Deloitte.



Manchester Phase 1b, Mayfield

Screening and Scoping Report

October 2024

Contents

1. Introduction 2
2. Baseline Conditions and Development Proposals 7
3. Technical Disciplines to be Scoped Out of EIA 13
4. Approach to EIA and Proposed Methodology 20
5. Environmental Statement Chapters 22
6. Summary 69

Appendix A – Site Location Plan

Appendix B - Schedule of Committed Developments

Appendix C – Non-Significant Environmental Effects

Appendix D – Air Quality Monitoring Results

Appendix E – TVIA Zone of Visual Influence Plan

Appendix F – Plan of Heritage Assets

1. Introduction

Introduction

1.1. This Environmental Impact Assessment (EIA) Screening and Scoping Report (the 'Report') has been prepared in respect of the development of a large brownfield site (Phase 1b) at Mayfield, Manchester. The emerging proposals are being brought forward by Mayfield Medlock Limited.

1.2. The proposals relate to a major regeneration scheme that will deliver the first residential phase of a wider commercially led masterplan over two plots, located to the south of Mayfield Park and to the north of the Mancunian Way. The EIA boundary (Figure 1) covers a greater area than the red line boundary (Figure 2) to cover works to the adjacent highway located offsite that will be relevant to the assessment of the EIA,.

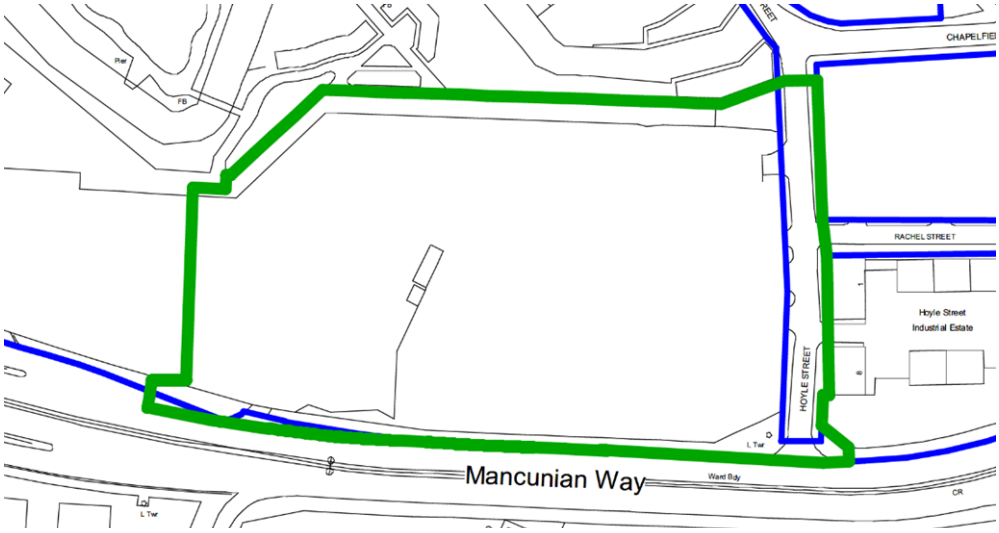


Figure 1 – EIA Boundary Plan (green line – EIA boundary, blue line = ownership boundary)

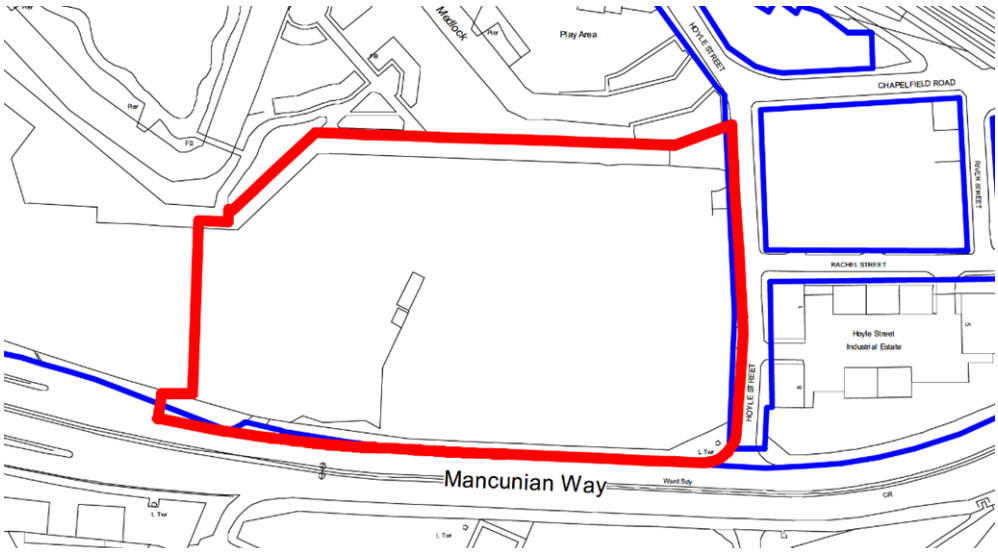


Figure 2 – Red line boundary plan (red line – planning application boundary, blue line – ownership boundary)

1.3. This Screening and Scoping Report has been prepared based on the maximum anticipated quantum of development across several development scenarios and therefore seeks to represent a 'worst-case' scenario with regard to the identification and assessment of potentially significant environmental effects.

1.4. This Scoping Report is submitted to request that Manchester City Council (MCC) in its capacity as Local Planning Authority (LPA) adopts a Scoping Opinion under Regulation 15 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 in accordance with Regulation 15, paragraph 2, this report contains:

- A plan sufficient to identify the land (Figure 1, included in Appendix A);
- A schedule of Committed Developments (included in Appendix B);
- A brief description of the nature and purpose of the Proposed Development and of its possible effects on the environment.

1.5. The term "Proposed Development" used within this Report refers to all stages of construction and operation of development.

1.6. The Proposed Development will be brought forward as 2 plots (Plots J and K) to provide 900 homes in a mix of 1, 2 and 3 bed apartments. The buildings range from 9 to 28 storeys in height, arranged as staggered linear blocks in a north-south orientation above two storey podium levels.

EIA Requirements

1.7. The EIA process is the mechanism by which development proposals are appraised in terms of environmental criteria, in addition to socio-economics, engineering and technical considerations. The EIA process defines the context of the Proposed Development and examines the issues considered pertinent.

1.8. The purpose of the EIA is to establish the nature of the development and the environment to identify likely significant effects that may arise, by comparing the existing situation (baseline) with the situation once the proposals are in place. The scenarios are set out in full within Section 3 of this report.

1.9. The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 require that any proposed development falling within the description of a 'Schedule 2 development' within the meaning of the Regulations, will be subject to an EIA where such development is likely to have 'significant' effects on the environment by virtue of such factors as its nature, size or location (Regulation 4(2)).

1.10. The Proposed Development falls under the category of "Infrastructure Projects – Urban Development Projects" (Schedule 2, 10, (b)) as described in the Regulations. The applicable threshold above which EIA is likely to be required is (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.

1.11. The indicative thresholds and criteria state that:

"In addition to the physical scale of such developments, consideration should be given to the potential increase in traffic, emissions and noise. EIA is unlikely to be required for the redevelopment of land unless the new development is 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".

1.12. The Proposed Development exceeds the threshold in part (i) and the site area exceeds the threshold in relation to parts (i) listed in Schedule 2, 10, (b) of the Regulations. In addition, given that the Proposed Development results in development of a greater scale than the existing use, an EIA is therefore considered appropriate to test the likely significant effects of the Proposed Development.

Purpose of the EIA Scoping Report

1.13. The process of identifying likely significant effects on the environment that should be addressed by the EIA is termed 'scoping' and the results are presented as a Scoping Report.

1.14. Regulation 15 of the EIA Regulations sets out the process for obtaining a Scoping Opinion from the relevant planning authority.

1.15. This Scoping Report sets out the approach taken to the topic areas and information that would be contained within the Environmental Statement. Statutory consultees are invited to express their views on the proposed scope of the EIA or suggest additional issues that may be of significance. The views expressed by statutory consultees will then be used by the LPA to inform the formal EIA Scoping Opinion.

1.16. The LPA is requested to respond to the formal request for an EIA Scoping Opinion within five weeks of registering receipt.

1.17. Should the proposed scope of the EIA be accepted by MCC, the intention would be that any future application relating to the Proposed Development would be accompanied by an EIA, which would be produced by the team as set out in Table 1.1 and coordinated by Deloitte LLP (IEMA EIA Quality Mark registered).

Topic	Assessment Carried out By
Air Quality	Buro Happold
Construction Management and Phasing	Construction Planning Associates
Climate Change and GHG Emissions	Buro Happold
Daylight / Sunlight / Overshadowing	GIA
Noise and Vibration	Buro Happold
Socio-Economic	Buro Happold
Townscape and Visual Impact	Chris Burnett Associates
Wind Microclimates	Buro Happold
Ecology and Biodiversity	Buro Happold
Ground Conditions	Buro Happold
Transport and Traffic	Civic
Water Resources and Flood Risk	Buro Happold
Human Health	Buro Happold
Heritage	Stephen Levrant Heritage Architecture

1.18. For those disciplines to be scoped out of the ES, full technical reports will be submitted alongside the application. The appointed consultants for disciplines to be scoped out are outlined below:

Topic	Assessment Carried out By
Archaeology	Salford University
Aviation	GTech
TV and Telecommunications	GTech
Solar Glare	GIA

Structure of this Report

1.19. This Report comprises the following sections:

- Section 2 of this Report provides a description and outlines the nature of the Proposed Development;
- Section 3 provides details of those environmental disciplines to be scoped out of the EIA;

- Section 4 sets out the proposed approach and methodology that an ES would take and who might need to be consulted;
- Section 5 sets out key issues that would be addressed by the EIA; and
- Section 6 summarises the chapters to be included in the EIA.

2. Baseline Conditions and Development Proposals

Baseline Conditions

2.1. This Section sets out the baseline conditions that form the basis of the technical assessments that have been set out in the remainder of this document.

Site Description

2.2. The Site is located adjacent to the north of the Mancunian Way, to the south of Mayfield Park, to the west of Hoyle Street and to the east of Mayfield Phase 1a, with Baring Street beyond. It measures 1.63 hectares in its entirety.

2.3. The Site comprises previously developed land, which has been largely cleared following the demolition of a former logistics warehouse and vehicular compound in 2019. Following the demolition of those structures, the Site was used as a site compound for materials and vehicles during the construction of Mayfield Park between 2020 and 2022.

2.4. Since the completion of the park, the Site has remained a mix of hard landscaping, alongside areas of made ground and the remains of material piles. There are limited areas of low-quality scrubland around the perimeter of the Site. The Site is accessible to vehicles from Hoyle Street and Baring Street (via the Phase 1a sites).

2.5. The Site is currently surrounded by hoardings to provide physical security and to improve the visual quality of areas surrounding the Site by screening the vacant land from the park and from residents of Ardwick.

2.6. A Site Location Plan identifying the area of redevelopment for Phase 1b is provided at Appendix A.

Site Context

2.7. The Proposed Development forms the first residential phase of development as part of a wider commercially led regeneration priority area within Manchester City Centre. In 2018, Manchester's Executive Committee endorsed the 'Mayfield Strategic Regeneration Framework' ('SRF'), which sets out a clear ambition to guide the redevelopment, re-modelling and refurbishment of the Site within SRF boundary.

2.8. The ambition for Mayfield, as set out in the SRF, is to deliver a world class, transformational, distinctive and imaginative commercially led neighbourhood, anchored by Mayfield Park, which will become a powerhouse of socio-economic productivity.

2.9. Following the endorsement of the SRF by Manchester City Council in 2018, applications were submitted in 2019 and approved in 2020 relating to the Poulton, multi-storey car park, Mayfield Park, and the Republic, comprising over 400,000 sq. ft. of commercial floorspace, as described below under Planning History. In summary, the park is now fully complete and operational to the north of Phase 1b, and the Mayfield Depot further to the north has permission until 2029 to be used as a mixed-use cultural venue.

Environmental Conditions

Transport networks

Pedestrian

2.10. There are footways to either side of Mancunian Way that are approximately 3.5m wide, however there are no pedestrian crossings over Mancunian Way in the immediate vicinity of the Site.

2.11. The closest pedestrian crossing over Mancunian Way is 320m to the east where there is a signal-controlled crossing at the junction with Fairfield Street. To the west there is a signal-controlled crossing around 430m from Hoyle Street at the junction between Mancunian Way and the A6.

2.12. Mayfield Park provides a network of pedestrian-only routes that extend between Baring Street and Hoyle Street. Hoyle Street and Baring Street provide footways that are all around 1.8m wide, however these are currently in a poor condition and subject to frequent incidences of pavement parking and Baring Street and Fairfield Street provide the most direct pedestrian link to Manchester Piccadilly. Fairfield Street benefits from footways that are around 3m wide, and most road crossings are uncontrolled with dropped kerbs and tactile paving.

2.13. Some junctions have wide crossings. The junction of Fairfield Street and Travis Street has one arm where the pedestrian crossing is roughly 25m and crossing facilities are inadequate.

Cycling

2.14. There are no cycle facilities in the immediate vicinity of the site, but there are cycle stands at Piccadilly Station that accommodate up to 43 bicycles.

2.15. Several cycle routes are accessible a short distance away. National Cycle Route (NCR) 66 can be followed from Manchester Piccadilly northbound up the Rochdale Canal, past Rochdale. From here, it continues east through Leeds towards Hull.

2.16. To the west, the on-road cycle lanes on Grosvenor Street connect with the segregated cycle route that runs along Oxford Road. Cycle lanes also exist on London Road where it connects into the A6.

2.17. To the east, there is local route 86 which follows the River Medlock that connects to NCR 60, which travels east before heading south to traverse westbound across south Manchester.

Bus

2.18. The closest bus stops to the Site are on Fairfield Street around 250m to the north of the site. This pair of stops are used by the number 219 bus, which is a service between Manchester and Ashton-under-Lyne and Stalybridge and runs at frequent intervals of not more than 10 minutes during peak hours.

2.19. During the week, services start at 0425 from Ashton and 0500 from Manchester and run until 0200, with frequent journeys operating until midnight. The 220 and 221 also use these stops but between them only operate eight services a day, only on weekdays.

2.20. There are also bus stops on London Road that are served by several other bus routes some 300m to the west of the Site. These include the 192, 201, 202, 203 and 205 that operate regular services between Stockport and Manchester.

Metrolink

2.21. The nearest tram stop is at Manchester Piccadilly located 600m (8-min walk) to the north from the Site. Services to Ashton-under-Lyne, Bury, Eccles, and Altrincham all depart from here. All services operate a peak service of 12-minute frequency, except for the Ashton line, which runs every 6-minutes.

Train

2.22. The nearest train station to the proposed development is Manchester Piccadilly station around 600m (8-minute walk) to the north of the Site. This is the busiest station in Manchester with an estimated 30.3M entries and exits in 2018-19.

2.23. Manchester Piccadilly has frequent commuter rail services to destinations throughout northwest England. It is open and staffed 24 hours a day, seven days a week. The station also provides direct national services to London, Birmingham, Glasgow, Edinburgh, Liverpool, and Leeds.

Local Highway Network

2.24. The Site is bounded by the Manchester ring road (Mancunian Way) to the south with access via Hoyle Street. The Hoyle Street/Mancunian Way junction is left-in/-out only so only accessible to traffic travelling anti-clockwise on the ring road.

2.25. The ring road provides connections to all the radial routes into and out of Manchester, which in turn connect to the strategic motorway network in the north of England.

2.26. The Site is therefore very well located for access to the strategic highway network allowing for connections around the north of England and nationwide.

Air Quality

2.27. The Site is located within the Greater Manchester Combined Authority Air Quality Management Area (AQMA), which was declared in 2016 due to exceedances of national air quality objectives (AQO) for annual mean nitrogen dioxide (NO_2) and 24-hour mean particulate matter PM_{10} concentrations. The Site is in an area where the local air quality is primarily affected by road traffic emissions from the local road network surrounding the Site, including Mancunian Way and Hoyle Street.

Flood Risk

2.28. The nearest surface water feature to the Site is the River Medlock, which passes through Mayfield Park to the north. The river is approximately 10m away from the Site boundary at its closest point. There are no other notable surface water features within a 500m vicinity of the Site.

2.29. The Site falls within the North West River Basin District. Within this, it is situated within the Irwell management catchment. The associated River Basin Management Plan sets a number of actions to meet the requirements (i.e., good status) of the Water Framework Directive (WFD).

2.30. With regard to the WFD classification system, when last assessed in 2022, the River Medlock at its nearest location to the site was classified as heavily modified and was designated as achieving moderate ecological status. Chemical status was not assessed in 2022 but was classified as fail in the 2019 assessment cycle.

2.31. The Site does not lie within a drinking water or groundwater safeguarding zone.

2.32. The gov.uk flood map for planning indicates much of the Site is within flood zone 1 and is therefore at a low risk of flooding from rivers and the sea. However, a small area (approximately 0.1ha) to the north boundary lies within flood zones 2 and 3, within which the risk of flooding from rivers is medium. Surface water flood risk is considered to be very low risk across the site and flooding from reservoirs or groundwater is unlikely in the Site.

2.33. The Site is served by United Utilities (UU) for surface and foul water drainage services, and potable water supply. The site is situated within UU's 'Strategic Resource Zone'. More than 90% of UU's water supply is derived from rivers and reservoirs, with the remainder from groundwater. The EA has not identified the area UU serve as one under serious water stress. Their 'Water Stressed Areas – Final Classification' report (2021) finds the region to be classified as 'not serious'.

Historic Environment

2.34. The Site is not located within a conservation area, nor does it contain any listed buildings. There are 19 listed buildings within a 500m radius of the site boundary. Beyond the site boundary, the nearest listed buildings are to the south in Ardwick namely six addresses on Manor Street (Grade II) and Ardwick Green North (Grade II), the Church of St. Thomas (Grade II) and the Drill Hall (Grade II). To the north lies the Star and Garter Pub (Grade II), Piccadilly Station (Grade II*), the former Station Goods Office (Grade II) and London Road Fire Station (Grade II*).

Planning History

2.35. The proposals for Phase 1B follow the approval in February 2020 of Phase 1a, referred to as the Baring Street Campus, which was approved under planning permission references 124972/FO/2019 (Application 1) and 125248/FO/2019 (Application 2), which have since been partially delivered, as amended.

2.36. Development commenced in Spring 2021 to remediate the Site and the park was fully completed in September 2022. The permissions for Phase 1a were subject to an amendment that were then approved in September 2023 (LPA Ref.: 137350/JO/2023 (Plot N – MSCP), 137263/FO/2023 (Plot O – Poulton Office) and 127349/JO/2023 (Plot M – Republic Office).

2.37. The Site also forms part of a temporary planning permission (LPA Ref.: 137072/FO/2023) to provide a construction compound, which was approved to support the delivery of railway infrastructure proposed at Manchester Piccadilly. The area covered by this permission is predominantly to the east of the Site, located on the other side of Hoyle Street and forming Phase 3 of the SRF. However, a non-essential phase of the compound sits on the Phase 1b site, which would fall away once Phase 1b commences development.

2.38. The Site has no other relevant planning history.

Proposed Development

2.39. The anticipated application for Full Planning Permission, as of August 2024, is a phased development that is proposed to include:

- Remediation and reprofiling works for the site to allow for the phased erection of two residential Plots (J and K) comprising Phase 1b.
- The development plots comprise two podium levels to address the site level changes and provide a generous amount of ground floor frontage, comprising commercial space, supporting residential amenity areas that are accessible to the public and various back of house storage spaces, surrounded by new high quality public realm.

- Above the podium levels, residential blocks will provide accommodation in four buildings providing a mix of 1-, 2- and 3-bedroom units in each, with a maximum of 33% 1-bedroom apartments in each plot. The total number of residential units is circa 900 at the time of writing.
- Plot J comprises two buildings on top of a two-storey podium level, with J1 being part 7, part 17 storeys and J2 being part 10 and part 23 storeys. Plot K comprises two buildings on top of a podium level, with K1 being part 9, part 28 storeys and K2 being part 11 and part 20 storeys. Each plot building is designed to appear as two volumes, or four buildings, within each plot. This helps to articulate and break down their overall mass and bring a more human scale to the park frontage.
- Creation of an at-grade route to the south of the residential blocks, which will be traffic calmed to encourage pedestrian flows whilst allowing for a service road to be created, with a buffer zone between this route and the Mancunian Way. The service road will connect to Hoyle Street, which will be stopped up at the southern end to minimise traffic entering the Mayfield area.
- Provisionally there is an ambition to deliver a new at-grade crossing over the Mancunian Way to provide improved access to the park for residents in Ardwick. It is anticipated that this will be indicative at the time of submission.

2.40. The draft description of development is as follows:

> *"Full Planning application for the erection of two residential blocks (Use Class C3) comprising 900 no. residential units contained within buildings ranging from 9 storeys to 28 storeys in height alongside ground and first floor commercial spaces comprising restaurant and / or retail units (Use Class E(b) and/or E(a)), bars (sui generis), indoor sports and community space provision (Use Class F1), with associated works comprising site remediation and reprofiling together with highways works, access, servicing, rooftop plant, site infrastructure and delivery of public realm, and other associated works for each relevant phase."*

2.41. The quantum of the Proposed Development is set out in Table 2.1 below. It should be noted that the EIA development quantum is part of the evolving design. As such, the EIA Screening and Scoping Report tests a 'worst-case scenario,' by assessing upper parameters that are 10% greater than what is currently expected to be brought forward as part of the future planning application.

Plot	Residential	Commercial Quantum	Building Heights
Plot J	1 bed – 138 (33%) 2 bed – 246 (61%) 3 bed – 22 (4%)	Circa 1,500 sq.m (GIA)	J1: Part 7, part 17 (+94m AOD) J2: Part 10, part 23 (+113m AOD)
Plot K	1 bed – 155 (31%) 2 bed – 305 (62%) 3 bed – 34 (7%)	Circa 3,500 sq. m.	K1: Part 9, part 28 (+128m AOD) K2: Part 10, part 20 (+103m AOD)

Plot	Residential	Commercial Quantum	Building Heights
Overall	1 bed – 293no. (33%) 2 bed – 551no. (61%) 3 bed – 56 no. (6%) Total – 900 units	Circa 5,000 sq. m.	-

Table 2.1: Indicative Planning Application Quantum

Phasing and Delivery

2.42. The construction programme is indicative at this stage, but is understood to comprise:

- Phase 1: Plot J plus public realm with an anticipated start on site Q2 2026 and completion 2029; and
- Phase 2: Plot K plus public realm and estate road with an anticipated start on site in Q4 2026 and completion 2030.

3. Technical Disciplines to be Scoped Out of EIA

Introduction

3.1. It is considered that the following disciplines will not give rise to likely significant effects on the environment and would therefore not require inclusion in the ES:

- Agricultural circumstances
- Archaeology
- Aviation
- Broadband Connectivity
- Solar Glare
- TV Reception

3.2. Justification in relation to each discipline are provided below following consultation with technical consultants.

Agricultural Circumstances

3.3. The Site is entirely on brownfield land so there would be no effects with respect to agriculture. This discipline can therefore be scoped out of the EIA.

Archaeology

3.4. This section has been prepared by the project's Archaeology consultant, Salford Archaeology. The authors of this summary have 10 years' experience and have delivery 45 EIAs between them relating to archaeology.

3.5. Consultation has taken place with GMAAS (Greater Manchester Archaeological Advisory Service) at the start of June 2024 to discuss archaeological significance, potential impact, and mitigation with their archaeological advisor.

3.6. Baseline studies comprise desktop surveys from 2014 and 2019 and an archaeological excavation that took place in 2020, with a corresponding report prepared to reflect findings on Site. These Reports are attached for completeness and the relevant elements are summarised below in relation to the Site.

