



33-41 Cheetham Hill Road, Environmental Statement

Contents

Iceni Projects Limited on behalf of
ZX Cheetham Hill Developments Limited

May 2024

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EIA Quality Mark

This Environmental Statement, and the Environmental Impact Assessment (EIA) carried out to identify the significant environmental effects of the proposed development, was undertaken in line with the EIA Quality Mark Commitments.

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Chapter 1: Introduction

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1. INTRODUCTION AND EIA METHODOLOGY

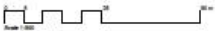
Introduction

- 1.1 This Environmental Statement (ES) has been prepared by Icen Projects and a team of technical experts on behalf of ZX Cheetham Hill Developments Limited (the 'Applicant'). The ES accompanies a full (detailed) planning application, submitted to Manchester City Council ('MCC') for the redevelopment of '33-41 Cheetham Hill Road' (the 'Site').
- 1.2 The Site, approximately 0.12 hectares (ha) in size is currently vacant, having most recently been in use as a car wash and car dealership.
- 1.3 The Site is situated wholly within the administrative boundary of MCC. The planning application boundary is shown in **Figure 1.1** and **Appendix 1.2**.
- 1.4 This chapter is accompanied by the following technical appendices:
- **Appendix 1.1:** Location of Specified information in the ES;
 - **Appendix 1.2:** Site Location Plan;
 - **Appendix 1.3:** Scoping Report (October 2023);
 - **Appendix 1.4:** MCC Scoping Opinion (December 2023);
 - **Appendix 1.5:** Scoping Opinion Response Table;
 - **Appendix 1.6:** Geo-Environmental Investigation and Assessment; and
 - **Appendix 1.7:** Noise Impact Assessment.

Overview of the Proposed Development

- 1.5 The Applicant is seeking full planning permission for the following:
- "Demolition of existing on-site buildings and structures and development of part 17 / part 23 storey building to accommodate residential apartments (Class C3), along with ancillary resident amenity facilities, ground floor commercial unit (Use Class E), cycle parking, hard and soft landscaping and other ancillary works"*
- 1.6 A more detailed description of the Proposed Development is provided in **Chapter 3: Proposed Development**.

Figure 1.1 Site Location Plan



Planning Context and History

Planning Context

- 1.7 The relevant Development Plan is provided by Manchester City Council's adopted Core Strategy ("CS")ⁱ, coupled with the saved policies of the Manchester Unitary Development Plan ("UDP") (1995).
- 1.8 The Site falls within the Regional Centre, as designated by Policy EC3 (Regional Centre), and is also within the area of the city defined by Policy H3 as 'North Manchester'. In addition, it forms part of an Economic Improvement Area, as defined by UDP Policy CC10 (Economic Improvement Area), which covers the wider Strangeways and lower Cheetham Hill Road areas.
- 1.9 The Site also falls within the Great Ducie Street Strategic Regeneration Framework ("SRF") areaⁱⁱ which is positioned to the north of the city centre, extending northwards from Manchester's Inner Ring Road adjacent to the Manchester Arena. It encompasses but does not include the former Boddington's Brewery Site.
- 1.10 The Site also falls within the Great Ducie Street Strategic Regeneration Framework ('SRF') area, which is positioned to the north of the City Centre. The Great Ducie Street SRF was adopted by MCC in November 2018, and is a material consideration in the determination of planning applications for sites within the Framework area.

Planning History

- 1.11 Planning permission was granted on the Site (on appeal) in May 2018 for an 8-storey building to create a 147 bedroom Hotel (Use Class C1) with two basement levels of car parking (providing 86 spaces) and a restaurant, back of house area and WCs to the ground floor (ref. 114607/FO/2016). This consent was not implemented and expired in May 2021.
- 1.12 Prior to this, consent was granted in November 2013 for the erection of a 2-storey mixed use development comprising of 417 sqm of retail floorspace (Use Class A1) at ground floor and a gym (Use Class D2) at first floor and associated car parking, landscaping, and boundary treatment, following demolition of the existing building (ref. 103354/FO/2013/N1).

Background to the EIA Process

- 1.13 The ES reports the findings of the Environmental Impact Assessment ('EIA') process, which is a systematic assessment of the likely significant effects of the Proposed Development. The EIA process is required by UK law for certain types of development projects and informs decision makers of the likely significant environmental effects when determining a planning application. The EIA is a process for identifying and, where necessary, mitigating and/ or enhancing (where beneficial) the likely significant environmental effects of a development. On the basis of mitigation measures implemented, where required, the significance of likely residual effects are identified. The EIA is an iterative process whereby environmental studies inform the design of development to prevent, reduce or offset any significant adverse effects, as far as practicably possible.
- 1.14 The ES was prepared to comply with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) (the 'EIA Regulations')ⁱⁱⁱ. These EIA Regulations set out the statutory requirements for carrying out an EIA, the contents of the ES and the procedures for

determining planning applications for 'EIA Development'. The information required for inclusion in an ES is defined by Regulations 4(2),18(3)/(4)/(5) and Schedule 4 of the EIA Regulations. **Appendix 1.1** sets out these information requirements together with their location in the ES.

1.15 The Proposed Development falls within Category 10(b) of Schedule 2 of the EIA Regulations, which is applicable to '*Urban Development Projects*'. The thresholds for such developments that require an EIA are:

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

1.16 For such developments, the EIA Regulations require that an EIA is undertaken where the development is '*likely to have significant effects on the environment by virtue of factors such as its nature, size and location*'.

EIA Guidance

1.17 The following good practice guidance was also considered when undertaking the EIA including:

- National PPG – Environmental Impact Assessment^{iv};
- Institute of Environmental Management and Assessment (IEMA) Update to Guidelines for Environmental Impact Assessment (2016)^v;
- IEMA (2011) The State of Environmental Impact Assessment Practice in the UK^{vi};
- Recent EIA case law, where appropriate; and
- Topic specific guidance and assessment criteria, where appropriate.

1.18 Each technical assessment presented in this ES will follow respective national and local planning policy and guidance as appropriate to their discipline.

Scoping Process

1.19 In accordance with EIA Regulations and best practice guidance (see below), the Applicant submitted an EIA Scoping Report in October 2023 to MCC (**Appendix 1.3**) to determine the scope of the EIA.

1.20 Planning Practice Guidance (PPG) advises (at Paragraph: 002 Reference ID: 4-002-20140306) that:
"Local planning authorities and developers should carefully consider if a project should be subject to an Environmental Impact Assessment. If required, they should limit the scope of assessment to those aspects of the environment that are likely to be significantly affected."

1.21 In this context, a Scoping Opinion (**Appendix 1.4**) was received from MCC in December 2023. MCC determined that the scope of the EIA should comprise the following:

- Climate Change;
- Built Heritage;

- Human Health;
 - Townscape and Visual Impact Assessment (TVIA);
 - Socio-Economics;
 - Sunlight, Daylight and Overshadowing;
 - Wind Microclimate;
 - Residual Effects; and
 - Interaction of Effects.
- 1.22 As a result of the EIA Scoping process, MCC agreed that the following topics could be scoped out of the Environmental Statement: Ecology and Biodiversity, Water Environment, Flood Risk and Drainage, Agricultural Land, Archaeology, Ground Conditions, Arboriculture, Transport and Access, Air Quality, Noise and Vibration, Land Use (Aviation), Waste, Major Accidents and Disasters and Energy and Sustainability.
- 1.23 The Proposed Development is confirmed to be 'car free' (with loading and services bays provided). The trips generated by the Proposed Development have been derived using the TRICS database. It's been concluded that the Proposed Development will not be associated with a significant level of traffic during the critical peak network hours, or across the day. In addition, when considered in the context of the baseline use of the Site, the Proposed Development will not significantly change the traffic flows associated with the site. As such, the Proposed Development will not have an impact on highway operation or road safety.
- 1.24 Full reasoning for scoping these topics out are detailed in the Scoping Report at **Appendix 1.3**. Although these topics are not likely to result in significant environmental effects such that they are required to be included within the EIA, these topics are addressed separately in standalone documentation, where relevant, that accompany the planning application. The suite of documents being submitted are listed in **Table 1.5**.
- 1.25 In line with the EIA Regulations, the ES has been based on MCC's Scoping Opinion (**Appendix 1.4**). Full details of how the ES responds to the formal Scoping Opinion is provided at **Appendix 1.5: Scoping Response Table**.

Further Clarification in response to the Scoping Opinion

- 1.26 MCC identified in their Scoping Opinion (**Appendix 1.4**) that Ground Conditions and Noise and Vibration could be '*scoped out of the ES, subject to clarification*'. This section provides further detail on these topics to demonstrate why they are not considered to have significant environmental impacts as a result of the Proposed Development and have been scoped out of the ES. This information has been provided in line with the National Planning Practice Guidance which states the following (ref. 4-038-20170728):

"...where it becomes evident during the assessment process, for example, when undertaking a baseline survey, that a particular environmental factor is absent or unlikely to be significantly affected by a proposed development, there should be no need for further assessment of that factor even

though it was identified in the scoping process. In such cases, the reasons for not undertaking further, more detailed assessment of that particular factor should be clearly set out in the Environmental Statement."

Ground Conditions and Land Contamination

- 1.27 A Geo-Environmental Investigation and Assessment (see **Appendix 1.6**) has been carried out by WML Consulting (October 2022).
- 1.28 The Site lies within Zone 2 of a Source Protection Zone. In addition, the BGS plans indicates that the Site is underlain by cohesive Glacial Till. The drift deposits are underlain by the Triassic Chester Formation, indicated to comprise sandstone. In consideration of the indicated geology, risks to the development from subsidence relating to shallow, unrecorded abandoned mine workings are considered low and can be discounted. In addition the risk from non-coal mining at the site is also considered low.
- 1.29 The Site is not in Radon Affected Area as defined by the UK Health Security Agency as fewer than 1% of properties are above the Action Level of exposure.
- 1.30 The earliest map dated 1850 indicated the Site to have already been developed with residential dwellings. In the 1970's, the Site was redeveloped as a petrol filling station and more recently modified for use as a hand car wash before falling into disuse.
- 1.31 The objective of the assessment was to provide geotechnical recommendations for construction design purposes together with a geo-environmental risk assessment in terms of possible ground contamination. The assessment concluded the following:
- The chemical analyses indicates that the Site does not appear to have been impacted by significant and / or widespread contamination sources when compared to the relevant reference values associated with site end use;
 - There is no evidence of remaining underground storage tanks (USTs);
 - Following the development of the Site, there will be no mechanism for a direct contact pollution linkage with contaminated soil where surfaced with buildings and hardstanding. However, a direct contact pollution linkage is plausible in proposed soft landscaped areas, and it is recommended that these should be capped with a geotextile membrane overlain by 450mm of clean sub-soil and 150mm of topsoil to provide a 600mm clean cover and thus remove any localised pollution linkages; and
 - Taking into consideration the low sensitivity of the underlying superficial aquifer and that the source of any historic hydrocarbon contamination (UST's, fuel pumps and associated pipework) appear to have been removed from the Site, the concentrations recorded are not considered to represent a significant ongoing source of contamination. However, it cannot be discounted that further hydrocarbon contamination could be encountered during the groundworks phase of construction.
- 1.32 Construction works and the handling of materials will be undertaken in line with standard practice and legislative requirements, which will effectively manage and remediate contamination (such as

hydrocarboncontamination) should it be encountered during the construction works. Measures to avoid pollution to controlled waters and to human health of construction workers will form part of the CEMP. As such, significant environmental effects are not considered likely to occur during construction.

- 1.33 On this basis of the conclusions presented in the assessment, it is not considered that the Proposed Development will cause any significant ground conditions effects during the construction and operational phases.

Noise and Vibration

- 1.34 A Noise Impact Assessment (see **Appendix 1.7**) has been prepared by Jameson Acoustics (November 2023) which has been submitted alongside the planning application. As part of the Noise Impact Assessment, the noise generated from the operation of the Proposed Development (plant, commercial and amenity land uses) has been assessed.
- 1.35 The Assessment finds that the ambient noise at the Site is dominated by local road traffic noise, primarily Cheetham Hill Road. The neighbouring commercial/industrial units appear to all be of a retail/office type operation with no notable industrial/delivery/service yard related noise activities.
- 1.36 Considering the immediate surroundings of the Site, any further noise from other sources is limited, or of sufficient distance away to not cause any potential nuisance or noise impact on the Site.
- 1.37 There are likely to be increased noise and vibration levels during the demolition/ construction works, emanating from construction plant and vehicles. These noise and vibration sources will be temporary and will be controlled by the implementation of industry standard good practice measures. These include acoustic screening/ hoardings, the selection of appropriate and modern construction techniques, and the restricted operation of certain plant and activities to agreed hours. These measures would form part of the CEMP to make sure any effects are minimised. Furthermore, the commercial land uses in proximity to the Site (i.e. Topps Tiles Cheetham, ATM (Redbank Service Station and ICIC Bank UK) and the adjacent local road network (i.e. Carnarvon Street and Cheetham Hill Road) are not considered particularly sensitive to noise and vibration. Given the above and the implementation of proposed measures to be employed within the CEMP, it is not considered that the construction of the Proposed Development will result in significant noise or vibration effects on nearby sensitive receptors.
- 1.38 Given the Site's proximity to Manchester City Centre, the Proposed Development will be car-free resulting in negligible traffic movements along Cheetham Hill and Carnarvon Road. As such, a change in traffic levels would not be significant for a perceptible change in noise levels at the nearest residential dwellings.
- 1.39 Regarding internal noise, the assessment concluded that internal noise levels within new dwellings can be achieved through the appropriate specification of façade elements and appropriate ventilation and overheating mitigation solutions that removes or restricts reliance on openable windows, particularly for dwellings overlooking Cheetham Hill Road.

1.40 The assessment also recommended the following, which are expected to be secured through a suitably worded planning condition:

- In relation to noise impacts from the operation of ground floor commercial unit and upper floor residential amenity space, the assessment has proposed suitable noise criteria to mitigate the risk of adverse noise impacts;
- Plant noise emission limits have been proposed so future plant installations do not adversely impact on the locality;
- The commercial unit is to provide shell only construction achieving Building Regulations Part E sound insulation requirements. This will allow future tenants to introduce acoustic enhancements to suit their operation; and,
- In relation to amenity spaces, the assessment has proposed to enhance internal building fabric construction to mitigate noise and vibration impacts to adjoining dwellings.

1.41 On this basis of the above, it is not considered that the Proposed Development will cause significant noise and vibration effects during the construction and operational phases.

Changes to the Proposed Development since issue of the Scoping Report (October 2023)

1.42 Although the size, massing, and number of units have not changed, amendments have been made to the building appearance and internal layouts since the Scoping Report (**Appendix 1.3**) was submitted to MCC. As such, all ES chapter assessment methodologies and assessments have been reviewed against the proposed changes associated with internal layouts and building appearance. It's concluded that no amendments are considered necessary to the scope and methodology set out for each chapter in the EIA Scoping Report (**Appendix 1.3**) and MCC Scoping Opinion (**Appendix 1.4**).

Consultation

1.43 During the statutory consultation period related to the Scoping Opinion request, MCC carried out a consultation exercise with a number of statutory and non-statutory consultees including, (not limited too):

- Natural England;
- Aerodrome Safeguarding;
- Greater Manchester Ecology Unit (GMEU); and,
- City Council Arborist.

1.44 A summary of the key issues raised during consultation which is relevant to the EIA process and how these are addressed in the EIA is provided in the '*Assessment Methodology and Significance Criteria*' section of each technical chapter of this ES.

1.45 Where it has been necessary for further discussion and/or consultation on comments raised as part of the EIA Scoping process, further details have been provided within the relevant ES chapter or planning application document. As reiterated above, full details of how the ES responds to the formal

Scoping Opinion and its peer review of the scoping report is provided at **Appendix 1.5: Scoping Response Table**.

Consultation

- 1.46 The Applicant has engaged in pre-application consultations in 2023 (November), in addition to prior engagement with elected representatives. Counter Context led the public consultation for the Proposed Development and helped facilitate meetings between stakeholders and MCC council members.
- 1.47 The following activities have taken place, (not limited too):
- A series of pre-application meetings with the Council;
 - Meeting with Councillor Gavin White, Executive Member for Housing (Labour) to brief him on the proposals and the consultation process. He was provided with the opportunity to ask any questions about the scheme. The following topics were discussed:
 - The role the site could play in contributing to wider regeneration priorities within this part of Manchester city centre;
 - Tenure type, viability and approach to affordable housing;
 - The potential for the proposed development to provide active frontages and improvements to the street scene along Cheetham Hill Road;
 - Microclimate impacts, particularly in relation to other recently submitted proposals;
 - Postcard was distributed to introduce residents and businesses to the Proposed Development;
 - A press release was issued which provided information about the Proposed Development and details of the consultation;
 - A detailed consultation website went live in November 2023 providing information about the proposed Development and included links for online feedback;
- 1.48 Overall, the feedback received in response to the Proposed Development was broadly supportive, in particular, respondents were very enthused about the inclusion of a ground floor commercial unit in the plans, with several noting that it would provide a vital active frontage in the area.

ES Structure and Project Team

- 1.49 The project team, authors of ES chapters and the structure of the ES are set out in **Table 1.1**.
- 1.50 As defined by paragraph 18(5)(a) of the EIA Regulations, this ES has been undertaken by independent qualified and competent experts. The ‘competency of the authors undertaking the ES chapters are outlined in each technical ES chapter (**chapter 7 -13**).

Table 1.1 EIA Team and Topic

Chapter	Author
Volume I: Main Text	

Chapter		Author
1	Introduction	Iceni Projects
2	Site and Surroundings	
3	Proposed Development	
4	Consideration of Alternatives and Design Evolution	
5	EIA Methodology and Significance Criteria	
6	Construction Methodology	
7	Climate Change	Lifeproven
8	Built Heritage	Stephen Levrant Heritage Architecture
9	Human Health	King Street Planning
10	Townscape and Visual Impact Assessment ('TVIA')	Chris Burnett Associates
11	Socio-Economics	Brookdale Consulting
12	Sunlight, Daylight and Overshadowing	Proximity
13	Wind Microclimate	Architectural Aerodynamics
14	Residual Effects	Iceni Projects (with input from the EIA team)
15	Summary of interaction effects	
Vol II	Technical Appendices	Various
Vol III	Non-Technical Summary	Iceni Projects (with input from the EIA team)

Planning Application Supporting Documents

- 1.51 Separate to the ES, the documents set out in **Table 1.2** have been submitted with this planning application.

Table 1.2 Documents Submitted with Planning Application

Documents submitted with Planning Application
Air Quality Assessment
Archaeological Assessment
Broadband connectivity statement
Biodiversity metric and report
Construction management plan
Crime impact statement
Design and access statement
Drawing set including existing and proposed plans and elevations
Externa light strategy

Documents submitted with Planning Application
Energy and Environmental Standards Statement
Fire strategy report and fire statement form
Flood risk assessment and outline drainage strategy
Geo-environmental investigation and assessment
Heritage statement
Landscape proposals
Local labour agreement
Lighting Strategy
Nocturnal Bat Survey
Noise impact assessment
Operational management strategy
Outline drainage strategy
Preliminary Roost Assessment and Ecological Walkover and Nocturnal Bat Survey Report
Planning Statement (including Tall Building Statement and Blue & Green Infrastructure Statement)
Planning application form and certificates
Statement of community involvement
Summertime Internal Environment Report (including Ventilation Strategy)
Television Reception
Transport Statement
TV Reception Survey
MCC Waste Management Proforma
Wind Assessment
Viability Assessment

Availability of ES Volumes

- 1.52 The ES and Non-Technical Summary are available to view online, via the following link: [Simple Search \(manchester.gov.uk\)](https://www.manchester.gov.uk/simple-search)
- 1.53 In addition, hardcopies (£250) or electronic copies (free of charge) of the ES can be provided, and the ES can be inspected at MCCs offices.
- 1.54 The Non-Technical Summary can be obtained free of charge as an electronic file or as a hard copy (£10). If hardcopies are required, Icen Projects will be able to assist and can be contacted as follows:
- Da Vinci House
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ⁱ MCC (2012) Core Strategy Development Plan Document, read in conjunction with Addendum to Manchester Core Strategy 2024

ⁱⁱ Deloitte (2018) Great Ducie Street Strategic Regeneration Framework

ⁱⁱⁱ The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (legislation.gov.uk)

^{iv} Department for Levelling Up, Housing and Communities (2014). Planning Practice Guidance - Environmental Impact Assessment. ID 4 /[guidance/environmental-impact-assessment/](https://www.gov.uk/guidance/environmental-impact-assessment/)

^v Institute of Environmental Management and Assessment (IEMA), (2016); Update to Guidelines for Environmental Impact Assessment

^{vi} IEMA, (2011); The State of Environmental Impact Assessment Practice in the UK



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Chapter 2: Description of the Site and Surroundings

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2. DESCRIPTION OF THE SITE AND SURROUNDINGS

Introduction

- 2.1 This chapter provides a summary of the existing Site and its surrounding area, including key environmental features, designations, and sensitive receptor locations. This provides the context for evaluating the existing and future baseline conditions and for assessing the likely significant effects of the Proposed Development.

Site Description

- 2.2 The Site, rectangular in shape and approximately 0.12 hectares ('ha') in size and is wholly located within the administrative area of Manchester City Council ('MCC'). The Site is bound by a range of residential and mixed-use developments, reflecting its proximity to the city centre.
- 2.3 The Site comprises a vacant parcel of brownfield land which contains a disused garage and shelter, and is bound by security hoarding to restrict access. There is also some limited vegetation present. **Figure 2.1** shows the location of the Site.

Figure 2.1 Location of Site



Surrounding Area

- 2.4 The Site is bound to the north by Carnarvon Street, directly beyond which is a commercial unit (and associated car park), known as '*Topps Tiles Cheetham Hill – Clearance Outlet*'. To the north east, planning permission was granted in November 2016 for the erection of a 16-storey building to form 192 residential apartments (Application Reference: 113914/FO/2016), for which construction is not yet underway.
- 2.5 The east of the Site is bound by A665 Cheetham Hill Road, directly beyond is petrol filling station (ATM Redbank Service Station) and a cluster of tall residential units, including 'The Hallmark Manchester'. Further east is Fernie Street with a cluster of high-rise buildings located beyond, including 'Jefferson Place'.
- 2.6 To the immediate south is 'ICICI Bank UK', with Park Place road located beyond. Directly beyond, is an approved application (Reference number: 138302/FO/2023) for the erection of a part 25 and part 15 storey residential building comprising 154 apartments, for which demolition of the existing structure and construction of the proposals is not yet underway.
- 2.7 To the immediate west is Gibson Place road, beyond which sits low and mid-rise light commercial premises.
- 2.8 The surrounding landscape is characterised as urban, comprising a mix of commercial and residential properties. The area surrounding the Site is comprised of emerging and existing developments of local significance. As such, the Site lies approximately 270m north of the AO Arena at the nearest Site boundary, 277m east of Manchester Prison, and is 600m north of Manchester Cathedral. The Site is also in proximity to emerging developments, as referenced above.

Transport and Accessibility

- 2.9 The Site has frontages to Carnarvon Street, Gibson Place, and Cheetham Hill with two existing vehicle access points from Cheetham Hill and one existing vehicle access from Carnarvon Street.
- 2.10 Victoria Station is located approximately 300m south of the Site, within a 10-minute walk, which can be used to access mainline trains offering comprehensive service coverage of Greater Manchester and Northwest destinations. Metrolink tram services can also be accessed at Victoria Station. The tram services provide high-frequency services to other areas of the city centre, Altrincham, Eccles, East Didsbury, Media City, Ashton, the Airport, Rochdale, Bury, Salford Quays and the Trafford Centre.
- 2.11 The nearest bus stops to the Site are located on Cheetham Hill Road, adjacent to the Site. These stops include 'Park Place' to the south and 'St Chard's Catholic Church' to the north. Both stops are served by 41 and 135 providing connections to Piccadilly Gardens, Middleton Bus Stop and North Manchester General Hospital.

- 2.12 Cheetham Hill Road forms part of the Key Route Network and routes on a north-south axis on the eastern boundary of the Site, providing road access between north Manchester and the city centre. Wide footways are provided on both sides of the carriageway. Carnarvon street is a single carriageway road with footways on both sides.

Environmental Constraints

- 2.13 The Site is not located within, or in proximity to, a 'sensitive area' (as defined in Part 1 of the EIA Regulations) (i.e. a Site of Special Scientific Interest ('SSSI'), National Park, National Landscape (previously referred to as 'Area of Outstanding Natural Beauty' ('AONB')), World Heritage Site ('WHS'), Scheduled Monument or European Site).
- 2.14 **Figure 2.2** identifies the key environmental designations within and in proximity to the Site. Further details of the environmental sensitivities are provided in the technical chapters of this ES and a summary is provided below.

Built Heritage

- 2.15 The Site is not situated within a Conservation Area nor are there any listed buildings or scheduled monuments in the immediate proximity of the Site. The nearest Conservation Areas are the Cathedral and Shudehill Conservation Areas approximately 300m to the south of the nearest Site boundary.
- 2.16 The nearest listed buildings to the Site are:
- Former Synagogue (at 19 Cheetham Hill Road) (Grade II), located circa 93m south;
 - St Chad's Cheetham Hill First World War Memorial (Grade II), located circa 126m north east; and
 - Roman Catholic Church of St Chad and attached Presbytery and boundary walls on Cheetham Hill Road (Grade II), located circa 141m north east.
- 2.17 Further details on the Listed Buildings is outlined in **Chapter 8: Built Heritage** of the ES.

Ecology

- 2.18 The Site is not located within any Statutory or Non-Statutory designated areas.
- 2.19 The nearest statutory designated site is 'The Cliff / Kersal Dale' Local Nature Reserve, located approximately 2.4km north west of the Site.

Townscape

- 2.20 The Site falls within the 55 Manchester Conurbation National Character Area ('NCA'), defined by Natural England as a dense urban and industrial development, commercial, financial, retail and administrative centres, commuter suburbs and housing, interspersed with a network of green infrastructure. Further information is provided in **Chapter 10: TVIA** of this ES.

Land Quality

- 2.21 The British Geological Survey indicates that the Site is underlain by cohesive Glacial Till. The drift deposits are underlain by the Triassic Chester Formation, indicated to comprise sandstone.
- 2.22 The bedrock underlying the Site is classified as a 'Principal Aquifer'. The superficial strata is classified as a Secondary (Undifferentiated) Aquifer.

Water Quality and Flood Risk

- 2.1 The Site lies entirely within Flood Zone 1, which indicates the lowest probability of fluvial/tidal flooding.
- 2.2 The Site is typically at very low risk of surface water flooding, however small areas of low risk exist on roads surrounding the Site. To mitigate any risk associated with surface water flooding, the building is to be set back from the highway with appropriate falls to mitigate any issues.
- 2.3 The nearest surface water feature is the River Irk, located circa 180m south of the Site.

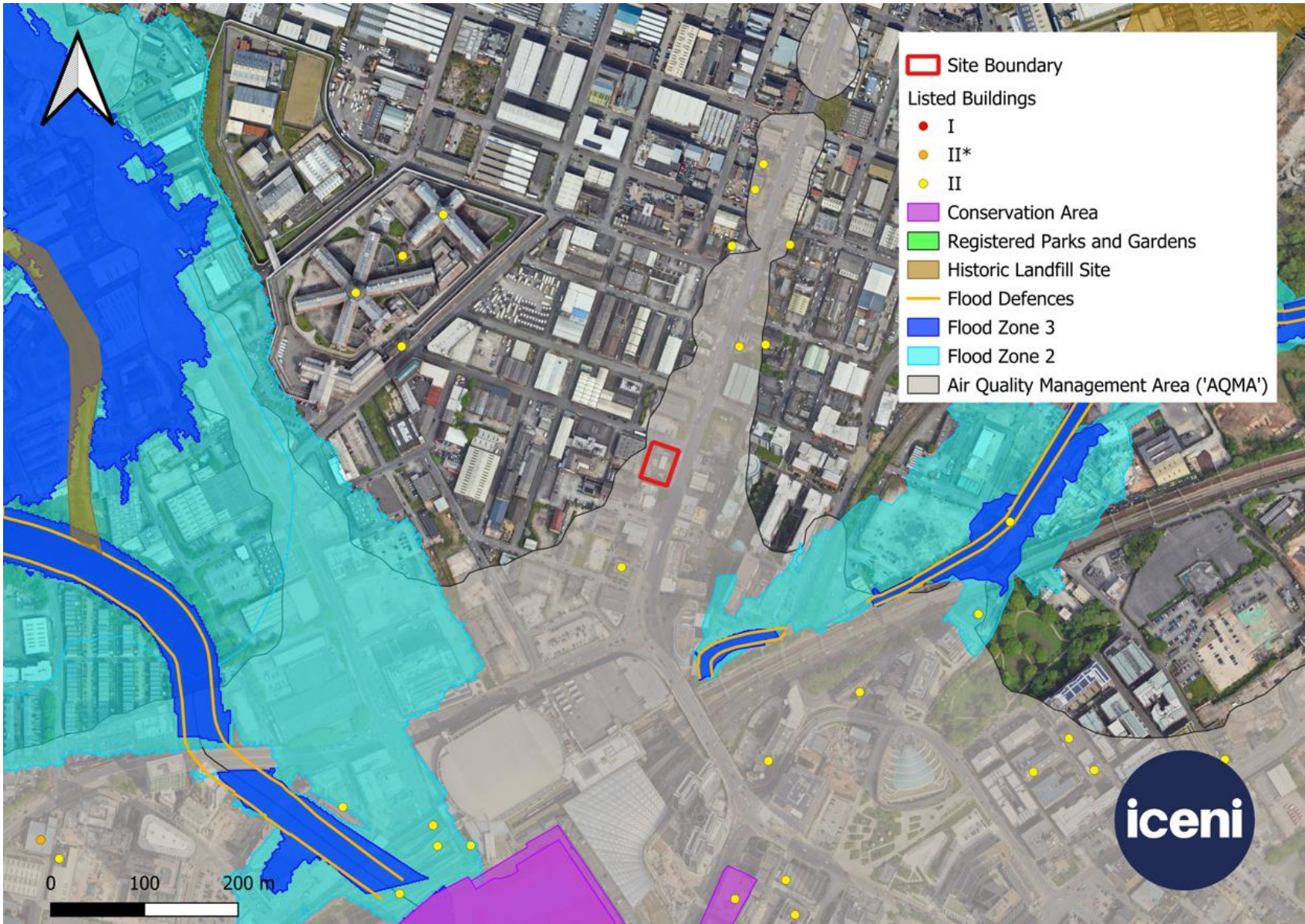
Air Quality

- 2.4 The Site is situated within the Manchester Air Quality Management Area(AQMA) which has been declared by MCC for exceedances of annual mean NO2 concentrations and 24-hour mean PM10, for which road transport is cited as the primary source of air pollution.

Noise

- 2.5 The primary source of noise is from vehicular activity along A665 Cheetham Hill Road.

Figure 2.2 Environmental Constraints Map





33-41 Cheetham Hill Road Environmental Statement

Chapter 3: Proposed Development

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Developments Limited

May 2024

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3. PROPOSED DEVELOPMENT

Introduction

3.1 This chapter provides a summary of the Proposed Development. This chapter has been based on information provided by the project design team and inputs from the project technical team.

3.2 This Chapter is supported by the following appendices:

- **Appendix 3.1:** Detailed Planning Drawings.

Overview of the Proposed Development

3.3 The Applicant is seeking full planning permission for the following description of development:

‘Demolition of existing on-site buildings and structures and development of part 17 / part 23 storey building to accommodate residential apartments (Class C3), along with ancillary resident amenity facilities, ground floor commercial unit (Use Class E), cycle parking, hard and soft landscaping and other ancillary works’.

3.4 The Proposed Development will comprise:

- The total site area of 0.12 hectares (ha);
- The provision of 237 residential apartments (Class C3):
 - 1-bedroom: 82 units (35%); and,
 - 2-bedroom: 155 units (65%).
- Combined Internal and External Amenity Space: 477sqm
- The provision of ground floor commercial space (Class E): Total 91sqm
- Provision of 237 on site cycle parking spaces;
- Car free development (with loading and services bays provided);
- The main entrance for the Proposed Development will be situated along Cheetham Hill Road, with secondary entrances provided on Carnarvon Street and on the Southern elevation.

3.5 The Site Plan proposed is shown in **Figure 3.1**. This plan shows the proposed residential blocks of the Proposed Development. The red line boundary shows the planning application boundary.

Figure 3.1 Proposed Site Plan



*Reference Number: CHR HBA ZZ ZZ DR A 08 0020 Site Plan Proposed

- 3.6 **Appendix 3.1** comprises the detailed planning drawings that the ES has been based on, and a full list of the detailed planning drawings for approval is included within it.

Overview of the Proposed Development

Quantum and Height of Proposed Development

- 3.7 The Proposed Development will comprise a total of 237 residential apartments which will range from 1-bed to 2-bed flats. The proposed layout of the residential dwellings maximises the residential footprint available to the Site.
- 3.8 The residential block will comprise of a part 17 and part 23 storey block, with the tallest element located in the northern part of the Site. At the 17th storey, the floorplate would cut back in size, and step in height. See **Figure 3.2** below.
- 3.9 As shown in **Figure 3.1**, the commercial units (Use Class E) are located at the ground floor of the residential block located at the north east corner of the Site.
- 3.10 **Table 3.1** shows the unit mix, heights and commercial floorspace.

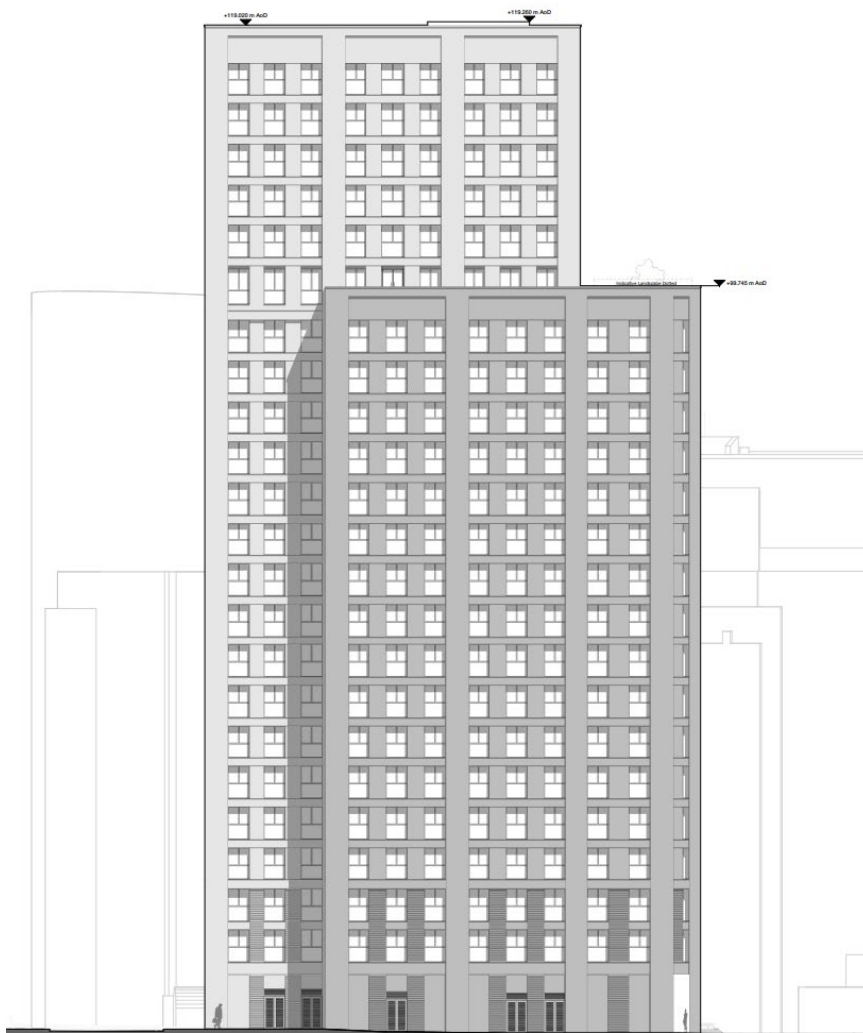
Table 3.1 Unit Mix and Heights

Residential (Class C3)			Commercial Floorspace (Use Class E)
Unit Type	Count	Storey Height and meters (AoD)	Sqm
1B1P	39 (16%)	Part 17 (+99.745m AoD) / Part 23 (+119.260m AoD).	91
1B2P	43 (18%)		
Total	82 (35%)		
2B3P	43 (18%)		
2B4P	112 (47%)		
Total	155 (65%)		
Overall Total	237		91 sqm

* Note: Percentages are rounded and may not sum

- 3.11 The proposed massing and height of the residential block has been sensitively designed against the surrounding urban and residential context, specifically the cluster of high-rise buildings to the east of the Site, such as Jefferson Place. **Figure 3.2** shows the proposed height of the residential block.

Figure 3.2 Proposed Elevation (Gibson Road)



**Reference Number: CHR HBA ZZ XX DR A 08 0203 Proposed Elevation – Gibson Place*

Materials and Appearance

3.12 Careful consideration has been given to the palette of materials and colours with references to the surrounding urban context and adjacent developments. The key design details are likely to comprise of (not limited to):

- Implementation of two-tone brick façade to finish the exterior of the building. This will differentiate the interlocking massing, and fragment the built form of the Proposed Development;
- Windows are mostly implemented with an aluminium composite window system with anodic bronze PPC finish;
- Obscured and clear glazing can be seen along the ground floor elevations which create a curtain wall; and,
- Dual aspect living spaces through the provision of slot windows, in lieu of corner windows.

Access and Parking Provision

- 3.13 The main entrance to the Proposed Development would be on Cheetham Hill Road, with secondary entrances provided to the bin store on Carnarvon Street and to the cycle store on the southern elevation. Access to the plant rooms and the refuse stores would be via points on Carnarvon Street and Gibson Place, providing unobstructed and easy access to facilitate the daily operational requirements of the building.

Car and Cycle Parking Provision

- 3.14 The Proposed Development will be 'car free', however, it will provide a loading / service bay, two disabled spaces and one care space to serve the Proposed Development.
- 3.15 Due to the Site's location being closely located to the city centre and being well connected to local transportation routes, sustainable modes of transport have been encouraged, such as the implementation of cycle spaces and storage.
- 3.16 The Proposed Development will provide 237 cycle parking spaces, (1 space per residential unit). Of which 50% of spaces are contained within ground floor store (via Sheffield stand and racking system) and 50% within apartments.

Amenity Space

- 3.17 The Proposed Development will comprise a total of 477sqm of open space seen on the ground floor and floor 17 of the building. The space can be used as an informal area for all residents and includes mixed planting, paving and timber framing features. The amenity space will encourage community and social cohesion.

Table 3.2 Provision of Amenity Space

Residential Block	Amenity Space (sqm)
Ground Floor	38.6
17 th Floor of the Residential Block	438.4
Total	477

- 3.18 An outdoor roof terrace is proposed on the 17th floor to provide amenity space for residents which is accessible from the shared amenity rooms on that level.
- 3.19 Active ground floor frontages are proposed along the Carnarvon Street and Cheetham Hill Road elevations of the building, where the shared amenity areas (commercial unit and residents' concierge) would be located.

Refuse Storage

- 3.20 Each residential apartment will have a dedicated space to accommodate MC's bin requirements.

Landscaping and Public Realm

3.21 The proposed landscaping strategies are proposed as follows:

Ground Floor

- A high-quality package of landscaping is proposed on the street level, comprising hard and soft elements that would be used to frame the Proposed Development.
- Raised planters would be introduced along the Cheetham Hill Road elevation to provide a soft and attractive linear landscape feature.
- The planting within the raised planters would consist of high impact structural specimen shrub features within bold blocks of mixed planting below. Structural, formal clipped planting blocks would be provided between the brick piers to reinforce the layout and define the edge of the walkway.
- The planters would step down in height around the south-eastern corner of the building to emphasise the main entrance.
- Additional planting and planters would be provided to the south of the building, encouraging pedestrian movement along the east-west route running immediately to the south of the Site.

17th Floor of the Residential Block

3.22 As advised above, an outdoor roof terrace is proposed on the 17th floor which will include the following landscape features (not limited to):

- Provision of seating to encourage community cohesion and social gatherings; and
- Incorporation of mixed planting with large specimen shrubs / small multi-stemmed trees.



33-41 Cheetham Hill Road, Environmental Statement

Chapter 4: Consideration of Alternatives and Design Evolution

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May 2024

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4. CONSIDERATION OF ALTERNATIVES AND DESIGN EVOLUTION

Description of Alternatives

- 4.1 In line with the EIA Regulations, this chapter describes the '*reasonable alternatives*' to the Proposed Development studied by the Applicant, prior to selection of the final design of the Proposed Development. This includes an indication of the main reasons for selecting the final chosen option, including a comparison of the environmental effects.
- 4.2 Information regarding the need for the Proposed Development is provided in the Planning Statement which accompanies the planning application and is not provided within the ES.
- 4.3 The alternatives that are considered in this chapter include:
- **Option 1:** 'Do Nothing' Alternative;
 - **Option 2:** Alternative locations for the Proposed Development;
 - **Option 3:** Alternative uses for the Site; and
 - **Option 4:** Alternative Designs for the Proposed Development in the context of design evolution.

Option 1: Consideration of the 'Do Nothing' Alternative

- 4.4 In line with the EIA Regulations, this section broadly outlines the consequences of no development taking place at the Site and it remaining in its current state. **Chapters 7 – 13** and **Volume II** of the ES set out the existing baseline conditions of the Site and the future baseline conditions of the Site, which are likely to arise in the absence of the Proposed Development, giving includes an indication of how the existing baseline conditions could evolve should the Site remain vacant.
- 4.5 In the absence of the Proposed Development, it is reasonably assumed that the Site would remain in its present condition i.e. a vacant brownfield site which contains a disused garage and shelter as outlined in **Chapter 2** of this ES.
- 4.6 Should the Proposed Development not proceed, the potential adverse environmental effects related to demolition and construction would not occur, for example, in relation to visual changes. However, these effects will predominantly be temporary and short-term in nature and would be reduced by complying to the CEMP, submitted with the planning application.
- 4.7 In the absence of the Proposed Development, multiple benefits in relation to socio-economic and townscape would not be realised including, not limited to:
- Contribution to local housing brought by the new residential apartments. **Chapter 11: Socio-Economic** illustrates that the Proposed Development delivering new residential homes will provide residents with a choice of housing mix and tenures;
 - Employment opportunities brought forward by demolition and construction, and the provision of new commercial units. **Chapter 11: Socio-Economics** finds the provision of new housing will generate additional income which will contribute positively to Manchester's economy. Further to this, the

Proposed Development will provide employment opportunities for future site users and existing residents via the provision of the commercial floorspace; Improvements to social and community cohesion via the provision of open space for public use; and

- The beneficial townscape and visual effects and delivery of a landmark building of scale and high-quality architecture, that would help to create a neighbourhood that is varied in character and has a strong sense of place. **Chapter 10: TVIA** concludes that the Proposed Development not only fits within the tall building cluster at this location but improves the view and the dynamic experience of those travelling along Cheetham Hill Road.

Option 2: Alternative Sites/ Locations for the Proposed Development

- 4.8 No alternative sites were considered by the Applicant as the Site is within the Applicant's ownership.
- 4.9 The Proposed Development is instrumental in addressing the underutilised nature and strategic location of the Site. The Site is in a highly accessible location within the Regional Centre, is a brownfield site, and the redevelopment of part of the Site has already been deemed acceptable by way of the granting of Planning Permission Reference: *114607/FO/2016* in 2018.
- 4.10 This chapter therefore does not consider alternative sites within the context of the planning application as there is an identified need to redevelop this specific site in order to make a positive contribution to Manchester's future regeneration.

Option 3: Alternative Uses

- 4.11 In reviewing alternative uses for the Site, consideration has been given to the surrounding uses (as set out within **Chapter 2**), as well as the planning policy position.
- 4.12 The Site is located within the Great Ducie Street SRF areaⁱ and within North Manchester where there are a number of clear strategic objectives as set out in the adopted CSⁱⁱ.
- 4.13 The Proposed Development includes 237 residential dwellings. This land use is in line with MCC's CS Policy H3 'North Manchester' which states that the North Manchester area (within which the Site is located) will accommodate around 20% of new residential development over the lifetime of the Plan.
- 4.14 Further, the Proposed Development will align with the objectives of the Great Ducie Street SRF (as set out above) through the creation of a high density, residential-led mixed-use development.
- 4.15 The Proposed Development will also contribute to the local economy through the generation of New Homes Bonus and Council Tax Revenue, direct and indirect expenditure created through new residents living in the area, and the new jobs created during both construction and operation. The proposed ground floor commercial unit will create new long-term jobs, as set out in **Chapter 11: Socio-Economics**.
- 4.16 For the reasons outlined above, alternative uses were discounted as the Proposed Development is the most appropriate in the context of location whilst also responding to identified regeneration priorities and housing need.

Option 4: Alternative Design and Layout

- 4.17 The design of the Proposed Development has evolved over several iterations through consultation with various stakeholders and interested parties, including MCC. Environmental studies have been undertaken to inform the design such as Townscape and Visual Impact Assessment (TVIA) and wind microclimate assessments.
- 4.18 There are several environmental constraints and opportunities associated with the Proposed Development that have been influential in the design evolution process. These are detailed below in **Table 4.1**.

Table 4.1 Site Constraints and Opportunities Considered

Constraints	Opportunities
Wind Conditions (as a result of the Proposed Development of up to 23 storeys in height).	The wind conditions have been influential in the design of the Proposed Development. ArcAero have assessed how the Proposed Development will impact wind conditions in the local area and pedestrian comfort. This exercise has been undertaken with the proposed building massing modelled within the current and future context. The report provides the following conclusions: - Upon the introduction of the Proposed Development within the existing surrounds: On ground and terrace level, wind conditions are expected to remain safe and suitable for intended uses within and around the Site; and - Upon the introduction of the Proposed Development within the cumulative surrounds: wind safety and comfort conditions remain materially similar to that of the Proposed Development within existing surrounds. - Proposals to improve comfort levels have been incorporated into the Level 17 terrace landscaping. Details of the key wind effects and the resulting design features implemented are included in Chapter 13: Wind Microclimate of the ES.
Surrounding Noise Environment, Cheetham Hill Road	The Site is subject to road traffic noise, primarily from Cheetham Hill Road which has informed the design of the Proposed Development. To mitigate noise for residents, a cooling strategy has been developed to work with restricted periods where windows are opened to achieve a comfortable internal temperature.
The surrounding built environment	The Proposed Development (of up to part 17 / 23 storeys in height) has been carefully designed in recognition of the surrounding built characteristics, i.e. cluster of tall buildings to the east of the Site, such as Jefferson Place. The 'step down' approach of the Proposed Development creates visual interest and relief in the elevation along Cheetham Hill Road.

Constraints	Opportunities
Size of the Site and Strategic Regeneration Framework (SRF) Pedestrian Route	In response to the proposals for a new pedestrian route to the South of the Site, the ground floor frontages of the Proposed Development have been designed to be at distance from the southern boundary. This design choice enables the incorporation of landscaping proposals and facilitates coordination with any future development in the adjacent southern plot.

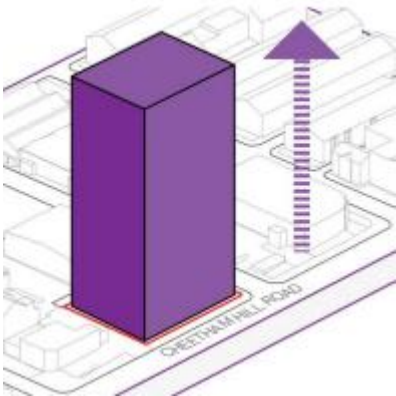
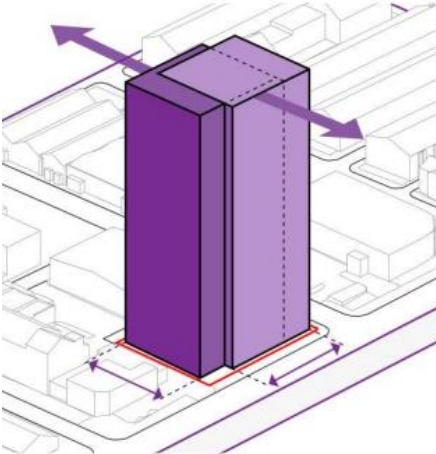
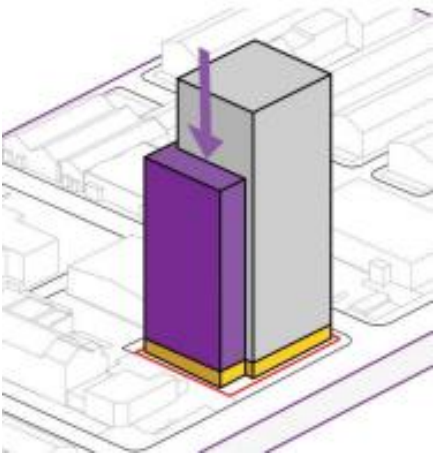
4.19 In addition to the Site constraints, the following Site opportunities have been considered:

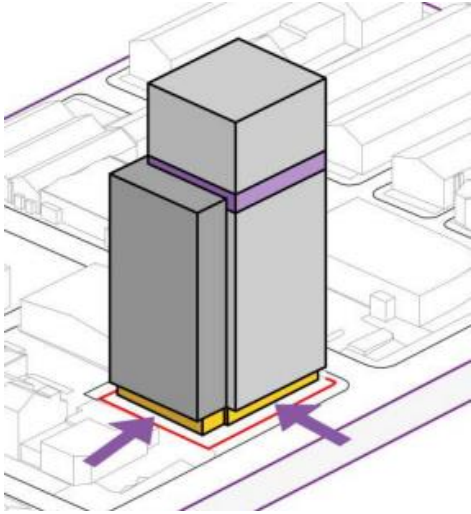
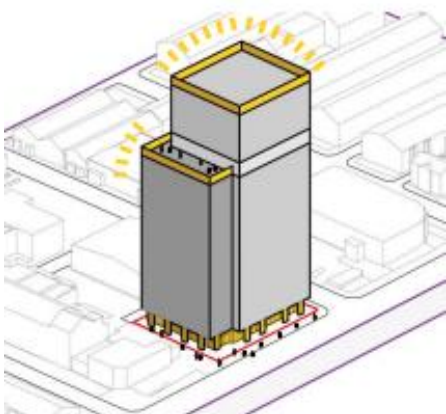
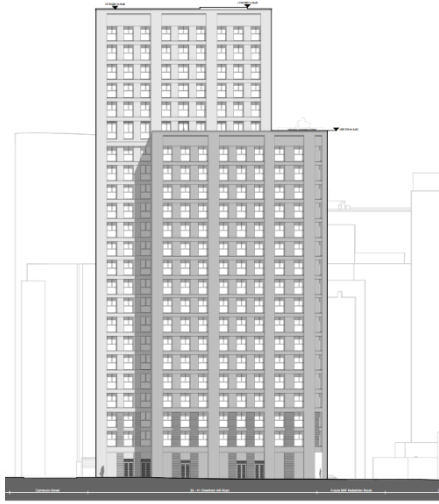
- The Proposed Development provides employment opportunities;
- Opportunities for accessible public realm for future residents. This will encourage social cohesion as well as encourage individuals of all ages to interact in activities;
- Opportunity to rejuvenate the vacant condition of the Site. This will improve the interpretation of the Site for future residents;
- Opportunity to enhance pedestrian connectivity and experience via the implementation of active frontages; and
- Opportunity for a landmark development, to establish the Great Ducie Street district with the city context.

4.20 Several alternative masterplan options, specifically in relation to the massing of the Proposed Development, were developed as part of the design evolution, as set out in **Table 4.2**.

4.21 The architects have tested a range of massing options for the Site that meet the target number of homes in the client brief. These explored alternate ways of stepping the building plan in order to break the wider elevations along Cheetham Hill Road and Gibson Place, as shown below in **Table 4.2**. This approach centred on maximising dual aspect living spaces across the Proposed Development and locating an external amenity terrace at the upper levels. The team settled on the form generated by two interlocking buildings that stepped in height.

Table 4.2 Masterplan Evolution

Masterplan	Commentary
	Option 1 - Footprint extruded to 20 storey datum as described in SRF.
	Option 2 - This option shows the building form has shifted in plan to create interest and relief in elevation along Cheetham Hill Road, increasing the number of dual aspect apartments.
	Option 3 - Push / Pull elements were explored in this option to create a stepped form with the tallest element to the North of the Site. This option explored the implementation of active frontages at ground floor located on East and South façades to encourage pedestrian activity and connectivity.

Masterplan	Commentary
	Option 4 - This option pushed back active frontages at ground floor to create sheltered entrances, thereby improving the pedestrian experience. Where the building steps down, amenity space was implemented to utilise the roof of lower form, (i.e. a roof terrace).
	Option 5 - Building grounded with colonnade to the set-back façades at ground floor, with opportunity for street trees to improve micro-climate and the pedestrian experience. Expressed architectural 'crown' to define the landmark building in the city skyline.
	Final Scheme (May 2024) The final scheme of the residential uses includes: - The building form steps down, with the tallest element located to the north of the Site. This stepping creates visual interest and relief in the elevation along Cheetham Hill Road, and increases the number of dual aspect apartments; - The step form of the Proposed Development breaks up the massing of the Proposed Development; - The final design allows a roof terrace to be created at a mid-point in the building. This will provide an interesting but useable amenity area; and, - The active frontages are pushed back at ground floor to create sheltered entrances and improve the micro-climate for pedestrian experience at this level compared to previous options.

- 4.22 Pre-application (Pre-App) meetings with planning officers from MCC took place from April 2023 to October 2023. A summary of each meeting, including any key feedback which informed the Proposed Development is provided below:

Pre-App meeting 01 (April 2023)

- The architects presented their initial analysis of the Site, including research on the local context and the Great Ducie Street SRF.
- Key design principles were shared to reflect the understanding of the aspirations for this part of the city, which informed an appraisal of the Site geometry and an initial massing strategy that set out to agree acceptable building heights for the Site.

Pre-App meeting 02 (June 2023)

- Further developed proposals that built on the massing principles established in Pre-App 01 were presented in this meeting.
- The design team shared detailed floor plans with apartment layout and initial thoughts on the landscaping proposals, as well as emerging façade strategy options with material palette and colour combinations for the interlocking forms.
- In this Pre-App, the form and repetitive façade grid was positively received by MCC, as well as masonry being deemed as a suitable primary façade material for this Site. MCC expressed that the Proposed Development should endeavour to provide more active frontage to Carnarvon Street and ensure cycle store contributes towards creating active frontage.

