



Environmental Statement Appendices

Chorlton Precinct, Manchester

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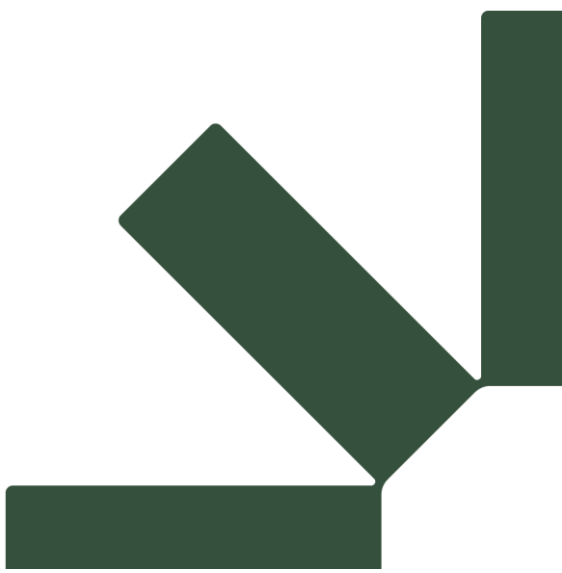
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Appendices

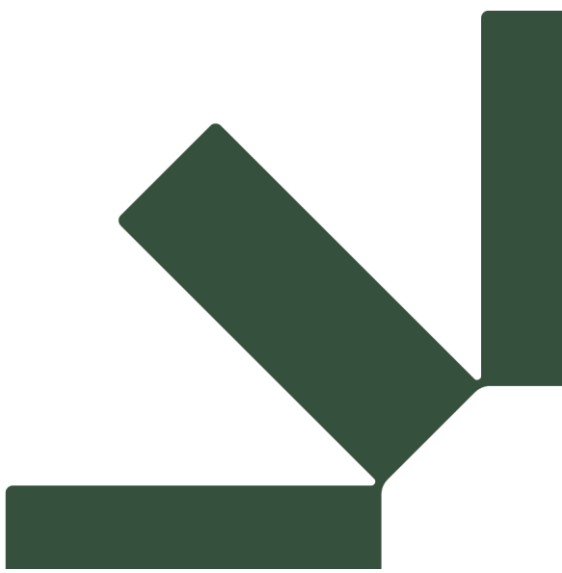
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Appendix 1A SLR's EIA Quality Mark Certificates

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Appendix 1A SLR's EIA Quality Mark Certificates

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This is to certify that

SLR Consulting Ltd

are a member of the

EIA Quality Mark

for the registration period covering

18th April 2024 – 17th April 2025 *

***Subject to meeting the requirements of registration**





Appendix 1B Screening Request

*SLR



Appendix 1B Screening Request

*SLR



Request for an EIA Screening Opinion

Chorlton Precinct

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Basis of Report

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Appendices

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Acronyms and Abbreviations

Abbreviation	Definition
AADT	Annual Average Daily Traffic
ALC	Agricultural Land Classification
AONB	Area of Outstanding Natural Beauty (also called National Landscapes)
AQMA	Air Quality Management Area
AQO	Air Quality Objective
ATC	Automatic Traffic Count
BESS	Battery Energy Storage Scheme
BMV	Best and Most Versatile Agricultural Land
BRE	Building Research Establishment
CEMP	Construction Environmental Management Plan
CFD	Computational Fluid Dynamics
DAS	Design & Access Statement
DMP	Demolition Management Plan
EA	Environment Agency
EclA	Ecological Impact Assessment
ECoW	Ecological Clerk of Works
EIA	Environmental Impact Assessment
ES	Environmental Statement
ESIA	Environmental and Social Impact Assessment
EV	Electric Vehicle
FRA	Flood Risk Assessment
GLTA	Ground Level Tree Assessment
GLVIA	Guidelines for Landscape and Visual Impact Assessment
GMAL	Greater Manchester Accessibility Level
HEDBA	Historic Environment Desk Based Assessment
HMMP	Habitat Management and Monitoring Plan
HRA	Habitat Regulations Assessment
IAQM	Institute of Air Quality Management
IEMA	Institute of Environmental Management and Assessment
LDDC	London Docklands Development Corporation
LPA	Local Planning Authority
LVIA	Landscape and Visual Impact Assessment
MCC	Manchester City Council
PEA	Preliminary Ecological Appraisal



Abbreviation	Definition
POC	Point of Connection
PPG	Planning Practice Guidance
PRA	Preliminary Roost Assessment
PV	Photovoltaics
SAC	Special Area of Conservation
SFRA	Strategic Flood Risk Assessment
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SuDS	Sustainable Drainage System
TA	Transport Assessment
TCA	Townscape Character Area
TVIA	Townscape and Visual Impact Assessment
UU	United Utilities
VSC	Vertical Sky Component
WHS	World Heritage Site
ZTV	Zone of Theoretical Visibility



1.0 Introduction

SLR Consulting was commissioned by CBRE Limited on behalf of PJ Livesey Homes (6) Limited (the 'Applicant') to assist Manchester City Council (MCC) in determining whether proposals for a residential-led mixed-use redevelopment (the 'Proposed Development'), on land at Chorlton Precinct, Chorlton-cum-Hardy, Manchester (the 'Application Site'), would require an Environmental Impact Assessment (EIA) as defined within the Town and Country Planning (Environmental Impact Assessment Regulations) 2017 (as amended) (the 'EIA Regulations').

Whilst EIA Screening is not a mandatory step in the EIA process, the EIA Regulations provide an opportunity for an Applicant to request the formal opinion of the planning authority (an 'EIA Screening Opinion') on whether the Proposed Development is likely to result in significant environmental effects, and as such would be considered to be 'EIA Development' and require the submission of an Environmental Statement (ES) as part of any future planning application.

This Request for an EIA Screening Opinion makes appropriate reference to the criteria set out in Schedule 3 of the EIA Regulations, and the clarifications given in the EIA Planning Practice Guidance (May, 2020)¹. In accordance with the procedure set out in the EIA Regulations, this request for an EIA Screening Opinion includes the following information:

- a plan sufficient to identify the land (**Figure 1**);
- a description of the location of the development, with particular regard to the sensitivity of the geographical areas likely to be affected (**Section 2.0**);
- a description of the development, including its physical characteristics (**Section 3.0**);
- a description of the aspects of the environment likely to be significantly affected by the development (**Sections 4.0 and 5.0**);
- a description of the likely significant effects of the development on the environment resulting from expected residues and emissions, and the use of natural resources (**Section 5.0**);
- such other information or representations as the person making the request may wish to provide or make, including any features of the proposed development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment (**Sections 4.0 and 5.0**).
- conclusions on the potential of the development to result in significant environmental effects (**Section 6.0**).

¹ <https://www.gov.uk/guidance/environmental-impact-assessment>



2.0 Application Site and Surrounds

2.1 Description of the Application Site

Chorton Precinct is located in Chorton-cum-Hardy, approximately 4.5km south-west of Manchester city centre. The Application Site covers approximately 1.27 hectares of land which currently comprises Chorton Cross shopping centre, the 8-storey Chorton Square (Graeme House) office block and The Square car park (providing 190 surface-level car parking spaces). The office block and all shops, with the exception of Costa (which is excluded from the application redline and is to remain in situ), are currently vacant. The shopping centre was built in 1973 and Graeme House was built in 1971. The buildings have a dated appearance and have reached the end of their economic life.

A site location plan is provided in **Figure A**.

The Application Site is bound by Barlow Moor Road to the east, Wilbraham Road (A6010) to the south, properties on Oswald Road to the west and Nicholas Road to the north. Manchester Road passes through the middle of the site, connecting Wilbraham Road to Nicholas Road. This route passes through the existing surface car park and is not public highway. The topography of the site is relatively flat and is generally well-enclosed by surrounding buildings.

The Chorton Precinct Development Framework (2017) describes the constraints of the existing site, which include a lack of retail frontage onto Manchester Road, poor pedestrian permeability and Manchester Road routing through the site. Opportunities noted include the creation of a positive residential frontage to the west and east of the site as well as enhanced pedestrian access and an attractive public realm.

The Application Site does not lie within any environmentally designated areas (e.g. Conservation Areas, Sites of Special Scientific Interest (SSSIs) or Air Quality Management Areas (AQMAs)), though it does adjoin the Wilbraham Road/Edge Lane Conservation Area along its western edge. Further information is provided in Section 5.0 of this Request.

2.2 Description of the land in the vicinity of the Application Site

The Application Site is situated within a dense urban context, which is inherently commercial and residential in character (predominantly 3-4 storeys), comprising a mix of late-19th century terraced commercial premises to the south and east, smaller residential dwellings to the west, and larger institutional buildings to the north. The tallest building in the area is Graeme House, located within the Application Site, which rising to 8-9 storeys.



3.0 The Proposed Development

3.1 Demolition Works

A separate Prior Notice for Demolition submission (LPA ref. 141706/DEM/24) has been made to Manchester City Council (MCC), as local planning authority, to confirm that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights.

The submission is informed by a Demolition Management Plan (DMP), prepared by the proposed demolition contractor, which sets out the proposed demolition methodology and mitigation measures to minimise impacts on surrounding sensitive (primarily residential) receptors. Subject to the notice being approved (7th January 2025 target determination date) then demolition works are intended to commence in short order thereafter (subject to site mobilisation etc.) and will take circa 20 weeks to complete.

3.2 Nature of the Proposed Development

The proposed description of development is as follows:

Application for Full Planning Permission for the erection of 6no. residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses; together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.

The Proposed Development comprises the following:

- Demolition of existing buildings within the redline boundary (as above - noting that a Prior Notice for Demolition submission has already been made to Manchester City Council as local planning authority – ref. 141706/DEM/2024);
- 262 new homes across 6 no. residential buildings with associated car parking (surface and subterranean); and
- 973sqm of ground floor commercial units (Use Class E (a-e));
- Treatment to party walls to retained buildings adjacent to the redline boundary (including the Costa unit fronting Wilbraham Road);
- Hard/soft landscaping works; and
- Highways/access alterations (including part closure of Manchester Road to create an active travel route).

The proposed masterplan is provided in **Figure B**.

Blocks A, B and C are triangular in form, fronting onto Barlow Moor Road, Nicolas Road and Manchester Road. The northern most block is 10 storeys, stepping down southwards to 7/8 storeys. The ground floor includes retail fronting onto Barlow Moor Road, with residential above. Parking is within the central core in the basement and lower ground floor, with a large communal podium garden located at level 1 and variety of other smaller roof terraces and balconies provided for the residents of blocks A, B and C.

Blocks D and E are located within the western part of the site and overlook the pedestrianised greenway running along Manchester Road. The buildings are 6 storeys tall. Parking is located at ground floor level, to the west of block D. Rain gardens, tree and shrub planting is proposed within the car parks and around the buildings.

Block F is located within the southern part of the site to front onto Wilbraham Road. The building is 4 storeys with retail fronting onto the road and residential above. A more intimate



Makers Market courtyard space is proposed to the side and rear of the existing Costa Coffee unit off Wilbraham Road to provide space for smaller independent businesses.

Vehicular access would be from the existing access off Manchester Road with a service access off Nicolas Road.

A linear green space is proposed along Barlow Moor Road to include informal spill out spaces for tables and chairs, naturalistic planting beds to screen the road and new tree planting to add to the existing retained mature trees.

To the southern end of the Barlow Moor Road linear green space, a quieter more contemplative 'Pocket Park' space for local residents and workers is proposed. A linear green space is proposed along Nicolas Road to include shrub planting below the existing retained trees. A publicly accessible pedestrianised 'greenway' route through the site would be created along Manchester Road, including woodland inspired planting, rain gardens and informal natural 'play on the way' features. To the northern end of Manchester Road a pocket square will be created to encourage people to dwell and provide a focal space for Chorton residents.

Building materials are chosen to reflect the local character, with the use of red brick, slate and accent details. The building façades include bays to reflect the local vernacular.

3.3 Embedded (Primary) Mitigation

The design has been developed with inputs from the technical consultant team and therefore includes embedded (primary) mitigation in order to avoid and/or reduce adverse environmental effects:

- Energy efficient design through inclusion of air source heat pumps and photovoltaic panels, with no fossil fuels;
- Providing EV parking, active travel routes and cycle parking to maximise non-car accessibility;
- The proposals have been designed to mitigate impacts to the character and appearance of the conservation area as far as possible. This has been achieved through application of heritage lead design, specifically the adoption of local architectural details;
- Developing the proposed site masterplan in accordance with the Arboricultural Impact Assessment findings in order to limit overall loss and protect retained trees through the construction process;
- A sensitive lighting strategy has been implemented in order to direct lighting levels away from trees with roost potential and other retained trees on-site where possible. These measures are to be incorporated in a CEMP, secured via a suitably worded planning condition;
- The drainage strategy includes SuDS features and is designed to discharge to the combined sewer network at greenfield rates, with an appropriate allowance made for climate change;
- Higher specification glazing has been included to control internal noise levels across the Proposed Development; and
- To enhance the site for roosting bats, bat boxes (Schwegler 1ft or equivalent) are recommended have been incorporated within the final scheme.



3.4 Known cumulative developments

Known cumulative developments in the surrounding area have been discussed with MCC and are shown in the table below.

Table 1: Known Cumulative Development

Planning Reference	Name	Proximity to Application Site	Description	Status
136791/FO/2023	Chorlton Leisure Centre	~ 300m E	Erection of 2 no. 5 storey residential buildings comprising 50 no. dwellings (Class C3) with ancillary communal facilities; and, associated access, car parking, bin store, amenity space and landscaping, following the demolition of the existing building	Approved
136878/FO/2022	4b Albany Road	~ 250m NE	Erection of a 4 storey building to form 40 no. residential apartments, together with cycle and car parking, bin store, landscaping and boundary treatments following demolition of existing buildings.	Approved
132708/FO/2022	Chorlton Irish Club	~ 400m S	Erection of a part three, part four storey development to provide 29 (10 x one and 18 x two bed and 1 x studio) residential units with associated vehicular and cycle parking, refuse store and landscaping	Approved
135604/FO/2022	Land to the Rear of 345 Wilbraham Road	~ 150m E	Erection of a 65 dwellings (Use Class C3(a)), with associated infrastructure, including landscaping, ecological mitigation, drainage and car parking, access from Wilbraham Road, and demolition of garage to the rear of 354 Wilbraham Road	Approved

Consideration of cumulative schemes is typically limited to those within 500m of the Application Site that are themselves above the relevant screening thresholds and criteria for category 10(b) *urban development projects*, namely those that:

- include more than 1 hectare / 10,000 sqm of development that are not houses; or
- include more than 150 houses; or
- cover an area of more than 5 hectares.

None of these schemes are above the relevant screening thresholds and criteria for category 10(b) *urban development projects*, as set out in the EIA Regulations.



4.0 The EIA Screening Process

4.1 Overview in the context of the EIA Regulations

The EIA Regulations are applied to certain types of development that are likely to have significant effects on the environment. Various development types are categorised in the EIA Regulations as Schedule 1 or Schedule 2 developments.

The first stage of the EIA screening process is to determine whether the Proposed Development is of a type described under Schedule 1 or Schedule 2 of the EIA Regulations. Development described under Schedule 1 must be subject to EIA. Development described under Schedule 2 may be subject to EIA, depending on whether it is likely to have significant effects on the environment. EIA is only intended to be required for a small number of development proposals where significant environmental effects are likely.

In the case of Schedule 2 projects, the location of the development must be examined to determine if it is in a sensitive area. This is defined in the EIA Regulations as including:

- Sites of Special Scientific Interest (SSSIs);
- Land under nature conservation orders and international conservation sites (e.g. Special Protection Areas, Special Areas of Conservation and Ramsar sites);
- National Parks (including the Broads);
- Areas of Outstanding Natural Beauty (AONBs) (also called National Landscapes);
- World Heritage Sites; and
- Scheduled Monuments.

If the Application Site is classed as being within a sensitive area then the screening criteria and thresholds in Schedule 2 are not applicable and the Proposed Development is examined to determine whether it is likely to have significant effects on the environment. If so, the development is an 'EIA Development' and an ES is required.

If the development is not in a sensitive area, the next stage in the screening process is to assess whether the development proposals meet or exceed any of the applicable thresholds and criteria for that particular type / class of development. These thresholds and criteria are related to the attributes (e.g. size of the Application Site, production / output, capacity of a facility) of a type of development, and not exceeding or meeting them is a strong indication that an EIA is not required².

If the development exceeds or meets any of the applicable thresholds and criteria, then it is termed a Schedule 2 development, and the next stage is to assess if it is likely to have significant effects on the environment.

This Request for an EIA Screening Opinion follows the above screening process as it applies to the Proposed Development, to assist the planning authority in determining whether it is an EIA development. The flow chart from the EIA Planning Practice Guidance (PPG) (2014, as amended 2020) has been used as a guide to the various stages of the process.

² Regulation 5(7) of the EIA Regulations enables the Secretary of State to direct that a development described in Schedule 2 is EIA development even if it falls below the exclusive thresholds. The local authority or a member of the public is able to make a request to the Secretary of State for such a direction.



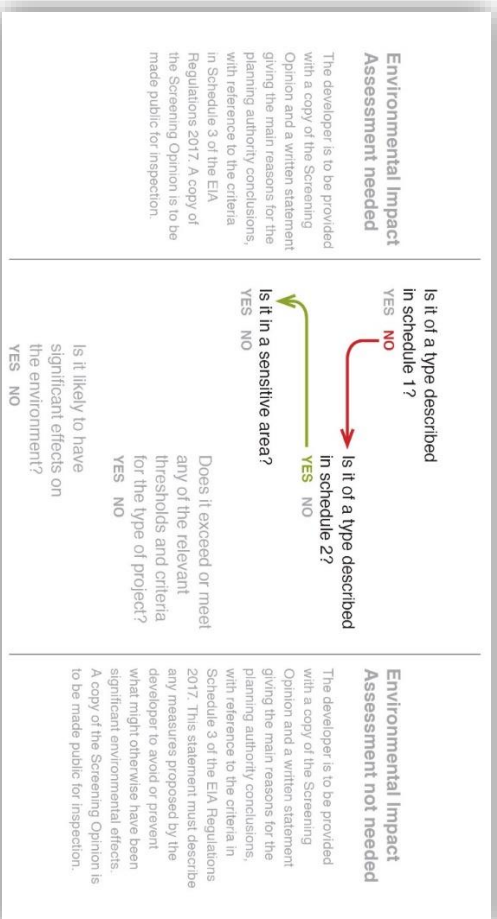
4.2 EIA Schedule 1

The Proposed Development is not listed under Schedule 1 of the EIA Regulations. Therefore, the requirement for EIA is not mandatory.

4.3 EIA Schedule 2

The Proposed Development is of a type listed under Schedule 2 of the EIA Regulations, falling under category 10(b) *urban development projects*.

Where development is of a type described in Schedule 2, an EIA is more likely to be required if the site is located in a sensitive area, or the scale of the development meets or exceeds the applicable thresholds and criteria.

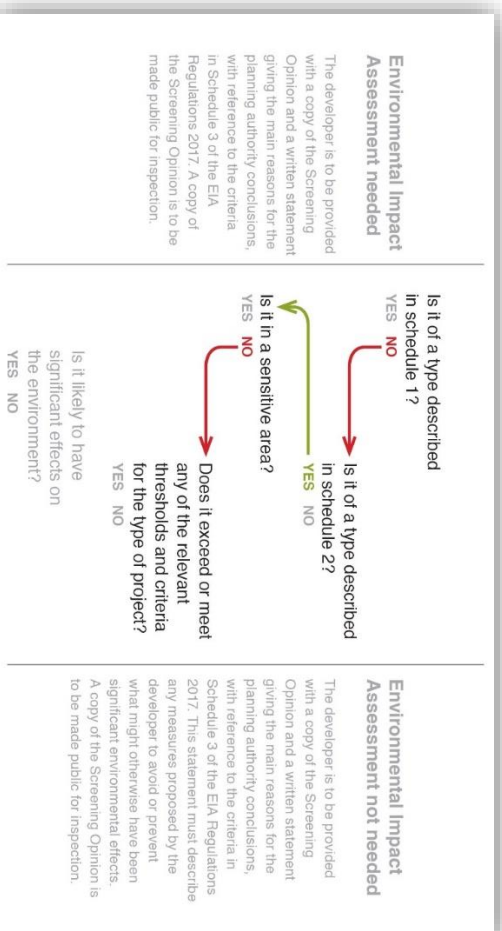


4.4 Sensitive Areas

The Application Site is not located within a 'sensitive area', as defined in the EIA Regulations.

The requirement for EIA must now consider whether the Proposed Development exceeds applicable thresholds within Schedule 2 and is likely to have significant effects on the environment.





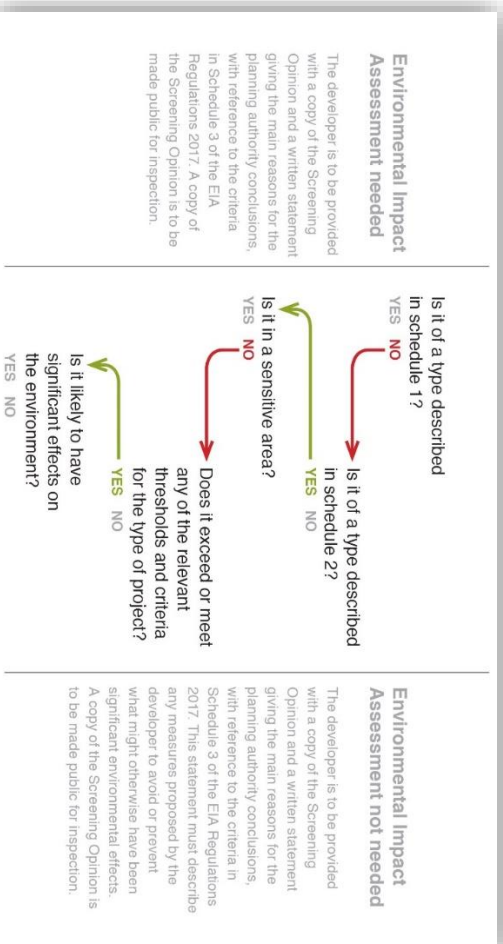
4.5 Applicable Thresholds

The Proposed Development falls within Schedule 2, Category 10(b) *Urban development projects, including the construction of shopping centres and car parks, sports stadiums, leisure centres and multiplex cinemas.*

The applicable thresholds and criteria for Category 10(b) projects are:

- The development includes more than 1 hectare of urban development which is not dwellinghouse development; or
- The development includes more than 150 dwellings; or
- The overall area of the development exceeds 5 hectares.

The Proposed Development meets threshold (ii) and the determination of whether EIA is required will therefore rest on the likelihood of significant environmental effects.



5.0 Assessment of Likely Environmental Effects

5.1 Comparison with the PPG

The EIA Planning Practice Guidance provides further indicative criteria and thresholds that can be helpful in determining whether significant environmental effects are likely for the Proposed Development.

For development classified under Category 10(b) in Schedule 2, where a site has not been previously intensively developed, the PPG suggests that EIA is more likely where:

- i. The area of the scheme is more than 5 hectares; or*
- ii. It would provide a total of more than 10,000 m² of new commercial floorspace; or*
- iii. The development would have significant urbanising effects in a previously non-urbanised area (e.g. a new development of more than 1,000 dwellings).*

The Application Site has been intensively developed in the past and is within an urbanised area. The Proposed Development does not meet any of the indicative criteria or thresholds set out in the PPG, as listed above.

5.2 Consideration of likely environmental effects

5.2.1 Traffic and Transport

Civic Engineers have been commissioned by the Applicant to prepare a Transport Assessment and Travel Plan. Civic Engineers have provided traffic data to inform the air quality and noise impact assessments summarised later in this section.

Chorlton Precinct is located within Chorlton district centre and sits at the heart of a walkable neighbourhood. Over 50% of Chorlton residents travel to work by modes other than the private car.

On the east side of the Application Site, new segregated cycleways have been recently introduced (February 2024) on both sides of Barlow Moor Road. These lead to a new CYCLOPS signalised junction at the intersection of Barlow Moor Road and Wilbraham Road. To the west of this junction there are short lengths of segregated cycleway along Wilbraham Road to link with the CYCLOPS facility. Further west the cycle provision comprises on-road painted cycle lanes that are occasionally interrupted by loading bays and/or bus stops.

Served by frequent bus and tram services, the site is in an area with a 'Greater Manchester Accessibility Level' (GMAL) score of 6, which is the third-highest level achievable. GMALs (rated 1-8, with 1 the lowest and 8 the highest) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester Local Link (flexible transport service), taking into account walk access time and service availability.

The Application Site is bisected by Manchester Road, which links to Nicolas Road to the north of the site, which in turn links to Oswald Road that borders the west of the site, and Barlow Moor Road to the east. It is well-connected to the surrounding highway network.

Directly south of the site is Wilbraham Road (A6010), which transects southern Manchester from East to West, connecting to the A5145 in Stretford to the West and Moseley Road in Fallowfield to the East. The southern section of Manchester Road is public highway until the entry to the existing car park. There is a thin line of public highway on the cobbles which run east-to-west parallel to Wilbraham Road, east of Manchester Road. The carriageway along this route is not public highway, nor is the northern section of Manchester Road. Wilbraham



Road junctions with Barlow Moor Road immediately southeast of the site which links to the residential roads surrounding the site.

The proposals provide a total of 164 private residential parking spaces (63% ratio provision). There are 12 public car parking spaces provided on-site (8 standard, 2 accessible and 2 EV charging spaces) to the south-west, accessed from Manchester Road. A further 6 private spaces are provided for retail tenants.

The North Block will be serviced from Nicholas Road, using the existing loading bay on the north side of the road. The West and East blocks will be serviced via Manchester Road, accessed from Wilbraham Road. Vehicles can use a proposed delivery bay to deliver to the residential entrances or the designated service yard in the south east of the site for the retail elements. The refuse collection point has been located to minimise reversing.

A comparison of the net trips generated by the Proposed Development, over and above those generated by the historic use of the site is shown in the table below. The expected number of trips has been informed by the TRICS database.

Table 2: Net Trips

	AM Peak - In	AM Peak - Out	AM Peak - Total	PM Peak - In	PM Peak - Out	PM Peak - Total
Extant trips calculated with parking survey data						
Extant	38	6	44	10	50	60
Proposed	19	48	67	42	31	76
Net	-19	42	24	32	-19	13

The net trips generated by the site are the highest in the AM peak, where an increase of 24 trips is calculated. This increase in vehicles is negligible and will not have a significant impact on the surrounding highway network.

The largest calculated increase in 24 hour Annual Average Daily Traffic (AADT) flows is 161 along Barlow Moor Road. This equates to an increase of 2.04% in traffic flows in 2028 under the 'do something' scenario. The largest calculated increase of HGV flows is 0.07% along Wilbraham Road in 2028 under the 'do something' scenario. These changes are not large enough to require detailed considerations under the Environmental Assessment of Traffic and Movement guidelines (IEMA, 2023).

No significant environmental effects are considered likely during construction or operation.

5.2.2 Air Quality

Redmore Environmental have been commissioned by the Applicant to prepare an Air Quality Assessment.

The Application Site lies partially within the Greater Manchester Combined Authority Air Quality Management Area (AQMA), which has been declared on the basis that annual mean concentrations of NO₂ are above the Air Quality Objective (AQO) of 40ug/m3. MCC has concluded that concentrations of all other pollutants are currently below the relevant AQOs.

Monitoring of pollutant concentrations is undertaken by MCC throughout their area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO₂ concentrations recorded in the vicinity of the development, as provided in the 'Greater Manchester LAQM and CAP NO2 Diffusion Tube Results, 2011-2023' are shown below:



Table 3: Air Quality Monitoring Data

Monitoring Site	Monitored NO2 Concentration (2021)	Monitored NO2 Concentration (2022)	Monitored NO2 Concentration (2023)
TRF2	Trafford A56	23	24
CAP_TRAF_010	A56 Chester Road	-	23.9
CAP_TRAF_011	A56 Chester Road	25.2	31.6
CAP_TRAF_012	A56 Chester Road	22.2	29.2
CAP_TRAF_013	A56 Chester Road	37.1	40.6
CAP_TRAF_014	A56 Chester Road	25.2	27.1
CAP_TRAF_015	A56 Chester Road	30.4	30.0
CAP_TRAF_023	A56 Chester Road	-	30.6
CAP_TRAF_024	A56 Chester Road	-	31.1

Sensitive locations were identified from a desk-top study, with receptor heights included in order to take account of less-sensitive land uses, such as the proposed commercial/retail uses at ground floor level.

Table 4: Sensitive Receptors – Air Quality

Receptor	National Grid Reference – X	National Grid Reference – Y	Height (m)
R1 Residential - Manchester Road	381628.5	394171.3	3.0
R2 Residential - Manchester Road	381644.0	394120.1	3.0
R3 Residential - Wilbraham Road	381703.4	393993.7	3.0
R4 Residential - Wilbraham Road	381642.9	393994.0	3.0
R5 Residential - Wilbraham Road	381519.7	394026.8	3.0
R6 Residential - Wilbraham Road	381507.4	394001.6	3.0
R7 Educational - Oswald Road Primary School	381558.8	394232.9	1.5
R8 Residential - Barlow Moor Road	381738.4	393928.5	3.0
R9 Residential - Barlow Moor Road	381764.1	393882.5	3.0
R10 Residential - Wilbraham Road	381705.9	394015.7	3.0
R11 Residential - Wilbraham Road	381755.3	393993.5	3.0



Receptor		National Grid Reference – X	National Grid Reference – Y	Height (m)
R12	Residential - Wilbraham Road	381776.6	394021.9	3.0

Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of demolition, earthworks, construction and trackout activities. It is considered that the use of the identified site-specific control measures would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level. These measures are set out in the CEMP which is to be submitted with the planning application and subject to a planning condition requiring a detailed plan is submitted prior to commencement of any construction works on site (based on demolition works being controlled via the Demolition Management Plan (DMP) submitted with the pending Prior Notice for Demolition.

Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the development. Dispersion modelling was therefore undertaken in order to predict pollutant concentrations at sensitive locations as a result of emissions from the local highway network both with and without the development in place. Results were subsequently verified using local monitoring data.

Annual mean NO₂ concentrations were predicted to be below the AQO of 40µg/m³ at the proposed development. The maximum level was 21.38µg/m³.

Annual mean PM₁₀ concentrations were predicted to be below the AQO of 40µg/m³ at the proposed development. The maximum level was 12.76µg/m³.

Annual mean PM_{2.5} concentrations were predicted to be below the Concentration Target of 10µg/m³ at the proposed development. The maximum level was 7.49µg/m³.

The greatest change in pollutant concentrations were all modelled at Receptor R2:

Table 5: Summary of Modelled Pollutant Concentrations – Receptor R2

Pollutant	Receptor	Predicted Annual Mean Concentration	Change	Impact Significance
NO ₂	R2	16.25ug/m ³	0.23ug/m ³	Negligible
PM ₁₀	R2	11.42ug/m ³	0.07ug/m ³	Negligible
PM _{2.5}	R2	6.92ug/m ³	0.04ug/m ³	Negligible

Institute of Air Quality Management (IAQM) guidance³ states that only if the impact is greater than slight, the effect is considered significant.

No significant environmental effects are considered likely during construction or operation.

5.2.3 Noise and Vibration

E3P have been commissioned by the Applicant to prepare a Noise Impact Assessment.

Three unattended noise surveys were undertaken during a typical weekday and weekend time period to quantify noise levels across the site. A survey of breakout sound from a nearby bar has also been conducted, however no audible breakout was observed. Furthermore, fixed plant measurements have been conducted for an existing kitchen (Yara restaurant) extract fan to the south of the proposed development. These surveys have been used to inform the modelling of construction and operational effects.

³ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017



To inform a worst-case assessment of construction activities, the assessment is based on the closest building being constructed to each respective receptor. As such, the average position to the closest building is used for the basis of the assessment for most receptors. Any works that take place closer to the receptor will be for a short period and an average, central position is considered robust.

Table 6: Pre-mitigation Construction Effects – Noise and Vibration

Receptor	Average Distance (m)	Average Construction Noise Levels (LAeq,10hrs)
R1 - Wilbraham Road	55	64.1dB
R2 – Doctors Surgery	45	76.8dB
R3 – Barlow Moor Road	85	71.5dB

Calculated unmitigated construction noise levels will exceed the applicable threshold value at R2. On this basis, it has been recommended that works are undertaken in accordance with Best Practicable Means, which are set out within the proposed DMP submitted with the Prior Notice/CEMP to be submitted with the planning application. Such measures include:

- Any compressors brought on to the Site to be silenced or sound reduced models fitted with acoustic enclosures.
- All pneumatic tools to be fitted with silencers or mufflers.
- Care to be taken when erecting or striking scaffolds to avoid impact noise from banging steel. All operatives undertaking such activities to be instructed on the importance of handling the scaffolds to reduce noise to a minimum.
- Most deliveries to be programmed to arrive during normal working hours only. Care to be taken when unloading vehicles to minimise noise. Delivery vehicles to be routed to minimise disturbance to residents. Delivery vehicles to be prohibited from waiting within or in the vicinity of the Site with their engines running.
- All plant items to be properly maintained and operated according to manufacturers' recommendations in such a manner as to avoid causing excessive noise.
- All plant to be sited so that the noise impact at nearby noise sensitive properties is minimised.
- Local hoarding, screens, or barriers to be erected as necessary to shield particularly noisy activities; and,
- Problems concerning noise from construction works can often be avoided by taking a considerate and neighbourly approach to relations with the residents. Works should only take place during given periods, e.g. during normal construction hours and not at night.

Table 7: Residual Construction Effects – Noise and Vibration

Receptor	Average Distance (m)	Average Construction Noise Levels (LAeq,10hrs)
R1 - Wilbraham Road	55	54.1dB – 59.1dB
R2 – Doctors Surgery	45	66.8dB – 71.8dB
R3 – Barlow Moor Road	85	61.5dB – 66.5dB

In terms of operational effects, EP3 have determined that certain facades require higher specification glazing to control internal noise levels across the development.

Operational and fixed plant noise limits have been set to control the impact of the new development upon existing residential receptors.



With mitigation measures in place, the assessment has shown that no adverse impact is predicted day or night at the identified receptors due to existing sound sources.

No significant environmental effects are considered likely during construction or operation.

5.2.4 Ecology and Biodiversity

Tyler Grange have been commissioned by the Applicant to prepare an Ecological Impact Assessment (EclA).

An extended Phase 1/UK Habitat Classification (UK Habs) survey, Preliminary Roost Assessment (PRA) and Ground Level Tree Assessment (GLTA) were undertaken initially on 10th August 2023, and updated on 25th July 2024.

Scattered trees are considered to be of local ecological importance, and as such, development proposals have retained trees where possible, and where not possible, trees loss has been mitigated through additional tree planting on-site (based on a 2:1 replacement ratio as per current planning policy guidance). An Arboricultural Method Statement (AMS) will also be adhered to during demolition and construction phases to protect retained trees on site. All other on-site habitats are of negligible ecological importance.

No bats were identified roosting within the on-site building during the 2023 or 2024 surveys, and therefore roosting bats are likely absent from the building and no further mitigation is required for bats prior to the demolition of the building. To enhance the site for roosting bats, bat boxes (Schwegler 1ft or equivalent) are recommended to be incorporated within the final scheme.

Trees, building and introduced shrub on site offer some potential for nesting bird species. As such, any removal of these habitats should be avoided during the nesting season (March to September inclusive) where possible. Should any of these habitats be cleared during the nesting bird season, pre-removal checks for nesting birds must be carried out by a suitably experienced Ecological Clerk of Works (ECOV), no more than 48 hours prior to the works commencing. Three bird boxes are recommended to be incorporated within scheme (expected to be secured via a suitably worded planning condition).

Given the locational context of the site and the proposed scheme, lack of connecting habitat and the distances involved between the site and all statutory and non-statutory sites (the closest being 770 m south-west), no adverse direct or indirect effects are anticipated, providing that pollution prevention measures are incorporated and secured through a Construction and Environmental Management Plan (CEMP).

The Statutory Biodiversity Metric calculated that the proposed development would result in a total net biodiversity unit gain of +0.52 habitat units equating to a net gain of 20.8%. Details of habitat establishment and long-term management will be provided through the production of a Habitat Management and Monitoring Plan (H MMP).

No significant environmental effects are considered likely during construction or operation.

5.2.5 Heritage

Lanpro have been commissioned by the Applicant to prepare a Historic Environment Desk-based Assessment (HEDBA). The HEDBA draws together the available archaeological, historic, topographic and land-use information in order to clarify the significance and archaeological potential of the Application Site and provides an assessment of the potential impacts that the Proposed Development could have on the setting and significance of built heritage assets.

There is the low potential for below-ground archaeological remains associated with agrarian activities during the medieval and post-medieval periods to be identified within the Application Site. The part of the Application Site east of the former route of Manchester



Road has likely been heavily truncated by the construction of Chorlton Precinct and Graeme House, and the potential for remains of the former villas and terraces to survive within this area are considered to be negligible-low. Additionally, the western half of the Application Site has been solely utilised as a car park, and it is considered that any ground works within this area will result in a moderate-high impact upon the significance of any below-ground remains that may survive within this area of the study site.

The Application Site is adjacent to the Wilbraham Road/Edge Lane Conservation Area. There are no listed buildings within the site boundary, however, there are six grade II listed buildings noted within the 500m study area – most notably The Lloyd and Platt Hotel (NHLE 1096127), Chorlton Library (NHLE 1414760) and the Former Temperance Billiard Hall (NHLE 1268311). The conservation area also includes a concentration of designated and non-designated heritage assets key to the character to the conservation area – the key ones being Wilbraham Road Former Conservative Club (KUB 03) and Spread-Eagle Hotel (KUB09).

The proposals have been designed to mitigate impacts to the character and appearance of the conservation area as far as possible. This has been achieved through application of heritage-led design, specifically the adoption of local architectural details. There will be a change in the current scale and massing of the site as well as its visibility from the conservation area. However, the breakup of the current scale and massing and likewise the stepping back of the development away from the conservation area is considered to mitigate any impact as it will respect the existing building line and not breach current scales. Furthermore, the proposed development will enhance the area with the reinstitution of Manchester Road through the site.

Lanpro conclude that there would be no harm to the significance of the Wilbraham Road/Edge Lane Conservation Area and adjacent designated and non-designated heritage assets. In their view, the proposals will (in respect of these assets) meet the objectives of Paragraphs 205 and 206 of the NPPF requirements of the s.66 (1) and s.72 of The Planning (Listed Buildings and Conservation Areas) Act 1990. The assessment also concludes that there would be beneficial elements resulting from the proposals.

No significant environmental effects are considered likely during construction or operation.

5.2.6 Townscape and Visual Impact

Randall Thorp have been commissioned by the Applicant to prepare a Townscape and Visual Impact Assessment. The assessment has been completed in accordance with the Guidelines for Landscape and Visual Assessment Third Edition (GLVIA).

The Application Site is not covered by any statutory landscape or townscape planning designations, is not designated for its landscape value and would not meet the criteria of 'Valued Landscape' in terms of NPPF. It is located outside, although adjoining, the Wilbraham Road/Edge Lane Conservation Area on its western edge.

The Application Site and study area are situated within the National Character Area (NCA) 55 Manchester Conurbation which includes the land focused around the principal commercial, financial, retail and cultural centres of Manchester, Salford and Stockport. The NCA description states: "The Manchester Conurbation is characterised by dense urban and industrial development, with 82 per cent of the area being classed as urban".

The Proposed Development would not be at odds with the land use and townscape characteristics within the area, and there would be no perceptible effect upon the wider character as a result of changes within the site.

A summary of the assessment on townscape character and visual receptors is provided in the table below.



Table 8: Summary of TVIA

Receptor	Sensitivity of Receptor	Magnitude of Effect	Residual Effect
Chorlton District Centre TCA	Low-Medium	Medium /Beneficial	Moderate Beneficial
Wilbraham Road/Edge Lane Conservation Area TCA	Medium	Low - Negligible/ Beneficial	Minor Beneficial - Negligible
Terraced and Higher Density Housing TCA	Low-Medium	Low – Negligible /Beneficial	Minor Beneficial - Negligible
Landscape features of the site	Medium	Medium /Beneficial	Moderate Beneficial
A6010 Wilbraham Road VP 1.1	Medium	Low/Neutral	Neutral
A6010 Wilbraham Road VP 1.2	Medium	Low/Neutral	Neutral
A6010 Wilbraham Road VP 1.3	Medium	Low/Beneficial	Minor Beneficial
A6010 Wilbraham Road VP 1.4	Medium	Low/Beneficial	Minor Beneficial
A6010 Wilbraham Road VP 1.5	Medium	Low/Beneficial	Minor Beneficial
A6010 Wilbraham Road VP 1.6	Medium	Negligible	Negligible
A6010 Wilbraham Road VP 1.7	Medium	Negligible	Negligible
Barlow Moor Road/Manchester Road VP 2.1	Medium	Low/Neutral	Neutral
Barlow Moor Road/Manchester Road VP 2.2	Medium	Medium/Beneficial	Moderate Beneficial
Barlow Moor Road/Manchester Road VP 2.3	Medium	Medium/Beneficial	Moderate Beneficial
Barlow Moor Road/Manchester Road VP 2.4	Medium	Low/Neutral	Neutral
Barlow Moor Road/Manchester Road VP 2.5	Medium	Negligible	Negligible
Nicolas Road VP 3.1	Low-Medium	Low/Neutral	Neutral
Nicolas Road VP 3.2	Low-Medium	Low/Neutral	Neutral
Nicolas Road VP 3.3	Low-Medium	Low/Neutral	Neutral
Nicolas Road VP 3.4	Low-Medium	Medium/Beneficial	Moderate Beneficial
Manchester Road VP 4	Low-Medium	Low/Beneficial	Minor Beneficial
Longford Road VP 5	Low-Medium	Low/Neutral	Neutral



Receptor	Sensitivity of Receptor	Magnitude of Effect	Residual Effect
Selborne Road/ Keppel Road VP 6.1	Low-Medium	Low/Beneficial	Minor Beneficial
Selborne Road/ Keppel Road VP 6.2	Low-Medium	Low/Neutral	Neutral
Warwick Road/ Albany Road VP 7.1	Low-Medium	Low/Neutral	Neutral
Warwick Road/ Albany Road VP 7.2	Low-Medium	Low/Neutral	Neutral
Brundretts Road VP 8.1	Low-Medium	Low/Beneficial	Minor Beneficial
Brundretts Road VP 8.2	Low-Medium	Low/Neutral	Neutral
Whitelow Road/ High Lane VP 9.1	Medium	Low/Neutral	Neutral
Whitelow Road/ High Lane VP 9.2	Medium	Negligible	Negligible

No significant environmental effects are considered likely during construction or operation.

5.2.7 Ground Conditions

Civic Earth have been commissioned by the Applicant to prepare a Phase 1 Desk Study and Preliminary Risk Assessment.

The earliest mapping dated 1849 indicates the site is predominantly occupied by farmland with two possible buildings, pond-like features or Marl Pits in the north and southeast of the site until c.1881 when residential properties and a nursery occupy the site. Further residential properties were developed within the site across the former nursery area with terraced properties constructed in the south of the site c.1905. Various minor reconfiguration and redevelopment of residential properties and small structures took place across the site until the site was redeveloped into the present day layout of car parks, substation, Graeme House and Chorton Shopping Centre. The site remained predominantly unchanged until the present day with the exception of an additional building constructed in the southeast of the site c.1992.

The majority of the site is anticipated to be underlain by Glaciofluvial Sheet Deposits, with Till (Diamicton) potentially present within the western extent of the site. The superficial deposits are anticipated to be underlain by the Wilmslow Sandstone Formation (typically red-brown, fine to medium grained, cross-bedded sandstones with sporadic siltstones).

The Glaciofluvial Sheet Deposits are designated a Secondary A aquifer whilst the Till (potentially present within the west of the site) is designated a Secondary (undifferentiated) aquifer. The bedrock geology of the Wilmslow Sandstone Formation is designated a Principal Aquifer. The site is not located within a groundwater Source Protection Zone (SPZ) and there are no groundwater or potable abstraction points located within 1km of the site.

The site does not lie within a Radon Affected Area, as less than 1% of properties are above the action level, and no radon protective measures are considered necessary.

The preliminary qualitative risk assessment indicates there is a low to moderate risk to identified receptors from potential contaminants associated with the current and former uses of the site and surrounding area and potential Made Ground associated with the former development of the site and potential infilling of Marl Pit(s).

In addition, the assessment has identified a number of potential geotechnical constraints associated with the potential for below ground obstructions, infilled marl pit(s) in the north



(and potentially east) of the site, variable thickness of Made Ground associated with the development history of the site and potential variability of the underlying superficial deposits.

It is recommended that an intrusive ground investigation is undertaken to assess for the identified contaminants of concern, to evaluate the potential contaminant linkages through soil, leachate and groundwater sampling, and enable a robust remediation strategy to be developed, if required.

Such issues are common on many previously developed sites. The Application Site and Proposed Development are not considered to present a high risk to any neighbouring users/properties nor end users (i.e. future residents).

No significant environmental effects are considered likely during construction or operation.

5.2.8 Flood Risk and Drainage

Civic Engineers have been commissioned by the Applicant to prepare a Flood Risk Assessment (FRA) and Drainage Strategy.

There is no record of flooding at the Application Site within the Historic Flood Map published by the Environment Agency (EA), which has recorded major flood data since 1946.

The nearest watercourse to the Application Site is the Chorlton Brook, a tributary of the River Mersey, which flows through Chorlton-cum-Hardy approximately 700m to the south of the site boundary. The EA Flood Risk from Rivers or the Sea Map indicates that the site lies within flood zone 1, meaning that there is a less than 0.1% chance of flood from rivers or the sea each year.

The EA Flood Risk from Surface Water Map shows that the site contains pockets of low flood risk, meaning there is a 0.1% and 1% chance of surface water flooding each year.

The Local Strategic Flood Risk Assessment (SFRA) does not lie within an area at risk of groundwater flooding.

Infiltration drainage is not possible due to the superficial geology (primarily till, which has poor infiltration rates) and the varying groundwater table, as identified through the ground investigation. The Proposed Development will therefore discharge surface water to the United Utilities (UU) combined sewer system at a rate no greater than 10l/s, in line with the greenfield run-off rate for the site and as requested by UU through a pre-development enquiry.

The surface water drainage system has been designed to make appropriate allowances for climate change (as per Defra's Climate Change Allowances Map for the Upper Mersey Catchment) and incorporates SuDS features such as cellular attenuation tanks, permeable paving and bioretention systems. The Proposed Development will not increase the risk of flooding either on-site or off-site.

No significant environmental effects are considered likely during construction or operation.

5.2.9 Daylight, Sunlight and Overshadowing

BWB have been commissioned by the Applicant to prepare a Daylight, Sunlight and Overshadowing Assessment. The assessment follows the guidance outlined in the Building Research Establishment's (BRE) "Site Layout Planning for Daylight and Sunlight: A Guide to Good Practice" (the BRE Guide, 2022).

In EIA, daylight, sunlight and overshadowing is considered where it affects neighbouring properties, with internal daylight and sunlight being a design consideration. The neighbouring residential and applicable non-residential buildings that have been considered within the assessment are as follows:



- Nicolas Road houses (to the North);
- Selbourne/Keppel/Marick Road houses (to the North-East/East);
- Wilbraham Road houses (to the south);
- Oswald/Manchester Road houses (to the North West/West);
- Chorton Family Practice (to the North).

The amenity space (gardens/playground) of Nicolas Road houses, Selbourne/Keppel/Marick Road houses, Wilbraham Road houses, Oswald/Manchester Road houses, Oswald Road Primary School playground, and The Lloyds Pub Garden were also considered.

In terms of daylight quantity (VSC), the impact of the Proposed Development on all assessed neighbouring properties is considered acceptable, with the majority (95%) of the assessed windows adhering to the BRE guideline. The effect of the Proposed Development on neighbouring properties is therefore considered 'negligible' in accordance with paragraph H5 of the BRE Guide.

In terms of sunlight, the impact of the Proposed Development on all assessed neighbouring properties (within 90 degrees due south) is considered negligible in accordance with paragraph H5 of the BRE Guide 2022, with the majority (98%) of the assessed windows within 90° of due south adhering to the BRE guideline. It is expected that the lighting conditions following the completion of the Proposed Development will present no significant effect to the neighbourhood residential properties as they will all continue to receive adequate sunlight as defined by the BRE guidance.

In terms of overshadowing, the impact of the Proposed Development on the majority of assessed surrounding amenity spaces (gardens) will be unnoticeable. The overshadowing assessment shows that 97% of the amenity spaces will continue to receive good levels of sunlight following the completion of the Proposed Development, without any changes to the current situation. All assessed gardens (except No 20, Oswald Road house garden) fully adhere to the BRE guidelines and will continue to receive adequate sunlight on the 21st of March. Therefore, the impact of the Proposed Development on the sunlight levels of all surrounding amenity spaces are considered negligible.

No significant environmental effects are considered likely during construction or operation.

5.2.10 Wind and Microclimate

Gordon Ingram Associates (GIA) have been commissioned by the Applicant to prepare a Wind Microclimate Assessment.

Microclimate conditions were established using GIA's high resolution Computational Fluid Dynamics (CFD) model, extending 400m radius from the Site. A model of the development was included within the CFD model and tested to determine the conditions at and around the Site. The model was run at full scale from 18 wind angles, spaced using 10° or 30° increments such that no sector contributes more than 10% of the annual wind.

Wind speeds were measured at 1.5m above any surfaces expected to be used for pedestrian activity. On-site and local wind speeds were combined with wind statistics from 30 years of data recorded at Manchester International Airport for variations in terrain between the airports and the site, to obtain annual and seasonal frequency and magnitude of wind speeds across the model. This allows the 'grading' of the pedestrian level winds according to the Lawson Comfort Criteria, which are explained later in this report.

The wind microclimate effects are assessed annually, for the winter months (December, January and February) and for the summer months (June, July, August). Winter conditions are reported as this is the season when the strongest winds are expected, summer



conditions are reported as this is the season when pedestrian usage of outdoor spaces is expected to be highest.

The assessment was graded against the Lawson Comfort and Safety Criteria, as summarised in the tables below.

Table 9: Lawson Comfort Criteria (LDDC Variant)

Comfort Category	Mean Wind Speed Exceedance	Description
Sitting	4m/s	Acceptable for outdoor sitting use (e..g cafes, benches, balconies and terraces)
Standing	6m/s	Acceptable for main building entrances, pick-up/drop-off points and bus stops
Walking (leisure)	8m/s	Acceptable for strolling
Walking (business)	10m/s	Acceptable for external pavements, walking purposefully without lingering
Uncomfortable	>10m/s	Not comfortable for regular pedestrian access

Table 10: Lawson Safety Criteria (LDDC Variant)

Comfort Category	Mean Wind Speed Exceedance	Description
No safety exceedance	<15m/s	Safe for all users
S15 (distress)	>15m/s	Unsafe for frail individuals, or cyclists
S20 (safety)	>20m/s	Wind conditions considered unsafe for all users

Conditions range between suitable for sitting, standing and leisure walking in winter and between sitting and standing in summer.

The results of the CFD modelling are summarised below:

- Conditions for the principal proposed entrances to the development are suitable for sitting in all seasons. This one category calmer than required for the intended use.
- Conditions for principal off-site entrances are suitable for either sitting or standing in all seasons. This is suitable for the intended use.
- Conditions for the bus stops on Wilbraham Road and Barlow Moor Road are suitable for either sitting or standing in all seasons. This is suitable for the intended use.
- Conditions for the (existing) cafe spill-out seating on Wilbraham Road and Barlow Moor Road are suitable for sitting or standing in winter and for sitting in summer. This is suitable for the intended use.
- Conditions for existing off-site residential gardens are suitable for sitting in all seasons. This is suitable for the intended use.
- Conditions for the proposed ground level amenity are suitable for a mix of sitting and standing in winter and for sitting in summer. This is suitable for the intended use,
- Conditions for the proposed podium level amenity are suitable for a mix of sitting, standing and leisure walking in winter and for a mix of sitting and standing (with the vast majority of the space suitable for sitting) in summer. This is suitable for the intended use.
- Conditions for the proposed balconies are suitable for either sitting or standing in summer. This is suitable for the intended use.



No wind safety risks were identified either within the site or the surrounding area.

Wind comfort conditions would be suitable for all intended uses for all thoroughfares, roadways, proposed or existing building entrances, bus stops, existing spill out seating, existing gardens, proposed amenity at ground level and podium level and proposed balconies).

No significant environmental effects are considered likely during construction (where wind conditions would be less than or equal to those for operation) or operation.

5.2.11 Major Accidents and Disasters

Risks of major accidents and disasters during construction will be mitigated by undertaking construction works in accordance with the CEMP (as to be submitted with the planning application).

The Proposed Development is not of a type that is considered likely to result in or be affected by major accidents and/or disasters during its operation. Consideration of these topics is usually more relevant when dealing with heavy industry etc. Access to the site has been designed to meet relevant highways safety standards.

No significant environmental effects are considered likely during construction or operation.



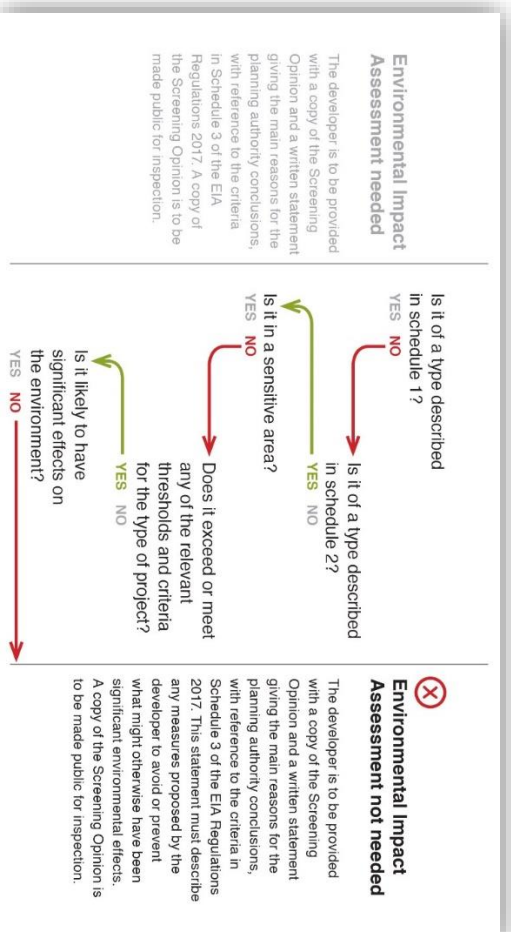
6.0 Conclusion

P J Livesey Homes (6) Limited is formally requesting an EIA Screening Opinion from Manchester City Council to determine whether the Proposed Development constitutes an EIA development.

This Request for an EIA Screening Opinion has been prepared to provide relevant information to assist MCC in its determination and includes all of the information required under Regulation 6(2) of the EIA Regulations.

The Proposed Development has been assessed in accordance with the screening process set out in the EIA Regulations and this has concluded that:

- the Proposed Development is of a type described in Schedule 2;
- the Application Site is not located within a sensitive area;
- the Proposed Development is above relevant thresholds in the EIA Regulations;
- the Proposed Development is not considered to have significant environmental effects, either in isolation or cumulatively with the proposed adjacent office and laboratory building land use;
- the Proposed Development does not require an EIA.



Whilst the decision remains with MCC (as local planning authority), this report concludes that the Proposed Development including associated primary and secondary mitigation (in isolation and considered cumulatively) will not require an EIA, as it is considered unlikely to result in significant environmental effects.

In accordance with Regulation 6(6)(a), MCC must adopt a screening opinion within 3 weeks of receiving this Request.

As per Regulation 5(5), should MCC consider that it has not been provided with sufficient information to adopt a Screening Opinion, it may notify the Applicant of the points on which the additional information is required.

In the event that MCC agrees with the conclusion of this Request, it is envisaged that the following environmental assessments would be submitted as part of a non-EIA planning application for the Proposed Development:



- Construction Environmental Management Plan;
- Transport Assessment and Travel Plan;
- Air Quality Assessment;
- Lighting Assessment;
- Energy and Environmental Standards Assessment;
- Noise Impact Assessment;
- Phase 1 Desk Study;
- Flood Risk Assessment and Drainage Strategy;
- Historic Environment Desk Based Assessment (HEDBA);
- Townscape and Visual Impact Assessment (TVIA);
- Ecological Impact Assessment (EcIA);
- Biodiversity Net Gain Assessment;
- Tree Survey & Arboricultural Implications Assessment;
- Daylight, Sunlight and Overshadowing Assessment; and
- Wind Microclimate Assessment.

MCC is invited to comment on this list of supporting technical assessments and any other pre-application guidance or validation requirements that the Applicant should take into account.



Appendix A Figures

Request for an EIA Screening Opinion

Chorlton Precinct

CBRE Limited

20 December 2024



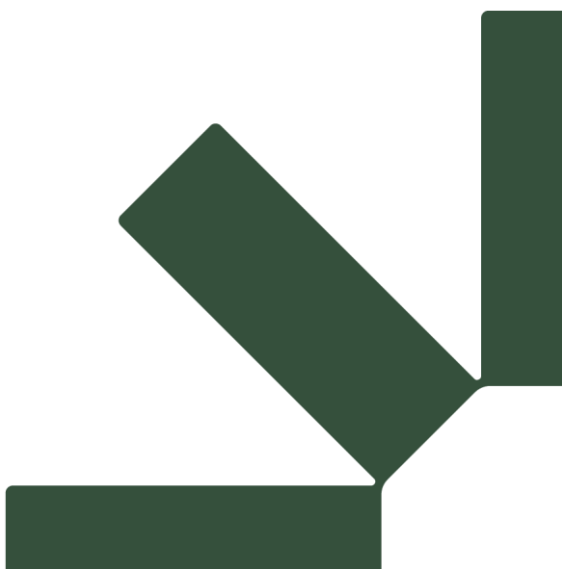
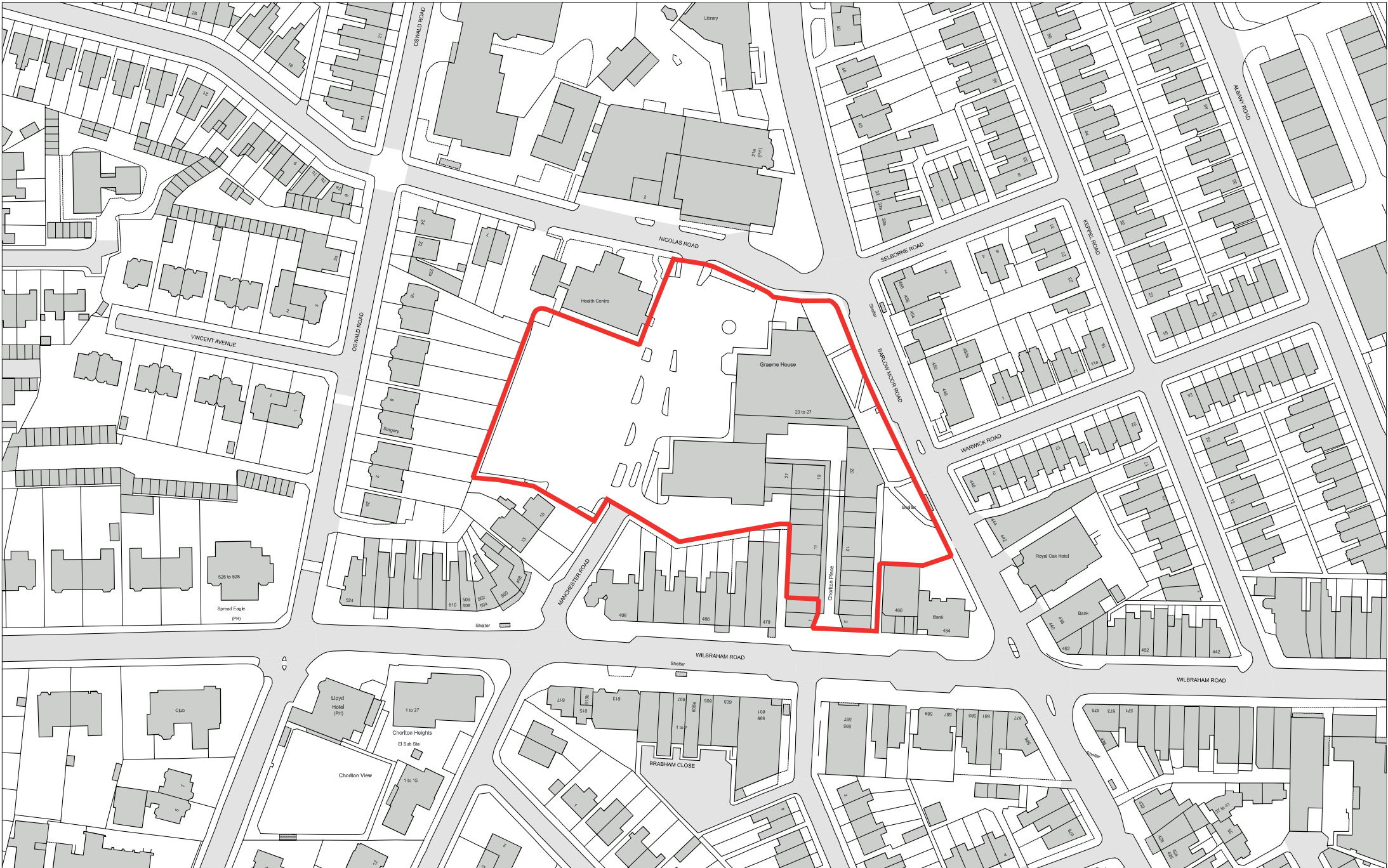


Figure A Location Plan

*SLR



DRAFT



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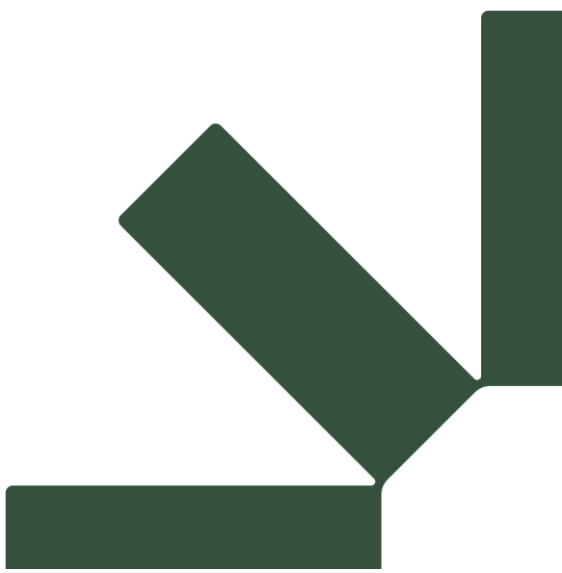
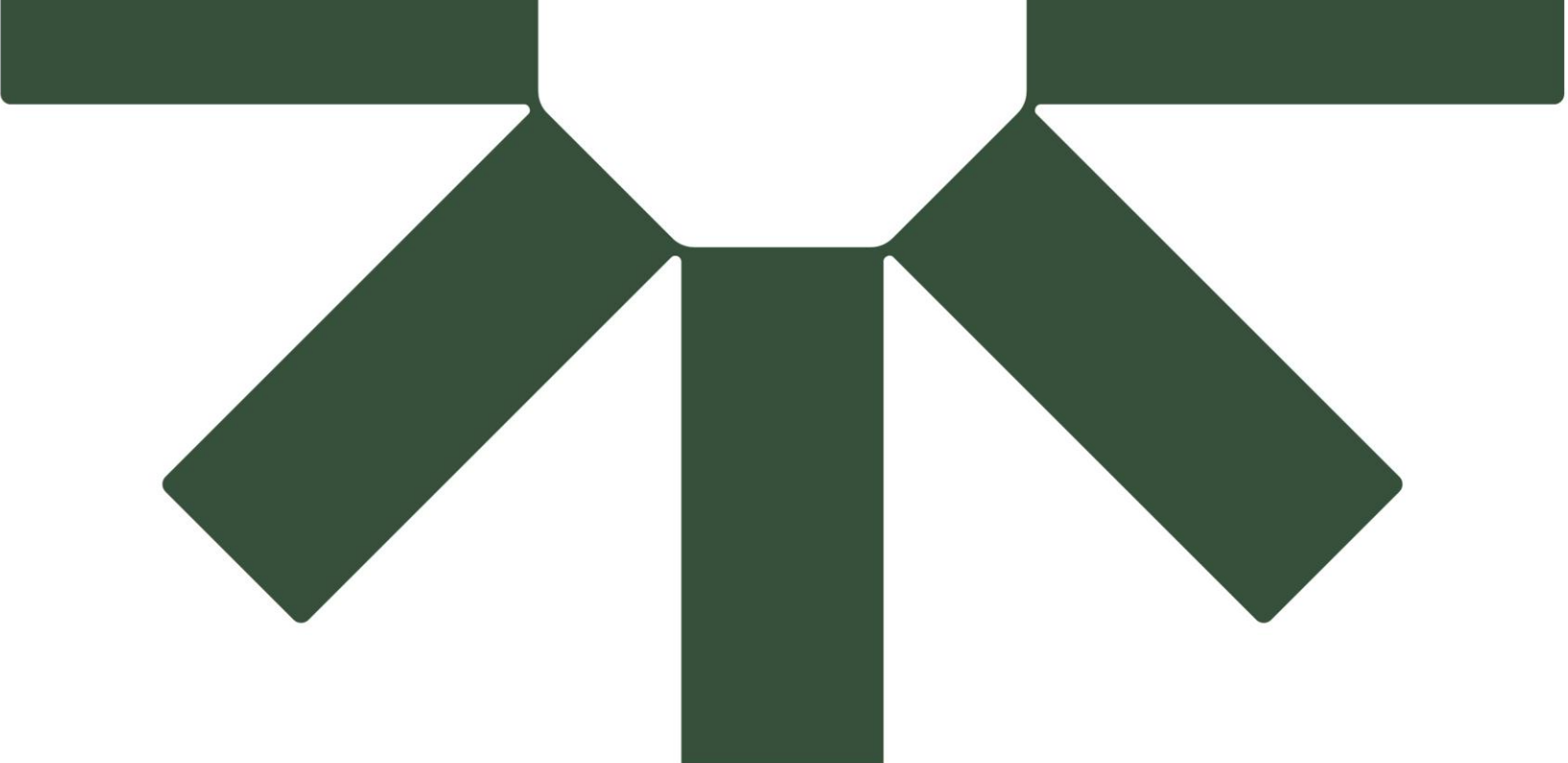


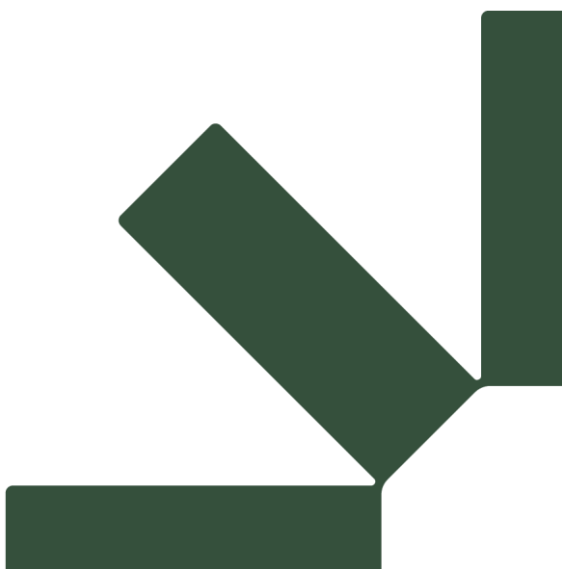
Figure B Illustrative Masterplan

*SLR



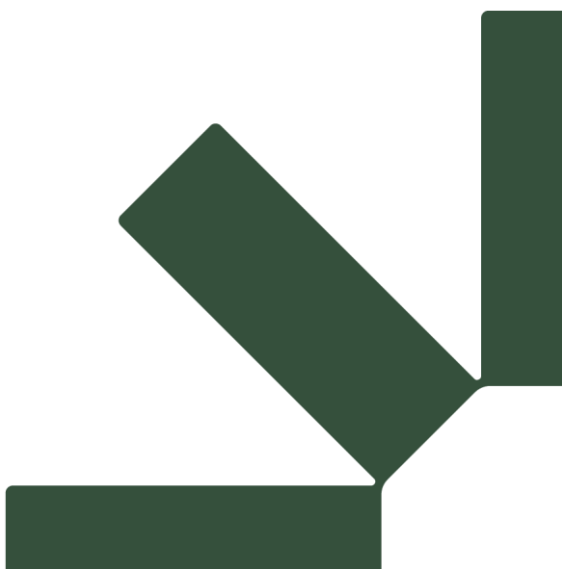


Making Sustainability Happen



Appendix 1C Screening Opinion

*SLR



Appendix 1C Screening Opinion

*SLR



MANCHESTER
CITY COUNCIL

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7th January 2024

Via email only
chris.argent@cbre.com

Our reference: SOUTH/EIA/ChorltonPrecinct

Dear Chris,

**TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT
ASSESSMENT) (ENGLAND) REGULATIONS 2017**

**FORMAL SCREENING OPINION FOR ENVIRONMENTAL IMPACT
ASSESSMENT 'SCREENING' UNDER PART 2 REGULATION 6**

**PROPOSED DEVELOPMENT: ERECTION OF 6 NO. RESIDENTIAL
BUILDINGS TO PROVIDE UPTO 262 RESIDENTIAL DWELLINGS (USE
CLASS C3) WITH GROUND FLOOR COMMERCIAL USES (USE CLASS E(a-
e); INFRASTRUCTURE WORKS INCLUDING ELECTRIC SUBSTATION AND
ASSOCIATED UTILITIES WORKS, SERVICE YARD, VEHICULAR AND
PEDESTRIAN ACCESSES, PUBLIC REALM WORKS AND HARD AND
SOFT LANDSCAPING FOLLOWING DEMOLITION OF EXISTING
BUILDINGS AND STRUCTURES ON SITE**

**SITE LOCATION: CHORLTON PRECINCT, WILBRAHAM
ROAD/MANCHESTER ROAD/BARLOW MOOR ROAD/NICHOLAS ROAD,
CHORLTON, MANCHESTER**

SCREENING OPINION ADOPTED BY MANCHESTER CITY COUNCIL

Following the formal request for a Screening Opinion received on the 20th
December 2024 the Council has assessed the submitted report prepared by

SLR dated 20th December 2024 in respect of the above regulations in order to come to a formal EIA screening opinion on the above proposed development.

In coming to a formal opinion on whether an Environmental Impact Assessment (EIA) is required to support the proposed development, Manchester City Council, as Local Planning Authority, has taken into account the SLR report referenced above as received on the 20th December 2024. The Council has also recently determined a prior approval application for the demolition of the buildings contained on the site (application reference: 141706/DEM/2024), concluding that the demolition of the buildings would not give rise to significant impacts.

The EIA Screening process is used to determine whether the proposed development is likely to have any significant effects on the environment. The Council as local planning authority have now had a chance to consider the submission against the EIA regulations and the response is outlined below.

Site context

The site is bound by Barlow Moor Road to the east, Wilbraham Road to the south, the rear of properties on Oswald Road to the west and Nicholas Road to the north. Manchester Road passes through the middle of the site, connecting Wilbraham Road to Nicholas Road. This route passes through the existing surface car park and is indicated in the submission as not being a public highway. The topography of the site is relatively flat. The site is situated within an urban context, containing a mix of commercial and residential premises in character (predominantly 2-4 storeys in height), comprising a mix of late-19th century terraced commercial premises to the south and east, smaller residential dwellings to the west, and larger institutional buildings to the north. The tallest building in the area is identified as Graeme House, located within the site, which rises to 8 storeys.

The site does not lie wholly within any environmentally designated areas (e.g. Sites of Special Scientific Interest (SSSIs)), however, parts of the road network immediately adjacent the site on Barlow Moor Road and parts of the site are within an Air Quality Management Area (AQMA)), the site does also immediately adjoin the Wilbraham Road/Edge Lane Conservation Area along its western and southern-western edge.

Proposed development

The Screening report sets out a description of the proposed development and sets out the proposed masterplan. The development is set out as comprising:

- Demolition of existing buildings within the site boundary;
- 262 new homes across 6 no. residential buildings with associated car parking (surface and subterranean); and
- 973sqm of ground floor commercial units (Use Class E (a-e));
- Treatment to party walls to retained buildings adjacent to the site boundary (including the Costa unit fronting Wilbraham Road);
- Hard/soft landscaping works; and

- Highways/access alterations (including part closure of Manchester Road to create an active travel route).

The proposed six buildings are described as being 10, 8, 7, 6, 6 and 4 storeys in height arranged across the site with commercial floorspace on the ground floors of the buildings facing onto Wilbraham Road, Barlow Moor Road and Nicholas Road. Vehicular access would be retained from Manchester Road to the south of the site and a servicing access from Nicholas Road.

EIA Screening

As identified within the Screening report the proposal type is listed in category 10 (b) 'Urban Development Projects' of Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) (England) Regulations 2017. In such instances it is indicated that consideration should be given by the local planning authority to potential significant effects on the environment where:

- (i) The development includes more than 1 hectare of urban development which is not dwellinghouse development; or*
- (ii) the development includes more than 150 dwellings; or*
- (iii) the overall area of the development exceeds 5 hectares*

The submitted Screening report indicates that the site area is 1.27 hectares and would provide up to 262 residential dwellings and commercial floorspace, and as such the proposals would fall within the thresholds set out within the EIA regulations to be a schedule 2 project.

In assessing likely environmental effects, the submitted Screening report highlights the Planning Practice Guidance (PPG) relating to EIA and sets out the indicative criteria and thresholds that can be used to determine whether a project is likely to have significant effects on the environment. The PPG is clear that these indicative thresholds and criteria are an aid to local planning authorities to determine whether a project is likely to have significant environmental effects.

The indicative thresholds and criteria for Schedule 2 category 10(b) projects are:

- Environmental Impact Assessment is unlikely to be required for the redevelopment of land unless the new development is:
 - o On a significantly greater scale than the previous use, or the types of impact are of a markedly different nature or there is a high level of contamination.
 - o Sites which have not previously been intensively developed:
 - (i) area of the scheme is more than 5 hectares; or
 - (ii) it would provide a total of more than 10,000 m² of new commercial floorspace; or
 - (iii) the development would have significant urbanising effects in a previously non-urbanised area (e.g. a new development of more than 1,000 dwellings).

It is further advised that the key issues to consider are: the physical scale of such developments, potential increase in traffic, emissions and noise.

The submitted Screening report concludes that the proposed development would not meet any of the indicative criteria or thresholds set out in the PPG.

The PPG also makes it clear that: *“it should not be presumed that developments above the indicative thresholds should always be subject to assessment, or those falling below these thresholds could never give rise to significant effects, especially where the development is in an environmentally sensitive location. Each development will need to be considered on its merits”*.

Further consideration is now required against the selection criteria within schedule 3 of the 2017 EIA Regulations. Consideration of these is set out below.

Characteristics of development

Size of Development

Whilst elevation plans are not contained within the screening report, an illustrative masterplan is provided identifying the location of the 6 proposed buildings and reference is made to the scale in terms of the height of these buildings which would range in height from 10 storeys to 4 storeys to accommodate the level of proposed development. The illustrative masterplan indicates areas of proposed development and siting of the proposed buildings. The existing site contains a building that is 8 storeys in height, but the remainder of the site comprises areas of surface level car parking or buildings of two storeys in height.

The site lies adjacent to existing areas of residential and commercial premises in an urban context; however, the scale and size of the development proposals would be of a scale that is not consistent with the prevailing character and scale of existing premises in the area.

As such the City Council as local planning authority is of the opinion that the proposed development is of a built form of significantly greater scale than is currently present on the site.

Cumulation with other development

There are other committed developments within the vicinity of the site and these are referenced in Table 1 of the Screening report which indicates that none of the schemes were EIA development. The EIA PPG indicates that possible cumulative effects should always be given regard to and sets no benchmark or thresholds when other approved development would or would not be relevant for assessment. It is noted that the list of committed developments contained in Table 1 are at different stages of proceeding on site and would deliver in the order of 184 residential units in the immediate locality of the proposed development site.

There are likely to be some cumulative impacts in relation to traffic, noise and air quality during the construction phase. However, these impacts are considered to be predictable and localised in nature and can be suitably mitigated through careful management of the demolition and construction works.

In terms of the operational phases of the development, it is considered that there could be impacts as the site is adjacent and partially within an Air Quality Management Area. The submitted Screening report indicates that an assessment of impacts on Air Quality has been undertaken. The conclusions of this assessment are that no significant environmental effects are considered likely during construction or operation of the proposed development. This appears to be a reasonable conclusion based on the proposed development although it is noted no reference is made to potential impacts arising from cumulative development taking place in the area.

Use of natural resources

The site is not known to contain any natural resources. The impact of the design and construction of the scheme in terms of natural resources should be considered as part of a holistic approach to sustainability. It is anticipated that the sourcing, manufacturing and transportation of construction materials would minimise impacts as part of this approach.

It is therefore considered the use of natural resources would not be significant in respect of this development and therefore does not warrant consideration by an EIA.

Production of waste

Developments of this scale would inevitably create waste both in the construction and operational phases of the development.

The proposed development would generate waste during the demolition and construction phase and once occupied. Demolition and construction waste would need to be suitably managed in accordance with best practice.

Once complete, the proposed development would generate predominantly household / commercial municipal waste, for which the method of treatment is commonplace and which would not give rise to potential significant effects. The residential units would be provided with waste storage facilities to segregate waste in accordance with local policy, minimising the amount of residual waste generated.

The production of waste would, therefore, not be significant, localised in nature and predictable and therefore does not require consideration by an EIA.

Pollution and nuisances

The construction phase of the scheme would produce dust, noise and vibrations from the works and use of machinery. Additional traffic will be present on the highway network from construction vehicles, particularly heavy goods vehicles, resulting in noise and emissions in the immediate area which would give rise to disruption to local residents and businesses for the duration of the construction period. Given the scale of the development, scope of construction works and location adjacent to sensitive uses including a Health Centre and Primary school and partially in the Greater Manchester Air Quality Management Area (AQMA) it is considered that these matters warrant further investigation through the EIA process.

The construction phase is likely to generate movements of construction traffic including HGVs and other commercial vehicles associated with works at the site. Given the location of the site within a district centre and close to high levels of pedestrians and cyclists there is the potential for impacts on high sensitivity receptors. No reference is made to construction traffic increases associated with the development or potential impacts on sensitive users that would be present in the vicinity of the site in the 'Traffic and Transport' section of the Screening report. The City Council as local planning authority considered that these potential impacts warrant further investigation through the EIA process.

In addition to the above there are potential cumulative effects on air quality, traffic and transport and noise as a result of other committed developments in the locality and the City Council as local planning authority believes the cumulative effects warrants further investigation as part of the EIA process.

Risk of accidents

The main risks in terms of a development of this nature are the contamination of land and/or water from spillages and leak. However, it is not considered that the construction or the operational stages of the development pose a significant risk in this regard given the existing conditions at the site and the substances that are likely to be used, particularly in the construction process.

The area is not considered to be environmentally sensitive, and it is considered that given the scale and nature of the development, such impacts are not likely to be of more than local significance, short in duration and predictable. In addition, the development is not likely to give rise to any risks to human health from dangerous substances.

Townscape and Visual Impact including Heritage effects

The site does not contain any statutory or non-statutory listed buildings and is also not within a conservation area. However, the site does lie immediate adjacent the Wilbraham Road/Edge Lane conservation area and there are Grade II listed buildings noted within the area these being: The Lloyd and Platt Hotel; Chorlton Library; 21A Manchester Road; Church Of St Clement, St Clements Road; St Johns Presbytery, 1 St Clements Road, Manchester; and 10 Chorlton Green; and, Gatehouse And Bell Turret, Chorlton Green, Manchester further to the south of the site.

The submitted Screening report indicates that the proposals have been designed to mitigate impacts to the character and appearance of the conservation area 'as far as possible'.

Given the scale of the proposed development, the potential alteration to the townscape character of the area, the scale of the buildings adjacent existing buildings and its adjacency to designated heritage assets, the City Council as local planning authority does consider that the townscape, visual impact and heritage effects of the proposed development are topics requiring further investigation as part of the EIA process.

Location of development

The site comprises previously developed land which is occupied by buildings and areas of hardstanding and soft landscaping. The buildings on site have predominantly been occupied for commercial uses including offices and retail premises. The land is not considered to be environmentally sensitive.

There are no Tree Preservation Orders (TPOs) on the site although there are a number adjacent to it. The site is located within a flood zone 1 'low risk to flooding' area and the scheme is not expected to have an impact on local sources of flooding.

Whilst it has been identified that the site is of generally low to moderate risk for ground contamination it is considered that such contamination does not warrant consideration by an EIA on this basis given that the contamination levels are not expected to be significant beyond what would be reasonably expected on a site such as this.

Relative abundance, quality and regenerative capacity of natural resources in the area

The site is not known to contain any natural resources that would be affected by the development.

Absorption capacity of the natural environment

The site contains no areas of statutory nature conservation and there are no such sites within the immediate vicinity of the site.

Overall, it is considered that the impacts on the natural environment would be of no more than local significance and the impacts from the construction phase can be carefully managed to minimise any impacts on any nearby sensitive receptors. On that basis the development is unlikely to give rise to any significant impacts and therefore consideration by an EIA is not considered necessary.

Types and characteristics of the potential impact

There would be no transfrontier impact as a result of the development.

The implementation of the proposed development would result in a permanent change to the appearance and character of the area which would only be reversed if the development were to be removed. The visual impacts of the new development, particularly from its scale, would alter the visual amenity of the area and how the site is viewed in the area. It is considered that this alteration to the visual amenity and townscape character of the area warrant further investigation through the EIA process.

Conclusion

The site relates to a previously developed site containing the vacant Graeme House, Chorlton Precinct Centre, and areas of associated hardstanding, landscaping with existing vehicular access from Manchester and Nicholas Roads. The site is well related to public transport modes in the form of light rail (Metrolink) the bus network and upgrade cycle infrastructure provision. The site is located within Chorlton District Centre the commercial centre for the wider residential neighbourhoods containing a broad range and type of commercial uses.

The site is not located within a Conservation Area but is immediately adjacent the Wilbraham Road/Edge Lane Conservation Area. The closest listed buildings to the site are Chorlton Library and the Former Temperance Billiard Hall, both of which are Grade II listed and located 80 and 50 metres respectively to the north of the site, a further Grade II listed building is the Lloyd and Platt Hotel located 140m to the south-west of the proposed development site.

The proposal is for an urban development in the form of a 6 no. buildings ranging in height from 10 to 4 storeys for residential and commercial development following the demolition of existing buildings on the site. It is noted that there are other committed developments in the wider area and future proposals not yet subject to planning applications. Whilst the scale of these proposals were not EIA development the City Council as local planning authority considers that there is the potential for cumulative impacts to arise that would warrant consideration of this development proposal through an Environmental Impact Assessment.

It is concluded that this proposed development would have impact on the surrounding area and these impacts warrant a formal Environmental Impact Assessment. Therefore, the opinion of the City Council, as Local Planning Authority, is that an Environmental Impact Assessment is required in this instance and that an Environmental Statement be prepared to accompany any planning application for the proposed development

This screening opinion relates to the requirements of an Environmental Impact Assessment only.

I trust this information is of some assistance to you. Should you require anything further please do not hesitate to contact **Robert Griffin**.

Yours sincerely

A handwritten signature in black ink, appearing to read 'Derek Jones', written in a cursive style.

Derek Jones

Strategic Planning and Projects Lead



Appendix 1D Informal Scoping Exercise

***SLR**



Appendix 1D Informal Scoping Exercise

***SLR**

Edward Bright

From: ebright@slrconsulting.com
Subject: FW: Chorlton - Screening Opinion

From: Robert Griffin <robert.griffin@manchester.gov.uk>
Sent: Wednesday, January 15, 2025 2:51 PM
To: Argent, Chris @ Manchester <Christopher.Argent@cbre.com>
Cc: Mcelhone, Joe @ Manchester <Joe.Mcelhone@cbre.com>; Des Jones <des.jones@manchester.gov.uk>
Subject: Re: Chorlton - Screening Opinion

External

Dear Chris,
Thanks for your comprehensive email this is appreciated.

We are content with the topics to be scoped in and out of the ES and the overall content and structure proposed.

In terms of cumulative developments there have been public consultations on a potential scheme to redevelop land at Ryebank Fields, Chorlton in the vicinity of the site, although these proposals have not been formally submitted as a planning application. The Council has also recently issued a Scoping Opinion for that proposals which is available to view on the Councils public access system using reference ELASCO/24/006

Regards

Rob Griffin
Principal Planner
Development Management South
Planning, Licensing and Building Control
Growth and Development Directorate
Manchester City Council
PO Box 532
Manchester
M60 2LA

T: 0161 234 4527

e: robert.griffin@manchester.gov.uk

From: Argent, Chris @ Manchester <Christopher.Argent@cbre.com>
Sent: 13 January 2025 09:42
To: Des Jones <des.jones@manchester.gov.uk>

Cc: Robert Griffin <robert.griffin@manchester.gov.uk>; McElhone, Joe @ Manchester <Joe.McElhone@cbre.com>
Subject: RE: Chorlton - Screening Opinion

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Hi Gents,

Further to the positive screening opinion for the Chorlton (dated 7th January 2024), I write with a view to informally agreeing the scope the ES that will accompany the planning application, which is being targeted for submission at the end of February 2025. Given constraints in relation to programme, there is insufficient time to prepare and formally request an ES scoping opinion at this time – particularly given the 5 week response timescale.

Topics to be Scoped In

Based on the screening opinion, MCC suggest that the Proposed Development may have likely significant effects in relation to:

- Built Heritage
- Townscape and Visual Effects
- Traffic and Transport
- Air Quality
- Noise & Vibration

Issues of traffic, air quality and noise were flagged more in relation to the potential for significant cumulative effects arising from the Proposed Development alongside other consented developments in the vicinity of the site (see 'Cumulative Developments').

Topics to be Scoped Out

Based on the screening opinion, MCC acknowledge that the Proposed Development is unlikely to have significant effects in relation to:

- Ecology and Biodiversity
- Archaeology
- Ground Conditions
- Flood Risk and Drainage
- Daylight, Sunlight and Overshadowing
- Wind Microclimate
- Major Accidents and Disasters

Cumulative Schemes

The request for a screening opinion identified the following schemes in the vicinity of the site:

Planning Reference	Name	Proximity to Application Site	Description	Status
136791/FO/2023	Chorlton Leisure Centre	~ 300m E	Erection of 2 no. 5 storey residential buildings comprising 50 no. dwellings (Class C3) with ancillary communal facilities; and, associated access, car parking, bin store, amenity space and landscaping, following the demolition of the existing building	Approved
136878/FO/2022	4b Albany Road	~ 250m NE	Erection of 4 storey building to form 40 no. residential apartments, together with cycle and car parking, bin store, landscaping and boundary treatments following demolition of existing buildings.	Approved
132708/FO/2022	Chorlton Irish Club	~ 400m S	Erection of a part three, part four storey development to provide 29 (10 x one and 18 x two bed and 1 x studio) residential units with associated vehicular and cycle parking, refuse store and landscaping	Approved
135604/FO/2022	Land to the Rear of 345 Wilbraham Road	~ 150m E	Erection of a 65 dwellings (Use Class C3(a)), with associated infrastructure, including landscaping, ecological mitigation, drainage and car parking, access from Wilbraham Road, and demolition of garage to the rear of 354 Wilbraham Road	Approved

Proposed Structure of the ES

The proposed structure of the ES is as follows:

Volume 1: Main Volume

Chapter No.	Chapter Title	Author	Notes
1	Introduction	SLR	Will include overview of EIA methodology
2	Application Site and Surrounds	SLR	Description of site and surrounds, including current uses and key receptors for assessment
3	The Proposed Development	SLR	Will include consideration of alternatives and construction programme and phasing
4	Townscape and Visual Effects	Randall Thorp	
5	Built Heritage	Lanpro	
6	Traffic and Transport	Civic Engineers	
7	Air Quality	Redmore Environmental	
8	Noise and Vibration	E3P	
9	Intra-Development Cumulative Effects	SLR	Will consider the intra-development effects only (i.e. the cumulation of effects on a single receptor that arise from the Proposed Development). N.b. – inter-development cumulative effects (i.e. the cumulation of effects arising from the Proposed Development alongside other consented schemes) will be set out within each technical ES chapter.
10	Residual Effects and Next Steps	SLR	Will contain summary tables of residual effects, proposed mitigation (and how this is to be

			secured) and commentary on determination of the EIA application
--	--	--	---

Volume 2: Drawings & Technical Appendices

Volume 3: Non-Technical Summary

Proposed Structure of the Technical Chapters

Each of the technical chapters will be structured as follows:

Section	Notes
Introduction	Set the scene, information about the author(s) to demonstrate that they are competent experts
Methodology	Bullet point summary of relevant legislation, policy and guidance (more detail will be provided within the relevant technical appendices), summary of consultation undertaken, methodology employed, study area etc.
Baseline Conditions	Description of baseline conditions, key receptors, assessment of sensitivity
Assessment of Effects	Split by construction and operational phases, assessment of magnitude and significance
Mitigation Measures	Description of any secondary mitigation (i.e. mitigation not embedded in design) required to avoid, reduce, restore, compensate or offset environmental effects. Indication of method for securing mitigation (e.g. planning condition, legal agreement) and any relevant trigger points.
Residual Effects	Summary of residual environmental effects (i.e. after the implementation of mitigation measures)
Inter-Development Cumulative Effects	If not considered implicitly in the 'Impact Assessment' assessment section (e.g. through application of growth factors for traffic), this section will look at the cumulative effects of the Proposed Development alongside other consented schemes within the vicinity of the Application Site.

Questions for MCC

We would be grateful if MCC could answer the following questions:

- Are you happy with the topics proposed to be scoped in?
- Are you happy with the topics to be scoped out?
- Are there any other cumulative developments that we need to be aware of?
- Are you happy with the proposed structure and format of the ES and the technical chapters?

I would be grateful if you could advise ASAP by return that you are able to agree the ES informally...

Trust this is appropriate – welcome your response...

Regards

Chris Argent | Director
 CBRE Limited | Planning & Development
 10th Floor, One St Peters Square, Manchester, M2 3DE
 DD1 0161 233 5463 | Internal Extension 35463 | M 07825 242 730
chris.argent@cbre.com | <http://www.cbre.com>

From: Des Jones <des.jones@manchester.gov.uk>
Sent: Tuesday, January 7, 2025 12:24 PM
To: Argent, Chris @ Manchester <Christopher.Argent@cbre.com>
Cc: Robert Griffin <robert.griffin@manchester.gov.uk>
Subject: Re: Choriton - Screening Opinion

External

Hi Chris and Happy New Year

Please find the Screening opinion attached.