Baseline

3.7. The Site does not contain any statutory designated heritage assets such as Listed Buildings, Scheduled Monuments, or any Registered Parks and Gardens, and it does not fall within a Conservation Area. An archaeological desk-based assessment in June 2019 identified possible archaeological sites within the Site, including Ardwick Dye Works, 19th-century workers' housing, a 19th-century public house, Ardwick Tannery, and a Water Meter Works.

3.8. The Site has high potential to contain remains associated with the industrial period, and the Proposed Development could potentially lead to the complete or partial removal of

archaeological receptors and the associated loss of its research potential/heritage significance. These archaeological receptors are of low significance based on criteria provided within the ICOMOS guidance[1].

3.9. In 2020, two evaluation trenches were excavated in the west of the Site, over the footprint of the Ardwick Dye Works (late Chapelfield Works) and the reservoir / terraced housing. The northmost trench was covered by a brick structure. The southernmost trench revealed little remains of archaeological interest. A small part of the south-east Area 1, Ardwick Tannery, was excavated in the Site, although few remains associated with the tannery survived within the east of the trench. A pipe/drain was identified as aligned north-west to south-east, continuing along the limit of excavation and therefore within the Site[2].

Identification of Effects

3.10. The Proposed Development is not considered to have any significant effects in respect of Archaeology. It is proposed that any potential impacts on Archaeology can be fully considered though the planning process through the submission of an Archaeological Desk-Based Assessment.

3.11. The NPPF makes clear that where the loss of the whole or a material part of a non-designated heritage asset's significance is justified by a development, the developer should be required to record that asset and advance understanding of its significance, and to make this evidence publicly accessible. Archaeological investigations at the Site will mitigate against the loss of below-ground archaeological remains. Such mitigatory measures can be secured on any permission via appropriately worded conditions and will ensure there are no significant effects arising from the development.

3.12. The EIA has been discussed with GMAAS (Greater Manchester Archaeological Advisory Service), who have agreed for archaeological issues to be 'scoped out' on the basis that an archaeological desk-based assessment is produced and appropriate mitigation is undertaken (tertiary).

3.13. The presence or absence of archaeological remains requires verification through intrusive archaeological investigation. This will be secured via condition prior to commencement of development and current indications suggest that the archaeological potential of the Site is low. However, pending the extent and significance of any surviving buried remains, further archaeological excavation may be required to mitigate the loss of buried remains during the proposed construction programme, namely in relation to the Ardwick Dye Works, Ardwick Tannery, Reservoir and Workers' Houses.

Aviation

3.14. This section has been prepared by the project's Aviation consultant Pager Power, who have 7 years' worth of experience and have prepared 17 EIAs between the two authors. No consultation has been undertaken with the relevant Aviation Authority as this is expected once this EIA Scoping Request is submitted to the LPA and issued to Statutory Consultees for their review.

Baseline

3.15. This section of the Scoping Report considers the potential aviation impacts of the

[1] ICOMOS (2011). Guidance on Heritage Impact Assessments for Cultural World Heritage Properties. Paris: International Council on Monuments and Sites.
[2] Salford Archaeology (2021). Mayfield, Manchester: Excavation Report. Salford: Salford Archaeology

Proposed Development arising during construction, operation, and maintenance.

3.16. Building developments have the potential to impact aviation and radar infrastructure in their vicinity. This is predominantly due to two main considerations, namely:

- Buildings as physical structures that present a collision risk;
- Buildings interacting with electromagnetic signals.

3.17. The second category can be further subdivided but essentially this comes down to weakening a radio signal in the shadow of the building or reflection of an electromagnetic signal in unwanted directions.

3.18. Guidance and policy are dictated primarily by the Civil Aviation Publications (CAP) produced by the Civil Aviation Authority (CAA). There is also further policy provided by the Ministry of Defence (MOD) and National Air Traffic Service (NATS). The most relevant guidance to this project is likely to be:

- CAP 168: Licensing of Aerodromes,
- CAP 670: Air Traffic Services Safety Requirements,
- CAP 777: ATC Surveillance Minimum Altitude Charts in UK Airspace Policy and Design Criteria,
- International Civil Aviation Organization (ICAO) Procedures for Air Navigation Services, Aircraft Operations, Volume II Construction of Visual and Instrument Flight Procedures, Fifth Edition, and
- ICAO EUR DOC 015 - European Guidance Material on Managing Building Restricted Areas.
- All relevant aviation guidance has been followed.

3.19. The proposed development is located in the Manchester control zone (CTR) airspace, which extends from the ground to 3,500ft, and laterally within the Outer Horizontal Surface (OHS) associated with Manchester Airport. The proposed development is within an urban area with other tall buildings in the vicinity, and therefore four new physical obstructions would be added to the already urban area.

3.20. The Secondary Surveillance Radar (SSR) at Manchester Airport is located approximately 15.3km to the south of the proposed development. The proposed development is located behind other tall buildings in central Manchester relative to the radar; however, it may provide new structures that could cause impacts to the radar.

Identification of Effects

3.21. The proposed development does exceed the 90m AOD aviation safeguarding threshold that requires Manchester Airport/NATS to be consulted for parts of the city centre, moreover it is best practice to engage with NATS and Manchester Airport for any development of potential concern. The possible effects are outlined in the tables below and on the following page.

3.22. The key constraints that are to be assessed in the greatest technical detail are Manchester Airport's Secondary Surveillance Radar (SSR), Obstacle Limitation Surfaces (OLS), Instrument Flight Procedures (IFP's), Minimum Safe Altitudes / Surveillance Minima, and helicopter operations.

3.23. There is no meteorological radar within their safeguarded range. No MOD air defence radar are expected to be affected. Other aviation issues that will be assessed include

military low flying operations and any other radio navigation aids however are not expected to be affected.

3.24. An Aviation Safety Assessment will be prepared and submitted as part of the application, which will be prepared in consultation with both Manchester Airport Group and NATS.

3.25. It is considered that this technical report will be able to identify any potential risks regarding aviation, namely radar impact, safety zones around licensed aerodromes, and aircraft flying rules, and is considered unlikely to raise any significant effects in that regard, particularly once mitigation measures have been introduced.

Broadband Connectivity

3.26. This section has been prepared by the Project's Broadband and Connectivity Consultant, Pager Power, who have 7 years' worth of experience and have prepared 17 EIAs between the two authors. No consultation has been undertaken with the relevant Aviation Authority as this is expected once this EIA Scoping Request is submitted to the LPA and issued to Statutory Consultees for their review.

Baseline

3.27. There is a requirement to ensure that new residences have access to superfast broadband speed to ensure future occupants can obtain sufficient broadband services. There are many forms of broadband infrastructure in the UK including fixed line broadband[3] and wireless broadband services[4].

3.28. The term 'superfast' is understood to mean speeds of 24 Mbps or higher[5]. Available speeds for the technologies are as follows:

- Standard broadband – up to 24Mbps;
- Superfast broadband – up to 80Mbps (Fibre To The Cabinet);
- Gfast Broadband – up to 330 Mbps;
- Cable Broadband – up to 1130 Mbps[6] (Virgin Media);
- Ultrafast Full Fibre – typically up to 1 Gbps[7] (Fibre To The Premises).

3.29. A relevant aspect in the context of potential requirements for building developments is ensuring that sufficient broadband services are provided. It is likely that sufficient internet services are readily available at the proposed development location given that it is located in a built-up urban environment with other residential buildings nearby.

3.30. For broadband connectivity, there is no set guidance on the assessment process. Whilst broadband download speeds[8] are not the only consideration when considering the quality of a broadband connection, it is typically the main consideration undertaken for the purposes of a broadband connectivity assessment.

3.31. The methodology used by Pager Power is to undertake a desk-based review of available download speeds from the most common internet providers in UK[9]. The availability of

[3] Technologies include Asymmetric Digital Subscriber Line (ADSL), Fibre To The Cabinet (FTTC), Fibre To The Premises (FTTP), Gfast, Cable (DOCSIS).
[4] Fixed Wireless Access, 4G / 5G home broadband, or via satellite.
[5] Source: BBC, 2014, *One million UK properties on 'superfast broadband' after investment'*. Last accessed August 2021.
[6] https://www.virginmedia.com/shop/broadband/speeds
[7] Source: Openreach. 1 Gbps = 1,000 Mbps.
[8] The type of infrastructure implemented (e.g. FTTP is considered the most future proofed technology), upload speed, and latency (Time delay before a transfer of data begins following an instruction for its transfer. Important for video calls and online video gaming).
[9] This may include some consultation with broadband providers, where appropriate.

broadband services and the associated speeds is determined based on:

- Openreach coverage checker – which is available via the Openreach website and identifies available speeds in any area within the UK.
- Crosschecks with three of the main UK broadband providers (BT, Virgin Media, and Sky).
- Investigation of the process for obtaining superfast broadband to the premises.

3.32. The first two checks are undertaken either at the proposed development location or at adjacent locations[10]. The reason for this approach is that in a built-up urban environment where the proposed development is located, broadband services are likely to be provided by fixed line broadband from the main internet providers and the infrastructure to supply those services is likely to be readily available.

Identification of Effects

3.33. Fibre to the Premises (FTTP) infrastructure is available free of charge for this development subject to application to Openreach. This would ensure internet speeds are maintained and is recommended for the proposed development.

3.34. If the installation of FTTP were to be pursued, the application must be done at least six months before provision of the service to the first property is provided. Likewise, if Virgin Media are contacted within a sufficient time frame and notified of the site plans it is likely that the proposed development will benefit from either FTTP or cable broadband supplied by Virgin Media. Other internet service providers can be contacted in advance.

3.35. It is likely that superfast broadband is already available at the site, and a broadband connectivity assessment will be undertaken to confirm this. If superfast broadband is not available, FTTP infrastructure should be provided by Openreach or other providers providing that the above process is followed. It is considered appropriate for broadband connectivity to be scoped out.

Solar Glare

3.36. This section has been prepared by the project's Solar Glare consultant, GIA, who have 20 years' worth of experience and have prepared over 30 ES chapters relating to solar glare.

Baseline

3.37. As set out in Section 2 of this Report, the Site is currently cleared and is in proximity to rail and road transport networks, so the introduction of buildings here may create an effect.

Identification of Effects

3.38. Solar glare is generally only a potential problem to motorists or train drivers approaching traffic lights or signals surrounding the site where there are large areas of reflective glass, particularly sloping glass, which could reflect sunlight and cause dazzle. Reflections that occur within 10° of a drivers' direct line of sight are classed as Significant whilst reflections occurring outside 10° are Not Significant.

3.39. A desktop review has been undertaken to identify potentially sensitive locations within 500m of the Proposed Development. Within a 500m radius of the Site, train lines approaching and departing Manchester Piccadilly are located to the north-east of the Site, the A635 is located directly to the south and the A6 is located to the west. There are a number of smaller roads with uncontrolled junctions located within the 500m radius of

[10] Typically, up to five adjacent postcodes.

the Site also.

3.40. The reflective elements on the Proposed Development will be windows within punched frames and a predominantly solid facade, reducing the likelihood of glare. Due to the scale of surrounding buildings, the western elevations will be shaded and obscured from view at nearby road and rail locations. The angle of the northern elevation within the field of view of drivers would mean solar glare would not impact train drivers on the adjacent train lines nor any road users.

3.41. The eastern elevation of Block J1 is the only elevation that would be visible to train drivers but would be located to the far side within the peripheral view of train drivers. The eastern elevation of Block J1 would likely sit comfortably outside the sensitive 10° field of view for train drivers on the nearby tracks, and outside 30° of the direct line of sight for much of the track approaching and departing Manchester Piccadilly Station. Therefore, in consideration of both the small, broken up nature of any reflections occurring from the proposed elevations and their location outside 10°, any reflections that do occur would not be considered Significant and would not require mitigation.

3.42. For the A6, the Proposed Development would not be visible within 30° of a driver's line of sight. For the A635, no signals have been identified within the stretch of road where the Proposed Development would be visible, therefore no sensitive locations relevant for solar glare assessment have been identified.

3.43. Whilst small areas of reflections maybe be visible from the Proposed Development within the peripheral view of train drivers and road users, they would occur outside 10° of the driver's direct line of sight so they would be Not Significant. Therefore, the effects of the Proposed Development on solar glare at sensitive receptors surrounding the Site are not considered significant and have therefore been scoped out of this ES.

TV Reception

3.44. This section has been prepared by the Project's Broadband and Connectivity Consultant, Pager Power, who have 7 years' worth of experience and have prepared 17 EIAs between the two authors. No consultation has been undertaken with the relevant Aviation Authority as this is expected once this EIA Scoping Request is submitted to the LPA and issued to Statutory Consultees for their review.

Baseline

3.45. Building developments have the potential to interfere with electro-magnetic signals passing above ground. This can therefore potentially affect television reception in a shadow zone behind the building. This is predominantly due to two main considerations, namely:

- Buildings blocking signals;
- Buildings reflecting signals.

3.46. The first category is most relevant for building developments, as reflection effects are very uncommon in practice.

3.47. The Winter Hill TV transmitter located approximately 25.2km north-west of the proposed development, provides terrestrial TV services to Manchester and the surrounding areas. The shadow zone for the proposed development will stretch to the south-east, covering

an area mostly comprising low-rise residential units with some light industry.

Identification of Effects which are Not Significant

3.48. Terrestrial TV reception quality can be impacted for neighbouring properties within the 'shadow zone' of the proposed development (i.e., behind the proposed development relative to the TV transmitter). This could materialise as interference or complete loss of services.

3.49. It is generally the case that if adverse impacts to reception are experienced due to a new building, alternative sources of coverage can be provided. The optimal solution needs to be assessed on a case-by-case basis. Common options include improvement or adjustment of the receiving equipment, or provision of services via an alternative technology.

3.50. The process for investigating and dealing with TV interference is well known and is frequently covered by a planning condition. It is considered appropriate for TV reception to be scoped out.

4. Approach to EIA and Proposed Methodology

4.1. The EIA will assess both the construction and operational of the Proposed Development, with overlapping or concurrent phases within the scheme.

4.2. The ES is anticipated to comprise two volumes, the first of which will set out the findings with respect to each of the environmental disciplines that have been examined as part of the EIA. Volume 2 will include all the supporting documents and technical appendices relating to the chapters. A Non-Technical Summary ('NTS') will be produced and will form a standalone document.

4.3. Each ES chapter will follow the headings set out below to ensure the final document is transparent, consistent and accessible:

- Introduction;
- Legislative and Policy Context;
- Assessment Methodology and Significance Criteria;
- Baseline Conditions;
- Identification and Evaluation of Key Effects;
- Mitigation Measures;
- Cumulative Effects;
- Residual Impacts;
- Summary.

4.4. Each chapter sub-heading is explained in further detail below.

Introduction

4.5. This section will introduce the assessment discipline and the purpose for which it is being undertaken.

Legislative and Policy Context

4.6. This section will include a summary of national, regional and local policies of relevance to the environmental discipline and assessment. Relevant legislation will be summarised where applicable.

Assessment Methodology and Significance Criteria

4.7. This section will provide an explanation of methods used in undertaking the technical study with reference to the published standards, guidelines and best practice. The application of significance criteria will also be discussed.

4.8. It will also outline any difficulties encountered in compiling the required information.

Baseline Conditions

4.9. This will include a description of the environment as it is currently and as it is expected to change given the project were not to proceed (i.e., 'do-nothing' scenario). The method used to obtain this information will be clearly identified. Baseline data will be collected in such a way that the importance of the particular subject area to be affected can be placed in its context and surroundings so that the effects of the proposed changes can be predicted.

4.10. Baseline conditions will include implemented planning permissions that are under construction.

Identification and Evaluation of Likely Significant Effects

4.11. This section will identify the likely significant effects on the environment resulting from the Proposed Development.

4.12. The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the effects can be positive or negative. The criteria to be used in carrying out this process are detailed below. It should be noted that these tables provide a standardised set of criteria, which may not be applicable to all technical disciplines considered within the EIA. Where relevant, individual consultants may use a variation of the criteria and this will be clearly explained within the methodology of each chapter.

Phasing and Scenarios

4.13. It is understood that the Proposed Development will be phased as follows:

- Phase 1: Plot J plus public realm; and
- Phase 2: Plot K plus public realm and estate road.

4.14. Phase 1 will start on site in Q2 2026 with completion in 2029 and Phase 2 will start on site in Q4 2026 with completion in 2030.

4.15. Each Phase relates to separate construction (including demolition or remediation as necessary) and operational phases of development. Scenarios are as follows so that environmental effects arising from the phasing are robustly assessed:

- Scenario 1: Baseline (existing Site, including developments currently under construction);
- Scenario 2: Baseline with Proposed Development Phase 1 under construction;
- Scenario 3: Baseline with Proposed Development Phase 1 and Phase 2 under construction (as above);
- Scenario 4: Baseline with Proposed Development Phase 1 and Phase 2 operational (as above); and
- Scenario 5: Baseline with Proposed Development Phase 1 and Phase 2 operational (as above) and cumulative developments.

4.16. Consultants will also consider the combined impacts of phases being on-site concurrently, as well as any potential interrelated impacts. The construction management chapter will set out the assessment of the Proposed Development in the context of other schemes nearby with planning permission that may be affected or affect nearby receptors in combination.

5. Environmental Statement Chapters

Introduction

5.1. This Section provides a summary of the Environmental Statement Chapters that are to be included in the ES due to potentially significant effects that may arise in the absence of any mitigation measures.

Air Quality

5.2. This section has been prepared by the project's Air Quality consultant, Buro Happold. The authors have over 15 years of experience between them and have authored over 130 Environmental Statements between the two authors.

5.3. No consultation has been undertaken to date. An air quality consultation letter will be issued to MCC to agree specific technical details of the assessment methodology prior to the completion of the ES chapter. No site-specific survey has been undertaken for air quality on this project.

Baseline

5.4. GMCA have deployed two monitoring networks, to fulfil the requirements for Local Air Quality Management (LAQM) and the Clean Air Plan (CAP). The most recent year of publicly available air quality monitoring data is 2022, which was published by the GMCA. Appendix D presents air quality monitoring sites in proximity to the Site and the wider study area. Each air quality monitoring site is colour-coded based on the 2022 annual average NO_2 concentration measured.

5.5. Air quality monitoring sites 036, 039, and 040 are the closest passive diffusion tube sites, all within 30 m of the Site. The 2022 annual mean NO_2 concentrations measured at sites 039 and 040 are 37.7 µg/m^3 and 38.6 µg/m^3, both within 10% of the AQO (40 µg/m^3). A slightly lower NO_2 level was measured at site 036, at the annual mean concentration of 32.9 µg/m^3 in 2022.

5.6. Manchester Oxford Road is the closest automatic monitoring station to the Site. The 2022 NO_2 annual mean concentration at this site is 43 µg/m^3, exceeding the AQO level. The 1-hour mean NO_2 concentration at this site exceeded the threshold of 200 µg/m^3 three times in 2022, which is well below the allowed 18 times per year.

5.7. For particulate matter, 2022 annual mean concentrations of PM_{10} and $PM_{2.5}$ are 18 µg/m^3 and 10 µg/m^{3,} respectively, which are below relevant AQOs. Hourly mean PM_{10} concentrations exceeded the threshold of 50 µg/m^3 eight times, which complies with the allowable 35 times. No other major emission sources were identified at the scoping stage.

Scope of Assessment

Non-Significant Effects

5.8. The following effects have been identified and are not considered significant. They will not be considered further within the EIA or reported in the ES and factual evidence base has been provided in Appendix C to support this:

- Nuisance, disturbance from dust soiling, and adverse health effects resulted from dust and PM10 generated by construction activities: implementing tertiary mitigation measures will ensure that residual effects are not significant. The construction dust risk assessment and proposed mitigation measures will be included as a technical appendix to the air quality ES chapter.
- Combustion emissions from Non-Road Mobile Machinery (NRMM) during construction activities: Due to the adoption of the tertiary NRMM mitigation within the Proposed Scheme, significant effects are considered unlikely, and therefore, the effects of combustion emissions from NRMM on existing sensitive receptors will not be considered within the EIA or reported in the ES.
- Emissions released from energy combustion plant: As no combustion sources are proposed for the primary energy supply, no local air quality impacts are anticipated. Therefore, emissions released from energy combustion plants to nearby sensitive receptors are unlikely to be considered significant and will not be considered within the EIA or reported in the ES.

Effects that are likely to be significant

5.9. The following effects have been identified and are considered potentially significant. They will be considered further within the EIA:

- Effects associated with emissions of NO2 and PM10 /PM2.5 generated by construction vehicle traffic: Nearby existing sensitive uses (Residential properties, schools, care homes, etc.) that are close to roads along which there will be an increase in traffic due to construction. This shall be considered in line with the IAQM screening criteria for detailed assessment.
- Effects associated with emissions of NO2 and PM10 /PM2.5 generated by operational traffic: Existing sensitive uses that are close to roads along which there will be an increase in traffic due to operation. This shall be considered in line with the IAQM screening criteria for detailed assessment.
- Effects associated with sources of air pollutant emissions on future receptors that would be introduced to the area through the Proposed Development: Sensitive uses (e.g. residential) introduced by the Proposed Development.
- The potential for cumulative effects to take place as a result of the Proposed Development and other cumulative schemes during operation: Existing and cumulative sensitive uses that are close to roads along which there will be an increase in traffic due to operation. This shall be considered in line with the IAQM screening criteria for detailed assessment.

Assessment Methodology for Likely Significant Effects

5.10. It is proposed that the following scope of works will be carried out:

- Consultation with the Environmental Health officer to confirm the assessment methodology.

- Identify air quality sensitive receptors on and around the Site with the potential to be affected by the Proposed Development.
- A review and summary of existing local, regional, national, and international policies and guidelines regarding air quality and planning.
- A quantitative assessment of impacts associated with operational and construction traffic predicted changes in concentrations of NO_2, $PM_{10,}$ and $PM_{2.5}$ at selected worst-case receptors locations during the construction and operational phases, as a result of changes in traffic flows on the surrounding road network will be undertaken using dispersion modelling software ADMS-Roads.
- The need to conduct detailed dispersion modelling of construction and operational traffic for each scenario will be determined using the criteria set out in the IAQM/EPUK guidance on land-use planning and development control[11]. The following scenarios will be considered as an assessment of the worst case scenarios in line with best practice (exact years to be confirmed):
    - Baseline Year (2022 or 2023, depending on project programme and data availability) (testing scenario 1);
    - Peak Construction Year (2025) without Proposed Development 'Do Nothing' scenario;
    - Peak Construction Year (2025) with Proposed Development 'Do Something' scenario (testing scenario 3);
    - Future Baseline (2029) without Proposed Development 'Do Nothing' scenario; and
    - Future Baseline (2029) with Proposed Development 'Do Something' scenario (testing scenario 4).
- Where IAQM criteria are not met, a quantitative assessment of traffic emissions will be scoped out.

5.11. In scenarios where IAQM criteria are met, a worst-case approach will be taken in predicting pollutant concentrations at receptor locations, which assumes no change in background concentrations from existing. If this leads to predicted significant impacts, consideration will be given to Defra's projected improvements in background air quality conditions. The scope and extent of any dispersion modelling study carried out will be agreed with the Environmental Health Officer.

- The concentrations predicted by dispersion modelling will be compared against the appropriate air quality objectives, and any exceedances will be highlighted. Significance levels will be reported using the criteria set out in the IAQM/EPUK guidance on land-use planning and development control.
- An assessment of the likely cumulative effects associated with committed developments will also be undertaken for the construction and operational phases. Where detailed modelling assessment is required, each scenario will consider traffic flows associated with cumulative schemes as part of the future baseline and thus is inherent within the assessment.