Pre-App Meeting 03 (October 2023)

- This Pre-App discussed the preferred facade strategy for the Proposed Development. Massing views within the existing context were shared to describe the facade grid and repetition that wrapped the building form. These were supported with detailed street level imagery and emerging bay study elevations that captured the proportion, depth and texture of the typical facade bays.

Further Design Feedback (December 2023)

- This meeting focused on discussions around the treatment of the building's corners. A range of façade options were explored. Through several discussions with MCC, a preference to maintain solidity in the building's corners was highlighted as an appropriate response for a tall building in this location. The design team have introduced slot windows alongside the repeating window modules to maximise dual-aspect living spaces in the Proposed Development.

Summary

- 4.23 The EIA has considered the alternative designs (including 'Do-Nothing'), location, and land use.
- 4.24 In the absence of the Proposed Development, the Site is reasonably assumed to remain in its existing condition. The surrounding cumulative schemes would come forward, which would leave an under-

utilised parcel of land in an otherwise busy city centre, with aspirations under the CS and SRF left unfulfilled.

- 4.25 The chosen design for the Proposed Development has evolved in discussion with MCC, and has been informed by the constraints and opportunities identified at the existing Site; consideration has been given particularly to the potential wind microclimate and townscape and visual effects of the Proposed Development, which have informed the final design proposals.

ⁱ Deloitte (2018) Great Ducie Street Strategic Regeneration Framework

ⁱⁱ MCC (2012) Core Strategy Development Plan Document, read in conjunction with Addendum to Manchester Core Strategy 2024



33-41 Cheetham Hill Road, Environmental Statement

Chapter 5: EIA Methodology and Significance Criteria

Iceni Projects on behalf of ZX
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May 2024

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5. EIA METHODOLOGY AND SIGNIFICANCE CRITERIA

Introduction

- 5.1 This Chapter sets out the methodology and approach used in preparing this ES. It has been prepared in accordance with the EIA Regulations, which implements 'Environmental Impact Assessment (EIA) Directive (2014/52/EU)'.
- 5.2 This ES also acknowledges the guidance on EIA set out within the Planning Practice Guidance (PPG) issued by central Government.

Approach to Technical Studies

- 5.3 The findings of the baseline environmental studies have played an important role in the design of the Proposed Development by defining the environmental sensitivities, constraints and opportunities associated with the Site.
- 5.4 Design team reviews, attended by members of the project team, were held at regular intervals throughout the application process. These ensured that the design team were fully aware of the environmental constraints and opportunities and of the interactions between disciplines.
- 5.5 The technical study has been undertaken in accordance with current best practice. Specific guidance used is referenced within the technical assessment chapters (**Chapters 7 to 10**).
- 5.6 The assessment and conclusions of the ES are based on the description of the Proposed Development provided in **Chapter 3** of this ES.

Structure of the Technical Chapters

- 5.7 The technical chapters of this ES follows the headings set out below to ensure that the ES is consistent with the requirements of the EIA Regulations, easy to navigate and understand:
- Introduction;
 - Policy Context;
 - Assessment Methodology and Significance Criteria;
 - Baseline Conditions;
 - Identification and Evaluation of Key Effects;
 - Mitigation Measures;
 - Residual Effects;
 - Cumulative Effects; and
 - Summary.

Introduction

- 5.8 The section introduces the EIA topic which is the subject of the chapter, and the reason it is being considered.

Policy Context

- 5.9 This section provides a summary of relevant national, regional and local policies, as well as any relevant legislation, that is relevant to the EIA topic which is the subject of the chapter.

Assessment Methodology and Significance Criteria

- 5.10 This section explains the methods used to undertake the assessment with reference to published standards, guidelines and best practice. The significance criteria used in the assessment is also set out, along with details of any assumptions and limitations encountered in undertaking the assessment or obtaining required data or information.

Baseline Conditions

- 5.11 This section includes a description of the environment as it is currently (i.e. in 2023/2024) and as it is expected to change should the Proposed Development not proceed (i.e. the future baseline under a 'do nothing' scenario).
- 5.12 The methodology used in collating baseline data is explained in each of the technical Chapters 7 to 13.

Identification and Evaluation of Likely Significant Effects

- 5.13 The section identifies the likely significant environmental effects (beneficial, adverse, neutral) resulting from the Proposed Development during the construction and operational phases.
- 5.14 Generic criteria for determining magnitude, sensitivity and significance are set out in **Tables 5.1-5.6** below. Where the criteria utilised in the technical Chapter 7 to 13 differs from the generic criteria, this is explained in the Assessment Methodology and Significance Criteria section of the corresponding chapter. All significance criteria takes account of the following factors:
- The value of the resource (international, national, regional and local level importance);
 - The magnitude of the impact;
 - The duration involved;
 - The reversibility of the effect; and
 - The number and sensitivity of receptors.

Generic Significance Criteria

- 5.15 The generic significance criteria is set out in **Table 5.1** below.

Table 5.1 Magnitude of Impact

Type of Effect	Criteria for Assessing Impact
Major	Total loss of major/ substantial alteration to key elements/ features of the baseline (predevelopment) conditions such that the post-development character/ composition /attributes will be fundamentally changed.

Type of Effect	Criteria for Assessing Impact
Moderate	Loss or alteration to one of more key elements/ features of the baseline conditions such that post-development character/ composition/ attributes of the baseline will be materially changed.
Minor	A minor shift away from the baseline conditions. Change arising from the loss/ alteration will be discernible/ detectable but not material. The underlying character/ composition/ attributes of the baseline condition will be similar to the pre-development circumstances/ situation.
Very Low	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

- 5.16 The sensitivity of a receptor is based on the relative importance of the receptor using the criteria in **Table 5.2**.

Table 5.2 Sensitivity of Receptor

Sensitivity	Examples of receptor
High	The receptor/ resource has little ability to absorb change without fundamentally altering its present character or is of international or national importance.
Moderate	The receptor/ resource has moderate capacity to absorb change without fundamentally altering its present character or is of high importance.
Low	The receptor/ resource is tolerant of change without detriment to its character, is of low or local importance

- 5.17 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be beneficial or adverse. The impact of significance matrix is set out in **Table 5.3**. Effects that are moderate or major are typically considered to be significant; if this differs for the technical Chapters 7 to 13, the alternate thresholds are described.

Table 5.3 Significance Matrix

Magnitude	Sensitivity		
	High	Moderate	Low
Major	Major Adverse / Beneficial	Major-moderate adverse – beneficial	Moderate-minor adverse / beneficial
Moderate	Major-Moderate Adverse / Beneficial	Moderate-minor adverse / beneficial	Minor adverse / beneficial
Minor	Moderate-Minor Adverse / Beneficial	Minor adverse / beneficial	Minor – negligible

Magnitude	Sensitivity		
	High	Moderate	Low
Negligible	Negligible	Negligible	Negligible

Mitigation Measures

5.18 Any potential adverse impact should be considered as requiring of mitigation, and specific mitigation measures put forward, where practicable. Where mitigation measures have been identified to prevent, reduce, or offset any significant adverse effects, these have been adopted in a number of ways:

- Incorporated and embedded into the Proposed Development, for example, through an amendment during the design evolution process as a result of initial modelling and studies;
- Implemented as a monitoring/management measure during the demolition / construction works (e.g. through a CEMP); or
- Operational or managerial standards/ procedures and further design (i.e. through planning conditions or obligations).

5.19 Each of the technical chapters 7 to 13 will summarise the extent of the mitigation measures and how these will be effective. Where the effectiveness is uncertain or depends upon assumptions about operating procedures, information is provided to justify the acceptance of these assumptions.

5.20 Clear details of when and how the mitigation measures will be implemented is provided. When certainty of impact magnitude and/ or effectiveness of mitigation over time exists, monitoring programmes are proposed to enable subsequent adjustment of mitigation measures, as necessary.

5.21 The opportunity for enhancement measures is also considered, where appropriate.

Residual Effects

5.22 The residual effect, i.e. the remaining impacts from the Proposed Development assuming implementation of proposed mitigation, should be estimated. Residual effects have been identified in tabular format (see example **Table 5.4**).

5.23 The methods used to make these estimates are clearly described, and the proposed methods of treatment for any residual effects are also identified. Any effects have been quantified wherever possible.

Table 5.4 Residual Effects

	Description	Pre-mitigation significance	Post mitigation significance
Proposed Development			

Cumulative Effects

- 5.24 The EIA Regulations specify the information to be included in an ES (Schedule 4) and require that in assessing the effects of a particular development, consideration should be given to cumulative effects. Potential cumulative effects can be categorised into two types:
- 5.25 Two types of cumulative effects are assessed:
- **Combined effects** - occur when two or more different environmental effects from the Proposed Development (e.g. dust, noise, traffic) act together to produce a different level of effect / impact experienced by a particular receptor. These combined effects (or 'Intra-Project') can be additive or synergistic such that the sum of the impacts can be less or more than the individual impacts (i.e. because they may exacerbate or neutralise one another); and
 - **Cumulative effects** - are those that accrue over time and space from a number of different development activities and projects in geographical proximity to one another, which individually might be insignificant, but when considered together, could create a significant cumulative effect (also referred to as interproject effects).
- 5.26 The cumulative assessment is important to ensure that the combined effects of other schemes with the Proposed Development are understood appropriately for decision making.
- 5.27 The cumulative effects of the Proposed Development and cumulative schemes will be considered on a topic-by-topic basis with the cumulative assessment methodologies and the cumulative effects reported in a subsection of each ES chapter, along with mitigation measures where necessary. Combined effects will be considered in **Chapter 15: Interaction of Effects**.
- 5.28 . A list of cumulative schemes was submitted to and agreed with MCC (**see Appendix 5.1**). The full assessment of effect interactions and cumulative effects can be found in the technical Chapters (chapters 7 – 13).

Summary

- 5.29 Finally, the technical chapter includes a summary of the assessment undertaken. This contains a brief description of the assessment and conclusions.

Assumptions and Limitations

- 5.30 The principal assumptions that have been made and any limitations that have been identified in preparing the ES are set out in the technical chapter. General assumptions include the following:
- Assessments assume the baseline conditions at the time of ES preparation (January 2023 to May 2024).
 - It is assumed that current surrounding land uses do not change, other than where specific projects have been identified for assessment of cumulative effects.
 - Assessments are based on published sources of information and primary data collection. Sources of information are provided for each of the technical Chapters 7 to 13. Where secondary data is used, it is accepted that these will have inherent and assumptions.

- Assessments are based upon, and conclude, the “worst case” effects that would arise from the Proposed Development as defined by the description set out in Chapter 3. Where minor design amendments have been made due to internal layout requirements and building appearances prior to submission, consideration has been given to whether they are material to the ES’s assessment of environmental effects, to ensure the determining authority has sufficient information within the ES to understand the environmental effects of the Proposed Development.
- Construction and phasing will be in accordance with the description of the Proposed Development set out in **Chapter 3** and will follow the timetable and methods set out in the Construction Methodology described in **Chapter 6**.
- Conditions will be attached to the Planning Permission that will control disturbance during the Proposed Development.

Objectivity

- 5.31 The technical study undertaken within this ES have been progressed in a transparent, impartial and unbiased way with equal weight attached, as appropriate, to beneficial and adverse effects. Where possible, this has been based upon quantitative and accepted criteria together with the use of value judgements and expert interpretations.
- 5.32 The assessment has clearly identified areas of limitation within the ES and any difficulties that have been encountered, including assumptions upon which the assessments are based.

Consultation

- 5.33 Consultation has continued throughout the preparation of the ES and, in particular, meetings and discussions have taken place with MCC. A summary of the key issues raised during consultation which is relevant to the EIA process and how these are addressed in the EIA is provided in the ‘Assessment Methodology and Significance Criteria’ section of each technical chapter of this ES.



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Chapter 6: Construction Methodology

Iceni Projects on behalf of ZX
Cheetham Hill Developments
Limited

May 2024

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6. CONSTRUCTION METHODOLOGY

Introduction

- 6.1 This provides a description of the demolition/ construction activities and timescales associated with the Proposed Development. This chapter has been based on information provided by the project design team and inputs from the project technical team.
- 6.2 This chapter is supported by the following appendix:
- **Appendix 6.1:** Construction Environmental Management Plan (CEMP)
- 6.3 The approach to demolition and construction is wide-ranging at this early stage and may be subject to adjustment at prior to demoltion and construction commences. This initial assessment is based on reasonable assumptions at this time and allows for the assessment of the realistic worst-case construction phase effects.

Construction of the Proposed Development

- 6.4 This is a descriptive section only. Assessment of construction impacts of the Proposed Development are provided in each technical chapter of this ES (**Chapters 7 to 13**). In addition, each technical chapter assesses the cumulative impacts of construction of the Proposed Development in conjunction with other schemes in the vicinity.

Indicative Construction Programme

- 6.5 The indicative delivery programme for the Proposed Development is estimated to span approximately two years. Subject to planning permission being granted, construction is anticipated to commence on Site in Q1 2025, and be fully operational in 2027.

Indicative Demolition and Construction Methodology

- 6.6 The activities on-Site during the demoltiion and construction phase are expected to include the following:
- Demolition of existing structures and removal of hardstanding on-Site;
 - Site establishment and clearance works (comprising ground and scrub clearance, establishment of construction compound(s) and security fencing, delivery of materials and plant);
 - Excavation and sub-structure works;
 - Installation of drainage features;
 - Construction of superstructure;
 - Internal fit-out; and
 - Landscaping.

6.7 The types of plant that are likely to be used during the demolition and construction phase are as follows. This list is indicative, and is used to inform the technical assessment of potential effects during the demolition and construction phases:

- Tracked/ wheeled excavators;
- Dumpers;
- Mobile cranes;
- Handheld tools;
- Power tools;
- Piling equipment;
- Wheel washing plant;
- Mobile access platforms;
- Fixed access platforms i.e. scaffolding;
- Skips;
- Concrete mixers; and
- Vehicles such as delivery trucks, skip trucks, road sweepers.

Hours of work

6.8 The prescribed hours of work would be agreed with MCC. It is anticipated that the core working hours will be as follows:

- 08:00 – 18:00 hours weekdays;
- 08:00 – 13:00 hours Saturday; and
- No working on Sundays or Bank Holidays.

6.9 Site compounds with welfare facilities for construction staff will be located on Site and may be occupied outside the above noted hours for administration tasks.

6.10 The proximity of local businesses and residents to the Site is acknowledged, and the Principal Contractor will be responsible for ensuring that the programme and working hours are adhered to by the employed contractors in order to protect residential amenity.

6.11 The following activities are expected to be permitted to take place outwith the normal working hours as outlined above:

- Arrival and departure of workforce on-Site;
- Deliveries and unloading;
- Check and examinations of plant and machinery (including test running) and essential repairs/ maintenance;

- Site inspections and safety checks; and
 - Site clean-up.
- 6.12 These hours will be strictly adhered to unless, or in the event of:
- An emergency demands continuation of works on the grounds of safety;
 - Minor internal works are being carried out within the confines of the building envelope; or
 - Completion of an operation that would otherwise cause greater interference with the environment / general public if left unfinished;
- 6.13 Approval from MCC will be required for any works beyond the above that need to be undertaken outside of permitted hours.
- 6.14 Further information on the construction proposals of the Proposed Development is provided in the CEMP (**Appendix 6.1**).

Construction Traffic

Construction Phase Vehicle Movements

- 6.15 All vehicle unloading will take place within the Site and will not affect public highways or adjacent landowners.
- 6.16 The storage of plant and materials will be within the Site. Management of deliveries and the volumes brought to the Site daily will be considered by the appointed Contractors' logistics team. It is expected that the management of deliveries will be assisted by an on-line booking tool.

Construction Traffic Management Plan

- 6.17 A Construction Traffic Management Plan (CTMP) will be submitted to MCC prior to the works commencing and will include details of the following:
- Contact details for relevant responsible persons;
 - Days and hours of vehicle movements/ deliveries;
 - Routing of demolition, excavation and construction vehicles;
 - Details of site access arrangements; and
 - Details of the vehicles accessing the Site per day/ week in terms of number, type, size, and weight.

Controls for the Protection of the Environment

- 6.18 A CEMP is submitted with the full planning application and is appended to the ES (**Appendix 6.1**). The CEMP sets out the strategy, standards, control measures and monitoring procedures that will be implemented to manage and mitigate any adverse environmental effects of the construction process, including mitigation measures defined by the ES.
- 6.19 The CEMP will remain a live document to ensure that it is specific to the works and processes that are to be employed during demolition and construction activities. The CEMP will include details on

roles and responsibilities, control measures and activities to be undertaken to minimise environmental effects, as well as monitoring and record-keeping requirements. It will also provide a framework for engaging with local residents and communities, and their representatives, throughout the demolition and construction period. The CEMP will be secured by reasonably worded planning condition.

Noise and Vibration

- 6.20 Potential sources of noise and vibration include (but are not restricted to) the operation of plant and heavy machinery, crushing activities and vehicle movements. Mitigation measures will be set out in the CEMP to mitigate potential noise and vibration effects. Should a complaint be received regarding noise and/ or vibration, the Principal Contractor will consider installing monitoring equipment and, if it is deemed necessary, additional mitigation measures will be implemented.

Dust and Air Quality

- 6.21 Construction Dust is created during many construction tasks on Site and in many instances is unavoidable. Good practice measures will be implemented via the CEMP to minimise dust and emissions from being generated at the source, such as hoarding, covering/ seeding of stockpiles, on-Site traffic management (including no idling and wheel washing) and avoiding diesel/ petrol-powered generators where practicable.

Water Resources and Land Pollution

- 6.22 Surface water, groundwater and soils will be protected from incursion by potentially polluting materials through the use of adequate bunding, control of surface water runoff, provision of spill kits, implementation of correct storage measures, and adherence to washing down and refuelling procedures. In the incidences of a spill, work will be halted and the Site manager will be notified. Such measures are set out in the CEMP.
- 6.23 Fuels, oils and chemicals would be stored in appropriate containers within secure bunded compound constructed of an impermeable hardstanding and in accordance with good practices and Environment Agency guidelines (Pollution Prevention Guidance Note 6 'Working at Construction and Demolition Sites').
- 6.24 Hazardous substances will be stored in line with the Control of Substances Hazardous to Health (CoSHH) Regulations 2002 (as amended).

Waste and Servicing

- 6.25 Guidance is provided in the CEMP (**Appendix 6.1**) on the segregation of waste streams such as aggregates, excavated materials, metal, wood, cardboard, and polythene packaging waste. Segregated waste for recycling would be removed from the Site by a licensed contractor to an appropriate Materials Recycling Facility (MRF). Wastes that cannot be recycled would be removed to an appropriate licensed landfill facility ensuring adherence to the Environmental Protection (Duty of Care) Regulations.

- 6.26 Clearly labelled waste skips would be provided at the Site for the segregation of waste streams for recycling and for general waste to be disposed of to landfill. The skips will be stored in a secure location on Site., Infrastructure and services.

Flood Risk, Drainage and Utilities

- 6.27 The Environmental Agency (EA) flood mapping shows that the Site is located entirely within Flood Zone 1 therefore is at little or no risk from tidal or fluvial flooding and is therefore suitable for all types of development under PPG. Further details on the water environment are provided in **Chapter 2: Site and Surroundings** of this ES.
- 6.28 The Site will be designed with attenuation which will reduce the level of runoff from the Site when compared to the pre-development scenario. To minimise the risk of increased flood risk, Sustainable Drainage Systems (SuDS) features will be implemented, such as blue roofs with attenuation tanks, soft landscaping, and drainage channels and gullies per the Outline Drainage Strategy submitted with the planning application.
- 6.29 Surface water will discharge into the public combined sewer within Carnarvon Street at an agreed discharge rate, subject to agreement with the lead local flood authority (LLFA), Manchester Council, and United Utilities, the provider. It is currently proposed that surface water discharge rate from the Site will be restricted to 3.0l/s which is a 93% betterment from pre-development discharge rates. In addition, surface water storage will be provided on Site, sufficient to store a volume up to, and including, a 1 in 100 year storm plus an additional climate change allowance in line with the NPPF.
- 6.30 Foul and surface water flows from the Proposed Development will be kept separate within the Site and only combined one manhole prior to discharging into the existing combined sewer.

Energy and Sustainability

- 6.31 The following measures will be implemented, inline with the Environmental Standards Statement including Energy Strategy, submitted with the planning application (note. this is not an exhaustive list of sustainability measures, but it prudent to those to be adopted during the demolition and construction phase):
- **First fabric approach** – the Proposed Development will incorporate a fabric first approach using passive energy techniques available in the construction industry to reduce its ongoing requirement to consume energy to heat, ventilate and light the building. This is achieved by improved highly efficient fabric design in excess of the thermal properties set out within the Building Regulations.
 - **Energy Efficiency** – the Proposed Development will incorporate energy efficiency measures in its building services to reduce the carbon footprint of the Site below the passive improvement stage. This is achieved by using highly efficient heat generation plant, heat recovery systems and energy efficient and highly controllable lighting.
 - **Local Materials** - where possible, materials and resources used during the construction of the Proposed Development will be sourced from the local area.

- **Sustainable modes of transportation** – the Proposed Development will encourage active and sustainable living practices via cycle parking spaces and localised pedestrian route enhancements.

Ecology

- 6.32 The habitats on-Site comprised hardstanding and brash piles.
- 6.33 It is recommended that works or the removal of vegetation take place outside of the breeding bird season. To further increase the Site's value for wildlife, bat and bird boxes could be integrated into the Proposed Development during construction to provide habitat for fauna during the operational phase.



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7. CLIMATE CHANGE

Introduction

- 7.1 This Chapter of the Environmental Impact Assessment analyses the likely significant effects of the Proposed Development with respect to Climate Change. This Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce, or offset any significant negative effects; and the likely residual effects after these measures have been adopted.
- 7.2 The Climate Change assessment focuses on assessing and addressing the potential impacts of the project on climate change, through calculation of greenhouse gas (GHG) emissions.
- 7.3 Calculating GHG emissions is crucial as it provides a quantifiable measure of the Proposed Development's contribution to climate change, enabling mitigation measures to be identified in the early stages of the Proposed Development's lifecycle (e.g., implemented through design) as well as during construction and operation.

Competence

- 7.4 This assessment has been conducted by the following LifeProven experts:
- Edward Smith (BSc) has 2 years of industry experience in quantity surveying and ESG services. Edward has extensive use of OneClick LCA, completing multiple Whole Life Carbon Assessments across the UK.
 - Sofi Zickerman White has the following qualifications a BSc Geophysics, MPA energy technology and climate policy, one click LCA certified construction life cycle assessment specialist, Well AP and Level 4 non-domestic energy assessor.
 - Jordan Relfe is a quantity surveyor and a member of the royal institution of chartered surveyors (RICS).

Legislation and Policy Context

Legislation Context

- 7.5 The following legislation is applicable to the Proposed Development and this assessment:

- The Climate Change Act 2008 (2050 Target Amendment) Order 2019¹
- Carbon Budgets (Order 2011², Order 2016, and Order 2021³)
- UK Planning and Energy Act 2008⁴
- Building Regulations 2010, Approved Document L1: Conservation of fuel and power in new dwellings, 2021 edition incorporating 2023 amendments⁵
- Building Regulations 2010, Approved Document L2: Conservation of fuel and power in buildings other than dwellings, 2021 edition incorporating 2023 amendments⁶

The Climate Change Act 2008 (2050 Target Amendment) Order 2019

7.6 The Climate Change Act 2008 set out legally binding climate mitigation targets for the UK. This includes a legal target to achieve at least an 80% reduction in greenhouse gas emissions by 2050 based on 1990 levels. In 2019, this was increased to a 100% reduction in emissions by 2050.

Carbon Budgets (Order 2011, Order 2016, and Order 2021)

7.7 The ambitious Climate Change Act 2008 established a system of 5-year carbon budgets that set limits on the total greenhouse gases that the UK can emit over defined periods to better control emissions and support the transition to a low-carbon economy. Climate change budgets are set in tonnes of carbon dioxide equivalent (tCO₂e), which refer to greenhouse gas emissions beyond only CO₂, such as the addition of nitrous oxide (N₂O) and methane (CH₄).

7.8 The Climate Change Committee are responsible for advising governments on emission reduction targets and monitoring the UK's progress towards them. The UK's upcoming carbon budgets are as follows:

- Carbon Budget Order 2011 (2023-2027): 1.95 GtCO₂e
- Carbon Budget Order 2016 (2028-2032): 1,725 MtCO₂e
- Carbon Budget Order 2021 (2033-2037): 965 MtCO₂e

¹ UK Gov (2019) *The Climate Change Act 2008 (2050 Target Amendment) Order 2019*, Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukdsi/2019/9780111187654>

² UK Gov (2021) *The Carbon Budget Order 2021*, Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukdsi/2021/9780348222616>

³ Department for Energy Security and Net Zero (2021) *Carbon budgets*, GOV.UK. Available at: <https://www.gov.uk/guidance/carbon-budgets>

⁴ UK Gov (2008) *Planning and energy act 2008*, Legislation.gov.uk. Available at: <https://www.legislation.gov.uk/ukpga/2008/21/contents>

⁵ HM Government (2023) *Approved Document L1: Conservation of fuel and power in new dwellings, 2021 edition incorporating 2023 amendments*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133079/Approved_Document_L_Conervation_of_fuel_and_power_Volume_1_Dwellings_2021_edit ion_incorporating_2023_amendments.pdf

⁶ HM Government (2023) *Approved Document L2: Conservation of fuel and power in buildings other than dwellings, 2021 edition incorporating 2023 amendments*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1133081/Approved_Document_L_Conervation_of_fuel_and_power_Volume_2_Buildings_other_than_dwellings_2021_edition_incorporating_2023_amendments.pdf

- 7.9 The UK government encourage cities to develop their own carbon budgets, which has been done by Manchester as described in the local policy section below.

UK Planning and Energy Act 2008

- 7.10 The Energy Act 2008 is a piece of legislation that focuses on various aspects of energy policy and regulation. Key elements that influence building developments includes specific energy performance requirements to ensure developments make efforts to improve energy efficiency and contribute to the UK's carbon reduction targets. For example, it encourages developers to design and construct buildings with lower carbon emissions (affecting building materials, insulation, and energy systems) and incorporate renewable energy sources such as solar panels or heat pumps into building design.

Building Regulations 2010, Approved Document L1A: Conservation of fuel and power in new dwellings, 2021 edition incorporating 2023 amendments

- 7.11 CoPart L1A provides guidance and regulations related to the conservation of fuel and power in new dwellings. The purpose of the document is to set out the legal requirements for achieving energy efficiency in new residential buildings, promoting sustainable construction practices, and helping to reduce emissions. It sets mandatory standards for in-design and as-built stages to ensure that mandatory standards are met, outlining specific criteria related to insulation, building fabric, windows, heating systems, as well as air quality. It also requires the calculation of the energy performance using approved methodologies such as the Standard Assessment Procedure (SAP) to assess the building's energy consumption and carbon emissions.
- 7.12 The 2021 edition encourages the use of renewable energy sources and low carbon technologies in new dwellings to reduce carbon emissions and provides guidance on integrating these technologies effectively.

Building Regulations 2010, Approved Document L2A: Conservation of fuel and power in buildings other than dwellings, 2021 edition incorporating 2023 amendments

- 7.13 Approved Document L, Volume 2, of the UK Building Regulations provides specific guidance and requirements related to the conservation of fuel and power in new and existing non-domestic buildings (commercial, industrial, and public sector structures as well as residential extensions to existing non-domestic buildings).
- 7.14 The document sets out mandatory energy efficiency standards that these buildings must meet in relation to insulation, heating, cooling, lighting, and other building systems. It also requires conservation of fuel and power, emphasising the importance of reducing energy consumption and carbon emissions associated with building operations. It also encourages the use of renewable and low-carbon technologies. Building owners, developers and designers must demonstrate compliance

to these standards through calculating the energy performance using nationally approved methodologies.

National Planning Policy

7.15 The following national planning policies provide guidance and principles for the Proposed Development:

- Climate change risk assessment⁷
- The Carbon Plan: Delivering our Low Carbon Future (2011)⁸
- Net Zero Strategy: Build Back Greener (2021)⁹
- Climate Change Risk Assessment (2022)

7.16 Part of the ambitious Climate Change Act 2008 is also to conduct a Climate Change Risk Assessment (CCRA) every 5 years, that evaluates the potential risks and opportunities associated with Climate Change in the UK across different sectors including energy, infrastructure, and health to inform the development of policies and measures to mitigate and adapt to the effects of Climate Change. The CCRA in conjunction with advice from the Climate Change Committee ensure that the UK's climate action is updated and remains evidence-based and responsive to the evolving challenges posed by global warming. The latest Climate Change Risk assessment was published in 2022.

The Carbon Plan: Delivering our Low Carbon Future (2011)

7.17 The Carbon Plan 2011 is a policy document that outlines a series of measures and strategies to reduce greenhouse gas emissions and transition to a low-carbon, more sustainable economy. It looks to maintain energy security, and minimise cost to customers, particularly in poorer households.

7.18 In the context of developments, this plan reaffirmed the UK's commitments to the legally binding carbon budgets under the Climate Change Act 2008, emphasising the importance of renewable energy, detailing measures to improve energy efficiency - including initiatives to reduce energy consumption and enhance building insulation - and acknowledges the need for adaptation to climate change impacts and building resilience.

⁷ UK Gov (2022) UK climate change risk assessment 2022 - GOV.UK. Available at: <https://assets.publishing.service.gov.uk/media/61e54d8f8fa8f505985ef3c7/climate-change-riskassessment-2022.pdf>

⁸ HM Government (2011) The carbon plan: Delivering our low carbon future. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/476_13/3702-the-carbon-plan-delivering-our-low-carbon-future.pdf

⁹ Department for Energy Security and Net Zero (2021) Net zero strategy: Build back greener, GOV.UK. Available at: <https://www.gov.uk/government/publications/net-zero-strategy>

Net Zero Strategy: Build Back Greener (2021)

- 7.19 The UK's Net Zero Strategy is a comprehensive and ambitious policy document outlining the country's plan to achieve net zero greenhouse gas emissions by 2050. Some of the key elements applicable to this development include green buildings (promoting improved energy efficiency through enhanced insulation and setting green building standards); nature-based solutions (encouraging biodiversity enhancement and natural sustainable building materials); decarbonising energy (using low-carbon energy sources, transitioning away from reliance on fossil fuels); in addition to adaptation and resilience (mitigating and preparing for potential climate change impacts).

Local Planning Policy

- 7.20 The following local planning policies are relevant to the Proposed Development:

- Manchester Climate Change Framework (2020-2025)¹⁰
- Climate Change Action Plan (2020-2025)¹¹
- Manchester Low Carbon Build Standard¹²
- Manchester's Local Development Framework Core Strategy (2012)¹³

Manchester Climate Change Framework & Climate Change Action Plan (2020-2025)

- 7.21 Manchester's Climate Change Framework is a strategy that works towards making Manchester a thriving, zero carbon and climate resilient city. In relation to developments, this includes:

- Improving health and wellbeing by contributing towards CO₂ reduction and adaptation, particularly for those in need.
- - Supporting Manchester's mission is to become a zero-carbon city by 2038 (12 years ahead of the Government's target for the UK of 2050).

- 7.22 The Climate Change Action Plan is a more detailed and practical document that outlines specific actions, targets, and initiatives aimed at reducing greenhouse gas emissions and promoting sustainability across the city.

¹⁰ Manchester Climate Change Agency (2020) Manchester Climate Change Framework 2020-25. Available at: <https://www.manchesterclimate.com/sites/default/files/Manchester%20Climate%20Change%20Framework%202020-25.pdf>

¹¹ Manchester City Council (2022) Manchester City Council's Climate Change Action Plan 2020-2025 (Refreshed plan 2022-2025). Available at: https://www.manchester.gov.uk/downloads/download/7523/climate_change_action_plan_2022_refresh

¹² Manchester City Council (no date) Manchester City Council Capital Programmes Manchester Low Carbon Build Standard. Available at: <https://modern.gov.cheshireeast.gov.uk/ecminutes/documents/s91587/Appendix%201%20-%20Manchester%20Low%20Carbon%20Build%20Standard.pdf>

¹³ Manchester City Council (2012) Manchester's Local Development Framework, Core Strategy Development Plan Document. Available at: https://www.manchester.gov.uk/download/downloads/id/18981/final_core_strategy.pdf

Manchester Low Carbon Build Standard

- 7.23 The Manchester Low Carbon Build Standard requires projects delivered by/for MCC to be designed in line with the RIBA Sustainable Outcomes Guide 2019¹⁴ to ensure a set of common, clear, and professionally determined standards. These must be used for project delivery, covering all aspects of the built environment. This includes achievement of RIBA's operational energy targets, designing now for achievement of the 2025 targets, and from 2025, designing for 2030:

Table 7.1 Operational Energy Targets for MCC projects, based on RIBA 2030 Climate Challenge

Year	Non-domestic	Domestic
2025	110kWh/m2/year	70 kWh/m2/year
2030	55 kWh/m2/year	35 kWh/m2/year

- 7.24 As part of the Low Carbon Build Standards, Manchester has set out the 'Top 10 Carbon Priorities', which relate to (1) the building fabric, (2) efficient boilers, (3) improved lighting, (4) energy controls and metering, (5) improved ventilation, (6) renewable energy sources, (7) reduced water consumption, (8) low energy equipment, (9) performance measurement, and finally (10) re-used and recycled materials.

Manchester's Local Development Framework Core Strategy (2012)

- 7.25 Manchester's Core Strategy contains guidance related to Environmental Quality and sustainability, which relate to climate change. These include policies related to the requirement for having energy statements, for reducing emissions through low and zero carbon developments, as well as the expectation for developments to be adaptable to climate change in terms of design, layout, siting, and function.

Guidance

- 7.26 The following guidance documents also support the wider environmental impact assessment of the Proposed Development:
- RICS Guidance on Whole Life Carbon Assessment for the Built Environment 1st Edition (2017)¹⁵, with consideration of the 2nd edition that comes into effect from the 1st of July 2024¹⁶.

¹⁴ RIBA (2019) RIBA Sustainable Outcomes Guide. Available at: <https://www.architecture.com/knowledge-and-resources/resources-landing-page/sustainableoutcomes-guide>

¹⁵ 7 RICS (2017) RICS professional standards and guidance, UK, Whole Life Carbon Assessment for the Built Environment 1st Edition. Available at: https://www.rics.org/content/dam/ricsglobal/documents/standards/whole_life_carbon_assessment_for_the_built_environment_1st_edition_rics.pdf

¹⁶ RICS (2023) Whole life carbon assessment for the built environment global, 2nd Edition. Available at: https://www.rics.org/content/dam/ricsglobal/documents/standards/Whole_life_carbon_assessment_PS_Sept23.pdf

- Institute of Environmental Management & Assessment (IEMA) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance 2nd Edition (2022)¹⁷.

Assessment Methodology and Significance Criteria

- 7.27 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to Climate Change.

Consultation

- 7.28 **Table 7.1** presents a summary of the comments raised in the Council's EIA Scoping Opinion and other discussions with relevant consultees with respect to Climate Change

Table 7.1 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Formal Scoping Opinion	The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.	Climate Change is scoped into the ES, see this chapter, (Chapter 7: Climate Change).

Assessment Methodology

Study Area and Scope

Study Area

- 7.29 The Site is the geographical study area for the assessment, however off-site emissions that have been included in the assessment include:

- Those from the product stage (A1-A3), that consists of raw material extraction, transport of materials and manufacturing, as well as transport of materials to the site.
- Those associated with a development's end-of-life or decommissioning process (C1-C4), which consists of the strip out, disassembly, deconstruction, and demolition as well as the transport, processing, and disposal of materials.

Scope of Assessment

- 7.30 Emissions sources have been identified using IEMA and RICS Whole Life Carbon Guidance. Professional judgement has been used to determine which emission sources will be scoped in or out of the climate change impact assessment.

¹⁷ IEMA (2022) Institute of Environmental Management & Assessment (IEMA) Guide: Assessing Greenhouse Gas Emissions and Evaluating their Significance 2nd Edition. Available at: https://s3.eu-west-2.amazonaws.com/iema.net/documents/knowledge/policy/impactassessment/J35958_IEMA_Greenhouse_Gas_Guidance-1.pdf

- 7.31 The scope adheres to the British Standard (BS) EN 15978:2011 ‘Sustainability of construction works, Assessment of environmental performance of buildings calculation’ method, which was developed by the European Committee for Standardisation (CEN) to enable a consistent approach to the environmental assessment and GHG emissions.
- 7.32 The below **Table 7.2** outlines the scope of this assessment, as set out within the submitted Scoping Report (**Appendix 1.3**).

Table 7.2 Scope of the Assessment

Likely significant effect	Description	Relevance to project	Scoped in / out
Product stage (A1 – A3)	Emissions associated with materials or products used in construction, including raw material extraction, transport, and manufacturing emissions	Raw materials and products have embodied emissions which may have large contributions to the project’s release of GHG emissions	Scoped in
Construction Stage A4	Emissions associated with the transport of materials to the construction site.	Fuels and energy associated with the transport of materials and products to site can be large if not sourced locally and sustainably	Scoped in
Construction Stage (A5)	Emissions from the construction and installation process.	Plant and equipment used during construction result in emissions being directly released into the atmosphere	Scoped in
	Emissions result from the disposal of waste and materials during construction	Materials disposed of or lost during construction is expected to be low, however will be assessed.	Scoped in
	Emission changes result from land use, land use change, and forestry during construction	Emissions from land use change and biomass disposal is expected to be minimal and therefore excluded	Scoped Out
In use Stage B1	Emissions arising from the building’s operation, such as those due to the release of refrigerants.	Whilst the contribution towards emissions is estimated to be small, this is easily calculated and has therefore been included	Scoped in
In use Stage B2	Emissions resulting from the Development’s maintenance	Whilst the contribution towards emissions is estimated to be small, this is easily calculated and has therefore been included.	Scoped In

In use Stage B3	emissions resulting from any repairs conducted in the Development during operation.	Whilst the contribution towards emissions is estimated to be small, this is easily calculated and has therefore been included.	Scoped in
In use Stage B4	Emissions resulting from any refurbishments conducted during the buildings lifetime	Emissions from refurbishments could be large, therefore this is included.	Scoped in
In-Use Stage B5	Emissions resulting from replacements of equipment and products over the Development's lifetime	Emissions from replacement of equipment and products could be large	Scoped In
Operational carbon B6	Emissions from the building's operation, specific to energy consumption during operation	The building will use energy to run during its lifetime, leading to annual emission contributions which will be included in the assessment	Scoped In
Operational carbon B7	Emissions from the building's operation, specific to water consumption during operation	Due to it being a residential Development, water use is expected to be large and therefore this is scoped in	Scoped In
Other user activities B8	These are emissions resulting from user activities including land change and forestry.	Emissions from land use change are expected to be small and therefore not included	Scoped out
End of life stage C1-C4	missions associated with the end-of-life of the Development, including deconstruction and demolition, transport, waste processing and disposal	Emissions associated with the building's decommissioning process could be large and has been included	Scoped In

Data Collection

7.33 The Proposed Development is currently in its early stages of design (RIBA Stage 2), and therefore design data currently available for the project has been used for the calculation of emissions. Evidence used for the assessment includes:

- RIBA Stage 2 Architectural Drawings and Design Pack prepared and issued by Hawkins\Brown Architects including:
- Proposed Gross Area Floor Plans, Sections and Elevations

- Area Schedule and Accommodation
- RIBA Stage 2 Civil and Structural Engineering Information prepared and issued by Renaissance Structural and Civil Engineering
- MEP RIBA Stage 2 Report prepared and issued by FutureServ Consulting Engineers
- RIBA Stage 2 Cost Plan prepared and issued by KS4 Project & Cost Consulting
- LETI Climate Emergency Design Guide (2020)¹⁸
- LETI Embodied Carbon Primer (2020)¹⁹
- RIBA 2030 Climate Challenge Version 2 (2021)²⁰
- One Click LCA Software
- PAS 2080:2023 Carbon Management in Buildings and Infrastructure²¹

Assessment Methodology

- 7.34 There is no single accepted methodology for calculating greenhouse gas emissions as part of an EIA. Therefore, this assessment has been based on recommended practice guidance - *IEMA's 'Environmental Impact Assessment Guide to: Assessing Greenhouse Gas Emissions and Evaluating their Significance.'*
- 7.35 In line with the recommended approach, the methodology that has been taken to assess and address GHG emissions consists of calculating the baseline conditions, establishing the significance for each scoped in emission source by comparing GHG emissions of the Proposed Development to the current baseline, in addition to national and local carbon budgets and RIBA/MCC net zero targets. Strategies used to mitigate emissions have been included within the calculations, and additional mitigating factors to reduce residual effects have also been explored.
- 7.36 The baseline is based on the emissions from a 'no development' scenario.
- 7.37 To determine the significance, the below GHG emission sources have been calculated. Whilst emissions from construction and operation as well as the Proposed Development in its end-of-life phase are collectively compared against baseline conditions and carbon budgets, operational energy has also been calculated against MCC's energy targets to determine the significance. For 2025, the

¹⁸ LETI (2020) Climate Emergency Design Guide. Available at: https://www.leti.uk/_files/ugd/252d09_3b0f2acf2bb24c019f5ed9173fc5d9f4.pdf

¹⁹ LETI (2020) Embodied Carbon Primer. Available at: https://www.leti.uk/_files/ugd/252d09_8ceffcbcafdb43cf8a19ab9af5073b92.pdf

²⁰ 22 RIBA (2021) RIBA 2030 Climate Challenge Version 2. Available at: <https://riba-prdassets.azureedge.net/-/media/Files/RIBA-2030-Climate-ChallengeSlides.pdf?rev=7a6e96bfa2e946208ccceae9a96ee9ad&hash=23977D060251E421606B28CF4CE26B15>

²¹ BSI (2023) PAS 2080:2030 Carbon Management in Buildings and Infrastructure. Available at: <https://www.bsigroup.com/en-GB/standards/pas-2080/>

operational energy differs slightly for RIBA (60 kWh/m²/year) and MCC (70 kWh/m²/year). Overall, the emissions scoped in cover the cradle-to-grave stages of the Proposed Development's lifecycle.

Construction Phase

7.38 Construction emissions have been calculated using One Click LCA's 'Carbon assessment, GLA / RICS / Green Mark' version of the LCA calculations. The development programme indicates that the Proposed Scheme will commence in November 2024 and will be completed over a two-year period (ending in December 2026).

- GHG emissions prior to construction (A1-A3).
- GHG emissions during construction (A4-A5).

Operational Phase

7.39 The Proposed Development is projected to be fully operational from 2027. The typical building is operational for 60 years, and therefore the below emissions have been calculated over a 60-year period.

- Operational emissions from energy (B6) and water (B7).
- GHG emissions (embodied only) during operation (B1-B5).

End-of-Life Phase

7.40 Emissions resulting from the development's end-of-life (C1-C4) have also been calculated.

Receptor Sensitivity

7.41 The sensitivity defines the value/importance of effects. Currently, there is no agreed threshold for what level of emissions are considered significant. However, the IEMA identify that all new GHG emissions contribute to a significant negative environmental effect. Therefore, significance is based on the net impact of the Proposed Development and should be mitigated as far as possible.

7.42 Any contribution towards climate change has a global impact, rather than directly affecting any specific local receptor. Therefore, based on the significance criteria, the receptor (in this case the global climate system) is always considered to be **high**, as it is of international, national, and local importance.

The Magnitude of Change

7.43 The magnitude of change defines the impact. This has been calculated using three indicators. This includes baseline emissions, carbon budgets as well as a comparison against industry net zero targets. There is no standard definition to determine the actual magnitude of change as major, moderate, or minor. Therefore, IEMA guidance and professional judgement has been used. These are shown in **Table 7.3**.

Table 7.3 Determining the Magnitude of Change

Magnitude of change	Baseline emissions and/or carbon budget impact		Net zero impact
Major	>5% increase/decrease in GHG emissions relative to baseline emissions and/or future carbon budgets	and / or	Proposed Development exceeds “Business as Usual”
moderate	2-5% increase/decrease in GHG emissions relative to baseline emissions and/or future carbon budgets		Proposed Development meets “Business as Usual”
Minor	1-2% increase/decrease in GHG emissions relative to baseline emissions and/or future carbon budgets		Proposed Development meets 2025 targets
Negligible	<1% increase/decrease in GHG emissions relative to baseline emissions and/or future carbon budgets		Proposed development meets 2030 targets

Determining the Level of Effects

7.44 **Table 7.4** has been used to assess the significance of effects (in this case the whole life embodied carbon, and operational emissions resulting from the Proposed Development),

Table 7.4 Significance of Effects

Magnitude of impact	Sensitivity importance
	High
Major	Major
Moderate	Major-moderate
Minor	Moderate – minor
Negligible	Negligible

7.45 IEMA provide guidance on how to distinguish different levels of significance, **where major and/or moderate are significant**, and **minor and/or negligible are not** considered to be **significant**. Given that there will be residual effects, ‘beneficial effects’ which are also considered to be significant (in benefit) have not been further defined and explored. IEMA’s definitions are described below:

- **Major:** “the project’s GHG impacts are not mitigated or are only compliant with minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK’s trajectory towards net zero.”
- **Moderate:** “the project’s GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to

decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero."

- **Minor:** "the project's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero."
- **Negligible:** "the project's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions."

7.46 The duration of effect is considered long term, because GHG emissions contribute to global warming, which may be long lasting and irreversible.

Limitations and Assumptions

7.47 Assumptions and limitations for the emissions calculated include:

- **Design Specification:** The project is currently in RIBA Stage 2 of design. The design may be subject to change as the project progresses and materials and construction methods are specified.
- **Material Sources:** The closest material has been specified in One Click LCA, however there might be variations in the embodied carbon of materials as well as the distance they travel to the construction site. This can lead to variations in the results.
- **Operational Energy:** The energy used during operation has been based on Manchester City Council requirements, which is at least 70 kWh/m²/year in 2025. This has been used because BRUKL reports do not account for unregulated emissions and in RICS' latest whole life carbon calculation guidance, it is recommended that BRUKL reports are not used for carbon calculations. The actual energy consumption may vary as the design progresses in addition to during operation because of the unpredictability of occupant behaviour.
- **Maintenance and Replacement:** Embodied carbon during the project's operational phase is also assumed in the One Click LCA software and may differ based on the building's durability.
- **Local Climate and Grid Decarbonisation:** The calculations assume that local climate data and electricity grid data are representative of national estimations as well as the built-in assumptions from One Click LCA.

- **Scope Boundaries:** A decision has been made on whether emissions have been scoped in or out of this assessment, which may lead to slight variations in the results. This is however, assumed to be below 5% and therefore not significant.

7.48 It is important to continuously update and refine the climate impact assessment as the project advances (e.g., in each consecutive design stage) and as more precise data becomes available, to make the assessment more accurate and reliable.

Baseline Conditions

Current Baseline Conditions

7.49 The impact of the Proposed Development has been assessed against the existing baseline conditions. The current Site comprises a building that has been unused for some time, and therefore for the purpose of this assessment, the baseline emissions are considered to be 0. However, because any contribution above 0 will have a major adverse effect, this has not been used as an accurate comparison.

7.50 The baseline emissions for Manchester, North-West England and the UK has therefore been taken from the UK Local Authority and Regional Greenhouse Gas Emissions National Statistics (2005-2021), 2023. The latest available emissions at the time of writing are 2021.

Table 7.4 Baseline Emissions

Location	Baseline emissions (2021) TC0ze
Manchester	2,095,600
North-west England	44,047,000
England	309,040,000

Future Baseline Conditions

Carbon Budgets

7.51 The Climate Change Committee have defined the UK's climate budgets²², meanwhile the Tyndall Centre for Climate Change Research have helped Manchester set their carbon budgets in line with a 1.5-degree warming²³. By assessing the environmental impact against local and national carbon

²² Department for Energy Security and Net Zero (2023) UK Local Authority and Regional Greenhouse Gas Emissions National Statistics, 2005 to 2021, GOV.UK. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissionsnational-statistics-2005-to-2021>

²³ Tyndall Centre for Climate Change Research (2023) Setting Climate Change Commitments for Manchester. Available at: <https://carbonbudget.manchester.ac.uk/reports/E08000003/>

budgets, the percentage contribution can be assessed, which helps to determine the magnitude of change resulting from the Proposed Development.

Table 7.5 Budget Contributions of the Proposed Development²⁴

Period	GHG emissions (tCO2e)	
	UK	Manchester
2023-2027	1,950,000,000	4,600,000
2028-2032	1,725,000,000	2,400,000
2033-2037	965,000,000	1,200,000
2038 - 2042	Undefined	600,000
2043 - 2047	Undefined	300,000
2048 – 2100	Undefined	300,000

Net Zero Targets

- 7.52 The emission intensity of the Proposed Development is also assessed against the MCC design targets for whole life embodied emissions as well as operational building emissions from energy consumption. The only discrepancy from RIBA's 2030 Climate Challenge is the 2025 target, which is 70 kWh/m²/year for Manchester as opposed to 60 kWh/m²/year by RIBA. Assessment against future net zero targets help to determine the future potential magnitude of change when compared to industry net zero benchmarks.

Table 7.6 MCC Climate Targets

RIBA Sustainable outcome metrics	Business as usual	2025 target	2030 target
Whole Life Embodied Carbon (kgCO ₂ e/m ²)	1,200	< 800	< 625
Operational Energy (kWh/m ² /year)	120	70	35

Assessment of Likely Significant Effects

- 7.53 The Proposed Development has been conscious in its design from the initial stages to reduce associated emissions. This includes selecting materials within a closer proximity to the Site, as well

²⁴ Department for Energy Security and Net Zero (2023) UK Local Authority and Regional Greenhouse Gas Emissions National Statistics, 2005 to 2021, GOV.UK. Available at: <https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissionsnational-statistics-2005-to-2021>

as eliminating fossil fuels (the Proposed Development is a fully electric building that uses heat pumps), in addition to PVs that reduce the total energy demand from the grid during operation.

- 7.54 The effects of the Proposed Development on the receptor have been calculated in tonnes of carbon dioxide equivalent (tCO₂e) and are shown in **Table 7.7**.

Table 7.7 Likely Significant Effects

Likely significant effects	Effect (tCO ₂ e)
Construction Stage	
A1-A3: Emissions from raw material extraction, transport, and manufacture	9,501.58
A4: Emissions from material transport	241.19
A5: Emissions from construction, installation, and waste	1,085.92
Operational stage	
B1-B5: Emissions from in-use maintenance, repairs, refurbishment, and replacements	2,913.19
B6: Emissions from in-use energy consumption	10,905.92
B7: Emissions from in-use water consumption	754.05
End of Life Stage	
C1-C4: Emissions from deconstruction and demolition, transport, waste processing and disposal	527.03

Significance Against the Current Baseline Conditions

- 7.55 The total emissions against the baseline have been assessed against national and local baseline emissions. To calculate the % emissions against the baseline, the average emissions from construction (A1-A5) in addition to the worst-case scenario year during operation have been used (2027, due to less grid decarbonisation using the BEIS emission factors).

Table 7.8 Magnitude of impact from current baseline conditions

Location	33-41 Cheetham hill GHG emissions (% increase from baseline)		Magnitude of impact
	Construction phase	Operational phase	
Manchester	0.5167%	0.0029%	Negligible
North-west England	0.0246%	0.0001%	Negligible
England	0.0035%	0.0000%	Negligible

- 7.56 It can be seen from the current baseline conditions that both construction phase and operational phase emissions are less than 1% and therefore considered **negligible**.

Significance Against Future Baseline Conditions - Carbon Budgets

Table 7.9 Budget contributions of the Proposed Development

Period	33-41 Cheetham Hill Road Contribution to UK Budgets (%)	33-41 Cheetham Hill Road Contribution to MCC Budgets (%)	Magnitude of impact
2023-2027	0.0006%	0.2389%	Negligible
2028-2032	0.0000%	0.0261%	Negligible
2033-2037	0.0000%	0.0372%	Negligible
2038 - 2042	n/a	0.0689%	Negligible
2043 - 2047	n/a	0.1190%	Negligible
2048 – 2100	n/a	0.3237%	Negligible

- 7.57 It can be seen from **Table 7.9** that likely emissions are less than 1% of national and local carbon budgets, and are therefore considered **negligible**.

Significance against future baseline conditions – net zero targets

Table 7.10 Contribution towards Net Zero Targets

Sustainable Outcome Metric	33-41 Cheetham Hill Road	Magnitude of Impact
Whole Life Embodied Carbon (kgCO ₂ e/m ²)	747	Minor
Operational Energy (kWh/m ² /year)	70	Minor

- 7.58 The whole life embodied carbon of 33-41 Cheetham Hill Road is 747 kgCO₂e/m² meanwhile the operational energy is assumed to be 70 kWh/m²/year. These surpass the 'business as usual' figures and meet the MCC's 2025 targets. Therefore, 33-41 Cheetham Hill is considered to have a **minor adverse** impact on net zero targets.

Summary of Likely Significance

Table 7.11 Summary of Significance

Likely significance effect	Receptor and sensitivity	Nature of impact	Magnitude of impact	Significance of Likely Effect
Whole life embodied emissions	The global climate system (high)	Adverse	Minor	Moderate – minor
Operational building emissions	The global climate system (high)	Adverse	Minor	Moderate – minor

- 7.59 Based on the magnitude of impact of the current and future baseline conditions, the significance of likely effects have been determined in **Table 7.11** (above). All are moderate-minor and therefore considered not significant.

Mitigation Measures

- 7.60 Whilst the significance of effects is moderate-minor, mitigation measures are recommended to further reduce emissions during construction and operation.

Construction emissions

- 7.61 Mitigation measures that can be integrated in later design stages to reduce embodied emissions are outlined in **Table 7.12**.

Table 7.12 Suggested construction emission mitigation measures

Mitigation measures	Description
Design for Less Material Use	Employ efficient structural design to reduce the amount of material required. Utilise advanced design techniques and modelling that minimises materials required whilst maintaining structural integrity.
Select Materials with Low Carbon Content	Utilise alternative and sustainable materials such as Ground Granulated Blast-furnace Slag (GGBS) as opposed to traditional high-carbon cementitious materials. Consider using engineered wood products such as laminated veneer lumber or cross-laminated timber (CLT), which have lower embodied carbon compared to steel or concrete

Use Materials with Recycled Content	Prioritise materials with a high percentage of recycled content, particularly steel, plastic, or reclaimed wood
Use Sustainably Sourced Materials	Choose sustainable materials such as those certified through the Forest Stewardship Council (FSC) for wood-based products, or Cradle to Cradle certified for other products.
Design for Adaptability and Disassembly	Design building components and systems with the future in mind, making the Development easy to adapt with changes in need, and disassemble with ease and without excessive waste
Design for Durability and Flexibility	Select materials and systems that are long-lasting and require minimal maintenance. Plan for spaces that can be easily reconfigured to accommodate changing needs, reducing the need for new construction
Use Materials that Can be Reused or Recycled	Prioritise materials that are recyclable or can be repurposed, reducing waste and emissions from disposal
Implement a Construction Environmental Management Plan (CEMP)	Develop a CEMP to monitor and manage waste during construction, ensuring that materials are segregated and recycled, reducing waste to landfill.
Use Modern Methods of Construction (MMC)	Employ off-site construction methods, such as modular systems, to reduce construction waste and efficiency (reducing construction time)
Minimise Fabrication and Construction Waste	Implement lean construction practices to reduce on-site waste generation
Implement a Construction Stage Traffic Management Plan	Minimise construction traffic emissions by optimising transport routes. Schedule deliveries during non-peak hours to reduce traffic congestion and emissions

Operational phase

7.62 Additional mitigation measures that can be integrated to reduce emissions during operation are outlined in **Table 7.13**.