Best regards, Dez

Derek W Jones
Strategic Planning and Project Lead
Planning
Growth and Development Directorate
Manchester City Council
Level 6 Town Hall Extension
Albert Square
Manchester
PO Box 532
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Tel: 0161 234 4522
Internal: 801 34522
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E-Mail: des.jones@manchester.gov.uk

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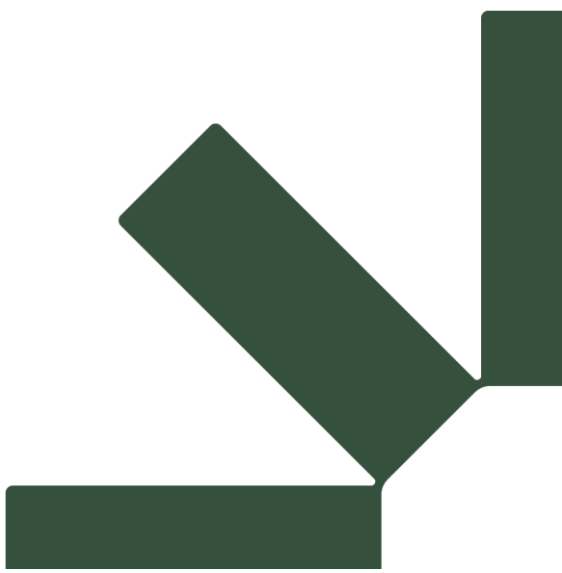
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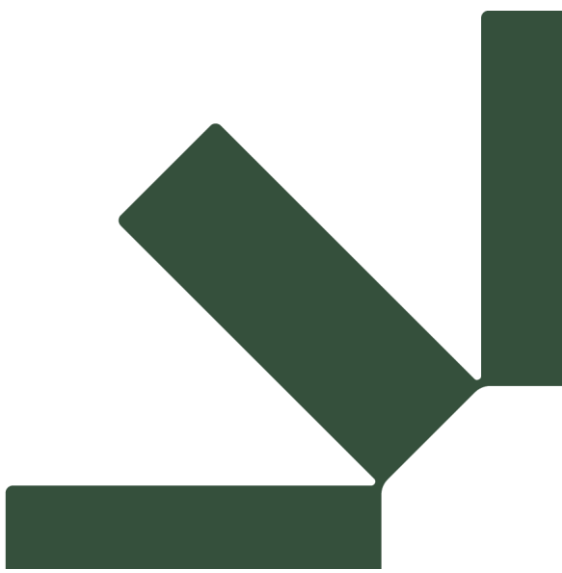
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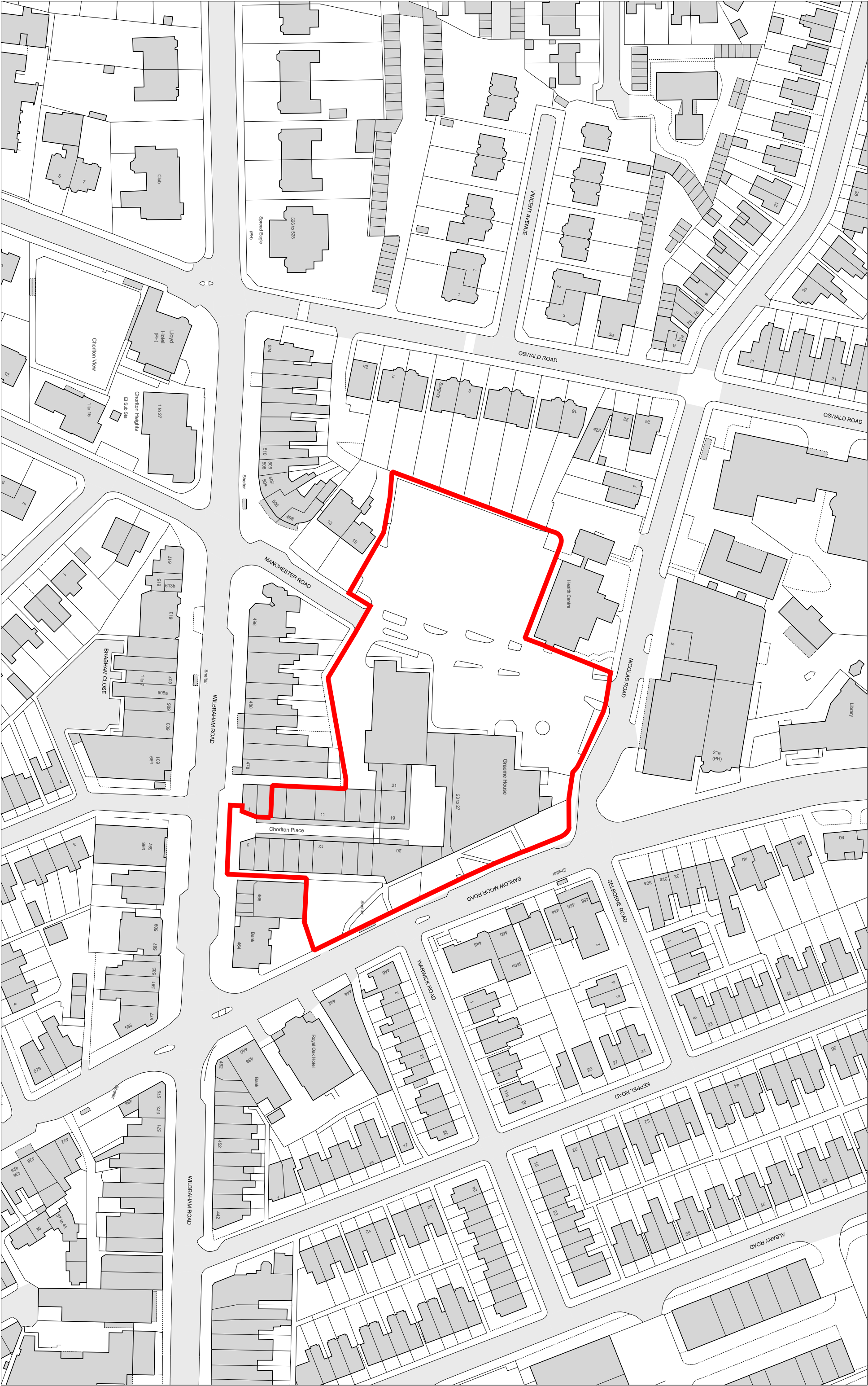
Appendix 2A Site Location Plan

*SLR



Appendix 2A Site Location Plan

*SLR



Amendment
P01 PLANNING ISSUE

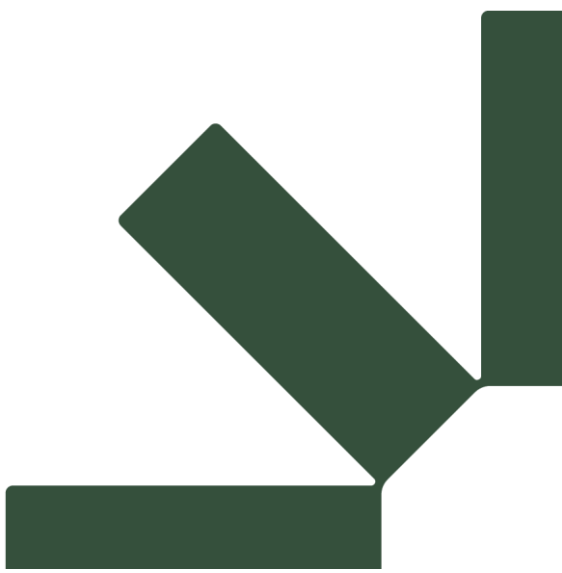
Date
12.03.2025



File **Chorlton Precinct** **by** **studios**
LLP
Bath Brewery/
Toll Bridge Road
Bath BA1 7DE
t 01225 852545
f 01225 852528
e bath@costudios.com

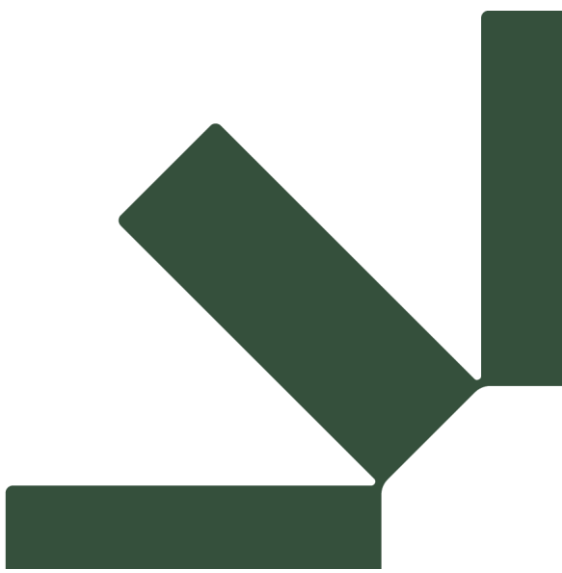
Project Name	JOHNDRAWING No	Amendment
CHORLTON PRECINCT	2104-FCBS-ZZXX-DR-A-001-P01	
CHORLTON-CUM-HARDY		
Location Plan	Scale 1:1250 @A3	Date 12.03.2025
	Drawn SD GROUP	Check AB
Do not scale		

Original printed at A3
All dimensions to be checked on site



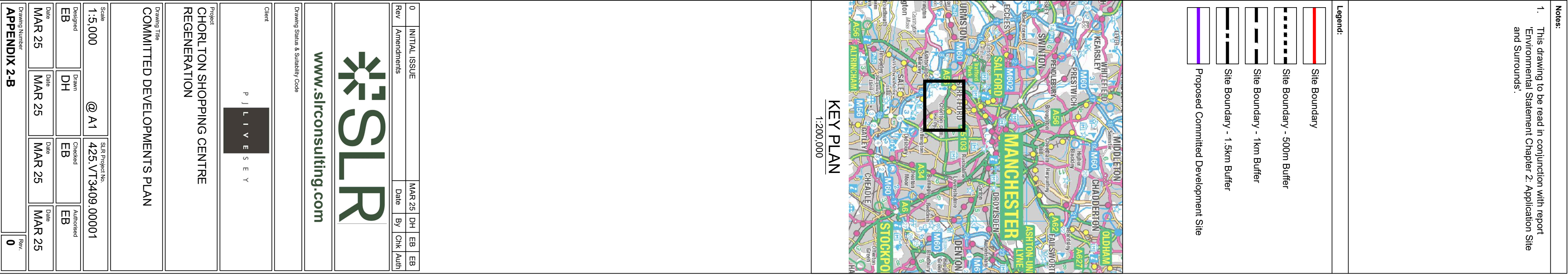
Appendix 2B Committed Developments Plan

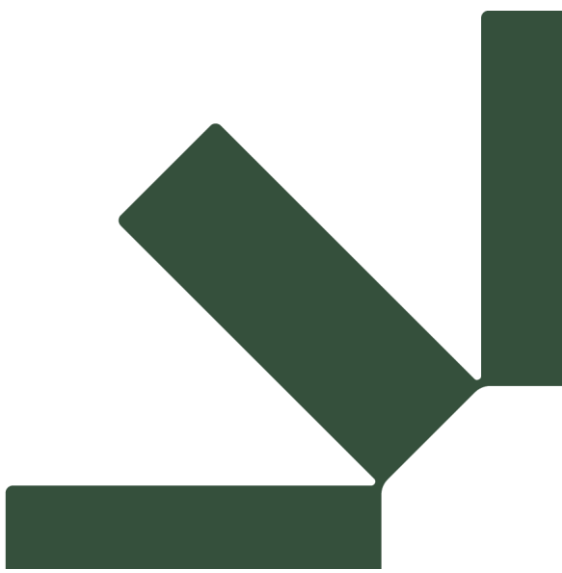
*SLR



Appendix 2B Committed Developments Plan

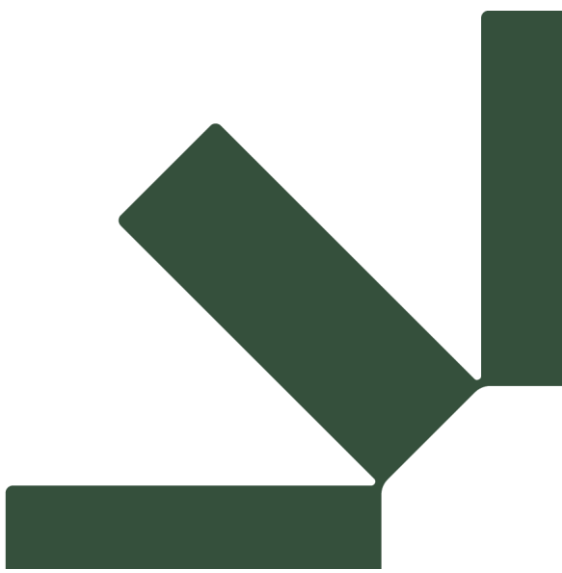
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Appendix 4A Figures

*SLR



Appendix 4A Figures

*SLR

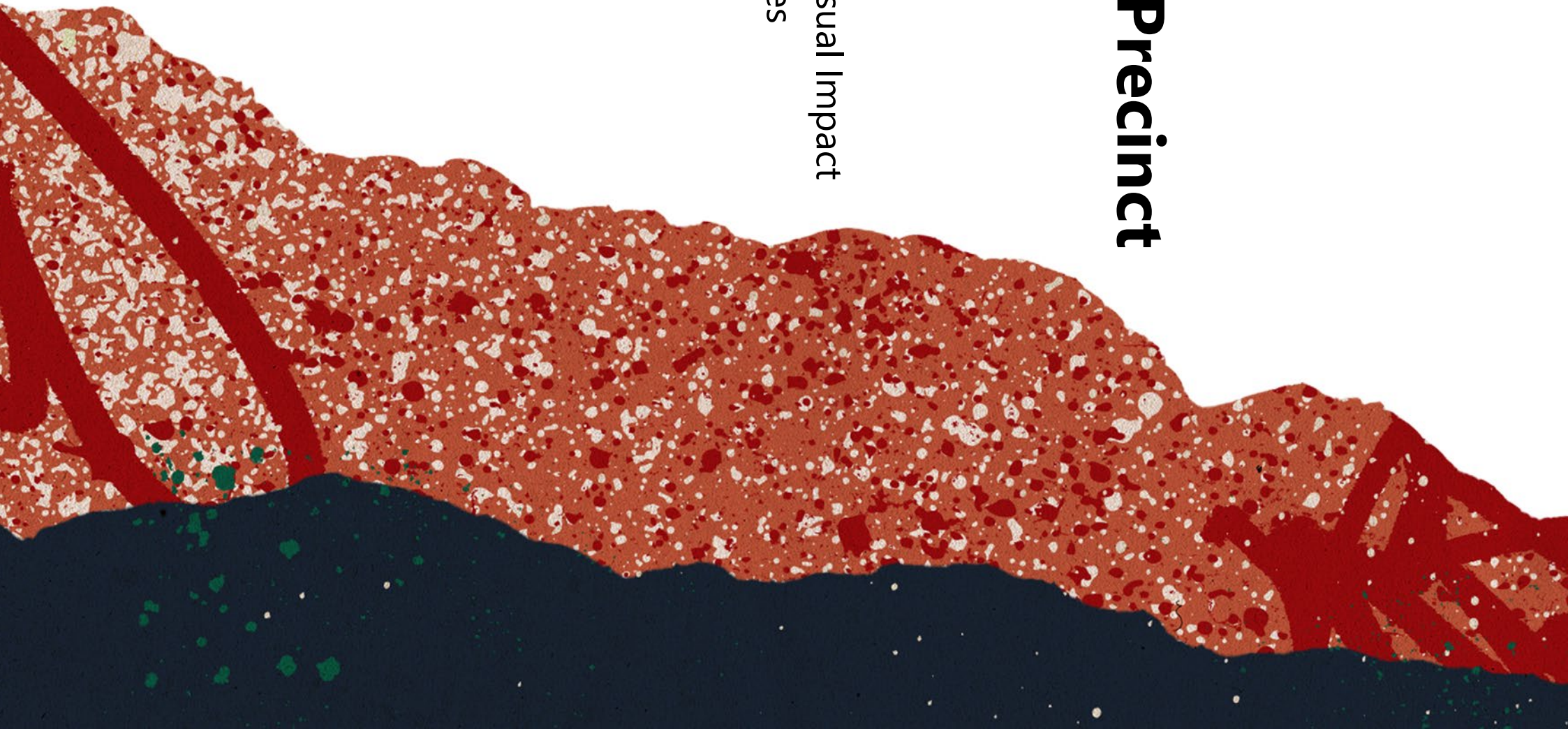
Chorlton Precinct

Appendix 4-A Townscape and Visual Impact Assessment: Figures

P J L I V E S E E Y



March 2025



KEY :

 Site boundary

 500m Study area

Townscape Character Areas

-  Chorlton District Centre
-  Wilbraham Road/ Edge Lane Conservation Area
-  Terraced and higher density housing
-  Mixed age and lower density housing
-  Commercial area - Large scale building

P J L I V E S E E Y



Chorlton Precinct,
Manchester - TVIA

Figure 4 - 1

Study Area and Townscape Context

Drwg No: 1062 - 03
Drawn by: DA
Rev by:
QM Status: unchecked
Scale: NTS @ A3

Date: 04.10.24
Checker: JF
Rev checker:
Product Status:
Internal RT Review



KEY:

 Site boundary

 500km Study area

 Site photograph locations



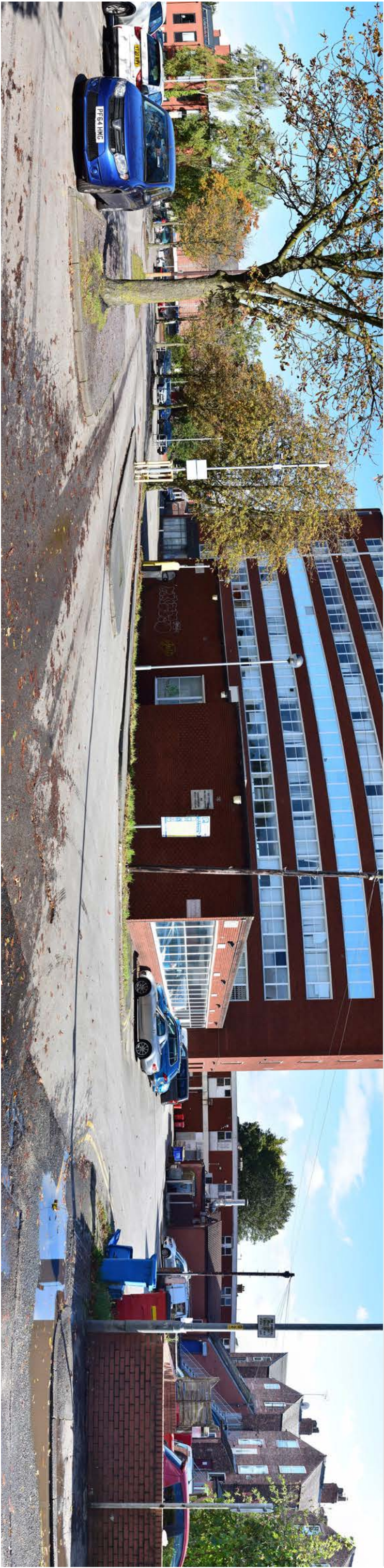
P J L I V E S E E Y

Chorlton Precinct,
Manchester - TVIA

Figure 4 - 2

Site Context

Drwg No: 1062 - 04 Date: 04.10.24
Drawn by: DA Checker: JF
Rev by: Rev checker:
QM Status: unchecked Product Status:
Scale: NTS @ A3 Internal RT Review



SITE PHOTOGRAPH A - View from the southern Manchester Road access point looking north across site



SITE PHOTOGRAPH B - View from the western site boundary looking south-east across site



Landscape Architecture
Landscape Assessment
Masterplanning
Urban Design
Expert Witness

Beehive Lofts, Beehive Mill, Jersey St,
Ancoats, Manchester, M4 6JG
0161 228 7721 mail@randallthorp.co.uk
www.randallthorp.co.uk

P J L I V E S E E Y

**Chorlton Precinct,
Manchester - TVIA**
Figure 4 - 3
Site Photographs A & B

Date: 04/10/24
Drawn by: DA
Checker: JF
Rev by:
Rev checker:

Drwg No: 1062 - 05

Scale: NTS @ A3



SITE PHOTOGRAPH C - View from the northern site boundary looking south-east across site



SITE PHOTOGRAPH D - View from the eastern site boundary looking south across site



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**Chorlton Precinct,
Manchester - TVIA
Figure 4 - 4
Site Photographs C & D**

Date: 04/10/24
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Checker: JF
Rev by:
Rev checker:

Dwg No: 1062 - 06

Scale: NTS @ A3

KEY :

Site boundary

500m Study area

Viewpoint locations

Photomontage locations

Visual Receptors and Viewpoints
Pedestrians, cyclists and motorists using the following transport corridors:

- 1 - A6010 Wilbraham Road (VP 1.1 - 1.7)

2 - Barlow Moor Road (VP 2.1 - 2.5)

3 - Nicolas Road (VP 3.1 - 3.4)

4 - Manchester Road (VP 4)

5 - Longford Road (VP 5)

6 - Selborne Road/ Keppel Road (VP 6.1 - 6.2)

7 - Warwick Road/ Albany Road (VP 7.1 - 7.2)

8 - Brundretts Road (VP 8.1 - 8.2)

9 - Whitelaw Road/ High Lane (VP 9.1 - 9.2)



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Manchester - TVIA

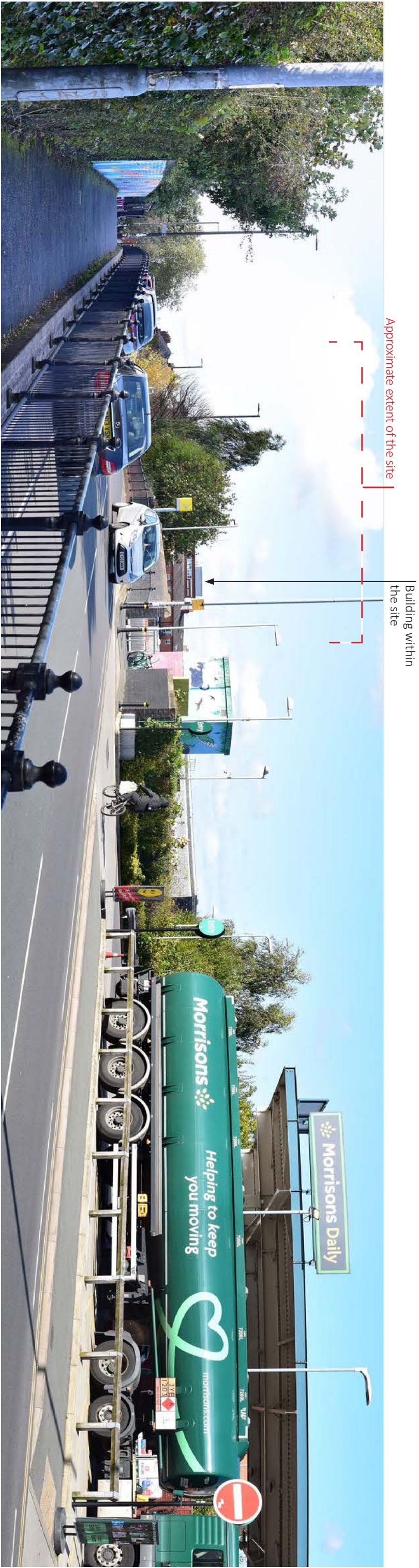
Figure 4 - 5

Viewpoint Locations

Drwg No: 1062 - 07
Drawn by: DA
Rev by:
QM Status: unchecked
Scale: NTS @ A3

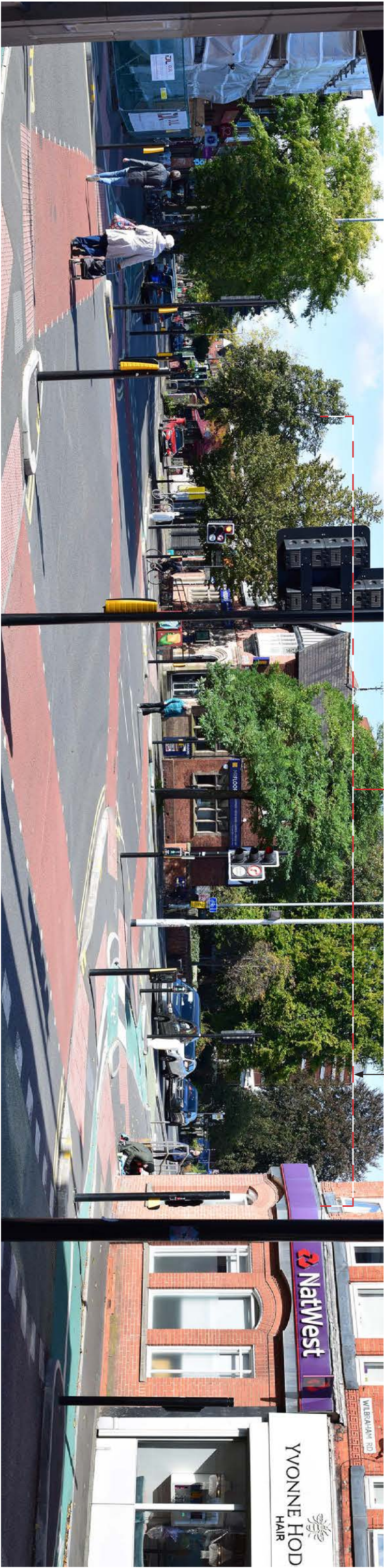
Date: 04.10.24
Checker: JF
Rev checker:
Product Status:
Internal RT Review





VIEWPOINT PHOTOGRAPH 1.1 - View from the A6010 Wilbraham Road looking north-west

APPROXIMATE DISTANCE FROM SITE - 300m



VIEWPOINT PHOTOGRAPH 1.2 - View from the A6010 Wilbraham Road looking north-west

APPROXIMATE DISTANCE FROM SITE - 75m



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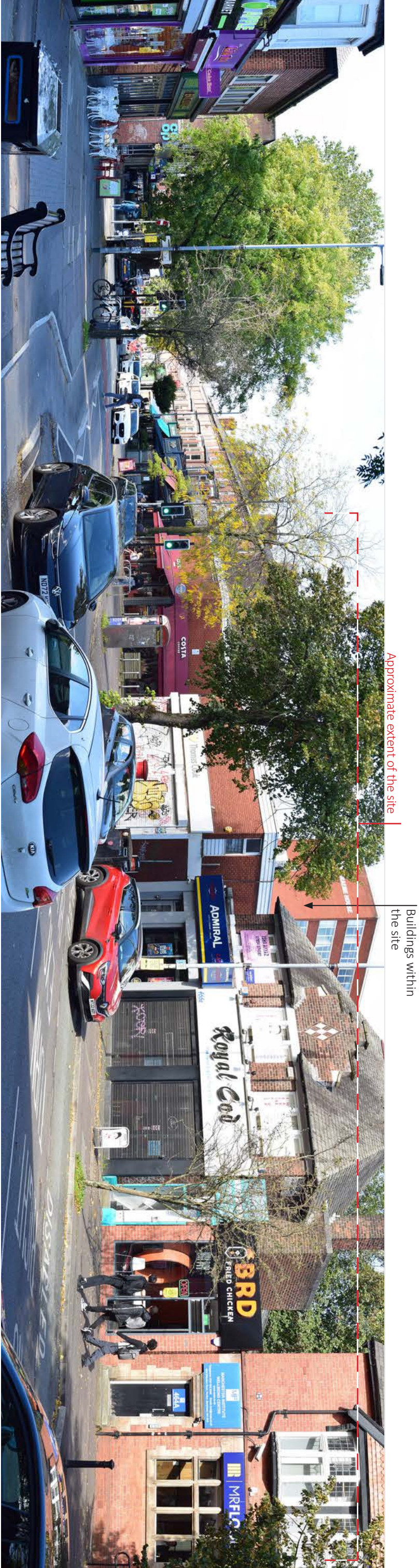
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Chorlton Precinct,
Manchester - TVIA
Figure 4 - 6
Viewpoint Photographs 1.1 & 1.2

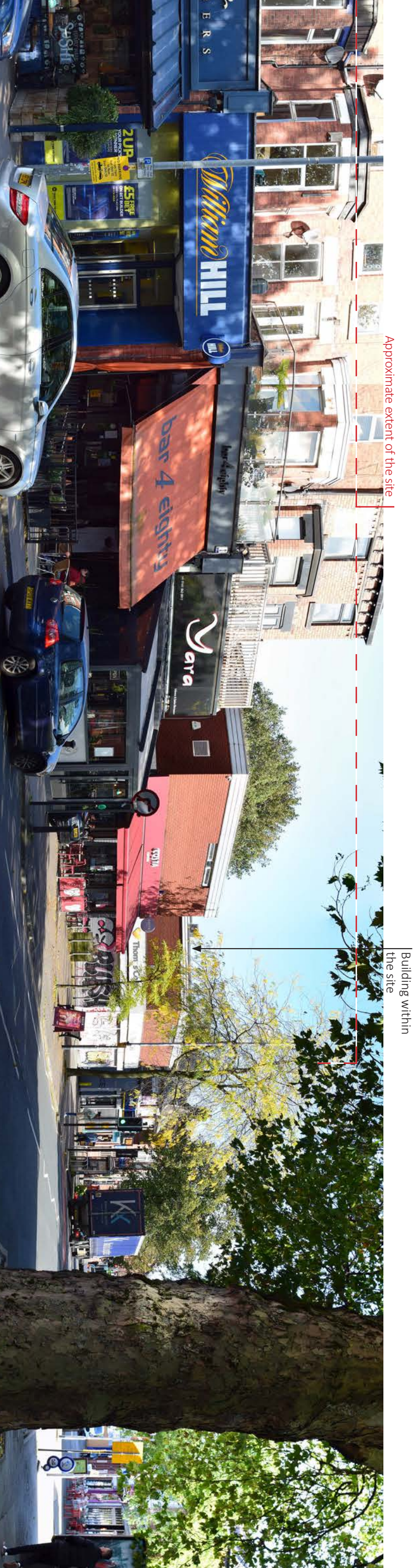
Date: 04/10/24
Drawn by: DA
Checker: JF
Rev by:
Rev checker:

Drwg No: 1062 - 08 Scale: NTS @ A3



VIEWPOINT PHOTOGRAPH 1.3 - View from the A6010 Wilbraham Road looking north-west

APPROXIMATE DISTANCE FROM SITE - 35m



VIEWPOINT PHOTOGRAPH 1.4 - View from the A6010 Wilbraham Road looking north-east

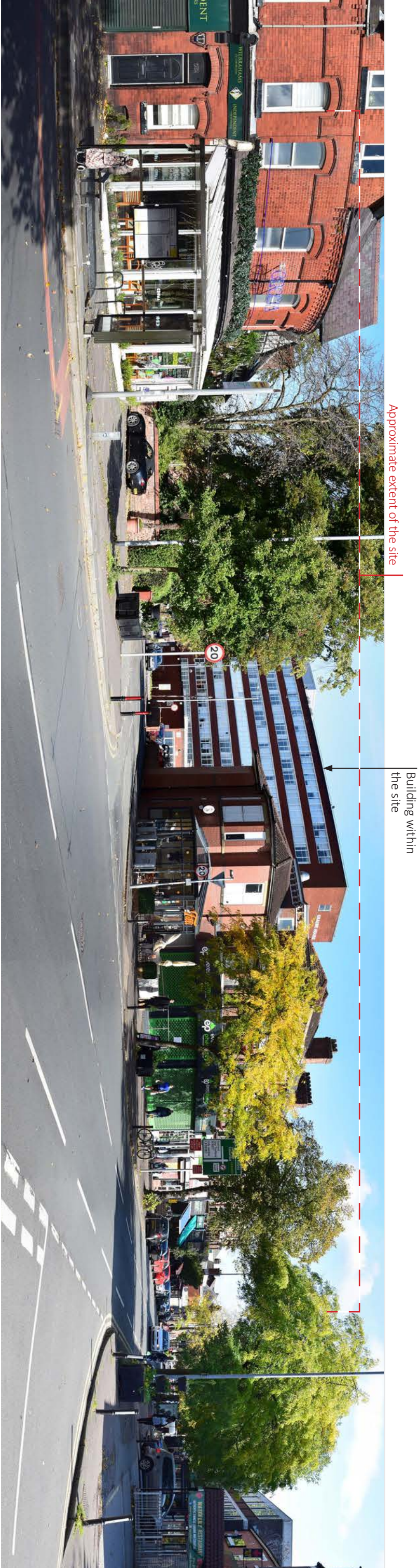
APPROXIMATE DISTANCE FROM SITE - 50m



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Chorlton Precinct,
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Figure 4 - 7
Viewpoint Photographs 1.3 & 1.4
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Drawn by: DA
Checker: JF
Rev by:
Rev checker:
Dwg No: 1062 - 09
Scale: NTS @ A3



VIEWPOINT PHOTOGRAPH 1.5 - View from the A6010 Wilbraham Road looking north-east

APPROXIMATE DISTANCE FROM SITE - 60m



VIEWPOINT PHOTOGRAPH 1.6 - View from the A6010 Wilbraham Road looking north-east

APPROXIMATE DISTANCE FROM SITE - 100m



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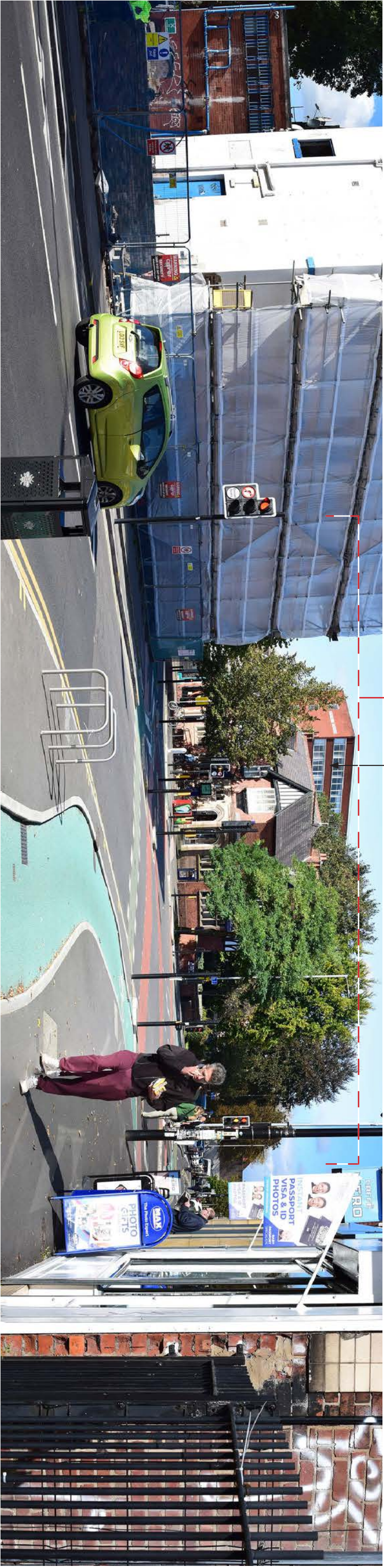
Chorlton Precinct,
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Figure 4 - 8
Viewpoint Photographs 1.5 & 1.6
Date: 04/10/24
Drawn by: DA
Checker: JF
Rev by:
Rev checker:
Dwg No: 1062 - 10
Scale: NTS @ A3



Approximate extent of the site

VIEWPOINT PHOTOGRAPH 1.7 - View from the A6010 Wilbraham Road looking east

APPROXIMATE DISTANCE FROM SITE - 140m



Approximate extent of the site

Building within the site

VIEWPOINT PHOTOGRAPH 2.1 - View from Barlow Moor Road looking north-west

APPROXIMATE DISTANCE FROM SITE - 60m



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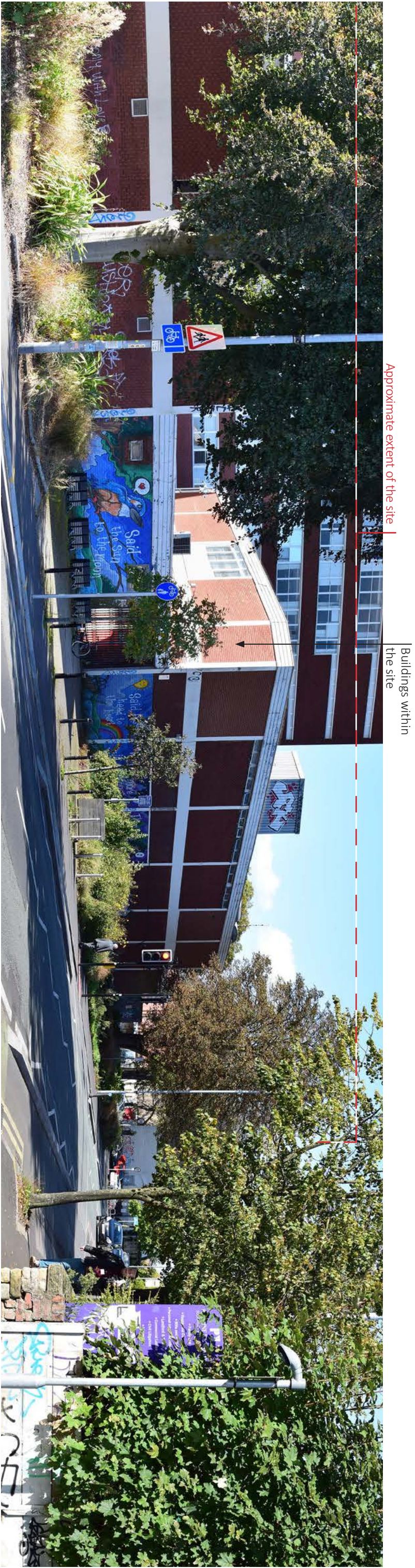
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Chorlton Precinct,
Manchester - TVIA
Figure 4 - 9
Viewpoint Photographs 1.7 & 2.1

Date: 04/10/24
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Rev by:
Rev checker:

Drwg No: 1062 - 11 Scale: NTS @ A3



VIEWPOINT PHOTOGRAPH 2.2 - View from Barlow Moor Road looking north-west

APPROXIMATE DISTANCE FROM SITE - 12m



VIEWPOINT PHOTOGRAPH 2.3 - View from Manchester Road looking south

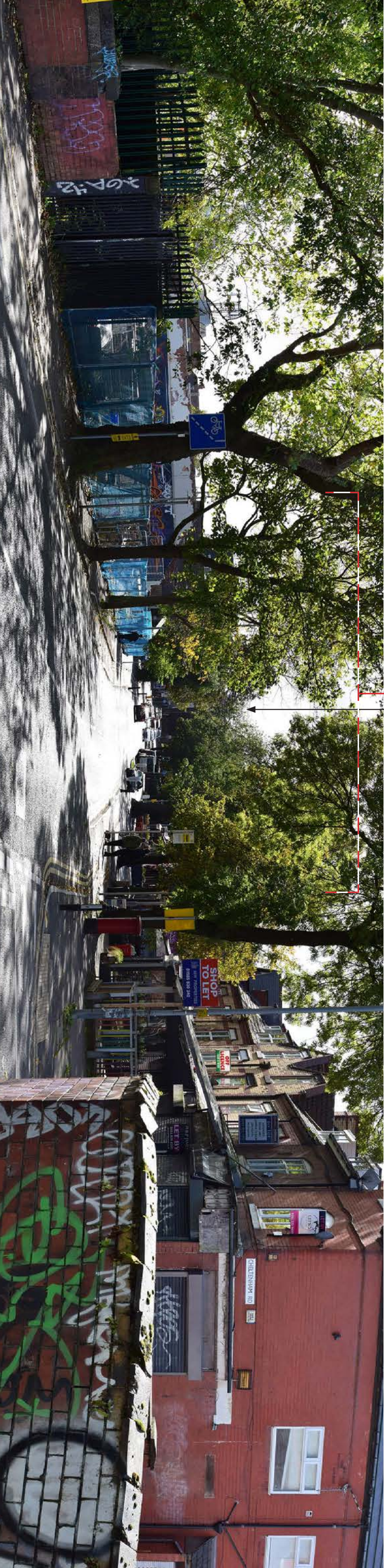
APPROXIMATE DISTANCE FROM SITE - 50m



Approximate extent of the site

VIEWPOINT PHOTOGRAPH 2.4 - View from Manchester Road looking south

APPROXIMATE DISTANCE FROM SITE - 120m



Approximate extent of the site

Top of building within the site behind trees

VIEWPOINT PHOTOGRAPH 2.5 - View from Manchester Road looking south

APPROXIMATE DISTANCE FROM SITE - 450m

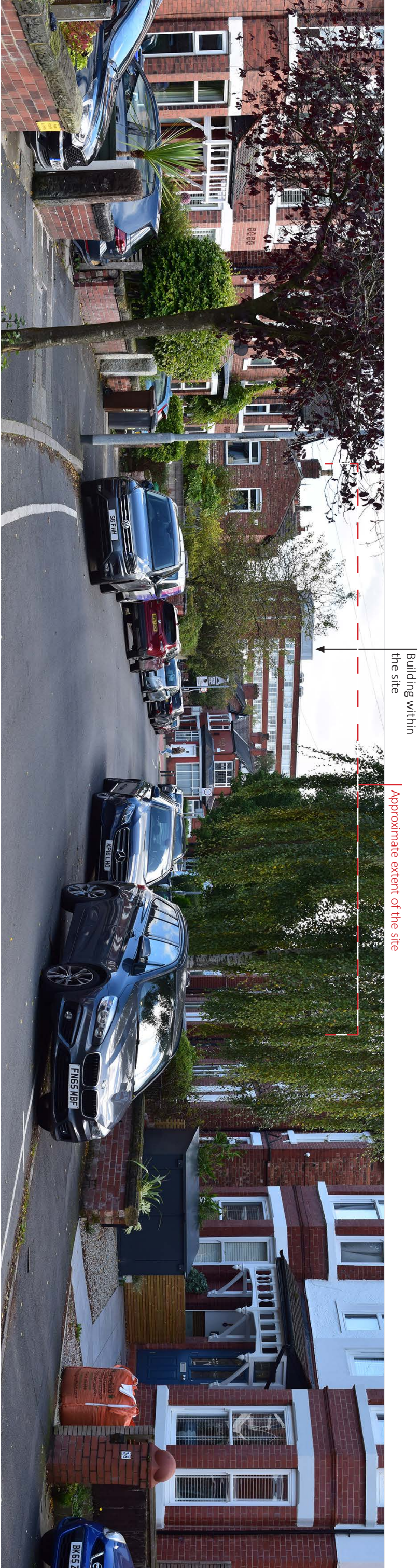


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Chorlton Precinct,
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Figure 4 - 11
Viewpoint Photographs 2.4 & 2.5
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Checker: JF
Rev by:
Rev checker:
Dwg No: 1062 - 13
Scale: NTS @ A3



VIEWPOINT PHOTOGRAPH 3.1 - View from Nicolas Road looking east

APPROXIMATE DISTANCE FROM SITE - 160m



VIEWPOINT PHOTOGRAPH 3.2 - View from the corner of Nicolas Road and Oswald Road looking east

APPROXIMATE DISTANCE FROM SITE - 120m



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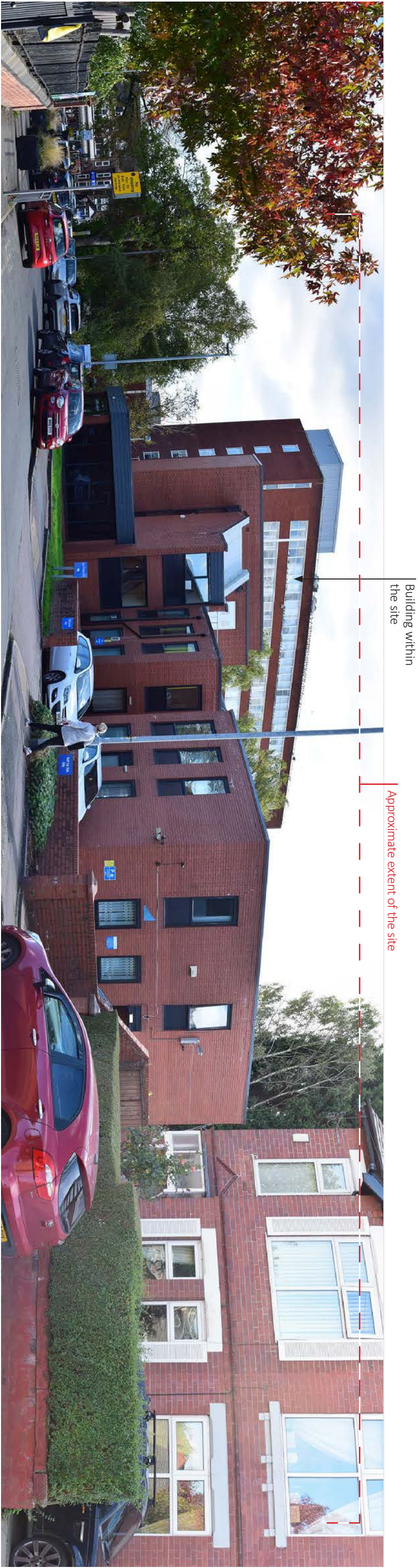
Figure 4 - 12

Viewpoint Photographs 3.1 & 3.2

Date: 04/10/24
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Checker: JF
Rev by:
Rev checker:

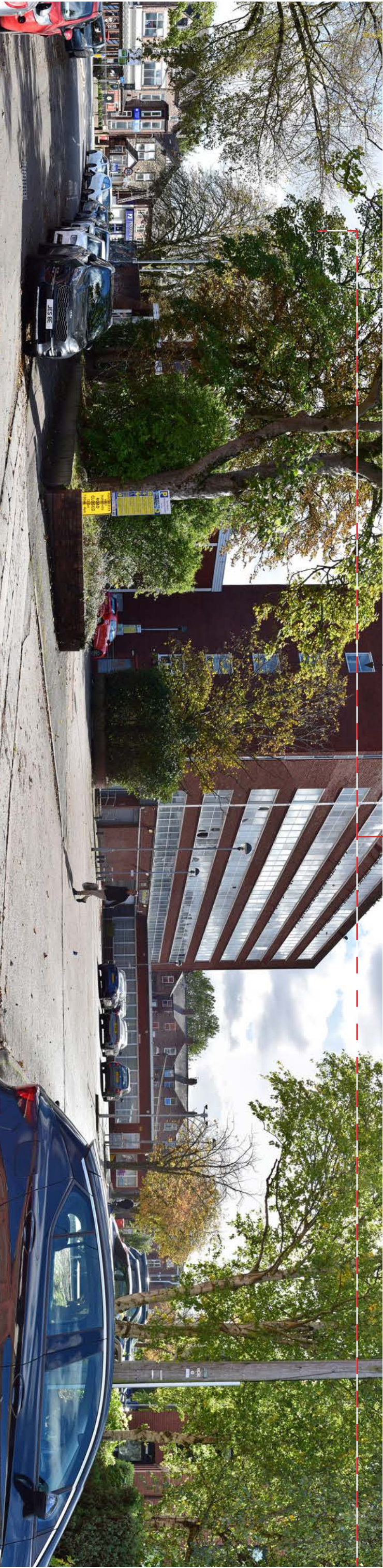
Dwg No: 1062 - 14

Scale: NTS @ A3



VIEWPOINT PHOTOGRAPH 3.3 - View from Nicolas Road looking east

APPROXIMATE DISTANCE FROM SITE - 50m



VIEWPOINT PHOTOGRAPH 3.4 - View from Nicolas Road looking south-east

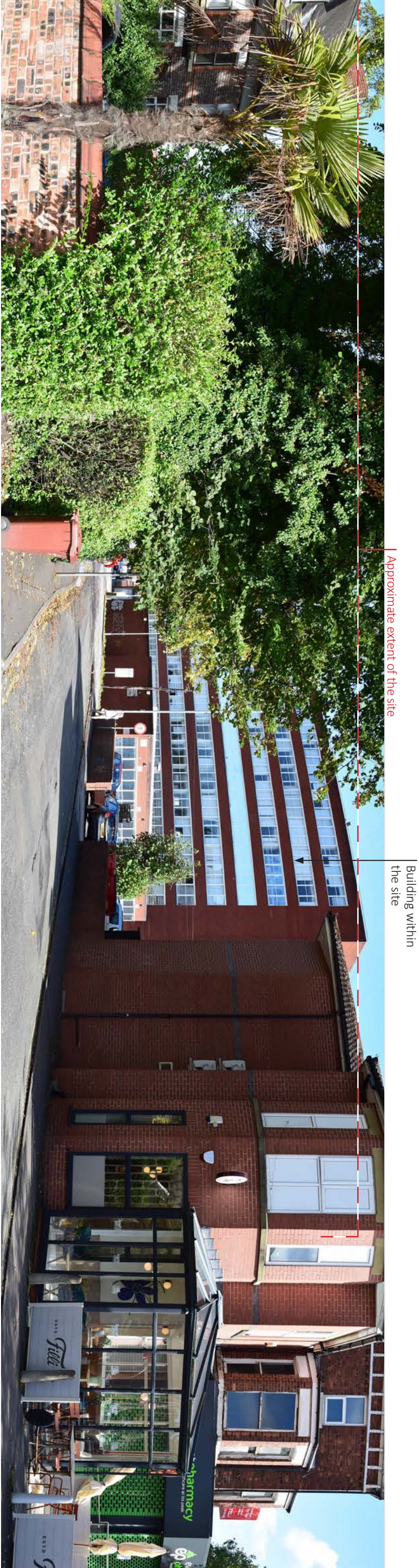
APPROXIMATE DISTANCE FROM SITE - 10m



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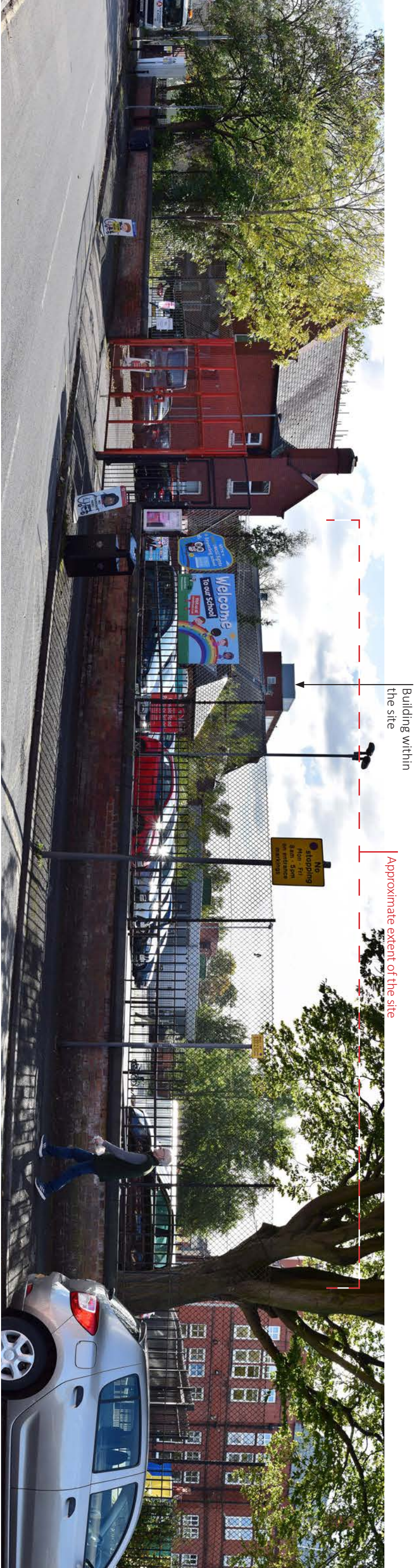


**Chorlton Precinct,
Manchester - TVIA**
Figure 4 - 13
Viewpoint Photographs 3.3 & 3.4
Date: 04/10/24
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Checker: JF
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Rev checker:
Dwg No: 1062 - 15
Scale: NTS @ A3



VIEWPOINT PHOTOGRAPH 4 - View from Manchester Road looking north-east

APPROXIMATE DISTANCE FROM SITE - 30m



VIEWPOINT PHOTOGRAPH 5 - View from Longford Road looking south

APPROXIMATE DISTANCE FROM SITE - 150m

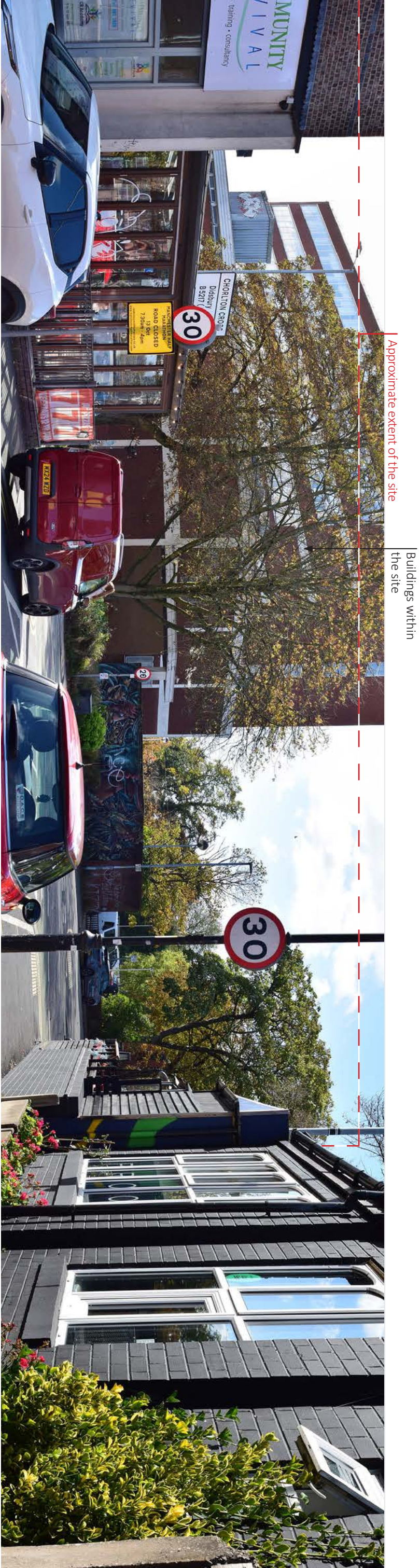


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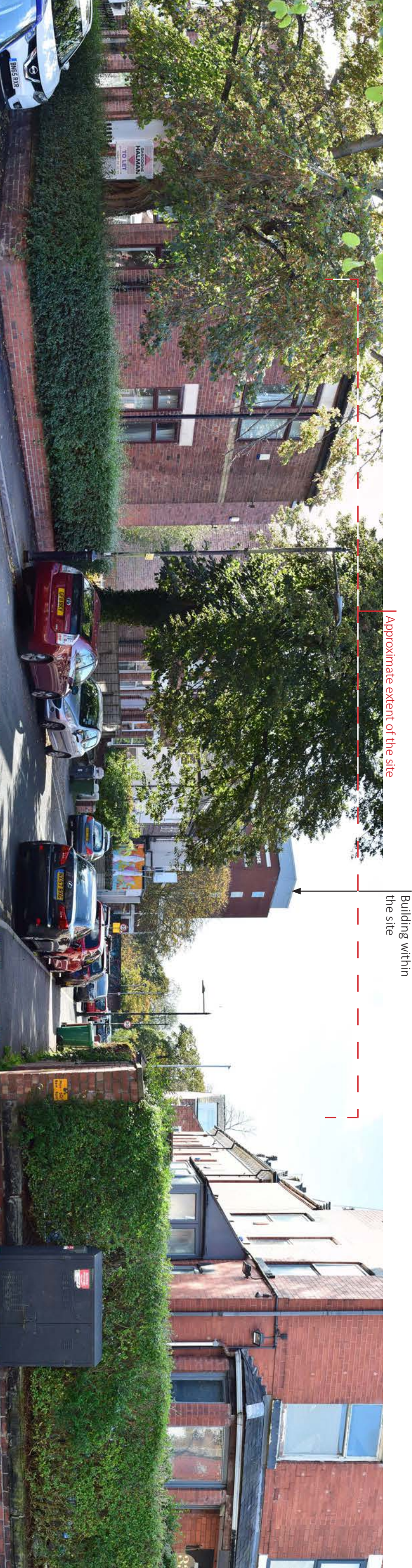


Chorlton Precinct,
Manchester - TVIA
Figure 4 - 14
Viewpoint Photographs 4 & 5
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Checker: JF
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Rev checker:
Dwg No: 1062 - 16
Scale: NTS @ A3



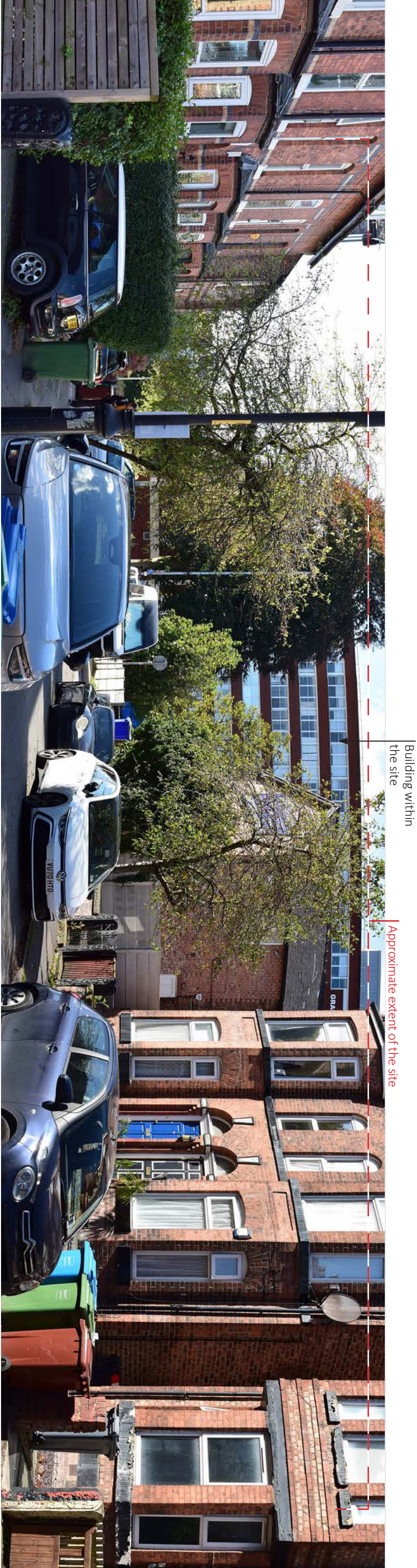
VIEWPOINT PHOTOGRAPH 6.1 - View from Selbourne Road looking south-west

APPROXIMATE DISTANCE FROM SITE - 30m



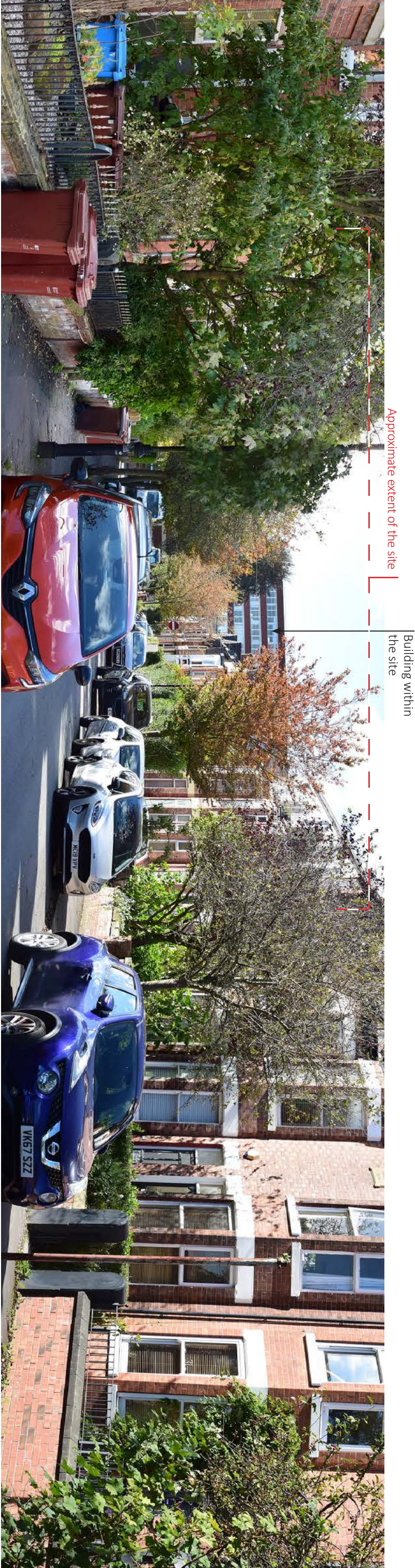
VIEWPOINT PHOTOGRAPH 6.2 - View from the corner of Keppel Road and Selbourne Road looking south-west

APPROXIMATE DISTANCE FROM SITE - 100m



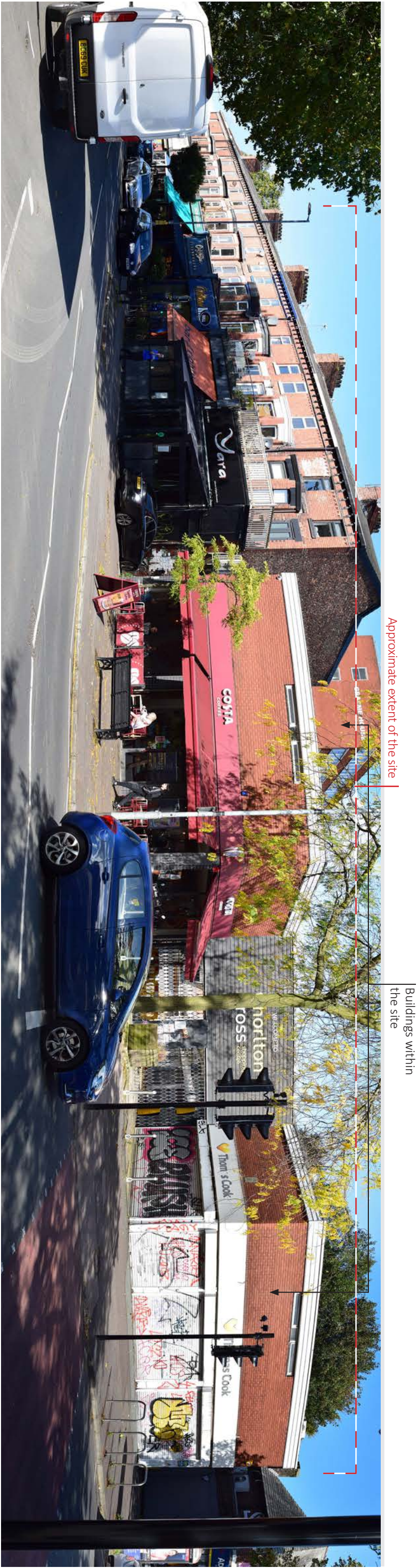
VIEWPOINT PHOTOGRAPH 7.1 - View from Warwick Road looking south-west

APPROXIMATE DISTANCE FROM SITE - 60m



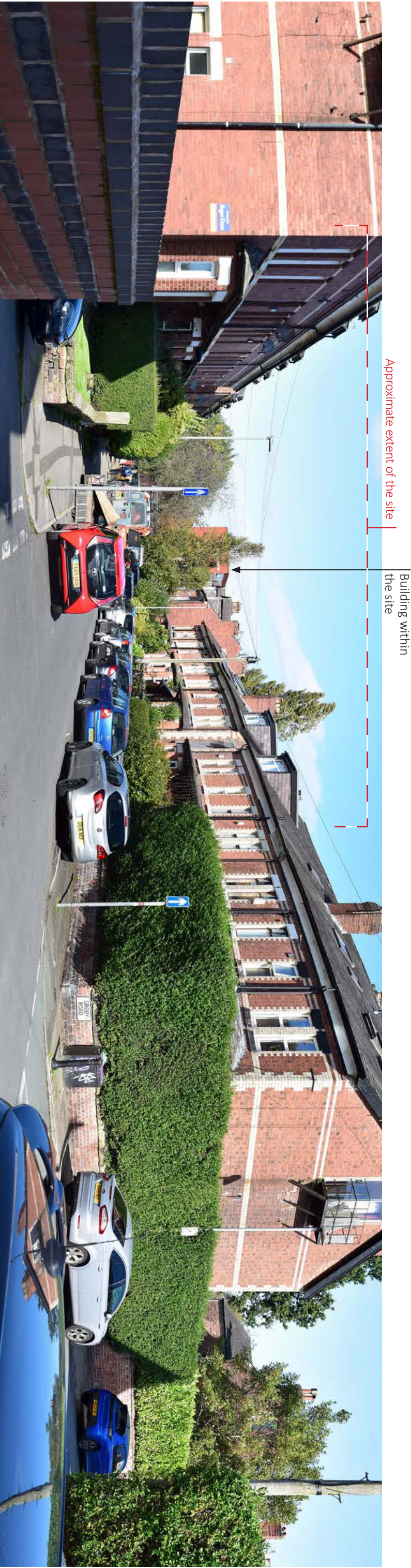
VIEWPOINT PHOTOGRAPH 7.2 - View from the corner of Warwick Road and Albany Road looking south-west

APPROXIMATE DISTANCE FROM SITE - 150m



VIEWPOINT PHOTOGRAPH 8.1 - View from the corner of Wilbraham Road and Brundretts Road looking north

APPROXIMATE DISTANCE FROM SITE - 20m



VIEWPOINT PHOTOGRAPH 8.2 - View from Brundretts Road looking north

APPROXIMATE DISTANCE FROM SITE - 190m

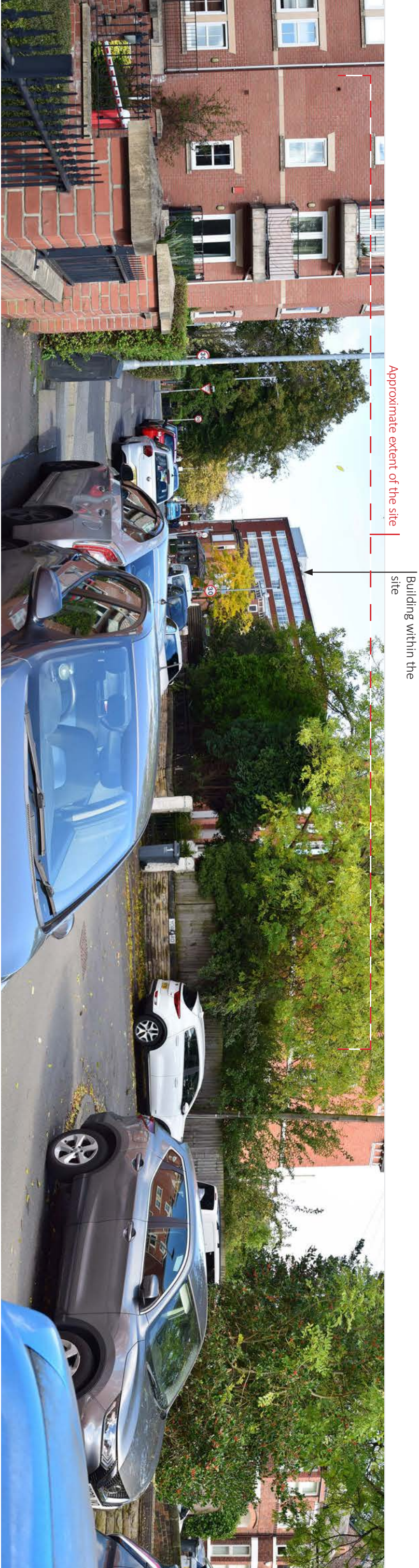


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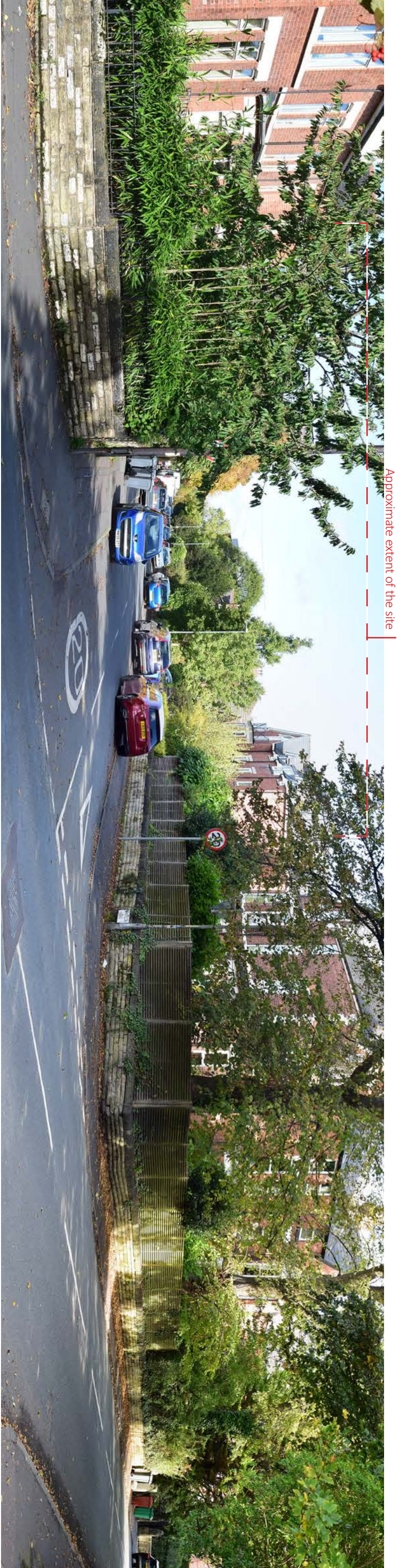


Chorlton Precinct,
Manchester - TVIA
Figure 4 - 17
Viewpoint Photographs 8.1 & 8.2
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Dwg No: 1062 - 19
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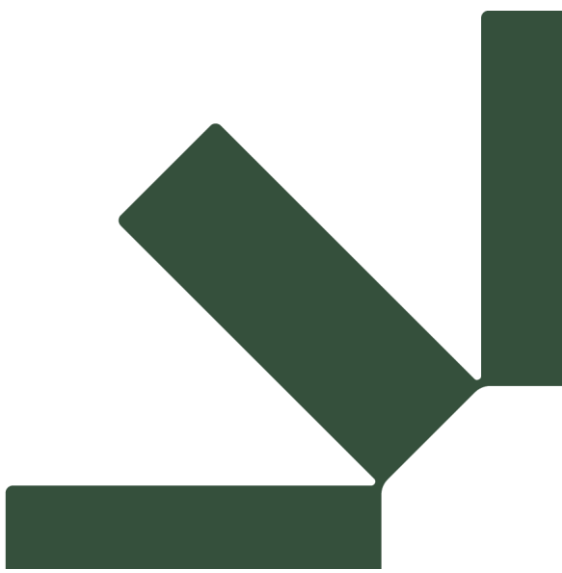
VIEWPOINT PHOTOGRAPH 9.1 - View from Whitelaw Road looking north-east

APPROXIMATE DISTANCE FROM SITE - 120m



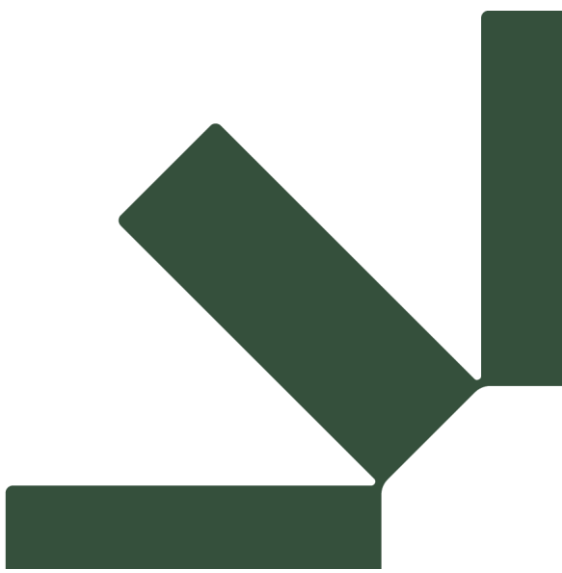
VIEWPOINT PHOTOGRAPH 9.2 - View from the corner of Whitelaw Road and High Lane looking north-east

APPROXIMATE DISTANCE FROM SITE - 300m



Appendix 4B Methodology

*SLR



Appendix 4B Methodology

*SLR

Chorlton Precinct

Appendix 4-B Townscape and Visual Impact Assessment: Methodology

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March 2025





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Format check	EH
QM Status	
Product Status	
Check date	03.02.25

Contents

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2.	Approach	3
3	Assessing Townscape Effects	5
4	Assessing Visual Effects	10

1. Relevant Guidance

1.1. The following guidance is relevant to the TVIA:

- Guidelines for Landscape and Visual Impact Assessment Third Edition (GLVIA 3) – Landscape Institute (LI) and the Institute of Environmental Management and Assessment (IEMA) (2013);
- Notes and Clarifications on Aspects of Guidelines for Landscape and Visual Impact Assessment Third edition (GLVIA) – Technical Guidance Note LITGN-2024-01 (August 2024)
- Townscape Character Assessment Technical Information Note 05/2017 - Landscape Institute (Revised April 2018);
- Visual Representation of Development Proposals Technical Guidance Note 06/19 - Landscape Institute (2019);
- Guidance on Tall Buildings CABE (2007) and
- Advice Note 4: Tall Buildings, Historic England (2022).

2. Approach

2.1. In line with GLVIA 3, the methodology used for this assessment has four key stages as follows:

- Establishment of the baseline conditions of the study area relating to townscape character and views and the quality, value and sensitivity to change of these resources;
- Contributions to the iterative process of design to understand the nature, form and features of the Proposed Development and inform inherent mitigation;
- An assessment of the magnitude of effect likely to result from the Proposed Development; and
- An assessment of the significance of townscape and visual effects considering the sensitivity of resources and the magnitude of effect.

2.2. The assessment is based on:

- Ground Floor Plan (241114_2104_FCBS_SK_2D_WS3_01) – Fielden Clegg Bradley Studios
- Landscape Masterplan (1062-01) – Randall Thorp

2.3. The assessment focuses on daytime effects during upon completion, but considers effects during construction and 15 years post completion described as the residual effects.

2.4. Viewpoints considered representative of potentially sensitive receptors situated within the study area at varying distances and directions have been identified. Views from public viewpoints, such as Public Rights of Way (PROW) and roads in the vicinity have been considered. Views from private residences have not been considered, any consideration of residential amenity would need to be carried out as a separate assessment in accordance with GVLIA guidance.

Desk-based Data

- 2.5. The desk study has included the review of the professional guidance listed above, national and local planning policy standards and published landscape character assessments. In addition, desk studies have included analysis of landform, field and settlement patterns using Ordnance Survey mapping and public rights of way mapping, and review of landscape characteristics and landscape grain using aerial photographs.

Site Survey

- 2.6. Field work was undertaken in October and November 2024. The field work established an understanding of the townscape within and around the site, its component parts, and subdivisions, as well as the contribution currently made by different areas in terms of townscape quality and character, value, green infrastructure functions and accessibility. It also verified the visual baseline to identify the range of views of the site, and whether there are any public viewpoints which are important in terms of appreciating the character of the site.

Photography and Photomontages

- 2.7. Photographic surveys have been undertaken to record views from readily accessible public viewpoints. A fixed lens, 50mm equivalent lens was used with the camera handheld to obtain normal eye height. Photographs included in the assessment are presented with the intention of aiding the understanding of the descriptive text. Where appropriate, frames have been joined together to create panoramas which are representative of normal forward vision with a horizontal field of view of 120 degrees, and which may extend up to a maximum of 180 degrees. This complies with the Visual Representation of Development Proposals, Technical Guidance Note 06/19 in respect of Type 1, Annotated Viewpoint Photographs. The photographs were taken on the 02.10.24.
- 2.8. A number of verified photomontages have been prepared to illustrate the proposals from key viewpoints. The verified photomontage work has been undertaken in accordance with Landscape Institute Technical Guidance Note 06/19 Visual Representation of Development Proposals. The photomontages have been presented as wireframes to demonstrate scale and mass of the proposals.

Extent of the Study Area

- 2.9. The extent of the study area was informed by the site survey, and is based on townscape character areas which would be influenced by the Proposed Development and the viewpoint locations. Due to the position of the site within an urban context and the screening effects of surrounding buildings, the majority of the viewpoint locations lie within a 500m radius of the site and therefore this forms the extent of the study area.

3. Assessing Townscape Effects

- 3.1. The assessment of townscape effects is structured around the identification of Townscape Character Areas (TCA) within the study area, based on a combination of desktop study and analysis, field survey and professional judgement. Different TCAs are defined through the identification of consistencies across areas of townscape in elements such as scale, materials, land use, heritage, street pattern or open space. Other townscape receptors may include individual features.

Townscape Sensitivity

- 3.2. The sensitivity of a TCA/townscape receptor to change is defined as High, Medium or Low and is based on weighing up professional judgements regarding **value** and **susceptibility**.
- 3.3. The assessment of townscape sensitivity will be made with reference to **Table 1** (Value Attached to Designated Townscape), **Table 2** (Value Attached to Non-Designated Townscape) and **Table 3** (Susceptibility to Change of Townscape Character Areas) with any further explanation felt to be necessary set out in text.

VALUE OF THE TOWNSCAPE CHARACTER AREAS

- 3.4. Existing Townscape designations are taken as the starting point for this assessment. However, the value attached to undesignated townscapes has also been assessed. Advice included within the Landscape Institute Technical Guidance Note 02 / 21 ‘Assessing Landscape Value Outside National Designations’ has been incorporated.
- 3.5. In relation to designated townscape, an overall assessment of value is made for each townscape receptor in terms of High, Medium and Low value. This is based on the criteria in **Table 1**.

Table 1: Value Attached to Designated Townscape

Value	Criteria
High	Sites, features or areas of national or international importance with settings of high quality such as World Heritage Sites, Scheduled Monuments, AONB, National Parks, Grade I and II * Listed Buildings, Registered Historic Parks and Gardens and Conservation Areas.
Medium	Sites, features or areas of local or regional importance with intact character such as Grade I and II * Listed Buildings, local nature site, long distance recreational routes, Tree Preservation Orders (TPO) and local designations that exhibit wider geographic, cultural or townscape significance.
Low	Areas or features of local importance such as Tree Preservation Orders (TPO), Public Right of Way (PROW) and locally listed buildings.

- 3.6. The criteria for assessing the value of undesignated townscape is set out in **Table 2**.

Table 2: Value Attached to Non-Designated Townscape

Factors	Value		
	High	Medium	Low
Townscape quality, condition and amenity	High quality/condition and largely intact. Attractive/ unique street scape/ townscape, buildings and elements. Strong aesthetic qualities such as scale, form, colour and texture. Absence of detracting / incongruous features.	Moderate quality/condition demonstrates some intactness. Moderate street scape/ townscape, buildings and elements. Moderate aesthetic qualities such as scale, form, colour and texture. Limited detracting / incongruous features.	Low/poor quality and disparate elements/features. Unattractive street scape/ townscape. Poor aesthetic qualities such as scale, form, colour and texture. Detracting / incongruous features.
Scarcity/ rarity	Irreplaceable / Particularly scarce or fragile. Presence of rare or unusual features.	Mainly common features, but occasional interesting features. Limited rare or unusual features.	Common features found in many cities / towns. Lack of rare or unusual features.
Historic/ Heritage interest	Historic interest which contributes significantly to townscape character. Features which offer a strong dimension of time depth.	Some historic interest with moderate contribution to historic character.	Limited to no historic interest. Lack of features which offers a strong dimension of time depth.
Sense of place	Strong sense of place and identity. Strong pattern of street blocks and plots. Distinctive building form, style material and vernacular. Unique landform, with some quality trees/ wildlife habitats. Memorable/ distinctive views and landmarks.	Moderate sense of place / identity. Moderate pattern of street blocks and plots. Some identity associated with the building form, style material and vernacular. Moderate landform, with some quality trees/ wildlife habitats. Some memorable/ distinctive views and landmarks.	Poor sense of place. Poor pattern of street blocks and plots. No similarity in building form, style material and vernacular. Lack of landform, trees/ wildlife habitats of interest. Lack of memorable/ distinctive views and landmarks.
Movement and connectivity	Legible, convenient and safe routes. Highly adaptable, with good access, natural surveillance.	Moderate legibility and access. Routes are not convenient and feel unsafe in places. Moderate access and natural surveillance.	No clear legibility. Routes are not convenient. Poor access. No natural surveillance. Existing routes feel unsafe.

SUSCEPTIBILITY TO CHANGE OF THE TOWNSCAPE CHARACTER AREAS

3.7. Susceptibility indicates the ability of a defined Townscape receptor to accommodate the Proposed Development “without undue consequences for the maintenance of the baseline situation and/or the achievement of landscape planning policies and strategies.” (GLVIA, para 5.40). A description of how susceptibility is evaluated for each receptor type is included in **Table 3**.

Table 3: Susceptibility to Change of Townscape Character Areas

Value	Criteria
High	Townscape receptor has little ability to accommodate the Proposed Development without undue negative consequences for the maintenance of the baseline townscape character and/or the achievement of townscape planning policies and strategies.
Medium	Townscape receptor has some ability to accommodate the Proposed Development without undue negative consequences for the maintenance of the baseline townscape character and/or the achievement of townscape planning policies and strategies.
Low	Townscape receptor has substantial ability to accommodate the Proposed Development without undue negative consequences for the maintenance of the baseline townscape character and/or the achievement of townscape planning policies and strategies.

Magnitude of Townscape Effects

3.8. The assessment of magnitude of effect is a professional judgement which considers the degree to which the proposal fits with existing character, and the contribution to the townscape that the development may make by virtue of good design. The balance between the size and scale of changes to individual components, the overall change to townscape character resulting, the extent of the area affected, and the duration of the townscape effects which arise are all considered. The magnitude of townscape effects is therefore assessed in terms of:

- Size or scale of effect on townscape;
- Geographical extent of the area influenced by that effect, and
- Duration and degree of reversibility.

3.9. The resulting magnitude of effect upon each townscape receptor is graded on a scale of High, Medium, Low or Negligible. Negligible change refers to a barely perceptible change.

3.10. The effects are categorised as either Adverse, Beneficial or Neutral. Adverse changes would cause harm to the townscape receptor, whilst beneficial changes would be an improvement. Neutral change recognises that there would be a change; this may be a combination of both adverse and beneficial changes, but the overall the proposals would be in keeping with the existing characteristics, causing neither degradation or enhancement.

SIZE AND SCALE OF TOWNSCAPE EFFECTS

3.11. The size and/or scale of effects relates to the scale of changes in the townscape, such as townscape elements which are lost and those which are improved, the degree to which aesthetic or perceptual aspects of the

townscape are altered and whether the effects change the key characteristics of the townscape.

3.12. The criteria used to assess the size and scale of townscape effects is based upon the amount of change that will occur as a result of the proposals and is judged as High, Medium, Low or Negligible. The criteria for judging the size and scale of effect has been set out in **Table 4**, below:

Table 4: Size and Scale of Townscape Effects

Category	Criteria
High degree of change	The proposals will result in a total change in the key characteristics of townscape character; will introduce elements totally uncharacteristic to the attributes of the receiving townscape; and/or will result in a substantial or total loss, alteration or addition of key elements/features/characteristics. The proposals will totally accord with the townscape character/elements/features/characteristics, or would restore, recreate or permanently benefit the condition or character of the townscape.
Medium degree of change	The proposals will result in a partial change in the key characteristics of townscape character; will introduce elements partially uncharacteristic to the attributes of the receiving townscape; and/or will result in partial loss, alteration or addition of key elements/features/characteristics. The proposals will achieve a good fit with the townscape character/elements/features/characteristics or would noticeably improve the condition or character of the townscape.
Low degree of change	The proposals will result in a small change in the key characteristics of townscape character; will introduce elements that are somewhat uncharacteristic to the attributes of the receiving townscape; and/or will result in a minor loss, alteration or addition of elements/features/characteristics. The proposals will achieve a degree of fit with the townscape character/elements/features/characteristics and go some way towards improving the condition or character of the townscape.
Negligible degree of change	The proposals will result in a just discernible change to the townscape character/elements/features/characteristics.

GEOGRAPHICAL EXTENT OF EFFECTS

3.13. The geographical extent is the area over which the townscape effects will be felt and could comprise Local level (on site or neighbouring sites); District level; Regional level; National level (UK); International level.

DURATION/ REVERSIBILITY

3.14. Effects may be experienced over a range of timescales. For this assessment, the following timescales are considered appropriate:

- Short-term: 0-5 years;
- Medium-term: Between 5 and 10 years; and

- Long-term: 10 – 25 years.

3.15. Effects may be permanent or reversible over time.

Final Assessment of the Significance of Townscape Effects

3.16. Conclusions reached regarding the **sensitivity** of the townscape receptors and the **magnitude** of effect will be combined to draw an overall judgement about the significance of the effects on each of the identified townscape receptors. **Table 5** below provides and indicative guide to the relationship between sensitivity and magnitude of change. This matrix is used as a guide alongside professional judgement.

3.17. Townscape effects will be described as **Major, Moderate, Minor or Negligible** (or a combination such as minor-moderate) and the changes may be categorised as **Adverse, Beneficial or Neutral**.

3.18. Townscape effects that are deemed to be significant for the purposes of this assessment are those that are described as being of a major or moderate-major effect. Moderate, minor-moderate, minor, negligible and neutral effects are not considered significant.

Table 5: Assessment of Townscape or Visual Significance

Sensitivity of Receptor	Magnitude			
		High	Medium	Low
	High	Major	Moderate - major	Moderate
	Medium	Moderate - Major	Moderate	Minor-moderate
	Low	Moderate	Minor-moderate	Minor

4. Assessing Visual Effects

Visual Sensitivity

4.1. The sensitivity of visual receptors to change is defined as High, Medium or Low and is based on weighing up professional judgements regarding **value** and **susceptibility**.

4.2. The assessment of visual sensitivity will be made with reference to **Table 6** (Value Attached to Views) and **Table 7** (Visual Receptor Susceptibility to Change) with any further explanation felt to be necessary set out in text.

VALUE OF VIEWS

4.3. The value attached to views has regard to a number of factors, including:

- Recognition through planning designations or heritage assets; and
- The popularity of the viewpoint, its appearance in guidebooks, literature or art, on tourist maps and the facilities provided for its enjoyment.

4.4. The assessment of the value of views is summarised in **Table 6** below, in terms of High, Medium and Low value. These criteria are provided for guidance only and are not intended to be absolute.

Table 6: Value Attached to Views

Value	Criteria
High	Views from townscapes/viewpoints of international/national importance recognised through designation or planning documents, or highly popular visitor attractions identified through guidebooks or tourist maps where the view forms an important part of the experience, or with important cultural associations.
Medium	Views from townscapes/viewpoints of regional/local importance, identified or protected at local level, locally popular visitor attractions identified through guidebooks or tourist maps or where the view forms part of the experience, or with local cultural associations.
Low	Views from townscapes/viewpoints with no designation, not recognised in guidebooks or on tourist maps as a visitor attraction, and typical or unremarkable views.

SUSCEPTIBILITY OF VISUAL RECEPTORS TO CHANGE

4.5. The susceptibility of different types of visual receptor to changes in views is mainly a result of:

- The occupation or activity of the viewer at a given location; and
- The extent to which a person's attention or interest may therefore be focussed on a view and the visual amenity experienced at a given view.

4.6. The assessment of visual receptors to change is specific to the Proposed Development. However, the Guidelines for Landscape and Visual Impact Assessment offers the generic guidance identified in **Table 7** as a starting point for the assessment, alongside the use of professional judgement.

Table 7: Visual Receptor Susceptibility to Change

Susceptibility	Type of Receptor
High	<ul style="list-style-type: none">• Users of public space, including users of public rights of way, whose attention is likely to be focussed on the townscape and on particular views;• Visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience;• Communities where views contribute to the townscape setting enjoyed by residents; and• Travellers on scenic routes.
Medium	<ul style="list-style-type: none">• Travellers on road, rail or other transport routes, where the view is moderately important to the quality of the journey; and• Users of public space, where the view is part of the wider experience of the place.
Low	<ul style="list-style-type: none">• People at their place of work, where the setting is not important to the quality of working life;• Travellers on road, rail or other transport routes, where the view is fleeting and incidental to the journey; and• People engaged in outdoor sport or recreation, or users of a public space, which does not involve appreciation of views.

4.7. The Guidelines for Landscape and Visual Impact Assessment qualifies the above examples as follows:

‘This division is not black and white and in reality, there will be a gradation in susceptibility to change. Each project needs to consider the nature of the groups of people who will be affected and the extent to which their attention is likely to be focussed on views and visual amenity.’ (page 114, paragraph 6.35).

Magnitude of Visual Effects

4.8. The magnitude of a visual effect is assessed in terms of its:

- Size or scale of visual effect;
- Geographical extent of the area influenced/the area over which visual effects are likely to be visible; and
- Duration and degree of reversibility.

4.9. The resulting magnitude of effect upon each visual receptor is graded on a scale of High, Medium, Low or Negligible. Negligible change refers to a barely perceptible change.

4.10. The effects are categorised as either Adverse, Beneficial or Neutral. Adverse changes would cause harm to the view, whilst beneficial changes would be an improvement. Neutral change recognises that there would be a change; this may be a combination of both adverse and beneficial changes, but the overall the proposals would be in keeping with the existing characteristics, causing neither degradation or enhancement.

SIZE AND SCALE OF VISUAL EFFECTS

4.11. When considering the size and scale of the change in the view the following criteria are considered:

- Loss or additional of features within the view including the proportion of the view occupied by the Proposed Development;
- The degree of contrast or integration of any new features or changes in the townscape with the existing or remaining townscape elements and characteristics in terms of scale, mass, line, height and colour.
- The nature of the view of the development proposed in terms of the length of time over which it will be experienced and whether the views will be full, partial or glimpsed; and
- The geographical extent of a visual effect will vary with different viewpoints and is likely to be reflected by the angle of the view, and the distance of the viewpoint from the proposals.

4.12. Criteria for the size and scale of effects on a visual receptor are set out in **Table 7**.

Table 7: Size and Scale of Visual Effects

Category	Criteria
High degree of change	The proposals will cause a dominant or complete change or contrast to the view, resulting from the loss or addition of substantial features in the view and will substantially alter the view.
Medium degree of change	The proposals will cause a clearly noticeable change or contrast to the view, which would have some effect on the composition, resulting from the loss or addition of features in the view and will noticeably alter the view.
Low degree of change	The proposals will cause a perceptible change or contrast to the view, but which would not materially affect the composition of the view.
Negligible degree of change	The proposals will cause a barely perceptible change or contrast to the view, which would not affect the composition of the view.

GEOGRAPHICAL EXTENT OF EFFECTS

4.13. The geographical extent of effects relates to the area over which visual effects are likely to be seen and could comprise Local level (on site or neighbouring sites); District level; Regional level; National level (UK); International level.

DURATION / REVERSIBILITY

4.14. Effects may be experienced over a range of timescales. For this assessment, the following timescales are considered appropriate:

- Short-term: 0-5 years;
- Medium-term: Between 5 and 10 years; and
- Long-term: 10 – 25 years.

4.15. Effects may be permanent or reversible over time. For example, visual effects arising from construction activities may be limited solely to the construction period and would be reversible. The assessment therefore considers the practicality of effects being reversed.

Final Assessment of the Significance of Visual Effects

- 4.16. Conclusions reached regarding the sensitivity of the visual receptors and the magnitude of effect will be combined to draw an overall judgement about the significance of the effects on each of the identified visual receptors. **Table 5** above provides an indicative guide to the relationship between sensitivity and magnitude of change. This matrix is used as a guide alongside professional judgement.
- 4.17. Visual effects will be described as **Major**, **Moderate**, **Minor** or **Negligible** (or a combination such as minor-moderate) and the changes may be categorised as **Adverse**, **Beneficial** or **Neutral**.
- 4.18. Visual effects that are deemed to be significant for the purposes of this assessment are those that are described as being of a Major or Moderate-major effect. Moderate, Minor-moderate, Minor, Negligible and Neutral effects are not considered significant.



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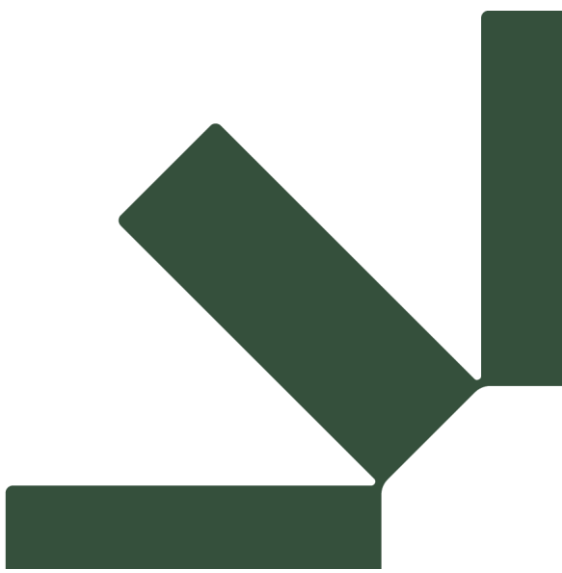
+44 (0)161 228 7721
mail@randallthorp.co.uk

randallthorp.co.uk

ASSESS

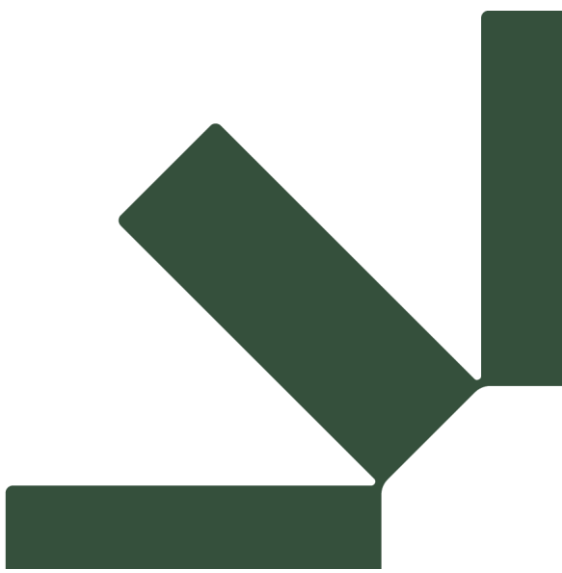
IMAGINE

CREATE



Appendix 4C Landscape Masterplan

*SLR

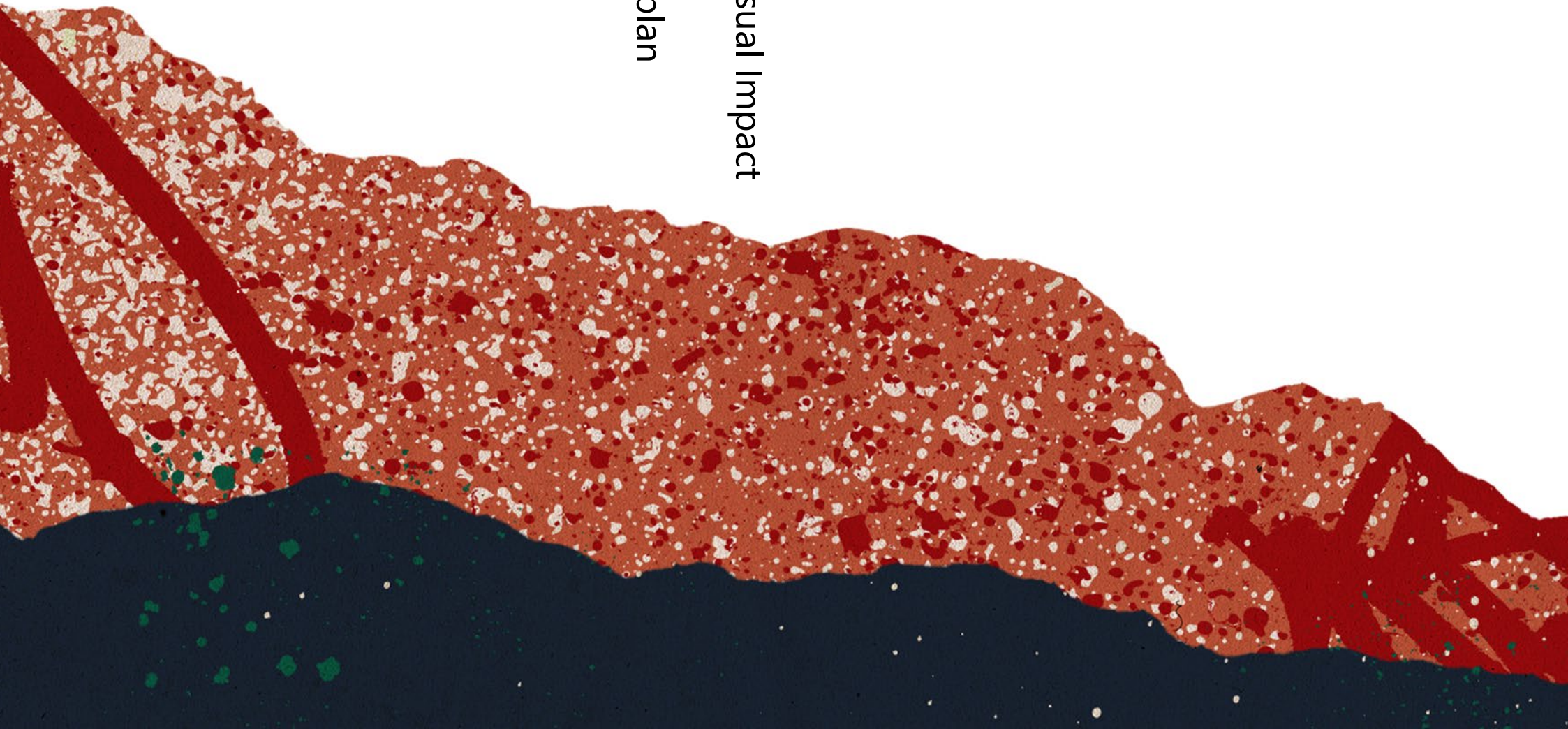


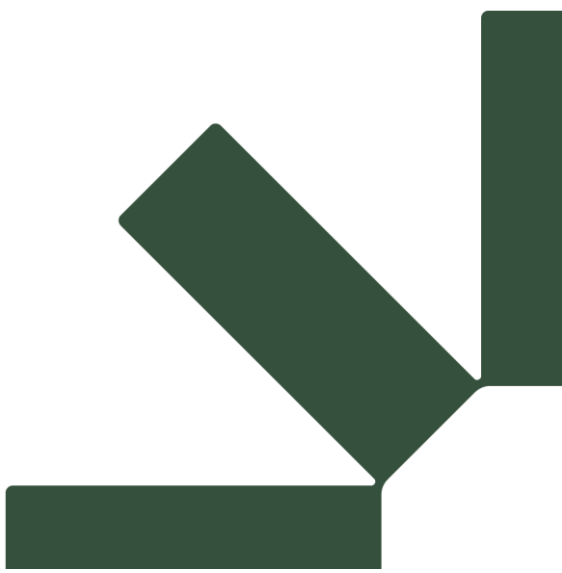
Appendix 4C Landscape Masterplan

*SLR

Chorlton Precinct

Appendix 4-C Townscape and Visual Impact Assessment: Landscape Masterplan



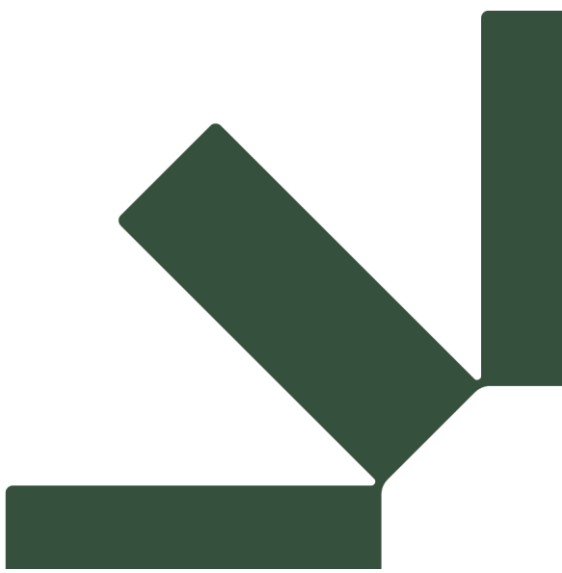


Appendix 4D Photomontage Report

– Rob Lockhart

Studios

 **SLR**



Appendix 4D Photomontage Report

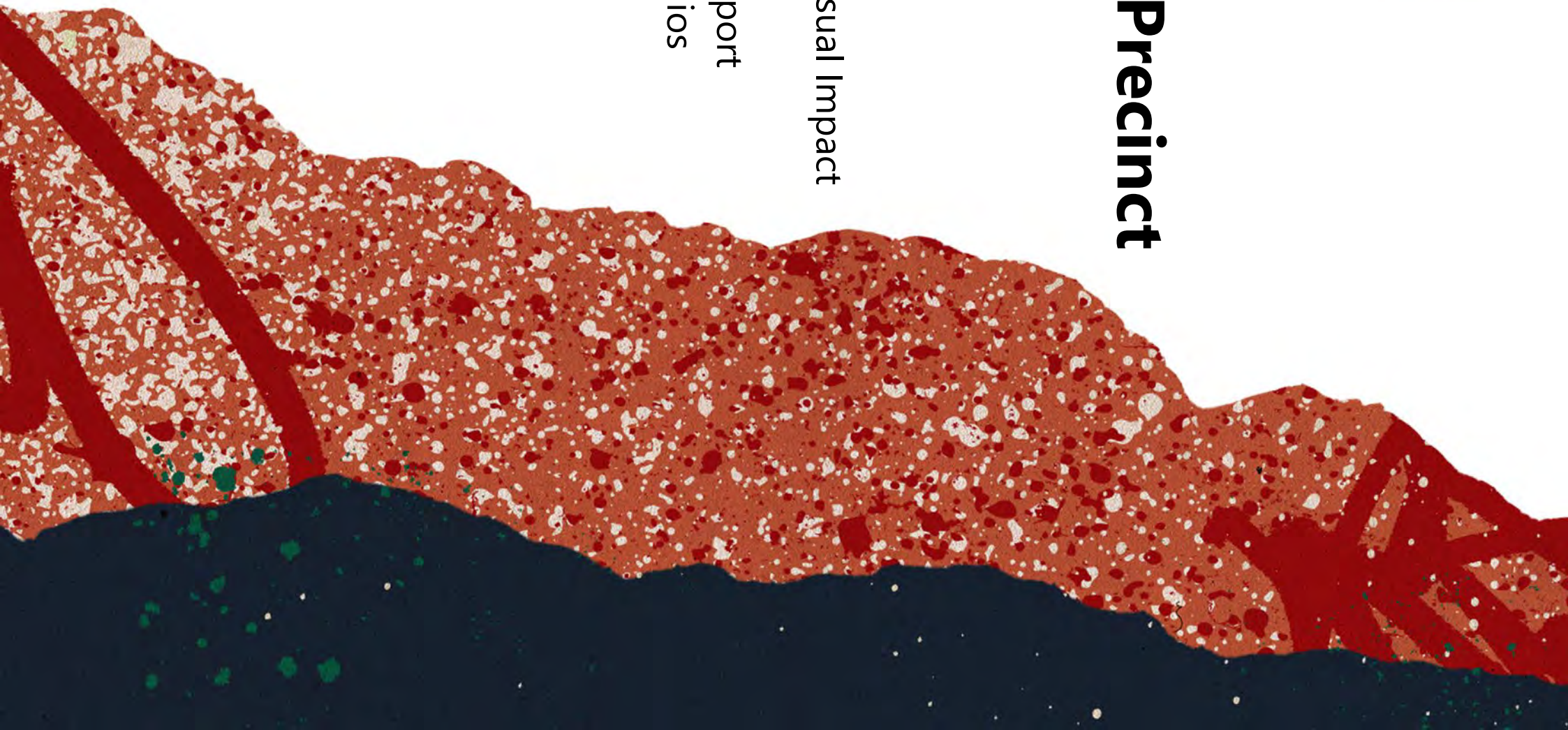
– Rob Lockhart

Studios

 **SLR**

Chorlton Precinct

Appendix 4-D
Townscape and Visual Impact
Assessment:
Photomontage Report
Rob Lockhart Studios



Verified View Methodology

Visualisation Type 3 | AVR Level 1 and 3

Overview

This document has been prepared to explain the process of generating verified views (also referred to as accurate visual representations (AVR)) for the proposed development of Chorlton Precinct, Manchester.

Rob Lockhart Studios use a methodology that is compliant with relevant sections of The Landscape Institute/LEMA Guidelines for Landscape and Visual Impact Assessment and the Landscape Institute Technical Guidance Note 06/19 (Visual Representation of Development Proposals).

High quality digital photographs were taken from the agreed locations as instructed by Randall Thorp. Visible features were used and recorded to locate the exact location of the cameras and GPS coordinates were taken. Development 3D models were imported to correct geographical co-ordinates. With a known camera position, orientation and visible features the development 3D models were accurately aligned to the photograph.

Photography

Prior to visiting the site virtual cameras were placed into the 3D model to assess and plan the required viewpoints. It was clear due to the close proximity of the view points and the built up environment that to capture the proposed site and context, it was necessary to take the photos with a 24mm lens.

For each agreed photo viewpoint location, photographs were taken with a high resolution digital SLR camera.

The locations at which the photographs were taken were recorded by supplementary photographs and the GPS coordinates were recorded. At each point, where possible, a visual feature on the ground that could be identified from geo located aerial photography was used. Where necessary, measurements were taken from visible points to locate the camera's position. The camera was mounted on a tripod with a pano head and levelled horizontally and laterally by means of integrated and additional spirit levels. The camera height from ground level was measured and recorded.

Where panoramic photos were required to capture the extent of the proposals and further context. A sufficient overlap of shots was used for the panoramic photography and were anchored by principal shots that centered on the development.

Equipment Used for Photography:

- Nikon Z6ii Digital SLR
- Nikkor Z S-Line 24mm Lens
- Remote shutter release
- Tripod with indexed pano head and adjustable nodal slider
- Spirit levels
- Plumb line
- Leica DISTO D210
- 2nd camera to record position and setup of equipment

Post Production

Each photo viewpoint photograph was processed from a RAW data file in 16bit colour space using Adobe Camera Raw.

The individual shots were stitched together using a method of cylindrical projection to form a panorama.

Standard (digital) photographic post production techniques were used to create a corrected final 16bit file to be used as the basis for each photomontage.

Chorlton Precinct, Manchester

AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

The Proposed 3D Development Model

The most recent detailed 3D model, 3D massing model and CAD drawings of the site plan and sections were provided by Feilden Clegg Bradley Studios and were checked for accuracy and consistency.

Finishes and materials were applied to the detailed AVR level 3 model in accordance with those proposed in the design documents and communications with the architect.

A 3D massing model was also built from this information to enable the creation of wireline images suitable for AVR Level 1.

The models were aligned in the correct position and height above ordnance datum to the OSGB36 coordinate system.

For the AVR Level 3 images 3D trees and planting were selected by type and size according to the landscape design documents prepared by Randall Thorp and placed in the relevant proposed locations. Two of the viewpoints photography was taken in winter and one in summer therefore the 3D models were selected in season to match.

The Verification Process

The verification process confirms the accuracy of the 3D model in relation to each view.

LiDAR DSM topography with a 1m resolution and height accuracy of 5cm was imported into the scene with the 3D development model relative to the OSGB36 coordinate system. A geo located aerial photograph with a resolution of 12.5cm was applied to the topography.

At each location a virtual camera was created based on the real lens information from the EXIF data of each photograph. The cameras were positioned in the 3D model using GPS, visual references, site measurements and known heights above the LiDAR data. The likely level of location accuracy is better than 1.5m.

The cameras were matched by aligning the LiDAR DSM topography, the aerial photograph and known features on the landscape with the photo viewpoint photographs.

For each viewpoint, in the case of the AVR level 3 views, an exact lighting system was setup using the geographic location and the date and time in the EXIF data of each photograph.

This process mimics the real life sun and atmospheric environmental lighting at the point the photograph was captured. Some fine tuning is generally necessary to allow for any effects of cloud cover variations and to better match the resultant lighting and shadows in the base photograph. The 3D model of the proposed development was rendered for each viewpoint to create an image file.

Using a photo editing package the rendered images were photomontaged with the corresponding photographs. For each viewpoint the rendered image of the development was masked behind buildings, structures, trees and terrain where it would be obscured from sight in the photo.

For the AVR3 images adjustments in colour, tone and saturation are then made to the rendered image to create a close impression of how the proposed finishes of the building would look like in context with the photographic image.