[11] IAQM. (2017). Land-Use Planning & Development Control: Planning For Air Quality https://iaqm.co.uk/text/guidance/air-quality-planning-guidance.pdf

5.12. The magnitude of impact due to road traffic emissions arising from the construction and operation of the Proposed Development is determined with respect to the change in pollutant concentration at a sensitive receptor, in relation to the relevant AQO for a pollutant. The magnitude of impact with regards to the exposure of future site users to air pollution is determined by comparing the air pollutant concentrations the site user will experience to the AQO levels.

5.13. The impact significance at each individual sensitive receptor is determined in accordance with the IAQM's significance criteria in this assessment, as detailed in Table 4. These criteria are recommended by the professional body for air quality practitioners, the IAQM, and will be used in determining impact significance at individual receptors. Significance criteria for air quality assessment deviate from the criteria outlined in Table 4.

5.14. The overall significance of the effects of the Proposed Development on air quality will be determined using professional judgement, considering the impacts at individual receptors, whilst taking other relevant factors into account. This is in line with IAQM / EPUK guidance.

Long-term average concentration at receptor in assessment year	Change in concentration relative to AQO				
	0%	1%	2-5%	6-10%	>10%
75% or less of AQO	Negligible	Negligible	Negligible	Slight (Minor)	Moderate
76-94% of AQO	Negligible	Negligible	Slight (Minor)	Moderate	Moderate
95-102% of AQO	Negligible	Slight (Minor)	Moderate	Moderate	Substantial (Major)
103-109% of AQO	Negligible	Moderate	Moderate	Substantial (Major)	Substantial (Major)
110% or more of AQO	Negligible	Moderate	Substantial (Major)	Substantial (Major)	Substantial (Major)

Table 4 - IAQM Air quality impact significance descriptors, interchangeable descriptors used in the rest of the ES are labelled in brackets.

Limitations and Assumptions

5.15. There are a number of factors that will contribute to uncertainty in the modelling predictions, including the traffic and emissions data model inputs, which will have inherent uncertainty associated with them. There is also additional uncertainty owing to the model simplifying real-world conditions into a series of algorithms.

5.16. To reduce this uncertainty, model verification will be carried out for any assessment of traffic emissions by comparing modelled and monitored concentrations, which will ensure a good degree of confidence in modelled results for the existing baseline year. Furthermore, the professional judgement and experience of the consultants preparing this Air Quality ES Chapter will be used to ensure a robust assessment.

5.17. It will be assumed that the latest version (at the time of the assessment) of Defra's NOx to NO_2 calculator[12] accurately predicts NO_2 concentrations.

5.18. Predicting the impacts during construction is difficult as it is dependent on a number of factors, particularly the weather during specific works. This cannot be predicted, and therefore, the assessment methodology uses a risk-based approach to identify appropriate mitigation measures. While adopting conservative assumptions, the assessment assumes that the mitigation measures will be fully implemented. It should be noted that there may be periods with visible dust, but this is likely to be infrequent and insufficient to negatively impact the amenity.

5.19. Sensitive receptor locations identified will be considered at worst-case locations regarding sensitivity to poor air quality and potential for impacts. However, this will not be an exhaustive list, and there may be other locations within the vicinity of the Application Site that may experience air quality impacts due to emissions generated by the Proposed Development that have not been individually assessed.

Climate Change and Greenhouse Gas Emissions

5.20. This section has been prepared by the project's Climate Change consultant, Buro Happold. The authors of the proposed chapter have been GHG assessors for 15 years and have prepared over 35 EIAs between them.

5.21. No consultation has been undertaken to date or will be carried out for the purposes of the assessment beyond that carried out through EIA scoping. No background / baseline studies or surveys have been undertaken to date.

Baseline

5.22. The baseline is a reference point against which the effects of the proposed development can be compared. The IEMA Greenhouse Gas (GHG) Guidance (2022) states that "the ultimate goal of establishing a baseline is being able to assess and report the net GHG impact of the proposed project."

5.23. The Site is not currently in use and therefore it is assumed that currently there are no GHG emissions from the Site.

5.24. The future baseline scenario considers how the GHG emissions associated with the Site are likely to change in the future, should the Proposed Development not come forward, based on a time period comparable to the design life of the Proposed Development (i.e., 60 years). Should the Proposed Development not come forward, for the purposes of this assessment, it has been assumed that the Site would remain in its current state. As such, the future baseline GHG emissions from the Site are also considered to be zero.

[12] Defra. (2020). NOx to NO2 calculator. Retrieved from LAQM support: https://laqm.defra.gov.uk/air-quality/air-quality-assessment/nox-to-no2-calculator/

Scope of Assessment

Non-Significant Effects

5.25. The following effects have been identified and are not considered significant. They will not be considered further within the EIA or reported in the ES and factual evidence base has been provided in Appendix C to support this:

- GHG emissions associated with waste generated by the Proposed Development during the operational phase: GHG emissions associated with operational waste are proposed to be scoped out as they are not expected to be material in scale, such that they could influence the overall significance of the GHG effects. A Waste Management Strategy shall be submitted for the Proposed Development alongside the planning application in due course.
- GHG emissions associated with carbon sequestration of green infrastructure: On the basis that GHG emissions associated with carbon sequestration of green infrastructure will be low relative to the GHG emissions over the whole life of the proposed development and would lead to an overall reduction in emissions, excluding them from the assessment is considered conservative and robust.
- GHG emissions associated with beyond building lifecycle: GHG emissions associated with the beyond building lifecycle stage (Module D) are proposed to be scoped out on the basis that the proposed assessment of project's lifecycle emissions (Modules A to C) (only) comprises a conservative assessment.

Potentially Significant Effects

5.26. The following effects have been identified and are considered potentially significant and will be considered further within the EIA:

- Embodied carbon associated with the product stage (lifecycle stages A1-A3 – See Figure 1)
- Embodied carbon associated with the construction process stage (lifecycle stages A4-A5 – See Figure 1)
- Embodied carbon associated with the in-use stage from the Proposed Development (lifecycle stage B1-B5 – See Figure 1)
- GHG emissions associated with operational energy for the Proposed Development (lifecycle stage B6 – see Figure 1)
- GHG emissions associated with operational water (lifecycle stage B7 – see Figure 1)
- GHG emissions associated with the end-of-life stage (lifecycle stage C1-C4 – see Figure 1)
- GHG emissions associated with construction and operational transport emissions (lifecycle stage A4 – see Figure 1)

Assessment Methodology for Likely Significant Effects

5.27. There is currently no standard methodology for quantifying GHG emissions within EIA. However, best practice will be drawn from guidance documents, including:

- EIA Guide to Assessing GHG Emissions and Evaluating their Significance (IEMA, 2022)[13];
- Royal Institute of Chartered Surveyors (RICS) Whole Life Carbon Assessment for the Built Environment (2017)[14]; and
- BS EN 15978:2011 Sustainability of construction works. Assessment of environmental performance of buildings. Calculation method[15].

5.28. A reference study period (RSP) of 60 years is proposed, as per the principles outlined in BS EN 15978. This is based on the typical expected service life of a building. The total estimated GHG emissions will be estimated to 60 years from the start of the in-use stage.

5.29. The GHG emissions scope will align with the lifecycle stages defined as modules within BS EN 15978, with building elements included as per guidance within the RICS guidance on Whole Life Carbon Assessment for the Built Environment (2017), as shown in Figure 1 (excluding Module D, which is proposed to be scoped out).

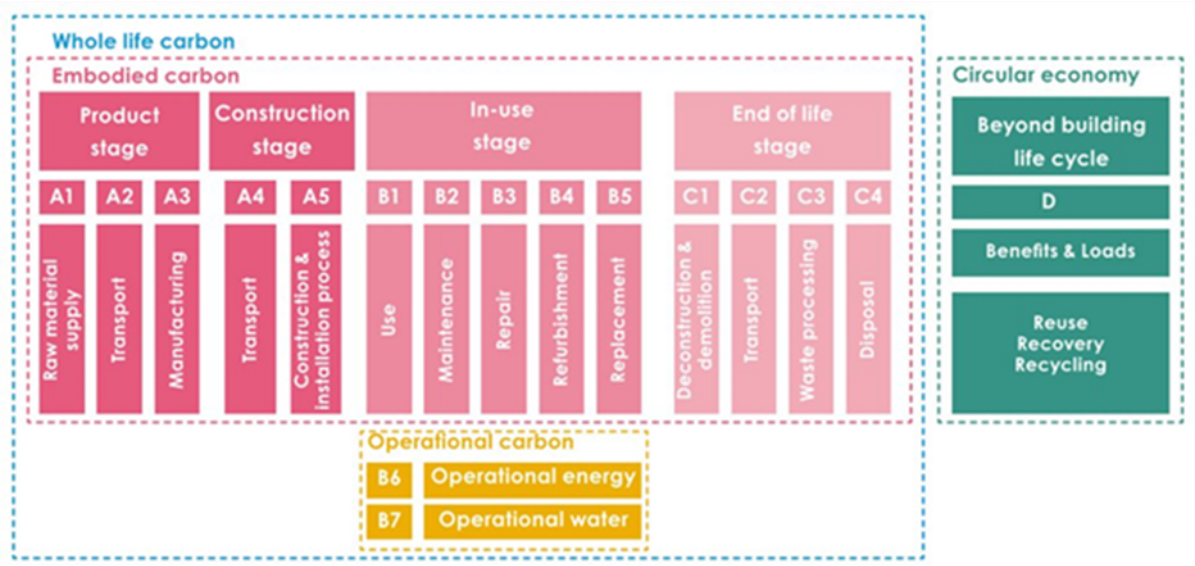


Figure 3 - Diagram showing the stages of a lifecycle GHG emissions assessment, taken from the LETI Embodied Carbon Primer (2020) Diagram based on lifecycle stages set out in BS EN 15978

5.30. GHG emissions associated with enabling works and construction phase shall be estimated through the whole life carbon assessment for the Proposed Development – this shall be completed in line with the relevant policy requirements. Where information is available from the sustainability and energy consultants on likely operational energy, and utilities engineers on likely operational water, appropriate carbon factors shall be applied to determine GHG emissions associated with these sources. Where this information is not available, appropriate published benchmarks shall be used.

5.31. Operational trip generation data from the project transport consultants will be used to estimate GHG emissions arising from operational transport. Carbon factors will be applied to the number of trips, and conservative assumptions on journey distances will be made.

[13] Institute of Environmental Management and Assessment (IEMA) (2022) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance, 2nd Edition.
[14] Royal Institution of Chartered Surveyors (RICS). (2017). Whole Life Carbon Assessment for the Built Environment
[15] BSI (2011) BS EN 15978 Sustainability of Construction Works – Assessment of Environmental Performance and Buildings – Calculation Method

5.32. The ES chapter will provide a summary of the GHG emissions from each stage across the 60-year RSP.

5.33. Appropriate mitigation measures will be recommended for both the construction and operational phases of the Proposed Development. With these mitigation measures in place, the significance of effects will be assessed based on the effect significance criteria and using professional judgement and previous project experience.

Assessment Scenarios

5.34. The following scenarios will be assessed:

- The baseline (including anticipated evolution of the baseline over the RSP) (Scenario 1);
- The construction phase (including product stage and construction stage GHG emissions) (Scenario 3); and
- The operational phase (including in use and end-of-life stage GHG emissions) (Scenario 4).

Limitations and Assumptions

5.35. The necessary full detailed scheme information required to undertake a full detailed embodied carbon assessment of the Proposed Development, such as construction material quantities, are not expected to be available in many cases. As such, to calculate the GHG emissions associated with the construction and operation of the Proposed Development, appropriate energy and carbon benchmarks, based on floor area and building use, will be sourced from relevant industry publications. These benchmarks will be conservative and are considered the best available methods of estimating GHG emissions given the information available.

Daylight, Sunlight and Overshadowing

5.36. This section has been prepared by the project's Daylight, Sunlight and Overshadowing (DSO) consultant, GIA, who have over 20 years' experience in assessing DSO effects and have prepared over 35 EIAs.

5.37. There are no specialists within Manchester City Council or other statutory consultees relevant to the area of daylight, sunlight, and solar glare. As such, no consultation has been undertaken. Discussions on overshadowing to Mayfield Park have formed part of the pre-application process with Manchester City Council.

5.38. This assessment has used the completed background studies and available information set out in the table below.

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Identification of residential and hotel sensitive receptors surrounding the Site	Site visit and review of council tax records	March 2024
Identification of external amenity space sensitive receptors surrounding the Site	Site visit and review of Proposed Development and aerial photography	March 2024

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Location of floor plans for the sensitive receptors	Review of MCC planning portal, leases and online marketing details	March 2024
Full Measured Survey	Pointcloud laser scan of context / terrain	March 2024

Table 5 – Background studies for DSO

Baseline

Daylight and Sunlight

5.39. The BRE Guidelines suggest that residential properties have the highest requirement for daylight and sunlight and states that:

"the guidelines are intended for use for rooms in adjoining dwellings where light is required, including living rooms, kitchens and bedrooms."

5.40. The scope of entirely residential properties, properties that contain an element of residential accommodation or hotels being of a transient residential nature (sensitive receptors) that will be assessed has been determined through professional judgement, considering their orientation and proximity to the Site.

5.41. Baseline studies are currently being undertaken by GIA. The baseline assessment will review the daylight and sunlight conditions within each of the sensitive receptors in the Site area's present form (i.e., the current baseline).

5.42. The following sensitive receptors will be considered for daylight and sunlight due to their residential or hotel use and proximity to the Site:

- Liberty Point - Block A
- Liberty Point - Block B
- Piccadilly Point
- Star & Garter
- Mayfield Park
- 79-85 Brydon Avenue
- 80-86 Brydon Avenue
- 86-96 Cotter Street
- 33-39 Cotter Street
- 50-80 Cotter Street
- 31 Cotter Street
- 25-41 Paddock Street
- 21 Thirsk Street.

Overshadowing

5.43. Any overshadowing sensitive receptors will be established from a transient overshadowing assessment of the Proposed Development upon the surrounding context on 21st March (Spring & Autumn Equinoxes), 21st June (summer Solstice), and 21st December (winter solstice).

5.44. Based on the results of the transient overshadowing assessment those areas which experience levels of change which have the potential to breach BRE guidance will also be assessed for sun hours on the ground (SHOG).

Scope of Assessment

Non-Significant Effects

5.45. The following effects have been identified and are not considered significant. They will not be considered further within the EIA or reported in the ES and factual evidence base has been provided in Appendix C to support this:

- **Reduced daylight and sunlight amenity within commercial properties or distant residential properties**: Reduced daylight and sunlight amenity within commercial properties or distant residential properties will not be assessed.

Assessment Methodology for Likely Significant Effects

Effect	Receptor	Applicable Development Phase (C / O)
Reduction in daylight amenity	See above list	O
Reduction in sunlight amenity	See above list	O
Increase in shadow to surrounding amenity spaces	TBC from transient overshadowing assessments	O

Table 6 – Potentially Significant Effects

Daylight & Sunlight Assessment Methodology

5.46. The assessments will be carried out in accordance with the BRE Guidelines. The analysis will be calculated from a 3D computer model using specialist software based on detailed architectural models, Ordnance Survey (OS) mapping, photogrammetry and full measured survey.

5.47. In line with the BRE Guidelines, both the Vertical Sky Component (VSC) and No Sky Line (NSL) assessments will be undertaken in the Proposed Development scenario for the relevant sensitive receptors identified.

5.48. The sunlight amenity to the surrounding relevant receptors will be considered by reference to the BRE recommended Annual Probable Sunlight Hours (APSH) and Winter Probable Sunlight Hours (WPSH) methods of assessment. Due to the southerly location of the sun in the sky, this assessment will consider those windows which face the site and are located within 90 degrees of due south.

Overshadowing Assessment Methodologies

5.49. The assessments will be carried out in accordance with the BRE Guidelines. The analysis will be calculated from a 3D computer model using specialist software based on detailed architectural models, Ordnance Survey (OS) mapping, photogrammetry and full measured survey.

5.50. The overshadowing analysis on the surrounding areas of amenity space will be undertaken by reference to the Transient Overshadowing (TOS) and Sun Hours on Ground (SHOG) methods of assessment.

5.51. For the TOS assessment, the path of shadow will be mapped for the Proposed development on the following dates as suggested by the BRE Guidelines:

- 21st March (Spring Equinox);
- 21st June (Summer Solstice); and
- 21st December (Winter Solstice).

5.52. Should potentially significant effects be identified through the TOS assessment, a SHOG assessment will be undertaken to confirm and quantify any effect on 21st March, as recommended by the BRE Guidelines. The SHOG assessment will consider the proportion of a designated amenity space which receives 2 or more hours of direct sunlight on 21st March.

Scenarios Assessed

5.53. The results of the following assessment scenarios, refining those set out in Section 4 of this Report, will be reviewed and reported:

- Existing site (baseline), including developments currently under construction;
- Existing site (baseline) with Proposed Development Phase 1 and Phase 2 operation (as above); and
- Existing site (baseline) with Proposed Development Phase 1 and Phase 2 operational (as above) and cumulative developments.

Assessment Criteria

5.54. The following table provides a summary of the criteria set out within the BRE Guidelines for daylight and sunlight:

Table 7 – BRE Criteria

Method	BRE Criteria
VSC	A window may be adversely affected if its VSC measured at the centre of the window is less than 27% and less than 0.8 times is former value.
NSL	A room may be adversely affected if the daylight distribution (NSL) is reduced beyond 0.8 times its existing area.
APSH	A window may be adversely affected if a point at the centre of the window received for the whole year, less than 25% of the APSH including at least 5% of the APSH during the winter months (21 September to 21 March) and less than 0.8 times its former sunlight hours during either period, and for existing neighbouring buildings, if there is a reduction in total APSH which is greater than 4%.

Method	BRE Criteria
SHOG	An amenity area may be adversely affected if less than 50% of its area receives less than 2 hours of direct sunlight on 21 March and less than 0.8 times its former value.

5.55. The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low, and negligible), the magnitude of change (on a scale of large, medium, small, and negligible), and the level of effect on a scale of major, moderate, minor, and negligible. Significant effects will be determined from this evaluation and including professional judgment.

5.56. When assigning significance criteria for daylight and sunlight effects, professional judgement will be used in conjunction with the significance criteria. Consideration will be given to the proportion of rooms/windows affected, as well as the percentage alterations, absolute changes, sensitivity of the receptor, and any other relevant factors. There may be mitigating factors such as location and nature of development, balconies, overhangs or design features which may also affect the determination of assigning the criteria.

5.57. When assigning significance criteria for sun hours on ground effects, professional judgement will be used in conjunction with the significance criteria. Consideration will be given to the nature of the adjoining amenity space, as well as the percentage alterations, absolute changes, sensitivity of the receptor, and any other relevant factors.

5.58. Effects classified as Moderate or Major in scale are considered to be 'significant'. Effects classified as Minor or Negligible in scale are considered to be 'not significant'.

Limitations and Assumptions

5.59. To ensure transparency within the EIA process, the following limitations and assumptions have been identified:

- Where floor plans are not available, assumptions will be made based on external inspection as to the use and internal configuration of the rooms behind the fenestration observed.
- Unless building form dictates otherwise, a standard 4.2 m (14 ft) room depth will be assumed. This is common practice where access to buildings for surveying is unavailable.

5.60. Floor levels will be assumed for surrounding properties where access or detailed planning drawings cannot be obtained. Where floor levels are assumed, the working plane will be located 850 mm above the assumed Finished Floor Level (FFL).

Heritage

5.61. This section has been prepared by the project's Heritage Consultant, Stephen Levrant Heritage Architecture, who are heritage specialists with over 50 years' worth of experience and have provided heritage EIA chapters for a range of major regeneration projects across Manchester City Centre.

5.62. Consultation has taken place to set out a series of key viewpoints to the Local Planning Authority and those views also include key heritage assets within proximity to the proposals. At the time of writing, the acceptance of these views has not been provided but are shown for completeness in Appendix E.

Available Baseline Information

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Mayfield, Manchester Phase 1a (ref: 124972/ FO/2019) Heritage Statement (not completed by Heritage Architecture)	Heritage Study undertaken for Phase 1a application including baseline significance appraisal of relevant heritage assets in setting of the site neighbouring that which is subject to this Scoping Report.	2019
Zone of Theoretical Visibility ('ZTV') (prepared by Chris Burnett Associates)	Visual study and illustration of areas in the setting of the site where the Proposed Development has the potential to be seen.	May 2024
Identification of key viewpoints (prepared by Chris Burnett Associates)	Identifying key views from which to assess the Proposed Development, taking into consideration heritage, townscape and visual sensitivities.	May 2024

Baseline

5.63. The Site is not located in a conservation area, nor does it contain any listed buildings. No Non-Designated Heritage Assets ('NDHA') have been identified within the Site or its setting. A study area of 500m from the Site boundary has been determined by Heritage Architecture as being appropriate for the consideration of potential significant effects of the Proposed Development on the setting of heritage assets in the local area.

5.64. The determination of the study area has been based on an understanding of the existing nature of the site and its surroundings, heritage sensitivities in the locality of the site, the form and character of the proposed development, a Zone of Theoretical Visibility, and has been further informed by professional judgement and experience in similar assessments. It is acknowledged that there are several heritage assets outside of the study area and in the wider setting of the Site.

5.65. Baseline data of the study area was collected utilising Historic England's Online Mapping tool (plotting structures identified on the National Heritage List for England), and Manchester City Council's interactive planning map. Google Earth was also utilised as part of the baseline data collection.

5.66. Due consideration has been given to heritage assets outside of the 500m study area. It has been determined that it is probable there will be no potential for significant effects on these receptors due to separating distance and interposing built form and landscape. Notwithstanding this, heritage assets outside of the study area will still be considered with regard to any potential material impact to their setting or an appreciation of their significance in the forthcoming built heritage assessment and any effects identified; this will be informed by the verified views prepared to support the Townscape and Visual Impact Assessment (prepared by Chris Burnett Associates).

5.67. Within 500m of the Site boundary, there is a total of 19 listed buildings. The eastern edge of Whitworth Street Conservation Area just falls within the 500m study area. The location of these heritage assets in relation to the Site boundary are shown in Appendix F.

5.68. The full heritage baseline is presented in the table below:

Name of Heritage Asset	Designation	Heritage Value
Listed Buildings		
Star And Garter Public House	Grade II	Medium
Milford House	Grade II	Medium
25, Manor Street	Grade II	Medium
27, Manor Street	Grade II	Medium
21 and 23, Manor Street	Grade II	Medium
27, Ardwick Green North	Grade II	Medium
Sculptural Wall	Grade II	Medium
Former Goods Offices to Piccadilly Station	Grade II	Medium
Train Shed And Undercroft at Manchester Piccadilly Station	Grade II	Medium
Crusader Works	Grade II	Medium
Drill Hall	Grade II	Medium
Former Church of St Thomas	Grade II	Medium
Railings of Ardwick Green	Grade II	Medium
War Memorial	Grade II	Medium
Fenton House	Grade II	Medium
2 And 4, Palfrey Place	Grade II	Medium

Name of Heritage Asset	Designation	Heritage Value
Apollo Theatre	Grade II	Medium
31, Ardwick Green North	Grade II	Medium
Milepost Beside Railings of Ardwick Park	Grade II	Medium
Conservation Areas		
Whitworth Street Conservation Area	n/a	High

Table 8 – List of Designated Heritage Assets

Scope of Assessment

Potentially Significant Effects

5.69. The built heritage chapter will identify and evaluate the nature and likelihood of the impacts of the Proposed Development, both permanent and temporary, in both the short term and long term, on built heritage receptors against clearly defined criteria.

