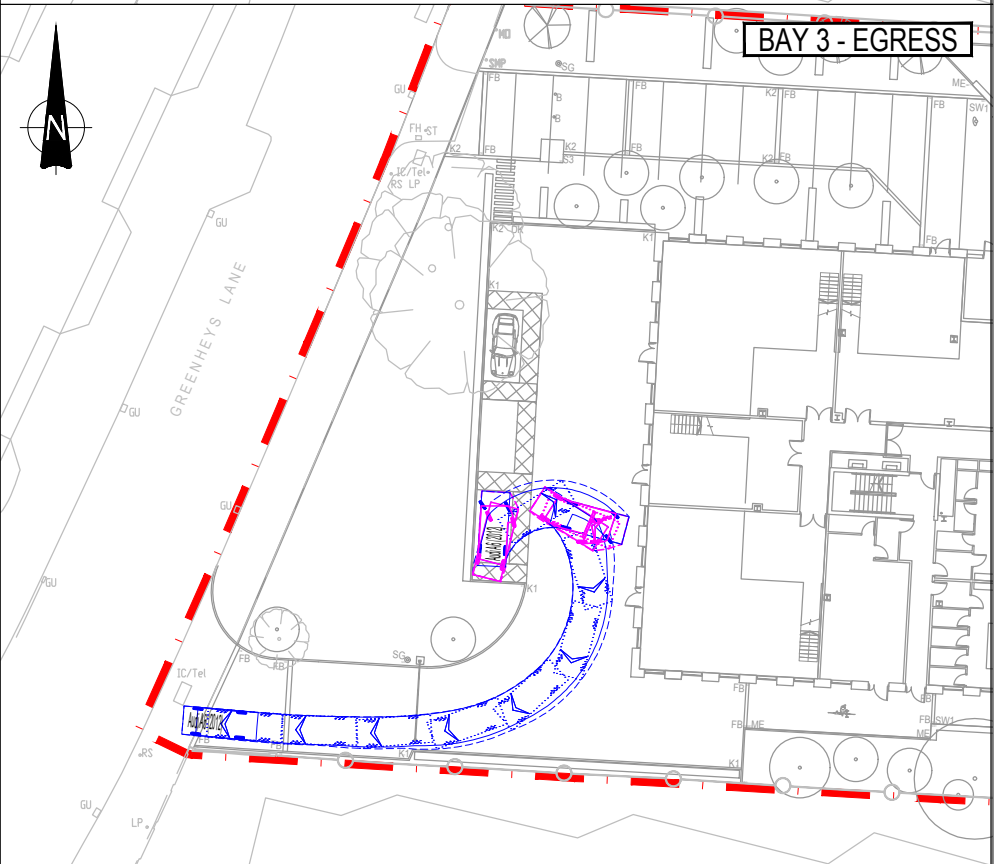
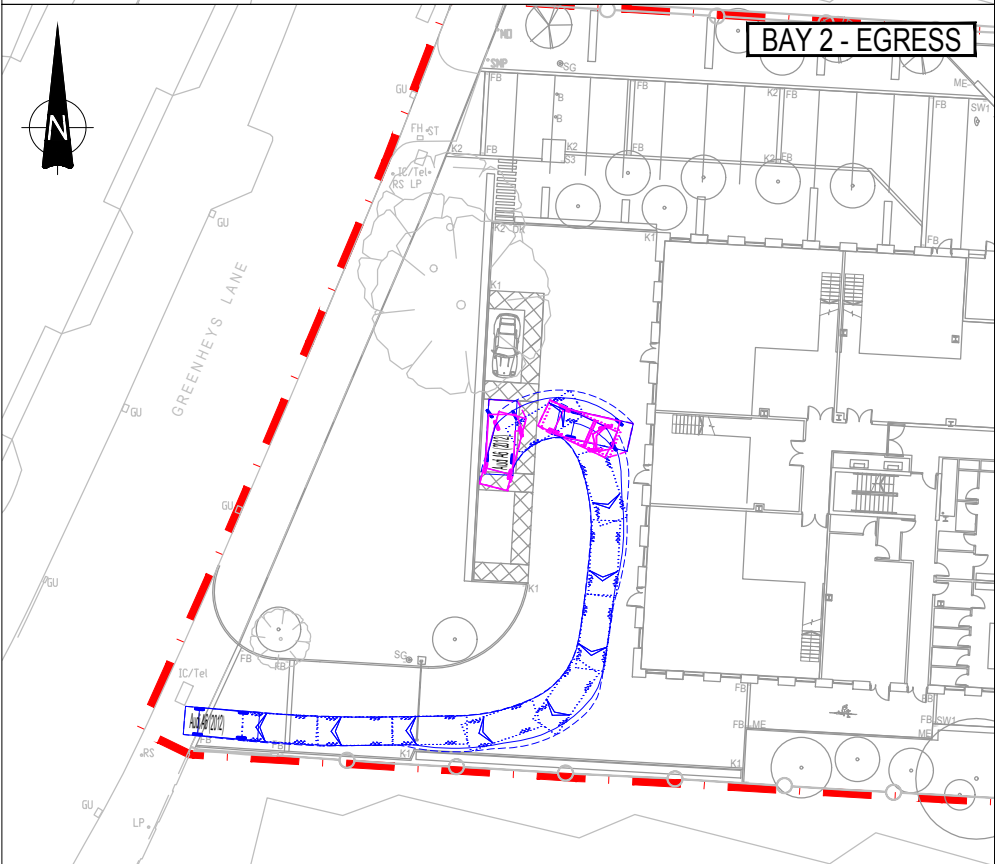
