



Evan Kellie
PROPERTY SOLUTIONS

**Riverpark Road Trading Estate,
Manchester**

Environmental Statement – Volume 1

4 April 2025

Neo
9 Charlotte Street
Manchester
M1 4ET



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Author	Kelly Paddick MRTPI PIEMA
Checked By	Ellie Philcox MRTPI PIEMA
Issued	FINAL

1. Introduction

- 1.1 This Environment Statement (“ES”) has been prepared on behalf of our client, Kellen Homes and Great Places Housing Association (“the Applicant”), in respect of proposals to develop land at Riverpark Road Trading Estate in Newton Heath, Manchester (“the Site”). A Location Plan is included in **Appendix 1.1**.
- 1.2 The planning application to which this ES relates seeks full planning permission for the development of 498 residential dwellings (Planning Use Class C3) together with landscaping, sustainable drainage features, pedestrian footways, vehicular accesses and highways, parking provision and other associated works (hereafter referred to as “the Proposed Development”).
- 1.3 Further details in respect of the Site and the Proposed Development are set out in within **Chapter 2** and **Chapter 3** respectively.
- 1.4 When describing or refer to the proposals within this report, the term “Proposed Development” will be used, and is deemed to include all stages of construction and the operation of the development.

Background to this Environmental Statement

- 1.5 This ES sets out the findings of the Environmental Impact Assessment (“EIA”) of the Proposed Development that has been carried out pursuant to The Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the “EIA Regulations”).
- 1.6 The EIA process seeks to protect the environment by ensuring that a Local Planning Authority (“LPA”), when deciding whether to grant planning permission for a development which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision-making process.
- 1.7 The purpose of the EIA is to identify both the nature of the development and the environment within which it will take place in order to identify the likely significant environmental effects. This is undertaken by comparing the existing situation at the start of the work (baseline) with the situation once the proposals are in place and any associated effects during the construction of the development.
- 1.8 The ES for the Proposed Development considers the likely significant effects on the environment arising from the proposals during demolition, construction and operational phases and the cumulative impact with regards to committed developments at the time of the assessment.
- 1.9 The EIA Regulations 2017 require that any proposed development falling within the description of a ‘Schedule 2 development’ (as defined by the EIA Regulations), will be subject to an EIA where such development is likely to have ‘significant’ effects on the environment by virtue of such factors as its nature, size or location (Regulation 2(b)).
- 1.10 The Proposed Development falls under the category of “Infrastructure Projects – Urban Development Projects” (Schedule 2, 10. (b)) as described in the Regulations. The applicable threshold above which EIA is likely to be required is 5 hectares (ha) or the development includes more than 150 dwellings.
- 1.11 The Proposed Development exceeds the threshold set out in Schedule 2 10 (b) of the EIA Regulations as it comprises a residential-led development comprising 498 no. new dwellings.

EIA Screening

- 1.12 Regulation 6 of the 2017 EIA Regulations makes provision for a developer to request a ‘Screening Opinion’ from the LPA to ascertain whether an EIA is required if a development is classed as a Schedule 2 development. This decision is based on the likelihood of significant environmental effects arising in relation to the development proposals.
- 1.13 In this instance, it is considered that the proposals constitute ‘EIA Development’ due to the anticipated significant effects as outlined in this ES. As such an EIA should be carried out in relation to the topic areas where it is anticipated there is likely to be a significant effect on the environment. Accordingly, a request for a formal EIA Screening Opinion has not been submitted and this EIA has been undertaken voluntarily.

EIA Scoping

- 1.14 The process of identifying likely significant effects on the environment which should be addressed by the EIA is termed ‘scoping’ and the results are presented as a Scoping Report.
- 1.15 The requirements for obtaining a scoping opinion from the LPA are set out within Regulation 15 of the EIA Regulations. This states that a person who is minded to make an EIA application may ask the relevant LPA to state in writing their opinion as to the information to be provided and subsequently reported in an Environmental Statement (“ES”) (through the submission of a ‘Scoping Report’).
- 1.16 A request for an EIA Scoping Opinion was submitted Manchester City Council (“MCC”) as the Local Planning Authority (“LPA”) on 19 December 2024, and accordingly a Scoping Report was also prepared (attached at **Appendix 1.2**). The Scoping Opinion of the LPA was issued on 19 February 2025 (attached at **Appendix 1.3**). This Environmental Statement has subsequently been prepared in accordance with the LPA’s Scoping Opinion.

Structure of this Environmental Statement

- 1.17 This ES comprises 14 chapters and is supported by Figures (located within each chapter within Volume 1 where appropriate) and technical Appendices (within a separate Volume 2).
- 1.18 Figures included within the main text have been referenced using the chapter number as a prefix followed by the number of the figure within a given chapter. Appendices have been referenced in the same way but due to their size are contained separately within Volume 2.
- 1.19 A Non-technical Summary (“NTS”) of the full ES is provided as a separate standalone document (Volume 3).

The EIA Team

- 1.20 This ES has been compiled by Kelly Paddick, a Chartered Town Planner (MRTPI) and a Practitioner Member of the Institute of Environmental Management & Assessment (PIEMA) and reviewed by Ellie Philcox, also a Chartered Town Planner (MRTPI) and a Practitioner Member of the Institute of Environmental Management & Assessment (PIEMA).

- 1.21 The technical assessors which have contributed to this ES, and details of their relevant qualifications, are set out in **Table 1.1** below:

Topic	Company	Assessor
Air Quality	Redmore Environmental	Emily Macey BSc (Hons) MSc MIAQM MIEEnvSc
Climate Change	Hilson Moran	Sian Grimsley, BSc (Hons) MsC AIES and Andy Hart CEng
Heritage and Townscape & Visual Impact	Heritage Architecture	Anna Manley, BA (Hons), MA and Kirsten McKnight, BA (Hons), MA, ,MSc, IHBC
Human Health	King Street Planning	Jamie Lynch MRTPI, MRICS, MIEMA
Socio-Economics	Brookdale Consulting	Donald Webb BSc (Hons) MBA
Transport	Curtins	Matthew Thorley CMILT
Wind	ArcAero	Robin Stansfield BEng (Hons)

^ Table 1.1 Details of Technical Assessors

- 1.22 A schedule of application documents which are submitted in support of the planning application is provided at **Appendix 1.4**.

Environmental Statement Availability

- 1.23 A hard copy of this ES will be available for viewing during normal office hours at:

Planning Growth and Development
 Manchester City Council
 Town Hall Extension
 Albert Square
 Manchester
 M2 5DB

- 1.24 For additional copies a charge of £15 will be made for a full electronic copy of the ES on CD. Costs for paper copies are as follows:

- Volume 1: ES Main Text & Figures - £50
- Volume 2: ES Appendices - £150
- Non-Technical Summary – no charge

Contact for Further Information

- 1.25 For further information in respect of this ES please contact: please contact:

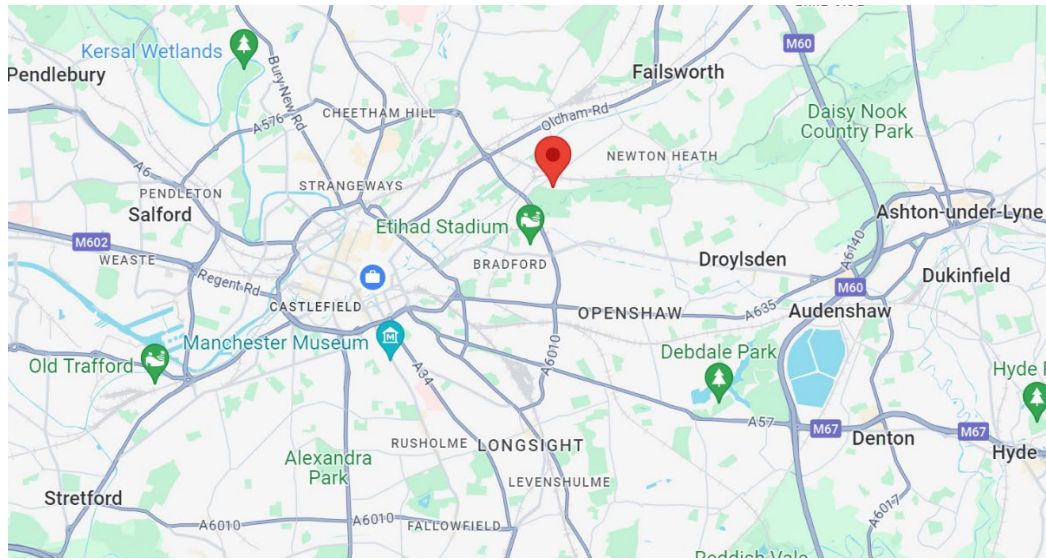
Kelly Paddick
Company Director
Euan Kellie Property Solutions
Neo
9 Charlotte Street
Manchester
M1 4ET

Email: kelly@euankellie.co.uk

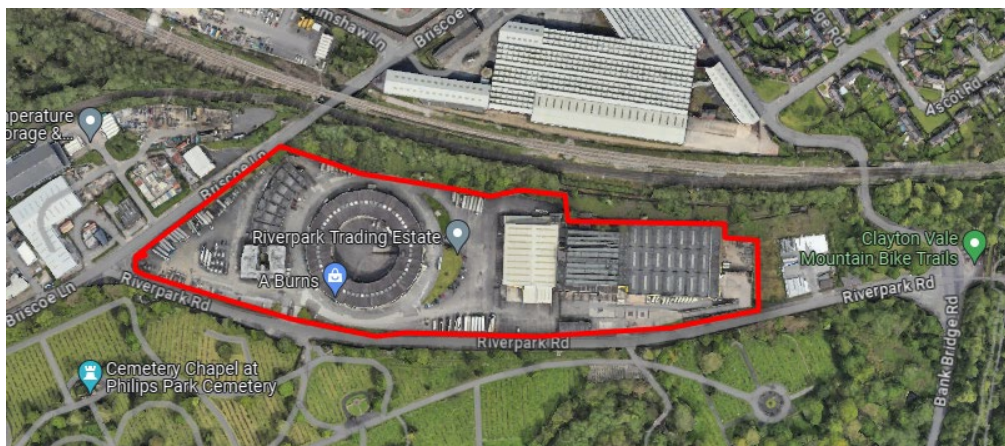
- 1.26 **Chapter 2** will now set out details of the Site and its surroundings.

2. The Application Site and Surroundings

- 2.1 The Site falls within the administrative boundary of MCC and is located within the Miles Platting & Newton Heath Ward in East Manchester. It is bound by Riverpark Road to the south, and the Manchester Victoria to Huddersfield railway line to the north. Ten Acres Lane forms the eastern boundary of the Site, whilst Briscoe Lane lies to the west and is characterised by a variety of commercial uses.
- 2.2 The Site is 6.5 hectares (16.07 acres) in size. **Figure 2.1** shows the Site context whilst **Figure 2.2** shows the Site boundary.



^ Figure 2.1



^ Figure 2.2

- 2.3 The Site was, until recently, occupied by several buildings relating to its former use as an industrial estate. It is also the site of the former Manchester Abbatoir which is understood to have operated at the Site until 2000. Prior Approval for demolition of all buildings on site was issued by MCC in November 2024, and demolition works have now commenced on site.
- 2.4 The basis of assessment for this EIA is therefore a cleared site.
- 2.5 The area surrounding the Site is characterised by a mix of residential and commercial development. Riverpark Road forms a buffer between the Site and Phillips Park, which includes Philips Park Cemetery (located immediately to the south of the Site) and is a Grade II registered park and garden.

- 2.6 A number of buildings and structures within the cemetery are also Grade II listed, including the cemetery chapel and the entrance lodge; cemetery office; and gates and railings at the main entrance on Briscoe Lane. Philips Park, which lies further to the south beyond the River Medlock, is also designated as a Grade II registered park and garden.

Planning Policy Designations

- 2.7 The purpose of this section is to introduce the key planning policy designations.

Adopted Planning Policy

- 2.8 The Site is located within the jurisdiction of MCC and is within East Manchester. The Planning Policy documents relevant to the development of the Site are listed below.

The Development Plan

- The Manchester Core Strategy (Adopted 2012)
- Saved Policies of the Manchester Unitary Development Plan (UDP Adopted 1995, relevant Policies 'Saved in 2012')
- Places for Everyone (Adopted 2024)

Supplementary Planning Documents and Planning Guidance

- Guide to Development in Manchester SPD (Adopted 2007)
- Design for Access 2 (Adopted 2003)
- Manchester Residential Design Guidance (Published in 2016 and a 'Material Consideration' in planning decisions)

Other Relevant Planning and Regeneration Documents

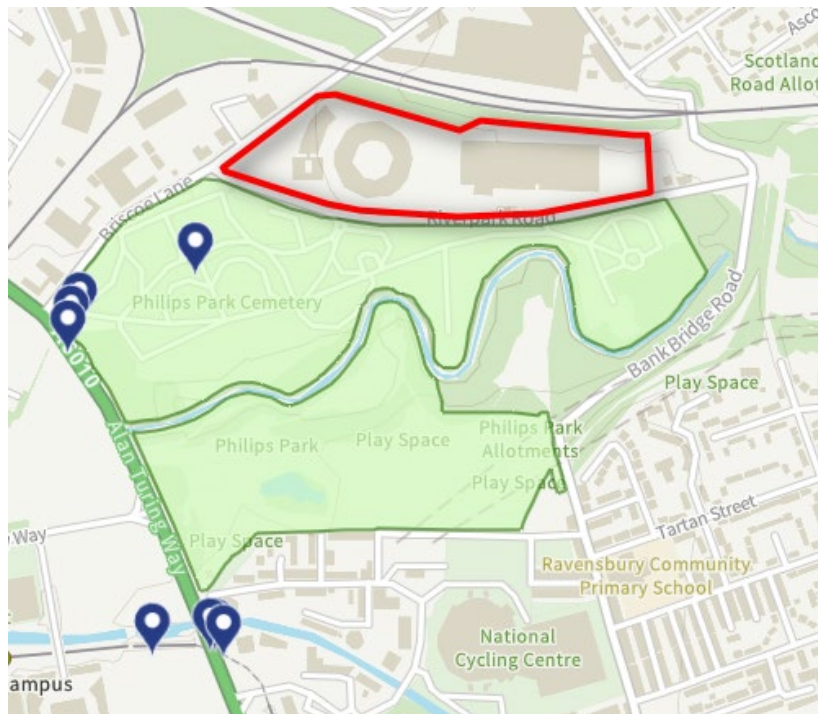
- Eastlands Regeneration Framework (Updated 2019 and a 'Material Consideration' in planning decisions)

Heritage

- 2.9 As set out above, whilst there are no listed buildings or structures located on the Site, it is located immediately north of the Grade II Registered Park and Garden ('RPG'), Philip's Park Cemetery. The park is a designated heritage asset and accommodates a number of others including:-

- Cemetery Chapel at Philips Park;
- Cemetery office at Philips Park;
- Entrance Lodge to main entrance of Philips Park;
- Gates and railings to main entrance of Philips Park.