Effect	Receptor	Applicable Development Phase (C / O)
Potentially Significant (beneficial or adverse effect on special interest of listed buildings)	Listed Buildings (as listed above) in the setting of the Site	C and O
Potentially Significant (beneficial or adverse effect on special interest of Conservation Area)	Conservation Areas (as listed above) in the setting of the Site	C and 0

Table 9 – Potentially Significant Effects for Heritage

Assessment Methodology for Likely Significant Effects

5.70. The assessment methodology for the Historic Built Environment is a synthesis of established guidance, best practice, and professional judgement. In accordance with an adapted form of the methodology set out in the ICOMOS Guidance on 'Heritage Impact Assessments' (January 2011), in which the value of heritage attributes is assessed in relation to statutory designations, and priorities or recommendations set out in national research agendas, and ascribed values. Professional judgement is then used to determine the importance of the resource. The heritage assets which might be affected by the Proposed Development are valued and the impact on them is assessed to give a significance of effect.

5.71. A Heritage Statement will be prepared to support the Built Heritage Chapter (forming a technical appendix) and accompany the Planning Application. As stated above, the Heritage Statement will provide a detailed and robust baseline assessment of the identified heritage assets surrounding the Site, considering their significance and to what extent their setting contributes to an appreciation of this. This information will be summarised in the ES Chapter.

5.72. Both reports will be prepared in general accordance with or with reference to the following legislation, policy and guidance:

- Planning (Listed Buildings & Conservation Areas) Act 1990;
- National Planning Policy Framework (NPPF) Conserving and Enhancing the Historic Environment (2023);
- Historic England guidance: Conservation Principles Policies and Guidance (2008);
- Historic England's Good Practice Advice Note 2: Managing Significance in Decision-Taking in the Historic Environment (2015);
- Historic England's Good Practice Advice Note 3: The Setting of Heritage Assets (2017);
- Historic England's Advice Note 12: Statements of Heritage Significance (2019); and
- Historic England's Advice Note 4: Tall Buildings (2022).

5.73. The Heritage Statement will consider the potential indirect impact of the Proposed Development on heritage assets (i.e. change to setting or through indirect visual impact) of sensitive receptors within the defined study area (and beyond it where necessary).

5.74. The Heritage Impact Assessment ('HIA') will utilise relevant key views (prepared as Accurate Verified Views, 'AVRs') to inform an understanding of the potential effects of the Proposed Development. The selection of viewpoint locations has been informed by Zone of Visual Influence Studies (produced by Chris Burnett Associates), site surveys and VU.CITY analysis. They have been identified in consultation with the Local Planning Authority. A total of 15 key views have been identified, of which 5 are relevant for the purposes of the HIA. The proposed representative viewpoint locations are provided in Appendix E.

5.75. To assess the potential magnitude and significance of effect of the visual impact of the Proposed Development, the following criteria is considered:

- The sensitivity and proximity of receptors (i.e. heritage assets);
- The nature of the existing views;
- The degree of change to existing views and the visibility of the Proposed Development; and
- The availability and amenity of alternative views.

5.76. The assessment section of the Chapter will:

- Describe the potential impacts to the heritage assets as a result of the Proposed Development; and
- Outline suitable mitigation measures to deal with the potential effects of the Proposed Development on heritage assets.

5.77. The language/criteria used to define the sensitivity of receptors, magnitude of impact, and the overall effect will be informed by that outlined in Section 4 and potential effects associated with the construction and operational phases of the Proposed Development will relate to indirect temporary visual impacts and indirect permanent visual impacts in line with the Scenarios set out in Section 3.

5.78. Significant effects in EIA terms relate to effects categorised as Moderate or Major. Any effects categorised below this – Minor-Moderate, Minor, Negligible, or None – are considered to be Not Significant. Please refer to Section 4 for relevant methodology matrix.

Limitations and Assumptions

5.79. Survey of the identified heritage assets within the study area was from publicly accessible areas. As such the study is limited to assessment from ground level.

5.80. Assessment of below ground archaeology does not form part of this assessment.

Traffic and Transport

5.81. This section has been prepared by the project's Transport and Traffic consultant, Civic Engineers, and the authors have over 30 years' worth of experience and have prepared over 30 EIAs relating to traffic and transport.

5.82. To inform this section of the EIA Scoping Assessment, consultation has taken place with MCC Highways as follows:

- Teams meeting: 21 February 2024: discussion on form of development and access for pedestrians, cyclists, and vehicles. Outcome was production of TA Scoping Note (see below).
- Teams meeting: 27 March 2024: Continued discussion of above. Outcome was production of TA Scoping Note.
- Transport Assessment Scoping Note 26 April 2024: seeks to agree the approach to the Transport Assessment with MCC and TfGM. This methodology feeds into the methodology used for the Transport chapter of the ES.

5.83. TRICS data review has been undertaken to understand the trip generation of similar development gathers and applied to the proposed GFA and number of residential units proposed, which was undertaken in April 2024.

Baseline

5.84. The baseline from a transport and connectivity perspective has been set out in detail in Section 2 of this Report.

Scope of Assessment

Non-Significant Effects

5.85. The following effects have been identified and are not considered significant. They will not be considered further within the EIA or reported in the ES and factual evidence base has been provided in Appendix C to support this:

- Hazardous/large loads: Hazardous/large loads are not expected during the construction or operation stage. If they are required these will be highly managed via the CEMP and site management, and therefore effects are not considered significant.
- Road Vehicle Driver and Passenger Delay: The impact of the development on Road Vehicle Driver and Passenger Delay is not considered significant as the change in hourly flows is very low during the times that nearby junctions would be at their busiest.

Assessment Methodology for Likely Significant Effects

5.86. The following are considered potentially significant effects in relation to traffic and transport:

Effect	Receptor	Applicable Development Phase (C / O)
Severance of Communities	Pedestrians and cyclists	Construction and Operation
Non-motorised User Delay	Pedestrians and cyclists	Construction and Operation
Non-motorised User Amenity	Pedestrians and cyclists	Construction and operation
Fear and Intimidation on and by Road Users	Vehicle drivers / occupants, pedestrians and cyclists	Construction and Operation
Road User and Pedestrian Safety	Vehicle drivers / occupants, pedestrians and cyclists	Construction and Operation

Table 9 – Potentially significant effects for traffic and transport

5.87. The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low, and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

5.88. For the effect of 'reduction in safety and increase in accident risk' collision clusters will be identified using available data from Crashmap. The change in Annual Average Daily Traffic Flow (AADT) will be used to define impacts. This will use the peak hour development flows presented in the Transport Assessment, which will be converted to AADT.

5.89. The peak hour flows (PHF in the image below) will be converted to Annual Average Daily Traffic flows (AADF in the image below) for the purposes of this assessment using the following factors taken from the DfT's Traffic Appraisal Manual (1991):[i]

Conversion of Hourly Flow	Types of Road					
	Main Urban		Inter Urban		Recreational Inter–Urban	
	Factor	Coeff* (%)	Factor	Coeff* (%)	Factor	Coeff* (%)
AAHF to PHF	2.630	(11)	2.825	(15)	3.890	(23)
AAHF to 10th highest hour	2.83	(14)	3.231	(20)	4.400	(23)
AAHF to 30th highest hour	2.703	(11)	3.017	(17)	4.974	(21)
AAHF to 50th highest hour	2.649	(10)	2.891	(15)	3.742	(19)
AAHF to 100th highest hour	2.549	(9)	2.711	(12)	3.381	(15)
AAHF to 200th highest hour	2.424	(9)	2.501	(9)	3.042	(13)
AAWF to AADF	0.943	(3)	0.979	(4)	1.015	(4)

Notes: AAHF is assumed to be AADF ÷ 24
AAWF is the Average Annual Weekday Flow (Monday–Friday)
*Coefficient of Variation
Source: Traffic Appraisal Manual (TAM) DOT (1991).

Table 7.2 Peak–hour factors by road type classification.

Figure 4 – Annual Average Daily Traffic Flows

Determining Sensitivity of Receptor

5.90. The sensitivity of affected receptors will be considered on a scale of high, medium, low, or negligible. If a link is identified as having receptors which are of high sensitivity the impacts are assessed in more detail if there is a change in AADT of 10% or more (Rule 2 of the IEMA Guidelines).

5.91. All other links in the study area will have impacts assessed in more detail if there is a change in AADT of 30% of more (Rule 1 of the IEMA Guidelines).

Determining the Magnitude of Change

5.92. The magnitude of change will be considered as the change experienced from "Scenario 1: Existing site (baseline), including developments currently under construction" at the sensitive receptor and will be considered on a scale of large, medium, small or negligible. As identified within the 2023 IEMA Guidelines, the magnitude of each impact represents the level of change from the baseline conditions.

Determining the Level of Effect

5.93. The following terms have been used to define the level of the effects identified and these can be 'beneficial' or 'adverse':

- Major effect: where the Proposed Scheme is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;

- Moderate effect: where the Proposed Scheme is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
- Minor effect: where the Proposed Scheme is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance or recoverability or is of the highest sensitivity; or where the Proposed Scheme is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change and / or can recover from the change; and
- Negligible: where the Proposed Scheme is unlikely to cause a noticeable change at a receptor, despite its level of sensitivity or there is a considerable change at a receptor which is not considered sensitive to a change.

5.94. The duration of the effect will be assessed as either 'short-term', 'medium-term' or 'long-term'. Short-term is considered to be up to 1 year, medium-term is considered to be between 1 and 10 years and long-term is considered to be greater than 10 years.

Limitations and Assumptions

5.95. Construction and operational stage traffic flows for the cumulative development scenario will be taken from publicly available documents (e.g., planning documents) or documents provided by the Local Highways Authority. Where these are not available, reasonable assumptions will be made.

5.96. For the Proposed Development, only the impact of the taxi and servicing traffic will be assessed for the operational phase. This is because the development will adopt low parking provision and car traffic generated by the Proposed Development will be attracted to off-site car parks that already have planning permission and whose impact has already been assessed.

5.97. Construction traffic generation of the Proposed Development will be based on reasonable assumptions for other similar sites, in lieu of a materials/construction waste management plan being available at this stage.

Water Resource and Flood Risk

5.98. This section has been prepared by the project's Water Resources consultant, Buro Happold, who have over 18 years' experience between the two authors and have prepared over 85 chapters relating to this discipline.

5.99. Consultation in relation to the preparation of this Section of the EIA Scoping Request has not yet been held but it is expected that United Utilities will confirm the flows for discharge and Manchester City Council will be required to review the flood risk conditions on site and propose measures to manage surface water flows.

5.100. Desktop research from online sources to establish baseline conditions includes sources such as Google satellite map imagery, EA Catchment Data Explorer and gov.uk flood map for planning, undertaken on the 14th of May 2024.

Baseline

5.101. The baseline is set out in Chapter 2 of this EIA Scoping Request. The current drainage arrangements for the Site will be reviewed as part of the drainage strategy to be developed. Flood risk from all relevant sources will be reviewed as part of the flood risk assessment.

Scope of Assessment

Potentially Significant Effects

5.102. The following potentially significant effects will be assessed during either construction or operation:

Effect	Receptor	Applicable Development Phase (C / O)
Localised changes in surface water flow regime during rainfall events which may increase flood risk to the site, adjacent areas or areas downstream	Capacity of surface water drainage network and surrounding water network to accommodate flows	C
Deterioration of the quality of surface water runoff from the site which may deteriorate the quality of downstream water bodies	Water quality of the River Medlock and surrounding water network	C
Accidental leaks and spillages of hazardous material which could adversely affect the quality of downstream water bodies	Water quality of the River Medlock and surrounding water network	C
Flood risk to construction workers and plant	People and equipment present on site	C
Increased potable water demand from residential units and commercial uses	Capacity of potable water supply to meet demand	O
Increased foul water drainage capacity requirements	Capacity of foul drainage infrastructure to meet demand	O
Localised changes in surface water flow regime during rainfall events which may increase flood risk to the site, adjacent areas or areas downstream	Capacity of surface water drainage network and surrounding water network to accommodate flows	O

Effect	Receptor	Applicable Development Phase (C / O)
Deterioration of the quality of surface water runoff from the site which may deteriorate the quality of downstream water bodies and groundwater through infiltration	Water quality of the River Medlock and surrounding water network	O
Proposed development's vulnerability to flood risk	Residents, visitors and other site users	O

Table 10 – Potentially significant effects relating to Water Resources

Assessment Methodology for Likely Significant Effects

5.103. The Water Resources and Flood Risk chapter of the ES will assess the potential effects of the development on the surrounding water environment and the potential effects of the water environment on the Proposed Development. This will include an assessment of the potential change in water supply, foul drainage, surface water drainage, pollution prevention and flood risk. The assessment will consider the five baseline and development scenarios as set out in Section 2 of this Scoping Report.

5.104. A Flood Risk Assessment ('FRA') and Drainage Strategy will be prepared and submitted with the Application, including consultation with the LLFA, UU and the EA where appropriate, and will assess the risk of flooding from all sources (fluvial, tidal, groundwater, surface water and sewer) and the change in risk due to climate change.

5.105. The FRA and drainage strategy will be developed in accordance with the guidance set out in the NPPF and other guidance, including the Strategic FRA for the locality.

5.106. The FRA and drainage strategy will provide a level of quantification/appraisal with regard to drainage impacts for both foul water and surface water flows. This will be summarised in EIA terms within the Water Resources ES Chapter.

5.107. A qualitative appraisal of potable water demand will be undertaken, informed by information from potable water utilities.

5.108. The effect significance will be based on assessing the magnitude of change (i.e., the deviation from the baseline condition) and the sensitivity of the likely receptor. Professional judgement and the use of a matrix approach will determine if potential effects are considered to be significant.

Limitations and Assumptions

5.109. The water environment is well understood for the purpose of this assessment.

5.110. The understanding with regard to flood risk, foul water drainage and surface water drainage will be informed though a number of best practice modelling techniques, to produce the best accurately available baseline and future scenario. The accuracy of these assessments can be expected to be of a high confidence level and is reinforced through sound judgement and professional experience.

Noise and Vibration

5.111. This section has been prepared by the project's Noise and Vibration consultant, Buro Happold. who have over 21 years' experience between the two authors and have prepared over 15 chapters relating to this discipline.

Baseline

5.112. In addition to the baseline details set out in Section 2, unattended noise monitoring was supplemented by attended noise monitoring and observations on the evenings of Wednesday 21st February and Saturday 24th February 2024, selected to reflect entertainment events taking place at the Star & Garter pub and the Freight Island bar respectively. Attended measurements were taken at six locations, with four on the boundaries of the Site and the other two close to the nearest receptors on Baring Street and Cotter Street.

5.113. Regarding vibration, the only nearby sources of potentially significant levels vibration are the railway lines to the north of the Site, which are around 75 m away at the closest point to the boundary.

5.114. In terms of the future baseline scenario, if the Proposed Development did not come forward, it is expected that it would continue to be dominated by similar levels of road traffic and railway noise, together with temporary noise from construction works taking place on the wider Mayfield regeneration site.

Scope of Assessment

Non-significant effects

5.115. The following effects have been identified and are not considered significant. They will not be considered further within the EIA or reported in the ES and factual evidence base has been provided in Appendix C to support this:

- Operational vibration: As the Proposed Development will not generate significant levels of vibration during its operation, there is no need to consider operational vibration as part of the assessment.

Potentially significant effects

Effect	Receptor	Applicable Development Phase (C / O)
Temporary construction noise, including related traffic	Student accommodation on Baring Street, residential properties on Cotter & Paddock Street	C
Temporary construction vibration	Student accommodation on Baring Street, residential properties on Cotter & Paddock Street	C
Changes in road traffic noise (operational)	Student accommodation on Baring Street, residential properties on Cotter & Paddock Street	O

Effect	Receptor	Applicable Development Phase (C / O)
Noise from entertainment use at the commercial units	Student accommodation on Baring Street, residential properties on Cotter & Paddock Street	O
Noise from use of new external fixed building services plant	Student accommodation on Baring Street, residential properties on Cotter & Paddock Street	O

Table 10 – Potentially significant effects relating to noise and vibration

Assessment Methodology for Likely Significant Effects

Overview

5.116. The assessment of significant effects from noise and vibration using current guidance does not align with the matrix-based sensitivity/impact/effect approach. The potential effects of noise and vibration are assessed using different methods based on the type of source being considered.

5.117. In some cases, such as construction noise and vibration, this involves the definition of a Lowest Observed Adverse Effect Level (LOAEL), below which no adverse effects are expected, but above which adverse effects are detectable, and a Significant Observed Adverse Effect Level (SOAEL), above which significant adverse effects expected to occur (these terms are defined by Government noise policy).

5.118. In addition to exceeding the SOAEL, potential significance may also require consideration of other factors such as duration of the effect. However, where a type of noise is already part of an existing environment but is altered by a development, it can be more appropriate to use the magnitude of change in noise levels alone (i.e., the impact) to indicate significance.

Temporary construction noise, including related construction traffic, and vibration

5.119. Construction noise from the main construction activities at the relevant receptors will be predicted based on the methods described in BS 5228-1:2009+A1:2014[16] for noise and BS 5228-2:2009+A1:2014[17] for vibration, using information provided by the project team on construction activities and plant.

5.120. Construction noise and vibration effect level thresholds will be based on those detailed in the same standards for the on-site construction activities, with the duration of any threshold exceedances also considered when determining significance. These criteria are detailed in the following tables:

Table 11 - Effect level thresholds for construction noise at residential receptors

Effect Level [a]	Time Period	Threshold Value (dB $L_{Aeq,T}$) [b]
LOAEL	Day (07:00 – 19:00)	65
	Evening (19.00 – 23.00)	55

[16] BS 5228-1:2009+A1:2014 'Code of practice for noise and vibration control on construction and open Sites – Part 1: Noise'
[17] BS 5228-2:2009+A1:2014 'Code of practice for noise and vibration control on construction and open Sites – Part 2: Vibration'

Effect Level [a]	Time Period	Threshold Value (dB $L_{Aeq,T}$) [b]
	Night (23.00 – 07.00)	45
SOAEL	Day (07:00 – 19:00)	75
	Evening (19.00 – 23.00)	65
	Night (23.00 – 07.00)	55

Notes:
[a] A significant effect is indicated if the programme of works indicates that the SOAEL threshold value is likely to be exceeded for a period of at least one month.
[b] Values apply to a location one metre from a residential building façade containing a window, ignoring the effect of the acoustic reflection from that façade.

Table 12 - Effect level thresholds for construction vibration at residential receptors

Effect Level	Threshold Value (PPV, mm/s) [a]
LOAEL	0.3
SOAEL	1.0 [b]

Notes:
[a] This is the level at a residential receptor.
[b] Guidance in BS 5228-2:2009+A1:2014 states that this level of exposure can be tolerated by those affected if prior warning and explanation has been given. It goes on to state that a level of 10 mm/s is likely to be intolerable in most building environments for any more than a very brief exposure.

5.121. Predicted changes in road traffic noise due to construction traffic on the roads around the Site will be calculated by comparing scenarios both with (Scenario 2 and 3) and without (Scenario 1) the traffic associated with the construction of the Proposed Development, with the basic noise level (BNL) for each relevant link calculated using the method described in the technical memorandum Calculation of Road Traffic Noise[18] (CRTN).

5.122. The changes will be assessed based on the methodologies described in the Design Manual for Roads and Bridges[19] (DMRB). For construction traffic noise, the assessment of significance is based on the magnitude of the change in noise levels resulting from the construction vehicle movements, and the duration of the impact, as follows:

Table 13 - Impact magnitudes and assessment of significance of construction traffic noise at residential receptors

Magnitude of Impact	Increase in noise level due to construction road traffic (dB)	Significance of effect
Negligible	Less than 1.0	Insignificant
Minor	Greater than or equal to 1.0 and less than 3.0	
Moderate	Greater than or equal to 3.0 and less than 5.0	Potentially significant, depending on duration (see note at foot of table)
Major	Greater than or equal to 5.0	

Identification of effect significance:
Significant effects are expected to occur if the programme of works indicates that either a moderate or major impact is predicted over a period of at least one month.

[18] Calculation of Road Traffic Noise, Department for Transport: Welsh Office, 1988
[19] Design Manual for Roads and Bridges, LA 111 – Noise and vibration, version 2, Highways Agency, May 2020

5.123. The prediction and assessment of construction noise will test scenarios where only Phase 1 of the Proposed Development is under construction (Scenario 2), and where both Phase 1 and Phase 2 are under construction at the same time (Scenario 3).

Changes in road traffic noise due to operation of the Proposed Development

5.124. Predicted changes in road traffic noise due to operation of the Proposed Development on nearby roads will be calculated by comparing scenarios both with (Scenario 4 and 5) and without (Scenario 1) the traffic associated with the Proposed Development for a given year using data provided by the project transport consultant in the annual average weekday traffic (AAWT) format for the 18 hour period of 06:00 to 00:00, with the basic noise level (BNL) for each relevant link calculated using the method described in the technical memorandum Calculation of Road Traffic Noise[20] (CRTN).

5.125. The changes will be assessed based on the methodologies described in the Design Manual for Roads and Bridges[21] (DMRB). For operational road traffic noise, the assessment of significance is based on the magnitude of the change in noise levels, as follows:

Table 13 - Impact magnitudes and assessment of significance of changes in noise from operational road traffic

Magnitude of Impact	Change in noise level (dB)	Signifance of effect
No Change	0	Insignificant
Negligible	Up to 0.9	
Minor	1.0 – 2.9	
Moderate	3.0 – 4.9	Significant
Major	5.0 and above	

5.126. The prediction and assessment of operational road traffic noise will test a scenario where both Phase 1 and Phase 2 are in operation (Scenario 4 and 5).

Noise from entertainment use at the commercial units

5.127. As discussed under the 'Limitations and Assumptions' below, target noise levels for noise emissions from entertainment use at the commercial units (to avoid significant effects at noise sensitive receptors) will be provided based on the results of the baseline noise survey. The selection of appropriate target levels will be based on the requirements of Manchester City Council's Planning & Noise Technical Guidance[22].

Noise from use of new external fixed building services plant

5.128. As discussed under the 'Limitations and Assumptions' below, target noise levels for noise emissions from proposed external fixed building services plant (to avoid significant effects at noise sensitive receptors) will be provided based on the results of the baseline noise survey. The selection of appropriate target levels will be based on BS 4142:2014+A1:2019[23] and the Manchester City Council Planning & Noise Technical Guidance. Plant installations will be designed to meet the target levels.

[20] Calculation of Road Traffic Noise, Department for Transport: Welsh Office, 1988
[21] Design Manual for Roads and Bridges, LA 111 – Noise and vibration, version 2, Highways Agency, May 2020
[22] Planning & Noise: Technical Guidance, Manchester City Council, June 2022
[23] BS 4142:2014+A1:2019 'Methods for rating and assessing industrial and commercial sound'

Site suitability/design appendix

5.129. The noise and vibration ES chapter will be accompanied by a technical appendix covering the relevant design aspects of the Proposed Development. This will include details of suitable glazing specifications to achieve the required internal ambient noise levels, and consider both ventilation and overheating. Where required, reference will be the Manchester City Council Planning & Noise Technical Guidance.

Limitations and Assumptions

5.130. The prediction and assessment of construction noise and vibration require detailed information which is typically unavailable at the time of a planning application submission. It is likely, therefore, that informed assumptions will need to be made regarding the type of construction plant to be used and the works methodologies. However, this is considered a reasonable approach in identifying any likely significant effects.

5.131. It is assumed that at the time of undertaking the assessment, full details of any proposed entertainment use or external fixed building services plant will not be available. Consequently, it is unlikely that any relevant predictions of noise from such sources will be possible. Therefore, in lieu of an assessment, target noise levels for entertainment and fixed plant noise emissions at noise sensitive receptors, based on the results of the baseline noise survey, will be defined in accordance with the relevant standards and guidance, including Manchester City Council Planning & Noise Technical Guidance.