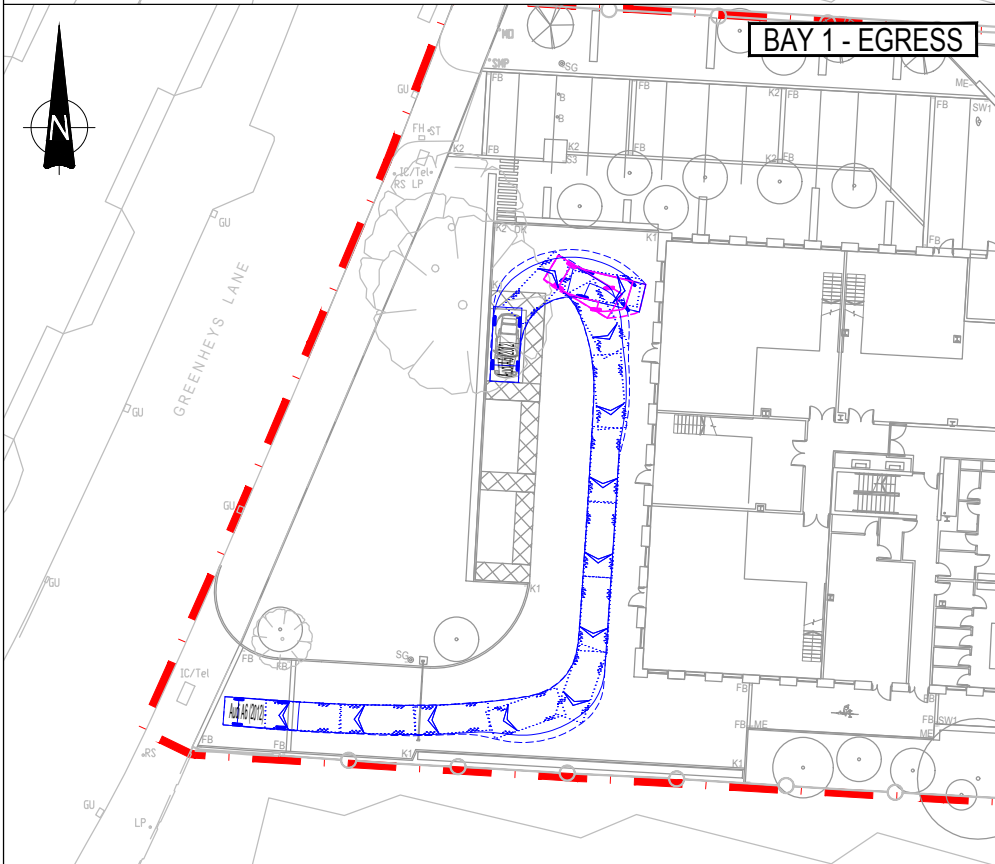
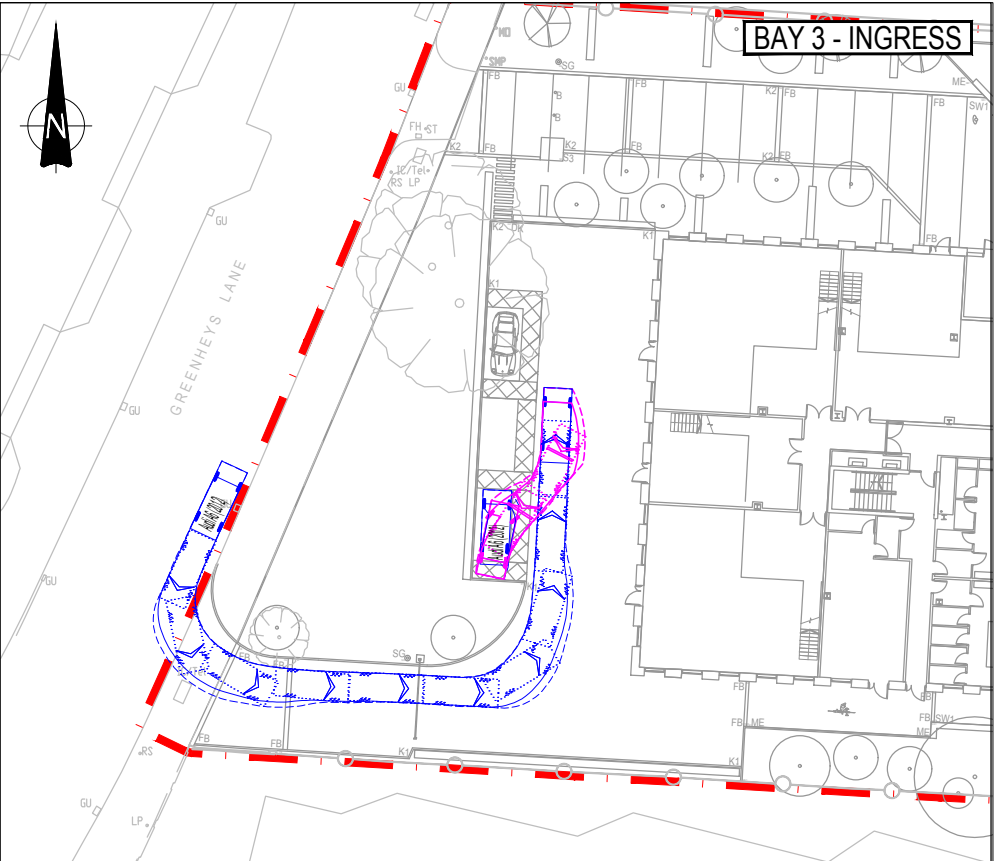