Table 7.13 Suggested operational energy reduction measures

Mitigation measures	Description
Enhance Building Fabric Performance	Opt for materials and insulation with low U-values to improve thermal performance and reduce heat loss, reducing the energy required to maintain thermal comfort. Maximise air tightness to prevent uncontrolled air leakage.

Install Efficient Building Service	Choose energy efficient HVAC systems to reduce energy for temperature control. Use durable and energy-efficient (LED) lighting to reduce energy use.
implement Low-Flow Fixtures and Leak Detection Systems	Install low-flow faucets, showerheads, and toilets to reduce water consumption. Utilise advanced water leak detection systems to manage leaks promptly.
Integrate Smart Building Management Systems	Implement building management systems (BMS) to optimise building operation, enabling monitoring of energy consumption and adjustments to HVAC systems such as set point temperatures. Use sensors and automation to control lighting and HVAC systems to reduce use when and where they are not required.

Residual Effects

Mitigations Tested

- 7.63 Embodied carbon emissions are the largest contributor to the total emissions of a development. In the case of the Proposed Development, it accounts for 55% of total emissions over the development's lifetime. Materials with the largest embodied carbon were replaced with alternatives - where more sustainable replacements were available - to assess the potential residual effect. These are outlined **Table 7.14**.

Table 7.14 Tested Material Alternatives for Cheetham Hill

No	Material	Sustainable replacement
1	Ready-mix concrete C40/50, 0% recycled binders in cement	Ready-mix concrete, normal-strength, generic, C40/50 (5800/7300 PSI), 50% recycled binders in cement
2	Reinforcement steel (rebar), generic, 0% recycled content (only virgin materials)	Reinforcement steel (rebar), generic, 97% recycled content (typical), A615
3	Aluminium window system, triple glazed	No suitable sustainable alternative
4	Suspended metal ceiling system, 6.305 kg/m2	Suspended metal ceiling system, 7.637 kg/m2, SAS System 205 (Steel) (SAS International) - BRE
5	Partitioning wall system (internal insulated wall) with steel studs, glass wool core and gypsum board double siding	Wooden stud internal wall assembly, 100 mm, incl. mineral wool insulation, for UK
6	Lightweight concrete block, with expanded clay aggregate, generic	Expanded clay hollow concrete block partition wall

7	Ready-mix concrete, normal strength, generic, C32/40, 0% recycled binders	Ready-mix concrete, normal strength, generic, C32/40 (4600/5800 PSI) with CEM III/A, 60% GGBS content in cement (300 kg/m ³ ; 18.7 lbs/ft ³ total cement) (One Click LCA 2022)
8	Rock wool insulation panels, unfaced, generic	No suitable sustainable alternative
9	Internal wall system with glass wool core, gypsum board and steel frame	Wooden stud internal wall assembly, 100 mm, incl. mineral wool insulation, for UK
10	Luxury vinyl floor tile (Karndean)	Wooden stud internal wall assembly, 100 mm, incl. mineral wool insulation, for UK

Summary of residual effects

7.64 The residual effects after testing the impact of material alternatives are displayed in the below table.

Table 7.15 Likely residual effects

Likely significant effects	Effect (tCO ₂ e)
Construction Stage	
A1-A3: Emissions from raw material extraction, transport, and manufacture	6,683.28
A4: Emissions from material transport	248.31
A5: Emissions from construction, installation, and waste	903.20
Operational stage	
B1-B5: Emissions from in-use maintenance, repairs, refurbishment, and replacements	3,769.38
B6: Emissions from in-use energy consumption	10,905.92
B7: Emissions from in-use water consumption	754.05
End of Life Stage	
C1-C4: Emissions from deconstruction and demolition, transport, waste processing and disposal	963.61

Significance against Current Conditions

7.65 The residual emissions against the baseline have been assessed against national and local baseline emissions. To calculate this, the average emissions from construction (A1-A5) has been used, in addition to the worst-case scenario year during operation (2027, due to less grid decarbonisation).

Table 7.16 Residual Effects Against the Current Baseline Emissions

Location	33-41 Cheetham hill GHG emissions (% increase from baseline)		Magnitude of impact
	Construction phase	Operational phase	

Manchester	0.3739%	0.0029%	Negligible
North-west England	0.0178%	0.0001%	Negligible
England	0.0025%	0.0000%	Negligible

- 7.66 It can be seen from the current baseline conditions that both construction phase and operational phase emissions are less than 1% of the baseline and therefore considered **negligible**.

Future Baseline Conditions

Carbon budgets

Table 7.17 Residual effects against current baseline emissions

Period	33-41 Cheetham Hill Road Contribution to UK Budgets (%)	33-41 Cheetham Hill Road Contribution to MCC Budgets (%)	Magnitude of impact
2023-2027	0.0004%	0.1741%	Negligible
2028-2032	0.0000%	0.0291%	Negligible
2033-2037	0.0001%	0.0431%	Negligible
2038 - 2042	n/a	0.0808%	Negligible
2043 - 2047	n/a	0.1428%	Negligible
2048 – 2100	n/a	0.1862%	Negligible

- 7.67 It can be seen from **Table 7.17** that residual emissions are less than 1% and are therefore considered negligible.

Net Zero Targets

Table 7.18 Residual effects against current baseline emissions

Sustainable Outcome Metric	33-41 Cheetham Hill Road	Magnitude of Impact
Whole Life Embodied Carbon (kgCO ₂ e/m ²)	658	Minor
Operational Energy (kWh/m ² /year)	70	Minor

- 7.68 The residual whole life embodied carbon on the Proposed Development is 658 kgCO₂e/m². And the operational energy remains the same at the assumed 70 kWh/m²/year. This surpasses the 'business as usual' figures as well as MCC's 2025 targets and is very close to the 2030 targets. However, the magnitude of impact remains **minor**.

Offset

- 7.69 To fully mitigate residual effects, the Proposed Development will need to offset all remaining emissions above zero. The government recommends obtaining carbon credits from schemes that remove carbon from the atmosphere from afforestation, ecosystem restoration, bioenergy with carbon capture and storage (BECCS) and direct air capture with carbon storage (DACCS) and mineralisation.
- 7.70 The residual effects arising from the Proposed Development are summarised in **Table 7.19** below.

Table 7.19 Summary of Residual Effects

Effect	Receptor (Sensitivity)	Nature of impact	Magnitude of impact	Classification of effect (statement of significance before mitigation)	Mitigation and monitoring	Significance of likely effect
Whole Life Embodied Emissions	The Global Climate System (High)	Adverse	Minor	Moderate – minor	Possible enhancements : materials with lower embodied carbon and transport minimisations	Moderate- Minor (Not Significant)
Operational Building Emissions	The Global Climate System (High)	Adverse	Minor	Moderate – minor	Possible enhancements : maximising thermal performance, efficient building systems and low flow fixtures	Moderate – Minor (Not Significant)

Likely Significant Environmental Effects

- 7.71 Based on the magnitude of impact of the residual effects, the significance is still considered to be moderate-minor, and therefore **not significant**.

Summary and Conclusions

- 7.72 This chapter of the ES provides a summary of the residual effects of the Proposed Development.
- 7.73 The impacts of the Site on climate change is considered **not significant** as the magnitude of impact is negligible or minor, in addition to the application of mitigation measures. The contribution towards carbon budgets and the current baseline are all negligible. The impact towards net zero targets is minor.
- 7.74 **Table 7.19** above provides a summary of the residual environmental effects.

Summary of mitigation measures

- 7.75 Measures have been incorporated into the early stages of design of the Proposed Development to avoid, reduce, or offset significant environmental effects. Where this has not been possible, further mitigation measures are proposed.
- 7.76 Mitigation measures that have been recommended comprise best practice in design and construction and operation. These are set out within the technical chapters.

Table 7.20 Summary of Mitigation Measures

Mitigation measures	Description
Construction	
Design for Less Material Use	Employ efficient structural design to reduce the amount of material required. Utilise advanced design techniques and modelling that minimises materials required whilst maintaining structural integrity.
Select Materials with Low Carbon Content	Utilise alternative and sustainable materials such as Ground Granulated Blast-furnace Slag (GGBS) as opposed to traditional high-carbon cementitious materials. Consider using engineered wood products such as laminated veneer lumber or cross-laminated timber (CLT), which have lower embodied carbon compared to steel or concrete
Use Materials with Recycled Content	Prioritise materials with a high percentage of recycled content, particularly steel, plastic, or reclaimed wood.
Use Sustainably Sourced Materials	Choose sustainable materials such as those certified through the Forest Stewardship Council (FSC) for wood-based products, or Cradle to Cradle certified for other products.

Design for Adaptability and Disassembly	Design building components and systems with the future in mind, making the Development easy to adapt with changes in need, and disassemble with ease and without excessive waste.
Design for Durability and Flexibility	Select materials and systems that are long-lasting and require minimal maintenance. Plan for spaces that can be easily reconfigured to accommodate changing needs, reducing the need for new construction.
Use Materials that Can be Reused or Recycled	Prioritise materials that are recyclable or can be repurposed, reducing waste and emissions from disposal.
Implement a Construction Environmental Management Plan (CEMP)	Develop a CEMP to monitor and manage waste during construction, ensuring that materials are segregated and recycled, reducing waste to landfill.
Use Modern Methods of Construction (MMC)	Employ off-site construction methods, such as modular systems, to reduce construction waste and efficiency (reducing construction time).
Minimise Fabrication and Construction Waste	Implement lean construction practices to reduce on-site waste generation.
Implement a Construction Stage Traffic Management Plan	Minimise construction traffic emissions by optimising transport routes. Schedule deliveries during non-peak hours to reduce traffic congestion and emissions
Operation	
Enhance Building Fabric Performance	Opt for materials and insulation with low U-values to improve thermal performance and reduce heat loss, reducing the energy required to maintain thermal comfort. Maximise air tightness to prevent uncontrolled air leakage.
Install Efficient Building Services	Choose energy efficient HVAC systems to reduce energy for temperature control. Use durable and energy-efficient (LED) lighting to reduce energy use
Implement Low-Flow Fixtures and Leak Detection Systems	Install low-flow faucets, showerheads, and toilets to reduce water consumption. Utilise advanced water leak detection systems to manage leaks promptly
Integrate Smart Building Management Systems	Implement building management systems (BMS) to optimise building operation, enabling monitoring of energy consumption and adjustments to HVAC systems such as set point temperatures. Use sensors and automation to control lighting and HVAC systems to reduce use when and where they are not required.

7.77 In addition to applying feasible enhancement measures as outlined above, the suggested approach for the Proposed Development involves neutralising any remaining emissions using carbon credits

to attain net-zero emissions, with a focus on offsets that capture greenhouse gas emissions from the atmosphere. Some examples include afforestation, ecosystem restoration, bioenergy with carbon capture and storage (BECCS) and direct air capture with carbon storage (DACCS) and mineralisation.

Effect Interactions and Cumulative Effects

- 7.78 The atmospheric concentration of GHGs and the resulting effect on climate change is affected by all sources and sinks globally, anthropogenic, or otherwise. Due to them being felt globally, rather than affecting a local area, the approach of cumulative effects differs from other EIA topics, where typically projects within a certain boundary is assessed. Hence, there is no increase in local climate effect due to one development, and alternatively, all combined developments globally contribute to the receptor (the atmospheric concentration of GHG emissions and therefore climate change). As suggested by IEMA, “there is no basis for selecting any particular cumulative project for assessment”, and therefore cumulative effects are not calculated in this assessment.



33-41 Cheetham Hill Road, Environmental Statement

Chapter 8: Built Heritage

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May 2024

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8. BUILT HERITAGE

Introduction

- 8.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to Built Heritage. This Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.
- 8.2 This chapter assesses the likely significant effects of the Proposed Development on the built historic environment i.e. above ground heritage assets.
- 8.3 The chapter describes the methods used to assess the likely significant effects, the baseline conditions currently existing at the site and in its surroundings, the potential indirect effects of the proposed development arising from the construction and the operational phase, the mitigation measures required to prevent, reduce, or offset the identified significant effects and the residual effects.
- 8.4 This chapter is supported by the following technical appendices:
- **Appendix 8.1:** Heritage Statement ('HS'). This appendix provides a detailed analysis of the historic development of the Site, an appraisal of identified heritage assets – including the contribution made by the Site to the setting of these – and an assessment of the potential impact of the proposed development on their significance. **This Chapter cross refers to the Heritage Statement where most of the detail of the assessment is presented.**

Legislation and Policy Context

Legislation Context

- 8.5 This assessment is carried out in accordance with the principles contained within the following Policy and Legislation.

National Planning Policy

- 8.6 The following national planning policy is relevant to the Proposed Development:
- Planning (Listed Buildings and Conservation Areas) Act 1990; and,
 - National Planning Policy Framework ('NPPF'), 2023.

Local Planning Policy

- 8.7 The following local planning policies are relevant to the Proposed Development:
- Manchester's Local Development Framework, Core Strategy, July 2012; and
 - Manchester Extant Unitary Development Policies ('UDP'), July 1995.

Guidance

8.8 The following guidance is relevant to the Proposed Development:

- Planning Practice Guidance ('PPG') 2023;
- ICOMOS guidance on Heritage Impact Assessments (2011);
- Historic England's Planning Advice Guidance Notes: GPA3: The Setting of Heritage Assets (December 2017); and,
- Historic England Advice Note 4: Tall Buildings ('HEAN 4').

Assessment Methodology and Significance Criteria

8.9 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to Built Heritage.

Consultation

8.10 **Table 8.1** presents a summary of the comments raised in the Council's EIA Scoping Opinion and other discussions with relevant consultees with respect to Built Heritage.

Table 8.1 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Formal Scoping Opinion (December 2023)	It is not agreed that Heritage can be scoped out of the EIA. Given the magnitude of the development the EIA should consider the impact on nearby listed buildings together with wider townscape impacts on the assets within the city centre.	Heritage has been scoped into this ES. See this chapter – (Chapter 8: Heritage and associated appendix 8.1: Heritage Assessment). See Chapter 10: TVIA of the ES and associated appendices (Appendix 10.1 – 10.4).

Assessment Methodology and Significance Criteria

Study Area

8.11 For the purposes of the built heritage assessment, consideration has been given within a 500m radius of the Site, which is considered to be proportionate to the scale of Proposed Development of the Site and the proximity of surrounding heritage assets.

8.12 A Zone of Theoretical Visibility ('ZTV') covers a wider area and has been utilised to understand what the potential impacts on heritage receptors might be. The ZTV suggests that the Proposed Development has the potential to be visible from a large area of the surrounding city. However, the heritage assets which are considered to be most sensitive and have the potential to be affected by the proposed development are limited to those closest to the Site – this has also been confirmed through pre-application discussions with MCC.

8.13 The identification of sensitive receptors has therefore been limited to a consideration of heritage receptors within 500m of the Site boundary. The potential effect of the Proposed Development on

heritage receptors outside the 500m study area has been considered as part of this assessment but it is not considered that it will give rise to any significant effects on the setting of these wider heritage receptors.

Assessment Methodology

- 8.14 The assessment methodology for the baseline appraisal and Heritage Assessment, within **Appendix 8.1**, is a synthesis of established guidance, best practice, and professional judgement. In accordance with an adapted form of the methodology set out in the 'Department for Transport's Design Manual for Roads and Bridges (DMRB) Volume 11 Section 3 Part 2 Cultural Heritage HA 208/07', all receptors identified in the baseline which might be affected by the Proposed Development are valued and the impact on them is assessed in order to give a significance of effect. The following guidance has also been utilised for the assessment:
- DCMS's Principles of Selection for Listing Buildings (2010);
 - Historic England's Conservation Principles, Policies and Guidance (2008);
 - Historic England's Good Practice Advice Note 3: The Setting of Heritage Assets (2017); and
 - Historic England's Advice Note 12 – Statements of Heritage Significance: Analysing Significance in Heritage Assets (2019).
- 8.15 The aim of this assessment is:
- To establish the baseline environment regarding designated heritage assets i.e. Listed Buildings and Conservation Areas;
 - Assessment of the significance of identified assets;
 - Evaluation of the magnitude of impacts on identified assets; and
 - Identification of mitigation in the form of further surveys, investigation, and recording to be undertaken in light of the identified impacts.
- 8.16 Consideration has also been given to the historical development, building types and materials, key views to the notable historic buildings which contribute to the identification of the built form, and understanding of the special interest of the area.
- 8.17 The selection of views for the visual impact assessment within the appended Heritage Statement (**Appendix 8.1**) considered the following factors regarding character and distinctiveness of the area surrounding the Site: location of heritage assets, open spaces, public realm, materials, views into and from the Site, current and historic uses, and the urban grain.
- 8.18 In order to predict the magnitude of impact and the overarching effect, the following criteria is considered:
- The sensitivity and proximity of receptors;
 - The nature of existing views;

- The degree of change to views and visibility of the Proposed Development; and
- The availability and amenity of alternative views.

Construction Phase

- 8.19 The construction phase assessment has considered the potential for change in the setting of designated heritage assets in the vicinity of the Site.

Operational Phase

- 8.20 The assessment methodology and approach to the relative impact on heritage assets during the operational phase is based on evidence-based assumptions in relation to material changes in the setting of designated heritage assets in the vicinity of the Site.

Significance Criteria

- 8.21 Criteria have been established to appraise a heritage asset's significance. Statutory criteria, as set out in the 'Principles of Selection for Listing Buildings', DCMS, 2010 (revised 2018), provides a list of principles for assessing significance based on architectural and historic interest, age and rarity, aesthetic merits, selectivity and national interest. Historic England's (formerly English Heritage) criteria outlined in 'Conservation Principles, Policies and Guidance' (2008) are also considered in this assessment.
- 8.22 Evaluation of significance has been informed primarily by the designation of the assets at an international, national, regional, or local level as well as their ability to contribute to an understanding of the past. This value rating had also been applied when considering sensitivity of views containing heritage assets. Indicative definitions for each of these ratings are outlined in **Table 8.2**.

Table 8.2 Significance Criteria for Determining the Value of Heritage Assets

Significance	Definition
High	- Grade I and Grade II* listed buildings. - Other buildings that can be shown to have exceptional qualities in their fabric or historical associations not adequately reflected in the listed grade. - Conservation Areas containing very important buildings.
Medium	- Grade II listed buildings. - Historic Buildings that can be shown to have exceptional qualities in their fabric or historical associations. - Conservation areas containing buildings that contribute significantly to its historic character.

Low	- Locally Listed buildings. - Historic buildings of modest quality in their fabric or historical association.
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Magnitude of Impact

- 8.23 Impacts may be beneficial, adverse, or neutral. If a development will enhance heritage values or the ability to appreciate them, then the impact on heritage significance will be deemed to be beneficial; however, if they fail to sustain heritage values or impair their appreciation then the impact will be deemed to be adverse. Where a development will not intrude on the significance of a heritage asset, the impact will be deemed neutral.
- 8.24 **Table 8.3** summarises the factors to be taken into account when assessing the magnitude of impact. The criteria are not intended to be prescriptive and the weighting to be accorded to each requires professional judgement.

Table 8.3 Criteria for Determining Magnitude of Impact

Magnitude of Impact	Criteria for assessing impact
Major Beneficial	The Proposed Development considerably enhances the heritage values of the heritage assets, or the ability to appreciate those values.
Moderate Beneficial	The Proposed Development enhances to a clearly discernible extent the heritage values of the heritage assets, or the ability to appreciate those values.
Minor Beneficial	The Proposed Development enhances to a minor extent the heritage values of the heritage assets, or the ability to appreciate those values.
Negligible Beneficial	The Proposed Development would imperceptibly enhance the intrinsic values of the identified heritage assets, or the experience and appreciation of the buildings or the designated area.
Neutral	The Proposed Development may result in some visual change but does not affect the heritage values of the heritage assets in the view, or the ability to appreciate those values.
Negligible Adverse	The Proposed Development would alter, but not diminish, the intrinsic values of the identified heritage assets, or the experience and appreciation of the buildings or the designated area to any appreciable degree.
Minor Adverse	The Proposed Development erodes to a minor extent the heritage values of the heritage assets, or the ability to appreciate those values.

Moderate Adverse	The Proposed Development erodes to a clearly discernible extent the heritage values of the heritage assets, or the ability to appreciate those values.
Major Adverse	The Proposed Development severely erodes the heritage values of the heritage assets, or the ability to appreciate those values

Assessing Significance of Effect

- 8.25 Derived by combining the significance rating of the asset with the magnitude of impact for each asset, **Table 9.4** illustrates how information on the significance of the asset and the magnitude of the impact has been combined to arrive at an assessment of the significance of effect. The matrix is not intended to 'mechanise' judgment of the significance of effect but act as a check to ensure that judgments regarding value, magnitude of impact and significance of effect are reasonable and balanced.
- 8.26 The tabulated matrix below (**Table 8.4**) is generally consistent with recognised criteria as defined within ICOMOS Guidance (2011). This is not, however, intended to be prescriptive, and does not consider the existing character of the areas around the Site. Scale or severity of impacts or changes can be judged considering their direct and indirect effects and whether they are temporary or permanent, reversible or irreversible. The cumulative effect of separate impacts is also be considered. The scale or severity of impact is ranked without regard to the value of the asset. Significant effects are typically understood as anything from moderate to major, however, the number of impacts are also a consideration in determining overall heritage impact.

Table 8.4 Significance of Effect Matrix

Magnitude	Sensitivity		
	High	Medium	Low
Major	Major Beneficial / Adverse	Major – Moderate Beneficial / Adverse	Moderate – Minor Beneficial / Adverse
Moderate	Major – Moderate Beneficial / Adverse	Moderate – Minor Beneficial / Adverse	Minor Beneficial / Adverse
Minor	Moderate – Minor Beneficial / Adverse	Minor Beneficial / Adverse	Minor - Negligible
Negligible	Negligible	Negligible	Negligible

Limitations and Assumptions

- 8.27 The survey undertaken 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, and is not informed by internal access.
- 8.28 This assessment assumes that the data collated from secondary sources is up to date and valid.

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

Baseline Conditions

Establishing Baseline Conditions

- 8.30 The baseline assessment was undertaken using a combination of desk-based research and fieldwork to identify and assess the heritage significance of designated heritage assets (referred to as 'receptors') and their settings in relation to the Site. It also established the way in which the settings and the Site contribute to the heritage significance of these assets.
- 8.31 The receptors were valued and the impact on them assessed giving a significance of effect.
- 8.32 The baseline assessment was informed by information collated from several online and primary sources including:
- The National Heritage List (Historic England).
 - Historic Maps (including tithe and Ordnance Survey maps).
 - Historic aerial photography.
 - Site surveying.

Baseline Conditions

- 8.33 The Site comprises a vacant plot of land which in a disused and deteriorating condition; it has a poor relationship to the streetscape of both Cheetham Hill Road and Caernarvon Street.
- 8.34 The Site was originally part of the large Strangeways Hall estate and was located in the Hall's grounds. In the c1810s Cheetham Hill Road was constructed partially through the grounds, and was originally called York Street.
- 8.35 The Site was first developed as a row of four terraced houses and one, larger, double-fronted house by 1832. The Site remained unaltered until bomb damage in 1940 destroyed the southernmost house and badly damaged the adjacent house, resulting in their demolition. The two southern houses were demolished by 1946 and the site of the two houses was left cleared into the mid-1950s.
- 8.36 At some time in the circa (c.) 1960s/ 70s the remaining three houses were demolished and a single-storey petrol garage was constructed across the Site, closing in the c.2000s.
- 8.37 There are some existing structures/ buildings present on the Site associated with its most recent use as a car dealership / car wash facility and does not contain any listed buildings or locally listed buildings and is not located in a Conservation Area.
- 8.38 Please refer to Section 4 of the Heritage Statement (**Appendix 8.1**) for a detailed description of the historic development of the Site and its locality.

Baseline Survey Information

- 8.39 There are no designated or non-designated heritage assets within the Site boundary.

8.40 Within 500m of the Site boundary there are the following seven listed buildings that have been scoped in for assessment:

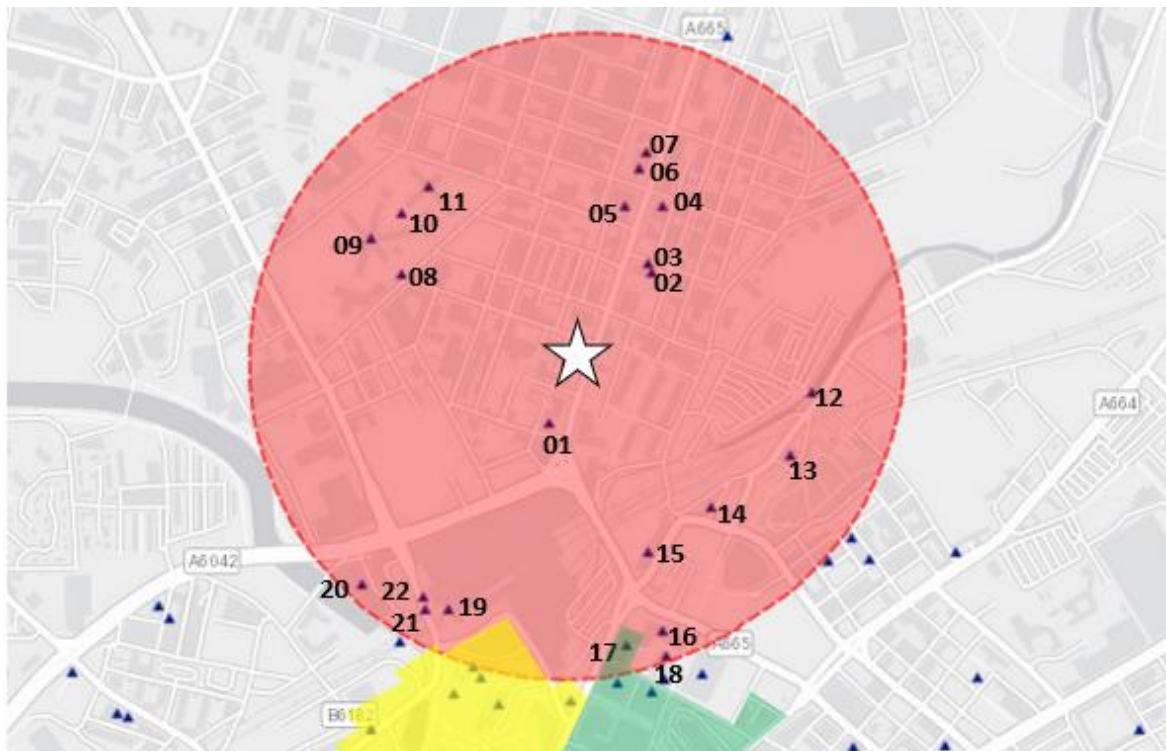
- Former Synagogue (Grade II);
- Roman Catholic Church of St Chad and Presbytery St Chards Presbytery (Grade II);
- Churchyard Walls of Roman Catholic Church of St Chad (Grade II);
- Former Free Library (Grade II);
- Knowsley Hotel (Grade II);
- Cheetham Town Hall (FORMER) (Grade II); and
- Cheetham Town Hall Annexe (FORMER) (Grade II).

8.41 There are two Conservation Areas (Cathedral Conservation Area and Shudehill Conservation Area) within the setting of the Site, however, due to lack of intervisibility only the Cathedral Conservation Area has the potential to be affected by the Proposed Development, and has therefore been scoped in.

8.42 The above heritage assets comprise the designated heritage assets which are the subject of this assessment (and addressed in the supporting Heritage Statement, **Appendix 8.1**). The location of these listed buildings is identified on the map at **Figure 8.1**.

Figure 8.1 Location of all listed buildings and conservation areas within the study area

** 500m radius is indicated by the red circle, with the Site indicated by the white star.*



***Listed Buildings are numbered by blue triangles, those which are considered to have the potential to be impacted by the Proposed Development have been scoped-in to this assessment. The Cathedral Conservation Area is shown shaded yellow, and the Shudehill Conservation Area is shaded green.*

Significance / Value of the Heritage Assets

- 8.43 A detailed description of the form, character, and significance/ value of the scoped-in heritage assets, as well as a description of their setting and the contribution made to an appreciation of their significance by the Site, is provided in the Heritage Statement (**Appendix 8.1**). **Table 8.5** below provides a summary of the significance/ value of each of the scoped in heritage assets.

Table 8.5. Significance/ Value of Scoped-In Heritage Assets

Heritage Asset / Receptor	Designation	Sensitivity / Value
Listed Buildings		
Former Synagogue	Grade II	Medium
Roman Catholic Church of St Chad And Presbytery St Chads Presbytery	Grade II	Medium
Churchyard Walls of Roman Catholic Church of St Chad	Grade II	Medium
Former Free Library	Grade II	Medium
Knowsley Hotel	Grade II	Medium
Cheetham Town Hall (Former)	Grade II	Medium
Cheetham Town Hall Annexe (Former)	Grade II	Medium
Conservation Areas		
Cathedral Conservation Area	-	Medium

Identification and Evaluation of Significant Effects

- 8.44 Heritage assets are susceptible to numerous forms of development and non-development impacts both during the construction process and as a consequence of the operational phase of a development.
- 8.45 The potential effects in relation to the Proposed Development have been deemed to be indirect effects, i.e. the settings of heritage assets within the 500m study area.

Mitigation Measures

- 8.46 The mitigation of any potential impacts has been considered through the design of the scheme proposals and will therefore be 'embedded'.
- 8.47 Enlisting appropriate specialists has informed the design development and assessment process to ensure potential adverse visual impacts on the identified heritage assets are minimised wherever possible.

Residual Effects

- 8.48 It is judged likely that the residual effects of the Proposed Development in the operational phase will remain the same as identified in the above assessment with the additional mitigation methods factored in owing to the nature of the scheme which introduces a large building of scale into a

currently, largely undeveloped site and into the setting of a number of heritage assets. It is considered that the effects will remain within the range of the effects identified in this Chapter.

- 8.49 These overarching effects on designated heritage assets in the setting of the Site – **Negligible-to-Minor adverse** and **Minor Adverse** will be long term and permanent at a national level, and therefore will not incur any significant effects.
- 8.50 The residual effects arising from the Proposed Development are summarised in **Table 8.6** below.

Table 8.6 Summary of Residual Effects

Likely significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Indirect effect on setting	FORMER SYNAGOGUE	Hoarding	Minor Adverse (temporary) (Not Significant)
Indirect effect on setting	ROMAN CATHOLIC CHURCH OF ST CHAD AND PRESBYTERY ST CHADS PRESBYTERY	Hoarding	Negligible to minor adverse (temporary) (Not Significant)
Indirect effect on setting	CHURCHYARD WALLS OF ROMAN CATHOLIC CHURCH OF ST CHAD	N/A	Neutral (Not Significant)
Indirect effect on setting	FORMER FREE LIBRARY	N/A	Neutral (Not Significant)
Indirect effect on setting	KNOWSLEY HOTEL	N/A	Neutral (Not Significant)
Indirect effect on setting	CHEETHAM TOWN HALL (FORMER)	N/A	Neutral (Not Significant)
Indirect effect on setting	CHEETHAM TOWN HALL ANNEXE (FORMER)	N/A	Neutral (Not Significant)
Indirect effect on setting	Cathedral Conservation Area	N/A	Neutral (Not Significant)
Operational Phase			

Indirect effect on setting	ROMAN CATHOLIC CHURCH OF ST CHAD AND PRESBYTERY ST CHADS PRESBYTERY	N/A	Negligible to minor adverse (Not Significant)
Indirect effect on setting	CHURCHYARD WALLS OF ROMAN CATHOLIC CHURCH OF ST CHAD	N/A	Neutral (Not Significant)
Indirect effect on setting	FORMER FREE LIBRARY	N/A	Neutral (Not Significant)
Indirect effect on setting	KNOWSLEY HOTEL	N/A	Neutral (Not Significant)
Indirect effect on setting	CHEETHAM TOWN HALL (FORMER)	N/A	Neutral (Not Significant)
Indirect effect on setting	CHEETHAM TOWN HALL ANNEXE (FORMER)	N/A	Neutral (Not Significant)
Indirect effect on setting	Cathedral Conservation Area	N/A	Neutral (Not Significant)

Likely Significant Environmental Effects

- 8.51 None of the effects identified from a Proposed Development are significant in EIA terms.

Effect Interactions and Cumulative Effects

Cumulative Effects of the Proposed Development with Other Development Schemes

- 8.52 An overall assessment of cumulative effects, i.e. of the effect of the Proposed Development taking into account other proposed and consented schemes, will be provided in relation to townscape and views and will be undertaken in the submitted Townscape and Visual Impact Assessment (**Chapter 10** of the ES and associated appendices, specifically **Appendix 10.2: TVIA photos and AVR's**) by Chris Burnett Associates.



33-41 Cheetham Hill Road, Environmental Statement

Chapter 9: Human Health

King Street Planning on behalf
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May 2024

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9. HUMAN HEALTH

Introduction

- 9.1 This Chapter of the ES comprises an assessment of the Human Health related effects associated with the Proposed Development. It focuses on the likely impacts during the construction and operational phases to human health receptors both on and off-site. The assessment has been undertaken by King Street Planning.
- 9.2 The Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects; cumulative effects and the likely residual effects.

Competence

- 9.3 Jamie Lynch (BA, MSc, MRICS, MRTPI, MIEMA, CEnv) is a director of King Street Planning, an environmental and town planning consultancy practice based in Manchester. Jamie's experience focuses on planning and environmental advice for large-scale developments throughout the UK. He has prepared a number of Health Impact Assessments for developments of a similar nature, scale, type and use.

Legislation and Policy Context

Legislation Context

- 9.4 There is no Legislation directly governing the assessment of human health..

National Planning Policy

- 9.5 The following national planning policy is relevant to the Proposed Development:
- 9.6 The National Planning Policy Framework ("NPPF") (December 2023) sets out the Government's planning policies for England and how these should be applied. In order to achieve sustainable development, the planning system has three overarching objectives, all of these contribute to the health of residents and the community. Paragraph 8 objectives are:
- *'a) an economic objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
 - *b) a social objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and,*

- *c) an environmental objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.'*
- 9.7 Chapter 8 of the NPPF is related to 'Promoting Healthy and Safe Communities'. Paragraph 96 states that planning decisions should aim to achieve healthy, inclusive and safe places and beautiful buildings which:
- *'a) promote social interaction, including opportunities for meetings between people who might not otherwise come into contact with each other – for example through mixed-use developments, strong neighbourhood centres, street layouts that allow for easy pedestrian and cycle connections within and between neighbourhoods, and active street frontages;*
 - *b) are safe and accessible, so that crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion – for example through the use of beautiful, well-designed, clear and legible pedestrian and cycle routes, and high quality public space, which encourage the active and continual use of public areas; and;*
 - *c) enable and support healthy lifestyles, especially where this would address identified local health and well-being needs – for example through the provision of safe and accessible green infrastructure, sports facilities, local shops, access to healthier food, allotments and layouts that encourage walking and cycling.'*
- 9.8 Paragraph 97 states that decisions should *'take into account and support the delivery of local strategies to improve health, social and cultural well-being for all sections of the community'*.
- 9.9 Open space and recreational opportunities are recognised as important infrastructure to support the health and well-being of communities.
- 9.10 Paragraph 109 is within the chapter relating to sustainable transport and states that providing a genuine choice of modes of travel can help to reduce congestion and emissions, and improve air quality and public health.
- 9.11 The design of new development is recognised as an important consideration to *'create places that are safe, inclusive and accessible, promote health and well-being, with a high standard of amenity for existing and future site users'* (para 135(f)).
- 9.12 Paragraph 191 relates to pollution and states that planning decisions should ensure that a *'new development is appropriate for its location, taking into account the likely effects of pollution on health, living conditions and the natural environmen'*. In doing so, they should should:
- *a) mitigate and reduce to a minimum potential adverse impacts resulting from noise from new development – and avoid noise giving rise to significant adverse impacts on health and the quality of life;*

- *b) identify and protect tranquil areas which have remained relatively undisturbed by noise and are prized for their recreational and amenity value for this reason; and,*
- *c) limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.'*

Planning Practice Guidance

9.13 National Planning Practice Guidance ("NPPG") is an online guidance tool to assist the planning process, providing further detailed information which supports the policy basis in the NPPF. Paragraph 001 (ref. ID: 53-001-20190722) of the *Achieving Health and Inclusive Communities* section of the NPPG states:

- *'The design and use of the built and natural environments, including green infrastructure are major determinants of health and wellbeing. Planning and health need to be considered together in two ways: in terms of creating environments that support and encourage healthy lifestyles, and in terms of identifying and securing the facilities needed for primary, secondary and tertiary care, and the wider health and care system (taking into account the changing needs of the population).'*

Local Planning Policy

9.14 The following local planning policies are relevant to the Proposed Development.

Manchester's Local Development Framework, Core Strategy,(July 2012)

9.15 A series of Citywide challenges are set out in the Core Strategy. These need to be overcome for the Council to achieve its sustainable community strategy, including:

- Reducing worklessness and deprivation
- Improving the skills of residents to meet the job opportunities
- Reducing contribution to and mitigating effects of climate change.
- Creating neighbourhood focus, facilities and identity. - Providing a choice of high quality safe and sustainable lifetime homes and neighbourhoods for a growing population
- Removing health inequalities and enabling more healthy lifestyles.
- Improving access to employment and education.
- Reducing congestion on the roads, improving the reliability of public transport and reducing overcrowding.
- Improving the quality of air and water.
- Reducing the area of contaminated land and facilitating the re-use of previously developed land.
- Continuing to ensure that development is of a consistently high quality.

- 9.16 All of the above challenges are in some way linked to the health and well-being of the residents in Manchester.
- 9.17 Policy SP1 'Spatial Principles' states that development in the City should make a positive contribution to the health, safety and well-being of residents. Paragraph 6.8 which supports Policy SP1 states that new development can play a role in improving health by:
- Providing pedestrian and cycling facilities.
 - Good open space provision.
 - Sustaining local facilities and networks.
 - Good quality housing provision and choice.
 - Good access for all to jobs and services.
- 9.18 Access to sustainable modes of transport is recognised as a positive mechanism to tackle the impacts of climate change, and thereby improving health.
- 9.19 Policy T1 'Sustainable Transport' sets out the Council's measures to deliver a sustainable, high quality, integrated transport system to encourage modal shift away from car travel to public transport, cycling and walking.
- 9.20 The importance of green infrastructure is recognised as a critical element for delivering sustainable economic prosperity. The attractiveness of the environment is in part what determines where firms choose to locate, and where the workforce chooses to live; workers with access to green infrastructure also tend to be healthier and more productive. Green infrastructure provides accessible areas for relaxation, recreation, exercise and sport and alternative sustainable transport routes. It reduces air pollution, improving the general health and well-being of communities (paragraph 12.51).
- 9.21 Policy DM1 'Development Management' sets out a series of criteria which should be considered when designing new developments. Of specific relevance to human health are:
- Appropriate siting, layout, scale, form, massing, materials and detail.
 - Impact on the surrounding areas in terms of the design, scale and appearance of the proposed development. Development should have regard to the character of the surrounding area.
 - Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.
 - Accessibility: buildings and neighbourhoods fully accessible to disabled people, access to new development by sustainable transport modes.
 - Community safety and crime prevention.
 - Design for health.
 - Adequacy of internal accommodation and external amenity space.

- Green Infrastructure including open space, both public and private
- Flood Risk and Drainage

Guide to Development in Manchester Supplementary Planning Document (April 2007)

9.22 Whilst the SPD is somewhat dated, some of the core messages and principles are still relevant today. The SPD intends to provide developers with guidance when bringing forward development within the City.

9.23 Chapter 9 is titled 'Design for Health' and sets out a series of objectives to ensure that development works to improve the health of Manchester's residents. These objectives are:

- Encourage active lifestyles – place walking and cycling routes as a priority over cars. This can be assisted by providing secure cycle storage in all developments, and ensuring good quality facilities for cyclists.
- Build opportunities for social interaction – create environments where people can meet informally; promote local services; and ensure that people are adequately involved in developments in their area.
- Improve housing quality – new housing should be of a high standard of design. New dwellings should be designed and orientated to maximise natural light and provide views over aesthetically pleasing spaces, designing for safety, both in terms of reducing accidents and reducing the risk of crime.
- Improve access to work – all new development which include employment generating uses should consider the needs of those without cars, and should actively encourage access to the site by pedestrians, cyclists and public transport. Mixed-use development can also be a means of shortening journeys to work by bringing employment near to residential areas
- Ensure accessibility for all – new development should ensure the needs of the more vulnerable road users such as pedestrians, disabled people, cyclists and those using public transport are considered during the planning process.
- Promote local food production and access to healthy food – encourage a diversity of shopping facilities in local centres.
- Promote safety and a sense of safety – new developments should use traffic calming measures to slow the speed of traffic and give priority to pedestrians and cyclists; design to ensure natural surveillance over public space; and provide safe places for children to play
- Promote social inclusion – delivering development that provides a mix of housing tenures, whilst ensuring that development does not drive out those on low incomes by making property or services too expensive, and ensuring that people are not excluded because of age, disability, or lack of access to a car.

- Improve the quality of the natural environment – development should protect and enhance waterways and areas of green space
- Improve the quality and aesthetics of the built environment – designing places to be intuitively understandable, integrating the natural environment into the built environment with trees and other planting schemes, and by providing gardens in residential developments.

Manchester Population Health Plan: 2018 – 2027

9.24 The plan focuses on delivering results in five aspects of life in Manchester:

- The first 1,000 days of a child's life
- Work and its positive impact on health
- Making social connections and changes that matter
- An age-friendly Manchester
- Action on preventable early deaths

Health Impact Assessment in Spatial Planning (October 2020)

9.25 The guide was prepared by Public Health England to support the preparation of Health Impact Assessment (HIA) in the planning system. The guidance described the health and well-being outcomes that are influenced through planning, and how these outcomes can be optimised through the planning process.

9.26 **Table 9.1** summaries a list of considerations that HIA can seek to review as part of the planning process.

Table 9.1 Wider determinants of health and wellbeing outcomes

Health considerations	Wider documents of health and wellbeing			
	Access	Traffic and transport	Socio-economic	Land use
Reduce health inequalities	Local public key services and facilities	Accessibility	Employment, including skills development and training opportunities	Sustainable and efficient land use in urban and/or /rural settings
Improve mental health and wellbeing	Good quality affordable housing	Access to public transport	Local business activity	Quality of Urban and natural environments, such as air and noise pollution
Improve diets and weight	Healthy and affordable food	Opportunities for active travel (cycling and walking)	Regeneration	Climate change impacts
Improve musculoskeletal health	Natural environment	Links between communities	Tourism and leisure industries	
Improve respiratory health	Green spaces and public realm	Community severance		

Health considerations	Wider documents of health and wellbeing			
	Access	Traffic and transport	Socio-economic	Land use
Improve cardiovascular health	Leisure, sport, recreation, play and physical activities within the environments	Connections to jobs	Community/ social cohesions and access to social networks	
Protect environmental health		Connections to services, facilities and leisure	Community engagement	
Provide access to health and care infrastructure				

Guidance

9.27 There are a series of other relevant guidance documents which support the undertaking of HIAs:

- Spatial Planning for Health: An Evidence Resource for Planning and Designing Healthier Places (2017).
- The London healthy Urban development Unit (HUDU) Planning for Health: Healthy Urban Planning Checklist (April 2017). - HUDU Rapid Health Impact Assessment Tool (October 2019)
- IEMA: Effective Scoping of Human Health in Environmental Impact Assessment (November 2022).
- IEMA: Determining Significance for Human Health In Environmental Impact Assessment (November 2022).

Assessment Methodology and Significance Criteria

9.28 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to Human Health.

Consultation

9.29 **Table 9.2** presents a summary of the comments raised in the Council's EIA Scoping Opinion and other discussions with relevant consultees with respect to Human Health.

Table 9.2 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Formal Scoping Opinion	The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.	This Human Health Chapter and assessment were completed in line with the agreed scope and methodology.

Assessment Methodology and Significance Criteria

Study Area and Scope

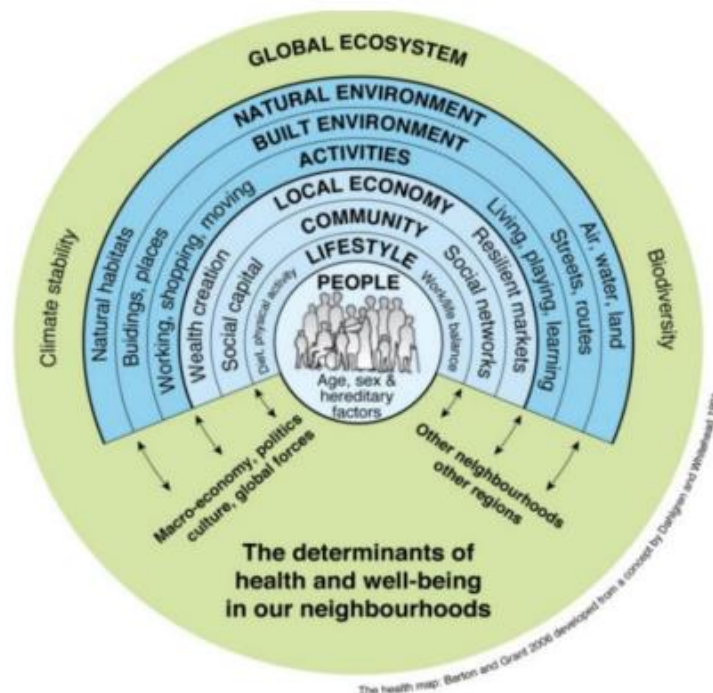
Overview

- 9.30 Human Health in an ES Chapter will broadly follow the expected methodology for a Health Impact Assessment (“HIA”). HIA is a systematic approach to identify the differential health and wellbeing impacts, both positive and negative, of projects and plans. The assessment of health is particularly concerned with the distribution of certain effects within a population, as different groups are likely to be affected in different ways. It therefore looks at how health and social determinants might be affected by a Proposed Development.
- 9.31 The aim of HIAs is to support and add value to the decision-making process by providing a systematic analysis of the potential impacts, as well as recommending opportunities, where appropriate, to mitigate negative impacts and reduce health inequalities.

Determinants for Health

- 9.32 Dahlgren and Whitehead developed the determinants for health model which identified a range of influences on health, providing a broad overview of the links with the planning system. This was further developed by Barton and Grant in 2006. These are illustrated in **Figure 9.1**.

Figure 9.1 Determinants for Health



Study Area

- 9.33 The HUDU themes include a series of assessment criteria which form the basis of the assessment. As such, the ES Chapter will include a baseline assessment of the Site and surrounding area.
- 9.34 Due to the nature of the datasets available, the geographical scope of the assessment will comprise a mix of the Site, the Lower Super Output Area (“LSOA”) (Manchester 056B), ward data, MCC’s administrative area, the North West Region, and England. Once the baseline has been established, the impacts of the Proposed Development against the health determinants set out above will be undertaken.
- 9.35 The receptor groups identified include:
- Construction workers.
 - Existing off-site residents.
 - Existing off-site non-residential uses.
 - Future on site residents and site users.
- 9.36 The accessibility of social and community infrastructure including schools, GPs, and dentists will also be considered as part of the baseline assessment.

Scope of Assessment

9.37 The criteria used in the HUDU planning checklist will be utilised to determine the likely baseline considerations for the Proposed Development:

- Housing quality and design.
- Access to healthcare services and other social infrastructure.
- Open space, nature and biodiversity. - Pollutants and neighbourhood amenity.
- Accessibility and active transport.
- Crime reduction and community safety.
- Access to healthy food.
- Access to education, training and employment opportunities.
- Social cohesion and lifetime neighbourhoods
- Minimising the use of resources.
- Climate change.
- Health inequalities

9.38 The principal health related impacts will however relate to the following considerations:

- **Air Quality:**
 - Construction phase dust impacts to construction workers and off-site receptors.
 - Operational phase emissions generated by the building's erection and operation.
 - The suitability of the site for future residents from an air quality perspective.
- **Noise:**
 - Construction noise impacts on existing residential receptors.
 - The existing noise climate effects on future residents.
 - Operational noise effects associated with plant and non-residential uses.
- **Socioeconomics**
 - Construction sector employment effects.
 - Operational phase effects associated with working households; household expenditure; council tax revenue and jobs; new homes bonus; and new commercial premises.
- **Wind:**
 - Operational impacts to wind safety criteria and comfort criteria.
- **Daylight, Sunlight and Overshadowing:**

- Operational impacts on existing and committed residential properties.
- **Ground Conditions:**
 - Construction phase impacts associated with contaminated material affecting construction site workers and off-site sensitive receptors.
- **Amenity:**
 - Compliance with internal space standards and provision of sufficient private amenity space for future residents.

Assessment Methodology

Impact Assessment

- 9.39 Based on the assessment criteria, its relevance to the Proposed Development is established. After which the potential health impact is determined. The health impact will take into account any mitigation which is secured by design (embedded mitigation) or through further mitigation which is secured by condition on the decision notice.

Methodology

- 9.40 MCC does not have a Supplementary Planning Document which provides guidance when undertaking HIAs, nor is there a standard methodology when undertaking human health ES Chapters. The NHS Healthy Urban Development Unit (“HUDU”) have, however, prepared a series of guidance notes to guide the process of undertaking HIAs. These include the Rapid Health Impact Assessment Tool (Fourth Edition, October 2019); and Healthy Urban Planning Checklist (April 2017).
- 9.41 The HUDU checklist interprets the health determinants into a set of themes which can be used to assess development proposals:
- Healthy housing.
 - Active travel.
 - Healthy environment.
 - Vibrant neighbourhoods.
- 9.42 The HUDU guidance recognises that there are generally three types of HIAs, desktop; rapid; and full. Based on the type of development proposed, its scale, the existing site conditions and the likely effects, it is considered the most appropriate approach is a rapid appraisal as part of the ES.

Significance Criteria

- 9.43 IEMA have prepared a guidance document to assist in determining the significance of health related effects in the EIA. As the assessment focuses on the environmental impacts on human health receptors, the significance of effects will align with the findings of the technical assessments undertaken to support the planning application, and will therefore generally follow the methodology

for each technical assessment to determine the sensitivity of a receptor, magnitude of effect and likely significance.

- 9.44 IEMA have, however, prepared a generic health significance framework that will be also be utilised to inform the findings of the assessment and identify mitigation measures where significant impacts are anticipated.

Table 9.3 Health Sensitivity Methodology Criteria

Sensitivity	Indicative criteria
High	High levels of deprivation (including pockets of deprivation); reliance on resources shared (between the population and the project); existing wide inequalities between the most and least healthy; a community whose outlook is predominantly anxiety or concern; people who are prevented from undertaking daily activities; dependants; people with very poor health status; and/or people with a very low capacity to adapt.
Medium	Moderate levels of deprivation; few alternatives to shared resources; existing widening inequalities between the most and least healthy; a community whose outlook is predominantly uncertainty with some concern; people who are highly limited from undertaking daily activities; people providing or requiring a lot of care; people with poor health status; and/or people with a limited capacity to adapt.
Low	Low levels of deprivation; many alternatives to shared resources; existing narrowing inequalities between the most and least healthy; a community whose outlook is predominantly ambivalence with some concern; people who are slightly limited from undertaking daily activities; people providing or requiring some care; people with fair health status; and/or people with a high capacity to adapt.
Very Low	Very low levels of deprivation; no shared resources; existing narrow inequalities between the most and least healthy; a community whose outlook is predominantly support with some concern; people who are not limited from undertaking daily activities; people who are independent (not a carer or dependant); people with good health status; and/or people with a very high capacity to adapt.

Magnitude of Impact

- 9.45 **Table 9.4** summarises the factors to be taken into account when assessing the magnitude of impact.

Table 9.4 Health Magnitude Methodology Criteria

Magnitude	Indicative criteria
High	High exposure or scale; long-term duration; continuous frequency; severity predominantly related to mortality or changes in morbidity (physical or mental health) for very severe illness/injury outcomes; majority of population affected; permanent change; substantial service quality implications.
Medium	Low exposure or medium scale; medium-term duration; frequent events; severity predominantly related to moderate changes in morbidity or major change in quality-of-life; large minority of population affected; gradual reversal; small service quality implications.
Low	Very low exposure or small scale; short-term duration; occasional events; severity predominantly related to minor change in morbidity or moderate change in quality-of-life; small minority of population affected; rapid reversal; slight service quality implications.
Very low	Negligible exposure or scale; very short-term duration; one-off frequency; severity predominantly relates to a minor change in quality-of-life; very few people affected; immediate reversal once activity complete; no service quality implication.

9.46 **Table 9.5** below shows the significance of effect criteria.