Socio-Economics

5.132. This section has been prepared by the project's Socio-Economics consultant, Buro Happold.

Baseline

Current Baseline Conditions

5.133. The Site borders Mayfield Park, the newly developed large outdoor space, and there are several other open spaces close to the Site. Within the study area (a 2.5km radius), there are a range of community facilities and social infrastructure, including 28 primary schools and 38 secondary schools. There are three GP surgeries within 1km of the site, all of which are accepting new patients, and two hospitals within approximately 2.5km of the Site.

Future Baseline Conditions

5.134. The socio-economic and health profile in the study area can be expected to change during the construction of the Proposed Development and operational phase is also likely to impact the socio-economic profile of the study area.

5.135. Construction jobs created during the construction phase will likely lead to positive impacts on the local economy during this phase. The addition of 900 new residential units will bring new residents to the local area and there will impacts on the surrounding social infrastructure (e.g., open space, play space, schools, and healthcare facilities) arising from the new residential population. The construction of new commercial floorspace will result in the addition of new jobs to the local area, affecting the local and regional economies through the creation of new employment opportunities.

5.136. If the Proposed Development does not come forward, the Site may remain unused and there are unlikely to be any positive socio-economic effects.

Scope of Assessment

5.137. The socio-economic assessment aims to evaluate the potential influence of the Proposed Development on the existing economic and social landscape of the area. The assessment will recognise and quantify, where possible, the effects of the intended construction on factors such as job opportunities, housing availability, economic contribution, local expenditure, communal facilities, and nearby amenities and services.

5.138. The socio-economic assessment will consider the impacts during the construction and operation phases of the Proposed Development. The likely sensitive receptors of the proposed scheme are considered to be:

- Existing and future local businesses and employees;
- Existing and future local residents; and
- Local social infrastructure resources (including education, open space, play space, and health facilities).

5.139. The assessment also examines the policy context and relevant planning guidance provided at the national and local level (Manchester City Council) and identifies whether the Proposed Development is likely to contribute to, or conflict with, the objectives and requirements of these documents.

Receptors

5.140. Receptors are likely to include:

- The local economy and labour market (i.e., local businesses and economically active residents);
- The local housing market; and
- Local social infrastructure and its users; specifically:
    - Primary schools within 2km from the Site (or average distance travelled by pupils based on the Latest National Travel Survey);
    - Secondary schools within 5km from the Site (or average distance travelled by pupils based on the latest National Travel Survey);
    - General Practice (GP) surgeries within a 1km radius from the centre of the Site; and
    - Open space and play space within 800m walking distance from the Site.

5.141. The Proposed Development will also introduce new residents to the Site who will be sensitive to socio-economic impacts.

Non-Significant Effects

5.142. At this scoping stage, all the potential effects have been scoped in as we do not have certainty at this stage of the level of significance of each effect. All of the potential effects will be analysed during the socio-economic assessment.

Potentially Significant Effects

Effect	Receptor	Applicable Development Phase (C / O)
Temporary Employment Opportunities, direct and indirect	The local economy and labour market	C
Employment generation through the increased population and new commercial space	The local economy and labour market	O
Increase in housing provision	The local housing market	O
Increase in affordable housing provision	The local housing market	O
Increased spending in the local economy as a result of the increased population	The local economy and local businesses	O
Increased demand for educational facilities	Local residents	O
Increased demand for healthcare facilities	Local residents	O
Increased demand for open space and play space	Local residents	O

Table 14 – Potentially significant Socio-economic effects

Assessment Methodology for Likely Significant Effects

Technical Scope

5.143. This ES chapter will outline potential socio-economic effects (both direct and indirect) of the Proposed Development. It will also clearly set out the significance of the residual socio-economic effects (those that remain after mitigation) of the Proposed Development. The assessment will test the full/ maximum parameters of the development.

Baseline Assessment

5.144. A baseline assessment will be undertaken to establish the socio-economic condition, which currently surround the Site, both at the local and regional level. The ES chapter will utilise data from a variety of sources including:

- 2021 Census data to provide insights into the demographic and economic makeup of the area;
- Data from the Office for National Statistics (ONS) to offer a comprehensive understanding of key local socio-economic indicators;
- Department for Education (DfE) Annual School data and local capacity data;

- National Health Services (NHS) data to comprehend healthcare and related socio-economic facets within the vicinity of the site; and
- Relevant local and regional studies and assessments will be referenced to enrich the baseline assessment.

Effect prediction and assessment of effect significance

5.145. The assessment of potential socio-economic effects will be undertaken using several methodologies, data sources and assumptions. There are set out below:

- Construction related employment effects will be assessed using established ratios of construction output to employment, considering the distinctive characteristics of the project;
- Additionality effects such as deadweight (effects that would occur regardless of the Proposed Development), leakage (the proportion of an effect that will occur outside the target area or group), displacement (the proportion of an impact accounted for by the reduction of existing outputs), and substitution effects (those which replace existing outputs) using HCA Additionality Guidance (2015);
- Population and child yield projections for the proposed development using relevant yield assumptions (e.g., GLA Population Yield Calculator, where no local equivalent exists) and local authority guidance where necessary;
- Current capacity in schools in proximity to the Proposed Development will be assessed based on information from the Annual Schools Census Data (2022 or latest available) and public admission numbers (2022 or latest available), as well as local authority data and studies where available;
- Availability of primary healthcare facilities in the local area will be assessed using public NHS data. This information will be compared with the projected new population in the Proposed Development to estimate the likely effect of the development on primary healthcare facilities;
- Play space provision will be assessed against relevant local standards and compared to the estimated child yield arising from the Proposed Development; and
- An estimate of spending generated as a result of the completed/operational Proposed Development will be calculated using average national household spending figures (ONS Family Spending Statistics, 2021 or latest available).

5.146. The assessment of likely significant effects to sensitive receptors will consider the sensitivity of the receptor (on a scale of high, medium, low and negligible) and the magnitude of change (on a scale of large, medium, small and negligible) to determine the level of effect on a scale of major, moderate, minor and negligible. Significant effects will be determined following this through professional judgment.

Phasing

5.147. Demolition and construction of the Proposed Development will be provided across two phases. The phasing outlined is unlikely to affect the socio-economic assessment, and therefore socio-economic impacts will not be assessed for individual phases and will be assessed for the overall construction period (Scenario 3).

5.148. Operational effects will be assessed once the Proposed Development is fully operational. While some residents are likely to move into the Proposed Development before this date, this is when the full operational impacts will be experienced (Scenario 4).

Limitations and Assumptions

5.149. Assumptions likely to be made for the assessment include:

- Employment density using HCA employment density guidance, to calculate the potential employment from the commercial floorspace; and
- Residential unit occupancy based on size and tenure. This is used to calculate the number of young people and their age breakdown, in order to calculate the number of children that will go to school in the local area.

5.150. Limitations include:

- The baseline conditions used for the socio-economic assessment may change over time and this could influence the findings of the assessment, and could lead to the findings suffering from statistical time lag; and
- The use of the Employment Densities Guide will be used to calculate FTEs that align most closely to the proposed purposes of the commercial space. If the facilities are used differently, then there may be variations in FTE employment.

Human Health

5.151. This section has been prepared by the project's Human Health consultant, Buro Happold.

Baseline

5.152. The baseline conditions will focus on the health determinants in the area surrounding the Site in order to provide a demographic context of the existing community locally. It then considers the baseline in terms of access to infrastructure and conditions relevant to the health of the potential occupants of the Proposed Development.

Current Baseline Conditions

5.153. As set out in Section 2, the Site is currently vacant and is part of the larger Mayfield Strategic Regeneration Framework (SRF) boundary, which includes Mayfield Park, providing outdoor space for residents.

5.154. There are three GP surgeries within 1km of the Site, all of which are accepting new patients, and two hospitals within approximately 2.5km of the Site. In addition to Mayfield Park, the Site is close to several other outdoor spaces, namely the Lower Medlock Valley that comprises a large greenspace 1km to the east to the Site.

Future Baseline Conditions

5.155. If the Proposed Development does not come forward, the Site may remain unused and there are unlikely to be any human health impacts.

Scope of Assessment

5.156. The human health assessment will consider the effects on the physical and mental health of local residents, new residents and workers that may arise from the construction and operation of the Proposed Development.

5.157. It is proposed that a Rapid HIA (following the guidance published by the Healthy Urban Development Unit, HUDU) is prepared in support of the Proposed Development, which meets the broad parameters of best practice HIA guidance but can be considered a 'light touch' approach. The Rapid HIA will be included within the ES as part of the human health technical chapter.

5.158. The Rapid HIA has two overarching purposes:

- Assess the potential impact of a programme and/or development on a) population health and b) the distribution of population health; and
- Recommend ways to mitigate these impacts, by preventing negative impacts while promoting positive impacts.

5.159. The HIA will consider the populations affected by the Proposed Development which includes the existing local community and the proposed residents and employees. The HIA will also consider the policy context and relevant planning guidance provided at the national and local level (Manchester City Council) and identifies whether the Proposed Development is likely to contribute to, or conflict with, the objectives and requirements of these documents.

Receptors

5.160. Receptors for the HIA are:

- Existing local community, including the relevant identified social and health infrastructure that contributes to human health indicators; and
- Proposed new residents and employees.

Identification of Effects

5.161. The approach to assessing the human health effects of the Proposed Development will be based on a socio-environmental model of health. This model defines health broadly and recognises that health and well-being are attributable, not just to health service intervention, but to a wide set of inter-related factors such as lifestyle, employment, education and income.

5.162. There is no definitive guidance on how to assess human health within an ES. Best practice principles are provided in NHS England's/Healthy Urban Development Unit's (HUDU) Rapid HIA Toolkit (Fourth Edition) 2019 and will form the basis for the approach to assessing impacts on health and wellbeing.

5.163. The HUDU Planning for Health Rapid HIA Tool, Fourth Edition (October 2019) recommends the assessment of potential health impacts under eleven topics or broad determinants. These are listed in Table 15 below, together with the key potential health impacts associated with each and the relevance to the Proposed Development.

Health determinant	Potential health impact	Relevance to the Proposed Development
Housing quality and design	Access to adequate housing is important for health and wellbeing, and environmental factors such as overcrowding and sanitation in buildings have been identified as causing illness.	The Proposed Development will introduce new housing to the local area.

Health determinant	Potential health impact	Relevance to the Proposed Development
Access to healthcare services and other social infrastructure	Accessibility is important in terms of transport and access into a building, and the range and quality of services offers. Access to good quality health and social care, education, and community facilities has a direct positive effect on human health.	The Proposed Development may alter access to healthcare services or other social infrastructure as it may impact on demand, physical access or land take for such facilities.
Access to open space and nature	Providing secure, convenient and attractive open/green space can lead to more physical activity and reduce levels of heart disease, strokes and other ill-health problems that are associated with both sedentary occupations and stressful lifestyles. There is growing evidence that access to parks and open spaces and nature can help to maintain or improve mental health.	The Proposed Development is close to open spaces and will therefore have an impact on the health of existing and new residents
Air quality, noise and neighbourhood amenity	The quality of the local environment can have a significant impact on physical and mental health. Pollution from construction can lead to poor air quality which can lead to health conditions. Noise pollution can have a detrimental impact on health resulting in sleep disturbance and other effects.	Findings from other topics – air quality, noise & vibration, and climate change will be reviewed to assess the impact on health
Accessibility and active travel	Convenient access to services and facilities encourages greater opportunities for social interaction. Accessible buildings encourage all groups, including older people and people with a disability, to use them. Discouraging car use and providing opportunities for walking and cycling can increase physical activity and provide health benefits.	The Proposed Development will introduce new housing and associated infrastructure. As such, it may have an impact on accessibility and active travel in the area.
Crime reduction and community safety	Thoughtful planning and urban design that promotes natural surveillance and social interaction can help to reduce crime and the 'fear of crime', both of which impact on the mental wellbeing of residents.	The Proposed Development will introduce new housing to the local area. As such, the Proposed Development is expected to have an impact on crime and community safety.

Health determinant	Potential health impact	Relevance to the Proposed Development
Access to healthy food	Access to healthy and nutritious food can improve diet and prevent chronic diseases related to obesity. Opportunities to grow and purchase local healthy food and limiting concentrations of hot food takeaways can change eating behaviour and improve physical and mental health	The Proposed Development may alter access to healthy food as it may impact on demand, physical access or land take for such services
Access to work and training	Employment and income is a key determinant of health and wellbeing. Unemployment generally leads to poverty, illness and a reduction in personal and social esteem. Work aids recovery from physical and mental illnesses.	The Proposed Development may support local employment opportunities, providing access to jobs and training for the local workforce during the construction phase and employment opportunities in the commercial space once operational
Social cohesion and neighbourhoods	Friendship and supportive networks in a community can help to reduce depression and levels of chronic illness as well as speed recovery after illness and improve wellbeing. Fragmentation of social structures can lead to communities demarcated by socio-economic status, age and/or ethnicity, which can lead to isolation, insecurity and a lack of cohesion.	The Proposed Development may affect social cohesion and neighbourhoods as it may impact accessibility of facilities and composition of communities.
Minimising the use of resources	Reducing or minimising waste including disposal, processes for construction as well as encouraging recycling at all levels can improve human health directly and indirectly by minimising environmental impact, such as air pollution.	Construction activities as well as creation of waste during operation of the Proposed Development may have an impact on resources
Climate change	There is a clear link between climate change and health. Planning is at the forefront of both trying to reduce carbon emissions and to adapt urban environments to cope with higher temperatures, more uncertain rainfall, and more extreme weather events and their impacts such as flooding. Poorly designed homes can lead to fuel poverty in winter and overheating in summer contributing to excess winter and summer deaths.	The Proposed Development may result in changes to the climate and environment of the Site. Findings from other topics – air quality, noise and vibration and climate change will be assessed to determine the impact on health.

Table 16 – Human health receptors

Assessment Methodology

5.164. A baseline assessment will be undertaken to establish the health conditions of the current residents surrounding the Site, both at the local and regional level. This Chapter will utilise data from a variety of sources including:

- 2021 Census data to provide insights into the demographic makeup of the area;
- Data from the Office for National Statistics (ONS) to provide further insight into the demographic makeup of the area;
- National Health Services (NHS) data to comprehend healthcare facets within the study area;
- Index of Multiple Deprivation (IMD) 2019 to examine the deprivation levels of the proposed site and the surrounding area;
- Public Health England (PHE) to analyse key health indicators including life expectancy;
- Relevant local and regional studies and assessments will be referenced to enrich the baseline assessment.

5.165. There is no recognised or consolidated methodology or practice for the assessment of effects on human health. Best practice principles are provided in NHS England's Healthy Urban Development Unit's Rapid Health Impact Assessment (HIA) Toolkit 2019 and will form the basis of the approach adopted to assess impacts on health and wellbeing in the ES chapter.

5.166. There is no definitive guidance on how to assess human health within an ES. Best practice guidance is provided in NHS England's/Healthy Urban Development Unit's HUDU Rapid HIA Toolkit. The assessment of potential health impacts will be undertaken using the assessment matrix set out within the 'Rapid HIA Tool', taking account of published data from a variety of sources including those listed above, and applying professional judgment informed by relevant guidance to evaluate the health impacts of the scheme.

5.167. The HIA will consider how the Proposed Development may influence the physical and mental health and wellbeing of local residents and inhabitants of the Proposed Development taking into account the key determinants of health.

5.168. The 'Rapid HIA Tool' suggests the evaluation of potential health impacts under the eleven topics or broad determinants listed previously, which include:

- Housing and design affordability;
- Access to health and social care services and other social infrastructure;
- Access to open space and nature;
- Air quality, noise and neighbourhood amenity;
- Accessibility and active travel;
- Crime reduction and community safety;
- Access to healthy food;
- Social cohesion and inclusive design;
- Access to work and training;

- Minimising the use of resources; and
- Climate change.

5.169. The geographical extent of the impacts depends on the type of effect and the receptors. Effects will be considered during the construction phase and once the scheme is complete and occupied.

5.170. The HIA will be qualitative rather than a quantitative assessment, due to the diverse nature of the health determinants and health outcomes assessed. It will not be possible to quantify the severity or extent of the effects which give rise to the health impacts and as such, the potential impacts during construction and operation are described as either positive, neutral, negative, or uncertain.

Limitations and Assumptions

5.171. Limitations include:

- We cannot assess significance and therefore the methodology will be different to the other ES chapters.
- The baseline conditions may change over time and this could influence the findings of the assessment, and could lead to the findings suffering from statistical time lag.

5.172. Assumptions include:

- The residential unit occupancy is based on assumptions around size and tenure. This is used to calculate the additional demand on healthcare services and open spaces.
- Given the lack of clear industry recognised methodology in the assessment of health effects in EIA, particularly in respect of significance, the assessment presented in the Human Health ES chapter will be qualitative and will be based on the framework provided by the HUDU/NHS Planning for Health Rapid HIA Toolkit.

Ecology and Biodiversity

5.173. This section has been prepared by the project's ecology consultant, Buro Happold, who have over 16 years of experience and have prepared approximately 50 EIAs relating to the subject.

Baseline

5.174. No consultation has been undertaken to date, or will be carried out for the purposes of the assessment beyond that carried out through EIA scoping. Completed studies include studies from 2017 and again in 2024 and survey both the whole of the SRF area before a more specific Habitat survey of the Mayfield Phase 1B extent within the Mayfield Strategic Regeneration Framework (SRF) site. An UK Habitat Classification System survey was carried out following the methodology set out by Butcher et al. (2023). The extent of each habitat type was mapped in the field, with target notes to highlight any features of ecological interest.

5.175. The areas of the plots associated with Mayfield Phase 1b (Plots J and K), and wider across the area to the south of the Park, were cleared and remediated as required following the creation of the Park and as part of Phase 1a. This has resulted in the removal of vegetation across the Phase 1b site in comparison with the 2017 baseline. An update ecological survey was undertaken on 22nd of May 2024, to identify the changes that have occurred within the Phase 1b site since the previous baseline was recorded in 2017. The site is now dominated by hardstanding and artificial unvegetated/unsealed surfaces. It also comprises scattered scrub with areas of ruderal/ephemeral vegetation, young trees, and small areas of other neutral grassland, mixed and bramble scrub.

Biodiversity Net Gain & Previous Baseline

5.176. Biodiversity Net Gain (BNG) was used in the previous iterations of the Ecology Strategy to quantify the benefits for biodiversity because of the proposed development at Mayfield, both in terms of the Phase 1a site and Mayfield Park as well as the wider Strategic Regeneration Framework (SRF) as a whole. As applied in the previous Ecology Strategy for Mayfield and within the 2019 ES Ecology chapter (124972/FO/2019), the baseline as surveyed in 2017 will continue to be used for the BNG calculations to reflect a true change in habitats for the proposed Phase 1b and wider Mayfield development area.

5.177. Habitats recorded within the Phase 1b site in 2017 included a building, hardstanding, a small parcel of semi-natural broadleaved woodland and broadleaved parkland/scattered trees, and a range of semi-natural habitats typical of urban brownfield sites (Figure 1-1).

5.178. It is acknowledged that Mayfield Park now provides a more ecologically valuable receptor within the Mayfield site than the baseline reflects. However, the Park is part of the post-development condition of the site, and so will not form part of the baseline assessment presented within the BNG assessment and Phase 1b ES Chapter.

Likely Significant Effects

5.179. Potential for impacts to the ecological receptors associated with the Park due to potential construction and operational impacts associated with the implementation of the Phase 1b development plots will be considered in the ES Chapter. The table below sets out the areas that are potentially significant and therefore will be scoped into the ecology ES chapter:

Effect	Receptor	Applicable Development Phase (C / O)
Damage and disturbance from noise/vibration, lighting, dust and run-off during construction (This effect could be controlled via a CEMP. If scoped out, could be moved to the not significant table, 'primary mitigation')	Mayfield Park	C
Damage and disturbance from noise/vibration, lighting, dust and run-off during construction (This effect could be controlled via a CEMP. If scoped out, could be moved	The River Medlock	C

Effect	Receptor	Applicable Development Phase (C / O)
to the not significant table, 'primary mitigation')		
Indirect impacts from noise/vibration, light, dust and run-off during construction (This effect could be controlled via a CEMP. If scoped out, could be moved to the not significant table, 'primary mitigation')	Foraging and commuting bats	C
Loss of habitat reducing foraging opportunities and severing commuting routes (Note: update ecology survey will confirm if the site has been totally cleared or there are some habitats left. If the site has been cleared completely, this effect will be moved to the not significant table).	Foraging and commuting bats	C
Impacts from lighting	Mayfield Park	O
Impacts from lighting	The River Medlock	O
Impacts from lighting	Foraging and commuting bats	O
Impacts from lighting	Local fauna including black redstart, generalist birds and invertebrates	O
Creation of new biodiverse habitats and long-term management of existing ecologically valuable habitats on the site	Fauna of conservation value, including bats and birds	O

Table 17 – Potentially significant ecological effects

Assessment Methodology for Likely Significant Effects

5.180. This chapter of the ES will assess the potential effects of the proposed scheme on ecology, including impacts on protected and priority species and habitats on and adjacent to the Site.

5.181. The study area will be defined by the Zone of Influence (ZoI) of the Proposed Development and is broadly confined to the Site itself and the immediate surrounding area. In accordance with best practice guidance (CIEEM, 2016), potential effects that could occur at greater distances will be assessed with respect to international statutorily protected sites at up to 10km from the Site and national statutorily and non-statutorily protected sites up to 2km. In addition, potential effects to protected and priority fauna within 2km will be considered.

5.182. The approach to the assessment will follow the Guidelines for Ecological Impact Assessment in the UK and Ireland (2018). The evaluation of ecological resources will identify important ecological receptors that are likely to be affected by the Development. The level of importance of specific ecological features will be assigned using a geographic frame of reference.

5.183. The CIEEM Guidelines (2018) do not require the sensitivity of the important ecological feature to be assessed, the important ecological feature is described in terms of its ecological value on a geographical scale which is determined through professional judgement and is based on factors such as quality and extent of a habitat, or the rarity of a habitat or species. To more accurately define the level of importance of an ecological feature, the geographical scale referenced in the CIEEM Guidelines will be applied as set in the following table to ensure comparability with terminology used in other chapters.

Value (Sensitivity)	Descriptor (CIEEM Equivalent)
High	International
High	National
Medium	Regional, County
Low	District, Local
Negligible	Negligible

Table 18 – Sensitivity values for ecological receptors

5.184. When describing potential effects, reference will be made to the following characteristics where relevant:

- Positive or negative;
- Extent;
- Magnitude;
- Duration;
- Timing;
- Frequency; and
- Reversibility.

5.185. The significance of ecological effects will be assessed using terminology derived from CIEEM guidance (2018). The approach is summarised below:

- Designated sites and ecosystems: Significant effects encompass impacts on the structure and function of defined sites and ecosystems. For designated sites the focus is whether the Development and associated activities are likely to undermine the sites conservation objectives or negatively affect the conservation status of the species or habitats for which the site is designated. For ecosystems, the focus is whether the Development is likely to result in a change in its structure or function.

- Habitats and Species: Consideration of conservation status is important for evaluating the effects of impacts on individual habitats and species and assessing their significance. Conservation status for habitats is determined by the sum of the influences acting on the habitat that may affect its extent, structure and function as well as its typical species composition within a given geographical area. For species, it is determined by the sum of influences acting on the species concerned that may affect its abundance and distribution within a given geographical area.

5.186. The CIEEM methodology requires the significance of effects to be expressed in a geographical frame of reference which may differ from that used to describe its ecological importance. In order to ensure the description of significance of effects are comparable with effects in other chapters, the table below sets out how the CIEEM criteria translates to terminology to be used in the Environmental Statement.