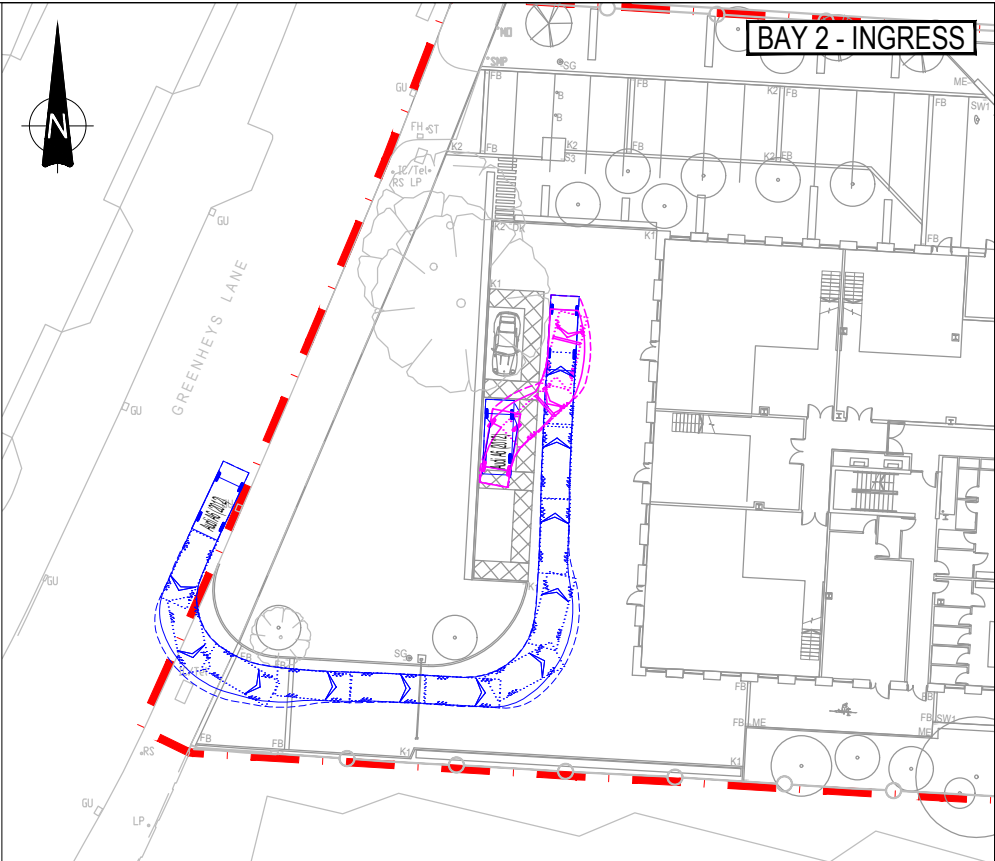
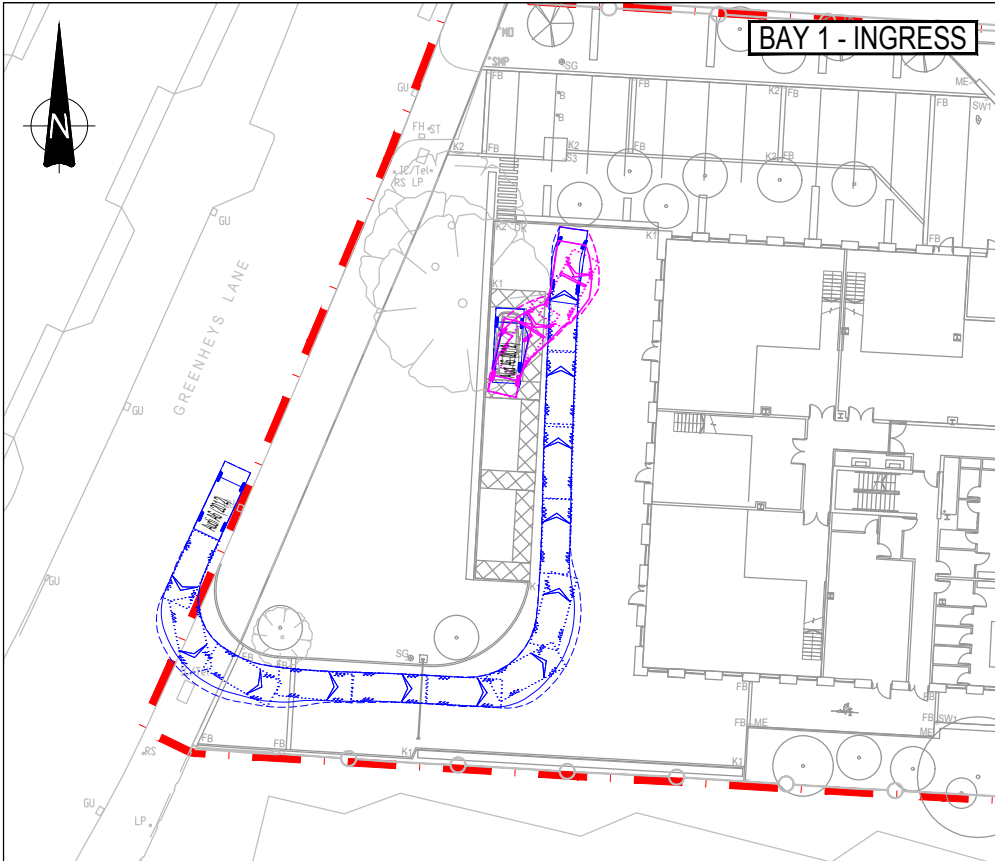
P03	Layout updated	12/09/19	JM
P02	Layout updated	07/05/19	JM
Rev:	Description:	Date:	By:

GENERAL NOTES:

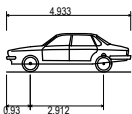
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Project:	BASE BUILDING - MSP		Status:	PRELIMINARY			
Drg Title:	SWEPT PATH ANALYSIS 10m HGV		Drawn By:	JM	Checked By:	AV	
Project No:	Originator:	Zone:	Level:	Type:	Discipline:	Category / Number:	Rev:
72257 - CUR - 00 - XX - DR - TP - 05003							-P03



VEHICLE PROFILE:



Audi A6 (2012)	4.933m
Overall Length	1.874m
Overall Width	1.529m
Overall Body Height	0.313m
Min Body Ground Clearance	1.852m
Max Track Width	4.00s
Lock to lock time	5.950m
Kerb to Kerb Turning Radius	

GENERAL NOTES:

P03	Layout updated	12/09/19	JM
P02	Layout updated	05/07/19	JM
Rev:	Description:	Date:	By:



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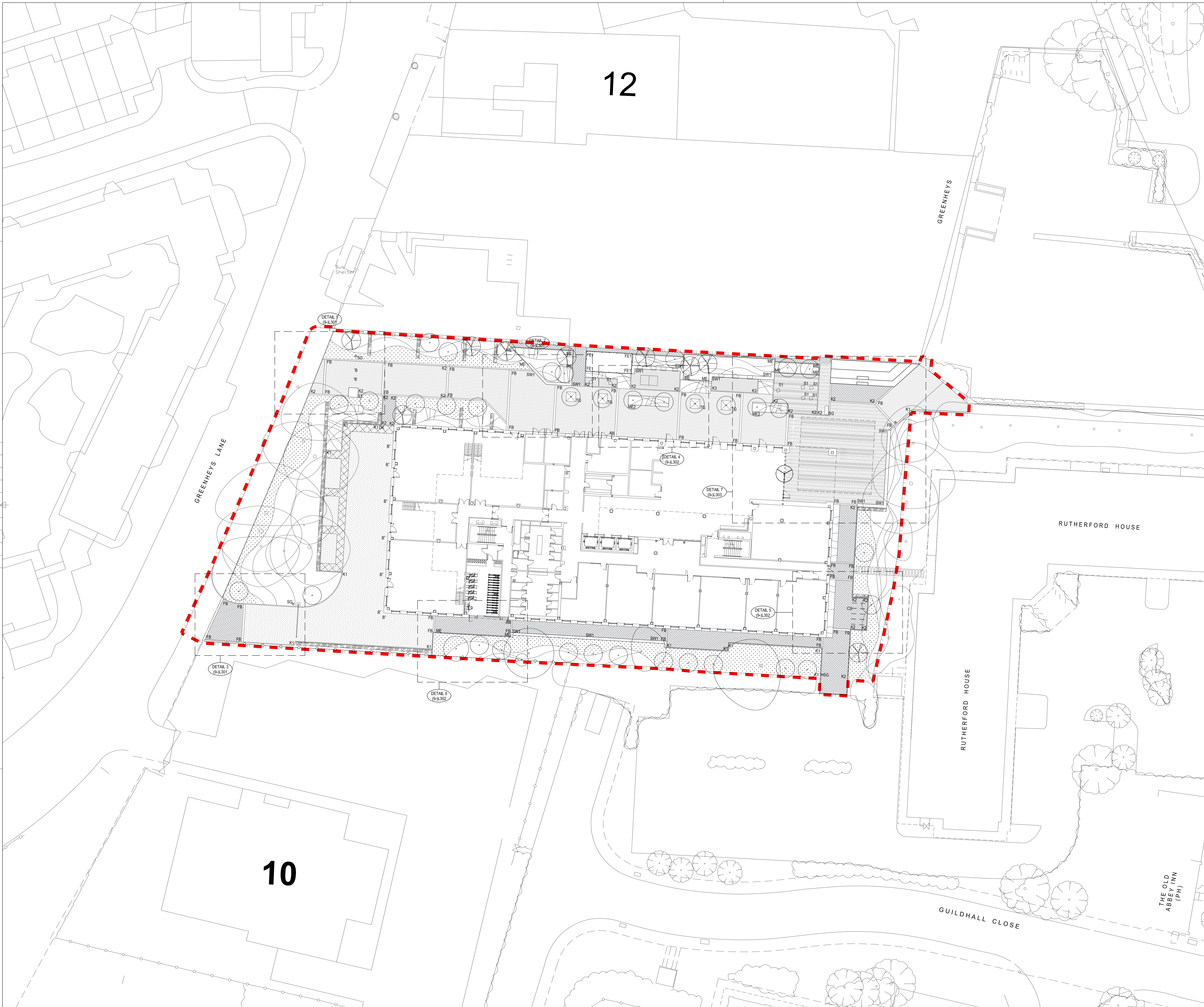
Project: BASE BUILDING - MSP
Drg Title: SWEPT PATH ANALYSIS
LARGE CAR
PROPOSED DISABLED BAYS