Table 9.5 Significance of Effect Criteria

Significance	Indicative Criteria
Major	Changes, due to the project, have a substantial effect on the ability to deliver current health policy and/or the ability to narrow health inequalities, including as evidenced by referencing relevant policy and effect size (magnitude and sensitivity levels), and as informed by consultation themes among stakeholders, particularly public health stakeholders, that show consensus on the importance of the effect. Change, due to the project, could result in a regulatory threshold or statutory standard being crossed (if applicable). There is likely to be a substantial change in the health baseline of the population, including as evidenced by the effect size and scientific

Significance	Indicative Criteria
	literature showing there is a causal relationship between changes that would result from the project and changes to health outcomes. In addition, health priorities for the relevant study area are of specific relevance to the determinant of health or population group affected by the project.
Moderate	Changes, due to the project, have an influential effect on the ability to deliver current health policy and/or the ability to narrow health inequalities, including as evidenced by referencing relevant policy and effect size, and as informed by consultation themes among stakeholders, which may show mixed views. Change, due to the project, could result in a regulatory threshold or statutory standard being approached (if applicable). There is likely to be a small change in the health baseline of the population, including as evidenced by the effect size and scientific literature showing there is a clear relationship between changes that would result from the project and changes to health outcomes. In addition, health priorities for the relevant study area are of general relevance to the determinant of health or population group affected by the project

Significance	Indicative Criteria
Minor	Changes, due to the project, have a marginal effect on the ability to deliver current health policy and/or the ability to narrow health inequalities, including as evidenced by effect size of limited policy influence and/or that no relevant consultation themes emerge among stakeholders. Change, due to the project, would be well within a regulatory threshold or statutory standard (if applicable); but could result in a guideline being crossed (if applicable). There is likely to be a slight change in the health baseline of the population, including as evidenced by the effect size and/or scientific literature showing there is only a suggestive relationship between changes that would result from the project and changes to health outcomes. In addition, health priorities for the relevant study area are of low relevance to the determinant of health or population group affected by the project.
Negligible	Changes, due to the project, are not related to the ability to deliver current health policy and/or the ability to narrow health inequalities, including as evidenced by effect size or lack of relevant policy, and as informed by the project having no responses on this issue among stakeholders. Change, due to the project, would not affect a regulatory threshold, statutory standard or guideline (if applicable). There is likely to be a very limited change in the health baseline of the population, including as evidenced by the effect size and/or scientific literature showing there is an unsupported relationship between changes that would result from the project and changes to health outcomes. In addition, health priorities for the relevant study area are not relevant to the determinant of health or population group affected by the project.

Assessing Significance of Effect

9.47 **Table 9.6** shows the EIA significance matrix.

Table 9.6 Significance of Effect Matrix

Magnitude	Sensitivity			
	High	Medium	Low	Very low
High	Major	Major / Moderate	Moderate / Minor	Minor / Negligible
Medium	Major / Moderate	Moderate	Minor	Minor / Negligible
Low	Moderate / Minor	Minor	Minor	Negligible
Negligible	Minor / Negligible	Minor / Negligible	Negligible	Negligible

- 9.48 Those effects identified as **major** will be **significant**. **Moderate** effects could be both **significant** and **not significant**, and will be confirmed per effect in this chapter. The determination of significant or not significant effects will be case specific based on the conclusions of the technical assessments.

Limitations and Assumptions

- 9.49 The latest published data available will be used throughout the assessment. However, the baseline demographics are constantly evolving and therefore the impacts identified relate to the proposed development sought for approval and the current demographics established at the point this assessment has been completed.
- 9.50 The 2021 Census has been undertaken; however, not all of the datasets are available for interrogation yet. Therefore, the latest data available for the relevant baseline criterion has been used.
- 9.51 An ES Chapter generally follows a different methodology to that for a standalone technical assessment. Therefore, as the ES is relatively limited in scope, a number of the technical assessment reports have not been presented utilising ES methodology. Therefore, the conclusions reached are based on an interpretation of the standalone reports and applying the significance criteria set out previously within this section.
- 9.52 The air quality and noise assessments have been undertaken as standalone reports. It has been agreed with MCC that significant effects are not anticipated in relation to these disciplines and, therefore, they have been scoped out of the ES. This notwithstanding, given the potential effects to human health and the requirement to demonstrate mitigation a summary of these assessments is included within this chapter for completeness. All conclusions reached are based on the analysis of the technical expert preparing the noise and air quality assessment respectively.

Baseline Conditions

Information Source

- 9.53 The assessment will utilise the findings of technical assessments undertaken to support the planning application, and a suite of online government datasets, including (but not limited to):
- Air Quality Assessment.
 - Chapter 12 Daylight, Sunlight and Overshadowing and the associated appendices.
 - Chapter 11 Socio-economics.
 - Energy & Sustainability Statement.
 - Flood Risk Assessment & Drainage Strategy.
 - Noise Assessment.
 - Phase 1 Ground Investigation Report.
 - Transport Statement and Interim Travel Plan.
 - Chapter 13 Wind Microclimate and associated Wind Assessment (Appendix 13.1)
- 9.54 No primary research or surveys have been undertaken, and the assessment is based on published information which is considered an appropriate level of assessment based on the proposals.

Existing Site Use

- 9.55 It is approximately 0.12 hectares (0.25 acres) in size and comprises a vacant parcel of brownfield land most recently in use as a car wash and dealership.

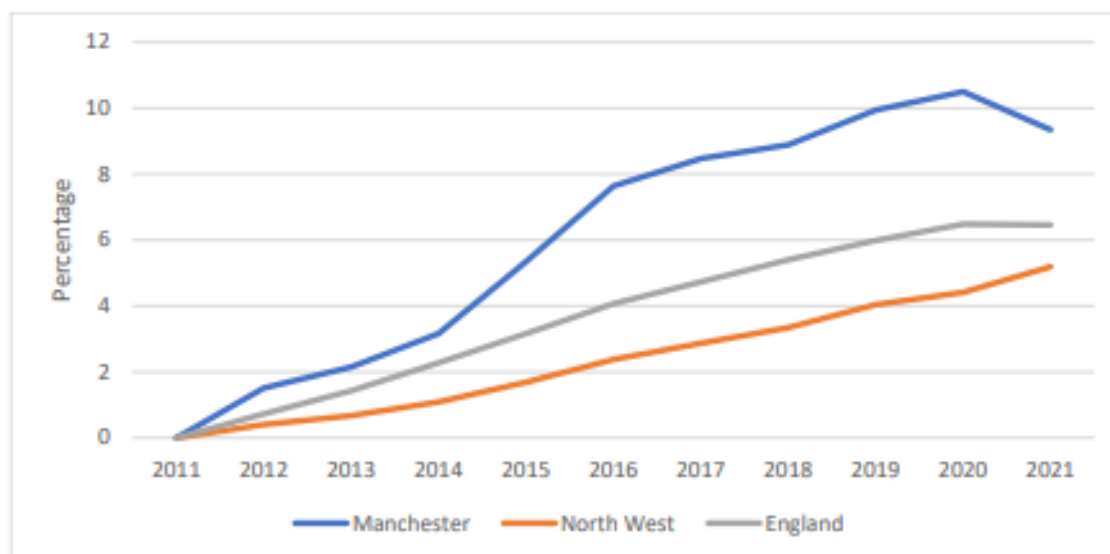
Existing Residential Receptors

- 9.56 There are no residential receptors on Site.
- 9.57 The nearest existing residential properties are located in the Hallmark apartment building located on the opposite side of Cheetham Hill Road to the southeast (c.20m). In addition, a 16-storey apartment building has received planning permission on the corner of Cheetham Hill Road and Lord Street, located c. 20m northeast.

Population

- 9.58 In 2011, the resident population in Manchester was 502,900. This has increased to 549,900 in 2021, representing a 47,000 (9.3%) increase in residents over a ten year period. Comparatively, the North West increased from 7,056,000 to 7,422,300 (5.19%); and England from 53,107,200 to 56,536,400 (6.46%) over the same time period. This level of growth in Manchester is significantly above the region and national context, as illustrated in **Figure 9.2**.

Figure 9.2 Population Change 2011 – 2021



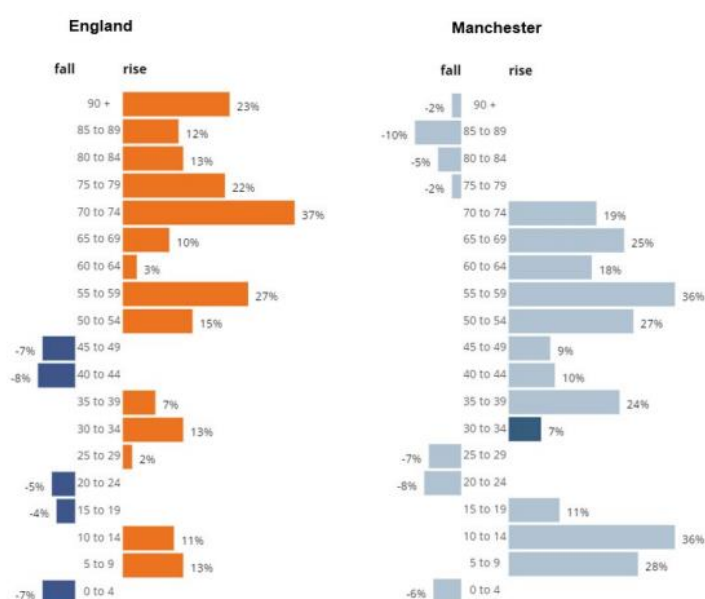
- 9.59 Based on 2021 census data, there is broadly an even split of males and females in Manchester, 273,200 and 276,600 respectively. In 2021, Manchester had a population density of 4,772 residents per square km. This is significantly above that of the North West (525.8) and England (433.5). Manchester is the most densely populated of the 39 local authority areas in the North West.
- 9.60 Manchester has seen a good deal more growth in the younger age brackets when compared with the regional and national population. There has been just under 17% growth in the 0-14 age bracket, whilst comparatively the working age population (15-64) only increased by 7.89% in Manchester. There is a markedly reduced proportion of growth in retirees (65+) in Manchester (9.72%) when compared with the North West (18.37%) and England (20.10%). This is detailed in Table 9.7 and further illustrated in **Figure 9.3**.
- 9.61 Manchester's proportionate increase in young people is likely testament to the strong levels of growth in the City over the past ten years, specifically through the provision of housing and employment to support new and growing families.

Table 9.7 Age Profile, 2011 v 2021

Age range	2011	2021	No change	% increase
Manchester				
0-14	91,815	107,283	15,468	16.84%
15-64	363,768	392,487	28,719	7.89%
65+	47,544	52,167	4,623	9.72%
Total	503,127	551,937	848,810	9.70%
North west				
0-15	1,236,664	1,305,134	68,470	5.53%
15-64	4,644,358	4,725,945	81,587	1.75%
65+	1,171,155	1,386,318	215,163	18.37%

Total	7,052,177	7,417,397	365,22	5.17%
England				
0-15	9,372,010	9,838,977	466,967	4.98%
15-64	34,979,917	36,249,768	1,269,851	3.63%
65+	8,660,529	10,401,303	1,740,774	20.10%
Total	53,012,456	56,490,048	3,477,592	6.55%

Figure 9.3 Population change (%) by age group in England and Manchester (2011 v 2021)



Health characteristics of the Population

9.62 The health of residents in Manchester is generally worse than the national average. A detailed summary of various health related statistics are set out in Table 9.8 which allow the following conclusions to be drawn:

- The health of residents in Manchester is generally worse than the national average. The life expectancy for both males and females is below that of the North West and England. The trend is, however, improving over time.
- The mortality rate in Manchester is significantly above that of England, standing at 48% higher. Similarly the proportion of residents mortality attributed to cancer and cardiovascular diseases is significantly above that of the North West and England.
- Alcohol related conditions and smoking prevalence is worst in Manchester, but the authority has the lowest percentage of adults classified as overweight or obese, standing at 63.3%.
- Infant mortality rates are markedly higher in Manchester (6.7) when compared with the North West (4.4) and England (3.9).

- Poverty is higher in Manchester. 39.4% of households are within 'relative low income' households which have incomes below 60% of the mean average in that year. This is used to look at how changes in income for the lowest income households compare to change in incomes near the average. 31.1% of households are within 'absolute low income' households which have incomes 60% below the average in 2010/11, adjusted for inflation. It is used to look at how changes in income for the lowest income households compare to the changes in the cost of living.

Table 9.8 Manchester's Health Profile

No	Indicator	Manchester		North west (value)	England (value)
		Count	Value		
Life expectancy and causes of death					
1	Life expectancy at birth (Male, 1 year range) 2022	-	75.7	77.7	79.3
2	Life expectancy at birth (Female, 1 year range) 2022	-	79.9	81.7	83.2
3	Under 75 mortality rate from all causes 2022*	1,700	507.7	410.4	342.3
4	Under 75 mortality rate from all circulatory diseases 2022*	375	117.5	97.2	77.8
5	Under 75 mortality rate from cancer 2022*	492	158.2	135.0	122.4
6	Suicide rate 2020 – 22*	168	11.7	11.8	10.3
Injuries and ill health					
7	Killed and seriously injured (KSI) casualties on England's roads 2022	184	111.6	94.0*	94.5*
8	Emergency Hospital Admissions for Intentional Self-Harm 2022/23*	665	108.9	139.3	126.3
9	Hip fractures in people aged 65 and over 2022/23*	325	648	620	558
10	Percentage of cancers diagnosed at stages 1 and 2, 2021	843	54.9%	53.5%	54.4%
11	Estimated diabetes diagnosis rate 2018	-	77.2%	81.1%	78%
12	Estimated dementia diagnosis rate (aged 65 and over) 2023	2,598	70.0	66.9	63.0
Behavioural risk factors					
13	Admission episodes for alcohol-specific conditions - Under 18s 2020/21 – 22/23	70	18.3	31.2	26.0

No	Indicator	Manchester		North west (value)	England (value)
		Count	Value		
14	Admission episodes for alcohol-related conditions (Narrow) 2022/23	2,005	484	475	475
15	Smoking Prevalence in adults (18+) - current smokers (APS) 2022	-	17.3%	13.4%	12.7%
16	Percentage of physically active adults 2022/23	-	65.0%	65.7%	67.1%
17	Overweight (including obesity) prevalence in adults (18+ yrs)	-	63.3%	66.5%	64.0%
Child health					
18	Under 18s conception rate / 1,000, 2021	143	14.5	16.4	13.1
19	Smoking status at time of delivery 2022/23	415	9.2%	10.3%	8.8%
20	Baby's first feed breastmilk (previous method) 2018/19	4,520	64.8%	62.4%	67.4%
21	Infant mortality rate 2020 - 22	139	6.7	4.4	3.9
22	Year 6: Prevalence of obesity (including severe obesity) 2022/23	1,955	29.2%	23.8%	22.7%
Wider determinants of health					
23	Children in relative low income families (under 16s) 2022/23	45,146	39.4%	26.7%	19.8%
24	Children in absolute low income families (under 16s) 2022/23	35,642	31.1%	20.5%	15.6%
25	Percentage of people in employment 2022/23	268,200	68.2%	73.6%	75.7%
26	Violent crime - hospital admissions for violence (including sexual violence) 2020/21 – 2022/23	960	51.7	46.8	34.3
27	Winter Mortality Index Aug 2021 - Jul 2022	130	11.4%	8.2%	8.1%
28	New STI diagnoses (excluding chlamydia aged under 25) per 100,000 2022	5,222	950	446*	496
29	TB incidence (three year average) 2020 - 22	337	20.4	6.5	7.6

9.63 Indicator value types:

- 1,2 - Life expectancy, years.
- 3,4,5 - Directly age-standardised rate per 100,000 population aged under 75.
- 6 - Directly age-standardised rate per 100,000 population aged 10 and over.
- 7 - Crude rate per 100,000 population.
- 8 - Directly age-standardised rate per 100,000 population.
- 9 - Directly age-standardised rate per 100,000 population aged 65 and over.
- 10 - Proportion - % of cancers diagnosed at stage 1 or 2.
- 11 - Proportion - % recorded diagnosis of diabetes as a proportion of the estimated number with diabetes.
- 12 - Proportion - % recorded diagnosis of dementia as a proportion of the estimated number with dementia.
- 13 - Crude rate per 100,000 population aged under 18.
- 14 - Directly age-standardised rate per 100,000 population.
- 15,16,17 – Proportion.
- 18 - Crude rate per 1,000 females aged 15 to 17.
- 19,20 – Proportion.
- 21 - Crude rate per 1,000 live births.
- 22 – Proportion.
- 23, 24,25 – Proportion.
- 26 - Directly age-standardised rate per 100,000 population.
- 27 - Ratio of excess winter deaths to average of non-winter deaths.
- 28 - Crude rate per 100,000 population aged 15 to 64 (excluding Chlamydia).
- 29 - Crude rate per 100,000 population

9.64 At a local level the Office for Health Improvement and Disparities provides a series of datasets associated with the Cheetham Ward which can be compared with the data for the administrative area of Manchester City Council as a whole. This data has been provided separately as it tends to be slightly out of date when compared with local authority, regional and national statistics.

Table 9.9: Health Data Comparison – Ward Level Data v. MCC and England

No.	Indicator	Cheetham Ward	MCC	England
Long Term Health Conditions and Morbidity				

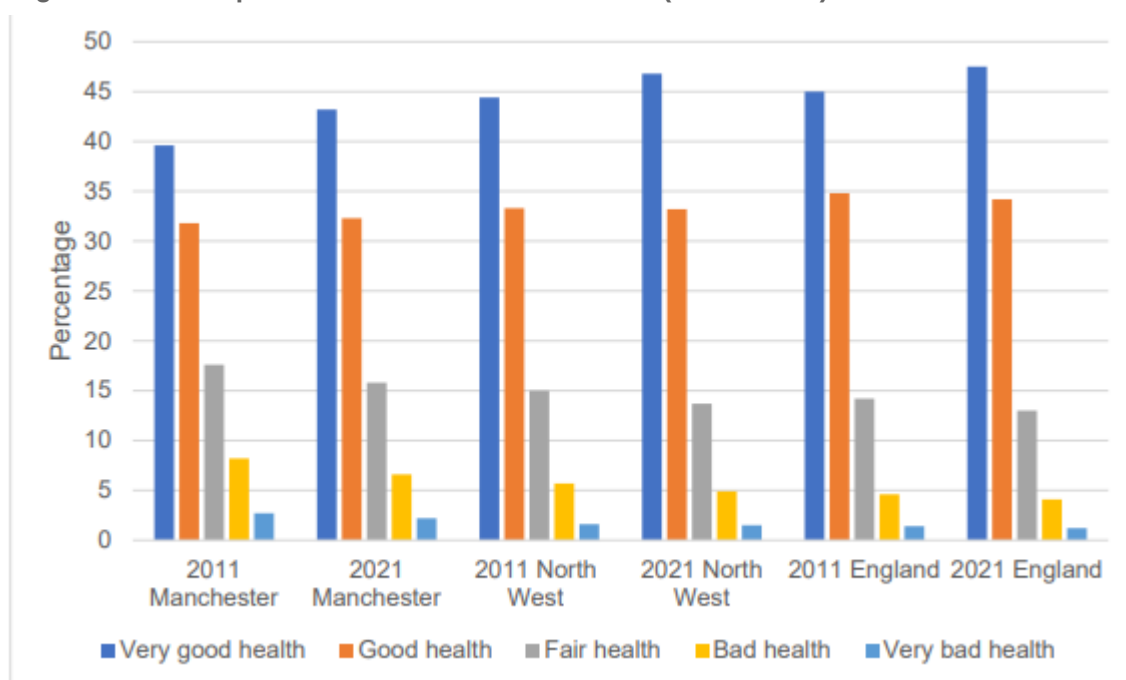
No.	Indicator	Cheetham Ward	MCC	England
1.	Limiting long-term illness or disability (%) 2011	16.4	17.8	17.6
Children's Weight				
2.	Reception: Prevalence of overweight (including obesity) (%) 2017/18 – 2019/20	25.1	24.4	22.6
3.	Reception: Prevalence of obesity (including severe obesity) (%) 2017/18 – 2019/20	13.2	11.9	9.9
4.	Year 6: Prevalence of overweight (including obesity) (%) 2017/18 – 2019/20	44.9	42.2	35.8
5.	Year 6: Prevalence of obesity (including severe obesity) (%) 2017/18 – 2019/20	29.6	27.3	21.6
Children's Health Care Activity				
6.	Emergency admissions in children under 5 years old (Crude rate per 1000) 2016/17 – 2020/21	234.2	209.5	140.7
7.	Emergency admissions for injuries in children under 5 years old (Crude rate per 10000) 2016/17 – 2020/21	235.8	205.8	119.3
8.	Emergency hospital admissions for injuries in under 15 years old (Crude rate per 10000) 2016/17 – 2020/21	141.5	143.4	92
9.	Emergency hospital admissions for injuries in 15 to 24 years old (Crude rate per 10000) 2016/17 – 2020/21	106.0	95.9	127.9
10.	Deliveries to teenage mothers (%) 2016/17 – 2020/21	N/A	0.7	0.7
Child and Maternal Health				
11.	Low birth weight of live babies (%) 2016 – 2020	7.6	7.0	6.8
12.	General fertility rate: live births per 1000 women aged 15 to 44 years (%) 2016 – 2020	67.9	52.3	59.2
Behavioral Risk Factors				
13.	Smoking prevalence at 15 years Regular (%) 2014	3.9	5.6	5.4
14.	Smoking prevalence at 15 years Regular or Occasional (%) 2014	6.7	8.9	8.2
Emergency Hospital Admissions				
15.	Emergency hospital admissions for all causes (SAR) 2015/16 – 2019/20	135.7	131.1	100
16.	Emergency hospital admissions for coronary heart disease (SAR) 2015/16 – 2019/20	203.4	154.6	100
17.	Emergency hospital admissions for stroke (SAR) 2015/16 – 2019/20	197.9	149.0	100

No.	Indicator	Cheetham Ward	MCC	England
18.	Emergency hospital admissions for Myocardial Infarction (heart attack) (SAR) 2015/16 – 2019/20	206.0	127.9	100
19.	Emergency hospital admissions for Chronic Obstructive Pulmonary Disease (COPD) (SAR) 2015/16 – 2019/20	240.1	220.3	100
Hospital Admissions – Harm and Injury				
20.	Emergency hospital admissions for intentional self harm (SAR) 2016/17 – 2020/21	67.4	80.8	100
21.	Emergency hospital admissions for hip fractures persons aged 65 years and over (SAR) 2016/17 – 2020/21	84.7	114.9	100
22.	Hospital admissions for alcohol attributable conditions (Broad definition) (SAR) 2016/17 – 2020/21	126.7	137.0	100
23.	Hospital admissions for alcohol attributable conditions (Narrow definition) (SAR) 2016/17 – 2020/21	103.3	110.2	100
Cancer Incidence				
24.	Incidence of all cancer (SIR per 100) 2015 – 2019	101.9	116.6	100
25.	Incidence of breast cancer (SIR per 100) 2015 – 2019	89.4	100.1	100
26.	Incidence of colorectal cancer (SIR per 100) 2015 – 2019	86.7	105.3	100
27.	Incidence of lung cancer (SIR per 100) 2015 – 2019	139.2	206.2	100
28.	Incidence of prostate cancer (SIR per 100) 2015 – 2019	76.5	92.7	100
Life Expectancy				
29.	Life expectancy at birth for males (years) 2016 – 2020	75.7	75.6	79.5
30.	Life expectancy at birth for females (years) 2016 – 2020	81.0	79.7	83.2
Mortality and Causes of Death – Premature Mortality				
31.	Deaths from all causes under 75 years (Standardised mortality ratio (SMR)) 2016 – 2020	152.5	152.2	100
32.	Deaths from all cancer under 75 years (Standardised mortality ratio (SMR)) 2016 – 2020	106.0	139.6	100
33.	Deaths from circulatory disease under 75 years (Standardised mortality ratio (SMR)) 2016 – 2020	232.9	171.7	100

No.	Indicator	Cheetham Ward	MCC	England
34.	Deaths from causes considered preventable under 75 years (Standardised mortality ratio (SMR)) 2016 – 2020	149.5	164.9	100
Mortality and Causes of Death				
35.	Deaths from all causes all ages (SMR)	124.0	133.3	100
36.	Deaths from all cancer all ages (SMR)	96.9	127.6	100
37.	Deaths from circulatory disease all ages (SMR)	154.9	138.5	100
38.	Deaths from coronary heart disease all ages (SMR)	187.2	174.9	100
39.	Deaths from stroke all ages (SMR)	166.6	120.5	100
40.	Deaths from respiratory diseases all ages (SMR)	148.2	161.0	100

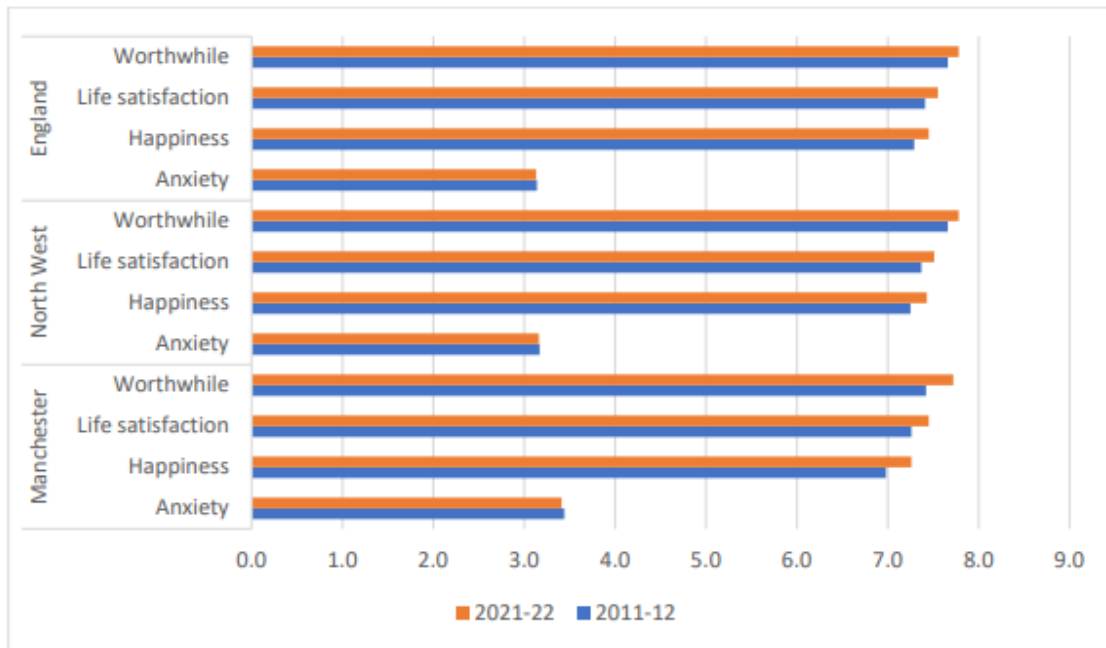
9.65 Despite the health issues highlighted in **Tables 9.8 and 9.9**, the health of residents in Manchester has generally improved over the 10-year period since 2011. 43.2% of residents registered very good health, up from 39.6% in 2011. The level is still below that of the North West (46.8%) and England (47.5%) in the 2021 census. The increased proportion of residents experiencing good health has led to a corresponding decline in poor health. Only 8.8% of residents in 2021 recorded bad or very bad health in Manchester, down from 10.9% in 2011. This is still some way off that of the North West (6.4%) and England (5.3%) in 2021.

Figure 9.4 Self Reported Health of Usual Residents (2011 v 2021)



- 9.66 The Census measures personal well-being in the UK. This estimates life satisfaction, a feeling that the things done in life are worthwhile, happiness and anxiety. Each of these measures are scored out of 10, with 10 being the highest score. Manchester has consistently scored worse than the North West and England during the 2011 census, but only at a marginal rate as illustrated in **Figure 9.5**.

Figure 9.5 Personal well being (2011 v 2021)



Deprivation

- 9.67 The latest indices of deprivation was published in September 2019. The statistics measure relative levels of deprivation in 32,844 small areas or neighbourhoods called LSOAs. Deprivation is measured across seven domains including income; employment; health deprivation and disability; education, skills and training; crime; barriers to housing and services; and living environment.
- 9.68 The site is located in LSOA Manchester 056B and its extent is shown in **Figure 9.6** below. In 2019, the LSOA was ranked 10,953 out of 32,844 LSOAs in England, where 1 is the most deprived. LSOA 056B has observed higher levels of deprivation when compared with the 2015 survey, which identified a rank of 12,711. This is amongst the 40% most deprived neighbourhoods in the country.
- 9.69 The site is located within an area subject to high levels of deprivation. To the immediate west is LSOA 058C (ranked 2,903); and to the north is LSOA 058B (ranked 2,288). Both of these areas are in the top 10% most deprived in the country.

Figure 9.6 IMD 2019 Map

Economic Activity and Unemployment

- 9.70 Based on the most recent ONS data, around 288,000 residents in Manchester are economically active. Between 2012 and 2022, the number of economically active residents in employment increased from 247,500 to 288,000, a 16.4% increase. However, at present the proportion of economically active residents in Manchester (72.1%) is still some way behind that of the North West (76.7%) and England (78.7%).
- 9.71 Approximately 18,200 residents are considered to be economically active and unemployed in Manchester, representing 6.3% of the population. Again this is above that of the North West (4.1%) and England (3.6%). Of those residents which are economically inactive (109,700) in Manchester, 12,100 (11%) want to secure employment.
- 9.72 Manchester's largest occupation for its residents is defined as professional occupations, amounting to 107,000 residents. When combined with associate professional occupations, this represents 52.6% of employment in the City. Significantly above that of the North West (39.3%) and England (41.2%). The proportion of managers, directors and senior officials is lower in Manchester, sitting at 3.5% and 4.5% below that of the North West and England respectively.

Table 9.10 Employment by occupation (January 202 – Dec 2022)

Occupation	Manchester	North west	England
1. Managers, directors and senior officials	6.2%	9.7%	10.7%
2. Professional occupations	39.5%	24.8%	26.4%
3. Associate professional occupations	13.1%	14.5%	14.8%
4. Administrative and secretarial occupations	7.5%	11.0%	10.1%
5. Skilled trades occupations	-	7.7%	8.6%
6. Caring, leisure and other service occupations	6.0%	8.0%	7.9%
7. Sales and customer service occupations	5.0%	7.0%	6.2%
8. Process, plant and machine operatives	4.6%	6.2%	5.5%
9. Elementary occupations	12.5%	10.3%	9.3%

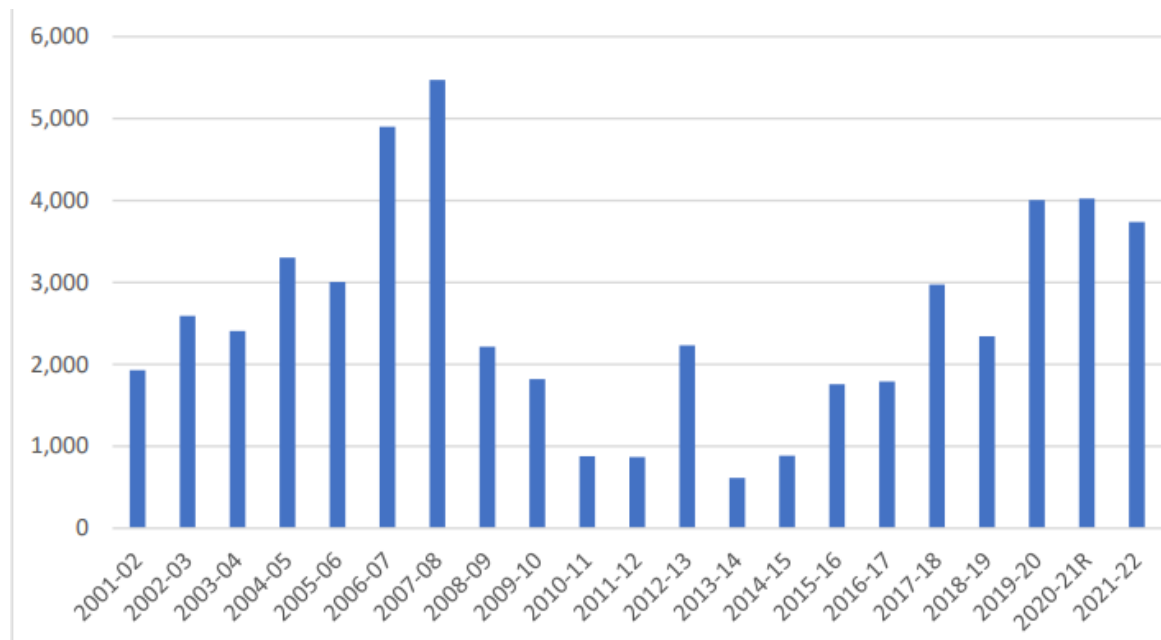
- 9.73 In June 2023, 23,930 residents are claiming universal credit in Manchester. This amounts to 6.2% of the residents aged 16-64 and is above that of the North West (4.3%) and England (3.8%). Manchester scores better when it comes to job density, equating to 1.23 (471,000 jobs in total), whereas the North West and England sit at 0.84 and 0.86 respectively.

- 9.74 The Inter-Departmental Business Register has tracked the number of enterprises and local units between 2012 and 2022. During this time, the number of enterprises in Manchester increased from 13,385 to 23,385, a 74% increase over ten years. Whereas the North West (31.8%) and England (30.7%) are significantly behind Manchester. Similarly, the number of local units significantly increased from 18,400 to 28,650, a 55.7% increase over the same time period. Again the North West (24.7%) and England (25.2%) are significantly behind that of Manchester.

Housing

- 9.75 The Government publishes live data on housing supply, including the net additional dwellings for each local authority. During the monitoring period of 2001/02 and 2021/22, Manchester completed 53,760 net additional dwellings within the City. This equates to a rough average of 2,500 new homes per annum.

Figure 9.7 Net Additional Dwellings in Manchester (2001/02 – 2021/22)



- 9.76 The Greater Manchester Strategic Housing Market Assessment (“SHMA”) (January 2019) estimated that, based on household projections, Manchester should deliver 23,826 new homes between 2018 and 2028, equating to 2,383 homes per annum.

Social Infrastructure¹

Education provision

- 9.77 Local Education Authorities (“LEAs”) have a statutory duty to secure sufficient school places within their area. The school that any particular child attends is a parental choice subject to availability of

¹ Measurements taken from postcode ‘M4 4FT

capacity at the selected school. It is always subject to the overriding requirements of any published admission criteria that the school has, as well as the appeals procedure for individual pupils.

9.78 The Home to School Travel and Transport Guidance is largely derived from the Education and Inspections Act 2006. The Act states that the statutory walking distances are 2 miles for children under 8 and 3 miles for children aged 8 and over. When looking at current school provision around the site the current capacity of primary schools has been taken from a 2-mile radius and secondary schools from a 3-mile radius.

9.79 There are 19 schools located within 1.5 miles of the Site: 15 primary and 4 secondary schools. In addition there are a further 2 primary schools due to open in September 2024. There is a mix of denominational and non-denominational, state and independent provision locally. In terms of secondary provision in the area, there are 2 free schools, 1 academy and 1 state-funded and there are a range of state, free school, Academy and voluntary aided primary schools. **Table 9.11** details the schools and lists the latest school capacity and the places available. There are under 10,000 pupils on the school roles in the area. With current capacity there are 629 places available.

Table 9.11 Schools within 1.5 miles of development. (Source Manchester City Council and Get-information-schools.service.gov.uk)

School	Type	Distance from development (miles)	Capacity	Places available
Cheetwood Primary School	Primary – State funded	0.49	210	-14
Eden Boys' Leadership Academy	Secondary – Free school	0.56	800	173
Abbott Community Primary School	Primary – State funded	0.6	240	1
St Chad's RC Primary School	Primary – Voluntary aided	0.65	240	9
Eden Girls' Leadership Academy	Secondary – Free school	0.67	800	175
St Patrick's RC Primary School	Primary – Voluntary aided	0.68	350	54
Unity Community Primary	Primary – Free school	0.74	420	95
Co-op Academy New Islington	Primary – Free school	0.85	420	38
St Malachy's RC Primary	Primary - Voluntary aided	0.87	242	12
The Olive School (Proposed opening Sep 24)	Primary - Free school, muslim	0.88		

School	Type	Distance from development (miles)	Capacity	Places available
Oasis Academy Temple	Primary – Academy school	0.92	709	6
Saviour CofE Primary School	Primary – Voluntary aided	0.93	210	50
Cheetham CofE Community Academy	Primary – State funded	1.12	690	32
St Anne's RC Primary School	Primary – Voluntary aided	1.21	218	-9
Park View Community School	Primary – State funded	1.22	459	52
Manchester Communication Primary Academy	Primary – Academy school	1.32	420	-41
Manchester Communication Academy	Secondary – Academy school	1.32	1,200	-24
St Augustine's CofE Primary School	Primary – Voluntary aided	1.36	240	20
Crown Street Primary School (proposed opening Sep 24)	Primary - Academy school	1.41		
Abraham Moss Community School	Primary & Secondary – State funded	1.44	1,830	Not recorded
Total			9,598	629

9.80 There are 7 private nurseries located within one mile of the development shown in **Table 9.12** along with a wide range of other childcare provision throughout the city, including childminders and playgroups.

Table 19.12 Private Nurseries within 1 mile of development (Source: daynurseries.co.uk)

Nursery	Distance from development (miles)	Capacity
WMB Hillcity Day Nursery	0.5	120
Unity School Nursery	0.8	78
Early Learning Childcare	0.9	70
Tabiyah Nurseries Ltd	1	96
Happy Feet Day Nursery	1	46

WMB Winstanley Day Nursery	1	64
Kids adVentures Salford	1	53

Healthcare Provision

- 9.81 According to the NHS Choices website, there are 6 GP practices within 1.5 miles of the site. All practices are accepting new patients.

Table 9.13 GP Capacity

GP	Distance from site (miles)	Status
City Health Centre	0.6	Accepting new patients
Queens Medical Centre	0.7	Accepting new patients
Blackfriars Medical Practice	0.7	Accepting new patients
Cheetham Hill Primary Care Centre	0.7	Accepting new patients
New Collegiate medical centre	0.9	Accepting new patients
Fernclough surgery	1.5	Accepting new patients

- 9.82 According to the NHS Choices website, there are 15 dental practices within 1.5 miles of the site. Eight of the 15 practices are accepting new patients, including adults and children. The status is based on the latest updates by the NHS and therefore the practice statuses may differ slightly based on the most recent patient roll data.

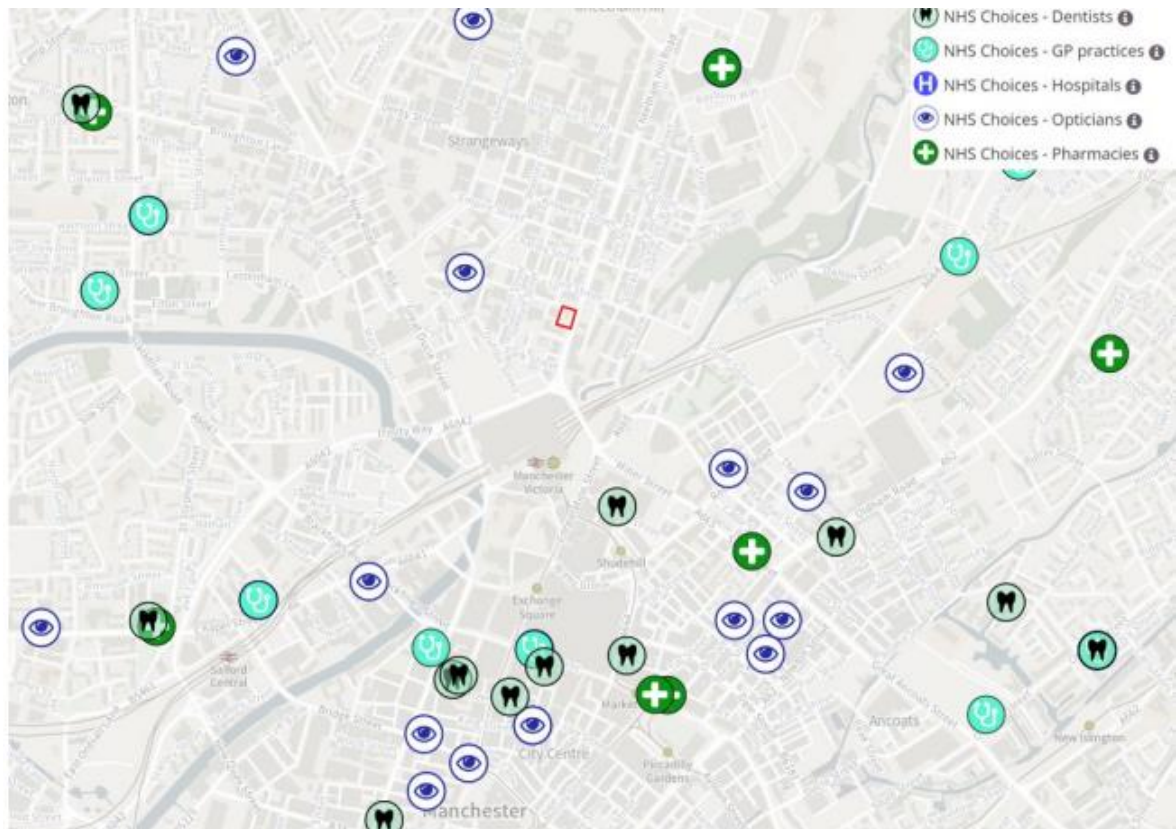
Table 9.14 Dentist Capacity

GP	Distance from site (miles)	Status
Manchester DP Ltd	0.6 mile	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
New Cross Dental Surgery	0.6 mile	No status update
Ocean Dental Implant and Aesthetic Clinic	0.6 mile	Only taking NHS patients referred by another dentist
Bupa Dental Care, Manchester	0.6 mile	Not accepting new patients
mydentist, Stevenson Square, Manchester	0.6 mile	Not accepting new patients
City Centre Dentists	0.8 mile	Only taking NHS patients referred by another dentist
Revive Dental Care	0.9 mile	Only taking NHS patients referred by another dentist

GP	Distance from site (miles)	Status
Deane Dental Practice	0.9 mile	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
207 Dental Care	0.9 mile	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
Collegiate Dental Practice	1 mile	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
End D	1 mile	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
Queens Road Dental & Cosmetic Centre	1 mile	No status update
Revive Dental Care Limited	1.1 miles	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
The Griffin Dental Surgery	1.3 miles	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care
The Dental Practice	1.4 miles	Accepting children aged 17 or under Accepting adults 18 and over Accepting adults entitled to free dental care

9.83 As shown in **Figure 9.8**, there are a number of pharmacies within the immediate vicinity of the site, the nearest of which is A-Z Chemist located a 7-minute walk (c. 480m) north of the site. the nearest hospital offering A&E services is North Manchester General located c.4km north of the site.

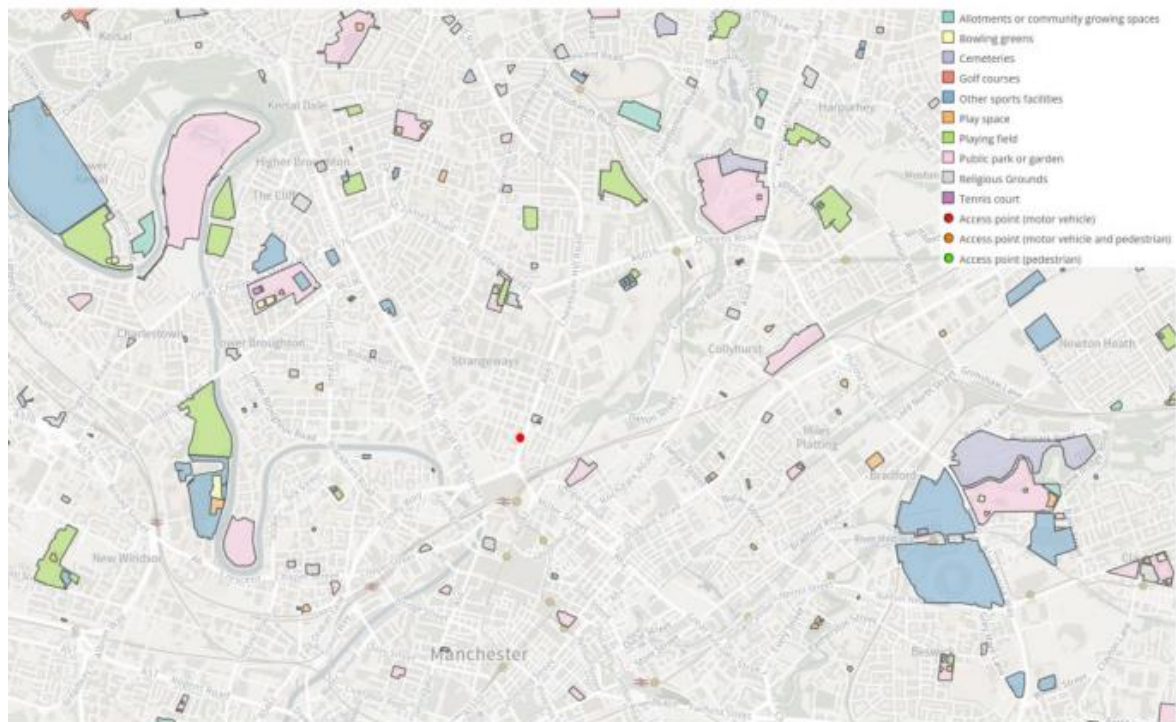
Figure 9.8 Healthcare services



Services and Amenities

- 9.84 There are a significant number of services and amenities within the immediate vicinity of the site, including a host of public houses, restaurants, religious meeting venues, gyms and fitness centres, convenience stores and supermarkets amongst others. Figure 9.9 illustrates the various greenspaces which are accessible in the local area. A number of new open spaces and community facilities are proposed as part of a strategic masterplan for the Northern Gateway to the east of the site which are not currently illustrated on the below figure.

Figure 9.9 Open space and green infrastructure



9.85 Greater Manchester has also developed a tool known as Greater Manchester Accessibility Levels (“GMAL”). This provides a detailed and accurate measure of the accessibility of a location to both the conventional public transport network (i.e. bus, metrolink, rail) and Greater Manchester’s Local Link (flexible transport service), taking into account walk accessibility time and service availability. The GMAL is attributed a score between 1 and 8, with 1 being the lowest level of accessibility and 8 the highest level. The site is identified as having a GMAL of 8, the highest score of accessibility which is achievable. This is testament to the site’s highly sustainable and accessible nature, combined with its proximity to key transport services. The below figure illustrates the various walking, cycling and public transport infrastructure available within the site’s vicinity.

Figure 9.10 Sustainable transport infrastructure

Crime

9.86 The Greater Manchester Police record crime within the local area. The Site is located within the Lower Cheetham administrative area for crime recording. Over the past 12 months (July 2022 – June 2023), there have been three recorded crimes in the Lower Cheetham area, these are described as:

- Violence and sexual offences – 2 (66.7%).
- Other theft – 1 (33.3%).

9.87 Over the last three years (August 2020 – June 2023), there have been 118 recorded crimes in Lower Cheetham, comprising:

- Violence and sexual offences – 31 (26.3%).
- Other theft – 12 (10.2%).
- Other crime – 2 (1.7%).
- Criminal damage and arson – 5 (4.2%).
- Drugs – 19 (16.1%).
- Possession of weapons – 9 (7.6%).
- Public order – 24 (20.3%).
- Shoplifting – 11 (9.3%).
- Bicycle theft – 2 (1.7%).
- Robbery – 1 (0.8%).
- Theft from the person – 1 (0.8%).
- Vehicle crime – 1 (0.8%).

Environmental Considerations

Air Quality

9.88 The site is located within the Manchester City Council Air Quality Management Area ("AQMA"). This has been designated due to exceedances in Nitrogen Dioxide.

Figure 9.11 Defra AQMA Map



Noise

- 9.89 A noise assessment has been undertaken by Jameson Acoustics in support of the planning application. During the daytime (07:00-23:00) the noise levels range from 59-67dB, whilst at night time, the noise levels range from 55-64dB. This is generally associated with vehicular related noise on the highways network.
- 9.90 An industrial noise background baseline survey has also been undertaken which confirmed the noise from industrial sources ranging between 51-58dB in the daytime and 40-46dB in the night time.

Ground Conditions

- 9.91 A ground conditions assessment has been undertaken by esi Environmental Specialists and WML Consulting as part of the planning application (Appendix 1.6). The more recent WML report comprised a suite of intrusive site investigations.
- 9.92 The Site has remained developed since 1850 (earliest available maps), initially comprising residential dwellings, before the petrol filling station was developed on site around the 1970s. It is understood that the underground storage tanks have been removed from the ground (Sales Particulars, Ridley Thaw Property Consultants).
- 9.93 Given the Site's history, there is potential for historical contamination within the Site boundary to have occurred relating to the following:

- Miscellaneous fuel or chemical spills/leaks (i.e. fuels used for refilling and storage in UST's, oils, lubricants, greases, antifreeze residues etc.) associated with the Sites use as a petrol filling station.
 - Miscellaneous spills of chemicals associated with the use of the Site as a hand car wash.
 - Given the age of the buildings on-Site, asbestos containing materials may be present within the building fabric (including cement sheeting roofing materials).
- 9.94 The presence of numerous historical works buildings within the vicinity of the site may have led to the migration of contamination onto the site.

Flood Risk

- 9.95 The Site is located within Flood Zone 1 and therefore not at risk of flooding from fluvial sources. The site itself is not subject to surface water flooding, but the access roads which bound the site appear to be at low risk of surface water flooding.

Wind Assessment

- 9.96 A wind assessment has been undertaken by Arcaero as part of the planning application. With regards to wind safety criteria, the conditions within and around the site satisfy the criteria for pedestrian safety. In terms of the existing wind comfort conditions, the site and immediate surrounding area are generally suitable for at least short-term standing or better with small pockets of strolling conditions further to the east and northeast of the site. Wind conditions are, therefore, generally comfortable for the intended uses as pedestrian ingress / egress at all entrances, and comfortable thoroughfare use in and around the site.
- 9.97 This is provided at Chapter 13 Wind Microclimate and associated appendix.

Daylight, sunlight and overshadowing

- 9.98 A daylight, sunlight and overshadowing assessment has been undertaken by Proximity as part of the planning application. This is provided at Chapter 12 Daylight, Sunlight and Overshadowing and associated appendices.
- 9.99 There are no existing sensitive receptors on Site. The principal receptors which could be affected by the proposals include:
- Britton House, Lord Street.
 - Jefferson Place, Fernie Street.
 - The Hallmark, 6 Cheetham Hill Road.
 - 4 Park Place

Identification and Evaluation of Significant Effects

Environmental Design and Management

9.100 A number of environmental design measures are embedded into the design of the Proposed Development which are of relevance to the assessment of potential effects to Human health These comprise:

- Delivering energy and sustainability commitments.
- Providing sufficient levels of cycle parking and EV charging provision.
- Architectural detailing and soft landscaping on the roof terrace to minimise the effects of wind to on and off-site receptors.

Construction Effects

9.101 During the construction phase, the identified receptors include construction workers and off-site residential properties which are considered to be high sensitive receptors. As well as off-site commercial uses, these are however less sensitive. The potential impacts on human health which are explored in the following assessment comprise:

- Socio-economics.
- Contaminated land.
- Air quality.
- Noise.
- Traffic and transport.

9.102 Due to the nature of the daylight, sunlight and overshadowing assessments, the principal effects are only realised following full completion of the Proposed Development given the gradual nature of the construction process. As such, these disciplines are only assessed during the operational phase of Proposed Development.

Socio-Economics

9.103 There will be a number of economic impacts as a result of the construction phase of the development. The calculations are based on the estimated costs for the Proposed Development of £45m excluding VAT. This is based on 237 residential units plus 95.6 sqm of commercial space.

9.104 It is estimated that the scale of the Proposed Development could support 695.5 person years of construction related employment, comprising 257.6 on-site construction job years and a further 437.9 indirect job years in supporting industries such as specialist suppliers and manufacturing. It is estimated that the construction of the Proposed Development could be completed over a 24-month period which implies that there will be 129 construction FTE jobs supported on-Site during the build period and a further 219 off-site indirect FTE jobs. The GVA associated with these jobs will be £23.5m per year.

- 9.105 The identified socio-economic effect is considered to be minor beneficial due to the construction gain (jobs, spending etc.) created by the Proposed Development which is not significant. There would be disruption to local businesses and services due to the construction operations which could result in a moderate adverse effect which is considered to be not significant.

Contaminated land

- 9.106 During the construction phase, there is the potential for contaminated materials (asbestos) and soils to impact the health of construction workers and off-site human receptors. This could be through direct contact, inhalation or indigestion. The baseline ground conditions surveys have identified the potential presence of ground gas.
- 9.107 The sensitivity of human health is considered to be high and the magnitude of effect is medium. In the absence of mitigation, the potential contaminated land and ground gas effects could range from minor to moderate adverse to construction workers and off-site residential/commercial uses.

Air Quality and Dust

- 9.108 The air quality assessment has considered the risk of impacts associated with the generation of dust during the construction phase, in accordance with the IAQM guidelines. The guidance suggests that construction impacts on local air quality can be divided into four key areas:
- Demolition.
 - Earthworks.
 - Construction.
 - Trackout.
- 9.109 Potential dust emission magnitude has been assessed for each of the four key areas above in relation to the Site. The dust emission magnitude is based on the scale of the anticipated works and is classified as small, medium, or large. The guidance provides examples of how the potential dust emission magnitude for different activities can be defined.

Earthworks

- 9.110 The Total Site area is less than 18,000 m². The total volume of material to be removed is estimated to be less than 20,000 tonnes with fewer than five heavy earth-moving vehicles active at one time.
- 9.111 With reference to the BGS online geology maps, the Site is indicated to be underlain by superficial deposits of Devensian Till (glacial clay and boulders) over bedrock geology of Chester Formation (sandstone and conglomerate). The dust-generation potential of the sub surface is considered to be 'moderate'.
- 9.112 Due to the small size of the site and the limited volume of material anticipated to be moved, the potential dust emission magnitude in the absence of mitigation is considered to be 'small'.

Construction

- 9.113 The total volume of the building to be constructed is between 12,000 and 75,000 m³. It is anticipated that the proposed building will comprise a reinforced concrete frame with a masonry façade. Concrete batching is not expected to be undertaken on site.
- 9.114 The potential dust emission magnitude in the absence of mitigation is considered to be 'medium'

Trackout

- 9.115 Trackout dust impacts are associated with heavy-duty vehicles ("HDVs") leaving the site after moving over unpaved ground where they will accumulate mud and dirt that can then be tracked out onto the public highway. Trackout impacts are linked to the number of outward HDV movements over the course of a day.
- 9.116 It is estimated that the maximum number of HDVs leaving site per day will be less than 20. The length of unpaved road on the site is expected to be less than 50 m and the dust-generation potential of the subsurface is assessed as 'moderate'.
- 9.117 The potential dust emission magnitude in the absence of mitigation is considered to be 'small'.

Air quality summary

- 9.118 Overall, based on the IAQM suggested methodology, the potential risk of impacts, prior to mitigation, is anticipated to be low to medium based on the various activities required to construct the development. This is a different terminology approach to that suggested earlier in the Chapter, but would normally be equivalent to a minor to moderate adverse effect.

Noise and Vibration

- 9.119 The noise assessment has not specifically considered impacts associated with the construction phase of development. However, there are several activities which could impact off-site residential and commercial human health receptors, including:
- Excavation and enabling works;
 - Road works;
 - Sub-structure works that may include piling, and,
 - Construction of superstructure.
- 9.120 Depending on the distance of existing residential receptors, with the nearest being located c. 20m to the southeast, the noise and vibration effects could range from minor to moderate adverse, assuming a high sensitivity receptor and medium magnitude of effect.