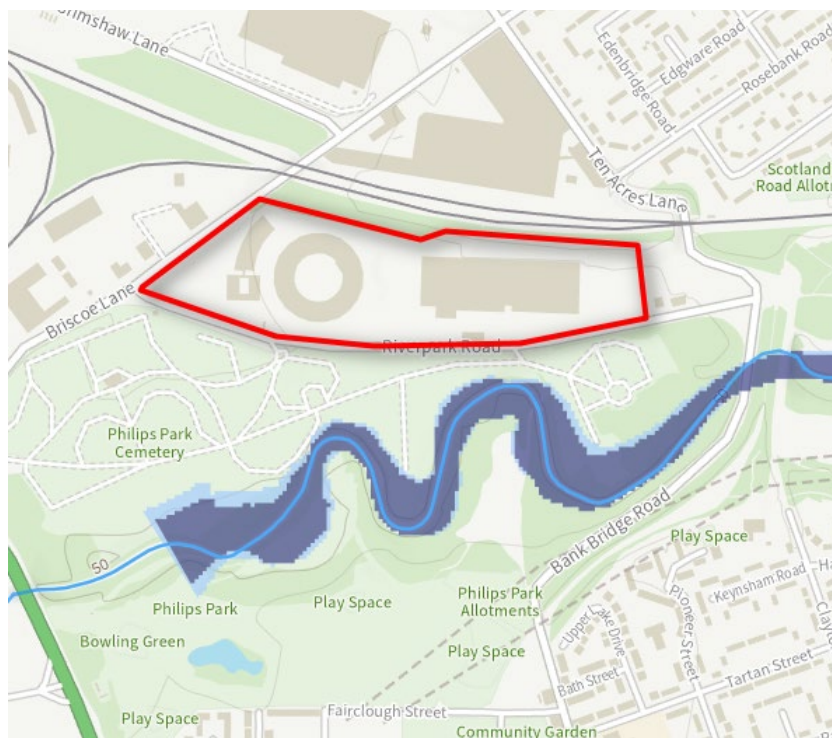
- 2.10 All of these are Grade II listed, and their location is shown in **Figure 2.3**. The Site is not located in a Conservation Area.



^ Figure 2.3 – nearby heritage designations (Site boundary marked with red line)

Flood Risk

- 2.11 Having consulted the “GOV.UK” website the Site (outlined in red) does not appear to be at risk from flooding as it is within Flood Zone 1 (see **Figure 2.4** below).



^ Figure 2.4: Flood Map

Planning history

- 2.12 The Site has the following recent planning history relevant to the proposals:
- “Outline application for a maximum of 340 residential dwellings with associated open space, highways, landscaping with all matters reserved with the exception of access which is proposed to be taken off Riverpark Road” (Ref. 106592/OO/2014/N1) – approved 25 November 2015. The has not been implemented and lapsed in November 2018.
 - “Variation of Condition 4 (height parameters) of 106592/OO/2014/N1 to change height of block one to between part 4 and part 5 storeys.” (Ref. 110486/JO/2015/N1) – approved 3 November 2016.
- 2.13 The principle of demolition of the buildings on the Site has therefore already been considered and approved through the granting of Outline Planning Permission Ref. 106592/OO/2014/N1.
- 2.14 Following on from this, and as referenced above, Prior Approval was issued on 21 November 2024 for the demolition of all buildings on the Site (Ref. 141383/DEM/2024) and demolition works have subsequently commenced.
- 2.15 **Chapter 3** will now introduce the proposals that will form the subject of the planning application to which this ES relates.

3. The Proposed Development

- 3.1 This chapter provides a summary of the Proposed Development. A more detailed description is set out within the submitted Design & Access Statement, which has been prepared by AEW Architects, and is attached at **Appendix 3.1**.

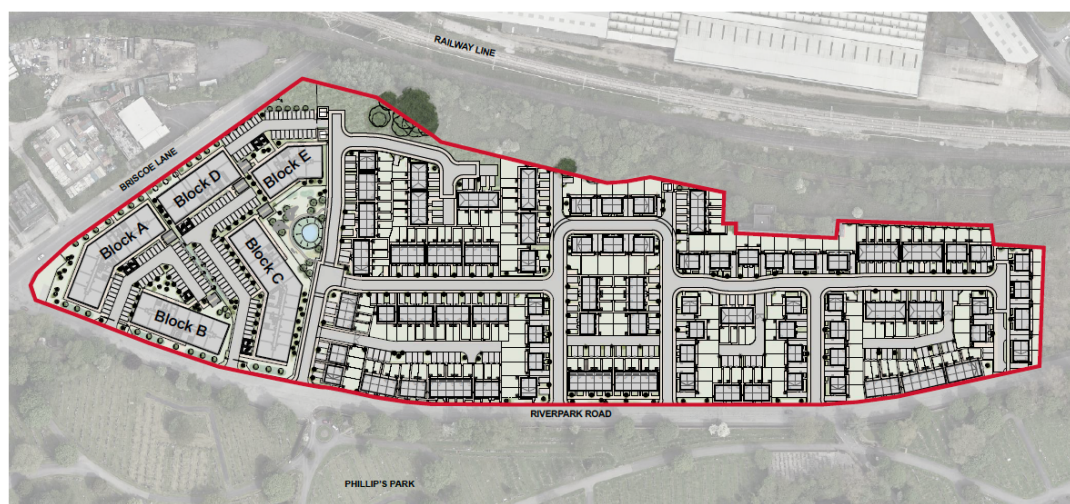
Application Proposals

- 3.2 The application proposals present an opportunity to deliver 498 new homes, including those suitable for family housing and affordable housing, in a sustainable location within East Manchester.

- 3.3 The application proposes the following:

“Erection of a residential development comprising 498 dwellings (including a mix of housing types and tenures) together with landscaping, sustainable drainage features, pedestrian footways, vehicular accesses and highways, parking provision and other associated works”.

- 3.4 The Proposed Site Plan is shown in **Figure 3.1** below.



^ Figure 3.1 Proposed Site Plan

- 3.5 The Proposed Development includes the following:

- 277 no. one and two bedroom apartments within five separate four to six storey apartment blocks at the western end of the site, designed in accordance with MCC's Residential Quality Guidance and Nationally Described Space Standards ("NDSS"), with 154 no. car parking spaces (56% provision).
- The provision of 221 no. two and three storey houses in a range of house types comprising mix of two, three and four bedroom houses designed in accordance with MCC's Residential Quality Guidance and Nationally Described Space Standards ("NDSS"), all with private gardens and off-road car parking (146% provision).
- The provision of 214 no. affordable homes (43%), comprising 104 no. one and two bedroom apartments within two of the apartment blocks in the western part of the site (Blocks A and B) along with 110 no. two, three and four bedroom houses. All new affordable homes will be tenure blind to be managed by Great Places Housing Association.

- All new homes will be compliant with Part M(4)2 of the Building Regulations and 3% will meet the requirements of Part M(4)3 of the Building Regulations (comprising 15 no. M(4)3 dwellings, including 11no. apartments and 4no. houses).
 - Six separate new access points into the Proposed Development from Riverpark Road, creating a permeable development. The existing vehicular access points from Riverpark Road is removed, with the footways being reinstated. The internal access roads have been designed to adoptable standards and includes a 5.5m-wide carriageway with a 2m-wide footway on both sides of the road throughout the scheme.
 - Enhancements to pedestrian and cycle access to the site, with a 1.5m cycle lane along the northern side of Riverpark Road for the extent of the site frontage, with two controlled pedestrian/cycle crossings proposed on Riverpark Road. 2.0m-wide footways are proposed throughout the internal road network and with dropped kerbs and tactile paving at junctions.
 - Provision for a total of 477no. car parking spaces across the site (56% provision for the apartments and 146% provision for the houses), including 9no disabled person spaces. All car parking spaces will be equipped with EV charging from the outset.
 - Active travel initiatives include provision of dedicated secure cycle parking stores for each of the apartment blocks accommodating 276 cycles and secure cycle parking facilities will be provided within the curtilage of each house (100% provision).
 - The proposed landscape design will provide an attractive and welcoming environment for the new neighbourhood, with naturalistic public open spaces and focal features to enhance key routes through the site, including informal play areas and seating. Native and wildlife-friendly planting is proposed for biodiversity and wildlife value, offering habitat, foraging, and pollinating opportunities, and Sustainable Urban Drainage features included rain gardens and swales are also included across the site. There is a 273% Biodiversity Net Gain achieved on site.
- 3.6 The proposals are presented in further detail in the Design & Access Statement, prepared by AEW Architects, submitted in support of the application.
- 3.7 **Chapter 4** will now set out the details of the alternative proposals and designs for the Site which have been considered by the Applicant.

4. Consideration of Alternatives and Design Evolution

Introduction

- 4.1 In line with the requirements of Paragraph 2 of Schedule 4 of the EIA Regulations this Chapter reviews the various design, use and siting options explored and the reasoning for the selection of the preferred development option that forms the subject of assessment within this ES.
- 4.2 The scale and form of Proposed Development has been influenced by a range of factors including location, surrounding uses, and scheme deliverability, as well as developer and MCC aspirations.
- 4.3 This chapter considers the following options:
- the 'do nothing' scenario where the Development is not progressed;
 - alternative locations for the Development;
 - alternative uses for the Site; and
 - alternative designs for the Development in the context of design evolution.

Client Brief

- 4.4 The Applicant approached AEW Architects to develop a new residential neighbourhood in East Manchester, with a target of achieving in the region of 500-600 new homes, including provision of Affordable Housing. All new homes need to meet MCC's preferred mix and be sized to meet Nationally Described Space Standards.
- 4.5 The Site is located within the East Manchester Regeneration Framework area, and MCC has prepared a Strategic Regeneration Framework ('SRF') for East Manchester 2008-2018 (subsequently updated by the 'Eastlands Regeneration Framework: A 2019 Update') which establishes principles and objectives to secure long-term, successful and sustainable regeneration.
- 4.6 The SRF promotes neighbourhood-focused growth through the provision of high-quality housing and services to give existing and new residents the confidence to raise their families in the neighbourhoods in East Manchester. The key actions for housing development have been identified as:
- To broaden and deepen the housing offer, providing both affordable and higher value homes to promote the diversity every successful place requires.
 - To ensure opportunities for new affordable housing in areas such as [*inter alia*] Riverpark Road are captured to provide the opportunities for all residents to fully harness the benefits of growth.
 - Deliver a diverse range of new homes in the area ensuring that affordability of these homes is at the heart of residential growth and a broadening of the area's housing offer;
 - Provide a distinctive urban form and a high quality public realm.
- 4.7 The 2019 Update envisages that the ERF area will accommodate a significant number of new homes over the next 15 years, for existing and future residents, to provide a range and mix of residential accommodation which includes both affordable and higher value homes to attract and retain residents at both ends of the market.

4.8 New development should deliver a balanced range of housing types and tenures that operate at all price points and meet the needs of Manchester and its residents in the short, medium and long term.

4.9 More specifically, in terms of development at Riverpark Road, the 2019 Update states:

“It is considered that this site offers a residential opportunity” ... “The focus today is to ensure that the broadest range of housing choice is made available across the ERF area. This means there is an expectation that housing will be affordable to local people, whether that be for private sale, shared ownership, affordable rent and social rent. Developing this site in partnership with RSLs should be part of any future proposals that come forward. As part of this offer, there is an opportunity for proposals to come forward which explore opportunities to increase density, whilst remaining residential quality. This is given that the site falls within the Regional Centre, as defined within the Core Strategy, and has a sustainable location close to public transport and District Centre amenities.”

4.10 The client brief seeks to align with the development and design aspirations which MCC have for this part of the city.

Consideration of the ‘Do Nothing’ Alternative

4.11 In the “do nothing” scenario the Site would be left in its current state as outlined in **Chapter 2**, and no development would be undertaken.

4.12 The Site is located within a highly strategic and sustainable location in East Manchester and within the Regional Centre, The Site is currently not in active use and is therefore does not comprise an efficient use of the land. The buildings previously located on the Site are in the process of being demolished and even if they were to be brought back into active use would not result in an efficient use of the Site due to the low density of the development on the Site.

4.13 The Site is currently surrounded by hoarding for safety and security reasons but in its current state is not making a positive contribution to the streetscape.

4.14 In contrast, the Site has considerable regeneration potential and offers the opportunity to deliver a development that will make a positive contribution to the Eastlands Regeneration Framework area, including:

- Delivering a new sustainable development comprising a mix of housing types that would help to create a neighbourhood that is varied in character and has a strong sense of place.
- Delivering a high density of development adopting a contemporary building design that would help to provide sustainable growth, long term competitiveness and vibrancy in the area.
- Delivering new development that has been designed to allow accessibility for all and to create a safe and secure environment using the principles of ‘Secured by Design’.
- Creating an environment within the Proposed Development where the amenity of all residents and occupiers would be maximised with regard to privacy, microclimate, noise, refuse management, safety and vehicular movement, as demonstrated within the suite of technical and environmental documents being submitted in support of the planning application.
- Improving linkages to the Eastlands area and the Regional Centre more generally, through the proposed improvements to the footway bounding the Site, creation of a cycle path along the northern boundary of Riverpark Road and the introduction of two controlled pedestrian/cycle crossings on Riverpark Road, as detailed within the Transport Statement.

- Incorporating provisions to reduce carbon emissions (as outlined within the Environmental Standards Statement being submitted in support of the planning application), which would help to achieve sustainability and resilience in all buildings and spaces throughout the SRF area.
- 4.15 In summary, the Proposed Development would make a significant contribution towards the regeneration objectives for the Eastlands area that are set out within the Regeneration Framework.
- 4.16 The Proposed Development will also make a significant contribution to MCC'S 'deliverable' supply of housing land (in particular within East Manchester). It will also support the ambitious target set by the Labour Government to deliver 1.5 million new homes by 2029, a significant proportion of which should be Affordable Housing.
- 4.17 In addition, the proposals will lead to a number of economic benefits including the creation of jobs during the construction period and the additional Council Tax and New Homes Bonus which will be generated as a result of the new development.
- 4.18 Consequently 'Do Nothing' is not a valid alternative taking into account the strategic objectives of MCC along with the social, environmental and economic benefits of delivering mixed-use residential led development in this location and the current condition of the Site.

Alternative Locations

- 4.19 The Proposed Development is directly associated 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 redevelopment of Site has already been deemed acceptable by way of the granting of Planning Permission Ref. 106592/OO/2014/N1 for in 2015.
- 4.20 In addition, National Policy sets out the Government's objective of 'significantly boosting the supply of homes', with particular support placed on the need to deliver high density development in the most sustainable locations.
- 4.21 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.

Alternative Uses

- 4.22 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.
- 4.23 The Site has previously been in commercial use, however the Site was underutilised and the employment uses on Site did not make a positive contribution to the surrounding environment – specifically the Grade II Registered Park and Garden ('RPG'), Philip's Park Cemetery – including local residential areas.
- 4.24 The Site is located within the Eastlands Regeneration Framework area and within East Manchester where there are a number of clear strategic objectives as set out in the adopted Core Strategy.
- 4.25 The Proposed Development includes 498 residential dwellings. This land use is in line with MCC's Core Strategy Policy H4 'East Manchester' which states that the North Manchester area (within which the Site is located) will accommodate around 30% of new residential development over the lifetime of the Plan.
- 4.26 Further, the Proposed Development will align with the objectives of the Eastland Regeneration Framework (as set out above) through the creation of a high density, residential-led mixed-use development.

- 4.27 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. Further details of the economic benefits which the Proposed Development will deliver are provided within **Chapter 13** of this ES.
- 4.28 For the reasons outlined above, alternative uses were discounted as the proposed residential-led scheme is the most appropriate in the context of location whilst also responding to identified regeneration priorities and housing need.