Applications Used

- Adobe Photoshop CC
- Adobe Lightroom CC
- Autodesk 3ds Max
- Chaos Group Vray
- PTGui Pro
- Google Earth Pro
- OGIS
- Grid InQuest 2



Visual Receptor - Key Views

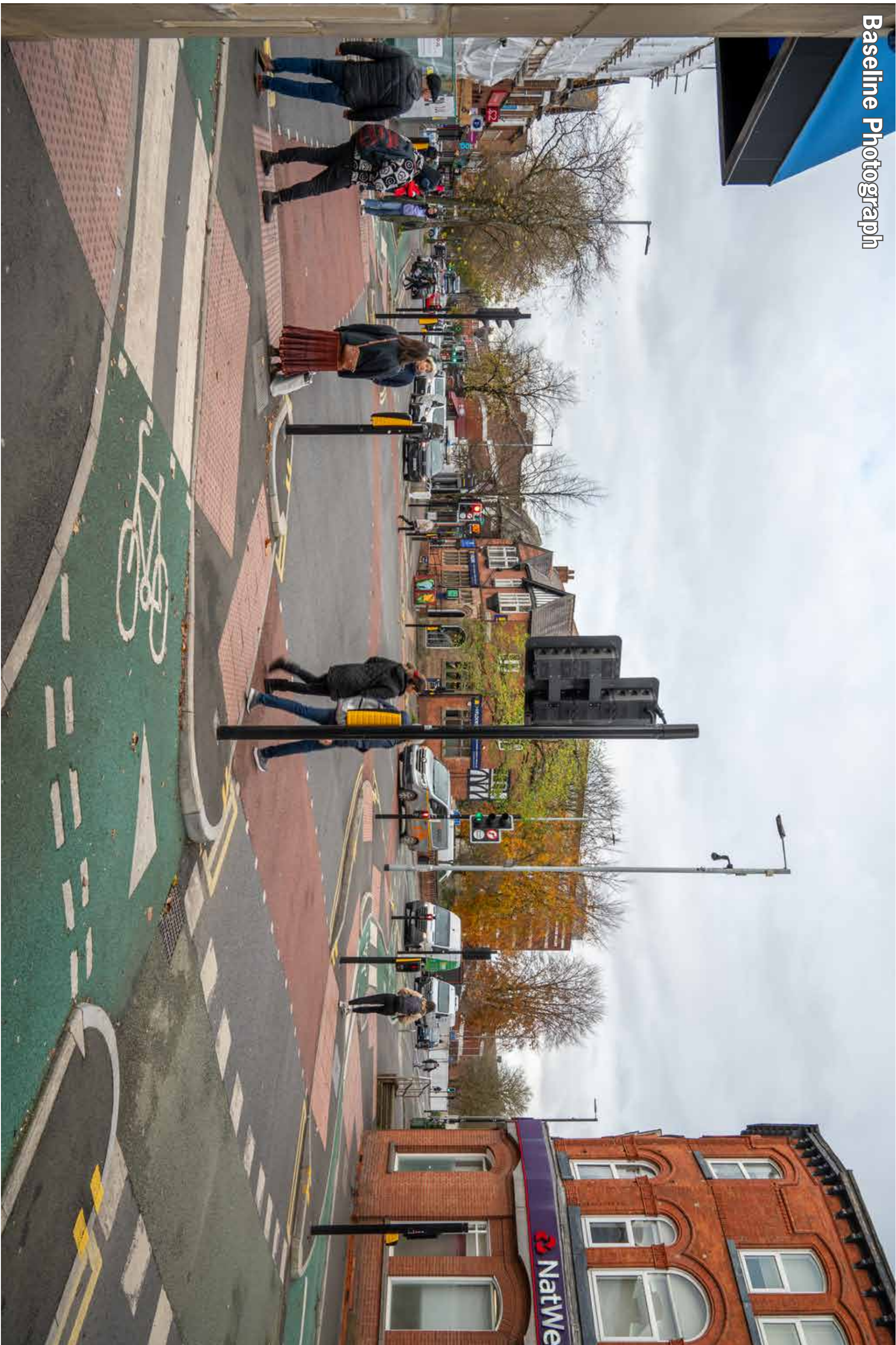
Supplied by Randall Thorp

Key:

- Site Boundary
- Viewpoint Location



Photowire AVR Level 1



Baseline Photograph

VFOV 52.94°

Solid Outline - Represents the extent of the proposed built form

HFOV 73.59°



Camera Location



Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 13:57
Camera Location | E 381707.36, N 3933996.52 @ 27.711m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 300.5° from N

Distance to Nearest Site Boundary | 83.5m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-line 24mm
Focal Length and Orientation | 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires
November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 13:57
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Camera Lens | Nikon Nikkor Z S-Line 24mm
Focal Length and Orientation | 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Solid Outline - Represents the extent of the proposed built form

Chorlton Precinct, Manchester
AVR Photomontages / Photowires
November 2024 v2.0 (updated September 2025)

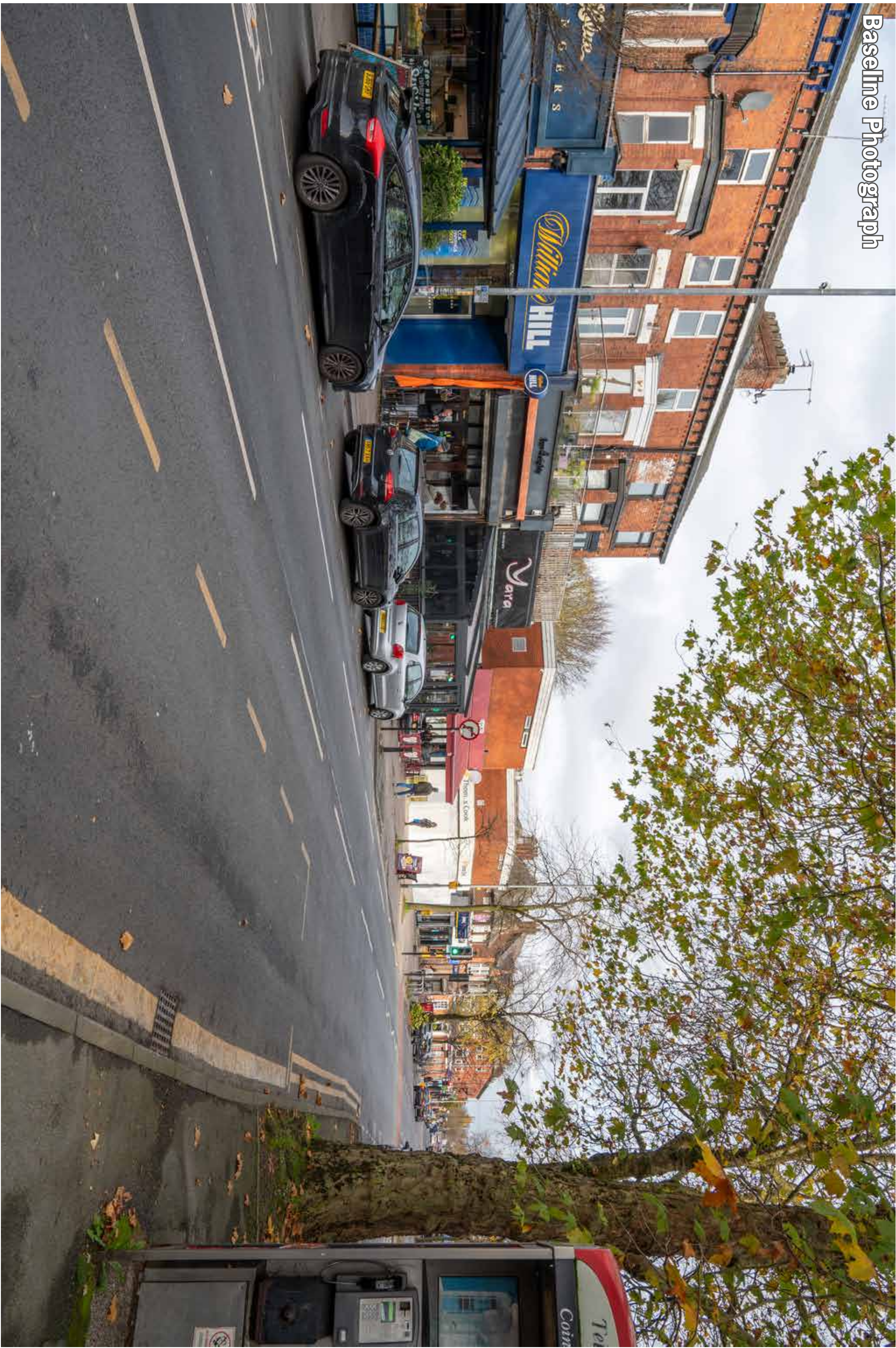
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Camera Location | E 381707.36, N 3933996.52 @ 27.711m AOD
Camera's Nodal Point Height From Ground | 1.6m
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Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 24mm
Focal Length and Orientation | 24mm Landscape

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Photomontage AVR Level 3



Baseline Photograph

VFOV 52.94°

HFOV 73.59°



Camera Location



Chorlton Precinct, Manchester

AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 13:26
Camera Location | E 381561.14, N 394007.53 @ 28.358m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 63.7° from N

Distance to Nearest Site Boundary | 42m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-line 24mm
Focal Length and Orientation | 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 12/11/2024 @ 13:26	Distance to Nearest Site Boundary 42m
Camera Location E 381561.14, N 394007.53 @ 28.358m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-Line 24mm
Direction of View 63.7° from N	Focal Length and Orientation 24mm Landscape



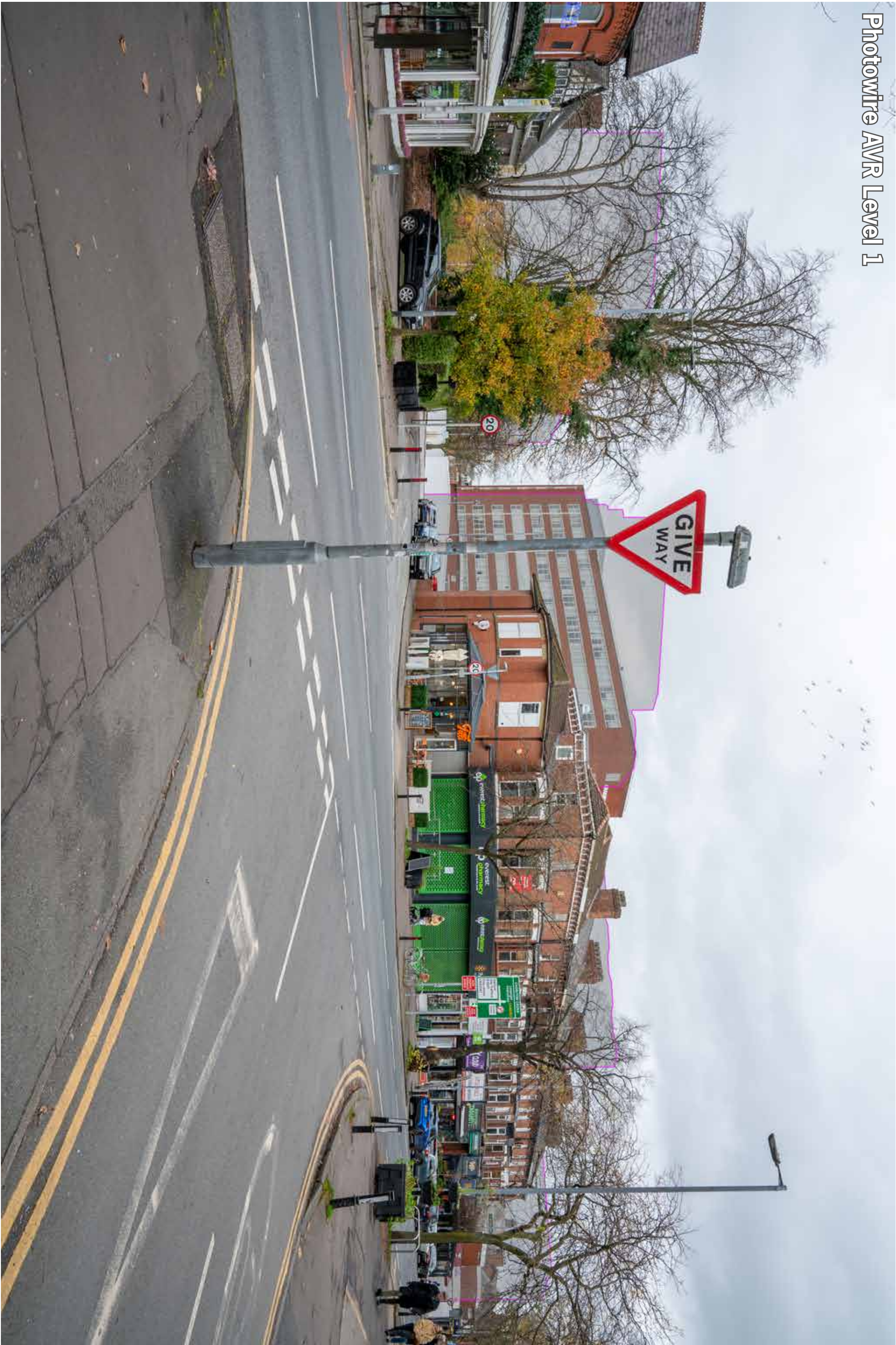
Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 12/11/2024 @ 13:26	Distance to Nearest Site Boundary 42m
Camera Location E 381561.14, N 394007.53 @ 28.358m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-Line 24mm
Direction of View 63.7° from N	Focal Length and Orientation 24mm Landscape



Photowire AVR Level 1



Baseline Photograph

VFOV 52.94°

Solid Outline - Represents the extent of the proposed built form

HFOV 73.59°



Camera Location



Chorlton Precinct, Manchester

AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 12:59
Camera Location | E 381486.86, N 394004.48 @ 29.032m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 47.9° from N

Distance to Nearest Site Boundary | 65m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 24mm
Focal Length and Orientation | 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires
November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 12:59
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Distance to Nearest Site Boundary | 65m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 24mm
Focal Length and Orientation | 24mm Landscape

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Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Solid Outline - Represents the extent of the proposed built form

Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 12:59
Camera Location | E 381486.86, N 394004.48 @ 29.032m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 47.9° from N

Distance to Nearest Site Boundary | 65m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 24mm
Focal Length and Orientation | 24mm Landscape

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Photowire AVR Level 1



Baseline Photograph

VFOV 52.94°

Solid Outline - Represents the extent of the proposed built form

HFOV 73.59°



Camera Location



Chorlton Precinct, Manchester

AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 14:12
Camera Location | E 381711.01, N 393977.93 @ 27.572m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 304° from N

Distance to Nearest Site Boundary | 93m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-line 24mm
Focal Length and Orientation | 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires
November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 14:12
Camera Location | E 381711.01, N 393977.93 @ 27.572m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 304° from N

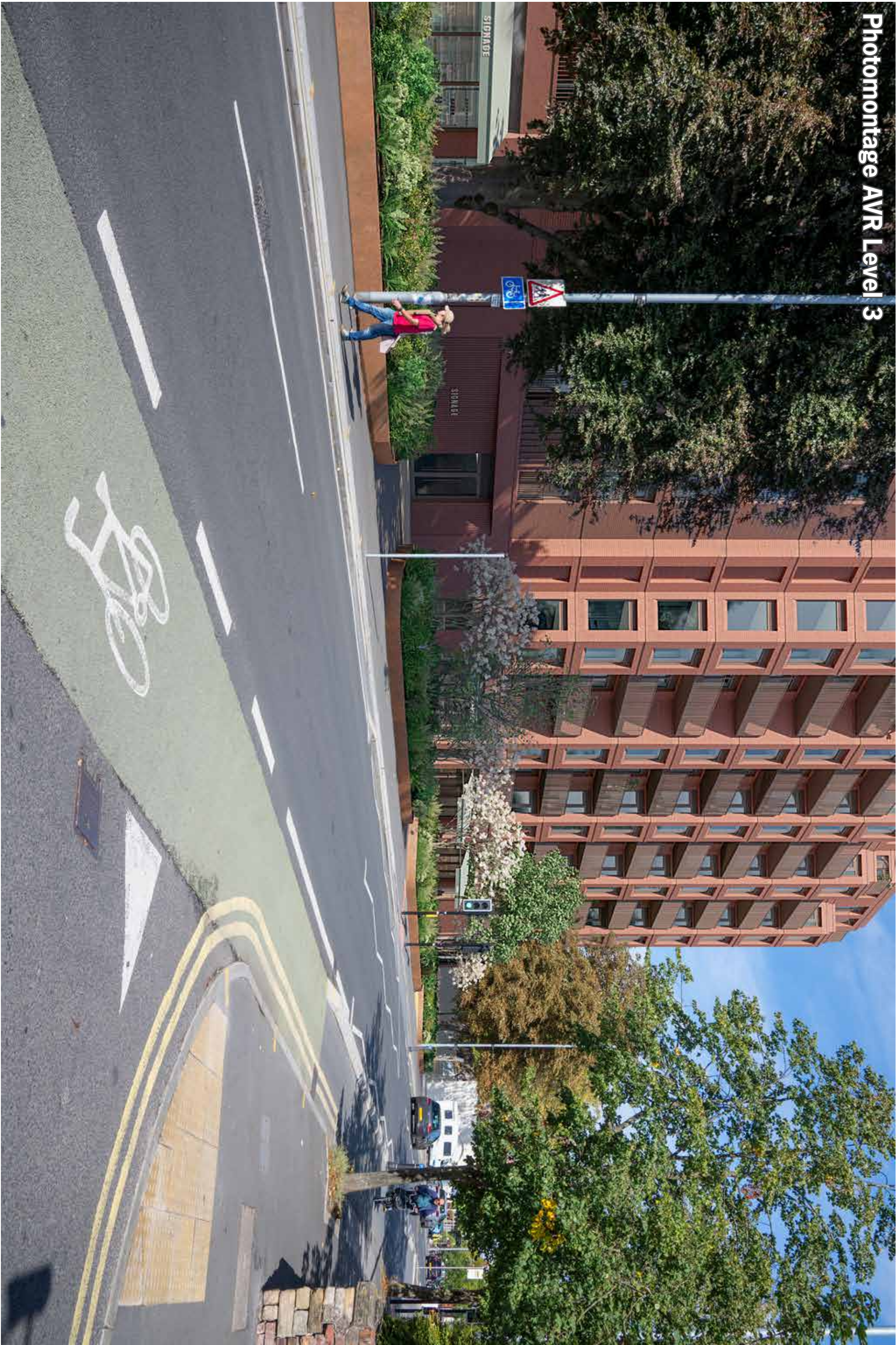
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Camera Lens | Nikon Nikkor Z S-Line 24mm
Focal Length and Orientation | 24mm Landscape



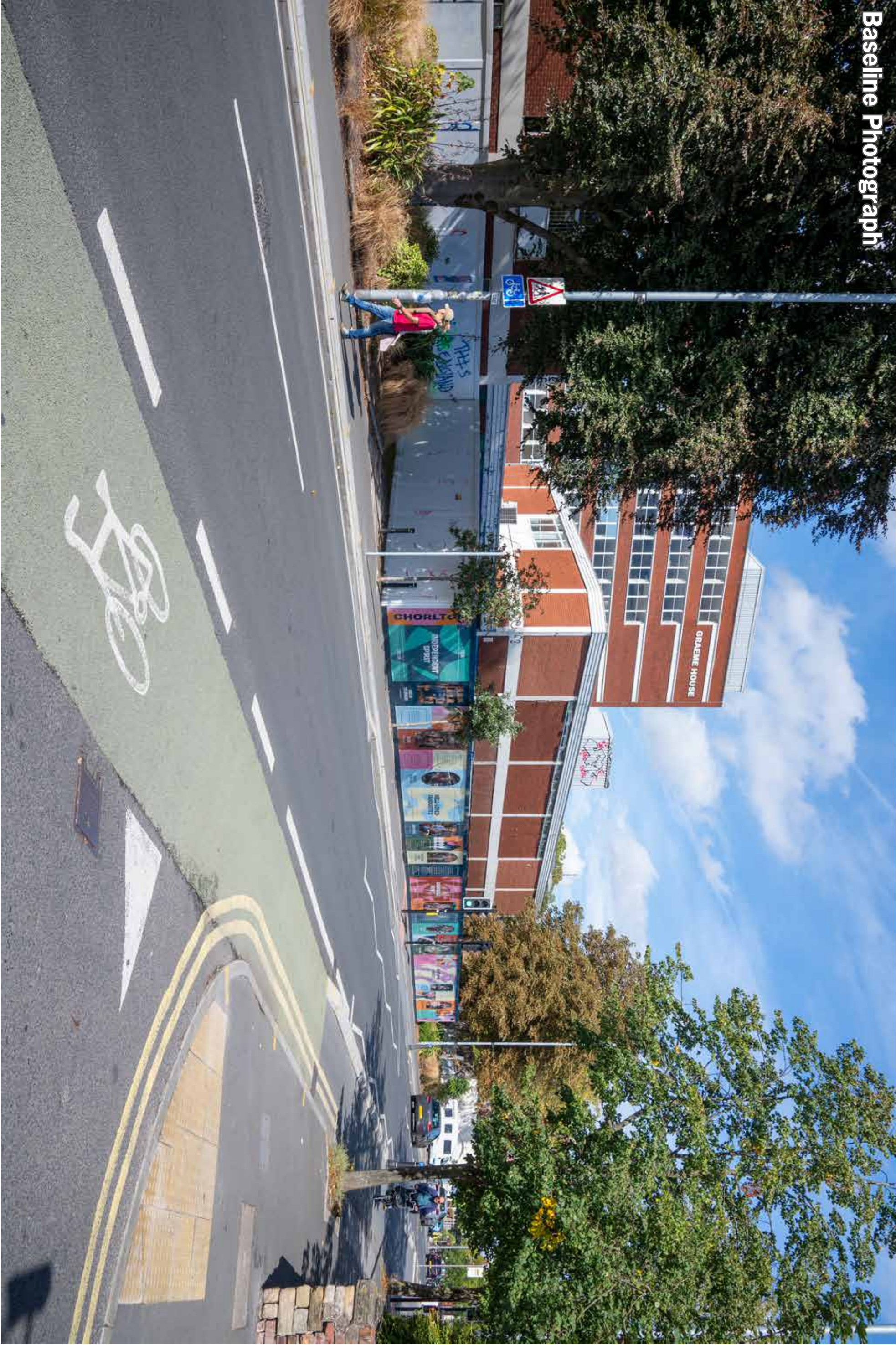
Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Solid Outline - Represents the extent of the proposed built form



VFOV 52.94°



HFOV 73.59°



Camera Location



Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 09/09/2025 @ 11:14	Distance to Nearest Site Boundary 15.35m
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Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-line 24mm
Direction of View 60.9° from N	Focal Length and Orientation 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 09/09/2025 @ 11:14	Distance to Nearest Site Boundary 15.35m
Camera Location E 381654.56, N 394083.72 @ 27.967m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
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Direction of View 60.9° from N	Focal Length and Orientation 24mm Landscape

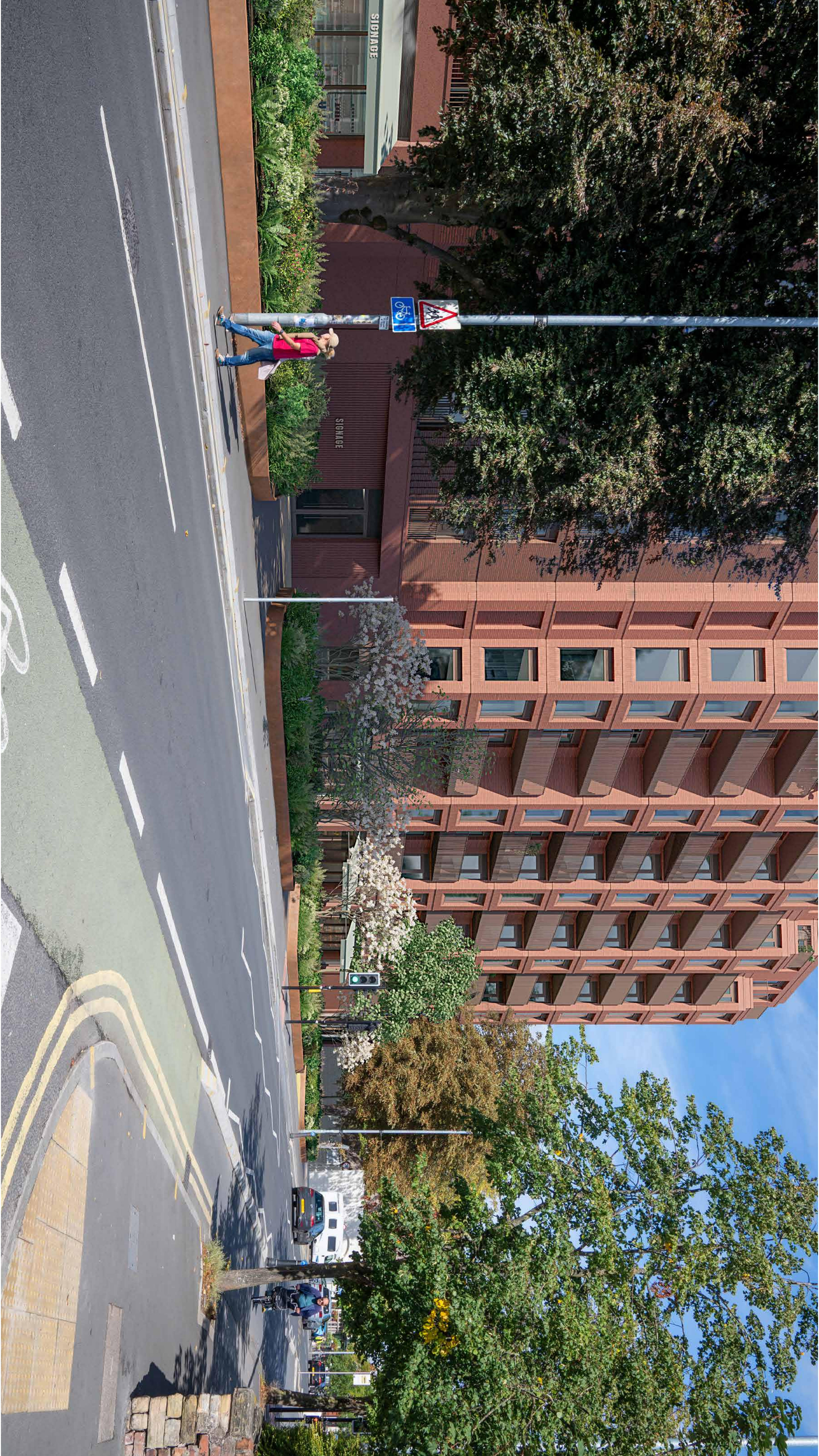


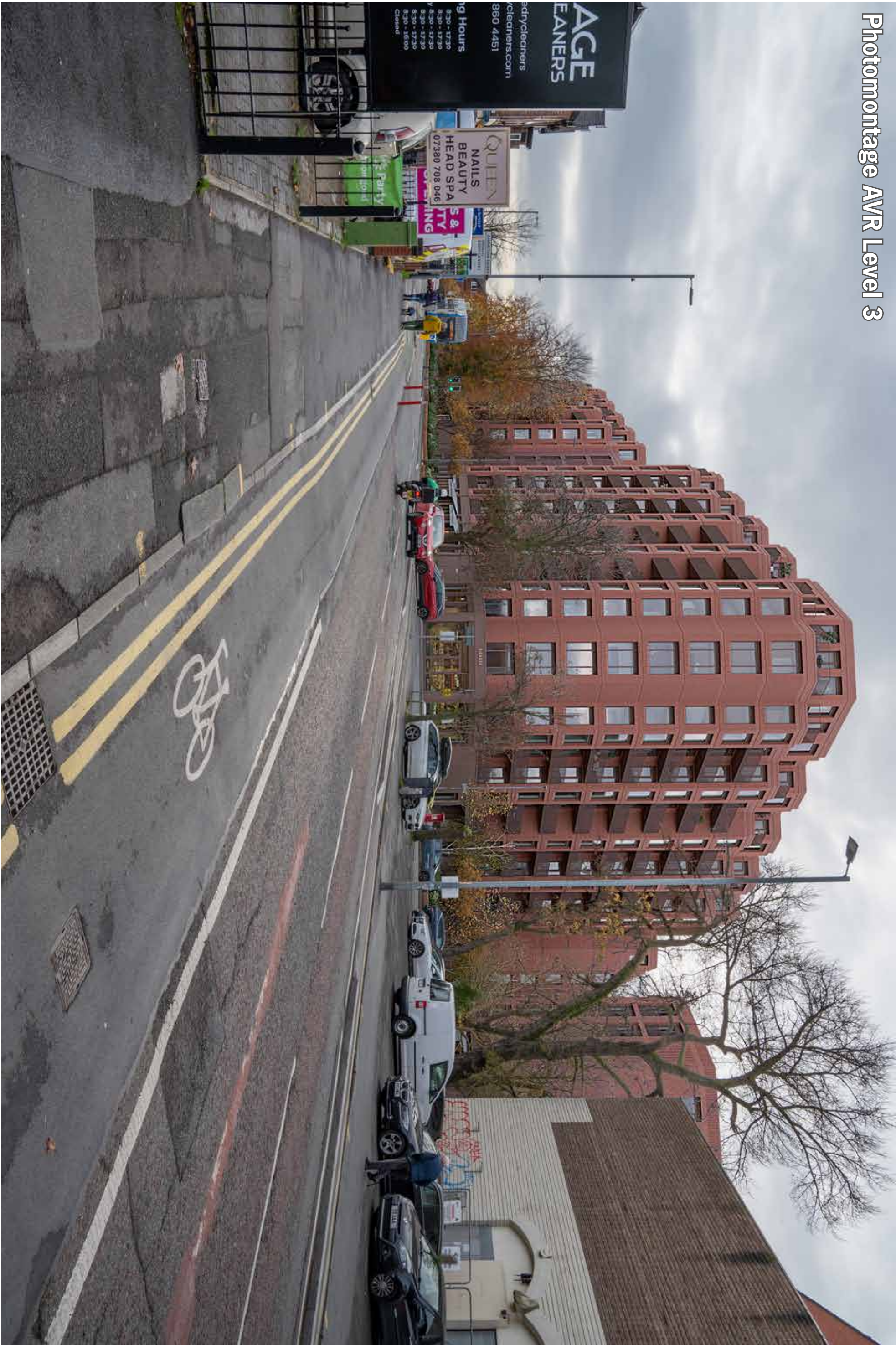
Image Enlargement 100% at A1 sheet size

HF0V 73.59°

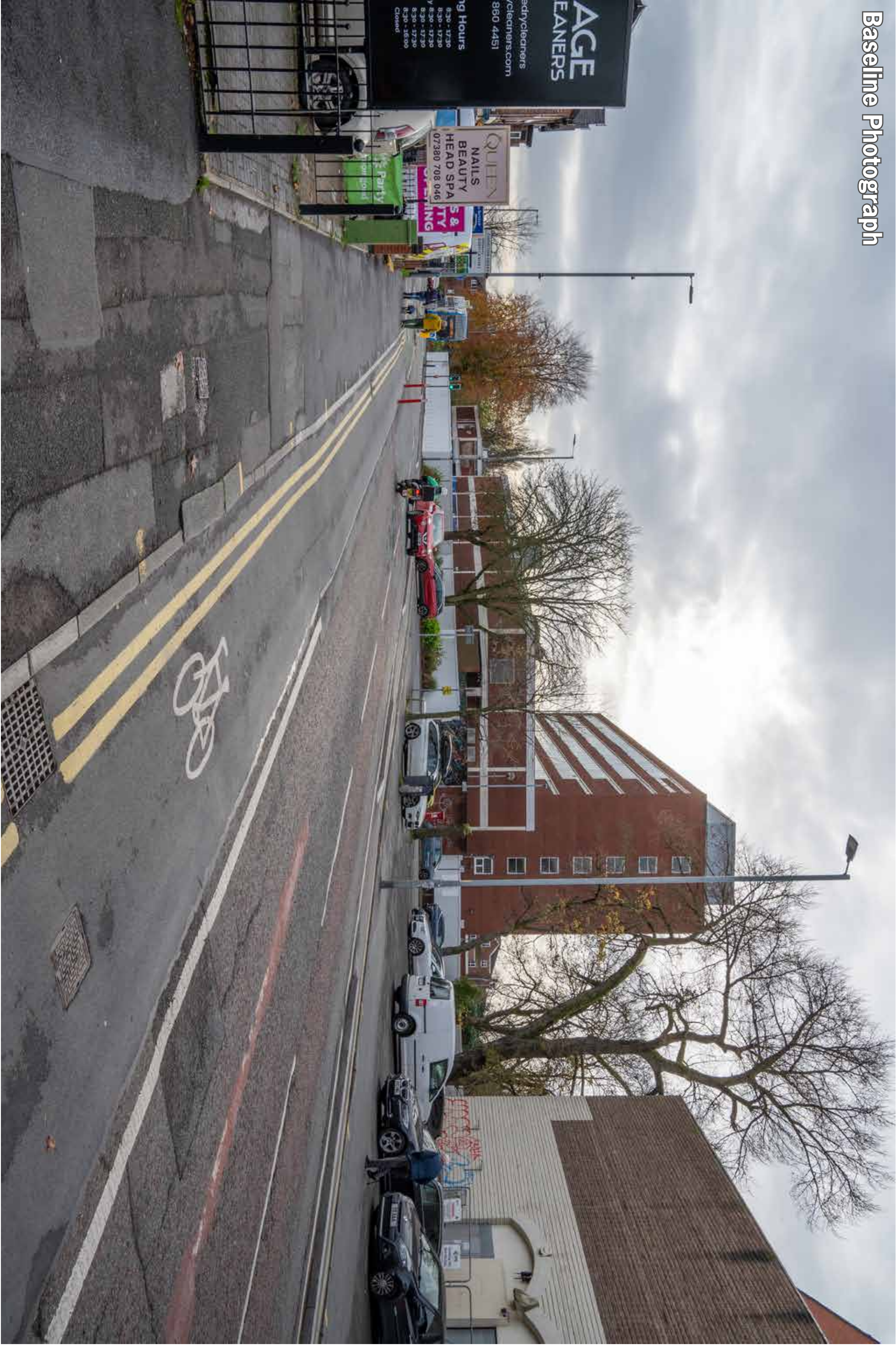
Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 09/09/2025 @ 11:14	Distance to Nearest Site Boundary 15.35m
Camera Location E 381654.56, N 394083.72 @ 27.967m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-line 24mm
Direction of View 60.9° from N	Focal Length and Orientation 24mm Landscape



Baseline Photograph



VF0V 52.94°

HF0V 73.59°



Camera Location



Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 12:19
Camera Location | E 381609.99, N 394204.51 @ 28.189m AOD
Camera's Nodal Point Height From Ground | 1.6m
Direction of View | 187.2° from N

Distance to Nearest Site Boundary | 59m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-line 24mm
Focal Length and Orientation | 24mm Landscape



Image Enlargement 100% at A1 sheet size

HFOV 73.59°

Chorlton Precinct, Manchester

AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 12:19

Camera Location | E 381609.99, N 394204.51 @ 28.189m AOD

Camera's Nodal Point Height From Ground | 1.6m

Direction of View | 187.2° from N

Distance to Nearest Site Boundary | 59m

Camera Model | Nikon Z6ii, Full Frame Sensor

Camera Lens | Nikon Nikkor Z S-Line 24mm

Focal Length and Orientation | 24mm Landscapes

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Image Enlargement 100% at A1 sheet size

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Chorlton Precinct, Manchester
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November 2024 v2.0 (updated September 2025)

Photo Captured 12/11/2024 @ 12:19	Distance to Nearest Site Boundary 59m
Camera Location E 381609.99, N 394204.51 @ 28.189m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-line 24mm
Direction of View 187.2° from N	Focal Length and Orientation 24mm Landscape



HFOV 90°

This image is for context only as its horizontal field of view is outside current technical guidance for a planar projected panorama.

Chorlton Precinct, Manchester
AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 12/11/2024 @ 12:19	Distance to Nearest Site Boundary 59m
Camera Location E 381609.99, N 394204.51 @ 28.189m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-Line 24mm
Direction of View 187.2° from N	Focal Length and Orientation 24mm Landscape

Solid Outline - Represents the extent of the proposed built form



Photowire AVR Level 1



Baseline Photograph

VFOV 52.94°

Solid Outline - Represents the extent of the proposed built form

HFOV 73.59°



Camera Location



Chorlton Precinct, Manchester

AVR Photomontages / Photowires

November 2024 v2.0 (updated September 2025)

Photo Captured 12/11/2024 @ 12:39	Distance to Nearest Site Boundary 80m
Camera Location E 381442.59, N 394199.14 @ 28.611m AOD	Camera Model Nikon Z6ii, Full Frame Sensor
Camera's Nodal Point Height From Ground 1.6m	Camera Lens Nikon Nikkor Z S-line 24mm
Direction of View 116.5° from N	Focal Length and Orientation 24mm Landscape



Image Enlargement 100% at A1 sheet size

HF0V 73.59°

Chorlton Precinct, Manchester
AVR Photomontages / Photowires
November 2024 v2.0 (updated September 2025)

Photo Captured | 12/11/2024 @ 12:39
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Camera's Nodal Point Height From Ground | 1.6m
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Distance to Nearest Site Boundary | 80m
Camera Model | Nikon Z6ii, Full Frame Sensor
Camera Lens | Nikon Nikkor Z S-Line 24mm
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Image Enlargement 100% at A1 sheet size

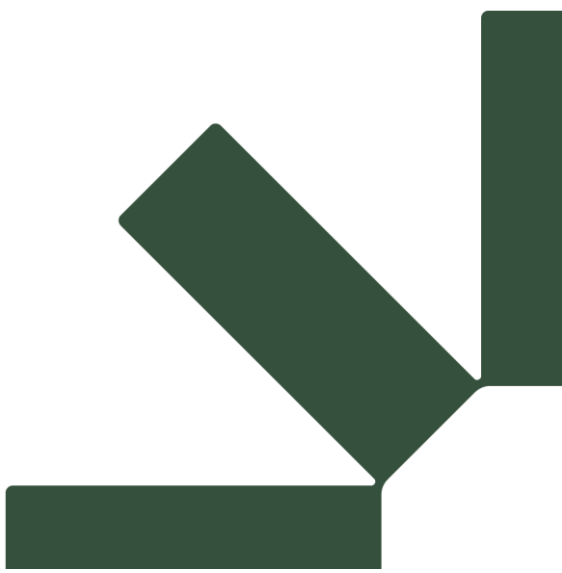
HF0V 73.59°

Solid Outline - Represents the extent of the proposed built form

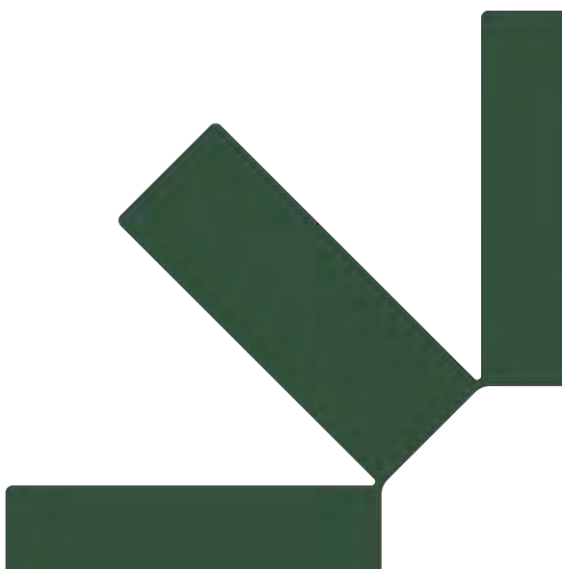
Chorlton Precinct, Manchester
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Appendix 5A Historic Environment Desk based Assessment



Appendix 5A Historic Environment Desk based Assessment



4778/H, Chorlton Precinct Redevelopment, Historic Environment Desk-based Assessment



Historic Environment Desk-based Assessment

Chorlton Precinct Redevelopment, Chorlton Cross Shopping
Centre, Hardy Ave, Chorlton-cum-Hardy, Manchester M21 9AQ

PJ Livesey

March 2025

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Issue Sheet

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Historic Environment Desk-based Assessment:

Chorton Precinct Redevelopment, Chorton Cross Shopping Centre, Hardy Avenue, Chorton-cum-Hardy, Greater Manchester, M21 9AQ

Prepared by:

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Date: March 2025

Revision: V2.0

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Non – Technical Summary

Lanpro Services Limited was commissioned by PJ Livesey to produce an historic environment desk-based assessment to inform a full planning application for the residential-led mixed-use redevelopment of Chorton Precinct (including Graeme House). The site is located in Chorton-cum-Hardy, Greater Manchester (NGR SJ 81553 94106) and extends to c. 1.27ha. It is located within the administrative boundary of Manchester City Council.

A separate Prior Notice for Demolition submission has been made to Manchester City Council (MCC) as local planning authority to confirm that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. Subject to the notice being approved then demolition works are intended to commence in early 2025 for a period of circa 20 weeks.

This assessment has identified the potential for below-ground archaeological remains to survive within the western part of the study site. This includes evidence for medieval – post-medieval agricultural and extractive activity, as well as remains of Nos. 17-27 (odd) Manchester Road, six late-19th century semi-detached villas which were demolished in the mid-20th century. However, remains associated with agricultural and extractive activity are considered to be of negligible significance and, as there are numerous surviving examples of these 19th century villas elsewhere, it is considered that the historic and archaeological interests of any surviving villa foundations would not contribute to the *Updated North West Regional Research Framework*. It is therefore concluded that no further archaeological works are required within the study site.

The site lies adjacent to the Wilbraham Road/Edge Lane Conservation Area, and there are a number of listed buildings surrounding the site.

The proposals have been designed to mitigate impacts to the character and appearance of the Wilbraham Road/Edge Lane Conservation Area as far as possible through a more appropriate materiality and design. There will be an intensification in the current massing of the site, however, the inclusion of set-back tops, a breakup of scale and massing within the design and likewise the stepping back of the development away from the conservation area is considered to mitigate impact. Furthermore, the Proposed Development will enhance the area with the reinstitution of Manchester Road.

Assessment Against National and Local Policy

Based on our assessment of heritage assets with potential to be affected it is concluded that there would be less than substantial harm to the significance of the Wilbraham Road/Edge Lane Conservation Area and the following designated and non-designated heritage assets:

- Lloyd and Platts Hotel (NHLE 1096127)
- Former Wilbraham Road Conservative Club (KUB 03)
- Spread-Eagle Hotel (KUB 09)
- 464 Wilbraham Road (Sunwick Villa) (BO 1)

Objectives of Paragraphs 212 and 213 of the NPPF requirements of the s.66 (1) and s.72 of The Planning (Listed Buildings and Conservation Areas) Act 1990 will be met. When assessed against local policy, objectives set out in Policy JP-P2 of the PTE Joint Development Plan (2024), and Policy EN3 of the Core Strategy will be met. The Proposed Development responds to the planning briefs set out in the Chorton Local Infrastructure Framework (2025) by providing an improved public realm, and a mix of commercial and residential development.

Paragraph 215 of the NPPF is engaged which states the following:

Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.

The test in paragraph 215 of the NPPF (2024) will be used when considering this application. This requires the LPA to weigh the harm against the public benefits of the proposal including, where appropriate, securing the optimum viable use of the building.

1 Introduction

1.1 Summary

1.1.1 This historic environment desk-based assessment (HEDBA) has been prepared by Lanpro Services Limited on behalf of PJ Livesey to inform on full planning application for the residential-led mixed-use redevelopment of Chorlton Precinct (including Graeme House). The site is located in Chorlton-cum-Hardy, Greater Manchester (NGR SJ 81553 94106) (hereafter to referred as the 'study site'). It is located within the administrative boundary of Manchester City Council (MCC).

1.1.2 Ongoing consultation has been carried out with Manchester City Council (MCC) and Greater Manchester Archaeological Advisory Service (GMAAS) throughout various stages of the assessment.

1.1.3 This document provides an assessment of the potential for the survival of archaeological remains within the study site and assesses the potential impacts that the proposed development could have on these and other heritage assets in the vicinity.

1.1.4 This assessment has been undertaken to meet the requirements of the National Planning Policy Framework's (NPPF) Section 16: 'Conserving and enhancing the historic environment' (DLUHC 2024) and is in line with the Chartered Institute for Archaeologists' (CIfA) guidelines *Standard and guidance for historic environment desk-based assessment* (CIfA 2020).

2 Legislation, National and Local Policy and Guidance

2.1 General

2.1.1 In considering any planning application for development, the local planning authority will be guided by current legislation, the policy framework set by government planning policy, by current Local Plan policy and by other material considerations.

2.2 Current Legislation

2.2.1 The applicable legislative framework for this historic environment desk-based assessment is summarised as follows:

- Ancient Monuments and Archaeological Areas Act (AMAAA) 1979;
- Planning (Listed Buildings and Conservation Areas) (P(LBCA)) Act 1990.

2.2.2 The AMAAA largely concerns Scheduled Monuments (SMs) and designated archaeological areas, detailing in particular what can and cannot be undertaken on archaeological grounds.

2.2.3 The Planning (Listed Buildings and Conservation Areas) Act 1990 (the 1990 Act) provides for the protection of listed buildings and Conservation Areas and is largely expressed in the planning process through policies in regional and local planning guidance, as outlined below. This act is the primary legislative instrument addressing the treatment of listed buildings and Conservation Areas through the planning process.

2.2.4 Section 66 of the 1990 Act states that ‘...in considering whether to grant planning permission for development which affects a listed building or its setting, the local planning authority or, as the case may be, the Secretary of State shall have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses.’

2.2.5 Buildings on the list are graded to reflect their relative architectural and historic interest, based on the below:

- Grade I buildings are of exceptional interest;
- Grade II* buildings are particularly important buildings of more than special interest;
- Grade II buildings are of special interest, warranting every effort to preserve them.

2.2.6 In addition to the statutory criteria for listing, i.e. architectural and historic interest, and group value, the following general principles are also considered by the Secretary of State when determining if a building is suitable for addition to the list of building of special architectural and historic interest:

2.2.7 **Age and rarity:** the older a building is, and the fewer the surviving examples of its kind, the more likely it is to have special interest. The following chronology is meant as a guide to assessment; the dates are indications of likely periods of interest and are not absolute. The relevance of age and rarity will vary according to the particular type of building because for some types, dates other than those outlined below are of significance. However, the general principles used are that:

- before 1700, all buildings that contain a significant proportion of their original fabric are listed;
- from 1700 to 1840, most buildings are listed;
- after 1840, because of the greatly increased number of buildings erected and the much larger numbers that have survived, progressively greater selection is necessary;
- particularly careful selection is required for buildings from the period after 1945;
- buildings of less than 30 years old are normally listed only if they are of outstanding quality and under threat.

2.2.8

Aesthetic merits: the appearance of a building, both its intrinsic architectural merit and any group value, is a key consideration in judging listing proposals, but the special interest of a building will not always be reflected in obvious external visual quality. Buildings that are important for reasons of technological innovation, or as illustrating particular aspects of social or economic history, may have little external visual quality.

2.2.9

Selectivity: where a building qualifies for listing primarily on the strength of its special architectural interest, the fact that there are other buildings of similar quality elsewhere is not likely to be a major consideration. However, a building may be listed primarily because it represents a particular historical type in order to ensure that examples of such a type are preserved. Listing in these circumstances is largely a comparative exercise and needs to be selective where a substantial number of buildings of a similar type and quality survive. In such cases, the Secretary of State's policy is to list only the most representative or most significant examples of the type.

2.2.10

National interest: the emphasis in these criteria is to establish consistency of selection to ensure that not only are all buildings of strong intrinsic architectural interest included on the list, but also the most significant or distinctive regional buildings that together make a major contribution to the national historic stock. For instance, the best examples of local vernacular buildings will normally be listed because together they illustrate the importance of distinctive local and regional traditions. Similarly, for example, some buildings will be listed because they represent a nationally important but localised industry, such as shoemaking in Northamptonshire or cotton production in Lancashire.

2.2.11

State of repair: the state of repair of a building is not a relevant consideration when deciding whether a building meets the test of special interest. The Secretary of State will list a building which has been assessed as meeting the statutory criteria, irrespective of its state of repair

2.2.12

Section 72 of the 1990 Act adds that ‘...with respect to any buildings or other land in a Conservation Area, of any powers under any of the provisions mentioned in subsection (2), special attention shall be paid to the desirability of preserving or enhancing the character or appearance of that area’.

2.2.13

As far as Section 72 is concerned, it has previously been established by the Courts that development which does not detract from the character or appearance of a Conservation

Area is deemed to be in accordance with the legislation. In other words, there is no statutory requirement to actively ‘enhance’.

2.3 National Planning Policy Framework

2.3.1 Section 16 of the NPPF (DLUHC 2024), entitled ‘Conserving and enhancing the historic environment’ provides guidance for planning authorities, property owners, developers and others on the conservation and investigation of heritage assets.

2.3.2 Overall, the objectives of Section 16 of the NPPF can be summarised as seeking the:

- Delivery of sustainable development,
- Understanding the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment, and
- Conservation of England’s heritage assets in a manner appropriate to their significance.

2.3.3 Section 16 of the NPPF recognises that intelligently managed change may sometimes be necessary if heritage assets are to be maintained for the long term. Paragraph 207 states that planning decisions should be based on the significance of the heritage asset (and any contribution made by its setting), and that the ‘*level of detail should be proportionate to the assets’ importance and no more than is sufficient to understand the potential impact of the proposal upon their significance*’. This is supported by paragraph 203 which states that LPAs should take this into account when considering applications.

2.3.4 Paragraphs 207-216 consider the impact of development proposals upon the significance of designated heritage assets. Paragraph 212 states that where a development is proposed that would affect the significance of a designated heritage asset ‘*great weight should be given to the asset’s conservation (and the more important the asset, the greater this weight should be)*’. Paragraph 215 emphasises that ‘*where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits*’ of the scheme, bearing in mind the great weight highlighted in Paragraph 212.

2.3.5 Heritage Assets are defined in Annex 2 of the NPPF as: ‘*a building, monument, site, place, area or landscape identified as having a degree of significance meriting consideration in planning decisions, because of its heritage interest. It includes designated heritage assets and assets identified by the local planning authority (including local listing)*’.

2.3.6 A Designated Heritage Asset comprises a ‘*World Heritage Site, Scheduled Monument, Listed Building, Protected Wreck Site, Registered Park and Garden, Registered Battlefield or Conservation Area designated under the relevant legislation.*’

2.3.7 In short, government policy provides a framework which:

- Protects nationally important designated heritage assets,
- Protects the settings of such designations,

- In appropriate circumstances seeks adequate information (from desk-based assessment and field evaluation where necessary) to enable informed decisions, and
- Provides for the recording of sites not significant enough to merit in situ preservation.

2.4 Planning Practice Guidance

2.4.1 The Planning Practice Guidance (MHCLG 2019) is a web-based resource which is to be used in conjunction with the NPPF. It is aimed at planning professionals and prescribes best practice within the planning sector. The relevant section is entitled ‘Conserving and enhancing the historic environment’. The guidance given in this section sets out the best practice to applying government policy in the NPPF. It provides an interpretation for each of the interests assigned to heritage assets in understanding significance: archaeological, architectural and artistic, and historic (Paragraph: 006 Reference ID: 18a-006-20190723).

2.5 Local Planning Policy

Manchester Local Development Framework

2.5.1 The Manchester *Local Development Framework* is formed by a series of Local Development Document’s (LDD’s), including the *Core Strategy Development Plan Document*. This document was adopted in July 2012 and is the key document in the LDF, setting out the long-term strategic policies for Manchester’s future development. The *Core Strategy Document* superseded significant elements of the *Unitary Development Plan* (1995). The following policies contained within the *Core Strategy* are considered relevant to this assessment:

- Policy EN 3. Heritage. *Note: The second paragraph of Policy EN3. Heritage has been replaced by PTE Policy JP-P2.*

Manchester Unitary Development Policies

2.5.2 While the *Core Strategy Development Plan Document* superseded significant elements of the *Unitary Development Plan* (1995), some UDP policies are still extant. The following extant policies are considered relevant to this assessment:

- DC18.1. Conservation Areas
- DC19.1. Listed Buildings
- DC20.1. Archaeology

Places for Everyone Joint Development Plan

2.5.3 The Greater Manchester Combined Authority’s (GMCA) *Places for Everyone* (PTE) Joint Development Plan (GMCA 2024) was adopted in March 2024. It provides an opportunity to create the conditions for inclusive economic growth as well as providing opportunities for provision of much needed homes, as well as protecting and enhancing the natural environment within Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan. The following policies within the Joint Development Plan are considered relevant to this assessment:

- Policy JP-P2: Heritage.
- Policy DM1: Development Management

Chorlton Frameworks

2.5.4 Both the *Chorlton Precinct Development Framework Summary* (2017) and the *Chorlton Local Infrastructure Framework* (2025) have been issued as supplementary guidance in relation to development within Chorlton. They have been taken into account during the design and assessment stages of these proposals.

2.6 Professional Guidance

2.6.1 The *CIfA Standard and Guidance for Historic Environment Desk-based Assessment* (2020) provides guidelines and recommendations for best practice in undertaking archaeological desk-based research and assessment. This document has also been prepared in accordance with the general guidelines set out in British Standard 7913:2013 *Guide to the Conservation of Historic Buildings*.

2.6.2 Guidance on the implementation and interpretation of historic environment policy has been provided by the Historic England publications *Historic Environment Good Practice Advice in Planning Note 2: Managing Significance in Decision Taking in the Historic Environment* (GPA2, 2015) and the *Historic Environment Good Practice Advice in Planning Note 3 (Second Edition): The Setting of Heritage Assets* (GPA3, 2017).

2.6.3 Historic England's GPA2 outlines a seven-stage process for the assembly and analysis of relevant information relating to heritage assets potentially affected by a proposed development:

- Understand the wider social, cultural, economic and environmental benefits brought by the conservation of the historic environment,
- Understand the significance of the affected assets,
- Understand the impact of the proposal on that significance,
- Avoid, minimise and mitigate impact in a way that meets the objectives of the NPPF,
- Look for opportunities to better reveal or enhance significance,
- Justify any harmful impacts in terms of the sustainable development objective of conserving significance and the need for change, and
- Offset negative impacts on aspects of significance by enhancing others through recording, disseminating and archiving archaeological and historical interest of the important elements of the heritage assets affected.

2.6.4 In order to understand the nature, extent and level of significance GPA2 advocates considering the four types of heritage value an asset may hold, as identified in *Conservation Principles, Policies and Guidance* (English Heritage 2008): *aesthetic, communal, historic and evidential*. However, NPPF (2024) has since provided a definition of significance dependant on the following four interests: archaeological, architectural and artistic, or

historic. The following assessment of significance results from a combination of any, some or all of these values and interests.

2.6.5

Historic England's GPA3 recognises that whilst setting is not a heritage asset, elements of a setting 'may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral' (para. 4). Setting is described as being distinct to curtilage, character and context. This guidance also notes that the contribution of setting to the significance of a heritage asset is often expressed by reference to views, although the importance of setting lies in what it contributes to the significance of the heritage asset, and this can be influenced by a number of other factors.

2.6.6

The Historic England advice note, *Statement of Heritage Significance: Analysing Significance in Heritage Assets. Historic England Advice Note 12* (HEAN 12, 2019), brings together all of the above guidance in an analysis of an appropriate approach for applicants for heritage and other consents in providing an understanding of the significance of heritage assets in line with NPPF. It emphasises the level of detail required in support of both planning and listed building consent applications, which should be no more than is necessary, i.e. proportionate to the significance of the heritage asset affected, to reach an informed decision.

3 Methodology

3.1 General Introduction

3.1.1 The purpose of a HEDBA is to meet the requirements of the Statutory Development Plan (relevant Manchester Core Strategy, Saved UDP and Places for Everyone heritage policies) and the NPPF (as a material consideration), in order to inform planning decisions when considering proposals that have the potential to have an impact, directly or indirectly, upon a heritage asset. It is not concerned with other planning issues.

3.1.2 The degree of impact on heritage assets is variable and can sometimes be positive rather than negative. The wide range of possible impacts can include loss of historic fabric, loss of historic character, damage to historic setting, and damage to significant views.

3.1.3 Under the requirements of national and local policy and in line with professional guidance, the process of assessment can be summarised as involving three parts:

1. understanding the heritage values and significance of the designated and non-designated heritage assets involved and their settings,
2. understanding the nature and extent of the proposed development,
3. making an objective judgement on the impact that the proposals outlined in Part 2 may have on the information outlined in Part 1.

3.2 Information Sources

3.2.1 A gazetteer of all records held on the Greater Manchester Historic Environment Record (HER) and Historic England's National Heritage List for England (NHLE) for within a 500m search area is provided in Appendix 1 and their locations illustrated on Figure 1.

3.2.2 The holdings of the Manchester City Archives and Local History Library together with online repositories for historic maps, plans and relevant documentary sources were consulted in accordance with guidelines laid down by CIfA (2020).

3.2.3 A range of published and unpublished material has been consulted, including the *Updated North-West Regional Research Framework* (www.researchframeworks.org)

3.3 Site Visit

3.3.1 A site visit was undertaken on 11th of October 2024 in fair conditions to provide an assessment of the character of the study site and surrounding search area and appraise the potential impact of the proposed development on any heritage assets (Plates 1-21).

3.4 Assessment Criteria

Significance

3.4.1 NPPF defines significance as:

The value of a heritage asset to this and future generations because of its heritage interest. The interest may be archaeological, architectural, artistic or historic. Significance derives not only from a heritage asset's physical presence, but also from its setting.

3.4.2

Historic England's *Conservation Principles, Policies and Guidance* (previously English Heritage, 2008) identified four high level values: evidential, historic, aesthetic and communal. NPPF (2024) defines significance in the planning context as resulting from the heritage interest of an asset determined by the following:

- Archaeological Interest: the potential of an asset to yield evidence of past human activity that could be revealed through future investigation. Archaeological interest includes above-ground structures, as well as earthworks and buried or submerged remains.
- Architectural and Artistic Interest: derives from a contemporary appreciation of an asset's aesthetics. Architectural interest is an interest in design, construction, craftsmanship and decoration of buildings and structures. Artistic interest can include the use, representation or influence of historic places or buildings in artwork. It can also include the skill and emotional impact of works of art that are part of heritage assets or assets in their own right
- Historic Interest: the way in which an asset can illustrate the story of past events, people and aspects of life (illustrative value, or interest). It can be said to hold communal value when associated with the identity of a community.

3.4.3

These values or interests encompass the criteria that Historic England are obliged to consider when statutorily designating heritage assets.

3.4.4

There are no single defining criteria that dictates the overall asset significance; each asset has to be evaluated against the range of criteria listed above on a case-by-case basis. These values are not intended to be restrictive but are identified in order to help establish a method for thinking systematically and consistently about the heritage values that can be ascribed to a place and contribute to a heritage asset's significance.

3.4.5

In relation to a recognised heritage asset, the production of this assessment also takes into account the contribution which the historic character and setting makes to the overall significance of the asset.

Setting

3.4.6

The NPPF defines the setting of a heritage asset as:

The surroundings in which a heritage asset is experienced. Its extent is not fixed and may change as the asset and its surroundings evolve. Elements of a setting may make a positive or negative contribution to the significance of an asset, may affect the ability to appreciate that significance or may be neutral.

3.4.7

Historic England's GPA3, *The Setting of Heritage Assets Setting* (2017), was used to inform the methodology for this assessment. The guidance recommends that a systematic and staged '5-step process' to assessment should be adopted, to which this HEDBA has adopted steps i) to iv):

- i. identify which heritage assets and their settings are affected,

- ii. *assess the degree to which these settings make a contribution to the significance of the heritage asset(s) or allow significance to be appreciated,*
- iii. *assess the effects of the proposed development, whether beneficial or harmful, on that significance or on the ability to appreciate it,*
- iv. *explore the way to maximise enhancement and avoid or minimise harm,*
- v. *make and document the decision and monitor outcomes.*

3.4.8

The production of this assessment has taken into account the physical and sensory surroundings of the asset, in order to understand the contribution ‘setting’ makes to the heritage significance of the asset(s). This has included topography and intervening development and vegetation. It also considers how the asset is currently experienced and understood through its setting, in particular views to and from the asset and the site, along with key views, and the extent to which setting may have already been compromised.

Definition of Harm

3.4.9

Current guidance by Historic England is that ‘change’ does not equate to ‘harm’. The NPPF and its accompanying PPG effectively distinguish between two degrees of harm to heritage assets – substantial and less than substantial.

3.4.10

In determining the effects of the proposed scheme this assessment is cognisant of case law. In particular, that for Flag Station, Mansel Lacy, Herefordshire [22/09/2015] Case Number EWHC 2688, wherein it emphasised the primacy of the 1990 Planning Act and the fact that it is up to the decision makers in the planning system to ‘have special regard to the desirability of preserving the [listed] building or its setting’. HH Judge David Cooke stated, in regards to an impact on the setting of a listed building, (Court of Appeal (PALMER and HEREFORDSHIRE COUNCIL & ANR) in 2016 (Case No: C1/2015/3383) para.34):

It is still plainly the case that it is for the decision taker to assess the nature and degree of harm caused, and in the case of harm to setting rather than directly to a listed building itself, the degree to which the impact on the setting affects the reasons why it is listed.

3.4.11

The judgment was agreed by Lord Justice Lewison at the Court of Appeal, who stated that:

It is also clear as a matter both of law and planning policy that harm (if it exists) is to be measured against both the scale of the harm and the significance of the heritage asset. Although the statutory duty requires special regard to be paid to the desirability of not harming the setting of a listed building, that cannot mean that any harm, however minor, would necessarily require planning permission to be refused.

Methodology for Assessing Harm

3.4.12

Heritage impact is defined as the potential level of harm or benefit to special architectural or historic interest causes by proposed development. The NPPF (2024) stresses that impacts on heritage assets should be avoided and if it cannot be avoided, it should be minimised or mitigated. The NPPF does not prescribe a format or title for analyses of

heritage significance and/or impact. The following methodology is based on the guidance set out in Historic England's HEAN12 (2019):

- Assessment of impact:
 - Effect on fabric
 - Effect on setting
 - Cumulative impact
- Avoiding harmful impact(s),
- Enhancing significance,
- Justification for harmful impacts.

Assessment of impact

3.4.13 Any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. Section 7 assesses the effect of the proposals on fabric, setting and cumulative impact on significance. A level of relative impact (major, moderate, minor or negligible) will be assigned to the proposal. Impact may also be beneficial and defined under the statutory development plan and also the NPPF sustainable development criteria of social, economic or environmental.

Avoiding Harmful Impact(s)

3.4.14 Harm to heritage assets should be avoided and if it cannot be avoided, it should be minimised or mitigated. This section will set out how decisions have been taken in the interest of the heritage asset to avoid harm, and if this is not possible, how risk has been mitigated or minimised through design changes.

Enhancing Significance

3.4.15 Impact may also have public benefits that can be defined as social, economic or environmental. Heritage benefits such as repairs and reinstatement can be defined as environmental benefits. Any outcomes of the scheme that will enhance significance will be articulated here.

Justification for harmful impacts

3.4.16 Where a proposed development will lead to substantial or less than substantial harm, the proposals must achieve substantial public benefits that outweigh that harm or weigh the harm against the public benefits, respectively. The proposals will be justified under the statutory development plan and also the NPPF sustainable development criteria of social, economic or environmental.

4 Site Appraisal

4.1 Site Description

4.1.1

The study site comprises Chorton Cross Shopping Centre and Graeme House, along with their associated car parks, and area equating to c. 1.27ha, located at the junction of Wilbraham Road and Barlow Moor Road (to the north and west respectively), Chorton-cum-Hardy (Chorton), on the south side of Manchester (centred at NGR SJ 81553 94106) (Figure 1). The study site is situated within a dense urban context, which is inherently commercial and residential in character, comprising a mix of late-19th century terraced commercial premises to the south and east, smaller residential dwellings to the west, and larger institutional buildings to the north. Whilst currently occupied with the larger buildings of the shopping precinct, the study site is interspersed with mature trees and vegetation which allow large portions of the site to be screened from various angles.

4.1.2

The study site was originally the site of both commercial and residential properties constructed in the mid-19th century, all of which were demolished in the late 1960s to make way for the shopping centre development. The west of the site was cleared for car parking space and area for offloading good to various shops located within the study area. The main building of the site – being Graeme House, was let as office and commercial space from 1971 and inhabited by the Department for Work and Pensions (Plates 6-27).

4.2 Geology and Soils

4.2.1

The bedrock geology of the study site comprises sandstone of the Wilmslow Sandstone Formation. This sedimentary bedrock formed between 252.2 and 247.1 million years ago during the Triassic period. This majority of the study site is overlain by superficial deposits of glaciofluvial sand and gravel sheet deposits, with the north-western part of the study site overlain by superficial deposits of Devensian Till – Diamicton (BGS 2024).

4.2.2

The soils of the study site are classified as naturally wet, very acid sandy and loamy soils (LandIS 2024).

5 Archaeological and Historical Background

5.1 Introduction

This section reviews the existing archaeological evidence for the study site and the archaeological and historical background of the surrounding area, based on a consideration of evidence in the Greater Manchester HER and the NHLE. It is not the purpose of this document to create a detailed archaeological or historical narrative of the area, but to provide an assessment of the study site's historical development and archaeological potential in accordance with the NPPF.

5.2 Designated Heritage Assets

5.2.1 There are no designated heritage assets within the study site, nor does it fall within a Conservation Area.

5.2.2 Within the wider 500m search area, Historic England's NHLE records two Conservation Areas and six Grade II Listed Buildings. The study site is situated immediately adjacent to the Wilbraham Road/Edge Lane Conservation Area, which is an area recognised as possessing buildings and spaces of character and quality dating back to the late-19th century. Due to its proximity to the study site, this asset has been scoped into further assessment.

5.2.3 Approximately 450m to the south of the study site, the northern part of the Chorlton Green Conservation Area extends into the wider 500m search area. Due to its distance from the study site, the built-up nature of the surrounding townscape, largely formed by the buildings within the Wilbraham Road/Edge Lane Conservation Area, it is considered that there is no potential for the proposed development to impact upon the character and significance of the Chorlton Green Conservation Area. This asset has therefore been scoped out of further assessment.

5.2.4 Of the six Grade II Listed Buildings within the wider 500m search area, three have been scoped out of further assessment, as there will be no impact to their setting or significance due to their distance, the dense urban grain and large amount of foliage screening the study site from the assets, resulting in a lack of intervisibility. The assets scoped out comprise:

- Church of St Clement (NHLE 1254463);
- Chorlton War Memorial (NHLE 1432791); and
- Roman Catholic Church of Our Lady and St John (NHLE 1450142).

5.2.5 Due to its proximity to the study site, it is considered that the proposed development has the potential to impact upon the Lloyd and Platt Hotel (NHLE 1096127), which is situated c. 100m south-west of the study site. This asset has therefore been included for further assessment. Chorlton Library (NHLE 1414760) and the Former Temperance Billiard Hall (NHLE 1268311) have also been included for further assessment, due to a potential impact on their experience.

5.2.6 Details of all designated heritage assets can be found in the gazetteer in Appendix 1 and are illustrated on Figure 1.

5.3 Non-Designated Heritage Assets

5.3.1 The Greater Manchester HER records no non-designated heritage assets within the study site boundary.

5.3.2 Within the wider 500m search area, the Greater Manchester HER records seven non-designated heritage assets, the majority of which represent the sites of demolished post-medieval buildings and possible extractive sites identified from field names recorded within the 1847 Chorton-cum-Hardy tithe apportionment, as well as the historic core of the village of Chorton (HER 2060.1.0), c. 260m south of the study site.

5.3.3 There is one non-designated building recorded by the Greater Manchester HER, Chorton Baths (Chorton Leisure Centre) (HER 17450.1.0), which is situated c. 370m north of the study site to the east of Manchester Road. However, this building was recently demolished, and as such, is now considered to be a monument.

5.3.4 The Wilbraham Road/Edge Lane Conservation Area Appraisal (CAA; MCC 2024) notes that *‘Many of the buildings that line the streets within the area are architecturally impressive, and most of them can be regarded as making a positive contribution to the conservation area.’* The CAA identifies nine ‘Key Unlisted Buildings’ which are considered to contribute more to the character of the conservation area:

- Wilbraham Road Unitarian Church (KUB 01);
- Chorton Methodist Church (KUB 02);
- Wilbraham Road Former Conservative Club (KUB 03);
- Lauriston Club (Former Liberal Club) (KUB 04);
- Former Hellenic Centre (KUB 05);
- Former South Manchester Freemasons Hall (KUB 06);
- Chorton Church of England Primary School (KUB 07);
- William Hulme Grammar School (KUB 08) and;
- Spread-Eagle Hotel (KUB 09)

5.3.5 After consideration, seven of the key unlisted buildings (KUB 01 – 02; KUB 04 – 08) have been scoped out of further assessment, as there will be no impact to their setting or significance due to their distance from the study site, the dense urban grain, and a large amount of foliage screening the study site from these assets, resulting in a lack of intervisibility.

5.3.6 The Spread-Eagle Hotel (KUB 09) and the Wilbraham Road Conservative Club (KUB 03) are both situated at the junction of Wilbraham Road and Manchester Road/Oswald Road. It is considered that the proposed development has the potential to impact upon the setting and significance of these two key unlisted buildings and they have therefore been included for further assessment and will be assessed together.

5.3.7 Finally, this assessment has identified a structure which, due to its historic interest and proximity to the study site, is considered sensitive to the proposed development. This comprises No. 464 Wilbraham Road (Sunwick Villa) (B 01) which has been taken forward for further assessment.

5.3.8 The location of all non-designated heritage assets as well as the Key Unlisted Buildings recorded within the Wilbraham Road/Edge Lane CA and buildings of historic interest are illustrated on Figure 1 and are listed in the gazetteer in Appendix 1.

5.4 Previous Archaeological Investigations

5.4.1 The Greater Manchester HER records two archaeological investigations as having been carried out within the wider 500m search area. Both events comprise non-invasive desk-based assessments of buildings within Chorton, including the recently demolished Chorton Baths (Chorton Leisure Centre) (HER 17450.1.0). No archaeological events are recorded as having been carried out within the site boundary.

5.4.2 The BGS documents two boreholes as having been excavated within the study site in 1969, carried out after the demolition of the 19th century villas and commercial buildings which were once present within the site, and possibly before or during the redevelopment of the site into Chorton Precinct and Graeme House (SubSoil Surveys Ltd 1969).

5.4.3 Borehole 1 appears to have been located immediately east of Manchester Road, which once ran north-east/south-west through the centre of the study site and was excavated to a depth of c. 16.4m BGL. The uppermost layers of this borehole were composed of the following stratigraphy:

- 0 - 1.07m BGL: Black topsoil and tree roots; and
- 1.07m – 3.66m BGL: Stiff to very stiff brown sandy clay with stone inclusions and grey fissures in upper zone.

5.4.4 Borehole 2 appears to have been excavated within one of the gardens of a former villa which fronted the eastern side of Manchester Road and was excavated to a depth of c. 28.9m BGL. The uppermost layers of this borehole were composed of the following stratigraphy:

- 0 – 0.9m BGL: Black topsoil
- 0.9m – 1.52m BGL: Brown and grey very sandy clay with stone inclusions, sand and possible brick – possible fill.
- 1.52m – 4.72m BGL: Stiff to firm brown sandy and silty clay with stone inclusions and sand pockets and laminated zones. Grey fissures and root inclusions in upper zone.

5.4.5 The location of all archaeological events as well as the location of the boreholes have been illustrated on Figure 1 and listed in the gazetteer in Appendix 1.

5.5 Historic Landscape Characterisation

5.5.1 The 500m search area includes parts of 78 separate HLC units, with these units representing a mixture of broad type land uses, including Communications, Commercial,

Industrial, Institutional, Ornamental, Parkland and Recreational, and Residential (GMAU 2011; Figure 2). The study site falls within two of these broad types: Commercial and Institutional, with the south-eastern corner of the study site falling entirely within the Commercial broad type (HGM14653). This unit represents the late-20th century shopping centre known as Chorton Precinct. The Institutional broad type, for which the remainder of the study site is classified, largely falls within the 'Civic & Municipal Buildings' primary type (HGM14654) and is composed of a late-20th century structure known as Graeme House and its associated car park. A small section of land in the north-western corner of the study site falls within the 'Medical Complex' primary type (HGM14655), though this appears to be an error of the mapping, as this area is in actuality included within the car park for Graeme House.

- 5.5.2 Notably, all the HLC units which fall into the study site once formed part of the 'Residential: Villas/Detached Housing' broad and primary type, having once been the site of a series of late-19th century villa status houses prior to the construction of Graeme House and Chorton Shopping Centre in the 20th century. The part of the study site fronting Wilbraham Road was also once classified as 'Commercial: Commercial Core-Urban', having also been the site of a series of 19th century commercial structures, which were also demolished by the mid-late 20th century.

5.6 Prehistoric and Roman Periods (c. 9500 BC – c. AD 410)

- 5.6.1 No prehistoric or Roman period activity has been identified within the study site or wider 500m search area.

- 5.6.2 The Romans appear to have come into the wider area in the AD70s, with the fort, known as *Mammucium*, established during the governorship of Agricola within the Castlefield area of Manchester not long after. This fort was connected to *Deva* (modern Chester) to the south by the Manchester to Chester Roman Road, which runs north-east/south-west c. 1.9km to the west of the study site.

- 5.6.3 Due to the distinct lack of prehistoric and Roman period remains within the 500m search area, and Chorton-cum-Hardy as a whole, it is considered that there is the negligible potential for remains of these dates to be identified within the study site.

5.7 Medieval Period (c. AD 410 – c. 1540)

- 5.7.1 The Greater Manchester HER does not record any remains dating to the medieval period within the study site, nor the wider 500m search area.

- 5.7.2 Following the withdrawal of the Romans in the early 5th century, the former province began fragmenting into smaller tribal units, with the river Mersey c. 2.1km to the south of the study site likely forming the border between Northumbria to the north and Mercia to the south.

- 5.7.3 The Chorton area was settlement by the Saxons in the year 610 AD who cleared it of its oak forest (MCC 2023a; 2023b). However, there is a scarcity of evidence for early medieval remains within this area, with evidence for occupation during this period primarily found in the various place-names that still survive to the present day. First recorded in 1243 as part of an inquiry into the wapentake of *Salefordesire*, *Cholreton* appears to have derived from

an Old English (OE) personal name and *tūn* or ‘farmstead of a man called Cēofrith’ (Farrer 1903). Likewise, *Hearða* (modern Hardy) also appears to have derived from an OE personal name, meaning ‘island of a man called *Hearða*’ (Ekwall 1922; Mills 2011, 114). Both settlements appear to have formed part of Withington Manor, with the settlements joining together into ‘Chorton-cum-Hardy’ in the 16th century. However, there is no record of this name before 1700, with ‘Chorton-cum-Hardy’ more formally adopted by Victorian property developments in the late-19th century to differentiate this area from Chorton-on-Medlock.

5.7.4

There is no evidence for medieval occupation within the study site or the immediate surroundings. The site sits outside any areas of known occupation and was likely utilised for agrarian purposes during this period. It is therefore considered that any early-medieval or medieval remains that could be identified within the study site of this date would likely relate to this agricultural use (e.g. ploughing, drainage, field boundaries) and would be of negligible significance.

5.8 Post-Medieval, Industrial and Modern Periods (c. 1540 – Present)

5.8.1

No post-medieval, industrial, or modern period remains are documented by the Greater Manchester HER within the study site. The majority of the heritage assets documented within the 500m search area date to these periods, and include both extant listed and non-designated buildings, as well as the sites of a series of former post-medieval structures and locations of areas of former industrial extractive works.

5.8.2

Up until the late-19th century, Chorton (HER 2060.1.0) appears to have remained a small, rural settlement, with the lands appearing to have been passed into the holdings of the Egerton’s of Tatton Hall sometime in the early post-medieval period. The settlement at Chorton-cum-Hardy during this period appears to have been dispersed along three main roads, as first illustrated on Yates’ 1786 map of *The County Palatine of Lancaster* (not illustrated). The study site is situated at the junction of two of these roads, with the westernmost road running roughly south-west/north-east through the centre of the study site. This map shows a series of buildings fronting both roads, with one of these structures appearing to be situated within the eastern half of the study site. Later county maps, such as Greenwood’s 1818 and Hennet’s 1828 *Maps of the County Palatine of Lancaster* (not illustrated) depicts very little change to the wider area during this period, highlighting these areas slow development during the post-medieval and early industrial periods. The building depicted on Yates’ plan no longer appears within the study site on these later county plans, though a building is depicted just to the south, possibly suggesting an error in the early mapping.

5.8.3

The first plan to show the study site in detail is the 1847 *Tithe Plan of the Township of Chorton Cum Hardy* (Figure 3), which shows the road layout through and adjacent to the study site as identical to Yates’ 1786 plan. The road running through the centre of the site (No.409) is recorded as ‘Stretford Road to Red Gates’, whilst the road along the eastern boundary (No. 404) is recorded as ‘Road from Red Gates to Brundretts Cross’. Red Gates (HER 9738.1.0) is a farmstead located 90m north of the study site. The study site itself occupies parts of four plots, three of which are owned by Wilbraham Egerton Esq. (Nos. 96, 134 and 135), and one owned by George Lloyd Esq. (No. 132). The Egerton and Lloyd

families were two of the principal landowners in the township during the late-18th and early 19th centuries, when the wider area was still largely undeveloped.

5.8.4

The accompanying tithe apportionment notes that the field names of two of the plots are indicative of having been utilised for extractive purposes, with Plot No. 96 known as ‘Brick Croft, Burn Pit’, and No. 134 as ‘Pits Intak’. Both plots have ponds within their extent, with two of these ponds extending into the study site boundary. The remaining two plots, Holt Croft (No. 132) and Hollinsworth Acre (No. 135) appear to have been utilised for agricultural purposes, though the name of the former plot, ‘Holt Croft’ suggests that this land was also partially wooded, potentially a continuation of the woodland depicted around the ponds/pits of ‘Red Gates’ to the north. Plot No. 135, ‘Hollinsworth Acre’ is listed as an ‘Orchard’ in the tithe apportionment (Cavill 2018). Within the wider landscape, the structures depicted on the early county plans can be seen in more detail, many appearing to represent small farmsteads abutting the main roadways through the landscape. One such farmstead is ‘Red Gates’, which is located c. 100m north of the study site, with a second complex also depicted c. 25m to the south of the study site. It is possible this latter structure is the building depicted on Yates’ plan within the study site, though this cannot be confirmed with any certainty. Another structure depicted on this plan is Renshaws Buildings (HER 9720.1.0), c. 40m east of the study site, which are a series of back-to-back terraces.

5.8.5

The 1848-49 Ordnance Survey (OS) map (Figure 4) shows a largely similar landscape as depicted on the earlier tithe plan, though there are several differences identified. Within the study site, tithe plot No. 134 has been subdivided into two smaller plots, with both plots now possessing ponds within the study site boundary. The orchard identified on the earlier tithe plan within the south-western part of the study site, is now shown in more detail, with regular strip plots present within, laid out on a north-west/south-east alignment. Parts of three of these smaller plots fall within the study site boundary.

5.8.6

Within the wider landscape, those structures depicted aligning the main roadways are now named, and include the aforementioned Red Gate, as well as Martledge and Renshaw’s Buildings, all of which are situated to the north/east of the study site, and Ash Tree, which is situated to the south-west.

5.8.7

In 1849, the extension of the railway from Manchester to Stretford to the west of Chorton made the area an attractive place to live. The mid-late 19th and early-20th century saw a transformation in the character of the area and the previously open fields were gradually being infilled with residential development, as wealthy industrialists were able to live outside of the industrial centre of Manchester but within easy reach of their businesses, with a new rail station being built in Chorton in the 1880s. As one of the primary landowners within Chorton-cum-Hardy, the Egerton family took advantage of these new links and began to carry out a number of changes to the village. One such change included the establishment of Wilbraham Road, which now forms part of the southern boundary of the study site, in the 1860s (Simpson 2024).

5.8.8

An OS map dated to 1881 (not illustrated), which appears to have been created specifically for the Withington Local Board and is a precursor to the printed 1894 OS map (Figure 5),

shows the rapid growth of Chorton since the 1848-9 OS map (Figure 4), likely a result of the opening of the rail station in Chorton by 1880. Much of the development is still focussed to the south of the newly established Wilbraham Road, including the construction of the Lloyd and Platt Hotel (NHLE 1096127) in c. 1870, with the land to the north still largely populated by the established smaller roadside farmsteads. However, some new development has now been carried out north of the road, including within the study site itself. The former 'Stretford Road to Red Gates' Road, which runs through the centre of the site, is now known as Manchester Road. Eight new large houses, or villas, have been constructed on either side of Manchester Road within the study site, set within substantial garden plots, with several possessing associated outbuildings and glass conservatories. These structures appear to have been built for some of the more well-off families of Chorton, including businessmen commuting into Manchester, as well as those who were living off of 'private means' (e.g. family money). Six of these semi-detached dwellings were positioned to the north-west of Manchester Road, whilst just one set of semi-detached houses were located to the south-east of the road. The remaining land south-east of Manchester Road is labelled as being utilised as a Nursery, likely continuing on from part of its earlier function as an Orchard. A series of glass buildings likely associated with the nursery are also depicted within the study site, south of the semi-detached houses south of the road, with associated nursery structures also depicted immediately south of the study site boundary.

5.8.9

By the time of the production of the 1894 OS map (Figure 5), extensive development has been undertaken not only within the study site, but also within its immediate environs. Within the site itself, the six semi-detached dwellings north-west of Manchester Road are still present within their large garden plots, with a new pair of similar dwellings also having been built to the south of the existing houses, immediately outside the study site boundary (B 04). South-east of Manchester Road, a new set of semi-detached houses have been built to the south of the existing dwellings within the study site, across the footprint of the former glass nursery buildings. The nursery itself is no longer extant within or outside the study site, with new residential dwellings present within the site along eastern boundary of the study site, fronting Barlow Moor Road.

5.8.10

Immediately surrounding the site, a number of new roads have been constructed off of the main roads, with a large number of terraced houses having been built fronting these new roads. South of the study site, a new row of buildings has been built fronting Wilbraham Road (B 02), with a small lane running along the back of their rear garden plots separating these plots from the study site. South-east of the study site boundary, a new house called 'Sunwick' (B 01) was also built at the junction of Barlow Moor Road and Wilbraham Road, with the property surrounded by a tall brick wall. It appears as though this house was occupied and utilised from the outset as a private residence and surgery for a succession of doctors until the early-mid 20th century. A number of new institutional structures have been established by the late-19th century, including the Conservative Club (KUB 03) and Liberal Club (KUB 04), both situated off of Manchester Road to the south-west of the study site.

5.8.11

By the early-20th century, this area of Chorton continued to expand with residential and commercial development, especially to the north of the study site, along Barlow Moor and

Oswald Roads, as illustrated on the 1907 and 1922 OS maps (Figures 6 and 7). A new row of commercial and residential properties had also been built west of the junction of Wilbraham Road and Manchester Road, immediately south of the study site (B 03). Within the study site itself, a series of commercial and residential structures have been built within the southernmost part of the study site, fronting Wilbraham Road, with only minor changes documented within the remainder of the study site, largely the demolition and construction of several small outbuildings and glasshouses.

5.8.12

An aerial photograph from 1927 (not illustrated) provides the first views of the buildings within the study site themselves. The large semi-detached dwellings east and west of Manchester Road appear to be two-storeys in height, with bay windows facing onto the road. The plots are separated by brick walls, some of which are lined with trees and shrubs, whilst Manchester Road itself appears to be lined by a number of mature trees. The buildings fronting Barlow Moor Road are more modestly sized, though also two-storeys in height, with the building at the junction of Barlow Moor Road and Manchester Road being a slightly larger structure, with an adjacent tennis court. Various outbuildings can be seen throughout the study site, many of which appear to be single storey in height. Finally, in the southern part of the study site, a new two-storey structure has been built immediately west of Sunwick. The 1933 OS map (Figure 8) documents the changes illustrated on the 1927 photograph in more detail, with the most notable change being that Sunwick is no longer utilised as a residence and surgery and is now identified as a 'Bank'. The new building to the west of the Bank is identified as a Hall.

5.8.13

A World War II bomb damage map, dating to 1940-41 (not illustrated), appears to show that two firebombs were dropped immediately west of the study site in October 1940, across two dwellings fronting Oswald Road. However, an aerial image, dated 10th August 1945 (not illustrated), does not show any damage to these structures or their rear gardens, suggesting any damage wasn't extensive and likely did not extend into the western part of the study site. This also appears to be confirmed in the 1950-55 OS map (Figure 9) which shows all the buildings as being extant within this area.

5.8.14

The 1950-55 OS map (Figure 9) does not illustrate any major changes to the dwellings within the site. However, within the southern part of the site, several of the outbuildings behind the structures fronting Wilbraham Road appear to have been demolished or amalgamated, with a garage having been established within this area, which is accessed via a passageway from Wilbraham Road.

5.8.15

A series of photographs from the 1959 (not illustrated) show several of the terraces which fronted Wilbraham Road, indicating that many of these buildings had been partially converted into commercial premises, with the former front gardens of these terraces having been replaced by ground-floor shops with new extensions and awnings. The later terraces within the southern part of the study site appear to have been utilised as shops much earlier and continued to act as such in the mid-20th century.

5.8.16

The rail station's closure in the late 1960's was considered to be the beginning in the general change of the middle-class suburb of Chorton-cum-Hardy to a more mixed residential and commercial hub (Farmer and Brownbill 1911, 297-302). During this period, the study site

appears to have remained largely unchanged, as indicated by a 1965 aerial photograph (not illustrated), which shows all the structures still extant, with extensive planting present both within the various gardens and lining Manchester Road. However, this would change in the late-1960s, when all the buildings within the study site were demolished to make way for Chorton Cross Shopping Precinct. This structure was designed using the contemporary modernist, modular construction methods and architectural treatments popular in the early-1970s, with the shopping centre opening to the public in 1971. The space comprised a mixture of commercial and office spaces, with Graeme House to the north also possessing commercial shopping space on its ground floor, though the remainder of this structure was utilised as office space for the predecessor to, and later the Department for Work and Pensions until the early-21st century (Simpson 2020).

5.8.17

The 1979-81 OS map (Figure 10) shows the extent of the new development within the site. Manchester Road no longer extends across the study site to the junction of Barlow Moor Road and Nicholas Road and is now solely an access into the new Chorton Shopping Centre. All buildings east of the former Manchester Road have been demolished and are largely covered by the footprint of both the Shopping Precinct and Graeme House. West of the former road footprint, all the former large villas have been demolished, with the site converted into a car park. Historic mapping indicates that the layout of the study site has remained unchanged since the 1970s (Figures 11-12).

6 Assessment of Significance

6.1.1

Paragraph 207 of the NPPF states that planning decisions should be based on the significance of the heritage asset, and that the level of detail supplied by an applicant should be proportionate to the importance of the asset and should be no more than sufficient to review the potential impact of the proposal upon the significance of the asset.

6.1.2

It is recognised that not all parts of a heritage asset will necessarily be of equal significance. In some cases, certain elements could accommodate change without affecting the significance of the asset. Change is only considered harmful if it erodes an asset's significance. Understanding the significance of any heritage assets affected and any contribution made by their setting (paragraph 207, NPPF 2024) is, therefore, fundamental to understanding the scope for and acceptability of change.

6.2 Designated Heritage Assets

Wilbraham Road/Edge Lane Conservation Area

6.2.1

The Wilbraham Rd/Edge Lane Conservation Area (CA) is largely characterised by built form corresponding to the historical development of Chorlton in the 19th century, centred on Wilbraham Road which was laid down c.1850-1860.

Character and Appearance of the Conservation Area

6.2.2

Prior to the expansion of Manchester and the subsuming of Chorlton into the city boundaries, the area was comprised of rural hamlets and farmland, in contrast to the already developed city of Manchester in the early 19th century. The material appearance of the area is largely defined by the use of Manchester red brick with buff coloured sandstone dressings. The area is further characterised by often ornate and fine historic Victorian Villas and terraced shopping rows, developed for the emerging middle classes in the area during the 19th century (Plates 16-22). The Grade II listed Lloyd and Platts Hotel (NHLE 1096127) is considered a fine example of the architectural style found within the conservation area (Plates 20-21). The area largely remained a middle-class suburb effectively into the mid-20th century. Whereupon economic downturn forced a change in the housing market to accommodate the change, altering the largely planned layout of Wilbraham Road.

6.2.3

In addition, a number of civic and community buildings were constructed to service the growth of the settlement. As a result, civic, religious and recreational buildings survive in many cases as historic landmarks within the streetscape. Notable examples include:

- Lloyd and Platts Hotel
- Lauriston Club (Former Liberal Club)
- Former Wilbraham Road Conservative Club
- Chorlton Methodist Church
- Spread Eagle Public House and Hotel
- William Hulme Grammar School

- Chorton Church of England Primary School
- St Clements Church
- Wilbraham Road Unitarian Church
- South Manchester Freemasons Hall
- Former Hellenic Centre

Contribution of Setting

6.2.4 The Wilbraham Road/Edge Lane CA encompasses a suburban portion of the wider Chorton suburb. It is composed largely of buildings constructed in Manchester red brick with a mix of 19th and 20th century development. The northern section of the conservation area extends to the western and southwestern boundaries of the study site. The conservation area covers the convergence of edge land and Wilbraham Road within the wider suburb of Chorton. To the north of the conservation area, the character is largely defined by suburban development, semi-detached and detached residential properties with gardens and driveways, and the commercial character of the precinct itself.

6.2.5 Views along Wilbraham Road are key to the understanding of the area. In these views the main thoroughfare is read as the commercial heart of the conservation area. Views north from Wilbraham Road are constrained and filtered by the tight urban grain and tree planting to the rear of properties. However, there are some views north from the conservation area in which Graeme House and the Chorton Cross Shopping Precinct are visible. Notwithstanding, it should be noted that views of the shopping centre do not contribute positively to the character and appearance of the CA.

Lloyd and Platts Hotel (NHLE 1096127)

6.2.6 The asset comprises both the Grade II Lloyd and Platts Hotel itself as well as the bowling green to the rear of the building. It is positioned within the Wilbraham Rd/Edge Lane CA. The asset is of local brick construction with ashlar architraves and decorative features present on the exterior. The asset's primary northern elevation fronts onto Wilbraham Road. It also sits to the southwest of the study site (Plates 20-21).

6.2.7 The asset is primarily of local brick construction, with ashlar detailing above the entrance and above the windows as lintels. It is set over two storeys with a two-storey bay window and a range of double pane sash windows on the ground and first floor. The western elevation features a rotunda of the same brick and ashlar construction. Decorative brick corning is visible throughout. Moreover, the former boundary wall surrounding the bowling green has been retained.

Architectural and Historic Interest

6.2.8 The asset has some architectural interest derived from distinctive built features such as the western-facing rotunda and decorative stonework, as well as from late Victorian design features. The position and scale of the asset result in it being prominent on Wilbraham Road and as a result its architectural design contributes to the character of the Wilbraham Road Conservation Area.

- 6.2.9 Moreover, as the Lloyd and Platt Hotel is a part of the historic fabric of Chorlton and a visible marker of the area's development, the asset derives historic interest from its survival as an early designed feature of Chorlton. This historic interest is further enhanced by its treatment that showcase historic features typical of Victorian architectural principles.

Contribution to Significance made by Setting

- 6.2.10 The asset is bound by Wilbraham Road to the north and Manchester Road to the west. Both non-designated heritage buildings the Former Conservative Club (located to the immediate west of the asset) and the Spread-Eagle Hotel (located to the immediate northwest) are located nearby the asset.

- 6.2.11 The asset is primarily experienced from within the dense urban environment in which it is located. The asset is appreciable from Wilbraham Road, where the full extent of its scale and massing can be read in its historic context, namely from its location on the convergence of Manchester Road and Wilbraham Road. The primary elevation, with its high-quality design makes a positive contribution to conservation area it sits within. Likewise, the built environment being a long straight road with flanking commercial premises in the local vernacular and tree planting is a positive contribution to the asset. The rear elevation is generally not experienced due to the lack of intervisibility with Wilbraham Road in the enclosed urban context of Chorlton. The building is not visible in long distance views due to the mostly tight urban grain of the surrounding area.

- 6.2.12 The asset is positioned within an area heavily screened from the study site by late 19th, 20th and 21st century development as well as foliage. The scheme would make a positive contribution to the asset by enhancing the asset's ability to be appreciated and experienced.

Former Temperance Hall (NHLE 1268311)

- 6.2.13 The asset comprises the Grade II listed Former Temperance Billiard Hall (NHLE 1258311). The asset is composed of a common local construction of Red Brick with buff sandstone dressings.

Architectural and Historic Interest

- 6.2.14 The asset derives its principal significance from its primary elevation, which demonstrates the assets unique architectural features (Plate 13). The asset is set over two storeys and retains much of its historic form despite 20th century alterations in its usage and the surrounding urban environment.

Contribution Made to Significance by Setting

- 6.2.15 The asset is experienced within the dense urban environment in which it is located. While the asset was constructed historically within an already built-up area, the development in the scale and massing of surrounding buildings has affected the historic experience of the asset somewhat, from its side and rear elevations. The asset is primarily experienced from Barlow Moor Road and lacks intervisibility with the study site due to 20th century construction to the south of the Temperance Hall obscuring the study site from view (Plate 14).

Chorlton Library (NHLE 1414760)

- 6.2.16 The Grade II listed Chorlton Library is a prominent listed building within the locale in which it is situated. It was constructed in the early 20th century by Henry Price in an Edwardian Baroque Style.

Architectural and Historic Interest

- 6.2.17 The building derives considerable significance from its strong built form. The principal north facing façade presents aesthetic architectural interest from its distinctive Edwardian Baroque design, displaying careful attention to detail (Plate 11). This architectural significance is enhanced by its distinctive scale and massing and its spatial relationship to the nearby Former Temperance Hall (NHLE1268311).

- 6.2.18 The building also derives significance from its historic value as a Carnegie Foundation funded library as well as being a part of the historic development of Chorlton. It also draws significance from its relationship with the Titanic disaster as the original plans for the asset were stored on the ship prior to departure. The building also has some group value with other Carnegie-funded libraries of its kind.

Contribution Made to Significance by Setting

- 6.2.19 The asset is located within a relatively dense urban context and within the immediate proximity of the Grade II Listed Temperance Hall located adjacent to the asset. The asset sits on a triangular plot in mainly urban setting, comprising a mixture of 19th century and 20th century development.

- 6.2.20 The asset is primarily experienced from Manchester Road on its eastern elevation but can also be experienced from its principal northern elevation on Manchester Road also. Despite being surrounded by late 20th century development, the early 20th century experience of the asset has been preserved to an extent, by its prime location on the intersection of Longford Road and Manchester Road. It must be noted however, that the context of intervening development to the south of the site obscures views from the south towards the asset.

- 6.2.21 The building derives no significance from the site as well as a lack of intervisibility being present between the two.

6.3 Non-Designated Built Heritage Assets

Wilbraham Road Conservative Club (KUB 03)

- 6.3.1 The Wilbraham Road Conservative Club is a non-designated heritage asset lying within the Wilbraham Road/Edge Lane CA. Built in the late 19th century, it formed from Manchester Red Brick, characteristic of the area, with aspects of early Arts and Crafts Movement in its detailing. A decorative clocktower is positioned on the roof of the asset facing onto Wilbraham Road. The primary elevation also fronts onto Wilbraham Road (Plate 19). The main entrance is accessible through the historic boundary walls on Manchester Road.

Architectural and Historic Interest

- 6.3.2 The building derives limited architectural interest being defined by Manchester Red Brick with buff coloured sandstone dressings, Welsh slate roof and an Arts and Crafts

architectural treatment. It has a distinctive scale and massing, providing architectural and aesthetic interest being reminiscent of many of the fine architectural buildings on Wilbraham Road. In addition, the unique inclusion of the clock tower further contributes to its overall significance.

- 6.3.3 The building derives significance from its designed architectural value and for its role in the development of Wilbraham Road. It also has some communal value having hosted local sporting events, meetings in the events hall and important meetings since its construction in the 1890s.

Group Significance

- 6.3.4 The building also shares some group value with other historic buildings within the conservation area, as the building contains characteristic design elements common to a number of historic buildings in the conservation area.

Contribution Made to Significance by Setting

- 6.3.5 The asset is located on the corner of Wilbraham Road and Manchester Street, adjacent to the non-designated heritage asset, the Spread-Eagle Public House and Hotel. It is located to the southwest of the study site, with which it has no intervisibility due to the tight urban grain, largely made up of 19th and 20th century development. The asset is therefore experienced within the context of Chorton's partially planned built environment. The clock tower is prominent on the primary elevation of the asset, but remains obscured due to foliage which screens the eastern elevation of the asset from Wilbraham Road.

- 6.3.6 The building does not derive any significance from the site itself.

Spread Eagle Hotel (KUB 09)

- 6.3.7 The asset comprises the Spread-Eagle Public House and Hotel. It is formed of Manchester Red Brick with buff coloured sandstone dressings, along with elements suggestive of the early Arts and Craft style. It is defined to an extent by its location and association with other buildings within the Wilbraham Road/Edge Lane Conservation Area.

Architectural and Historic Interest

- 6.3.8 The asset derives some architectural value from being indicative of the prevailing architectural style of the area. Its significance is further enhanced as it is a good example of high-quality architectural design of suburban public hotels within Manchester.

- 6.3.9 Moreover, the asset draws historic significance from its association with the 19th century development of the planned elements of Chorton, and specifically the laying down of Wilbraham Road in the mid-19th century. The asset is indicative of the former prosperity of the area and the areas development within the wider context of the City of Manchester. The asset does share some associative value with other non-designated heritage assets considered to be significant to the overall character of the Wilbraham Road/Edge Lane Conservation Area

Contribution Made to Significance by Setting

- 6.3.10 Bound by Wilbraham Road to the south on which its primary elevation is fronted, and Oswald Road to the east, the asset is experienced within the dense urban setting of Chorton. It is defined and experienced as a late 19th century building to the west of the study site. While the wider area surrounding the asset is partially 20th century in date, the immediate setting has developed little with the majority of building in the immediate area dating to the 19th century. As such, the asset retains its principal relationship to historic Chorton. The asset is considered to derive no significance from the site area.

6.4 Other Buildings of Historic Interest

464 Wilbraham Road (Sunwick Villa) (B 01)

- 6.4.1 The asset is a former Victorian ‘Sunwick’ Villa. It is formed of local brick of English Garden-Wall Bond, with a portion of the ground floor entrance done in ashlar. The ground floor features a range of mullion windows of ashlar construction on the primary, southern elevation fronting onto Wilbraham Road, and the eastern elevation. The original boundary walls of the Villa and gate piers remain extant (Plates 7, 8, 9).

Architectural and Historic Interest

- 6.4.2 The asset derives the majority of its significance from its distinctive architectural features. One of those distinctive features is the ground floor entrance featuring mullion windows and moulded surrounds. Its significance is also enhanced by features suggestive of the Arts and Crafts Movement present on the primary elevation. While 20th century development has diminished the asset’s architectural significance to a degree, the surviving 19th century elements contribute positively to the streetscape and the asset overall.

- 6.4.3 The asset’s limited historic significance is derived from its historic value as an early part of the 19th century built development of Chorton and its former relationship to the doctor’s surgery formerly extant on the study site. The surgery was demolished in the rounds of modernisation undergone in Chorton in the mid-20th century. As such, the asset shares a historic association to the study site, as the resident doctor of the surgery built the asset as his home.

Contribution Made to Significance by Setting

- 6.4.4 While the asset is still appreciated from street level within the urban environment it was constructed in, its experience has somewhat altered in its change in function to a commercial premises. While the experience has been altered due to 20th century development also, the main features of the asset are still appreciable in their context from Wilbraham Road.

- 6.4.5 The building derives significance from its historic relationship with the study site. However, this relationship has been disrupted due to 20th century development and demolition of the historic buildings once extant on the study site.

6.5 Potential Sub-surface Archaeological Remains

- 6.5.1 This assessment has identified that there is a low potential for significant archaeological remains dating to the prehistoric and/or Roman period to survive within the study site. Should such remains be found they would likely be of no greater than local significance.

6.5.2

The study site was located outside any known medieval settlements in the area and was likely utilised during the medieval and post-medieval periods for agricultural purposes. Therefore, there is the potential for features relating to associated activities such as ploughing, drainage, or boundaries, to be identified within the study site. Any such remains that could survive would be considered to be of negligible significance.

6.5.3

The study site was once the location of a series of mid-late 19th century glasshouses, and late-19th/early-20th century residential structures (and associated outbuildings), including large-semi-detached villas (Nos. 17-27 Manchester Road), and large two-storey houses (No 30 Manchester Road; Nos 587-595 (odd) Barlow Moor Road) (Plate 16). The site was also the location of several terraced houses (Nos. 468-476 Wilbraham Road) (Plate 17) utilised for both commercial and residential purposes, as well as a Motor Garage accessed from Wilbraham Road. All of these structures were demolished in the 1960s, ahead of the redevelopment of the study site into the Chorton Cross Shopping Precinct and Graeme House. However, the level of site clearance that was carried out during the demolition of these structures is unknown, and therefore there is the potential that remains associated with these buildings may survive below-ground within the study site. Should such remains survive, they would likely be of overall local significance, due to their *historic interest*, specifically their *archaeological interest*.

7 Impact Assessment

7.1 Overview of impact

7.1.1

Local authorities have a duty under the 1990 Planning (Listed Buildings and Conservation Areas) Act (section 66[1]) to have special regard to the ‘*desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses*’. The NPPF expects local authorities to have access to significance and impact assessments to inform these duties (paragraphs 207 and 208).

7.1.2

Impact is assessed according to different levels, from neutral to beneficial with a range of degrees of harm, from slight to substantial. Where substantial harm will be caused, for example by the total demolition of a listed building or a building that contributes to the character of a conservation area, local authorities should normally refuse consent, unless the criteria set out in the NPPF are met (paragraph 214). For proposals where the harm is ‘less than substantial’, the Local Authority is expected to weigh the harm to significance against the public benefits of the scheme.

7.2 Proposed Development

7.2.1

The application submission (Prior Notice for Demolition and separate Full Planning Application for redevelopment) includes the demolition of the Chorlton Cross Shopping Precinct and Graeme House and the erection of six residential buildings (two blocks including ground floor commercial uses). The eastern blocks are proposed to be served by under-croft car parking.

7.2.2

The proposed development plans also include the reinstatement of the former alignment of Manchester Road as an active travel (pedestrianised) route through the centre of the site, as well as associated parking and landscaping. The formal description of development is as follows:

Application for Full Planning Permission for the erection of 6no. residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e)); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses; together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.

7.3 Previous Consultations

7.3.1

Full details of the proposals can be found within the Design and Access Statement that accompanies the application. Additionally, the Design and Access Statement sets out the consultation that has taken place with the Greater Manchester Conservation Team and the resulting development of the design in conjunction with that engagement. Consultation included an urban design review where the concern over façade treatment to facilitate a breakdown in mass was raised. Proposals were therefore altered to include mitigating factors in line with comments, including set-back from the Wilbraham Road/Edge Lane Conservation Area, bay windows implemented within designs, set-back tops and castellated rooflines.

Overview of Design

- 7.3.2 The proposed development will consist of 6 blocks of mixed residential and commercial space. Residential space will be located on the upper floors, with commercial located on the ground floor level. The buildings are proposed to be between 4-10 storeys with Blocks D and E orientated roughly west of Manchester Road with Blocks A, B and C roughly located on the current alignment of Graeme House (Please refer to Section 6.2 of the Design and Access Statement). Block F fronts onto Wilbraham, Road. It should also be noted that designs include set-back tops, with the development stepping up away from the Wilbraham Road/Edge Lane Conservation Area to mitigate impact caused by the intensification of scale and massing proposed by the Proposed Development. Tall elements are also focused away from the conservation area with the 10 storey sections located in the far northeastern corner of the site, as well as the retention of a portion of the current car park on the west of the site. Manchester Road will also be reinstated along historic boundaries. The scale and massing to the current proposals have been proposed in line with previous consultations with MCC on earlier designs.

- 7.3.3 Designs have followed a heritage-led approach to respond to the general character and construction of the surrounding area and the nearby Wilbraham Road/Edge Lane Conservation Area that borders the southwestern edge of the scheme. Design proposals include bay windows, balconies and chamfered gables to reference historic Chorton mansion-type blocks, terraced streets and townhouses. Repeating colour palettes within the conservation area have also been reviewed and integrated into the designs. Overall, the development has also been designed with a strong base, middle and top to reflect the existing repeating hierarchy within the conservation area.

- 7.3.4 The Proposed Development's materiality has also taken into account the general character and vernacular construction of the surrounding area and the nearby Wilbraham Road/Edge Lane Conservation Area that borders the southwestern edge of the Proposed Development. High quality designs reflect the character of the area through the inclusion of elements such as brick construction that responds to the local typology.

- 7.3.5 Full details of the proposals can be found within the Design and Access Statement that accompanies the application. Additionally, the Design and Access Statement sets out the consultation that has taken place with the Greater Manchester Conservation Team and the resulting development of the design in conjunction with that engagement.

7.4 Previous Impacts

- 7.4.1 Whilst no invasive archaeological or ground-investigation works have been carried out within the study site as part of this assessment, two boreholes are documented by the BGS as having been excavated in 1969, carried out after site-wide clearance of the late-19th/early-20th century buildings and prior to the construction of Chorton Precinct and Graeme House (Figures 1 and 13; SubSoil Surveys Ltd 1969). Unfortunately, the results do not provide a great deal of detail of the below-ground stratigraphy, though borehole 2, which was located within a former villa garden, did identify a possible fill layer 0.9-1.52m

BGL. It is likely this fill layer was associated with the demolition of the neighbouring villas, or possibly even the demolition of the earlier nursery buildings that were once located immediately west of this area.

7.4.2 Historic mapping indicates that prior to the development of the site in the mid-late 19th century, the study site was likely utilised in part for extractive works (as indicated by the 1847 tithe apportionment), with several ponds/pits illustrated on early maps within the study site boundary. Such works would have likely impacted any earlier archaeological remains within the study site.

7.4.3 Likewise, the southern part of the study site appears to have been used as both an orchard and nursery during the 19th century (and possibly earlier). Agricultural practices, such as ploughing, could have also potentially impacted earlier archaeological remains within the study site.

7.4.4 Whilst the level of site clearance that was carried out during the demolition of the various villas, terraces, and outbuildings within the study site in the mid-20th century is unknown, the extensive construction works associated with the building of Chorton Precinct and Graeme House are likely to have resulted in extensive ground disturbances within the eastern half of the study site.

7.4.5 Finally, the bomb damage map, dating to 1940-41 (not illustrated), has shown that two firebombs landed c. 20m west of the study site boundary, and whilst later aerial imagery and historic maps suggests that any associated damage did not extend into the western part of the study site, this potential should still not be discounted.

7.5 Designated Heritage Assets

Wilbraham Road/Edge Lane Conservation Area

7.5.1 The Wilbraham Road/Edge Lane Conservation Area runs along the western and southwestern boundary of the site. The area is characterised by a mix of mid to late 19th century and early 20th century construction, in red brick with buff sandstone dressings. The area also contains a number of late 20th century buildings of varying styles.

7.5.2 The current site is not listed as a negative contributor to the nearby conservation area. However, it is noted in the Conservation Area Appraisal that similar late 20th century developments within the conservation area share a lack of modelling and little regard to the geometry of the conservation area. As such, the design of the Proposed Development will be an improvement in terms of its response to the character and appearance of the conservation area. The Proposed Development will be partially visible in views looking eastwards from the conservation area (Viewpoint 1.5). These views will be filtered by street trees, as outlined within the TVIA.

7.5.3 Although the Proposed Development will be more prominent in terms of height in views from the conservation area (Viewpoint 1.5), the building will not become dominant. The TVIA outlines likewise that the views will become increasingly filtered further into the Conservation Area. Due to the appropriate design, the Proposed Development will feature a more consistent architectural fluency with the conservation area than Graeme House

currently does. For example, the inclusion of bay windows and the reflected colour palette of the surrounding urban environment within the conservation area.

7.5.4

The scale and massing of the Proposed Development will constitute an intensification of the current conditions due to the new built forms emerging with the study site, albeit in a location that is currently characterised by a 9 storey 20th century development. However, the impacts of the new building line that will emerge within views from the conservation area will be mitigated by a number of measures including the focusing of massing to the northeastern edge of the study site, the stepping back of built forms away from the conservation area and the retention of a part of the existing car park to act as a buffer between the conservation area and Proposed Development. As Graeme House already breaches the roofline of the shop in views north from Wilbraham Road, so too will the Proposed Development. However, the design has been drawn up to break up massing, and emphasise the base middle, and top of the new buildings design, a characteristic form within the conservation area. In this view, the design references to the Mansion blocks on Manchester Road will be evident (Viewpoint 1.5). The reinstatement of the historic residential building line along Manchester Road will also be evident. This, therefore, will reintroduce some level of authenticity into this particular view out of the conservation area.

7.5.5

The design of the Proposed Development will also present an appropriate response to the character of the conservation area more generally. The appearance of proposed design principles such as bay windows, balconies and the western plots referencing terraced streets and townhouses in views from Wilbraham Road will act to make a positive contribution to the overall character of the conservation area through its setting.

7.5.6

In views westward, the nature of the approach toward the Conservation Area will be changed. Due to the change in from the current layout of the study site, there will be taller elements of massing sat at the gateway into the conservation area. However, it is considered that this constitutes an intensification of the existing impact of the scale and massing of Graeme House, and is mitigated somewhat due to the retention of a portion of the existing car park which will act as a buffer between the conservation area and Proposed Development.

7.5.7

Unlike Graeme House, the design and materiality of the Proposed Development will be more appropriate, and better respond to the built urban context unlike Graeme House. Overall, it will result in a slightly increased level of impact, which will be more prevalent in winter when the filtering offered by vegetation is reduced, as noted in the TVA. However, the appreciation for the conservation area with a tall element to its north, will be sustained (Viewpoints 1.2 and 2.1).

7.5.8

Views from immediately outside the conservation area on Wilbraham Road will exhibit the change in massing on the study site. These views will be possible when one leaves conservation area on foot. As such, it will change the nature of the experience of leaving the conservation area to a limited degree, which is further iterated upon within the TVA. However, leaving the conservation area in that direction, the experience is already defined by the transition from suburban development to commercial and larger built forms. This transition into shopfronts and businesses with the partial visibility of Graeme House behind

is already referenced within the TVIA as a consideration. The impact is again lessened by the appropriate design which better responds to the current urban context (Viewpoint 1.4).

7.5.9 Overall, the impact to the conservation area is considered to result in less than substantial harm.

Lloyd and Platts Hotel (NHLE 1096127)

7.5.10 The Grade II listed Lloyd and Platt Hotel (NHLE 1096127) is located to the southwest of the scheme, in the northeastern corner of the Wilbraham Road/Edge Lane Conservation Area. It has a strong architectural form and is a prominent building within the conservation area (Plates 19-20).

7.5.11 The asset is prominent in views looking eastwards on Wilbraham Road toward Graeme House and is mentioned as a consideration within the prepared TVIA due to being a positive contributor to the conservation area (Viewpoint 1.5). While the site forms an element of the wider setting of the asset, the site does not directly contribute to the significance of the building, and there is a lack of intervisibility from the site towards the asset. Where the Proposed Development will be visible from the asset, it has been designed to step up away from the conservation area in which the asset is located, with taller elements focused to the east. Blocks on the westernmost side of the development will be 6 storeys at their highest point. Furthermore, the introduction of more built forms will break up the monolithic massing currently present within the site. The retention of some of the existing car park in the west of the site will act as a buffer between the conservation area and the Proposed Development.

7.5.12 As a result, while there may be a degree of intervisibility between the asset and the Proposed Development, the materiality and design principles within the Proposed Development such as bay windows, balconies and a brick construction will mitigate the intensification of the current massing. The breaking up of the scale of the current site is also considered a benefit. The set back top of the buildings within the Proposed Development will soften the building outline and silhouette. The materiality of the Proposed Development responds better to the built form of the asset in contrast to Graeme House. The design will therefore be appropriate to the character of the conservation area and the asset, which is marked as a positive contributor to the built environment of the conservation area. As a result, the Proposed Development will result in less than substantial harm at the lower end.

Former Temperance Hall (NHLE 1268311)

7.5.13 The Grade II listed Temperance Hall (NHLE 1268311) is located to the northwest of the site, and fronts onto Barlow Moor Road. While retaining historic design features, the building and its setting have developed in the 20th and 21st centuries and it is no longer experienced within its historical context, due to the change in scale and massing of nearby buildings (Plates 12, 13). Views to the south of the Temperance Hall toward the Proposed Development are blocked by the large scale and massing of the adjacent building to the south of the Temperance Hall. (Viewpoint 2.3) The dominant view of the asset is from

Barlow Moor Road and Manchester Road from the North. Therefore, the Proposed Development will not form a dominant element within this view. Therefore, the ability to appreciate the historic character and function as well as the architectural form and the experience of the asset will remain unaltered, and its significance will be sustained.

Chorlton Library (NHLE 1414760)

- 7.5.14 The asset consisting of the Grade II Chorlton Library (NHLE 1414760) is situated to the north of the Proposed Development. It is bound by the Former Temperance Hall to the immediate south and the convergence of Longford Road and Manchester Road to the north. Comprised of an Edwardian Baroque style library building, it retains much of its historic design features (Plate 10). While the setting has changed considerably from its historic context due to continued 20th and 21st century development, the asset can still be understood in its historical context and boundaries to a degree. The dominant view of the asset is from Manchester Road and Longford Road. Being separated from the site by 20th century development to the south, there is a lack of intervisibility with the current site, as views to the south from Manchester Road are blocked by the current scale and massing of buildings to the south of the library (Viewpoint 2.3). While the scale and massing will become more prominent on Barlow Moor Road, this will not change the current experience of the asset. The historic appreciation of the asset will be retained along with the ability to appreciate the architectural form and function of the library in its historic context. Therefore, there will be no impact to the significance of the asset.

7.6 Non-Designated Built Heritage Assets

Wilbraham Road Conservative Club (KUB 03) and Spread-Eagle Hotel (KUB 09)

- 7.6.1 The Wilbraham Road Conservative Club and Spread-Eagle Hotel are key elements of the Wilbraham Road/Edge Lane Conservation Area due to their strong architectural form, prominence within the townscape and as examples of local style (Plate 18). They are located adjacent to one another on the convergence of Manchester Road onto Wilbraham Road across from the Grade II Listed Lloyd and Platt Hotel (NHLE 1096127). Due to the tight urban grain that surrounds the buildings, it is considered that there will be limited views of the Proposed Development. Due to the change in the scale and massing of the study site and the change in orientation of proposed buildings, along with the erection of buildings on the current car park, these assets have the potential to be impacted. The Proposed Development will appear in views from the area adjacent to the grouping towards the study site, leading to an intensification of the current impact. However, the breakup in the current scale and massing from a monolithic structure to a more architecturally fluid design in line with the rhythm and character of the conservation area is considered beneficial. The retention of a portion of the current car park within designs will also act as a buffer between the conservation area and the study site. The proposed materiality and design aspects such as bay windows, balconies, a set back top and the development stepping up away from the conservation area are considered to mitigate impact to a degree. As such, it is considered that there will be less than substantial harm to the significance of the grouping.

7.7 Other Buildings of Historic Interest

464 Wilbraham Road (Sunwick Villa) (B 01)

7.7.1

Sunwick Villa is located to the southeast of the Proposed Development, occupying a corner location on the convergence of Barlow Moor Road and Manchester Road. It forms a prominent building in the immediate locale, with a strong architectural form displaying elements of local detailing common within the surrounding built environment (Plates 7,8, 9). There is intervisibility between the asset and the scheme site. Views northwest from the convergence of Barlow Moor Road and Manchester Road illustrate the prominence of Sunwick Villa on Wilbraham Road, and the existing relationship between the villa and the current scale and massing of Graeme House (Viewpoint 1.2 and 2.1). The partial visibility of Graeme House is referenced within the TVIA. The Proposed Development will lead to an intensification of this relationship due to the change in orientation of proposed buildings and an intensification in the scale present on the site. As such, the Proposed Development will appear taller with a slight intensification in the massing from views to the south of the asset. However, the Proposed Development includes better design and materiality, that respond more appropriately to the design elements of the asset and its surroundings. This is in contrast to the current monolithic massing of Graeme House. However, the relationship is interrupted by dense foliage to the north of Sunwick Villa (Plate 14). The Proposed Development will not alter this relationship, albeit the breakup of the current massing will allow for a greater appreciation of the asset in its historic built context. The current experience and appreciation of the asset will be enhanced by the Proposed Development, and as such its significance will be enhanced. Overall, there will be less than substantial harm at the lower end to the significance of the asset.

7.8 Potential Sub-surface Archaeological Remains

7.8.1

There is the low potential for below-ground archaeological remains associated with agrarian activities during the medieval and post-medieval periods to be identified within the study site. If such remains were to be identified, then these would be impacted upon by the proposed development, though such remains would be considered to be of negligible significance.

7.8.2

The proposed development plan (Figure 13) indicates that there is the potential for groundworks associated with redevelopment of the site to impact upon below-ground remains. However, as noted in section 7.3 above, the part of the study site east of the former route of Manchester Road has likely been heavily truncated by the construction of Carlton Precinct and Graeme House, and the potential for remains of the former villas and terraces to survive within this area are considered to be negligible-low.