Traffic and Transport

- 9.121 During construction, HGVs and other small site / plant vehicles together with construction workers will undertake trips to and from the Site.

- 9.122 As a result, there would be an increased volume of construction traffic on the highways network as workers, contractors and materials travel to and from the site each day. Whilst pedestrian routes exist in the vicinity of the site, appropriate routes will be maintained and disruption to pedestrians will be minimal. Any temporary diversions on the public highway network will be agreed with the local highways authority to ensure an alternative route is available to members of the public. It is anticipated that the impacts on pedestrian delay and amenity is minor adverse, prior to implementing mitigation.
- 9.123 The highways network within the vicinity of the site does not have an unduly poor safety record which would merit concerns in relation to accidents and safety associated with an increased provision of construction vehicles on the local network. Given the existing baseline traffic flows, it is not considered the development's construction traffic would have a material effect on the network which would increase the number of accidents and safety issued on the network. The impact is, therefore, assumed to be minor to moderate adverse, prior to implementing mitigation.

Townscape and Visual

- 9.124 The townscape character area most affected by the demolition and construction operations are the Townscape Character Zones in and around the Proposed Development Site namely: Green Quarter, Former Boddington Brewery, Medieval Core and Cheetham. The significance of effect is therefore predicted to be moderate adverse for the duration of the construction period due to site clearance works, stockpiling of demolition and construction materials, the use of construction equipment such as cranes and temporary fencing. The effects, however, should be relatively localised and temporary and will not affect other Townscape Character zones in any measurable way.
- 9.125 The effects of demolition and clearance on the Representative Viewpoints will also be limited to some extent. Nonetheless, there is little doubt that the construction phase of any building of any scale, until it is fully clad, will involve processes that are visually unsightly and are likely, in visual effect terms, to be largely adverse in nature. This period, however, is only likely to be transitional and will be of short duration in relation to the lifespan of the Proposed Development itself. In view of the scale of the Proposed Development, the magnitude of effect, and significance of effect is therefore judged to be moderate adverse.

Operation Effects

- 9.126 During the operational phase, the principal receptors comprise future residents using the Site, and off-site residential receptors. These are both considered to be receptors of high sensitivity. The off-site commercial uses could be impacted by the development, but again these are less susceptible to the effects of development and comprise medium sensitivity receptors. The potential impacts on human health which are explored in the following assessment comprise:
- Socio-economics.
 - Air quality.
 - Noise.

- Traffic and transport.
 - Wind.
 - Daylight, sunlight and overshadowing.
 - Internal and external amenity space.
- 9.127 Contaminated land has been scoped out of the operational phase assessment as all land which requires remedial measures will have been treated during the construction stage.
- 9.128 Socio-Economics The socioeconomics assessment has identified the following effects:
- Effects associated with the additional working households – moderate beneficial (not significant).
 - Increased household expenditure – minor beneficial (not significant).
 - Creation of long term job opportunities – minor beneficial (not significant).

Air Quality and Dust

- 9.129 During the operational phase, the principal air quality effects relate to the existing/future air quality conditions on future Site users, namely the residential properties. As well as, the impacts on existing residential properties (The Hallmark (Existing Receptor 1); Jefferson Place (Existing Receptors 2-4); and One Lord Street (committed development) (Existing Receptor 5).

Site Suitability

- 9.130 The Site is situated within an AQMA which has been declared in respect of the annual mean Air Quality Objectives (“AQO”) for NO₂. 8.126 Detailed dispersion modelling has been undertaken as part of the AQA. As part of the modelling exercise, concentrations of key air pollutants (NO₂, PM₁₀ and PM_{2.5}) have been predicted along the roadside façade of the Proposed Development to determine whether any mitigation to reduce future occupants’ exposure is required. The results of the assessment indicate that concentrations along the Cheetham Hill Road façade of the proposed building are predicted to be well below the relevant AQO in the opening year.
- 9.131 The Site is therefore considered to be suitable for the Proposed Development. The effects on future site users are, therefore, not significant (assumed to be negligible).

Operational Related Effects

- 9.132 The Site is highly accessible and, as such, the Proposed Development has been designed to be ‘car-free’ with the exception of three on-street parking spaces (two accessible spaces and one for car club use). Residents are expected to walk/cycle to access the local facilities. The Site’s baseline use is as a car sales/ servicing facility and, whilst this is inactive, it could legitimately be brought back into use.
- 9.133 As the Site is ‘car free’, the traffic flows are predominantly made up of delivery and servicing vehicles. In addition, delivery and servicing vehicles are already expected to utilise the local road network and the actual net increase in daily trips is expected to be significantly lower. Detailed consideration of

air quality impacts associated with increased traffic flows has therefore be scoped out of the assessment.

- 9.134 Notwithstanding this, the height of the proposed building, in combination with other tall buildings in proximity, has the potential to restrict dispersion of existing road traffic emissions and may result in increased concentrations of air pollutants locally. Detailed dispersion modelling has therefore been undertaken to explore the potential street canyon effect created by the proposed building and predict concentrations of air pollutants along the roadside façades of existing and consented apartment buildings on the opposite side of Cheetham Hill Road.
- 9.135 For PM₁₀ and PM_{2.5} the predicted future year concentrations are well below the annual mean AQOs of 40 µg.m-3 and 25 µg.m-3 respectively at all of the modelled receptor locations. The maximum annual mean PM₁₀ concentration of 15.82 µg.m-3 and maximum PM_{2.5} concentration of 9.94 µg.m-3 were predicted at receptor ER1.0 (The Hallmark).
- 9.136 Annual mean concentrations of NO₂ with the Proposed Development in place are well below the AQO with a maximum of 29.39 µg.m-3 recorded at ER1.0 (The Hallmark). As predicted annual mean concentrations are all below 60 µg.m-3 it can also be assumed that concentrations will not exceed the short-term (1-hour mean) AQO.
- 9.137 The impact at individual receptors for future year scenarios has been assessed with reference to guidance produced jointly by the IAQM and EPUK. An impact descriptor is determined for each receptor based on the change in annual mean pollutant concentration between the 'withdevelopment' and 'without-development' scenarios and the total pollutant concentrations relative to the AQO with the scheme in place. Impacts have been assessed in the context of predicted annual mean NO₂ concentrations as this is the pollutant which is most significantly influenced.
- 9.138 The impact at all modelled receptors is described as negligible with one exception (ER5: One Lord Street). This is located on the roadside façade of the consented development at One Lord Street. As the predicted impact is described as 'moderate' at ground floor level at ER5, a full impact assessment at all floor heights was undertaken to evaluate the significance of the Proposed Development on this modelled receptor in more detail. The results show that from ground floor to 6th floor, the adverse impact is described as 'moderate'. From the 7th floor upwards, the impact is described as 'slight'.
- 9.139 In summary, with the exception of ER5, the predicted impact at existing receptors is 'negligible'. At ER5, the predicted impact of the Proposed Development is described as 'moderate adverse' at ground floor to sixth floor and 'slight adverse' at the floors above. This is an overestimation of impacts over a very limited geographical area which assumes that the One Lord Street consented development and the Proposed Development are introduced simultaneously.
- 9.140 The overall significance of effects of the Proposed Development on local air quality is considered to be 'not significant' (assumed to be negligible in EIA terms).

Noise and Vibration

9.141 During the operational phase, there are three elements which are afforded consideration to determine any noise related health effects:

- Achieving suitable internal noise levels for residents.
- Achieving suitable external noise levels in private amenity space for residents.
- Assessing the development generated noise impacts.

Internal Noise Impacts

9.142 As part of the design process, the architect has incorporated a series of noise mitigation measures into the design. This is essentially embedded mitigation and as such the following impact assessment assumes this mitigation is in place.

9.143 The noise assessment suggested implementing the following mitigation is designed into the development:

- External walls and roofs – The façade improvements are anticipated to far surpass the required noise ingress requirements.
- Framed external window and door systems – The assessment recommends select acoustic performance for windows and doors based on the level of noise experienced for each apartment/façade.
- Ventilation – For ventilation (and to assist with overheating), appropriately-sized MVHR heat recovery systems will be provided to each apartment. These will remove the need for trickle ventilators and/or reliance on openable windows to provide normal background ventilation (in line with Approved Document F).
- Overheating – An acoustic, ventilation and overheating strategy has been prepared and set limits to ensure the noise levels fall below the required thresholds.

9.144 The assessment finds that acceptable internal noise levels within new dwellings can be achieved through the appropriate specification of façade elements and appropriate ventilation and overheating mitigation solutions that removes or restricts reliance on openable windows, particularly for dwellings overlooking Cheetham Hill Road. Preliminary guidance on suitable specifications and solutions for framed external window/door systems has been provided. Acoustically-enhanced double glazed windows will be required for façades facing south, Cheetham Hill Road and Carnarvon Street, reducing to more conventional double glazing on the west elevation. As such, the effect is considered to be negligible as the internal noise levels are suitable for the intended use.

External Private Amenity

9.145 A roof terrace is proposed at level 17, solely used by future residents. The noise levels are between 49-50dB and therefore achieve the BS8233 target of <50 dB LAeq,16hr across the terrace. The potential effects are considered to be negligible.

Development Generated Noise Impacts

- 9.146 The Proposed Development has the potential to generate noise associated with fixed plant associated with the building's operation, and noise associated with the ground floor commercial unit / amenity spaces.
- 9.147 With regards to plant noise, a suitably worded planning condition has been proposed to ensure plant noise levels are 5dB below prevailing background levels. Thus, the potential effects associated with plant is considered to be negligible to minor adverse provided the necessary noise levels can be achieved.
- 9.148 The uses for the commercial unit on the ground floor and private amenity space are not known at this stage. Therefore, impacts could arise associated with the delivering of goods and services, operational noise egress and residents using the amenity space. The noise assessment has not been able to calculate the likely noise levels associated with these spaces, and therefore, best practice noise mitigation measures through glazing and ceilings to control noise have been recommended. A suitably worded condition can be secured to ensure the eventual noise mitigation for commercial uses is considered suitable by the Council's environmental health team. The effects are anticipated to be negligible to minor adverse following the implementation of designed-in mitigation.

Traffic and Transport

- 9.149 The Proposed Development is in a sustainable location and is designed to be car-free. Therefore, there would be no material increase on the local highways network as a result of the Proposed Development. The Proposed Development will, however, lead to health related benefits by encouraging future residents to travel to and from the Site by sustainable means. This would include walking, cycling and public transport. This could result in a minor beneficial effect to future residents health and wellbeing.
- 9.150 During the operational phase, the Proposed Development would result in vehicular movements associated with delivery and servicing. This would result in a negligible effect.

Wind

- 9.151 Following the erection of the proposed development, wind conditions within the site and surrounding areas satisfy the safety criteria for wind at ground level.
- 9.152 A small, localised exceedance of the wind safety criteria occurs at the southwest corner Level 17 terrace of proposed development. The introduction of localised landscaping measures is deemed to be sufficient to mitigate the exceedance.
- 9.153 The assessment concluded:
- **Thoroughfares (on-site)** – Wind conditions on thoroughfares within the Site remain suitable for pedestrian strolling or better and are thus comfortable for pedestrian access to and passage through the site. The assessment confirmed a negligible effect.

- **Entrances (on-site)** – Wind conditions at all entrances to the proposed development remain suitable for short-term standing or better and thus comfortable for pedestrian ingress / egress. The assessment confirmed a negligible effect.
- **Recreational Spaces (on-site)** - With regards to the amenity space at Level 17, wind conditions are substantially suitable for short-term sitting from spring to autumn. A localised region of windier conditions still exists at the southwestern corner of this level that is exposed to southerly prevailing winds. With the landscaping scheme designed into the Proposed Development the effect is considered to be negligible.
- **Surrounding Area (off-site)** – Within the surrounding areas, wind conditions remain generally suitable for at least short-term standing or better all year round, with localised regions of strolling conditions present along the Cheetham Hill Road, Gibson Place, and Carnarvon Street. This still meets comfort criteria for a leisure thoroughfare through the area. Thus, all entrances and thoroughfares in the surrounding area are comfortable for their intended uses.

9.154 In the cumulative effects scenario, wind conditions remain materially similar for both safety and comfort.

9.155 In the summer, wind conditions on the terrace range from long term standing / sitting to strolling. The majority of the space is, however, subject to short-term standing / sitting wind conditions. Wind conditions on the terrace range from short-term standing / sitting to strolling. There is a small area of the space which is identified as fast walking and uncomfortable (hence the small safety exceedance). A landscaping strategy will be embedded into the design which includes screening and vegetation measures to reduce wind speeds. The potential effects are considered to be negligible to minor adverse (not significant).

Daylight, Sunlight and Overshadowing

9.156 Notwithstanding localised impacts, with the Proposed Development in place, Britton House, The Hallmark and 4 Park Place would, overall, experience negligible impacts (not significant) on daylight and sunlight amenity.

9.157 Jefferson Place would, overall, experience a minor adverse impact (not significant) on daylight amenity. Jefferson house would, overall, experience negligible (not significant) impact on sunlight amenity.

Townscape and Visual

9.158 During the operational phase, the potential effects on identified viewpoints (the effects relate to both viewpoints and townscape character unless stated otherwise) have been identified as:

- Viewpoint 1 Cheetham Hill Road – Negligible beneficial (not significant). A minor beneficial effect on townscape character.
- Viewpoint 2 Cheetham Hill Road – Minor beneficial (not significant).

- Viewpoint 3 Cheetham Hill Road – Minor beneficial (not significant). A moderate beneficial effect (significant) on townscape character.
- Viewpoint 4 Cheetham Hill Road – Moderate beneficial (significant) for both viewpoints and townscape character.
- Viewpoint 5 Cheetham Hill Road – Moderate beneficial (significant) for both viewpoints and townscape character.
- Viewpoint 6 Cheetham Hill Road – Moderate beneficial (significant) for both viewpoints and townscape character.
- Viewpoint 7 Ring Road – Negligible beneficial (not significant) for both viewpoints and townscape character.
- Viewpoint 8 Ring Road – No impact.
- Viewpoint 9 New Bridge Street – Minor beneficial (not significant) for both viewpoints and townscape character.
- Viewpoint 10 Bury New Road – Minor beneficial (not significant) for both viewpoints and townscape character.
- Viewpoint 11 Trinity Way – Negligible beneficial (not significant) for both viewpoints and townscape character.
- Viewpoint 12 Deansgate – Minor beneficial (not significant) for both viewpoints and townscape character.
- Viewpoint 13 Carnarvon Street – Minor beneficial (not significant) for both viewpoints and townscape character.
- Viewpoint 14 Hunts Bank Approach – No impact.

9.159 The long term townscape character and visual effects range from no impact to moderate beneficial.

Internal and External Amenity Space

9.160 The Proposed Development meets Manchester’s internal space standards. Therefore, sufficient internal amenity space has been provided for future residents. This is combined with an internal and external private amenity space solely for the use of future residents. As such, the site’s external and amenity provision is considered sufficient to accommodate the needs of future residents, and no impacts are anticipated (as demonstrated by the findings of the technical assessments undertaken to support the application).

Summary of Effects (prior to implementing any further mitigation)

9.161 Prior to implementing any further mitigation, the below table sets out the potential effects of the proposed development on human health. The effects take into account any measures which have been designed into the Proposed Development, also known as embedded mitigation.

Table 9.15 Summary of Effects (prior to further mitigation)

Likely significant Effect	Receptor	Embedded mitigation	Pre-mitigation effect
Construction Phase			
Socioeconomics	Disruption to local area due to movement of materials etc.	Best practice mitigation measures implemented by way of CEMP	Moderate Adverse (not significant)
	Employment gain for construction industry	None proposed	Minor Beneficial (not significant)
Contaminated land	Construction workers / off-site residential properties / off-site commercial uses	None proposed	Minor to moderate adverse (not significant)
Air quality	Construction workers / off-site residential properties / off-site commercial uses	None proposed	Minor to moderate adverse (not significant)
Noise and vibration	Construction workers / off-site residential properties / off-site commercial uses	None proposed	Minor to moderate adverse (not significant)
Traffic and transport – pedestrian delay and amenity	Highways network, pedestrians and road users	None proposed	Minor adverse (not significant)
Traffic and transport – accidents and safety	Highways network, pedestrians and road users	None proposed	Minor to moderate adverse (not significant)
Townscape and visual	Townscape character	None proposed	Moderate adverse (significant)

Townscape and visual	Viewpoints 1-14	None proposed	Moderate adverse (significant)
Operational Phase			
Socio-economics - Local Population	Residents	None proposed	Minor Beneficial (not significant)
Socio-economics - Local employment	Employees / employers	None proposed	Moderate Beneficial (not significant)
Air quality – Site Suitability	Future residents / site users	Car-free development	Negligible (not significant)
Air Quality – Operational Related Effects	Future residents and offsite receptor		Negligible (not significant)
Noise and Vibration – Internal Noise	Future residents	Suitable façade, ventilation and glazing measures.	Negligible (not significant)
Noise and Vibration – External Private Amenity Space	Future residents	None proposed	Negligible (not significant)
Noise and Vibration – Development Generated Noise	Future residents and off-site receptors	Suitable façade, ventilation and glazing measures. Alongside plant noise limit restrictions.	Negligible to minor adverse (not significant)
Traffic and Transport – Health benefits of car-free developmen	Future residents	Car free development	Minor beneficial (not significant)
Traffic and transport – Vehicle	Highways network	Car-free development	Negligible (not significant)

Wind - Adherence to Wind Safety Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met
Wind - Adherence to Wind Safety Criteria	Private Amenity Space	Baseline landscaping scheme	Negligible – safety criteria met
Wind - Adherence to Wind Comfort Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met
Wind - Adherence to Wind Comfort Criteria	Private Amenity Space	Baseline landscaping scheme	Negligible – safety criteria met
Daylight, Sunlight and Overshadowing	Britton House, The Hallmark and 4 Park Place – Daylight and Sunlight Amenity	None proposed	Negligible (not significant)
Daylight, Sunlight and Overshadowing	Jefferson Place – Daylight Amenity	None proposed	Minor Adverse (not significant)
Daylight, Sunlight and Overshadowing	Jefferson Place – Sunlight Amenity	None proposed	Negligible (not significant)
Townscape and Visual	Townscape Character	High quality design and landscaping strategy.	No impact (not significant) to moderate beneficial (significant)
Townscape and Visual	Viewpoints 1-14		
Internal and External Amenity Space	Future residents	Secured through design: NDSS and private internal and external amenity space	No impact

Mitigation Measures

Mitigation during Construction

Socio-Economics

- 9.162 To mitigate the potential disruption, it is suggested that the design and timings for the construction programme should take this into account to minimise these effects, avoiding rush hour where possible for logistics. Best practice measures will be included within a Construction Environment Management Plan (CEMP) and secured by condition.
- 9.163 The introduction of a Local Employment Scheme could help to retain some of the employment benefits in the local area. The Proposed Development will provide training for new entrants during construction.

Contaminated Land

- 9.164 A suite of best practice contaminated land remediation measures can be secured by condition and include (these are commonplace measures that will be adapted based on the findings of the intrusive investigations):
- Ensure that the materials used during the construction phase are clean and suitable for use.
 - Minimise impact on soils by limiting tracking over exposed soils.
 - Soils to be stripped and placed in stockpiles in accordance with best practice. Where possible stockpiles to be placed in low activity areas and delineated/protected.
 - Implementation of appropriate health and safety procedures. Any tanks which are to be located on-site should be bunded and a spill kit should be onsite and consideration should be given to the installation of interceptor tanks within the onsite drainage system to capture the run-off from areas of hardstanding.
 - Gas protection measures in accordance with the requirements of Characteristic Situation 2 could be required as described in BS8485:2015+A1:2019.

Air Quality and Dust

- 9.165 The IAQM guidance provides recommendations for mitigation measures commensurate with the risk of dust impacts. These can be secured via a Construction Environmental Management Plan ("CEMP") and/or Dust Management Plan ("DMP"), to be secured by suitably worded planning condition, and include (but not limited to):

Communications

- Develop and implement a stakeholder communications plan that includes community engagement before work commences on Site;
- Display the name and contact details of persons accountable for air quality and dust issues on the Site boundary together with head or regional office contact information; and

- Develop and implement a DMP which may include measures to control other emissions, approved by the LA. The DMP may include monitoring of dust deposition, dust flux, real-time PM₁₀ continuous monitoring and/or visual inspections.

Site Management

- Record all dust and air quality complaints, identify causes and take appropriate measures to reduce emissions in a timely manner. All records should be made available to the LPA when asked; and
- Record any exceptional incidents that occur, causing dust and/or air emissions, either on or off-site, and the action taken to resolve the situation.

Monitoring

- Carry out regular site inspections to monitor compliance with the DMP, increasing the frequency when activities with a high potential to produce dust are being carried out or during prolonged dry/windy conditions; and, Agree dust deposition, dust flux, or realtime PM₁₀ continuous monitoring locations with the LA. Where possible commence baseline monitoring at least three months before work commences on-site.

Preparing and maintaining the site

- Plan site layout so that, where possible, machinery and dust causing activities are located away from receptors;
- Erect solid screens or barriers around the site boundary and implement intelligent screening, such as positioning site offices between potentially dusty activities and receptors;
- Fully enclose the Site or specific operations where there is a high potential for dust production and the site is active for an extensive period;
- Avoid site runoff of water and mud;
- Keep site fencing, barriers and scaffolding clean using wet methods;
- Remove materials that have a potential to produce dust from site as soon as possible unless being re-used on site. If being retained on-site cover as described below;
- Cover, seed or fence stockpiles to prevent wind whipping.
- Operating vehicle/machinery and sustainable travel;
- Implement a site policy that no vehicles are left idling and engines are switched off when not in use; and
- Avoid the use of diesel or petrol-powered generators using mains electricity or battery powered equipment where practicable.

Operations

- Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques;
- Ensure adequate water supply for dust suppression, to avoid generation of windblown dust, using non-potable water where possible;
- Minimise drop-heights into skips and use enclosed chutes, conveyers and covered skips, where possible; and
- Ensure equipment is readily available on site to clean any dry spillages as soon as reasonably practicable after the event using wet cleaning methods.

Waste Management

- Ban the disposal of waste material by burning on Site.

Construction

- Ensure sand and other aggregates are stored in bunded area and are not allowed to dry out unless this is required for a particular process, in which case that appropriate additional control measures are in place.

Noise and Vibration

Earthworks and Construction Noise Effects

- 9.166 To reduce noise levels at the receptors, it is assumed that Best Practicable Means (“BPM”) will be followed on-site considering the proximity of existing and proposed residential receptors. These will be adopted through the CEMP, to be secured by suitably worded planning condition.
- 9.167 Accepted safeguards exist to minimise the effects of construction noise, these include:
- The various EC Directives and UK Statutory Instruments that limit noise emissions from a variety of construction plant.
 - Guidance set out in BS5228-1 which covers noise control on construction sites; and
 - The powers that exist for local authorities under Sections 60 and 61 of the Control of Pollution Act 1974 to control noise from construction application sites.
- 9.168 The adoption of Best Practicable Means, as defined in Section 72 of the Control of Pollution Act 1974 is usually the most effective means of controlling noise from construction sites. Such measures where appropriate may include the following:
- Any compressors brought on to the Site to be silenced or sound reduced models fitted with acoustic enclosures.
 - All pneumatic tools to be fitted with silencers or mufflers.
 - Care to be taken when erecting or striking scaffolds to avoid impact noise from banging steel. All operatives undertaking such activities to be instructed on the importance of handling the scaffolds to reduce noise to a minimum.

- Most deliveries to be programmed to arrive during normal working hours only. Care to be taken when unloading vehicles to minimise noise. Delivery vehicles to be routed to minimise disturbance to residents. Delivery vehicles to be prohibited from waiting within or in the vicinity of the Site with their engines running.
- All plant items to be properly maintained and operated according to manufacturers' recommendations in such a manner as to avoid causing excessive noise.
- All plant to be sited so that the noise impact at nearby noise sensitive properties is minimised.
- Local hoarding, screens, or barriers to be erected as necessary to shield particularly noisy activities;
- Problems concerning noise from construction works can often be avoided by taking a considerate and neighbourly approach to relations with the residents; and
- Works should only take place during given periods, e.g. during normal construction hours and not at night.

9.169 It is recommended that the above measures be included in any CEMP that may be issued to and agreed with the contractor(s) conducting the works.

Construction Vibration

9.170 It is advised to employ a number of physical and operational measures in order to reduce the potential effects resulting from construction generated vibration. These may include:

- Adoption of low vibration working methods. Consideration should be given to use of the most suitable plant.
- Where processes could potentially give rise to significant levels of vibration, on - site vibration levels should be monitored regularly by a suitably qualified person.
- Where piling is to take place, any obstructions within the ground such as shallowly lying stone, should first be removed.
- The provision of cut-off trenches to interrupt the direct transmission path of vibrations. –
- Reduction of energy input per blow (applicable to piling); and
- Application of piling techniques aimed at reducing resistance to penetration e.g. pre-boring for driven piles and adding water to the hole for impact bored piles

9.171 It is expected that mitigation measures and operational considerations such as these would be incorporated within the development of the site construction methodologies in order that the effects of ground borne construction vibration can be controlled wherever practically possible.

Traffic and Transport

9.172 Mitigation measures regarding transport and access to the Site will be implemented via the CEMP or via a Construction Traffic Management Plan (CTMP), to be secured by suitably worded planning condition:

- Agreed traffic management measures to restrict construction vehicles in certain locations and routes at certain times of the day;
- Travel Plan initiatives to encourage workers to travel to the Site in a sustainable manner; and
- Considerate construction practices (such as wheel washing).

Townscape and Visual

9.173 Mitigating the effects of the construction phase will involve high quality hoardings that will be used to limit unsightly visual impacts during the construction phase at street level. These will secure and protect the site and prevent views of an unsightly construction site. These can be secured via a CEMP.

Mitigation Once the Proposed Development is Operational

Socio-Economics

9.174 The impacts of the Proposed Development during the operational phase are assessed as Moderate Beneficial. Therefore, no additional mitigation of adverse impacts is required. However, the developer is committed to enhancing the beneficial impacts of the operational Proposed Development through promoting local employment through multiple routes including the Greater Manchester Local Enterprise Partnership, local groups and partnerships with Manchester focused job fairs and events.

Air Quality and Dust

9.175 Guidance on mitigating against air quality impacts is provided in the IAQM/EPUK guidance document. The guidance emphasises that all developments should adopt good design principles to reduce emissions and minimise cumulative impacts regardless of the outcome of individual air quality assessments.

Minimising exposure to poor air quality

9.176 There is a wide pavement along Cheetham Hill Road and additionally, no residential uses are proposed at ground level along the Cheetham Hill Road façade of the proposed building.

9.177 The concentrations predicted at the worst-case proposed receptor locations (closest to Cheetham Hill Road) in the opening year are well below the annual mean AQO (maximum of 28.66 µg.m-3) and no additional mitigation to reduce future residents' exposure to air pollution is considered to be necessary.

Heating Scheme

- 9.178 The heat demand of the development will be addressed using electric systems therefore no point source of NO_x or PM₁₀ will be introduced on site and no mitigation is required.

Noise and Vibration

- 9.179 The assessment has identified a series of measures which are secured by design. The assessment finds that acceptable internal noise levels within new dwellings can be achieved through the appropriate specification of façade elements and ventilation and overheating mitigation solutions that removes or restricts reliance on openable windows, particularly for dwellings overlooking Cheetham Hill Road. Preliminary guidance on suitable specifications and solutions for framed external window/door systems has been provided. Acoustically-enhanced double glazed windows will be required for façades facing south, Cheetham Hill Road and Carnarvon Street, reducing to more conventional double glazing on the west elevation.
- 9.180 The additional mitigation which can be secured by planning condition include:
- Plant noise emission limits have been proposed so that future plant installations do not adversely impact on the locality.
 - Noise impacts from the operation of the ground floor commercial unit and upper floor residential amenity spaces have been considered and suitable noise criteria have been proposed to mitigate the risk of adverse noise impacts.
 - For the commercial unit, the approach should be to provide shell only constructions achieving Building Regulations Part E sound insulation requirements. This will allow future tenants to introduce acoustic enhancements to suit their operation, and the Local Authority may wish to secure this through a suitably worded condition of planning.
 - For the amenity spaces, provisions exist to enhance internal building fabric constructions as required to mitigate noise and vibration impact risks to adjoining dwellings. However, the exact usage of these amenity spaces is yet to be decided and, again, it may therefore be prudent for the Local Authority to secure this through a suitably worded condition of planning.

Traffic and Transport

Traffic

- 9.181 The Site is highly accessible and, as such, the Proposed Development has been designed to be 'car-free' with the exception of three, on-street parking spaces (two accessible and one for car club use). A high level of cycle parking is to be provided (one space per apartment).
- 9.182 The Site will be supported by a Travel Plan that includes measures to promote and support active and sustainable resident travel. An Interim Travel Plan has been prepared for the planning application. The Interim Travel Plan sets out the measures that will be adopted at the site, including management and monitoring mechanisms.
- 9.183 A Travel Plan will set out a range of measures to support active / sustainable travel as follows:

- Travel packs will be provided to new occupants which contains information on nearby travel options and timetables, along with the Travel Plan Co-ordinators contact details.
- The Travel Plan Co-ordinator will offer personal travel planning services to help residents who require extra help familiarising themselves with their options.
- The proposed development will provide localised enhancements to pedestrian access routes, 100% resident cycle parking and visitor cycle parking.
- Details of the frequent bus services on Cheetham Hill Road and train/tram services at Victoria station will be provided in the Travel Pack.

Parking provision

- 9.184 Cycle parking will be provided within the building at a rate of 1 space per unit. 50% of the cycle parking is provided in the ground floor store and the remainder is accommodated in apartments.
- 9.185 Most of the cycle parking in the store will be in a racking system, with separate parking provided to accommodate adapted bikes (a Sheffield stand). A cycle cleaning area is also provided in the cycle store.
- 9.186 The Council's parking policy allows Blue Badge holders to park for free and unlimited duration in street parking bays across the city. The site relates well to existing parking bays where disabled residents could park. The proposal will provide two disabled spaces and a car club white lined space on Carnarvon Street. The applicant will fund the modifications required to the existing TRO to accommodate these spaces.

Delivery and servicing management plan

- 9.187 A white lined loading bay will be provided on Carnarvon Street for use by refuse vehicles and larger resident deliveries. The residents will be advised of the location of the loading bay via the travel pack that will be issued as part of the Travel Plan. The Travel Plan sets out a Management Strategy that will be used at the site to manage larger deliveries.
- 9.188 The loading bay will also be able to accommodate day-to-day deliveries to residents, such as food deliveries, post, Amazon and take-aways. These delivery movements are undertaken in smaller vehicles (cars, light goods vehicles, and motorbikes). These vehicle types would therefore also be able to utilise available free space within the marked bays in the local area. A post / parcel storage area is provided in the concierge area and residents will be advised of this as part of the Management Strategy set out in the Travel Plan.

Wind

- 9.189 There is a small area on the level 17 terrace which is in excess of the safety and comfort criteria. This is due to winds accelerating around the exposed upper south-western corner from various directions, but critically from the southern and western sectors. To improve these conditions the development will implement a suite of soft landscaping improvements.

Daylight, Sunlight and Overshadowing

- 9.190 No mitigation is proposed as the design process has evolved to minimise long term operational effects on existing and future receptors.

Townscape and Visual

- 9.191 No further mitigation is proposed as all measures will have been secured through delivery of a high quality design, public realm and landscaping strategy. These will be approved in detail as part of the planning application.
- 9.192 **Table 9.16** sets out how the various mitigation measures have / will be secured as part of the planning process.

Table 9.16 Summary of Mitigation

Discipline / Effect	Approach to securing mitigation	
	Embedded mitigation – secured by design (plans)	Further mitigation – secured by condition / S106 Obligation
Construction Phase		
Socioeconomics	CEMP	Local Labour Agreement
Contaminated land	None proposed	Intrusive ground investigation, remedial measures and ground gas protection (if required).
Air quality	None proposed	CEMP / DMP
Noise and Vibration	None proposed	CEMP
Traffic and Transport – Pedestrian Delay and Amenity	None proposed	CEMP / CTMP
Traffic and Transport – Accidents and Safety	None proposed	
Townscape and Visual	None proposed	CEMP
Townscape and Visual	None proposed	
Operation		
Socioeconomics	None proposed	Local labour agreement
Air quality – Site Suitability	Car free development	Travel plan
Air Quality – Operational Related Effects		Electric heating system
Noise and Vibration – Internal Noise	Suitable façade, ventilation and glazing measures	None proposed
Noise and Vibration – External Private Amenity Space	None proposed	None proposed

Discipline / Effect	Approach to securing mitigation	
	Embedded mitigation – secured by design (plans)	Further mitigation – secured by condition / S106 Obligation
Noise and Vibration – Development Generated Noise	Suitable façade, ventilation and glazing measures. Alongside plant noise limit restrictions.	Updated noise assessment based on final end users for commercial floorspace and private amenity space.
Traffic and Transport – Health benefits of car-free development	Car free development	Travel Plan Travel Plan Delivery and Servicing Management Plan Car club space
Traffic and Transport – vehicle movements		
Wind – Ground Level (on and off-site)	None proposed	None proposed
Wind – Private Amenity Space	Landscaping strategy: • Raising parapet • Landscaping • Screening • Pergola	None proposed
Daylight, Sunlight and Overshadowing	None proposed	None proposed
Daylight, Sunlight and Overshadowing	None proposed	None proposed
Internal and External Amenity Space	Secured through design: NDSS and private internal and external amenity space.	None proposed
Daylight, Sunlight and Overshadowing	None proposed	None proposed
Townscape and Visual	High quality design and landscaping strategy	None proposed
Townscape and Visual		

Residual Effects

9.193 The residual effects arising from the Proposed Development are summarised in **Table 9.17** below.

Effect	Receptor (and sensitivity)	Further mitigation	Residual effect
Construction Phase			
Socioeconomics - Disruption to local area due to movement of materials etc.	Local economy	CEMP	Negligible (not significant)
Socioeconomics - Employment gain for construction industry	Local economy	None proposed	Minor Beneficial (not significant)
Contaminated land	Construction workers / off-site residential properties / off-site commercial uses	Intrusive ground investigation, remedial measures and ground gas protection (if required)	Negligible to minor adverse (not significant)
Air quality	Construction workers / off-site residential properties / off-site commercial uses	None proposed	Negligible to minor adverse (not significant)
Noise and vibration	Construction workers / off-site residential properties / off-site commercial uses	None proposed	Minor adverse (not significant)
Traffic and transport – pedestrian delay and amenity	Highways network, pedestrians and road users	CEMP / DMP	Negligible to minor adverse (not significant)
Traffic and transport – accidents and safety	Highways network, pedestrians and road users		Negligible to minor adverse (not significant)
Townscape and visual	Townscape character	CEMP	Moderate adverse (significant)

Effect	Receptor (and sensitivity)	Further mitigation	Residual effect
Townscape and visual	Viewpoints 1-14		Moderate adverse (significant)
Operational Phase			
Socioeconomics – Local Population	Local housing market, health determinants, deprivation and local economy	Local labour agreement	Minor beneficial (not significant)
Socioeconomics – Local employment	Employers / employees	None proposed	Moderate Beneficial (not significant)
Air quality – Site Suitability	Future residents / site users	Travel plan Electric heating system	Negligible (not significant)
Air Quality – Operational Related Effects	Future residents and offsite receptor		Negligible (not significant)
Noise and Vibration – Internal Noise	Future residents	None proposed	Negligible (not significant)
Noise and Vibration – External Private Amenity Space	Future residents	None proposed	Negligible (not significant)
Noise and Vibration – Development Generated Noise	Future residents and off-site receptors	Updated noise assessment based on final end users for commercial floorspace and private amenity space.	Negligible to minor adverse (not significant)

Effect	Receptor (and sensitivity)	Further mitigation	Residual effect
Traffic and Transport – Health benefits of car-free development	Future residents	Travel Plan	Minor beneficial (not significant)
Traffic and transport – vehicle movements	Highways network	Travel plan Delivery and servicing management plan Car club space	Negligible (not significant)
Wind - Adherence to Wind Safety Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met
Wind - Adherence to Wind Safety Criteria	Private Amenity Space	Baseline landscaping scheme	Negligible – safety criteria met
Wind - Adherence to Wind Comfort Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met
Wind - Adherence to Wind Comfort Criteria	Private Amenity Space	Baseline landscaping scheme	Negligible – safety criteria met
Daylight, Sunlight and Overshadowing	Britton House, The Hallmark and 4 Park Place – Daylight and Sunlight Amenity	None proposed	Negligible (not significant)
Daylight, Sunlight and Overshadowing	Jefferson Place – Daylight Amenity	None proposed	Minor Adverse (not significant)

Effect	Receptor (and sensitivity)	Further mitigation	Residual effect
Daylight, Sunlight and Overshadowing	Jefferson Place – Sunlight Amenity	None proposed	Negligible (not significant)
Townscape and Visual	Townscape Character	None proposed	No impact (not significant) to moderate beneficial (significant)
Townscape and Visual	Viewpoints 1-14		
Internal and External Amenity Space	Future residents	None proposed	No impact (not significant)

Likely significant Environmental Effects

- 9.194 Overall, following mitigation, the assessments have demonstrated there are very few significant health related effects associated with the Proposed Development. During the construction phase, vibration activities could be moderate adverse, but this would be subject to the piling solution eventually employed on-site and the controls secured during the construction process via the CEMP.
- 9.195 The wind assessment has identified a potentially pre-mitigation significant effect for future residents using the private amenity space at Level 17. This is due to a safety exceedance. However, a suite of mitigation measures have been recommended to reduce wind speeds in this location and ensure the space is suitable for its intended use.
- 9.196 All other health related effects have been confirmed to be not significant.

Summary and Conclusion

- 9.197 Referring back to the Citywide challenges identified in the Development Plan, the assessment has demonstrated the following with respect to human health:
- Reducing worklessness and deprivation – The Proposed Development creates jobs and opportunities during the construction and operational phase. This will also increase spending in the local economy, thus supporting jobs in the local area indirectly. The creation of jobs will upskill residents and help to tackle the causes and challenges associated with deprivation.
 - Improving the skills of residents to meet the job opportunities – As per above, and the Applicant has committed to a Local Labour Agreement which include key targets to source employment locally, thus providing opportunities for upskilling and various apprenticeship opportunities.
 - Reducing contribution to and mitigating effects of climate change – The Proposed Development delivers a highly energy efficient development in a highly sustainable location. This replaces a derelict and out-of-date industrial building
 - Creating neighbourhood focus, facilities and identity – The Proposed Development provides a blend of uses and private amenity spaces to support the needs of future residents and the existing community to create a positive and successful neighbourhood.
 - Providing a choice of high quality safe and sustainable lifetime homes and neighbourhoods for a growing population – The proposals will deliver 237 homes. The size of the dwelling meets Manchester space standards and the mix is considered suitable based on market signals.
 - Removing health inequalities and enabling more healthy lifestyles – The Proposed Development is car-free and will encourage future residents to walk, cycle or commute via public transport. The creation of jobs and homes in a sustainable location will help address health inequalities in the local area.
 - Improving access to employment and education – The Site provides employment opportunities during construction and operational in a highly sustainable location, with walking, cycling and

public transport genuinely realistic alternatives to private car use. There is sufficient capacity within local schools to accommodate the pupil yield generated by the Proposed Development.

- Reducing congestion on the roads, improving the reliability of public transport and reducing overcrowding – The Proposed Development is car-free and will be a long-term positive step to reduce congestion on the highways network.
- Improving the quality of air and water – As above. In addition, the drainage strategy will implement a series of sustainable drainage strategy measures to treat surface water prior to discharging into the network.
- Reducing the area of contaminated land and facilitating the re-use of previously developed land – The Site comprises previously developed land in need of regeneration. The proposals will remediate any contaminated land and re-use a brownfield city centre site.
- Continuing to ensure that development is of a consistently high quality – The design is clearly of the highest quality and is the product of an extensive engagement process with MCC and a series of key stakeholders.

Cumulative Effects

- 9.198 The EIA process has identified the following cumulative developments within the Site's vicinity for an assessment of potential cumulative effects. All schemes have been scoped-in for the purposes of an assessment of potential effects to Human Health as there is the potential for cumulative effects across at least one technical discipline; the list of schemes for assessment is presented at Appendix 5.1.

Socio-Economics

- 9.199 Given the scale of these developments relative to the local construction industry, it is likely that construction jobs will leak outside the immediate area and external contractors will be required from outside the local area. The indirect benefits of the construction, such as the workers' spend in the area, will still remain and are increased by the total volume of new construction activity across the programme of approved developments. Given that other developments are likely to complete while new ones emerge, the overall scale of construction activity is likely to remain at a similar level. This indicator would remain as Moderate Beneficial impact rating for the wider area, which would remain as Not Significant in EIA terms. The Construction effects assessment highlighted the potential for short term disruption to the local area during the construction programme given the need for access and materials movement. While short-term, this could be moderately disruptive to the area. With implementation of best practice construction practices, it is assumed that the residual impact of the Proposed Development would move from Moderate Adverse in the short-term to a short-term Negligible residual impact in the inner study area, which is Not Significant. This is not expected to change for the cumulative impact assessment, assuming all developments implement the same mitigating factors.

- 9.200 The cumulative effect assessment of the completed developments is based on an overall assessment of the impact on the local population and economy. The development will provide housing which is needed. Three are completed residential developments. A further six residential developments are anticipated to come forward plus two enabling development sites with dwelling numbers yet to be specified. Given the existing transport links, proximity to the city centre and the growth forecast, the cumulative effect of these developments is to bring forward much needed supply of housing, including affordable homes, within Manchester City Centre. This is in line with policy objectives for sustainable growth of the city.
- 9.201 Therefore, the impact significance is assumed to remain Moderate Beneficial to the immediate study area and Moderate Beneficial for the wider area, which is Not Significant in EIA terms.

Contaminated Land

- 9.202 During the construction phase, there could be an increased risk of cumulative contaminated land effects to off-site receptors should any contamination be digested or inhaled. However, it is assumed that the best practice measures are employed including: agreement of the scope of intrusive investigations with the Council; identifying any remedial measures; and implementing commonplace site management and control measures to ensure the off-site effects are minimised as far as possible. Therefore, following the implementation of mitigation measures, the residual effects remain unchanged in the cumulative effects scenario and are minor adverse (not significant).

Air Quality

- 9.203 During the construction phase, there could be an increased risk of cumulative air quality effects to identified receptors. However, it is assumed that the best practice measures are employed including: measures set out within a CEMP in accordance with IAQM guideline recommendations; and Dust Management Plan; thus implementing commonplace site management and control measures to ensure the effects are minimised as far as possible. Therefore, following the implementation of mitigation measures, the residual effects remain unchanged in the cumulative effects scenario and are negligible to minor adverse (not significant).
- 9.204 The air quality assessment has considered the cumulative schemes inherently within the assessment previously presented. Therefore, no additional cumulative effects have been identified over and above those set out previously.

Noise

- 9.205 During the construction phase, there could be an increased risk of cumulative noise effects to identified receptors. However, it is assumed that best practice measures are employed including measures set out within a CEMP, thus implementing commonplace site management and control measures to ensure the effects are minimised as far as possible. Therefore, following the implementation of mitigation measures, the residual effects remain unchanged in the cumulative effects scenario and are minor to moderate adverse.

- 9.206 During the operational phase, the mitigation measures identified for the proposed development would likely be similarly applied to the cumulative developments. This would include plant noise limits and suitable ventilation, glazing and façade measures to minimise break-out noise and impacts to existing and future sensitive receptors. Therefore, following the implementation of mitigation measures, the residual effects remain unchanged in the cumulative effects scenario and are negligible to minor adverse (not significant).

Traffic and Transport

- 9.207 During the construction phase, there could be an increased number of construction related vehicles using the local highways network. This would be somewhat inevitable should the construction phases overlap. Therefore, it is assumed that each scheme would implement a CTMP, CEMP and various other commonplace traffic routing and management measures in accordance with Considerate Constructor principles. Therefore, following the implementation of mitigation measures, the residual effects remain unchanged in the cumulative effects scenario and are minor adverse (not significant).
- 9.208 During the operational phase, there is unlikely to be significant cumulative effects on the local highways network. The transport consultant has reviewed the likely trips associated with the proposed development, which primarily relate to delivery and servicing. These trips are likely already on the network given the nature of these trips. Each scheme will be assumed to implement a Travel Plan and Delivery and Servicing Management Plan. Therefore, following the implementation of mitigation measures, the residual effects in the cumulative effects scenario and are negligible to minor adverse (not significant).

Wind

- 9.209 The wind assessment has considered the cumulative schemes inherently within the assessment previously presented. Therefore, no additional cumulative effects have been identified over and above those set out previously.

Daylight, Sunlight and Overshadowing

- 9.210 The Daylight, Sunlight and Overshadowing assessment has considered the cumulative schemes inherently within the assessment previously presented. Therefore, no additional cumulative effects have been identified over and above those set out previously.
- 9.211 Overall, following mitigation, the assessments have demonstrated there are very few significant health related effects associated with the Proposed Development. During the construction phase, vibration activities could be moderate adverse, but this would be subject to the piling solution eventually employed on site and the controls secured during the construction process via the CEMP.
- 9.212 The wind assessment has identified a potentially pre-mitigation significant effect for future residents using the private amenity space at Level 17. This is due to a safety exceedance. However, a suite of measures have been recommended.



33-41 Cheetham Hill Road, Environmental Statement

Chapter 10: Townscape and Visual Impact Assessment ('TVIA')

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May 2024

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10. TOWNSCAPE AND VISUAL IMPACT ASSESSMENT ('TVIA')

Introduction

- 10.1 This Chapter of the ES has been prepared by Chris Burnett Associates and assesses the likely significant effects of the Proposed Development with respect to Townscape and Visual amenity. This Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant adverse effects; cumulative effects and the likely residual effects. Technical appendices also support this assessment and consist of the following:
- 10.2 This chapter is supported by the following technical appendices:
- **Appendix 10.1:** Maps;
 - **Appendix 10.2:** Viewpoint and townscape photographs including AVR images;
 - **Appendix 10.3:** Visualisation methodology; and
 - **Appendix 10.4:** AVR Methodology.

Competence

- 10.3 The author and reviewer of this ES Chapter (BSC BLD CMLI) is a principal partner of Chris Burnett Associates, a registered practice of landscape architects, who specialises in tall building Townscape and Visual Impact Assessments, as part of Environmental Statements, for many tall building developments throughout the UK since 2002. This includes over 30 tall buildings in Manchester and Salford alone, most of which have received planning consent. This includes Beetham Hilton, Deansgate Square, New Wakefield Street, Great Northern, Mayfield and others.

Legislation and Policy Context

Legislation

- 10.4 The following legislation is relevant to the Proposed Development.
- 10.5 The European Landscape Conventionⁱ (ELC)(2000) provides a foundation for closer cooperation on landscape issues across Europe and was ratified in the UK on the 21 November 2006 and became binding on 1 March 2007. The convention identifies the need to recognise landscape in law, to develop and promote landscape policies dedicated to the protection, management and creation of landscapes, and to establish procedures for the participation of the general public and other stakeholders in the evolution and implementation of landscape policies. It also encourages the integration of landscape into all relevant areas of policy, including cultural, economic and social policies.
- 10.6 The ELC defines landscape under Article 1 as '*an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors*'. It recognises that landscape has important cultural, ecological, environmental, and social dimensions and is a key element of achieving sustainable development. Article 3 states that the aims of the Convention are to promote

landscape protection, management, and planning and to organise European co-operation on landscape issues.

National Planning Policy

10.7 The following national planning policy is relevant to the Proposed Development:

10.8 **National Planning Policy Framework ('NPPF'), 2023ⁱⁱ**. The NPPF sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.

10.9 Key aspects of the NPPF, revised in 2023, which apply to the Townscape and Visual Impact Assessment are the paragraphs 131 and 135 below:

- **Para.131** *'The creation of high quality, beautiful and sustainable buildings and places is fundamental to what the planning and development process should achieve. Good design is a key aspect of sustainable development, creates better places in which to live and work and helps make development acceptable to communities. Being clear about design expectations, and how these will be tested, is essential for achieving this. So too is effective engagement between applicants, communities, local planning authorities and other interests throughout the process'.*
- **Para. 135** *'Planning policies and decisions should ensure that developments:*
 - a) will function well and add to the overall quality of the area, not just for the short term but over the lifetime of the development;*
 - b) are visually attractive as a result of good architecture, layout and appropriate and effective landscaping;*
 - c) are sympathetic to local character and history, including the surrounding built environment and landscape setting, while not preventing or discouraging appropriate innovation or change (such as increased densities);*
 - d) establish or maintain a strong sense of place, using the arrangement of streets, spaces, building types and materials to create attractive, welcoming and distinctive places to live, work and visit;*
 - e) optimise the potential of the site to accommodate and sustain an appropriate amount and mix of development (including green and other public space) and support local facilities and transport networks; and*
 - f) create places that are safe, inclusive and accessible and which promote health and well-being, with a high standard of amenity for existing and future users; and where crime and disorder, and the fear of crime, do not undermine the quality of life or community cohesion and resilience'.*

Local Planning Policy

10.10 The following local planning policies are relevant to the Proposed Development:

10.11 **Manchester's Local Development Framework, Core Strategy, July 2012ⁱⁱⁱ**. It is the key document in Manchester's Local Development Framework and covers a period of 15 years from 2012 to 2027. It describes Manchester today and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision.

- **Policy EN 1 - Design Principles and Strategic Character Areas.** *'All development in Manchester will be expected to follow the seven principles of urban design, as identified in national planning guidance and listed above and have regard to the strategic character area in which the development is located. Opportunities for good design to enhance the overall image of the City should be fully realised, particularly on major radial and orbital road and rail routes. Design and Access Statements submitted with proposals for new development must clearly detail how the proposed development addresses the design principles, reinforces and enhances the local character of that part of the City and supports the achievement of the Core Strategy Strategic Objectives.'*
- **Policy CC6 High Density Development.** *'City Centre High Density Development City Centre development will generally be high density. It is a location where land should be used to maximise its efficiency. The appropriate scale, massing and height of development in the City Centre will significantly exceed what is appropriate elsewhere in the City. Development will need to have regard to the Council's approach to tall buildings (policy EN2), but any proposals which do not reflect the importance of maximising the development opportunities in the City Centre will only be supported where this accords with wider Core Strategy objectives'*
- **Policy CC9 Design and Heritage.** *'Design of new buildings will need to be of the highest standard in terms of appearance and function. The standards and guidance explained in other LDF policies should be the basis for the approach to design, with particular attention to be given to the City Centre context and character. Development in Manchester City Centre should preserve or enhance the heritage assets that have been identified, including listed buildings, conservation areas and scheduled ancient monuments. The Council will support high density and mixed use development in the City Centre, but developers must recognise the specific design challenges that must be overcome to ensure complementarity of function and form. New development must support the range of uses the Council expects in the City Centre and contribute to a coherent and integrated physical environment'*

10.12 The surrounding area has been broken down into distinct townscape character zones which include several in the northern part of Manchester City Centre. The extent and nature of the impact of the Proposed Development on these zones is described in more detail later in this chapter. The Core Strategy also refers to tall buildings:

Policy EN2 – Tall Buildings:

‘Tall buildings are defined as buildings which are substantially taller than their neighbourhoods and/or which significantly change the skyline.

- Proposals for tall buildings will be supported where it can be demonstrated that they are of excellent design quality.*
- Are appropriately located.*
- Contribute positively to sustainability.*
- Contribute positively to place making, for example as a landmark, by terminating a view, or by signposting a facility of significance, and will bring significant regeneration benefits.*
- A fundamental design objective will be to ensure that tall buildings complement the City's key existing building assets and make a positive contribution to the evolution of a unique, attractive and distinctive Manchester, including to its skyline and approach views.*
- Suitable locations will include sites within and immediately adjacent to the City Centre with particular encouragement given to non-conservation areas and sites which can easily be served by public transport nodes.*
- Elsewhere within Manchester tall building development will only be supported where, in addition to the requirements listed above, it can be shown to play a positive role in a coordinated place-making approach to a wider area. Suitable locations are likely to relate to existing district centres. The height of tall buildings in such locations should relate more to the local, rather than the City Centre, urban context.*
- By their very size tall buildings can have a significant impact on the local environment and its micro-climate. It is therefore expected that this impact be modelled and that submissions for tall buildings also include appropriate measures to create an attractive, pedestrian friendly local environment.*
- It will be necessary for the applicant/developer to demonstrate that proposals for tall buildings are viable and deliverable’.*

10.13 Significantly, the Core Strategy offers further guidance in relation to the Proposed Development of tall buildings as follows:

- ‘Tall Buildings can provide a sense of place and distinctiveness, however as high development can have a substantial impact on an area careful consideration should be given to each proposal.*
- The NPPF requires local authorities to have regard to best practice in design, such as "By Design - Urban Design in the Planning System: Towards better practice" and "By Design – Better places to live". Policies are not to be overly prescriptive but, amongst other things, should concentrate on guiding height in relation to neighbouring buildings and the local area in general. Innovation should not be stifled but local distinctiveness should be reinforced. PPS4 directs planning*

authorities to set flexible policies for their centres which can respond to changing economic circumstances and encourage where appropriate high density development accessible by public transport, walking and cycling.