Alternative Design and Layout

- 4.29 The initial design proposal was for a mixture of seven apartment blocks comprising a nineteen storey tower, a twelve storey tower, an eight storey block, six storey blocks and four storey blocks together with three storey town houses and two storey family dwellings.
- 4.30 This initial design evolved through extensive dialogue with MCC, this included updating the proposals to ensure that all the parking for the apartments was hidden away in order to provide strong active frontage to Riverpark Road and Briscoe Lane.
- 4.31 The scheme had a linear public realm linking Briscoe Lane to Riverpark Road and beyond to Phillips Park and the Cemetery. Alongside this, a strong active housing frontage to Riverpark Road was established with a cycle lane running through to Bank Bridge Road linking to Clayton Vale.
- 4.32 Parking for the houses fronting onto Riverpark Road was relocated to parking courts behind the properties to enable the cycle lane to be uninterrupted, where possible.
- 4.33 Links from the Proposed Development through to Phillips Park were deemed important to make ensure the development is permeable and ties in well with its wider context.

Design Evolution

- 4.34 Financial modelling during the design process determined buildings at 19 and 12 storeys were not viable and as such a rethink on the design strategy was required. Most of the concepts and principals established in the original design were kept however the massing of the apartments was greatly reduced.
- 4.35 The linear public open space link from Briscoe Lane to Riverpark Road was omitted in lieu of a more useable public open space at the heart of the Proposed Development, to be enjoyed by all residents.
- 4.36 As established in the original proposal, the design ensures that the car does not dominate with car parking 'screened' behind the apartment active frontages. The public open space is fronted by both apartments and houses to create a sense of enclosure and passive surveillance.
- 4.37 The housing layout remains the same as the previous design iterations focussing on the principals already established.
- 4.38 The apartment blocks have been placed to form an active frontage to both Briscoe Lane and Riverpark Road with a much gentler mid-rise scale to the each block, which feels more appropriate to the local context.
- 4.39 The corner of Briscoe Lane and Riverpark Road is held by a four storey apartment block as it was felt that anything greater than four storeys would be too dominant. It was however important that the development did not feel too flat and so two, six storey blocks were introduced to break up the massing along Briscoe Lane.

Final Scheme

Apartment Design

- 4.40 Through extensive dialogue with MCC, it was agreed that the apartment blocks should have a brick facing material.
- 4.41 The four storey blocks have a rigour and rhythm to the window proportions and spacing. The living spaces have a projecting brick cowl to add modelling to the elevations and to accentuate the depth of brick reveals. Stack bonded brickwork has been introduced between window heads and cills to express a sense of verticality to the blocks.
- 4.42 The six storey apartment blocks have a setback reveal instead of the projecting brick cowl to help break up the massing. The principals of the window proportions and the stack bonding remain the same to unite the apartment block architecture. The windows have a vertical louvre to aid with the ventilation strategy.
- 4.43 Brick choice and tonality for apartment blocks A & B have been derived from the existing Riverpark Road wall enclosing Phillips Park. Variation in the tonality through the development is provided in a change in the colour palette with a shift towards a red brick to tie in with the wider housing stock.

House Typologies

- 4.44 Building on Kellen Homes standard house typologies, all houses have been adapted for a more context led approach in terms of the elevations.
- 4.45 The site plan has been split into three distinct character areas which are defined by Riverpark Road, Apartment character zone and the main body of the Site:
1. Apartment Character Zone - Three storey town houses have been placed to assist in the transition of scale through the Site from the apartments. The window proportions and brick selection have been designed to complement the apartment blocks.
 2. Riverpark Road Character Zone - The brick choice has been derived from the colour palette and tonality from the existing Riverpark Road wall enclosing Phillips Park providing a synergy between the wall and apartment blocks.
 3. Main body of the Site – The brick choice and colour has been derived by blending the tonality of the Riverpark Road apartment character areas and wider context.

Summary

- 4.46 Paragraph 2 of Schedule 4 of the EIA Regulations requires applications to provide an outline of the main alternative approaches to the Proposed Development that have been considered and the reasons for the eventual choice. These are broken down into the following categories and justification is provided for the rejection of each alternative:
- **The ‘do nothing’ scenario:** this is considered unacceptable as this would represent a significant missed opportunity to regenerate the Site and make a positive contribution to the strategic regeneration of MCC – in particular, the provision of new ‘deliverable’ homes.
 - **Alternative Sites:** The Proposed Development is directly associated in addressing the under-utilisation 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 the Site has

already been deemed acceptable by way of the granting of Planning Permission Ref. 106592/OO/2014/N1 for in 2015.

- **Alternative Uses:** The scheme is a residential-led development which includes 498 residential dwellings. This land use is in line with MCC's Core Strategy Policy H4 'East Manchester' which states that the East Manchester area (within which the Site is located) will accommodate around 30% of new residential development over the lifetime of the Plan.

Alternative uses were discounted as the proposed residential-led scheme is the most appropriate in the context of location whilst also responding to identified regeneration priorities and housing need.

- **Alternative Designs:** A number of alternative design layouts / concepts have been identified and systematically assessed and dismissed against a range of criteria / objectives. This has included revisions made in response to pre-application consultation feedback received from MCC.

4.47 **Chapter 5** will now provide details of the Methodology and Significance Criteria employed in undertaking this EIA.

5. EIA Methodology and Significance Criteria

- 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)’¹.
- 5.2 This ES also acknowledges the guidance on EIA set out within the Planning Practice Guidance issued by central Government².
- 5.3 This ES comprises three volumes; this document, comprises Volume 1 and sets out the findings of the assessments for each of the EIA topics which will be considered; Volume 2 comprises all of the supporting documents and appendices to the ES Chapters; and Volume 3 comprises a Non-Technical Summary (“NTS”) providing a description of the EIA process and its findings in a manner that is easily understood by the general public.

Content of ES

- 5.4 The information within this ES is provided in accordance with Schedule 4 of the EIA Regulations, and includes the following:

Information	Location within this ES
A description of the Proposed Development.	Chapter 3
A description of the reasonable alternatives.	Chapter 4
A description of the proposed construction methodology	Chapter 6
A description of the relevant aspects of the existing environment (the ‘baseline’ position) likely to be significantly affected by the Proposed Development.	Chapters 7-13
A description of the factors specified in regulation 4(2) likely to be significantly affected by the development.	Chapters 7-13
A description of the likely significant effects of the development on the environment.	Chapters 7-13
A description of the forecasting methods or evidence, used to identify and assess the significant effects on the environment.	Chapters 7-13
A description of the measures envisaged to avoid, prevent, reduce or, if possible, offset any identified significant adverse effects on the environment.	Chapters 7-13
A non-technical summary.	Within Volume 3
A reference list detailing the sources used for the descriptions and assessments included in the environmental statement.	Chapters 7-13

[^] Table 5.1

¹ <https://www.ecolex.org/details/legislation/directive-201452eu-of-the-european-parliament-and-of-the-council-amending-directive-201192eu-on-the-assessment-of-the-effects-of-certain-public-and-private-projects-on-the-environment-lex-faoc133116/>

² <https://www.gov.uk/guidance/environmental-impact-assessment>

Approach to Technical Studies

- 5.5 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.
- 5.6 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.
- 5.7 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 13**). The majority of assessments involve consultations with statutory and non-statutory bodies, desk-based research, site inspections and surveys, impact prediction and mitigation.
- 5.8 The assessment and conclusions of the ES are based on the proposed construction methodology and the description of the Proposed Development provided in **Chapter 3**.

Structure of the Technical Chapter

- 5.9 The technical chapter 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;
 - Cumulative Effects;
 - Residual Effects; and,
 - Summary.
- 5.10 Each of these sub-headings is explained in more detail below and overleaf.

Introduction

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

Policy Context

- 5.12 This section provides a summary of relevant national 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

- 5.13 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 difficulties encountered in undertaking the assessment or obtaining required data or information.

Baseline Conditions

- 5.14 This includes a description of the environment as it is currently (i.e. in 2024) and as it is expected to change should the Proposed Development not proceed (i.e. a 'do nothing' scenario).
- 5.15 Some baseline data has been obtained from existing data sources, but in some cases additional data has been sourced. The method used to obtain this information is clearly identified.

Identification and Evaluation of Likely Significant Effects

- 5.16 The section identifies the likely significant environmental effects (positive, negative, neutral) resulting from the Proposed Development during the construction and operational phase.
- 5.17 Generic criteria for determining magnitude, sensitivity and significance are set out in **Tables 5.4-5.6** below and overleaf. However, for some subject areas, other references have been incorporated to reflect established thresholds of impact upon sensitive receptors.
- 5.18 All significance criteria used has been explained under the Assessment Methodology and Significance Criteria section of the chapter, and 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

- 5.19 The generic Significance Criteria used is set out in **Table 5.2** below.

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

Magnitude of Impact	Criteria for Assessing Impact
	condition will be similar to the pre-development circumstances / situation.
Negligible	Very little change from baseline conditions. Change barely distinguishable, approximating to a 'no change' situation.

^ Table 5.2

- 5.20 The sensitivity of a receptor is based on the relative importance of the receptor using the scale in **Table 5.3**.

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.

^ Table 5.3

- 5.21 The significance of an environmental effect is determined by the interaction of magnitude and sensitivity, whereby the impacts can be positive or negative. The Impact Significance Matrix is set out in **Table 5.4** below.

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
Negligible	Negligible	Negligible	Negligible

^ Table 5.4

Mitigation Measures

- 5.22 Any adverse impact should be considered for mitigation and specific mitigation measures put forward, where practicable. Mitigation measures considered may include recommendations for modification for the Proposed Development (if feasible), compensation and the provision of alternative solutions, as well as pollution control where appropriate.

- 5.23 The assessment identifies where mitigation measures are required relative to the different phase of the Proposed Development (as necessary).
- 5.24 Details provided include 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.
- 5.25 Clear details of when and how the mitigation measures will be carried out 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.
- 5.26 The opportunity for enhancement measures is also considered, where appropriate.

Cumulative Effects

- 5.27 The EIA also assesses the effects of the Proposed Development cumulatively with other committed developments (i.e. those that have already begun or constructed or those that have not commenced but have a valid planning permission), where there are likely to be significant effects.
- 5.28 Two types of cumulative effects are assessed:
- **Type 1 Effects:** The combination of individual effects (for example noise, dust and visual effects) from a development on a particular receptor; and,
 - **Type 2 Effects:** Effects from several developments, which individually might be insignificant, but when considered together could create a significant cumulative effect.
- 5.29 Type 1 Effects are considered within **Chapter 12** of this Environmental Statement.
- 5.30 Consideration of Type 2 Effects is set out within the technical chapters (**Chapters 7 to 10**).
- 5.31 Details of the committed developments which will be considered (as agreed with MCC as part of the EIA Scoping process) are set out in **Table 5.5** below:

Site Name and Application No.	Approx. Distance and Direction	Proposal
Jackson's Brickworks 129197/FO/2021 and 133700/FO/2022	1km northeast of site	Application for development comprising 378 dwellings (134 apartments and 244 houses) (Use Class C3) and a new community building with ground floor commercial floorspace (up to 671 sq.m) (Use Classes E, F1 and F2), all with associated car parking, highways, landscaping, community park and pocket park, and other associated works, with all matters to be considered; together with an outline application with all matters reserved except for means of access , for a new secondary school (Use Class F1), with associated car parking, highways arrangements, landscaping and other associated works, and the erection of up to 338 dwellings (Use Class C3), with associated car parking, highways, landscaping and new public realm creation, and other associated works. (Approved May 2023)
Former Mather & Platt Foundry 135454/JO/2022	1km north of site	Erection of 12 No. industrial units with Use Class E(g), B2 and B8 uses with ancillary offices (42782 sqm) together with service areas, car parking, landscaping and boundary treatment following demolition of existing building. (Approved Sep 2021)

Site Name and Application No.	Approx. Distance and Direction	Proposal
Etihad Stadium (North Stand) 136763/FO/2023	1.5km south of site	Alterations to the Etihad Stadium North Stand and adjoining land to provide an overall increase in Stadium capacity, hospitality, and concourse facilities available for use both during and outside of event days, an ancillary TV Studio (Sui Generis), a Roof-Walk Attraction (Use Class F1(c)) together with the erection of a 9 storey, 391 bed hotel (Use Class C1) with a further 10 suites provided within the North Stand of the Etihad Stadium for hotel or hospitality space (Use Class C1 / Sui Generis); restaurant at Level 1 (Use Class C1 / Class E), erection of an 8-storey building comprising: a new Club Shop and Ticket Office (Use Class E) at Ground and Level 1, City Museum at Level 2, Leisure Attraction at Level 3 (Class F1(c)); and workspace (Class E) at Levels 4, 5, 6 and 7 and a new covered City Square fan zone and flexible event space with ground floor commercial, leisure, food and drink use (Use Class E and/ or drinking establishment (Sui Generis)) within each of the interrelated buildings adjoining the proposed square with associated landscaping and public realm works, servicing and access arrangements, and other associated works. (Approved Oct 2023)
2 Angel Square, NOMA 134307/FO/2022	3.6km west of site	Erection of 2 Angel Square, a 14 storey building (excluding roof top plant) to form a mixed use office development (Use Class Egi) with two flexible commercial units at Upper Ground floor Level (Use Classes Ea, b, c, e, f, and / or Use Class Sui Generis (p) and (q)), and with a flexible office (Use Class Egi) and/or restaurant (Use Class Eb) space at Level 12, along with Lower Ground Level car and cycle parking, hard and soft landscaping and other associated works. (Approved Oct 2022)
Dantzie Street, Dalton Street, Victoria North 136814/FO/2023	3.3km west of site	Erection of a phased residential led mixed use development comprising three residential towers (Use Class C3a) (NT02 34 storeys, NT03 part 8, part 20 and part 31 storeys and NT04 part 8, part 27 storeys) with associated flexible non-residential floorspace comprising commercial, business, service and community uses (Use Classes E, F and Sui Generis); erection of a 6 storey residential amenity space within a clubhouse building (part of NT02), with associated car and cycle parking, hard and soft landscaping, improvement works to Dantzie Street, drainage infrastructure and associated engineering works following demolition of existing buildings and structures. (Approved Dec 2023)

Table 5.5 Committed developments to be considered in cumulative assessment

Residual Effects

- 5.32 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 5.6**).
- 5.33 The methods used to make these estimates are clearly described, and proposed methods of treatment for any residual effects are also identified. Any effects have been quantified wherever possible.

	Description	Pre-Mitigation Significance	Post-Mitigation Significance
Proposed Development			

^ Table 5.6

Summary

- 5.34 Finally, the technical chapter includes a summary of the assessment undertaken. This contains a brief description of the assessment scope, findings and an account of the main mitigation measures that should be undertaken as part of the Proposed Development to offset any adverse effects.
- 5.35 The summary is written in non-technical language so as to be suitable for inclusion in the separate Non-Technical Summary document (Volume 3 of the EIA).

Assumptions and Limitations

- 5.36 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 (between June 2024 and March 2025).
 - 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.
 - Assessments are based upon and conclude the “worst case” effects that would arise from the application as defined by the description of Proposed Development, set out in **Chapter 3**.
 - 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

- 5.37 The technical studies 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.
- 5.38 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

- 5.39 Consultations have continued throughout the preparation of the ES, and in particular, meetings and discussions have taken place with MCC.
- 5.40 **Chapter 6** will now present the anticipated Construction Methodology.