7.8.3

Since the mid-20th century, the western half of the study site has been solely utilised as a car park, and therefore, there is the potential that remains associated with the 19th century villas may survive below-ground within this part of the site. It is therefore considered that any ground works within this area of the study site will result in a moderate-high impact upon the significance of any below-ground remains that may survive within this area of the study site.

8 Conclusions

8.1 Summary

8.1.1 This historic environment desk-based assessment draws together the available archaeological, historic, topographic and land-use information in order to clarify the significance and archaeological potential of the study site ahead of the proposed redevelopment of Chorlton Cross Shopping Centre and Graeme House, Chorlton-cum-Hardy. This document also provides an assessment of the potential impacts that the proposed development could have on these and the setting and significance of other built-heritage assets in the vicinity.

8.1.2 This assessment has identified the potential for below-ground archaeological remains to survive within the western part of the study site. This includes evidence for medieval – post-medieval agricultural and extractive activity, as well as remains of Nos. 17- 27 (odd) Manchester Road, six late-19th century semi-detached villas which were demolished in the mid-20th century. However, remains associated with agricultural and extractive activity are considered to be of negligible significance and, as there are numerous surviving examples of these 19th century villas elsewhere, it is considered that the historic and archaeological interests of any surviving villa foundations would not contribute to the *Updated North West Regional Research Framework*. It is therefore concluded that no further archaeological works are required within the study site.

8.1.3 The site lies adjacent to the Wilbraham Road/Edge Lane Conservation Area, and there are a number of listed buildings surrounding the site.

8.1.4 The proposals have been designed to mitigate impacts to the character and appearance of the Wilbraham Road/Edge Lane Conservation Area as far as possible through a more appropriate materiality and design. There will be an intensification in the current massing of the site, however, the inclusion of set-back tops, a breakup of scale and massing within the design and likewise the stepping back of the development away from the conservation area is considered to mitigate impact. Furthermore, the Proposed Development will enhance the area with the reinstitution of Manchester Road.

Assessment Against National and Local Policy

8.1.5 Based on our assessment of heritage assets with potential to be affected it is concluded that there would be less than substantial harm to the significance of the Wilbraham Road/Edge Lane Conservation Area and the following designated and non-designated heritage assets:

- Lloyd and Platts Hotel (NHLE 1096127)
- Former Wilbraham Road Conservative Club (KUB 03)
- Spread-Eagle Hotel (KUB 09)
- 464 Wilbraham Road (Sunwick Villa) (BO 1)

8.1.6 Objectives of Paragraphs 212 and 213 of the NPPF requirements of the s.66 (1) and s.72 of The Planning (Listed Buildings and Conservation Areas) Act 1990 will be met. When

assessed against local policy, objectives set out in Policy JP-P2 of the PTE Joint Development Plan (2024), and Policy EN3 of the Core Strategy will be met. The Proposed Development responds to the planning briefs set out in the Chorton Local Infrastructure Framework (2025) by providing an improved public realm, and a mix of commercial and residential development.

8.1.7 Paragraph 215 of the NPPF is engaged which states the following:

8.1.8 *Where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.*

8.1.9 The test in paragraph 215 of the NPPF (2024) will be used when considering this application. This requires the LPA to weigh the harm against the public benefits of the proposal including, where appropriate, securing the optimum viable use of the building.

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row, from private houses', Manchester Archives GB127.m18260

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Archives GB127.m17412

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GB127.m17411

Appendix 1 Plates



Plate 1: Primary Elevation from Barlow Moor Rd



Plate 2: Rear Elevation from Car Park



Plate 3: Rear Elevation of Graeme House and Loading Area



Plate 4: Extent of the Car Park Making Up the Western Portion of the Site



Plate 5: Parking premises for Shop Owners and Loading Area for Businesses on Wilbraham Rd and formerly the Shopping Precinct



Plate 6: Interior of Former Chorton Cross Shopping Centre - Entrance from Wilbraham Rd.



Plate 7: Former Sunwick Villa. Remains a Surviving Building of the Original Site Before the Construction of Chorton Cross Shopping Centre



Plate 8: Side Elevation of Sunwick Villa and Rear



Plate 9: Extant Gate Piers of Sunwick Villa



Plate 10: View Towards Graeme House from Barlow Moor Rd



Plate 11: Chorlton Library (Undergoing Renovation Works)



Plate 12: Shopping Precinct Entrance from Barlow Moor Rd



Plate 13: Former Temperance Hall on Barlow Moor Rd - View to Graeme House Blocked by Adjacent Building and Foliage (Left)



Plate 14: View from Temperance Hall Toward Graeme House



Plate 15: Extant Foliage Screening Sunwick Villa from Graeme House



Plate 16: Original Row of Terrace Commercial Premises on Wilbraham Rd. and 1970s Extension of Chorton Shopping Precinct (Now Costa Coffee (Right))



Plate 17: Terrace Shopping Premises on the Convergence of Wilbraham Rd into Manchester Rd (Entrance for Shopping Precinct Car Park)



Plate 18: Two Remaining Operating Shops of the Former Shopping Precinct on Wilbraham Rd.



Plate 19: Non-Designated Heritage Asset Former Chorlton Conservative Club



Plate 20: Grade II Listed Lloyd and Platt Hotel Rear Elevation. Screened from Site by Foliage and Dense Urban Environment



Plate 21: Grade II Listed Lloyd and Platt Hotel Principal Elevation



Plate 22: Non-Designated Heritage Asset Chorlton Methodist Church

Appendix 2 Gazetteer of Heritage Assets

The following table provides details of heritage assets recorded on Historic England's NHLE and Greater Manchester HER within 500m of the study site. These have been listed in order of their reference numbers, and their locations are marked on Figure 1.

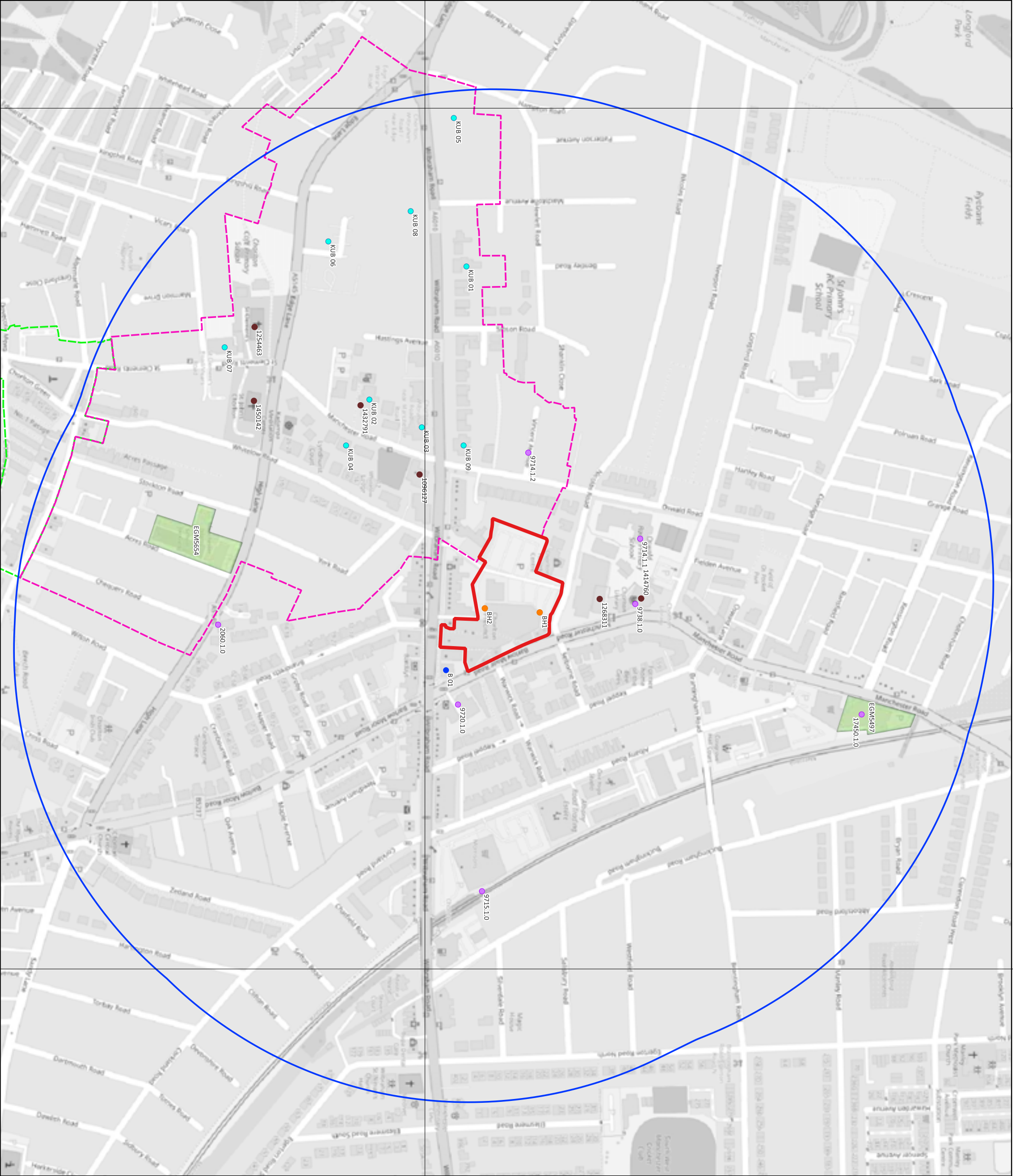
NHLE ID	HER Ref.	Name	Designation	NGR	Period
NHLE Designated Assets					
1096127	15547.1.0	Lloyd and Platts Hotel	Grade II Listed Building	SJ 81425 3994	19 th century
1254463	9716.1.0	Church of St Clement	Grade II Listed Building	SJ 81254 3802	19 th century
1268311	15858.1.0	Former Temperance Billiard Hall	Grade II Listed Building	SJ 81570 4203	20 th century
1414760	16225.1.0	Chorlton Library	Grade II Listed Building	SJ 81567 4244	20 th century
1432791	17004.1.0	Chorlton War Memorial	Grade II Listed Building	SJ 81345 3925	20 th century
1450142	17245.1.0	Roman Catholic Church of Our Lady and St John	Grade II Listed Building	SJ 81319 3806	20 th century
-	-	Chorlton Green	Conservation Area	SJ 8136 9352	Late-18 th – 19 th century
-	DGM3156	Wilbraham Road/Edge Lane	Conservation Area	SJ 8127 9385	19 th – 21 st century

Project ID	Name	NGR	Period
Key Unlisted Buildings -			
KUB 01	Wilbraham Road Unitarian Church	SJ 8118 9404	19 th -20 th century
KUB 02	Chorlton Methodist Church, Manchester Road	SJ 8133 9393	19 th century
KUN 03	Conservative Club, Wilbraham Road	SJ 8137 9399	19 th century
KUB 04	Former Lauriston Club (former Liberal Club), 12 Manchester Road	SJ 8139 9390	19 th century
KUB 05	Former Hellenic Centre, 562 Wilbraham Road	SJ 8101 9403	19 th century?
KUB 06	Former South Manchester Freemasons Hall, 12 Edge Lane	SJ 8115 9388	19 th century
KUB 07	Chorlton Church of England Primary School	SJ 8127 9376	20 th century
KUB 08	William Hulme Grammar School, 643-5 Wilbraham Road	SJ 8111 9398	19 th century?
KUB 09	Spread Eagle Hotel, Wilbraham Road/Oswald Road	SJ 8139 9404	19 th century

HER Ref.	Project ID	Name	NGR	Period
Non-Designated Heritage Assets				
2060.1.0		Chorlton village core	SJ 8159 9375	Medieval – Post-medieval
9714.1.1		Kiln Field (site of)	SJ 8150 9424	Post-medieval
9714.1.2		Brick Field (field name) (site of)	SJ 8139 9412	Post-medieval
9715.1.0		Chorlton-cum-Hardy Railway Station (site of; now Chorlton Metrolink tram stop)	SJ 8190 9406	19 th – 20 th century
9720.1.0		Renshaws Buildings (site of)	SJ 8169 9403	18 th – 20 th century
9738.1.0		Redgate Farm (site of)	SJ 8157 9424	19 th century
17450.1.0		Chorlton Baths (Chorlton Leisure Centre)	SJ 8170 9450	20 th century
-	B 01	464 Wilbraham Road, former Sunwick Villa	SJ 8165 9402	19 th century

HER Ref.	Name	NGR	Year
Archaeological Events			
EGM5497	Chorlton Leisure Centre. Desk-based Assessment	SJ 8170 9452	2023
EGM5654	Islamic Girls High School. Desk-based Assessment and Heritage Assessment.	SJ 8150 9373	2024

Appendix 3 Figures



Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

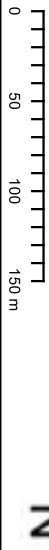
Figure 01:
Designated and Non-Designated Heritage Assets

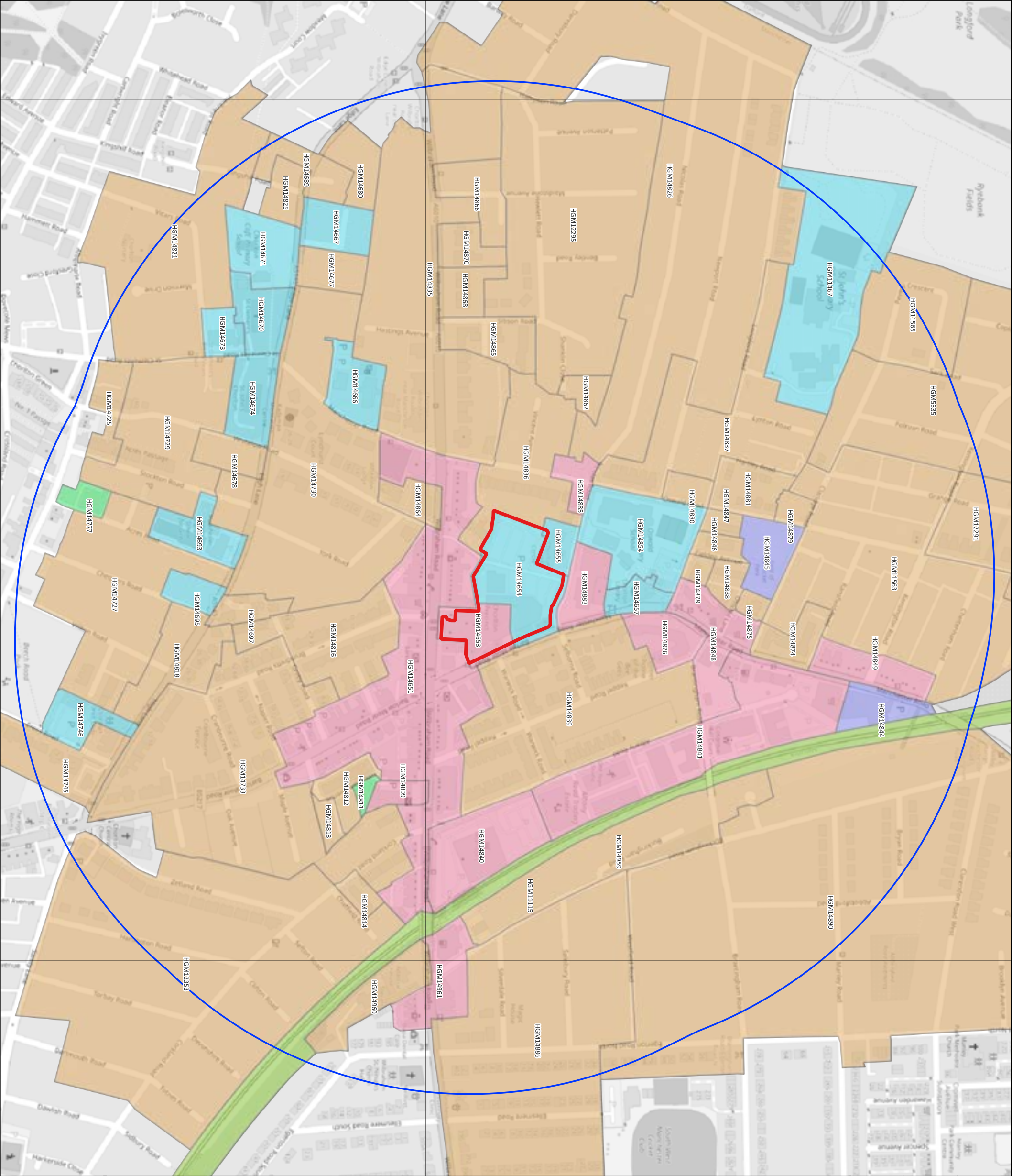
- Legend:
- Study Site
 - 500m Search Area
 - Grade II Listed Building
 - Wilbraham Road/Edge Lane Conservation Area
 - Chorlton Green Conservation Area
 - HER Non-Designated Heritage Assets
 - Key Unlisted Buildings within Wilbraham Road/Edge Lane Conservation Area
 - Non-designated Building
 - Historic Boreholes
 - HER Archaeological Events

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AC0000862729



Co-ordinate system: OSGB36 / British National Grid
Scale: 1:4200 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 02:

Historic Landscape Characterisation

- Legend:
- Study Site
 - 500m Search Area
 - HLC Broad Types**
 - Residential
 - Ornamental, Parkland and Recreational
 - Institutional
 - Industrial
 - Commercial
 - Communications

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Base Map: © Crown copyright and database rights 2024. Ordnance Survey
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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:4200 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 03:

1847 Chorlton-cum-Hardy Tithe Plan

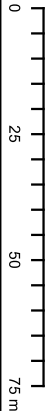
Legend:

 Study Site

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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:1500 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 04:

1848-9 Ordnance Survey 6 inch map

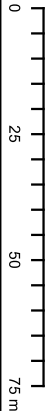
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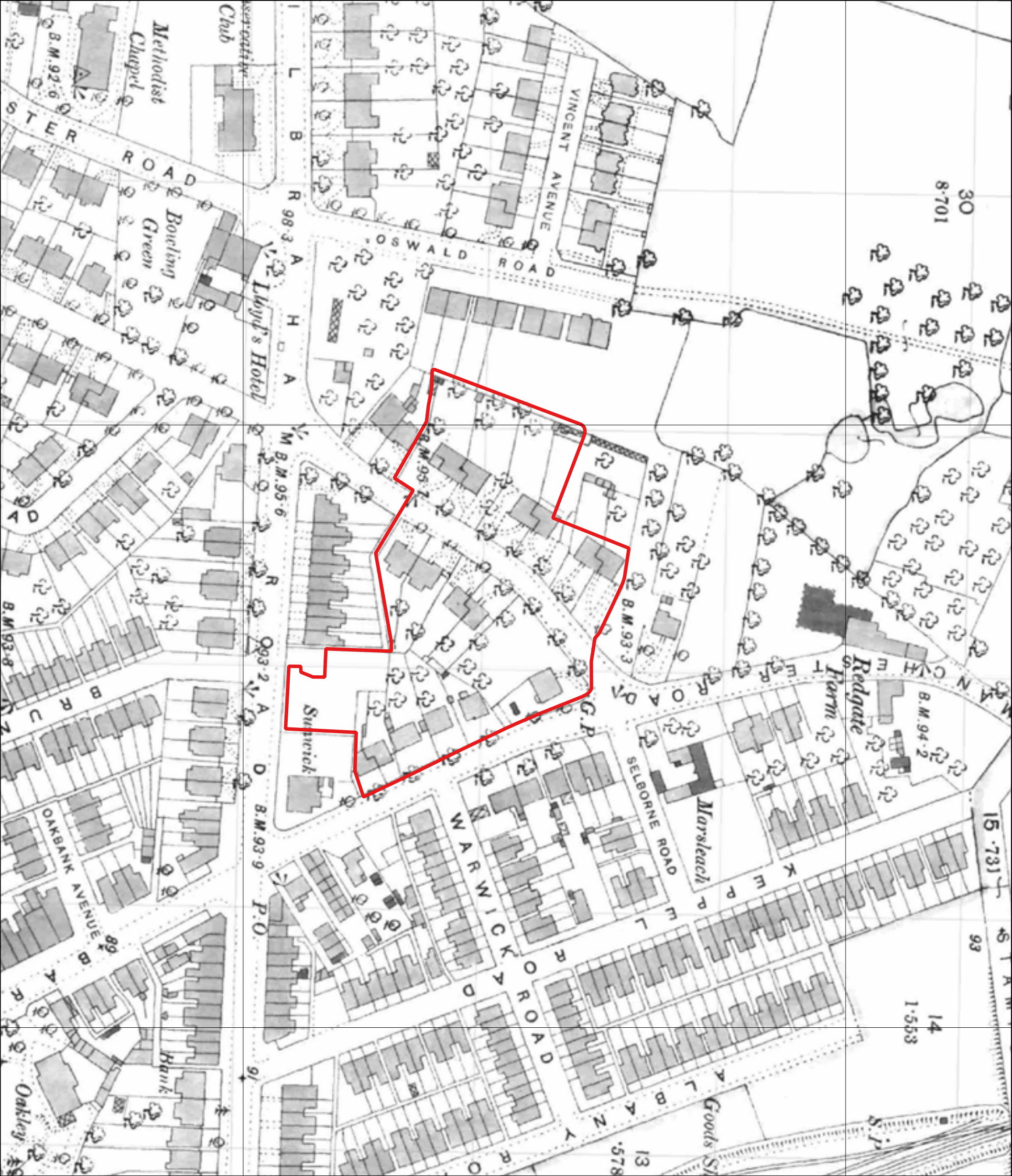
 Study Site

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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:1500 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 05:

1894 Ordnance Survey 25 inch map

Legend:

 Study Site

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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:1500 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 06:

1907 Ordnance Survey 25 inch map

Legend:

 Study Site

Co-ordinate system: OSGB36 / British National Grid

Scale: 1:1500 @ A3





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Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 07:

1922 Ordnance Survey 25 inch map

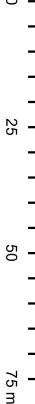
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 Study Site

Co-ordinate system: OSG836 / British National Grid

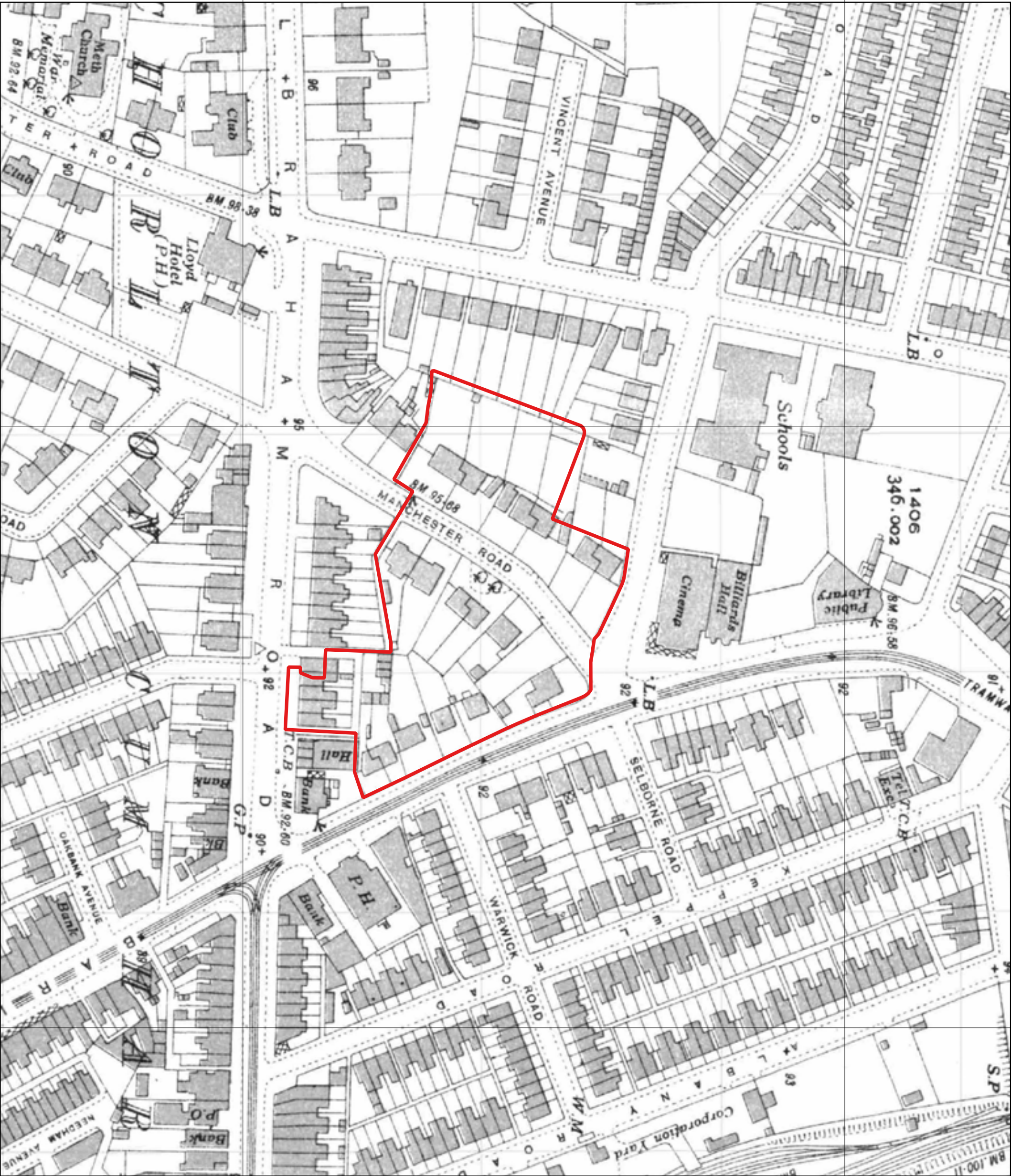
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Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 08:

1933 Ordnance Survey 25 inch map

Legend:
 Study Site

Co-ordinate system: OSG836 / British National Grid
Scale: 1:1500 @ A3



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Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 09:
1950-55 Ordnance Survey 1:1,250 scale map

Legend:
 Study Site

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AC0000862729
Co-ordinate system: OSGB36 / British National Grid
Scale: 1:1500 @ A3







Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

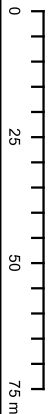
Figure 10:
1979-81 Ordnance Survey 1:1,250 scale map

Legend:
 Study Site

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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:1500 @ A3



Chorlton Precinct Redevelopment

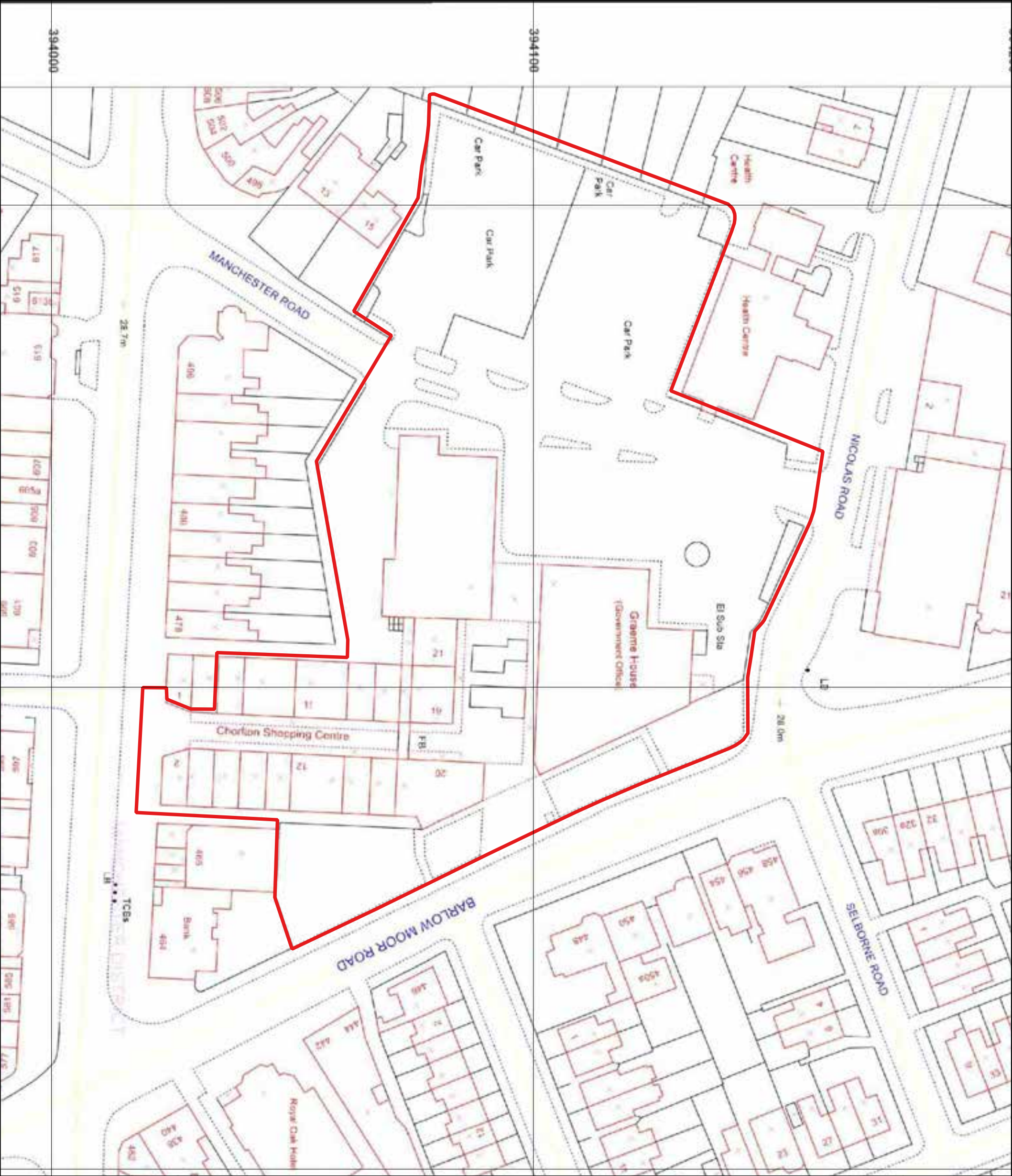
Historic Environment Desk-based Assessment

Figure 11:

2003 Ordnance Survey 1:1,250 scale map

Legend:

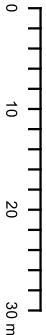
 Study Site

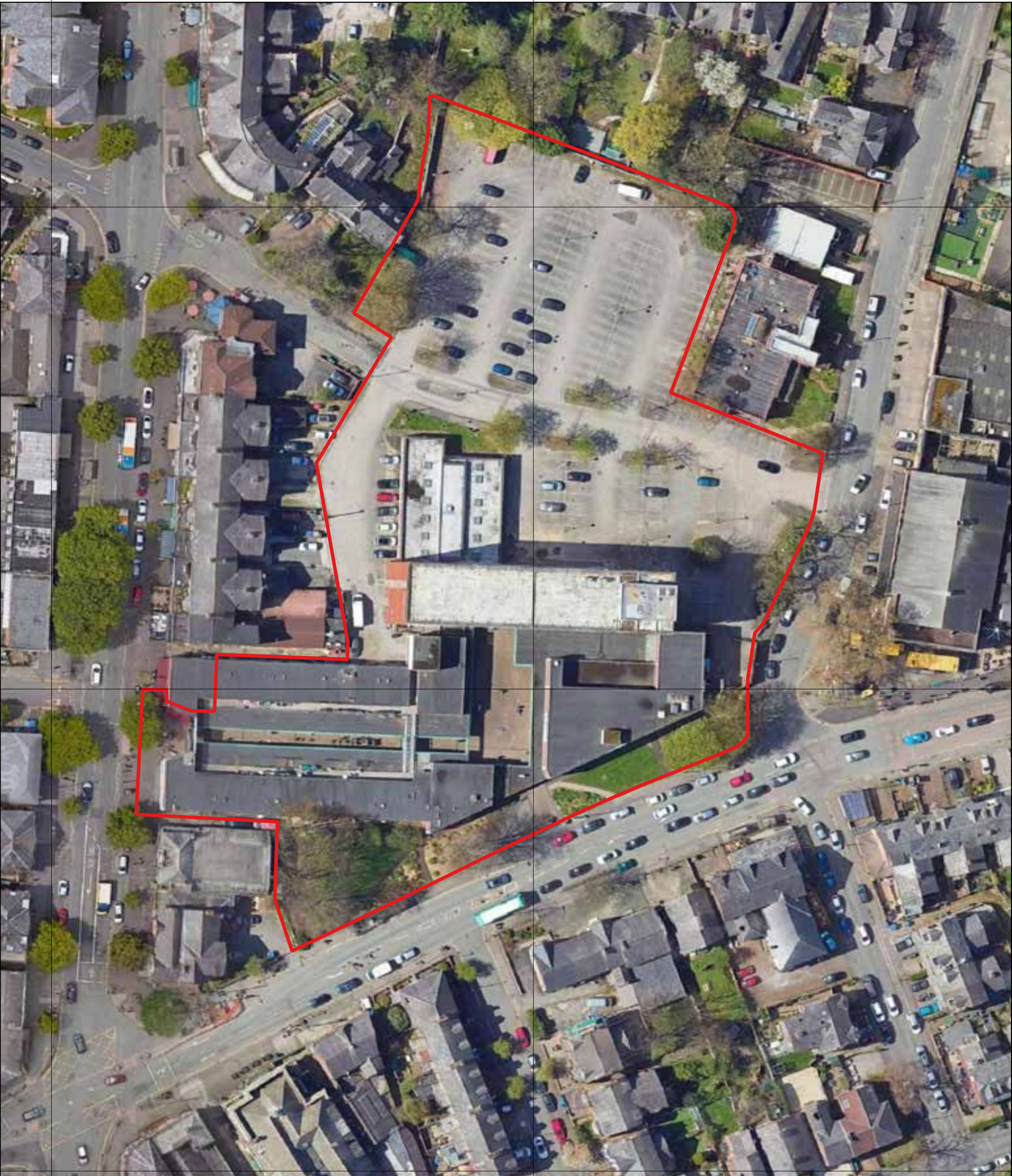


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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:750 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 12:

2023 Google Imagery

Legend:



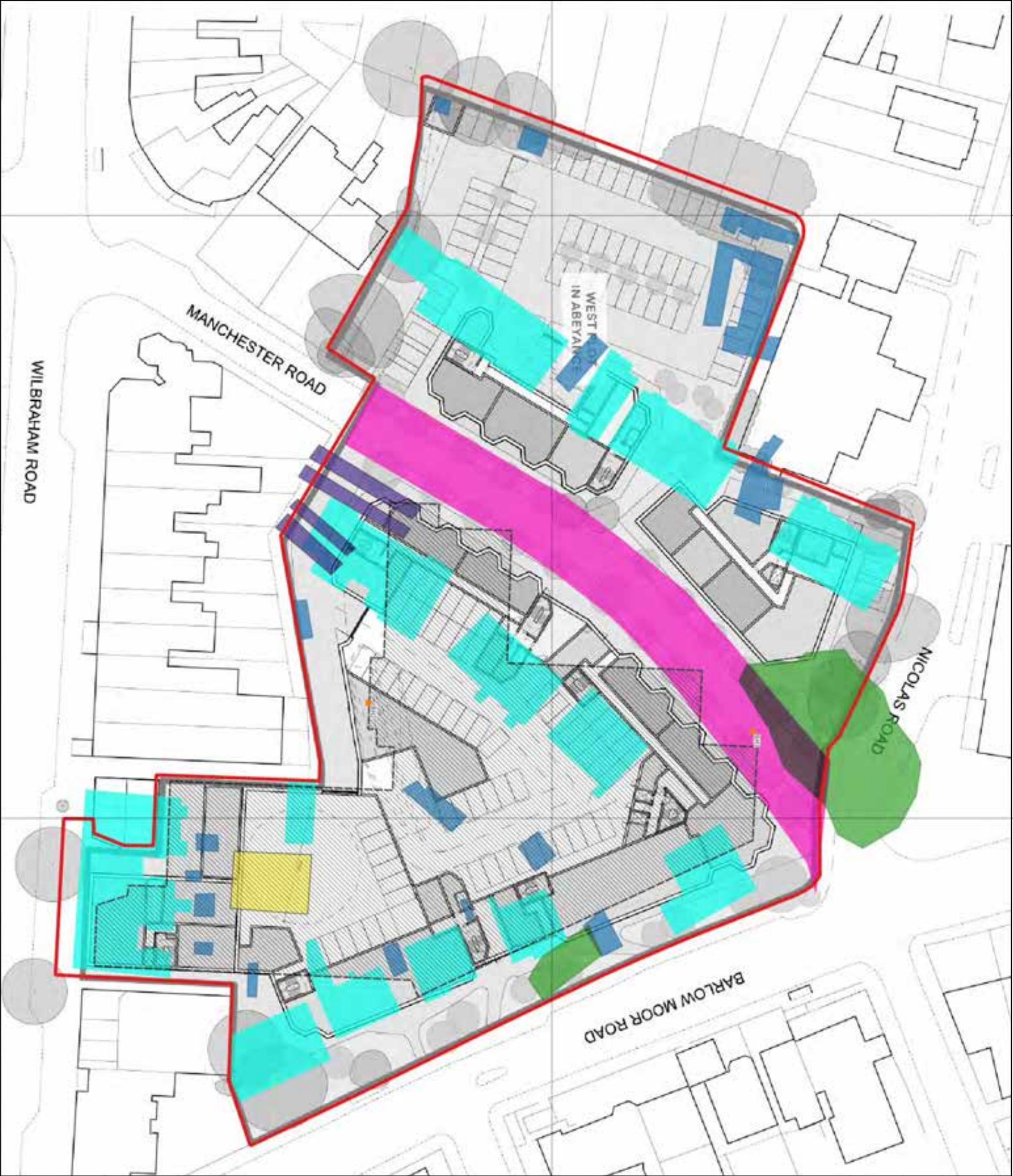
Study Site

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Co-ordinate system: OSGB36 / British National Grid

Scale: 1:750 @ A3





Chorlton Precinct Redevelopment

Historic Environment Desk-based Assessment

Figure 13:
Previous features within site identified from Historic
Mapping overlaid on Indicative Masterplan

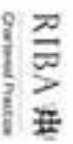
- Legend:
- Study Site
 - Current Building Footprint
 - Demolished Buildings
 - Demolished Outbuildings
 - Demolished Garage
 - Demolished Glasshouses
 - Former Route of Manchester Road
 - Former Ponds/Marl Pits?

Data: ©
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AC0000862729

Co-ordinate system: OSGB36 / British National Grid

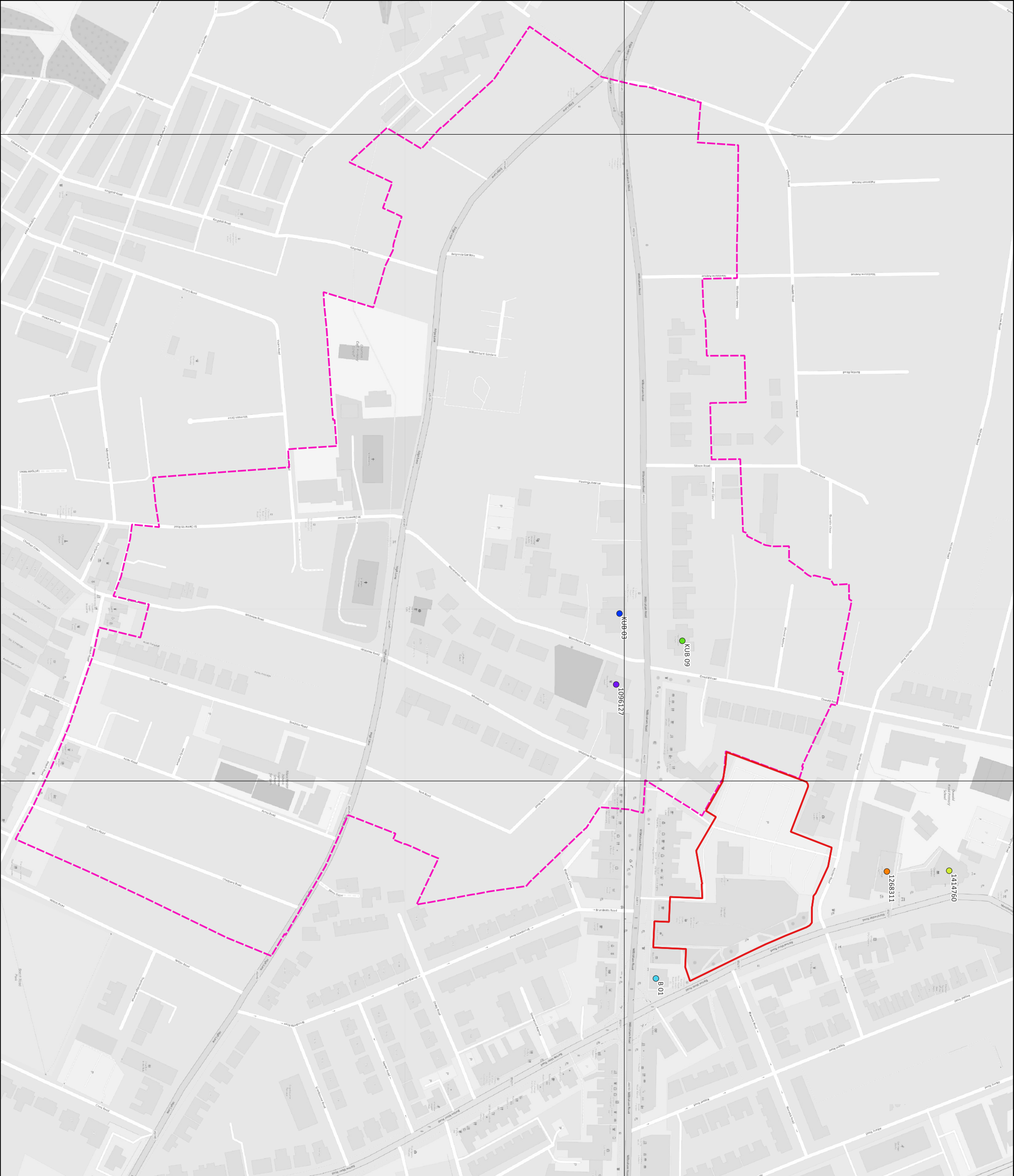
Scale: 1:600 @ A3





**Appendix 5B Figure 5-1 –
Designated and Non
Designated Built
Heritage Assets**

**Appendix 5B Figure 5-1 –
Designated and Non
Designated Built
Heritage Assets**



Chorlton Precinct Redevelopment

Environmental Statement Chapter 5: Built Heritage

Figure 5-1:

Designated and Non-Designated Heritage Assets

Legend:

- Site Boundary
- Wilbraham Road/Edge Lane Conservation Area

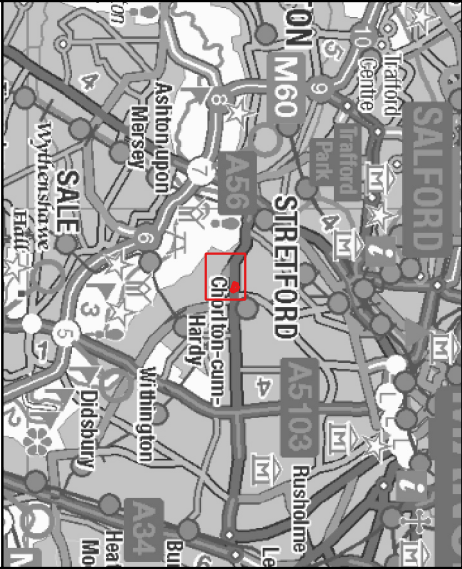
Grade II Listed Buildings

- Lloyd and Platts Hotel (NHLE 1096127)
- Former Temperance Billiard Hall (NHLE 1268311)
- Chorlton Library (NHLE 1414760)

Key Unlisted Buildings and Buildings of Historic Interest

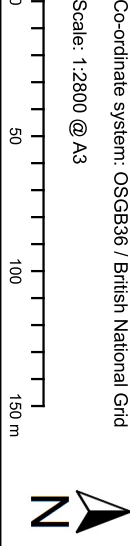
- Conservative Club (KUB 03)
- Spread Eagle Hotel (KUB 09)
- 464 Wilbraham Road (Sunwick Villa) (B 01)

Data: ©
Base Map: © Crown copyright and database rights 2024. Ordnance Survey
AC0000862729

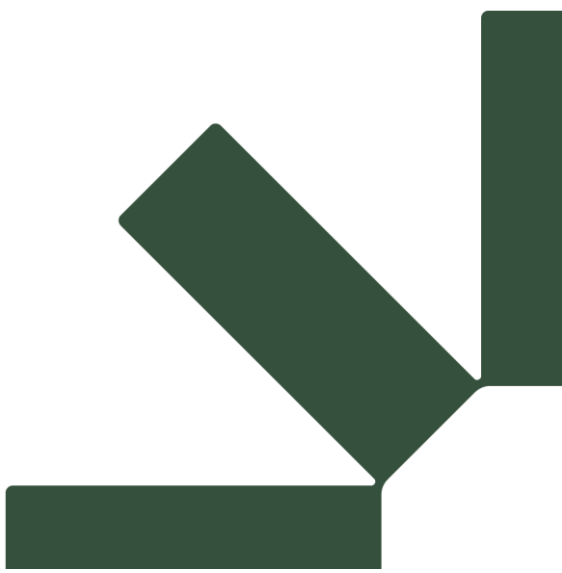


Co-ordinate system: OSGB36 / British National Grid

Scale: 1:2800 @ A3

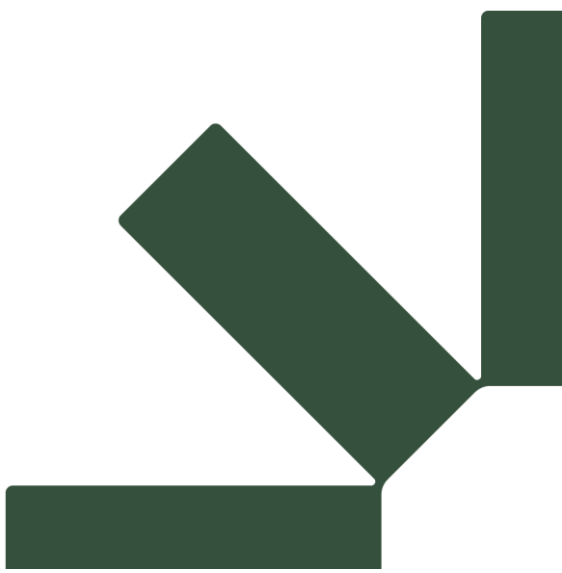


Lanpro



Appendix 6A Construction Traffic Information

*SLR



Appendix 6A Construction Traffic Information

*SLR

Chorton Construction Traffic Information

AAWT

Peak construction year 2026 (two way trips)

60 HGV per work day

30 LGV per work day

320 Staff per work day

65% Assume 65% travel to work by car

208 People travelling by car

20% Assume that 20% of people travelling by car are a passenger with a colleague

42 Passengers

166 Cars

256 AAWT

60 18-hour workday/ HDV

These are the AAWT figures for noise

AADT

220 Work days in a year

365 Days in a year

18 AADT LDV

100 AADT Staff cars

155 AADT

36 AADT HDV

These are the AADT figures for air quality

Routing

Staff travel

Assume all cars go to site (south end of Manchester Road). This is robust as trips will actually be distributed around Chorton

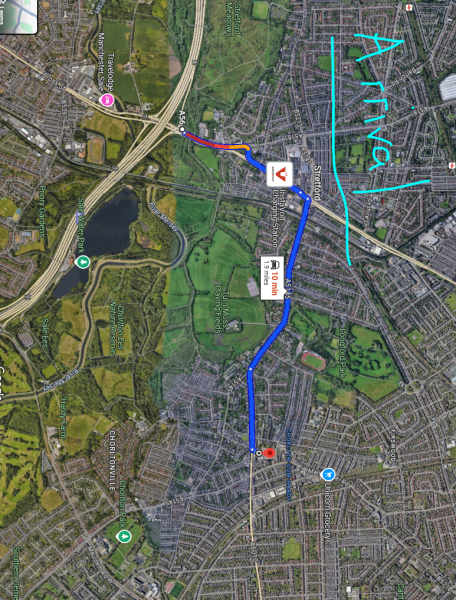
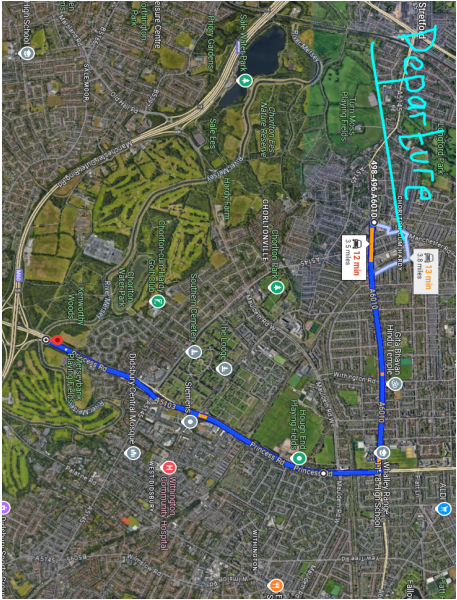
Distribute staff cars as per existing car park distribution

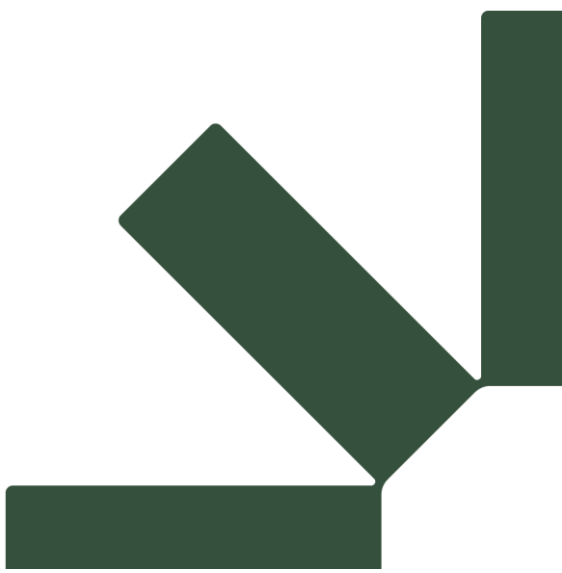
HDV and LGV

From CEMP and Demo Plan

Deliveries arrival to site: M60 at Junction 7, A56 Chester Road, right at AS145 Edge Lane straight on to A6010 Wilbraham Road west, left into site

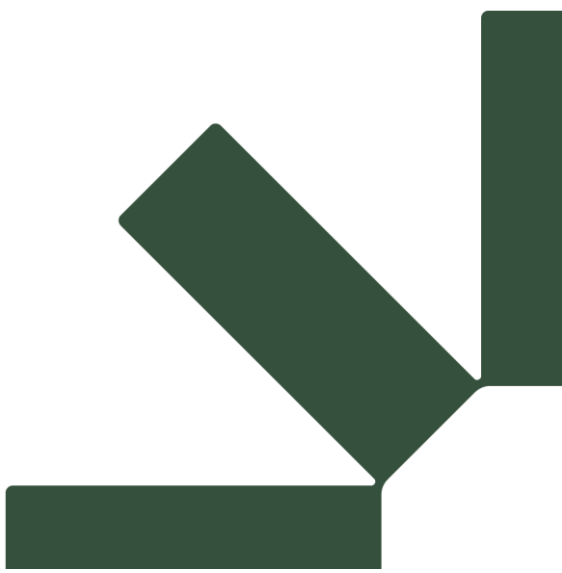
Deliveries departure from site: turn left onto the A6010, right onto the A5103 Princess Road proceeding to the M60 at Junction 5.





Appendix 6B Construction Traffic Impact

 **SLR**



Appendix 6B Construction Traffic Impact

*SLR

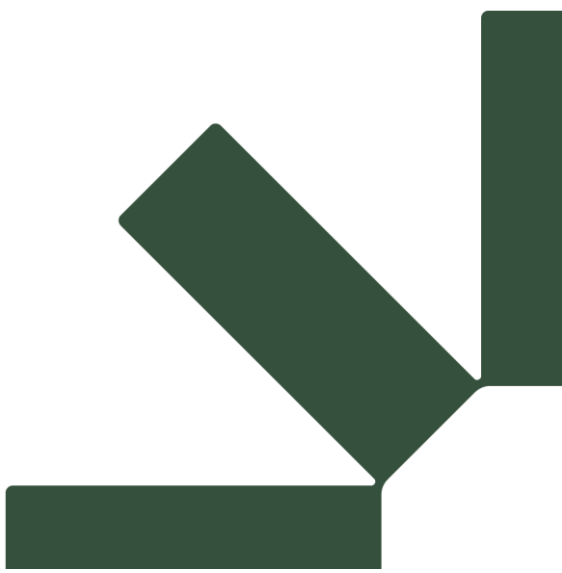
Appendix 6-B - Chorlton Precinct - Construction Stage Impact

	Link Ref	Link	Trip Distribution		Dev Trips (Construction)						Impact of Dev (Construction)						Scenario 1		Scenario 2	
			Construction (LGV + HGV)*	Construction (cars)**	AADT	AAWT	AADT HDV	AAWT HDV	AADT	AAWT	AADT HDV	AAWT HDV	AADT	HDV	AADT	HDV	Baseline	Baseline with Proposed Development during peak demolition & construction stage		
	1	A6010 Wilbrahim Road East of Barlow Moor Road	50%	13%	41	67	18	30	0.3%	0.5%	18.3%	31.2%	13116	99	13157	166				
	2	A6010 Wilbrahim Road West	50%	34%	61	101	18	30	0.3%	0.6%	12.8%	21.9%	17526	141	17587	242				
	3	Barlow Moor Road North		16%	16	27	0	0	0.1%	0.2%	0.0%	0.0%	13591	106	13607	133				
	4	Barlow Moor Road South		35%	35	59	0	0	0.3%	0.6%	0.0%	0.0%	10166	168	10202	227				
	5	Whiteflow Road	50%	2%	29	48	18	30												
	6	Seymour Grove							0.0%	0.0%	0.0%	0.0%	12777	249	12777	249				
	7	Kensington Road																		
	8	Upper Chorlton Road							0.0%	0.0%	0.0%	0.0%	11149	111	11149	111				
	9	Oswald Lane																		
	10	Chorlton Road							0.0%	0.0%	0.0%	0.0%	14713	122	14713	122				
	11	Moss Lane East							0.0%	0.0%	0.0%	0.0%	10391	40	10391	40				
	12	Stretford Road							0.0%	0.0%	0.0%	0.0%	7749	67	7749	67				
	13	Mancunian Way							0.0%	0.0%	0.0%	0.0%	40089	1244	40089	1244				
	14	London Road							0.0%	0.0%	0.0%	0.0%	12518	212	12518	212				
	15	Downing Street							0.0%	0.0%	0.0%	0.0%	22118	536	22118	536				
	16	Cambridge Street																		
	17	Barlow Moor Road South (South of Princess Road)	50%	2%	30	45	18	30	0.2%	0.3%	7.9%	13.6%	16525	228	16555	273				
	18	Sandy Lane																		
	19	Derwent Avenue																		
	20	Princess Road	50%	10%	37	45	18	30	0.1%	0.1%	2.3%	3.9%	72092	796	72129	841				
	21	Princess Parkway							0.0%	0.0%	0.0%	0.0%	60573	737	60573	737				
	22	M60	100%	19%	73	90	36	60	0.3%	0.4%	5.3%	9.0%	22346	687	22419	777				
	23	Kingsway	50%	4%	31	45	18	30	0.2%	0.3%	21.3%	36.4%	16192	85	16223	130				
	24	A66 South	50%	31%	58	45	18	30	0.1%	0.1%	4.5%	7.6%	40070	405	40128	450				
	25	Lime Road																		
	26	A5145 Edge Lane	50%	34%	61	45	18	30	0.3%	0.3%	12.8%	21.9%	17526	141	17587	186				
	27	A6010 Wilbrahim Road East of the Proposed Development	50%	65%	92	45	18	30	0.7%	0.4%	18.3%	31.2%	13116	99	13208	144				

Orange cells – baseline traffic counts not available however impact of development is very limited or zero so further analysis not required

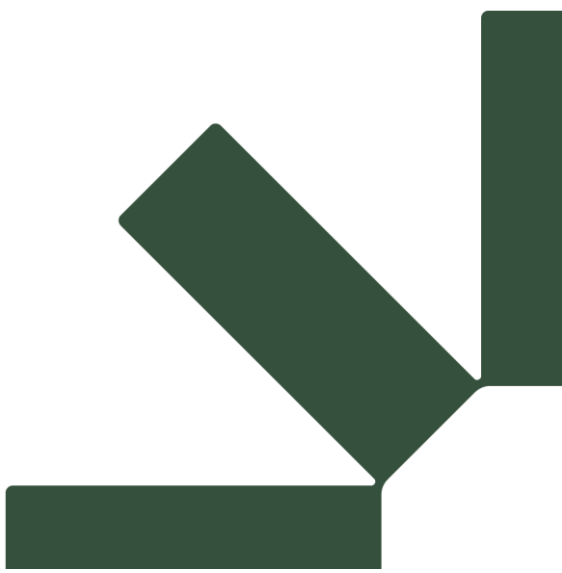
*Taken from CEMP

** Taken from Census



Appendix 6C Operational Traffic Impact

*SLR



Appendix 6C Operational Traffic Impact

*SLR

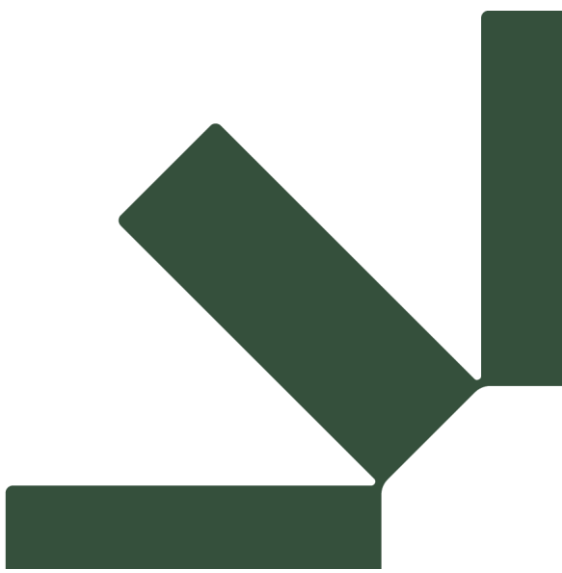
Appendix 6-C - Chorlton Precinct - Operational Stage Impact

Link Ref	Link	Trip Distribution	Dev Trips (Operational)						Impact of Dev (Operational)						2023 Baseline AADTs				Scenario 1		Scenario 3	
			AADT	AAWT	AADT HDV	AAWT HDV	AADT	AAWT	AADT HDV	AAWT HDV	AADT	HDV	Source	AADT	HDV	AADT	HDV					
1	A6010 Wilbraham Road East of Barlow Moor Road	Operational	51	49	0	0	0%	0%	0%	0%	13116	99	DfT Point 47799	13116	99	13167	148					
2	A6010 Wilbraham Road West	19.8%	127	124	1	1	1%	1%	1%	1%	17526	141	DfT Point 73794	17526	141	17526	265					
3	Barlow Moor Road North	47.0%	302	293	2	2	2%	2%	2%	2%	13591	106	Derived from surveys	13591	106	13593	389					
4	Barlow Moor Road South	24.4%	157	153	1	1	2%	2%	1%	1%	10166	168	Derived from surveys	10166	168	10323	321					
5	Whitlow Road	0.9%	6	5	0	0																
6	Seymour Grove	6.56%	42	41	0	0	0%	0%	0%	0%	12777	249	DfT Point 930102	12777	249	12819	290					
7	Kensington Road	2.23%	14	14	0	0																
8	Upper Clifton Road	33.37%	215	208	2	2	2%	2%	1%	1%	11149	111	DfT Point 944649	11149	111	11364	319					
9	Oswald Lane	4.83%	31	30	0	0																
10	Cherton Road	6.88%	44	43	0	0	0%	0%	0%	0%	14713	122	DfT Point 800256	14713	122	14757	165					
11	Moss Lane East	2.72%	18	17	0	0	0%	0%	0%	0%	10391	40	DfT Point 944407	10391	40	10409	57					
12	Streitford Road	23.76%	153	148	1	1	2%	2%	2%	2%	7749	67	DfT Point 809433	7749	67	7902	215					
13	Mancunian Way	0.02%	0	0	0	0	0%	0%	0%	0%	40089	1244	DfT Point 70273	40089	1244	40089	1244					
14	London Road	7.68%	49	48	0	0	0%	0%	0%	0%	12518	212	DfT Point 46165	12518	212	12567	280					
15	Downing Street	4.46%	29	28	0	0	0%	0%	0%	0%	22118	536	DfT Point 26157	22118	536	22147	564					
16	Cambridge Street	11.60%	75	72	1	1																
17	Barlow Moor Road South (South of Princess Road)	2.10%	14	13	0	0	0%	0%	0%	0%	16525	228	DfT Point 57780	16525	228	16539	241					
18	Sandy Lane	3.54%	23	22	0	0																
19	Derwent Avenue	0.34%	2	2	0	0																
20	Princess Road	18.44%	119	115	1	1	0%	0%	0%	0%	72092	796	DfT Point 37809	72092	796	72211	911					
21	Princess Parkway	12%	75	73	1	1	0%	0%	0%	0%	60573	737	DfT Point 75235	60573	737	60648	810					
22	M60	7%	43	42	0	0	0%	0%	0%	0%	22346	687	DfT Point 75238	22346	687	22389	729					
23	Kingsway	4.55%	29	28	0	0	0%	0%	0%	0%	16192	85	DfT Point 38053	16192	85	16221	113					
24	A56 Road	14.35%	92	90	1	1	0%	0%	0%	0%	40070	405	DfT Point 16537	40070	405	40162	495					
25	Lime Road	0.92%	6	6	0	0																
26	A5145 Edge Lane	18.89%	122	118	1	1	1%	1%	1%	1%	17526	141	DfT Point 17698	17526	141	17648	259					
27	A6010 Wilbraham Road East of the Proposed Development	79%	510	495	4	4	4%	4%	4%	4%	13116	99	DfT Point 47799	13116	99	13626	594					

Orange cells - baseline traffic counts not available however impact of development is very limited or zero so further analysis not required

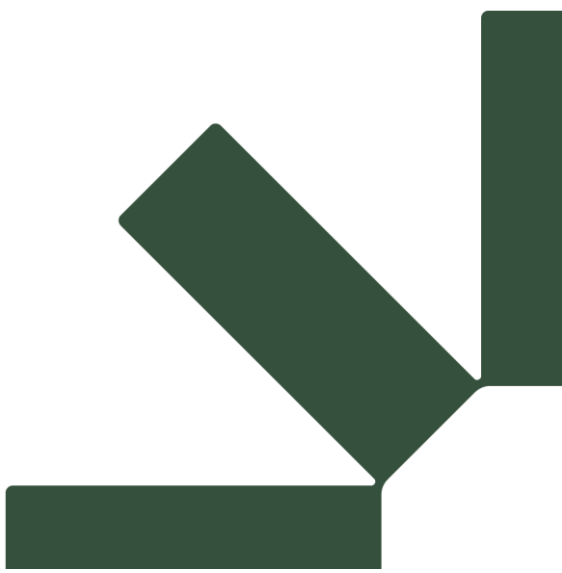
*Taken from CEMP

^{***} Taken from Census



Appendix 6D Cumulative Traffic Impact

***SLR**



Appendix 6D Cumulative Traffic Impact

*SLR

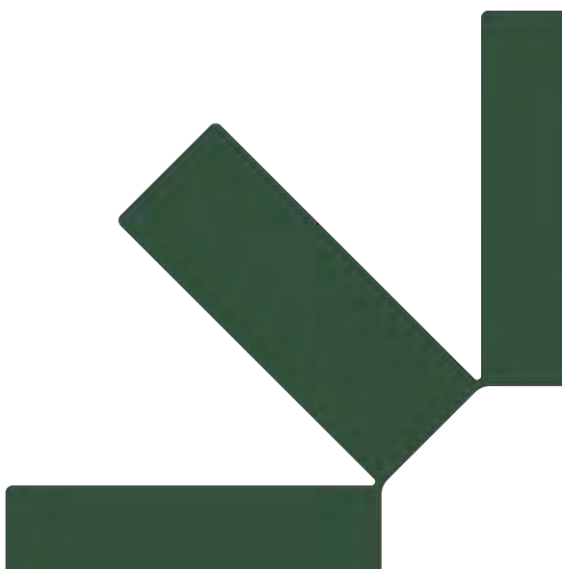
Appendix 6-D - Chorlton Precinct - Cumulative Assessment

Link Ref	Link	Trip Distribution		Dev Trips (Operational)				Cumulative Trips				Impact of Dev + Cumulative Trips (Operational)						2023 Baseline AADTs				Scenario 1		Scenario 4	
		Operational	AADT	AAWT	AADT HDV	AAWT HDV	AADT	AAWT	AADT HDV	AAWT HDV	AADT	AAWT	AADT HDV	AAWT HDV	AADT	HDV	Source	AADT	HDV	AADT	HDV	Baseline	Development and cumulative development during operational stage		
1	A6010 Wilbrahith Road East of Barlow Moor Road	Operational	51	49	0	0	319	310	0	0	3%	3%	1%	13116	99	DTT Point 47799	13116	99	13466	498					
2	A6010 Wilbrahith Road West	Operational	127	124	1	1	61	59	0	0	1%	1%	1%	17526	141	DTT Point 73794	17526	141	17714	324					
3	Barlow Moor Road North	Operational	302	283	2	2	148	144	1	1	3%	3%	3%	13591	106	Derived from surveys	13591	106	14042	543					
4	Barlow Moor Road South	Operational	157	153	1	1	79	77	1	1	2%	2%	1%	10166	168	Derived from surveys	10166	168	10402	398					
5	Whiteley Road	Operational	6	5	0	0	3	3	0	0	0%	0%	0%	12777	249	DTT Point 930102	12777	249	12839	309					
6	Seymour Grove	Operational	42	41	0	0	20	19	0	0	0%	0%	0%	11449	111	DTT Point 944619	11449	111	11466	418					
7	Kensington Road	Operational	215	205	2	2	102	99	1	1	3%	3%	2%	11449	111	DTT Point 944619	11449	111	11466	418					
8	Upper Chorlton Road	Operational	31	30	0	0	0	0	0	0	1%	1%	0%	14213	122	DTT Point 80256	14213	122	14851	256					
9	Ossett Lane	Operational	44	43	0	0	9	9	0	0	0%	0%	0%	14213	122	DTT Point 80256	14213	122	14851	256					
10	Moss Lane East	Operational	44	43	0	0	9	9	0	0	0%	0%	0%	14213	122	DTT Point 80256	14213	122	14851	256					
11	Moss Lane East	Operational	18	17	0	0	9	8	1	1	0%	0%	0%	10391	40	DTT Point 94407	10391	40	10417	65					
12	Stretford Road	Operational	153	148	1	1	73	71	1	1	3%	3%	2%	7749	67	DTT Point 80433	7749	67	7974	298					
13	Manoruan Way	Operational	0	0	0	0	23	23	0	0	0%	0%	0%	40089	1244	DTT Point 70273	40089	1244	40113	2867					
14	London Road	Operational	49	48	0	0	0	0	0	0	0%	0%	0%	12518	212	DTT Point 46165	12518	212	12547	1260					
15	Downton Street	Operational	29	28	0	0	14	13	0	0	0%	0%	0%	22118	538	DTT Point 26157	22118	538	22160	577					
16	Cambridge Street	Operational	75	72	1	1	35	34	0	0	0%	0%	0%	16525	228	DTT Point 57780	16525	228	16545	247					
17	Barlow Moor Road South (South of Princess Road)	Operational	14	13	0	0	6	6	0	0	0%	0%	0%	16525	228	DTT Point 57780	16525	228	16545	247					
18	Sandy Lane	Operational	23	22	0	0	11	11	0	0	0%	0%	0%	16525	228	DTT Point 57780	16525	228	16545	247					
19	Darnall Avenue	Operational	2	2	0	0	1	1	0	0	0%	0%	0%	72092	796	DTT Point 37809	72092	796	72287	966					
20	Princess Road	Operational	119	115	2	2	58	55	0	0	0%	0%	0%	72092	796	DTT Point 37809	72092	796	72287	966					
21	Princess Parkway	Operational	75	73	1	1	36	35	0	0	0%	0%	0%	60573	737	DTT Point 75235	60573	737	60684	845					
22	M60	Operational	43	42	0	0	21	20	0	0	0%	0%	0%	22346	687	DTT Point 75235	22346	687	22410	749					
23	Kingsway	Operational	29	28	0	0	14	13	0	0	0%	0%	0%	16192	85	DTT Point 38053	16192	85	16235	177					
24	A66 South	Operational	92	90	1	1	44	43	0	0	0%	0%	0%	40070	405	DTT Point 16537	40070	405	40206	537					
25	Line Road	Operational	6	6	0	0	3	3	0	0	0%	0%	0%	17526	141	DTT Point 17608	17526	141	17806	413					
26	A5145 Edge Lane	Operational	122	118	1	1	158	154	0	0	2%	2%	1%	17526	141	DTT Point 17608	17526	141	17806	413					
27	A6010 Wilbrahith Road East of the Proposed Development	Operational	510	495	4	4	4	63	61	2	2	4%	4%	5%	13116	99	DTT Point 47799	13116	99	13869	656				

Orange cells - Baseline traffic counts not available however impact of development is very limited or zero so further analysis not required

*Taken from CEMP

** Taken from Census



Appendix 6E Transport Assessment

*SLR

Chorlton Precinct

Transport Assessment v1.3

October 2025

PREPARED FOR

PJ Livesey Homes (6) Limited

Transport Assessment v1.3

Prepared By	Joel Sorsby
Reviewed By	Emily Ingham
Report Reference	3062-01
Issued	Version 1.0 on 13 December 2024
Revised	Version 1.1 issued on 18 March 2025 Version 1.2 issued on 28 March 2025 Version 1.3 issued 2 October 2025

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Appendix A- Development Proposals

Appendix B- MCC Meeting Minutes (Oct 2024)

Appendix C- Highway Boundary (supplied by MCC)

Appendix D- On-street parking survey (October 2024)

Appendix E- The Square Parking Survey 2023

Appendix F- Refuse Vehicle Tracking off Nicolas Road

Appendix G- Loading Bay Tracking (LGV)

Appendix H- Loading Bay Tracking (Refuse Vehicle)

Appendix I- LGV Tracking in Service Yard

Appendix J- Visibility Displays from Car Park Access

Appendix K- Fire Tender Tracking

Appendix L- The Square Car Park Data 2019

Appendix M- TRICs Output

Appendix N- Stage 1 Road Safety Audit and Designer's Response

Appendix O- Taxi and Servicing Trip Generation

1. Introduction

Civic Engineers has been appointed by P J Livesey Homes (6) Limited, to prepare a Transport Assessment (TA) in support of a full planning application in association with the residential-led mixed-use redevelopment of Chorlton Precinct (and Graeme House) in Chorlton-cum-Hardy, Manchester (land bounded by Nicolas Road, Barlow Moor Road and Wilbraham Road).

The application is for Full Planning Permission for the erection of 6no. residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e)); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses, together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.

The development proposals are included at Appendix A.

A separate Prior Notice for Demolition application (LPA ref. 141706/DEM/2024) was approved by Manchester City Council, as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The approved demolition works (starting with internal soft-strip) are intended to commence in Q2 2025 for a period of circa 20 weeks.

1.1. Pre-Application Scoping with Manchester City Council and Transport for Greater Manchester

On 29 October 2024, Civic Engineers met with representatives from Manchester City Council (MCC – as statutory highways authority) and Transport for Greater Manchester (TfGM). This followed Civic Engineers issuing a Transport Assessment Scoping Note on 24 October 2024, in which the proposed methodology for the TA was set out. The assessment indicated that the net change in vehicle trips from the existing land-use to the proposed development would not exceed an increase of 30 two-way trips at any junctions in the vicinity, and therefore proposed that further analysis and modelling was not required. It was confirmed after the meeting, by email on 7 November 2024, that this position was accepted by MCC. The minutes from this meeting and the subsequent email is included at Appendix B. This analysis is set out in more detail in Section 5.

MCC and TfGM were satisfied in principle with the car parking proposals set out in the meeting, with MCC asking that the TA include the rationale for the proposed parking provision, see Section 4.5.

It was concluded that additional cycle parking will be included by the residential entrances and that a designated space for light goods vehicles and taxis is provided close to the entrance into the residential elements. See Section 4.6.

1.2. Transport Assessment Content

This Transport Assessment sets out:

- Existing land use of the site and its context in the local transport network
- Policy context on national, regional and local levels
- Development proposals
- Trip generation and impacts
- Summary

2. Existing Site and Transport Context

2.1. Site Location

Chorlton Precinct is located in Chorlton-cum-Hardy, approximately 4.5km South-West of Manchester city centre. The site currently consists of Chorlton Cross shopping centre, Graeme House office building and The Square shopping centre car park.

The site is bound by Barlow Moor Road to the east, Wilbraham Road (A6010) to the south, properties on Oswald Road to the west and Nicolas Road to the north. Manchester Road passes through the middle of the site on a north-south alignment, currently connecting Wilbraham Road to Nicolas Road. This a route through the existing car park (associated with the now vacant shopping precinct but currently operational) and is not public highway (see Section 2.8).

The location of the site is shown in Figure 1.

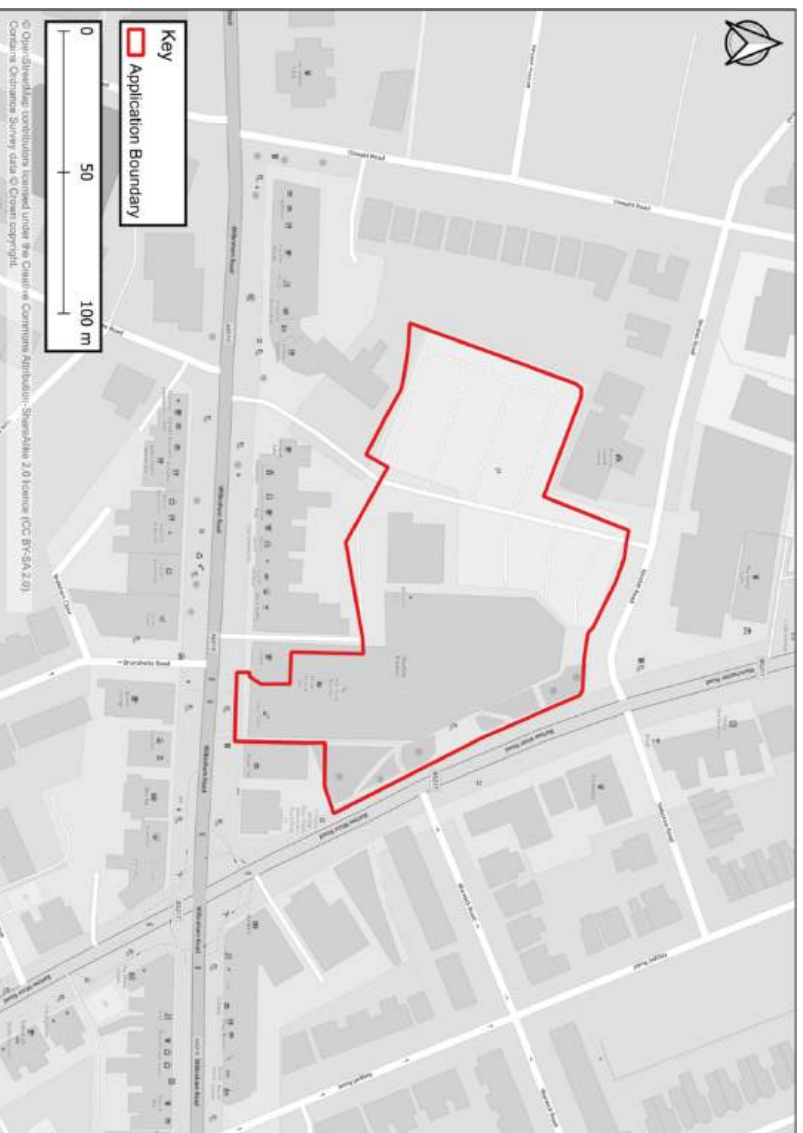


Figure 1: Site location

2.2. Existing Land Use

The site currently consists of an at-surface car park with approximately 190 spaces associated with Chorlton Cross shopping centre. As well as these elements, there is an 8-storey office block (Graeme House) within the site known as Chorlton Square. The office block and shops are currently vacant and boarded off but the car park remains operational until the demolition phase commences (as per the separate Prior Notice for Demolition submission).

2.3. Pedestrian Access

Chorton Precinct is located within Chorton district centre and sits at the heart of a walkable neighbourhood. Over 50% of Chorton residents travel to work by modes other than the private car¹. There are a wide range of facilities available within a kilometre of the site, as shown in Figure 2 below.

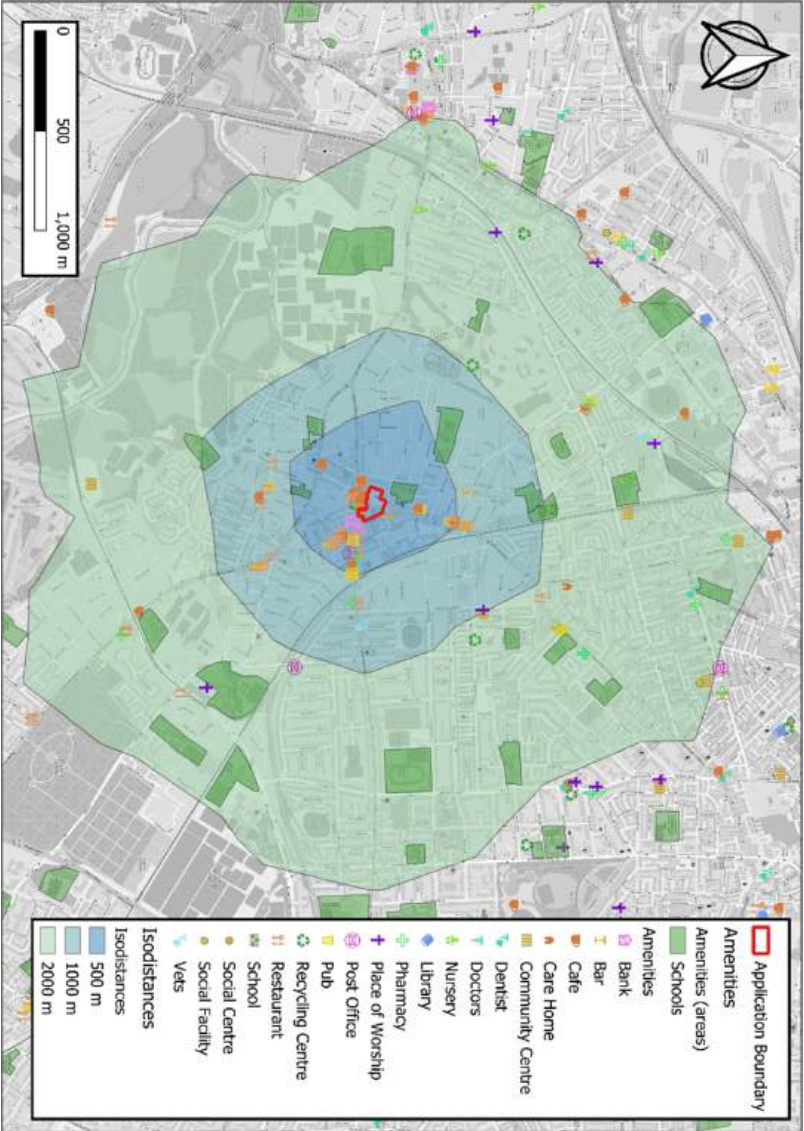


Figure 2: Walking Isodistance

Regarding the provision of appropriate kerbs around the site, the recently upgraded Wilbraham Road/ Barlow Moor Road junction features correct tactile paving, signal heads and dropped kerbs at each arm of the crossing point. Similarly, tactile paving at the crossing point over Nicolas Road to the north of the site are of a high quality (Figure 3).

¹ Data taken from <https://commute.datashine.org.uk/#mode=cdriving&direction=from&msoa=E02001073&zooom=13.0&lon=-2.2265&lat=53.4561> [accessed 9/12/2024].

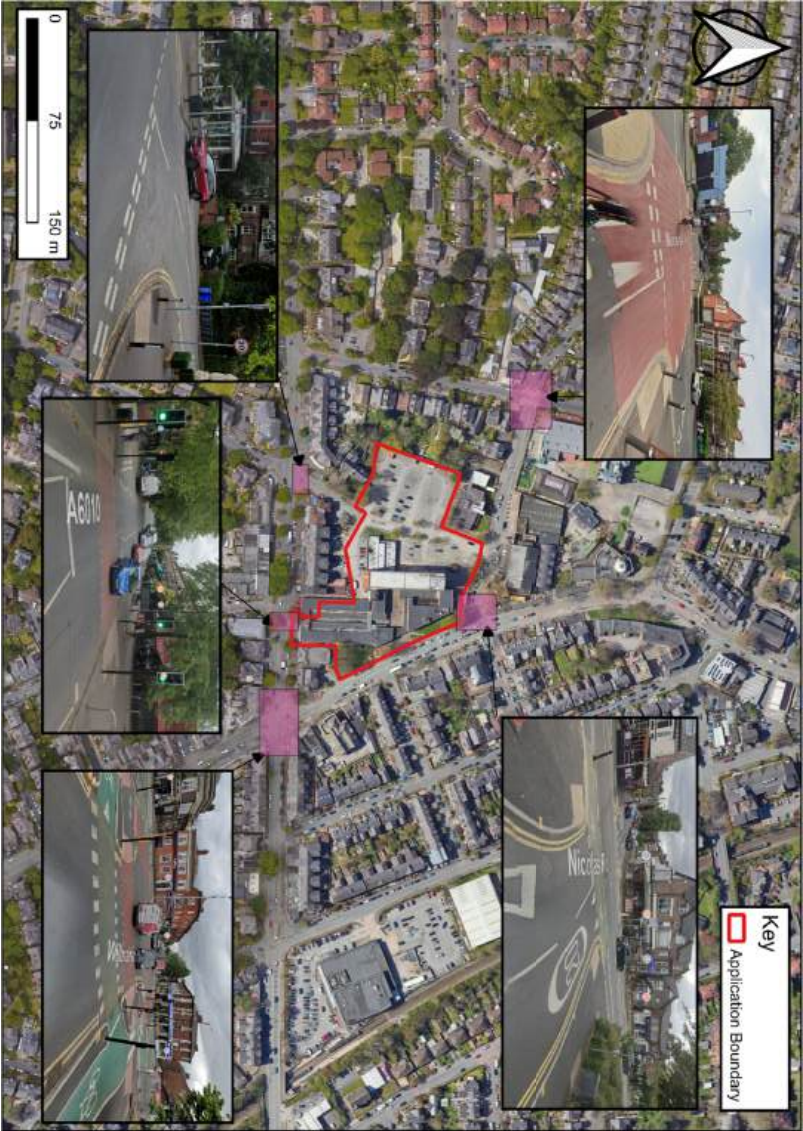


Figure 3- Junctions and crossing immediately surrounding the site.

The other junctions in the immediate vicinity of the site feature dropped kerbs and appropriate tactile paving.

2.4. Cycle Access, Cycle Parking, and Cycle Hire

On the east side of the application site, new segregated cycleways have been recently introduced (approx. February 2024) on both sides of Barlow Moor Road. These lead to a new CYCLOPS signalled junction at the intersection of Barlow Moor Road and Wilbraham Road. To the west of this junction there are short lengths of segregated cycleway along Wilbraham Road to link with the CYCLOPS facility. Further west the cycle provision comprises on-road painted cycle lanes that are occasionally interrupted by loading bays and/or bus stops.

There are several bicycle hire facilities surrounding the site also. Closest to the site are the Beryl bike docking stations on High Lane, approximately 325m south of the site and at the junction of Longford Road and Barlow Moor Road, 175m north of the site.

Figure 4 shows the cycling infrastructure available around the site. As shown, there is a high density of cycle parking facilities as well as cycle lanes that facilitate travel in a north-south or east-west direction. The cycle lanes along Wilbraham Road connect into the wider Manchester cycle network and link to both on-carriageway lanes and shared routes.

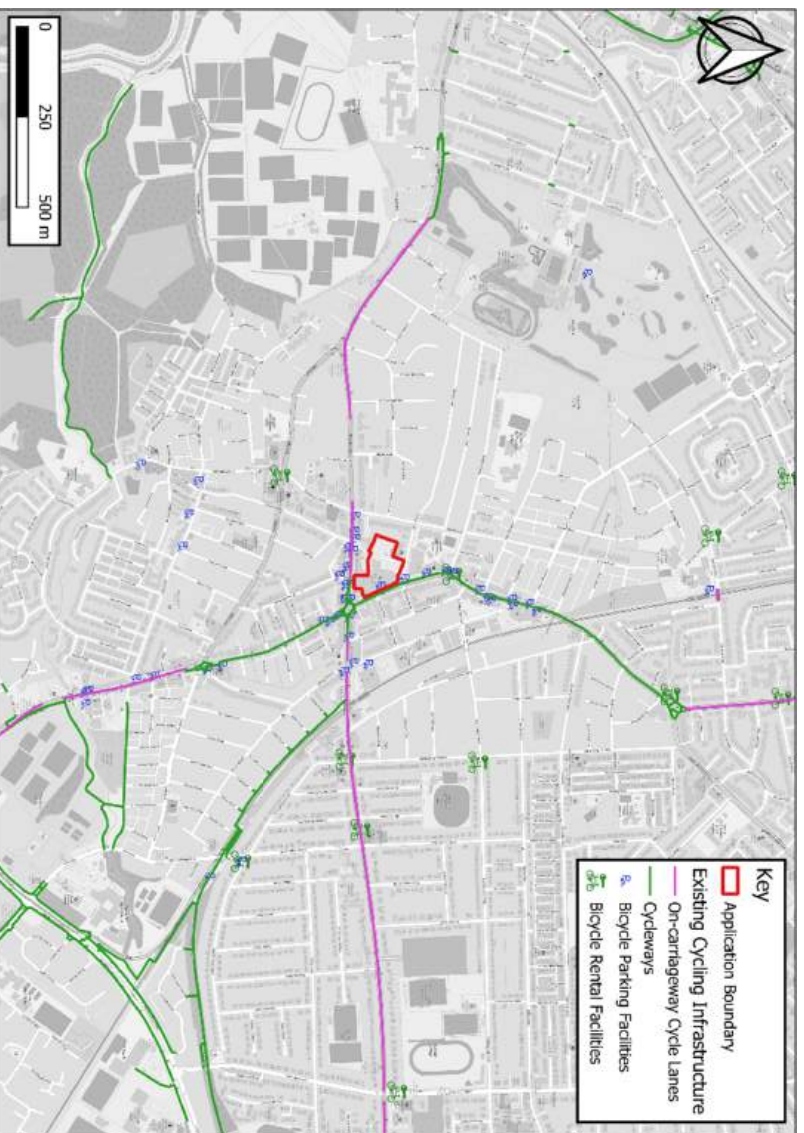


Figure 4: Existing cycle infrastructure

The Beeeways are a network of existing and proposed cycle routes to connect Greater Manchester by cycle. Figure 5 shows the proposed network in the vicinity of the site, noting that the route on Barlow Moor Road is now delivered, as above.

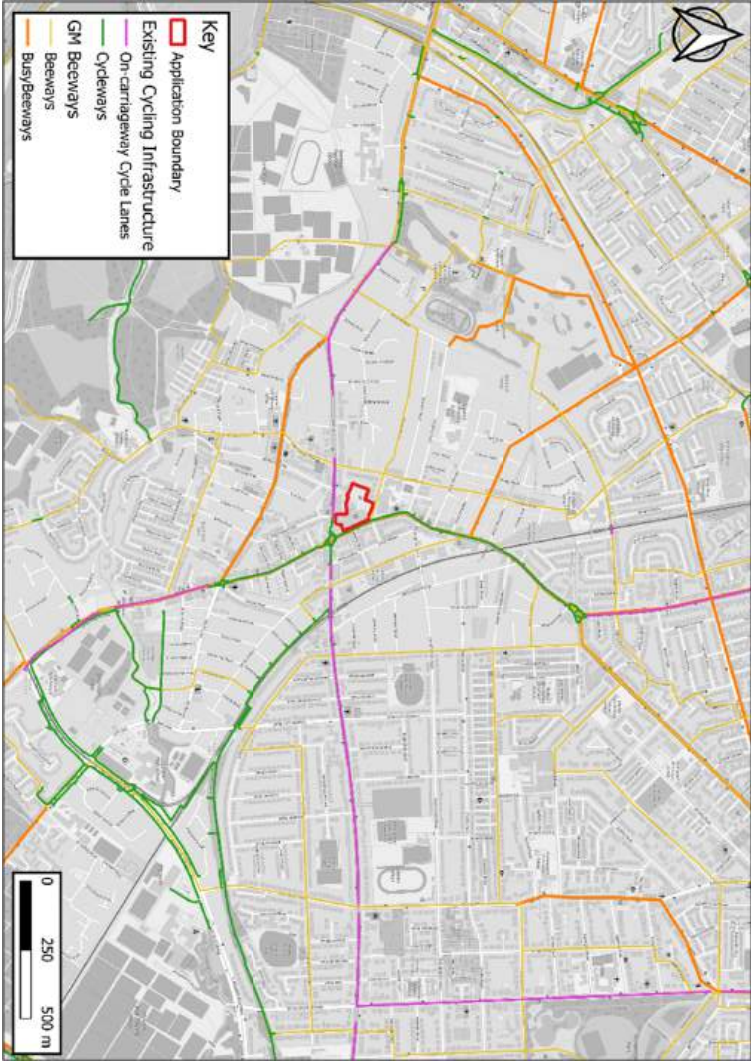


Figure 5: Proposed cycle network

A distance of 8km takes around 30-35 minutes for the average cyclist and is a distance that is considered reasonable for commuting. An 8km isodistance is shown on Figure 6, within this distance is all of Manchester city centre, central Salford, Salford Quays, Stretford, Chorton, Droylsden, Didsbury, and Broughton Park.

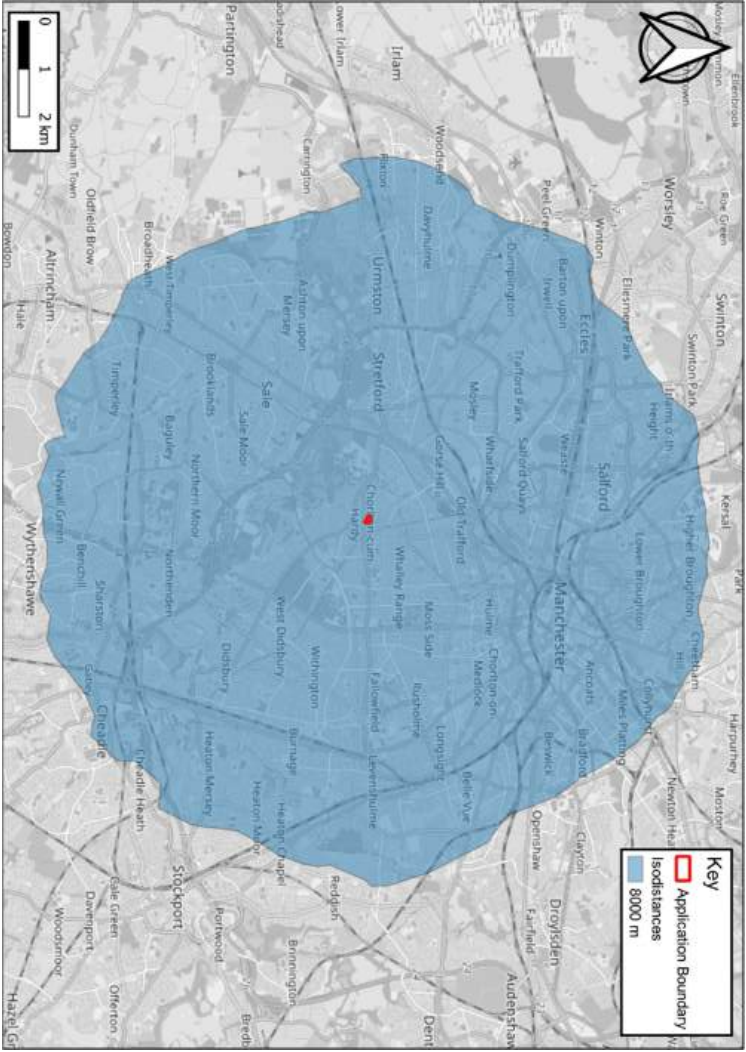


Figure 6: Cycle Isodistance

2.5. Public Transport Access

Served by frequent bus and tram services, the site is in an area with a 'Greater Manchester Accessibility Level' (GMAL) score of 6, which is the third-highest level achievable. GMALs (rated 1-8, with 1 the lowest and 8 the highest) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester Local Link (flexible transport service), taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region.

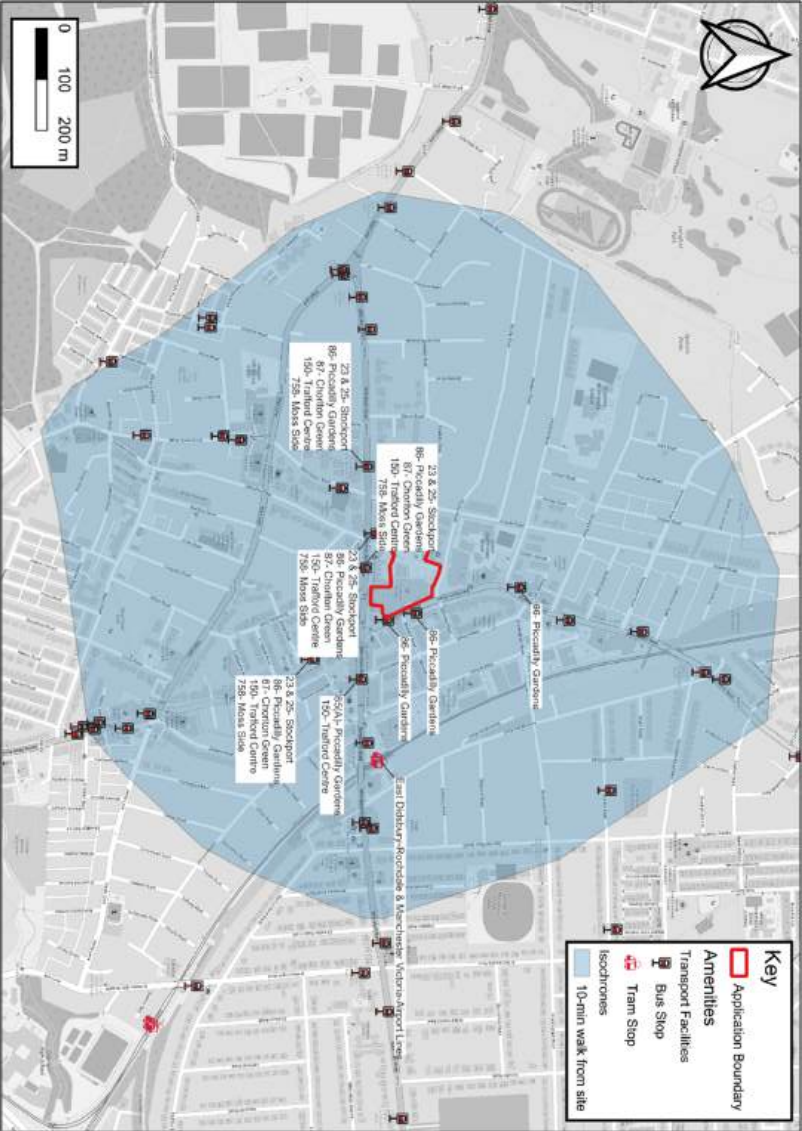


Figure 7- Bus stops within a 10-minute walk of the site.

Bus routes shown in the above Figure route towards the city centre and Chorlton Green along Barlow Moor Road, and towards Trafford Centre and Moss Side along Wilbraham Road. The tram stop (Chorlton) 320m east of the site is part of the East Disbury-Rochdale and Manchester Airport-Victoria lines which pass through Old Trafford, the city centre and Rochdale to the north and Wythenshawe to the south.

The frequency of bus and tram services are shown in Table 1

Table 1 - Frequency of bus and tram services around the site.

Destination	Frequency (Weekdays)
Tram	
To East Didsbury	Every 6 minutes
To Rochdale	Every 12 minutes
To Manc Airport	Every 12 minutes
To Manc Victoria	Every 12 minutes
Bus	
86 – Piccadilly Gardens	Every 12 minutes
23 – Trafford Centre	Every 20 minutes
25 – Trafford Centre	Every 30 minutes
87 – Chorlton Green	Hourly
85A – Piccadilly Gardens	Hourly
758 – Moss Side/ Laureston Grammar School	Operating to school hours

The site has a Greater Manchester Accessibility Level (GMAL) of 6 out of 8, indicating a high level of transport accessibility (Figure 8).

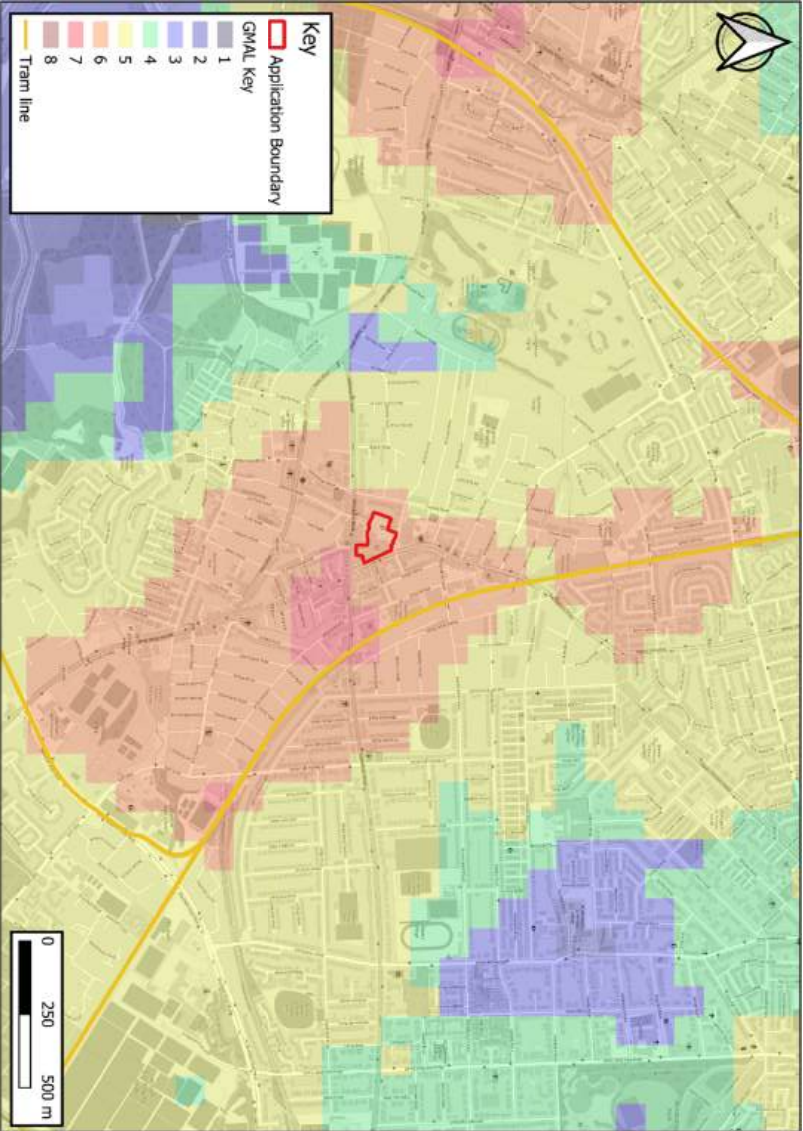


Figure 8: Public Transport

2.6. Car Club

There are 4 Enterprise Car Club locations with a total of 9 vehicles within 500m of the site, as is shown in Figure 9. 4 of the 9 vehicles are electric.

The nearest are on Nicolas Road immediately adjacent to the site, where there are two vehicles parked on the road.

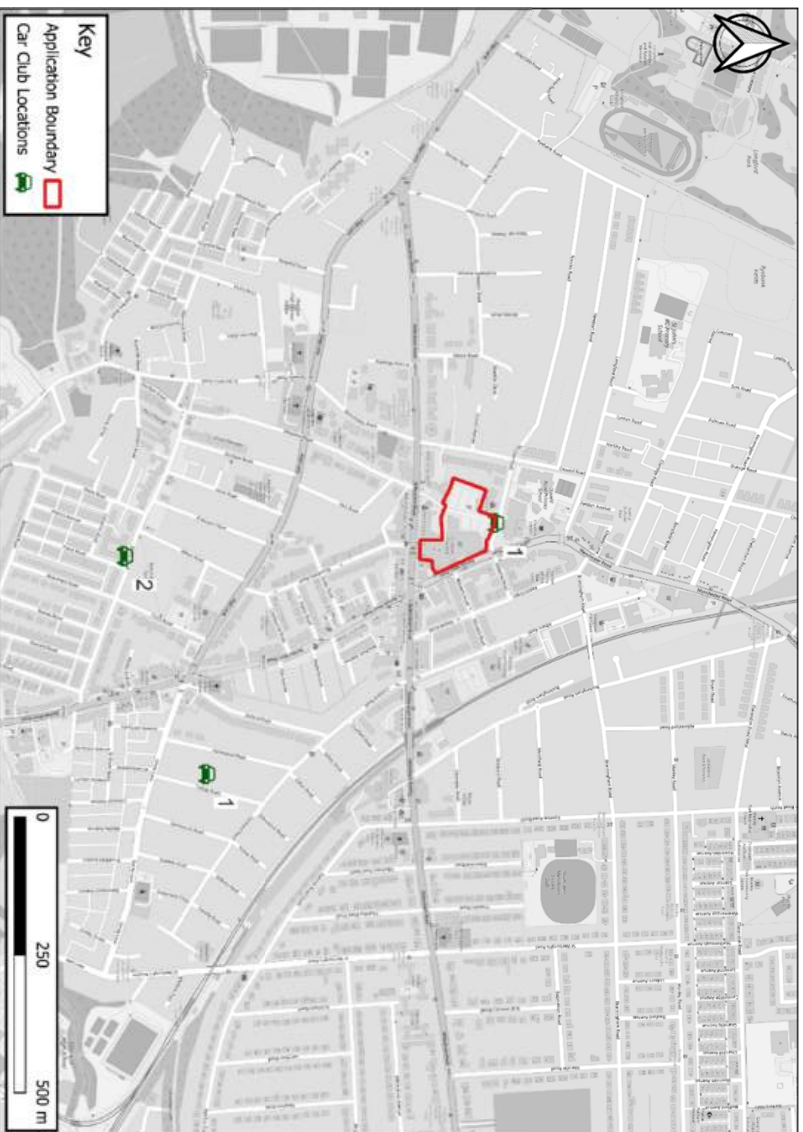


Figure 9: Car club (number indicates how many vehicles at each location)

2.7. Highway Network

The public highway boundary has been obtained from MCC and is included at Appendix C.

The area surrounding the site is shown in Figure 10.

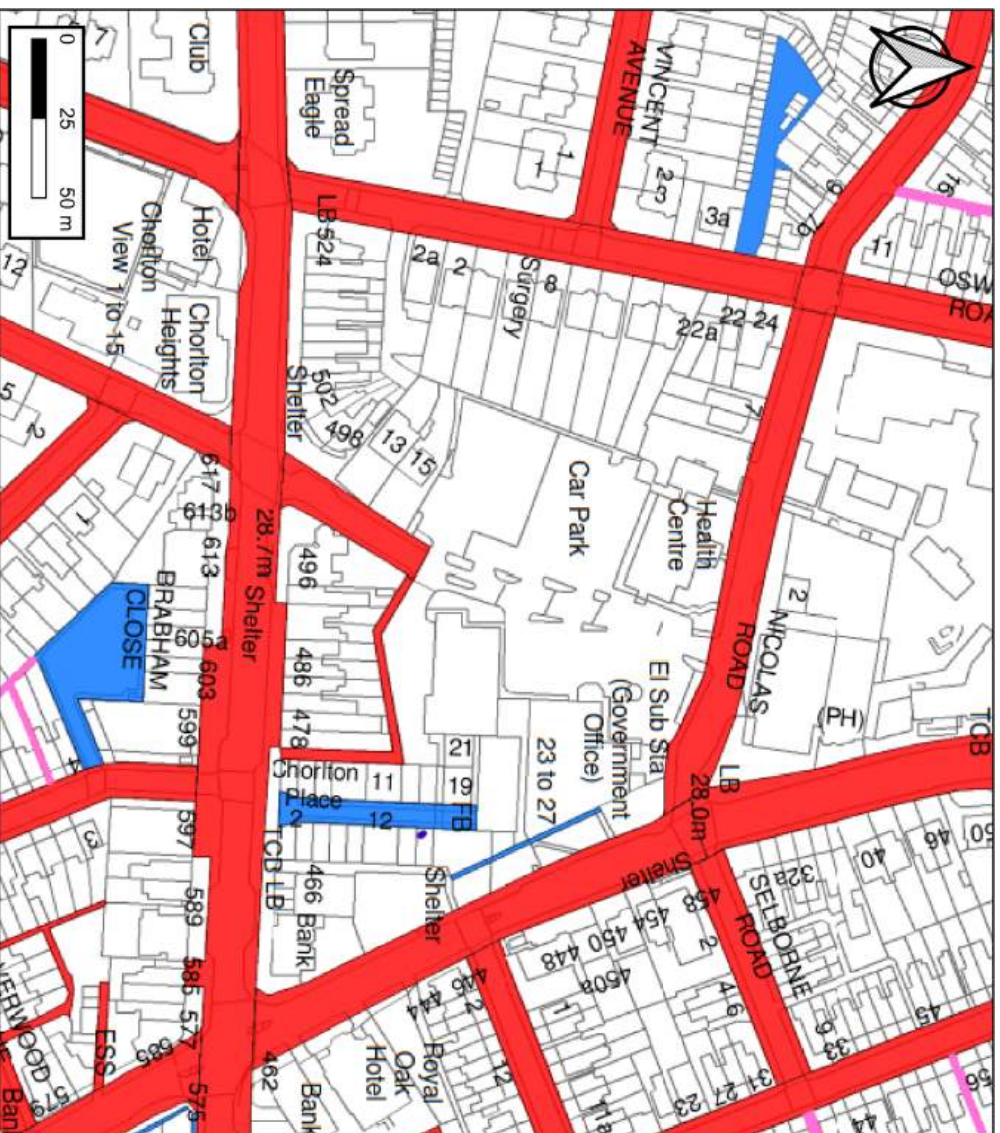


Figure 10: Public Highway Boundary

As can be seen, the southern section of Manchester Road is public highway until the entry to the existing car park. There is a thin section of public highway on the cobbles which run east-to west parallel to Wilbraham Road, east of Manchester Road. The carriageway along this route is not public highway. The northern section of Manchester Road through the site and leading to its junction with Nicolas Road is not public highway.