- *In the context of ensuring sustainable development, the City Centre is clearly a location that requires the prudent use of scarce land resources. It is generally well served by public transport and one where a high density of development is consistent with its distinctive character. The City Centre is, in general, considered an appropriate area for tall buildings. The growth of the City Centre is still evolving, particularly in relation to the development of fringe sites, and proposals need to be considered having regard to the character of the places in which they are proposed. Therefore, whilst some parts of the City Centre are more or less likely to be suitable for tall buildings, the Council does not consider a site specific policy that identifies detailed locations for a tall building to be appropriate. The Council is aware that over the 15 year plan period there is a need to be flexible and to be able to respond to changing economic conditions. The above criteria based policy is therefore set out, which will together with other design policies, form the policy context against which all proposals for tall buildings will be considered.*
- *Elsewhere across the City, District Centres may be appropriate locations for "tall" buildings. Being generally accessible to the local population and well served by public transport, they are natural foci for developments that attract a larger number of people. The definition of tall as being in relation to neighbouring buildings should be noted, however, as the scale of development acceptable within a District Centre is unlikely ever to match that within the City Centre.*
- *Tall buildings by their very nature can dominate the street scene and be highly visible over long distances. They can also have an impact on the local micro-climatic conditions, for example, by creating wind tunnels. It is for these reasons that it is considered particularly important that they are designed to the highest quality, both in terms of appearance and their impact on the functioning of surrounding space'.*

Policy EN3 – Heritage

- *'Throughout the City, the Council will encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods, including those of the City Centre.*
- *New developments must be designed so as to support the Council in preserving or, where possible, enhancing the historic environment, the character, setting and accessibility of areas and buildings of acknowledged importance, including scheduled ancient monuments, listed buildings, registered parks and gardens, conservation areas and archaeological remains.*
- *Proposals which enable the re-use of heritage assets will be encouraged where they are considered consistent with the significance of the heritage asset'.*

Guidance

10.14 The following guidance is relevant to the Proposed Development:

- Guidance on tall buildings published by Historic England: Advice Note 4^{iv} March 2022;
- History in the View prepared for English Heritage by LUC in 2011;
- Manchester Residential Quality Guidance^v

10.15 The guidance contained in Historic England's advice note on Tall buildings is particularly relevant:

- Tall buildings need to set exemplary standards in design because of their scale, mass, wide impact and likely longevity. Good design will take the opportunities available for improving the character and quality of an area and respond to local character and history (NPPF paragraphs 58 and 64). It is important that the required high standard of architectural quality is maintained throughout the process of procurement, detailed design, and construction, through the use of conditions and reserved matters.
- Given their likely impact on a wide area, it is important that social and environmental effects are also assessed. Consideration needs to be given to a tall building's contribution to public space and facilities. This applies both internally and externally, including the provision of a mix of uses (especially on the ground floor of towers), as part of a well-designed public realm. Consideration of the impact on the local environment is also important, including microclimate, overshadowing, night-time appearance, light pollution, vehicle movements, the environment and amenity of those in the vicinity of the building, and the impact on the pedestrian experience. Well-designed tall buildings provide an inclusive environment, both internally and externally, taking opportunities to offer improved permeability, accessibility and, where appropriate, the opening up or effective closure of views to improve the legibility of the wider townscape.

Assessment Methodology and Significance Criteria

10.16 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to TVIA.

Consultation

10.17 MCC were consulted on the proposed location of all representative viewpoints and, agreement was reached on their selection in October 2023.

10.18 **Table 10.1** presents a summary of the comments raised in the Council's EIA Scoping Opinion and other discussions with relevant consultees with respect to TVIA.

Table 10.1 Table 10.1 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Formal Scoping Opinion	The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES.	TVIA has been scoped into the ES, see this chapter (Chapter 10: TVIA and associated appendices).
Historic England	I confirm that we do not have any comments regarding the Scoping Report.	

Study Area and Scope

- 10.19 This assessment has been undertaken alongside the Heritage Statement provided at **Appendix 8.1**, and assesses the impact of the Proposed Development on heritage assets and the surrounding built environment.
- 10.20 This Chapter assesses the impact of the Proposed Development over a wider area and assesses it against townscape character and visual amenity.

Study Area

- 10.21 The study area for this assessment comprises an area of approximately 1km in radius focussed on the Site. This area is judged to be appropriate given the height of the Proposed Development, the prevailing topography of surrounding area, and the location of the Site. Outside of this zone, townscape and visual effects are unlikely to be significant due to distance, the effects of urban grain and street pattern and, also, the proximity of several intervening tall buildings.

Baseline Surveys

Desk Based Research

- 10.22 Research included establishing a Zone of Theoretical Visibility (ZTV) and examining appropriate guidance and policies on tall buildings issued by MCC and relevant authorities such as Historic England.

Field Surveys

- 10.23 Field surveys were undertaken to explore the current baseline of Manchester City Centre. The surveys were based on zones using the template set out in Manchester Residential Quality Guidance. During the field surveys, the ZTV was confirmed and a series of Representative Viewpoints (RVP) established for assessment, all subsequently subject to Accurate Visual Representation (AVR).

Assessment Methodology

- 10.24 The TVIA was undertaken in accordance with the methodology and approach set out in the *'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) Third Edition' (2013) – produced by the Landscape Institute (LI) and IEMA^{vi}*.
- 10.25 The GLVIA requires that a clear distinction is drawn between landscape (which includes the urban townscape) and visual effects:
- Townscape effects relate to the degree of change to characteristics or physical components of an urban area, which together form the character of that townscape, e.g. topography, buildings, and vegetation.
 - Visual effects relate to the degree of change to an individual receptors or a receptor group's view of that townscape, e.g. local residents, users of public footpaths or motorists passing through the area.

- The relationship between the effects of the Proposed Development on Townscape and Visual Issues are interdependent but not exclusively so. The effects will therefore be examined in terms of:
 - Effects on Townscape character. For the purposes of this study the area immediately around the Proposed Development is examined on a character area basis based on the zonal template used by Manchester City Council. Character areas are shown on City Centre Character Areas and Viewpoint Locations, which is located at **Appendix 10.1**.
 - Effects on visual receptors. This is examined through the RVP Approach in which the effects of the Proposed Development are assessed in short, medium and long distance views from a variety of key locations.

Townscape Character Effects

10.26 The assessment of the Proposed Development on Townscape Character has been based on Manchester City Centre Zones, revised in Manchester Residential Quality Guidance as Neighbourhood Zones, and supplemented by those which lie outside the City Centre. It includes an assessment of the elements which comprise it such as built form and styles, urban grain and street pattern, soft elements such as green spaces and trees and a sense of place and effect that the Proposed Development is judged to have on them. The following zones are potentially affected to varying degrees.

Manchester City Centre Neighbourhood and Townscape Character Zones

- Retail core
- Greengate
- Medieval Core
- Noma
- Northern Quarter
- New Cross
- Lower Irk Valley
- Green Quarter
- Former Boddington Brewery
- Irwell Riverside
- Cheetham

10.27 Their extent is defined on the map of City Centre Character Areas and Viewpoint Locations (**Appendix 10.1**) and they are described in more detail in the corresponding baseline condition section.

- 10.28 Townscape effects can be characterised as the changes in the urban grain, character and condition of the townscape as a result of the impact of a development. Specifically, the assessment will examine:
- Direct effects on specific townscape elements;
 - Effects that are more subtle in nature, which affect the character of the townscape
 - Effects on a designated asset such as a World Heritage Site, Listed Building or Conservation Area or tourist landmark; and
 - Visual Effects.
- 10.29 The ZTV, in the context of the surrounding topography and the height of the Proposed Development, has been established initially through 3D modelling using current Lidar DSM data combined with 10K base mapping to produce a Zone of Theoretical Visibility (ZTV) map, Viewshed Analysis and Viewshed Locations in **Appendix 10.1**, and then confirmed as part of the field work exercise. Taking into account the scale and height of the Proposed Development, it covers an area principally to the north of the city centre and provides a quick guide as to the Proposed Development's visibility in the immediate vicinity. The Proposed Development consists of a 17 to 23 storey building with an AOD height of 121.25m.
- 10.30 As with other Townscape and Visual Impact Assessments, and in accordance with guidance issued in GLVIA, the accepted practice of selecting and assessing of a range of "Representative Viewpoints", all publicly accessible, has been adopted. This is the most appropriate and practical method of assessing and understanding the visual impact of the Proposed Development. The viewpoint locations are marked in **Appendix 10.1** on the ZTV map and also City Centre Character Areas and Viewpoint Locations map and are illustrated by way of photographs taken from these viewpoints, represented in **Appendix 10.2**.
- 10.31 Representative Viewpoints are, by their very nature, representative and not necessarily site specific, unless a townscape or visual effect from an important regional landmark i.e. Albert Square, is predicted. In each a case a view was sought where the Proposed Development was visible, informed by the results of the ZTV. Viewpoints were selected to cover a number of different locations and varying distances, to reflect the experience of different types of visual receptor and viewing distance. Accordingly, viewpoints ranged from immediate proximity to the Proposed Development site and included residential streets, pedestrianized precincts, public squares footpaths and main approach and ring roads.
- 10.32 During the main field assessment process, which was undertaken in January 2023, baseline viewpoint photographs were initially taken using a Canon EOS DSLR camera, for consultation purposes, but then subsequently retaken by Ambiente using a Canon 5DMkII FFS with a Canon 24 TS-E Mk II 24mm lens. Full justification for the use of this camera and lens, together with recommendations on presentation and viewing distance are contained in **Appendix 10.3**

Visualization Methodology and **Appendix 10.4** AVR Methodology all in accordance with the Landscape Institute Technical Guidance Note 06/19 September 2019^{vii}.

- 10.33 The effect of the Proposed Development is then assessed from each of the viewpoints using the information on the height of the building provided by the architects Hawkins\Brown and the accurate interpretation of this information by Ambiente in the form of a series of Accurate Visual Representation (AVR) Type 4 fully rendered or white block mass images of the Proposed Development superimposed onto photographs taken from each viewpoint.

Heritage Viewpoints

- 10.34 The effects dealt with in this chapter are primarily concerned with the effects on townscape character and visual receptors. The effects on heritage assets, including listed buildings and Conservation Areas is dealt with in more detail in the stand alone Heritage Assessment (**Appendix 8.1**) and will examine views 2,3,5,6,7 and 12 from a heritage perspective. Reference will be made however, to heritage assets that appear in any of the Representative Views as they often play an important part in determining townscape character, but no judgement will be made as to the effect of the Proposed Development on them in this chapter to avoid unnecessary duplication.

Defining Significance of Effect

- 10.35 The significance of townscape and visual effects can broadly be determined by the interaction of the sensitivity of the receptor and the magnitude of effect with professional judgement playing an important part in identifying the overall significance values for each receptor.

Townscape: Sensitivity of Receptor

- 10.36 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, as set out below.
- 10.37 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). A description of how susceptibility would be evaluated for each receptor type is included below:

Table 10.2 Susceptibility of Townscape Receptor

Susceptibility	Criteria
High	Little ability to accommodate the proposed development without undue harm.
Medium	Some ability to accommodate the proposed development without undue harm.
Low	Substantial ability to accommodate the proposed development without undue harm.

- 10.38 Townscape Value is “*the relative value that is attached to different landscapes by society*”. It is assessed on the following scale along with assessment of various undesignated townscape attributes:

Table 10.3 Townscape Value

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

- 10.39 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 value as described above.

Townscape: Magnitude of Effect

- 10.40 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 set out below.

Table 10.4 Magnitude of Townscape Effect

Category	Criteria
Major Adverse townscape effect	The Proposed Development will result in a total change in the key characteristics of townscape character; will introduce elements totally uncharacteristic to the attributes of the receiving townscape; and/or will result in a substantial or total loss, alteration or addition of key elements/features/characteristics.
Moderate adverse townscape effect	The Proposed Development will result in a partial change in the key characteristics of townscape character; will introduce elements partially uncharacteristic to the attributes of the receiving townscape; and/or will result in partial loss, alteration or addition of key elements/features/characteristics.

Minor adverse townscape effect	The Proposed Development will result in a small change in the key characteristics of townscape character; will introduce elements that are not uncharacteristic to the attributes of the receiving townscape; and/or will result in a minor loss, alteration or addition of elements/features/characteristics.
Negligible townscape effect	The Proposed Development will result in a just discernible improvement to the townscape character/elements/features/characteristics
Minor townscape benefit	The Proposed Development will achieve a degree of fit with the townscape character/elements/features/characteristics and go some way towards improving the condition or character of the townscape.
Moderate townscape benefit	The Proposed Development will achieve a good fit with the townscape character/elements/features/characteristics, or would noticeably improve the condition or character of the townscape.
Major townscape benefit	The Proposed Development will totally accord with the townscape character/elements/features/characteristics, or would restore, recreate or permanently benefit the condition or character of the townscape.
No change	The Proposed Development will not cause any change to the townscape character/ elements/ features/ characteristics.

10.41 The size and/or scale of change in the townscape takes into consideration the following factors:

- The extent/proportion of townscape elements lost or added;
- The contribution of that element to townscape character and the degree to which aesthetic/perceptual aspects are altered; and
- Whether the effect is likely to change the key characteristics of the townscape, which are critical to its distinctive character.

10.42 The geographical extent of effects relates to:

- The area over which townscape effects are likely to be experienced, i.e. this could be at the site level, the immediate setting of the site, or townscape character type or area;
- The area over which visual effects are likely to be visible; and
- Duration.

Visual Receptors: Sensitivity of Receptor

10.43 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.

10.44 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.

10.45 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.

10.46 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, determined from the criteria below.

Table 10.5 Visual Receptor Susceptibility

Susceptibility	Criteria
High	Users of public space, including users of public rights of way, whose attention is likely to be focused on the townscape and on particular views; Visitors to heritage assets or other attractions where views of the surroundings are an important part of the experience; Communities where views contribute to the townscape setting enjoyed by residents; and Travellers on scenic routes.
Medium	Travellers on road, rail or other transport routes, where the view is moderately important to the quality of the journey; and Users of public space, where the view is part of the wider experience of the place.
Low	People at their place of work, where the setting is not important to the quality of working life; Travellers on road, rail or other transport routes, where the view is fleeting and incidental to the journey; and People engaged in outdoor sport or recreation, or users of a public space, which does not involve appreciation of views

Table 10.6 Visual Receptor Value

Value	Criteria
High	Views from townscapes/viewpoints of national importance, or highly popular visitor attractions where

	the view forms an important part of the experience, or with important cultural associations. An example may be where the viewpoint features a nationally important designated asset as the main focus of the view.
Medium	Views from townscapes/viewpoints of regional/district importance or moderately popular visitor attractions where the view forms part of the experience, or with local cultural associations. The viewpoint may be a good location to view a designated asset of regional/local importance, or where a nationally important designated asset is not the main focus of the view.
Low	Views from townscapes/viewpoints with limited designations, not particularly popular as a viewpoint and with minimal or no cultural associations. The viewpoint may include designated assets of regional/local importance which do not form the main focus of the view

Visual: Magnitude of Effect

- 10.47 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 set out below.

Table 10.7 Magnitude of visual effect

Category	Criteria
Major Adverse or beneficial visual effect	The Proposed Development will cause a dominant or complete change or contrast to the view, resulting from the loss or addition of substantial features in the view and will substantially alter the appreciation of the view.
Moderate adverse or beneficial visual effect	The Proposed Development will cause a clearly noticeable change or contrast to the view, which would have some effect on the composition, resulting from the loss or addition of features in the view and will noticeably alter the appreciation of the view.
Minor adverse or beneficial visual effect	The Proposed Development will cause a perceptible change or contrast to the view, but which would not materially affect the composition or the appreciation of the view
Negligible adverse or beneficial visual effect	The Proposed Development will cause a barely perceptible change or contrast to the view, which would not affect the composition or the appreciation of the view
No change	The Proposed Development will cause no change to the view.

10.48 The size or scale of change in the view relates to the degree of contrast or integration likely to result from the Proposed Development and is influenced by the relative time over which a view is experienced and whether it is a full, partial, or glimpsed view.

Duration of Effect

10.49 Both Townscape and Visual effects may be experienced over a range of timescales. For this assessment, the following timescales are considered appropriate:

- Short-term: 1 year or below;
- Medium-term: Between 1 and 10 years in duration; and
- Long-term: Greater than 10 years in duration.

Significance of Effect

10.50 The objective of the assessment process is to identify and evaluate the likely significant effects arising from the Proposed Development for both Townscape and Visual Receptors. Significance indicates the importance or gravity of the effect. **Table 10.8** is offered in support of professional judgement in determining the Significance of effect and is used as a guide to the narrative explanation of the nature and significance of both townscape and visual effects brought about by the Proposed Development.

Table 10.8 Significance of Effect

Sensitivity of Receptor	Magnitude of Effect				
	Major Effect	Moderate effect	Minor effect	Negligible effect	No change
High	Major Significance	Moderate Significance	Moderate Significance	Minor Significance	No change
Medium	Moderate significance	Moderate significance	Minor significance	Negligible	No change
Low	Moderate significance	Minor significance	Negligible	Negligible	No change

10.51 The effects on both townscape and visual receptors is examined in each case. All viewpoints have been subjected to the insertion of an AVR into a baseline photograph so that the extent of both townscape and visual effects can be judged more accurately. In each case, the effect of the Proposed Development is compared with the baseline condition or view and an assessment made in terms of receptor susceptibility, value of townscape setting or view, receptor sensitivity and magnitude of effect.

10.52 A judgement is then made as to whether the effect is of major to negligible significance of effect using the Significance of Effect Matrix in **Table 10.8** and then a judgement made as to whether the effect is **significant** or **not significant** in EA regulation terms.

- 10.53 For the purposes of this Townscape and Visual Impact Assessment, effects of **Moderate Significance** and above are considered to be **Significant**. Those values of **Minor** and below are therefore deemed to be **Not Significant**. A professional judgement is then made as to whether the effect is of an adverse or beneficial nature. The effects below are primarily concerned with the effects on townscape character and visual receptors.
- 10.54 This process has been applied to provide a robust assessment in similar townscape settings and is considered to be the most suitable approach in this context.
- 10.55 The visual impact of the Proposed Development will demonstrably change as it is constructed. As the construction phase is likely to be a relatively short period in the context of the lifecycle of the Proposed Development, the impact of the building upon completion, or operational phase, is the principal focus of this study although the construction effects are also examined below. Similarly, the impact pathway is direct. The building is either visible or it is not.

Limitations and Assumptions

- 10.56 The principal limitation as far as the field survey work was concerned has been that photography was undertaken in the winter months when the extent of foliage on trees is at its minimum. This, therefore, reflects a best case scenario in terms of visibility but only a limited number of views are affected as the population of street trees in Manchester is low.

Baseline Conditions

Townscape Baseline

- 10.57 A summary is set out below which describes the main attributes and characteristics of each of the Townscape Zones and RVPs that may be potentially affected by the Proposed Development at the time of this assessment. Following baseline fieldwork and photography in January 2023, the ZTV and RVPs were established in August, and subsequently agreed by MCC in October, and the assessment was carried out in November following receipt of the modelled AVR views. In August 2023. Each character area is referenced on Map 2 City Neighbourhood Areas and Viewpoint Locations (**Appendix 10.1**). Only those areas which have the potential to be significantly affected by the Proposed Development are included with the baseline conditions that prevail at the current time in terms of their townscape character and views. Relevant schemes under construction, which are predicted to be complete when the Proposed Development is due to have been completed are also included. The effects on the baseline together with the Proposed Development and any committed development coming forwards is dealt with in the Cumulative Effects section.

Green Quarter

- 10.58 The Site is located in this character area. This area is characterised by a mixture of low rise industrial, commercial and residential premises with occasional pockets of dense retail activity. Trade retail clothing outlets also contribute to the character of the area particularly along Cheetham Hill Road itself. The urban grain is geometric with a regular grid pattern of streets arranged in perpendicular fashion to each other and to Cheetham Hill Road. Most of the buildings that exist in this character area are largely low rise or two storey at most but the recent high rise Green Quarter development

close to the city centre, and immediately adjacent to the Proposed Development, provides a contrast to this pattern.

Cheetham

- 10.59 Cheetham is a large character area to the north of Manchester City Centre. This area is characterised by commercial and industrial premises that occupy most of the western fringes of this character area with no parks, conservation areas or landmark buildings of any significance. The layout of the street pattern is based on a grid system which feeds off the principal axis of Cheetham Hill Road.

Retail Core

- 10.60 The main retail streets of Market Street, King Street, St. Ann's Square, and part of Deansgate constitute this area of the city centre which is one of the busiest in Manchester. Two main roads, Cross Street and Deansgate, giving contained axial views on a north to south orientation, cross the area. To the east of Cross Street, the bulk of the Arndale shopping complex dominates, enclosing the pedestrianised Market Street, which leads to Piccadilly Gardens. A mix of historic and modern buildings characterise the area between Cross Street and Deansgate. These buildings, including the Cotton Exchange, generally have large footprints and enclose the intimate St Ann's Square at the core of the zone. The River Irwell forms the western boundary and includes the three bridges which link Manchester with Salford. The river corridor itself is confined by buildings on both banks.

Medieval Core

- 10.61 This townscape area is an important regional and local gateway and transport hub containing Victoria Station, a number of Metrolink stops and the Inner relief route on its northern boundary. The major overhaul of Metrolink tracks, station building and platforms at Victoria is now complete. It is also a major retail and leisure area with the development of the Corn Exchange, Urbis, now the National Football Museum, MEN Arena and the Printworks. Its significance as a cultural and public area is notable with the presence of Manchester Cathedral which has been the ecclesiastical and scholastic centre of Manchester since the earliest of times.
- 10.62 To the south and east of the Cathedral Yard lie the Victorian commercial buildings of the impressive Corn and Produce Exchange. These all cluster around the medieval street pattern and are bounded on the outside by the curving line of the Cateaton Street, Hanging Ditch, Todd Street, Victoria Station and Hunts Bank approach.
- 10.63 To the north and west, the Cathedral overlooks the broad width of the busy Victoria Street and the deeply incised channel of the River Irwell, both of which run beyond into Salford.

Former Boddington Brewery

- 10.64 This was the site of Boddingtons brewery, now demolished after the brewery closed in 2005 and is now an 800-space car park and the site of a major housing regeneration initiative. It is adjacent to the busy inner ring road and a short distance from the MEN arena.

Greengate

- 10.65 Greengate townscape area is of mix of somewhat incoherent, townscape components. It consists of several newly constructed high rise residential apartment blocks, Abito and Anaconda Cut and the emerging The Residence amongst others, in close juxtaposition to single storey light industrial sheds and warehouses. There are a number of listed buildings in this zone which include the Collier Street Baths and The Eagle Public House. The urban grain is mixed also, often broken by vacant lots which are currently used as car parks mixed in with narrow streets. The railway that carries the main line through Salford Central station is supported by a brick viaduct and this restricts much of the view from the south in this zone. The busy Trinity Way defines the northern boundary. The whole zone is the subject of Salford's Greengate Regeneration Strategy which is yielding multiple tall buildings which are now emerging in the centre of this zone.

Irwell Riverside

- 10.66 This is a large character area of generally tight urban grain, associated with large areas of housing and attendant schools. The area is far from homogenous however, and pockets of industrial activity with some open land, and commercial premises such as car dealerships along Trinity Way are also features of this character area. The river Irwell runs in a deeply incised boundary and defines the northern boundary.

Assessment of Effects

Environmental Design and Management

- 10.67 Mitigation in terms of visual and townscape effects for the operational phase are focussed on embedded mitigation measures which are an integral part of the design of the Proposed Development, as progressed by architects Hawkins\Brown and fully described in the Design and Access Statement which accompanies the planning application.

Sources of Effects: Demolition and Construction Phase

- 10.68 The construction of this building on a site on the centre of Manchester will clearly involve procedures and processes that are unsightly and intrusive consistent with operations on most large-scale construction sites. However, this process is comparatively short lived in nature when considered in the context of the lifespan of the Proposed Development concerned and will also be screened to some extent by existing buildings which surround it. The demolition and construction programme will commence in a number of phases but the key physical activities will include:

- Site clearance and demolition;
- Construction plant such as cranes etc;
- Mobile construction plant;
- Delivery and stockpiling of materials;
- Protective fencing and hoardings;

- Unfinished appearance of the Proposed Development and its core for the majority of the construction period; and
- Traffic movements associated with the above.

Assessment of Construction Phase Effects

Effects of demolition, clearance and construction on Townscape Character

- 10.69 The townscape character area most affected by the demolition and construction operations are the Townscape Character Zones in and around the Proposed Development Site namely: Green Quarter, Former Boddington Brewery, Medieval Core and Cheetham. The significance of effect is therefore predicted to be moderate adverse for the duration of the construction period due to site clearance works, stockpiling of demolition and construction materials, the use of construction equipment such as cranes and temporary fencing. The effects, however, should be relatively localised and temporary and will not affect other Townscape Character zones in any measurable way.

Effects of demolition, clearance and construction views

- 10.70 The effects of demolition and clearance on the RVPs will also be limited to some extent. Nonetheless, there is little doubt that the construction phase of any building of any scale, until it is fully clad, will involve processes that are visually unsightly and are likely, in visual effect terms, to be largely adverse in nature. This period, however, is only likely to be transitional and will be of short duration in relation to the lifespan of the Proposed Development itself. In view of the scale of the Proposed Development, the magnitude of effect, and significance of effect is therefore judged to be moderate adverse also during the construction period in the following Zones: Piccadilly, Northern Quarter and Retail Core where views can be obtained.

Operational Phases

- 10.71 The source of the effect during the operational phase is concerned with the physical impact that the Proposed Development will have on views, visual and townscape receptors.
- 10.72 The townscape and visual effects of the Proposed Development are considered to be long term in terms of their duration.

Assessment of Operational Phases Effects

Effects of completed Development on Townscape Character and Views

Viewpoint 1 Cheetham Hill Road

- 10.73 Situated at a busy road junction and adjacent to a local retail park, townscape value and susceptibility are both judged to be low for the Site as townscape character is mixed. Townscape sensitivity is therefore judged to be low as a result. Visual receptors are largely in the transient user group category and with visual receptor value low also in the absence of any designated viewpoint or landmark feature. Visual receptor sensitivity is low as a result. In terms of magnitude of townscape effect, the Proposed Development echoes the forms of the distant tall building clusters south of the city centre and acts as a new gateway at the bottom of Cheetham Hill Road, balancing, to some degree the Green Quarter development opposite. As the Proposed Development is a distant feature

in this view the effect is judged to be minor beneficial. In terms of magnitude of visual effect, the Proposed Development improves the composition of the view but in a minor way due to the intervening distance. A value of minor beneficial is therefore also recorded. This translates into a negligible, beneficial significance of effect which is **not significant** in EA regulation terms.

Viewpoint 2 Cheetham Hill Road

- 10.74 Situated closer to the City centre townscape sensitivity is raised by the presence of historic buildings such as the Prestwich Union building and St Chad's church which strengthen townscape character but do not dominate. Townscape sensitivity remains low as a result. Visual receptor sensitivity also remains low as most are in the transient user group category with most receptors travelling to or from the City Centre and is therefore a good representation of most viewpoints along Cheetham Hill Road. The Proposed Development is much more prominent in this view and forms a dramatic vertical element in a townscape where such forms are more distant. As a result, the magnitude of townscape effect is judged to be moderate beneficial. In visual terms, the Proposed Development provides a dominant focal element but one which has sufficient degree of visual interest manifest in the repetitive façade grid and recessed vertical axis dominant windows to improve and enhance visual interest. The masonry patterns used in its construction will match the brick buildings that line much of Cheetham Hill Road and which contribute so effectively to its character. Magnitude of visual effect is therefore also judged to be moderate beneficial. This translates to significance of effect values of minor beneficial which is not significant in EA regulation terms.

Viewpoint 3 Cheetham Hill Road

- 10.75 St Chad's church is in close proximity to this viewpoint and a landmark feature of both townscape and view. Townscape character remains incoherent here with vacant sites, commercial units and advertising hoardings mixed in with residential properties. Townscape sensitivity is judged to be low in this context but raised to medium by the proximity of St Chad's. Visual sensitivity remains low as most receptors are in the transient receptor category. The Proposed Development is even more prominent in this view but balances the vertical forms of St Chad's church and the Green Quarter development effectively and in not an overwhelming way. The fit is therefore complementary rather than inharmonious. Magnitude of townscape effect is therefore judged to be moderate beneficial. The visual composition is also improved as the Proposed Development improves visual interest through its textured repetitive façade and forms a successful component part of the triangle formed by St Chad's church and the Green Quarter. Visual magnitude of effect is also judged to be moderate beneficial. This translates to significance of effect values of **moderate beneficial** significance for **townscape receptors**, which is significant in EA regulation terms, and **minor beneficial** significance for **visual receptors** which is not significant in EA regulation terms.

Viewpoint 4 Cheetham Hill Road

- 10.76 This viewpoint is closest viewpoint to the site and illustrates the heterogeneous character of the townscape character at this point showing the contributions made by the recent Hallmark Tower development in the foreground, the vacant Proposed Development site itself, commercial and

residential properties. Townscape sensitivity is judged to be low therefore. Visual sensitivity also remains low as most receptors are in the transient receptor category. In terms of magnitude of townscape effect the Proposed Development makes a demonstrable but complementary contribution to the townscape character. It balances the Hallmark tower, fills the void of the current vacant site and strengthens Cheetham Hill Road at ground level with set back ground floor frontages and a colonnade. Masonry construction echoes the buildings on either side. The effect is judged to be major beneficial. For visual receptors the existing view is not of sufficient quality to be compromised by the Proposed Development. A new gateway to the city centre is created and visual interest is improved as a result. The effect for visual receptors is judged to be major beneficial also. This translates to significance of effect values of **moderate beneficial** significance for both receptor categories which is significant in EA regulation terms.

Viewpoint 5 Cheetham Hill Road

- 10.77 A close up, directional viewpoint located on a busy intersection of Cheetham Hill Road with the inner ring road. Tall buildings are represented in this view by the foreground development of Park Inn with Hallmark Tower above and townscape character is mixed as a result. Townscape susceptibility is judged to be low here as the area has a substantial ability to accommodate the Proposed Development without undue harm. Townscape value at this point is low also as the viewpoint lies outside a Conservation Area or other designated area so, overall, Townscape sensitivity is judged to be low. In terms of visual receptors most fall into the low category where the view is largely incidental to the majority of receptors who are travelling on this busy arterial ring road route around Manchester. Visual receptor value is judged to be low also so visual receptor sensitivity is low also. In terms of townscape character the Proposed Development makes a substantial contribution by balancing its neighbours on the opposite side of the road and is a good complementary fit with recent development. The magnitude of townscape effect is judged to be major beneficial as a result. The view is also improved by the two interlocking blocks of the building which, by stepping back on the apex of the curve of the road, assists, subtly, with the dynamic composition and the direction of travel northwards along Cheetham Hill Road. The step in height acknowledges the height of the neighbouring tall buildings on the opposite side of the road and the colour of the masonry construction of the smaller block helps to relate the Proposed Development to its neighbours on the opposite side of the road. The visual magnitude of effect is also judged to be major beneficial. This translates to significance of effect values of **moderate beneficial** significance for both receptor categories which is significant in EA regulation terms.

Viewpoint 6 Cheetham Hill Road

- 10.78 This is a wider, more panoramic viewpoint which explores the relationship of the Proposed Development in the wider context of the more open area at the junction with the Ring Road but directed up Cheetham Hill Road. Both townscape and visual receptor sensitivity remain low here for the reasons outlined above. Magnitude of effect also remain the same for both categories as the attributes of the Proposed Development are evident and the fit complementary in this panoramic

townscape setting. As a consequence, significance of effect values of **moderate beneficial** significance for both receptor categories which is significant in EA regulation terms.

Viewpoint 7 Ring Road

- 10.79 This viewpoint explores the relationship the Proposed Development has with the Ring Road. Townscape character is heavily influenced by the proximity of the Park Inn and associated development at this busy traffic route. Townscape and Visual receptor sensitivity remain low. In terms of magnitude of effect for both townscape and visual receptors the Proposed Development consolidates the existing tall building cluster in a positive way and provides further vertical visual interest. The contrast in materiality with the smooth cladding of Park Inn increases diversity and accentuates the heterogenous mix of styles and forms at this busy junction which adds to townscape character. The scale of the Proposed Development is not so apparent from this viewpoint so a value of minor beneficial is registered for this viewpoint which translates to values of negligible beneficial for both categories. This is not significant in EA regulation terms.

Viewpoint 8 Ring Road

- 10.80 Also located on the Ring Road the intervening effect of the Green Quarter development ensure that no views of the Proposed Development are recorded from this viewpoint. A value of no impact is, therefore, registered from this viewpoint.

Viewpoint 9 New Bridge Street

- 10.81 A view which clearly demonstrates the nature of recent regeneration at the bottom of Cheetham Hill Road which includes the prospect of further development on the former Boddingtons brewery site which occupies a prominent location in the foreground as a vacant site. Townscape susceptibility is low at this point as a result and as the site lies outside any Conservation Area or other designation townscape value is low as a result. Accordingly, townscape sensitivity is judged to be low for this viewpoint. Similarly, visual receptor sensitivity is low as most receptors on this busy ring road are drawn from the transient receptor category. Townscape character is not coherent in this view dominated, as it is, by the large vacant site in the foreground. But the recent development of tall buildings are, nevertheless, prominent features of the view on the skyline and the Proposed development fits well with both townscape character and the view at this point. In particular, the stepped, wrapped block, façade reflects the irregular nature of the Green Quarter development and ties it in in a consistent way. The colour of the masonry construction also helps to the break the profile up and tie it in successfully to its neighbours from this perspective. The magnitude of effect in both townscape and visual terms is therefore judged to be moderate beneficial. This translates into significance of effect values of minor beneficial for both categories which is not significant in EA regulation terms.

Viewpoint 10 Bury New Road

- 10.82 Townscape susceptibility, in the context of the amount of recent development in the baseline view is judged to be low and, taking account that this character area, former Boddington brewery, is currently a vacant site used for parking. Townscape value is low also. Townscape sensitivity at present is

judged to be low. In terms of visual receptor sensitivity most receptors belong to a transient user group either vehicle borne or on foot. Susceptibility is therefore low. When combined with low visual receptor value influenced as this viewpoint is by its proximity to two major circulation routes and a traffic node, visual receptor sensitivity is judged to be low also. Once again townscape character is derived almost wholly from recent development which populates the horizon forming a varied profile, both in terms of height and materiality. The Proposed Development fits into this established pattern in a consistent way. The stepped façade profile helps considerably in this respect and improves both visual interest and consistency in terms of fit with the townscape character. As a consequence, the magnitude of effect for both categories of receptor is judged to be moderate beneficial which translates into significance of effect values of minor beneficial which are not significant in EA regulation terms.

Viewpoint 11 Trinity Way

- 10.83 This viewpoint provides a good view of the horizon along Cheetham Hill Road which includes HMP Strangeways prison tower. Townscape susceptibility is judged to be low in the context of recent development, much of it in the Green quarter area. In the absence of any designations, townscape value is also low. Townscape sensitivity is therefore low. Visual receptor sensitivity is also judged to be low as this is a busy road crossing where most receptors are vehicle borne and in transit. Once again recent developments dominate the horizon with the buildings of Green Quarter notable amongst them but this viewpoints affords glimpses of two landmark buildings: Strangeways and St Chads church tower. The Proposed Development does not compromise the view of either of them but fits consistently with the broken and diverse nature of the horizon. As a consequence, the magnitude of effect for both townscape and visual receptors is judged to be minor beneficial in this instance. This translates into negligible beneficial significance of effect for both receptor categories which are not significant in EA regulation terms.

Viewpoint 12 Deansgate

- 10.84 A viewpoint with high townscape sensitivity given the proximity of Manchester Cathedral and the Cathedral conservation area, this viewpoint explores the effects that the Proposed Development will have on central Manchester. Townscape sensitivity and visual receptor sensitivity are both high as a result, the latter especially in view of the pedestrianized and landscaped gardens that have recently been developed in close proximity to the Cathedral. The Proposed Development rises as a distant feature on the horizon and does not conflict with the Cathedral tower. It forms a component part of the skyline which already contains a high proportion of new build manifest in the City Living office blocks in the foreground. The magnitude of both townscape and visual effects is judged to be negligible beneficial which translates to significance of effect values of minor beneficial which is not significant in EA regulation terms.

Viewpoint 13 Carnarvon Street

- 10.85 Located in a quiet street occupied by a large number of commercial premises and in close proximity to HMP Strangeways, this viewpoint provides an axial view of the Proposed Development.

Townscape susceptibility is low in the context of the Green Quarter development which sits comfortably on the horizon. Townscape value is low in the absence of any townscape designations so townscape sensitivity is low also. In terms of visual receptor sensitivity most receptors are at their place of work and with low townscape value infers that visual receptor sensitivity is low also. The interlocking block and stepped nature of the crown reads strongly here and its masonry construction and repetitive façade pattern reflects the styles of the buildings on this street to some extent. The Proposed Development is also clearly identifiable as part of the tall building cluster on the horizon and, as a result, does not conflict with the low rise nature of the buildings in the foreground. Magnitude of townscape effect is judged to be moderate beneficial. In terms of visual magnitude of effect the proposals will cause a clearly noticeable change or contrast to the view, which has some effect on the composition, resulting from the addition of features in the view. In this case the view is not a special view but one typical of many streets in the Cheetham Hill area. By adding to the visual interest and building on the Hallmark Tower development the view is improved noticeably. Magnitude of visual effect is recorded as moderate beneficial also. This translates to significance of effect values of minor beneficial for both receptor categories which is not significant in EA regulation terms.

Viewpoint 14 Hunts Bank Approach

- 10.86 There are no views of the Proposed Development from this viewpoint due to intervening buildings. A value of no impact is, therefore, registered from this viewpoint.

Mitigation measures

Mitigation of effects during the construction phase

- 10.87 Mitigation of the potential effects of the construction phase will involve the erection of high quality hoardings that will be used to limit unsightly visual impacts during the construction phase at street level. These will secure and protect the Site and prevent views of an unsightly construction site.

Mitigation of effects during operational phase

- 10.88 No further mitigation measures are required further to those that are embedded to the design of the Proposed Development.

Residual Effects

- 10.89 The visual impact assessment has been carried out based on the assumption that all the necessary mitigation measures have been accounted for in the design process. The images for selected viewpoints illustrated in **Appendix 10.2** represent the accurate definition of the location and mass of the component parts of the Proposed Development.
- 10.90 The predicted significance of effect values are therefore the same for each representative viewpoint and Townscape Character Area as the residual effect values, and are illustrated in **Table 10.13** below.

Effect Interactions and Cumulative Effects

- 10.91 The cumulative effect of the Proposed Development is now examined in relation to inter-project cumulative effects.

Inter-project cumulative effects

- 10.92 In terms of inter- project cumulative effects, or effects arising from similar developments that are either consented or are coming forward in the planning process in proximity to the Proposed Development, there are developments that, cumulatively, could have the potential to affect the significance values for townscape and views.
- 10.93 The list of identified schemes are provided in **Appendix 5.1** of this ES. The list of schemes in **Appendix 5.1** have been reviewed and the following schemes have been assessed. **Table 10.12** summarises these schemes. Details of the Cumulative schemes appear as different coloured wirelines in the AVRs in **Appendix 10.2** and are listed below with planning references.

Table 10.12 Cumulative Schemes

Reference	Cumulative scheme	No. storeys
134092/FO/2022	New Victoria Phase 2	10
113914/FO/2016	Fernie street	16
118831/FO/2018	Boddingtons brewery	17,12,23,26
132416/FO/2021	Boddingtons brewery	27,20,17,11,10
116366/FO/2017	Danzic street	22,17,40,12,9

- 10.94 The developments listed above will not have a universal effect on all of the selected viewpoints and the townscape character of the affected city centre zones of Manchester. The baseline schemes have already been assessed under the Operational Effects section earlier in this chapter. An assessment of cumulative schemes is necessary to understand the manner in which the Proposed Development fits in with neighbouring developments in the future. **Table 10.12** has been compiled to facilitate this process by first summarising the effect of the Proposed Development on its own, using the values resulting from the Operational Effects section, and then reassessed the effect in respect of the relevant committed cumulative scheme on a viewpoint by viewpoint basis. Where a cumulative scheme is predicted to have an effect on views or townscape character then the significance of effect values are reassessed and adjusted accordingly to take the scheme or schemes into account in each case.
- 10.95 The relevant cumulative schemes have been modelled and are represented as different coloured wirelines in the Cumulative Views in **Appendix 10.2** Viewpoint and townscape photographs including AVR images.
- 10.96 Of course, as the cumulative schemes come forward then, in certain cases, visual receptor sensitivity is likely to increase as many of the developments contain apartments. However, by the same token, the magnitude of effect is likely to decline as the Proposed Development will now be seen in the

context of a greater number of similar developments of equivalent scale. As a result, the net effect, where the effect is deemed to be significant, is generally a lowering of the significance of effect value in cumulative terms. This is exacerbated to a value of not significant if the cumulative building obscures the view of the Proposed Development completely.

Table 10.13 TVIA Residual and Committed cumulative schemes impact assessment summary table

Location	Development only (residual impact)	EIA significance	Relevant cumulative scheme	Cumulative effect
1 Cheetham Hill Rd Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Minor beneficial Minor beneficial Neg beneficial	Not Significant	Fernie street Boddingtons brewery	Negligible / beneficial
2 Cheetham Hill Rd Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Mod beneficial Mod beneficial Min beneficial	Not Significant	Fernie street	Minor beneficial
3 Cheetham Hill Rd Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect (T) (VR)	Low Low Mod beneficial Mod beneficial Mod beneficial Min beneficial	Significant Not significant	Fernie street Boddingtons brewery	Minor beneficial
4 Cheetham Hill Rd Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Major beneficial Major beneficial Mod beneficial	Significant	Fernie street	Minor beneficial
5 Cheetham Hill Rd Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Major beneficial Major beneficial Mod beneficial	Significant		None

6 Cheetham Hill Rd				
Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Major beneficial Major beneficial Mod beneficial	Significant		None
7 Ring Road				
Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Minor beneficial Minor beneficial Negligible beneficial	Not significant		None
8 Ring Road				
Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	No impact	Not significant	Fernie Street	No impact
9 New Bridge Street				
Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Moderate beneficial Moderate beneficial Minor beneficial	Not significant	Fernie Street	Minor beneficial
10 Bury New Road				
Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Moderate beneficial Moderate beneficial Minor beneficial	Not significant	Boddingtons Brewery	No impact
11 Trinity Way				
Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Minor Minor Negligible beneficial	Not significant	Boddingtons Brewery Dantzic Street	Negligible beneficial

12 Deansgate				
Sensitivity (VR)	High			
Sensitivity (T)	High			
Magnitude (VR)	Negligible beneficial	Not significant	Boddingtons Brewery	Negligible beneficial
Magnitude (T)	Negligible beneficial			
Significance of effect	Minor beneficial			
13 Carnvaron Street				
Sensitivity (VR)	Low			
Sensitivity (T)	Low			
Magnitude (VR)	Mod beneficial	Not significant	Fernie street	Minor beneficial
Magnitude (T)	Mod beneficial			
Significance of effect	Minor Beneficial			
14 Hunts Bank Approach				
Sensitivity (VR)				
Sensitivity (T)	No impact	Not significant		None
Magnitude (VR)				
Magnitude (T)				
Significance of effect				

*Note where townscape (T) and visual receptor (VR) significance of effect values are the same, one shared value is provided. Where they are different, a value is provided for both categories. Abbreviations: Maj = Major ; Mod = Moderate; Min = Minor ; Neg = Negligible

Conclusion and Summary

- 10.97 This TVIA assessment examines the impact that the Proposed Development will have on the townscape character of Manchester City Centre focussing on those areas immediately surrounding the Proposed Development in particular. It does so in a systematic, rational, and objective way using established methodologies and practices contained in GLVIA. The impact of the Proposed Development on its own is explored and then in conjunction with consented and committed development in a Cumulative Assessment.
- 10.98 A computer modelling process was employed to provide an accurate series of Type 4 verified (AVR) Level 3 (fully rendered) and Level 2 (white block mass) images which illustrate and inform the nature of the impact the Proposed Development on a series of selected RVPs, and on the surrounding townscape character, on a 360-degree basis. The scale and location of the Proposed Development results in a widespread Zone of Visual Influence but with limited visibility to the south and the city centre in particular due to the effects of tight urban grain and topography.

- 10.99 Although it is not possible to provide one single summary value for the impact the Proposed Development will have on Manchester City Centre it is possible to summarise the effects in general terms.
- 10.100 In this regard **Table 10.10** records that in the overwhelming majority of viewpoints the Proposed Development has been judged to have **minor, negligible** or **no effect** on townscape and visual receptors. These values are not significant in EA regulation terms.
- 10.101 In the remaining cases the effects are judged to have a **moderate effect** which is **significant**. The operational effects are all judged to be **beneficial** in nature. The reason for this lies primarily with the design of the building itself from street level upwards. The Proposed Development has been designed with two interlocking blocks with defined crowns which result in a stepped and broken profile. A colonnade connects the building to the street at ground level. Visual interest is accentuated by a repetitive façade which uses brick masonry and recessed anodized windows to create textural effects. The net effect is that the Proposed Development not only fits with the tall building cluster at this location but improves the view and the dynamic experience of those travelling along Cheetham Hill Road.
- 10.102 In terms of cumulative effects, the cumulative schemes that have been assessed indicate that the operational effects all decline in significance when cumulative schemes are taken into account.

ⁱ Ref 6.1 The European Landscape Convention (ELC 2000

ⁱⁱ 2 Ref 6.2 National Planning Policy Framework 2023 Dept Levelling Up, Housing and Communities

ⁱⁱⁱ Manchester City Council Core Strategy 2012-2027

^{iv} Historic England note on Tall Buildings 2022

^v Manchester Residential Quality Guidance MCC 2017

^{vi} Guidelines for Landscape and Visual Impact Assessment 3rd Edition 2013 landscape Institute and Institute of Environmental Management and Assessment.

^{vii} Landscape Institute Technical Guidance Note 06/19 September 2019, Landscape Institute



33-41 Cheetham Hill Road, Environmental Statement

Chapter 11: Socio-Economics

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11. SOCIO-ECONOMIC

Introduction

- 11.1 This chapter assesses the significance of the socioeconomic effects of the Proposed Development on the identified study area. For the purposes of this assessment, the study areas are the Cheetham ward (inner study area), Manchester City (wider study area) and the North West of England.
- 11.2 The chapter describes the methods used to assess the effects, the baseline conditions currently existing at the Site and surroundings, the potential direct and indirect impacts of the Proposed Development arising from the proposed new housing and commercial space, the mitigation measures required to prevent, reduce, or offset the impacts and the residual effects.

Competence

- 11.3 The principal author of this chapter is a Director of Brookdale Consulting and has the following qualifications: BSc Hons, MBA, MIC (Member of the Institute of Consulting). They are an economist with 30 years' consultancy experience. They have undertaken numerous EIAs for a wide range of clients. They were formerly a Director of DTZ (now Cushman Wakefield) heading up DTZ's economics team based in Manchester. They have extensive experience of the economics of real estate covering residential, office and commercial. They have undertaken socio-economic impact assessments of a wide range of developments across the UK including city centre, out of town, science parks and developments in the greenbelt.

Legislation and Policy Context

Legislation Context

- 11.4 There is no Legislation directly governing socio-economics.

National Planning Policy

- 11.5 The provision of new homes and the need to significantly boost the housing supply are recognised by the Government as policy objectives of fundamental importance. Housing is an integral part of the UK's economic and social infrastructure, supporting labour mobility and providing a direct benefit to growth and jobs as new homes are built. The Government has introduced a number of policies and strategies in an attempt to bolster house building.
- 11.6 The National Planning Policy Framework (NPPF)ⁱ provides guidance on how planning decisions should be taken to support sustainable development across the country. Local authorities are to ensure that local planning policies promote appropriate city centre development with a mix of uses such as housing, greenspace, retail and commercial development. This includes assessing housing need (size, type and tenure) and ensuring housing requirements are part of local development plans.
- 11.7 In particular, the NPPF establishes principles to help with balancing competing interests, such as housing, economic development, environmental protection and community well-being.

- 11.8 Planning Policy Guidance (PPG)ⁱⁱ covers wider Government guidance on the planning system including how to interpret national policy such that consistency is applied across the UK. PPG recognises the requirement for delivering appropriate housing to meet population growth.

Regional and Local Planning Policy

- 11.9 The following regional and local planning policies are relevant to the Proposed Development:
- 11.10 The Greater Manchester Strategy 2021-2031 (GMS)ⁱⁱⁱ lays out a long-term vision and priorities for GM covering economy, environment, transport, housing, health, and people.
- 11.11 It is anticipated that the Proposed Development will contribute towards fulfilment of the strategy through provision of new housing in the city centre including affordable housing. This will, in turn, support the economic growth of Manchester through growth of the local labour market, sustainable commuting in and around the city centre and night time economy growth.
- 11.12 The Places for Everyone Joint Development Plan (PfE)^{iv} represents nine of Greater Manchester's 10 local authorities (Stockport excluded) to influence local development towards brownfield land and to protect Green belt across GM. This encourages a higher density of development on previously developed sites in keeping with the city centre as a growth pole alongside centres in other local authorities. Higher density development in Manchester itself supports the local economy including the night time economy, contributing to a vibrant sustainable city centre.
- 11.13 The Manchester Core Strategy^v sets out the main planning framework for Manchester city to support its economic growth through a significant increase in high-quality housing provision at sustainable locations throughout the City. The emphasis on high-quality housing includes creating sustainable lifetime neighbourhoods with high-quality environments, good local facilities, and with easy access to employment opportunities. The proposed development fits closely with a number of its policies including
- Policy CC 3 Housing: *'The City Centre will see the most intensive development of housing in the City. It is expected that a minimum of 16,500 new units between 2012 and 2027. Key locations for residential development as Castlefield, Piccadilly, the Southern Gateway and the Northern Quarter'.*
 - Policy CC 6 City Centre High Density Development: states *'City Centre development will generally be high-density. It is a location where land should be used to maximise its efficiency'*
 - Policy CC 7 Mixed Use Development: states that *'active ground floor uses (shops, food and drink and leisure) will be appropriate in locations which have an established public function'.*
 - Policy H 1 Overall Housing Provision: prioritising residential development on previously developed land.
 - Policy H2 Strategic Housing Location: highlights that the east and north of the city centre are strategic locations for housing development with specific mention of Cheetham Hill, where the proposed development is located. The core strategy suggests 1,070 homes per year to 2027.

- Policy H3 North Manchester: highlights the type of housing to be prioritised with high density being appropriate in this location close to the city centre and its good public transport links. North Manchester is to accommodate c 20% of the 60,000 new homes estimated to be required to be built by 2027. There is also a link to environmental improvements encapsulated in Policies EN4-EN7.
- Policy H8 Affordable Housing: highlights affordable housing requirements with a target of 20%. The proportion of affordable housing may vary by development as part of viability assessments. There is an objective of increasing the types of product available to include shared equity, joint ownership and rent.

Assessment Methodology and Significance Criteria

- 11.14 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to Socio-Economics.

Consultation

- 11.15 As the socioeconomic assessment draws upon existing sources of information, largely government statistics, no consultation was deemed necessary.
- 11.16 Error! Reference source not found. **Table 11.1 presents** a summary of the comments raised in the Council's EIA Scoping Opinion.

Table 11.1 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Formal Scoping Opinion	You have not provided any comments as to whether socio economic impacts should be scoped into or out of the EIA. Socio economic impacts should be scoped into the EIA.	Socio-Economics has been scoped into this ES. See this chapter, (Chapter 11: Socio-economics).

Assessment Methodology

Study Area

- 11.17 For the purposes of this assessment, the study areas are the Cheetham ward (inner study area), Manchester City (wider study area) and the North West of England.
- 11.18 The first stage of the assessment is to establish the baseline conditions through interrogation of published data or other sources for Manchester. This includes a review of local and national policies and strategies related to economic development and regeneration, which is used to identify priorities at the local and national level. It also establishes the existing demographic, economic and social conditions through reference to a number of published data sources such as Census data, the Office of National Statistics (ONS), NOMIS and information published by the National Health Service (NHS and Department for Education). The assessment is structured under the following headings:

- Population;
- Employment;
- Unemployment;
- Occupations;
- Housing;
- Social and Community Infrastructure; and
- Current Site Impacts.

11.19 The second stage is to assess the socioeconomic effects during both the construction and operational phases of development. The socioeconomic assessment utilises a range of different data sources including the Census 2021, ONS mid-year population estimates, the Business Register and Employment Survey, the Annual Business Survey, Annual Survey of Hours and Earning, the HCA Additionality Guide 4th Edition and guidance from the Department for Levelling Up, Housing and Communities on construction labour ratios and employment densities. The assessment is structured under the following headings:

Construction

- Construction Sector Employment

Completed Development

- Additional Working Households;
- Household Expenditure;
- Council Tax Revenue and Public Sector Jobs;
- The New Homes Bonus; and
- New Commercial Premises.

Construction Sector Employment

11.20 During the construction phase the key issues relate to the generation of construction-related employment at a local and regional level. This considers both the direct employment effect and the indirect/induced effects associated with the supply chain and the impact of construction worker spend on local goods and services.

11.21 The construction spend on the Proposed Development will support construction jobs over the lifetime of the build. This will have multiplier effects through indirect (supply chain) and induced (employee spend supporting further jobs) impacts. These are quantified and their significance evaluated.

11.22 Construction employment is calculated based on figures from the 2021 Annual Business Survey, which indicated that £1m of turnover in the construction sector supports 5.7 direct construction jobs for a year. The indirect construction job years area calculated using the ONS Employment multiplier

for Construction sector, which is 2.7. Gross Value Added (GVA) is the Government's preferred measure of economic activity. ONS data on GVA per job has been used for the North West for the construction sector.

Additional Working Households

- 11.23 The impact of the proposed residential development on demographics in the area is considered, in particular, by population and household size and structure. This includes an estimate of the population yield associated with the development based on the residential unit mix and average household size. The potential age profile and characteristics of the new residents and their likely occupational profile are considered to identify potential effects on the local labour market.
- 11.24 The additional number of residents is calculated using an average household size of 2.2 based on estimated occupancy levels by type of apartment provided in the Accommodation Schedule supplied by Euan Kellie Property Solutions. The number of working age people within the households is estimated based on the Cheetham ward average from ONS 2022 (68%).
- 11.25 The effect on demand for local social and community infrastructure is assessed with a particular focus on health and educational facilities by reference to current supply of services drawn from NHS data.
- 11.26 The impact on and relationship with housing supply and demand in the area is assessed. This assessment draws upon local housing market data gathered by MCC.

Household Expenditure

- 11.27 The effect on local employment through the direct, indirect, and induced impacts arising as a result of the development of new commercial employment floorspace is estimated. This includes the effects of the potential increase in spending by residents in the area and the indirect impact that this has on employment opportunities. The expenditure of residents will support jobs in the geographical area in which they spend money (the impact area) which in turn will support indirect and induced jobs. As well as supporting jobs, which can help to reduce unemployment, increased spending can support regeneration aims to ensure vibrant local town centres.
- 11.28 Household expenditure is calculated using a 5-year average for household weekly expenditure (£578.64) from the ONS Household Finances Survey, Living Costs and Food Survey. It is assumed 60% of household expenditure is retained in Manchester given its importance as a retail, culture, and administrative centre.
- 11.29 The number of jobs supported by local spending is calculated using the average of £141,015 of expenditure required to support one job derived from the Annual Business Survey 2021 and Business Register and Employment Survey. A local economic multiplier of 1.1 is used to calculate indirect jobs supported in the supply chain across Manchester based on the Additionality Guide.
- 11.30 As noted above, GVA is the Government's preferred measure of economic activity. ONS data on GVA per job has been used for the North West for the retail sector.

Council Tax Revenue and Public Sector Jobs

- 11.31 Additional Council Tax Revenue will be generated by the new homes in the proposed development and this is calculated on an annual basis. Public sector employment in the Borough is calculated based on the ratio of public jobs (education, health, social work, administration and defence) to residents in Manchester derived from the Business Register and Employment Survey 2021.