Status: PRELIMINARY
Drawn By: JM Checked By: AV
Designed By: JM Date: 25/06/19
Scale: 1:500

Project No: Originator: Zone: Level: Type: Discipline: Category / Number: Rev:

72257 - CUR - 00 - XX - DR - TP - 05004 -P03

Appendix A – Proposed Ground Floor Layout Plan



- KEY**
- SITE BOUNDARY
 - *K1* UPSTAND KERB
 - *K2* FLUSH KERB
 - *K3* ANGLED KERB
 - *DK* DROP KERB
 - KELLEN PAVING MIX 1 (LIGHT COLOUR BLEND)
 - KELLEN PAVING MIX 2 (MD GREY BLEND)
 - KELLEN PAVING MIX 3 (LIGHT GREY BLEND)
 - SERVICE AREA CONCRETE BLOCK PAVING
 - MAIN ENTRANCE NATURAL STONE FEATURE PAVING
 - 'OUTDOOR ROOMS' NATURAL STONE FEATURE PAVING
 - 'SUN TERRACE' FEATURE PAVING
 - GRANITE STEPPING STONES
 - FB FEATURE WHITE GRANITE PAVING BAND
 - ME' RAISED METAL EDGE
 - ME2' FLUSH METAL EDGE
 - MESH PANEL SYSTEM
 - 'TIMBER SUN TERRACE' BLEACHER SEATING
 - 'S1' GRANITE SEAT CUBES 500MM X 500MM
 - 'S2' CORTEN STEEL/TIMBER BENCH
 - 'S3' MSP FEATURED BENCH
 - SW1' SEATING WALL WITH TIMBER SEATS
 - ORNAMENTAL PLANTING
 - HEDGE
 - PROPOSED TREE
 - PROPOSED MULTISTEMMED TREE
 - TREE GRILLE
 - PROPOSED TREE IN RAISED PLANTER
 - 'CS' CYCLE STANDS
 - 'B' BOLLARDS
 - 'SG' SIGNAGE AND WAYFINDING
 - FE1 FENCING PANEL SCREEN