Table 19 - Definitions of Significance Criteria for Ecology

Significance Criteria	Description of Criteria
Major	An effect on the conservation status of a defined site or ecosystem(s) and/or the habitats or species that is significant at a county level or above.
Moderate	An effect on the conservation status of a defined site or ecosystem(s) and/or the habitats or species that is significant at a district level.
Minor	An effect on the conservation status of a defined site or ecosystem(s) and/or the habitats or species that is significant at a local level.
Negligible (insignificant)	No significant effect on an important ecological feature.

Townscape and Visual Impact

5.187. This section has been prepared by the project's Townscape and Visual Impact consultant, Chris Burnett Associates.

Baseline

5.188. Townscape and visual impacts can arise from the addition of, or changes to, physical features in the townscape and views, which affect its character. The visual impact assessment addresses the impacts of the Proposed Development, in this case the development of the Mayfield Plot 1B on the current baseline, in terms of views within the study area of Manchester City Centre as defined by the selection of the Representative Viewpoints.

5.189. The assessment of townscape impacts will be structured around the identification of distinct blocks of townscape, or character areas, defined through homogeneity of scale, materials, land use, heritage, street pattern, open space, amongst other factors as they exist in 2024.

Likely Significant Effects

5.190. Effects of the Proposed Development on views and visual receptors during construction and operational phases will be assessed. Effects of the proposed development on Townscape Character during construction and operational phases will be assessed.

Assessment Methodology for Likely Significant Effects

5.191. The Institute of Environmental Management and Assessment (IEMA) / Landscape Institute 'Guidelines for Landscape and Visual Impact Assessment' (3rd Ed., 2013) will be used as the principal source of guidance for the methodology for this assessment. The Historic England Advice Note (No.4) on Tall Buildings, 2022 will also be used as relevant guidance. A Zone of Theoretical Visibility (ZTV) map using Lidar data superimposed onto a 10K map to provide an indication of the Proposed Developments' visibility and guide the selection of viewpoints has been produced and is submitted with this scoping report.

5.192. A number of 'Representative Viewpoints' have been agreed with MCC, all within the identified ZTV. They will inform the assessment of the effect of the Proposed Development on townscape character, views and visual receptors in more detail and on a comprehensive basis, taking in short, medium and long range views, all from publicly accessible viewpoints. Receptors fall into two categories: Townscape receptors and Visual Receptors. Viewpoints that have been selected to ensure that the Proposed Development is assessed from a 360 degree basis and from a range of different viewpoints which include approach roads, key, well used city centre streets, tram stations, urban parks, civic spaces and buildings and sensitive historic environments. A key element of the assessment will be to understand the effects on Ardwick residents in particular.

5.193. The Townscape and Visual Impact Assessment will be supported by Accurate Visual Representation (AVRs) consisting of rendered and wireline images of the Proposed Development superimposed onto baseline photographs which are accurately surveyed from selected viewpoints. Technical Note 06/19 Visual Representation of Development Proposals will be used to inform the methods for production of visualisations but a Type 4 Photomontage / Photowire (Survey/ Scale Verifiable) is deemed an appropriate level of visualization in these circumstances. The methodology for the type of visualization used is attached to this scoping report as Appendix TVIA S1.

Townscape: Sensitivity of Receptor and Magnitude of Change

5.194. The sensitivity of a townscape receptor is an expression of its ability to accommodate the Proposed Development. Sensitivity is a judgement based on a combination of the susceptibility of the type of change or development proposed and the value attached to the townscape. 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, 3rd version, para 5.40). Susceptibility is evaluated for each receptor type. The overall sensitivity of each townscape receptor would be rated within the range of High-Medium-Low and would be informed by combining the susceptibility and townscape value.

5.195. The magnitude of a townscape effect is assessed in terms of its size or scale, the geographical extent of the area influenced by that effect, and its duration and degree of reversibility and would be rated within the range of Major-Moderate-Minor-Negligible-No Change.

Visual: Sensitivity of Receptor and Magnitude of Change

5.196. In terms of assessing the baseline visual sensitivity, key factors to consider are the type of view and the likely numbers and types of viewers (the visual receptors). The type of view and the number of viewers are described in the following terms:

- Glimpsed (i.e. in passing)/ Filtered/Oblique / Framed /Open Views; and

- Few/Moderate / Many Viewers
- 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.

5.197. The GLVIA identifies that the susceptibility of visual receptors to changes in views and visual amenity is a function of:

- The occupation or activity of people experiencing the view at a particular location; and
- The extent to which their attention or interest may therefore be focused on the views and visual amenity they experience at particular locations.

5.198. The assessment of receptor sensitivity is rated on the scale High-Medium-Low and combines judgements on the susceptibility of the receptor to the specific type of development proposed and the value attributed to that receptor. The magnitude of a visual effect is assessed in terms of its size or scale, the geographical extent of the area influenced and its duration and degree of reversibility and will be rated within the range of Major-Moderate-Minor-Negligible-No Change.

Limitations and Assumptions

5.199. Views will be assessed in the summer months when foliage is at its maximum. In terms of visibility therefore this represents a best case scenario in certain views. Wherever possible views will be sought which exclude foliage.

Wind Microclimate

5.200. This section has been prepared by the project's Wind consultant, Buro Happold.

Baseline

5.201. Plots J and K for Phase 1b ('the Site') comprises of cleared open land, awaiting site remediation and reprofiling. There are no buildings or notable structures on-site. It is noted the adjacent Mayfield Park to the immediate north of the Site is a public space used for recreation, with a pedestrian walkway and seating spaces along the park's south boundary, bordering the Site.

Scope of Assessment

Likely Significant Effects

5.202. New buildings can generate wind acceleration at ground level which could result in discomfort to pedestrians. An assessment of the wind microclimate created by the Proposed Development is necessary to identify any potential impacts that the Proposed Development may have.

5.203. The impact of the cumulative proposed development in future surroundings, an assessment of the illustrative scenario of wind conditions, is needed. This assessment will consider the combined effects of the Proposed Development with the cumulative surroundings, as listed in the Committed Developments table (Appendix B).

Effect	Receptor	Applicable Development Phase (C / O)
Accelerated wind speeds	Pedestrians and users of the Site and adjacent areas	C & O

Assessment Methodology for Likely Significant Effects

5.204. There are no national codes of practice or legislative policies relating to the assessment of environmental wind flows in the built environment. The impact of environmental wind on pedestrian spaces and the subsequent suitability of these spaces for planned usage are described by the Lawson Comfort Criteria (LCC), which are recognised by local planning authorities as a suitable benchmark for wind assessments. The LCC will be applied in the wind assessment for the Proposed Development.

5.205. The closest and most suitable wind data provided by the Met Office will be obtained and a Wind Frequency Analysis will be completed. This will be applied to the quantitative assessment of the wind effects likely to occur due to the inclusion of the proposed buildings. A Computational fluid dynamics (CFD) assessment will be used to assess the wind microclimate of the Site and its surroundings and will include topographical and geometrical data will be used.

5.206. The CFD assessment will be carried out based on a RANS[24] simulation. The RANS simulations do not model the effects of gusts; however, a mathematical approximation will be used to account for it. The use of CFD is accurate for the assessment of pedestrian comfort and safety.

5.207. The evaluation criteria used will be based on the LCC to assess the level of comfort for both existing sensitive receptors and new residential uses and public routes and spaces proposed as part of the Proposed Development from which the following will be undertaken:

Baseline Assessment

5.208. In the current context, the Site is surrounded mainly by residential areas with Mayfield park and Manchester Piccadilly train station to the north. Subject to prevailing wind directions there may be acceleration to the north of the Site from downwash and lack of cover from Mayfield Park depending on existing landscaping.

Construction Assessment

5.209. Temporal effects will change depending on the phase of construction. Due consideration will be given to the temporary hoarding, during the construction phase to reduce wind acceleration on Site.

Operational Assessment

5.210. New buildings associated with the Proposed Development could generate wind acceleration at ground level, which could cause discomfort to pedestrians (e.g. along public routes and within areas of public realm). The exposed nature of parts of the Proposed Development will have the potential to generate wind acceleration which could have adverse impacts on sensitive receptors.

[24] Reynolds-averaged Navier–Stokes equations (RANS equations) are time-averaged equations of motion for fluid flow

Scope of Assessment

5.211. The investigation of suitable conditions for the planned activities with the introduction of the Proposed Development to the Site will involve a combination of statistical models of meteorological wind frequencies and computational fluid dynamics simulations for each wind direction. This approach aims to assess exceedances at comfort category thresholds using the LCC.

Ground Conditions

5.212. This section has been prepared by the project's Ground Conditions consultant, Buro Happold.

Available Baseline Information

Study / Survey / Analysis / Evaluation	Overview	Date of Completion
Mayfield Phase 1B – Phase 1 Desk Study and Data Review 51001-CE-02-XX-R-G-1001	Civic Earth was commissioned by LandsecU+I to undertake a desk study and Preliminary Risk Assessment. The report evaluated geoenvironmental and geotechnical risks and constraints associated with the proposed development, and provided recommendations for further work.	16 November 2023
Mayfield Phase 1B – Supplementary Site Investigation Report 51001-CE-02-XX-R-G-1002	Civic Earth was commissioned by LandsecU+I to undertake a site investigation specific to Mayfield Phase 1B redevelopment. The ground investigation consisted of a series of cable percussion with rotary follow-on boreholes, windowless sampling, trial pits, and inspection pits. The report provided a summary of the ground conditions encountered and an assessment of contamination. The report recommends a remediation strategy and verification plan. No further reports relating to the current ground conditions were provided to Buro Happold.	21 March 2024

5.213. The ground conditions assessment will address issues relating to existing geoenvironmental conditions at the Site, with the aim of ensuring that suitable and safe conditions are achieved for the proposed end-use.

5.214. Consideration will be given to the Site's conceptual model including geology, hydrology, hydrogeology and the geoenvironmental conditions (including potential issues associated with soil gases, chemicals within site soils and groundwater).

5.215. By considering the baseline conditions (outlined above) and proposed future use, a number of potential receptors with respect to land contamination at the Site have been identified. These are listed below:

- Future Site users
- Off-site occupiers / visitors of neighbouring land
- Construction workers
- Principal Aquifer (Chester Formation)
- Secondary A Aquifer (Alluvium and Glacial Till)
- River Medlock
- Ecological receptors (flora)
- Potable water supply pipework
- Building structures (concrete).

Scope of Assessment

Non-Significant Effects

5.216. The following effects have been identified and are not considered significant. They will not be considered further within the EIA or reported in the ES and factual evidence base has been provided in Appendix C to support this:

- Operational Health effects: The risk to future site users will be mitigated during operation through appropriate design and remediation and verification; therefore, the effect is considered not significant during operation.
- Off site occupier health effects during construction: The effects to off-site occupiers / visitors of surrounding land will be mitigated during remediation, earthworks, and construction through adoption of good construction practice. Therefore, the effect is not significant during construction.
- Phytotoxic impacts on plant species: Proposed landscaping is likely to be limited and isolated from existing Made Ground through a clean capping layer with suitable material. All future landscaping will need to meet the appropriate horticultural requirements. Therefore, the effect is not significant during construction or operation.
- Degradation of water quality: The Secondary A Aquifer is located within the Glacial Till, typically of low permeability, therefore infiltration is unlikely. Mitigation will be through the development of a Piling Risk Assessment. Following implementation of the Piling Risk Assessment, the potential for increased migration of contamination along preferential pathways (piling) would be negligible. Therefore, the effect is not significant during construction. The Principal Aquifer is covered by some thickness of Glacial Till; therefore, infiltration is unlikely. Potential for increased migration of contamination along preferential pathways (piling) are negligible. Mitigation through the development of a Piling Risk Assessment. Therefore, the effect is not significant during construction. Owing to the geological conditions, and distance to the River Medlock, migration of mobilised contamination is considered unlikely. Therefore, the effect is not anticipated to be significant during construction.

Potentially Significant Effects

Effect	Receptor	Applicable Development Phase (C / O)
Health effects: direct/dermal contact, ingestion/inhalation of contaminated soils and dusts.	Construction workers	C

Assessment Methodology for Likely Significant Effects

5.217. The assessment will consider the five baseline and development scenarios as set out in Chapter 2 of this scoping report.

5.218. Land contamination is regulated under several regimes, including environmental protection, pollution prevention and control, waste management, planning and development control, and health and safety legislation. The primary regulatory regimes under which contaminated land are managed in the UK are under the planning process described in the National Planning Policy Framework and under Part 2A of the Environmental Protection Act.

5.219. The framework for the assessment of potential land contamination adopted in this assessment will be based on current guidance documents regarding the implementation of these regimes and the assessment of potentially contaminated land, with particular reference to:

- The Environment Agency Land Contamination: Risk Management and their Guiding Principles on Land Contamination;
- British Standard BS 10175:2011+A2:2017: Investigation of Potentially Contaminated Sites; and
- Reference will also be made to regional planning policy, namely Manchester's Local Development Framework – Core Strategy Development Plan Document.

5.220. A conceptual model of the Site has been developed at desk study stage and further refined following the supplementary GI. The conceptual model describes the features together with the expected interaction of potential contamination sources by means of a Source – Pathway – Receptor analysis of the Site in accordance with the guidance documents referred to above.

5.221. Where a source, relevant pathway and receptor are present, or could be created as a result of the proposed development, a "contaminant linkage" has been identified. The presence (or potential presence) of such a linkage gives rise to a circumstance through which some level of environmental harm could occur which requires assessed and the identification of mitigation, as appropriate.

Effect prediction and assessment of effect significance

5.222. The methodology for impact prediction is based on assessing both the magnitude of the changes expected and the sensitivity of the receptors. Criteria for assessing the significance of potential human and environmental impacts will be based on a qualitative assessment of the magnitude of the impact, or how far the impact deviates from the baseline conditions, and the receptor sensitivity.

5.223. The following resources/receptors will be considered in the assessment: construction workers, future site users, surrounding land users, controlled waters (groundwater and surface water bodies), flora, and the built environment. It is not anticipated that these resources/receptors will all be significantly affected, but it is necessary to demonstrate that these important receptors have been considered. Incorporation of mitigation such as personal protective equipment (PPE) and the health and safety regime for construction workers will address the majority of any potential health risks associated with the proposed development.

5.224. Receptors are considered to have varying degrees of sensitivity to contamination potentially present beneath the Site, based on the potential scale of exposure and the integrity of any site specific exposure pathways. The scale of receptor sensitivity will be defined on a scale from very low to high.

5.225. The criteria used to assess the magnitude of effects will be based on a qualitative assessment of the level of contamination and potential seriousness of the effect or how far the effect deviates from the baseline condition and the period of time that the effect could last. The combination of the sensitivity of the receptor and the magnitude of the impact will provide an indication of the nature and severity of possible effects (rankings may vary in accordance with the different scenarios being considered baseline, construction or operation).

5.226. Positive or negative effects during construction and when the proposed development is operational will be identified. The positive effects are associated with the mitigation of risks associated with contamination. The negative effects are temporary during the construction phase and relate to the increased potential for contaminant exposure (e.g., from the generation of contaminated dusts) and long term from the use of the Site during the operational phase (and any residual contamination if remediation was inadequate or not carried out.

Limitations and Assumptions

5.227. To ensure transparency within the EIA process, the following limitations and assumptions have been identified. When considered to totality, the reports referenced above and those included as technical appendices are comprehensive and provide a reasonable level of certainty about ground conditions.

5.228. It is important to recognise that there are inherent uncertainties associated with ground conditions and the data that informs its understanding, both geotechnical and geo-environmental. For example, geological strata can be very consistent or highly variable, both laterally and vertically. Similarly, contamination can be both widespread and relatively localised, depending on its source, location, nature and mobility. No investigation, however comprehensive can be expected to determine absolutely the geological conditions, the geotechnical parameters or the nature and extent of contamination which could be present on any site. There will always be an element of uncertainty about the ground conditions, including contamination.

5.229. This potential for uncertainty associated with each of the identified potential sources of contamination and with the migration pathways that could link such sources to any of the identified receptors has been taken into consideration in the various risks assessments and in the assessment of effects presented above. It will also be considered in the assessment of the need for, scope and design of the detailed remediation strategy; in geotechnical design; in health and safety planning; in financial risk management; and in the implementation of any remediation works.

6. Summary

6.1. As set out in detail within this EIA Scoping Opinion Request relating to the Proposed Development of Phase 1b at Mayfield, a summary of the chapters proposed for inclusion in the Environmental Impact Assessment, a summary of the scope of the assessment for those chapters, and a summary of the chapters proposed to be scoped out of the assessment are provided below:

Chapters proposed for inclusion in the Environmental Impact Assessment:

- Air Quality: This chapter will assess the effects associated with emissions of NO_2 and $PM^{10}/PM^{2.5}$ generated by construction and operational traffic and will consider the impact on existing sensitive receptors, future receptors introduced by the development, and the potential for cumulative effects with other schemes.
- Climate Change and Greenhouse Gas Emissions: This chapter will quantify the embodied carbon associated with the production, construction process, and in-use stages of the development. It will also assess GHG emissions from operational energy, water, end-of-life processes, and transport.
- Daylight, Sunlight, and Overshadowing: This chapter will assess the potential reduction in daylight and sunlight amenity for nearby residential properties and the increase in shadow to surrounding amenity spaces.
- Heritage: This chapter will evaluate the impact of the development on the setting of nearby listed buildings and conservation areas, considering both temporary construction impacts and permanent operational impacts.
- Traffic and Transport: This chapter will assess the potential for severance of communities, non-motorised user delay and amenity, fear, and intimidation on and by road users, and pedestrian safety.
- Water Resources and Flood Risk: This chapter will assess the potential for changes in surface water flow, deterioration of water quality, flood risk to the site and surrounding areas, increased potable water demand, and increased foul water drainage requirements.
- Noise and Vibration: This chapter will assess the potential for temporary construction noise and vibration, changes in road traffic noise, noise from entertainment uses, and noise from building services plant.
- Socio-Economics: This chapter will evaluate the potential impacts of the development on the local economy, housing market, and social infrastructure, including employment opportunities, housing provision, spending in the local economy, and demand for educational, healthcare, open space, and play space facilities.
- Human Health: This chapter will assess the potential effects of the development on the physical and mental health of local residents, new residents, and workers, considering factors such as housing quality, access to healthcare and social infrastructure, open space, air and noise quality, active travel, crime, healthy food, employment, social cohesion, resource use, and climate change.

- **Ecology and Biodiversity:** This chapter will assess the potential effects of the development on ecological receptors.
- **Townscape and Visual Impact:** This chapter will assess the effects of the development on views and visual receptors, as well as the impact on the character of the surrounding townscape.

Chapters proposed to be scoped out of the Environmental Impact Assessment:

- **Agricultural Circumstances**: Scoped out because the site is entirely brownfield land, with no agricultural activity.
- **Archaeology**: Scoped out because any potential impacts can be fully mitigated through an Archaeological Desk-Based Assessment and appropriate mitigation measures secured through planning conditions.
- **Aviation**: Scoped out because an Aviation Safety Assessment will be prepared in consultation with Manchester Airport Group and NATS, which is expected to identify and mitigate any potential risks.
- **Broadband Connectivity:** Scoped out because superfast broadband is likely already available at the site, and if not, Fibre to the Premises (FTTP) infrastructure can be provided.
- **Solar Glare**: Scoped out because the development's design and orientation are not expected to cause significant glare impacts on nearby roads or railway lines.
- **TV Reception**: Scoped out because any potential interference with television reception can be addressed through alternative sources of coverage or adjustments to receiving equipment and is typically covered by a planning condition.

6.2. Further details relating to non-significant effects for chapters that are 'Scoped Out' and technical elements of those 'Scoped In' are provided in Appendix C.

Appendix A – Site Location Plan

General Notes

No implied licence exists. This drawing should not be used to calculate areas for the purposes of valuation.
Do not scale this drawing for construction purposes. All dimensions to be checked on site by the contractor and such dimensions to be their responsibility.
All work must comply with relevant British Standards and Building Regulations
requirements. Drawing errors and omissions to be reported to the architect.

Notes

0 100m
@ 1:2500

Key

- EIA Boundary
- Ownership Boundary

DRAFT

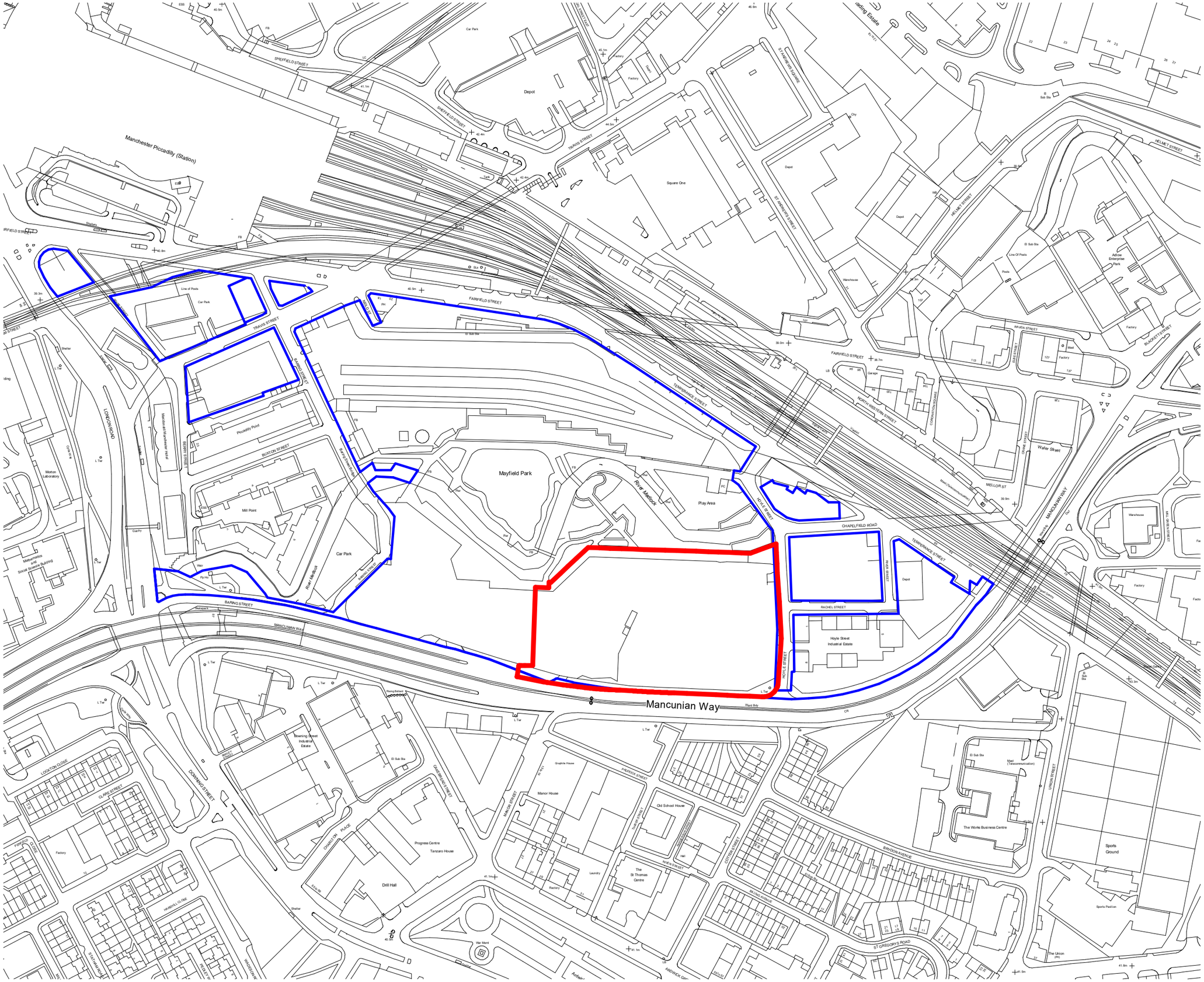
Studio Egret West
3 Brewhouse Yard
London, EC1V 4JQ
hello@egretwest.com
+44 (0) 20 7549 1730

Stage 2

Project No.	0198_MAY
Project Name	Mayfield Phase 1b
Drawing Title	EIA Boundary
Client	LandsecU+I
Scale @A3	1 : 2500
Date	10/01/24
Drawn by	TH
Checked by	SEW

Rev	Date	Reason	Chk

Drawing Number	Rev.
0198_MAY-SEW-SW1-1000-SK-L-002001	



General Notes

No implied licence exists. This drawing should not be used to calculate areas for the purposes of valuation.
Do not scale this drawing for construction purposes. All dimensions to be checked on site by the contractor and such dimensions to be their responsibility.
All work must comply with relevant British Standards and Building Regulations
requirements. Drawing errors and omissions to be reported to the architect.