6. Construction Methodology

Introduction

- 6.1 This chapter describes the anticipated construction methodology and phasing for the Proposed Development and has been prepared prior to any main contractor being involved in the project. For the purposes of this chapter and the wider ES, the construction phase incorporates all necessary excavation and enabling works.
- 6.2 Consideration of likely significant effects on the environment that may arise during the construction phase and any necessary mitigation measures are provided within the respective technical chapter of this ES.
- 6.3 A Construction Environmental Management Plan and Construction Traffic Management Plan has also been prepared and is included at **Appendix 6.1**.
- 6.4 The approach to construction is wide-ranging at this early stage and may be subject to adjustment at the detailed design stage of the project, construction planning or during site development. This initial assessment is based on reasonable assumptions at this time and allows for the assessment of the realistic worst case construction phase effects.

Anticipated Timescales

- 6.5 The indicative construction programme for the Proposed Development is expected to last 42 months, with the project commencing in Q3 2025.

Proposed Works

Site Enabling Works

- 6.6 Post-demolition site enabling works will include site investigation and remediation works. The project will require a 2.4 metre high hoarding to the perimeter, with access gates for deliveries.

Construction of Buildings

- 6.7 The Proposed Development will consist of 498 units and are a mixture of 2, 3 and 4-bedroom houses and 1 and 2 bedroom apartments, to be provided in 5 no. apartment blocks (A, B, C, D) within the range of 4-6 storeys. Comprising of 277 apartments and erection of 221 no. two and three storey dwellinghouses (Class C3) together with new vehicle accesses from Riverpark Road and associated works.

Other Proposed Works

- 6.8 Landscaping, sustainable drainage features, pedestrian footways, vehicular accesses and highways, parking provision and other associated works are also proposed.

Fit Out

- 6.9 Fit out will commence once a water-tight environment has been achieved to all properties/buildings. Material access will be gained through the utilisation of several hoists to the building perimeter. The fit out will consist primarily of stud/ plaster boarded (dry-lined) walls, with “white goods” fitted individually.

Construction Traffic Management Plan

- 6.10 A Construction Environmental Management Plan and Construction Traffic Management Plan has been prepared and is included in **Appendix 6.1**.
- 6.11 This includes details of the following:
- Contact details for relevant responsible persons.
 - Brief description of the Site activities.
 - Programme/ key dates.
 - Days and hours of site operations.
 - Routing of demolition, excavation and construction vehicles.
 - Details of site access arrangements.
 - Details of the vehicles accessing the Site per day/ week in terms of number, type, size and weight.

Construction Phase Vehicle Movements

- 6.12 In terms of access, the Site entrances will be provided along the existing site access on Riverpark Road. A limited amount of car parking will be situated on site where possible, some off-site parking may have to be sought to accommodate all of the vehicles.
- 6.13 All delivery vehicles will access the Site from Riverpark Road. This will also be used for vehicles egress.
- 6.14 Vehicle egress out of the Site will be onto Riverpark Road and then left onto Briscoe Lane. Access out of the Site will be assisted by a banksman when required. Smaller vehicles such as trade vehicles may turn left out of Riverpark Road.
- 6.15 All vehicle unloading will take place within the project boundary 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 amounts brought to 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.
- 6.17 Further details are provided in **Appendix 6.1**.

Outline Construction Methodology

Site Enabling

- 6.18 The project will require a 2.4 metre high hoarding to the perimeter, with access gates for deliveries.
- 6.19 Enabling works will include site investigation works feasible as well as the following remediation measures, in accordance with the remediation strategy for the Site:
- Cover Systems
 - Ex-Situ bioremediation
 - Stabilisation

- Excavation and disposal of material
- Pathway interruption through impermeable barriers

6.20 Post remediation, roads, sewers and services are to be constructed.

Drainage works

- 6.21 It is anticipated at this time that drainage connections will be separate systems.
- 6.22 Temporary drainage infrastructure will be installed by the appointed Contractor to manage and regulate surface water run-off during the construction period.
- 6.23 The Environmental Agency (EA) indicated flood mapping shows that the development site is located entirely within Flood Zone 1; at little or no risk from tidal or fluvial flooding and is therefore suitable for all types of development under Planning Practice Guidance. The site will be designed with attenuation which will reduce the level of runoff from the Site when compared to the pre-development scenario.

Surface Water Run-Off

- 6.24 Measures will be implemented, maintained, and monitored in order to comply with the Water Regulations Act (1991) section 85 and associated Regulations.
- 6.25 All surface water drainage from impermeable areas and roads shall pass through trapped gullies prior to being discharged into any watercourse. These drains will be blocked with straw bales or terram Kerbing or temporary bunds. These will be provided to prevent run-off to nearby watercourse.
- 6.26 There shall be no discharge of foul or contaminated drainage from the Site into either ground water or any surface waters, whether direct or via soakaways. No pumped water shall be discharged into the live drainage system without having been filtered through a silt interceptor.
- 6.27 If dewatering is required as part of the construction process, pumped surface water should be disposed of appropriately according to EA Pollution Prevention Guidelines.
- 6.28 Any disposal of surface water generated on site during construction to controlled waters will require consent from the EA.

Measures To Prevent the Pollution of Watercourses

- 6.29 Refuelling will occur in designated areas on an impermeable surface away from any drains or watercourses. Spill kits will be available in the event of an accident and will be kept in the refuelling area.
- 6.30 Off-site works such as drainage and utility connections will be undertaken by responsible sub-contractors with the correct 'Road Opening Notices' in place, alongside the associated Method Statements.
- 6.31 The drainage connections will be undertaken within the Site to existing drainage along Riverpark road and Briscoe Lane. Similarly, utility connections (gas / electric / water) will be undertaken within the existing footpaths adjacent to the Proposed Development.

Controls to Protect the Environment

- 6.32 A Project Environmental Plan will be developed and submitted prior to the works commencing, within which details of the following will be included:
- Contractual environmental requirements, including those stipulated in the following documents:
 - Employers Requirements
 - Planning Conditions
 - Site Investigation Reports
 - Geo-Environmental Reports
 - Ecology Reports
 - Project environmental aspects, including:
 - The monitoring and control of noise and dust
 - Contaminated ground
 - Local residents
 - Local businesses
 - Project environmental impacts, including:
 - Pollution to the ground
 - Nuisance to the local community
 - Excessive waste being produced and/or sent to landfill.

Environmental control / mitigation measures

Pollution

- Implement the best practice promoted in the Environmental Agency Pollution Prevention Guidelines (PPG's)
- Identify and implement working methodologies that will ensure that existing contamination in the ground does not find its way into the public drainage systems
- Establish procedures for dealing with pollution incidents in an Emergency Preparedness Plan

Waste

- Identify and implement measures to eliminate, reduce, reuse and recycle waste, through e.g.
 - Designing out waste workshops.
 - Maximising off-site fabrication.

- Utilising waste management companies that have the ability to divert 95%+ of construction waste from landfill.
- Develop and implement a waste management strategy that will address logistical issues on site, whilst encouraging contractors to minimise their waste production.

Carbon emissions

- Identify and implement measures to minimise the consumption of electricity and fuel during construction activities, through e.g.
 - Minimising delivery distances.
 - Arranging for materials to be delivered in bulk, and not part loads, to reduce trips.
 - Turning off plant and equipment when not in use.
 - Installing power correction units, timers, PIR's, etc where practicable.

Ecology

- Whilst there is likely to be minimal ecology on site, it is recognised that existing habitats and wildlife species from the surrounding areas, will still need to be considered.

Nuisance

- Identify and implement opportunities to minimise nuisance associated with:
 - Noise
 - Dust
 - Vibration
 - Traffic
 - Contractor parking

Communications

- Establish a dedicated point of contact on site, who will be responsible for dealing with construction related complaints if / when they arise.
- Identifying the key stakeholders in the local community and keeping them informed of the on-going and future works on site, such that good working relationships are established.
- Register the project with the Considerate Constructors Scheme and abide by their objectives.

6.33 It will be a requirement in the contract conditions that all contractors work in accordance with such strategies in the Project Environmental Plan, and this will be enforced throughout the duration of the project.

Health and Safety

Noise and Vibration

- 6.34 The overarching principle is the noise and vibration control at source with the selection where possible, the use of, quiet and low vibration equipment, a review of construction methodology to consider quieter methods, the location of equipment on site, the control of working hours, the provision of acoustic enclosures and the use of less intrusive audible warnings such as broadband vehicle reversing alarms.
- 6.35 For this development the following approach is considered appropriate:
- The Contractor's Site Manager will oversee the employment of measures for the control and monitoring of noise and vibration.
 - Operational hours generating noise and vibration will be restricted to:
 - Monday - Friday 07:30 – 18:00 and Saturday 08:00 – 17:00.
 - No deliveries or piling will take place outside the hours of 07:30 to 18:00 Monday to Friday or 08:00 to 17:00 on a Saturday.
- 6.36 Noise and vibration will be controlled and limited so far as reasonably practicable so that sensitive receptors are protected from excessive noise and vibration arising from construction.
- 6.37 The use of self-charging generators on the Site to prevent noise being generated through the night by being able to switch from diesel to stored electric power.
- 6.38 Acoustic enclosures may be required in sensitive locations such as near generators.
- 6.39 Hydraulic plant will be used in preference to pneumatic plant where possible.
- 6.40 Plant and equipment will be maintained in good working order and fitted with silencers and acoustic panels where appropriate.
- 6.41 Certain activities may extend outside of normal working hours to enable safe working or because of unforeseen events. The Environmental Health Team will be contacted to agree the activities if required.
- 6.42 Quieter activities which are carried out inside buildings such as electrical works, plumbing and plastering may take place outside of the agreed working times so long as they do not result in significant disturbance to neighbouring occupiers.
- 6.43 Vibration monitors will be installed whilst the piling works are carried out. If the triggers are hit, work will be stopped until further notice.

Dust

- 6.44 Construction Dust is created during many construction tasks on site and in many instances is unavoidable. The Principal Designer will, where possible, design out dust creating construction methods and identify any tasks they believe will generate dust above the Workplace Exposure Limits ("WEL"). The Principal Contractor and his supply chain will then review these residual tasks to identify ways to eliminate the production of dust or implement measures to control the dust at source such as on-tool extraction or water suppression.

- 6.45 Where dust still exceeds the WEL the task will be undertaken within a controlled environment such as a cutting room using Local Exhaust Ventilation (“LEV”) (Extract) and Respiratory Protective Equipment (RPE”) (Dust Mask) will be used by those working in the area. All RPE reliant on a face seal used on site will be a minimum FFP3 standard. Dry sweeping will not be allowed on site and all vacuums used will have Class H or M filters fitted.
- 6.46 Monaflex netting on the Heras fencing will be used in order to reduce the potential for dust leaving the Site. This netting will be dampened down to catch dust.
- 6.47 During dry spells care will be taken to dampen down parts of the Site and stockpiles of material by way of a water reservoir fitted to a forklift truck.
- 6.48 Mobile Sprayers will also be implemented to dampen down the Monaflex covering and stockpiles, examples of the above are provided in **Appendix 6.1**.
- 6.49 To further manage air quality, all dust complaints will be recorded and actioned by site management. If subcontractors are not adhering to HSE and COSHH regulations regarding dust suppression, disciplinary action will be taken.
- 6.50 In addition to the above, the following measures are also to be implemented:
- Wetting down of cutting processes.
 - Impose and signpost a maximum-speed-limit of 15mph on surfaced and 10mph on unsurfaced haul roads and work areas.
 - Ensure all engines from construction vehicles are switched off and not idling.
 - Stakeholder Engagement plan in the form of letter drops to notify nearby residents that construction work will be undertaken at given time periods.
 - Enclosure of skips where practicable.
 - Ensure Monaflex Sheeting is clean and damped down regularly.
 - Covering of wagons with sheets leaving the Site when necessary.
 - Road sweeping where appropriate.

Security

- 6.51 Prior to starting works a Site-Specific Security Risk Assessment will be undertaken identifying the Site security measures that will be implemented in order to secure the Site from incursions by the general public, vandals, thieves, and urban explorers. These measures will likely include, as a minimum:
- A 2.4m high hoarding comprising standard, hard wearing Heras fencing with a Monaflex covering along all road frontages, which will be subject to a temporary works design.
 - Statutory Signage will be prominently displayed advising of construction works ongoing and site contact details will also be clearly displayed.
 - Manned and segregated vehicle gates.
 - Out of Hours monitored CCTV around the Site perimeter.
 - 3.6m anti climb mesh hoardings around the tower crane bases.

- Emergency contact details will be placed at the Site entrances should a member of the public require assistance or to notify Kellen Homes of any issues.
- Additional emergency contact details will be placed along the Briscoe Lane boundary.
- Construction traffic warning signage will be placed along Briscoe Lane and Riverpark Road. This will inform residents and the public of construction traffic along this route.

A scheme for recycling / disposing of waste

- Sub-contractors are responsible for removal of their own waste from site, this is to be discussed at procurement/pre-start.
- All timber is to be placed in a timber only skip.
- All Plasterboard is to be placed in plaster only skip.
- All Brick / Rubble etc. is to be stockpiled on site until a sufficient amount can be brought to a crusher to generate 6F2, or to be moved by wagon to an adjacent site to be crushed.
- A pallet collection scheme is in operation.
- All metal will be collected by and recycled where appropriate.

Engagement with the Community

- 6.52 As outlined within the Outline Construction Management Plan included in **Appendix 6.1**, the Site Manager will establish contact details for the local housing association and local residents and will actively promote and arrange regular meetings to talk through Construction activity and general progress. The Site Manager will then be tasked to minute and close out all issues raised.
- 6.53 The Site Manager will produce a quarterly update via a letter drop process to all local residents listing upcoming construction activity within the period.
- 6.54 Any complaints will be logged in a dedicated file and will be actioned by the Site Manager. If not resolved by the Site Manager, then the complaint will be escalated to the Construction Director, Health and Safety Director then the Managing Director.
- 6.55 Prior to the commencement of the development a letter drop will take place to all local residents, nearby businesses, outlining the following:
- Proposed start date for construction and anticipated duration of build.
 - Proposed hours of construction.
 - Contact details (Name/Position/Contact number or email where appropriate) for any issues or complaints to be logged and for in the event of emergencies.
 - If required a presentation will be undertaken to any primary school in the area to highlight the “dangers on a construction site” this presentation will encourage children to stay away from the Site.
- 6.56 During the course of the development, letter drops will occur at key milestones, for example when piling activity is taking place or when deemed necessary by the business to inform residents of any changes to work practices.
- 6.57 The areas to be covered by the letter drop are to be confirmed.

- 6.58 In addition to the above measures, prior to the development and during the development period, photographic dilapidation surveys are to be undertaken periodically by the site manager to ensure that carriageways abutting the Site are kept clean and free of slip hazards.

Site Offices & Welfare Accommodation

- 6.59 Specific offices and accommodation for construction staff will be required and will be located on or locally adjacent to the Site. The type, amount and configuration of the welfare set up will be developed in the Pre-Construction phase and will be based on the number of operatives and staff and the type of works being undertaken at the time.