NOTES

TO BE READ IN CONJUNCTION WITH:
(S-L001) - STRATEGY PLAN
(S-L003) - LANDSCAPE COLOUR MASTERPLAN
(S-L004) - PLANTING STRATEGY PLAN
(S-L005) - LEVELS PLAN
(S-L006) - TREE CONSTRAINTS PLAN
(S-L301) - DETAIL AREAS SHEET 1 OF 3
(S-L302) - DETAIL AREAS SHEET 2 OF 3
(S-L303) - DETAIL AREAS SHEET 3 OF 3
(S-L401) - TYPICAL CONSTRUCTION DETAILS
(S-L402) - TYPICAL CONSTRUCTION DETAILS
(S-L601) - LANDSCAPE SECTIONS SHEET 1 OF 2
(S-L602) - LANDSCAPE SECTIONS SHEET 2 OF 2
(S-L701) - TREE FIT DETAILS

STAGE 3 COMMENTS AND CHANGES INCLUDING:
REWORKING MATERIALS, NEW SERVICE AREA ACCESS, REDUCED BOUNDARY, TESSA COMPANION AREA, ADJUSTMENT TO ENTRANCE PLAZA

AW 03.08.19
CZ 01.08.19
DAW 03.08.19
CZ 01.08.19

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MANCHESTER
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MSP BASE Building
MANCHESTER SCIENCE PARKS

LANDSCAPE GENERAL
ARRANGEMENT

DATE: 03.08.19
SCALE: 1:200
DRAWN: AUG '19
CHECKED: A

P3000597 BA-BDP-01-XX-DR-L-09-11.01

Appendix B – TRICS Outputs

Calculation Reference: AUDIT-148301-190529-0502

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 02 - EMPLOYMENT
 Category : B - BUSINESS PARK
 MULTI-MODAL VEHICLES

Selected regions and areas:

02	SOUTH EAST	
	EX ESSEX	2 days
	SC SURREY	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
05	EAST MIDLANDS	
	LN LINCOLNSHIRE	1 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	1 days
	ST STAFFORDSHIRE	1 days

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

Secondary Filtering selection:

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

Parameter: Gross floor area
 Actual Range: 1500 to 132084 (units: sqm)
 Range Selected by User: 975 to 132084 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/11 to 26/06/18

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:

Tuesday	1 days
Wednesday	2 days
Thursday	2 days
Friday	3 days

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

Selected survey types:

Manual count	8 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 undertaken using machines.

Selected Locations:

Edge of Town Centre	2
Edge of Town	6

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	4
Commercial Zone	2
No Sub Category	2

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

Secondary Filtering selection:

Use Class:

B1	8 days
----	--------

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

Population within 1 mile:

5,001 to 10,000	3 days
10,001 to 15,000	4 days
15,001 to 20,000	1 days

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

Population within 5 miles:

25,001 to 50,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	6 days

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

Car ownership within 5 miles:

0.6 to 1.0	2 days
1.1 to 1.5	6 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:

Yes	2 days
No	6 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	8 days
-----------------	--------

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

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL 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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	23446	0.632	8	23446	0.083	8	23446	0.715
08:00 - 09:00	8	23446	1.151	8	23446	0.142	8	23446	1.293
09:00 - 10:00	8	23446	0.411	8	23446	0.141	8	23446	0.552
10:00 - 11:00	8	23446	0.165	8	23446	0.123	8	23446	0.288
11:00 - 12:00	8	23446	0.140	8	23446	0.125	8	23446	0.265
12:00 - 13:00	8	23446	0.178	8	23446	0.206	8	23446	0.384
13:00 - 14:00	8	23446	0.194	8	23446	0.161	8	23446	0.355
14:00 - 15:00	8	23446	0.143	8	23446	0.167	8	23446	0.310
15:00 - 16:00	8	23446	0.101	8	23446	0.242	8	23446	0.343
16:00 - 17:00	8	23446	0.096	8	23446	0.424	8	23446	0.520
17:00 - 18:00	8	23446	0.081	8	23446	0.811	8	23446	0.892
18:00 - 19:00	8	23446	0.048	8	23446	0.663	8	23446	0.711
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			3.340			3.288			6.628