Notes

0 100m
@ 1:2500

Key

Planning Boundary

Ownership Boundary

UPDATES:
19/09/24 - OS Base updated

DRAFT

Studio Egret West
3 Brewhouse Yard
London, EC1V 4JQ
hello@egretwest.com
+44 (0) 20 7549 1730

Stage 2

Project No.	0198_MAY
Project Name	Mayfield Phase 1b
Drawing Title	Site Location Plan
Client	LandsecU+I
Scale @A3	1 : 2500
Date	19.06.24
Drawn by	TH
Checked by	SEW

Rev	Date	Reason	Chk
1	19/09/24	For Information	SEW

Drawing Number	Rev.
0198_MAY-SEW-SW1-1000-DR-L-002000	1

Appendix B - Schedule of Committed Developments

Application Reference	Proposal	Date Approved	Map No.
Land Bounded By Mayfield Depot Building, Hoyle Street, Mancunian Way (A635) **124972/FO/2019**	Phased creation of circa 2.4 ha (6 acres) of public park, including hard and soft landscaping and new bridges across the River Medlock; erection of 9 storey office development above basement with mezzanine and plant level (Class B1) with ground floor Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment) B1 (Office) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway; erection of 11 storey Multi-Storey Car Park to provide 581 car parking spaces with associated landscaping; highways and infrastructure works including the creation of new junction from London Road to provide access to the multi-storey car park (MSCP) (Use Class Sui Generis); works to Baring Street, stopping up of Bond Street and Nether Street (alongside associated Traffic Regulation Orders to manage unrestricted parking to Buxton Street, Berry Street and Travis Street (to be delivered and implemented prior to the MSCP becoming operational)) alongside enabling works comprising phased demolition and site clearance, earthworks including re-profiling and construction of retaining walls for the land bounded by the Mancunian Way to the south, Mayfield Depot to the north, Baring Street to the west and Hoyle Street to the east (as amended by 132255/JO/2021)	14 February 2020 - Baseline	1.
137263/FO/2023	Erection of 9 storey office development with mezzanine and plant level (Class E) with ground and basement floor retail, cafe and / or restaurant and / or gym (Use Class E) uses, rooftop amenity spaces and terrace levels, associated public realm and riverside walkway and associated works.	18 September 2023 – Cumulative	2.
125248/FO/2019	Erection of 13 storey building (including ground and mezzanine) comprising office space (Use Class B1) above flexible uses at ground and mezzanine levels (Class A1 (Shop), A2 (Financial and Professional Services), A3 (Café and Restaurant), A4 (Drinking Establishment) /D1 (Art Gallery, Museum and Conference & Training Centre)/D2 (Cinema)/ Theatre (Sui Generis)) with rooftop amenity spaces and external terrace levels, internal ancillary storage spaces for waste, cycles, rooftop plant, back of house functions and associated landscaping works (as amended by 137349/JO/2023)	14 February 2020 – Cumulative	3.
138294/FO/2023	Erection of a part six storey, part eight storey building for use as purpose built student accommodation (PBSA) (Sui Generis) comprising 263 bed spaces, with associated amenity space, cycle parking, external landscaping, access and other associated works.	26 Apr 2024 - cumulative	4.

Application Reference	Proposal	Date Approved	Map No.
124472/FO/2019	Erection of a part 4, part 5, part 6 storey extension to existing student accommodation building to form 25 additional student flats (comprising 100 bedrooms) (Use Class Sui Generis) to form 86 student flats in total (329 bedrooms) following removal, modification and reconfiguration of existing car parking, landscaping and boundary treatment together with the erection of a single storey water tank	6 December 2019 – baseline	5.
137399/FO/2023	Erection of a 6 to 9 storey building for Sci-Tech use (Use Class E (g)(ii)) and 265sqm of a cafe/bar (Use Class E (b)), and a 9 to 23 storey building for Purpose Built Student Accommodation (PBSA) (Use Sui Generis), comprising 737 bedrooms and 293sqm of community use (Use Class F2 (b)) and 80sqm of commercial floorspace (Use Class E), alongside new public realm, access, parking, and associated works following demolition of existing buildings	January 2024 – Cumulative	6.
137401/FO/2023	Full planning application for the demolition of existing buildings and erection of three ground floor + 12/14/29 storey buildings to be used for Purpose Built Student Accommodation (Use Sui Generis), comprising 983 bedrooms in total and 506sqm of ground floor ancillary uses (café/commercial and convenience store - Use Classes E (a)/(b)/(c)), three buildings comprising ground floor + 5/7/9 storeys for Science and Innovation uses (Use Class E (g)(i) & (ii)) and 834sqm ground floor community uses (retail/ cafés and medical facility (Use Classes E (a)/(b) and (e)), and the provision of new public realm, two new public squares, new access and parking, and associated works	January 2024 - Cumulative	7.
134288/FO/2022	Erection of 15 storey building comprising office space (Use Class E(g)(i)) and ancillary flexible commercial uses (Use Class E), rooftop terrace, highway works, landscaping, and other associated works	04 November 2022 - Baseline	8.
136874/FO/2023	Erection of 3 interlinked towers ranging from 27, 21 and 16 storeys together with intermediary link buildings (15 and 11 storeys) to form Purpose Built Student Accommodation (Sui Generis) with associated amenity space and external landscaping and other associated works	12 September 2023 - Baseline	9.
125712/FO/2019	Refurbishment, restoration, reconfiguration and extension of former London Road Fire Station site to create a mixed use development comprising of hotel (Use Class C1), workspace/office (Use Class B1, D1), commercial floorspace for shop and food and drink uses (Use Classes A1,	17 April 2020 - Baseline	10.

Application Reference	Proposal	Date Approved	Map No.
	A3 and A4), residential apartments (Use Class C3) and leisure (Use Class D2), together with access and highways works, servicing, rooftop plant and associated works (as amended by 130391/JO/2021)		
132489/FO/2021	Erection of a part-33, part-11, part 9 part 7 storey residential building above semi-basement level, with associated residents' amenity space including gym (Use Class C3) (comprising 481 dwellings), commercial space (Use Class E), basement car parking (47 spaces), cycle parking (481 spaces) landscaping, and other associated works (as amended by 138008/NMC/2023)	7 October 2022 - Baseline	11.
135675/FO/2022	Erection of two residential apartment buildings (Use Class C3) comprising Block 1 -part 9, part 10 (plus roof level amenity block) and Block 2- 12 storey building (comprising of 261 dwellings in total) above basement levels with ground floor commercial units (Use Class E (excluding E (b)), associated residents amenity space, cycle parking, landscaping, access, street loading and other associated works following demolition of the existing building and structures on site (as amended by 137807/JO/2023)	27 June 2023 - Baseline	12.
115178/FO/2017	Erection of 2 linked buildings ranging in height from 8 to 10 storeys (plus roof top plant room) to provide residential accommodation (Use Class C3) comprising 18 x 1 bed, 84 x 2 bed, 15 x 3 bed, 2 x duplex (4 bed) and 9 townhouses (7 x 3 bed, 1 x 2 bed and 1 x 4 bed) (128 units in total) works to create provision for access and servicing, hard and soft landscaping (to include a secure external area and public realm linking Ducie Street to the Rochdale Canal) and associated works following the demolition of existing buildings. Development to include 128 cycle parking spaces.	16 Jan 2018 – Baseline	13.
128911/FO/2020	Erection of 9 storey residential building (Use Class C3) comprising 89 residential units (28 x 1 bed and 61 x 2 bed) and conversion of and 3 storey extension to 32-34 Laystall Street for use as offices (Class E) with associated external works following demolition of outrigger and associated structures along with other associated works including access, servicing, landscaping and secure cycle parking	02 February 2022 - Baseline	14.
119801/FU/2018	Retention of existing use of former residential building (Use Class C3) as an 84 suite apart hotel (Use Class C1), to comprise 81 suites on the first to twelfth floors and 3 suites, ancillary services and 6no. commercial units for use as shops (Use Class A1) or Financial and	27 July 2018 – Cumulative	15.

Application Reference	Proposal	Date Approved	Map No.
	Professional Services (Use Class A2) or Offices (Use Class B1) on the ground floor (as amended by 121344/JO/2018)		
120149/FO/2018	Erection of 7 to 8 storey residential building (Class C3) to provide 41 apartments (7 x 1-bedroom 1-person apartments, 6 x 1-bedroom 2-person apartments, 6 x 2-bedroom 3-person apartments, 22 x 2-bedroom 4-person apartments) with associated landscaping and other works	19 March 2019 - Baseline	16.
132626/FO/2022	Erection of 15 storey building comprising 54 apartments (Use Class C3) with associated residential facilities (residents lounge and terrace and office space), 2 car parking spaces and 57 cycle parking spaces, landscaping, access and associated development	21 December 2022 – Cumulative	17.
126608/FO/2020	Erection of part 4, part 11 storey residential (Class C3) development (with roof top plant room) comprising 66 (Class C3) residential units (3 x 2 bed town houses, 46 x two bed apartments and 17 x one bed apartments) together with associated car parking (10 spaces including 5 EVC spaces), cycle parking (66 spaces) communal roof terrace (level 6), landscaping and ancillary infrastructure including rooftop PV panels, alterations to access onto Store Street (as amended by 129395/JO/2021)	13 November 2020 - Baseline	18.
132214/FO/2021	Erection of a 15 storey building to form 107 apartments (Use Class C3) at floors 1 to 15, residential amenity facilities including a roof terrace (level 14), associated ground floor cycle storage (68 spaces), two ground floor commercial units (Use Class E/ Sui Generis (Drinking Establishment), multipurpose events Pavilion (Use Class E/ Sui Generis (Drinking Establishment), associated landscaping to site perimeter and rooftop PV panels.	1 December 2022 – Cumulative	19.
121099/FO/2018	Construction of two residential buildings (Use Class C3) comprising Block 1 (29 storeys) (224 apartments (4 x 1 bed 1 person, 52 x 1 bed 2 person, 64 x 2 bed 3 person and 104 x 2 bed 4 person) 25% 1 bed and 75 % 2 bed) Block 2 (23 storeys) (264 apartments 44 x1 bed 1 person, 44 x 1 bed 2 person, 92 x 2 bed 3 person and 84 x 2 bed 4 person) (33% 1 bed and 67%% 2 bed) with a linked central podium, to deliver 488 units, shared amenity space, 27 car parking spaces, 492 cycle spaces, landscaping (including new public park) , lighting, highways and associated works following demolition of existing buildings and structures.	16 March 2021 - Baseline	20.

Application Reference	Proposal	Date Approved	Map No.
127317/FO/2020	Erection of a part 25 part 21, part 14, part 7 storey building for 352 apartments comprising 39 Studios, 77x 1 bed, 227 x 2 bed and 9 x 3 bed (Use Class C3) with ground floor commercial space within 4 units (494m2) for Class A1 (Shop), A2 (Financial and Professional Services) A3 (Café and Restaurant), A4 (Drinking Establishment), A5 (Hot Food Take Away), B1 (Office) and D1-D2 uses, ancillary indoor and outdoor amenity space (including 1st and 21st floor external areas) car parking for 20 vehicles, cycle parking and associated hard and soft landscaping works, following demolition of existing buildings	09 February 2021- Baseline	21.
122000/FO/2018	Erection of a part 25 part 3 storey residential tower (Use Class C3) for 177 apartments comprising 59 x 1 bed (34 x 1 bed 1 person and 25 1 bed 2 person), 113 x 2 bed (44 x 2 bed 3 person and 69 x 2 bed 4 person) and 5 x 3 bed (3 bed 5 person) with ground floor commercial space (Use Class A1, A2, A3, A4 and D1) above partial basement level associated shared amenity spaces at 3rd floor level, realm enhancements following demolition of existing buildings	26 August 2020 - Baseline	22.
126261/FO/2020	Erection of a 11-storey building to form 62 residential apartments (Use Class C3a) units with associated landscaping, servicing, access, and parking.	04 August 2020 - Baseline	23.
128191/FO/2020	Erection of five office buildings and new public realm comprising: 3 no. 8 storey mixed use buildings (Buildings A, D and E) comprising workspaces (Use Class E) together with flexible uses at ground floor (Use Class E) and/or theatre/bar (Sui Generis) together with a multi use rooftop amenity area to Building A; and 2 no. 5 storey mixed use buildings (Buildings B and C) comprising workspaces (Use Class E) together with flexible uses at ground floor (Use Class E) and/or theatre/bar (Sui Generis); together with cycle parking, creation of pedestrian and cycle routes, external amenity spaces, new public realm and other associated engineering and infrastructure works (as amended by 133841/JO/2022)	18 December 2020 – Cumulative	24.
134504/FO/2022	Erection of 272 dwellings (Use Class C3) within buildings between two and four storeys in height, and a new community building (Use Class F2(b)), with associated car parking, access from Bennett Street, landscaping, creation of area of public realm, boundary treatment and other associated works, following demolition of existing buildings and structures on the site	28 February 2023 - Baseline	25.

Application Reference	Proposal	Date Approved	Map No.
138294/FO/2023	Erection of a part six storey, part eight storey building for use as purpose built student accommodation (PBSA) (Sui Generis) comprising 263 bed spaces, with associated amenity space, cycle parking, external landscaping, access and other associated works.	Pending Determination – Cumulative	26.
139986/FO/2024	Demolition of existing part vacant buildings and erection of a part 10 storey, part 27, part 28 storey residential development comprising 359 homes (Use Class C3) with supporting amenity spaces, and associated highways works, landscaping, plant areas, and other associated works	Pending determination - cumulative	27.


NQUARTS
Piccadilly Trading Estate
BESWICK
ARDWICK
UNIVERSITY
BRUNSWICK
HULME
Medlock Primary School
Trinity Church of England High School
Manchester Science Park
The Dean Trust Ardwick School
Oldham Road
Rochdale Canal
Bradford Road
Ashton New Road
Ashton Canal
Oldham Street
Lever Street
Deansgate
Quay Street
Peter Street
Store Street
Pollard Street
Every Street
Palmerston Street
Ryland Street
Alan Turing Way
Duke's Tunnel
Fairfield Street
Mancunian Way
Gorton Road
Hyde Road
Bennett Street
Wenlock Way
Pottery Lane
Stockport Road
Plymouth Grove
Princess Road
Oxford Road
A665
A662
A6010
A5103
B6469
A635
A57 (M)
B5117
A6
A57
A34
Car Park H
Orange Car Park
500 m
1000 ft
Leaflet | © Bing Maps | Terms of use

Appendix C – Non-Significant Environmental Effects

Air Quality

Effect	Nuisance, disturbance from dust soiling, and adverse health effects resulted from dust and PM_{10} generated by construction activities.	**Applicable Development Phase (C / O)**	C	**Receptor**	Existing sensitive receptors within 250m from the Site boundary or 50m from the vehicle trackout routes.
Discussion of Effect					
Construction activities have the potential to result in dust-soiling and will have the potential to cause a loss of amenities and potential nuisance. Dust and PM_{10} emissions generated from construction activities can negatively affect human health.					
Mitigation Committed to in order to Avoid or Reduce Effect					
It is anticipated that dust and particulate matter emissions produced during construction activities will be controlled by implementing a CEMP. This CEMP will be informed by the Institute of Air Quality Management (IAQM) Guidance and would include prevention measures, such as screening stockpiles of materials, deployment of windbreak netting, and dampening exposed soils as appropriate and set out requirements for ongoing monitoring and liaison with the local community, and MCC. These tertiary mitigation measures would be considered an integral part of the Proposed Scheme and considered as part of the Schedule of Mitigation.					
Concluding Statement					
Nuisance, disturbance from dust soiling, and adverse health effects from dust and PM10 generated by construction activities will be scoped out of the air quality ES chapter as implementing these tertiary mitigation measures will ensure that residual effects are not significant. The construction dust risk assessment and proposed mitigation measures will be included as a technical appendix to the air quality ES chapter.					

Effect	Emissions released from energy combustion plant	**Applicable Development Phase (C / O)**	O	**Receptor**	Existing sensitive receptors in the vicinity of the Site and future residents of the Proposed Development
Discussion of Effect					
Combustion plants, such as gas-fired boilers and CHP units, can release NO_X and NO_2 emissions that can have an adverse impact on local sensitive receptors.					

Mitigation Committed to in order to Avoid or Reduce Effect
The Proposed Development will utilise an all-electric energy strategy. The only proposed energy combustion sources on-site will be for life safety purposes (such as firefighting/emergency lighting, etc.), with limited testing (less than 18 hours a year). The energy plant will be located and operated in line with best practices. These primary mitigation measures would be considered an integral part of the Proposed Scheme.
Concluding Statement
As no combustion sources are proposed for the primary energy supply, no local air quality impacts are anticipated. Therefore, emissions released from energy combustion plants to nearby sensitive receptors are unlikely to be considered significant and will not be considered within the EIA or reported in the ES.

Effect	Odour emissions from any proposed Class E uses	**Applicable Development Phase (C / O)**	O	**Receptor**	Existing sensitive receptors in the vicinity of the Site and future users of the Proposed Scheme
Discussion of Effect					
Odour emissions from any proposed Class E use included as part of the Proposed Scheme may have a significant impact on local air quality in the vicinity of the Site.					
Mitigation Committed to in order to Avoid or Reduce Effect					
Odour emissions from any proposed Class E use included as part of the Proposed Scheme will be mitigated through the implementation of an odour management system, which would be enforced through a planning condition, linked to the detailed design of the kitchens proposed, when this is available. The odour assessment will be completed in line with EMAQ 2018 Addendum to the 2005 Defra Guidance on the 'Control of Odour and Noise from Commercial Kitchen Exhaust Systems'.					
Concluding Statement					
The assessment will ensure that the odour from kitchen extracts does not cause a significant impact. Therefore, effects of odour emissions on nearby sensitive receptors are unlikely to be considered significant and will not be considered within the ES.					

Green House Gas and Climate Change

Effect	GHG emissions associated with waste generated by the Proposed Development during the operational phase	**Applicable Development Phase (C / O)**	O	**Receptor**	The global atmosphere
Discussion of Effect					
The opportunities for design and construction decisions to significantly influence the reduction of GHG emissions associated with operational waste are low, as it is highly dependent on occupant behaviour and waste processing at the city scale by the Local Authority. The emissions associated with operational waste					

are also not expected to be material in scale, such that they could influence the overall significance of effects, and are therefore proposed to be scoped out.
Mitigation Committed to in order to Avoid or Reduce Effect
Tertiary mitigation: A Waste Management Strategy will be submitted alongside the planning application. This will set out how physical and operational interventions will be adopted that follow the waste hierarchy.
Concluding Statement
GHG emissions associated with operational waste are proposed to be scoped out as they are not expected to be material in scale, such that they could influence the overall significance of the GHG effects. A Waste Management Strategy shall be submitted for the Proposed Development alongside the planning application in due course.

Effect	GHG emissions associated with carbon sequestration of green infrastructure	**Applicable Development Phase (C / O)**	O	**Receptor**	The global atmosphere
Discussion of Effect					
GHG emissions associated with carbon sequestration from proposed green infrastructure would be low relative to the total GHG emissions over the life of the Proposed Development. They would also ultimately reduce the emissions from the Proposed Development, rather than increase them. On the basis that the emissions would be small and would lead to an overall reduction in emissions, excluding them from the assessment is considered conservative and robust.					
Mitigation Committed to in order to Avoid or Reduce Effect					
No mitigation required.					
Concluding Statement					
On the basis that GHG emissions associated with carbon sequestration of green infrastructure will be low relative to the GHG emissions over the whole life of the proposed development and would lead to an overall reduction in emissions, excluding them from the assessment is considered conservative and robust.					

Effect	GHG emissions associated with beyond building lifecycle	**Applicable Development Phase (C / O)**		**Receptor**	The Global Atmosphere
Discussion of Effect					
This stage encompasses emissions associated with activities beyond the Site boundary and life cycle of the Proposed Development. This relates to the repurposing of discarded building elements or any energy recovered from beyond a project's lifecycle. The IEMA guidance states that "Certain life cycle modules (or stages) can be excluded if these exclusions are clearly highlighted and justified by the practitioner using professional judgement and in accordance with the materiality and cut-off guidance." Reliable information about how the components of the Proposed Development could potentially be repurposed following its demolition at the end of its life is not currently available. Given that this module (Module D) lies outside the Proposed Development's lifecycle and only covers GHG emissions that could potentially be avoided as a					

result of repurposing of discarded materials, it is considered that the proposed assessment of project's lifecycle emissions (Modules A to C) (only) comprises a conservative assessment. On this basis, consideration of Module D is proposed to be excluded from the scope of the assessment.
Mitigation Committed to in order to Avoid or Reduce Effect
No mitigation is required
Concluding Statement
GHG emissions associated with the beyond building lifecycle stage (Module D) are proposed to be scoped out on the basis that the proposed assessment of project's lifecycle emissions (Modules A to C) (only) comprises a conservative assessment.

Daylight, Sunlight and Overshadowing

Effect	Reduced daylight and sunlight amenity within commercial properties or distant residential properties	**Applicable Development Phase (C / O)**	O	**Receptor**	All
Discussion of Effect					
The scope of works will focus on the nearest sensitive receptors which are the residential receptors and public amenity spaces in the immediate vicinity of the Site. These have been determined in line with the reasonable expectation of daylight and sunlight as per the BRE guidelines. The BRE guidelines consider that residential properties have the highest requirement for daylight and sunlight. As such, daylight and sunlight effects to commercial buildings surrounding the Site, or residential buildings which are not in sufficient proximity to the Site, are not considered to be significant and will not be considered further in the EIA or reported in the ES.					
Mitigation Committed to in order to Avoid or Reduce Effect					
None					
Concluding Statement					
Reduced daylight and sunlight amenity within commercial properties or distant residential properties will not be assessed.					

Effect	Reduced daylight and sunlight amenity within surrounding residential receptors during demolition and construction	**Applicable Development Phase (C / O)**	C	**Receptor**	All

Discussion of Effect
Owing to the evolving and changing nature of construction activities, the assessment of potential effects during construction of the Proposed Scheme on daylight and sunlight to surrounding properties will not be modelled. Since the potential daylight and sunlight effects relating to construction works will vary throughout the construction programme and gradually increase to the potential effects identified for the completed Proposed Development, the interim construction effects will not be assessed quantitatively as it is considered that the completed Proposed Development represents the worst-case assessment in terms of likely daylight and sunlight. Therefore, reduced daylight and sunlight amenity within the surrounding residential receptors during the demolition and construction phases is not considered to be significant (or if it is, only on parity with the completed Proposed Scheme) and will not be considered further in the EIA or reported in the ES.
Mitigation Committed to in order to Avoid or Reduce Effect
None
Concluding Statement
Reduced daylight and sunlight amenity within surrounding residential receptors during demolition and construction phase will not be assessed.