Hours of Work

- 6.60 All construction activities at the Site will be limited to the following hours:
- Monday to Friday between the hours of 07:30 and 18:00 hours.
 - Saturday between 08:00 and 17:00 hours.
 - No deliveries or piling works to take place outside the hours of 07:30 and 18:00 hours Monday to Friday.
 - No deliveries or piling works to take place outside of the hours of 08:00 and 17:00 hours on Saturday.
 - No working on Sundays or Bank Holidays.
- 6.61 There may be limited occasions where working is required outside of the above hours however this will only take place with formal prior agreement from the LPA. All local residents would be informed of any changes by way of a letter drop in accordance with the community engagement strategy.
- 6.62 Quieter activities which are carried out inside buildings such as electrical works, plumbing and plastering may take place outside of the agreed working times so long as they do not result in significant disturbance to neighbouring occupiers.
- 6.63 Specific offices and accommodation for construction staff will be required and located on site and may be occupied outside the above noted hours for administration tasks.
- 6.64 The close proximity of local businesses and residents is noted, and the Principal Contractor will be responsible for ensuring that the programme and working hours are adhered to by their contractors in order to protect residential amenity.

Management of Construction Works

- 6.65 A site-specific Construction Phase Plan (“CPP”) will be developed by the Principal Contractor during the pre-construction phase. This plan will be reviewed by the Developer to ensure it is in place and addresses all issues in CDM 2015 Schedule 3. This plan will set the conditions for an incident free project and will be reviewed and updated throughout the duration of the contract.
- 6.66 All contractors will be required to complete a method statement and risk assessment outlining how they will undertake their works within the constraints imposed by the CPP, which will be reviewed and accepted by the Principal Contractor.
- 6.67 Where works will affect other contractors, any implications will be agreed with all affected contractors through the ongoing Collaborative Planning process, Weekly and Daily Coordination Meetings and Daily Activity Briefings.
- 6.68 The Principal Contractor will then manage the works so that the Contractors ensure their operatives work to the agreed method statement and risk assessment.

Response to Complaints

- 6.69 Any complaints will be logged on-site and, where necessary, reported to the relevant individual within MCC, as appropriate, (and vice versa) as soon as practicable.

Prior Notice

- 6.70 In the event of unusual activities or events, these will be notified to MCC, as appropriate, and relevant property owners or occupiers in advance. The relevant activities will be agreed with MCC, as appropriate once the detailed programme of construction is defined.
- 6.71 The following chapters of this ES will now consider the potential environmental effects arising from the Proposed Development.

7. Air Quality

Introduction

- 7.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to air quality. 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 This assessment has been undertaken by Emily Macey BSc (Hons) MSc MIAQM MEnvSc. Emily is an Air Quality Consultant with over six years' experience in the air quality sector and has been responsible for conducting air quality studies for a range of projects, including residential, commercial, employment and industrial schemes.
- 7.3 Contributions to the assessment have been made by Jethro Redmore BEng (Hons) MSc CEnv PIEMA MIAQM MEnvSc. Jethro is an Air Quality Consultant and has worked as a professional environmental scientist for approximately 18 years. He has been responsible for conducting environmental studies for major road improvement and construction schemes, power stations, oil refineries and other major industrial complexes.

Legislative and Policy Context

Legislation

- 7.4 The Air Quality Standards Regulations (2010) and subsequent amendments include Air Quality Limit Values (AQLVs) for the following pollutants:
- Nitrogen dioxide (NO₂);
 - Sulphur dioxide;
 - Lead;
 - Particulate matter with an aerodynamic diameter of less than 10µm (PM₁₀);
 - Particulate matter with an aerodynamic diameter of less than 2.5µm (PM_{2.5});
 - Benzene; and.
 - Carbon monoxide.
- 7.5 Air Quality Target Values have also been provided. It should be noted that the AQLV for PM_{2.5} stated in the Air Quality Standards Regulations (2010) was amended in the Environment (Miscellaneous Amendments) (EU Exit) Regulations (2020).
- 7.6 The Air Quality Strategy (AQS) was produced by the Department for Environment, Food and Rural Affairs (DEFRA) and published on 28th April 2023³. The document contains standards, objectives and measures for improving ambient air quality, including a number of Air Quality Objectives (AQOs). These are maximum ambient pollutant concentrations that are not to be exceeded either without exception or with a permitted number of exceedences over a specified timescale. These

³ AQS: Framework for Local Authority Delivery, DEFRA, 2023.

are generally in line with the AQLVs, although the requirements for the determination of compliance vary.

7.7 The Environmental Improvement Plan⁴ was published in January 2023, providing long term and Interim Targets in order to reduce population exposure to PM_{2.5}. The Concentration Target for 2040 was subsequently adopted in the Environmental Targets (Fine Particulate Matter) (England) Regulations (2023).

7.8 **Table 7.1** (overleaf) presents the AQO, Interim Target and Concentration Target for pollutants considered within this assessment.

Pollutant	Air Quality Objective/Interim Target/Concentration Target	
	Concentration (µg/m ³)	Averaging Period
NO ₂	40	Annual mean
	200	1-hour mean, not to be exceeded on more than 18 occasions per annum
PM ₁₀	40	Annual mean
	50	24-hour mean, not to be exceeded on more than 35 occasions per annum
PM _{2.5}	12 ^(a)	Annual mean
	10 ^(b)	Annual mean

Note: (a) Interim Target to be achieved by end of January 2028.

(b) Concentration Target to be achieved by 2040.

^ Table 7.1 - Air Quality Objectives/Interim Target/Concentration Target

7.9 **Table 7.2** below and overleaf summarises the advice provided in DEFRA guidance⁵ on where the AQOs for pollutants considered within this report apply.

Averaging Period	Objectives Should Apply At	Objectives Should Not Apply At
Annual mean	All locations where members of the public might be regularly exposed Building façades of residential properties, schools, hospitals, care homes etc.	Building façades of offices or other places of work where members of the public do not have regular access Hotels, unless people live there as their permanent residence Gardens of residential properties Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term

⁴ Environmental Improvement Plan 2023, DEFRA, 2023.

⁵ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

Averaging Period	Objectives Should Apply At	Objectives Should Not Apply At
24-hour mean	All locations where the annual mean objective would apply, together with hotels Gardens of residential properties	Kerbside sites (as opposed to locations at the building façade), or any other location where public exposure is expected to be short term
1-hour mean	All locations where the annual mean and 24 and 8-hour mean objectives apply. Kerbside sites (for example, pavements of busy shopping streets) Those parts of car parks, bus stations and railway stations etc which are not fully enclosed, where members of the public might reasonably be expected to spend one hour or more Any outdoor locations where members of the public might reasonably be expected to spend one hour or longer	Kerbside sites where the public would not be expected to have regular access

^ Table 7.2 - Examples of Where the Air Quality Objectives Apply

Local Air Quality Management

- 7.10 Local Authorities (LAs) are required to periodically review and assess air quality within their area of jurisdiction under the system of Local Air Quality Management (LAQM). This review and assessment of air quality involves comparing present and likely future pollutant concentrations against the AQOs. If it is predicted that levels at locations of relevant exposure, as summarised in **Table 7.2**, are likely to be exceeded, the LA is required to declare an Air Quality Management Area (AQMA). For each AQMA the LA is required to produce an Air Quality Action Plan (AQAP), the objective of which is to reduce pollutant concentrations in pursuit of the AQOs.

Dust Legislation

- 7.11 The main requirements with respect to dust control from industrial or trade premises not regulated under the Environmental Permitting (England and Wales) Regulations (2016) and subsequent amendments, such as construction sites, is that provided in Section 79 of Part III of the Environmental Protection Act (1990). The Act defines nuisance as:

"any dust, steam, smell or other effluvia arising on industrial, trade or business premises and being prejudicial to health or a nuisance."

- 7.12 Enforcement of the Act, in regard to nuisance, is currently under the jurisdiction of the local Environmental Health Department, whose officers are deemed to provide an independent evaluation of nuisance. If the LA is satisfied that a statutory nuisance exists, or is likely to occur or happen again, it must serve an Abatement Notice under Part III of the Environmental Protection Act (1990). The only defence is to show that the process to which the nuisance has been attributed and its operation are being controlled according to best practicable means.

Planning Policy

- 7.13 The applicable planning policy is summarised as follows:

- National Planning Policy Framework (NPPF), 2024, Chapter 15;
- National Planning Practice Guidance (NPPG);

- Places for Everyone Joint Development Plan Document, Greater Manchester Combined Authority (GMCA), Policy JP-S5 and Policy JP-P1; and,
- Manchester City Council (MCC) Core Strategy Development Plan Document, Policy EN 16, Policy DM 1.

Guidance

7.14 The following guidance documents have been used during the preparation of this chapter:

- 'Air Quality & Planning Technical Guidance' Supplementary Planning Document⁶ (SPD);
- 'Land-use Planning & Development Control: Planning for Air Quality', Institute of Air Quality Management (IAQM), 2017;
- 'Guidance on the assessment of dust from demolition and construction V2.2', IAQM, 2024; and,
- Greater Manchester Clean Air Plan (2025).

Assessment Methodology and Significance Criteria

7.15 The Proposed Development has the potential to cause air quality effects during the construction and operational phases. These were assessed in accordance with the following methodology. It should be noted that the Site currently comprises open land.

Construction Phase Fugitive Dust Emissions

7.16 There is the potential for fugitive dust emissions to occur as a result of construction phase activities. These have been assessed in accordance with the methodology outlined within the IAQM document 'Guidance on the Assessment of Dust from Demolition and Construction V2.2'⁷.

7.17 Activities to be undertaken as part of the Proposed Development have been divided into three types to reflect their different potential impacts. These are:

- Earthworks;
- Construction; and,
- Trackout.

7.18 The potential for dust emissions was assessed for each activity that is likely to take place and considered three separate dust effects:

- Annoyance due to dust soiling;
- Harm to ecological receptors; and,
- The risk of health effects due to a significant increase in exposure to PM₁₀.

⁶ Air Quality & Planning Technical Guidance, MCC, 2022.

⁷ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

- 7.19 The first stage screens the requirement for a more detailed assessment. Should human receptors be identified within 250m from the Site boundary or 50m from the construction vehicle route up to 250m from the Site entrance, then the assessment proceeds to the next step. Additionally, should ecological receptors be identified within 50m of the Site or the construction vehicle route up to 250m from the Site entrance, then the assessment also proceeds to the next stage.
- 7.20 The second stage of the assessment screens the risk of potential dust impacts. The risk category was defined based on two factors:
- The scale and nature of the works, which determines the magnitude of dust arising as: small, medium or large; and,
 - The sensitivity of the area to dust impacts, which can be defined as low, medium or high sensitivity.
- 7.21 The two factors are combined in order to determine the impact risk without mitigation applied.
- 7.22 The influencing factors that define the sensitivity of specific receptors are shown in **Table 7.3** below.

Receptor Sensitivity	Example	
	Human Receptors	Ecological Receptors
High	Users expect high levels of amenity High aesthetic or value property People expected to be present continuously for extended periods of time Locations where members of the public are exposed over a time period relevant to the AQO for PM ₁₀ . e.g. residential properties, hospitals, schools and residential care homes	Internationally or nationally designated site e.g. Special Area of Conservation
Medium	Users would expect to enjoy a reasonable level of amenity Aesthetics or value of their property could be diminished by soiling People or property wouldn't reasonably be expected to be present here continuously or regularly for extended periods as part of the normal pattern of use of the land e.g. parks and places of work	Nationally designated site e.g. Sites of Special Scientific Interest
Low	Enjoyment of amenity would not reasonably be expected Property would not be expected to be diminished in appearance Transient exposure, where people would only be expected to be present for limited periods. e.g. public footpaths, playing fields, shopping streets, farmland, short term car parks and roads	Locally designated site e.g. Local Nature Reserve (LNR)

^Table 7.3 - Construction Dust - Sensitives of People and Ecological Receptors

- 7.23 The criteria for determining the sensitivity of the area to dust soiling effects on people and property is summarised in **Table 7.4** overleaf.

Receptor Sensitivity	Number of Receptors	Distance from the Source (m)			
		Less than 20	Less than 50	Less than 100	Less than 250
High	More than 100	High	High	Medium	Low
	10 - 100	High	Medium	Low	Low
	1 - 10	Medium	Low	Low	Low
Medium	More than 1	Medium	Low	Low	Low
Low	More than 1	Low	Low	Low	Low

^ Table 7.4 - Construction Dust - Sensitivity of the Area to Dust Soiling Effects on People and Property

- 7.24 **Table 7.5** below outlines the criteria for determining the sensitivity of the area to human health impacts.

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
High	Greater than 32µg/m ³	More than 100	High	High	High	Medium
		10 - 100	High	High	Medium	Low
		1 - 10	High	Medium	Low	Low
	28 - 32µg/m ³	More than 100	High	High	Medium	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	High	Medium	Low	Low
	24 - 28µg/m ³	More than 100	High	Medium	Low	Low
		10 - 100	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	Less than 24µg/m ³	More than 100	Medium	Low	Low	Low
		10 - 100	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low

Receptor Sensitivity	Background Annual Mean PM ₁₀ Concentration	Number of Receptors	Distance from the Source (m)			
			Less than 20	Less than 50	Less than 100	Less than 250
Medium	Greater than 32µg/m ³	More than 10	High	Medium	Low	Low
		1 - 10	Medium	Low	Low	Low
	28 - 32µg/m ³	More than 10	Medium	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	24 - 28µg/m ³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
	Less than 24µg/m ³	More than 10	Low	Low	Low	Low
		1 - 10	Low	Low	Low	Low
Low	-	Greater than 1	Low	Low	Low	Low

^ Table 7.5 - Construction Dust - Sensitivity of the Area to Human Health Impacts

7.25 **Table 7.6** below outlines the criteria for determining the sensitivity of the area to ecological impacts.

Receptor Sensitivity	Distance from the Source (m)	
	Less than 20	Less than 50
High	High	Medium
Medium	Medium	Low
Low	Low	Low

^ Table 7.6 - Construction Dust - Sensitivity of the Area to Ecological Impacts

7.26 The scale and nature of the construction works determine the magnitude of dust impacts arising from each activity. The relevant criteria are summarised in **Table 7.7** below.

Magnitude	Activity	Criteria
Large	Earthworks	Total site area greater than 110,000m ² Potentially dusty soil type (e.g. clay, which will be prone to suspension when dry due to small particle size) More than 10 heavy earth moving vehicles active at any one time Formation of bunds greater than 6m in height
	Construction	Total building volume greater than 75,000m ³ On site concrete batching Sandblasting

Magnitude	Activity	Criteria
	Trackout	More than 50 Heavy Duty Vehicle (HDV) trips per day Potentially dusty surface material (e.g. high clay content) Unpaved road length greater than 100m
Medium	Earthworks	Total site area 18,000m ² to 110,000m ² Moderately dusty soil type (e.g. silt) 5 to 10 heavy earth moving vehicles active at any one time Formation of bunds 3m to 6m in height
	Construction	Total building volume 12,000m ³ to 75,000m ³ Potentially dusty construction material (e.g. concrete) On site concrete batching
	Trackout	20 to 50 HDV trips per day Moderately dusty surface material (e.g. high clay content) Unpaved road length 50m to 100m
Small	Earthworks	Total site area less than 18,000m ² Soil type with large grain size (e.g. sand) Less than 5 heavy earth moving vehicles active at any one time Formation of bunds less than 3m in height
	Construction	Total building volume less than 12,000m ³ Construction material with low potential for dust release (e.g. metal cladding or timber)
	Trackout	Less than 20 HDV trips per day Surface material with low potential for dust release Unpaved road length less than 50m

^ Table 7.7 - Construction Dust - Magnitude of Emission

7.27 **Table 7.8** below outlines the dust risk category from earthworks, construction and trackout.