The New Homes Bonus

- 11.32 The additional New Homes Bonus is calculated using the Ministry of Housing, Communities and Local Government New Homes Bonus Calculator.

New Commercial Premises

- 11.33 The Proposed Development will create new commercial space which will potentially create employment on the site. The potential employment is calculated using Government data on employment densities by sector. The direct and indirect jobs facilitated by the new commercial space are then converted to GVA as in previous impact sections.

Characterisation of Effect

- 11.34 The overall impact methodology is primarily based on a quantitative assessment of the economic effects in terms of jobs and GVA, in line with HM Treasury Green Book guidance.
- 11.35 The level of significance is assessed as shown in **Table 11.1**.

Table 11.1 Impact Methodology

Magnitude of Effect		
Spatial Extent of the Effect	Duration of Effect	Scale of Effect
• Inner Study Area (Cheetham ward) • Wider Study Area (Manchester City) • North West of England (or beyond)	• Long-term/ permanent (more than 10 years) • Medium-term (existing for 5 to 10 years) • Short-term (existing for 1 to 5 years) • Temporary effect (existing for less than 1 year)	• As there are no specific standards or guidelines, the impacts have been assessed relative to baseline conditions, or a 'No Development' scenario
Sensitivity of Receptor		

The sensitivity of the receptor is typically assessed in terms of the recoverability of the receptor and importance of the receptor. However, this method of assessment does not perform well in terms of socioeconomic impacts (particularly beneficial impacts), where the receptor is assumed to be the economy, population, businesses and workforce in the study area. For example, in the case of job creation (or job losses) the sensitivity has been judged in terms of the level of unemployment in the area. Specific receptors identified in the assessment include construction, retail and public sector employment and the sensitivity is judged on the ability of the sector to absorb the predicted increase in employment.

Sensitivity of Receptor

- 11.36 The Sensitivity of the Receptor is measuring the capacity of the variable in question (e.g. population, employment/unemployment) to absorb any change. This is classified as a subjective judgement based on the best available evidence within the following model:

Table 11.2 Receptor Sensitivity

Value Sensitivity	
Very High Sensitivity	Evidence base suggests the variable is already over capacity before any new change is introduced.
High Sensitivity	Evidence base suggests the variable is close to or is at capacity.
Medium Sensitivity	Evidence base suggests the variable has capacity to accommodate some change.
Low Sensitivity	Evidence base suggests the variable has no capacity issues and can easily accommodate change.

Magnitude of Effect

- 11.37 The Magnitude of Effect is a composite measure which judges the combined effects of the modelled impacts of the development, including the location, duration and scale of the effect. The composite measure follows this model:

Table 11.3 Magnitude of Effect

Impact Magnitude	
Very High	A long-term and/or large-scale effect in the Inner Study Area.
High	Any combination of effects between the Very High and Medium definition.
Medium	A medium-term and/or moderate scale effect in the Wider Study Area.

Low	Any combination of effects between the Medium and Negligible definition.
Negligible	A temporary and/or small-scale effect and the North West of England level.

Significance of Effect

11.38 There are no recognised significance criteria for socioeconomic effects and, as such, professional judgement will be used based upon the identified needs of the local population, planning policy objectives and the magnitude of potential impacts in line with the significance criteria set out in **Chapter 2**. Mitigation measures will be identified as required along with any residual effects.

11.39 The significance takes into consideration the following variables:

- The sensitivity of the receptor – i.e. their value and susceptibility to change;
- The magnitude of effect experienced by the receptor – i.e. the degree of alteration from the baseline;
- The scale at which any effect will be felt – i.e. site level, at the immediate setting of the site, at the scale of the study area;
- The duration of any effect (short-term, long-term etc);
- The socioeconomic quality of the development itself; and
- The changes that will occur over time with the development in place.

11.40 The magnitude of change is considered alongside the sensitivity of the receptor and the significance of the impact is thus identified.

11.41 **Table 11.4** provides a matrix for determining the significance of an effect based on the sensitivity of the receptor and the magnitude of impact.

Table 11.4 Significance of Effect Matrix

Magnitude of Effect (based on spatial, duration and scale of effect)	Sensitivity of Receptor			
	Very High	High	Medium	Low
Very High	Major	Major	Major	Moderate
High	Major	Major	Moderate	Minor
Medium	Major	Moderate	Moderate	Minor
Low	Moderate	Minor	Minor	Negligible
Negligible	Minor	Negligible	Negligible	Negligible

- 11.42 The major, moderate and minor ratings can be beneficial or adverse. Any identified effects rated as Major are regarded as Significant to the EIA and are shaded grey in **Table 11.4**.

Limitations and Assumptions

- 11.43 The assessment is based on the latest available and most comprehensive socioeconomic data sources provided by central and local government. A number of these carry production lags, for example the latest population projections are based on 2017 mid-year estimates.

Baseline Conditions

- 11.44 This section describes the baseline conditions at the site and the study area.

Current Site

- 11.45 The Site is vacant with hoardings set up and has no existing activity on it.

Population

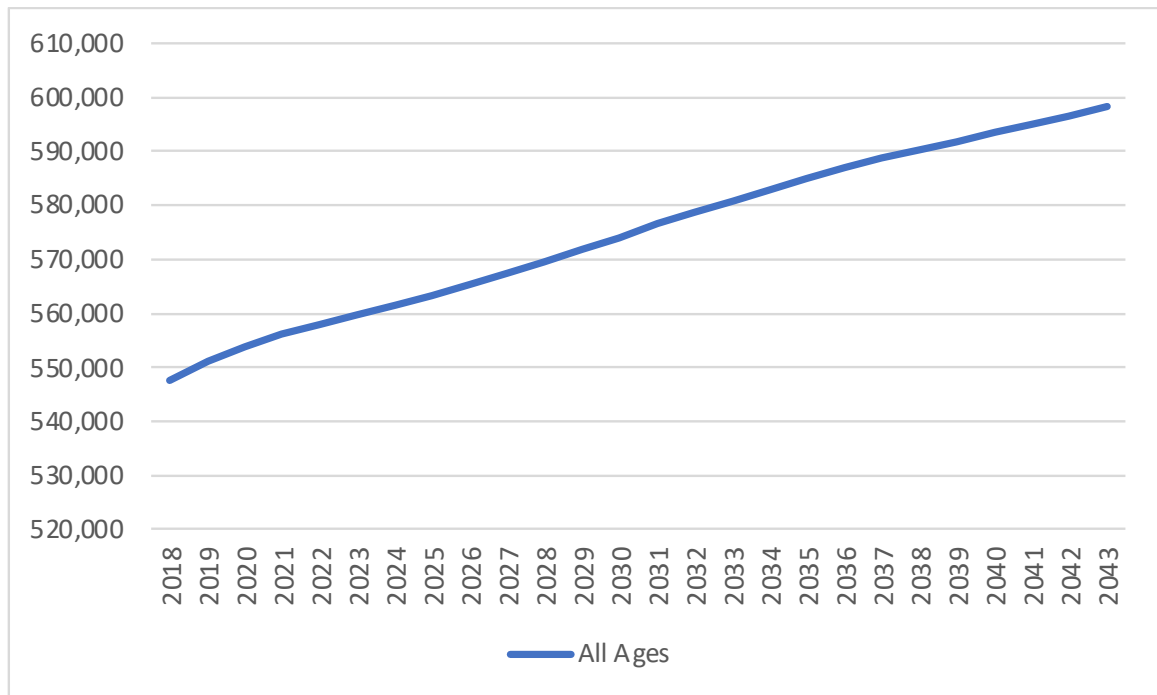
- 11.46 According to ONS mid-year population estimates for 2022, Manchester has a total population of 569,000. Within this, the Cheetham ward accounts for 3.7% of the population at 21,474.
- 11.47 A breakdown of the population by broad age category is given in **Table 11.5**. Cheetham has a higher proportion of younger people than Manchester and the North West but its working population is a slightly lower proportion. It has a lower proportion of older people than either Manchester or the North West.

Table 11.5 Population of Cheetham ward compared to Manchester and North West 2022

Age Range	Cheetham Ward	Manchester	North West
0 to 15 years	5,632	114,600	1,406,200
16 to 64 years	14,562	400,900	4,695,500
65 and over	1,279	53,500	1,414,400
Total Number	21,474	569,000	7,516,100
0 to 15 years	26.2%	20.1%	18.7%
16 to 64 years	67.8%	70.4%	62.5%
65 and over	5.9%	9.4%	18.8%
Total %	100%	100%	100%

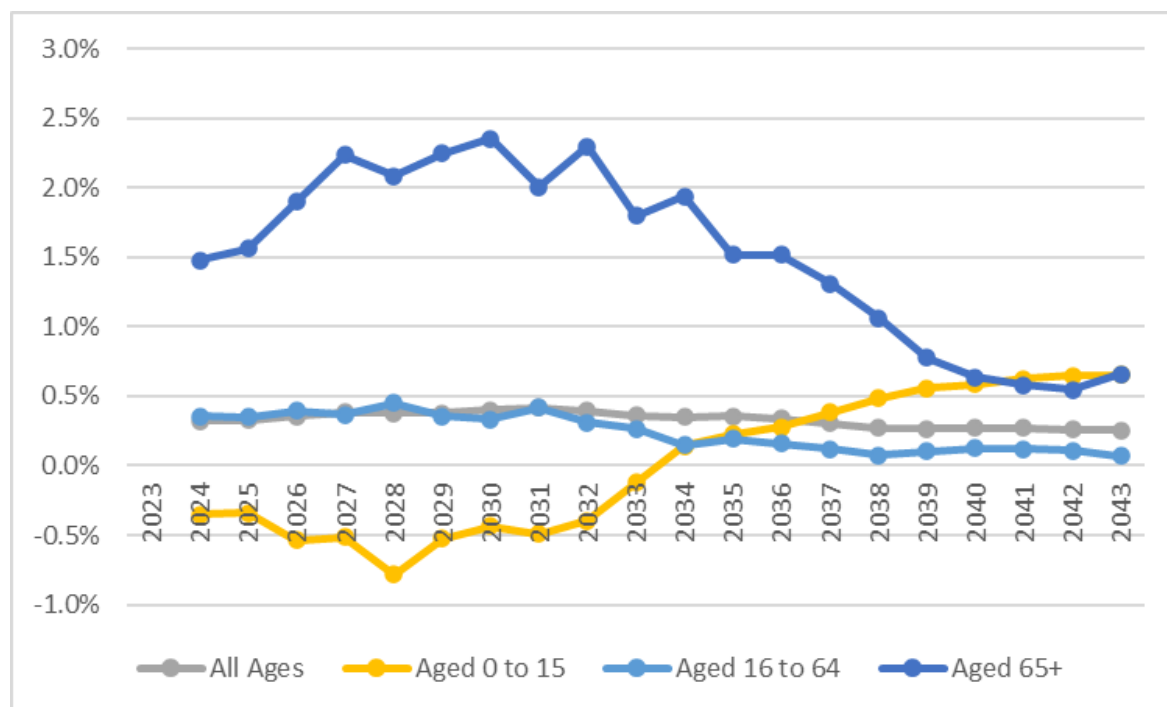
- 11.48 Population projections, often referred to as sub-national population projections (SNPP), are produced every two or three years at local authority level, with the most recent release based on 2018 data. **Figure 11.1** shows the population projections for Manchester for the period 2018 to 2043. The overall population is expected to grow from 547,627 to 598,149, which represents an 9.2% increase although the population has already reached ahead of these projections for 2023 to 569,000 – a 6.9% increase from 2023 to 2043.

Figure 11.1 Population projections for Manchester local authority area 2018 – 2043 (number)



11.49 The projections by age range are shown in **Figure 11.2**. The working age population is by far the largest and is expected to increase up to 2033 when it flattens off. The increase is driven by anticipated increases in student numbers. Those in retirement age are also expected to increase while the youngest age group is expected to reduce as a proportion of the population.

Figure 11.2 Population projections for Manchester local authority area by age group 2023-2043 (%change)



11.50 Due to the methodology employed to calculate migration, the ONS mid-year estimates attribute a lower growth rate than would be expected. The Greater Manchester (GM) Forecasting Model was developed to strengthen and supplement the ONS mid-year estimates, by drawing upon local intelligence including expected residential development. Whilst the GM baseline forecast only goes to 2037, for Manchester, it forecasts a higher level of population growth at 16%, more than double the ONS projection to 2043^{vi}. This highlights the need to plan for growth of a vibrant and dynamic city such as Manchester with a strong research and business base and a need for housing growth.

Employment and Wages

11.51 There are 9,000 economically active residents in Cheetham. ONS data show that economic activity in the Cheetham ward is 56.8%, just below Manchester at 59%, which is around the level for the North West at 59%^{vii}. There are just over 2,100 students of which just under 30% are economically active. The ward has a lower proportion of students than Manchester at 13% of residents over 16 years of age compared to 18% for Manchester but above 8% for the North West.

11.52 Full time employment rates are 62%, well below the 68.2% rate across Manchester. Only 35% of Cheetham residents have Level 4 qualifications (degree) or above, just below the level in the rest of Manchester at 37.6% (but above the 31.2% for the North West).

11.53 Wages data are only available for the whole of Manchester. By place of residence, at £634.80 per week (gross weekly earnings full time) they lag behind the North West at £649 or GB at £682.60. However, by place of work, Manchester is above both the North West and GB at £707 versus £647

(North West) and £683 (GB). This highlights that Manchester is still seen as a competitive wage location.

- 11.54 Employment forecasts in the Greater Manchester Forecasting Model^{viii} show employment in Greater Manchester is forecast to grow by 12% (183,000) jobs from 2017 to 2037. The city of Manchester is expected to provide a large share of this employment growth, especially if new development sites are brought forward, with Cheetham being a key city centre ward with growth potential for housing to support employment.

Unemployment

- 11.55 ONS data show that unemployment in the Cheetham ward is 6% of the working age population, which is slightly below the average for all Manchester of 5.7% and the North West at 3.4%. Those not in employment education or training are 2.65% in Cheetham, below Manchester at 4.94%.

Occupations

- 11.56 According to the ONS, the percentage of people working in professional environments in the Cheetham ward is reasonably high. The top three categories of employment (managers/senior officials, professional and associate professional/technical) account for 39.9% of the working population, slightly lower than the 46% for the rest of Manchester and 43.2% for the North West.
- 11.57 **Table 11.6** shows the structure of employment broken down by sector. The Professional, Scientific and Technical sector accounts for the largest proportion of employment in Manchester at 14.1%, closely followed by Human health and Social work at 12.3%, then Administrative and Support Services at 11.6% of employment. Two of these sectors are overrepresented in Manchester compared to the North West as a whole. The next tier of employment in Manchester is in Retail (10.4%) and Education (9.3%). Cheetham's top sector is Wholesale and retail trade; repair of motor vehicles and motorcycles at 31%. Another 3 sectors account for almost 30% (Professional, scientific and technical activities and public and private administration and support services).

Table 11.6 Structure of employment by sector 2022 (%)

Age Range	Cheetham Ward	Manchester	North West
A : Agriculture, forestry and fishing	0.00%	0.02%	1.07%
B : Mining and quarrying	0.00%	0.05%	0.10%
C : Manufacturing	5.56%	3.01%	8.83%
D : Electricity, gas, steam and air conditioning supply	0.00%	0.12%	0.28%
E : Water supply; sewerage, waste management and remediation activities	0.06%	0.23%	0.67%
F : Construction	2.78%	2.08%	5.21%

G : Wholesale and retail trade; repair of motor vehicles and motorcycles	30.89%	10.42%	14.66%
H : Transportation and storage	4.32%	6.02%	4.74%
I : Accommodation and food service activities	6.18%	8.57%	7.90%
J : Information and communication	3.09%	5.79%	3.31%
K : Financial and insurance activities	0.62%	4.40%	2.38%
L : Real estate activities	1.85%	3.01%	1.77%
M : Professional, scientific and technical activities	9.27%	14.13%	9.42%
N : Administrative and support service activities	10.81%	11.58%	8.19%
O : Public administration defence; compulsory social sec	9.27%	5.33%	4.82%
P : Education	5.56%	9.26%	7.82%
Q : Human health and social work activities	5.56%	12.27%	14.83%
R : Arts, entertainment and recreation	3.09%	1.62%	2.10%
S : Other service activities	1.08%	2.08%	1.91%
Total	100.00%	100.00%	100.00%

- 11.58 The State of the City Report (2022) states that vacancies in the city remain high. Technology will be one focus of expansion with nearly 80,000 roles opened by employers in areas such as fintech, ecommerce, cyber security and healthtech. The Work and Skills Strategy 2022 will support transition to a zero-carbon economy with green skills such as domestic retrofit, renewables generation, zero-carbon new builds, low-carbon vehicles, infrastructure development and environmental activities.

Housing

- 11.59 Manchester State of the City Report 2022 highlights that the residential housing pipeline continued to deliver new homes with a particular concentration in the city centre and including 532 affordable homes. Manchester has an overall housing target of 3,553 new homes per annum.
- 11.60 The city's 10-year Housing Strategy launched in 2022. The Strategy sets ambitious targets to deliver 36,000 new homes by 2032, of which 10,000 will be affordable.
- 11.61 As stated earlier, MCC's Core Strategy (2012–2027) supports "*high-density residential development on brownfield land close to public transport.*" (p106). The Report goes on to note that this aim is

restated in the Council's strategy for residential growth, "*which seeks to increase the number of homes within the conurbation core, primarily in the Northern and Eastern Gateways.*" (p106)

- 11.62 Cheetham accounts for around 7.5% of Manchester's housing, two thirds of which is townhouses and the balance flats. Nearly two thirds of Manchester's households are in rented accommodation which is well above the level of the North West. It also has a high proportion in social housing.
- 11.63 MCC recognises that work needs to be done to ensure that housing supply meets existing and future demand. Low levels of development in the past along with population growth as led to a situation of unmet demand for housing. MCC has undertaken analysis to help understand how expected new housing development is likely to be absorbed and draws upon population forecasts from MCCFM.
- 11.64 The analysis has shown historic undersupply and that there continues to be a need to invest in new housing across the city centre.

Social and Community Infrastructure

- 11.65 The Council's report Profile of Children in Manchester (2021) has highlighted the rapid growth in children in Manchester with a 36% increase since 2001. Many of these are of Asian or African descent. Cheetham has seen the fifth highest live births level of wards across Manchester and has the fourth highest number of children overall. This growth has put pressure on primary school places now moving into secondary. However, a slowdown in live births and the effects of Brexit on migration mean that pressure on school places is anticipated to ease.

Nurseries

- 11.66 There are 7 private nurseries located within one mile of the Proposed Development shown in **Table 11.7** along with a wide range of other childcare provision throughout the city, including childminders and playgroups.

Table 11.7 Private Nurseries within 1 mile of development (Source: daynurseries.co.uk)

Nursery	Distance from development (miles)	Capacity
WMB Hillcity Day Nursery	0.5	120
Unity School Nursery	0.8	78
Early Learning Childcare	0.9	70
Tabiyah Nurseries Ltd	1	96
Happy Feet Day Nursery	1	46
WMB Winstanley Day Nursery	1	64
Kids adVentures Salford	1	53

Primary and Secondary Schools

- 11.67 There are 19 schools located within 1.5 miles of the development: 15 primary and 4 secondary schools. In addition there are a further 2 primary schools due to open in September 2024. There is a mix of denominational and non-denominational, state and independent provision locally. In terms

of secondary provision in the area, there are 2 free schools, 1 academy and 1 state-funded and there are a range of state, free school, Academy and voluntary aided primary schools. **Table 11.8** details the schools and lists the latest school capacity and the places available. There are under 10,000 pupils on the school roles in the area. With current capacity there are 629 places available.

Table 11.8 schools within 1.5 miles of development. (Source Manchester City Council and Get-information-schools.service.gov.uk)

School	Type	Distance from development (miles)	Capacity	Places available
Cheetwood Primary School	Primary – State funded	0.49	210	-14
Eden Boys' Leadership Academy	Secondary – Free school	0.56	800	173
Abbott Community Primary School	Primary – State funded	0.6	240	1
St Chad's RC Primary School	Primary – Voluntary aided	0.65	240	9
Eden Girls' Leadership Academy	Secondary – Free school	0.67	800	175
St Patrick's RC Primary School	Primary – Voluntary aided	0.68	350	54
Unity Community Primary	Primary – Free school	0.74	420	95
Co-op Academy New Islington	Primary – Free school	0.85	420	38
St Malachy's RC Primary	Primary - Voluntary aided	0.87	242	12
The Olive School (Proposed opening Sep 24)	Primary - Free school, muslim	0.88		
Oasis Academy Temple	Primary – Academy school	0.92	709	6
Saviour CofE Primary School	Primary – Voluntary aided	0.93	210	50
Cheetham CofE Community Academy	Primary – State funded	1.12	690	32
St Anne's RC Primary School	Primary – Voluntary aided	1.21	218	-9
Park View Community School	Primary – State funded	1.22	459	52

Manchester Communication Primary Academy	Primary – Academy school	1.32	420	-41
Manchester Communication Academy	Secondary – Academy school	1.32	1,200	-24
St Augustine's CofE Primary School	Primary – Voluntary aided	1.36	240	20
Crown Street Primary School (proposed opening Sep 24)	Primary - Academy school	1.41		
Abraham Moss Community School	Primary & Secondary – State funded	1.44	1,830	Not recorded
Total			9,598	629

Health and Dental Provision

11.68 There are 5 General Practitioner (GP) surgeries located within one mile catchment of the development. There are a further 6 surgeries within one mile that are out of catchment. These surgeries have a combined number of registered patients of nearly 104,000 and all 10 are currently accepting new patient registrations which suggests plenty of capacity.

11.69 There are at least 12 dental surgeries located within one mile of the Proposed Development, of those 50% are accepting new patients who are children or adults entitled to free dental care. There are a large number of dental surgeries located within the city centre. NHS Manchester has 59 dentists per 100,000 population compared with only 44 for the whole of England.

Green Space

11.70 There are two parks and gardens within 1 mile's walking distance of the Proposed Development as well as a further two open green spaces.

11.71 The overall allocation of green space in the area is below MCC's recommended level of 1.26ha per 1,000 residents at 0.8; however, there are a large number of open spaces across the city more widely.

Current Economic Impact

11.72 As the Site is currently vacant and bound by hoardings, the current economic impact of the Site is assumed to be negligible.

Embedded Mitigation

11.73 This section describes the measures which have been 'embedded' into the Proposed Development.

Construction

- 11.74 There are no embedded mitigation measures of relevance to socioeconomics.

Completed Development

- 11.75 The operational Proposed Development will be carefully designed to improve the area and contribute to enhancing the streetscape and flows of traffic and pedestrians. The highly sustainable location means that most commuting will be possible on foot or by public transport.

Assessment of Likely Significant Effects

- 11.76 This section sets out the potential effects of the Proposed Development and their significance.

Construction

- 11.77 There will be a number of economic impacts as a result of the construction phase of the Proposed Development. The calculations are based on the estimated costs for the Proposed Development of £45m excluding VAT. This is based on 237 residential units plus 95.6 sqm of commercial space.
- 11.78 It is estimated that the scale of the Proposed Development could support 695.5 person years of construction related employment, comprising 257.6 on-site construction job years and a further 437.9 indirect job years in supporting industries such as specialist suppliers and manufacturing. It is estimated that the project could be completed over a 24-month period which implies that there will be 129 construction FTE jobs supported on-site during the build period and a further 219 off-site indirect FTE jobs. The GVA associated with these jobs will be £23.5m per year.
- 11.79 This generates two effects that have been measured on the significance of impact scale. Firstly, short-term disruption to the local area during the construction programme including the noise of the works and the logistical implications of access and materials movement in the immediate area. In the short-term, this could be disruptive to the local business district. The main receptor in this case is the ability of the local businesses to accommodate change. As a result of a rating of high magnitude of effect and medium sensitivity of receptor, this has been given an overall **Moderate Adverse** impact, which is **Not Significant** in EIA terms. The design and timings for the construction programme will take this into account to minimise these effects, avoiding rush hour where possible for logistics and limiting noisy activities at unsocial times.
- 11.80 Secondly, there will be a short-term employment gain for the construction industry. Given the overall size of the ward, the construction sector is likely to be relatively small and under-represented relative to the region as a whole. There is therefore a fair chance that the works will be conducted by a contractor outside the immediate local area and the employment benefits leaked. The contractor will be appointed on a competitive tender basis, but local contractors will be welcome to bid to maximise the opportunity for the local gain, and the use of local materials encouraged where possible. In addition, the construction workers based in the area will generate further benefits as they spend in local shops and other services. The main receptor in this case is construction employment. As a result of a rating of low magnitude of effect and high sensitivity of receptor, this indicator has been given a **Minor Beneficial** impact rating, which is **Not Significant** in EIA terms.

Completed Development

Local Employment: Additional Working Households

- 11.81 The additional housing proposed for the application Site is estimated to accommodate 519 additional residents. As previously shown in **Table 11.9**, the proportion of working age residents in the Cheetham ward is 67.8%. This suggests an additional 352 working age residents could be expected.

Table 11.9 Estimate of additional residents from the development

	Value
Number of apartments	237
Average number of persons per household*	2.19
Number of additional people	519
Working age %	68%
Estimated additional working age people	352

- 11.82 The State of the City Report 2021 demonstrates ongoing demand for housing and expected continued population growth. The 519 additional residents that would be accommodated in the Proposed Development account for a relatively small share of the total new demand forecast for the area.
- 11.83 The number of school age residents within the Proposed Development is estimated at around 135 (children between 0 to 15 years). This equates to around 1.4% of the existing capacity of schools within 1.5 miles of the development. Given the likelihood that there would be a spread across nursery, primary and secondary provision and the potential for residents attending schools out with the 1.5-mile catchment assessed, the capacity of schools and nurseries is not regarded as a significant issue.
- 11.84 In terms of health services, if all of the 519 estimated new residents were to seek to register with one of the GPs identified, they would represent just 0.5% of the total current patients. It seems highly likely that the existing services would absorb these extra residents within their current capacity. In terms of dental surgeries located within the city centre there is a problem nationwide with NHS dental capacity but plenty private capacity. This is a post-COVID phenomenon and may mean that some residents cannot find an NHS dentist.
- 11.85 Given this context, overall the Proposed Development is regarded as having a positive and lasting impact in the area. The main receptor in this case is the population. This results in an assessment of medium magnitude of effect and medium sensitivity of receptor, giving a **Moderate Beneficial** overall rating which is **Not Significant** in EIA terms. As such, no mitigation measures are required in relation to this impact.

Household Expenditure

- 11.86 The additional households will help to support local services and businesses such as schools, health centres and shops. In terms of retail, the households living within the application site will bring additional spending to Manchester and the local area. The residents will also support development of Manchester's evening economy.
- 11.87 These households will spend £7.1m per year based on the household survey. Assuming 60% of their household spend is within the Manchester area, this will bring an additional £4.3m of expenditure to the local economy (**Table 11.10**).

Table 11.10 Household Expenditure from the development

	Proportion spent locally	Average weekly spend per household	Additional spend annually
Average weekly household expenditure		£578.64	£7,131,159
Proportion spent in Manchester	60%	£347.18	£4,278,696

- 11.88 The average retail expenditure required to support one job is £141,015. Therefore, the anticipated additional spending because of the new households could directly support 30 full time equivalent jobs within local shops in Manchester. The GVA associated with these jobs will be £0.85m per year.
- 11.89 The expenditure of new residents is a beneficial effect for the area overall and as such does not require any mitigation. The main receptor in this case is the retail sector employment. The overall scale of the retail sector in the immediate area results in an assessment of medium magnitude of effect and low sensitivity of receptor, therefore this impact is rated **Minor Beneficial**, which is **Not Significant** in EIA terms.

Business Space

- 11.90 The proposed development will create 95.6sqm of employment space which is assumed to be retail. This will create 5.5 direct jobs and 2.3 indirect jobs making 7.8 in total with GVA of £0.28m per year. This is assessed as a **Minor Beneficial effect**, which is **Not Significant** in EIA terms.

Council Tax Revenue and Public Sector Jobs

- 11.91 The new homes will generate additional annual Council tax revenue for the local authority. Assuming a mix of Band B and Band C the properties will generate in excess of £0.38m per annum for the Council.

Additional Mitigation / Enhancement Measures

- 11.92 This section describes the measures which are required to mitigate any significant environmental effects with regards to socioeconomics.

Construction

- 11.93 The Construction impact assessment presented identifies the potential for short term disruption to the local area during the construction programme including the logistical implications of access and materials movement in the area. While short-term, this could be moderately disruptive to the local businesses.
- 11.94 To mitigate the potential disruption, it is suggested that the design and timings for the construction programme should take this into account to minimise these effects, avoiding rush hour where possible for logistics. Best practice measures will be included within a Construction Environment Management Plan (CEMP) and secured by condition.
- 11.95 The introduction of a Local Employment Scheme could help to retain some of the employment benefits in the local area. The development will provide training for new entrants during construction.

The Completed and Operational Development

- 11.96 The impacts of the Proposed Development during the operational phase are assessed as Minor and Moderate Beneficial. Therefore, no additional mitigation of adverse impacts is required. However, the Applicant is committed to increasing the beneficial impacts through promoting local employment through multiple routes including the Greater Manchester Local Enterprise Partnership, local groups and partnerships with Manchester focused job fairs and events.

Likely Residual Effects of the Proposed Development and their significance

- 11.97 With implementation of best practice demolition and construction management practices, it is assumed that the effect would reduce from Moderate Adverse in the short-term to a short-term **Negligible** residual effect in the inner study area, which is **Not Significant**. **Table 11.11** summarises this assessment.
- 11.98** As the effects of the Proposed Development once operational are assessed as Minor to Moderate Beneficial, no additional mitigation measures are required so the residual impacts remain the same and are rated as **Not Significant**.
- 11.99 The residual effects arising from the Proposed Development are summarised in **Table 11.12** below.

Table 11.11 Summary of Residual Effects

Effect	Potential effect (inc significance)	Mitigation	Residual effect (inc significance)
Demolition / Construction			
Disruption to local area due to movement of materials etc.	Moderate Adverse short-term effect on immediate area, which is Not Significant	Best practice mitigation measures implemented by way of CEMP	Negligible short-term effect on immediate area (Not Significant)
Employment gain for construction industry	Minor Beneficial short-term effect on the wider area, which is Not Significant	Introduction of a Local Employment Scheme	Moderate Beneficial short-term effect on the wider area (Not Significant)
Operation			
Local Population	Minor Beneficial effect rating on immediate area, which is Not Significant	Nothing additional to embedded mitigation	Minor Beneficial effect rating on immediate area (Not Significant)
Local employment	Moderate Beneficial long-term effect on immediate area, which is Not Significant	Nothing additional to embedded mitigation, but beneficial effects may be enhanced through promotion of local employment	Moderate Beneficial long-term effect on immediate area (Not Significant)
Provision of business space	Minor Beneficial, not significant	Nothing additional to embedded mitigation	Minor Beneficial, not significant

Notes: * incorporating environmental design and management, ** incorporating mitigation and monitoring measures

Summary and Conclusions

- 11.100 As explained above, the Site is currently vacant with no economic uses taking place. There is strong demand for high quality office and student accommodation and a need to ensure that land is allocated to the best uses.
- 11.101 Construction of the Proposed Development will support 129 person years of construction related employment, with GVA of £23.5m per year for 2 years. This is assessed as a Minor Beneficial short-term effect on the wider area, which is Not Significant.
- 11.102 The Proposed Development will create 237 apartments accommodating 519 additional residents with 352 being of working age. These households will spend £7.1m per year with £4.3m of expenditure in the local economy supporting 30 full time equivalent jobs and GVA of £0.85m per year. This is assessed as a Minor Beneficial effect, which is Not Significant in EIA terms.
- 11.103 The Proposed Development will create 95.6sqm of retail space which is assumed to be retail creating 7.8 direct and indirect jobs with GVA of £0.28m per year. This is assessed as a Minor Beneficial effect, which is Not Significant in EIA terms.
- 11.104 The Proposed Development will contribute to Manchester's economic prosperity providing sought after housing to the benefit of Greater Manchester and the North West. It will increase the revenues to Manchester City Council through Council tax in the order of £0.38m per year.
- 11.105 Given this context, the Proposed Development is regarded as having a beneficial and lasting effect in the area. This is assessed as a Minor and Moderate Beneficial overall rating which is Not Significant in EIA terms.

Cumulative Effects

- 11.106 The Cumulative Schemes have been assembled from the Planning portal with three completed residential schemes accounting for 1,422 apartments and a further six residential which are scoped-in or scoped-out of Socioeconomics' Cumulative Effects Assessment (CEA). The list of cumulative schemes are provided in **Appendix 5.1**.

Approach

- 11.107 The first stage of the cumulative sites assessment is to establish which sites are to be included in the assessment. Of the sixteen sites identified, five are completed; of these, one educational and one office building are scoped out. Three completed residential schemes accounting for 1,422 dwellings are scoped in. Of the remaining 11 sites, two are for enabling works for future development (Victoria North – Red Bank) and are scoped out. A further proposed educational site is scoped out as is an office site. That leaves seven residential sites scoped in accounting for 2,502 dwellings (one does not state the number of dwellings). All sites will have an impact on the construction sector.
- 11.108 These sites are assessed to establish the potential cumulative effects from the combination of all of the relevant developments to assess the potential wider impact.

There are no further synergistic effects included in the assessment. Likely residual cumulative effects and their significance

Construction

- 11.109 Given the scale of these developments relative to the local construction industry, it is likely that construction jobs will leak outside the immediate area and external contractors will be required from outside the area. The indirect benefits of the construction, such as the workers' spend in the area, will still remain and are increased by the total volume of new construction activity across the programme of approved developments.
- 11.110 Given that other developments are likely to complete while new ones emerge, the overall scale of construction activity is likely to remain at a similar level. This indicator would remain as Moderate Beneficial impact rating for the wider area, which would remain as Not Significant in EIA terms.
- 11.111 The Construction effects assessment highlighted the potential for short term disruption to the local area during the construction programme given the need for access and materials movement. While short-term, this could be moderately disruptive to the area.
- 11.112 With implementation of best practice construction practices, it is assumed that the residual impact of the Proposed Development would move from Moderate Adverse in the short-term to a short-term Negligible residual impact in the inner study area, which is Not Significant. This is not expected to change for the cumulative impact assessment, assuming all developments implement the same mitigating factors.

The completed and operational development

- 11.113 The cumulative effect assessment of the completed developments is based on an overall assessment of the impact on the local population and economy; this development will provide housing which is needed. Three are completed residential developments. A further six residential developments are anticipated to come forward plus two enabling development sites with dwelling numbers yet to be specified. Given the existing transport links, proximity to the city centre and the growth forecasts, the cumulative effect of these developments is to bring forward much needed supply of housing including affordable homes within Manchester City Centre. This is in line with policy objectives for sustainable growth of the city.
- 11.114 Therefore, the impact significance is assumed to remain Moderate Beneficial to the immediate study area and Moderate Beneficial for the wider area, which is Not Significant in EIA terms.
- 11.115 The cumulative developments and this proposed development, are complementary to Manchester's growth strategy, meeting the established demand forecast for growth in the City Centre.

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- i Department for Levelling Up, Housing and Communities (2023) The National Planning Policy Framework
 - ii Department for Levelling Up, Housing and (2023) Planning Policy Guidance
 - iii GMCA (2021) Greater Manchester Strategy 2021-2031
 - iv GMCA, (2021) Places for Everyone Joint Development Plan
 - v MCC (2012) Manchester Core Strategy
 - vi Greater Manchester Forecasting Model Summary of outputs – 2019 update
 - vii Nomis Ward Profile using 2021 Census data
 - viii MCC (2017) Greater Manchester Forecasting Model – Summary of outputs – 2017 update, October 2017, Public Intelligence, Chief Executive's Department



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Chapter 12: Sunlight, Daylight and Overshadowing

Proximity on behalf of ZX
Cheetham Hill Developments
Limited

May 2024

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12. SUNLIGHT, DAYLIGHT AND OVERSHADOWING

Introduction

12.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to Daylight and Sunlight Amenity. This Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.

12.2 This chapter is supported by the following technical appendices:

- **Appendix 12.1:** BRE Guidance detail
- **Appendix 12.2:** BLVPR – Existing and Proposed Massing Images
- **Appendix 12.3** BLVPR VSC
- **Appendix 12.4:** BLVPR NSL
- **Appendix 12.5:** BLVPR – APSH
- **Appendix 12.6:** Cumulative Massing Images
- **Appendix 12.7:** BLVCU.PR VSC
- **Appendix 12.8:** BLVCU.PR – NSL
- **Appendix 12.9** BLVCU.PR - APSH

Competence

12.3 This chapter is authored by Jerome Muir of Proximity. Proximity is a consultancy that specialises in advising on Proximity Risk TM, including Daylight and Sunlight Amenity Impact Assessments.

12.4 Jerome is chartered surveyor with 7 years' experience in daylight and sunlight amenity impact assessment, and has authored Daylight, Sunlight and Overshadowing chapters for Environmental Statements for several other developments in Manchester, as well Daylight and Sunlight Amenity Impact Assessment Reports for developments throughout England.

Legislation and Policy Context

Legislation Context

12.5 There is no Legislation directly governing daylight and sunlight amenity.

National Planning Policy

12.6 The following national planning policy is relevant to the Proposed Development:

12.7 **National Planning Policy Framework ('NPPF'), 2023.** The NPPF promotes, where appropriate, an uplift in density for residential development in town and city centres, and notes that a flexible

approach should be taken in applying guidance relating to daylight and sunlight in such areas of high density.

Local Planning Policy

12.8 The following local planning policies are relevant to the Proposed Development:

12.9 **Manchester's Local Development Framework, Core Strategy, July 2012.** The Core Strategy was adopted in July 2012 and is the key development plan document in the Local Development Framework ("LDF"). It describes Manchester today and outlines the Council's vision for Manchester in 2027 along with the planning policies which will be used to deliver that vision.

- **Policy CC1 - Primary Economic Development Focus: City Centre and Fringe.** The Site falls within the bounds of the 'Fringe' of the city centre, as defined by Policy CC1. This policy notes that the City Centre and fringe will be considered a suitable location for the consideration of high density buildings.
- **Policy H3 – North Manchester,** notes that *"High density housing will be permitted within or adjacent to the parts of North Manchester that fall within the Regional Centre (Strangeways and Collyhurst area)"*

12.10 **Guide to Development in Manchester Supplementary Planning Document ("SPD").** The SPD is intended to provide clear direction on the considerations, qualities, and opportunities that will help to deliver high quality residential development of part of successful and sustainable neighbourhoods across Manchester. In encouraging developers to "appreciate scale" the SPD acknowledges that taller buildings can have an impact on the character and atmospheric quality of the spaces immediately around them; affecting light and shadow amongst other things and requiring developers and their design teams to demonstrate how massing and scale have been considered in terms of its impact on the neighbourhood, street and block.

12.11 **Great Ducie Street Strategic Regeneration Framework ("SRF").** The Site sits within the bounds of the Great Ducie Street Strategic Regeneration Framework Area. The SRF notes that *"Higher density mixed use development set within a high quality environment is envisaged", through the replacement of the existing low density environment'.*

12.12 **Places for Everyone Joint Development Plan.** The Places for Everyone Joint Development Plan is not yet adopted. It does however note that development within the City Centre will be delivered at high density. It also notes that high density will be appropriate in locations with good accessibility by walking, cycling and public transport. In massing and density terms then, it is acknowledged that the Site, its surroundings and City Centre and Fringe more generally are the subject of planning policy and guidance that promotes high density development. It is also clear that in areas of high density the guidance regarding daylight and sunlight amenity should be applied flexibly, to acknowledge the greater massing both at present and in future. Whilst the aforementioned policies and guidance refer to daylight and sunlight amenity, no guidance is provided on how daylight and sunlight amenity impact might be measured and evaluated in practice. Accordingly, it is necessary to consider the

Building Research Establishment (BRE) and their Guidance Note 'Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice'.

Guidance

12.13 The following guidance is relevant to the Proposed Development:

- BRE Guidance Note - 'Site Layout Planning for Daylight & Sunlight: A Guide to Good Practice'
- Guide to Development in Manchester Supplementary Planning Document

Assessment Methodology and Significance Criteria

12.14 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to Sunlight, Daylight and Overshadowing.

Consultation

12.15 **Table 12.1** presents a summary of the comments raised in the Council's EIA Scoping Opinion and other discussions with relevant consultees with respect to Sunlight, Daylight and Overshadowing.

Table 12.1 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Formal Scoping Opinion	The comments within your Scoping Report are noted and are acceptable in terms of their consideration in the ES. There is an extant planning permission on the corner of Cheetham Hill Road and Fernie Street. The windows should be tested on this development.	Impacts on daylight and sunlight amenity of this future neighbouring development and the 1 Park Place development have been considered qualitatively in the cumulative condition.

Assessment Methodology

Study Area and Sensitive Receptors

Study Area

12.16 In identifying the Study Area, the BRE Guidance has been used.

12.17 The Guidance emphasises the assessment of residential accommodation, specifically habitable rooms within residential buildings. A non-residential building may be assessed if there is a reasonable expectation of daylight and sunlight, such as hospitals or schools. Commercial office buildings are not typically considered to be daylight and sunlight receptors requiring impact assessment.

12.18 The appropriate study area has been defined following a Site inspection and research to identify neighbouring buildings of residential use, with the application of professional judgement to consider

which neighbouring buildings within 250m of the Site rely on the Site for the receipt of daylight and sunlight, warranting further technical appraisal.

Receptors

12.19 Based on their spatial relationship with the Site and outlook towards the Proposed Development, the habitable rooms of the following neighbouring buildings are identified as daylight and sunlight receptors worthy of impact appraisal:

- Britton House, Lord Street;
- Jefferson Place, Fernie Street;
- The Hallmark, 6 Cheetham Hill Road; and
- 4 Park Place

12.20 Rooms known to be of non-habitable use are excluded from the assessment.

12.21 Proposals for residential buildings in the vicinity which are not yet under construction – such as those at 1 Park Place and the vacant plot bounded by Lord Street and Cheetham Hill Road – have been qualitatively impact appraised as receptors in the cumulative effects assessment. Their massing is also included in assessment of cumulative impacts on the daylight and sunlight receptors identified above.

Scope

12.22 Daylight and Sunlight amenity of the buildings has been assessed, with reference to the provisions and guidance contained within the BRE document *Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice*.

Assessment Methodology

The BRE Guidance

12.23 The assessment has been undertaken in accordance with the provisions of the BRE Guidance document *Site Layout Planning for Daylight and Sunlight – A Guide to Good Practice*.

12.24 A more detailed explanation of the BRE Guidance methodology for assessment of impacts on daylight and sunlight are contained in **Appendix 12.1**. This is summarised below.

12.25 Where appropriate, a technical analysis exercise has been undertaken, and the daylight and sunlight conditions, as existing and proposed, have been assessed with reference to the following:

- Vertical Sky Component ('VSC');
- The No Sky Line ('NSL');
- Annual Probable Sunlight Hours ('APSH') and Winter Probable Sunlight Hours ('WPSH'); and
- External Amenity Space Time in Sun.

12.26 In summary the targets, established in accordance with the BRE Guidance are as follows:

Table 12.2 BRE Targets

BRE Target		Acceptable Tolerance Alternative Target
VSC	27%	21.6%
NSL	At least 0.8x baseline	n/a
APSH	25%	20%
WPSH	5%	4%

12.27 Further detail on how these metrics are measured in practice can be found in **Appendix 12.1**.

12.28 The Acceptable Tolerance Alternative Target has been established using BRE principles.

12.29 In summary, the BRE Guidance notes that retained daylight and sunlight values that are of at least 0.8x baseline value are unlikely to be noticeably different to occupants.

12.30 On that basis, Acceptable Tolerance Alternative Targets, appropriate to the City Centre, Corridor and City Centre Fringe areas of Manchester, are established by applying 0.8x to the BRE's targets for VSC, APSH and WPSH and shown in the table above.

12.31 More detail on the rationale and establishment of these are measured can be found in **Appendix 12.1**

Application of the BRE Guidance in EIA

12.32 Appendix H of the BRE Guidance outlines how the guidelines within can be applied in the context of Environmental Impact Assessment.

12.33 It notes a number of factors that tend towards a minor adverse impact, including only a small number of windows are affected; loss of light is marginally outside of the guidelines; a receptor has a low level requirement for daylight or sunlight; other reasons, such as a window standing unusually close to a boundary.

12.34 The BRE Guidance also notes factors tending towards a major adverse impact. Such factors include a large number of windows being affected; loss of light is substantially outside of the guidelines; all the windows in a particular property are affected.

12.35 Notwithstanding the above generalisation of an impact, a reduction in daylight and sunlight amenity will at all times be subject to the BRE general compliance criteria, as follows:

- If the BRE targets are met in the Proposed condition, then any reduction in daylight and sunlight will not be considered significant;
- Where the BRE targets are not achieved in the Baseline condition, a retention of 0.8x baseline values in the Proposed Condition will not be considered significant. In accordance with the BRE Guidance, such a reduction is unlikely to be noticed by the room occupants;

- A 20% reduction of the measured baseline NSL value (i.e., retention of 0.8x baseline value) will not have a material impact, on the grounds that such a reduction would not be noticed by the room occupants.
- 12.36 As confirmed earlier in this Chapter, it is the professional opinion of Proximity that a VSC of 21.6% is within an acceptable tolerance of the BRE targets, given the City Centre / Corridor context of the Site.
- 12.37 Also, as confirmed earlier in this Chapter, it is the professional opinion of Proximity that a 4% winter and 20% annual APSH result is within an acceptable tolerance of the BRE targets, given the City Centre / Corridor context of the Site.
- 12.38 Where a window or room achieves the BRE target or the Acceptable Tolerance alternative target, the impact is considered to be Not Significant.

Assessment Methodology

Construction Phase

- 12.39 The impact that the physical construction of the Proposed Development will have on daylight and sunlight amenity of the surrounding built environment has not been considered.
- 12.40 The effects of the construction phase are temporary because light impact is a function of the proposed massing, which will vary during the construction phase operations.

Operational Phase

- 12.41 The Proposed Development will have its greatest and long-term daylight and sunlight impact during the operational phase once construction of the massing is completed, therefore the operational phase is assessed within this chapter

Characterisation of Effect

- 12.42 The massing to be constructed on the Site will be the source of daylight and sunlight impacts/ effects of the Proposed Development.
- 12.43 The construction of this massing may result in reduced sky visibility from within habitable rooms of neighbouring buildings, and the windows that serve them. This in turn will have an effect on the daylight and sunlight amenity enjoyed in the Proposed condition.
- 12.44 Impacts of daylight and sunlight amenity are therefore likely to be permanent and localised to individual receptors.

Sensitivity of Receptors

- 12.45 Having identified the relevant receptors, it is necessary to consider their sensitivity to reductions in daylight and sunlight. The general methodology that Proximity has adopted for determining sensitivity to a measured magnitude of change is tabulated below.

Table 12.3 Methodology for Determining Sensitivity to a Measured Magnitude

Sensitivity	Examples of receptor
High	The receptor has little ability to absorb change without fundamentally altering its present character or is of international or national importance.
Moderate	The receptor/resource has moderate capacity to absorb change without significantly altering its present character or is of high importance.
Low	The receptor/resource is tolerant of change without detriment to its character, is of low or local importance

- 12.46 The BRE Guidance emphasises the availability of daylight and sunlight to living rooms and daylight to bedrooms and family kitchens.
- 12.47 The BRE does not impose a hierarchy of habitable rooms, i.e., confirm whether one habitable room should receive more light than another, but in real terms, such a hierarchy does exist and that hierarchy should be borne in mind when considering and evaluating the impact that the Proposed Development might have on the availability of light in a City Centre environment.
- 12.48 The above general methodology has been developed further below to establish the following window sensitivity matrix, informed in part by the BRE Guidance, and, based on the function or use of the rooms behind each of the windows that have been assessed:

Table 12.4 Window Sensitivity Matrix

Room Use	Daylight Sensitivity	Sunlight Sensitivity
Living Room / Combined Living, Kitchen & Dining ("LKD")	High	High
Kitchen / Dining	Medium	Low
Bedrooms	Medium / Low	Low
Student Accommodation	Low	Low
Communal Kitchens	Low	Low
Circulation Space	n/a	n/a
Toilets/ bathrooms	n/a	n/a
Commercial uses	n/a	n/a

Determining the Magnitude of Change

- 12.49 It is possible to reduce the amount of daylight and / or sunlight that a window currently receives without that reduction amounting to a material / significant or adverse impact on the existing amenity enjoyed. The following has been used as a methodology for determining the magnitude of change in evaluating the results of the technical study:

Table 12.5 Methodology for Determining the Magnitude C

Magnitude of Change	Criteria for assessing impact
Major (<0.6 x baseline)	Total loss or major/substantial alteration to key elements/features of the baseline conditions such that the post development character/composition/attributes will be fundamentally changed. From a measurement perspective this will include any reduction in amenity of in excess of 40% of the existing or baseline values
Moderate (0.6xx < 0.7x baseline)	Loss or alteration to one or more key elements/features of the baseline conditions such that post development character/composition/attributes of the baseline will be materially changed. From a measurement perspective this will include any reduction in amenity of between 30-40% of the existing or baseline values.
Minor (0.7x < 0.8x baseline)	A minor shift away from baseline conditions. Change arising from the loss/alteration will be discernible/detectable but not material. The underlying character/composition/attributes of the baseline condition will be similar to the predevelopment circumstances/situation. From a measurement perspective this will include any reduction in amenity of between 20-30% of the existing or baseline values
Negligible (>0.8x Baseline)	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation. From a measurement perspective this will include any reduction in amenity of up to 20% less than the existing or baseline values. i.e., retained values in the Proposed condition will be at least 0.8x baseline values

Significance of Impacts

- 12.50 The significance of an impact can be assessed with reference to the table below and to the BRE Guidance.

Table 12.6 Significance of Impact

		Sensitivity		
	Magnitude of Change	High	Moderate	Low
	Major	Major Adverse	Major Adverse	Moderate Adverse
	Moderate	Major Adverse	Moderate Adverse	Minor Adverse
	Minor	Moderate adverse	Minor Adverse	Negligible
	Negligible	Negligible / minor	Negligible	Negligible

- 12.51 Impacts that are Minor Adverse or Negligible are Not Significant. Those impacts identified as Moderate or Major Adverse, highlighted above, are generally considered to be Significant.
- 12.52 With reference to paragraph H3 of the BRE Guidance, regarding application of the BRE guidelines as basis for Environmental Impact Assessment, it notes that “*adverse impacts occur when there is a*

significant decrease in the amount of skylight and sunlight reaching an existing building where it is required, or in the amount of sunlight reaching an open space”.

- 12.53 The significance of impact should also be considered with reference to the quantum of light lost. For example, where daylight or sunlight values are low or very low in the baseline condition, even very small, measured changes can equate to high magnitudes of change, notwithstanding that, in reality, the light lost may not be noticeable to a room occupant.
- 12.54 As noted earlier in this chapter, where a window or room achieves the BRE target or the Acceptable Tolerance alternative target, the impact is considered to be Not Significant.

Limitations and Assumptions

- 12.55 In undertaking this appraisal, Proximity has not been inside any of the neighbouring buildings. It has therefore been necessary to make some assumptions as to the size, arrangement, and use of the rooms behind the neighbouring windows.
- 12.56 Assumptions have been informed by letting particulars available from the internet, leaseplans available from Land Registry, and from Planning Applications available digitally via Manchester City Council's public planning access system, as follows:
- Britton House – MCC Ref. 082191/FO/2007/N1;
 - Jefferson Place – Leaseplans available from land registry; and
 - The Hallmark – MCC Ref. 109031/FO/2015/N1.
- 12.57 On the basis that the neighbouring buildings have not been inspected internally, we have also had to make assumptions as to their use and function.
- 12.58 Where no room arrangement information has been identified we have assumed that each window serves its own 5m deep room or, where justified, the room is half of the neighbouring building's depth.
- 12.59 Further, the height between the internal floor level and the window will in each room of the neighbouring buildings will influence the position of the working plane, which is the level at which the internal distribution of light is measured. We have had to assume the position of the working plane.

Baseline Conditions

Survey and Date Sources

- 12.60 To facilitate the running of the technical analysis, computerised 3D massing simulations of the Site and its immediate surroundings have been constructed, in its Baseline, Proposed and Cumulative massing configurations. In building the 3D massing models, the following information, provided to Proximity by others, has been relied upon:
- Photogrammetric model to the Site and surrounding area provided by AccuCities;
 - Point Cloud survey provided by ND Oliver; and
 - 3D autocad model of the Proposed Development by Hawkins\Brown Architects.

- 12.61 For the purposes of the cumulative assessments, Proximity's understanding of the massing of the various Planning approved neighbouring developments will be based on PDF drawings that are available to download from Manchester City Council's Planning public access portal.

Baseline Conditions

- 12.62 In the baseline condition, the Site comprises a single story building at the northern end and central part of the Site. The remainder of the Site is free of massing, having formerly been forecourt.
- 12.63 In massing terms, the surrounding areas is characterised by high-rise, high-density apartments and commercial space to the east, a part of Manchester known as the 'Green Quarter'. To the south, west and north of the Site the surroundings are predominantly occupied by low rise, low density commercial and industrial space.
- 12.64 The daylight amenity of the neighbouring receptors is tabulated below:

Table 12.7 Daylight amenity of the neighbouring receptors

Receptor	% windows achieves BRE VSC target (27%) or Alternative target (21.6%)	% windows below alternative target (21.6%)
Britton House	157 windows (60%)	106 windows (40%)
Jefferson Place	418 windows (62%)	254 windows (38%)
The Hallmark	160 windows (68%)	75 windows (32%)
4 Park Place	4 windows (40%)	6 windows (60%)

- 12.65 In the baseline condition circa one third of each building's windows, or more for 4 Park Place, do not achieve the VSC target. This is the result of a number of factors, including the existing large buildings and high density of the Green Quarter; and the presence of both projecting balconies above windows and recessed balconies with windows set back into the building – design features which place an inherent limitation on daylight potential by obstructing sky visibility.
- 12.66 The sunlight amenity of the neighbouring receptors is tabulated below:

Table 12.8 Sunlight amenity of the neighbouring receptors

Receptor	% rooms achieve annual and winter sunlight target	% rooms achieve either annual or winter sunlight target	% rooms achieve neither annual nor winter sunlight target
Britton House	129 rooms (87%)	19 rooms (13%)	1 room (<1%)
Jefferson Place	29 rooms (97%)	1 room	0 rooms
The Hallmark	Not appraised – the Proposed Development is to the north of this neighbouring building		
4 Park Place	Not appraised – Site facing windows are north facing		

Evaluation of Significant Effects

Environmental Design and Management

- 12.67 The Applicant has considered carefully the proposed massing and landscaping proposals for the Proposed Development to ensure it is sensitive to its surrounds.