Directly south of the site is Wilbraham Road (A1060), which transects southern Manchester from east to west, connecting to the A5145 in Stretford to the west and Moseley Road in Fallowfield to the east. In closer proximity to the site, Wilbraham Road and Barlow Moor Road intersect immediately southeast of the site which links to the residential roads surrounding the site. Wilbraham Road is an A-road that features a 9m wide carriageway and a speed limit of 30mph. There are nine parking bays that about the site boundaries on the northern side of Wilbraham Road. There is a toucan crossing close to the junction of Brundretts Road and Wilbraham Road that allows access to shops on the northern side of Wilbraham Road. Moreover, there are intermittent on-carriageway cycle lanes along this road as well as a bus lane on approach to the Barlow Moor Road/ Wilbraham Road junction.

Barlow Moor Road is a B-road that is also subject to 30mph speeds and is approximately 9.5m in width. It is subject to parking restrictions in its length adjacent to the site. It features a signalised crossing close to the junction with Warwick Road as well as the CYCLOPs junction with Wilbraham Road to the south east of the site – this junction prioritises cyclist and pedestrian movements. Barlow Moor Road becomes Manchester Road following the junction with Nicolas Road north of the site. Immediately to the north of this junction, there is a signalised pedestrian crossing.

Nicolas Road is a 30mph minor access road that abuts the site to the north. It is a single-carriageway

road of approximately 7.2m in width. There are few parking restrictions on the part of the road that abuts the site, other than parking bays that are designated for car club usage, accessible spaces and a loading bay area. There is an uncontrolled crossing with tactiles at the junction of Nicolas Road with Barlow Moor Road.

2.8. Car Parking and Traffic Regulation Orders

2.8.1. Traffic Regulation Orders on Nicolas Road

On Nicolas Road adjacent to the site there is a loading bay on the north side, two car club bays and two disabled parking bays, see Figure 11 for a plan of existing Traffic Regulation Orders (TROs). The rest of Nicolas Road is unrestricted, with parking taking place on both sides of the road, likely associated with district parking and parking for Chorton Medical Centre.



Figure 11: TROs on Nicolas Road

2.8.8.2. On-street Parking

Short-stay parking is available for 2 hours on Wilbraham Road outside of the existing shop parade. There is currently uncontrolled on-street parking available on Nicolas Road north of the site whilst Barlow Moor Road to the East of the site has full parking restrictions.

Surveys of on-street parking occupancy around the site were undertaken from the Thursday 10 to Saturday 12 October, 2024. The results of this survey are shown in full in Appendix D and spare capacity set out in Table 2.

Table 2: Parking beat survey results

Spare Capacity – Total for Streets in Study Area			
Time	Thursday	Friday	Saturday
0515	130	124	129
0730	138	124	122
0930	82	83	90
1130	78	57	61
1330	52	45	51
1530	62	67	57
1730	76	77	43
1930	95	40	38

2.8.3. Off-street Parking

At present, there is an at-surface car park with capacity for 190 vehicles within the site boundaries. Full survey results for off-street parking can be viewed in Appendix E. At its busiest period on Saturday 7 October 2023 at 12:00-15:00 there were 38 car parking spaces in use in the surface level car park. At the same time in the surveyed period in 2024, there were 51 to 57 spaces available on street in the surrounds.

2.9. Electric Vehicle Charging

Figure 12 shows the location of electric vehicle charging points around the site. There exists two charging sites within 2km of the site. Both of these charging points are classified as slow (below 8kW).

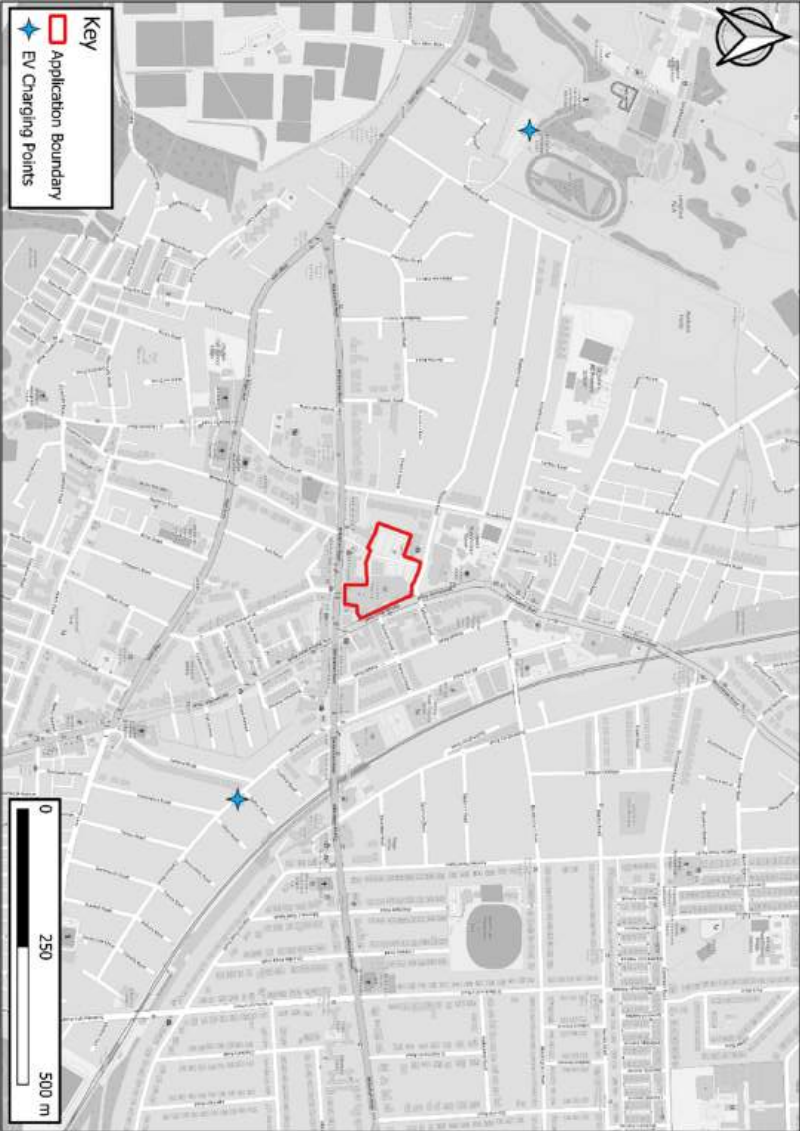


Figure 12: Public EV charging points

2.10. Traffic Collision Data

In the 5-year period (2019-2023) covered by the most recent data publicly available, there were 11 collisions on Wilbraham Road in the vicinity of the site. Of these, 10 resulted in injuries classified as slight in severity with 1 resulting in serious injury. No collisions resulted in fatalities. There were also two collisions at the Barlow Moor Road/Wilbraham Road junction, noting that this layout has changed to a CYCLOPS arrangement since this data was captured. No collisions have been recorded on the section of Barlow Moor Road adjacent to the east of the site.

Four of the collisions (three resulting in slight injuries, one resulting in serious injury) in the study area involved cyclists. Similarly, four of the collisions on Wilbraham Road (three resulting in slight injuries, one resulting in serious injury) involved pedestrians.

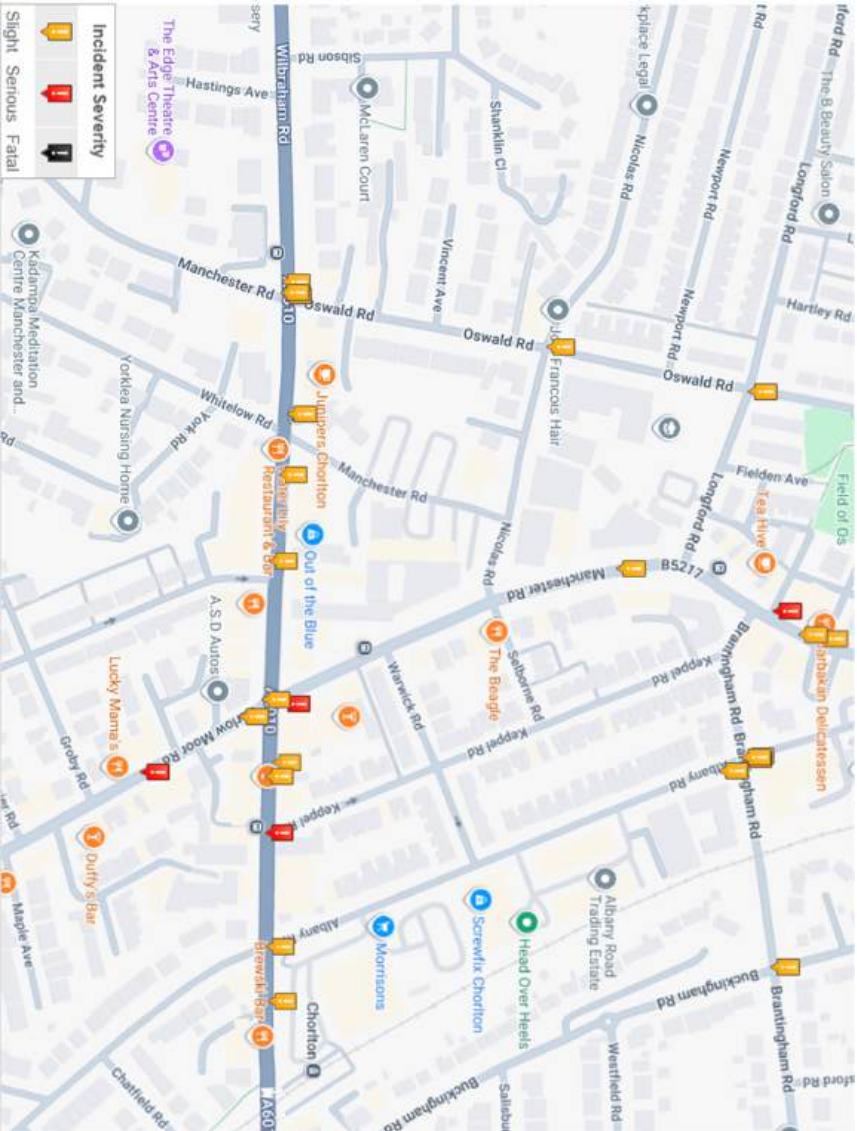


Figure 13: Traffic collisions 2019-2023 (inclusive) (Source: www.crashmap.co.uk)

3. Policy Context

3.1. National Planning Policy Framework

The revised National Planning Policy Framework (NPPF)² was published in December 2024, setting out the government's planning policies for England and how these are expected to be applied. It provides a framework within which locally prepared plans for housing and other developments can be produced. At the heart of the document is a presumption in favour of sustainable development.

In order to achieve sustainable development, there are three identified overarching interdependent objectives outlined within the NPPF, including an economic, a social and an environmental objective.

Paragraph 109 of the NPPF states that "Transport issues should be considered from the earliest stages of plan-making and development proposals, using a vision-led approach to identify transport solutions that deliver well-designed, sustainable and popular places. This should involve:

- making transport considerations an important part of early engagement with local communities;
- ensuring patterns of movement, streets, parking and other transport considerations are integral to the design of schemes, and contribute to making high quality places;
- understanding and addressing the potential impacts of development on transport networks;
- realising opportunities from existing or proposed transport infrastructure, and changing transport technology and usage – for example in relation to the scale, location or density of development that can be accommodated;
- identifying and pursuing opportunities to promote walking, cycling and public transport use; and
- identifying, assessing and taking into account the environmental impacts of traffic and transport infrastructure – including appropriate opportunities for avoiding and mitigating any adverse effects, and for net environmental gains."

Paragraph 110 states that "The planning system should actively manage patterns of growth in support of these objectives. Significant development should be focused on locations which are or can be made sustainable, through limiting the need to travel and offering a genuine choice of transport modes. This can help to reduce congestion and emissions, and improve air quality and public health. However, opportunities to maximise sustainable transport solutions will vary between urban and rural areas, and this should be taken into account in both plan-making and decision-making."

Paragraph 111 states that planning policies should:

- support an appropriate mix of uses across an area, and within larger scale sites, to minimise the number and length of journeys needed for employment, shopping, leisure, education and other activities;
- be prepared with the active involvement of local highways authorities, other transport infrastructure providers and operators and neighbouring councils, so that strategies and investments for supporting sustainable transport and development patterns are aligned;
- identify and protect, where there is robust evidence, sites and routes which could be critical in developing infrastructure to widen transport choice and realise opportunities for large scale development;
- provide for attractive and well-designed walking and cycling networks with supporting facilities such as secure cycle parking (drawing on Local Cycling and Walking Infrastructure Plans);
- provide for any large scale transport facilities that need to be located in the area, and the infrastructure and wider development required to support their operation, expansion and contribution to the wider economy. In doing so they should take into account whether such

² National Planning Policy Framework, December 2024, available online at

https://assets.publishing.service.gov.uk/media/67aaf6f3b41f783cca46251/NPPF_December_2024.pdf [accessed 10 March 2025]

development is likely to be a nationally significant infrastructure project and any relevant national policy statements; and

- recognise the importance of maintaining a national network of general aviation airfields, and their need to adapt and change over time – taking into account their economic value in serving business, leisure, training and emergency service needs, and the General Aviation Strategy.

Paragraph 112 suggests that: “If setting local parking standards for residential and non-residential development, policies should take into account:

- the accessibility of the development;
- the type, mix and use of development;
- the availability of and opportunities for public transport;
- local car ownership levels; and
- the need to ensure an adequate provision of spaces for charging plug-in and other ultra-low emission vehicles.”

Paragraph 115 describes that, in considering development proposals, “it should be ensured that:

- sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;
- safe and suitable access to the site can be achieved for all users;
- the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and
- any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach.”

Crucially, it states in Paragraph 116 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, following mitigation, would be severe, taking into account all reasonable future scenarios.”

It outlines in Paragraph 117 that “developments should:

- give priority first to pedestrian and cycle movements, both within the scheme and with neighbouring areas; and second – so far as possible – to facilitating access to high quality public transport, with layouts that maximise the catchment area for bus or other public transport services; and appropriate facilities that encourage public transport use;
- address the needs of people with disabilities and reduced mobility in relation to all modes of transport;
- 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;
- allow for the efficient delivery of goods, and access by service and emergency vehicles; and
- be designed to enable charging of plug-in and other ultra-low emission vehicles in safe, accessible and convenient locations.”

3.2. The Climate Emergency

The aspiration to reduce car use and car ownership over time is a common thread running through emerging national and local planning policies, with its links to improved local air quality, reduced impact on global climate change, increased activity levels among residents and reduction in conflict between vehicles and pedestrians/cyclists.

In July 2019 Manchester City Council announced a Climate Emergency, with the target for

Manchester to become a zero carbon city by 2038. Manchester has a Climate Change Action Plan 2020-25 which sites alongside a citywide framework produced by Manchester Climate Change Partnership.

3.3. Manchester's Core Strategy 2012-2027

The policies within the Core Strategy which are of relevance to this Transport Assessment are set out below.

Policy T1 Sustainable Transport

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

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 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 eastwest 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.*

Policy EC 9- South Manchester

South Manchester is not expected to make a significant contribution to employment provision within the City. New development is expected to mainly comprise office development, although proposals for high technology industry and research will also be supported. Employment and economic development provision will be within:

1. *Existing employment locations, such as Business Parks, such as, Towers, Didsbury Point, Christie Fields and Parkway; Christies Hospital; Along Princess Parkway; District Centres of Chorton, Didsbury, Fallowfield, Levenshulme and Withington. These will be suitable for mixed use development providing local needs and services.*

2. *Development proposals and planning applications should have regard to:*
 - *Ensuring efficient use of existing employment space; Improving public transport, walking and cycling connectivity between residential neighbourhoods and employment locations such as the City Centre, district centres, Trafford Park and Manchester Airport, particularly orbital connectivity.*

3.4. Places for Everyone

Places for Everyone is a long-term plan for jobs, new homes and sustainable growth prepared by Greater Manchester City Authority. The P4E plan was adopted in March 2024 and the following policies are relevant to the application:

Policy JP-Strat14 – A Sustainable and Integrated Transport Network: The transport network will be improved with, amongst others, policy support for the creation of a much larger, integrated, rapid transit network (incorporating bus, Metrolink, tram/train and rail services) as well as focusing new development in locations close to existing and proposed public transport connections. The policy thereafter details that higher densities will typically be appropriate in locations with good access to rapid transit connections and that new development will have a significant role in delivering the future sustainable and integrated transport network in order to reduce car dependency.

Policy JP-C1 – An Integrated Network: In order to help deliver an accessible, low carbon Greater Manchester with world-class connectivity, we will support a range of measures, including:

1. Delivering a pattern of development that minimises both the need to travel and the distance travelled by unsustainable modes to jobs, housing and other key services, including healthcare, education, retail, recreation and leisure facilities, green space and green infrastructure;
2. Enabling the provision of high quality digital infrastructure;
3. Locating and designing development, to deliver a significant increase in the proportion of trips that can be made by walking, cycling and public transport;
4. Transforming transport infrastructure and services by securing investment in new and improved transport infrastructure and services that will:
 - promote social inclusion, support economic growth, reduce carbon emissions and protect our environment and air quality;
 - meets customers' needs by being integrated, reliable, resilient, safe and secure, well-maintained, environmentally responsible, attractive and healthy; and
 - provide access to jobs and other key services, including healthcare, education, retail, recreation and leisure facilities, greenspace and green infrastructure.
5. Ensuring that development and transport investment fully considers the needs of all people and those modes which make most efficient and sustainable use of limited road space, by following the hierarchy set out below (highest priority first):
 - Pedestrians (and people using mobility aids);
 - Cyclists, powered two-wheelers, and public transport users;
 - People doing business or providing services (such as taxis/private hire, deliveries or waste collection);
 - People in personal motorised vehicles

Policy JP-C3 – Public Transport: In order to help deliver major improvements to public transport, the following range of measures will be supported (not exhaustive list):

- Better integration of services and between public transport modes and enhanced connections between other town centres, key locations, major allocations and public transport interchanges, and the upgrading of key sections of the strategic public transport network;

- More and higher quality public transport stations and interchanges with suitable capacity and better integration of different public transport modes and services;
- Improved access to rapid transit routes including first/last mile solutions.

Policy JP-C5 – Streets for All: The policy details that streets will be designed and managed to make a significant positive contribution to the quality of place and support high levels of walking, cycling and public transport. The policy details, amongst others, that:

1. The design and management of streets will follow a Streets for All approach, including by:
 - a. Understanding the 'movement and place function' of streets as the starting point for improvement;
 - b. Ensuring that streets are welcoming for all, and respond to the needs of those with reduced mobility;
 - c. Delivering new and improved walking and cycling routes and facilities as part of the delivery of an integrated sustainable transport network
 - d. Maximising the ability of pedestrians and cyclists to navigate easily, safely and without delay, and minimising barriers and obstacles to their movement;
 - e. Providing frequent opportunities for people to rest, linger and socialise, and for children to play, particularly in streets with a high 'place function';
 - f. Setting aside space for cycle parking (including for bike-sharing schemes where appropriate), high-quality public transport waiting areas, and other facilities that will support sustainable modes of travel;
 - g. Incorporating increased levels of greenery including trees where possible;
 - h. Offering shelter from wind and rain, and shade from the sun;
 - i. Delivering priority for public transport and facilities for public transport users;
 - j. Providing appropriate places and routes for servicing, deliveries and 'drop-off';
 - k. Mitigating the impacts of air and noise pollution and carbon emissions from road transport;
 - l. Ensuring the efficient movement of people and goods on streets with a high 'movement function' and;
 - m. Harnessing new mobility innovations such as traffic signals technology and ULEV charging infrastructure.
2. Improvements to the highways network are part of a multi-modal strategy to increase public transport, cycling and walking and improve access for all;
3. Any new infrastructure minimises the negative effects of vehicle traffic; and
4. New infrastructure includes provision for utilities and digital infrastructure where required.

Policy JP-C6 – Walking and Cycling: In order to help deliver a higher proportion of journeys made by walking and cycling, we will support a range of measures, including:

- Creating safe, attractive and integrated walking and cycling infrastructure, connecting every neighbourhood and community with reference to national and locally adopted design guidance;

- Ensuring routes are direct, easily navigable and integrated with the street and public transport network;
- Creating active neighbourhoods and street networks which are more permeable to walking and cycling than to the private car, creating an incentive to walk and cycle;
- Creating, where needed, dedicated separate space for people walking and cycling, with pedestrians and cyclists given priority at junctions and crossings;
- Increasing the capacity and quality of walking and cycling infrastructure in locations where significant growth in the number of short journeys is anticipated, and where quality of place improvements are proposed; and
- Utilising and enhancing green infrastructure, including canals, parks and recreation grounds, to create opportunities for walking and cycling.

Policy JP-C8 – Transport Requirements of New Development: Requires new development 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. This will be achieved by:

Connectivity and Permeability

1. Prioritising safe and convenient access to the site and buildings for all users in accordance with the user hierarchy in Policy JP-C 1 'An Integrated Network', including:
 - Prioritising new and enhanced walking, cycling and public transport routes and stops, through and around the site. These routes should:
 - o be direct, safe and convenient;
 - o connect to nearby facilities, employment areas, public transport stops; and
 - o improve the coverage, quality and integration of the wider walking and cycling infrastructure and public transport provision;
 - Ensuring that the layout, design and landscaping of development prioritises the provision of safe, secure and attractive access to local services and facilities for pedestrians, cyclists and people with a disability; and
 - Ensuring that new development is connected visually and physically, within the site and to the surrounding built environment.
2. Ensure appropriate connectivity to the existing highway network.

Design

3. Reducing the need to travel by ensuring that community facilities, services and amenities are provided within the site or within walking distance of new development.
4. Incorporating highway design at a human scale using street-based prescriptions such as those within Manual for Streets and/or any locally adopted design guidance, to ensure that highways do not dominate the development.

Public Transport

5. Ensuring (through funding improvements where appropriate) that the nearest public transport stops (both within and adjacent to the development site) are attractive to users in terms of seating, shelters, information and easy step-free access.
6. Subsidising new or amended public transport services where the development would otherwise have inadequate public transport access.

Parking Infrastructure

7. Making adequate car parking provision, including for disabled drivers and passengers.

8. 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.
9. 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:
 - Showers, changing facilities and lockers for cyclists and walkers
 - Pool or hire bikes for use by occupiers
 - Information in advance about facilities to visitors.
10. Promoting alternatives to car ownership, such as the use of ULEV car clubs rather than the provision of private car parking spaces.
11. Promoting the increased provision of ULEV charging infrastructure including meeting any standards set by local plans.
12. Providing for overnight parking and rest areas, with appropriate facilities, for heavy goods vehicle drivers, where the development is likely to generate demand, and it is appropriate to the location.

Access and Servicing

13. Providing designated pick-up/drop-off points for taxis and other demand-responsive transport services where appropriate, taking into account the potential increase in demand if car ownership falls.
14. Making appropriate provision for deliveries and servicing (including requiring Delivery and Servicing Plans for appropriate developments), in a way that:

- meets road safety requirements,
- reduces transport emissions and other environmental impacts,
- reduces traffic congestion, the number of vehicle movements and the need for repeat deliveries;

Construction Management

15. Ensuring Construction Management Plans are produced for developments, where appropriate, to mitigate construction logistics and environmental impacts including air quality and noise on the surrounding area and encourage sustainable deliveries.

Transport Assessments

16. Planning applications will be accompanied by a Transport Assessment / Transport Statement and Travel Plan where appropriate, in order to assess impacts and determine the most appropriate mitigation on the SRN and local transport network. Planning applications which are required to be accompanied by a Transport Assessment will need to consider air quality impacts on Holcroft Moss, within the Manchester Mosses Special Area of Conservation (SAC). Any proposals that would result in increased traffic flows on the M62 past Holcroft Moss of more than 100 vehicles per day or 20 Heavy Goods Vehicles (HGVs) per day must devise a scheme-specific range of measures to reduce reliance on cars, reduce trip generation and promote ultra-low emission vehicles and provide a contribution towards restoration measures in accordance with the Holcroft Moss Habitat Mitigation Plan.

3.5. Manchester Guide to Development

The Guide to Development in Manchester - Supplementary Planning Document and Planning Guidance (SPD) was officially adopted on 11 April 2007. The document details the desired street hierarchy within Manchester as well as parking guidelines.

Street Hierarchy

UDP Part 1 Policy T3.9 sets out a broad hierarchy of road users which will be used in assessing schemes with transport implications. It is recognised that the function of each locality will determine the extent to which it will be appropriate to give priority to each user group. Thus pedestrians will be given priority in residential areas, but inevitably there will be strategic routes where the aspiration to improve conditions for pedestrians will compete with the need to maintain.

Parking Guidelines

UDP Part 1 Policy T3.9 gives priority to pedestrians, disabled people and cyclists above the needs of the car, and developers must take this into consideration in the location and design of any parking facilities. Developers will be expected to submit Travel Plans where appropriate to encourage and support walking, cycling and public transport use. It is understood that new developments may also need to have some car parking for the users' needs. This section provides more detailed guidance on how the need for car parking can be accommodated in the context of ensuring that priority is still given to the non-car user.

3.6. Greater Manchester Transport Strategy 2040

Adopted in 2017 and updated in 2021, the Greater Manchester Transport Strategy 2040 has the vision 'to make Greater Manchester one of the best places in the world to grow up, get on and grow old'. It sets out how Government funding will be allocated by this devolved authority to address long-term challenges such as a rapidly growing and ageing population, climate change and the need to improve productivity and reduce social inequality in the city region.

It sets the Right Mix vision for 50% of trips to be made by sustainable modes by 2040, with no net increase in motor vehicles. Chorlton Precinct Development Framework

The Chorlton Precinct Development Framework (2017) describes the constraints of the existing site. These include a lack of retail frontage onto Manchester Road, poor pedestrian permeability and Manchester Road routing through the site.

Opportunities noted in this framework include the creation of a positive residential frontage to the west and east of the site as well as enhanced pedestrian access and an attractive public realm.

Design principles laid out in the framework are as follows:

- Active frontages and improved public realm should be introduced
- A safe pedestrian environment should be created
- Sensitive consideration of site boundaries onto the back gardens in the west and onto Wilbraham Road must be part of the design
- Car parking should be consolidated
- Hard and soft landscaping should be used to create an attractive environment

3.7. Chorton Precinct Development Framework

The Chorton Precinct Development Framework (2017) describes the constraints of the existing site. These include a lack of retail frontage onto Manchester Road, poor pedestrian permeability and Manchester Road routing through the site.

Opportunities noted in this framework include the creation of a positive residential frontage to the west and east of the site as well as enhanced pedestrian access and an attractive public realm.

Design principles laid out in the framework are as follows:

- Active frontages and improved public realm should be introduced
- A safe pedestrian environment should be created
- Sensitive consideration of site boundaries onto the back gardens in the west and onto Wilbraham Road must be part of the design
- Car parking should be consolidated
- Hard and soft landscaping should be used to create an attractive environment

3.8. Chorton Local Infrastructure Framework

With several developments predicted to come forward in Chorton over the coming years, Manchester City Council commissioned a team to produce a Local Infrastructure Framework (LIF), to ensure that improvements to the public realm and community infrastructure come forward in a coherent way and that the District Centre fully benefits from this investment. The Public Realm Plan focusses on how the street scene and public spaces can be improved. A Social Infrastructure Plan considers the future need for public service provision such as health and education.

The Public Realm Plan establishes the design principles and priorities for improving Chorton District Centre, predominantly covering spaces that are highly visible and the Council owns. It will provide a more pleasant and welcoming functional environment for residents and visitors to Chorton, and will also benefit the local commercial, retail and food & drink offer. The Public Realm Plan has been drafted to be flexible, so that its principles and recommended approaches stay relevant over the long term as opportunities for improvements arise.

Three focus areas were identified including Chorton Library to Nicolas Road and Wilbraham Road, both of which are in the vicinity of the Chorton Precinct site. A palette of materials was recommended as well as a broad design approach and suggestions for activation, spill-out spaces for businesses and changes to the highway configuration.

The draft Public Realm Plan was consulted on in early 2024 with the final draft subsequently presented to the Council's Executive for endorsement in February 2025. The design team for Chorton Precinct met with MCC Officers and the LIF project team to discuss how the proposed development responds to and complements the proposals set out in the LIF.

4. Development Proposals

4.1. Development Use and Quantum

As detailed in the introduction, this TA informs a full planning application for the residential-led mixed-use redevelopment of Chorton precinct (with Graeme House). Demolition of the existing site is subject to a separate Prior Notice for Demolition submission to confirm that the applicant can demolish in accordance with permitted development rights.

With respect to the full planning application, the scheme comprises:

- 262 residential units; and
- 976 sqm GFA of Class E (a-e) ground floor commercial development

4.2. Pedestrian Access

Pedestrian entrances, crossings and routing into the site are shown in Figure 14.



Figure 14- Pedestrian entrances, crossings and routing.

Pedestrian routes provided are considered to meet established desire lines as well as crossing points on the surrounding highway network. The active travel corridor within the site along the realigned Manchester Road will provide a pleasant and safe environment for pedestrians to exit the site in any direction.

Pedestrian access will be provided through the site to satisfy the existing desire line via Manchester Road.

For North-South pedestrian movements, there is an existing Pelican crossing 50m west of the Wilbraham Road/Manchester Road junction, and pedestrian facilities at the new CYCLOPs junction at the intersection of Barlow Moor Road and Wilbraham Road.

There is a new signalised crossing on Barlow Moor Road north of Warwick Road to the east of the development that has replaced an uncontrolled crossing point which the proposed public realm will tie into.

As shown on the landscape plans at Appendix A, the footway on Nicolas Road will be resurfaced to link with the pedestrian and cycle route through the site and has been discussed and agreed with the MCC officers working on the LIF project.

4.3. Cycle Parking

Cycle parking will be provided in secure cycle stores distributed around the development:

- East Block A/B – 114 spaces between two locations. Ground floor - 54x on double tier stands. Basement – 62 spaces. 60x on double tier stands. 2x 1.5m width single tier Sheffield stand space. There are 134 homes in A/B, therefore this is an 85% provision.
- East Block C – 31 spaces. 30x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 134 homes in C, therefore this is a 91% provision.
- West Block D – 39 spaces. 38x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 45 homes in D, therefore this is an 87% provision.
- North Block E – 33 spaces. 32x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 37 homes in E, therefore this is an 89% provision.
- South Block F – 19 spaces. 18x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 12 homes in F, therefore this is a 158% provision.

In total 236 cycle spaces are proposed for the 262 homes, an overall provision of 90%. It is understood that TfGM and Active Travel England aspirations are for 1 cycle parking space per unit/bedroom.

Requiring 1:1 assumes that every single resident/household cycle, which is not realistic. Even with a dramatic shift towards cycling – with widescale Dutch-style cycle infrastructure, culture change and massive uptake of e-bikes, the Propensity to Cycle tool³ indicates that in this area, cycling would be at 32% at most.

Therefore, a provision of 90% in this location is considered adequate, and allows for provision of some wider spaced stands which can be used to store modified cycles/tricycles/cycles with trailers/child seats - 6 of these spaces are on wider racks are proposed.

Cycle parking will also be provided in external landscaped areas for visitors and staff of the commercial development. 3 are provided at the entrance to the apartment entrance to the southern end of Manchester Road, 3 at the apartment entrance mid-way along Manchester Road, 8 (two banks of 4) at Nicolas Road, and 4 at the southern end of the Barlow Moor Road frontage. In total this will accommodate 36 cycles.

4.4. Car Parking

A total of 182 parking spaces are proposed comprised of:

- 164 residential spaces
- 6 commercial tenant spaces
- 12 public car parking spaces

Further breakdown and information on the location of these spaces is provided below.

Public Car Park

The development proposals include 12 public car parking spaces accessed from Manchester Road, and located south of the private surface car park:

- 8 standard public spaces
- 2 disabled public spaces
- 2 public EV space

³ <https://www.pct.bike/>

The peak demand for parking in the surface car park currently on site occurred at 12-3pm on a weekday, when there were 38 spaces in use in the surface level car park. At this same time, there were 48-62 spaces available on street in the surrounds.

With the provision of 12 new district centre car parking spaces being provided as part of the development proposals, 26 vehicles of the current maximum demand of 38 spaces would need to park elsewhere.

At this time, the available capacity on surrounding streets can accommodate town centre parking demand. Note that this analysis doesn't include the Morrisons car park which provides 2-hour parking. It is therefore concluded that parking provision proposed is adequate.

Surveys of the surface car park and streets in the vicinity of the development are presented in Section 2.8.

Commercial Tenant Parking

6 parking spaces are proposed in the service area at the south east of the site. These will be for tenants of the ground floor commercial units in the East block which front Barlow Moor Road and will be used for staff parking or other operational uses.

Residential Car Parking

162 residential car parking spaces are proposed, an overall ratio of 63%. 2021 Census data⁴ shows that 42-49% of the households in the area do not own a car, therefore 51-58% of households do own a car. A parking provision of 63% is therefore appropriate to this location.

50 of the car parking spaces are at surface level west of the West Block D, 1 is north of the North block E, and the remainder are in the podium car park.

Disabled parking will be provided at a ratio of 6% of total spaces, i.e. 10 spaces will be provided. These are distributed around the scheme to ensure distances to nearest main entrance is limited.

There is one off Nicolas Street for North block E; 1 in the surface car park for West block D; 8 spaces in the podium at basement and ground floor for the East block A/B/C.

Electric vehicle chargers will be provided at all external residential spaces. For the ground floor/basement parking spaces under East block, infrastructure will be provided to enable installation of chargers in the future.

⁴ Car or Van Availability data available at [https://www.surrey.gov.uk/census-2021/2021-census-car-or-van-availability/#:~:text=Car%20or%20van%20availability%20from%20the%202021%20Census&text=Census%202021%20asked%20households%20how,equal%20to%2040.4%25%20in%202011\) for LSOAs in which the development sits: E00026113 and E00026104](https://www.surrey.gov.uk/census-2021/2021-census-car-or-van-availability/#:~:text=Car%20or%20van%20availability%20from%20the%202021%20Census&text=Census%202021%20asked%20households%20how,equal%20to%2040.4%25%20in%202011) for LSOAs in which the development sits: E00026113 and E00026104)

4.5. Vehicle Access and Refuse, Servicing and Emergency Access Strategy

Vehicle access to the site will be from the south via the existing Wilbraham Road/Manchester Road junction. The existing northern access onto Nicolas Road will be closed to traffic, and therefore the site will no longer be a through-route to vehicles.

Servicing strategy is shown on Figure 15.



Figure 15- Servicing routing into the site.

North Block E

The North block will be serviced from Nicolas Road, for both the commercial and residential elements of the block, using the existing loading bay on the north side of the road.

Refuse vehicles will reverse down the service route to the west of the North block. Tracking of this movement is included on drawing 3062-CIV-XX-XX-H-D-0005 at Appendix F.

West and East Blocks

The development will primarily be serviced via Manchester Road, accessed from Wilbraham Road. Vehicles can use a proposed delivery bay to deliver to the residential entrances or the designated service yard in the south east of the site for the retail elements, taxis can also stop in this location. Vehicle tracking is shown on drawing 3062-CIV-XX-XX-H-D-0005 at Appendix G.

The refuse collection point has been located to minimise reversing. Vehicle tracking is shown on drawing 3062-CIV-XX-XX-H-D-0004 at Appendix H.

Smaller delivery vehicles (akin to a Transit or Sprinter) can use the service yard at the south east of the site to serve the commercial units. Vehicle tracking is shown on drawing 3062-CIV-XX-XX-H-D-0006 at Appendix I.

Access to Podium Car Park

The podium car park in the East block will be accessed from the existing private road which branches

east from Manchester Road and runs behind the properties which face onto Wilbraham Road.

Visibility splays from the ground floor/basement car park at the East block are shown on drawing 3062-CIV-XX-XX-H-D-0001 at Appendix J.

Fire Tender Access Strategy

Access for fire tender will take place on the access road at the south of the site, in the surface car park to the west and through the active travel corridor to reach inside the site. Lockable bollards will facilitate this movement. Routing and visibility of fire tender is shown in drawing number 3062-CIV-XX-XX-H-D-0001 in Appendix K.

Active Travel Route on realigned Manchester Road, and changes to TROs on Nicolas Road

A new active travel route will be created along the realigned Manchester Road, with lockable bollards facilitating access for emergency vehicles.

Figure 16 shows the routing of fire vehicles out of the north of the site onto Nicolas Road, which requires the review and relocation of the TROs (car club and disabled car parking). The existing TROs on Nicolas Road, which are shown on Figure 11, have been reviewed. The existing car club and disabled parking bays are proposed to be relocated as shown in Figure 16.



Figure 16- Fire tender routing exiting the site northwards.

An assessment of the demand and capacity for taxis and servicing vehicles is provided at Section 5.5.

A Stage 1 Road Safety Audit was commissioned and the report is provided at Appendix N along with the Designer's Response.

4.6. BREEAM Compliance

Section 2.3 provides an analysis of pedestrian infrastructure surrounding the site, including provision of dropped kerbs and tactile paving for people who are blind, using a wheelchair or have a pram.

The Accessibility Index of the site can be determined using the GMAL rating which is high, scoring 6 out of a possible 8 (Section 2.5).

Cycle parking is provided for people working at the commercial element in the service area at the south east of the development – space for 20 cycles is available.

4.7. New Public Realm and Materials Palette

The landscape GA Plan at Appendix A identifies that all public realm works within the defined redline boundary is within P.J.L. land ownership and would be subject to appropriate management regimes (i.e. requirement for public realm / landscape management plans to be controlled by way of potential planning conditions).

The red dashed hatch outside of the red-line on the GA Plan – described in the key as 'indicative works outside the red-line application boundary - details TBC' is public realm or highway works within the adopted highway (footways and vehicular access points). The only area which includes the red hatch outside the redline, but is not adopted highway is the alleyway link to Wilbraham Road. The maximum area of pavement reinstatement was agreed with MCC officers at the pre-application stage.

Additionally, the proposals were subject to detailed engagement with the MCC Chorton LIF team, and OPEN (as retained consultants to MCC) to co-ordinate with the Local Infrastructure Framework (LIF) to align with the aspirations for Focus Area 1 at Nicolas Road. This engagement is summarised in the Design & Access Statement (DAS) submitted with the planning application.

It is anticipated that works outside of the applicant's ownership identified on the plan at Appendix A would be delivered under the terms of a S278 Highways Act agreement.

4.8. Flood Risk Management and Street Lighting

In terms of drainage arrangements for the scheme and specifically public realm areas within the applicant's ownership, the submitted Flood Risk Assessment and Drainage Strategy report confirms that the site will comprise two catchments (covering east and west) which will be managed by separate drainage networks which will individually discharge into the existing 1400mm combined sewer, which is owned by United Utilities and runs through the site. Prior agreement has been reached with UU for this drainage strategy and for the provision of SuDS rain gardens within the easement of the existing combined sewer.

As per the submitted landscape GA plan at Appendix A, no street trees are proposed within the adopted highway.

An external lighting plan was submitted with the planning application. This identifies that no new lighting columns are proposed within the adopted highway. A lighting strategy is identified for public realm areas within the applicant's ownership/demise which would be maintained on a private basis.

5. Trip Generation and Impact

This section sets out the net trip generation of the proposed development compared to the extant development of the shopping precinct and 8-storey office building. This has been agreed with MCC and TfGM via the Transport Assessment Scoping Note, scoping meeting (29 October) and subsequent emails, see Section 1.1.

Trip generation for the AM (08:00-09:00) and PM (17:00-18:00) peak hours has been calculated, looking at cars, taxis, vans, and heavy goods vehicles (OGVs). This gives an indication of the development traffic generated during the times at which the surrounding highway network is likely to be at its busiest.

5.1. Trip Generation of Extant Use

As set out in Section 2.8.3 parking survey data is available for the existing on-site car park. Particularly relevant are the parking survey figures obtained in 2019 as they reflect a time period where the office block (Graeme House) was occupied, as well as the shops on the precinct. As these land uses could become occupied again at any point in the future, parking figures from 2019 can be taken as the best proxy for assessing the site at full capacity.

Table 3 shows the trips generated in June 2019.

The full survey data is proved at Appendix L.

Table 3: Extant Trip Generation using Car Park Data

AM Peak Hour 08:00-09:00			AM Peak Hour 17:00-18:00		
Arrival	Departure	Two-way	Arrival	Departure	Two-way
38	6	44	10	50	60

5.2. Proposed Trip Generation

The TRICS database has been used to predict trip generation of the proposed development, and the following TRICS categories have been applied:

- 03 - Residential/D - Affordable/Local Authority Flats - all locations except edge of town, weekday
- 03 - Residential/Houses Privately Owned - all locations except edge of town, weekday.
- 01 Retail I – Shopping Centre – Local Shops, town centre, weekday (as above for extant position).
- 06 Hotel Food & Drink K – Café, all locations except edge of town, weekday. Note that as the commercial element will be largely car free, only LGV, HGV and taxi trips have been included
- For the commercial element a split of 50:50 café to local shops has been used.

TRICS output is provided at Appendix M, and summarised in Table 4, along with the vehicle trip generation of the proposed development.

Table 4: Proposed Vehicle Trip Rates and Vehicle Trip Generation

Land Use	No. units/ GFA	AM Peak Hr (0800-0900)			PM Peak Hr (1700-1800)		
		In	Out	Total	In	Out	Total
Vehicle trip rates (per dwelling or per 100sqm of commercial)							
Affordable homes		0.055	0.108	0.163	0.121	0.098	0.219
Private Homes		0.064	0.189	0.253	0.147	0.08	0.227
Shops		0.367	0.183	0.55	1.101	1.835	2.936
Cafes		0.241	0.322	0.563	0	0	0
Vehicle trip generation							
Affordable homes	49 homes	3	5	8	6	5	11
Private Homes	213 homes	14	40	54	31	17	48
Shops	488sqm	2	1	3	5	9	15
Cafes	488sqm	1	2	3	0	0	0
Total		19	48	67	43	31	74

5.3. Net Trip Generation

Table 5 sets out the net trip generation of the proposed development, with the trips generated by the extant development netted off. The maximum net increase in vehicle traffic is 24 two-way trips in the AM peak hour, if the extant trips are calculated using the parking survey data available from when the site was operational.

This uplift in local traffic is not considered significant and therefore further analysis is not required. This has been agreed with TfGM and MCC as set out in Section 1.1.

Table 5: Net Vehicle Trip Generation

	AM Peak Hour			PM Peak Hour		
	In	Out	Total	In	Out	Total
Extant trips calculated with parking survey data						
Extant	38	6	44	10	50	60
Proposed	19	48	67	43	31	74
Net	-19	42	24	32	-19	13

5.4. Impact on the Highway Network

The net trips generated by the site are the highest in the AM peak, where an increase of 24 trips is calculated. This increase in vehicles is negligible and will not have a significant impact on the surrounding highway network.

5.5. Loading Bay Demand and Capacity

The LHA response requested further information regarding analysis undertaken to determine assessment of the number trips associated with taxi and food/parcel deliveries, and demonstration of how these activities can be accommodated within the proposed loading arrangement.

5.6. Proposed Loading and Delivery Arrangements

The delivery strategy for the proposed development includes marked loading bays to the north and south of the site. The north utilises an existing on-street loading bay area on Nicolas Road. The south has a loading bay provision as part of the landscape design. These loading bays can be used for deliveries for residents (and retail for the north plot).

The retail units located in the east and south plots will have access to a dedicated loading / service area that is accessed from the service road to the south of the site. There will be a 2.8m maximum headroom for vehicles. This will enable a variety of LGVs to use this area for loading and deliveries to the retail units.

A summary of the proposed loading and delivery arrangements is shown in Figure 17.

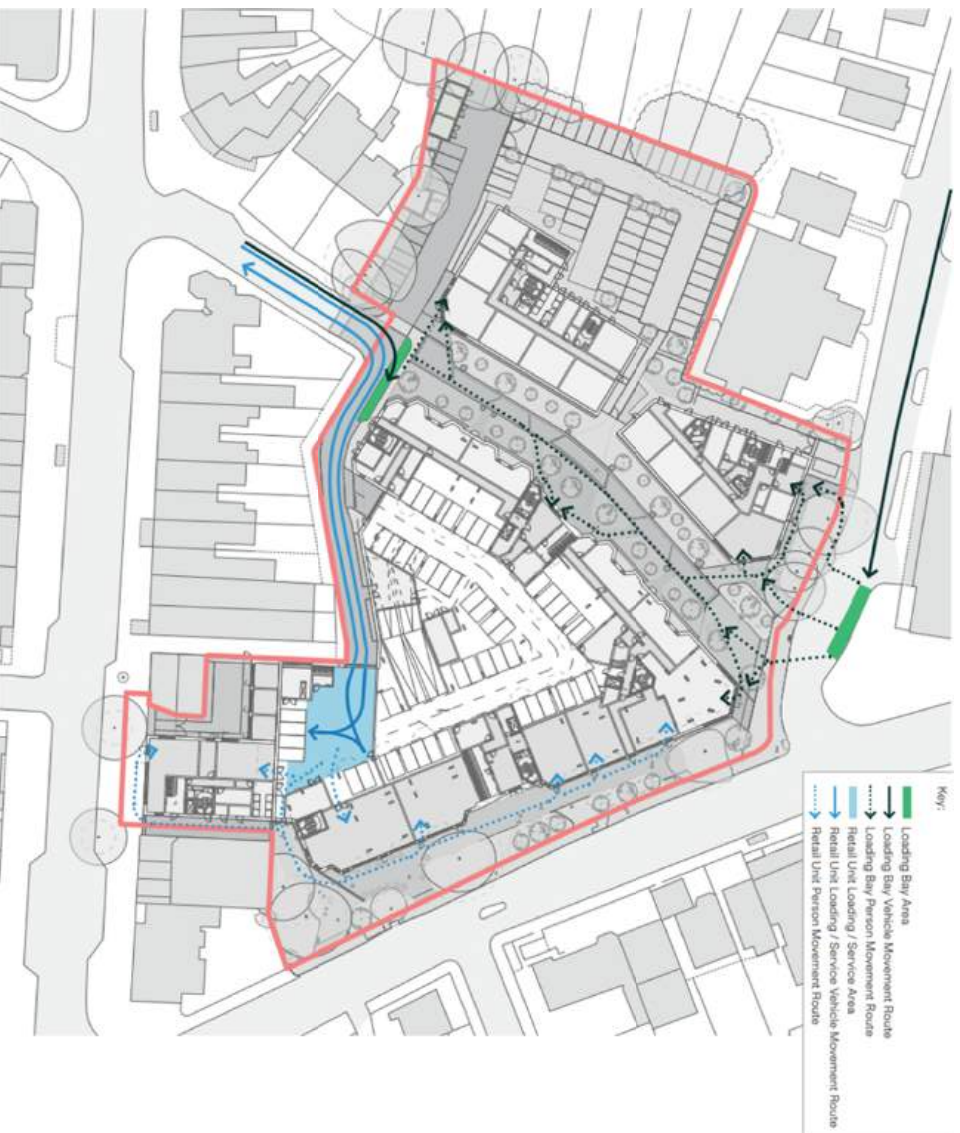


Figure 17: Proposed Loading and Delivery Arrangements

5.7. Loading Bay Demand and Capacity

Further to the hourly traffic impact set out in the above sections, analysis of hourly taxi and servicing vehicle trip generation has been undertaken to understand the potential utilisation of the loading bays proposed for the development.

The following assumptions have been made to understand the estimate the utilisation of the loading bays and ensure a robust assessment:

- Nicolas Road loading bay and the proposed loading bay on Manchester Road can each accommodate two LGVs/taxis, or one OGV. The servicing area at the south east of the

development can accommodate two LGVs.

- **Taxi:** 50% of taxis are dropping off and 50% of taxis are picking up passengers. Taxi drop-off takes 2 minutes and taxi pick-up takes 5 minutes. Half the taxis use the loading area on Nicolas Road and half use the loading area on Manchester Road to drop off/pick-up.
- **LGV:** load / unload takes 10 minutes. Deliveries to the commercial element use the dedicated provision in the service yard at the south east of the development. For the residential element, half use the loading area on Nicolas Road and half use the loading area on Manchester Road to make deliveries.
- **OGV:** load / unload takes 20 minutes. Half use the loading area on Nicolas Road and half use the loading area on Manchester Road.

The hourly vehicle trip generation for the proposed development throughout the day for taxis, OGVs and LGVs is presented in Appendix O, alongside the loading bay demand / capacity analysis.

A summary of the key findings of the analysis is as follows:

- The maximum occupancy of any of the loading areas is 73%, which is predicted to occur between 18:00 and 19:00.
- The average hourly occupancy between 08:00 and 20:00 is 48% for the Nicolas Road and Manchester Road areas, and 13% for the servicing area at the south east of the development.

The assessment therefore demonstrates that the proposed loading bay provision is sufficient to serve the demand associated with the proposed development. The proposed design provides a good amount of spare capacity should demand increase in future and is therefore considered to be robust.

It is anticipated that a full Waste Management Strategy and Delivery Management Strategy will be the requirement of planning conditions.

6. Summary

The site is very well connected to the surrounding public transport network, with Chorlton tram stop being approximately 320m east of the site and access to numerous, frequent bus services being available immediately outside of the site.

Moreover, the existing cycling infrastructure around the site is generally high quality and to LTN 1/20 standards, with the CYCLOPs crossing at the Wilbraham Road/ Barlow Moor Road junction prioritising pedestrian and cyclist movement to and from the tram stop.

The development proposals are the first residential phase of development as part of the wider Chorlton LIF, and seeks to deliver important elements of the LIF including:

- Improvements to the public realm and community infrastructure come forward in a coherent way and that the District Centre fully benefits from this investment. The Public Realm Plan focusses on how the street scene and public spaces can be improved.
- The development should provide a more pleasant and welcoming functional environment for residents and visitors to Chorlton, and will also benefit the local commercial, retail and food & drink businesses.

Pedestrian access into the site will take place from Manchester Road/ Barlow Moor Road and Nicolas Road from the north, where the closure of Manchester Road to vehicle traffic, and realignment to honour desire lines, allows for a car-free active travel corridor that transects the site and provides an attractive space for residents and the wider community.

The south the site is accessed from Wilbraham Road, which features appropriate signalised crossings at three points within 250m. This high density of crossings will serve pedestrians adequately, with the CYCLOPs junction also serving cyclists. A further signalised crossing along Barlow Moor Road facilitates pedestrian and cyclist access into the commercial element of the site.

Cycle parking provision is an average of 90% for the 262 homes within the site. This is surplus to the anticipated demand for cycles at the site but is in line with national, regional and local targets to inculcate higher rates of cycling and also allows for the storage of larger and modified cycles. Moreover, designated cycle parking close to the entrance to the buildings allow for secure drop-offs for cycle couriers and cargo-bikes.

182 car parking spaces are proposed within the site. 12 spaces within the car park are retained for public use, with the rest being residential parking. Parking surveys carried out indicate that the maximum demand for car parking in Chorlton can be accommodated within the new district centre car parking spaces, and other available capacity on street.

Vehicle access is considered in Section 4.5, with tracking analysis provided in Appendix F to Appendix K.

Trip generation at the site is negligible, with less than 24 additional trips being generated from the previous land use of the site in the AM peak, and 13 additional trips in the PM peak. These trips will not have a significant impact on the surrounding highway network.

The planning application complies with the statutory development plan provisions. Moreover, there are no traffic or transport-based matters which would preclude the application determined positively.

Appendix A- Development Proposals

Appendix B- MCC Meeting Minutes (Oct 2024)

Appendix B- MCC Meeting Minutes (Oct 2024)

MEETING MINUTES

Project Name: Chorton Precinct

Subject: TA scoping meeting with MCC and TfGM officers

Job Number: 3062

Location: Microsoft Teams

Held On: 29.10.24

Attendees:

Richard Dolphin (TfGM)
Laura Wareing (MCC)
Neil Bayliss-Rowe (MCC)
Muniza Usmani (MCC)
Emily Ingham (Civic)
Joel Sorsby (Civic)

Cc: Project team to be sent minutes as minutes now agreed with MCC/TfGM

Post meeting note: these minutes have been confirmed as correct by MCC highway officers following the meeting.

Ref	Item & Notes	Action
1.0	Trip Generation Methodology <ul style="list-style-type: none"> TfGM- would prefer car park use surveys to be used to determine trip gen of the extant development, rather than TRICS (these two options were presented in the TA Scoping Note) El- With net vehicle trips less than 30- is it acceptable that traffic modelling is not proposed? TfGM agreed with this in principle but would like to view the car park data to confirm this conclusion. 	Civic Engineers will provide the car park survey data to TfGM HFAS
1.1	Additional Comments from TfGM on the TA Scoping Note: <ul style="list-style-type: none"> Threshold is 30 2-way trips so further modelling is not required Overall parking provision set out in the TA Scoping Note are too high for this location. El updated the meeting participants with the emerging development proposals: private homes approx. 1:1 (possibly slightly more), affordable homes at 0-0.5 per home. RD much more satisfied with this. Some parking is a re-provision of the existing town centre parking RD wants to see the parking survey data from LIF scheme. RD requested that as recent as possible 5-year traffic collision data is reviewed in the Transport Assessment <p>**RD then left the meeting**</p>	Action Civic Engineers to circulate parking survey data to TfGM and MCC.

Ref	Item & Notes	Action
1.2	Parking Ratios <ul style="list-style-type: none"> MCC echoed TfGM comment that parking provision in TA Scoping Note seemed too high for this location. Were more satisfied with updated proposals (as above), and asked Civic Engineers provide a basis for the proposed parking ratios-based on precedent schemes, Census, market experience, etc. for all types of parking proposed. Disabled parking proportion discussed- 6% agreed upon NBR asked if local councillors were supportive of the parking ratios proposed. 	Action Civic Engineers to check in with applicant.
1.3	Time-limited parking <ul style="list-style-type: none"> MCC asked if the town centre parking spaces will be time limited? 	Action Civic Engineers to discuss with design team and provide a time limit strategy in the Transport Assessment
1.4	Refuse/ Servicing <ul style="list-style-type: none"> EI presented the option to reverse back the service yard at the southeast of the plan, a 75m reverse. NBR stated this would not be acceptable. EI raised that the MCC refuse vehicle spec provided does not present a real-world vehicle but rather an envelope. She asked if tracking can be presented of real-world vehicles likely to serve the site. NBR asked for more details to be provided on what refuse vehicle is likely to be used within the site. With some evidence, the tracking of a real-world vehicle may be accepted over the MCC refuse vehicle. He also stated that if the collection will be carried out by a private company, the vehicle type can be more easily specified. Action; Civic Engineers to progress refuse strategy with design team on basis of turning around in the service area. EI set out that the refuse vehicle will reverse from Nicolas Road to serve the block there. NW stated this would be acceptable with a banksman, but concerns raised over single-driver vehicles having to reverse in/out of the Nicholas Road access. The frequency of service vehicles reversing from Nicholas Road into the site must be established to assess whether this is feasible. NW supportive of gate being provided set back from highway so that vehicles wait off the main road. 	Action Access strategy to be reviewed with design team. Loading bay on Nicolas Road may be more appropriate if possible.

Ref	Item & Notes	Action
1.5	<p>Public Realm LIF Strategy and alignment with Chorlton Precinct Application and Adoption Strategy</p> <ul style="list-style-type: none">NBR raised that he understood that the LIF project introduced the concept of the closure of Nicholas Road to motor trafficEl stated that a meeting was held between the applicant and the LIF team recently, the applicant is supportive of a closure of Nicolas Road but this will not form part of this application. Action: Civic Engineers to review if servicing strategy to northwest block can work with Nicolas Road closed to motor vehicles.NBR asked if the paving strategy/materials palette align with those to be used in the LIF public realm strategy? El confirmed that the two sets of landscape architects will collaborate to provide a cohesive paving strategy with complementing palettesNBR expects the adopted footway on Barlow Moor Road and Nicholas Road (and ideally Manchester Road) along the site frontage to be repaved and resurfaced as part of this application, using the materials specified by the LIF Public Realm work.NBR queried whether the public realm within the red line will be offered for adoption. El expects not as there is already adopted footway out with the red line boundary, however, will review with applicant team.	<p>Civic Engineers to confirm proposed adoption strategy in Transport Assessment</p>

Ref	Item & Notes	Action
1.6	Closure of Manchester Road through-route <ul style="list-style-type: none"> LW confirmed extent of public highway at south end of Manchester Road. NBR asked that a publicly accessible turning area be available for vehicles. NBR asked that a planning condition include agreement that the parking bays in the 'town centre parking' section are available for community use. MU requested that TROs be reviewed on Manchester Road and Nicolas Road to ensure that the new development can mitigate any issues that may arise. Action: TRO review to be included in the Transport Assessment. TROs issues around the site will be reviewed by Civic and communicated if any issues are found. NBR also asked that existing car club and disabled parking on Nicolas Road be reviewed and retained/re-provided. NBR: PROWs through the site should be checked and accounted for. Action: Civic Engineers to discuss with design team and include review in Transport Assessment. 	Action Civic Engineers to discuss the turning head and parking strategy for these spaces with client and design team Civic Engineers to review existing car club and disabled parking provisions on Nicholas Road
1.7	Cycle Parking <ul style="list-style-type: none"> Cycle parking discussion- MU asked if there is cycle parking for the retail units and NW also asked that cycle parking be provided at residential entrances as provisions for uber eats etc. MU asked for wayfinding signs within the new public realm. 	Action Civic Engineers to discuss with design team
1.8	Deliveries <ul style="list-style-type: none"> NBR asked where deliveries for the residential units will stop, to ensure they don't block access to the car parks, etc. 	Action Designated space for this to be provided in emerging development proposals.

Appendix C- Highway Boundary (supplied by MCC)

Appendix D- On-street parking survey (October 2024)

Daily Avg. Occupancy									
	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Thursday	77%	74%	35%	66%	70%	61%	81%	79%	82%
Friday	69%	77%	36%	61%	79%	63%	84%	79%	83%
Saturday	63%	67%	38%	55%	80%	72%	86%	72%	88%

Number of Spaces Available (on Average)									
	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Thursday	7	7	12	6	14	22	9	3	3
Friday	9	6	12	7	10	17	7	3	5
Saturday	11	9	12	9	9	13	6	4	2

Occupancy by Beat									
	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Thursday	48%	50%	0%	41%	63%	47%	76%	36%	69%
0300	55%	42%	26%	47%	65%	36%	71%	64%	69%
0730	76%	62%	53%	58%	61%	36%	69%	50%	63%
0815	76%	77%	53%	63%	70%	33%	69%	71%	66%
0830	69%	58%	63%	63%	63%	38%	71%	79%	75%
0845	72%	65%	74%	63%	70%	40%	69%	86%	94%
0900	83%	81%	84%	68%	76%	42%	67%	86%	94%
0915	76%	88%	84%	58%	74%	42%	80%	86%	100%
1130	83%	96%	89%	76%	80%	56%	82%	93%	75%
1300	93%	92%	89%	63%	80%	67%	67%	89%	90%
1445	90%	85%	95%	74%	70%	62%	96%	86%	88%
1500	100%	85%	95%	99%	67%	64%	98%	93%	98%
1515	76%	88%	94%	96%	72%	60%	98%	93%	88%
1530	86%	69%	84%	68%	74%	64%	93%	100%	81%
1720	79%	77%	79%	68%	61%	56%	84%	100%	94%
1930	69%	65%	74%	63%	74%	69%	84%	64%	88%

	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Friday	38%	42%	5%	53%	61%	56%	87%	29%	69%
0515	48%	23%	21%	47%	59%	44%	72%	47%	79%
0730	83%	88%	47%	63%	70%	47%	78%	86%	81%
0830	76%	92%	53%	74%	91%	67%	89%	86%	106%
1130	72%	100%	53%	79%	96%	78%	89%	86%	81%
1300	86%	92%	58%	68%	74%	64%	76%	86%	81%
1500	83%	77%	53%	42%	83%	60%	73%	93%	88%
1720	66%	85%	53%	63%	96%	89%	98%	86%	81%

	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Saturday	45%	31%	5%	47%	54%	51%	82%	21%	81%
0515	45%	23%	26%	47%	57%	51%	82%	43%	81%
0730	69%	65%	58%	42%	61%	60%	78%	93%	88%
0830	76%	96%	58%	63%	78%	62%	84%	79%	89%
1130	69%	81%	58%	63%	96%	82%	87%	86%	81%
1300	55%	92%	47%	58%	83%	82%	89%	100%	94%
1500	66%	88%	47%	53%	104%	89%	91%	79%	94%
1720	83%	62%	47%	63%	104%	98%	96%	79%	88%

Spare Spaces by beat									
	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Thursday	15	13	19	10	17	24	11	9	5
0500	13	13	14	10	16	29	13	5	5
0730	7	10	9	8	18	30	14	7	6
0830	7	6	9	7	14	30	14	4	4
0845	9	11	7	7	17	28	13	3	4
0900	8	9	5	7	14	27	14	2	1
0915	5	5	3	6	11	26	15	2	1
0930	7	3	3	8	12	26	9	2	0
1130	5	1	2	4	11	20	8	1	4
1300	2	2	2	7	9	15	5	1	4
1445	3	4	1	5	14	17	2	2	2
1500	0	4	3	1	15	16	1	1	2
1515	7	3	1	4	13	18	1	1	2
1530	4	8	3	6	12	16	3	1	3
1720	6	6	4	6	18	20	7	0	1
1930	9	9	5	7	12	14	7	5	2

	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Friday	18	15	18	9	18	20	6	10	5
0515	15	15	15	10	19	25	7	3	5
0730	5	3	10	7	14	24	10	2	3
0830	7	2	9	5	4	15	5	2	-1
1130	8	0	9	4	2	10	5	2	3
1300	4	2	8	6	12	16	11	2	3
1500	5	6	9	11	8	18	12	1	2
1720	5	6	9	7	2	5	1	2	3
1930	10	4	9	7	2	5	1	2	3

	Oswald Road	Nicolas Street	Wilbraham Road	Vincent Avenue	Whitlow Road	York Road	Brundretts Road	Silverwood Avenue	Selbourne Road
Saturday	16	18	18	10	21	22	8	11	3
0515	16	20	14	10	20	22	8	8	3
0730	9	9	8	11	18	17	10	3	2
0930	7	1	8	7	10	17	7	3	2
1130	9	5	8	7	2	8	6	2	3
1300	13	2	10	8	8	8	5	0	1
1720	10	3	10	9	-2	5	4	3	1
1930	5	10	10	7	-2	1	2	3	2

AVG:	74
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Appendix E- The Square Parking Survey 2023
Available on request

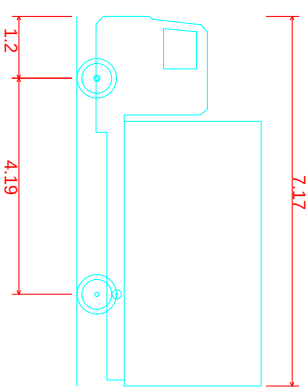
Appendix F - Refuse Vehicle Tracking off Nicolas Road

Appendix G- Loading Bay Tracking (LGV)



STANDARD NOTES

1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECTS AND ENGINEERS DRAWINGS AND THE SPECIFICATIONS.
2. THIS DRAWING SHOULD NOT BE SCALED.
3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.
4. ALL DISCREPANCIES SHOULD BE REPORTED TO CA/E, PRIOR TO THE COMMENCEMENT OF WORKS.



F1A Design 7.5 Tonne Rigid Vehicle (2016)

1. THE VEHICLE MOVEMENT ENVELOPES SHOWN ARE GENERATED USING AUTODESK VEHICLE TRACKING SOFTWARE AND ARE INDICATIVE ONLY.
2. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER VISIBILITY, GRADIENTS AND ALTERNATIVE VEHICLE SPECIFICATIONS.

KEY

- | | |
|----------------------------|-------|
| CHASSIS ENVELOPE | — |
| BODY ENVELOPE | - - - |
| CHASSIS ENVELOPE (REVERSE) | — |
| BODY ENVELOPE (REVERSE) | — |

Appendix H- Loading Bay Tracking (Refuse Vehicle)

[illegible]

Appendix I- LGV Tracking in Service Yard

Appendix J - Visibility Splays from Car Park Access



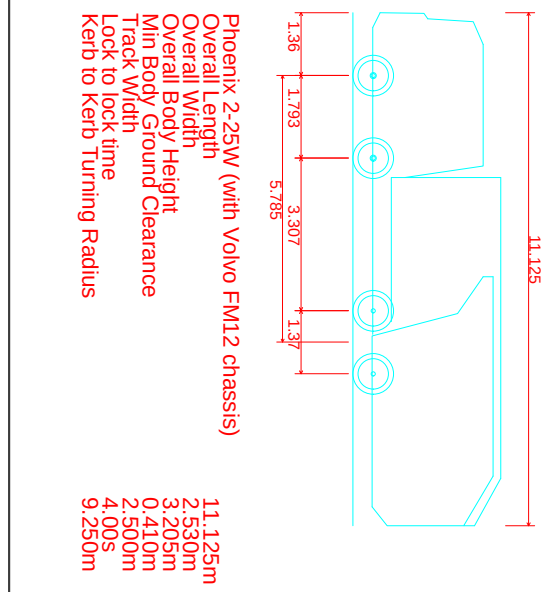
Appendix K- Fire Tender Tracking

- STANDARD NOTES
1. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S AND ENGINEERS DRAWINGS AND THE SPECIFICATIONS.

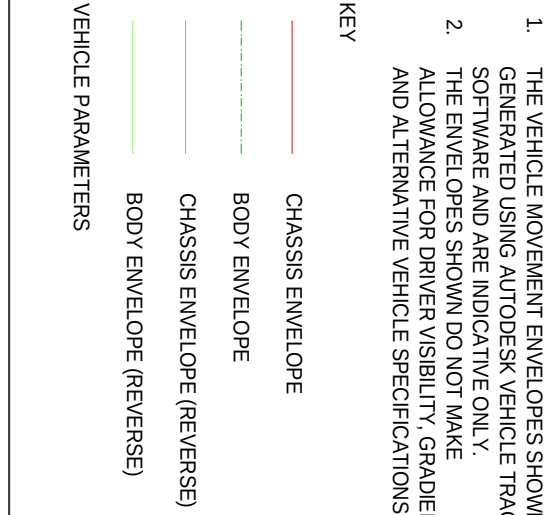
2. THIS DRAWINGS SHOULD NOT BE SCALED.

3. ALL DIMENSIONS ARE TO BE VERIFIED BY THE CONTRACTOR ON SITE.

4. ALL DISCREPANCIES SHOULD BE REPORTED TO C.A.E.A. PRIOR TO THE COMMENCEMENT OF WORKS.



1. THE VEHICLE MOVEMENT ENVELOPES SHOWN ARE GENERATED USING AUTODESK VEHICLE TRACKING SOFTWARE AND SHOULD NOT BE USED FOR CONSTRUCTION PURPOSES.
2. THE ENVELOPES SHOWN DO NOT MAKE ALLOWANCE FOR DRIVER VISIBILITY, GRADEIENS AND ALTERNATIVE VEHICLE SPECIFICATIONS.



PROJECT

CHORLTON PRECINCT

TITLE

FIRE TENDER TRACKING

18.03.25

P02

UPDATED LAYOUT

JS

EI

11.12.24

P01

FIRE TENDER TRACKING

JS

EI

DATE

REV

DESCRIPTION

PRAWN

CHAD

CE PROJECT No.

3062

SCALE @ A1

--

DATE CREATED

11.12.24

DRAWN

JS

CHECKED

EI

civicingineers.com

CIVIC ENGINEERS

FOR INFORMATION

DRAWING No.

3062-CIV-XX-XX-H-D-0002

STATUS CODE

S01

REV

P02



Appendix L- The Square Car Park Data 2019
Available on request

Appendix M- TRICS Output

Civic Engineers Dale Street Manchester

Licence No : 758701

Calculation Reference: AUDIT-758701-241015-1037

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 01 - RETAIL
Category : I - SHOPPING CENTRE - LOCAL SHOPS
TOTAL VEHICLES

Selected regions and areas:

16 ULSTER (REPUBLIC OF IRELAND)
CV CAVAN

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: 545 to 545 (units: sqm)

Range Selected by User: 200 to 8310 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 13/09/23

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:

Wednesday 1 days

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

Selected survey types:

Manual count 1 days

Directional ATC Count 0 days

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

Selected Locations:

Town Centre 1

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:

Built-Up Zone 1

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 X days - Selected

Secondary Filtering selection:

Use Class:

n/a 1 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®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

5,001 to 10,000 1 days

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

Secondary Filtering selection (Cont.):

Population within 5 miles:
5,001 to 25,000 1 days

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

Car ownership within 5 miles:
1.6 to 2.0 1 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.

Petrol filling station:
Included in the survey count 0 days
Excluded from count or no filling station 1 days

This data displays the number of surveys within the selected set that include petrol filling station activity, and the number of surveys that do not.

Travel Plan:
No 1 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 1 days

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

LIST OF SITES relevant to selection parameters

1	CV-01-I-01 COLLEGE STREET CAVAN THE PLAZA Town Centre Built-Up Zone Total Gross floor area: Survey date: WEDNESDAY	LOCAL SHOPS 545 sqm 13/09/23	CAVAN Survey Type: MANUAL
---	---	--	--

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

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
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 - 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	1	545	0.183	1	545	0.183	1	545	0.366
08:00 - 09:00	1	545	0.367	1	545	0.183	1	545	0.550
09:00 - 10:00	1	545	1.835	1	545	1.284	1	545	3.119
10:00 - 11:00	1	545	3.303	1	545	2.936	1	545	6.239
11:00 - 12:00	1	545	0.550	1	545	0.734	1	545	1.284
12:00 - 13:00	1	545	1.835	1	545	1.284	1	545	3.119
13:00 - 14:00	1	545	2.018	1	545	2.752	1	545	4.770
14:00 - 15:00	1	545	1.284	1	545	1.284	1	545	2.568
15:00 - 16:00	1	545	1.284	1	545	1.651	1	545	2.935
16:00 - 17:00	1	545	2.018	1	545	1.284	1	545	3.302
17:00 - 18:00	1	545	1.101	1	545	1.835	1	545	2.936
18:00 - 19:00	1	545	1.284	1	545	1.651	1	545	2.935
19:00 - 20:00	1	545	1.651	1	545	1.101	1	545	2.752
20:00 - 21:00	1	545	0.000	1	545	0.550	1	545	0.550
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	18.713			18.712			37.425		

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:545 - 545 (units: sqm)

Survey date date range:01/01/16 - 13/09/23

Number of weekdays (Monday-Friday):1

Number of Saturdays:0

Number of Sundays:0

Surveys automatically removed from selection:0

Surveys manually removed from selection:0

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

TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
TAXIS

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	1	545	0.000	1	545	0.000	1	545	0.000
08:00 - 09:00	1	545	0.000	1	545	0.000	1	545	0.000
09:00 - 10:00	1	545	0.000	1	545	0.000	1	545	0.000
10:00 - 11:00	1	545	0.183	1	545	0.183	1	545	0.366
11:00 - 12:00	1	545	0.000	1	545	0.000	1	545	0.000
12:00 - 13:00	1	545	0.000	1	545	0.000	1	545	0.000
13:00 - 14:00	1	545	0.183	1	545	0.183	1	545	0.366
14:00 - 15:00	1	545	0.183	1	545	0.183	1	545	0.366
15:00 - 16:00	1	545	0.000	1	545	0.000	1	545	0.000
16:00 - 17:00	1	545	0.000	1	545	0.000	1	545	0.000
17:00 - 18:00	1	545	0.000	1	545	0.000	1	545	0.000
18:00 - 19:00	1	545	0.000	1	545	0.000	1	545	0.000
19:00 - 20:00	1	545	0.000	1	545	0.000	1	545	0.000
20:00 - 21:00	1	545	0.000	1	545	0.000	1	545	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.549			0.549			1.098		

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 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
OGVS

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	1	545	0.000	1	545	0.000	1	545	0.000
08:00 - 09:00	1	545	0.000	1	545	0.000	1	545	0.000
09:00 - 10:00	1	545	0.000	1	545	0.000	1	545	0.000
10:00 - 11:00	1	545	0.183	1	545	0.183	1	545	0.366
11:00 - 12:00	1	545	0.000	1	545	0.000	1	545	0.000
12:00 - 13:00	1	545	0.000	1	545	0.000	1	545	0.000
13:00 - 14:00	1	545	0.000	1	545	0.000	1	545	0.000
14:00 - 15:00	1	545	0.000	1	545	0.000	1	545	0.000
15:00 - 16:00	1	545	0.000	1	545	0.000	1	545	0.000
16:00 - 17:00	1	545	0.000	1	545	0.000	1	545	0.000
17:00 - 18:00	1	545	0.000	1	545	0.000	1	545	0.000
18:00 - 19:00	1	545	0.000	1	545	0.000	1	545	0.000
19:00 - 20:00	1	545	0.000	1	545	0.000	1	545	0.000
20:00 - 21:00	1	545	0.000	1	545	0.000	1	545	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.183			0.183			0.366		

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 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
CARS

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	1	545	0.000	1	545	0.000	1	545	0.000
08:00 - 09:00	1	545	0.367	1	545	0.183	1	545	0.550
09:00 - 10:00	1	545	1.835	1	545	1.284	1	545	3.119
10:00 - 11:00	1	545	2.936	1	545	2.569	1	545	5.505
11:00 - 12:00	1	545	0.550	1	545	0.734	1	545	1.284
12:00 - 13:00	1	545	1.835	1	545	1.284	1	545	3.119
13:00 - 14:00	1	545	1.651	1	545	2.385	1	545	4.036
14:00 - 15:00	1	545	1.101	1	545	1.101	1	545	2.202
15:00 - 16:00	1	545	1.284	1	545	1.651	1	545	2.935
16:00 - 17:00	1	545	1.651	1	545	0.917	1	545	2.568
17:00 - 18:00	1	545	1.101	1	545	1.835	1	545	2.936
18:00 - 19:00	1	545	1.284	1	545	1.651	1	545	2.935
19:00 - 20:00	1	545	1.651	1	545	1.101	1	545	2.752
20:00 - 21:00	1	545	0.000	1	545	0.550	1	545	0.550
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	17.246			17.245			34.491		

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.

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TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
LGVs

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	1	545	0.183	1	545	0.183	1	545	0.366
08:00 - 09:00	1	545	0.000	1	545	0.000	1	545	0.000
09:00 - 10:00	1	545	0.000	1	545	0.000	1	545	0.000
10:00 - 11:00	1	545	0.000	1	545	0.000	1	545	0.000
11:00 - 12:00	1	545	0.000	1	545	0.000	1	545	0.000
12:00 - 13:00	1	545	0.000	1	545	0.000	1	545	0.000
13:00 - 14:00	1	545	0.183	1	545	0.183	1	545	0.366
14:00 - 15:00	1	545	0.000	1	545	0.000	1	545	0.000
15:00 - 16:00	1	545	0.000	1	545	0.000	1	545	0.000
16:00 - 17:00	1	545	0.367	1	545	0.367	1	545	0.734
17:00 - 18:00	1	545	0.000	1	545	0.000	1	545	0.000
18:00 - 19:00	1	545	0.000	1	545	0.000	1	545	0.000
19:00 - 20:00	1	545	0.000	1	545	0.000	1	545	0.000
20:00 - 21:00	1	545	0.000	1	545	0.000	1	545	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.733			0.733			1.466		

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.

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TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
Servicing 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	1	545	0.000	1	545	0.000	1	545	0.000
08:00 - 09:00	1	545	0.000	1	545	0.000	1	545	0.000
09:00 - 10:00	1	545	0.000	1	545	0.000	1	545	0.000
10:00 - 11:00	1	545	0.183	1	545	0.183	1	545	0.366
11:00 - 12:00	1	545	0.000	1	545	0.000	1	545	0.000
12:00 - 13:00	1	545	0.000	1	545	0.000	1	545	0.000
13:00 - 14:00	1	545	0.000	1	545	0.000	1	545	0.000
14:00 - 15:00	1	545	0.000	1	545	0.000	1	545	0.000
15:00 - 16:00	1	545	0.000	1	545	0.000	1	545	0.000
16:00 - 17:00	1	545	0.000	1	545	0.000	1	545	0.000
17:00 - 18:00	1	545	0.000	1	545	0.000	1	545	0.000
18:00 - 19:00	1	545	0.000	1	545	0.000	1	545	0.000
19:00 - 20:00	1	545	0.000	1	545	0.000	1	545	0.000
20:00 - 21:00	1	545	0.000	1	545	0.000	1	545	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.183			0.183			0.366

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.

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TRIP RATE for Land Use 01 - RETAIL/I - SHOPPING CENTRE - LOCAL SHOPS
Scooters

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	1	545	0.000	1	545	0.000	1	545	0.000
08:00 - 09:00	1	545	0.000	1	545	0.000	1	545	0.000
09:00 - 10:00	1	545	0.000	1	545	0.000	1	545	0.000
10:00 - 11:00	1	545	0.000	1	545	0.000	1	545	0.000
11:00 - 12:00	1	545	0.000	1	545	0.000	1	545	0.000
12:00 - 13:00	1	545	0.183	1	545	0.183	1	545	0.366
13:00 - 14:00	1	545	0.000	1	545	0.000	1	545	0.000
14:00 - 15:00	1	545	0.000	1	545	0.000	1	545	0.000
15:00 - 16:00	1	545	0.000	1	545	0.000	1	545	0.000
16:00 - 17:00	1	545	0.000	1	545	0.000	1	545	0.000
17:00 - 18:00	1	545	0.000	1	545	0.000	1	545	0.000
18:00 - 19:00	1	545	0.000	1	545	0.000	1	545	0.000
19:00 - 20:00	1	545	0.183	1	545	0.183	1	545	0.366
20:00 - 21:00	1	545	0.000	1	545	0.000	1	545	0.000
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.366			0.366			0.732

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.

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TRIP RATE CALCULATION SELECTION PARAMETERS:

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

Selected regions and areas:		
02	SOUTH EAST	
	BH BRIGHTON & HOVE	1 days
	CT CENTRAL BEDFORDSHIRE	3 days
	HF HERTFORDSHIRE	2 days
	PO PORTSMOUTH	1 days
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	DV DEVON	1 days
04	EAST ANGLIA	
	CA CAMBRIDGESHIRE	1 days
	NF NORFOLK	1 days
	SF SUFFOLK	2 days
05	EAST MIDLANDS	
	DY DERBY	1 days
	LE LEICESTERSHIRE	1 days
	NG NOTTINGHAM	3 days
06	WEST MIDLANDS	
	SH SHROPSHIRE	2 days
	WM WEST MIDLANDS	1 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	BY BARNSLEY	1 days
08	NORTH WEST	
	MS MERSEYSIDE	3 days
10	WALES	
	CO CONWY	1 days
11	SCOTLAND	
	HI HIGHLAND	1 days
12	CONNUGHT	
	MA MAYO	1 days
14	LEINSTER	
	LU LOUTH	1 days
	WX WEXFORD	1 days
15	GREATER DUBLIN	
	DL DUBLIN	3 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:

No of Dwellings

Actual Range:

9 to 332 (units:)

Range Selected by User:

6 to 372 (units:)

Parking Spaces Range:

All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:

Selection by:

Include all surveys

Date Range: 01/01/16 to 02/10/23

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	7 days
Tuesday	11 days
Wednesday	9 days
Thursday	2 days
Friday	4 days

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

Selected survey types:

Manual count	33 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:

Town Centre	1
Edge of Town Centre	14
Suburban Area (PPS6 Out of Centre)	14
Neighbourhood Centre (PPS6 Local Centre)	4

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

Selected Location Sub Categories:

Development Zone	3
Residential Zone	20
Built-Up Zone	5
No Sub Category	5

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	19 days - Selected
Servicing vehicles Excluded	15 days - Selected

Secondary Filtering selection:

Use Class:

C3

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®.

Population within 500m Range:

All Surveys Included

Population within 1 mile:

1,001 to 5,000	3 days
5,001 to 10,000	3 days
10,001 to 15,000	1 days
20,001 to 25,000	10 days
25,001 to 50,000	13 days
50,001 to 100,000	3 days

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

Population within 5 miles:

5,001 to 25,000	1 days
25,001 to 50,000	2 days
50,001 to 75,000	4 days
75,001 to 100,000	2 days
125,001 to 250,000	10 days
250,001 to 500,000	9 days
500,001 or More	5 days

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

Car ownership within 5 miles:

0.5 or Less	1 days
0.6 to 1.0	18 days
1.1 to 1.5	13 days
1.6 to 2.0	1 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	3 days
No	30 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	33 days
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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
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LIST OF SITES relevant to selection parameters

1	BH-03-C-01 OLD SHOREHAM RD BRIGHTON HOVE Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: TUESDAY	BLOCK OF FLATS			BRIGHTON & HOVE
2	BY-03-C-01 HEELIS STREET BARNSELEY	BLOCKS OF FLATS	71 26/09/17		Survey Type: MANUAL BARNSELEY
3	Edge of Town Centre Built-Up Zone Total No of Dwellings: Survey date: TUESDAY	BLOCKS OF FLATS	112 08/09/20		Survey Type: MANUAL CAMBRIDGESHIRE
4	CA-03-C-03 CROMWELL ROAD CAMBRIDGE				
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings: Survey date: MONDAY		82 18/09/17		Survey Type: MANUAL CONWY
5	CO-03-C-01 MOSTYN BROADWAY LLANDUDNO	BLOCKS OF FLATS			
6	Edge of Town Centre Built-Up Zone Total No of Dwellings: Survey date: MONDAY	BLOCKS OF FLATS	37 26/03/18		Survey Type: MANUAL CENTRAL BEDFORDSHIRE
7	CT-03-C-01 WING ROAD LEIGHTON BUZZARD LINS LADE Edge of Town Centre Residential Zone Total No of Dwellings: Survey date: TUESDAY		175 15/05/18		Survey Type: MANUAL CENTRAL BEDFORDSHIRE
8	CT-03-C-02 STANBRIDGE ROAD LEIGHTON BUZZARD	BLOCKS OF FLATS			
9	Edge of Town Centre Residential Zone Total No of Dwellings: Survey date: TUESDAY	BLOCKS OF FLATS	62 15/05/18		Survey Type: MANUAL CENTRAL BEDFORDSHIRE
10	CT-03-C-03 COURT DRIVE DUNSTABLE				
11	Edge of Town Centre No Sub Category Total No of Dwellings: Survey date: TUESDAY		146 15/05/18		Survey Type: MANUAL DUBLIN
12	DL-03-C-16 BOTANIC AVENUE DUBLIN	BLOCKS OF FLATS			
13	DRUMCONDRA Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: TUESDAY		31 22/11/16		Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

9	DL-03-C-17 FINGLAS ROAD DUBLIN FINGLAS Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: FRIDAY	BLOCKS OF FLATS		DUBLIN
10	DL-03-C-18 HAROLD'S CROSS ROAD DUBLIN Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: FRIDAY	BLOCKS OF FLATS	332 23/10/20	Survey Type: MANUAL DUBLIN
11	DV-03-C-01 BONHAY ROAD EXETER Edge of Town Centre Residential Zone Total No of Dwellings: Survey date: WEDNESDAY	BLOCK OF FLATS	102 19/05/21	Survey Type: MANUAL DEVON
12	DY-03-C-03 CAESAR STREET DERBY Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: MONDAY	BLOCKS OF FLATS	27 10/07/17	Survey Type: MANUAL DERBY
13	HF-03-C-03 SHENLEY ROAD BOREHAMWOOD Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: WEDNESDAY	BLOCK OF FLATS	30 25/09/19	Survey Type: MANUAL HERTFORDSHIRE
14	HF-03-C-07 OXHEY DRIVE WATFORD SOUTH OXHEY Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: Survey date: THURSDAY	BLOCKS OF FLATS	91 14/11/19	Survey Type: MANUAL HERTFORDSHIRE
15	HI-03-C-02 KING STREET NAIRN Edge of Town Centre Built-Up Zone Total No of Dwellings: Survey date: WEDNESDAY	BLOCK OF FLATS	84 07/06/23	Survey Type: MANUAL HIGHLAND
16	LE-03-C-01 NEW STREET LEICESTER OADBY Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: Survey date: WEDNESDAY	BLOCK OF FLATS	16 19/04/23	Survey Type: MANUAL LEICESTERSHIRE
	Total No of Dwellings: Survey date: FRIDAY		19 16/10/20	Survey Type: MANUAL

Civic Engineers Dale Street Manchester

Licence No : 758701

LIST OF SITES relevant to selection parameters (Cont.)

17	LU-03-C-04 RIVER COURT DROGHEDA	BLOCKS OF FLATS		LOUTH
	Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings:		42	
	Survey date: WEDNESDAY		22/09/21	Survey Type: MANUAL
18	MA-03-C-01 KNOCK ROAD CLAREMORRIS	BLOCKS OF FLATS		MAYO
	Edge of Town Centre No Sub Category Total No of Dwellings:		22	
	Survey date: TUESDAY		14/09/21	Survey Type: MANUAL
19	MS-03-C-02 SOUTH FERRY QUAY LIVERPOOL BRUNSWICK DOCK	BLOCKS OF FLATS		MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:		184	
	Survey date: TUESDAY		13/11/18	Survey Type: MANUAL
20	MS-03-C-03 MARINERS WHARF LIVERPOOL QUEENS DOCK	BLOCK OF FLATS		MERSEYSIDE
	Suburban Area (PPS6 Out of Centre) Development Zone Total No of Dwellings:		9	
	Survey date: TUESDAY		13/11/18	Survey Type: MANUAL
21	MS-03-C-04 HOY DRIVE NEWTON-LE-WILLOWS EARLESTOWN	BLOCK OF FLATS		MERSEYSIDE
	Edge of Town Centre Residential Zone Total No of Dwellings:		24	
	Survey date: MONDAY		12/04/21	Survey Type: MANUAL
22	NF-03-C-02 HALL ROAD NORWICH LAKENHAM	MIXED FLATS & HOUSES		NORFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:		82	
	Survey date: MONDAY		18/11/19	Survey Type: MANUAL
23	NG-03-C-01 LAWRENCE WAY NOTTINGHAM	HOUSES (SPLIT INTO FLATS)		NOTTINGHAM
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings:		56	
	Survey date: TUESDAY		08/11/16	Survey Type: MANUAL
24	NG-03-C-02 CASTLE MARINA ROAD NOTTINGHAM	HOUSES (SPLIT INTO FLATS)		NOTTINGHAM
	Suburban Area (PPS6 Out of Centre) No Sub Category Total No of Dwellings:		135	
	Survey date: WEDNESDAY		09/11/16	Survey Type: MANUAL

LIST OF SITES relevant to selection parameters (Cont.)

25	NG-03-C-03 CANAL STREET NOTTINGHAM	BLOCK OF FLATS		NOTTINGHAM
	Town Centre Built-Up Zone Total No of Dwellings:			
	Survey date: MONDAY		46	Survey Type: MANUAL
26	PO-03-C-01 CROSS STREET PORTSMOUTH	BLOCKS OF FLATS	02/10/23	PORTSMOUTH
	Edge of Town Centre Built-Up Zone Total No of Dwellings:			
	Survey date: TUESDAY		90	Survey Type: MANUAL
27	SF-03-C-04 SAINT MARY'S ROAD IPSWICH	BLOCKS OF FLATS	05/06/18	SUFFOLK
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:			
	Survey date: WEDNESDAY		56	Survey Type: MANUAL
28	SF-03-C-05 FORE STREET IPSWICH	BLOCKS OF FLATS	16/09/20	SUFFOLK
	IPSWICH WATERFRONT Edge of Town Centre Development Zone Total No of Dwellings:			
	Survey date: WEDNESDAY		69	Survey Type: MANUAL
29	SH-03-C-01 ABBEY FOREGATE SHREWSBURY	BLOCK OF FLATS	23/06/21	SHROPSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:			
	Survey date: MONDAY		47	Survey Type: MANUAL
30	SH-03-C-02 ABBEY FOREGATE SHREWSBURY	BLOCK OF FLATS	19/06/23	SHROPSHIRE
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings:			
	Survey date: FRIDAY		12	Survey Type: MANUAL
31	WM-03-C-04 GILLQUART WAY COVENTRY	BLOCKS OF FLATS	16/06/23	WEST MIDLANDS
	PARKSIDE Edge of Town Centre Residential Zone Total No of Dwellings:			
	Survey date: FRIDAY		55	Survey Type: MANUAL
32	WS-03-C-01 GORING ROAD WORTHING	BLOCKS OF FLATS	11/11/16	WEST SUSSEX
	GORING-BY-SEA Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings:			
	Survey date: WEDNESDAY		18	Survey Type: MANUAL
			11/05/22	

LIST OF SITES relevant to selection parameters (Cont.)

33	WX-03-C-01	BLOCKS OF FLATS	WEXFORD
	UPPER GEORGE'S STREET		
	WEXFORD		
	Edge of Town Centre		
	Residential Zone		
	Total No of Dwellings:	28	
	Survey date: THURSDAY	20/04/23	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.

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

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.037	33	72	0.147	33	72	0.184
08:00 - 09:00	33	72	0.064	33	72	0.189	33	72	0.253
09:00 - 10:00	33	72	0.079	33	72	0.080	33	72	0.159
10:00 - 11:00	33	72	0.060	33	72	0.075	33	72	0.135
11:00 - 12:00	33	72	0.062	33	72	0.077	33	72	0.139
12:00 - 13:00	33	72	0.075	33	72	0.079	33	72	0.154
13:00 - 14:00	33	72	0.069	33	72	0.077	33	72	0.146
14:00 - 15:00	33	72	0.077	33	72	0.077	33	72	0.154
15:00 - 16:00	33	72	0.107	33	72	0.072	33	72	0.179
16:00 - 17:00	33	72	0.117	33	72	0.070	33	72	0.187
17:00 - 18:00	33	72	0.147	33	72	0.080	33	72	0.227
18:00 - 19:00	33	72	0.149	33	72	0.090	33	72	0.239
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	1.043			1.113			2.156		

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: 9 - 332 (units:)
Survey date date range: 01/01/16 - 02/10/23
Number of weekdays (Monday-Friday): 33
Number of Saturdays: 0
Number of Sundays: 0
Surveys automatically removed from selection: 1
Surveys manually removed from selection: 0

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

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

TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.003	33	72	0.004	33	72	0.007
08:00 - 09:00	33	72	0.003	33	72	0.004	33	72	0.007
09:00 - 10:00	33	72	0.005	33	72	0.005	33	72	0.010
10:00 - 11:00	33	72	0.002	33	72	0.003	33	72	0.005
11:00 - 12:00	33	72	0.005	33	72	0.005	33	72	0.010
12:00 - 13:00	33	72	0.005	33	72	0.004	33	72	0.009
13:00 - 14:00	33	72	0.003	33	72	0.004	33	72	0.007
14:00 - 15:00	33	72	0.003	33	72	0.003	33	72	0.006
15:00 - 16:00	33	72	0.003	33	72	0.003	33	72	0.006
16:00 - 17:00	33	72	0.005	33	72	0.005	33	72	0.010
17:00 - 18:00	33	72	0.002	33	72	0.003	33	72	0.005
18:00 - 19:00	33	72	0.006	33	72	0.006	33	72	0.012
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.045			0.049			0.094		

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.001	33	72	0.001	33	72	0.002
08:00 - 09:00	33	72	0.001	33	72	0.000	33	72	0.001
09:00 - 10:00	33	72	0.001	33	72	0.001	33	72	0.002
10:00 - 11:00	33	72	0.002	33	72	0.002	33	72	0.004
11:00 - 12:00	33	72	0.002	33	72	0.002	33	72	0.004
12:00 - 13:00	33	72	0.001	33	72	0.001	33	72	0.002
13:00 - 14:00	33	72	0.000	33	72	0.000	33	72	0.000
14:00 - 15:00	33	72	0.000	33	72	0.001	33	72	0.001
15:00 - 16:00	33	72	0.000	33	72	0.000	33	72	0.000
16:00 - 17:00	33	72	0.000	33	72	0.000	33	72	0.000
17:00 - 18:00	33	72	0.000	33	72	0.000	33	72	0.000
18:00 - 19:00	33	72	0.000	33	72	0.000	33	72	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.008			0.008			0.016		

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.001	33	72	0.010	33	72	0.011
08:00 - 09:00	33	72	0.002	33	72	0.016	33	72	0.018
09:00 - 10:00	33	72	0.001	33	72	0.005	33	72	0.006
10:00 - 11:00	33	72	0.004	33	72	0.004	33	72	0.008
11:00 - 12:00	33	72	0.005	33	72	0.004	33	72	0.009
12:00 - 13:00	33	72	0.002	33	72	0.003	33	72	0.005
13:00 - 14:00	33	72	0.005	33	72	0.003	33	72	0.008
14:00 - 15:00	33	72	0.005	33	72	0.005	33	72	0.010
15:00 - 16:00	33	72	0.005	33	72	0.003	33	72	0.008
16:00 - 17:00	33	72	0.007	33	72	0.003	33	72	0.010
17:00 - 18:00	33	72	0.013	33	72	0.005	33	72	0.018
18:00 - 19:00	33	72	0.006	33	72	0.005	33	72	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.056			0.066			0.122

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.028	33	72	0.134	33	72	0.162
08:00 - 09:00	33	72	0.052	33	72	0.173	33	72	0.225
09:00 - 10:00	33	72	0.063	33	72	0.067	33	72	0.130
10:00 - 11:00	33	72	0.044	33	72	0.056	33	72	0.100
11:00 - 12:00	33	72	0.045	33	72	0.060	33	72	0.105
12:00 - 13:00	33	72	0.056	33	72	0.063	33	72	0.119
13:00 - 14:00	33	72	0.059	33	72	0.062	33	72	0.121
14:00 - 15:00	33	72	0.066	33	72	0.067	33	72	0.133
15:00 - 16:00	33	72	0.091	33	72	0.059	33	72	0.150
16:00 - 17:00	33	72	0.102	33	72	0.056	33	72	0.158
17:00 - 18:00	33	72	0.135	33	72	0.071	33	72	0.206
18:00 - 19:00	33	72	0.136	33	72	0.078	33	72	0.214
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.877			0.946			1.823

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
LGVs

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.004	33	72	0.008	33	72	0.012
08:00 - 09:00	33	72	0.008	33	72	0.010	33	72	0.018
09:00 - 10:00	33	72	0.010	33	72	0.007	33	72	0.017
10:00 - 11:00	33	72	0.011	33	72	0.014	33	72	0.025
11:00 - 12:00	33	72	0.009	33	72	0.009	33	72	0.018
12:00 - 13:00	33	72	0.012	33	72	0.010	33	72	0.022
13:00 - 14:00	33	72	0.006	33	72	0.010	33	72	0.016
14:00 - 15:00	33	72	0.007	33	72	0.006	33	72	0.013
15:00 - 16:00	33	72	0.013	33	72	0.010	33	72	0.023
16:00 - 17:00	33	72	0.010	33	72	0.009	33	72	0.019
17:00 - 18:00	33	72	0.009	33	72	0.004	33	72	0.013
18:00 - 19:00	33	72	0.005	33	72	0.005	33	72	0.010
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.104			0.102			0.206		

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 03 - RESIDENTIAL/C - FLATS PRIVATELY OWNED
MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	33	72	0.000	33	72	0.000	33	72	0.000
08:00 - 09:00	33	72	0.000	33	72	0.001	33	72	0.001
09:00 - 10:00	33	72	0.000	33	72	0.000	33	72	0.000
10:00 - 11:00	33	72	0.000	33	72	0.001	33	72	0.001
11:00 - 12:00	33	72	0.001	33	72	0.001	33	72	0.002
12:00 - 13:00	33	72	0.000	33	72	0.001	33	72	0.001
13:00 - 14:00	33	72	0.001	33	72	0.001	33	72	0.002
14:00 - 15:00	33	72	0.000	33	72	0.000	33	72	0.000
15:00 - 16:00	33	72	0.001	33	72	0.000	33	72	0.001
16:00 - 17:00	33	72	0.000	33	72	0.000	33	72	0.000
17:00 - 18:00	33	72	0.002	33	72	0.002	33	72	0.004
18:00 - 19:00	33	72	0.002	33	72	0.002	33	72	0.004
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.007			0.009			0.016		

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.

Calculation Reference: AUDIT-758701-241008-1000

TRIP RATE CALCULATION SELECTION PARAMETERS:

Land Use : 03 - RESIDENTIAL
Category : D - AFFORDABLE/LOCAL AUTHORITY FLATS
TOTAL VEHICLES

<u>Selected regions and areas:</u>		
02	SOUTH EAST	1 days
	HF HERTFORDSHIRE	
	WS WEST SUSSEX	1 days
03	SOUTH WEST	
	GS GLOUCESTERSHIRE	2 days
07	YORKSHIRE & NORTH LINCOLNSHIRE	
	LS LEEDS	1 days
	SE SHEFFIELD	1 days
10	WALES	
	CF CARDIFF	1 days
15	GREATER DUBLIN	
	DL DUBLIN	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: No of Dwellings
Actual Range: 10 to 111 (units:)
Range Selected by User: 6 to 467 (units:)

Parking Spaces Range: All Surveys Included

Parking Spaces per Dwelling Range: All Surveys Included

Bedrooms per Dwelling Range: All Surveys Included

Percentage of dwellings privately owned: All Surveys Included

Public Transport Provision:
Selection by: Include all surveys

Date Range: 01/01/16 to 05/03/24

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

Selected survey days:
Monday 1 days
Tuesday 1 days
Wednesday 1 days
Thursday 3 days
Friday 2 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:
Town Centre 1
Edge of Town Centre 3
Suburban Area (PPS6 Out of Centre) 3
Neighbourhood Centre (PPS6 Local Centre) 1

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:
Residential Zone 7
Built-Up Zone 1

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 5 days - Selected
Servicing vehicles Excluded 3 days - Selected

Secondary Filtering selection:

Use Class:
C3 8 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®.

Population within 500m Range:
All Surveys Included

Secondary Filtering selection (Cont.):

<u>Population within 1 mile:</u>	
5,001 to 10,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	5 days
50,001 to 100,000	1 days

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

<u>Population within 5 miles:</u>	
125,001 to 250,000	4 days
250,001 to 500,000	2 days
500,001 or More	2 days

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

<u>Car ownership within 5 miles:</u>	
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.

<u>Travel Plan:</u>	
No	8 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.

<u>PTAL Rating:</u>	
No PTAL Present	8 days

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

LIST OF SITES relevant to selection parameters

1	CF-03-D-01 TYN-Y-PARC ROAD CARDIFF WHITCHURCH Neighbourhood Centre (PPS6 Local Centre) Residential Zone Total No of Dwellings: Survey date: FRIDAY	BLOCKS OF FLATS	CARDIFF	24 07/10/16
2	DL-03-D-01 CHARLEMONT STREET DUBLIN PORTOBELLO Town Centre Built-Up Zone Total No of Dwellings: Survey date: THURSDAY	BLOCKS OF FLATS	DUBLIN Survey Type: MANUAL	
3	GS-03-D-01 SAINT STEPHEN'S ROAD CHELTENHAM SPA	BLOCKS OF FLATS	GLOUCESTERSHIRE Survey Type: MANUAL	79 26/09/19
4	GS-03-D-02 PRINCESS ELIZABETH WAY CHELTENHAM SPA	BLOCKS OF FLATS	GLOUCESTERSHIRE Survey Type: MANUAL	40 04/05/23
5	HF-03-D-02 SLIAM RD STEVENAGE	BLOCK OF FLATS	HERTFORDSHIRE Survey Type: MANUAL	27 04/05/23
6	LS-03-D-03 PASTURE MOUNT LEEDS ARMLEY Edge of Town Centre Residential Zone Total No of Dwellings: Survey date: FRIDAY	BLOCK OF FLATS	LEEDS Survey Type: MANUAL	103 28/06/19
7	SE-03-D-01 SAINT LAWRENCE ROAD SHEFFIELD	BLOCK OF FLATS	SHEFFIELD Survey Type: MANUAL	43 06/06/23
	Suburban Area (PPS6 Out of Centre) Residential Zone Total No of Dwellings: Survey date: WEDNESDAY		Survey Type: MANUAL	10 21/06/23

LIST OF SITES relevant to selection parameters (Cont.)