Sensitivity of the Area	Dust Emission Magnitude		
	Large	Medium	Small
High	High	Medium	Low
Medium	Medium	Medium	Low
Low	Low	Low	Negligible

^ Table 7.8 - Construction Dust - Dust Risk Category from Earthworks, Construction and Trackout Activities

7.28 It should be noted that predicted effects from construction phase fugitive emissions are considered to be adverse but temporary in nature.

7.29 Based on the dust risk category, Site-specific mitigation measures were identified from the IAQM guidance⁸ in order to reduce potential dust impacts.

⁸ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

- 7.30 The significance of residual impacts was then determined based on the professional judgement. For almost all construction activity, the aim should be to control effects through the use of effective mitigation. Experience shows that this is normally possible. Hence the residual effect will normally be negligible. This is regarded as not significant with respect to the Town and Country Planning (Environmental Impact Assessment) Regulations (2017)⁹.

Construction Phase Road Vehicle Exhaust Emissions

- 7.31 There is potential for road traffic exhaust emissions associated with vehicles travelling to and from the Site during the construction phase to impact on existing air quality at sensitive receptor locations. An assessment was therefore undertaken in accordance with the IAQM guidance 'Land-use Planning & Development Control: Planning for Air Quality'¹⁰. This involved comparing the predicted change in vehicle flows on the local road network as a result of the Proposed Development with the following thresholds:

- A change of Light Duty Vehicle (LDV) flows of more than 100 Annual Average Daily Traffic (AADT) within or adjacent to an AQMA or more than 500 AADT elsewhere; and,
- A change of HDV flows of more than 25 AADT within or adjacent to an AQMA or more than 100 AADT elsewhere.

- 7.32 If the predicted change in traffic flow on the road network as a result of the development is less than the thresholds outlined previously, the IAQM guidance 'Land-use Planning & Development Control: Planning for Air Quality'¹¹ indicates effects associated with road traffic exhaust emission effects can be classified as negligible and no further assessment is required. These effects would be considered to be not significant

Operational Phase Road Vehicle Exhaust Emissions

- 7.33 The Proposed Development has the potential to impact on existing air quality as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site during the operational phase. Potential effects have therefore been defined by predicting pollutant concentrations at sensitive locations using dispersion modelling for the following scenarios:

- 2023 - Model Verification (comparison of predicted and measured pollutant concentrations allowing calculation of a verification factor to adjust results accordingly);
- Opening year Do-Minimum (DM) (predicted traffic flows for 2026 should the Proposed Development not proceed); and,
- Opening year Do-Something (DS) (predicted traffic flows for 2026 should the Proposed Development be completed).

- 7.34 The DM Scenario (i.e. without the Proposed Development) included baseline traffic data, inclusive of anticipated growth and committed developments for 2026. The DS scenario (i.e. with the Proposed Development) included baseline traffic data, inclusive of anticipated growth and committed developments for 2026, in addition to predicted vehicle trips associated with the Proposed Development.

⁹ The Town and Country Planning (Environmental Impact Assessment) Regulation 2017, UK Government, 2017.

¹⁰ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹¹ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

- 7.35 Reference should be made to **Appendix 7.1** for a description of the dispersion modelling inputs.
- 7.36 Locations sensitive to potential changes in off-Site pollutant concentrations were identified within 200m of the highway network in accordance with the guidance provided within the Design Manual for Roads and Bridges (DMRB)¹² on the likely limits of pollutant dispersion from road sources. The criteria provided within DEFRA guidance¹³ on where the AQOs apply, as summarised in **Table 7.2**, was utilised to determine worst-case receptor positions in the vicinity of links likely to be affected by changes in traffic flows as a result of the Proposed Development.
- 7.37 The significance of predicted air quality impacts was determined in accordance with the guidance provided within the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'¹⁴. Using this methodology impacts were defined based on the interaction between the predicted pollutant concentration from the DS scenario and the magnitude of change between the DM and DS scenarios, as outlined in **Table 7.9** below.

Pollutant Concentration at Receptor in Assessment Year	Predicted Concentration Change as Proportion of AQO/Interim Target (%)			
	1	2 - 5	6 - 10	> 10
75% or less of AQO/Interim Target	Negligible	Negligible	Slight	Moderate
76 - 94% of AQO/Interim Target	Negligible	Slight	Moderate	Moderate
95 - 102% of AQO/Interim Target	Slight	Moderate	Moderate	Substantial
103 - 109% of AQO/Interim Target	Moderate	Moderate	Substantial	Substantial
110% or more of AQO/Interim Target	Moderate	Substantial	Substantial	Substantial

^ Table 7.9 - Operational Phase Road Vehicle Exhaust Emissions - Significance of Operational Phase Road Vehicle Exhaust Emissions Impact

- 7.38 It should be noted that the categories outlined in **Table 7.9** are intended to be used by rounding the change in percentage concentration to whole numbers.
- 7.39 Following the prediction of impacts at discrete receptor locations, the IAQM document¹⁵ provides guidance on determining the overall air quality impact significance of the operation of a development. The following factors are identified for consideration by the assessor:
- The existing and future air quality in the absence of the development;
 - The extent of current and future population exposure to the impacts; and,
 - The influence and validity of any assumptions adopted when undertaking the prediction of impacts.

¹² LA 105: Air Quality, National Highways, 2024.

¹³ Local Air Quality Management Technical Guidance (TG22), DEFRA, 2022.

¹⁴ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹⁵ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

- 7.40 The IAQM guidance states that an assessment must reach a conclusion on the likely significance of the predicted impact. Where the overall effect is moderate or substantial, the effect is likely to be considered significant, whilst if the effect is slight or negligible, the effect is likely to be considered not significant. It should be noted that this is a binary judgement of either it is significant or it is not significant.
- 7.41 Predicted air quality effects from operational phase road vehicle exhaust emissions are considered to be adverse and permanent in nature.

Operational Phase Potential Future Exposure

- 7.42 The Proposed Development has the potential to expose future residents to poor air quality. Pollutant concentrations were therefore quantified across the Site using dispersion modelling. The results were subsequently compared with the relevant AQOs and Interim Target to determine the potential for exceedance. Reference should be made to **Appendix 7.1** for a description of the dispersion modelling inputs.
- 7.43 Should the AQOs or Interim Target be exceeded, then the IAQM guidance¹⁶ considers potential air quality effects associated with a development to be **significant** and mitigation is required. Should compliance with the AQOs and Interim Target be indicated then effects would be considered **not significant** with respect to the Town and Country Planning (Environmental Impact Assessment) Regulations (2017) .

Assumptions and Limitations

- 7.44 A number of assumptions have been made during the undertaking of the assessment. These include the following:
- The meteorological data used for the assessment is representative of the conditions at the Site. Records were obtained based on a review of available observation locations to ensure the most representative record station was selected;
 - Background pollutant concentrations used for the assessment are representative of baseline annual mean pollutant concentrations at the Site. These values were obtained from the DEFRA background mapping study, an industry standard database produced on behalf of the UK Government, to ensure the most accurate representation of background pollutant concentrations;
 - Road traffic emissions of NO_x are predicted to decrease in future years with changes to the UK's fleet in line with Government legislation. An assumption that emission factors remain the same was therefore adopted in order to provide a robust assessment;
 - The traffic data obtained for the purpose of the assessment is accurate. These values were provided by Curtins, the Transport Consultants for the project, and the Department for Transport (DfT)¹⁷ web tool. These are therefore considered suitable for an assessment of this nature; and,
 - The monitoring data used in the assessment is accurate. The results were obtained from the 'Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2023' spreadsheet¹⁸ which have been ratified by DEFRA and are therefore considered valid.

¹⁶ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

¹⁷ <https://roadtraffic.dft.gov.uk/#6/55.254/-6.053/basemap-regions-countpoints>.

¹⁸ Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2023, GMCA, 2023.

- 7.45 The above assumptions are similar to those required for any project of this nature and the adoption of worst-case parameters, where necessary, has ensure the assessment results can be considered sufficiently robust.

Baseline Conditions

- 7.46 Existing air quality conditions in the vicinity of the Site were identified in order to provide a baseline for the assessment. These are detailed in the following Sections.

Local Air Quality Management

- 7.47 As required by the Environment Act (1995), as amended by the Environment Act (2021), MCC has undertaken Review and Assessment of air quality within their area of jurisdiction. This process has indicated that annual mean concentrations of NO₂ are above the AQO within the city. As such, a number of roads within Manchester have been included within the GMCA AQMA. This is described as follows:

"This is the part of the Greater Manchester Combined Authority AQMA located within the Manchester City Council area."

- 7.48 The Proposed Development is partly located within the AQMA. As such, there is the potential for the exposure of future residents to poor air quality and any emissions associated with the proposals to cause air quality effects within this sensitive location. This has been considered throughout the assessment.
- 7.49 MCC has concluded that concentrations of all other pollutants considered within the AQS are currently below the relevant AQOs. As such, no further AQMAs have been designated.

Local Air Quality Monitoring Data

- 7.50 Monitoring of pollutant concentrations is undertaken by MCC throughout their area of jurisdiction. Data has also been collected by the GMCA to inform the CAP. Recent NO₂ concentrations recorded in the vicinity of the Proposed Development, as provided in the 'Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2023'¹⁹ spreadsheet, are shown in **Table 7.10**.

Monitoring Site		Monitored NO ₂ Concentration (µg/m ³)			
		2020	2021	2022	2023
MA28NO	Ashton Old Road	26.4	29.4	29.3	26.9
MA95BNO	Ashton Old Road	31.5	34.1	33.7	31.5
CAP_MANC_133 ^(a)	A635 Fairfield Street	-	-	37.0	35.3
CAP_MANC_134 ^(a)	A635 Fairfield Street	-	-	39.3	37.4
CAP_MANC_135 ^(a)	A635 Fairfield Street	-	-	39.8	38.4

Note: (a) Monitor commissioned in 2022.

^ Table 7.10 - Monitoring Results

¹⁹ Greater Manchester LAQM and CAP NO₂ Diffusion Tube Results 2011-2023, GMCA, 2023.

7.51 As shown in **Table 7.10**, annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all monitors in recent years.

7.52 Pollutant concentrations during 2020 and 2021 were affected by changes to travel patterns associated with the COVID-19 pandemic. The results should therefore be viewed with caution. However, data for 2022 and beyond is now considered representative of post-pandemic conditions. This is supported by the IAQM²⁰, who have adopted the following position:

"ambient air quality monitoring data for the year 2022 and beyond is generally considered to represent the current post-pandemic baseline."

7.53 MCC do not undertake monitoring of PM₁₀ or PM_{2.5} concentrations within the vicinity of the Site.

7.54 Reference should be made to **Figure 7.2.1** in **Appendix 7.2** for a map of the survey positions.

Background Concentrations

7.55 Predictions of background pollutant concentrations on a 1km by 1km grid basis have been produced by DEFRA for the entire of the UK to assist LAs in their Review and Assessment of air quality. The Site is located in grid square National Grid Reference (NGR): 387500, 399500. Data for this location was downloaded from the DEFRA website²¹ for the purpose of the assessment and is summarised in **Table 7.11** below.

Pollutant	Predicted Background Annual Mean Pollutant Concentration (µg/m ³)		
	2023	2024	2026
NO ₂	15.60	15.09	14.12
PM ₁₀	12.44	12.39	12.28
PM _{2.5}	7.62	7.56	7.44

^ Table 7.11 - Predicted Background Concentrations

7.56 As shown in **Table 7.11**, predicted background NO₂, PM₁₀ and PM_{2.5} concentrations are below the relevant AQOs and Interim Target at the Site.

Sensitive Receptors

7.57 A sensitive receptor is defined as any location which may be affected by changes in air quality as a result of a development. These have been defined for construction dust and road vehicle exhaust emission impacts in the following Sections.

Construction Phase Fugitive Dust Emissions Sensitive Receptors

7.58 Receptors sensitive to potential dust impacts during earthworks and construction were identified from a desk-top study of the area up to 250m from the Site boundary. These are summarised in **Table 7.12** overleaf.

²⁰ Use of 2020 and 2021 Monitoring Datasets - IAQM Position Statement V1.1, IAQM, 2023.

²¹ <http://uk-air.defra.gov.uk/data/laqm-background-maps?year=2021>.

Distance from Site Boundary (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	1 - 10	0
Up to 50	10 - 100	0
Up to 100	More than 100	-
Up to 250	More than 100	-

^ Table 7.12 - Construction Dust - Earthworks and Construction Dust Sensitive Receptors

- 7.59 Receptors sensitive to potential dust impacts from trackout were identified from a desk-top study of the area up to 50m from the road network within 250m of the Site access. These are summarised in **Table 7.13** below.

Distance from Site Access Route (m)	Approximate Number of Human Receptors	Approximate Number of Ecological Receptors
Up to 20	1 - 10	1
Up to 50	10 - 100	1

^ Table 7.13 - Construction Dust - Trackout Dust Sensitive Receptors

- 7.60 The ecological receptor identified in **Table 7.13** is the Clayton Vale LNR, which is situated approximately 200m east of the Site boundary. Based on the criteria shown in **Table 7.3**, the sensitivity of this designation to potential dust impacts was classified as **low**.
- 7.61 Dust sensitive receptors within 250m of the Site include places of work and residential dwellings. These are considered to be of **medium** and **high** sensitivity, respectively. It should be noted that only receptors of **medium** sensitivity are present within 100m of the boundary.
- 7.62 The sensitivity of the receiving environment to dust soiling, human health and ecological impacts has been derived from **Table 7.4**, **Table 7.5** and **Table 7.6**, respectively. These are shown in **Table 7.14** below.

Potential Impact	Sensitivity of the Surrounding Area		
	Earthworks	Construction	Trackout
Dust Soiling	Medium	Medium	Medium
Human Health	Low	Low	Low
Ecological	-	-	Low

^ Table 7.14 - Construction Dust - Sensitivity of the Surrounding Area to Specific Dust Impacts

Operational Phase Road Vehicle Exhaust Emissions Sensitive Receptors

- 7.63 Locations sensitive to potential operational phase road vehicle exhaust emission impacts were identified from a desk-top study and are summarised in **Table 7.15** below. It should be noted that the receptor height was defined as the lowest floor of relevant exposure to allow for less sensitive land uses, such as retail space, at ground level.