Construction Phase

- 12.68 As noted above, assessment of construction phase impacts is not applicable as the massing will have its maximum effect during the operational phase.

The Completed and Operational Development

- 12.69 The assessment of likely significant effects has been made through a technical analysis.
- 12.70 The results of the VSC daylight tests are tabulated in **Appendix 12.1**.
- 12.71 This assessment has measured the daylight impact of the Proposed Development against the acceptable tolerance alternative target VSC target of 21.6%. This is considered reasonable given the urban location of the Proposed Development and surrounding receptors.
- 12.72 The tabulated results and contour plots of the NSL tests are presented at **Appendix 12.1**. To explain the NSL contour plots, the area of the room within the amber contour receives access to direct sky light. The hatched area of the room identifies each neighbouring room that will lose direct access to sky visibility, because of the Proposed Development.
- 12.73 The results of the APSH daylight tests are tabulated in **Appendix 12.1**.
- 12.74 As above, the BRE confirm that only windows facing within 90° of due south can have any real expectation of receiving sunlight and need to be technically appraised. This is because the sun rises in the east, sets in the west, passing through south.
- 12.75 Because some of the rooms are served by multiple windows or are dual aspect, we have summarised the results of our sunlight study on a room-by-room basis. Where Site facing windows/ rooms of neighbouring buildings are north facing, they have not been evaluated for sunlight amenity impact.

12.76 This assessment has measured the sunlight impact of the Proposed Development against the generic Acceptable Tolerance Alternative Targets of 4% for winter APSH target and 20% annual APSH, these being appropriate to the City Centre location of the Site.

12.77 The tabulated VSC and NSL results contained within the Appendices to this Chapter appended have been colour annotated for ease of review, as follows:

- Green indicates the result achieves the unmodified BRE target;
- Yellow indicates the result achieves the Acceptable Tolerance Alternative Target; and
- Pink indicates that the result is more than the Acceptable Tolerance reduction

12.78 Results in the 'Pr/Ex' column show the proposed value as a proportion of the baseline value.

12.79 These results are colour annotated according to the magnitude of change from baseline values, as follows:

Table 12.10 Magnitude of change from baseline values

Magnitude of change	Retained value as proportion of baseline	Technical analysis colour coding
Negligible	At least 0.8x baseline	Green
Minor	Between 0.7x – 0.8x	Yellow
Moderate	Between 0.6x – 0.7x	Amber
Major	Less than 0.6x baseline	Pink

12.80 Proposed results in the "Pr/Ex" column that are greater than 0.8x Baseline Values are coloured green. These results are considered acceptable to the BRE on the basis that any reduction in VSC, NSL or APSH would not be noticed by the room occupants, equating to Negligible Magnitude of change. Such negligible impacts are Not Significant.

12.81 Therefore, a result coloured pink in the VSC or APSH columns are considered BRE compliant if the Pr/Ex result is coloured green (i.e., the result in the Proposed Condition is not less than 0.8x baseline values). On the basis that the reduction is not likely to be noticed, the impact is Not Significant.

12.82 Impacts on daylight and sunlight amenity of the identified receptors is explained below.

Daylight Amenity

Britton House

12.83 263 windows serving 193 assumed habitable rooms have been appraised.

12.84 When assessed in the context of the Proposed Development, all rooms appraised would pass the BRE's NSL test, experiencing negligible reductions in daylight distribution within the rooms.

12.85 Of the 263 windows appraised, 256 windows (97%) will continue to either achieve the BRE's 27% VSC target; achieve the Acceptable Tolerance target appropriate to environments of elevated

density; or retain VSC figures of at least 0.8x baseline values (a reduction that is considered acceptable to the BRE on the grounds that it would not be noticed by the room occupants / users).

- 12.86 Rooms served by these windows will all pass the BRE's NSL test. Impacts on daylight amenity of these windows and rooms is therefore negligible and Not Significant.
- 12.87 Of the remaining 7 windows (3%), 6 serve rooms that are also served by other windows. These rooms will pass the NSL test, and impacts are therefore Not Significant.
- 12.88 One window serving a ground floor assumed living room would experience a low magnitude of change in VSC. This room does, in the baseline condition, achieve very low VSC (of 5.6%) as a result of its outlook towards Jefferson Place, as well as its position recessed into the building façade and placed below a balcony.
- 12.89 On the basis that this this room experiences no reduction in daylight distribution (and therefore passes the BRE's NSL test) and, in reality, the reduction in VSC is small (<1.3%), the impact on daylight amenity is arguably minor adverse and therefore Not Significant. 9.92 Overall, the impact of the Proposed Development on daylight amenity of Britton House is Not Significant.

Jefferson Place

- 12.90 682 windows serving 369 assumed habitable rooms have been appraised.
- 12.91 When assessed in the context of the Proposed Development,, 316 rooms (86%) appraised would pass the BRE's NSL test, experiencing negligible reductions in daylight distribution within the rooms.
- 12.92 Of the 682 windows appraised, 506 windows (75%) will continue to either achieve the BRE's 27% VSC target; achieve the Acceptable Tolerance target appropriate to environments of elevated density; or retain VSC figures of at least 0.8x baseline values (a reduction that is considered acceptable to the BRE on the grounds that it would not be noticed by the room occupants / users).
- 12.93 Of the remaining 166 windows (25% of windows appraised):
- 120 windows (8%), experiencing Minor magnitudes of change. Of these, 55 are understood to serve 56 bedrooms, which are a low sensitivity daylight receptor. Impacts on daylight amenity of these windows and rooms is therefore negligible – minor adverse, and therefore Not Significant.
 - 38 windows (6%) would experience a moderate magnitude of change.
 - 8 windows (1%) would experience a high magnitude of change.
- 12.94 LKD rooms are typically served by 2 windows. There are 27 LKD rooms where at least one of the windows would experience a Moderate or Major Magnitude of change in VSC. Of these 27 LKD rooms:
- 4 would pass the NSL test, experiencing negligible reduction in daylight distribution. Impacts on daylight amenity of these rooms is minor adverse;
 - 17 would experience Minor magnitudes of change in NSL. Impacts on these rooms is moderate adverse; and

- 3 LKDs would experience Moderate magnitudes of change in daylight distribution, and 3 LKDs would experience major Magnitudes of change in daylight distribution. Impacts on daylight amenity of these rooms is major adverse and therefore Significant.
- 12.95 The design of Jefferson Place includes balconies to LKD rooms. These balcony structures project from the elevation of the building and have the effect of limiting sky visibility from the face of the window and from within the room below. The balcony structures that are part of the design of Jefferson Place are an inherent constraint on daylight amenity to LKD rooms within, and which contribute to/ uplift magnitudes of change in daylight amenity resulting from development in the vicinity.
- 12.96 The impact of the Proposed Development on the daylight amenity of the majority of Jefferson Place is Negligible. Notwithstanding some localised significant impacts on daylight amenity, the impact of the Proposed Development on Jefferson Place, as a whole, is considered Minor Adverse. Impacts are commensurate with both the density that already exists within the Green Quarter (of which Jefferson Place is a part), and the uplift in density envisaged and sought by MCC planning policy.

The Hallmark

- 12.97 235 windows serving 174 assumed habitable rooms have been appraised.
- 12.98 When assessed in the context of the Proposed Development, all rooms appraised would pass the BRE's NSL test, experiencing negligible reductions in daylight distribution within the rooms.
- 12.99 Of the 235 windows appraised, 205 windows (87%) will continue to either achieve the BRE's 27% VSC target; achieve the Acceptable Tolerance target appropriate to environments of elevated density; or retain VSC figures of at least 0.8x baseline values (a reduction that is considered acceptable to the BRE on the grounds that it would not be noticed by the room occupants / users).
- 12.100 Rooms served by these windows will all pass the BRE's NSL test. Impacts on daylight amenity of these windows and rooms is therefore negligible and Not Significant.
- 12.101 The remaining 30 windows serve (as a secondary window) 30 adjacent bedroom and living room from first floor upwards. On the basis that:
- Each of these 30 windows is a secondary window; the rooms are also served by a larger main window;
 - The main windows of these rooms achieve the BRE target or retain at least 0.8x baseline values;
 - These windows are all set into the mass building, and overlook a recessed balcony. This design feature of the Hallmark limits each window's view of the sky to both sides and above each window. The recessed balcony also has a column present which further limits the access of daylight; and
 - All of these rooms will pass the NSL test.
- 12.102 The impacts on these living rooms and bedrooms are therefore Not Significant.

12.103 Overall, the impact of the Proposed Development on daylight amenity of the Hallmark building is Not Significant.

4-Park Place

12.104 10 windows serving 10 assumed habitable rooms have been appraised. In the baseline condition, 6 of these windows do not achieve the Alternative VSC target, owing to their recessed position (which limits access of daylight to the window).

12.105 When assessed in the context of the Proposed Development,, 8 rooms (80%) of those appraised would pass the BRE's NSL test, experiencing negligible reductions in daylight distribution within the rooms. The remaining 2 rooms would experience Low magnitudes of change in daylight distribution.

12.106 Of the 10 windows appraised, 4 windows (40%) would continue to either achieve the BRE's 27% VSC target; achieve the Acceptable Tolerance target appropriate to environments of elevated density; or retain VSC figures of at least 0.8x baseline values (a reduction that is considered acceptable to the BRE on the grounds that it would not be noticed by the room occupants / users).

12.107 3 windows (30%) would experience a medium magnitude of change. Notwithstanding this magnitude of change, each of these windows achieves VSC values of between 20.5% and 21.3%, and is therefore only fractionally – and not materially – different from a window that achieves the 21.6% Alternative Target for VSC. Residual VSC levels are commensurate with an urban environment of existing and future high density. On the basis that these rooms would each pass the NSL test impacts are Not Significant.

12.108 3 windows, serving rooms which pass the NSL test, would not achieve the VSC alternative target, but magnitudes of change are Low.

12.109 Overall, impacts on 4 Park place are considered Minor adverse, and Not Significant.

Sunlight Amenity

Britton House

12.110 149 rooms served by 191 windows have been appraised.

12.111 Rooms served solely by windows facing more than 90 degrees from due south have not been appraised, on the basis that due to orientation they have limited expectation of direct sunlight.

12.112 In the Proposed Condition 148 rooms (99%) would achieve both the Winter and Annual sunlight targets (or at least the Acceptable Tolerance Alternative Target), or retain at least 0.8x baseline sunlight values. Impacts on sunlight amenity of these rooms is negligible and Not Significant.

12.113 The single remaining room (1%) on the ground floor of Britton House, assumed to be a living room and a bedroom) would achieve the winter sunlight target but not the annual sunlight target. The impact on the annual sunlight amenity of this room amounts to a Minor magnitude of change.

12.114 Notwithstanding the High sensitivity of this room, the reduction in APSH is small – 2% of APSH – and on that basis the Impact is Minor Adverse and therefore Not Significant.

12.115 The impact on sunlight amenity of Britton House overall is therefore considered to be Not Significant.

Jefferson Place

12.116 30 LKD rooms served by 136 windows have been appraised.

12.117 In accordance with the BRE Guidance, “*main living rooms of dwellings ... should be checked if they have a window facing within 90 degrees of due south*”. Further, the BRE Guidance notes that loss of light need not be analysed to bedrooms.

12.118 When assessed in the context of the Proposed Development,, 29 of the 30 LKDs appraised would achieve both the annual and winter sunlight targets. The remaining LKD, at ground floor level, would achieve 24% APSH, exceeding the Acceptable Tolerance target set for high density environments (and only just shy of the unmodified target of 25%), and experience no reduction in Winter sunlight amenity.

12.119 The impact of the Proposed Development on sunlight amenity of Jefferson House is therefore Not Significant.

The Hallmark

12.120 On the basis that all parts of the Proposed Development are located to the north of The Hallmark building, and the windows through which it will be seen are north west facing, the Proposed Development will have no impact on sunlight amenity of rooms within the Hallmark. The impact is therefore Not Significant.

4-park place

12.121 On the basis that all parts of the Proposed Development are located to the north of 4 Park place, and the windows through which it will be seen are north facing, the Proposed Development will have no impact on sunlight amenity of rooms within 4 Park Place. The impact is therefore Not Significant.

Mitigation Measures

12.122 There is no mitigation proposed.

Residual Effects

12.123 The residual effects arising from the Proposed Development are summarised in **Table 12.11** below.

Table 12.11 Summary of Residual Effects

Likely significant Effect	Receptor	Mitigation and monitoring	Residual Effect
Construction Phase			
Not Applicable			
Operational Phase			
Daylight Amenity	Britton House The Hallmark	None proposed	Non-Significant Reduction in Daylight Amenity
Daylight Amenity	Jefferson Place 4 Park Place	None proposed	Minor Adverse (Not Significant)
Sunlight Amenity	Britton House Jefferson Place The Hallmark 4 Park Place	None proposed	Non-Significant Reduction in Sunlight Amenity

Likely Significant Environmental Effects

Effect Interactions and Cumulative Effects

Daylight Amenity

Britton House

12.124 The massing of Lord Street development will, once constructed, largely obscure the massing of the Proposed Development as viewed from the windows and rooms of Britton House. In the Cumulative condition, impacts on daylight amenity of Britton House is attributable to the mass of the Lord Street.

Jefferson Place

12.125 There is a cumulative impact on the daylight amenity of Jefferson Place, with the massing of the Proposed Development, the Lord Street proposal and the 1 Park Place proposal all visible through the windows of Jefferson Place.

12.126 At the northern end of this receptor, the Lord Street proposal will be a significant influence on daylight amenity given its proximity to the windows of Jefferson Place. The massing of this neighbouring proposal, combined with the existing massing of the Hallmark Building, limit daylight received around the Site and elevate magnitudes of change in the Cumulative condition.

12.127 In the cumulative condition, of the 369 rooms appraised:

- The majority of rooms (263 rooms; 71%) would experience negligible reductions in NSL;
- 42 rooms (11%) would experience a Minor magnitude of change;
- 33 rooms (9%) would experience a Moderate magnitude of change; and
- 31 rooms (9%) would experience a Major magnitude of change. 12 of these rooms have a very limited view of the Site, and NSL impacts in the Cumulative condition are therefore a result of the proposed Lord Street development.

12.128 Cumulative impacts are therefore to a minority of this neighbouring building and, as identified above, are influenced by the presence of projecting balconies above windows serving LKDs. These factors, in accordance with the BRE Guidance, tend towards a Minor adverse impact on daylight amenity of Jefferson Place in the cumulative condition.

The Hallmark

12.129 There would be a cumulative impact on daylight amenity of the Hallmark building. On the basis that the windows of this neighbouring receptor do not overlook the Site directly, but do overlook the site of the proposed 1 Park Place development, the cumulative impact on daylight amenity is principally the result of this neighbouring proposal and added to by the Proposed Development.

12.130 In the cumulative condition, of the 178 rooms appraised:

- The significant majority of rooms (168 rooms; 94%) would experience negligible reductions in NSL;

- 10 rooms (6%) would experience a Major magnitude of change.

12.131 Cumulative impacts on daylight amenity would therefore be localised to a small minority of rooms which, identified above, are served by recessed windows with limited capacity to receive direct daylight. The recessed position of these windows, to form a balcony space, acts as an inherent limitation on direct daylight.

4-park place

12.132 In the Cumulative Condition, there is no Cumulative impact on the daylight amenity of 4 Park Place.

12.133 The massing of the Proposed Development will obscure the massing of the Lord Street Development, and the impact of the 1 Park Place development is on the south facing windows and rooms (opposite, and separate, to those north facing windows and rooms affected by the Proposed Development).

12.134 Impacts on the proposed buildings on Lord Street and 1 Park Place – both of which have received planning permission but had not, at the date of Proximity’s inspection commenced on Site – have been qualitatively considered in the Cumulative Condition.

Lord Street Development

12.135 In the cumulative condition, the rooms of the unbuilt Lord Street development are unlikely to experience any significant impacts.

12.136 On the basis that its windows do not overlook the Site directly, its windows would pass the 25 degree block spacing test of the BRE Guidance, meaning that it is unlikely to experience significant impacts on daylight amenity.

1 Park Place Development

12.137 In the cumulative condition, the Site-facing rooms of the unbuilt 1 Park Place development are unlikely to experience any significant impacts.

12.138 Whilst the Proposed Development will be seen through its windows, the separation distance from the Site and the availability of daylight over the low-rise massing around the Proposed Development means that significant impacts on daylight amenity are unlikely.

Sunlight Amenity

12.139 There would be no cumulative impact on sunlight amenity to 4 Park Place, Hallmark and the future 1 Park Place development, on the basis that the Proposed Development is located to the north of these neighbouring buildings.

12.140 Windows of the future Lord Street Development through which the Proposed Development will be seen are north-west facing. On the basis that they are more than 90 degrees from due south, in accordance with the BRE Guidance these have limitation potential for direct sunlight and need not be appraised. The south facing windows of the Lord Street development serve either circulation space or are secondary windows to bedrooms.

- 12.141 On that basis, impacts of the Proposed Development on sunlight amenity of the future Lord Street development are unlikely to be significant.
- 12.142 Jefferson Place would experience a negligible cumulative impact. Impacts on 29 of the 30 LKD rooms appraised would remain as previously identified. The remaining LKD room would experience a moderate magnitude of change to winter sunlight amenity, however in practice this amounts to 1% difference compared to the Proposed Condition. On that basis there is no significant cumulative impact.
- 12.143 There would be an uplift in impact to sunlight amenity of Britton House in the cumulative condition. On the basis that the site of the proposed Lord Street development is located between the Site and Britton House, these impacts are the result of the Lord Street scheme rather than a cumulative impact.



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Chapter 13: Wind Microclimate

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13. WIND MICROCLIMATE

Introduction

13.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to Wind Microclimate. This Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.

13.2 This chapter is supported by the following technical appendices:

- **Appendix 13.1:** Wind Microclimate Technical Report. 2910468rep1v5 dated 15 May 2024.

Competence

13.3 This ES chapter was written by Liyana Arif, BEng (Hons) in Aerospace Engineering with proficiency in Computational Fluid Dynamics (CFD) analysis for wind microclimate study.

13.4 The chapter was reviewed by Alex Turpitt, who has an MEng (Hons) in Aerospace Engineering and has specialised in wind engineering for 15 years. Alex gained experience in wind tunnel and instrumentation operation before building technical expertise in all aspects of wind engineering including wind microclimate and wind loading. Alex has acted as technical lead for many prominent projects worldwide including tall buildings, stadia, masterplan developments and special structures. Alex has also led wind microclimate studies for 100+ EIA projects throughout the UK.

Legislation and Policy Context

Legislation Context

13.5 There are no legislative policies relating to the assessment of environmental wind flows in the built environment.

National Planning Policy

13.6 The following national planning policies are relevant to the Proposed Development:

National Planning Policy Framework

13.7 There are no legislative policies relating to the assessment of environmental wind flows in the built environment.

National Planning Practice Guidance

- Policy C1, paragraph 41, of the National Design Guide states that a new development '*enhances positive qualities and improves negative ones. Some features are physical, including: "environment – including landscape and visual impact, microclimate, orientation, flood risk, noise, air and water quality*'.

- Policy B1, paragraph 71, of the National Design Guide states that ‘Proposals for tall buildings (and other buildings with a significantly larger scale or bulk than their surroundings) require special consideration. This includes their location and siting; relationship to context; impact on local character, views and sight lines; composition - how they meet the ground and the sky; and environmental impacts, such as sunlight, daylight, overshadowing and wind. These need to be resolved satisfactorily in relation to the context and local character’.

Local Planning Policy

13.8 The following local planning policies are relevant to the Proposed Development:

Manchester’s Local Development Framework, Core Strategy Development Plan Document

- Policy EN 2 Tall Buildings, paragraph 12.14, states ‘Tall buildings by their very nature can dominate the street scene and be highly visible over long distances. They can also have an impact on the local micro-climatic conditions, for example, by creating wind tunnels. It is for these reasons that it is considered particularly important that they are designed to the highest quality, both in terms of appearance and their impact on the functioning of surrounding space’.

Assessment Methodology and Significance Criteria

13.9 This section presents the methodology used to assess the potential effects of the Proposed Development in relation to Wind Microclimate.

Consultation

13.10 0 presents a summary of the comments raised in the Council’s EIA Scoping Opinion and other discussions with relevant consultees with respect to Wind Microclimate.

Table 13.1 Summary of Comments Raised in the Scoping Opinion

Consultee	Comment	Response
MCC Scoping Opinion	It is not agreed that wind can be scoped out of the EIA. Given the magnitude of the development the EIA should consider the impact of the development on local wind conditions including cumulative impacts.	Chapter 13: Wind Microclimate and associated appendix assesses the potential effect to the wind microclimate.

Assessment Methodology

Overview

13.11 The full methodology for the CFD study is set out in **Appendix 13.1 Wind Microclimate Report**.

13.12 The microclimate of any development is the distinctive climate of a small-scale area. The weather variables in a microclimate, such as wind, may be different to the conditions prevailing over the area as a whole. This assessment considers the wind conditions that would result upon the introduction of the Proposed Development into the study area.

13.13 The current assessment considers the study area to comprise the Site plus buildings within a radius of 450 metres from the centre of the Site.

13.14 The assessment predicts the proportion of time an area will experience wind speeds in excess of threshold values for safety as well as a series of typical activities such as walking, waiting and outdoor sitting. It can therefore be shown within the various parts of a new development proposal and the adjacent developments, whether wind conditions are suitable or unsuitable, and whether design adjustment or mitigation measures are required.

Computational Fluids Dynamic

13.15 CFD modelling has employed a steady-state Reynolds-Averaged Navier–Stokes (RANS) approach. This method employs turbulence models to approximate the magnitude of velocity fluctuations about the average wind speeds predicted, in order to derive an estimation of the effect of gusts. Full details on this approach are provided in **Appendix 13.1**, salient highlights of this approach are:

- The Shear Stress Transport k- ω turbulence model has been employed.
- Architectural features of 0.5 metres or more have been captured within the geometry modelled.
- Cell sizes of as small as 0.2 metres were utilised to capture flow behaviour in critical locations.
- The region of interest closest to the ground (1.5 metres) incorporated 5 layers of cells.

13.16 Modelling has derived mean and gust equivalent mean wind speeds, in accordance with best industry practice. In doing so 16 wind directions were assessed, in 22.5° increments.

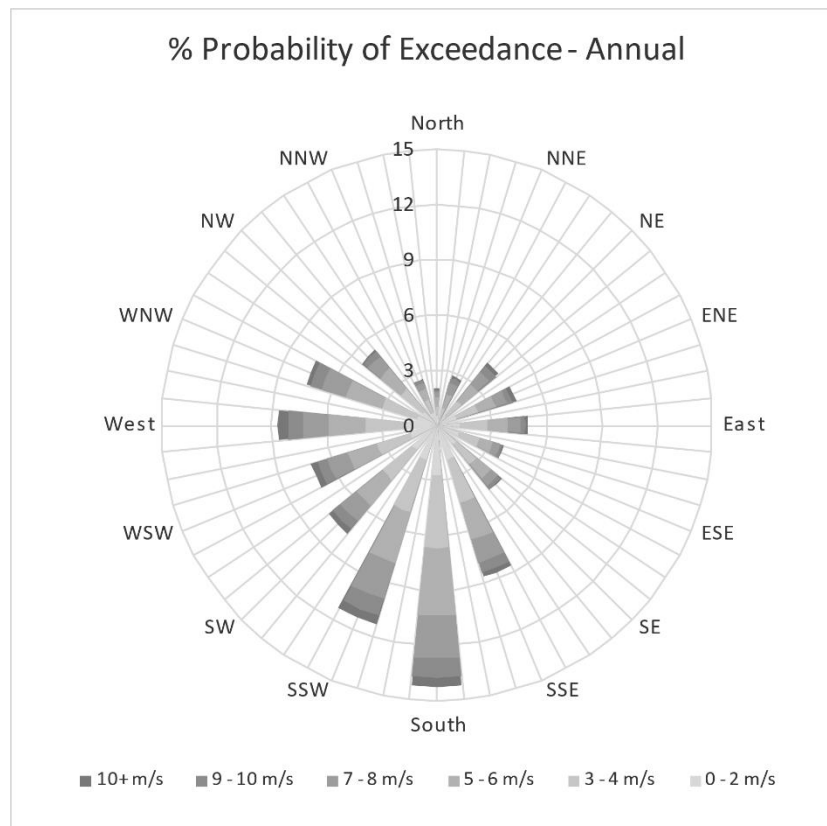
Site Wind Climate

13.17 Wind environment studies require that wind speed data obtained from a measurement station be transposed to the site of interest. The measurement station of choice for the assessment is that at Manchester Airport.

13.18 The wind speed history (for a period of 20 years), provided by weather organisations such as the UK Met Office or the National Oceanic & Atmospheric Administration, is reformatted into the number of observations of wind speeds within each of several wind speed ranges, for each wind direction and for each month of the year. The months are grouped into seasons and a Weibull distribution is fitted to the wind speed distribution for each wind direction, for each season. The resulting weather centre wind data is transposed to open country terrain at sea-level, accounting for upwind terrain. The open country wind data is then transposed to reference height at the Site.

13.19 The annual cumulative wind speed probability distribution at site is shown below:

Figure 13.1 Annual Cumulative Wind Speed



Assessment Criteria

- 13.20 The industry standard criteria for wind microclimate assessments are commonly referred to in the UK as the Lawson Criteria after one of their main authors. As with most other leading practitioners, ArcAero use the London Docklands Development Corporation (LDDC) variant of the Lawson Criteria.
- 13.21 The LDDC variant applies a single percentage probability of exceedance of a range of wind speeds and associates different wind speeds to different types of usage. This offers a relatively simple and practical manner for the assessment of wind comfort and safety.
- 13.22 A wind speed of 15 m/s occurring once per year is rated as unsuitable, in terms of safety, with the potential to de-stabilise the less able members of the public including the elderly, cyclists and children.
- 13.23 The LDDC variant of the Lawson Criteria prescribes that wind conditions are suitable for a given activity when the threshold is exceeded no more than 5% of the time. The value of 5% has been established as giving a reasonable allowance for extreme and relatively infrequent winds that are tolerable within each category.
- 13.24 Where certain activities are year-round, such as walking, entrance use or for waiting areas, comfort ratings are required to be met in all seasons. For more seasonal activities, such as outdoor recreation or for sitting spaces, the assessment focuses on relevant seasons where the expectation will exist

for conditions to be suitable. The LDDC comfort threshold wind speed values are presented in **Table 13.2** below.

Table 13.2 LDDC Variant of Lawson Comfort Criteria

Comfort category	5% Exceedance Threshold	Description
Long-term sitting	4 m/s	Light breezes desired for outdoor restaurants and seating areas where one can read a paper or comfortably sit for long periods.
Short-term sitting/standing	6 m/s	Gentle breezes suitable for main building entrances, pick-up/drop-off points and bus stops.
Strolling	8 m/s	Moderate breezes that would be appropriate for strolling along a city/town centre street, plaza or park.
Fast walking	10 m/s	Higher speeds that can be tolerated if one's objective is to walk, run or cycle without lingering.
Uncomfortable	>10 m/s	Winds considered a nuisance for most activities.

13.25 The assessment takes full account of seasonal variations in wind conditions and pedestrian activities. For example, conditions for recreational activities focus on summer (June, July, August), but also consider spring (March, April, May) and autumn (September, October, November), while conditions for pedestrian thoroughfare, access or waiting (e.g. bus stops) consider all seasons, with winter (December, January, February) usually being the critical season. The assessment is summarised in terms of suitability for various activities. The activities considered, and their relation to the Lawson Comfort Criteria are summarised in **Table 13.3**.

Table 13.3 Suitability Assessment Criteria

Threshold Wind Speed [m/s]	Comfort Rating / Activity		Qualifying Comments
4	C4	Long-term sitting	Reading a newspaper and eating and drinking
6	C3	Short term sitting	Appropriate for bus stops, window shopping and building entrances.
8	C2	Strolling	General areas of walking and sightseeing.
10	C1	Walking	Local areas around tall buildings where people are not likely to linger

Significance Criteria

13.26 During construction, receptors are defined to be pedestrians and cyclists on the road around the Site and construction workers within the Site. During construction, sensitivity to wind is typically reduced

relative to a typical area without building work taking place. All receptors are considered to be of medium sensitivity to the local wind microclimate conditions and are given an equal weighting.

- 13.27 For the scenario with the Proposed Development in place, receptors are defined to be persons on foot, seated or travelling by bicycle within the Proposed Development and surrounding areas. An unacceptable microclimate exists when either an exceedance of the safety criteria exists, or when the comfort criteria is not met for the existing / planned use at a receptor. All receptors are considered to be highly sensitive to the local wind microclimate conditions and are given an equal weighting.
- 13.28 Effect magnitude is defined by the severity of the deviation from the standards set out by the Lawson Criteria. Exceedances of the safety criteria are deemed to be the most critical, given their potential effect on pedestrians' wellbeing, i.e. they may be unduly exposed to the potential for harm. Such effects are thus deemed to have a high impact magnitude. Where the comfort criteria are not met, i.e. where the conditions are too windy for a particular receptor to be sufficiently comfortable for existing or planned pedestrian uses and thus inconvenient but not unsafe, such effects are deemed to be of medium impact magnitude. Where the comfort criteria are marginally exceeded, to the extent that the exceedance is expected to be perceptible, but tolerable, such effects are deemed to be of low impact magnitude.
- 13.29 On this basis, therefore, exceedances of the safety criteria are considered to be of major magnitude, while exceedances of the comfort criteria are considered to be of moderate or minor magnitude. Where the Proposed Development 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, this will be considered negligible.
- 13.30 Major and moderate effects are considered to be significant in EIA terms. Minor effects, as noted above being tolerable, are not considered to be significant.
- 13.31 The following are the significance criteria used to assess likely wind conditions as a result of the introduction of the Proposed Development:
- **Major Beneficial:** Any effect on wind conditions which is expected to improve pedestrian safety, namely an improvement in conditions from being considered unsafe to being considered safe.
 - **Moderate Beneficial:** Any effect on wind conditions which is expected to improve pedestrian comfort from unsuitable to suitable for planned activities.
 - **Minor Beneficial:** Any effect on wind conditions which is expected to improve pedestrian comfort from unsuitable to marginal / tolerable for planned activities, or from marginal/tolerable to suitable for planned activities.
 - **Negligible:** Any effect that does not alter the suitability of existing wind conditions with respect to planned activities.
 - **Minor Adverse:** Any effect on wind conditions which worsens pedestrian comfort from suitable to marginal / tolerable for planned activities, or from marginal/tolerable to unsuitable for planned activities.

- **Moderate Adverse:** Any effect on wind conditions that worsens pedestrian comfort from suitable to unsuitable for planned activities.
- **Major Adverse:** Any effect on wind conditions adversely affecting pedestrian safety, namely a deterioration in conditions from being considered safe to being considered unsafe.

Scenarios Assessed

13.32 The following scenarios were modelled in CFD:

- Existing Site Conditions (Baseline);
- Proposed Development in the context of Existing Surroundings; and
- Proposed Development in the context of Cumulative Surroundings.

Limitations and Assumptions

13.33 The studies have been carried out computationally via computational fluid dynamics (CFD) methods. The particular method adopted employs turbulence models to approximate the magnitude of velocity fluctuations about the average wind speeds predicted, in order to derive an estimation of the effect of gusts. ArcAero conducts regular validation of proprietary CFD processes against experimental results.

13.34 During the construction stage, the existing built form within the Site will be demolished and construction of the Proposed Development will occur gradually, across the entire Site. In the first instance when the demolition of the existing built form occurs, there is considered to be limited opportunity for accelerated wind due to channelling or downdraughts. Nonetheless, as the built form (specifically the massing) of the Proposed Development gradually occurs there will be instances where accelerated wind conditions may exist, albeit these will be gradual over the course of the construction stage. As the massing nears completion, the level of effect is likely to be similar to that being considered/ assessed for the operational stage.

13.35 Assuming the timely implementation of mitigation, the resulting level of effect during the construction stage would be the same as or less than reported at the operational stage. Therefore, it is considered that an assessment of operational effects would represent an appropriate approximation of a 'worst-case' scenario during the construction stage. Therefore, for the purpose of the ES, only the operational stage of the Proposed Development has been modelled and assessed.

Baseline Conditions

13.36 Conditions for Existing Site Conditions are presented within Figure 4.1 (for safety), Figure 4.2 (worst-seasonal comfort) and Figure 4.3 (summer comfort) of **Appendix 13.1**.

13.37 Wind conditions within and around the existing Site satisfy the criteria for pedestrian safety.

13.38 Wind conditions within the Site and immediate surrounding areas are generally suitable for at least short-term standing or better with small pockets of strolling conditions further to the east and

northeast of the Site. Thus, wind conditions are comfortable for intended uses as pedestrian ingress/ egress at all entrances, and comfortable thoroughfare use in and around the Site.

Identification and Evaluation of Significant Effects

- 13.39 Conditions for the Proposed Development within Existing Surrounds are presented within Figures 4.4 & 4.5 (for safety), Figures 4.6 & 4.7 (worst-seasonal comfort) and Figures 4.8 & 4.9 (summer comfort) of **Appendix 13.1**.
- 13.40 Following the introduction of Proposed Development, wind conditions within the Site and surrounding areas satisfy the safety criteria for wind at ground level. This is a **Negligible effect**.
- 13.41 The simulations executed were carried out in the absence of any soft landscaping proposals on the level 17 terrace, and are therefore over-conservative in this area. A small exceedance of the safety criteria is predicted near the western edge of the terrace. The baseline soft landscaping scheme provided to Architectural Aerodynamics on 29-11-2023 is sufficient to ameliorate any potential exceedances of the safety criteria. This is therefore expected to represent a **Negligible effect**.
- 13.42 Wind conditions on thoroughfares within the Site remain suitable for pedestrian strolling or better and are thus comfortable for pedestrian access to, and passage through, the Site. This is a **Negligible effect**.
- 13.43 Wind conditions at all entrances to the Proposed Development remain suitable for short-term standing or better and thus comfortable for pedestrian ingress/ egress. This is a **Negligible effect**.
- 13.44 The simulations executed were carried out in the absence of any soft landscaping proposals on the level 17 terrace, and would thus represent a worst-case scenario. As shown, the conditions on the terrace are largely suitable for strolling during the Winter and short-term sitting during the Summer in the absence of landscaping. The baseline soft landscaping scheme provided to Architectural Aerodynamics on 29-11-2023 is sufficient to ameliorate any potential exceedances of the comfort criteria on the level 17 terrace and ensure conditions are acceptable. This would therefore represent a **Negligible effect**.
- 13.45 Within the surrounding areas, wind conditions remain generally suitable for at least short-term standing or better all year round, with localised region of strolling conditions present along the Cheetham Hill Road, Gibson Place, and Carnarvon Street. This still meets comfort criteria for a leisure thoroughfare through the area. Thus, all entrances and thoroughfares in the surrounding area are comfortable for their intended uses. This is a **Negligible effect**.

Mitigation Measures

- 13.46 The soft landscaping proposals have been assessed qualitatively following the execution of the simulations runs for the building massing and will be sufficient to ameliorate any potential exceedances of the comfort or safety criteria. No further dedicated wind mitigation is required. The soft landscaping scheme is presented in **Figure 4.16**.

- 13.47 Beyond the landscaping proposals for the rooftop amenity terrace that are already incorporated, no mitigation measures are required for the Proposed Development.

Residual Effects and Monitoring

- 13.48 The residual effects arising from the Proposed Development are summarised in **Table 13.4** below.

Table 13.4 Summary of Residual Effects

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Scoped out of assessment			
Operational Phase			
Adherence to Wind Safety Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met
Adherence to Wind Safety Criteria	Private Amenity Space	Baseline landscaping scheme	Negligible – safety criteria met
Adherence to Wind Comfort Criteria	Ground Level (on and off-site)	Not required	Negligible – comfort criteria met
Adherence to Wind Comfort Criteria	Private Amenity Space	Baseline landscaping scheme	Negligible – comfort criteria met

Summary of Residual Impacts

Construction Phase

- 13.49 The construction phase is not qualitatively assessed as it is assumed that the assessment for the operational phase would represent the worst-case scenario.

Operational Phase

- 13.50 The overall impact of the operational scheme is assessed as being negligible and therefore not significant.
- 13.51 The residual effects of the Proposed Development during the construction and operational phases are summarised in **Table 13.6** above.

Cumulative Effects

- 13.52 Conditions for the Proposed Development within Existing Surrounds are presented within Figures 4.10 & 4.11 (for safety), Figures 4.12 & 4.13 (worst-seasonal comfort) and Figures 4.14 & 4.15 (summer comfort) of Appendix 13.1.
- 13.53 The committed developments that were considered in this assessment are:
- Former Boddingtons Brewery (132416/FO/2021);
 - Old Brewery Gardens (118831/FO/2018);
 - Land Bounded by Cheetham Hill Road, Lord Street & Fernie Street Manchester (113914/FO/2016); and
 - 1 Park Place (138302/FO/2023).
- 13.54 Following the introduction of cumulative surrounds, wind conditions from both a safety and a comfort perspective remain materially similar as the proposed development within the existing surrounds scenario. Correspondingly, acceptable wind conditions exist at ground level and the Level 17 roof terrace. This is a Negligible effect.

Summary

- 13.55 A study has been carried out to assess the wind microclimate for the proposed 33-41 Cheetham Hill Road development in Manchester, UK.
- 13.56 The study has employed computational modelling (CFD) to predict the strength of wind speeds that will occur following the introduction of the Proposed Development.
- 13.57 This suitability of wind conditions is determined using the widely accepted Lawson Criteria to determine the suitability of wind conditions on site and the impact of the Proposed Development on the surrounding area.
- 13.58 Wind conditions within and around the existing site are predicted to meet the safety criteria for wind and comfortable for intended uses.

- 13.59 Upon the introduction of Proposed Development within existing surrounds, both on the ground and terrace level, wind conditions are expected to remain safe and suitable for intended uses within and around the site.
- 13.60 Upon the introduction of the cumulative surrounds, wind safety and comfort conditions remain materially similar to that of the proposed development within existing surround



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Chapter 14: Summary of Residual Impacts

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14. SUMMARY OF RESIDUAL IMPACTS

Introduction

- 14.1 This chapter of the ES provides a summary of the residual effects of the Proposed Development.
- 14.2 Residual impacts are defined as those impacts which remain following the implementation of identified mitigation measures.
- 14.3 The formulation of the Proposed Development has been an iterative process undertaken in parallel with the assessment of environmental effects. As a consequence, some measures to mitigate potentially significant adverse effects have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset such effects.
- 14.4 However, where it has not been possible to incorporate mitigation measures into the iterative design process, mitigation may be achieved by one of the following means:
- Mitigation through controls on demolition and construction activities; or
 - Mitigation to be applied through ongoing management and monitoring once the Proposed Development commences; or
 - During the operation of the Proposed Development.
- 14.5 Each technical ES Chapter includes detailed consideration of the beneficial and adverse residual impacts anticipated as a result of the construction and operation of the Proposed Development. The general criteria applied to determine the significance of the residual impacts is set out in **Chapter 5: EIA Methodology and Significance Criteria** of this ES, with topic-specific methodologies presented in each technical chapter.

Table 141 Summary of Residual Effects During Construction

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
Chapter 7: Climate Change			
Whole Life Embodied Emissions	The Global Climate System (high)	Possible enhancements : materials with lower embodied carbon and transport minimisations	Moderate – Minor (Not Significant)
Chapter 8: Built Heritage			
Indirect effect on setting	Former Synagogue	Hoarding	Minor Adverse (temporary) (Not Significant)
Indirect effect on setting	Roman Catholic Church of St Chad and Presbytery St Chads Presbytery	Hoarding	Negligible to minor adverse (temporary) (Not Significant)
Indirect effect on setting	Churchyard Walls of Roman Catholic Church of St Chad	N/A	Neutral (Not Significant)
Indirect effect on setting	Former Free Library	N/A	Neutral (Not Significant)
Indirect effect on setting	Knowsley Hotel	N/A	Neutral (Not Significant)
Indirect effect on setting	Cheetham Town Hall (Former)	N/A	Neutral (Not Significant)
Indirect effect on setting	Cheetham Town Hall Annexe (Former)	N/A	Negligible (Not Significant)
Indirect effect on setting	Victoria Station including Concourse to Rear with Restaurant and Booking Hall	N/A	Neutral (Not Significant)
Indirect effect on setting	Cathedral Conservation Area	N/A	Neutral

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
			(Not Significant)
Indirect effect on setting	Shudehill Conservation Area	N/A	Neutral (Not Significant)
Chapter 9: Human Health			
Socioeconomics - Disruption to local area due to movement of materials etc.	Local economy	Best practice mitigation measures implemented by way of CEMP	Negligible (Not Significant)
Socio-economics - Employment gain for construction industry	Local labour market / economy	Nothing further to embedded mitigation	Minor Beneficial (Not Significant)Not Significant
Contaminated land	Construction workers / off-site residential properties / off-site commercial uses	Intrusive ground investigation, remedial measures and ground gas protection (if required).	Negligible to minor adverse (Not Significant)
Air Quality	Construction workers / off-site residential properties / off-site commercial uses	Implementation of the CEMP / DMP	Negligible to minor adverse (Not Significant)
Noise and Vibration	Construction workers / off-site residential properties / off-site commercial uses	Implementation of the CEMP	Minor to moderate adverse (Not Significant)
Traffic and Transport – pedestrian delay and amenity	Highways network, pedestrians and road users	Implementation of the CEMP / CTMP	Negligible to minor adverse (Not Significant)
Traffic and transport – accidents and safety	Highways network, pedestrians and road users	Implementation of the CEMP / CTMP	Negligible to minor adverse (Not Significant)
Townscape and Visual	Townscape Character	Implementation of the CEMP	Moderate adverse (significant)
Townscape and Visual	Viewpoints 1-14	Implementation of the CEMP	Moderate adverse (significant)
Chapter 10: TVIA			
Effects of demolition, clearance and construction on Townscape Character	The Townscape Character Zones in and around the Proposed Development Site namely: Green Quarter, Former Boddington	Erection of hoarding	Moderate adverse (significant)

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
	Brewery, Medieval Core and Cheetham		
Effects of demolition, clearance, and construction on views	RVPs	Erection of hoarding	Moderate adverse (significant) (temporary)
Chapter 11: Socio-Economics			
Disruption to local area due to movement of materials etc.	Local economy	Best practice mitigation measures implemented by way of CEMP	Negligible (Not Significant)
Employment gain for construction industry	Local labour market / economy	Nothing further to embedded mitigation	Minor Beneficial (Not Significant)
Chapter 12: Sunlight, Daylight and Overshadowing			
Construction Phase is scoped out of this assessment.			
Chapter 13: Wind Microclimate			
The construction phase is not qualitatively assessed as it is assumed that the assessment for the operational phase would represent the worst-case scenario.			

Table 14.2 Summary of Residual Effects during Operational Phase

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
Chapter 7: Climate Change			
Whole Life Embodied Emissions	The Global Climate System (High)	Possible enhancements : materials with lower embodied carbon and transport minimisations	Moderate – Minor (Not Significant)
Operation Building Emissions	The Global Climate System (high)	Possible enhancements : maximising thermal performance, efficient building systems and low flow fixtures	Moderate – Minor (Not Significant)
Chapter 8: Built Heritage			

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
Indirect effect on setting	Roman Catholic Church of St Chad and Presbytery St Chads Presbytery	N/A	Negligible to minor adverse (Not Significant)
Indirect effect on setting	Churchyard Walls of Roman Catholic Church of St Chad	N/A	Neutral (Not Significant)
Indirect effect on setting	Former Free Library	N/A	Neutral (Not Significant)
Indirect effect on setting	Knowsley Hotel	N/A	Neutral (Not Significant)
Indirect effect on setting	Cheetham Town Hall (Former)	N/A	Neutral (Not Significant)
Indirect effect on setting	Cheetham Town Hall Annexe (Former)	N/A	Neutral (Not Significant)
Indirect effect on setting	Victoria Station including Concourse to Rear with Restaurant and Booking Hall	N/A	Neutral (Not Significant)
Indirect effect on setting	Cathedral Conservation Area	N/A	Neutral (Not Significant)
Indirect effect on setting	Shudehill Conservation Area	N/A	Neutral (Not Significant)
Chapter 9: Human Health			
Socio-economics – Local Population	Local housing market, health determinants, deprivation and local economy	Local Labour Agreement	Minor beneficial (Not Significant)
Socioeconomics – Local Employment	Employers/ employees	None proposed	Moderate beneficial (Not Significant)

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
Air quality – Site Suitability	Future residents / site users	Implementation of Travel Plan	Negligible (Not Significant)
Air Quality – Operational Related Effects	Future residents and offsite receptors	Electric heating	Negligible (Not Significant)
Noise and Vibration – Internal Noise	Future residents	Application of noise emission limits to operational plant and machinery be secured by planning condition.	Negligible (Not Significant)
Noise and Vibration – External Private Amenity Space	Future residents	Use of amenity space to be secured through planning condition.	Negligible (Not Significant)
Noise and Vibration – Development Generated Noise	Future residents and offsite receptor	Application of noise emission limits to operational plant and machinery be secured by planning condition. Updated noise assessment based on final end users for commercial floorspace and private amenity space	Negligible to minor adverse (Not Significant)
Traffic and Transport – Health benefits of car-free development	Future residents	Implementation of a Travel Plan	Minor beneficial (Not Significant)
Traffic and Transport – vehicle movements	Highways Network	Implementation of a Travel Plan including details for Delivery and Servicing Management	Negligible (Not Significant)
Wind - Adherence to Wind Safety Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met (Not Significant)
Wind - Adherence to Wind Safety Criteria	Private Amenity Space	None proposed further to embedded mitigation	Negligible – safety criteria met (Not Significant)
Wind - Adherence to Wind Comfort Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met (Not Significant)
Wind - Adherence to Wind Comfort Criteria	Private Amenity Space	None proposed further to embedded mitigation	Negligible – safety criteria met (Not Significant)

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
Daylight, Sunlight and Overshadowing	Britton House and The Hallmark – Daylight Amenity	None proposed further to embedded mitigation	Non-Significant Reduction in Daylight Amenity (Not Significant)
Daylight, Sunlight and Overshadowing	Jefferson Place and 4 Park Place – Daylight Amenity	None proposed further to embedded mitigation	Minor adverse (Not Significant)
Daylight, Sunlight and Overshadowing	Britton House, Jefferson Place, The Hallmark, and 4 Park Place – Sunlight Amenity	None proposed further to embedded mitigation	Non-Significant Reduction in Daylight Amenity (Not Significant)
Townscape and Visual	Townscape Character	None proposed further to embedded mitigation	No impact (Not Significant) to moderate beneficial (significant)
Townscape and Visual	Viewpoints 1-14	None proposed further to embedded mitigation	No impact (Not Significant) to moderate beneficial (significant)
Internal and external amenity space	Future residents	None proposed further to embedded mitigation	No impact (Not Significant)

Chapter 10: TVIA

The TVIA has been carried out based on the assumption that all the necessary mitigation measures have been accounted for in the design process. The images for selected viewpoints illustrated in Appendix 10.2 represent the accurate definition of the location and mass of the component parts of the Proposed Development. The predicted significance of effect values is therefore the same for each representative viewpoints as the residual effect values and are illustrated in **Table 14.3 below**

Chapter 11: Socio-Economics

Local Population	Local housing market, health determinants, deprivation and local economy	Nothing additional to embedded mitigation	Minor Beneficial effect rating on immediate area (Not Significant)
Local employment	Employers/ employees	Nothing additional to embedded mitigation but beneficial effects may be enhanced through promotion of local employment	Moderate Beneficial long-term effect on immediate area (Not Significant)
Provision of business space	Local employment	Nothing additional to embedded mitigation	Minor Beneficial (Not Significant)

Likely significant effect	Receptor (and Sensitivity)	Mitigation	Residual Effect
Chapter 12: Sunlight, Daylight and Overshadowing			
Daylight, Sunlight and Overshadowing	Britton House and The Hallmark – Daylight Amenity	None proposed further to embedded mitigation	Non-Significant Reduction in Daylight Amenity
Daylight, Sunlight and Overshadowing	Jefferson Place and 4 Park Place – Daylight Amenity	None proposed further to embedded mitigation	Minor adverse (Not Significant)
Daylight, Sunlight and Overshadowing	Britton House, Jefferson Place, The Hallmark, and 4 Park Place – Sunlight Amenity	None proposed further to embedded mitigation	Non-Significant Reduction in Daylight Amenity
Chapter 13: Wind Microclimate			
Adherence to Wind Safety Criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met (Not Significant)
Adherence to Wind Safety Criteria	Private Amenity Space	None further to embedded mitigation	Negligible – safety criteria met (Not Significant)
Adherence to wind comfort criteria	Ground Level (on and off-site)	Not required	Negligible – safety criteria met (Not Significant)
Adherence to wind comfort criteria	Private Amenity Space	one further to embedded mitigation	Negligible – safety criteria met (Not Significant)

Table 14.3 Summary of TVIA Residual and Committed Cumulative Schemes Impact Assessment (during the Operational Phase)

Location	Development only (residual impact)	EIA significance	Relevant cumulative scheme	Cumulative effect
1 Cheetham Hill Rd Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Minor beneficial Minor beneficial Neg beneficial	Not Significant	Fernie street Boddingtons brewery	Negligible / beneficial

2 Cheetham Hill Rd	Low Low Mod beneficial Mod beneficial Min beneficial	Not Significant	Fernie street	Minor beneficial
3 Cheetham Hill Rd	Low Low Mod beneficial Mod beneficial Mod beneficial Min beneficial	Significant Not significant	Fernie street Boddingtons brewery	Minor beneficial
4 Cheetham Hill Rd	Low Low Major beneficial Major beneficial Mod beneficial	Significant	Fernie street	Minor beneficial
5 Cheetham Hill Rd	Low Low Major beneficial Major beneficial Mod beneficial	Significant	None	None
6 Cheetham Hill Rd	Low Low Major beneficial Major beneficial Mod beneficial	Significant	None	None

7 Ring Road Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Minor beneficial Minor beneficial Negligible beneficial	Not significant	None	None
8 Ring Road Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	No impact	Not significant	Fernie Street	No impact
9 New Bridge Street Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Moderate beneficial Moderate beneficial Minor beneficial	Not significant	Fernie Street	Minor beneficial
10 Bury New Road Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Moderate beneficial Moderate beneficial Minor beneficial	Not significant	Boddingtons Brewery	No impact
11 Trinity Way Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Minor Minor Negligible beneficial	Not significant	Boddingtons Brewery Dantzie Street	Negligible beneficial

12 Deansgate Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	High High Negligible beneficial Negligible beneficial Minor beneficial	Not significant	Boddingtons Brewery	Negligible beneficial
13 Carnvaron Street Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	Low Low Mod beneficial Mod beneficial Minor Beneficial	Not significant	Fernie street	Minor beneficial
14 Hunts Bank Approach Sensitivity (VR) Sensitivity (T) Magnitude (VR) Magnitude (T) Significance of effect	No impact	Not significant	None	None

Summary of Residual Effects

- 14.7 A comprehensive and robust assessment of the potential impacts of the demolition, construction and operation phases of the Proposed Development has been undertaken. Further to this, a range of appropriate mitigation measures have been proposed to minimise any likely significant effects.

Summary of Residual Effects during the Construction Phase:

- 14.8 After the implementation of a range of mitigation measures, there is the potential for significant adverse residual effects during the construction phase as follows:
- Human Health: potential significant adverse effect to townscape and visual receptors (Moderate Adverse). Mitigation measures will use high quality hoardings to limit unsightly visual impacts during the construction phase at street level. These will secure and protect the site and prevent views of an unsightly construction site. These can be secured via a CEMP. Effects will be temporary and cease upon completion of the construction phase.

Summary of Residual Effects during the Operational Phase:

- 14.9 After the implementation of a range of additional mitigation measures, there is the potential for significant beneficial residual effects during the operational phase as follows:
- Townscape and Visual Impact in relation to:
 - 3 Cheetham Hill Road (Moderate Beneficial – townscape receptors)
 - 4 Cheetham Hill Road (Moderate Beneficial – townscape and visual receptors)
 - 5 Cheetham Hill Road (Moderate Beneficial - townscape and visual receptors)
 - 6 Cheetham Hill Road (Moderate Beneficial- townscape and visual receptors)
 - Human Health: potential significant beneficial (no impact to moderate) effect to townscape and visual receptors as a result of the operational Proposed Development. A summary of the residual effects during the construction and operational phases are also provided in each technical chapter, **Chapter 7 – 13**.



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Chapter 15: Interaction of Effects

Iceni Projects Limited on
behalf of ZX Cheetham Hill
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May 2024

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15. INTERACTION OF EFFECTS

- 15.1 A requirement of the EIA Regulations is to assess cumulative effects. Per paragraph 5(e) of Schedule 4, cumulative effects are generally considered to arise from the combination of effects from the Proposed Development and from other proposed or permitted developments in the vicinity, acting in conjunction to generate elevated levels of effects:

'A description of the likely significant effects of the development on the environment resulting from, inter alia: ... (e) the cumulation of effects with other existing and/ or approved projects...'

- 15.2 Regulation 4(2)(e) of the EIA Regulations also requires, that the “interaction between the factors referred to in subparagraphs (a) to (d)” – that being the list of factors to be considered during the EIA process– should be identified, described and assessed.
- 15.3 As discussed in **Chapter 5 EIA Methodology**, two types of cumulative effects are assessed in the ES, discussed as follows.

Combined Effects

- 15.4 Combined effects (also referred to as ‘intra-project effects’) occur when two or more different environmental effects from the Proposed Development act together to add or neutralise the individual impacts to produce a different level of effect/ impact experienced by a receptor(s).
- 15.5 There is no published methodology for determining the significance of combined effects; therefore, judgement is necessarily qualitative and is based on professional judgment of the residual effects of the Development.
- 15.6 Having given consideration to the topics assessed within this ES it is not expected that there is likely to be any intra-project cumulative effects. There are no significant environmental effects that are considered to create new or worsened significant effects as a result of combination with another, nor are there any non-significant effects that are considered to become significant when combined with another.

Cumulative Effects

- 15.7 Cumulative effects (also referred to as ‘inter-project’ effects) consider the impact of the effects arising from the Proposed Development in conjunction with the effects arising from other proposed or committed developments; individually these effects may not be significant but, when considered together, could create a significant cumulative effect. The assessments for cumulative effects are considered within the technical chapters (**Chapters 7-13**) of this ES.
- 15.8 The list of cumulative schemes assessed in provided at **Appendix 5.1**.
- 15.9 Chapters 7 to 13 of this ES identify that there are no potential significant cumulative effects.