8	WS-03-D-01 SHELLEY ROAD WORTHING	BLOCKS OF FLATS	WEST SUSSEX
	Edge of Town Centre Residential Zone		
	Total No of Dwellings:	111	
	Survey date: MONDAY	16/05/22	Survey Type: MANUAL

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

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS

TOTAL VEHICLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.043	8	55	0.094	8	55	0.137
08:00 - 09:00	8	55	0.055	8	55	0.108	8	55	0.163
09:00 - 10:00	8	55	0.098	8	55	0.096	8	55	0.194
10:00 - 11:00	8	55	0.055	8	55	0.089	8	55	0.144
11:00 - 12:00	8	55	0.089	8	55	0.092	8	55	0.181
12:00 - 13:00	8	55	0.071	8	55	0.073	8	55	0.144
13:00 - 14:00	8	55	0.101	8	55	0.101	8	55	0.202
14:00 - 15:00	8	55	0.096	8	55	0.098	8	55	0.194
15:00 - 16:00	8	55	0.130	8	55	0.105	8	55	0.235
16:00 - 17:00	8	55	0.144	8	55	0.082	8	55	0.226
17:00 - 18:00	8	55	0.121	8	55	0.098	8	55	0.219
18:00 - 19:00	8	55	0.082	8	55	0.085	8	55	0.167
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	1.085			1.121			2.206		

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: 10 - 111 (units:)
Survey date date range: 01/01/16 - 05/03/24
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
TAXIS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.000	8	55	0.000	8	55	0.000
08:00 - 09:00	8	55	0.002	8	55	0.002	8	55	0.004
09:00 - 10:00	8	55	0.009	8	55	0.009	8	55	0.018
10:00 - 11:00	8	55	0.002	8	55	0.002	8	55	0.004
11:00 - 12:00	8	55	0.007	8	55	0.007	8	55	0.014
12:00 - 13:00	8	55	0.000	8	55	0.000	8	55	0.000
13:00 - 14:00	8	55	0.007	8	55	0.007	8	55	0.014
14:00 - 15:00	8	55	0.005	8	55	0.005	8	55	0.010
15:00 - 16:00	8	55	0.002	8	55	0.002	8	55	0.004
16:00 - 17:00	8	55	0.000	8	55	0.000	8	55	0.000
17:00 - 18:00	8	55	0.007	8	55	0.007	8	55	0.014
18:00 - 19:00	8	55	0.000	8	55	0.000	8	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.041			0.041			0.082		

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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
OGVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.000	8	55	0.000	8	55	0.000
08:00 - 09:00	8	55	0.000	8	55	0.000	8	55	0.000
09:00 - 10:00	8	55	0.002	8	55	0.002	8	55	0.004
10:00 - 11:00	8	55	0.002	8	55	0.000	8	55	0.002
11:00 - 12:00	8	55	0.002	8	55	0.005	8	55	0.007
12:00 - 13:00	8	55	0.002	8	55	0.002	8	55	0.004
13:00 - 14:00	8	55	0.000	8	55	0.000	8	55	0.000
14:00 - 15:00	8	55	0.002	8	55	0.002	8	55	0.004
15:00 - 16:00	8	55	0.002	8	55	0.002	8	55	0.004
16:00 - 17:00	8	55	0.000	8	55	0.000	8	55	0.000
17:00 - 18:00	8	55	0.000	8	55	0.000	8	55	0.000
18:00 - 19:00	8	55	0.000	8	55	0.000	8	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.012			0.013			0.025		

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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
PSVS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.000	8	55	0.000	8	55	0.000
08:00 - 09:00	8	55	0.002	8	55	0.000	8	55	0.002
09:00 - 10:00	8	55	0.000	8	55	0.002	8	55	0.002
10:00 - 11:00	8	55	0.000	8	55	0.000	8	55	0.000
11:00 - 12:00	8	55	0.000	8	55	0.000	8	55	0.000
12:00 - 13:00	8	55	0.000	8	55	0.000	8	55	0.000
13:00 - 14:00	8	55	0.000	8	55	0.000	8	55	0.000
14:00 - 15:00	8	55	0.000	8	55	0.000	8	55	0.000
15:00 - 16:00	8	55	0.000	8	55	0.000	8	55	0.000
16:00 - 17:00	8	55	0.000	8	55	0.000	8	55	0.000
17:00 - 18:00	8	55	0.000	8	55	0.000	8	55	0.000
18:00 - 19:00	8	55	0.000	8	55	0.000	8	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.002			0.002			0.004		

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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
CYCLISTS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.000	8	55	0.005	8	55	0.005
08:00 - 09:00	8	55	0.000	8	55	0.007	8	55	0.007
09:00 - 10:00	8	55	0.002	8	55	0.000	8	55	0.002
10:00 - 11:00	8	55	0.000	8	55	0.005	8	55	0.005
11:00 - 12:00	8	55	0.002	8	55	0.002	8	55	0.004
12:00 - 13:00	8	55	0.005	8	55	0.002	8	55	0.007
13:00 - 14:00	8	55	0.000	8	55	0.002	8	55	0.002
14:00 - 15:00	8	55	0.000	8	55	0.002	8	55	0.002
15:00 - 16:00	8	55	0.007	8	55	0.009	8	55	0.016
16:00 - 17:00	8	55	0.002	8	55	0.002	8	55	0.004
17:00 - 18:00	8	55	0.000	8	55	0.000	8	55	0.000
18:00 - 19:00	8	55	0.009	8	55	0.002	8	55	0.011
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.027			0.038			0.065

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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
CARS

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.037	8	55	0.078	8	55	0.115
08:00 - 09:00	8	55	0.039	8	55	0.094	8	55	0.133
09:00 - 10:00	8	55	0.069	8	55	0.064	8	55	0.133
10:00 - 11:00	8	55	0.037	8	55	0.066	8	55	0.103
11:00 - 12:00	8	55	0.064	8	55	0.069	8	55	0.133
12:00 - 13:00	8	55	0.050	8	55	0.053	8	55	0.103
13:00 - 14:00	8	55	0.069	8	55	0.066	8	55	0.135
14:00 - 15:00	8	55	0.078	8	55	0.076	8	55	0.154
15:00 - 16:00	8	55	0.101	8	55	0.080	8	55	0.181
16:00 - 17:00	8	55	0.119	8	55	0.071	8	55	0.190
17:00 - 18:00	8	55	0.103	8	55	0.076	8	55	0.179
18:00 - 19:00	8	55	0.071	8	55	0.078	8	55	0.149
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	0.837			0.871			1.708		

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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
LGVs

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.007	8	55	0.016	8	55	0.023
08:00 - 09:00	8	55	0.011	8	55	0.011	8	55	0.022
09:00 - 10:00	8	55	0.018	8	55	0.018	8	55	0.036
10:00 - 11:00	8	55	0.014	8	55	0.018	8	55	0.032
11:00 - 12:00	8	55	0.016	8	55	0.011	8	55	0.027
12:00 - 13:00	8	55	0.016	8	55	0.016	8	55	0.032
13:00 - 14:00	8	55	0.025	8	55	0.023	8	55	0.048
14:00 - 15:00	8	55	0.005	8	55	0.014	8	55	0.019
15:00 - 16:00	8	55	0.023	8	55	0.021	8	55	0.044
16:00 - 17:00	8	55	0.025	8	55	0.011	8	55	0.036
17:00 - 18:00	8	55	0.009	8	55	0.011	8	55	0.020
18:00 - 19:00	8	55	0.011	8	55	0.007	8	55	0.018
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.180			0.177			0.357

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 03 - RESIDENTIAL/D - AFFORDABLE/LOCAL AUTHORITY FLATS
MOTOR CYCLES

Calculation factor: 1 DWELLS

BOLD print indicates peak (busiest) period

Time Range	ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate	No. Days	Ave. DWELLS	Trip Rate
00:00 - 01:00									
01:00 - 02:00									
02:00 - 03:00									
03:00 - 04:00									
04:00 - 05:00									
05:00 - 06:00									
06:00 - 07:00									
07:00 - 08:00	8	55	0.000	8	55	0.000	8	55	0.000
08:00 - 09:00	8	55	0.000	8	55	0.000	8	55	0.000
09:00 - 10:00	8	55	0.000	8	55	0.000	8	55	0.000
10:00 - 11:00	8	55	0.000	8	55	0.002	8	55	0.002
11:00 - 12:00	8	55	0.000	8	55	0.000	8	55	0.000
12:00 - 13:00	8	55	0.002	8	55	0.002	8	55	0.004
13:00 - 14:00	8	55	0.000	8	55	0.005	8	55	0.005
14:00 - 15:00	8	55	0.007	8	55	0.002	8	55	0.009
15:00 - 16:00	8	55	0.002	8	55	0.000	8	55	0.002
16:00 - 17:00	8	55	0.000	8	55	0.000	8	55	0.000
17:00 - 18:00	8	55	0.002	8	55	0.005	8	55	0.007
18:00 - 19:00	8	55	0.000	8	55	0.000	8	55	0.000
19:00 - 20:00									
20:00 - 21:00									
21:00 - 22:00									
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.013			0.016			0.029

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 CALCULATION SELECTION PARAMETERS:

Land Use : 06 - HOTEL, FOOD & DRINK

Category : K - CAFE

TOTAL VEHICLES

<u>Selected regions and areas:</u>		
04	EAST ANGLIA	1 days
	NF NORFOLK	
05	EAST MIDLANDS	1 days
	LN LINCOLNSHIRE	
08	NORTH WEST	2 days
	GM GREATER MANCHESTER	
09	NORTH	2 days
	TW TYNE & WEAR	
14	LEINSTER	1 days
	WC WICKLOW	
	WX WEXFORD	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: 38 to 325 (units: sqm)

Range Selected by User: 38 to 325 (units: sqm)

Parking Spaces Range: All Surveys Included

Public Transport Provision:

Selection by: Include all surveys

Date Range: 01/01/16 to 20/09/23

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:

Tuesday 3 days

Wednesday 3 days

Thursday 2 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:

Town Centre 8

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:

Retail Zone 1

Built-Up Zone 5

High Street 1

No Sub Category 1

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 7 days - Selected

Servicing vehicles Excluded 1 days - Selected

Secondary Filtering selection:

Use Class: 8 days

E(b)

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®.

Population within 500m Range:

All Surveys Included

Secondary Filtering selection (Cont.):

<u>Population within 1 mile:</u>	
5,001 to 10,000	2 days
15,001 to 20,000	1 days
20,001 to 25,000	1 days
25,001 to 50,000	3 days
50,001 to 100,000	1 days

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

<u>Population within 5 miles:</u>	
5,001 to 25,000	1 days
25,001 to 50,000	1 days
50,001 to 75,000	1 days
125,001 to 250,000	1 days
500,001 or More	4 days

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

<u>Car ownership within 5 miles:</u>	
0.6 to 1.0	5 days
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.

<u>Travel Plan:</u>	
No	8 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.

<u>PTAL Rating:</u>	
No PTAL Present	8 days

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

LIST OF SITES relevant to selection parameters

1	GM-06-K-01 DEANGATE MANCHESTER	CAFÉ		GREATER MANCHESTER
	Town Centre Built-Up Zone Total Gross floor area:			
	Survey date: TUESDAY	200 sqm		Survey Type: MANUAL
2	GM-06-K-02 DEANGATE MANCHESTER	CAFÉ	19/04/22	GREATER MANCHESTER
	Town Centre Built-Up Zone Total Gross floor area:			
	Survey date: WEDNESDAY	38 sqm		Survey Type: MANUAL
3	LN-06-K-01 RED LION SQUARE STAMFORD	CAFÉ & TEA ROOM	20/09/23	LINCOLNSHIRE
	Town Centre Built-Up Zone Total Gross floor area:			
	Survey date: WEDNESDAY	190 sqm		Survey Type: MANUAL
4	NF-06-K-01 SAINT GILES STREET NORWICH	CAFÉ	12/10/21	NORFOLK
	Town Centre Built-Up Zone Total Gross floor area:			
	Survey date: TUESDAY	82 sqm		Survey Type: MANUAL
5	TW-06-K-01 NORTHUMBERLAND STREET NEWCASTLE UPON TYNE	COSTA COFFEE	20/09/22	TYNE & WEAR
	Town Centre Retail Zone Total Gross floor area:			
	Survey date: WEDNESDAY	325 sqm		Survey Type: MANUAL
6	TW-06-K-02 DEAN STREET NEWCASTLE UPON TYNE	CAFÉ	06/09/23	TYNE & WEAR
	Town Centre Built-Up Zone Total Gross floor area:			
	Survey date: THURSDAY	90 sqm		Survey Type: MANUAL
7	WC-06-K-01 FITZWILLIAM SQUARE WICKLOW	CAFÉ	07/09/23	WICKLOW
	Town Centre High Street Total Gross floor area:			
	Survey date: WEDNESDAY	320 sqm		Survey Type: MANUAL
8	WX-06-K-01 MALLIN STREET WEXFORD	CAFÉ	16/11/22	WEXFORD
	Town Centre No Sub Category Total Gross floor area:			
	Survey date: THURSDAY	60 sqm		Survey Type: MANUAL
		20/04/23		

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

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
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 - 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	2	182	1.653	2	182	0.826	2	182	2.479
07:00 - 08:00	3	228	1.903	3	228	1.171	3	228	3.074
08:00 - 09:00	7	178	1.365	7	178	1.205	7	178	2.570
09:00 - 10:00	8	163	4.138	8	163	2.912	8	163	7.050
10:00 - 11:00	8	163	4.291	8	163	3.831	8	163	8.122
11:00 - 12:00	8	163	3.295	8	163	3.372	8	163	6.667
12:00 - 13:00	8	163	3.908	8	163	3.602	8	163	7.510
13:00 - 14:00	8	163	4.368	8	163	4.138	8	163	8.506
14:00 - 15:00	8	163	2.989	8	163	3.218	8	163	6.207
15:00 - 16:00	8	163	2.069	8	163	2.529	8	163	4.598
16:00 - 17:00	7	175	1.554	7	175	1.635	7	175	3.189
17:00 - 18:00	5	189	1.060	5	189	1.273	5	189	2.333
18:00 - 19:00	2	182	1.928	2	182	1.377	2	182	3.305
19:00 - 20:00	2	182	1.928	2	182	3.306	2	182	5.234
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000
21:00 - 22:00	1	38	0.000	1	38	5.263	1	38	5.263
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			36.449			39.658			76.107

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: 38 - 325 (units: sqm)
Survey date date range: 01/01/16 - 20/09/23
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 show. Finally, the number of survey days that have been manually removed from the selected set outside of the standard filtering procedure are displayed.

TRIP RATE for Land Use 06 - HOTEL, FOOD & DRINK/K - CAFE
TAXIS

Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	
Time Range										
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	2	182	0.000	2	182	0.000	2	182	0.000	
07:00 - 08:00	3	228	0.000	3	228	0.000	3	228	0.000	
08:00 - 09:00	7	178	0.161	7	178	0.161	7	178	0.322	
09:00 - 10:00	8	163	0.077	8	163	0.077	8	163	0.154	
10:00 - 11:00	8	163	0.153	8	163	0.153	8	163	0.306	
11:00 - 12:00	8	163	0.307	8	163	0.307	8	163	0.614	
12:00 - 13:00	8	163	0.153	8	163	0.153	8	163	0.306	
13:00 - 14:00	8	163	0.307	8	163	0.307	8	163	0.614	
14:00 - 15:00	8	163	0.153	8	163	0.153	8	163	0.306	
15:00 - 16:00	8	163	0.000	8	163	0.000	8	163	0.000	
16:00 - 17:00	7	175	0.000	7	175	0.000	7	175	0.000	
17:00 - 18:00	5	189	0.000	5	189	0.000	5	189	0.000	
18:00 - 19:00	2	182	0.275	2	182	0.275	2	182	0.550	
19:00 - 20:00	2	182	0.275	2	182	0.275	2	182	0.550	
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000	
21:00 - 22:00	1	38	0.000	1	38	0.000	1	38	0.000	
22:00 - 23:00										
23:00 - 24:00										
Total Rates:			1.861			1.861			3.722	

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 06 - HOTEL, FOOD & DRINK/K - CAFE
OGVS

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	2	182	0.000	2	182	0.000	2	182	0.000
07:00 - 08:00	3	228	0.146	3	228	0.146	3	228	0.292
08:00 - 09:00	7	178	0.000	7	178	0.000	7	178	0.000
09:00 - 10:00	8	163	0.077	8	163	0.077	8	163	0.154
10:00 - 11:00	8	163	0.000	8	163	0.000	8	163	0.000
11:00 - 12:00	8	163	0.000	8	163	0.000	8	163	0.000
12:00 - 13:00	8	163	0.000	8	163	0.000	8	163	0.000
13:00 - 14:00	8	163	0.000	8	163	0.000	8	163	0.000
14:00 - 15:00	8	163	0.077	8	163	0.077	8	163	0.154
15:00 - 16:00	8	163	0.000	8	163	0.000	8	163	0.000
16:00 - 17:00	7	175	0.000	7	175	0.000	7	175	0.000
17:00 - 18:00	5	189	0.000	5	189	0.000	5	189	0.000
18:00 - 19:00	2	182	0.000	2	182	0.000	2	182	0.000
19:00 - 20:00	2	182	0.000	2	182	0.000	2	182	0.000
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000
21:00 - 22:00	1	38	0.000	1	38	0.000	1	38	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			0.300			0.300			0.600

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 06 - HOTEL, FOOD & DRINK/K - CAFE
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	2	182	0.275	2	182	0.000	2	182	0.275
07:00 - 08:00	3	228	0.293	3	228	0.439	3	228	0.732
08:00 - 09:00	7	178	0.080	7	178	0.080	7	178	0.160
09:00 - 10:00	8	163	0.307	8	163	0.153	8	163	0.460
10:00 - 11:00	8	163	0.077	8	163	0.230	8	163	0.307
11:00 - 12:00	8	163	0.307	8	163	0.153	8	163	0.460
12:00 - 13:00	8	163	0.460	8	163	0.383	8	163	0.843
13:00 - 14:00	8	163	0.307	8	163	0.383	8	163	0.690
14:00 - 15:00	8	163	0.153	8	163	0.230	8	163	0.383
15:00 - 16:00	8	163	0.000	8	163	0.000	8	163	0.000
16:00 - 17:00	7	175	0.082	7	175	0.164	7	175	0.246
17:00 - 18:00	5	189	0.106	5	189	0.000	5	189	0.106
18:00 - 19:00	2	182	0.000	2	182	0.275	2	182	0.275
19:00 - 20:00	2	182	0.551	2	182	0.551	2	182	1.102
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000
21:00 - 22:00	1	38	0.000	1	38	0.000	1	38	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:	2.998			3.041			6.039		

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 06 - HOTEL, FOOD & DRINK/K - CAFE
CARS

Calculation factor: 100 sqm

BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	
Time Range										
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	2	182	1.653	2	182	0.826	2	182	2.479	
07:00 - 08:00	3	228	1.171	3	228	0.586	3	228	1.757	
08:00 - 09:00	7	178	1.124	7	178	0.884	7	178	2.008	
09:00 - 10:00	8	163	3.448	8	163	2.375	8	163	5.823	
10:00 - 11:00	8	163	3.985	8	163	3.448	8	163	7.433	
11:00 - 12:00	8	163	2.989	8	163	2.989	8	163	5.978	
12:00 - 13:00	8	163	3.525	8	163	3.218	8	163	6.743	
13:00 - 14:00	8	163	3.985	8	163	3.831	8	163	7.816	
14:00 - 15:00	8	163	2.605	8	163	2.759	8	163	5.364	
15:00 - 16:00	8	163	1.992	8	163	2.529	8	163	4.521	
16:00 - 17:00	7	175	1.554	7	175	1.554	7	175	3.108	
17:00 - 18:00	5	189	1.060	5	189	1.273	5	189	2.333	
18:00 - 19:00	2	182	1.377	2	182	0.826	2	182	2.203	
19:00 - 20:00	2	182	1.377	2	182	2.755	2	182	4.132	
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000	
21:00 - 22:00	1	38	0.000	1	38	5.263	1	38	5.263	
22:00 - 23:00										
23:00 - 24:00										
Total Rates:			31.845			35.116			66.961	

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 06 - HOTEL, FOOD & DRINK/K - CAFE
LGV/S

Calculation factor: 100 sqm
BOLD print indicates peak (busiest) period

		ARRIVALS			DEPARTURES			TOTALS		
	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	No. Days	Ave. GFA	Trip Rate	
Time Range										
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	2	182	0.000	2	182	0.000	2	182	0.000	
07:00 - 08:00	3	228	0.586	3	228	0.439	3	228	1.025	
08:00 - 09:00	7	178	0.080	7	178	0.161	7	178	0.241	
09:00 - 10:00	8	163	0.307	8	163	0.230	8	163	0.537	
10:00 - 11:00	8	163	0.000	8	163	0.077	8	163	0.077	
11:00 - 12:00	8	163	0.000	8	163	0.000	8	163	0.000	
12:00 - 13:00	8	163	0.000	8	163	0.000	8	163	0.000	
13:00 - 14:00	8	163	0.000	8	163	0.000	8	163	0.000	
14:00 - 15:00	8	163	0.000	8	163	0.000	8	163	0.000	
15:00 - 16:00	8	163	0.000	8	163	0.000	8	163	0.000	
16:00 - 17:00	7	175	0.000	7	175	0.000	7	175	0.000	
17:00 - 18:00	5	189	0.000	5	189	0.000	5	189	0.000	
18:00 - 19:00	2	182	0.000	2	182	0.000	2	182	0.000	
19:00 - 20:00	2	182	0.000	2	182	0.000	2	182	0.000	
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000	
21:00 - 22:00	1	38	0.000	1	38	0.000	1	38	0.000	
22:00 - 23:00										
23:00 - 24:00										
Total Rates:			0.973	0.907			1.880			

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 06 - HOTEL, FOOD & DRINK/K - CAFE
MOTOR CYCLES

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	2	182	0.000	2	182	0.000	2	182	0.000
07:00 - 08:00	3	228	0.000	3	228	0.000	3	228	0.000
08:00 - 09:00	7	178	0.000	7	178	0.000	7	178	0.000
09:00 - 10:00	8	163	0.230	8	163	0.153	8	163	0.383
10:00 - 11:00	8	163	0.153	8	163	0.153	8	163	0.306
11:00 - 12:00	8	163	0.000	8	163	0.077	8	163	0.077
12:00 - 13:00	8	163	0.230	8	163	0.230	8	163	0.460
13:00 - 14:00	8	163	0.077	8	163	0.000	8	163	0.077
14:00 - 15:00	8	163	0.153	8	163	0.230	8	163	0.383
15:00 - 16:00	8	163	0.077	8	163	0.000	8	163	0.077
16:00 - 17:00	7	175	0.000	7	175	0.082	7	175	0.082
17:00 - 18:00	5	189	0.000	5	189	0.000	5	189	0.000
18:00 - 19:00	2	182	0.275	2	182	0.275	2	182	0.550
19:00 - 20:00	2	182	0.275	2	182	0.275	2	182	0.550
20:00 - 21:00	2	182	0.000	2	182	0.000	2	182	0.000
21:00 - 22:00	1	38	0.000	1	38	0.000	1	38	0.000
22:00 - 23:00									
23:00 - 24:00									
Total Rates:			1.470			1.475			2.945

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.

Appendix N- Stage 1 Road Safety Audit and Designer's Response



Chorlton Precinct

Stage 1 Road Safety Audit: Designer's Response v1.0

September 2025

**PREPARED FOR
PJ Livesey**

Stage 1 Road Safety Audit: Designer's Response v1.0

Prepared By	Rachel Cornfoot
Reviewed By	Emily Ingham
Report Reference	3062
Issued	Version 1.0 on 23 September 2025
Revised	

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2. Designer's Response 2

Appendix A: Stage 1 Road Safety Audit

1. Introduction

A planning application (Planning ref. 142652/FO/2025) has been submitted for the residential-led mixed use redevelopment of Chorlton Precinct (and Graeme House) in Chorlton, Manchester.

A Stage 1 Road Safety Audit was undertaken for the proposed development by Sevenairs Consulting Ltd in September 2025. The audit report is provided at Appendix A, with the Designer's Response detailed below.

2. Designer's Response

RSA Problem	RSA Recommendation	Designer's Response
A-01	It is recommended that the scope of changes to waiting restrictions to ensure safe use for all road users is established to inform the next stage of design.	Accepted. Changes to Traffic Regulation Orders will be set out through the Section 278 application process in the next stage of design.
A-02	It is recommended that the revised crossing need for users who rely on mobility aids are established to inform the next stage of design.	A review has been undertaken. The existing crossing point at Nicolas Road to the north of the site provides dropped kerbs and tactile paving. There are existing signalised pedestrian crossing (puffin) on the site frontages onto Barlow Moor Road to the east, and Wilbraham Road to the south, which feature pedestrian call buttons, tactile paving and dropped kerbs. At the junction of Barlow Moor Road and Wilbraham Road there are pedestrian-controlled signalised crossings with dropped kerbs and tactile paving. It is therefore considered that crossing movements for people relying on mobility aids are already accommodated and further action is not required.
A-03	It is recommended that suitable provision for pedestrians is made on both sides of Manchester Road between the development and Wilbraham Road and that suitable provision is made to prioritise pedestrian crossing needs over vehicle use at this location.	Manchester Road between the development and Wilbraham Road is outside the application red line boundary, therefore it is outside the scope of the application to make changes here.
A-04	It is recommended that an uncontrolled crossing point is provided on or near the pedestrian desire line and appropriate adjustments are made to the existing marked bays in the vicinity.	As in the response to A-02, pedestrian crossing connections into the surrounding areas are already well catered for with signalised crossings, dropped kerbs and tactile paving. More specifically, tactile paving, dropped kerbs and a c.11m wide raised table is already in place at the Nicolas Road / Barlow Moor Road junction. This is located optimally for the existing desire line for people walking north-south on Barlow Moor Road. The angle at which the proposed pedestrian route through the site connects into Nicolas Road allows pedestrian to use this

		<p>existing crossing point with little to no deviation from the desire line. The existing crossing is optimally located to serve both people walking on Barlow Moor Road and people walking through the future site as a single crossing point.</p> <p>As set out in the Transport Assessment (Section 4.5), TROs on Nicolas Road will be revised, relocating on-street parking/car club in order to accommodate the fire tender vehicle access route at the north end of the realigned Manchester Road. This will have the added benefit of improving visibility of the existing crossing point for pedestrians travelling northbound out of the proposed development.</p>
A-05	<p>It is recommended that provision is made for cyclists and other active mode users between Wilbraham Road and Barlow Moor Road.</p>	<p>No further action required, cyclists already very well accommodated:</p> <p>On the east side of the site, new segregated cycleways have been introduced (approx. February 2024) on both sides of Barlow Moor Road. These lead to a new CYCLOPS signalised junction at the intersection of Barlow Moor Road and Wilbraham Road. To the west of this junction there are short lengths of segregated cycleway along Wilbraham Road to link with the CYCLOPS facility. This high-quality dedicated cycle infrastructure makes this a safe, attractive route for use by cyclists. Although a slightly less direct route than through the site, this is likely a faster route and provides the benefit of avoiding a pedestrianised area.</p> <p>Bollards at each end of the pedestrianised area and the design features within the public realm signal this is a pedestrianised area and would discourage cycling at high speeds.</p>



Sevenairs Consulting Ltd

Chorlton Precinct, Chorlton-cum-Hardy, Manchester

Road Safety Audit Stage 1

September 2025



Document Control

Report Title:

Chorlton Precinct, Chorlton-cum-Hardy, Manchester – Road Safety Audit Stage 1

Date of Site Visit

8th September 2025

Document Reference

2025-09 Chorlton RSA1 – Revision 0

Report Prepared By:

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On behalf of

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Highway Authority / Overseeing Organisation
Manchester City Council

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Document History:

Revision	Date	Description	By
0	11.09.2025	For Issue	HV

Introduction

Commissioning and Scope

This report results from a Stage 1 Road Safety Audit carried out at the site of a town centre redevelopment referred to as Chorlton Precinct in Chorlton-cum-Hardy, Manchester. The audit was carried out at the request of Emily Ingham, Associate, Civic Engineers on behalf of the developer of the site.

The Road Safety Audit team membership was as follows:

The Audit Team	Haydn Vernals FCIHT FIHE CMILT MSORSA Directive 2008/96/EC (Certificate of Competency), Road Safety Team Leader in accordance with GG119
	Sarah Vernals BAHonsQTS NPQH, Road Safety Team Member in accordance with GG119
Audit Observers	None

The main project comprises of a town centre redevelopment to the west of Barlow Moor Road that will provide several new mixed-use buildings, a revised route between Manchester Road and Nicholas Road with associated access alterations as well as public realm works. Highway works include revisions to access arrangements to the rear of buildings along Wilbraham Road, minor modifications to the southern footway of Nicolas Road and closing up of the existing route through the site between Manchester Road and Nicholas Road to traffic other than for emergency access. The scope of this Road Safety Audit is to review the proposed highway works.

The audit has been carried out in accordance with the principles of the National Highways document GG 119 Road Safety Audit. A formal Road Safety Audit Brief was not provided to the Audit Team. However, information regarding the site was provided via email alongside the relevant scheme documents and drawings. This was considered by the Audit Team to provide sufficient detail to undertake the appropriate stage of audit.

The audit also comprised of a desk-top study where all documents and plans provided by the Design Team were reviewed. No departures from standard have been brought to the attention of the RSA team with regard to the scheme as designed.

Site Visit Attendance

A site visit took place comprising of the RSA team on Monday 8th September 2025 between 17:15 and 17:45 hours during which the weather was sunny and the road surface drying out following rainfall with some surface water puddles. Traffic conditions were heavy and congested on the adjacent main roads with pedestrians, cyclists and e-mobility users widely observed.

Documents Supplied

- Email proposal background
- 104-FCBS-ZZ-ZZ-DR-A-0600-P01 - Proposed GA Plan : Basement
- 104-FCBS-ZZ-ZZ-DR-A-0601-P01 - Proposed GA Plan : Ground Floor

- 1062-01U - Landscape Masterplan DRAFT
- 3062-CIV-XX-XX-H-D-0001-P02 – Visibility Splay out of Car Park
- 3062-CIV-XX-XX-H-D-0002-P02 – Fire Tender Tracking
- 3062-CIV-XX-XX-H-D-0003-P02 – LGV in Loading Bay
- 3062-CIV-XX-XX-H-D-0004-P02 – Refuse Vehicle in Loading Bay
- 3062-CIV-XX-XX-H-D-0005-P02 – Refuse Vehicle off Nicolas Road
- 3062-CIV-XX-XX-H-D-0006-P02 – LGV in Service Yard

Terms of Reference

The terms of reference of this Road Safety Audit are as described in the National Highways document GG119 Revision 2 Road Safety Audit. The Audit Team has examined and reported only on the road safety implications of the scheme as presented and has not examined or verified the compliance of the designs to any other criteria. However, to clearly explain a safety problem or the recommendation to resolve a problem, the Audit Team may on occasion have referred to a design standard for information only. No member of the Audit Team has been directly linked to the scheme design.

Each of the auditors' responses is classified as a 'Problem' that is likely to result in a significant road safety hazard. All comments and recommendations are referenced to the detailed design drawings and the locations have been indicated on the plan at the end of the report.

Where recommendations are made, these do not comprise design decisions, and it remains the responsibility of the Design Team to incorporate any changes into the scheme and consider any interactions between design elements.

Previous Road Safety Audits

The audit team have not been made aware of any previous Road Safety Audits.

Problems Raised at this Stage 1 RSA

PROBLEM – A-01

Location: Nicolas Road, Manchester Road and unnamed service road to rear of Wilbraham Road.

Summary: Network Management – Unsuitable waiting and loading controls may increase the risk of collisions linked to injudicious parking and loading.

The proposals are likely to make the route through the development more attractive for pedestrians and other active mode users. This will likely increase the use of footways both sides of Manchester Road to the south and introduce a second desire line crossing point to the north on Nicholas Road about 10-15m from Barlow Moor Road. Also, although some waiting restrictions are currently provided along the unnamed service road to the rear of Wilbraham Road, it is clear that controls in this area may not be sufficient enough to maintain safe passage for vehicles using the development car park or the loading area to the eastern end. Unsuitable waiting and loading controls may increase the risk of collisions linked to injudicious parking and loading.

RECOMMENDATION

It is recommended that the scope of changes to waiting restrictions to ensure safe use for all road users is established to inform the next stage of design.

PROBLEM – A-02

Location: Nicholas Road and Manchester Road.

Summary: Specific Road Users – Lack of crossing facilities may increase the risk of collisions involving users who rely on mobility aids.

At this early stage in the design, options for users who rely on mobility aids is unlikely to have been considered. Improved provision may be required for these users to cross the roads adjacent to the development or enter the development site. Without provision on Nicholas Road and Manchester Road, pedestrians who rely on mobility aids such as mobility scooters, wheelchairs, prams etc, may have difficulties finding suitable onward routes. Without suitable dropped crossing provision these users may find crossing the road difficult, travelling along carriageway areas to find a suitable point to traverse the kerb check. This may consequentially increase the risk of collisions involving these users.

RECOMMENDATION

It is recommended that the revised crossing need for users who rely on mobility aids are established to inform the next stage of design.

PROBLEM – A-03

Location: Manchester Road – Between Wilbraham Road and the development.

Summary: Pedestrians – Insufficient provision for pedestrians may increase the risk of collisions involving these users.

The development will likely increase the use of the footways both sides of Manchester Road. The western footway is currently overgrown with vegetation to the rear and neither footway is in optimal condition. Also, it is likely that neither footway will be wide enough for increased use. A number of paladins are noted to be blocking the eastern footway on Google Street View imagery. Whilst at the time of the site visit this was not an issue, it could be at other times. Also noted was a surface water issue in the carriageway near the junction of Manchester Road and the unnamed service road that may increase the risk of slips and falls by pedestrians especially in wintery conditions. Finally, at this early stage it is unclear where pedestrians will be directed to cross the existing roads to access the development.

RECOMMENDATION

It is recommended that suitable provision for pedestrians is made on both sides of Manchester Road between the development and Wilbraham Road and that suitable provision is made to prioritise pedestrian crossing needs over vehicle use at this location.

PROBLEM – A-04

Location: Nicholas Road.

Summary: Pedestrians – Lack of suitable crossing provision on this new desire line may increase the risk of collisions involving pedestrians.

The development will likely introduce a new crossing desire line on Nicholas Road about 10-15m from Barlow Moor Road. Nicolas Road widens at this point and there are currently marked bays for loading, disabled and car club parking. This may increase the risk that pedestrians cross between vehicles in these marked bays which could include goods vehicles loading that would mask visibility to approaching vehicles. Lack of suitable crossing provision on this new desire line may increase the risk of collisions involving pedestrians on Nicholas Road.

RECOMMENDATION

It is recommended that an uncontrolled crossing point is provided on or near the pedestrian desire line and appropriate adjustments are made to the existing marked bays in the vicinity.

PROBLEM – A-05

Location: Route between Wilbraham Road and Barlow Moor Road.

Summary: Cyclists – will use the link, so will need accommodating

The development will likely form an attractive route for cyclists and other active mode users between Wilbraham Road and Barlow Moor Road. At this early stage, no facilities are indicated for these users either in terms of dedicated provision or shared use. A lack of accommodation within the proposals for these users may increase the risk of collisions between these users and pedestrians and may also increase the risk of collision with other road users on Manchester Road and Nicolas Road.

RECOMMENDATION

It is recommended that provision is made for cyclists and other active mode users between Wilbraham Road and Barlow Moor Road.

Audit Team Statement

We certify that the Road Safety Audit Team have carried out their duties as far as practicable in accordance with GG119 Revision 2.

Road Safety Audit Team Leader

Haydn Vernalis FCIHT FIHE CMILT MSORSA
Directive 2008/96/EC (Certificate of Competency)

Signed:



Director – Sevenairs Consulting Ltd.
20 High Bank, Thurlstone, Sheffield,
South Yorkshire, S36 9QH

Date:

11th September 2025

Road Safety Audit Team Member

Sarah Vernalis BAHonsQTS NPQH
Director – Sevenairs Consulting Ltd.
20 High Bank, Thurlstone, Sheffield,
South Yorkshire, S36 9QH

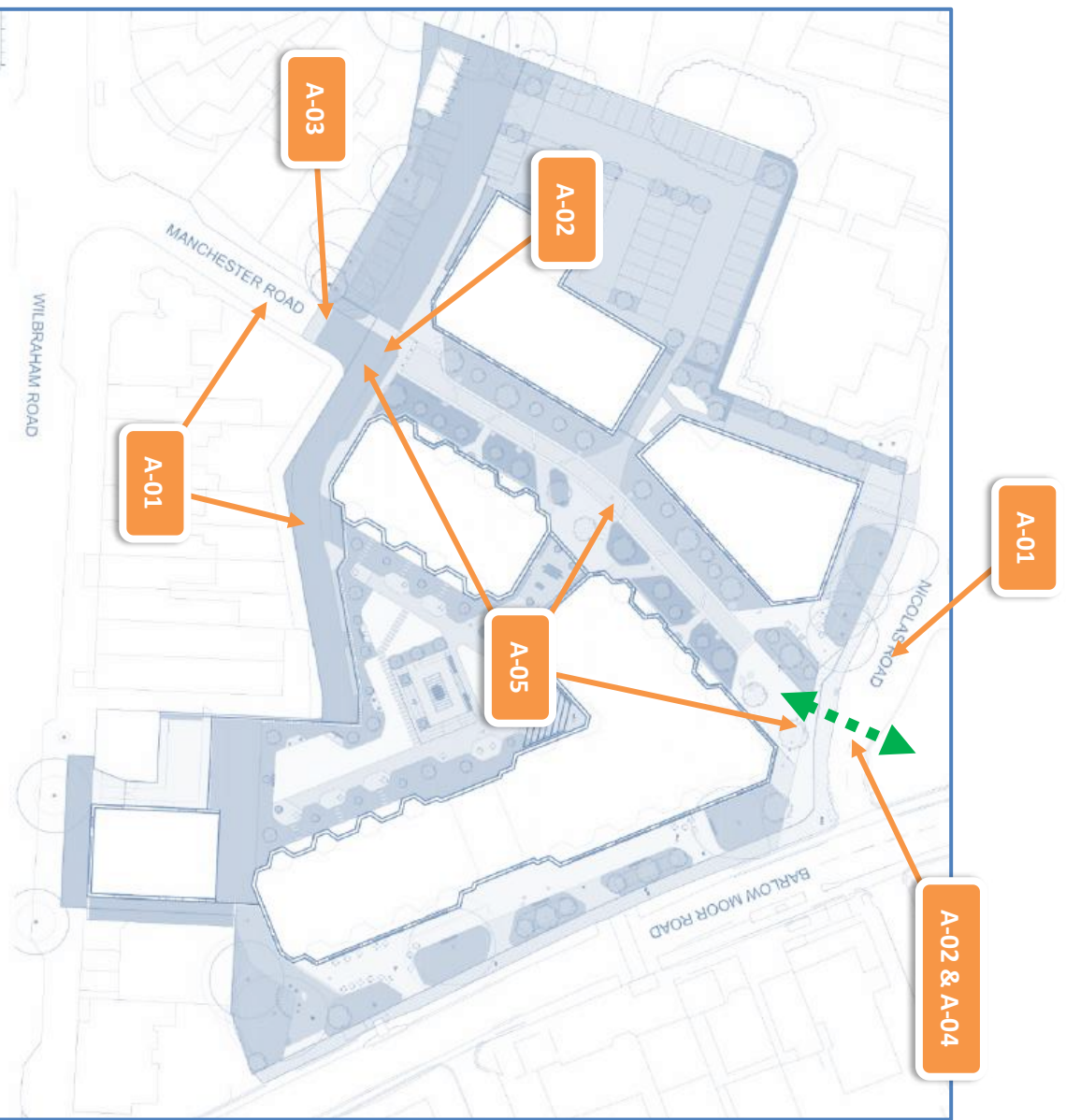
Signed:



Date:

11th September 2025

Problem Location Plan



Appendix O- Taxi and Servicing Trip Generation

VEHICLE TRIP GENERATION - HOURLY

HOUR	TRIP RATES												TRIPS														
	TAXI ARRIVAL TRIP RATES			OCV ARRIVAL TRIP RATES			LGV ARRIVAL TRIP RATES			TAXI ARRIVALS						OCV ARRIVALS						LGV ARRIVALS					
	Affordable e homes	Shops	Cafes	Affordable e homes	Shops	Cafes	Affordable e homes	Shops	Cafes	Affordable e homes	Private Homes	Shops	Cafes	Total	Affordable e homes	Private Homes	Shops	Cafes	Total	Affordable e homes	Private Homes	Shops	Cafes	Total			
00:00-01:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
01:00-02:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
02:00-03:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
03:00-04:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
04:00-05:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
05:00-06:00	0	0	0	0	0	0	0	0.227	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
06:00-07:00	0	0.003	0.076	0	0	0	0.004	0.148	0.007	0.004	0.004	0.004	0.004	0.004	0	0	0	0	0	0	0	0	0	0			
07:00-08:00	0.003	0.003	0.076	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0	0	0	0	0	0	0	0	0	0			
08:00-09:00	0.003	0.003	0.076	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0	0	0	0	0	0	0	0	0	0			
09:00-10:00	0.003	0.003	0.076	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0	0	0	0	0	0	0	0	0	0			
10:00-11:00	0.007	0.005	0.076	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0	0	0	0	0	0	0	0	0	0			
11:00-12:00	0	0.005	0.076	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0.002	0	0	0	0	0	0	0	0	0	0			
12:00-13:00	0	0.005	0.227	0.002	0	0	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0.016	0	0	0	0	0	0	0	0	0	0			
13:00-14:00	0.007	0.003	0.397	0	0	0	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0	0	0	0	0	0	0	0	0	0			
14:00-15:00	0.005	0.003	0.153	0.002	0	0.076	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0.077	0	0	0	0	0	0	0	0	0	0			
15:00-16:00	0.002	0.003	0.302	0	0.002	0	0.023	0.013	0.013	0.013	0.013	0.013	0.013	0.013	0	0	0	0	0	0	0	0	0	0			
16:00-17:00	0.007	0.002	0.076	0	0	0	0.026	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0	0	0	0	0	0	0	0	0	0			
17:00-18:00	0	0.003	0.153	0.002	0	0	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0	0	0	0	0	0	0	0	0	0			
18:00-19:00	0	0.003	0.153	0.002	0	0	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0	0	0	0	0	0	0	0	0	0			
19:00-20:00	0	0.003	0.153	0.002	0	0	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0	0	0	0	0	0	0	0	0	0			
20:00-21:00	0	0.003	0.153	0.002	0	0	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0	0	0	0	0	0	0	0	0	0			
21:00-22:00	0	0.003	0.153	0.002	0	0	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0	0	0	0	0	0	0	0	0	0			
22:00-23:00	0	0.003	0.153	0.002	0	0	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0.009	0	0	0	0	0	0	0	0	0	0			
23:00-24:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
MAX																											
4 0 1 2 4 0 1 2 4 0 1 2 4 0 1 2 4 0 1 2 4 0 1 2 4																											

HOUR	TRIPS TO EACH LOADING AREA						Utilisation of Each Loading Area					
	NICOLA ST			RETAIL LOADING AREA			MANCHESTER ROAD			Nicolas Street		
	OCV	LGV	TAXI	OCV	LGV	TAXI	OCV	LGV	TAXI	Minutes /capacity in use*	Demand /capacity in use*	Minutes /capacity in use*
00:00-01:00	0	0	0	0	0	0	0	0	0	0	0%	0
01:00-02:00	0	0	0	0	0	0	0	0	0	0	0%	0
02:00-03:00	0	0	0	0	0	0	0	0	0	0	0%	0
03:00-04:00	0	0	0	0	0	0	0	0	0	0	0%	0
04:00-05:00	0	0	0	0	0	0	0	0	0	0	0%	0
05:00-06:00	0	0	0	0	0	0	0	0	0	0	0%	0
06:00-07:00	0	0	0	0	0	0	0	0	0	0	0%	0
07:00-08:00	1	0	1	0	1	0	1	0	1	26	21%	4
08:00-09:00	1	0	1	0	1	0	1	0	1	46	38%	12
09:00-10:00	1	0	1	0	1	0	1	0	1	63	52%	11
10:00-11:00	1	0	1	0	1	0	1	0	1	63	52%	22
11:00-12:00	2	1	2	2	2	1	2	1	2	87	72%	23
12:00-13:00	1	1	2	2	1	1	1	1	1	69	58%	19
13:00-14:00	1	0	1	2	1	0	1	0	1	67	56%	19
14:00-15:00	1	0	1	2	1	0	1	0	1	56	47%	15
15:00-16:00	1	0	1	1	1	0	1	0	1	52	43%	15
16:00-17:00	1	0	1	1	1	0	1	0	1	37	31%	4
17:00-18:00	1	0	1	1	1	0	1	0	1	37	31%	7
18:00-19:00	2	1	2	2	2	0	2	1	2	86	72%	25
19:00-20:00	1	1	1	1	1	0	1	1	1	24	20%	11
20:00-21:00	1	0	1	1	1	0	1	0	1	43	36%	20
21:00-22:00	1	0	1	1	1	0	1	0	1	43	36%	20
22:00-23:00	0	0	0	0	0	0	0	0	0	0	0%	0
23:00-24:00	0	0	0	0	0	0	0	0	0	0	0%	0
SUM OVER DAY												68
Average 08:00-20:00												73%

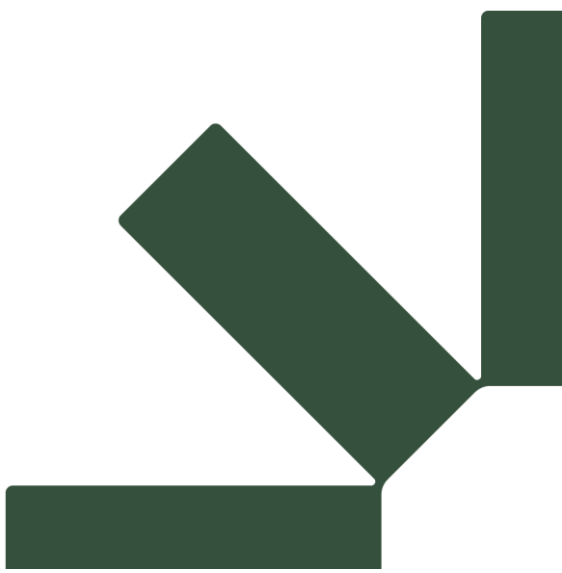
Parameters

- 50% taxi dropping off
- 50% taxi picking up
- 50% LGV surface level
- 2 min taxi drop off
- 5 min taxi pick up
- 10 min LGV load/unload
- 20 min OGV servicing
- 60 mins in hour
- 4 loading bays
- 50% OGV to Nicolas Road
- 50% OGV to Manchester Road
- 50% Real LGV to Nicolas Road
- 50% Real LGV to Manchester
- 2 spaces in the loading bay that a OGV takes up
- 2 how many half loading bays there are in this location
- * 24 Manchester Road, Nicolas Road and retail loading area can all accommodate 2 LGVs of taxis - so there is capacity for 120mins of loading per hour

CIVIC

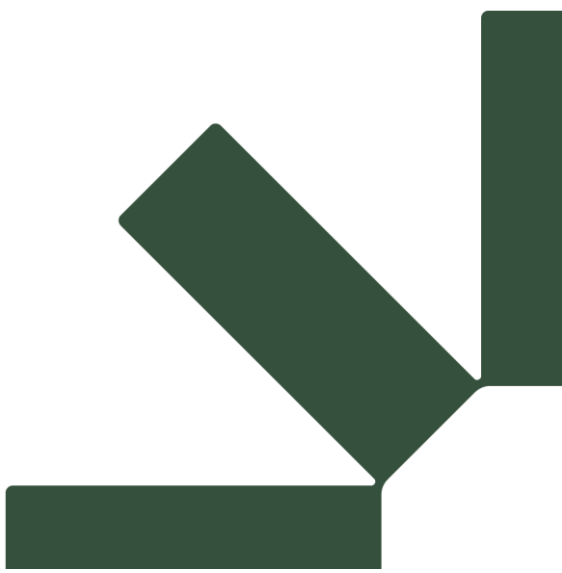
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Appendix 6F Framework Travel Plan

*SLR



Appendix 6F Framework Travel Plan

*SLR

Chorlton Precinct

Framework Travel Plan v1.2

March 2025

PREPARED FOR

PJ Livesey Homes (6) Limited

Framework Travel Plan v1.2

Prepared By	Joel Sorsby
Reviewed By	Emily Ingham
Report Reference	3062-02
Issued	Version 1.0 on 13 December 2024
Revised	Version 1.1 issued on 18 March 2025 Version 1.2 issued on 28 March 2025

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1. Introduction

1.1. Development Overview

Civic Engineers has been appointed by P J Livesey, to prepare a Framework Travel Plan (FTP) in support of a full planning application in association with the residential-led mixed-use redevelopment of Chorlton Precinct (and Graeme House) in Chorlton-cum-Hardy, Manchester (land bounded by Nicholas Road, Barlow Moor Road and Wilbraham Road).

The description of development is:

The application is for Full Planning Permission for the erection of 6no. residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e)); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses; together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.

The development proposals are included at Appendix A.

1.2. Objective and Purpose

A Travel Plan is a package of measures and actions aimed at reducing the need to travel by car by providing alternative choices and encouraging walking, cycling, and public transport use. It is noted that the accessible location of the development, and its low-car nature are key measures in supporting travel by sustainable modes.

This Framework Travel Plan is currently aimed at the development team, the future marketing team and site management at each element of the development. When implemented at each of the blocks once occupied, it will be aimed at residents.

The objective of this Framework Travel Plan are:

- To encourage and enable people living, working and studying at the development to arrive by sustainable modes

1.3. Content of this Framework Travel Plan

Section 2 sets out how the Travel Plan will be managed.

Section 3 provides details of the local transport network, with Section 4 setting out what measures will be introduced at the development during construction to support sustainable journeys. It also suggests ongoing measures which will be implemented to ensure that sustainable travel choices are practical and favourable.

Section 5 provides a summary of the actions and measures required to effectively implement the Framework Travel Plan.

2. Framework Travel Plan Management

This section sets out how the Framework Travel Plan will be managed across its lifetime. A summary of the required actions is provided in Table 1.

2.1. Lifespan

The Framework Travel Plan will continue as a formal process at the residential element of the development for 5 years after occupation of that element, after which the formal responsibility for monitoring and reporting will cease.

2.2. Travel Plan Coordinators

A Travel Plan Coordinator (TPC) will be appointed by the management company of each block.

The responsibilities of the TPCs will be as follows:

- Produce a Travel Plan for their element of the development.
- Delivering the actions in Table 1 and measures in Table 2 which have 'Travel Plan Coordinator' in the responsibility column.
- Carrying out surveys and reporting on findings to Manchester City Council.
- Communicating the Travel Plan to residents at the part of the development under their influence, including promotion of the benefits of travelling by sustainable modes, and acting as a point of contact for residents requiring information.

2.3. Travel Plan Targets

Targets are important for providing a measure of success of the Travel Plan. Targets will be set following the first annual travel surveys (see Section 2.6) which will provide an important baseline.

2.4. Monitoring and Reporting

Annual Travel Surveys

The Travel Plan Coordinator for each element will be carry out a travel survey at their element of the development within 3 months of first occupation of their element. These will be repeated each year.

This is an opportunity to communicate the Travel Plan to residents, to ensure they know about the range of travel options available for getting to the development and to gather feedback, e.g. the desire for more information, incentives or cycle parking. It will also be an opportunity to monitor use of the car parking and car ownership on site.

A prize should be offered to encourage participation, as it is shown to have a significant impact on the number of responses.

Annual Monitoring Reports

After the surveys each year, the Travel Plan Coordinator of each element will produce a Monitoring Report, issued to Manchester City Council for discussion. This will contain:

- Survey methodology and results
- Qualitative feedback
- An analysis on the effectiveness of the Travel Plan
- Uptake and success of the Travel Plan measures
- Details of car and cycle parking use

3. Local Transport Context and Access to the Development

3.1. Site Location

Chorton Precinct is located in Chorton-cum-Hardy, approximately 4.5km South-West of Manchester city centre. The site currently consists of Chorton Cross shopping centre, Graeme House office building and The Square shopping centre car park.

The site is bound by Barlow Moor Road to the east, Wilbraham Road (A6010) to the south, properties on Oswald Road to the west and Nicolas Road to the north. Manchester Road passes through the middle of the site on a north-south alignment, currently connecting Wilbraham Road to Nicolas Road. This a route through the existing car park (associated with the now vacant shopping precinct but currently operational) and is not public highway (see Section 3.8).

The location of the site is shown in Figure 1.

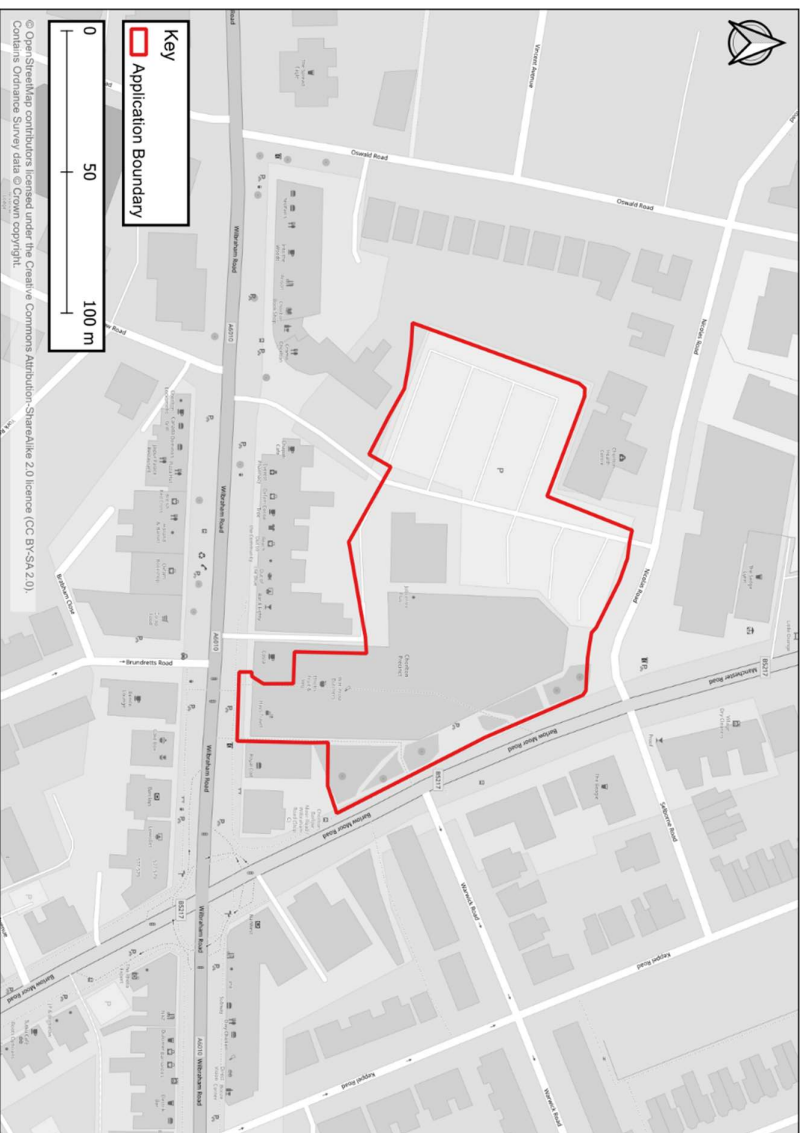


Figure 1: Site location

3.2. Existing Land Use

The site currently consists of an at-surface car park with approximately 190 spaces associated with Chorton Cross shopping centre. As well as these elements, there is an 8-storey office block (Graeme House) within the site known as Chorton Square. The office block and shops are currently vacant and hoarded off but the car park remains operational until the demolition phase commences (as per the separate Prior Notice for Demolition submission).

3.3. Pedestrian Access

Chorlton Precinct is located within Chorlton district centre and sits at the heart of a walkable neighbourhood. Over 50% of Chorlton residents travel to work by modes other than the private car¹. There are a wide range of facilities available within a kilometre of the site, as shown in Figure 2 below.

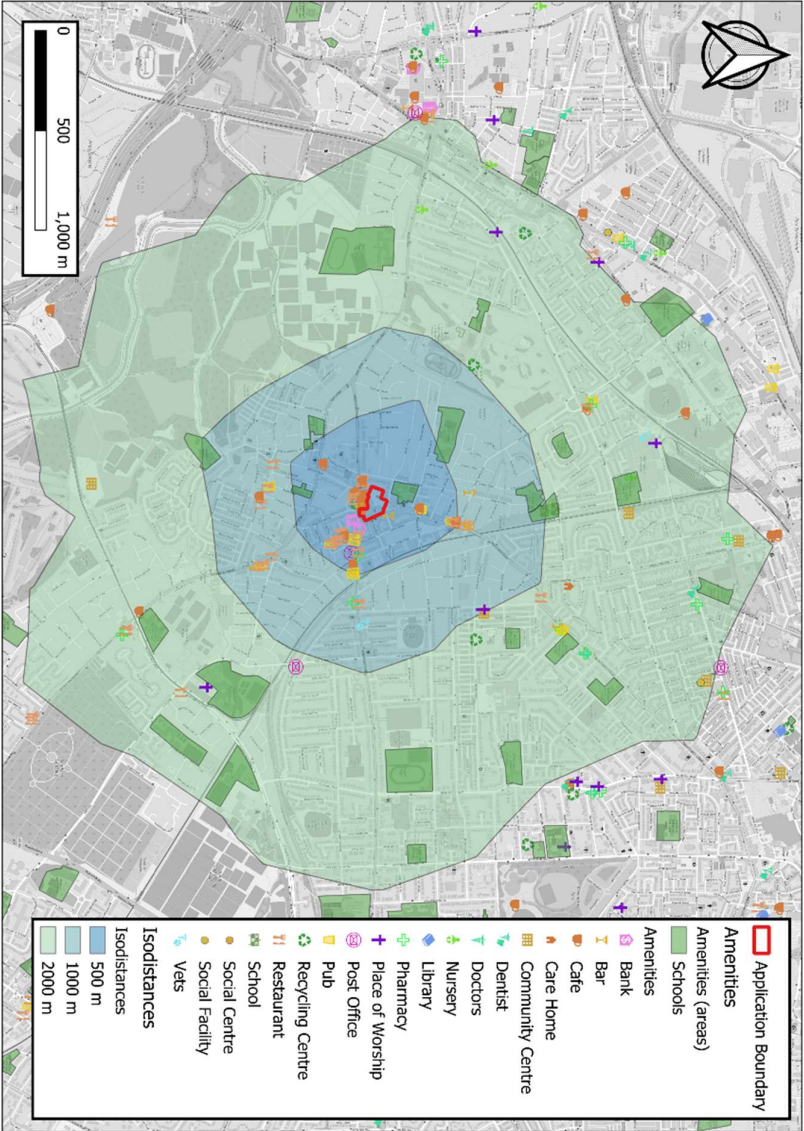


Figure 2: Walking Isodistance

Regarding the provision of appropriate kerbs around the site, the recently upgraded Wilbraham Road/ Barlow Moor Road junction features correct tactile paving, signal heads and dropped kerbs at each arm of the crossing point. Similarly, tactile paving at the crossing point over Nicolas Road to the north of the site are of a high quality (Figure 3).

¹ Data taken from <https://commute.datashine.org.uk/#mode=cardriving&direction=from&msoa=E02001073&zoom=13.0&lon=-2.2265&lat=53.4561> [accessed 9/12/2024].

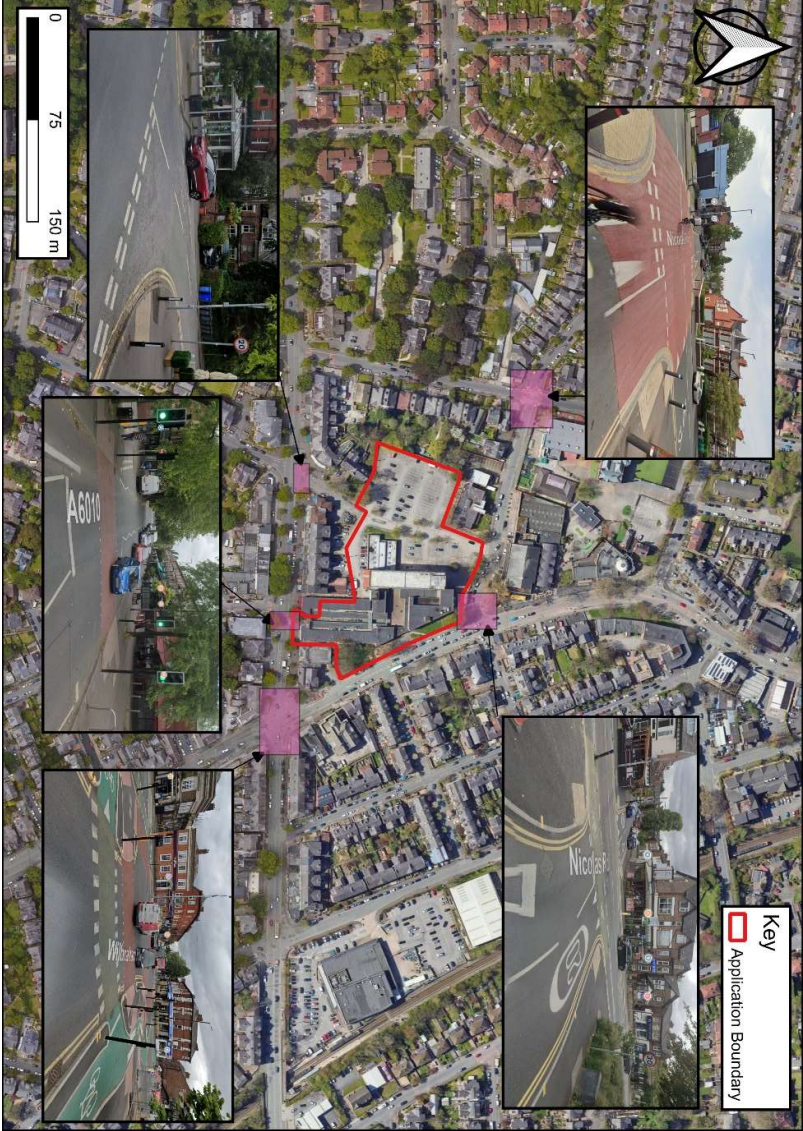


Figure 3- Junctions and crossing immediately surrounding the site.

The other junctions in the immediate vicinity of the site feature dropped kerbs and appropriate tactile paving.

3.4. Cycle Access, Cycle Parking, and Cycle Hire

On the east side of the application site, new segregated cycleways have been recently introduced (approx. February 2024) on both sides of Barlow Moor Road. These lead to a new CYCLOPS signalised junction at the intersection of Barlow Moor Road and Wilbraham Road. To the west of this junction there are short lengths of segregated cycleway along Wilbraham Road to link with the CYCLOPS facility. Further west the cycle provision comprises on-road painted cycle lanes that are occasionally interrupted by loading bays and/or bus stops.

There are several bicycle hire facilities surrounding the site also. Closest to the site are the Beryl bike docking stations on High Lane, approximately 325m south of the site and at the junction of Longford Road and Barlow Moor Road, 175m north of the site.

Figure 4 shows the cycling infrastructure available around the site. As shown, there is a high density of cycle parking facilities as well as cycle lanes that facilitate travel in a north-south or east-west direction. The cycle lanes along Wilbraham Road connect into the wider Manchester cycle network and link to both on-carriageway lanes and shared routes.

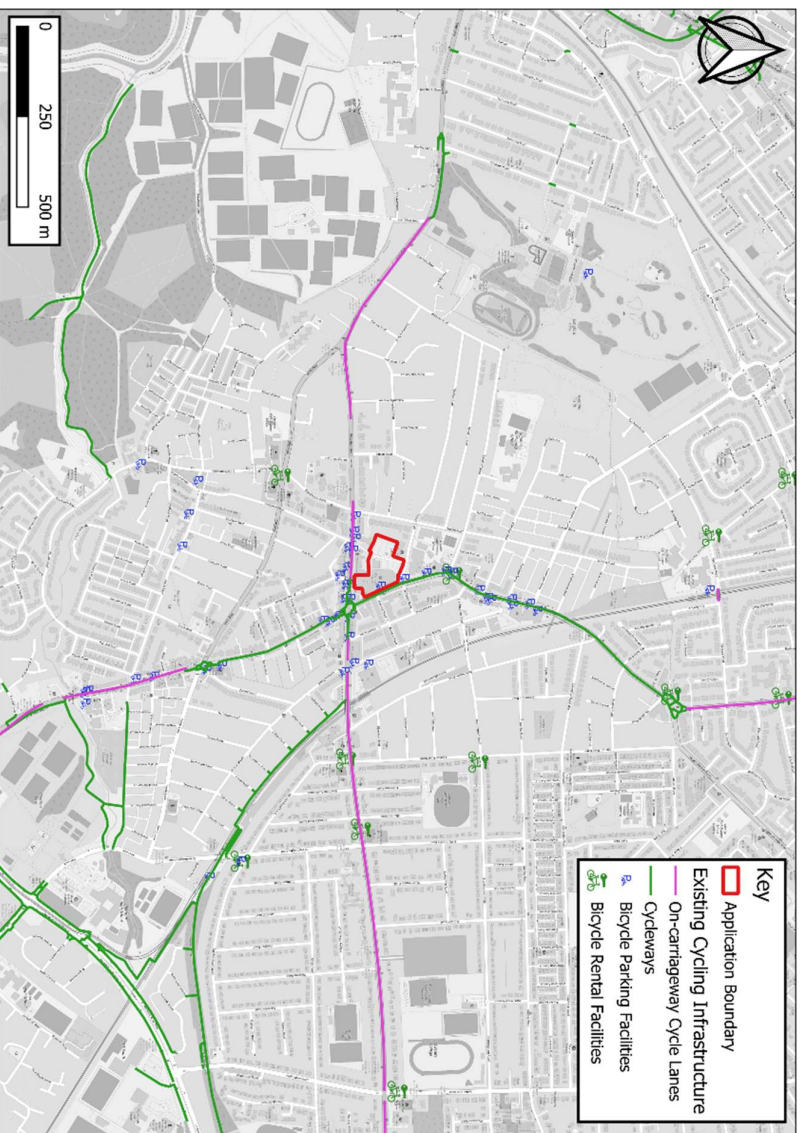


Figure 4: Existing cycle infrastructure

The Beeeways are a network of existing and proposed cycle routes to connect Greater Manchester by cycle. Figure 5 shows the proposed network in the vicinity of the site, noting that the route on Barlow Moor Road is now delivered, as above.

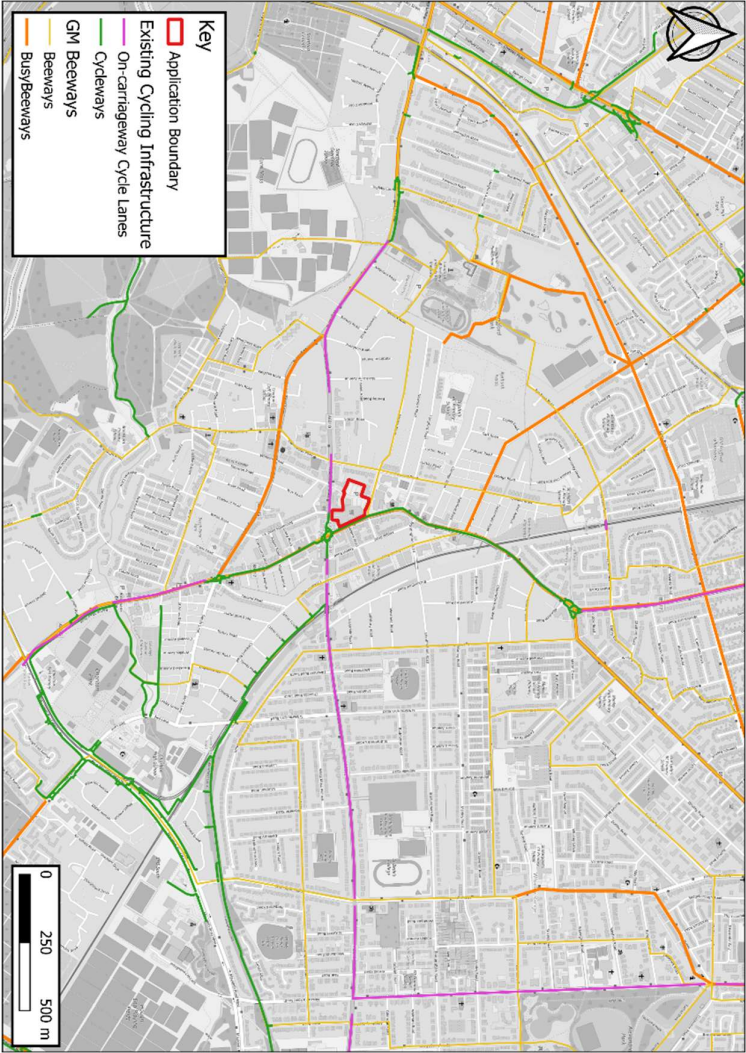


Figure 5: Proposed cycle network

A distance of 8km takes around 30-35 minutes for the average cyclist and is a distance that is considered reasonable for commuting. An 8km isodistance is shown on Figure 6, within this distance is all of Manchester city centre, central Salford, Salford Quays, Stretford, Chorlton, Droylsden, Didsbury, and Broughton Park.

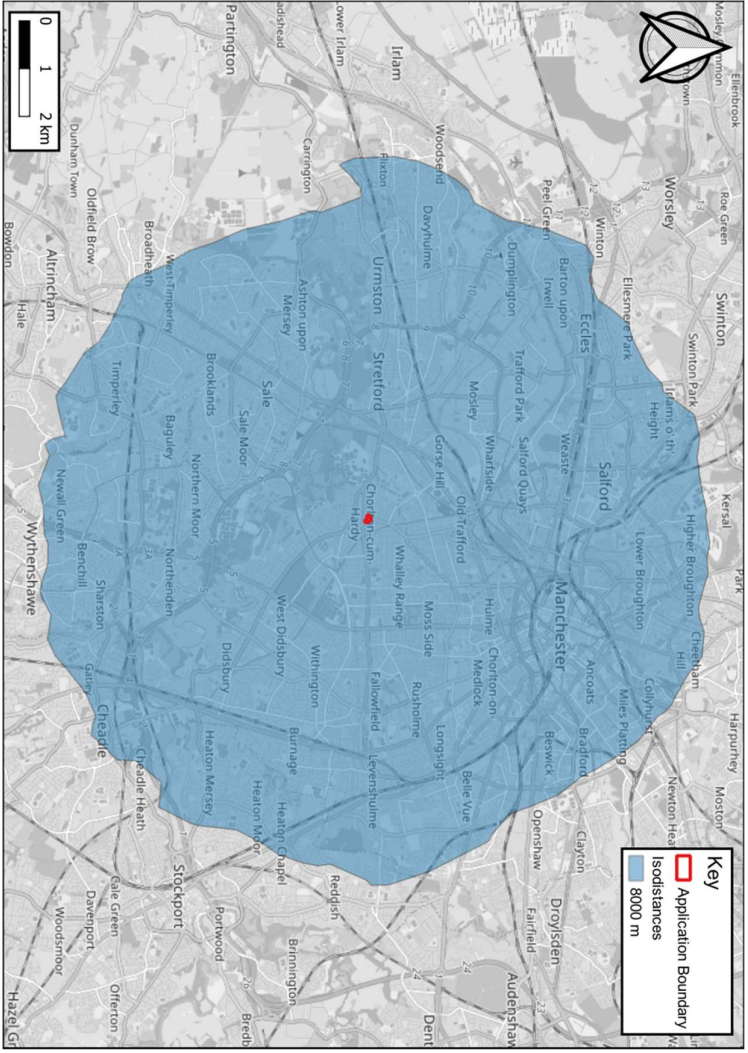


Figure 6: Cycle Isodistance

3.5. Public Transport Access

Served by frequent bus and tram services, the site is in an area with a 'Greater Manchester Accessibility Level' (GMAL) score of 6, which is the third-highest level achievable. GMALs (rated 1-8, with 1 the lowest and 8 the highest) are a detailed and accurate measure of the accessibility of a point to both the conventional public transport network (i.e. bus, Metrolink and rail) and Greater Manchester Local Link (flexible transport service), taking into account walk access time and service availability. The method is essentially a way of measuring the density of the public transport provision at any location within the Greater Manchester region.

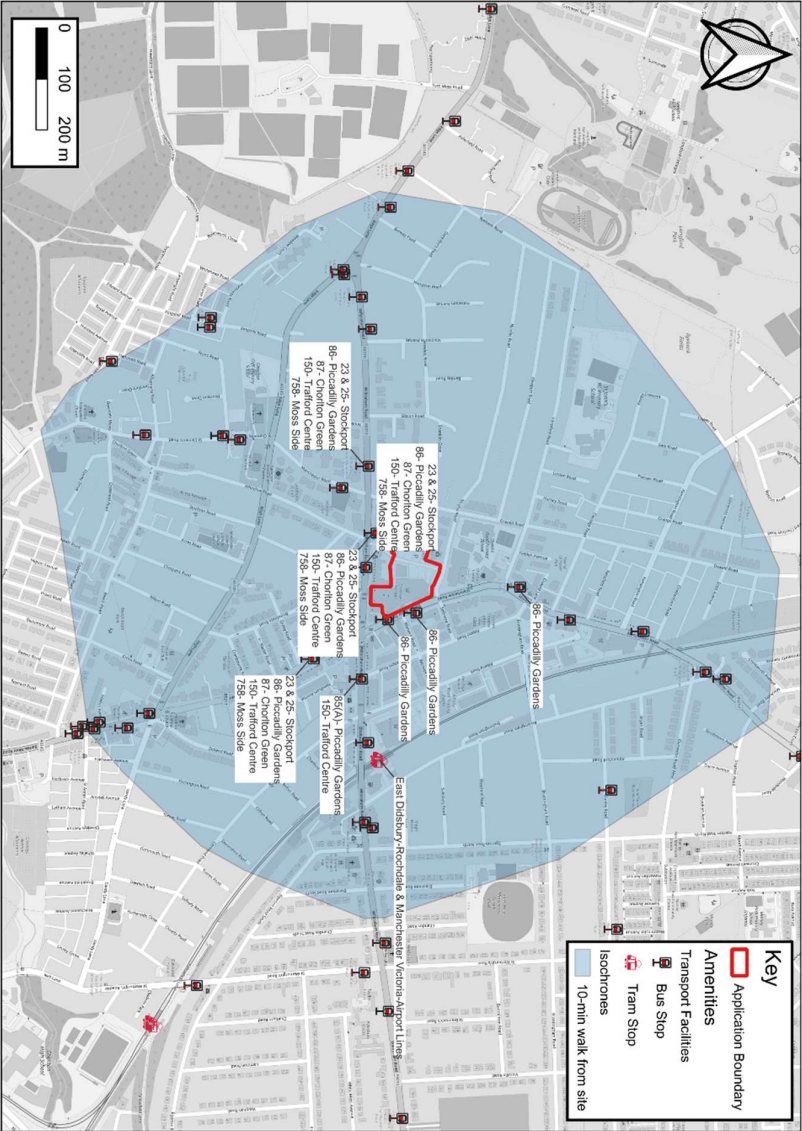


Figure 7- Bus stops within a 10-minute walk of the site.

Bus routes shown in the above Figure route towards the city centre and Chorlton Green along Barlow Moor Road, and towards Trafford Centre and Moss Side along Wilbraham Road. The tram stop (Chorlton) 320m east of the site is part of the East Disbury-Rochdale and Manchester Airport-Victoria lines which pass through Old Trafford, the city centre and Rochdale to the north and Wythenshawe to the south.

The frequency of bus and tram services are shown in Table 1.

Table 1 - Frequency of bus and tram services around the site.

Destination	Frequency (Weekdays)
Tram	
To East Didsbury	Every 6 minutes
To Rochdale	Every 12 minutes
To Manc Airport	Every 12 minutes
To Manc Victoria	Every 12 minutes
Bus	
86 – Piccadilly Gardens	Every 12 minutes
23 – Trafford Centre	Every 20 minutes
25 – Trafford Centre	Every 30 minutes
87 – Chorlton Green	Hourly
85A – Piccadilly Gardens	Hourly
758 – Moss Side/ Laureston Grammar School	Operating to school hours

The site has a Greater Manchester Accessibility Level (GMAL) of 6 out of 8, indicating a high level of transport accessibility (Figure 8).

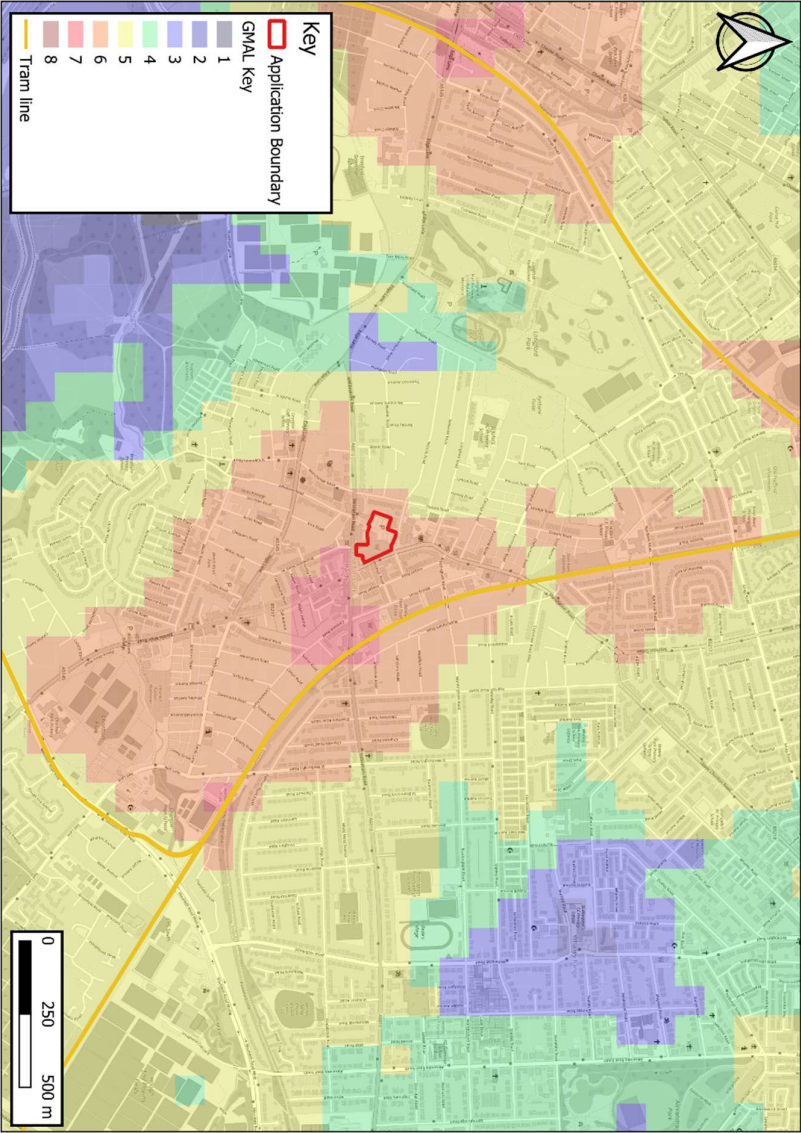


Figure 8: Public Transport

3.6. Car Club

There are 4 Enterprise Car Club locations with a total of 9 vehicles within 500m of the site, as is shown in Figure 9. 4 of the 9 vehicles are electric. The nearest are on Nicolas Road immediately adjacent to the site, where there are two vehicles parked on the road.

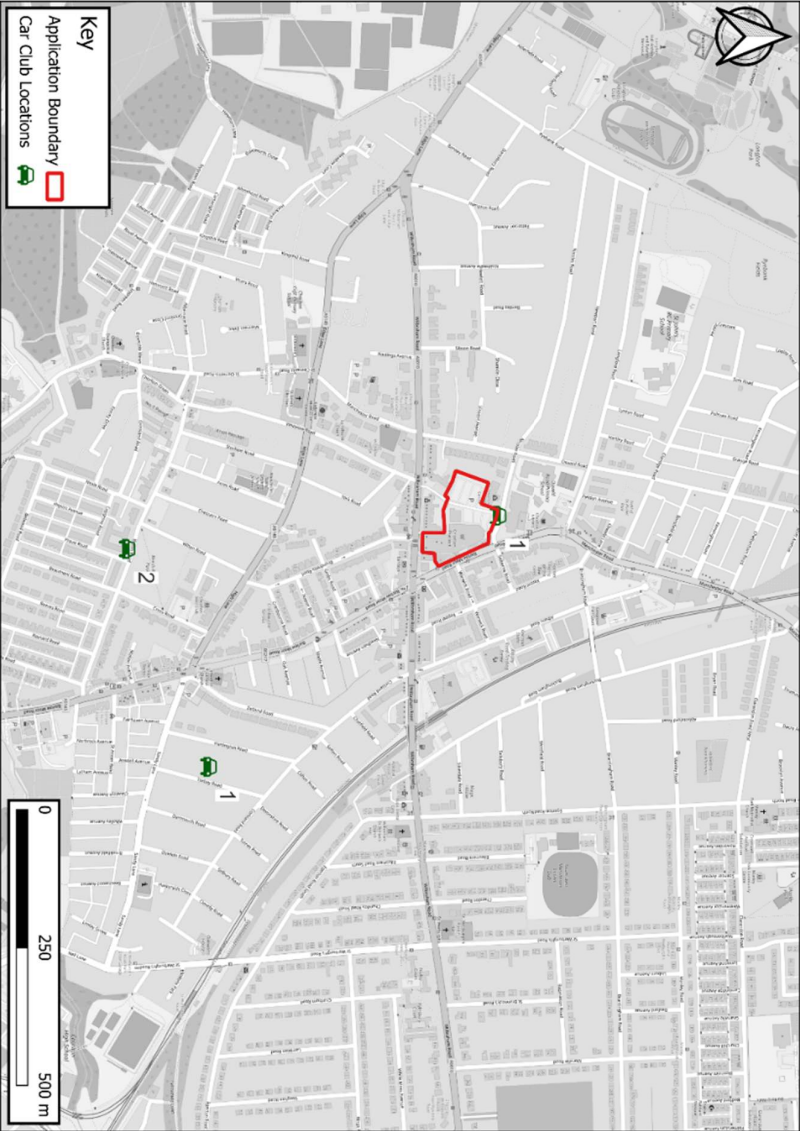


Figure 9: Car club (number indicates how many vehicles at each location)

3.7. Electric Vehicle Charging

Figure 10 shows the location of electric vehicle charging points around the site. There exists two charging sites within 2km of the site. Both of these charging points are classified as slow (below 8k W).

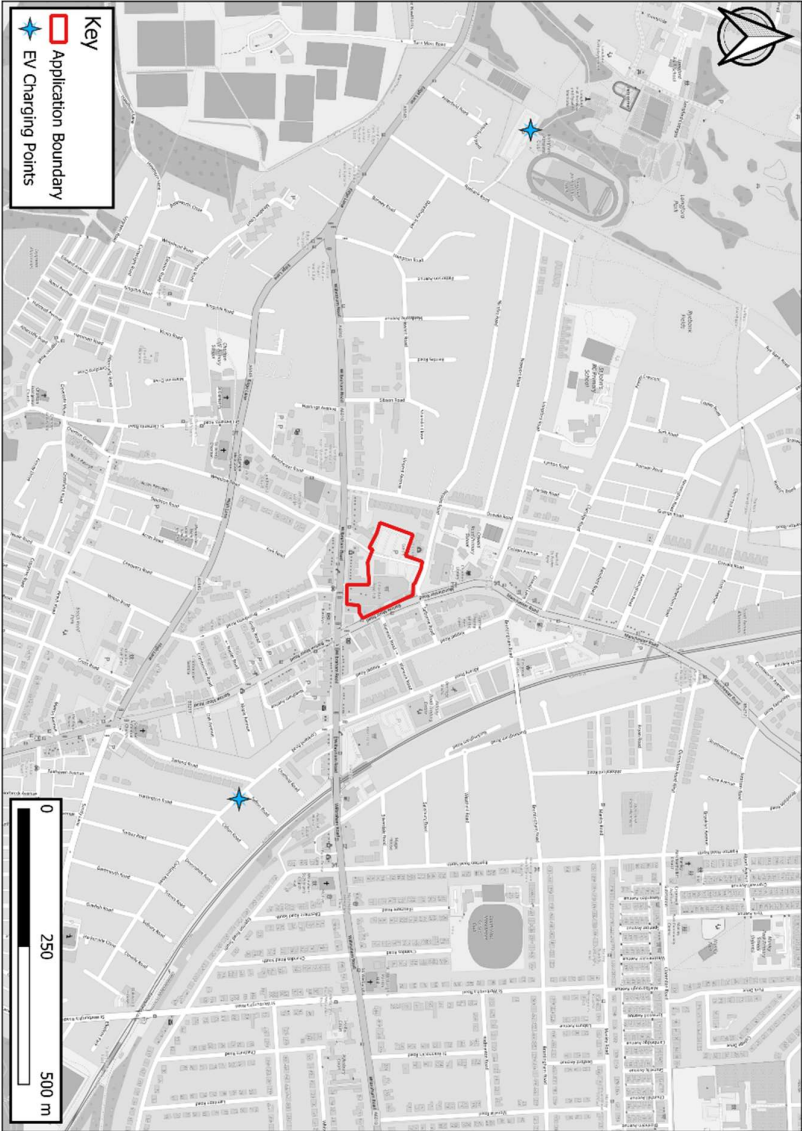


Figure 10: Public EV charging points

4. Development Details and Travel Plan Measures

This section sets out the development proposals for the site, looking at each available travel mode in turn to demonstrate how the proposals will support sustainable travel choice. The measures are summarised in Table 2.

4.1. Proposals

The scheme proposals are contained in Appendix A and can be summarised as follows:

- 262 residential units; and
- 976 sqm GFA of Class E (a-e) ground floor commercial development

4.2. Communication Strategy

The following sections set out how the development will be accessed by all available modes. These options must be communicated and promoted to residents.

Suggested Travel Plan communication strategy:

- Sustainable travel information to be included on development website(s).
- Travel information will be issued to residents upon completion of their lease contract and before they move in, including information about transport options.
- Ongoing communication with residents about the sustainable travel and initiatives.

Social media, development website, newsletters, and posters around the development can all be used to promote sustainable travel options and the benefits.

4.3. Pedestrian Access

Pedestrian entrances, crossings and routing into the site are shown in Figure 11.



Figure 11- Pedestrian entrances, crossings and routing.

Pedestrian routes provided are considerate to meet established desire lines as well as crossing points on the surrounding highway network. The active travel corridor within the site along the realigned Manchester Road will provide a pleasant and safe environment for pedestrians to exit the site in any direction.

Pedestrian access will be provided through the site to satisfy the existing desire line via Manchester Road.

For North-South pedestrian movements, there is an existing Pelican crossing 50m west of the Wilbraham Road/Manchester Road junction, and pedestrian facilities at the new CYCLOPs junction at the intersection of Barlow Moor Road and Wilbraham Road.

There is a new signalised crossing on Barlow Moor Road north of Warwick Road to the east of the development that has replaced an uncontrolled crossing point.

As shown on the landscape plans at Appendix A, the footway on Nicolas Road will be resurfaced to link with the pedestrian and cycle route through the site and has been discussed and agreed with the MCC officers working on the LIF project.

4.4. Cycle Parking

Cycle parking will be provided in secure cycle stores distributed around the development:

- East Block A/B – 114 spaces between two locations. Ground floor - 54x on double tier stands. Basement – 62 spaces. 60x on double tier stands. 2x 1.5m width single tier Sheffield stand space. There are 134 homes in A/B, therefore this is an 85% provision.
- East Block C – 31 spaces. 30x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 134 homes in C, therefore this is a 91% provision.
- West Block D – 39 spaces. 38x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 45 homes in D, therefore this is an 87% provision.
- North Block E – 33 spaces. 32x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 37 homes in E, therefore this is an 89% provision.
- South Block F – 19 spaces. 18x on double tier stands. 1x 1.5m width single tier Sheffield stand space. There are 12 homes in F, therefore this is a 158% provision.

Cycle parking will also be provided in external landscaped areas for visitors and staff of the commercial development. 3 are provided at the entrance to the apartment entrance to the southern end of Manchester Road. 3 at the apartment entrance mid-way along Manchester Road, 8 (two banks of 4) at Nicolas Road, and 4 at the southern end of the Barlow Moor Road frontage. In total this will accommodate 36 cycles.

4.5. Car Parking

A total of 182 parking spaces are proposed comprised of:

- 164 residential spaces
- 6 commercial tenant spaces
- 12 public car parking spaces

Further breakdown and information on the location of these spaces is provided below.

Public Car Park

The development proposals include 12 public car parking spaces accessed from Manchester Road, and located south of the private surface car park:

- 8 standard public spaces
- 2 disabled public spaces
- 2 public EV space

Commercial Tenant Parking

6 parking spaces are proposed in the service area at the south east of the site. These will be for tenants of the ground floor commercial units in the East block which front Barlow Moor Road, and will be used for staff parking or other operational uses.

Residential Car Parking

162 residential car parking spaces are proposed, an overall ratio of 63%. 2021 Census data² shows that 42-49% of the households in the area do not own a car, therefore 51-58% of households do own a car. A parking provision of 63% is therefore appropriate to this location.

50 of the car parking spaces are at surface level west of the West Block D, 1 is north of the North block E, and the remainder are in the podium car park.

Disabled parking will be provided at a ratio of 6% of total spaces, i.e. 10 spaces will be provided. These are distributed around the scheme to ensure distances to nearest main entrance is limited. There is one off Nicolas Street for North block E, 1 in the surface car park for West block D; 8 spaces in the podium at basement and ground floor for the East block A/B/C.

Electric vehicle chargers will be provided at all external residential spaces. For the ground floor/basement parking spaces under East block, infrastructure will be provided to enable installation of chargers in the future.

4.6. Delivery Strategy

Delivery by vehicle to the North Block E will utilise the existing loading bay on the north side of Nicolas Road.

Delivery by vehicle to the West and East blocks will use a new loading area at the end of Manchester Road, accessed from Wilbraham Road.

Deliveries by cycle are facilitated at each of the building entrances with the provision of cycle stands, see Section 4.4.

4.7. Car Club

There are currently two Enterprise car club vehicles parked on Nicolas Road. These bays will be relocated 12mm west to facilitate emergency access from the realigned Manchester Road active travel route through the site.

4.8. BREEAM Compliance

Section 3.3 provides an analysis of pedestrian infrastructure surrounding the site, including provision of dropped kerbs and tactile paving for people who are blind, using a wheelchair or have a pram.

The Accessibility Index of the site can be determined using the GMAL rating which is high, scoring 6 out of a possible 8 (Section 3.5).

Cycle parking is provided for people working at the commercial element in the service area at the south east of the development – space for 20 cycles is available.

² Car or Van Availability data available at <https://www.surrey.gov.uk/census-2021/2021-census-car-or-van-availability/#:~:text=Car%20or%20van%20availability%20from%20the%202021%20Census&text=Census%202021%20asked%20households%20how%20equal%20to%2040.4%25%20in%202011> for LSOAs in which the development sits: E00026113 and E00026104

5. Summary of Travel Plan Actions and Measures

Travel Plan actions and measures are summarised in Table 2 and Table 3, and will be in place for the lifetime of the Travel Plan.

Table 2: Summary of Travel Plan Actions

Action	Responsibility	Timeframe
Appoint a Travel Plan Coordinator	Management Company of each block/element	Travel Plan Coordinator to be in role prior to first marketing of that element of the development, and for 5 years after first occupation
Produce Travel Plan for relevant block/element of development	Each Travel Plan Coordinator to produce Travel Plan for their element	To be conditioned by MCC
Implement Travel Plan measures	As per Table 3	As per Table 3
Carry out annual travel surveys	Travel Plan Coordinators	Surveys to start 3 months after first occupation and continue annually for 5 years
Produce a Monitoring Report each year to review the effectiveness of the Travel Plan	Travel Plan Coordinators	Produce Monitoring Report within 2 months of the end of the survey period each year

Table 3: Summary of Travel Plan Measures

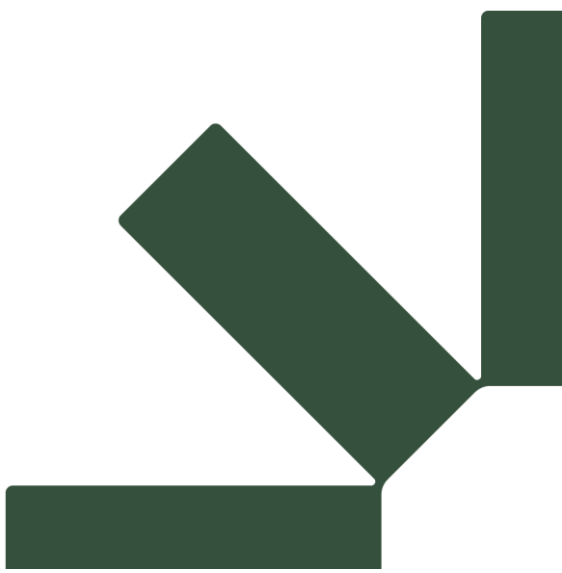
Measure	To Support	Timeframe
Communication strategy as per Section 4.2	Sustainable travel choice	Information available in time for marketing
Providing new commercial units on site will provide new, enhanced amenity and promote local trips on foot	Walking	Development design
Provision of connections to surrounding developments and active travel routes, including realigned Manchester Road as vehicle-free active travel route.	Walking and cycling	Construction
Provision of adequate, accessible, secure cycle parking for all users	Cycling	Construction
Cycle maintenance stands provided in all cycle stores.	Cycling	Construction

Appendix A – Development Proposals

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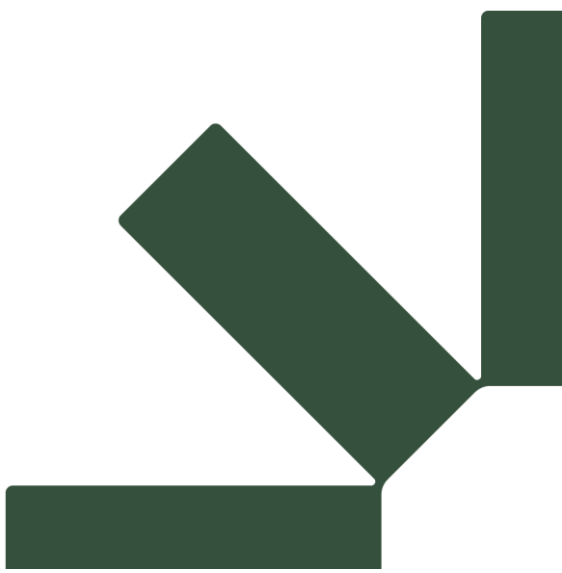
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Appendix 7A Air Quality Assessment

*SLR



Appendix 7A Air Quality Assessment

*SLR

Air Quality Assessment

Chorlton Precinct, Manchester

Client: PJ Livesey

Reference: 7162r2

Date: 19th February 2025



Report Issue

Report Title: Air Quality Assessment - Chorlton Precinct, Manchester

Report Reference: 7162

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Executive Summary

Redmore Environmental Ltd was commissioned by PJ Livesey to undertake an Air Quality Assessment in support of a residential-led mixed-use redevelopment of Chorlton Precinct, Manchester.

An Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the proposed development;
- Assess potential impacts associated with road transport emissions during the operational phase of the proposed development;
- Assess risk of future resident exposure to any existing air quality issues; and,
- Identify any requirement for relevant mitigation measures.

Potential construction phase air quality impacts from fugitive dust emissions were assessed as a result of demolition, earthworks, construction and trackout activities. It is considered that the use of the identified site-specific control measures, as outlined within the Construction Management Plan for the development, would provide suitable mitigation for a development of this size and nature and reduce potential impacts to an acceptable level.

A separate Prior Notice for Demolition application (LPA ref. 141706/DEM/2024) was approved by Manchester City Council, as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The submission is informed by a Demolition Management Plan, prepared by the proposed demolition contractor, which sets out the proposed mitigation measures to minimise air quality impacts on surrounding residential receptors. The approved demolition works are intended to commence in Q2 2025 for a period of circa 20 weeks.

Potential impacts during the operational phase of the proposals may occur due to road traffic exhaust emissions associated with vehicles travelling to and from the proposed development. Dispersion modelling was therefore undertaken in order to predict pollutant concentrations at sensitive locations as a result of emissions from the local highway network both with and without the development in place. Results were subsequently verified using local monitoring data.

Review of the dispersion modelling results indicated that air quality impacts as a result of traffic generated by the proposed development were not predicted to be significant at any sensitive location in the vicinity of the site.

Review of the dispersion modelling results also indicated that predicted pollutant levels were below the relevant criteria across the development. As such, the site is considered suitable for the proposed end use from an air quality perspective.

Based on the assessment results, air quality factors are not considered a constraint to the development and the scheme is considered to align with the requirements of Core Strategic Policy EN16 of the Manchester City Council Core Strategy and Policy JP-S5 of Places for Everyone.

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1.0 INTRODUCTION

1.1 Instruction

- 1.1.1 Redmore Environmental Ltd was commissioned by PJ Livesey to undertake an Air Quality Assessment in support of a residential-led mixed-use redevelopment of Chorlton Precinct, Manchester.

- 1.1.2 A separate Prior Notice for Demolition application (LPA ref. 141706?DEM?2024) was approved by Manchester City Council (MCC), as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The submission is informed by a Demolition Management Plan (DMP), prepared by the proposed demolition contractor, which sets out the proposed mitigation measures to minimise air quality impacts on surrounding residential receptors. The approved demolition works are intended to commence in Q2 2025 for a period of circa 20 weeks.

1.2 Site Location and Context

- 1.2.1 The site is located at Chorlton Precinct, Manchester (land bounded by Nicolas Road, Barlow Moor Road and Wilbraham Road), at approximate National Grid Reference (NGR): 381620, 394060. The relevant Local Authority (LA) is MCC. Reference should be made to Figure 1 for a map of the site and surrounding area.

- 1.2.2 The site currently consists of an at-surface car park with approximately 190 spaces associated with the former Chorlton Cross shopping precinct. As well as these elements, there is an 8-storey office block (Graeme House). The office block and shops are currently vacant and hoarded off but the car park remains operational until the demolition phase commences (as per the approved Prior Notice for Demolition application).

- 1.2.3 The proposals comprise an application for Full Planning Permission for the erection of 6 residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e)); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses; together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.

1.3 Assessment Scope

1.2.3 The proposals have the potential to cause air quality impacts at sensitive locations. As such, an Air Quality Assessment was undertaken to:

- Assess potential impacts associated with fugitive dust emissions during the construction phase of the development;
- Assess potential impacts associated with road transport emissions during the operational phase of the development;
- Assess risk of future resident exposure to any existing air quality issues; and,
- Identify any requirement for relevant mitigation measures.

1.2.4 This is detailed in the following report.

2.0 LEGISLATION AND POLICY

2.1 Legislation

2.1.1 The Air Quality Standards Regulations (2010) and subsequent amendments include Air Quality Limit Values (AQLVs) for the following pollutants:

- Nitrogen dioxide (NO₂);
- Sulphur dioxide;
- Lead;
- Particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀);
- Particulate matter with an aerodynamic diameter of less than 2.5µm (PM_{2.5});
- Benzene; and,
- Carbon monoxide.

2.1.2 Air Quality Target Values were also provided for several additional pollutants. It should be noted that the AQLV for PM_{2.5} stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).

2.1.3 The Air Quality Strategy (AQS) was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published on 28th April 2023¹. The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

2.1.4 The Environmental Improvement Plan 2023² was published in January 2023, providing long term and Interim Targets in order to reduce population exposure to PM_{2.5}. The Concentration Target for 2040 was subsequently adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

¹ AQS: Framework for Local Authority Delivery, DEFRA, 2023.

² Environmental Improvement Plan 2023, DEFRA, 2023.

2.1.5 Table 1 presents the AQOs, Interim Target and Concentration Target for pollutants considered within this assessment.

Table 1 Air Quality Objectives/ Interim Target/ Concentration Target

Pollutant	Air Quality Objective/ Interim Target/ Concentration Target	
	Concentration ($\mu\text{g}/\text{m}^3$)	Averaging Period
NO ₂	40	Annual mean
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum
PM _{2.5}	12 ^(a)	Annual mean
	10 ^(b)	Annual mean

Note: (a) Interim Target to be achieved by end of January 2028.
(b) Concentration Target to be achieved by 2040.

2.1.6 Table 2 summarises the advice provided in DEFRA guidance³ on where the AQOs for pollutants considered within this report apply.

Table 2 Examples of Where the Air Quality Objectives Apply

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
Annual mean	All locations where members of the public might be regularly exposed Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access Hotels, unless people live there as their permanent residence Gardens of residential properties Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term

³ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Averaging Period	Objective Should Apply At	Objective Should Not Apply At
24-hour mean	All locations where the annual mean objective would apply, together with hotels Gardens of residential properties	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets) Those parts of car parks, bus stations and railway stations etc which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer	Kerbside sites where the public would not be expected to have regular access

2.2
Local Air Quality Management

2.2.1 LAs are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure, as summarised in Table 2, are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan, the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

2.3
Dust

2.3.1 The main requirements with respect to dust control from industrial or trade premises not regulated under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments, such as construction sites, is that provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

"any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."

2.3.2 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

2.4 National Planning Policy

2.4.1 The revised National Planning Policy Framework⁴ (NPPF) was published in December 2024 and sets out the Government's planning policies for England and how these are expected to be applied.

2.4.2 The purpose of the planning system is to contribute to the achievement of sustainable development. In order to ensure this, the NPPF recognises three overarching objectives including the following of relevance to air quality:

"c) an environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy."

2.4.3 Chapter 15 of the NPPF details objectives in relation to conserving and enhancing the natural environment. It states that:

"Planning policies and decisions should contribute to and enhance the natural and local environment by:

[...]

e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of

⁴ NPPF, Ministry of Housing, Communities and Local Government, 2024.

soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality [...]."

- 2.4.4 The NPPF specifically recognises air quality as part of delivering sustainable development and states that:

"Planning policies and decisions should sustain and contribute towards compliance with relevant limit values or national objectives for pollutants, taking into account the presence of Air Quality Management Areas and Clean Air Zones, and the cumulative impacts from individual sites in local areas. Opportunities to improve air quality or mitigate impacts should be identified, such as through traffic and travel management, and green infrastructure provision and enhancement. So far as possible these opportunities should be considered at the plan-making stage, to ensure a strategic approach and limit the need for issues to be reconsidered when determining individual applications. Planning decisions should ensure that any new development in Air Quality Management Areas and Clean Air Zones is consistent with the local air quality action plan."

- 2.4.5 The implications of the NPPF have been considered throughout this assessment.

2.5 National Planning Practice Guidance

- 2.5.1 The National Planning Practice Guidance⁵ (NPPG) web-based resource was launched by the Department for Communities and Local Government to support the NPPF and make it more accessible. The air quality pages are summarised under the following headings:

1. What air quality considerations does planning need to address?
2. What is the role of plan-making with regard to air quality?
3. Are air quality concerns relevant to neighbourhood planning?
4. What information is available about air quality?
5. When could air quality considerations be relevant to the development management process?
6. What specific issues may need to be considered when assessing air quality impacts?

⁵

<https://www.gov.uk/guidance/air-quality--3>.

7. How detailed does an air quality assessment need to be?
8. How can an impact on air quality be mitigated?

2.5.2 These were reviewed and the relevant guidance considered as necessary throughout the undertaking of this assessment.

2.6 Local Planning Policy

2.6.1 The statutory development plan for City of Manchester comprises saved policies of the Unitary Development Plan (UDP), Core Strategy (as modified) and Places for Everyone Development Plan Document (DPD).

2.6.2 The Core Strategy DPD⁶ was adopted by MCC in July 2012 and provides policies which guide the determination of planning applications. Review of the document indicated the following of relevance to this report:

"Policy EN 16

Air Quality

The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester's principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local effect of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.

When assessing the appropriateness of locations for new development the Council will consider the effects on air quality, alongside other plan objectives. This includes cumulative effects, particularly in Air Quality Management Areas."

"Policy DM 1

Development Management

⁶ Core Strategy DPD, MCC, 2012.

All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:

[...]

Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise."

- 2.6.3 Places for Everyone⁷ was adopted by nine Greater Manchester councils, including MCC, in March 2024. Review of the document indicated the following policy of relevance to the assessment:

"Policy JP-S5: Clean Air

A comprehensive range of measures will be taken to support improvements in air quality, focusing particularly on locations where people live, where children learn and play, where there are impacts on the green infrastructure network and where air quality targets are not being met, including:

1. Location and designing development, and focusing transport investment, so as to reduce reliance on forms of transport that generate air pollution;
2. Determining planning applications having regard to the most recent development and planning control guidance published jointly by the Institute of Air Quality Management (IAQM) and the Environmental Protection UK (EPUK), and the most recent IAQM Guidance on the Assessment of Dust from Demolition and Construction, or relevant successor guidance, including the requirement for developers to submit construction management plans as appropriate;
3. Requiring applications for developments that could have an adverse impact on air quality to submit relevant air pollution data so that adverse impacts on air

⁷ Places for Everyone, Greater Manchester Combined Authority, 2024.

quality can be fully assessed and development only permitted where they are acceptably and/or suitable mitigation can be provided;

4. Restricting developments that would generate significant point source pollution such as some types of industrial activity and energy generation;

5. Significantly expanding the existing commercial network of electric vehicle charging points, both for public and private use, including as part of new developments;

6. Implementing the Clean Air Plan and associated measures;

7. Facilitating the more sustainable distribution of goods within the urban area, including through accommodating urban consolidation centres and urban distribution centres that use ultra-low-emission vehicles, and local delivery facilities to reduce repeat delivery attempts;

8. Designing streets to avoid trapping air pollution at ground level, including through the appropriate location and scale of buildings and trees;

9. Controlling traffic and parking within and around schools, early years sites and other locations that are particularly sensitive to air quality;"

10. Promoting actions that help remove pollutants from the air, such as enhancing the green infrastructure network and using innovative building materials that capture air pollutants; and,

11. Development should be located in areas that maximise the use of sustainable travel modes and be designated to minimise exposure to high levels of air pollution, particularly for vulnerable users."

2.6.4 MCC has also produced 'Air Quality & Planning Technical Guidance'⁸ which provides detail on assessing the impact of proposed development on air quality.

⁸

Air Quality & Planning Technical Guidance, MCC, 2022.

2.6.5 The above policies and technical guidance were taken into consideration throughout the undertaking of the assessment.

2.7 Greater Manchester Clean Air Plan

2.7.1 The UK Government has instructed a number of LAs to take rapid action to reduce harmful roadside levels of NO₂ within their area of jurisdiction in the quickest possible timeframe. The Greater Manchester Combined Authority (GMCA) and Transport for Greater Manchester (TfGM) have collaborated to develop a Clean Air Plan (CAP) to ensure Greater Manchester achieves compliance with the relevant AQOs for NO₂ by 2026 at the latest. The initial CAP proposal included implementation of a Class C charging Clean Air Zone. The GMCA has subsequently updated the CAP proposals to comprise an investment-led, non-charging approach. This is currently under review by the UK Government. The implications of the CAP were taken into account during the undertaking of this assessment.

3.0 METHODOLOGY

3.1 Introduction / Pre-Application Scoping

3.1.1 The proposed development has the potential to cause air quality impacts during the construction and operational phases. These have been assessed in accordance with the following methodology, which was agreed with Laura Miller, Environmental Protection Officer at MCC, on 8th October 2024. Reference should be made to Appendix 1 for a copy of the correspondence.

3.2 Construction Phase Assessment

3.2.1 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the Institute of Air Quality Management (IAQM) document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2⁹'.

3.2.2 Activities on the proposed construction site have been divided into four types to reflect their different potential impacts. These are:

- Demolition;
- Earthworks;
- Construction; and,
- Trackout.

3.2.3 It should be noted that a separate Prior Notice for Demolition application has been approved by MCC for demolition of the existing buildings on site. This submission was informed by a DMP which incorporates a number of mitigation measures to minimise air quality impacts on surround residential receptors. However, in order to provide a comprehensive assessment, consideration has been made to potential impacts associated with fugitive dust emissions during demolition throughout this report.

3.2.4 The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

⁹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to PM₁₀.

3.2.5 The assessment steps are detailed below.

Step 1 - Screen the Need for an Assessment

3.2.6 Step 1 screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the boundary or 50m from the construction vehicle route up to 250m from the site entrance, then the assessment proceeds to Step 2. Additionally, should ecological receptors be identified within 50m of the site or the construction vehicle route up to 250m from the site entrance, then the assessment also proceeds to Step 2.

3.2.7 Should sensitive receptors not be present within the relevant distances then **negligible** impacts would be expected and further assessment is not necessary.

Step 2 - Assess the Risk of Dust Impacts

3.2.8 Step 2 assesses the risk of potential dust impacts. A site is allocated a risk category based on two factors:

- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large (Step 2A); and,
- The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity (Step 2B).

3.2.9 The two factors are combined in Step 2C to determine the risk of dust impacts without mitigation applied.

3.2.10 Step 2A defines the potential magnitude of dust emission during the construction phase. The relevant criteria are summarised in Table 3.