Receptor		NGR (m)		Height (m)
		X	Y	
R1	Residential - Briscoe Lane	386779.2	399276.6	1.5
R2	Residential - Briscoe Lane	387467.9	399831.2	1.5
R3	Residential - Briscoe Lane	387668.9	399936.8	1.5
R4	Residential - Ten Acres Lane	387249.4	400074.5	1.5
R5	Residential - Ten Acres Lane	387123.0	400372.3	1.5
R6	Rocking Horse Nursery	386903.5	400356.6	1.5
R7	Residential - A62 Oldham Road	387301.6	400565.9	1.5
R8	Residential - Hulme Hall Lane	386505.4	399398.5	1.5
R9	Residential - Alan Turing Way	386969.8	398874.8	1.5
R10	Residential - Newcombe Close	386916.8	398304.8	1.5
R11	Residential - Orme Close	386433.8	398342.2	1.5
R12	Residential - Alan Turing Way	387153.4	398242.3	1.5
R13	Connell Coop College	387299.7	397919.9	1.5
R14	Residential - Outrington Drive	387249.5	397691.2	1.5
R15	Residential - Alan Turing Way	387225.0	397543.6	1.5
R16	Residential - Ashton Old Road	387100.1	397544.0	1.5
R17	Residential - Ashton Old Road	386649.2	397577.6	1.5
R18	Residential - Ashton Old Road	386454.5	397600.1	1.5
R19	Bridge College	387256.9	397344.7	1.5

Receptor		NGR (m)		Height (m)
		X	Y	
R20	Residential - Ashton Old Road	387433.2	397513.1	1.5
R21	Residential - Ashton Old Road	387625.3	397456.5	1.5
R22	Residential - Ashton Old Road	388128.4	397442.1	1.5
R23	Residential - Ashton New Road	387650.6	398511.5	3.5
R24	Residential - Bank Street	387641.6	398533.9	3.5
R25	Residential - Bank Street	387592.3	398701.9	1.5
R26	Ravensbury Street Primary School	387547.0	398878.2	1.5
R27	Residential - Ten Acres Lane	387565.0	399636.0	1.5
R28	Residential - Ten Acres Lane	387483.2	399750.2	1.5

^ Table 7.15 - Road Vehicle Exhaust Emissions Sensitive Receptor Locations

- 7.64 Reference should be made to **Figure 7.2.2** in **Appendix 7.2** for a map of road vehicle exhaust emission sensitive receptor locations.

Identification and Evaluation of Significant Effects

Construction Phase Fugitive Dust Emissions

- 7.65 Activities such as excavation, ground works, cutting, construction, concrete batching and storage of materials have the potential to result in fugitive dust emissions throughout the construction phase. Vehicle movements both on-Site and on the local road network also have the potential to result in the re-suspension of dust from haul roads and highway surfaces.
- 7.66 The potential for effects at sensitive locations depends significantly on local meteorology during the undertaking of dust generating activities, with the most significant effects likely to occur during dry and windy conditions.
- 7.67 The desk-top study undertaken to inform the baseline identified a number of sensitive receptors within 250m of the Site boundary. As such, a detailed assessment of potential dust effects has been undertaken.

Earthworks

- 7.68 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as Site levelling and landscaping. The area of the Site is between 18,000m² and 110,000m². In accordance with the criteria outlined in **Table 7.7**, the magnitude of potential dust emissions from earthworks is therefore medium.
- 7.69 As indicated in **Table 7.14**, the sensitivity of the study area to dust soiling effects on people and property is medium. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a medium risk site for dust soiling as a result of earthworks.

- 7.70 As indicated in **Table 7.14**, the sensitivity of the study area to human health impacts low. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a low risk site for human health receptors as a result of earthworks.

Construction

- 7.71 Due to the size of the Proposed Development, the total building volume is likely to be greater than 75,000m³. In accordance with the criteria outlined in **Table 7.7**, the magnitude of potential dust emissions from construction is therefore large.
- 7.72 As indicated in **Table 7.14**, the sensitivity of the study area to dust soiling effects on people and property is medium. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a medium risk site for dust soiling as a result of construction activities.
- 7.73 As indicated in **Table 7.14**, the sensitivity of the study area to human health impacts low. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a low risk site for human health receptors as a result of construction activities.

Trackout

- 7.74 Based on the Site area and existing hardstanding, it is anticipated that the unpaved road length is likely to be between 50m and 100m. In accordance with the criteria outlined in **Table 7.7**, the magnitude of potential dust emissions from trackout is therefore medium.
- 7.75 As indicated in **Table 7.14**, the sensitivity of the study area to dust soiling effects on people and property is medium. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a medium risk site for dust soiling as a result of trackout activities.
- 7.76 As indicated in **Table 7.14**, the sensitivity of the study area to human health impacts low. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a low risk site for human health receptors as a result of trackout activities.
- 7.77 As indicated in **Table 7.14**, the sensitivity of the study area to ecological impacts is low. In accordance with the criteria outlined in **Table 7.8**, the Proposed Development is considered to be a low risk site for ecological impacts as a result of trackout activities.

Summary of Predicted Dust Risk

- 7.78 A summary of the potential risk from each dust generating activity is provided in **Table 7.16** below.

Potential Impact	Potential Unmitigated Dust Risk		
	Earthworks	Construction	Trackout
Dust Soiling	Medium	Medium	Medium
Human Health	Low	Low	Low
Ecological	-	-	Low

^ Table 7.16 - Summary of Potential Unmitigated Construction Dust Risk

Construction Phase Road Vehicle Exhaust Emissions

- 7.79 Any vehicle movements associated with the construction phase of the Proposed Development will generate exhaust emissions on the local and regional road networks. As detailed in **Chapter 11 - Transport** of this ES, it is considered unlikely the development will result in more than 100 LDV or 25 HDV movements per day . Effects are therefore predicted to be not significant.

Operational Phase Road Vehicle Exhaust Emissions

- 7.80 The Proposed Development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site during the operational phase. As assessment was therefore undertaken using dispersion modelling in order to quantify potential changes in pollutant concentrations at sensitive locations in the vicinity of the Site. The results are summarised below. It should be noted that the modelling was based on 594 apartments and 183 dwellings. The scheme has since been revised and reduced to circa 500 units. However, the assessment has been completed based on trips from the larger scheme in order to provide a worst-case appraisal.
- 7.81 Reference should be made to **Appendix 7.1** for the assessment inputs.

Predicted Concentrations

- 7.82 Annual mean NO₂ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in **Table 7.17** below.

Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - Briscoe Lane	33.18	33.53	0.35
R2	Residential - Briscoe Lane	33.22	33.42	0.20
R3	Residential - Briscoe Lane	26.22	26.31	0.09
R4	Residential - Ten Acres Lane	32.21	32.43	0.22
R5	Residential - Ten Acres Lane	30.33	30.49	0.16
R6	Rocking Horse Nursery	38.67	38.70	0.03
R7	Residential - A62 Oldham Road	34.49	34.65	0.16
R8	Residential - Hulme Hall Lane	31.38	31.54	0.16
R9	Residential - Alan Turing Way	32.56	32.75	0.19
R10	Residential - Newcombe Close	25.92	25.95	0.03
R11	Residential - Orme Close	25.51	25.53	0.02
R12	Residential - Alan Turing Way	30.44	30.56	0.12

Receptor		Predicted Annual Mean NO ₂ Concentration (µg/m ³)		
		DM	DS	Change
R13	Connell Coop College	28.01	28.11	0.10
R14	Residential - Outrington Drive	31.93	32.07	0.14
R15	Residential - Alan Turing Way	35.85	35.99	0.14
R16	Residential - Ashton Old Road	31.97	32.06	0.09
R17	Residential - Ashton Old Road	34.81	34.91	0.10
R18	Residential - Ashton Old Road	33.40	33.49	0.09
R19	Bridge College	23.97	23.99	0.02
R20	Residential - Ashton Old Road	27.95	28.02	0.07
R21	Residential - Ashton Old Road	26.79	26.85	0.06
R22	Residential - Ashton Old Road	31.16	31.25	0.09
R23	Residential - Ashton New Road	28.29	28.33	0.04
R24	Residential - Bank Street	34.46	34.53	0.07
R25	Residential - Bank Street	29.23	29.33	0.10
R26	Ravensbury Street Primary School	27.25	27.33	0.08
R27	Residential - Ten Acres Lane	27.82	27.97	0.15
R28	Residential - Ten Acres Lane	28.91	29.07	0.16

^Table 7.17 - Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean NO₂ Concentrations

- 7.83 As shown in Table 7.17, predicted annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all receptors in both scenarios.
- 7.84 Reference should be made to **Figure 7.2.3** in **Appendix 7.2** for a graphical representation of annual mean NO₂ concentrations for the DM and DS scenario, respectively.
- 7.85 Annual mean PM₁₀ concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in **Table 7.18** overleaf.

Receptor		Predicted Annual Mean PM ₁₀ Concentration (µg/m³)		
		DM	DS	Change
R1	Residential - Briscoe Lane	17.68	17.80	0.12
R2	Residential - Briscoe Lane	17.76	17.83	0.07
R3	Residential - Briscoe Lane	15.67	15.70	0.03
R4	Residential - Ten Acres Lane	17.46	17.53	0.08
R5	Residential - Ten Acres Lane	16.79	16.85	0.05
R6	Rocking Horse Nursery	20.36	20.37	0.01
R7	Residential - A62 Oldham Road	18.41	18.47	0.06
R8	Residential - Hulme Hall Lane	16.94	16.99	0.05
R9	Residential - Alan Turing Way	17.49	17.56	0.06
R10	Residential - Newcombe Close	15.69	15.71	0.01
R11	Residential - Orme Close	15.59	15.59	0.01
R12	Residential - Alan Turing Way	17.49	17.54	0.05
R13	Connell Coop College	16.49	16.52	0.04
R14	Residential - Outrington Drive	18.02	18.07	0.06
R15	Residential - Alan Turing Way	19.11	19.17	0.05
R16	Residential - Ashton Old Road	17.57	17.60	0.03
R17	Residential - Ashton Old Road	18.67	18.71	0.04
R18	Residential - Ashton Old Road	17.76	17.79	0.03
R19	Bridge College	14.91	14.92	0.01
R20	Residential - Ashton Old Road	16.47	16.49	0.03
R21	Residential - Ashton Old Road	16.08	16.10	0.02
R22	Residential - Ashton Old Road	16.88	16.91	0.03

Receptor		Predicted Annual Mean PM ₁₀ Concentration (µg/m ³)		
		DM	DS	Change
R23	Residential - Ashton New Road	16.34	16.36	0.01
R24	Residential - Bank Street	18.67	18.70	0.03
R25	Residential - Bank Street	16.77	16.80	0.04
R26	Ravensbury Street Primary School	16.07	16.10	0.03
R27	Residential - Ten Acres Lane	16.05	16.10	0.05
R28	Residential - Ten Acres Lane	16.40	16.45	0.05

^Table 7.18 - Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean PM₁₀ Concentrations

- 7.86 As shown in **Table 7.18**, predicted annual mean PM₁₀ concentrations were below the AQO of 40µg/m³ at all receptors in both scenarios.
- 7.87 Reference should be made to **Figure 7.2.4** in **Appendix 7.2** for a graphical representation of annual mean PM₁₀ concentrations for the DM and DS scenario, respectively.
- 7.88 Annual mean PM_{2.5} concentrations were predicted at the sensitive receptor locations for the DM and DS scenarios. These are summarised in **Table 7.19** below.

Receptor		Predicted Annual Mean PM _{2.5} Concentration (µg/m ³)		
		DM	DS	Change
R1	Residential - Briscoe Lane	9.99	10.05	0.06
R2	Residential - Briscoe Lane	10.03	10.06	0.04
R3	Residential - Briscoe Lane	8.91	8.93	0.02
R4	Residential - Ten Acres Lane	9.86	9.90	0.04
R5	Residential - Ten Acres Lane	9.51	9.54	0.03
R6	Rocking Horse Nursery	11.42	11.43	0.01
R7	Residential - A62 Oldham Road	10.38	10.41	0.03
R8	Residential - Hulme Hall Lane	9.60	9.63	0.03
R9	Residential - Alan Turing Way	9.89	9.92	0.03

Receptor		Predicted Annual Mean PM _{2.5} Concentration (µg/m³)		
		DM	DS	Change
R10	Residential - Newcombe Close	8.93	8.93	0.01
R11	Residential - Orme Close	8.87	8.87	0.00
R12	Residential - Alan Turing Way	9.88	9.91	0.03
R13	Connell Coop College	9.35	9.37	0.02
R14	Residential - Outrington Drive	10.16	10.19	0.03
R15	Residential - Alan Turing Way	10.75	10.78	0.03
R16	Residential - Ashton Old Road	9.93	9.95	0.02
R17	Residential - Ashton Old Road	10.51	10.53	0.02
R18	Residential - Ashton Old Road	10.03	10.05	0.02
R19	Bridge College	8.51	8.52	0.00
R20	Residential - Ashton Old Road	9.34	9.35	0.01
R21	Residential - Ashton Old Road	9.13	9.15	0.01
R22	Residential - Ashton Old Road	9.57	9.58	0.02
R23	Residential - Ashton New Road	9.28	9.29	0.01
R24	Residential - Bank Street	10.52	10.54	0.02
R25	Residential - Bank Street	9.49	9.51	0.02
R26	Ravensbury Street Primary School	9.12	9.14	0.02
R27	Residential - Ten Acres Lane	9.11	9.14	0.03
R28	Residential - Ten Acres Lane	9.30	9.33	0.03

^Table 7.19 - Operational Phase Road Vehicle Exhaust Emissions - Predicted Annual Mean PM_{2.5} Concentrations

- 7.89 As shown in **Table 7.19**, predicted annual mean PM_{2.5} concentrations were below the Interim Target of 12µg/m³ at all receptors in both scenarios.
- 7.90 Reference should be made to **Figure 7.2.5** in **Appendix 7.2** for a graphical representation of annual mean PM_{2.5} concentrations for the DM and DS scenario, respectively.

Predicted Impacts

7.91 Predicted impacts on annual mean NO₂ concentrations at the sensitive receptor locations are summarised in **Table 7.20** below.

Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - Briscoe Lane	76 - 94% of AQO	1	Negligible
R2	Residential - Briscoe Lane	76 - 94% of AQO	1	Negligible
R3	Residential - Briscoe Lane	Below 75% of AQO	0	Negligible
R4	Residential - Ten Acres Lane	76 - 94% of AQO	1	Negligible
R5	Residential - Ten Acres Lane	76 - 94% of AQO	0	Negligible
R6	Rocking Horse Nursery	95 - 102% of AQO	0	Negligible
R7	Residential - A62 Oldham Road	76 - 94% of AQO	0	Negligible
R8	Residential - Hulme Hall Lane	76 - 94% of AQO	0	Negligible
R9	Residential - Alan Turing Way	76 - 94% of AQO	0	Negligible
R10	Residential - Newcombe Close	Below 75% of AQO	0	Negligible
R11	Residential - Orme Close	Below 75% of AQO	0	Negligible
R12	Residential - Alan Turing Way	76 - 94% of AQO	0	Negligible
R13	Connell Coop College	Below 75% of AQO	0	Negligible
R14	Residential - Outrington Drive	76 - 94% of AQO	0	Negligible
R15	Residential - Alan Turing Way	76 - 94% of AQO	0	Negligible
R16	Residential - Ashton Old Road	76 - 94% of AQO	0	Negligible
R17	Residential - Ashton Old Road	76 - 94% of AQO	0	Negligible
R18	Residential - Ashton Old Road	76 - 94% of AQO	0	Negligible
R19	Bridge College	Below 75% of AQO	0	Negligible
R20	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible

Receptor		Predicted Annual Mean NO ₂ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R21	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R22	Residential - Ashton Old Road	76 - 94% of AQO	0	Negligible
R23	Residential - Ashton New Road	Below 75% of AQO	0	Negligible
R24	Residential - Bank Street	76 - 94% of AQO	0	Negligible
R25	Residential - Bank Street	Below 75% of AQO	0	Negligible
R26	Ravensbury Street Primary School	Below 75% of AQO	0	Negligible
R27	Residential - Ten Acres Lane	Below 75% of AQO	0	Negligible
R28	Residential - Ten Acres Lane	Below 75% of AQO	0	Negligible

^ Table 7.20 - Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts NO₂

7.92 As shown in **Table 7.20**, impacts on annual mean NO₂ concentrations as a result of the Proposed Development were predicted to be **negligible** at all receptors. These are considered to be **not significant**.