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:	1500 - 132084 (units: sqm)
Survey date range:	01/01/11 - 26/06/18
Number of weekdays (Monday-Friday):	8
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 shown. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL CYCLISTS

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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	23446	0.054	8	23446	0.010	8	23446	0.064
08:00 - 09:00	8	23446	0.143	8	23446	0.018	8	23446	0.161
09:00 - 10:00	8	23446	0.093	8	23446	0.019	8	23446	0.112
10:00 - 11:00	8	23446	0.042	8	23446	0.020	8	23446	0.062
11:00 - 12:00	8	23446	0.025	8	23446	0.017	8	23446	0.042
12:00 - 13:00	8	23446	0.029	8	23446	0.031	8	23446	0.060
13:00 - 14:00	8	23446	0.031	8	23446	0.027	8	23446	0.058
14:00 - 15:00	8	23446	0.018	8	23446	0.022	8	23446	0.040
15:00 - 16:00	8	23446	0.026	8	23446	0.042	8	23446	0.068
16:00 - 17:00	8	23446	0.026	8	23446	0.076	8	23446	0.102
17:00 - 18:00	8	23446	0.024	8	23446	0.108	8	23446	0.132
18:00 - 19:00	8	23446	0.020	8	23446	0.075	8	23446	0.095
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.531			0.465			0.996

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.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL PEDESTRIANS

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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	23446	0.044	8	23446	0.008	8	23446	0.052
08:00 - 09:00	8	23446	0.114	8	23446	0.027	8	23446	0.141
09:00 - 10:00	8	23446	0.054	8	23446	0.021	8	23446	0.075
10:00 - 11:00	8	23446	0.036	8	23446	0.025	8	23446	0.061
11:00 - 12:00	8	23446	0.025	8	23446	0.019	8	23446	0.044
12:00 - 13:00	8	23446	0.060	8	23446	0.065	8	23446	0.125
13:00 - 14:00	8	23446	0.067	8	23446	0.056	8	23446	0.123
14:00 - 15:00	8	23446	0.022	8	23446	0.018	8	23446	0.040
15:00 - 16:00	8	23446	0.022	8	23446	0.027	8	23446	0.049
16:00 - 17:00	8	23446	0.032	8	23446	0.062	8	23446	0.094
17:00 - 18:00	8	23446	0.030	8	23446	0.119	8	23446	0.149
18:00 - 19:00	8	23446	0.011	8	23446	0.046	8	23446	0.057
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.517			0.493			1.010

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.

TRIP RATE for Land Use 02 - EMPLOYMENT/B - BUSINESS PARK

MULTI-MODAL PUBLIC TRANSPORT USERS

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 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	23446	0.044	8	23446	0.003	8	23446	0.047
08:00 - 09:00	8	23446	0.093	8	23446	0.047	8	23446	0.140
09:00 - 10:00	8	23446	0.043	8	23446	0.004	8	23446	0.047
10:00 - 11:00	8	23446	0.011	8	23446	0.012	8	23446	0.023
11:00 - 12:00	8	23446	0.007	8	23446	0.017	8	23446	0.024
12:00 - 13:00	8	23446	0.015	8	23446	0.010	8	23446	0.025
13:00 - 14:00	8	23446	0.031	8	23446	0.013	8	23446	0.044
14:00 - 15:00	8	23446	0.011	8	23446	0.011	8	23446	0.022
15:00 - 16:00	8	23446	0.004	8	23446	0.015	8	23446	0.019
16:00 - 17:00	8	23446	0.006	8	23446	0.041	8	23446	0.047
17:00 - 18:00	8	23446	0.005	8	23446	0.059	8	23446	0.064
18:00 - 19:00	8	23446	0.005	8	23446	0.023	8	23446	0.028
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.275			0.255			0.530

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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