Table 3 Construction Dust - Magnitude of Emission

Magnitude	Activity	Criteria
Large	Demolition	<ul style="list-style-type: none"> Total building volume greater than 75,000m³ Potentially dusty construction material (e.g. concrete) On-site crushing and screening Demolition activities more than 12m above ground level
	Earthworks	<ul style="list-style-type: none"> Total site area greater than 110,000m² Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) More than 10 heavy earth moving vehicles active at any one time Formation of bunds greater than 6m in height
	Construction	<ul style="list-style-type: none"> Total building volume greater than 75,000m³ On site concrete batching Sandblasting
	Trackout	<ul style="list-style-type: none"> More than 50 Heavy Duty Vehicle (HDV) trips per day Potentially dusty surface material (e.g. high clay content) Unpaved road length greater than 100m
Medium	Demolition	<ul style="list-style-type: none"> Total building volume between 12,000m³ and 75,000m³ Potentially dusty construction material Demolition activities between 6m and 12m above ground level
	Earthworks	<ul style="list-style-type: none"> Total site area 18,000m² to 110,000m² Moderately dusty soil type (e.g. silt) 5 to 10 heavy earth moving vehicles active at any one time Formation of bunds 3m to 6m in height
	Construction	<ul style="list-style-type: none"> Total building volume 12,000m³ to 75,000m³ Potentially dusty construction material (e.g. concrete) On site concrete batching
	Trackout	<ul style="list-style-type: none"> 20 to 50 HDV trips per day Moderately dusty surface material (e.g. high clay content) Unpaved road length 50m to 100m
Small	Demolition	<ul style="list-style-type: none"> Total building volume less than 12,000m³ Construction material with low potential for dust release (e.g. metal cladding or timber) Demolition activities less than 6m above ground Demolition during wetter months

Magnitude	Activity	Criteria
	Earthworks	<ul style="list-style-type: none"> Total site area less than 18,000m² Soil type with large grain size (e.g. sand) Less than 5 heavy earth moving vehicles active at any one time Formation of bunds less than 3m in height
	Construction	<ul style="list-style-type: none"> Total building volume less than 12,000m³ Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	<ul style="list-style-type: none"> Less than 20 HDV trips per day Surface material with low potential for dust release Unpaved road length less than 50m

3.2.11 Step 2B defines the sensitivity of the area around the development to potential dust impacts. The sensitivities of specific receptors are shown in Table 4.

Table 4 Construction Dust - Sensitivities of People and Ecological Receptors

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
High	<ul style="list-style-type: none"> Users expect high levels of amenity High aesthetic or value property People expected to be present continuously for extended periods of time Locations where members of the public are exposed over a time period relevant to the AQO for PM₁₀. e.g. residential properties, hospitals, schools and residential care homes 	<ul style="list-style-type: none"> Internationally or nationally designated site e.g. Special Area of Conservation
Medium	<ul style="list-style-type: none"> Users would expect to enjoy a reasonable level of amenity Aesthetics or value of their property could be diminished by soiling People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work 	<ul style="list-style-type: none"> Nationally designated site e.g. Sites of Special Scientific Interest

Receptor Sensitivity	Examples	
	Human Receptors	Ecological Receptors
Low	<ul style="list-style-type: none"> • Enjoyment of amenity would not reasonably be expected • Property would not be expected to be diminished in appearance • Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads 	<ul style="list-style-type: none"> • Locally designated site e.g. Local Nature Reserve

3.2.12 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in Table 5.

Table 5 Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	More than 100	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

3.2.13 Table 6 outlines the criteria for determining the sensitivity of the area to human health impacts.

Table 6 Construction Dust - Sensitivity of the Area to Human Health Impacts

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	Greater than 32µg/m ³	More than 100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
	28 - 32µg/m³	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m³	More than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	Less than 24µg/m³	More than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
		1 - 10	High	Medium	Low	Low
Medium	Greater than 32µg/m³	More than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m³	More than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24 - 28µg/m³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	Less than 24µg/m³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
		1 or more	Low	Low	Low	Low
Low	-	1 or more	Low	Low	Low	Low

3.2.14 Table 7 outlines the criteria for determining the sensitivity of the area to ecological impacts.

Table 7 Construction Dust - Sensitivity of the Area to Ecological Impacts

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
High	High	Medium

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
Medium	Medium	Low
Low	Low	Low

3.2.15 Step 2C combines the dust emission magnitude with the sensitivity of the area to determine the risk of unmitigated impacts.

3.2.16 Table 8 outlines the risk category from demolition activities.

Table 8 Construction Dust - Dust Risk Category from Demolition Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Medium
Medium	High	Medium	Low
Low	Medium	Low	Negligible

3.2.17 Table 9 outlines the risk category from earthworks, construction and trackout activities.

Table 9 Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

Receptor Sensitivity	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

Step 3 - Site-specific Mitigation

3.2.18 Step 3 requires the identification of site-specific mitigation measures within the IAQM guidance¹⁰ to reduce potential dust impacts based upon the relevant risk categories identified in Step 2. For sites with **negligible** risk, mitigation measures beyond those required by legislation are not required. However, additional controls may be applied as part of good practice.

Step 4 - Determine Significance

3.2.19 Once the risk of dust impacts has been determined and the appropriate mitigation measures identified, the final step is to determine the significance of any residual impacts. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be **not significant**.

3.2.20 The determination of significance relies on professional judgement and reasoning should be provided as far as practicable. The IAQM guidance suggests the provision of details of the assessor's qualifications and experience. These are provided in Appendix 3.

3.3 Operational Phase Assessment

Potential Development Impacts

3.3.1 The development has the potential to affect air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site. Potential impacts have therefore been defined by predicting pollutant concentrations at sensitive locations using dispersion modelling for the following scenarios:

- 2023 - Verification;
- Opening year Do-Minimum (DM) (predicted traffic flows in 2028 should the proposals not proceed); and,
- Opening year Do-Something (DS) (predicted traffic flows in 2028 should the proposals be completed).

¹⁰ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

3.3.2 A development opening year of 2028 was utilised as it is anticipated that demolition works will commence in Q2 2025 with subsequent construction works lasting approximately 140-weeks. It is therefore considered that 2028 would be the earliest operational year for the scheme.

3.3.3 Reference should be made to Appendix 2 for assessment input data and details of the verification process.

3.3.4 Locations sensitive to potential changes in off-site pollutant concentrations were identified within 200m of the highway network in accordance with the guidance provided within the Design Manual for Roads and Bridges (DMRB)¹¹ on the likely limits of pollutant dispersion from road sources. The criteria provided within DEFRA guidance¹² on where the AQOs apply, as summarised in Table 2, was utilised to determine worst-case receptor positions in the vicinity of links likely to be affected by changes in traffic flows as a result of the development.

3.3.5 The significance of predicted air quality impacts was determined in accordance with the guidance provided within the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'¹³. Using this methodology impacts were defined based on the interaction between the predicted pollutant concentration from the DS scenario and the magnitude of change between the DM and DS scenarios, as outlined in Table 10.

Table 10 Significance of Operational Phase Road Vehicle Exhaust Emission Impacts

Concentration at Receptor in Assessment Year	Predicted Concentration Change as Proportion of AQO/ Concentration Target (%)			
	1	2 - 5	6 - 10	> 10
75% or less of AQO/Concentration Target	Negligible	Negligible	Slight	Moderate
76 - 94% of AQO/ Concentration Target	Negligible	Slight	Moderate	Moderate
95 - 102% of AQO/Concentration Target	Slight	Moderate	Moderate	Substantial
103 - 109% of AQO/Concentration Target	Moderate	Moderate	Substantial	Substantial

¹¹ LA 105: Air Quality, Highways England, 2019.

¹² Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

¹³ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

Concentration at Receptor in Assessment Year	Predicted Concentration Change as Proportion of AQO/ Concentration Target (%)			
	1	2 - 5	6 - 10	> 10
1 10% or more of AQO/ Concentration Target	Moderate	Substantial	Substantial	Substantial

3.3.6 The matrix shown in Table 10 is intended to be used by rounding the change in percentage pollutant concentration to whole numbers, which makes it clearer which cell the impact falls within. It should be noted that changes of 0%, i.e. less than 0.5%, are described as **negligible**.

3.3.7 Following the prediction of impacts at discrete receptor locations, the IAQM document¹⁴ provides guidance on determining the overall air quality impact significance of the operation of a development. The following factors are identified for consideration by the assessor:

- The existing and future air quality in the absence of the development;
- The extent of current and future population exposure to the impacts; and,
- The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

3.3.8 The IAQM guidance states that an assessment must reach a conclusion on the likely significance of the predicted impact. Where the overall effect is **moderate** or **substantial**, the effect is likely to be considered **significant**, whilst if the impact is **slight** or **negligible**, the impact is likely to be considered **not significant**. It should be noted that this is a binary judgement of either it is **significant** or it is **not significant**.

3.3.9 The determination of significance relies on professional judgement and reasoning has been provided as far as practicable. The IAQM guidance¹⁵ suggests the provision of details of the assessor's qualifications and experience. These are provided in Appendix 3.

¹⁴ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹⁵ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

Potential Future Exposure

3.3.10 The proposals have the potential to expose future residents to elevated pollution levels. In order to assess NO₂, PM₁₀ and PM_{2.5} concentrations across the development site, detailed dispersion modelling was undertaken. Reference should be made to Appendix 2 for the assessment input data.

3.3.11 The dispersion modelling results were compared against the relevant AQOs and Concentration Target in order to determine the potential for exposure of future residents to elevated pollutant concentrations and identify any requirement for mitigation.

4.0 **BASELINE**

4.1 **Introduction**

4.1.1 Existing air quality conditions in the vicinity of the proposed development site were identified in order to provide a baseline for assessment. These are detailed in the following Sections.

4.2 **Local Air Quality Management**

4.2.1 As required by the Environment Act (1995), as amended by the Environment Act (2021), MCC has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ are above the AQO within the city. As such, one AQMA has been declared, which is described as follows:

"This is part of the Greater Manchester Combined Authority AQMA located within the Manchester Council area."

4.2.2 The site is partially located within the AQMA. As such, there is the potential for vehicles travelling to and from the site to increase pollution levels in this sensitive area, as well as exposure of future occupants to elevated pollutant concentrations. This has been considered throughout the assessment.

4.2.3 MCC has concluded that concentrations of all other pollutants considered within the AQs are currently below the relevant AQOs. As such, no further AQMAs have been designated.

4.3 **Air Quality Monitoring**

4.3.1 Monitoring of pollutant concentrations is undertaken by MCC throughout their area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO₂ concentrations recorded in the vicinity of the development, as provided in the 'Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results, 2011-2023'¹⁶ are shown in Table 11. Exceedences of the relevant AQO are shown in **bold**.

¹⁶ Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results, 2011-2023, GMCA, 2024.

Table 11 Monitoring Results - NO₂

Monitoring Site		Monitored NO ₂ Concentration (µg/m³)		
		2021	2022	2023
TRF2	Trafford A56	23	24	21
CAP_TRAF_010	A56 (Chester Road) ^(a)	-	23.9	21.6
CAP_TRAF_011	A56 (Chester Road) ^(b)	25.2	31.6	-
CAP_TRAF_012	A56 (Chester Road) ^(b)	22.2	29.2	-
CAP_TRAF_013	A56 (Chester Road)	37.1	40.6	37.7
CAP_TRAF_014	A56 (Chester Road) ^(b)	25.2	27.1	-
CAP_TRAF_015	A56 (Chester Road) ^(b)	30.4	30.0	-
CAP_TRAF_023	A56 ^(a)	-	30.6	-
CAP_TRAF_024	A56 ^{(a)(b)}	-	31.1	-

Note: (a) Monitor commissioned in 2022.

(b) Monitor decommissioned in 2023.

4.3.2 As shown in Table 11, annual mean NO₂ concentrations were above the AQO of 40µg/m³ at the CAP-TRAF_013 survey site in 2022. Levels have since dropped below the AQO. Concentrations were below the relevant AQO at the remaining monitors in recent years. Reference should be made to Figure 2 for a map of the survey positions.

4.3.3 Recent PM₁₀ monitoring results are shown in Table 12.

Table 12 Monitoring Results - PM₁₀

Monitoring Site		Monitored PM ₁₀ Concentration (µg/m³)		
		2021	2022	2023
TRF2	Trafford A56	14	16	13

4.3.4 As shown in Table 12, annual mean PM₁₀ concentrations were below the AQO of 40µg/m³ at TRF2 - Trafford A56 in recent years.

4.3.5 Pollutant concentrations during 2021 were affected by changes to travel patterns associated with the COVID-19 pandemic. The results should therefore be viewed with

caution. However, data for 2022 and beyond is now considered representative of post-pandemic conditions. This is supported by the IAQM¹⁷ who have adopted the following position:

"ambient air quality monitoring data for the year 2022 and beyond is generally considered to represent the current post-pandemic baseline."

4.3.6 MCC and the GMCA do not undertake monitoring PM_{2.5} concentrations within the vicinity of the application site.

4.4 Background Pollutant Concentrations

4.4.1 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The proposed development site is located in grid square NGR: 381500, 394500. Data for this location was downloaded from the DEFRA website¹⁸ for the purpose of the assessment and is summarised in Table 13.

Table 13 Background Pollutant Concentration Predictions

Pollutant	Predicted Background Pollutant Concentration (µg/m ³)		
	2023	2024	2028
NO ₂	15.27	14.68	12.56
PM ₁₀	12.64	12.59	12.37
PM _{2.5}	7.71	7.65	7.42

4.4.2 As shown in Table 13, predicted background concentrations are below the relevant AQOs, Interim Target and Concentration Target at the development site.

¹⁷ Use of 2020 and 2021 Monitoring Datasets V1.1, IAQM, 2023.

¹⁸ <http://uk-air.defra.gov.uk/data/iaqm-background-maps?year=2021>.

4.5 Sensitive Receptors

- 4.5.1 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. These have been defined for dust and road vehicle exhaust emission impacts in the following Sections.

Construction Phase Sensitive Receptors

- 4.5.2 Receptors sensitive to potential dust impacts during demolition, earthworks and construction were identified from a desk-top study of the area up to 250m from the development boundary. These are summarised in Table 14.

Table 14 Demolition, Earthworks and Construction Dust Sensitive Receptors

Distance from Site Boundary (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	More than 100	0
Up to 50	More than 100	0
Up to 100	More than 100	-
Up to 250	More than 100	-

- 4.5.3 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the site access. These are summarised in Table 15.

Table 15 Trackout Dust Sensitive Receptors

Distance from Site Access Route (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	More than 100	0
Up to 50	More than 100	0

- 4.5.4 There are no ecological receptors within 50m of the development boundary or the access route within 250m of the site entrance. As such, ecological impacts have not been assessed further within this report.

4.5.5 Based on the criteria shown in Table 4, the sensitivity of the receiving environment to potential dust impacts was determined as a **high**. This was because the identified receptors included residential properties.

Operational Phase Sensitive Receptors

4.5.6 Locations sensitive to potential operational phase road vehicle exhaust emission impacts were identified from a desk-top study and are summarised in Table 16. Receptor heights were included in order to take account of less-sensitive land uses, such as retail, at ground floor level.

Table 16 Operational Phase Road Vehicle Exhaust Emissions Sensitive Receptor Locations

Receptor	NGR (m)		Height (m)	
	X	Y		
R1	Residential - Manchester Road	381628.5	394171.3	3.0
R2	Residential - Manchester Road	381644.0	394120.1	3.0
R3	Residential - Wilbrham Road	381703.4	393993.7	3.0
R4	Residential - Wilbrham Road	381642.9	393994.0	3.0
R5	Residential - Wilbrham Road	381519.7	394026.8	3.0
R6	Residential - Wilbrham Road	381507.4	394001.6	3.0
R7	Educational - Oswald Road Primary School	381558.8	394232.9	1.5
R8	Residential - Barlow Moor Road	381738.4	393928.5	3.0
R9	Residential - Barlow Moor Road	381764.1	393882.5	3.0
R10	Residential - Wilbrham Road	381705.9	394015.7	3.0
R11	Residential - Wilbrham Road	381755.3	393993.5	3.0
R12	Residential - Wilbrham Road	381776.6	394021.9	3.0

4.5.7 Reference should be made to Figure 3 for a graphical representation of road vehicle exhaust emission sensitive receptor locations.

5.0 CONSTRUCTION PHASE ASSESSMENT

5.1 Introduction

5.1.1 There is the potential for air quality impacts as a result of the construction of the proposed development. These are assessed in the following Sections.

5.2 Step 1 - Screen the Need for an Assessment

5.2.1 The undertaking of activities such as excavation, groundworks, cutting, construction and storage of materials has the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-site and on the local road network also have the potential to result in the re-suspension of dust from haul roads and highway surfaces.

5.2.2 The potential for impacts at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.

5.2.3 The desk-study undertaken to inform the baseline identified a number of sensitive receptors within 250m of the site boundary. As such, a detailed assessment of potential dust impacts was required.

5.3 Step 2a - Define the Potential Dust Emission Magnitude

Demolition

5.3.1 Demolition (as approved by MCC via a Prior Notice for Demolition) will be undertaken at the start of the construction phase and will involve clearance of the existing buildings on site. It is estimated that the building volume to be demolished is greater than 75,000m³. In

accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from demolition is therefore **large**.

Earthworks

- 5.3.2 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as site levelling and landscaping. The area of the proposed development site is less than 18,000m², with a total area of 12,700m². In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from earthworks is therefore **small**.

Construction

- 5.3.3 Due to the size of the development, the total building volume is estimated to be greater than 75,000m³. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from construction is therefore **large**.

Trackout

- 5.3.4 Based on the site area and existing area of hardstanding, it is anticipated that the unpaved road length will be less than 50m. In accordance with the criteria outlined in Table 3, the magnitude of potential dust emissions from trackout is therefore **small**.

5.4 Step 2b - Define the Sensitivity of the Area

Dust Soiling

- 5.4.1 Table 14 shows that there are more than 100 **high** sensitivity receptors within 20m of the site boundary. The sensitivity of the area with respect to dust soiling from demolition, earthworks and construction, as defined using the criteria summarised in Table 5, is therefore considered to be **high**.

- 5.4.2 Table 15 shows that there are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to dust soiling from trackout, as defined using the criteria summarised in Table 5, is therefore considered **high**.

Human Health

5.4.3 Table 13 shows the annual mean PM₁₀ background concentration at the site is 12.59µg/m³. As shown in Table 6, where the background annual mean PM₁₀ concentration is below 24µg/m³ and there are more than 100 **high** sensitivity receptors within 20m of the site boundary, the sensitivity of the area with respect to human health from demolition, earthworks and construction is considered to be **medium**.

5.4.4 There are more than 100 **high** sensitivity receptors within 20m of the road network within 250m of the site access. The sensitivity of the area with respect to human health from trackout, as defined using the criteria summarised in Table 6, is therefore considered to be **medium**.

5.5 Step 2c - Define the Risk of Dust Impacts

5.5.1 The derived dust emission magnitude for each activity was combined with the sensitivity of the area to determine the risk of unmitigated impacts in line with the methodology set out in Table 9. A summary of the risk from each dust generating activity is provided in Table 17.

Table 17 Summary of Potential Unmitigated Dust Risks

Potential Impact	Risk			
	Demolition	Earthworks	Construction	Trackout
Dust Soiling	High	Low	High	Low
Human Health	Medium	Low	Medium	Low

5.5.2 As indicated in Table 17, the potential risk of dust soiling is **high** from demolition and construction and **low** from earthworks and trackout. The potential risk of human health impacts is **medium** from demolition and construction and **low** from earthworks and trackout.

5.5.3 It should be noted that the potential for impacts depends significantly on the distance between the dust generating activity and receptor location. Risk was predicted based on a worst-case scenario of works being undertaken at the site boundary closest to each

sensitive area. Therefore, actual risk is likely to be lower than that predicted during the majority of the construction phase.

5.6 Step 3 - Site-specific Mitigation

5.6.1 The IAQM guidance¹⁹ provides potential mitigation measures to reduce impacts as a result of fugitive dust emissions during the construction phase. These have been adapted for the development site as summarised in Table 18. A Prior Notice for Demolition application (LPA ref. 141706/DEM/2024) was approved by MCC. This was informed by a DMP which set out the proposed mitigation measures during demolition works, including those outlined in Table 18. A draft Construction Management Plan (CMP) has also been produced in support of the application incorporating the measures outlined in Table 18. A final CMP will be prepared via a suitably worded planning condition.

Table 18 Fugitive Dust Emission Mitigation Measures

Issue	Control Measure
Communications	<ul style="list-style-type: none">• Develop and implement a stakeholder communications plan that includes community engagement before work commences on site• Display the name and contact details of person(s) accountable for air quality and dust issues on the site boundary. This may be the environment manager/engineer or the site manager• Display the head or regional office contact information• Develop and implement a Dust Management Plan, or similar, which may include measures to control other emissions, approved by the LA
Site management	<ul style="list-style-type: none">• Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken• Make the complaints log available to the LA upon request• Record any exceptional incidents that cause dust and/or air emissions, either on- or offsite, and the action taken to resolve the situation in the log book
Monitoring	<ul style="list-style-type: none">• Carry out regular site inspections, record inspection results, and make an inspection log available to the LA upon request• Increase the frequency of site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions

¹⁹ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Issue	Control Measure
Site preparation	<ul style="list-style-type: none"> Plan site layout so that machinery and dust causing activities are located away from receptors, as far as is possible Erect solid screens or barriers around dusty activities or the site Fully enclose site or specific operations where there is a high potential for dust production and they are active for an extensive period Avoid site runoff of water or mud Keep site fencing, barriers and scaffolding clean using wet methods Remove materials that have a potential to produce dust from site as soon as possible, unless being re-used Cover, seed or fence stockpiles to prevent wind whipping
Operating vehicle/machinery and sustainable travel	<ul style="list-style-type: none"> Ensure all vehicles switch off engines when stationary - no idling vehicles Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable
Operations	<ul style="list-style-type: none"> Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques Ensure an adequate water supply on the site for effective dust suppression, using non-potable water where possible and appropriate Use enclosed chutes and conveyors and covered skips Minimise drop heights and use fine water sprays wherever appropriate Ensure equipment is available to clean any dry spillages, and clean up spillages as soon as reasonably practicable using wet cleaning methods
Waste management	<ul style="list-style-type: none"> Avoid bonfires or burning of waste materials
Demolition	<ul style="list-style-type: none"> Ensure effective water suppression is used during demolition operations Avoid explosive blasting, using appropriate manual or mechanical alternatives Damp down any biological debris before demolition
Construction	<ul style="list-style-type: none"> Avoid scabbling (roughening of concrete surfaces) if possible Ensure sand and other aggregates are stored in banded areas and are not allowed to dry out Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos with suitable emission control systems to prevent escape of material and overfilling during delivery
Trackout	<ul style="list-style-type: none"> Use water-assisted dust sweeper on access and local roads, if required Avoid dry sweeping of large areas Ensure vehicles entering and leaving site are covered to prevent escape of materials Implement a wheel washing system, if required

5.7 **Step 4 - Determine Significance**

5.7.1 Assuming the relevant mitigation measures outlined in Table 18 are implemented, the residual impacts from all dust generating activities is predicted to be **not significant**, in accordance with the IAQM guidance²⁰.

²⁰ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

6.0 OPERATIONAL PHASE ASSESSMENT

6.1 Introduction

6.1.1 The development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site during the operational phase, as well as expose future residents to any existing air quality issues. An assessment was therefore undertaken using dispersion modelling in order to quantify potential changes in pollutant concentrations at sensitive locations in the vicinity of the site.

6.1.2 The assessment considered the following scenarios:

- 2023 - Verification;
- 2028 - DM; and,
- 2028 - DS.

6.1.3 The DM scenario (i.e. without development) included baseline traffic data, inclusive of anticipated growth and the committed developments, for the relevant assessment year. The DS scenario (i.e. with development) included baseline traffic data, inclusive of anticipated growth and committed developments, in addition to predicted vehicle trips associated with the operation of the proposals.

6.1.4 The committed developments identified for inclusion in the assessment are outlined in Chapter 2 Site and Surrounds of the Environmental Statement produced in support of the application.

6.1.5 For the purpose of the assessment traffic data for 2028 was utilised as the development opening year. Air quality is predicted to improve in the future. However, in order to provide a robust assessment, emissions factors and background concentrations for 2023 were utilised within the dispersion model. The use of 2028 traffic data and 2023 emission factors is considered to provide a worst-case scenario and therefore a sufficient level of confidence can be placed within the predicted pollution concentrations.

6.1.6 Reference should be made to Appendix 1 for full assessment input details (as per pre-application scoping dialogue with MCC officers).

6.2 Potential Development Impacts

Predicted Concentrations

- 6.2.1 Annual mean NO₂ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in Table 19.

Table 19 Predicted Annual Mean NO₂ Concentrations

Receptor	Predicted Annual Mean NO ₂ Concentration (µg/m ³)			
	DM	DS	Change	
R1	Residential - Manchester Road	16.05	16.06	0.01
R2	Residential - Manchester Road	16.51	16.79	0.28
R3	Residential - Wilbraham Road	17.42	17.47	0.05
R4	Residential - Wilbraham Road	16.29	16.33	0.04
R5	Residential - Wilbraham Road	17.86	17.93	0.07
R6	Residential - Wilbraham Road	15.88	15.89	0.01
R7	Educational - Oswald Road Primary School	15.20	15.22	0.02
R8	Residential - Barlow Moor Road	16.32	16.35	0.03
R9	Residential - Barlow Moor Road	16.12	16.15	0.03
R10	Residential - Wilbraham Road	18.04	18.08	0.04
R11	Residential - Wilbraham Road	16.13	16.15	0.02
R12	Residential - Wilbraham Road	16.47	16.49	0.02

- 6.2.2 As indicated in Table 19, predicted annual mean NO₂ concentrations were below the relevant AQO at all sensitive receptors in both scenarios. Reference should be made to Figure 4 and 5 for graphical representation of the results.

- 6.2.3 Annual mean PM₁₀ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in Table 20.

Table 20 Predicted Annual Mean PM₁₀ Concentrations

Receptor	Predicted Annual Mean PM ₁₀ Concentration (µg/m ³)			
	DM	DS	Change	
R1	Residential - Manchester Road	11.36	11.36	0.00
R2	Residential - Manchester Road	11.50	11.60	0.09
R3	Residential - Wilbraham Road	11.77	11.78	0.01
R4	Residential - Wilbraham Road	11.42	11.43	0.01
R5	Residential - Wilbraham Road	11.92	11.94	0.02
R6	Residential - Wilbraham Road	11.30	11.30	0.01
R7	Educational - Oswald Road Primary School	11.09	11.10	0.01
R8	Residential - Barlow Moor Road	11.43	11.44	0.01
R9	Residential - Barlow Moor Road	11.38	11.39	0.01
R10	Residential - Wilbraham Road	11.97	11.98	0.01
R11	Residential - Wilbraham Road	11.37	11.38	0.01
R12	Residential - Wilbraham Road	11.48	11.48	0.01

6.2.4 As indicated in Table 20, predicted annual mean PM₁₀ concentrations were below the relevant AQO at all sensitive receptors in both scenarios. Reference should be made to Figure 6 and 7 for graphical representation of the results.

6.2.5 Annual mean PM_{2.5} concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in Table 21.

Table 21 Predicted Annual Mean PM_{2.5} Concentrations

Receptor	Predicted Annual Mean PM _{2.5} Concentration (µg/m ³)		
	DM	DS	Change
R1	Residential - Manchester Road	6.89	0.00
R2	Residential - Manchester Road	6.96	0.05
R3	Residential - Willbraham Road	7.10	0.01

Receptor	Predicted Annual Mean PM _{2.5} Concentration (µg/m³)			
	DM	DS	Change	
R4	Residential - Wilbraham Road	6.91	6.92	0.01
R5	Residential - Wilbraham Road	7.18	7.19	0.01
R6	Residential - Wilbraham Road	6.85	6.85	0.00
R7	Educational - Oswald Road Primary School	6.74	6.75	0.00
R8	Residential - Barlow Moor Road	6.92	6.92	0.01
R9	Residential - Barlow Moor Road	6.90	6.90	0.00
R10	Residential - Wilbraham Road	7.20	7.21	0.01
R11	Residential - Wilbraham Road	6.89	6.89	0.00
R12	Residential - Wilbraham Road	6.95	6.95	0.00

6.2.6 As indicated in Table 21, predicted annual mean PM_{2.5} concentrations were below Concentration Target at all sensitive receptors in both the DM and DS scenarios. Reference should be made to Figure 8 and 9 for graphical representation of the results.

Predicted Impacts

6.2.7 Predicted impacts on annual mean NO₂ concentrations at the sensitive receptor locations are summarised in Table 22.

Table 22 Predicted Impacts - NO₂

Receptor	Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance	
R1	Residential - Manchester Road	Below 75% of AQO	0	Negligible
R2	Residential - Manchester Road	Below 75% of AQO	1	Negligible
R3	Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R4	Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R5	Residential - Wilbraham Road	Below 75% of AQO	0	Negligible

Receptor	Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R6 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R7 Educational - Oswald Road Primary School	Below 75% of AQO	0	Negligible
R8 Residential - Barlow Moor Road	Below 75% of AQO	0	Negligible
R9 Residential - Barlow Moor Road	Below 75% of AQO	0	Negligible
R10 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R11 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R12 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible

6.2.8 As indicated in Table 22, impacts on annual mean NO₂ concentrations as a result of the proposed development were predicted to be **negligible** at all receptor locations.

6.2.9 Predicted impacts on annual mean PM₁₀ concentrations at the sensitive receptor locations are summarised in Table 23.

Table 23 Predicted Impacts - PM₁₀

Receptor	Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1 Residential - Manchester Road	Below 75% of AQO	0	Negligible
R2 Residential - Manchester Road	Below 75% of AQO	0	Negligible
R3 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R4 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R5 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R6 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R7 Educational - Oswald Road Primary School	Below 75% of AQO	0	Negligible
R8 Residential - Barlow Moor Road	Below 75% of AQO	0	Negligible

Receptor	Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R9 Residential - Barlow Moor Road	Below 75% of AQO	0	Negligible
R10 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R11 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible
R12 Residential - Wilbraham Road	Below 75% of AQO	0	Negligible

6.2.10 As indicated in Table 23, impacts on annual mean PM₁₀ concentrations as a result of the proposed development were predicted to be **negligible** at all receptor locations.

6.2.11 Predicted impacts on annual mean PM_{2.5} concentrations at the sensitive receptor locations are summarised in Table 24.

Table 24 Predicted Impacts - PM_{2.5}

Receptor	Predicted Annual Mean PM _{2.5} Concentration	Predicted Change as Proportion of Concentration Target (%)	Impact Significance
R1 Residential - Manchester Road	Below 75% of Concentration Target	0	Negligible
R2 Residential - Manchester Road	Below 75% of Concentration Target	0	Negligible
R3 Residential - Wilbraham Road	Below 75% of Concentration Target	0	Negligible
R4 Residential - Wilbraham Road	Below 75% of Concentration Target	0	Negligible
R5 Residential - Wilbraham Road	Below 75% of Concentration Target	0	Negligible
R6 Residential - Wilbraham Road	Below 75% of Concentration Target	0	Negligible
R7 Educational - Oswald Road Primary School	Below 75% of Concentration Target	0	Negligible
R8 Residential - Barlow Moor Road	Below 75% of Concentration Target	0	Negligible

Receptor	Predicted Annual Mean PM _{2.5} Concentration	Predicted Change as Proportion of Concentration Target (%)	Impact Significance
R9 Residential - Barlow Moor Road	Below 75% of Concentration Target	0	Negligible
R10 Residential - Wilbrham Road	Below 75% of Concentration Target	0	Negligible
R11 Residential - Wilbrham Road	76 - 94% of Concentration Target	0	Negligible
R12 Residential - Wilbrham Road	76 - 94% of Concentration Target	0	Negligible

6.2.12 As indicated in Table 24, impacts on annual mean PM_{2.5} concentrations as a result of the proposed development were predicted to be **negligible** at all receptor locations.

6.3 Potential Future Exposure

6.3.1 The proposed development has the potential to expose future residents to elevated pollution levels. Dispersion modelling was therefore undertaken with the inputs described in Appendix 1 (as per pre-app scoping dialogue with MCC officers) to quantify air quality conditions at the site. Reference should be made to Figures 5, 7 and 9 for graphical representations of predicted annual mean NO₂, PM₁₀ and PM_{2.5} concentrations.

6.3.2 As shown in Figure 5, annual mean NO₂ concentrations were predicted to be below the AQO of 40µg/m³ at the proposed development. The maximum level was 21.54µg/m³.

6.3.3 As shown in Figure 7, annual mean PM₁₀ concentrations were predicted to be below the AQO of 40µg/m³ at the proposed development. The maximum level was 13.54µg/m³.

6.3.4 As shown in Figure 9, annual mean PM_{2.5} concentrations were predicted to be below the Concentration Target of 10µg/m³ at the proposed development. The maximum level was 8.07µg/m³.

6.3.5 Based on the assessment results, future residents are not predicted to be exposed to pollutant concentrations above the relevant AQOs and Concentration Target. As such, the site is considered suitable for the proposed use from an air quality perspective.

6.4 Overall Impact Significance

6.4.1 The overall significance of operational phase road traffic emission impacts was determined as **negligible**. This was based on the overall predicted impacts at discrete receptor locations and the considerations outlined previously. Further justification is provided in Table 25.

Table 25 Overall Impact Significance of Road Vehicle Exhaust Emission Impacts

Guidance	Comment
The existing and future air quality in the absence of the development	Predicted annual mean NO ₂ , PM ₁₀ and PM _{2.5} concentrations were below the relevant AQOs and Concentration Target at all locations in the DM scenario It is considered unlikely that future air quality conditions will change significantly in the absence of the development given the relatively established nature of the area (district centre location)
The extent of current and future population exposure to the impacts	The development is not predicted to affect the population exposed to exceedences of the AQOs or Concentration Target
The influence and validity of any assumptions adopted when undertaking the prediction of impacts	It was assumed that vehicle exhaust emission rates and background concentrations will not reduce in future years. This provides worst-case results when compared with DEFRA and National Highways methodologies Due to the adopted assumptions it is considered the presented results are sufficiently robust for an assessment of this nature

6.4.2 The IAQM guidance²¹ states that only if the impact is greater than **slight**, the effect is considered **significant**. As impacts were predicted to be **negligible**, overall effects are considered **not significant**, in accordance with the stated methodology.

6.5 Mitigation

6.5.1 As air quality impacts associated with the proposals were predicted to be **not significant**, further mitigation to control effects is not considered necessary. However, a number of measures have been included within the scheme in accordance with the requirements of

²¹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'²² to encourage the use of sustainable transport modes, manage vehicle flows and reduce pollution around the site. Table 26 describes the good practice design principles detailed in the IAQM guidance along with how each has been addressed with regards to the proposals.

Table 26 Good Practice Design Principles

Phase	Principle	Action
Design Phase	New developments should not contravene the Council's AQAP, or render any of the measures unworkable	It is confirmed that the proposals will not contravene MCC's AQAP or render any of the measures unworkable
	Wherever possible, new developments should not create a new 'street canyon', or a building configuration that inhibits effective pollution dispersion	The proposals will alter the street geometry adjacent to B5217 - Manchester Road. However, as summarised previously, this will not lead to any significant impact at existing receptors or the exposure of future residents to poor air quality
	Delivering sustainable development should be the key theme of any application	The site is located in a district centre with high levels of public transport provision. The proposals have been designed to encourage sustainable transport behaviours, with the development providing Electric Vehicle (EV) charging points and cycle storage
Operational Phase	The provision of at least 1 EV "rapid charge" point per 10 residential dwellings and/or 1,000m ² of commercial floor space. Where on site is parking provided for residential dwellings, EV charging points for each parking space should be made	The development will provide appropriate EV charging spaces in accordance with planning policy guidance
	Where development generates significant traffic, provision of a detailed Travel Plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free ticketing, improvised links to bus stops, improved infrastructure and layouts to improve accessibility and safety	A Framework Travel Plan (FTP) has been prepared as part of the planning application submission. A final Travel Plan will be enacted upon the development becoming operational (trigger to be agreed with the Local Planning Authority)

²² Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

Phase	Principle	Action
	<p>All gas-fired boilers to meet a minimum standard of <40mgNO_x/kWh.</p> <p>All gas fired CHP plant to meet a minimum emissions standard of:</p> <ul style="list-style-type: none">• Spark ignition engine: 250mgNO_x/Nm³;• Compression ignition engine: 400mgNO_x/Nm³;• Gas turbine: 50mgNO_x/Nm³ <p>A presumption should be to use natural gas-fired installations. Where biomass is proposed within an urban area it is to meet minimum emissions standards of@</p> <ul style="list-style-type: none">• Solid biomass boiler: 275mgNO_x/Nm³ and 25mgNO_x/Nm³	<p>The proposed heating and hot water strategy includes provision of air source heat pumps and heat recovery ventilation systems. No boilers will be provided</p>

6.5.2 It is confirmed the above methods would further reduce potential impacts associated with the proposals. Specific mitigation suited to the proposals may be stipulated as a planning condition if deemed necessary by the LA.

6.6 Interim Planning Guidance for PM_{2.5}

6.6.1 Interim Planning Guidance²³ on the consideration of the PM_{2.5} targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise emissions of PM_{2.5} and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in Table 27, along with the development response.

²³ <https://uk-air.defra.gov.uk/pm25targets/planning>.

Table 27 Interim Planning Guidance Questions

Question	Response
<p>How has exposure to PM_{2.5} been considered when selecting the development site?</p> <p>Factors to consider include:</p> <ul style="list-style-type: none"> • Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these • Site proximity to pollution sources and the impact of these on users of the development • Exposure and emissions during both construction and in-use 	<p>The site is located in an urban setting, predominantly comprised of residential land use. Oswald Road Primary School lies within 50m of the northern site boundary. The results of the assessment, summarised previously, indicate that emissions from the proposed development are unlikely to impact on local receptors</p> <p>The site is adjacent to the A6010 - Wilbraham Road and the B5217 - Manchester Road. However, the results of the assessment, summarised previously, indicate that future occupants will not be exposed to exceedences of the relevant air quality standards as a result of road vehicle exhaust emissions</p> <p>As outlined in Table 18, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations</p>
<p>What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors and to reduce emissions of PM_{2.5} and its precursors?</p> <p>Factors to consider include:</p> <ul style="list-style-type: none"> • Site layout • The development's design • Technology used in the construction or installed for use in the development • Construction and future use of the development 	<p>A number of mitigation measures have been incorporated into the design of the scheme in order to reduce PM_{2.5} exposure for future residents. These include the following:</p> <ul style="list-style-type: none"> • Residential units are distanced from major road sources and associated vehicle exhaust emissions <p>In order to reduce emissions of PM_{2.5} with associated impacts at nearby receptors, the following measures have also been included:</p> <ul style="list-style-type: none"> • Provision of Electric Vehicle (EV) charging points to reduce reliance on diesel and petrol vehicles • Provision of secure cycle storage to encourage residents to use sustainable transport modes • Provision of pedestrianised streets to allow and encourage safe travel throughout the site using sustainable transport modes such as cycling and walking • Energy strategy to include air source heat pumps and heat recovery ventilation systems, providing a zero emission source of heating and hot water <p>Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities</p>

6.6.2 Based on the responses provided in Table 27 and the results of the assessment, as outlined in Sections 5.7 and 6.3, it is considered that the development has identified key sources of air pollution and taken appropriate action to minimise emissions of PM_{2.5}.

7.0 CONCLUSION

7.1.1 Redmore Environmental Ltd was commissioned by PJ Livesey to undertake an Air Quality Assessment in support of a residential-led mixed-use redevelopment of Chorlton Precinct, Manchester.

7.1.2 The proposals have the potential to cause air quality impacts at sensitive locations during the construction and operational phases. As such, an Air Quality Assessment was undertaken in order to determine baseline conditions and assess potential effects as a result of the scheme.

7.1.3 During the construction phase of the development there is the potential for air quality impacts as a result of fugitive dust emissions from the site. These were assessed in accordance with the IAQM methodology. Site-specific dust control measures were subsequently determined based on the identified risk ratings and formalised within a draft CMP. A final CMP will subsequently be secured through a suitably worded planning condition. Subject to implementation, potential air quality impacts from dust generated by demolition, earthworks, construction and trackout activities are predicted to be **not significant**.

7.1.4 A separate Prior Notice for Demolition application (LPA ref. 141706?DEM?2024) was approved by MCC, as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The submission is informed by a DMP, prepared by the proposed demolition contractor, which sets out the proposed mitigation measures to minimise air quality impacts on surrounding residential receptors. The approved demolition works are intended to commence in Q2 2025 for a period of circa 20 weeks.

7.1.5 The development has the potential to impact on existing air quality in the vicinity of the site during operation. Dispersion modelling was therefore undertaken in order to predict pollutant concentrations at sensitive locations as a result of emissions from the highway network both with and without the development in place. Results were subsequently verified using local monitoring data.

7.1.6 Review of the dispersion modelling results indicated that impacts on annual mean NO₂, PM₁₀ and PM_{2.5} concentrations as a result of traffic exhaust emissions associated with the development were predicted to be **negligible** at all receptor locations.

7.1.7 Review of the dispersion modelling results also indicated that predicted pollutant levels were below the relevant AQOs and Concentration Target across the development. As such, the site is considered suitable for the proposed end use from an air quality perspective.

7.1.8 Following consideration of the relevant issues, residual impacts as a result of the operation of the development were considered to be **not significant**, in accordance with the IAQM guidance.

7.1.9 Based on the assessment results, air quality factors are not considered a constraint to the development and the scheme is considered to align with the requirements of Core Strategic Policy EN16 of the MCC Core Strategy and Policy JP-S5 of Places for Everyone.

8.0 ABBREVIATIONS

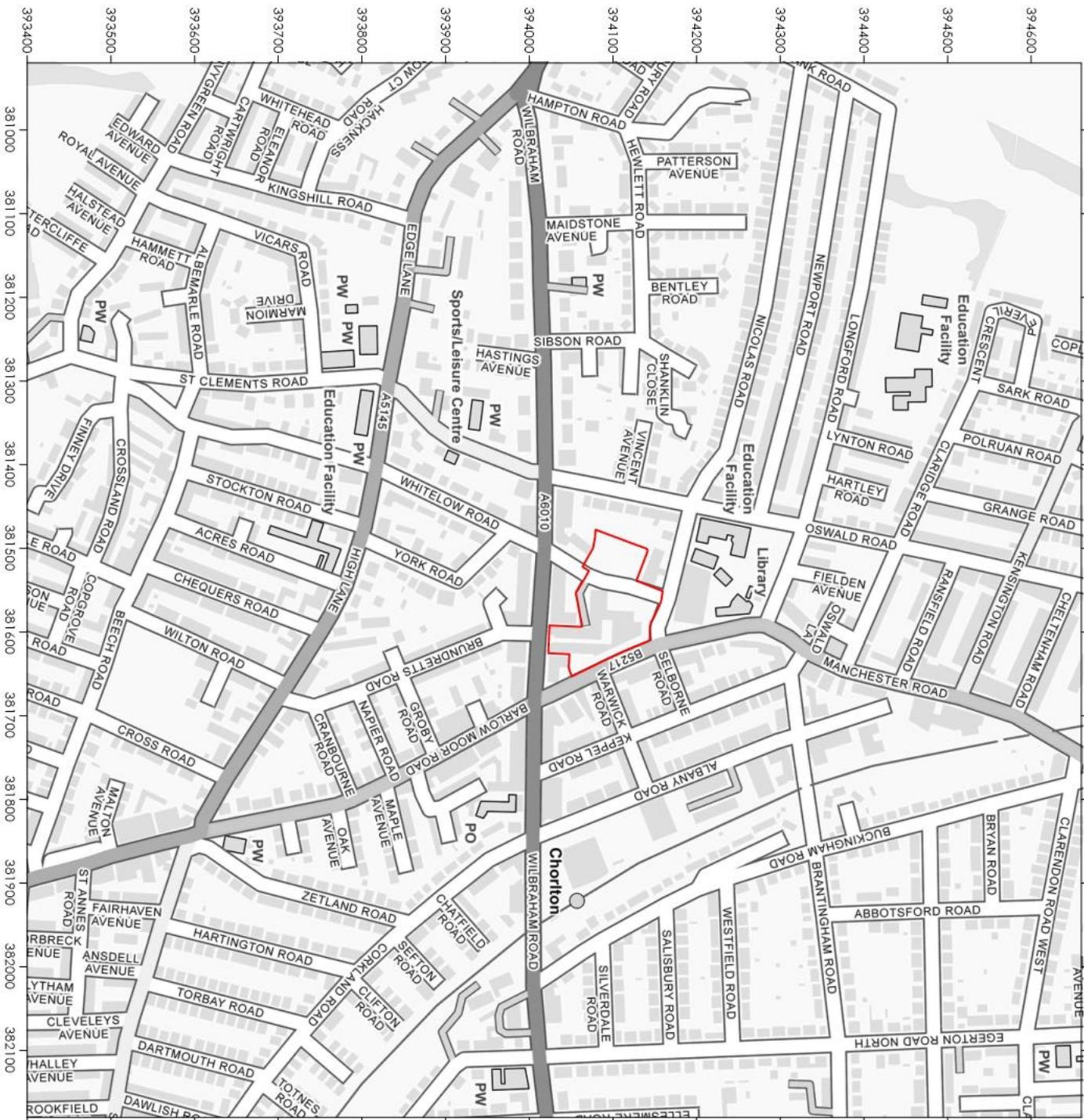
AADT	Annual Average Daily Traffic
ADM	Atmospheric Dispersion Modelling
AQLV	Air Quality Limit Value
AQMA	Air Quality Management Area
AQO	Air Quality Objective
AQS	Air Quality Strategy
CAP	Clean Air Plan
CERC	Cambridge Environmental Research Consultants
CMP	Construction Management Plan
DEFRA	Department for Environment, Food and Rural Affairs
DfT	Department for Transport
DM	Do-Minimum
DMP	Demolition Management Plan
DMRB	Design Manual for Roads and Bridges
DS	Do-Something
EB	Eastbound
GMCA	Greater Manchester Combined Authority
HDV	Heavy Duty Vehicle
IAQM	Institute of Air Quality Management
LA	Local Authority
LAQM	Local Air Quality Management
MCC	Manchester City Council
NB	Northbound
NGR	National Grid Reference
NO ₂	Nitrogen dioxide
NO _x	Oxides of nitrogen
NPPF	National Planning Policy Framework
NPPG	National Planning Policy Guidance
PM ₁₀	Particulate matter with an aerodynamic diameter of less than 10µm
PM _{2.5}	Particulate matter with an aerodynamic diameter of less than 2.5µm
SB	Southbound
SP	Slow Phase
TfGM	Transport for Greater Manchester
WB	Westbound

Z0

Roughness length

Figures





Site Boundary

Legend

Title
Figure 1 - Site Location

Project
Air Quality Assessment
Chorlton Precinct, Manchester

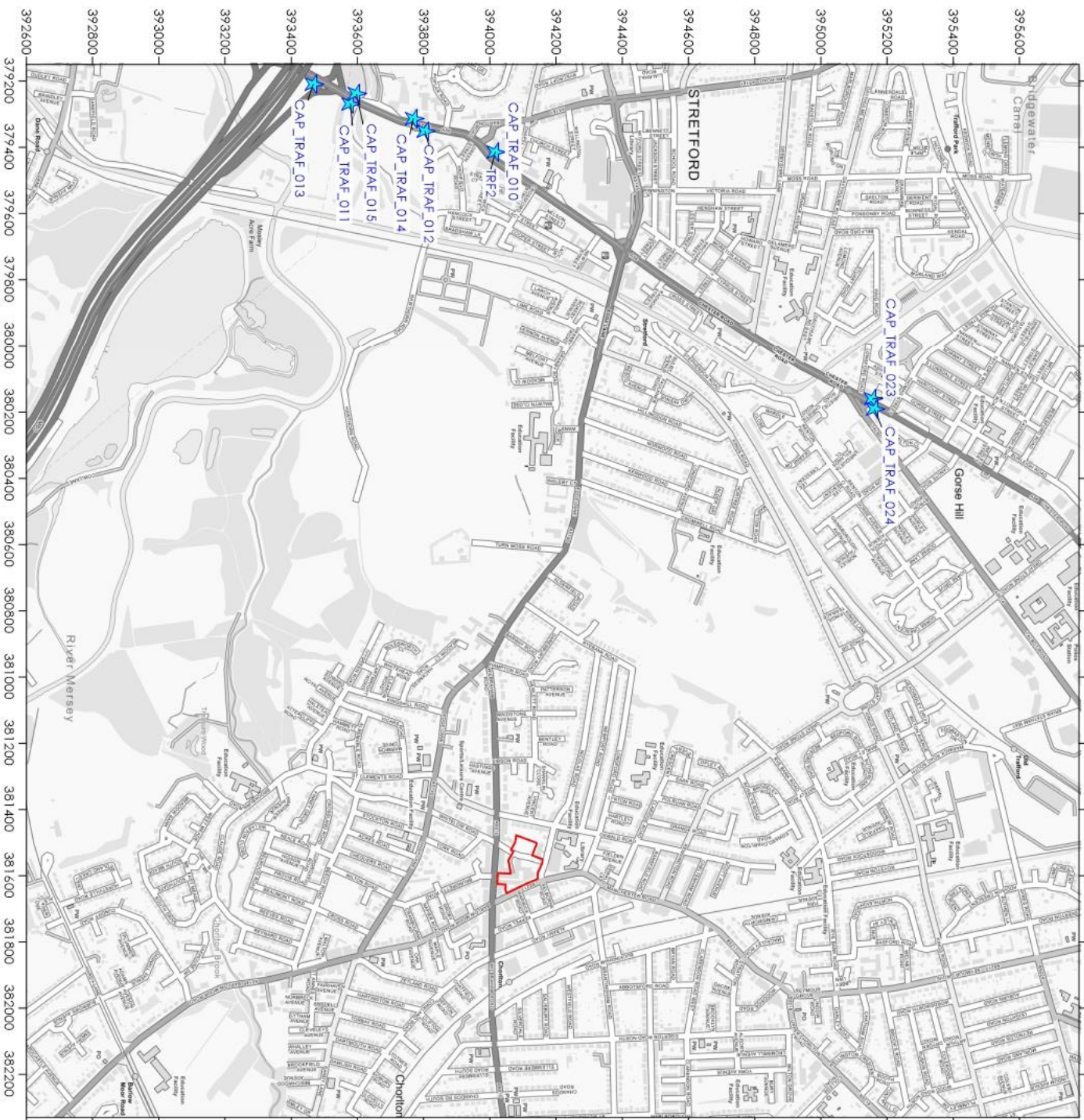
Project Reference
7162

Client
PJ Livesey

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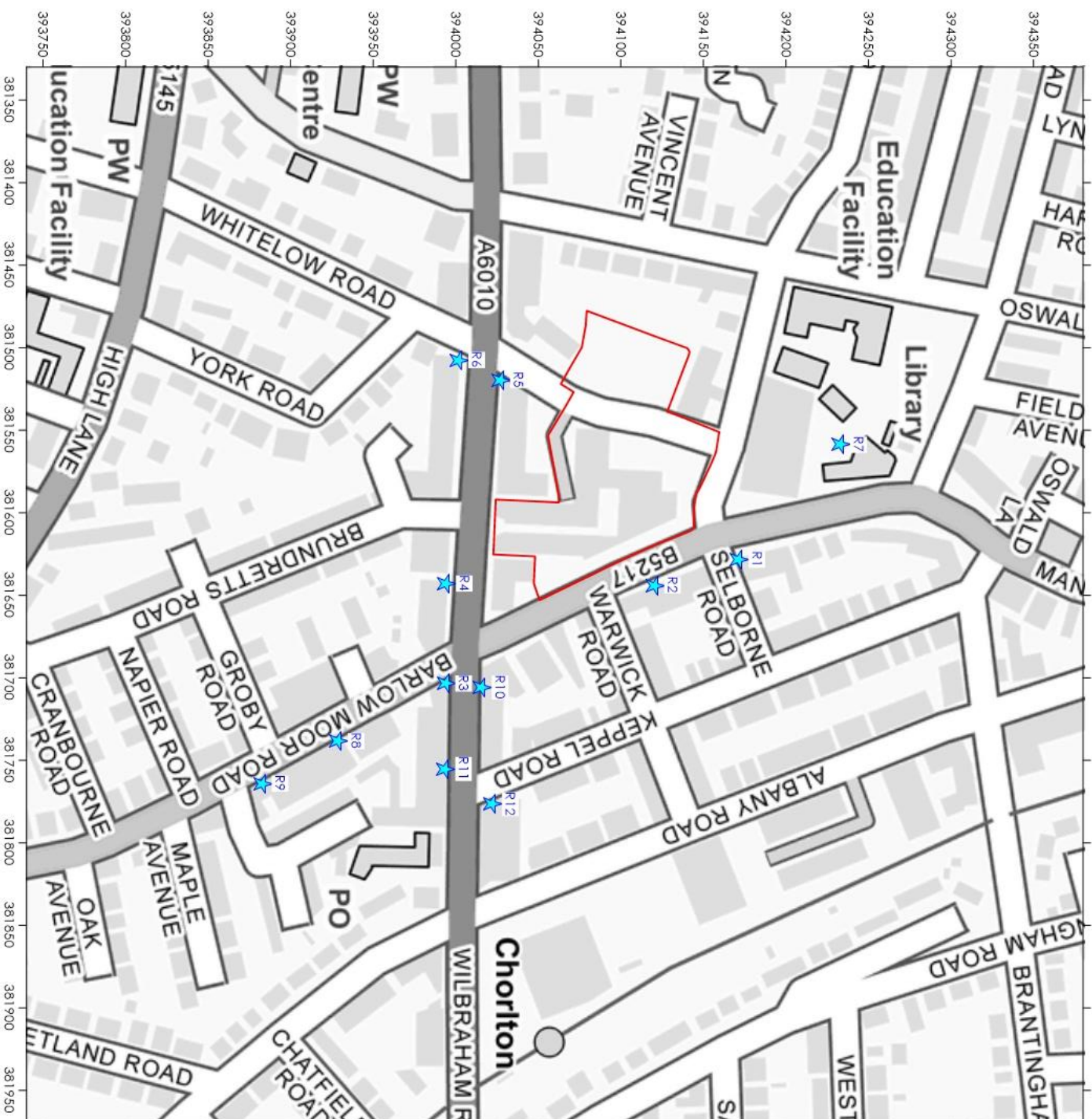


Site Boundary



Monitor

Title Figure 2 - Monitoring Locations	
Project Air Quality Assessment Chorlton Precinct, Manchester	
Project Reference 7162	
Client PJ Livesey	
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Legend

- Site Boundary
- Receptor

Title

Figure 3 - Operational Phase Road Vehicle Exhaust Emission Sensitive Receptor Locations

Project

Air Quality Assessment
Chorlton Precinct, Manchester

Project Reference

7162

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PJ Livezey

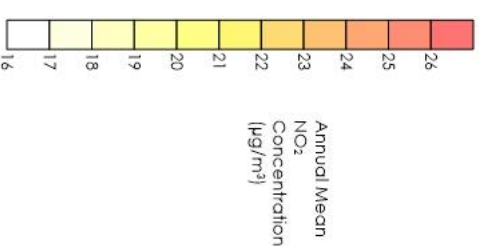
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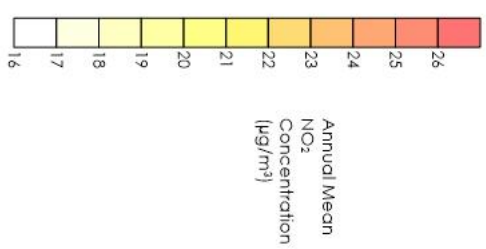
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Title Figure 4 - Predicted Annual Mean NO ₂ Concentration (µg/m ³) Do-Minimum	Project Air Quality Assessment Chorlton Precinct, Manchester	Project Reference 7162	Client PJ Livesey
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Legend



Title
Figure 5 - Predicted Annual Mean NO₂ Concentration (µg/m³) Do-Something

Project
Air Quality Assessment
Chorlton Precinct, Manchester

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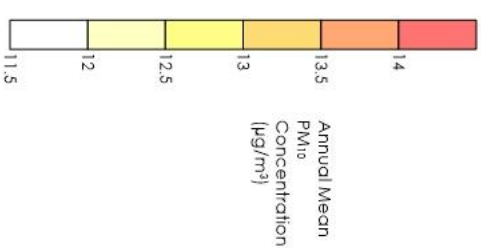
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Legend



Site Boundary



Title
Figure 6 - Predicted Annual Mean PM₁₀ Concentration (µg/m³) Do-Minimum

Project
Air Quality Assessment
Chorlton Precinct, Manchester

Project Reference
7162

Client
PJ Livesey

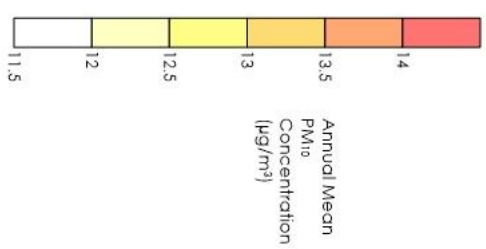
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Site Boundary



Title
Figure 7 - Predicted Annual Mean PM₁₀ Concentration (µg/m³)
Do-Something

Project
Air Quality Assessment
Chorlton Precinct, Manchester

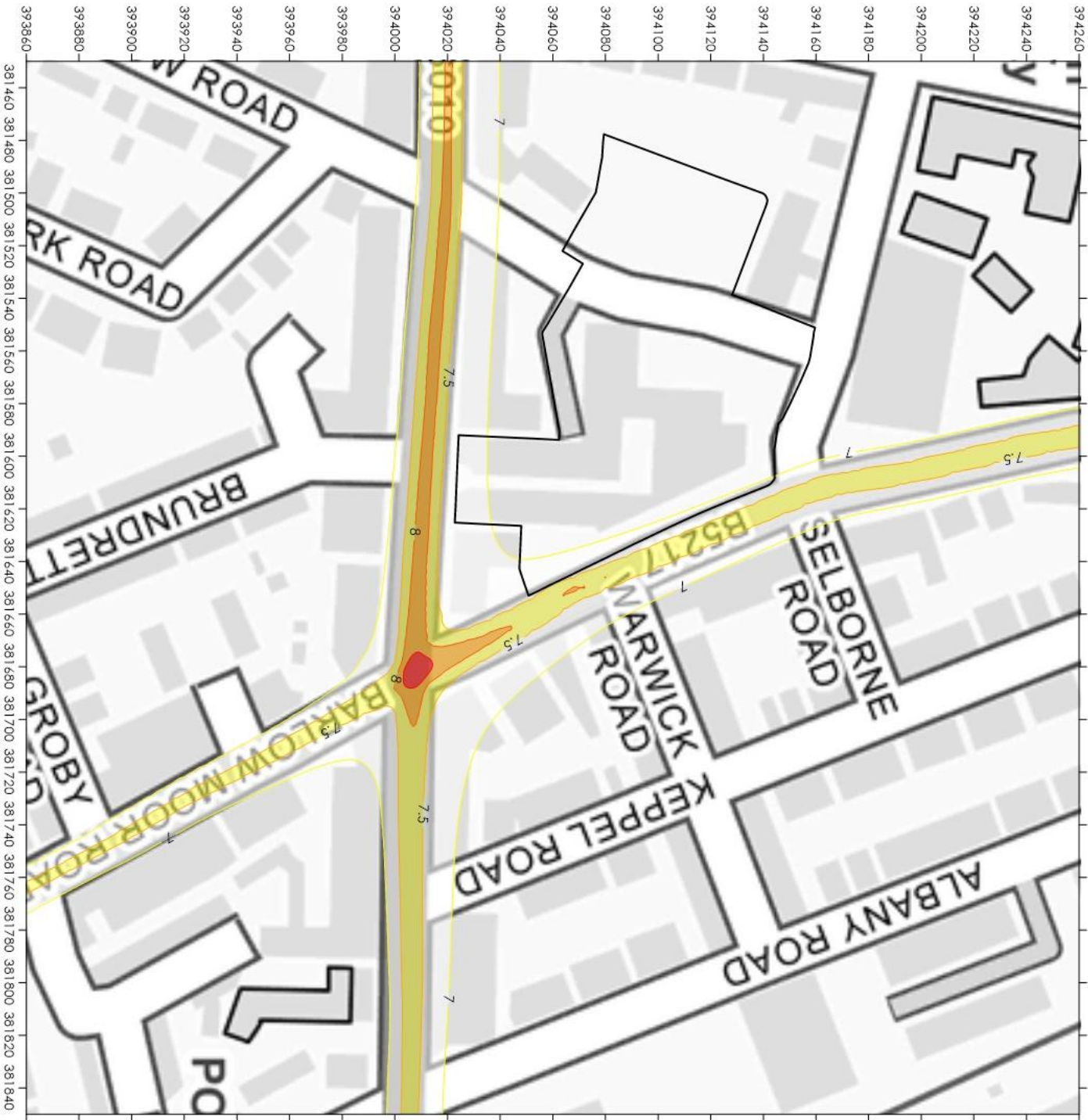
Project Reference
7162

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PJ Livesey

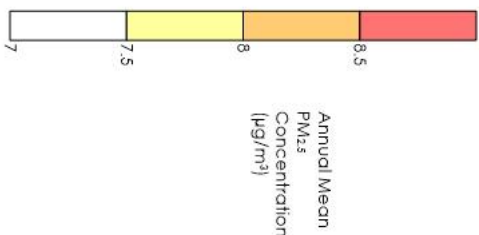
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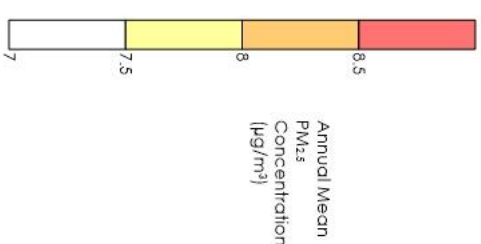
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Title Figure 8 - Predicted Annual Mean PM _{2.5} Concentration (µg/m ³) Do-Minimum	Project Air Quality Assessment Chorlton Precinct, Manchester	Project Reference 7162	Client PJ Livesey	Contains Ordnance Survey Data © Crown Copyright and Database Act 2023	 Redmore environmental	www.red-env.co.uk 0161 7060075
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Legend



Title

Figure 9 - Predicted Annual Mean PM_{2.5} Concentration (µg/m³)
Do-Something

Project

Air Quality Assessment
Chorlton Precinct, Manchester

Project Reference

7162

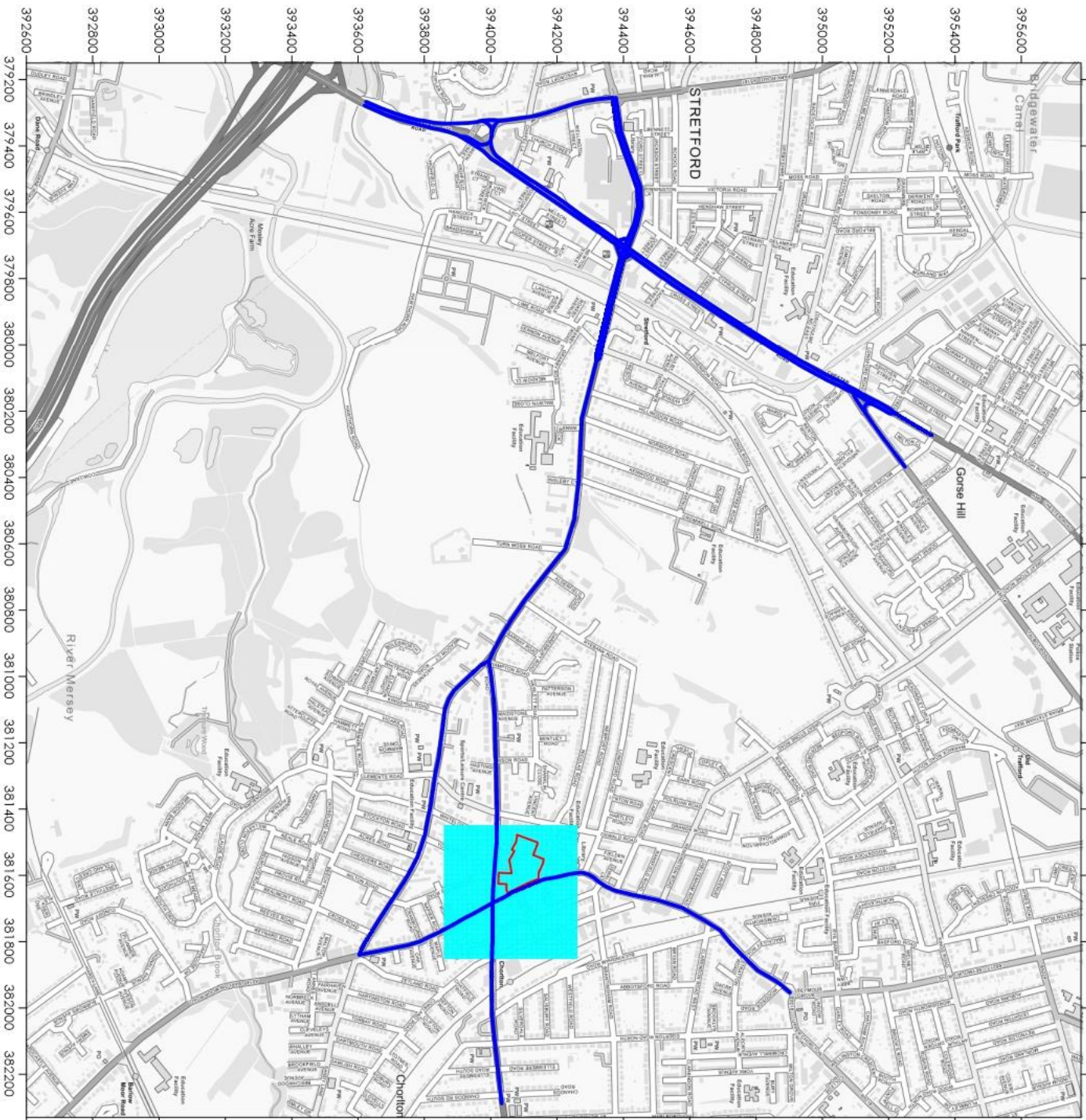
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Legend



Site Boundary

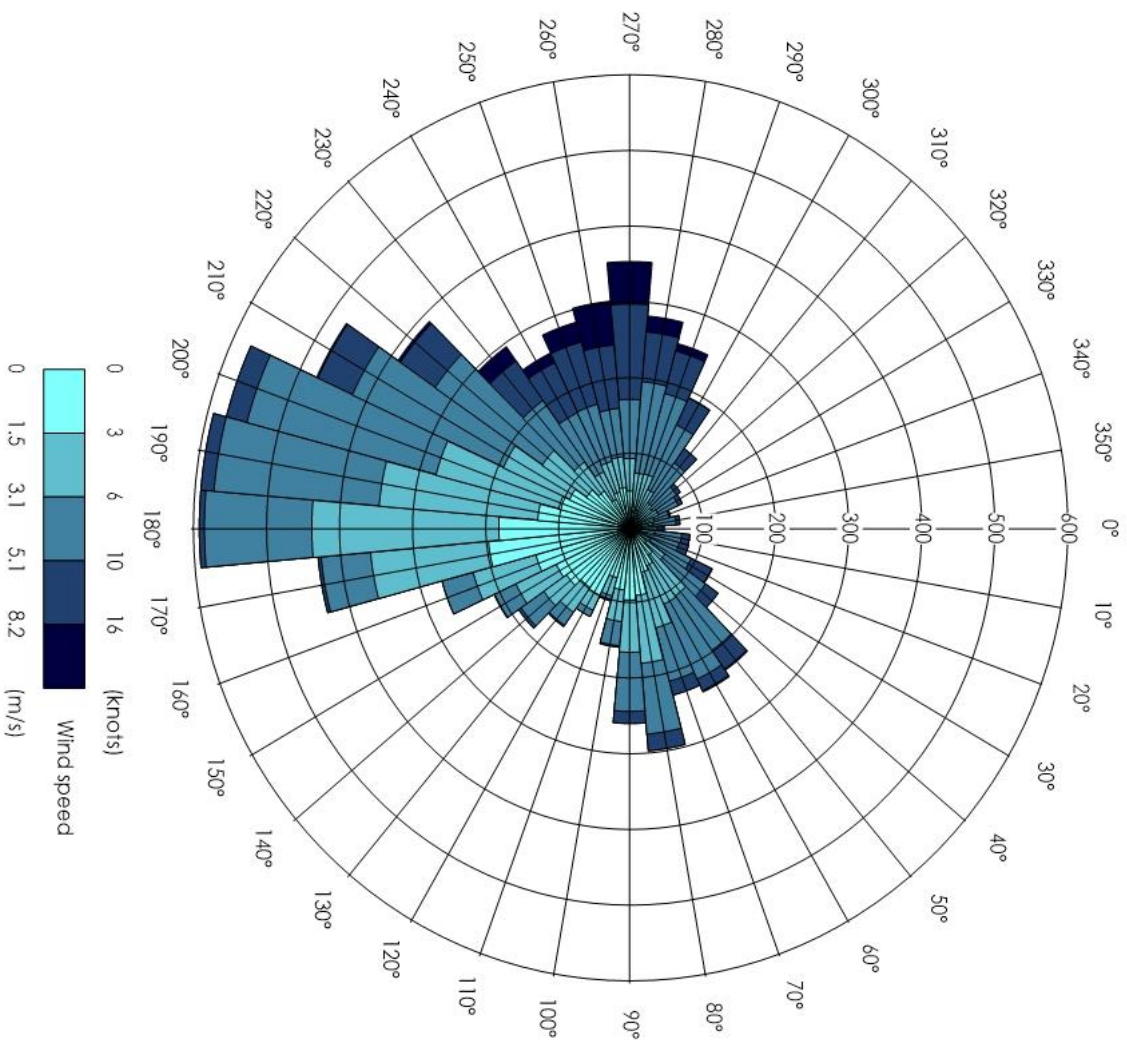


Output Grid



Road Link

<p>Title</p> <p>Figure 10 - ADMS-Roads Inputs</p>	<p>Project</p> <p>Air Quality Assessment Chorlton Precinct, Manchester</p>	<p>Project Reference</p> <p>7162</p>	<p>Client</p> <p>PJ Livesey</p>	<p>Contains Ordnance Survey Data © Crown Copyright and Database Act 2023</p> <p> Redmore environmental</p> <p>www.red-env.co.uk 0161 7060075</p>
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Legend

Title
Figure 11 - Wind Rose of 2023
Manchester Airport Meteorological
Data

Project
Air Quality Assessment
Chorlton Precinct, Manchester

Project Reference
7162

Client
PJ Livesey

Appendix 1 - Local Authority Correspondence (Pre-Application Scoping)

Emily Pears-Ryding

From: Laura Miller <laura.miller@manchester.gov.uk>
Sent: 08 October 2024 13:13
To: Emily Pears-Ryding
Subject: Re: Chorlton Precinct - Air Quality Assessment Methodology

Hi Emily,

Your methodology seems acceptable to me.

In addition to the national guidance we also have our own guidance available [here](#).

Not withstanding the outcome of the air quality impact assessment, the good practice principles as stated in the IAQM guidance should also be considered.

Kind Regards

Laura Miller (MRes, MA, BSc(Hons))

Environmental Protection
Environmental Health
Neighbourhoods Directorate
Manchester City Council

email: laura.miller@manchester.gov.uk
website: www.manchester.gov.uk
Telephone: 0161 234 1742
Internal: 31742

Please note that due to working compressed hours Wednesdays are a non-working day for me, I will respond to your email when I return to the office

We are on X, for news and updates follow us [@EnvHealthMcr](#)

Please consider the environment before printing an e-mail

From: Emily Pears-Ryding <emily.pears-ryding@red-env.co.uk>
Sent: 07 October 2024 09:46
To: Laura Miller <laura.miller@manchester.gov.uk>
Subject: Chorlton Precinct - Air Quality Assessment Methodology

You don't often get email from emily.pears-ryding@red-env.co.uk. [Learn why this is important](#)

ALERT This message originated outside of the Manchester City Council network. **BE CAUTIOUS** before clicking any links or opening any attachments. Please remember your Cyber Training and report anything suspicious.

Good morning Laura,

I hope you're well.

We have been instructed to undertake an Air Quality Assessment in support of the redevelopment of Chorlton Precinct, Manchester, to provide a residential-led scheme. I am writing to ask if you could provide your most recent air quality monitoring results for the area. We retain the 2022 results but it would be useful to see the 2023 data if possible. If you could also review the following methodology it would be greatly appreciated.

Outline Methodology

The development has the potential to cause air quality impacts associated with fugitive dust emissions during construction and road vehicle exhaust emissions during operation, as well as exposure of future occupants to any existing air quality issues. An Air Quality Assessment is therefore required in order to determine baseline conditions, provide an assessment of potential impacts and outline the requirement for any mitigation measures.

Baseline

Baseline air quality conditions in the vicinity of the site will be defined based on recent monitoring results and information from the Department for Environment, Food and Rural Affairs (DEFRA) Air Quality Resource. Sensitive locations in the vicinity of the site that could be affected by the proposals will also be identified, as well as any relevant planning policies or guidance.

Construction Phase Assessment

During the construction of the proposed development there is the potential for air quality impacts as a result of fugitive dust emissions from demolition, earthworks, construction and trackout activities. It is proposed to assess these in accordance with the Institute of Air Quality Management (IAQM) guidance 'Assessment of Dust from Demolition and Construction V2.2'. This document is standard industry guidance, with the results accepted throughout the UK.

Operational Phase Assessment

During the operation of the development there is the potential for air quality impacts as a result of road traffic exhaust emissions associated with vehicles travelling to and from the site, as well as the exposure of future occupants to poor air quality. Traffic data was not available at the time of scoping. Once available, this will be reviewed in order to determine the assessment approach. However, based on the scale of the scheme it is considered likely that the number of daily vehicle movements generated by the site will exceed the relevant criteria outlined by the IAQM. As such, it is proposed to assess potential impacts through detailed dispersion modelling using ADMS-Roads in order to fully quantify pollution levels at sensitive locations both with and without the development in place. ADMS-Roads is a commonly used software package for the prediction of emission dispersion and the results are accepted by Local Authorities throughout the UK.

The assessment will be undertaken using 1-year of hourly meteorological records taken from the closest observation station and the modelled results verified using local monitoring data. Impacts will be predicted at sensitive receptor locations.

Predicted pollutant concentrations will be compared against the Air Quality Objectives, as defined in the UK Air Quality Strategy and associated regulations. This will determine the potential for exposure of future occupants to poor air quality and inform any necessary mitigation strategy. The significance of potential impacts will also be determined based on the predicted magnitude of change in pollutant concentrations and the criteria provided within the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'.

Should review of the traffic data indicate the number of daily vehicle movements is below the relevant criteria, a screening assessment of potential impacts will be undertaken as an alternative. Dispersion modelling would then be used to determine the potential for exposure of future occupants only, using the methodology outlined above.

Mitigation

Date: 19th February 2025

Ref: 7162

If required following assessment of potential impacts, suitable mitigation measures will be identified in order to reduce air quality effects to an appropriate level. These will be based on best practice guidance documents including the IAQM Land-Use Planning & Development Control: Planning for Air Quality.'

Closure

I trust the above is acceptable and look forward to hearing from you shortly with any additional comments.

Kind regards,

Emily Pears-Ryding

Associate Director
Redmore Environmental Ltd

0161 706 0075 | 07761 800 380 | emily.pears-ryding@red-env.co.uk | www.red-env.co.uk



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Appendix 2 - Assessment Input Data

Introduction

The proposals have the potential to cause air quality impacts as a result of exhaust emissions associated with vehicles travelling to and from the development, as well as expose future occupants to any existing air quality issues. In order to assess NO₂, PM₁₀ and PM_{2.5} concentrations at sensitive locations, detailed dispersion modelling was undertaken in accordance with the following methodology.

Dispersion Model

Dispersion modelling was undertaken using the ADMS-Roads dispersion model (version 5.0.1.3). ADMS-Roads is developed by Cambridge Environmental Research Consultants (CERC) and is routinely used throughout the world for the prediction of pollutant dispersion from road sources. Modelling predictions from this software package are accepted within the UK by the Environment Agency and DEFRA.

The model requires input data that details the following parameters:

- Assessment area;
- Traffic flow data;
- Vehicle emission factors;
- Spatial co-ordinates of emissions;
- Street width;
- Meteorological data;
- Roughness length (z_0); and,
- Monin-Obukhov length.

Additional options can also be selected within the ADMS-Roads user interface in order to take account of site specific characteristics that may affect model outputs, such as canyons.

The relevant inputs are detailed in the following Sections.

Assessment Area

The assessment area was defined over the area NGR: 381450, 393860 to 381850, 394260. One cartesian grid was included within the model to produce data suitable for contour plotting using the Surfer software package.

Ambient concentrations were also predicted at a number of sensitive receptor locations, as outlined in Table 16.

Reference should be made to Figure 10 for a graphical representation of the assessment grid extents.

Traffic Flow Data

Traffic data for use in the assessment, including 24-hour Annual Average Daily Traffic (AADT) flows and fleet composition as HDV proportion, was provided by Civic Engineers, the Transport Consultants for the project.

Baseline traffic data for a number of roads was not available from the Transport Consultant and was therefore supplemented with information from the Department for Transport (DfT)²⁴. The DfT web tool enables the user to view and download traffic flows on every link of the 'A' road and motorway network, as well as selected minor roads, in Great Britain for the years 1999 to 2023. It should be noted that the DfT web tool is referenced in DEFRA guidance²⁶ as being a suitable source of data for air quality assessments and it is therefore considered to provide a reasonable estimate of traffic flows in the vicinity of the site.

Road widths and vehicle speeds were estimated from aerial photography and UK highway design standards. A summary of the traffic flow data is provided in Table A1.1.

²⁴

<https://roadtraffic.dft.gov.uk/#6/55.254/-6.075/basemap-regions-countpoints>.

Table A1.1 Traffic Data

Link	24-hour AADT Flow			HDV Prop. of Fleet (%)		Road Width (m)	Avg. Vehicle Speed (km/h)	
	2023	2028 DM	2028 DS	2023 and DM	DS			
L1	A5145 Edge Lane between Wilbricham Road and Chester Road	17,526	18,228	18,358	1.79	1.79	11.0	45
L2	A5145 Edge Lane, Westbound (WB) towards A56	9,223	9,591	9,656	1.75	1.75	7.0	45
L3	A5145 Edge Lane, WB, Slow Phase (SP)	9,223	9,591	9,656	1.75	1.75	11.1	25
L4	A5145 Edge Lane, approach to A56 Chester Road, SP	9,223	9,561	9,626	1.75	1.75	7.8	25
L5	A5145 Edge Lane, approach to A56 Chester Road, South Bound (SB)	2,306	2,390	2,455	1.75	1.77	4.5	25
L6	A56 Chester Road, SB	19,818	20,543	20,608	1.46	1.46	12.3	45
L7	Chester Road NB, south of gyrctory	26,129	27,085	27,150	1.87	1.87	10.9	45
L8	Gyrctory	6,848	7,099	7,164	1.86	1.87	8.5	45
L9	A56 Chester Road, North of A56 Chester Road	20,252	20,993	21,058	2.25	2.25	10.9	45
L10	A56 Chester Road, SP	20,252	20,993	21,058	2.25	2.25	16.4	25
L11	A56 Chester Road, approach to A5145 Edge Lane	20,252	20,993	21,058	2.25	2.25	11.1	25
L12	A56 Chester Road, Northbound (NB) between A5145 Edge Lane and Talbot Road	16,255	16,850	16,915	1.99	1.99	10.4	45
L13	A56 Chester Road, SB, north of A5145 Edge Lane	15,609	16,180	16,245	2.19	2.19	10.6	45
L14	A56 Chester Road, SB, SP	15,609	16,180	16,245	2.19	2.19	13.5	25
L15	A56 Chester Road, SB, SP, approach to A5145 Edge Lane	15,609	16,180	16,245	2.19	2.19	10.7	25
L16	A56 Chester Road, SB, approach to A5145 Eastbound (EB)	2,076	2,182	2,247	1.82	1.82	6.4	25
L17	A5145 Edge Lane, EB	8,304	8,638	8,703	1.82	1.82	6.7	45
L18	A56 Chester Road, approach to A5145 Kingsway	5,063	5,248	5,313	2.25	2.25	6.3	25

Link	24-hour AADT Flow			HDV Prop. of Fleet (%)		Road Width (m)	Avg. Vehicle Speed (km/h)	
	2023	2028 DM	2028 DS	2023 and DM	DS			
L19	A5145 Kingsway, WB	7,998	8,291	8,356	3.90	3.89	7.4	45
L20	A5145 Kingsway, WB, SP	7,998	8,291	8,356	3.90	3.89	6.9	25
L21	A5145 Kingsway, EB	8,193	8,493	8,558	3.77	3.76	7.1	45
L22	A5145 Kingsway, EB, SP	8,193	8,493	8,558	3.77	3.76	9.9	25
L23	A5145 Edge Lane, WB	9,223	9,591	9,656	1.75	1.75	7.0	45
L24	A5145 Edge Lane, EB	8,304	8,638	8,703	1.82	1.82	6.7	45
L25	A5145 Edge Lane towards A5145 Kingsway	7,998	8,291	8,356	3.90	3.89	7.8	45
L26	A56 Chester Road, NB, to A56 Chester Road	15,189	15,745	15,810	2.25	2.25	11.1	45
L27	A5145 Kingsway towards A5145 Edge Lane	8,193	8,493	8,558	3.77	3.76	9.9	45
L28	A56 Chester Road, SB, to A56 Chester Road	19,818	20,543	20,608	1.46	1.46	8.6	45
L29	A56 Chester Road, SB	19,818	20,543	20,608	1.46	1.46	8.6	45
L30	A6010 Wilbrham Road between Edge Lane and Manchester Road	17,526	17,647	17,775	0.80	0.84	8.6	45
L31	A6010 Wilbrham Road between Manchester Road and Barlow Moor Road	17,526	17,647	18,234	0.80	0.88	8.9	35
L32	A6010 Wilbrham Road between Barlow Moor Road and Albany Road	13,116	13,164	13,215	0.75	0.79	8.3	35
L33	A6010 east of Albany Road	13,116	13,164	13,215	0.75	0.79	8.3	45
L34	B5217 north of Site	13,591	13,878	14,181	0.78	0.83	5.8	45
L35	B5217 approach to Wilbrham Road	13,591	13,878	14,181	0.78	0.83	8.2	35
L36	Barlow Moor Road approach to Wilbrham Road	10,166	10,315	10,473	1.66	1.71	7.5	35
L37	Barlow Moor Road between Wilbrham Road and High Lane	10,166	10,315	10,473	1.66	1.71	5.8	45

Link		24-hour AADT Flow			HDV Prop. of Fleet (%)		Road Width (m)	Avg. Vehicle Speed (km/h)
		2023	2028 DM	2028 DS	2023 and DM	DS		
L38	Edge Lane approach to Wilbraham Road from south	16,525	17,130	17,130	3.01	3.01	6.1	25
L39	Edge Lane to High Lane	16,525	17,130	17,130	3.01	3.01	6.1	40
L40	High Lane approach to Barlow Moor Road	16,525	17,130	17,130	3.01	3.01	6.1	25
L41	A5181 Barton Road north of gyratory	9,323	9,664	9,664	2.21	2.21	8.1	45
L42	A5181 Barton Road approach to gyratory	4,306	4,464	4,464	1.76	1.76	8.5	25
L43	A5181 Barton Road exit from gyratory	5,017	5,201	5,201	2.59	2.59	4.3	25
L44	Chester Road SB, south of gyratory	27,201	28,197	28,262	1.75	1.76	9.9	45
L45	Chester Road NB at Talbot Road junction	16,255	16,850	16,915	1.99	1.99	11.2	30
L46	Chester Road north of Talbot Road	31,864	33,030	33,095	2.08	2.09	12.3	45
L47	Chester Road SB at Talbot Road junction	15,609	16,180	16,245	2.19	2.19	7.6	30
L48	Slip road from Talbot Road to Chester Road north	2,280	2,364	2,364	1.11	1.11	6.1	25
L49	Talbot Road approach to Chester Road south	9,121	9,455	9,455	1.11	1.11	15.6	25
L50	Talbot Road	9,121	9,455	9,455	1.11	1.11	8.6	45
L51	B5217 adjacent to Site	13,591	13,878	14,181	0.78	0.83	5.8	45

Reference should be made to Figure 10 for a graphical representation of the road link locations.

Canyons

Where buildings or walls surround roads, pollutant dispersion patterns are altered which can lead to high pollutant concentrations. These street canyons can significantly influence air quality along a road and therefore it is important to take consideration of their effects when undertaking dispersion modelling.

The release of ADMS-Roads version 4.0.1.0 in December 2015 incorporated a number of new features including an advanced street canyon module, which have been retained in version 5.0.1.3. Advanced street canyon modelling allows a number of parameters to be included in the dispersion model in order to predict pollutant dispersion patterns which better reflect air flow within complex urban geometries.

Canyons have five principal effects on dispersion which can influence pollutant concentrations. These are:

- Pollutants are channelled along street canyons;
- Pollutants are dispersed across street canyons by circulating flow at road height;
- Pollutants are trapped in recirculation regions;
- Pollutants leave the canyon through gaps between buildings - as if there was no canyon; and,
- Pollutants leave the canyon from the canyon top.

The combined modelling of these effects will result in concentration patterns unique to each canyon.

The proposed development will lead to an alteration in the street geometry along the B5217 - Manchester Road. As such, a canyon has been included along this link within the DS scenario. The parameters used in the assessment are outlined in Table A1.2.

Table A1.2 Canyon Parameters

Link	Parameter (m)					
	Canyon Width Left	Average Building Height Left	Building Length Left	Canyon Width Right	Average Building Height Right	Building Length Right
L51	0	0	0	16.3	30.6	88.0

A choice of two modes is provided for use in the advanced canyon module. Standard mode assumes that each road is part of a continuous network of roads with similar canyon properties. Network mode analyses the road network to determine transport of pollutants between adjoining street canyons, allows for varying concentrations along the canyon and accounts for transport of pollutants out of the end of a canyon. Network mode is considered most accurate for detailed local analysis and as such was selected for use in the model.

Emission Factors

Emission factors for each link were calculated using the relevant traffic flows and the Emissions Factor Toolkit (version 12.1). This has been produced by DEFRA and incorporates COPER 5.6 vehicle emission factors.

There is current uncertainty over NO₂ concentrations within the UK, with the implementation of new vehicle emission standards not resulting in the previously expected reduction in roadside levels. Therefore, 2023 emission factors were utilised in preference to the scheme opening year in order to provide robust model outputs. As predictions for 2023 were verified, it is considered the results are a robust indication of worst case concentrations for the future year.

Meteorological Data

Meteorological data used in the assessment was taken from Manchester Airport meteorological station over the period 1st January 2023 to 31st December 2023 (inclusive). Manchester Airport meteorological station is located at NGR: 381 792, 3841 16, which is approximately 9.9km south of the development. It is anticipated that conditions would be reasonably similar over a distance of this magnitude. The data was therefore considered suitable for an assessment of this nature.

All meteorological records used in the assessment were provided by Atmospheric Dispersion Modelling (ADM) Ltd, which is an established distributor of data within the UK. Reference should be made to Figure 11 for a wind rose of the utilised meteorological data.

Roughness Length

The z_0 is a modelling parameter applied to allow consideration of surface height roughness elements. A z_0 of 1m was used to describe the modelling extents. This value is considered appropriate for the morphology of the area and is suggested within ADMS-Roads as being suitable for 'cities, woodlands'.

A z_0 of 0.2m was used to describe the meteorological site. This value is considered appropriate for the morphology of the area and is suggested within ADMS-Roads as being suitable for 'agricultural areas (min)'.

Monin-Obukhov Length

The Monin-Obukhov length provides a measure of the stability of the atmosphere. A minimum Monin-Obukhov length of 30m was used to describe the modelling extents and meteorological site. This is considered appropriate for the nature of both areas and is suggested within ADMS-Roads as being suitable for 'cities and large towns'.

Background Concentrations

Background concentrations provided by DEFRA were used in the assessment to represent annual mean NO₂ levels in the vicinity of the site. In order to avoid 'double-counting' of road vehicle exhaust emissions, the proportion of the relevant background concentrations from primary A roads and minor roads within the grid square was removed in accordance with the methodology outlined in DEFRA guidance²⁵. These sectors were considered to be most representative of those being modelled within ADMS-Roads. Background concentrations before and after adjustment are shown in Table A1.3.

Table A1.3 Background Pollutant Concentrations - Modelling Extents

Pollutant	Predicted Background Pollutant Concentrations (µg/m³)	
	Total Predicted 2023 Background	Predicted Background with Sectors Removed
NO ₂	15.27	14.05
PM ₁₀	12.64	12.43
PM _{2.5}	7.71	7.59

Similarly to emission factors, background concentrations from 2023 were utilised in preference to the future year. This provided a robust assessment and is likely to overestimate pollutant concentrations during the operation of the proposal.

NO_x to NO₂ Conversion

Predicted annual mean NO_x concentrations were converted to NO₂ concentrations using the spreadsheet provided by DEFRA, which is the method detailed within DEFRA guidance²⁶.

Verification

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

- Estimates of background concentrations;
- Uncertainties in source activity data such as traffic flows and emission factors;
- Variations in meteorological conditions;
- Overall model limitations; and,
- Uncertainties associated with monitoring data, including locations.

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

For the purpose of the assessment, model verification was undertaken for 2023 using traffic data, meteorological data and monitoring results from this year.

Nitrogen Dioxide

Monitoring of NO₂ concentrations was undertaken at one location within the vicinity of roads included in the dispersion model during 2023. The result was obtained and the road contribution to total NO_x concentration calculated following the methodology contained within DEFRA guidance²⁷. The monitored annual mean NO₂ concentration and calculated road NO_x concentration is summarised in Table A1.4.

²⁶ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

²⁷ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Table A1.4 NO_x Verification - Monitoring Result

Monitoring Location		Monitored NO ₂ Concentration (µg/m ³)	Calculated Road NO _x Concentration (µg/m ³)
TRF2	Trafford A56	21	15.53

The annual mean road NO_x concentration predicted from the dispersion model and the road NO_x concentration calculated from the monitoring result is summarised in Table A1.5.

Table A1.5 NO_x Verification - Modelling Result

Monitoring Location		Calculated Road NO _x Concentration (µg/m ³)	Modelled Road NO _x Concentration (µg/m ³)
TRF2	Trafford A56	15.53	16.40

The monitored and modelled road NO_x concentrations were compared to calculate the associated ratio. This indicated a verification factor of 0.947 was required to be applied to all modelling results.

Particulate Matter

Monitoring of PM₁₀ concentrations was undertaken at one location within the vicinity of roads included in the dispersion model during 2023. The monitored and modelled annual mean PM₁₀ concentration is summarised in Table A1.6.

Table A1.6 PM₁₀ Verification - Modelling Result

Monitoring Location		Monitored PM ₁₀ Concentration (µg/m ³)	Modelled PM ₁₀ Concentration (µg/m ³)
TRF2	Trafford A56	13.00	15.10

The monitored and modelled road PM₁₀ concentrations were compared to calculate the associated ratio. This indicated a verification factor of 0.8635 was required to be applied to all PM₁₀ modelling results.

Monitoring of PM_{2.5} concentrations is not undertaken within the assessment extents. The PM₁₀ verification factor was therefore used to adjust model predictions of this species in lieu of more accurate data in accordance with DEFRA guidance²⁸.

Appendix 3 - Curricula Vitae

JETHRO REDMORE

Director

Beng (Hons), MSc, MIAQM, MEnvSc, PIEMA, CEnv



KEY EXPERIENCE:

Jethro is a Chartered Environmentalist and Director of Redmore Environmental with specialist experience in the air quality and odour sectors. His key capabilities include:

- Production and management of Air Quality, Dust and Odour Assessments for a wide-range of clients from the retail, residential, infrastructure, commercial and industrial sectors.
- Production and co-ordination of Environmental Permit applications for a variety of industrial sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads, ADMS-5, AERMOD-PRIME and BREEZE-ROADS. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.

SELECT PROJECTS SUMMARY:

Industrial

Shanks Waste Management - Odour Assessments of two waste management facilities to support Environmental Permit Applications.

Tatweer Petroleum - dispersion modelling of Bahrain oil field.

Doha South Sewage Treatment Works - AQAs for works extension in Qatar.

IRIS Environmental Appraisal Report Reviews, Isle of Man Government - odour assessment reviews.

Lankem, Greater Manchester - Environmental Permit Application for chemical manufacturing plant.

Newport Docks Bulk Drying, Pelleting and CHP Facility - air quality EIA for gas CHP.

Springshades, Leicester - Environmental Permit Variation Application for textile manufacturing plant.

Valspar, Chester - Odour Assessment and production of Odour Management Plan for a paint manufacturing plant in response to neighbour complaints.

Agrivert - dispersion modelling of odour and CHP emissions from numerous AD plants.

- Provision of expert witness services at Planning Inquiries.
- Design and project management of pollutant monitoring campaigns.
- Co-ordination and management of large-scale multi-disciplinary projects and submissions.

- Provision of expert advice to local government and international environmental bodies, as well as involvement in production of industry guidance.

Residential

Wood St Mill, Bury - residential development adjacent to scrap metal yard.

Hyams Lane, Holbrook - Odour Assessment to support residential development adjacent to sewage works.

North Wharf Gardens, London - peer review of EIA undertaken for large residential development.

Loxford Road, Alford - Air Quality EIA for residential development, included consideration of impacts from associated package sewage works

Elephant and Castle Leisure Centre - baseline AQAs for redevelopment.

Carr Lodge, Doncaster - EIA for large residential development.

Queensland Road, Highbury - residential scheme including CHP.

Bicester Ecotown - dispersion modelling of energy centre.

Castleford Growth Delivery Plan - baseline air quality constraints assessment for town redevelopment.

York St, Bury - residential development adjacent to AQMA.

Temple Point Leeds - residential development adjacent to M1.

Commercial and Retail

Ethad Stadium - Air Quality EIA for the extension to the capacity of the Ethad Stadium, Manchester.

Wakefield College - redevelopment of city centre campus in AQMA.

Manchester Airport Cargo Shed - commercial development.

Manchester Airport Apron Extension - EIA including aircraft emission modelling.

National Youth Theatre, Islington - redevelopment to provide new arts space and accommodation.

Barnes Wallis Heat and Power, Cobham - biomass facility adjacent to AQMA.

Lynchford Lane Waste Transfer Station - biomass facility energy recovery plant.

Rigg Approach, Leyton - Air Quality Assessment in support of waste transfer site.

EMILY PEARS-RYDING

Director

BSc (Hons), MIAQM, MEnvS

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KEY EXPERIENCE:

Emily is a Director with specialist experience in the air quality sector. Her key capabilities include:

- Production of Air Quality Assessments in accordance with Department for Environment, Food and Rural Affairs (DEFRA) methodologies for a range of residential, commercial and industrial sectors.
- Detailed dispersion modelling of road vehicle and industrial emissions using ADMS-Roads and ADMS-5. Studies have included impact assessment of ground level pollutant and odour concentrations and assessment of suitability of development sites for proposed end-use.
- Project management and co-ordination of Environmental Impact Assessments and scoping reports for developments throughout the UK.
- Assessment of fugitive dust impacts from a range of mineral extraction developments.
- Assessment of petrol stations to address benzene concentrations and their impact on adjacent developments.
- Production of air quality mitigation strategies specifically tailored to address issues of individual sites.
- Assessment of potential effects associated with network realignment schemes and highway developments.

SELECT PROJECTS SUMMARY:

Broad Street, Birmingham

Air Quality Assessment in support of a residential-led development on land at Broad Street, Birmingham. The proposals were located adjacent to a section of the Midland Metro Westside which runs along Broad Street. Consideration was made to the potential for re-alignment of the local road network as a result of the Metro to effect pollution levels at the development. The assessment indicated NO₂ concentrations exceeded air quality criteria from ground to third floor level as a result of road vehicle exhaust emissions. Mitigation was therefore specified for the affected units.

Home Farm, Forest Road, Warfield

Ecological Air Quality Assessment in support of a residential development. Natural England held concerns regarding potential impacts of sensitive ecological designations as a result of traffic exhaust emissions associated with the development. The predicted change in NO_x and ammonia concentrations and nitrogen and acid deposition was below the relevant criteria at all locations within the ecological designations. Impacts were therefore not considered to be significant.

Saltcoats Road, Stevenston

Air Quality Assessment in support of an educational campus and associated energy centre. Impacts associated with emissions from the proposed gas and biomass boilers were assessed through detailed dispersion modelling. This indicated impacts on annual mean NO₂ and PM₁₀ concentrations were predicted to be not significant.

Blackthorn & Piddington

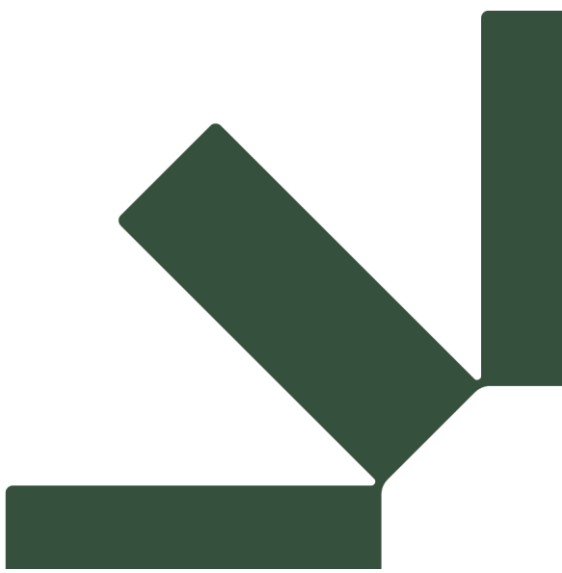
Environmental Impact Assessment in support of a railway embankment scheme on land at the Network Railway Embankment between Piddington and Blackthorn. Due to the extensive stabilisation works a Fugitive Dust Emissions Assessment was undertaken in addition to consideration of road vehicle exhaust emissions. Due to the location of the site in relation to nearby sensitive receptors, potential impacts associated with construction works were not considered to be significant.

Blackmoorfoot Road, Huddersfield

Air Quality in support of a residential-led development in close proximity to an operational minerals facility. Due to the presence of the Johnsons Wellfield Quarry to the south of the site a Fugitive Dust Emissions Assessment was undertaken to determine potential impacts. Dispersion modelling of road vehicle exhaust emissions was also undertaken in support of the scheme. Results indicated the overall significance of fugitive dust emissions from the quarry and air quality impacts associated with operation of the development itself were not significant.

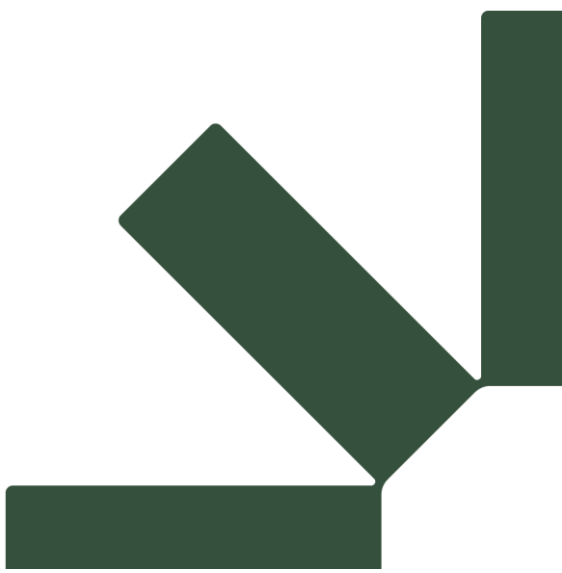
Lockwood Bar, Huddersfield

Air Quality Assessment for the proposed highway realignment scheme along Lockwood Road, Huddersfield. Changes in pollution levels were considered at sensitive receptors as a result of variations to road geometry and associated redistribution of vehicle trips across the local area. Results of the dispersion modelling study indicated air quality impacts as a result of the scheme were not significant.



Appendix 8A Noise Impact Assessment 50-956- R1-2 December 2024

 **SLR**



Appendix 8A Noise Impact Assessment 50-956- R1-2 December 2024

 **SLR**

Noise Impact Assessment

Site: Chorlton Precinct, Manchester

Reference: 50-956-R1-5

Date: September 25



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QUALITY ASSURANCE

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REV REF:	DESCRIPTION	AUTHOR	CHECKED	AUTHORISED	DATE
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R1-2	Final	LF	MB	LF	10/12/24
R1-3	Final	LF	MB	LF	12/12/24
R1-4	Final with updated layout	LF	MB	LF	17/03/25
R1-5	Final following MCC comments	LF	MB	LF	05/09/25

This report has been prepared for the sole benefit, use, and information of the client. The liability of Environmental Engineering Partnership Limited T/A E3P with respect to the information contained in the report will not extend to any third party. This report has been prepared by the qualified persons as listed below.

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EXECUTIVE SUMMARY

Site Address	Land bounded by Nicholas Road, Barlow Moor Road and Wilbraham Road, Chorlton-cum-Hardy, Manchester M21 9AS
National Grid Reference	E 381593, N 394085
Proposed Development	Application for Full Planning Permission for the erection of 6no. residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e)); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses; together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.
Surveys Completed	E3P have undertaken a thorough baseline noise survey allowing for three unattended noise surveys during a typical weekday and weekend time period to quantify noise levels across the site. A survey of breakout sound from a nearby bar has also been conducted, however no audible breakout was observed. Fixed plant measurements, associated with Yara Restaurant, have been conducted for an existing kitchen extract fan to the south of the proposed development.
Assessments Completed	E3P have undertaken 3D noise modelling to assess road traffic noise across the site, incident upon facades and assessed in accordance with BS 8233. The assessment determined that certain proposed facades require higher specification glazing to control internal noise levels across the development. A Mechanical Ventilation and Heat Recovery system is to be installed in all apartments as per approved document F. A full overheating assessment is required for certain apartments in accordance with the guidelines indicated in Part O. A Construction Environmental Management Plan (CEMP) has been prepared to minimise potential noise and vibration and impacts. This report provides advice on Best practicable means to reduce the impact of noise and vibration throughout the demolition and construction phases of the development. Operational and fixed plant noise limits have been set to control the impact of the new development upon existing and proposed residential receptors. Advice on sound insulation between the proposed ground floor commercial uses and the residential above within the scheme is given.
Conclusion and Discussion	With mitigation measures in place, this assessment has shown that no adverse impact is predicted day or night at the receptors due to existing sound sources. The application proposals comply with relevant statutory development plan policies including Saved UDP policy DC26, Core Strategy policy DM1 and Places for Everyone (PfE) policy JP-P1 (clause 15a).



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1. INTRODUCTION

1.1. BACKGROUND

E3P were commissioned by PJ Livesey to undertake a Noise Impact Assessment in support of a full planning application for a proposed residential-led mixed-use development on land at the former Chorlton Precinct, Manchester, to be referred to hereafter as 'the site'.

The Description of Development is as follows:

Application for Full Planning Permission for the erection of 6no. residential buildings to provide up to 262 residential dwellings (Use Class C3) with ground floor commercial uses (Use Class E(a-e)); infrastructure works including electric substation and associated utilities works, service yard, vehicular pedestrian accesses; together with public realm works and hard/soft landscaping following demolition of existing buildings and structures on site.

This assessment looks to determine the key noise sources that have potential to impact upon the noise sensitive development and to assess their impact, if any, upon proposed receptors and to specify mitigation measures, where required. Additionally, consideration to any proposed sources of sound associated with the development will be considered in relation to existing and proposed receptors.

A separate Prior Notice for Demolition application (LPA ref. 141706/DEM/2024) was approved by Manchester City Council, as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The submission is informed by a Demolition Management Plan, prepared by the proposed demolition contractor, which sets out the proposed mitigation measures to minimise impacts on surrounding residential receptors. The approved demolition works are intended to commence in Q2 2025 for a period of circa 20 weeks.

1.2. REPORT OBJECTIVES

The objectives of this report are as follows.

- ✚ Establish and measure the existing sound levels across the site, day and night.
- ✚ Consider the potential sources of sound impacting the site and to measure source sound levels of all applicable sources.
- ✚ Assess internal and external noise levels associated with road traffic in accordance with criteria given in BS 8233.
- ✚ Set operational and plant noise emission limits to protect the surrounding existing noise sensitive receptors
- ✚ Assess the potential demolition and constructions noise and vibration impact upon the surrounding noise sensitive receptors.
- ✚ Provide advice on mitigation measures, where required.



1.3. PROPOSED DEVELOPMENT

The site currently comprises a vacant (hoarded off) shopping precinct and Graeme House office building. The proposal (via the Prior Notice for Demolition and separate full planning application) seeks to demolish existing buildings and construct a residential-led mixed-use development (including ground floor commercial uses) along with access, car parking and landscaping.

The site location is indicated in Figure 1.

Figure 1 Snapshot of the proposed development





2. POLICY AND LEGISLATION

2.1. MANCHESTER CITY COUNCIL EXTANT UNITARY DEVELOPMENT POLICIES (UDP)

2.1.1. DEVELOPMENT CONTROL POLICY 26: DEVELOPMENT AND NOISE

DC26.1 The Council intends to use the development control process to reduce the impact of noise on people living and working in, or visiting, the City. In giving effect to this intention, the Council will consider both:

- a. the effect of new development proposals which are likely to be generators of noise; and
- b. the implications of new development being exposed to existing noise sources which are effectively outside planning control.

DC26.2 New noise-sensitive developments (including large-scale changes of use of existing land or buildings), such as housing, schools, hospitals or similar activities, will be permitted subject to their not being in locations which would expose them to high noise levels from existing uses or operations, unless the effects of the noise can realistically be reduced. In giving effect to this policy, the Council will take account both of noise exposure at the time of receiving a planning application and of any increase that may reasonably be expected in the foreseeable future.