Effect	Daylight & Sunlight within the proposed Residential Accommodation and Areas of Amenity Space	**Applicable Development Phase (C / O)**	O	**Receptor**	Proposed Site
Discussion of Effect					
As these assessments are not effect assessments, they will not be included within the ES Chapter.					
Mitigation Committed to in order to Avoid or Reduce Effect					
None					
Concluding Statement					
Daylight & Sunlight within the proposed residential accommodation and areas of amenity space will not be assessed.					

Traffic and Transport

Effect	Hazardous/large loads

Discussion of Effect

Dangerous / hazardous loads are not generally associated with the construction of mixed-use commercial and residential-led developments, as movements are primarily by HGV and Light Good Vehicles (LGVs) / Medium Good Vehicles (MGVs). The requirements for any such loads requiring access during construction will therefore be limited. A methodology statement will be included within the Construction Environmental Management Plan (CEMP) to be presented and agreed with the Local Highway Authority and HSE, where appropriate. Such a statement would include the details of trained operators, provision of appropriate audio / visual aids and / or proximity devices where operator visibility is restricted and the designation of dedicated loading / unloading areas.

For operation of the Proposed Scheme, due to the uses proposed, the Proposed Scheme would not require the transportation of dangerous or hazardous loads.

Therefore, effects related to hazardous loads are not considered significant and will not be considered further within the EIA or reported in the ES.

Mitigation Committed to in order to Avoid or Reduce Effect

CEMP as above

Concluding Statement

Hazardous/large loads are not expected during the construction or operation stage. If they are required these will be highly managed via the CEMP and site management, and therefore effects are not considered significant.

Effect	Road Vehicle Driver and Passenger Delay

Discussion of Effect

The change in vehicle flows arising from the development will be extremely low, as this is a car-free scheme.

The scheme will only directly generate LGV, OGV and taxi movements, which at their busiest will only amount to 17 vehicles during the highway peak hours, and 25 in the interpeak hours.

IEMA Guidelines indicate that the effect of Road Vehicle Driver and Passenger Delay is only likely to be significant at junctions which are at or close to their operational capacity. However, with an increase in traffic flows of just 17 vehicles at the times that the nearby junctions will be at their busiest, the change will be imperceptible, and therefore will not be assessed in more detail.

Mitigation Committed to in order to Avoid or Reduce Effect

n/a

Concluding Statement

The impact of the development on Road Vehicle Driver and Passenger Delay is not considered significant as the change in hourly flows is very low during the times that nearby junctions would be at their busiest.

Ground Conditions

Effect	Health effects	**Applicable Development Phase (C / O)**	O	**Receptor**	Future site users / visitors
Discussion of Effect					
Negative health effects to future site users due to dermal contact with or the direct / indirect ingestion of residual contaminated soil, inhalation of contaminated dust and / or hazardous fibrous substances, ingestion of contaminated water supplies. Proposed future use is commercial and retail at grade level with mid to high rise residential plots above one and two storey podium levels. The podium level will contain a podium garden. It is assumed there will be a mix of hard and soft landscaping at grade level, although this has not been confirmed. No basements are proposed.					
Mitigation Committed to in order to Avoid or Reduce Effect					
Primary mitigation will be achieved through encapsulation as part of the building construction and hard landscaping areas (i.e. limiting the potential for dust generation). Further primary mitigation to mitigate direct contact and ingestion of contaminated soils will be achieved through use of clean capping layer at grade level comprising suitable material (either site won or imported) in soft landscaped areas. Furthermore, podium garden soils will comprise of suitable soils either site won or imported. Primary mitigation will be carried out as part of the design. Secondary mitigation will include measures that are required by planning conditions such as the remediation strategy and validation plan and reports.					
Concluding Statement					
The risk to future site users will be mitigated during operation through appropriate design and remediation and verification; therefore, the effect is considered not significant during operation.					
Effect	Health effects	**Applicable Development Phase (C / O)**	C	**Receptor**	Off site occupiers / visitors of neighbouring land
Discussion of Effect					
The proposed development has the potential to affect surrounding site users within close proximity to the Site and site occupiers by inhalation of contaminated dust generated during remediation, earthworks and construction.					
Mitigation Committed to in order to Avoid or Reduce Effect					
Tertiary mitigation will comprise development of a Construction Management Plan which sets out the appropriate investigation and adoption of good construction practice to prevent dust generation.					
Concluding Statement					

The effects to off site occupiers / visitors of surrounding land will be mitigated during remediation, earthworks and construction through adoption of good construction practice. Therefore, the effect is not significant during construction.					
Effect	Phytotoxic impacts on plant species	**Applicable Development Phase (C / O)**	C & O	**Receptor**	Flora
Discussion of Effect					
Root uptake from contaminated materials within the Made Ground (phytotoxic element)					
Mitigation Committed to in order to Avoid or Reduce Effect					
Mitigation will include a clean capping layer with suitable material in soft landscaping areas with imported materials needed to meet horticultural requirements. A clean capping layer mitigates the risk of contact with underlying contaminated materials.					
Concluding Statement					
Proposed landscaping is likely to be limited and isolated from existing Made Ground through a clean capping layer with suitable material. All future landscaping will need to meet the appropriate horticultural requirements. Therefore, the effect is not significant during construction or operation.					
Effect	Degradation of water quality	**Applicable Development Phase (C / O)**	C	**Receptor**	Secondary A Aquifer
Discussion of Effect					
During the construction of the proposed development, there is a potential for the mobilisation of contamination. This is because, during earthworks the removal of sealed surfaces / hardstanding and the excavation of ground (for services / foundations etc.) there is a potential for increased rainwater infiltration. The construction of deep foundations (e.g. piled foundations) and service trenches also presents the potential for the creation of preferential migration pathways. Therefore, there is a consequent increased potential for the downward migration of contamination into the underlying Secondary A Aquifer. The Secondary A Aquifer is present within the Alluvium and Glacial Till. Piling could create a preferential pathway, and trenches could potentially penetrate beyond the Made Ground into the underlying superficial deposits.					
Mitigation Committed to in order to Avoid or Reduce Effect					
Primary mitigation of the potential risks can be achieved through appropriate risk assessment and design. Secondary mitigation will include measures that are required by planning conditions such as a Piling Risk Assessment.					
Concluding Statement					
The Secondary A Aquifer is located within the Glacial Till, typically of low permeability, therefore infiltration is unlikely. Mitigation will be through the development of a Piling Risk Assessment. Following implementation of the Piling Risk Assessment, the potential for increased migration of contamination along preferential pathways (piling) would be negligible.					

Therefore, the effect is not significant during construction.					
Effect	Degradation of water quality	**Applicable Development Phase (C / O)**	C	**Receptor**	Principal Aquifer
Discussion of Effect					
During the construction of the proposed development, there is a potential for the mobilisation of contamination. This is because, during earthworks the removal of sealed surfaces / hardstanding and the excavation of ground (for services / foundations etc.) there is a potential for increased rainwater infiltration. The construction of deep foundations (e.g. piled foundations) and service trenches also presents the potential for the creation of preferential migration pathways. Therefore, there is a consequent increased potential for the downward migration of contamination into the underlying Principal Aquifer.					
Mitigation Committed to in order to Avoid or Reduce Effect					
The Principal Aquifer is located within the Chester Formation, beneath a thickness of low permeability Glacial Till. Piling could create a preferential pathway, however service trenches are unlikely to penetrate beyond the Glacial Till. Primary mitigation of the potential risks can be achieved through appropriate risk assessment and design. Secondary mitigation will include measures that are required by planning conditions such as a Piling Risk Assessment.					
Concluding Statement					
The Principal Aquifer is covered by some thickness of Glacial Till, therefore infiltration is unlikely. Potential for increased migration of contamination along preferential pathways (piling) are considered to be negligible. Mitigation through the development of a Piling Risk Assessment. Therefore, the effect is not significant during construction.					
Effect	Degradation of water quality	**Applicable Development Phase (C / O)**	C	**Receptor**	River Medlock
Discussion of Effect					
During construction of the proposed development, there is a potential for the mobilisation of contamination, increased rainwater infiltration, and the creation of preferential pathways (e.g. drainage runs / below ground service trenches) and a consequent potential for the migration of contamination into the nearby River Medlock.					
Mitigation Committed to in order to Avoid or Reduce Effect					
There is a potential for increased infiltration and promotion of leaching during earthworks and construction. However, the River Medlock is ~85m north of the Site. Owing to the geological conditions (low permeability Glacial Till) and distance to the river, migration of mobilised contamination is considered unlikely. Mitigation of potential risks can be achieved through appropriate risk assessment, design and good construction practices.					
Concluding Statement					
Owing to the geological conditions, and distance to the River Medlock, migration of mobilised contamination is considered unlikely. Therefore, the effect is not significant during construction.					

Effect	Degradation of water quality & Health effects	**Applicable Development Phase (C / O)**	O	**Receptor**	Potable water supply network
Discussion of Effect					
Certain contaminants can permeate plastic water supply pipework laid directly in contaminated ground, leading potentially impacted water supply and negative human health effects.					
Mitigation Committed to in order to Avoid or Reduce Effect					
Primary mitigation can be achieved through appropriate design, with a full UKWIR assessment to be undertaken and recommendations for barrier pipes, if deemed required.					
Concluding Statement					
Primary mitigation through appropriate design. Therefore, the effect is not significant during operation.					
Effect	Degradation of buried concrete	**Applicable Development Phase (C / O)**	O	**Receptor**	Structures (concrete)
Discussion of Effect					
Ground conditions containing sulphates and acidity in soil and groundwater can cause concrete deterioration.					
Mitigation Committed to in order to Avoid or Reduce Effect					
Primary mitigation can be achieved through appropriate design, with an assessment undertaken in accordance with BRE SD 1 and recommendation of Design Sulphate and ACEC classification.					
Concluding Statement					
Primary mitigation through appropriate design. Therefore, the effect is not significant during operation.					

Appendix D – Air Quality Monitoring Results

Deloitte.

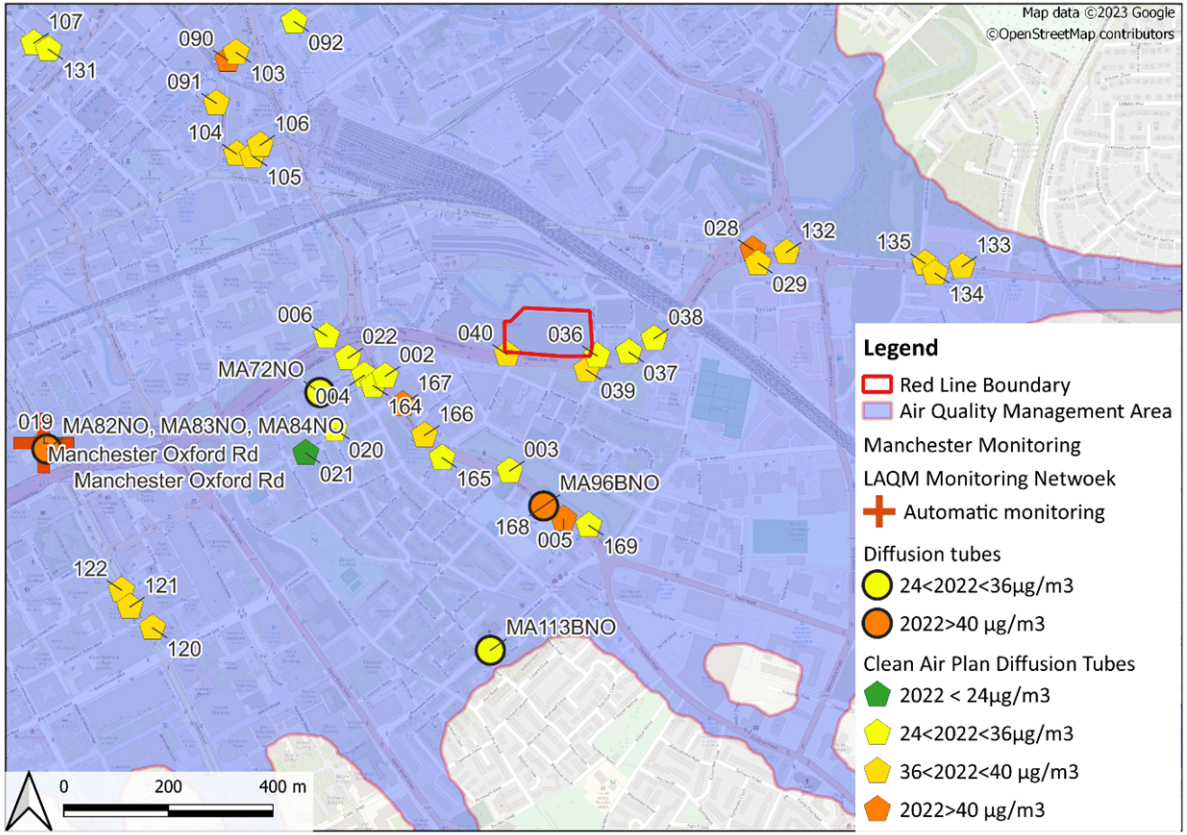


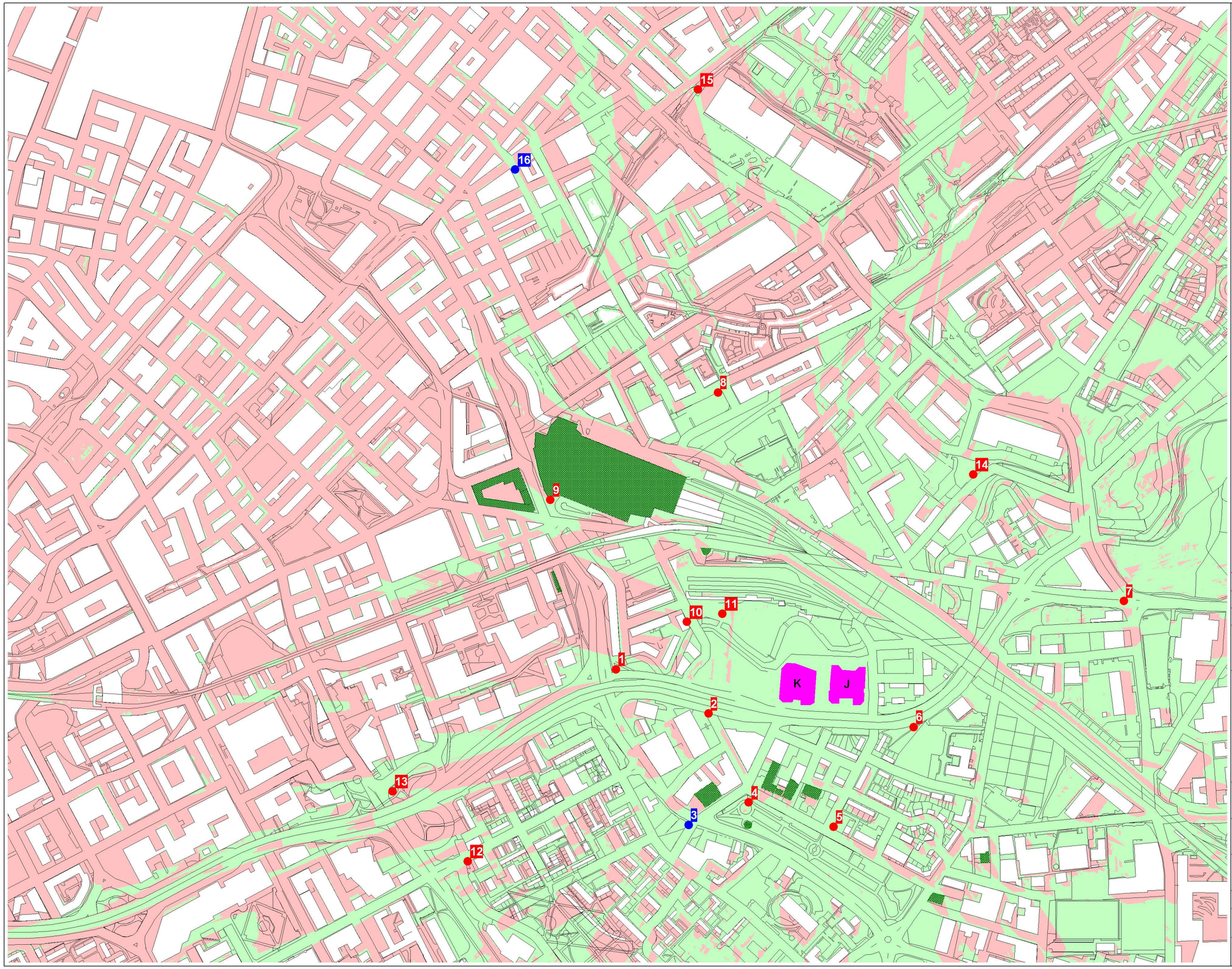
	Figure	1
	Title	Air quality monitoring sites in proximity to the proposed development, labelled and colour coded based on 2022 annual average NO_2 levels.
	Project	Mayfield Phase 1B
	Date	15/05/2024

Deloitte LLP is a limited liability partnership registered in England and Wales with registered number OC303675 and its registered office at 1 New Street Square, London, EC4A 3HQ, United Kingdom.

Deloitte LLP is the United Kingdom affiliate of Deloitte NSE LLP, a member firm of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"). DTTL and each of its member firms are legally separate and independent entities. DTTL and Deloitte NSE LLP do not provide services to clients. Please see www.deloitte.com/about to learn more about our global network of member firms.

© 2022 Deloitte LLP. All rights reserved.

Appendix E – TVIA Zone of Visual Influence Plan



Key

- footprints of proposed buildings
- Grade II Listed Building
- townscape viewpoint
- heritage viewpoint
- building(s) visible
- building(s) not visible
- OS Local Vector building footprints and/or DSM no data values

(NB Viewshed analysis is calculated from the top of the buildings to locations 1.6m above the DSM data taking into account a normal earth surface curvature correction.)

0.0 60.0 120.0
metres

Date	Details	Revision
03/05/24	Additional viewpoint locations.	-01
24/09/24	Additional viewpoint location.	-02

© Chris Burnett Associates 2024. Not to be reproduced in whole or in part without written permission. This product includes mapping data licensed from Ordnance Survey ®. © Crown copyright and/or database right 2024. Licence No. 0100031673.

CHRIS BURNETT associates
Landscape Architects
White House Farm
Shocklach, Malpas
Chester SY14 7BN
Tel: 01829 250646
Fax: 01829 256527
Mob: 07809 029810
chris@chrisburnettassociates.co.uk
www.chrisburnettassociates.co.uk

Client **Landsec U&I**

Project **Mayfield Plot 1b, Manchester**

Title **Viewshed Analysis, Listed Buildings & Provisional Viewpoint Locations**

Scale **1:6,000 @ A3**

Date	Drawn	Checked
24/09/24	JHD	CB

Reference **MP1bVIA24.03** Revision **-02**

N

Appendix F – Plan of Heritage Assets

APPENDIX TVIA S1 TOWNSCAPE AND VISUAL IMPACT ASSESSMENT: VISUAL REPRESENTATION OF DEVELOPMENT PROPOSALS

Introduction

Recent guidance published by the Landscape Guidance in October 2019, LI Technical Guidance Note 06/19 Visual Representation of Development Proposals, recommends that not only TVIA Representative Viewpoints are agreed with the competent authority, Manchester City Council, (MCC) in this case, but also the methodology used in the Visual Representation of Development Proposals itself is agreed.

This advice note seeks to explain why, and seek agreement for, the need for specialist lens equipment in the preparation of Verified Views for tall buildings.

AVR TYPE

TYPE 4 PHOTOMONTAGE / PHOTOWIRE (SURVEY/ SCALE VERIFIABLE)

This is the most sophisticated form of visualization and judged to be the most appropriate level in these circumstances where the planning application is supported by a full EIA and the subject is a tall building.

As LI Technical Guidance note 06 / 19 states:

'*Type 4 photomontages and / or photowires require the use of equipment and processes which provide quantifiable verification data, such that they may be checked for accuracy (as per industry-standard 'AVRs' or 'Verified Views'). Precise survey of features and viewpoint / camera locations may be included where warranted. Type 4 visualisations represent the highest level of accuracy and verifiability for use in the most demanding of situations'*

and

'Type 4 visualisations are photomontages or photowires, produced using quantifiable data, with procedural transparency and appropriate levels of accuracy. This involves using a defined camera / lens combination and establishing the camera location with sufficient locational accuracy to enable accurate scaling and location of the 3D model within the view. In addition, the print presentation size can be determined to provide binocular image scaling when appropriate.'

The guidance states that a 50mm lens should be used '**unless there are exceptional circumstances**' we believe that the assessment of a tall building in a townscape setting is an exceptional circumstance where a wide angle tilt shift lens is justified. This is because:

- The height of the building will inevitably mean that the top of the building is often cut off if a standard 50mm lens is used as the ridgeline is often more than 18˚from the horizontal
- Often close up views are necessary to assess the effect of the Proposed Development on the immediate streetscape, often in areas of tight urban grain

- Skylines and clusters of tall buildings are an important part of a TVIA where the insertion of a new tall building into an existing cluster or, as a new feature on the skyline or horizon, is an essential part of understanding its contextual fit.

For these reasons we are proposing to use a Canon EOS 5D Mark IV with sensor size 36 x 24mm lens

This is not without precedent as most TVIAs produced as part of EIAs for Tall Buildings in Manchester to date have used this equipment effectively to demonstrate accurately and verifiably the visual and townscape effects of a tall building on the townscape and views. As Technical Guidance note 06 / 19 notes:

'If the site / setting cannot be captured with the 50mm lens (e.g. close, tall buildings), consider alternative lenses. If a 50mm FL lens cannot capture the view in landscape or portrait orientation (for example, if the highest point of the development is approaching 18° above horizontal) the use of wider-angled prime lenses should be considered, working through the following sequence of fixed lenses in this order: 35mm FL > 28mm FL > 24mm FL > 24mm FL Tilt-Shift'

PRESENTATION AND VIEWING DISTANCE

An equally important feature of the new guidance is how the images are presented and how they are viewed. Again, the guidance offers some useful advice which we propose to follow in this instance.

Research by the LI Working Group in the preparation of this guidance, carried out across several cities, suggests that, in mid- to smaller-scale landscapes / townscapes, an enlargement around halfway between 100% and 150% results in a binocular relationship between the presented image and reality…… notwithstanding the above, SNH considers that consistent use of 150% enlargement is beneficial

So, in these circumstances we propose to present each image, consisting of baseline, proposed and cumulative for each viewpoint is presented as an A3 PDF which then be viewed digitally or printed, if necessary, at A2 to obtain a 141% enlargement to achieve the recommended enlargement ratio. Each image when printed should be viewed, again as stated in the guidance, at a comfortable arm's length.

Chris Burnett Associates May 2024
Landscape Architects

Deloitte.

This document is confidential and it is not to be copied or made available to any other party. Deloitte LLP does not accept any liability for use of or reliance on the contents of this document by any person save by the intended recipient(s) to the extent agreed in a Deloitte LLP engagement contract.

If this document contains details of an arrangement that could result in a tax or National Insurance saving, no such conditions of confidentiality apply to the details of that arrangement (for example, for the purpose of discussion with tax authorities).

Deloitte LLP is a limited liability partnership registered in England and Wales with registered number OC303675 and its registered office at 1 New Street Square, London, EC4A 3HQ, United Kingdom.

Deloitte LLP is the United Kingdom affiliate of Deloitte NSE LLP, a member firm of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"). DTTL and each of its member firms are legally separate and independent entities. DTTL and Deloitte NSE LLP do not provide services to clients. Please see www.deloitte.com/about to learn more about our global network of member firms.

© 2024 Deloitte LLP. All rights reserved.