DC26.3 Developments likely to result in unacceptably high levels of noises will not be permitted:

- a. in residential areas;
- b. near schools, hospitals, nursing homes and similar institutions;
- c. near open land used frequently for recreational purposes.

D

C26.4 Where the Council believes that an existing noise source might result in an adverse impact upon a proposed new development, or where a new proposal might generate potentially unacceptable levels of noise, it will in either case require the applicant to provide an assessment of the likely impact and of the measures he proposes to deal satisfactorily with it. Such measures might include the following:

- a. engineering solutions, including reduction of noise at source, improving sound insulation of sensitive buildings or screening by purpose-built barriers;
- b. layout solutions, including consideration of the distance between the source of the noise and the buildings or land affected by it, and screening by natural barriers or other buildings or noncritical rooms within a building; and
- c. administrative steps, including limiting the operating times of the noise source, restricting activities allowed on the site or specifying an acceptable noise limit. Any or all of these factors will be considered appropriate for inclusion in conditions on any planning permission.

DC26.5 The Council will control noise levels by requiring, where necessary, high levels of noise insulation in new development as well as noise barriers where this is appropriate.

DC26.6 Exceptions to the general policy will be considered on their merits. The Council accept, as an example, that the occasional use of outdoor facilities such as sports stadia for concerts can be acceptable in certain circumstances. Any such proposal will be considered in the light of consultation with local residents and others, and the practicability of appropriate conditions on any approval.

Reasons :-



It has become increasingly accepted that noise is a major source of environmental pollution, affecting peoples' physical and mental health. The Council considers that the planning process has a role to play in reducing noise levels generally and, through the development control system, to consider carefully the relationship between different land-uses from the point of view of noise generation and impact. Reaching judgments on what is or is not an acceptable amount or type of noise is a complex matter, consideration of which will depend on the particular circumstances on the ground.

2.2. MANCHESTER CORE STRATEGY (2012)

2.2.1. POLICY DM 1 - DEVELOPMENT MANAGEMENT

All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:

- Appropriate siting, layout, scale, form, massing, materials and detail.
- Impact on the surrounding areas in terms of the design, scale and appearance of the proposed development. Development should have regard to the character of the surrounding area.
- Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.
- ...

2.3. PLACES FOR EVERYONE (PPE) PLAN (2024)

2.3.1. POLICY JP-C5: STREETS FOR ALL

Streets will be designed and managed to make a significant positive contribution to the quality of place and support high levels of walking, cycling and public transport. Targeted improvements to the highway network will be supported through studies and scheme development, where they complement the aim of securing a significant increase in the proportion of trips made by walking, cycling and public transport (as set out in Policy JP-C6 'Walking and Cycling' and Policy JP-C3 'Public Transport').

We will seek to ensure:

- ...
K. Mitigating the impacts of air and noise pollution and carbon emissions from road transport.
- ...

2.3.2. POLICY JP-P1: SUSTAINABLE PLACES

We aim to become one of the most liveable city regions in the world, consisting of a series of beautiful, healthy and varied places, each having the following key attributes that all development, wherever appropriate, should be consistent with:

- 15. Comfortable and inviting, with indoor and outdoor environments:*
 - A. Offering a high level of amenity that minimises exposure to pollution, and*
 - B. Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter.*
- ...



2.4. MANCHESTER CITY COUNCIL – PLANNING & NOISE (MAY 2022)

Manchester City Council have produced a guidance note in relation to the assessment of planning and noise.

3.7.7.1 Residential Developments

The Council has adopted the following noise limits for residential properties:

- Bedrooms (night-time - 23.00 - 07.00) 30 dB L_{Aeq} (individual noise events should not normally exceed 45 dB L_{AmaxF} by more than 10 times)
- Living Rooms (daytime - 07.00 - 23.00) 35 dB L_{Aeq}
- Gardens and terraces (daytime) 55 dB L_{Aeq}

These criteria have been adopted for the following reasons:

- BS 8233: 2014 recognises these levels as a good standard for resting/sleeping conditions.
- The WHO document 'Guidelines for Community Noise' recommends an internal L_{Aeq} of 30dB for optimal sleep conditions (and no more than 35dB for internal rooms during daytime).
- The performance of acoustic insulation schemes can often be below that specified, according to the quality of installation, materials, noise spectrum and deterioration / wear and tear of building elements. A high design specification introduces a 'safety margin' should building elements not perform as well as expected ('on-site' performance).
- Performance specification for glazing does not usually take into account the detrimental effect of vents on the sound insulation. Even 'acoustic' vents will reduce the performance of the facade insulation, as they will inherently contain a free open area for air exchange.
- There is a general increase in urban noise levels, which can in the future be reasonably accommodated by these standards.
- The standards support the Local Authority corporate objective to prevent ill-health and improve local peoples' health and well being.

2.5. NATIONAL PLANNING POLICY FRAMEWORK (DECEMBER 2024)

Planning policies and decisions should also ensure that new development is appropriate for its location taking into account the likely effects (including cumulative effects) of pollution on health, living conditions and the natural environment, as well as the potential sensitivity of the site or the wider area to impacts that could arise from the development. In doing so they should:



- ✎ Mitigate and reduce to a minimum potential adverse impact resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life.
- ✎ identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason.

2.6. NATIONAL PLANNING PRACTICE GUIDANCE

Noise needs to be considered when new developments may create additional noise and when new developments would be sensitive to the prevailing acoustic environment. When preparing local or neighbourhood plans, or taking decisions about new development, there may also be opportunities to consider improvements to the acoustic environment.

Local planning authorities' plan-making and decision-making should take account of the acoustic environment and in doing so consider:

- ✎ Whether or not a significant adverse effect is occurring or is likely to occur.
- ✎ Whether or not an adverse effect is occurring or is likely to occur.
- ✎ Whether or not a good standard of amenity can be achieved.

In line with the explanatory note of the NPSE, this would include identifying whether the overall effect of the noise exposure (including the impact during the construction phase, where applicable) is, or would be, above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation.

The “observed effect levels” are as follows:

- ✎ Significant observed adverse effect level: This is the level of noise exposure above which significant adverse effects on health and quality of life occur.
- ✎ Lowest observed adverse effect level: This is the level of noise exposure above which adverse effects on health and quality of life can be detected.
- ✎ No observed effect level: This is the level of noise exposure below which no effect at all on health or quality of life can be detected.

Table 1 summarises the noise exposure hierarchy, based on the likely average response.



Table 1 Noise Exposure Hierarchy

Perception	EXAMPLES OF OUTCOMES	INCREASING EFFECT LEVEL	ACTION
Not Applicable	No effect	No observed effect	No specific measures required.
Noticeable and Not Intrusive	Noise can be heard but does not cause any change in behaviour or attitude. Can slightly affect the acoustic character of the area but not such that there is a perceived change in the quality of life.	No observed adverse effect	No specific measures required
Lowest Observed Adverse Effect Level			
Noticeable and Intrusive	Noise can be heard and causes small changes in behaviour and/or attitude, e.g. turning up volume of television, speaking more loudly, or having to close windows for some of the time because of the noise where there is no alternative ventilation. Potential for some reported sleep disturbance. Affects the acoustic character of the area such that there is a perceived change in the quality of life.	Observed adverse effect	Mitigate and reduce to a minimum
Significant Observed Adverse Effect Level			
Noticeable and Disruptive	The noise causes a material change in behaviour and/or attitude, e.g. avoiding certain activities during periods of intrusion, having to keep windows closed most of the time because of the noise where there is no alternative ventilation. Potential for sleep disturbance resulting in difficulty in getting to sleep, premature awakening and difficulty in getting back to sleep. Quality of life diminished due to change in acoustic character of the area.	Significant observed effect	Avoid
Noticeable and Very Disruptive	Extensive and regular changes in behaviour and/or an inability to mitigate effect of noise leading to psychological stress or physiological effects, e.g. regular sleep deprivation/awakening, loss of appetite, significant/medically definable harm (auditory and non-auditory).	Unacceptable adverse effect	Prevent

The subjective nature of noise means that there is not a simple relationship between noise levels and the impact on those affected. This will depend on how various factors combine in any situation.

These factors include the following:

- The source and absolute level of the noise together with the time of day it occurs. Some types and level of noise will cause a greater adverse effect at night than if they occurred during the day. The adverse effect can also be greater simply because there is less background noise at night.
- For non-continuous sources of noise, the number of noise events, and the frequency and pattern of occurrence of the noise can be important.
- The spectral content of the noise and the general character of the noise. The local topology and topography should also be considered along with the existing and, where appropriate, the planned character of the area.

More specific factors to consider when relevant:



- Where applicable, the cumulative impacts of more than one source should be considered along with the extent to which the source of noise is intermittent and of limited duration.
- Consideration should also be given to whether adverse internal effects can be completely removed by closing windows and, in the case of new residential development, if the proposed mitigation relies on windows being kept closed most of the time. In both cases, a suitable alternative means of ventilation is likely to be necessary.
- If external amenity spaces are an intrinsic part of the overall design, then the acoustic environment of those spaces should be considered so that they can be enjoyed as intended.

2.7. BUILDING REGULATIONS: APPROVED DOCUMENT F – VOLUME 1: DWELLINGS (JUNE 2022)

Approved document F Volume 1: Dwellings (ADF) provides guidance set by the Department for Levelling Up, Housing and Communities, that relates to means of ventilation within dwellings. The ventilation strategy specified within the ADF are as follows.

- 1.9 The ventilation strategy in this approved document relies on a combination of all of the following.*
 - a. Extract ventilation from rooms where water vapour or pollutants are likely to be released (e.g. bathrooms and kitchens), to minimise their spread to the rest of the building. Ventilation fans may be either intermittent operation or continuous operation.*
 - b. Whole dwelling ventilation to provide fresh air to the building and to dilute, disperse and remove water vapour and pollutants not removed by extract ventilation.*
 - c. Purge ventilation to remove high concentrations of pollutants and water vapour. Purge ventilation is used intermittently and required only for pollutants produced by occasional activities (e.g. fumes from painting).*
- 1.10 Ventilation may be delivered through natural ventilation, mechanical ventilation or a combination of both.*
- 1.11 The ventilation systems in this approved document are examples of systems that comply with Part F of the Building Regulations. Other ventilation systems may be acceptable if they can be shown to meet an equal level of performance.*

Within the ADF there are three system specific ventilation systems that can be utilised to provide sufficient ventilation. These methods are as follow.

- 1. Natural ventilation with background ventilators and intermittent extract fans (guidance suitable only for less airtight dwellings) - Ventilation provided by thermal, wind or diffusion effects through doors, windows or other intentional openings without the use of mechanically driven equipment. For the purposes of this approved document, natural ventilation refers to a ventilation strategy using background ventilators and intermittent extract ventilation.*
- 2. Continuous mechanical extract ventilation - Mechanically driven ventilation that continuously extracts indoor air and discharges it to the outside.*



3. *Mechanical ventilation with heat recovery - A mechanically driven ventilation system that both continuously supplies outdoor air to the inside of the dwelling and continuously extracts indoor air and discharges it to the outside. For the purposes of this approved document, the guidance for mechanical ventilation with heat recovery applies to centralised or decentralised supply and extract systems, with or without heat recovery.*

2.8. BUILDING REGULATIONS: APPROVED DOCUMENT O – OVERHEATING (JUNE 2022)

Approved document O - Overheating (ADO) provides guidance set by the Department for Levelling Up, Housing and Communities, that relates to the mitigation of overheating. In relation to noise the ADO provides the following guidance.

3.2 *In locations where external noise may be an issue (for example, where the local planning authority considered external noise to be an issue at the planning stage), the overheating mitigation strategy should take account of the likelihood that windows will be closed during sleeping hours (11pm to 7am).*

3.3 *Windows are likely to be closed during sleeping hours if noise within bedrooms exceeds the following limits.*

- a. *40dB LAeq,T, averaged over 8 hours (between 11pm and 7am).*
- b. *55dB LAFmax, more than 10 times a night (between 11pm and 7am).*

3.4 *Where in-situ noise measurements are used as evidence that these limits are not exceeded, measurements should be taken in accordance with the Association of Noise Consultants'*

Measurement of Sound Levels in Buildings with the overheating mitigation strategy in use.

NOTE: Guidance on reducing the passage of external noise into buildings can be found in the National Model Design Code: Part 2 – Guidance Notes (MHCLG, 2021) and the Association of Noise Consultants' Acoustics, Ventilation and Overheating: Residential Design Guide (2020)

2.9. BRITISH STANDARD BS 4142: 2014+A1:2019 - METHODS FOR RATING AND ASSESSING INDUSTRIAL AND COMMERCIAL SOUND

This standard describes methods for rating and assessing sound of an industrial or commercial nature which includes:



- Sound from industrial and manufacturing processes.
- Sound from fixed installations which comprise mechanical and electrical plant and equipment.
- Sound from the loading and unloading of goods and materials at industrial and / or commercial premises; and
- Sound from mobile plant and vehicles that is an intrinsic part of the overall sound emanating from processes or premises, such as that from forklift trucks, or that from train or ship movements on or around an industrial or commercial Site.

The procedure detailed in the standard compares the measured or predicted specific noise level from any of the above with the background sound level at a residential dwelling. The measured background sound level at a receptor should be reliable and should not necessarily ascertain a lowest measured background sound level, but rather to quantify what is typical.

The specific noise level also acknowledges the reference time intervals depending upon whether the noise source operates during daytime (1-hour) or night-time (15-minute) periods.

There are several 'penalties' which can be attributed to the specific sound level depending upon the 'acoustic features' of the sound level under investigation as follows:

Tonality

- +2 dB: where the tonality is just perceptible.
- +4 dB: where the tonality is clearly perceptible; and
- +6 dB: where the tonality is highly perceptible.

Impulsivity

- +3 dB: where the impulsivity is just perceptible.
- +6 dB: where the impulsivity is clearly perceptible; and
- +9 dB: where the impulsivity is highly perceptible.

Intermittency

- +3dB: where the intermittency is readily distinctive against the acoustic environment.

In addition to the above, there is a penalty for 'other sound characteristics' of +3 dB where a sound exhibits characteristics that are neither tonal nor impulsive, though are readily distinctive against the acoustic environment. BS 4142 goes on to state that the rating level is equal to the specific sound level if there are no such features present or expected to be present.

Assessment of the rating level relative to the background sound level can yield the following commentary:



- Typically, the greater this difference (between the rating level and the background sound level), the greater the magnitude of impact.
- A difference of around +10 dB or more is likely to be an indication of a significant adverse impact, depending on the context.
- A difference of around +5 dB is likely to be an indication of an adverse impact, depending on the context; and
- The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact.

2.10. BRITISH STANDARD BS 8233:2014+A1:2019 – GUIDANCE ON SOUND INSULATION AND NOISE REDUCTION FOR BUILDINGS

The scope of this standard is the provision of recommendations for the control of noise in and around buildings including residential dwellings. It suggests appropriate criteria and limits for different situations, which are primarily intended to guide the design of new buildings or refurbished buildings undergoing a change of use, rather than to assess the effect of changes in the external noise climate.

The standard suggests suitable internal noise levels within different types of buildings, including residential dwellings, as shown in Table 2.

Table 2 BS 8233:2014 Recommended Internal Noise Levels

Criterion	Typical situation	Design criterion, $L_{Aeq,T}$ (dB)
Suitable resting and sleeping conditions	Living Room	35
	Bedroom	30

BS 8233 goes on to recommend noise levels for gardens:

It is desirable that the external noise level does not exceed 50 dB $L_{Aeq,T}$, with an upper guideline value of 55 dB $L_{Aeq,T}$ which would be acceptable in noisier environments. However, it is also recognised that these guideline values are not achievable in all circumstances where development might be desirable. In higher noise areas, such as city centres or urban areas adjoining the strategic transport network, a compromise between elevated noise levels and other factors might be warranted.

BS 8233 goes on to say:

In such a situation, development should be designed to achieve the lowest practicable levels in these external amenity spaces but should not be prohibited.



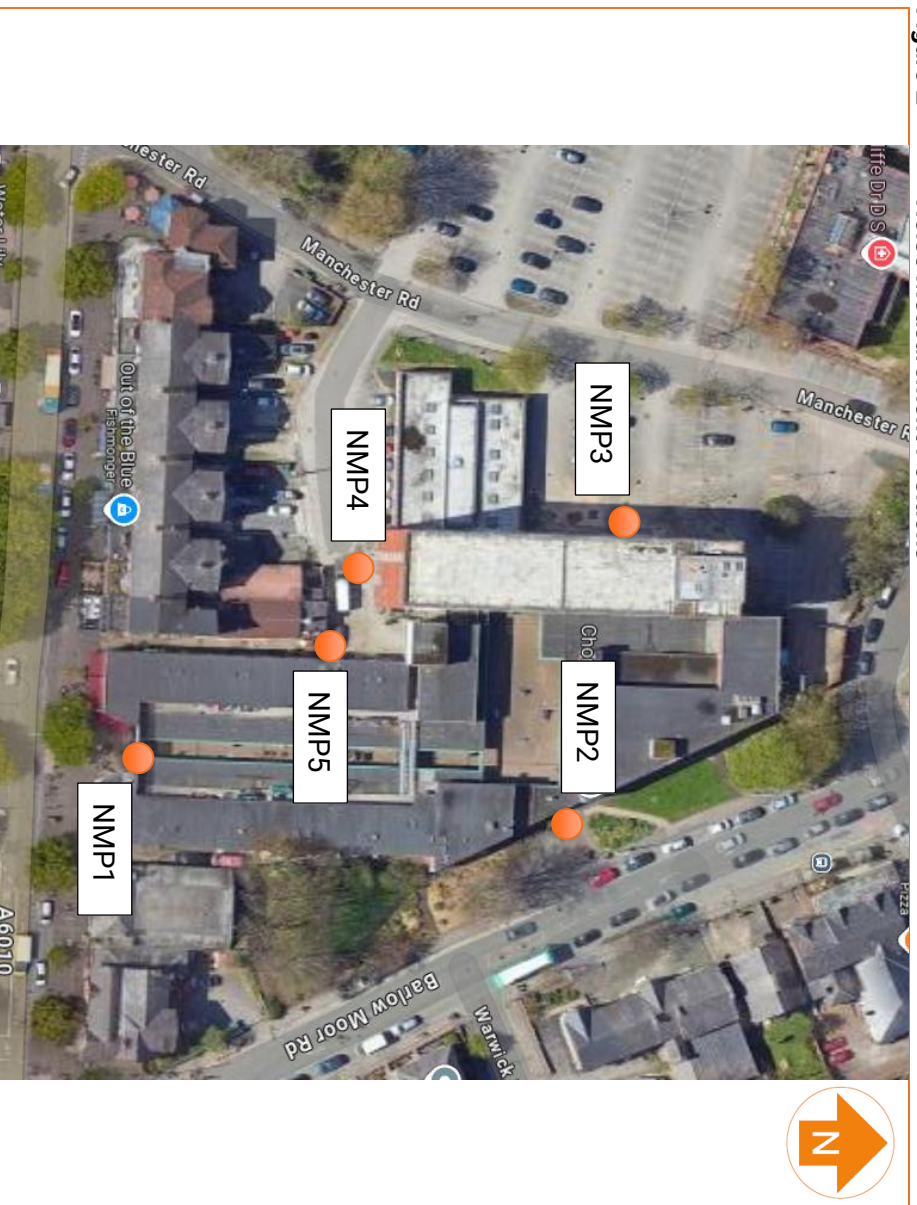
3. SURVEY RESULTS

Prior to the undertaking of the sound survey, E3P engaged (via pre-application scoping) with the Environmental Health Department at Manchester City Council, as local planning authority, in order to agree on the survey methodology.

However, MCC confirmed that they would not consult on this prior to submission and advised that any survey and assessment should be undertaken in accordance with the Manchester City Council Planning & Noise document, dated May 2022. Accordingly, all noise monitoring positions were chosen to be representative of all areas of the proposed development as well as to capture baseline levels of noise for existing receptors in accordance with MCC guidance and that of the relevant British Standards.

Figure 2 below shows the noise measurement positions.

Figure 2 Noise Measurement Positions



3.1. ROAD TRAFFIC SOUND MEASUREMENT – WILBRAHAM ROAD

E3P have undertaken a full weekday and weekend ambient sound survey inclusive of a full 24 hour road traffic sound survey in accordance with Calculation of Road Traffic Noise (CRTN) during a typical weekday period. The survey was undertaken during the following period:

- 🕒 12:00 Thursday 17th October to 10:00 Tuesday 22nd October 2024.

The following noise measurement position was chosen for the Road Traffic Noise Survey:



- Noise Measurement Position 1 (NMP1): Located on the southern boundary of the site approximately 15 m from the nearside road edge. The microphone was located at a height of 2 m above first floor level and in free-field conditions.

Table 3 details the summary of measured sound pressure levels. The full hourly data can be found in the appendix of the report.

Table 3 Measured Sound Pressure Levels – Wilbraham Road

Date	Assessment Period	Ambient sound levels, L _{Aeq,T} (dB)	10th Highest measured maximum sound level, L _{Amax,fast} (dB)
Thursday 17th October 2024	Daytime*	57.9	-
	Night-time	53.7	71.4
Friday 18th October 2024	Daytime	60.3	-
	Night-time	54.7	70.5
Saturday 19th October 2024	Daytime	58.2	-
	Night-time	54.0	69.5
Sunday 20th October 2024	Daytime	59.2	-
	Night-time	53.3	71.5
Monday 21st October 2024	Daytime	58.3	-
	Night-time	52.3	70.0

*Note the Daytime period here from 12:00 to 23:00.

3.2. ROAD TRAFFIC SOUND MEASUREMENT – BARLOW MOOR ROAD

E3P have undertaken a full weekday and weekend ambient sound survey inclusive of a full 24 hour road traffic sound survey in accordance with Calculation of Road Traffic Noise (CRTN) during a typical weekday period. The survey was undertaken during the following period:

- 12:00 Thursday 17th October to 10:00 Tuesday 22nd October 2024.

The following noise measurement position was chosen for the Road Traffic Noise Survey:

- Noise Measurement Position 2 (NMP2): Located on the eastern boundary of the site approximately 13 m from the nearside road edge. The microphone was located out of a first-floor window under facade conditions.

Table 4 details the measured sound pressure levels. The full hourly data can be found in the appendix of the report.



Table 4 Measured Sound Pressure Levels (Façade corrected values) – Barlow Moor Road

Date	Assessment Period	Ambient sound levels, $L_{Aeq,T}$ (dB)	10th Highest measured maximum sound level, $L_{Amax,fast}$ (dB)
Thursday 17th October 2024	Daytime*	60.8	-
	Night-time	56.9	71.4
Friday 18th October 2024	Daytime	61.3	-
	Night-time	58.1	72.5
Saturday 19th October 2024	Daytime	60.4	-
	Night-time	57.0	73.1
Sunday 20th October 2024	Daytime	62.4	-
	Night-time	59.4	75.0
Monday 21st October 2024	Daytime	60.4	-
	Night-time	55.5	74.1

*Note the Daytime period here from 12:00 to 23:00.

3.3. UNATTENDED BACKGROUND AND AMBIENT SOUND SURVEY

E3P have undertaken a full weekday and weekend ambient and background sound survey inclusive of a full 24-hour road traffic sound survey in accordance with Calculation of Road Traffic Noise (CRTN) during a typical weekday period. The survey was undertaken during the following period:

- 12:00 Thursday 17th October to 10:00 Tuesday 22nd October 2024.

The following position was used:

- Noise Measurement Position 3 (NMP3): Located on the western façade of the existing office block. The microphone was located out of a 2nd floor window in facade conditions.

A summary of the measured sound pressure levels is presented in Table 5. Full hourly data is given in the appendix of this report.

Table 5 Measured Sound Pressure Levels (façade corrected values) – Nicolas Road / Car park

Date	Assessment Period	Measured ambient sound levels, $L_{Aeq,T}$ (dB)	10th Highest measured maximum sound level, $L_{Amax,fast}$ (dB)	Median Measured background sound level, $L_{A90,T}$ (dB)
Thursday 17th October 2024	Daytime*	49.8	-	46
	Night-time	45.7	55.1	42
Friday 18th October 2024	Daytime	50.6	-	46
	Night-time	44.3	58.7	39
Saturday 19th October 2024	Daytime	50.2	-	45
	Night-time	47.6	56.7	40
Sunday 20th October 2024	Daytime	50.9	-	46
	Night-time	49.2	66.0	41
Monday 21st October 2024	Daytime	59.4**	-	48
	Night-time	45.2	55.1	42

*Note the Daytime period here from 11:00 to 23:00.



**Note that here there appears to be an event taking place or something similar in the car park that is not typical, as such the derived daytime level for this day while the highest will not be used to calibrate the noise model as it is not an accurate reflection of the sound climate.

The measured sound levels used for the assessment are highlighted in bold.

In addition to the above, we have also considered the MCC procedure for calculating the lowest average background sound level, which is shown below:

Table 6 Daytime Hourly Averages – MCC Method

Hour	Thursday	Friday	Saturday	Sunday	Monday	Arithmetic Average
07:00	-	53.4	45.8	45.9	50.3	48.9
08:00	-	52.9	47.7	47.4	53.6	50.4
09:00	-	48.6	47.8	50.0	51.8	49.6
10:00	-	48.3	48.9	50.2	50.9	49.6
11:00	47.8	48.5	48.9	50.2	50.4	49.2
12:00	49.8	49.5	49.5	50.9	49.9	49.9
13:00	49.5	50.0	50.4	50.3	51.9	50.4
14:00	49.7	49.9	50.3	49.5	51.6	50.2
15:00	49.2	49.5	49.6	49.0	49.9	49.4
16:00	48.8	49.6	47.7	48.5	49.7	48.9
17:00	48.3	49.7	47.1	48.6	50.8	48.9
18:00	49.4	48.7	45.4	47.6	51.7	48.6
19:00	49.0	47.8	44.3	47.3	50.9	47.9
20:00	48.1	47.4	44.0	47.3	50.2	47.4
21:00	50.2	47.1	48.5	46.3	49.6	48.3
22:00	49.2	46.5	47.9	46.8	48.3	47.7

The average of all average values is noted to be 49.1 dB. The lowest is 47.4 dB and the highest is 50.4 dB.

All these values are higher than the lowest median set by E3P (45 dB) and as such the median value will be used for the daytime.

Table 7 Night-time Hourly Averages – MCC Method

Hour	Thursday	Friday	Saturday	Sunday	Monday	Arithmetic Average
23:00	47.3	45.5	47.7	45.7	47.0	46.6
00:00	45.7	43.4	46.3	46.1	45.5	45.4
01:00	42.3	42.0	42.8	44.1	44.2	43.1
02:00	44.5	40.5	42.5	41.5	42.4	42.3
03:00	43.5	38.3	42.7	41.3	42.9	41.7
04:00	43.8	38.4	42.8	41.6	44.0	42.1
05:00	47.3	41.4	42.5	43.5	46.2	44.2
06:00	50.3	45.5	45.4	47.4	49.2	47.6

The average of all average values is noted to be 44.1 dB. The lowest is 41.7 dB and the highest is 47.6 dB.

All these values are higher than the lowest median set by E3P (39 dB) and as such the median value will be used for the daytime.



3.4. 'BAR 4 EIGHTY' SOUND SURVEY – MUSIC / BAR NOISE BREAKOUT

E3P has conducted attended measurements of the existing bar to the south of the site to determine if noise breakout due to live or recorded music or patron noise was audible at the proposed site. As such, the survey was carried out over the following periods:

📍 19:00 - 23:00 Friday 18th October 2024.

The following noise measurement position was chosen for the Survey:

📍 Noise Measurement Position 4 (NMP4): Located at the southern boundary of the site, directly opposite the rear of Bar 4 Eighty. The microphone was located at a height of 1.5 m above ground level and in free-field conditions.

A summary of the measured sound pressure levels are presented in Table 8.

Table 8 Summary of Measured Noise Levels for NMP4 – Attended

Measurement start	Measured sound pressure levels (dB)		Commentary
	L _{Aeq,1hr}	L _{A90,1hr}	
19:00	51.1	48.0	No audible breakout noise from the bar fix plant sound dominant from adjacent Yara restaurant.
19:15	49.0	47.4	
19:30	48.7	47.3	
19:45	49.5	47.4	
20:00	49.5	47.5	
20:15	56.5	47.3	
20:30	48.2	46.8	
20:45	48.5	47.1	
21:00	50.2	47.1	
21:15	49.6	47.8	
21:30	50.1	47.6	
21:45	50.1	46.8	
22:00	49.3	47.3	
22:15	52.3	47.9	
22:30	50.6	47.3	
22:45	50.2	47.0	

Given that no audible breakout sound was present noise from the bar does not require further investigation. However, this survey highlighted that the dominate noise source in this area was fixed plant sound associated with the adjacent Yara restaurant.

3.5. FIXED PLANT SOUND SURVEY – YARA RESTAURANT KITCHEN EXTRACT

E3P has conducted attended measurements of the kitchen extract system associated with the Yara Restaurant. As such, the survey was carried out over the following periods when the kitchen extract was operational:

📍 14:22 – 15:00 Tuesday 22nd October 2024.

The measured values are considered worst-case and representative of all operational periods of Yara. The following noise measurement position was chosen for the Survey:



- Noise Measurement Position 5 (NMP5): Located at the southern boundary of the site, close to the kitchen extract system of the Yara restaurant. The microphone was located at a height of 1.5 m above ground level and in free-field conditions. The kitchen extract flue is approximately 5 m in height.

A summary of the measured sound pressure levels are presented in Table 9.

Table 9 Summary of Measured Noise Levels for – Kitchen Extract System

Measurement start	Measured sound pressure levels (dB)			Commentary
	L _{Aeq,1hr}	L _{A90,1hr}		
14:54 to 14:56	53.8	51.8		Kitchen extract steady state fixed plant sound

The equipment outlined in Table 10 was used for the noise survey.

Table 10 Noise Measurement Equipment and Calibration Dates

Measurement position	Equipment description	Manufacturer & type number	Serial number	Calibration due date at time of survey
NMP1, NMP4 and NMP5	Sound Level Meter	Fusion	12039	28/07/2025
	Pre-amplifier	Pre22	1805124	
	Microphone	40CE	330832	
	Calibrator	Cal31	87281	19/01/2025
NMP2	Sound Level Meter	Fusion	14226	07/12/2025
	Pre-amplifier	Pre22	2135072	
	Microphone	40CD	470570	
	Calibrator	CR 515	99204	08/08/2025
NMP3	Sound Level Meter	Optimus Green CR:171A	G303884	19/09/2025
	Pre-amplifier	MV:200F	12731F	
	Microphone	MK:224	215899D	
	Calibrator	CR:515	99403	19/09/2025

The sound level meters were field calibrated before and after measurements with no significant drift witnessed.



4. CONSTRUCTION NOISE AND VIBRATION IMPACT ASSESSMENT

A separate Prior Notice for Demolition application (LPA ref. 141706/DEM/2024) was approved by Manchester City Council, as the Local Planning Authority, in January 2025, confirming that the proposed demolition of the existing shopping precinct and Graeme House office building can be undertaken under permitted development rights. The submission is informed by a Demolition Management Plan, prepared by the proposed demolition contractor, which sets out the proposed mitigation measures to minimise impacts on surrounding residential receptors. The approved demolition works are intended to commence in Q2 2025 for a period of circa 20 weeks.

4.1. CONSTRUCTION NOISE

E3P note that a CEMP forms part of the planning application submission and Best Practicable Means (BPM) are to be followed. As such, these measures are considered to be embedded into the development and will be allowed for in the assessment.

Experience from other sites has shown that by implementing the above measures, typical noise levels from construction works can be reduced by approximately 5 dB to 10 dB. As such, a 5 dB correction will be applied to the predicted levels.

It is inevitable with any major development that there will be some disturbance caused to those nearby during the construction phases of the Site. However, disruption due to construction is only temporary, limited to the Site and is of medium-term duration. Indeed, the impact will be localised to the nearest receptor/s to a phase and, as such, a medium-term consideration is considered appropriate.

The predictions have followed the methodology contained within BS 5228-1 and are in terms of the $L_{Aeq,T}$ over the core working day, which is noted to be 07:00 to 18:00 hours Monday to Friday and 08:00 to 17:30 on Saturdays and no work on Sundays, as noted in the CEMP. Any minor deviation from these times has little to no impact on the outcome of these assessments.

Table 11 sets out the typical plant type, number and assumed utilisation (percentage ‘on-time’) used in the prediction of noise levels during the key construction activities.

Table 11	Plant item details		
Plant type	Sound pressure level at 10 m, $L_{Aeq,T}$ (dB)	Number of plant items	Assumed % on-time
Earthworks and enabling works			
Dozer	64.9	4	80
Tracked Excavator	62.9	4	80
Dump truck	86.0	5	80
Rotary bored piling	83.0	2	75
Road Roller	63.9	1	60
Asphalt Paver	60.9	1	60
Construction			
Cement mixer truck idling	71.0	1	60
Concrete pump + cement mixer	67.0	2	80
Mobile telescopic crane	77.0	2	40
Telescopic handler	79.0	2	50
Circular saw	85.0	1	40



Plant type	Sound pressure level at 10 m, $L_{Aeq,t}$ (dB)	Number of plant items	Assumed % on-time
Diesel generator	77.9	1	100
Fork lift truck	88.0	1	70
Diesel generator	94.0	1	80

Predictions have been carried out to determine noise levels likely to be generated during the earthworks/enabling works and construction phase/s. For the purpose of these predictions, it was assumed that the intervening ground will be acoustically hard with no additional attenuation of sound due to ground absorption thus informing a worst-case assessment.

Noise predictions have been undertaken for off-site noise sensitive receptors in the immediate vicinity of the Site and are detailed below.

Table 10 sets out the average predicted unmitigated demolition and construction noise levels for the construction stage of the works. The absolute noise level of 75 dB for urban areas as set out in BS 5228 has been used give the location of the proposed site.

To inform a worst-case assessment, the assessment is based on the closest building being constructed to each respective receptor, including for earthworks and construction. As such, the average position to the closest building is used for the basis of the assessment for most receptors. Any works that take place closer to the receptor will be for a short period and an average, central position is considered robust.

Table 12 Predicted Average mitigated earthworks and construction noise levels

Receptor	Average distance (m)	Average earthworks noise levels, $L_{Aeq,10hrs}$ (dB)	Average construction noise levels, $L_{Aeq,10hrs}$ (dB)
R1 - Chorlton Health Centre, Nicholas Road	25	70.4	65.3
R2 - Oswald Road	50	64.9	57.3
R3 - 13 and 15 Manchester Road	35	68.0	60.4
R4 - Wilbraham Road	45	65.8	58.2
R5 - Barlow Moor Road	32	68.7	61.2

A review of Table 12 identifies that the calculated mitigated earthworks and construction noise levels fall below the applicable threshold value at all receptors.

It should be noted that these predictions are worst case and that it is unlikely that operations are to be conducted on the sections of the Site closest to each of the identified receptors for significant periods of time.

Given that Best Practicable Means (formalised via a final CEMP secured by way of pre-commencement planning condition) are to be followed and to ensure consistency, applicable measures that could be applied to the CEMP are discussed in Section 8.1.



4.2. CONSTRUCTION VIBRATION

Ground borne vibration calculations have been performed for typical construction activities / machinery based on the empirical prediction procedures and historical measurement data presented within BS 5228-2 and the TRL RR 246. Such predictions have been performed to determine the possible distances at which the adopted significance criteria may be registered based on a specified confidence limit (where applicable). In this regard, the ground borne vibration levels and associated distances have been identified for a sample of typical construction vibration sources as shown in Table 13. It is assumed that rotary bored piling would be undertaken.

Table 13 Predicted Ground born vibration levels applicable to typical generating construction activities

Operation	Confidence limit	Distance (m)	PPV (mm/s)
Vibratory rollers – start and end	95	60	0.3
	95	23	1.0
Vibratory rollers – steady state ¹	95	3.3	10
Rotary bored piling – driving casing	N/A	75	≤0.3
	N/A	23	≤1.0
	N/A	2.3	≤10
	N/A	50	≤0.3
HGVs ²	N/A	17	≤1.0
	N/A	2.5	≤10.0

1. Assumes 2 rollers, 0.4 mm amplitude, drum width of 1.3 m, e.g. heavy-duty ride on roller
2. Assumes max height / depth of surface defect of 50 mm, max speed of 30 km/h, and that surface defect occurs at both wheels.

Note: Where alluvium soils are present, higher vibration levels can be expected.

It should be noted that the data presented within Table 13 is general in nature and is not specific to the Site, however the vibration levels and associated distances can be used to determine the typical distances at which specific impacts are likely to be registered.

Given the distances and corresponding impact in Table 13, an assessment of vibration impact for is required as there is potential the closet receptors will be subject to vibration levels of between 1 mm/s and 10 mm/s due to their proximity. BS 5228 states that, at this level:

It is likely that vibration of this level in residential environments will cause complaint but can be tolerated if prior warning and explanation has been given to residents.

Given that the source of this is likely to be vibratory rollers for road construction, these operations would be for a short duration and, as long as the occupants are given pre warning, the impact is not considered to be significant, though it will be adverse and Best Practicable Means must be followed, as detailed in Section 8.2.

It should be noted that this is a worst-case assessment based on the minimum possible distances at which construction activities could reasonably take place from existing vibration sensitive receptors. For much of the construction phase, it is expected that activities will take place at greater distances from such properties thus leading to lesser significance of effects. Furthermore, it should be noted that the vibration predictions have utilised a large data set covering a range of measured levels applicable to each operation. It is evident from this dataset that, for most operations (approximately 95% in most cases), predicted levels will be lower than those presented within Table 13.



It should be noted that the above assessment has been undertaken based on vibration levels associated with a small range of ground borne vibration generative construction activities. It is possible that activities other than those presented may take place. Similarly, some of those presented may not be applicable to the construction activities specific to the Site.



5. OPERATIONAL PHASE - ROAD TRAFFIC NOISE IMPACT ASSESSMENT

For the purposes of this assessment, E3P has used noise modelling software, CadnaA 2024, to determine the impact of noise from road traffic sound. This is informed by measured road traffic noise levels at NMP1 to NMP3 and traffic data from Civic.

The following inputs have been included in the model:

- Site elevations have been taken as existing by way of a 2 m grid Digital Terrain Model (DTM) which contains public sector information licensed under the Open Government License v3.0.
- Wilbraham Road, Barlow Moor Road and Nicolas Road have been calibrated to NMP1, NMP2 and NMP3 respectively.
- Manchester Road is inputted using traffic flow information from Civic.
- Existing buildings are included.
- A reflection order of 1 has been used in all calculations.
- Noise levels generated using ISO 9613-1 and ISO 9613-2 “Acoustics – Attenuation of sound during propagation outdoors” as incorporated into CadnaA software.

Figures 3 and 4 determine the noise levels across the Site during the daytime and night-time periods, respectively, due to road traffic sound.

5.1. EXTERNAL AMENITY AREA NOISE LEVEL ASSESSMENT

E3P note that a proposed landscape/public realm area is proposed within the building envelope at first floor level. As such, consideration has been given to this area with the potential of resident usage. Noise levels here range between 40 and 55 dB. Areas in the south east of this area could have noise levels of up to 58 dB but given that the majority of the area is shielded from the road with noise levels of less than 55 dB, this is not considered significant.

As such, acceptable noise levels are achieved in the public realm area.

With regards to balconies, these are noted on all elevations of the main residential building. Here noise levels range between 48 dB for balconies overlooking the public realm area and up to 62 dB for those on Barlow Moor Road elevations.

When considering balconies, BS 8233 states the following:



Other locations, such as balconies, roof gardens and terraces, are also important in residential buildings where normal external amenity space might be limited or not available, i.e. in flats, apartment blocks, etc. In these locations, specification of noise limits is not necessarily appropriate. Small balconies may be included for uses such as drying washing or growing pot plants, and noise limits should not be necessary for these uses. However, the general guidance on noise in amenity space is still appropriate for larger balconies, roof gardens and terraces, which might be intended to be used for relaxation. In high-noise areas, consideration should be given to protecting these areas by screening or building design to achieve the lowest practicable levels. Achieving levels of 55 dB $L_{Aeq,T}$ or less might not be possible at the outer edge of these areas, but should be achievable in some areas of the space.

Given that these are individual balconies and do not fall within the criteria of roof gardens and terraces, the applicable of 55 dB is not considered appropriate. Indeed, the levels achieved would be considered the lowest practicable levels considering the locality of the site and its proximity to Barlow Moor Road. However, this potential impact is offset with the availability of the proposed public realm, with noise levels of less than 55 dB. Accordingly, no adverse impact is predicted within balconies with the lowest practicable levels achieved and access to other quieter areas available to residents.

5.2. INTERNAL NOISE LEVEL ASSESSMENT

With regards internal noise levels, E3P has assumed a standard glazing specification of 4 mm glass/20 mm air space/4 mm glass which affords a sound insulation performance in the order of 29 dB R_w (C_{tr} :1; C_{tr} :4). The primary noise impact here is road traffic sound, as such, the C_{tr} correction is applied.

The model has been used to predict façade noise levels at all floor levels and orientations. To determine any requirements for mitigation, E3P has added the reduction provided by the glazing (25 dB) to the relevant criterion for day (35 dB) and for night (30 dB). As such, any façades subject to noise levels higher than 60 dB during the day and/or 55 dB during the night will require higher specification glazing.

The highest predicted day and night façade levels here are 63 dB and 57 dB respectively. As such, certain apartments will require higher specification glazing. The exact specifications of the units will be given in section 6.

It is also important to consider the maximum noise levels during the night-time period. Figure 6 has been produced using the 10th Highest maximum noise levels for each road. The worst affected plots along Barlow Moor Road in relation to maximum noise levels have a level of 77 dB at the worst affected façade at ground and first floor level. As such, higher specification glazing for certain façades will be needed to achieve 45 dB internally achieving the criterion. Further details will be given in Section 6.

With regards opening windows, there is a requirement to consider the need to open windows for ventilation and the mitigation of overheating. At this stage, the assessment assumes that ventilation would be provided by way of extract fans in kitchens and bathrooms and openable windows.

5.2.1. VENTILATION CONDITION

E3P note, within the Ventilation Statement completed by Futureserv, that a Part F compliant system would be installed within all plots. Furthermore, the following is noted:

To provide minimum fresh air rates to the living spaces each habitable space will be provided with a whole dwelling mechanical ventilation heat recovery (MVHR) system. This system comprises of a continuous mechanical supply and extract ventilation unit located in a suitable position based on the space design.



The units will be provided with a high level of heat recovery efficiency for example an integrated counterflow heat recovery cell designed to aid part L compliance of the Building Regulations as detailed within the Energy Statement prepared in support of the application.

As such, the proposed system will provide the necessary ventilation without the need for opening windows. Windows can remain openable at the resident's discretion.

5.2.2. OVERHEATING CONDITION

E3P has considered the potential impact of noise, internally, should windows be opened to mitigate overheating, as per the criteria stipulated in ADO, which will feed into the overheating assessment and ventilation strategy. Any plots/facades that pass this test can open windows for this without resulting in unacceptable internal noise levels. Those that fail the test would be subject to a Part O Overheating Assessment by a suitably qualified consultant.

E3P note the following from the Ventilation Statement:

Purge ventilation, giving the occupant final control over their environment, will be provided by free area natural ventilation opening windows in the building façade and a boost mode on the MVHR units. These openings shall only be used for purge and overheating comfort, with day-to-day ventilation being provided by the mechanical MVHR systems.

Purge Ventilation shall be provided to each habitable room (Bedrooms and Living / Kitchens) within each apartment. Purge Ventilation shall be provided via opening windows installed in the façade. These openings are to be provided alongside an MVHR summer/purge boost mode (as required) which shall be operated locally via a manual switch within each apartment.

It should be noted that the windows are purely for user comfort and shall satisfy the building regulations compliance for purge ventilation for odour control and to offset summertime overheating.

However, for completeness, the report has considered Part O internal noise levels so that any facades that exceed this with windows open are highlighted should the above change.

Part O only applies to bedrooms at night in relation to the average 8-hour noise level and 10th highest maximum noise level.

Given that the site is within a moderate risk location, as per guidance within Approved Document O the external noise limit threshold is 49 dB during the night-time ($L_{Aeq,8hr}$) and 64 dB more than 10 times a night ($L_{A1,max}$).

As can be seen from Figures 5 & 6, several façades will experience an exceedance of the above criterion, particularly the night-time maximum noise level criterion. As such, a full overheating assessment in accordance with the guidelines indicated in Part O is required for many apartments. A full overheating assessment should be carried out by a suitable qualified consultant. The plots which have facades above the Part O criterion are highlighted in red on both Figures 5 and 6.



6. EXISTING FIXED PLANT NOISE IMPACT ASSESSMENT

For the purposes of this assessment, E3P has used noise modelling software, CadnaA 2024, to determine the impact of noise from existing commercial fixed plant sound.

The following inputs have been included in the model:

- Site proposed layout.
- The kitchen extract at Yara Restaurant is calibrated to the sound levels noted in section 3.5.
- Given the Yara restaurant is only open during daytime hours (up to 11pm Friday/Saturday and 10pm all other days) and the kitchen extract was not observed as operational during the night-time period, only a daytime assessment has been undertaken.
- Ground elevations have been taken as existing by way of a 2 m grid Digital Terrain Model (DTM) which contains public sector information licensed under the Open Government License v3.0.
- Existing buildings have been included in the model and assumed to have a structured façade.
- A reflection order of 1 has been used in all calculations.
- Noise levels generated using ISO 9613-1 and ISO 9613-2 "Acoustics – Attenuation of sound during propagation outdoors" as incorporated into CadnaA software.

For the BS 4142:2014 assessments, penalties are applied to the specific sound level to provide the rating level. These penalties relate to the acoustic features of the sound source. Accordingly, the following objective and subjective features have been accounted for in the assessment, in accordance with the subjective method detailed in BS 4142:2014, for the Site as a whole operation.

Table 14 Acoustic features			
Acoustic feature	Applicable?	Attributable penalty	Comment
Tonality	No	-	No tonality detected
Intermittency	No	-	No intermittency detected
Impulsivity	No	-	No impulsive sounds detected
Other	No	+3 dB	It is likely that the fixed plant sound will be readily distinctive against the background sound level as such the other penalty has been applied.

Figures 7 determine the rating levels across the Site during the daytime period due to commercial sound.



6.1. DAYTIME ASSESSMENT – 07:00-23:00

Figure 7 should be used to view the specific noise level at the receptors. The grid is calculated at 1.5 m height to show garden noise levels. As can be seen on the figure the worst effected façade of the proposed apartments reaches 43 dB $L_{Aeq,1hr}$.

This is the worst case predicted specific noise level. Therefore, the worst case predicted rating level with the penalty applied is 46 dB $L_{ar,1hr}$. The typical background sound level during the daytime was found to be 45 dB $L_{Aeq,1hr}$, as such there is a 1 dB exceedance at the worst affected facades.

BS 4142 states the following:

The lower the rating level is relative to the measured background sound level, the less likely it is that the specific sound source will have an adverse impact. Where the rating level does not exceed the background sound level, this is an indication of the specific sound source having a low impact.

Given this a 1 dB exceedance is not considered significant. Furthermore, when considering internal noise levels with windows open, occupants would experience noise levels of only 30 dB. Some 5 dB below the daytime criterion. Indeed, here internal noise levels with windows open would be acceptable even during the night-time period. As such no mitigation measures are required.



7. CONSTRUCTION PHASE

With respect to the proposed planning application for construction works, a CEMP has been prepared and seeks to align with the information on likely BPM to be followed on site, as set out below.

7.1. CONSTRUCTION NOISE

To reduce potential for unduly high noise levels at the receptors, it is recommended that Best Practicable Means (BPM) be followed, wherever possible and practicable, on-site considering the proximity of existing and proposed residential receptors.

Accepted safeguards exist to minimise the effects of construction noise, these include:

- ✎ The various EC Directives and UK Statutory Instruments that limit noise emissions from a variety of construction plant.
- ✎ Guidance set out in BS5228-1 which covers noise control on construction sites; and,
- ✎ The powers that exist for local authorities under Sections 60 and 61 of the Control of Pollution Act 1974 to control noise from construction application sites.

The adoption of Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974 is usually the most effective means of controlling noise from construction sites. Such measures where appropriate may include the following:

- ✎ Any compressors brought on to the Site to be silenced or sound reduced models fitted with acoustic enclosures.
- ✎ All pneumatic tools to be fitted with silencers or mufflers.
- ✎ Care to be taken when erecting or striking scaffolds to avoid impact noise from banging steel. All operatives undertaking such activities to be instructed on the importance of handling the scaffolds to reduce noise to a minimum.
- ✎ Most deliveries to be programmed to arrive during normal working hours only. Care to be taken when unloading vehicles to minimise noise. Delivery vehicles to be routed to minimise disturbance to residents. Delivery vehicles to be prohibited from waiting within or in the vicinity of the Site with their engines running.
- ✎ All plant items to be properly maintained and operated according to manufacturers' recommendations in such a manner as to avoid causing excessive noise.
- ✎ All plant to be sited so that the noise impact at nearby noise sensitive properties is minimised.
- ✎ Local hoarding, screens, or barriers to be erected as necessary to shield particularly noisy activities; and,
- ✎ Problems concerning noise from construction works can often be avoided by taking a considerate and neighbourly approach to relations with the residents. Works should only take place during given periods, e.g. during normal construction hours and not at night.



7.2. CONSTRUCTION VIBRATION

It is possible to employ a number of physical and operational measures in order to reduce the potential effects resulting from construction generated vibration. These may include and should be employed, where practicable, when in close proximity to the on-site receptors:

- Adoption of low vibration working methods. Consideration should be given to use of the most suitable plant.
- Where processes could potentially give rise to significant levels of vibration, on - site vibration levels should be monitored regularly by a suitably qualified person.
- Where piling is to take place, any obstructions within the ground such as shallow-lying stone, should first be removed.
- The provision of cut-off trenches in order to interrupt the direct transmission path of vibrations.
- Reduction of energy input per blow (applicable to piling); and,
- Application of piling techniques aimed at reducing resistance to penetration e.g. pre-boring for driven piles and adding water to the hole for impact bored piles.

It is expected that mitigation measures and operational considerations such as these would be incorporated within the CEMP in order that the effects of ground-borne construction vibration can be controlled wherever practically possible. Therefore, any impact from construction activities is not considered significant, unless stated in the assessments that follow.

7.3. PILING METHODOLOGY

In order to mitigate as best practicable, the potential for piling impacts, both due to noise and vibration, it is recommended that the following condition could be applied to the development and included in the CEMP:

Condition X

- a) Should any part of the development incorporate piling works, a method statement must be submitted to and approved in writing by the Local Planning Authority prior to the commencement of any piling works. The method statement must provide a justification for the method chosen and details of noise and vibration-suppression methods proposed.*
- b) Piling works shall then be carried out in accordance with the details approved under (a) above.*



8. MITIGATION

8.1. FAÇADE INSULATION AND VENTILATION

The previous section determined that higher specification glazing will be required for across certain facades. Standard thermal double glazing being sufficient across the rest of the site.

The below Table details the required glazing per façade. The worst-case required glazing is chosen per façade. For example, where a glazing needed due to night-time noise is higher than for daytime periods, the night-time requirements are recommended. Where maximum noise levels need mitigation the R_w value is provided.

It is recommended that a glazier is consulted to ensure any system installed achieves the above reduction as a minimum. These specifications should be reviewed by an acoustician.

Table 15 **Glazing Requirements - See Figure 8 for Locations**

Façade Orientation	Floor	Required glazing reduction (dB)	Example glazing (glass/air space/glass) (mm)
Block A			
Eastern	Level 1 to 4	27 dB $R_w + C_{tr}$ (*31 R_w)	6 / 6 to 16 / 6
Block B			
Eastern	Level 1 to 4	27 dB $R_w + C_{tr}$ (*30 R_w)	6 / 6 to 16 / 6
Block C			
All facades	All levels	Standard	4 / 6 to 16 / 4
Block D			
All facades	All levels	Standard	4 / 6 to 16 / 4
Block E			
Northern	Level 1 to 4	27 dB $R_w + C_{tr}$ (*30 R_w)	6 / 6 to 16 / 6
Block F			
Southern	Level 1 to 3	28 dB $R_w + C_{tr}$ (*32 R_w)	6 / 6 to 16 / 4

*Note that these glazing units need to achieve the denoted R_w values to control maximum noise level events during the night-time period.

Figure 8 in the appendix highlights the facades that need the above glazing specification.



9. COMMERCIAL TO RESIDENTIAL REQUIREMENTS

9.1. OPERATIONAL FIXED PLANT NOISE EMISSION LIMITS

As part of the development, there is potential for new external fixed plant items to be installed for the newly formed ground floor commercial units and operations such as deliveries to take place. At this stage, detailed information on the actual plant items and locations are not available and, as such, plant noise and operational noise emission limits have been set.

It is confirmed that the proposed ground floor commercial units will be subject to restrictions on proposed use, i.e. there will be no hot food takeaways uses.

At this stage it is assumed that any fixed plant could operate in both the day and night-time periods and servicing is likely to be completed during the day as such, the typical daytime and night-time background sound level, as measured will be used.

Furthermore, it is recommended that a limit of -5 dB in relation to the background is achieved at the closest receptors to avoid a creep in background sound levels in the area.

To that end, the following limits apply:

- ✱ The rating level of any fixed plant items associated with the proposed development, cumulatively, shall not exceed 40 dB during the daytime and 34 during the night-time at the closest residential dwellings. The rating level should allow for any acoustic features that are readily discernible against the existing sound climate. The limit applies as measured at 1 m from the façade of the closest habitable room window or representative location.

9.2. MUSIC NOISE ASSOCIATED WITH THE PROPOSED COMMERCIAL UNITS

E3P note that the proposed commercial areas will be Use Class E - Commercial, Business and Service allowing for:

- a) for the display or retail sale of goods, other than hot food, principally to visiting members of the public.
- b) for the sale of food and drink principally to visiting members of the public where consumption of that food and drink is mostly undertaken on the premises.
- c) for the provision of the following kinds of services principally to visiting members of the public—
 - (i) financial services,
 - (ii) professional services (other than health or medical services), or
 - (iii) any other services which it is appropriate to provide in a commercial, business or service locality.
- d) for indoor sport, recreation or fitness, not involving motorised vehicles or firearms, principally to visiting members of the public; and
- e) for the provision of medical or health services, principally to visiting members of the public, except the use of premises attached to the residence of the consultant or practitioner.

As such, there is potential for music associated with the indoor sport, recreation or fitness areas to generate music breakout. As the end users have not currently been confirmed, E3P note the following guidance set by Manchester City Council in the Planning & Noise Document 2022. This guidance must be followed by any ground floor commercial unit seeking to have music as part of their operations.



'Music noise levels in the 63Hz and 125Hz octave centre frequency bands (L_{eq}) should be controlled so as not to exceed (in habitable rooms) 47dB and 41dB ($L_{eq,5min}$), respectively'.

Entertainment noise ($L_{Aeq,5min}$) should be controlled to 5dB below the typical background noise level (L_{A90}) in each octave band at the nearest noise sensitive location'.

The guidance also goes on to state the following in relation to mixed use developments -

Where a planning application includes a proposal to contain a potentially noisy development within the same building as a noise sensitive use or vice versa the noise survey should consider the transfer of noise between the noisy and noise sensitive uses. An example of where this should be considered would be a proposal for a bar or club within the same building as residential properties (see section 3.6.1.2).

Consultants should demonstrate that the structure of the development will be sufficient to adequately contain the noise generated within the development. In doing so consultants should consider:

- *flanking noise;*
- *structure borne noise;*
- *the overall level of noise (L_{Aeq}) generated by the use in question and any tonal or impulsive characteristics that the noise may contain; and*
- *the acoustic properties of the development (including the construction of party floors and/or walls, windows and doors, ventilation systems, and structural columns.)*

9.3. PARTY FLOOR RECOMMENDATIONS

In addition to controlling exterior noise, sound from adjacent spaces can affect the intended use, depending on the noise activity, noise sensitivity and privacy requirement. A matrix may be used to determine the sound insulation requirement of separating partitions once the noise activity, noise sensitivity and privacy requirements for each room and space are established. Each room may be both a source and a receiving room. Where adjacent rooms have different uses, the worst-case sound insulation will be specified.

Table 16 details the example sound insulation matrix from BS 8233.

Table 16 Example On-site Sound insulation matrix

Privacy requirement	Activity noise of source room	Noise sensitivity of receiving rooms		
		Low	Medium	Sensitive
Confidential	Very high	47	52	57*
	High	47	47	52
	Typical	47	47	47
	Low	42	42	47
	Very high	47	52	57*
Moderate	High	37	42	47
	Typical	37	37	42
	Low	No rating	No rating	37
	Very high	47	52	57*
	High	37	42	47
Not Private	Typical	No rating	37	42
	Low	No rating	No rating	37



Values are dB $D_{nT,w}$

* Values of more than 55 dB are difficult to obtain on site and room adjacencies requiring these levels should be avoided wherever practical.

With reference to the above and the proposed internal layouts, the following relationships are found based on worst-case usage:

- Commercial – Residential = Confidential privacy, high activity noise of source room and sensitive receiving room = 52 dB $D_{nT,w}$ sound insulation required.

As such, it is found that a sound insulation performance of **at least 52 dB $D_{nT,w}$** is required between all ground floor commercial spaces and residential uses above, assuming worst-case usage in the commercial space.

For retail spaces and areas of an office nature, this requirements can be reduced to **at least 47 dB $D_{nT,w}$** .

For the residential dwellings themselves, the following performance standards are to be met in accordance with Building Regulations Part E:

- Walls – 45 dB $D_{nT,w}$ + C_r airborne sound insulation.
- Floors and stairs – 45 dB $D_{nT,w}$ + C_r airborne sound insulation and 62 dB $L'_{nT,w}$ impact sound insulation.



10. CONCLUSIONS AND DISCUSSION

E3P were commissioned to undertake a Noise Impact Assessment for the proposed residential-led mixed-use development at Chorlton Precinct, Manchester.

This assessment looked to determine the following:

- ✦ Establish and measure the existing sound levels across the site, day and night.
- ✦ Consider the potential sources of sound impacting the site and to measure source sound levels of all applicable sources.
- ✦ Assess internal and external noise levels associated with road traffic in accordance with criteria given in BS 8233.
- ✦ Set operational and plant noise emission limits to protect the surrounding existing noise sensitive receptors
- ✦ Assess the potential demolition and constructions noise and vibration impact upon the surrounding noise sensitive receptors.
- ✦ Provide advice on mitigation measures, where required.

E3P have undertaken three unattended noise surveys during a typical weekday and weekend time period to quantify noise levels across the site. A survey of breakout sound from a nearby bar has also been conducted, however no audible breakout was observed. Fixed plant measurements have been conducted for an existing kitchen extract fan to the south of the proposed development.

E3P have undertaken 3D noise modelling to assess road traffic noise across the site, incident upon facades and assessed in accordance with BS 8233. The assessment determined that certain facades require higher specification glazing to control internal noise levels across the development.

A full overheating assessment is required for certain apartments in accordance with the guidelines indicated in Part O. It is noted that MVHR is to be installed in all apartments.

The existing fixed plant items were found to not cause any significant impact upon the proposed development in relation to a BS 4142 assessment.

An assessment of noise and vibration during the demolition and construction phase have been carried out. E3P note that a DMP/CEMP will be submitted and that these will allow for mitigation in the form of Best Practicable Means which will ensure no adverse impact upon the surrounding noise sensitive receptors.

Operational and fixed plant noise emissions limits have been set based on the measured background sound levels that currently exist at the surrounding noise sensitive receptors.

With mitigation measures in place, this assessment has shown that no adverse impact is predicted day or night at the receptors due to existing sound sources. The proposed noise limits on the proposed commercial aspects will ensure compliance with Policy C 10 of the Core Strategy. The assessment has provided sufficient evidence and assessment to ensure no adverse impact in relation to noise and with regards to Policy DM 1 of the Core Strategy. The report also ensure compliance with the Places for Everyone requirements to mitigate noise impacts to avoid adverse noise impacts.

END OF REPORT

APPENDIX I LIMITATIONS



GENERAL

1. This report and any associated works (together comprising the "Services") were compiled and carried out by E3P for the client (as present in Section 1) under the E3P "Terms of Business" or with those parties with whom a warranty agreement has been executed, or with whom an assignment has been agreed and outlined in the body of the report.
2. Unless explicitly agreed otherwise, in writing, this report has been prepared under E3P Standard Terms and Business as included within our proposal to the Client.
3. Project-specific appointment documents may be agreed upon at our discretion and a charge may be levied for both the time to review and finalise appointment documents and also for associated changes to the appointment terms. E3P reserves the right to amend the fee should any changes to the appointment terms create an increased risk to E3P.
4. The report needs to be considered in light of the proposal and associated limitations of scope. The report needs to be read in full and isolated sections cannot be used without full reference to other elements of the report and any previous works referenced within the report.

NOISE AND VIBRATION IMPACT ASSESSMENTS

5. Where a noise or vibration survey is required to inform an assessment, E3P will endeavour to ensure that all noise and vibration measurements taken are robust, representative and reliable in order to inform an accurate assessment.
6. Where mitigation measures are specified in this report, it should be noted that these measures are relative to a specific sound or vibration source, both in terms of the measured sound pressure and vibration level and the character of the sound source. Where either the sound pressure level or the character of the sound varies following completion of the sound survey, E3P cannot be held responsible for any subsequent variations in the proposed mitigation performance.
7. The works undertaken to prepare this report comprised a study of available and easily documented information from a variety of sources (including the Client), together with (where appropriate) a brief walkover inspection of the Site and correspondence with relevant authorities and other interested parties. Due to the short timescales associated with these projects' responses may not have been received from all parties. E3P cannot be held responsible for any disclosures that are provided post-production of our report and will not automatically update our report.
8. The opinions given in this report have been dictated by the finite data on which they are based and are relevant only for the purpose for which the report was commissioned. The information reviewed should not be considered exhaustive and has been accepted in good faith as providing true and representative data pertaining to site conditions. Should additional information become available which may affect the opinions expressed in this report, E3P reserves the right to review such information and, if warranted, to modify the opinions accordingly.
9. E3P does not warrant work/data undertaken/provided by others.

APPENDIX II

GLOSSARY



NOISE

Noise is defined as unwanted sound. Human ears are able to respond to sound in the frequency range 20 Hz (deep bass) to 20,000 Hz (high treble) and over the audible range of 0 dB (the threshold of perception) to 140 dB (the threshold of pain). The ear does not respond equally to different frequencies of the same magnitude but is more responsive to mid-frequencies than to lower or higher frequencies. To quantify noise in a manner that approximates the response of the human ear, a weighting mechanism is used. This reduces the importance of lower and higher frequencies, in a similar manner to the human ear.

Furthermore, the perception of noise may be determined by a number of other factors, which may not necessarily be acoustic. In general, the impact of noise depends upon its level, the margin by which it exceeds the background level, its character and its variation over a given period of time. In some cases, the time of day and other acoustic features such as tonality or impulsiveness may be important, as may the disposition of the affected individual. Any assessment of noise should give due consideration to all of these factors when assessing the significance of a noise source. The most widely used weighting mechanism that best corresponds to the response of the human ear is the "A"-weighting scale. This is widely used for environmental noise measurement, and the levels are denoted as dB(A) or LAeq, LA90 etc., according to the parameter being measured.

The decibel scale is logarithmic rather than linear, and hence a 3 dB increase in sound level represents a doubling of the sound energy present. Judgement of sound is subjective but, as a general guide, a 10 dB(A) increase can be taken to represent a doubling of loudness, whilst an increase in the order of 3 dB(A) is generally regarded as the minimum difference needed to perceive a change under normal listening conditions. An indication of the range of sound levels commonly found in the environment is given in the following table.

Table 12	Typical Sound Pressure Levels	
	SOUND PRESSURE LEVEL	LOCATION/EXAMPLE
	0	Threshold of hearing
	20-30	Quiet bedroom at night
	30-40	Living room during the day
	40-50	Typical office
	50-60	Inside a car
	60-70	Typical high street
	70-90	Inside a factory
	100-110	Burglar alarm at 1 m away
	110-130	Jet aircraft on take off
	140	Threshold of pain



ACOUSTIC TERMINOLOGY

Table 13

DESCRIPTOR	Terminology	EXPLANATION
dB (decibel)		The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2E-05 Pa).
dB(A)		A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. "A" weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.
LAeq, T		LAeq is defined as the notional steady sound level which, over a stated period of time (T), would contain the same amount of acoustical energy as the A-weighted fluctuating sound measured over that period.
LAmx		LAmx is the maximum A-weighted sound pressure level recorded over the period stated. LAmx is sometimes used in assessing environmental noise where occasional loud noises occur, which may have little effect on the overall Leq noise level but will still affect the noise environment. Unless described otherwise, it is measured using the "fast" sound level meter response.
L10 and L90		If a non-steady noise is to be described, it is necessary to know both its level and the degree of fluctuation. The Ln indices are used for this purpose, and the term refers to the level exceeded for n% of the time. Hence L10 is the level exceeded for 10% of the time and as such can be regarded as the "average maximum level". Similarly, L90 is the "average minimum level" and is often used to describe the background noise. It is common practice to use the L10 index to describe traffic noise.
Free-field Level		A sound field determined at a point away from reflective surfaces other than the ground with no significant contributions due to sound from other reflective surfaces. Generally, as measured outside and away from buildings.
Fast		A time weighting used in the root-mean-square section of a sound level meter with a 125-millisecond time constant.
Slow		A time weighting used in the root-mean-square section of a sound level meter with a 1000-millisecond time constant.
dB (decibel)		The scale on which sound pressure level is expressed. It is defined as 20 times the logarithm of the ratio between the root-mean-square pressure of the sound field and a reference pressure (2E-05 Pa).
dB(A)		A-weighted decibel. This is a measure of the overall level of sound across the audible spectrum with a frequency weighting (i.e. "A" weighting) to compensate for the varying sensitivity of the human ear to sound at different frequencies.

APPENDIX III MEASURED SOUND PRESSURE LEVELS



Table 17 Measured Sound Pressure Levels – NMP1

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
17/10/2024 12:00	57.6	51.8
17/10/2024 13:00	57.6	51.8
17/10/2024 14:00	57.8	51.6
17/10/2024 15:00	57.1	51.4
17/10/2024 16:00	60.2	51.8
17/10/2024 17:00	57.6	52.2
17/10/2024 18:00	59.4	52.2
17/10/2024 19:00	57.6	52.2
17/10/2024 20:00	56.8	50.6
17/10/2024 21:00	56.8	51.3
17/10/2024 22:00	56.3	49.7
17/10/2024 23:00	54.4	47.0
18/10/2024 00:00	55.7	44.8
18/10/2024 01:00	49.9	41.1
18/10/2024 02:00	49.4	42.4
18/10/2024 03:00	48.6	42.0
18/10/2024 04:00	48.4	42.6
18/10/2024 05:00	53.1	45.9
18/10/2024 06:00	58.5	50.9
18/10/2024 07:00	60.1	53.5
18/10/2024 08:00	59.5	54.6
18/10/2024 09:00	58.5	52.2
18/10/2024 10:00	57.8	51.7
18/10/2024 11:00	58.1	52.2
18/10/2024 12:00	58.0	51.9
18/10/2024 13:00	58.2	52.3
18/10/2024 14:00	57.4	52.2
18/10/2024 15:00	57.8	52.1
18/10/2024 16:00	59.8	53.5
18/10/2024 17:00	60.8	53.5
18/10/2024 18:00	59.1	53.0
18/10/2024 19:00	57.2	52.4
18/10/2024 20:00	68.0	51.3
18/10/2024 21:00	57.8	51.2
18/10/2024 22:00	57.5	50.3
18/10/2024 23:00	55.5	48.9
19/10/2024 00:00	56.2	47.2
19/10/2024 01:00	56.9	45.4
19/10/2024 02:00	54.0	43.7
19/10/2024 03:00	53.1	42.4
19/10/2024 04:00	51.9	42.7
19/10/2024 05:00	52.7	44.0
19/10/2024 06:00	55.0	45.6
19/10/2024 07:00	58.4	46.8
19/10/2024 08:00	61.1	50.3
19/10/2024 09:00	59.1	51.6
19/10/2024 10:00	58.9	52.0
19/10/2024 11:00	58.1	52.1
19/10/2024 12:00	57.4	51.7



MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
19/10/2024 13:00	57.7	52.6
19/10/2024 14:00	57.2	52.1
19/10/2024 15:00	57.9	51.4
19/10/2024 16:00	57.1	51.0
19/10/2024 17:00	60.0	51.9
19/10/2024 18:00	57.3	51.8
19/10/2024 19:00	57.2	51.6
19/10/2024 20:00	56.7	51.1
19/10/2024 21:00	56.9	52.2
19/10/2024 22:00	56.8	51.0
19/10/2024 23:00	58.9	49.5
20/10/2024 00:00	55.4	48.0
20/10/2024 01:00	53.6	45.1
20/10/2024 02:00	51.5	43.9
20/10/2024 03:00	50.7	43.9
20/10/2024 04:00	49.8	44.1
20/10/2024 05:00	50.7	44.1
20/10/2024 06:00	52.8	47.0
20/10/2024 07:00	56.0	47.6
20/10/2024 08:00	59.5	50.1
20/10/2024 09:00	60.6	53.2
20/10/2024 10:00	60.8	53.7
20/10/2024 11:00	60.7	53.7
20/10/2024 12:00	60.3	53.7
20/10/2024 13:00	60.3	53.3
20/10/2024 14:00	59.0	53.7
20/10/2024 15:00	58.2	53.5
20/10/2024 16:00	61.8	53.7
20/10/2024 17:00	58.8	53.7
20/10/2024 18:00	58.6	53.0
20/10/2024 19:00	56.9	52.2
20/10/2024 20:00	57.1	51.4
20/10/2024 21:00	56.1	50.4
20/10/2024 22:00	56.6	50.5
20/10/2024 23:00	57.5	48.8
21/10/2024 00:00	54.6	48.3
21/10/2024 01:00	52.5	45.6
21/10/2024 02:00	47.3	41.5
21/10/2024 03:00	47.6	41.5
21/10/2024 04:00	49.4	41.8
21/10/2024 05:00	51.7	43.4
21/10/2024 06:00	55.0	47.3
21/10/2024 07:00	59.1	50.7
21/10/2024 08:00	60.7	53.5
21/10/2024 09:00	58.2	51.9
21/10/2024 10:00	57.4	51.3
21/10/2024 11:00	57.4	51.6
21/10/2024 12:00	58.2	51.9
21/10/2024 13:00	60.0	51.7
21/10/2024 14:00	57.2	51.4



MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
21/10/2024 15:00	57.1	51.3
21/10/2024 16:00	57.5	51.3
21/10/2024 17:00	57.5	52.8
21/10/2024 18:00	57.7	52.9
21/10/2024 19:00	57.2	52.7
21/10/2024 20:00	57.2	52.0
21/10/2024 21:00	61.0	50.3
21/10/2024 22:00	55.7	48.8
21/10/2024 23:00	54.2	46.9
22/10/2024 00:00	51.8	44.6
22/10/2024 01:00	49.5	43.1
22/10/2024 02:00	47.0	42.0
22/10/2024 03:00	47.6	42.1
22/10/2024 04:00	47.7	42.9
22/10/2024 05:00	51.7	45.0
22/10/2024 06:00	57.3	49.1
22/10/2024 07:00	58.6	53.2
22/10/2024 08:00	59.6	54.1
22/10/2024 09:00	59.0	52.1

Table 18 Measured Sound Pressure Levels – NMP2

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
17/10/2024 12:00	57.6	51.8
17/10/2024 13:00	57.6	51.8
17/10/2024 14:00	57.8	51.6
17/10/2024 15:00	57.1	51.4
17/10/2024 16:00	60.2	51.8
17/10/2024 17:00	57.6	52.2
17/10/2024 18:00	59.4	52.2
17/10/2024 19:00	57.6	52.2
17/10/2024 20:00	56.8	50.6
17/10/2024 21:00	56.8	51.3
17/10/2024 22:00	56.3	49.7
17/10/2024 23:00	54.4	47.0
18/10/2024 00:00	55.7	44.8
18/10/2024 01:00	49.9	41.1
18/10/2024 02:00	49.4	42.4
18/10/2024 03:00	48.6	42.0
18/10/2024 04:00	48.4	42.6
18/10/2024 05:00	53.1	45.9
18/10/2024 06:00	58.5	50.9
18/10/2024 07:00	60.1	53.5
18/10/2024 08:00	59.5	54.6
18/10/2024 09:00	58.5	52.2
18/10/2024 10:00	57.8	51.7
18/10/2024 11:00	58.1	52.2
18/10/2024 12:00	58.0	51.9
18/10/2024 13:00	58.2	52.3



MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
18/10/2024 14:00	57.4	52.2
18/10/2024 15:00	57.8	52.1
18/10/2024 16:00	59.8	53.5
18/10/2024 17:00	60.8	53.5
18/10/2024 18:00	59.1	53.0
18/10/2024 19:00	57.2	52.4
18/10/2024 20:00	68.0	51.3
18/10/2024 21:00	57.8	51.2
18/10/2024 22:00	57.5	50.3
18/10/2024 23:00	55.5	48.9
19/10/2024 00:00	56.2	47.2
19/10/2024 01:00	56.9	45.4
19/10/2024 02:00	54.0	43.7
19/10/2024 03:00	53.1	42.4
19/10/2024 04:00	51.9	42.7
19/10/2024 05:00	52.7	44.0
19/10/2024 06:00	55.0	45.6
19/10/2024 07:00	58.4	46.8
19/10/2024 08:00	61.1	50.3
19/10/2024 09:00	59.1	51.6
19/10/2024 10:00	58.9	52.0
19/10/2024 11:00	58.1	52.1
19/10/2024 12:00	57.4	51.7
19/10/2024 13:00	57.7	52.6
19/10/2024 14:00	57.2	52.1
19/10/2024 15:00	57.9	51.4
19/10/2024 16:00	57.1	51.0
19/10/2024 17:00	60.0	51.9
19/10/2024 18:00	57.3	51.8
19/10/2024 19:00	57.2	51.6
19/10/2024 20:00	56.7	51.1
19/10/2024 21:00	56.9	52.2
19/10/2024 22:00	56.8	51.0
19/10/2024 23:00	58.9	49.5
20/10/2024 00:00	55.4	48.0
20/10/2024 01:00	53.6	45.1
20/10/2024 02:00	51.5	43.9
20/10/2024 03:00	50.7	43.9
20/10/2024 04:00	49.8	44.1
20/10/2024 05:00	50.7	44.1
20/10/2024 06:00	52.8	47.0
20/10/2024 07:00	56.0	47.6
20/10/2024 08:00	59.5	50.1
20/10/2024 09:00	60.6	53.2
20/10/2024 10:00	60.8	53.7
20/10/2024 11:00	60.7	53.7
20/10/2024 12:00	60.3	53.7
20/10/2024 13:00	60.3	53.3
20/10/2024 14:00	59.0	53.7
20/10/2024 15:00	58.2	53.5



MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
20/10/2024 16:00	61.8	53.7
20/10/2024 17:00	58.8	53.7
20/10/2024 18:00	58.6	53.0
20/10/2024 19:00	56.9	52.2
20/10/2024 20:00	57.1	51.4
20/10/2024 21:00	56.1	50.4
20/10/2024 22:00	56.6	50.5
20/10/2024 23:00	57.5	48.8
21/10/2024 00:00	54.6	48.3
21/10/2024 01:00	52.5	45.6
21/10/2024 02:00	47.3	41.5
21/10/2024 03:00	47.6	41.5
21/10/2024 04:00	49.4	41.8
21/10/2024 05:00	51.7	43.4
21/10/2024 06:00	55.0	47.3
21/10/2024 07:00	59.1	50.7
21/10/2024 08:00	60.7	53.5
21/10/2024 09:00	58.2	51.9
21/10/2024 10:00	57.4	51.3
21/10/2024 11:00	57.4	51.6
21/10/2024 12:00	58.2	51.9
21/10/2024 13:00	60.0	51.7
21/10/2024 14:00	57.2	51.4
21/10/2024 15:00	57.1	51.3
21/10/2024 16:00	57.5	51.3
21/10/2024 17:00	57.5	52.8
21/10/2024 18:00	57.7	52.9
21/10/2024 19:00	57.2	52.7
21/10/2024 20:00	57.2	52.0
21/10/2024 21:00	61.0	50.3
21/10/2024 22:00	55.7	48.8
21/10/2024 23:00	54.2	46.9
22/10/2024 00:00	51.8	44.6
22/10/2024 01:00	49.5	43.1
22/10/2024 02:00	47.0	42.0
22/10/2024 03:00	47.6	42.1
22/10/2024 04:00	47.7	42.9
22/10/2024 05:00	51.7	45.0
22/10/2024 06:00	57.3	49.1
22/10/2024 07:00	58.6	53.2
22/10/2024 08:00	59.6	54.1
22/10/2024 09:00	59.0	52.1

Table 19 Measured Sound Pressure Levels – NMP3

MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
17/10/2024 11:00	52.0	47.8
17/10/2024 12:00	54.5	49.8
17/10/2024 13:00	52.8	49.5



MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
17/10/2024 14:00	55.4	49.7
17/10/2024 15:00	53.8	49.2
17/10/2024 16:00	52.7	48.8
17/10/2024 17:00	52.1	48.3
17/10/2024 18:00	53.3	49.4
17/10/2024 19:00	51.6	49.0
17/10/2024 20:00	50.8	48.1
17/10/2024 21:00	52.0	50.2
17/10/2024 22:00	51.1	49.2
17/10/2024 23:00	49.3	47.3
18/10/2024 00:00	48.2	45.7
18/10/2024 01:00	44.7	42.3
18/10/2024 02:00	46.7	44.5
18/10/2024 03:00	45.3	43.5
18/10/2024 04:00	46.3	43.8
18/10/2024 05:00	49.8	47.3
18/10/2024 06:00	53.1	50.3
18/10/2024 07:00	56.9	53.4
18/10/2024 08:00	55.3	52.9
18/10/2024 09:00	51.8	48.6
18/10/2024 10:00	51.7	48.3
18/10/2024 11:00	52.4	48.5
18/10/2024 12:00	55.3	49.5
18/10/2024 13:00	55.9	50.0
18/10/2024 14:00	55.3	49.9
18/10/2024 15:00	53.5	49.5
18/10/2024 16:00	54.2	49.6
18/10/2024 17:00	53.3	49.7
18/10/2024 18:00	51.7	48.7
18/10/2024 19:00	50.4	47.8
18/10/2024 20:00	52.3	47.4
18/10/2024 21:00	50.2	47.1
18/10/2024 22:00	50.2	46.5
18/10/2024 23:00	49.2	45.5
19/10/2024 00:00	47.4	43.4
19/10/2024 01:00	48.6	42.0
19/10/2024 02:00	45.1	40.5
19/10/2024 03:00	44.4	38.3
19/10/2024 04:00	42.8	38.4
19/10/2024 05:00	46.0	41.4
19/10/2024 06:00	50.2	45.5
19/10/2024 07:00	51.0	45.8
19/10/2024 08:00	53.1	47.7
19/10/2024 09:00	52.2	47.8
19/10/2024 10:00	52.9	48.9
19/10/2024 11:00	52.4	48.9
19/10/2024 12:00	53.0	49.5
19/10/2024 13:00	53.6	50.4
19/10/2024 14:00	55.7	50.3
19/10/2024 15:00	54.2	49.6



MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
19/10/2024 16:00	53.8	47.7
19/10/2024 17:00	54.2	47.1
19/10/2024 18:00	51.0	45.4
19/10/2024 19:00	49.5	44.3
19/10/2024 20:00	49.6	44.0
19/10/2024 21:00	51.3	48.5
19/10/2024 22:00	57.1	47.9
19/10/2024 23:00	51.9	47.7
20/10/2024 00:00	48.9	46.3
20/10/2024 01:00	48.4	42.8
20/10/2024 02:00	45.1	42.5
20/10/2024 03:00	45.2	42.7
20/10/2024 04:00	45.3	42.8
20/10/2024 05:00	45.4	42.5
20/10/2024 06:00	49.8	45.4
20/10/2024 07:00	50.4	45.9
20/10/2024 08:00	50.6	47.4
20/10/2024 09:00	53.8	50.0
20/10/2024 10:00	53.6	50.2
20/10/2024 11:00	53.7	50.2
20/10/2024 12:00	54.1	50.9
20/10/2024 13:00	53.5	50.3
20/10/2024 14:00	55.3	49.5
20/10/2024 15:00	55.8	49.0
20/10/2024 16:00	55.5	48.5
20/10/2024 17:00	56.2	48.6
20/10/2024 18:00	53.4	47.6
20/10/2024 19:00	52.3	47.3
20/10/2024 20:00	53.2	47.3
20/10/2024 21:00	51.5	46.3
20/10/2024 22:00	55.0	46.8
20/10/2024 23:00	56.3	45.7
21/10/2024 00:00	56.5	46.1
21/10/2024 01:00	53.3	44.1
21/10/2024 02:00	45.5	41.5
21/10/2024 03:00	43.8	41.3
21/10/2024 04:00	44.7	41.6
21/10/2024 05:00	46.7	43.5
21/10/2024 06:00	50.3	47.4
21/10/2024 07:00	53.0	50.3
21/10/2024 08:00	67.4	53.6
21/10/2024 09:00	56.7	51.8
21/10/2024 10:00	61.3	50.9
21/10/2024 11:00	66.1	50.4
21/10/2024 12:00	62.0	49.9
21/10/2024 13:00	70.5	51.9
21/10/2024 14:00	63.4	51.6
21/10/2024 15:00	54.9	49.9
21/10/2024 16:00	54.1	49.7
21/10/2024 17:00	53.8	50.8

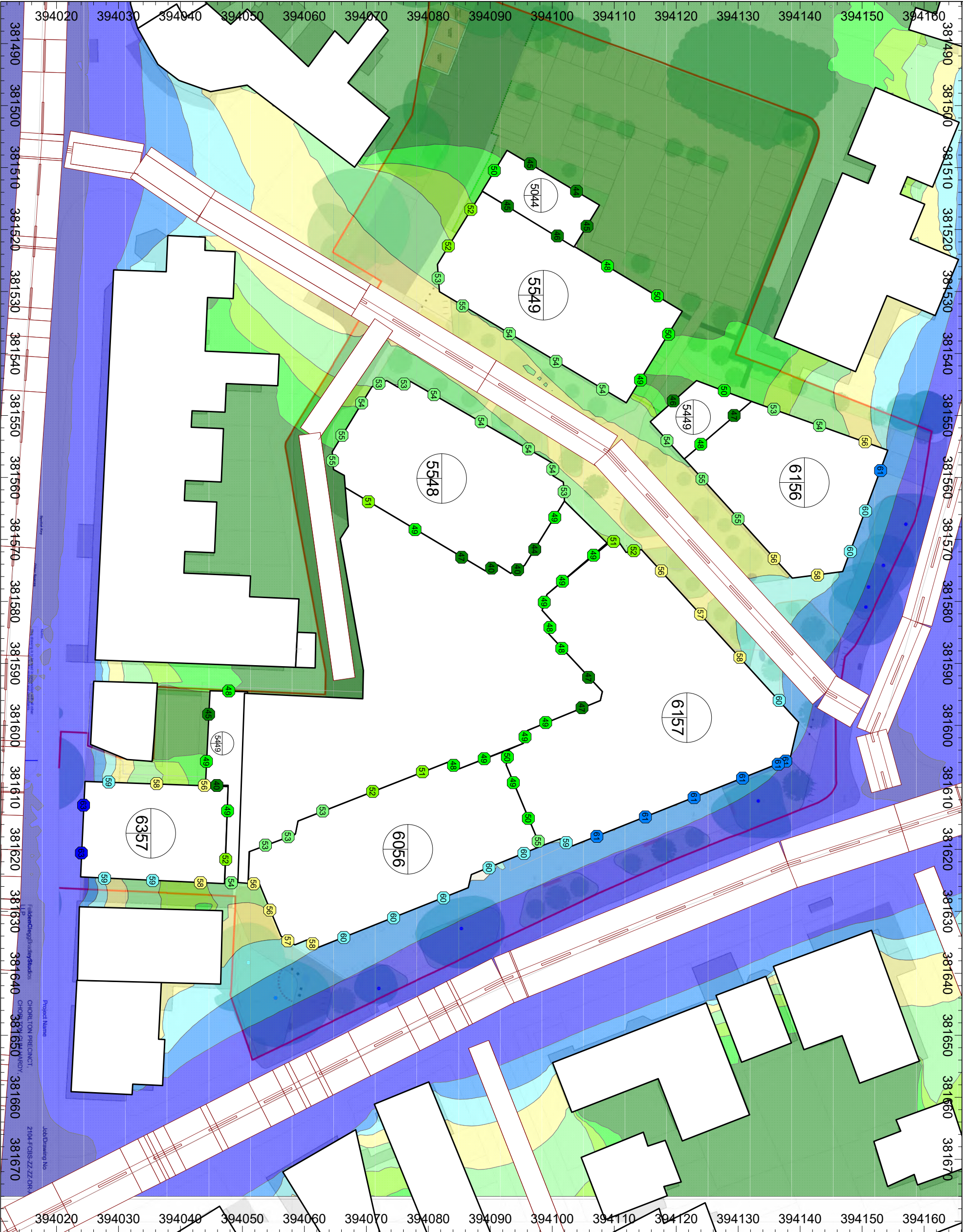


MEASUREMENT START TIME	MEASURED SOUND PRESSURE LEVEL, $L_{Aeq,1hr}$ (dB)	MEASURED BACKGROUND SOUND LEVEL, $L_{A90,1hr}$ (dB)
21/10/2024 18:00	53.7	51.7
21/10/2024 19:00	52.4	50.9
21/10/2024 20:00	52.5	50.2
21/10/2024 21:00	51.8	49.6
21/10/2024 22:00	50.7	48.3
21/10/2024 23:00	49.1	47.0
22/10/2024 00:00	47.6	45.5
22/10/2024 01:00	45.8	44.2
22/10/2024 02:00	44.9	42.4
22/10/2024 03:00	45.0	42.9
22/10/2024 04:00	46.0	44.0
22/10/2024 05:00	48.4	46.2
22/10/2024 06:00	52.8	49.2
22/10/2024 07:00	67.3	53.2
22/10/2024 08:00	65.2	54.5
22/10/2024 09:00	68.9	52.6

APPENDIX IV

FIGURES

Figure 3 - Daytime Grid Noise Map (BS 8233) - Calculation at 1.5 m above ground level

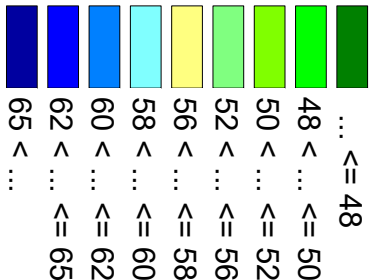


Project:
Chorlton Precinct,
Manchester

Project-No:
50-956

Client:
PJ Livsey

Daytime Noise Level,
L_{Aeq,16hr} (dB)



Noise Map Objects

- + Point Source
- Line Source
- ▭ Road
- ▭ Parking Lot
- ▭ Railway
- ▭ Building
- ▭ Barrier
- ⊕ Building Evaluation
- ▭ Calculation Area



Project Engineer: Lee Faulkner
Date: 17/03/2025

Figure 4 - Night-time Grid Noise Map (BS 8233) - Calculation at 4 m above ground level

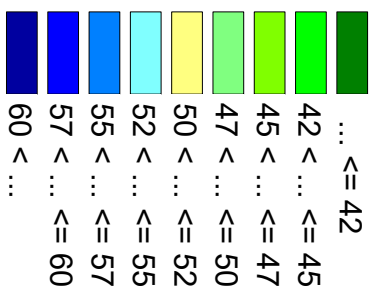


Project:
Chorlton Precinct,
Manchester

Project-No:
50-956

Client:
PJ Livsey

Night-time Noise Level,
LAeq,8hr (dB)



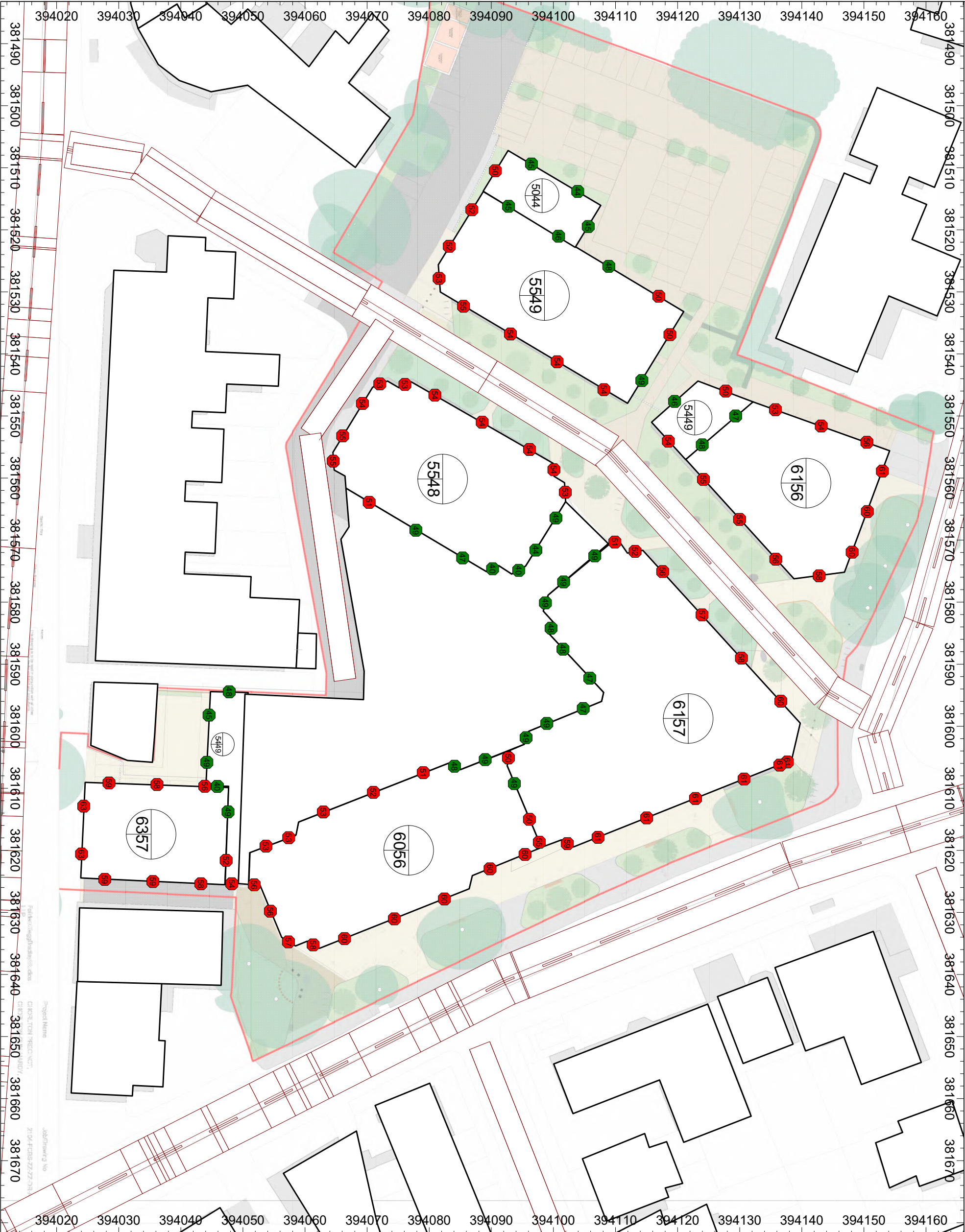
Noise Map Objects

- + Point Source
- Line Source
- ▭ Road
- ▭ Parking Lot
- ▭ Railway
- ▭ Building
- ▭ Barrier
- ⊕ Building Evaluation
- ▭ Calculation Area



Project Engineer: Lee Faulkner
Date: 17/03/2025

Figure 5 - Night-time Grid Noise Map (Part 0 - 49 dB Average Criterion)



Project:
Chorlton Precinct,
Manchester

Project-No:
50-956

Client:
PJ Livsey

Night-time Noise Level,
LAeq, 8hr (dB)

... ≤ 49
49 < ...

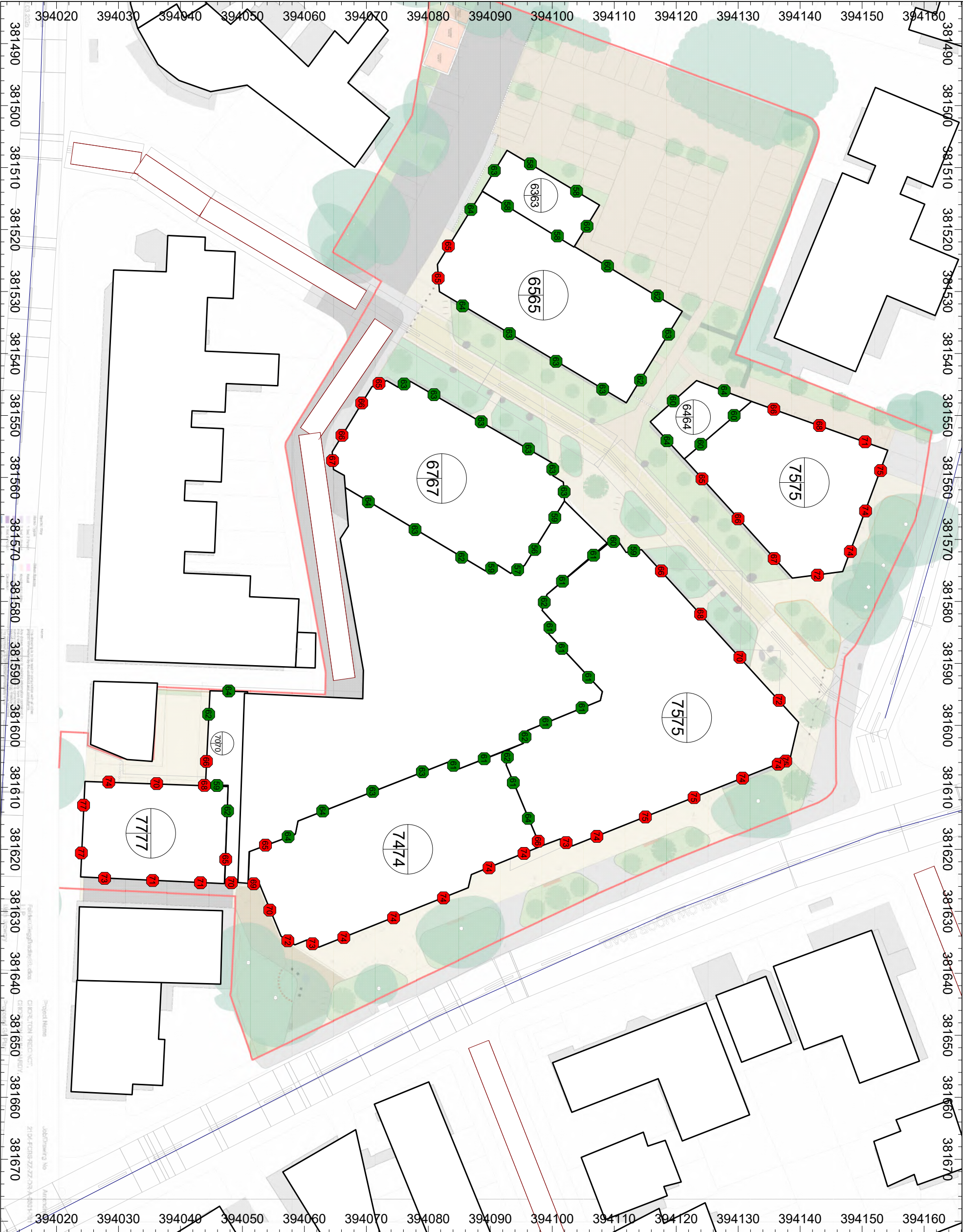
Noise Map Objects

- + Point Source
- Line Source
- ▨ Road
- ▨ Parking Lot
- ▨ Railway
- ▨ Building
- ▨ Barrier
- ⊕ Building Evaluation
- Calculation Area



Project Engineer: Lee Faulkner
Date: 17/03/2025

Figure 6 - Night-time Grid Noise Map (Part 0 - 64 dB Max Criterion)



Project:
Chorlton Precinct,
Manchester

Project-No:
50-956

Client:
PJ Livsey

**Night-time Maximum
Noise Level,
L_{max,fast} (dB)**

... ≤ 64
64 < ...

Noise Map Objects

- + Point Source
- Line Source
- Road
- Parking Lot
- Railway
- Building
- Barrier
- ⊕ Building Evaluation
- Calculation Area



Project Engineer: Lee Faulkner
Date: 17/03/2025

Figure 7 - Daytime Grid Noise Map (BS 4142)

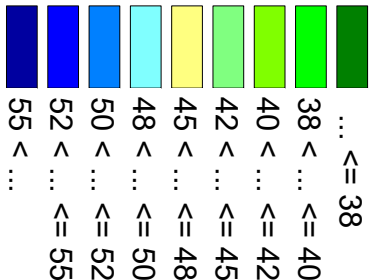


Project:
Chorton Precinct,
Manchester

Project-No:
50-956

Client:
PJ Livsey

**Specific Noise Level,
LAeq,1hour (dB)**



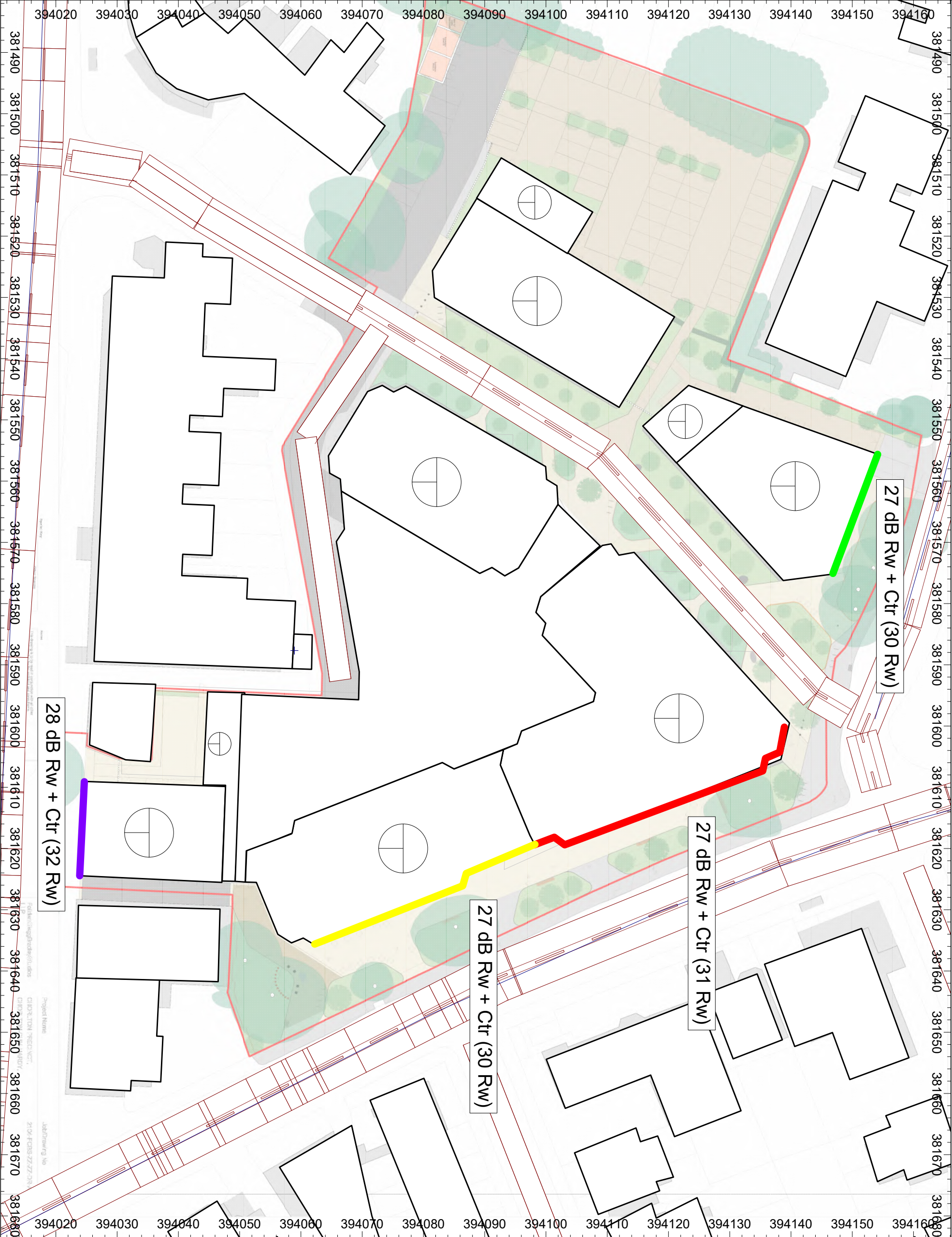
Noise Map Objects

- + Point Source
- Line Source
- ▭ Road
- ▨ Parking Lot
- ▧ Railway
- ▭ Building
- Barrier
- ⊕ Building Evaluation
- Calculation Area



Project Engineer: Lee Faulkner
Date: 17/03/2025

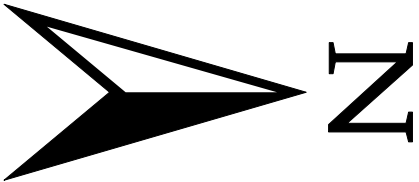
Figure 8 - Glazing Requirements



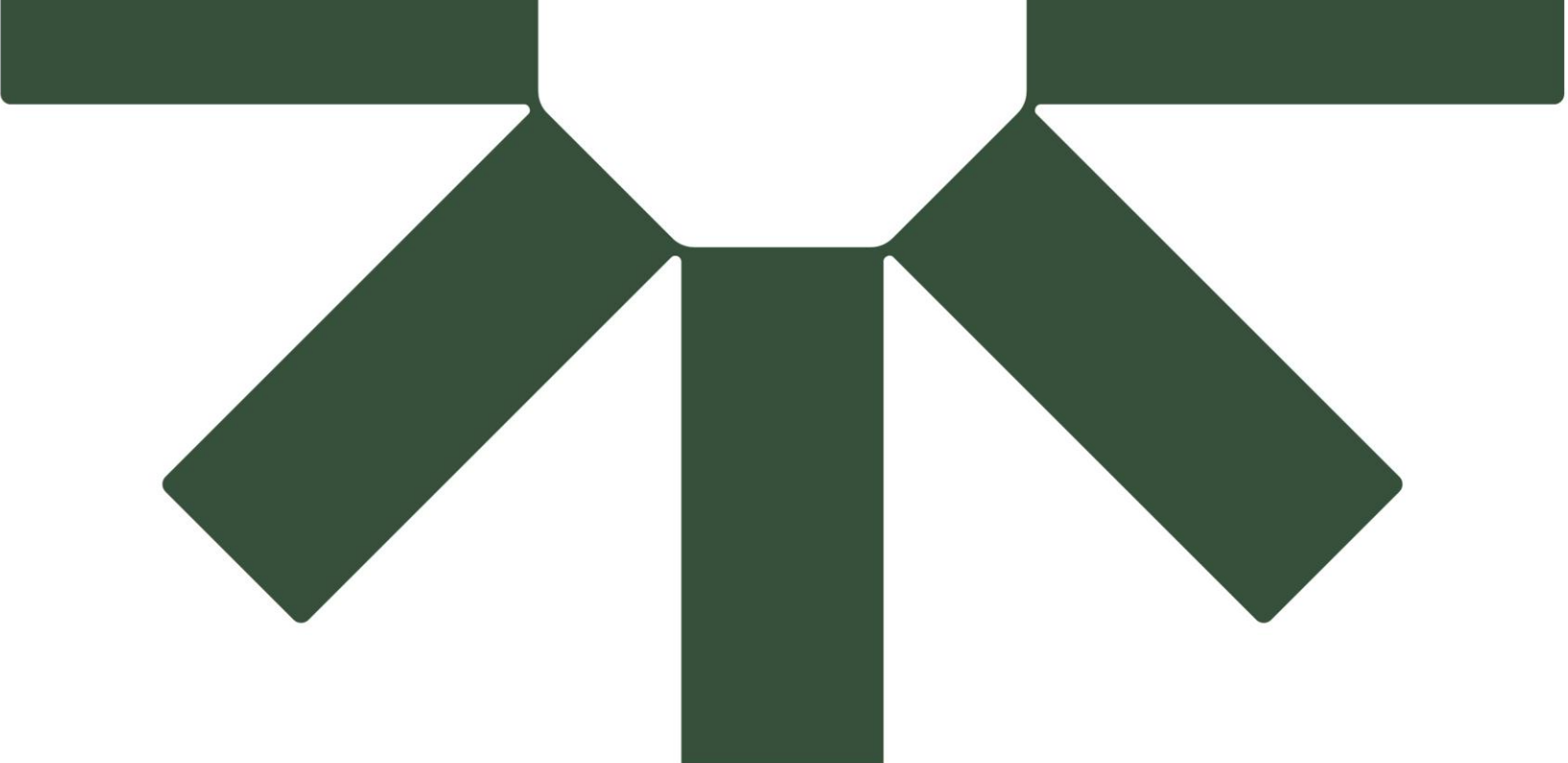
Project:
Chorlton Precinct
Manchester

Project-No:
50-956

Client:
PJ Livesey



Project Engineer: Lee Faulkner
Date: 17/03/2025



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