7.93 Predicted impacts on annual mean PM₁₀ concentrations at the sensitive receptor locations are summarised in **Table 7.21** below.

Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R1	Residential - Briscoe Lane	Below 75% of AQO	0	Negligible
R2	Residential - Briscoe Lane	Below 75% of AQO	0	Negligible
R3	Residential - Briscoe Lane	Below 75% of AQO	0	Negligible
R4	Residential - Ten Acres Lane	Below 75% of AQO	0	Negligible
R5	Residential - Ten Acres Lane	Below 75% of AQO	0	Negligible
R6	Rocking Horse Nursery	Below 75% of AQO	0	Negligible
R7	Residential - A62 Oldham Road	Below 75% of AQO	0	Negligible
R8	Residential - Hulme Hall Lane	Below 75% of AQO	0	Negligible

Receptor		Predicted Annual Mean PM ₁₀ Concentration	Predicted Concentration Change as Proportion of AQO (%)	Impact Significance
R9	Residential - Alan Turing Way	Below 75% of AQO	0	Negligible
R10	Residential - Newcombe Close	Below 75% of AQO	0	Negligible
R11	Residential - Orme Close	Below 75% of AQO	0	Negligible
R12	Residential - Alan Turing Way	Below 75% of AQO	0	Negligible
R13	Connell Coop College	Below 75% of AQO	0	Negligible
R14	Residential - Outrington Drive	Below 75% of AQO	0	Negligible
R15	Residential - Alan Turing Way	Below 75% of AQO	0	Negligible
R16	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R17	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R18	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R19	Bridge College	Below 75% of AQO	0	Negligible
R20	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R21	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R22	Residential - Ashton Old Road	Below 75% of AQO	0	Negligible
R23	Residential - Ashton New Road	Below 75% of AQO	0	Negligible
R24	Residential - Bank Street	Below 75% of AQO	0	Negligible
R25	Residential - Bank Street	Below 75% of AQO	0	Negligible
R26	Ravensbury Street Primary School	Below 75% of AQO	0	Negligible
R27	Residential - Ten Acres Lane	Below 75% of AQO	0	Negligible
R28	Residential - Ten Acres Lane	Below 75% of AQO	0	Negligible

^ Table 7.21 - Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts PM₁₀

7.94 As shown in **Table 7.21**, impacts on annual mean PM₁₀ concentrations as a result of the Proposed Development were predicted to be **negligible** at all receptors. These are considered to be **not significant**.

7.95 Predicted impacts on annual mean PM_{2.5} concentrations at the sensitive receptor locations are summarised in **Table 7.22** below.

Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R1	Residential - Briscoe Lane	76 - 94% of Interim Target	1	Negligible
R2	Residential - Briscoe Lane	76 - 94% of Interim Target	0	Negligible
R3	Residential - Briscoe Lane	Below 75% of Interim Target	0	Negligible
R4	Residential - Ten Acres Lane	76 - 94% of Interim Target	0	Negligible
R5	Residential - Ten Acres Lane	76 - 94% of Interim Target	0	Negligible
R6	Rocking Horse Nursery	95 - 102% of Interim Target	0	Negligible
R7	Residential - A62 Oldham Road	76 - 94% of Interim Target	0	Negligible
R8	Residential - Hulme Hall Lane	76 - 94% of Interim Target	0	Negligible
R9	Residential - Alan Turing Way	76 - 94% of Interim Target	0	Negligible
R10	Residential - Newcombe Close	Below 75% of Interim Target	0	Negligible
R11	Residential - Orme Close	Below 75% of Interim Target	0	Negligible
R12	Residential - Alan Turing Way	76 - 94% of Interim Target	0	Negligible
R13	Connell Coop College	76 - 94% of Interim Target	0	Negligible
R14	Residential - Outrington Drive	76 - 94% of Interim Target	0	Negligible
R15	Residential - Alan Turing Way	76 - 94% of Interim Target	0	Negligible
R16	Residential - Ashton Old Road	76 - 94% of Interim Target	0	Negligible
R17	Residential - Ashton Old Road	76 - 94% of Interim Target	0	Negligible
R18	Residential - Ashton Old Road	76 - 94% of Interim Target	0	Negligible
R19	Bridge College	Below 75% of Interim Target	0	Negligible
R20	Residential - Ashton Old Road	76 - 94% of Interim Target	0	Negligible

Receptor		Predicted Annual Mean PM _{2.5} Concentration	Predicted Concentration Change as Proportion of Interim Target (%)	Impact Significance
R21	Residential - Ashton Old Road	76 - 94% of Interim Target	0	Negligible
R22	Residential - Ashton Old Road	76 - 94% of Interim Target	0	Negligible
R23	Residential - Ashton New Road	76 - 94% of Interim Target	0	Negligible
R24	Residential - Bank Street	76 - 94% of Interim Target	0	Negligible
R25	Residential - Bank Street	76 - 94% of Interim Target	0	Negligible
R26	Ravensbury Street Primary School	76 - 94% of Interim Target	0	Negligible
R27	Residential - Ten Acres Lane	76 - 94% of Interim Target	0	Negligible
R28	Residential - Ten Acres Lane	76 - 94% of Interim Target	0	Negligible

^ Table 7.22 - Operational Phase Road Vehicle Exhaust Emissions - Predicted Impacts PM_{2.5}

- 7.96 As shown in **Table 7.22**, impacts on annual mean PM_{2.5} concentrations as a result of the Proposed Development were predicted to be **negligible** at all receptors. These are considered to be **not significant**.

Operational Phase Potential Future Exposure

- 7.97 The Proposed Development has the potential to cause the exposure of future residents to elevated pollution levels associated with local road vehicle exhaust emissions. Dispersion modelling was undertaken with the inputs described in **Appendix 7.1** to quantify air quality conditions at the Site. Reference should be made to **Figure 7.2.3**, **Figure 7.2.4** and **Figure 7.2.5** for graphical representations of the results.
- 7.98 As shown in **Figure 7.2.3**, annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all proposed residential facades. The maximum level was 33.51µg/m³.
- 7.99 As shown in **Figure 7.2.4**, annual mean PM₁₀ concentrations were below the AQO of 40µg/m³ at all proposed residential facades. The maximum level was 18.46µg/m³.
- 7.100 As shown in **Figure 7.2.5**, annual mean PM_{2.5} concentrations were below the Interim Target of 12µg/m³ at all proposed residential facades. The maximum level was 10.36µg/m³.
- 7.101 Based on the results of the assessment, exposure of future residents to exceedences of the relevant AQOs and Interim Target has not been predicted. As such, the predicted effect is **not significant**.

Interim Planning Guidance for PM_{2.5}

- 7.102 Interim Planning Guidance²² on the consideration of the PM_{2.5} targets identified in the Environment Act (2021) in planning decisions has been produced by DEFRA. This requires evidence that the key sources of air pollution within a development have been identified and appropriate action to minimise PM_{2.5} and its precursors as far as is reasonably practicable be provided in support of planning applications. To assist the process, two questions and associated considerations are provided. These are summarised in **Table 7.23** below, along with the development response.

Question	Response
How has exposure to PM_{2.5} been considered when selecting the development site? • Site proximity to people (particularly large populations and/or vulnerable groups, e.g. schools, hospitals, care homes, areas of deprivation) and the impact of the development on these • Site proximity to pollution sources and the impact of these on users of the development • Exposure and emissions during both construction and in-use	The Proposed Development is located in a predominantly industrial area with a number of schools within the vicinity of the Site. These have been considered within the assessment and concentrations are predicted to be below the Interim Target with the Proposed Development in place The Site is located adjacent to Briscoe Lane and associated road vehicle emissions. This road is minor in nature. The assessment has considered the potential for exposure of future users to elevated pollutant levels. This indicated that PM_{2.5} levels at all proposed residential facades were predicted to be below the Interim Target As outlined in Table 7.24 below, a number of mitigation measures will be used throughout the construction phase in order to reduce fugitive dust emissions as far as practicable. This will control potential exposure at off-site locations
What actions and/or mitigations have been considered to reduce PM_{2.5} exposure for development users and nearby receptors (houses, hospitals, schools etc.) and to reduce emissions of PM_{2.5} and its precursors? • Site layout • The development's design • Technology used in the construction or installed for use in the development • Construction and future use of the development	A number of mitigation measures have been incorporated into the design of the Proposed Development in order to reduce PM_{2.5} exposure for future residents. These include the following: • Trees will be planted sporadically along the boundary fronting Briscoe Lane and the railway line. This will provide screening from potential vehicle exhaust emissions In order to reduce emissions of PM_{2.5} with associated impacts at nearby receptors, the following measures have also been included: • The Proposed Development will include 100% Electric Vehicle (EV) charging

²² <https://uk-air.defra.gov.uk/pm25targets/planning>.

Question	Response
	• Provision of secure cycle spaces to encourage the use of sustainable transport modes • An Interim Travel Plan is being produced to encourage the use of sustainable transport modes Further to the above, in order to reduce emissions during the construction phase, a number of mitigation measures will be used to minimise dust generation from associated activities

^ Table 7.23 - Interim Planning Guidance Questions

- 7.103 Based on the responses provided in **Table 7.23** and the assessment results, as detailed above, it is considered that the development has identified key sources of air pollution and taken appropriate action to minimise emissions of PM_{2.5}.

Mitigation Measures

- 7.104 Where feasible at this stage measures have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset significant environmental effects. Where this has not been possible, further mitigation measures have been proposed.
- 7.105 The mitigation measures proposed, some of which comprise best practice measures which should be implemented in respect of any construction site, or operational development in order to minimise the impact on the environment, are set out within each of the technical chapters and summarised below.

Construction Phase Fugitive Dust Emissions

- 7.106 Due to the size and nature of the Proposed Development, a Construction Environmental Management Plan (CEMP) will be produced to control potential air quality effects during the construction phase. The measures outlined in **Table 7.24** below will be included within the CEMP to mitigate fugitive dust emissions during construction. These are based on the advice provided within the IAQM guidance²³ and are therefore considered suitable for the Site.

Issue	Control Measure
Communications	Develop and implement a stakeholder communications plan that includes community engagement before work commences on Site Display the name and contact details of person(s) accountable for air quality and dust issues on the Site boundary Display the head or regional office contact information Develop and implement a Dust Management Plan (DMP), which may include measures to control other emissions, approved by MCC
Site Management	Record all dust and air quality complaints, identify cause(s), take appropriate measures to reduce emissions in a timely manner, and record the measures taken Make the complaints log available to MCC when requested

²³ Guidance on the Assessment of Dust from Demolition and Construction V2.2, IAQM, 2024.

Issue	Control Measure
	Record any exceptional incidents that cause dust and / or air emissions, either on- or off-Site, and the action taken to resolve the situation in the log book
Monitoring	Carry out regular Site inspections to monitor compliance with the DMP, record inspection results, and make an inspection log available to MCC when requested Increase the frequency of Site inspections when activities with a high potential to produce dust are being carried out and during prolonged dry or windy conditions
Preparing and maintaining the Site	Plan Site layout so that machinery and dust causing activities are located away from receptors, as far as is possible Erect solid screens or barriers around dusty activities or the Site boundary that are at least as high as any stockpiles on Site Fully enclose 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 or mud Keep Site fencing, barriers and scaffolding clean using wet methods Remove materials that have a potential to produce dust from Site as soon as possible Cover, seed or fence stockpiles to prevent wind whipping
Operating vehicle/machinery and sustainable travel	Ensure all vehicles switch off engines when stationary, no idling vehicles Avoid the use of diesel or petrol powered generators and use mains electricity or battery powered equipment where practicable
Operations	Only use cutting, grinding or sawing equipment fitted or in conjunction with suitable dust suppression techniques Ensure an adequate water supply on the Site for effective dust suppression, using non-potable water where possible and appropriate Use enclosed chutes and conveyors and covered skips Minimise drop heights and use fine water sprays wherever appropriate Ensure equipment is available to clean any dry spillages, and clean up spillages as soon as reasonably practicable using wet cleaning methods
Waste Management	Avoid bonfires and burning of waste materials
Earthworks	Re-vegetate earthworks and exposed areas/soil stockpiles to stabilise surfaces as soon as practicable Use Hessian, mulches or trackifiers where it is not possible to re-vegetate or cover with topsoil, as soon as practicable
Construction	Avoid scabbling (roughening of concrete surfaces) if possible Ensure sand and other aggregates are stored in bunded areas and are not allowed to dry out Ensure bulk cement and other fine powder materials are delivered in enclosed tankers and stored in silos For smaller supplies of fine powder materials ensure bags are sealed after use and stored appropriately to prevent dust

Issue	Control Measure
Trackout	Use water-assisted dust sweepers on the access and local roads, to remove, as necessary, any material tracked out of the Site Avoid dry sweeping of large areas Ensure vehicles entering and leaving Sites are covered to prevent escape of materials during transport Implement a wheel washing system, if necessary

^ Table 7.24 - Construction Phase Fugitive Dust Emissions - Mitigation Measures

Construction Phase Road Vehicle Exhaust Emissions

- 7.107 Air quality effects as a result of construction and operational phase road vehicle exhaust emissions are predicted to be **not significant**. As such, additional mitigation measures were not considered necessary.

Operational Phase Road Vehicle Exhaust Emissions

- 7.108 Air quality effects as a result of operational phase road vehicle exhaust emissions were predicted to be **not significant**. As such, additional mitigation was not considered necessary. However, a number of measures have been included within the Proposed Development in accordance with the requirements of the IAQM document 'Land-Use Planning & Development Control: Planning for Air Quality'²⁴ to encourage the use of sustainable transport modes, manage vehicle flow and reduce pollution around the Site. **Table 7.25** below describes the good practice principles detailed in the IAQM guidance along with how each has been addressed with regards to the Proposed Development.

Phase	Principle	Action
Design Phase	New developments should not contravene the Council's AQAP ²⁵ , or render any of the measures unworkable	It is confirmed that the proposals will not contravene MCC's AQAP, or render any of the measures unworkable
	Wherever possible, new developments should not create a new "street canyon", or a building configuration that inhibits effective pollution dispersion	The development will not create a new street canyon or a building configuration that inhibits effective dispersion
	Delivering sustainable development should be the key theme of any application	An agreed number of EV charging points are to be included as part of the proposals to encourage use of non-fossil fuelled vehicles
Operational Phase	The provision of at least 1 EV "rapid charge" point per 10 residential dwellings and/or 1,000m ² of commercial floor space. Where on-site parking is provided for residential dwellings, EV charging points for each parking space should be made	The Proposed Development will be 100% EV charging. This includes 1 charge point per dwelling and 1 EV charger per parking space

²⁴ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

²⁵ Greater Manchester AQAP 2016-2021, GMCA, 2016.

Phase	Principle	Action
	Where development generates significant additional traffic, provision of a detailed Travel Plan (with provision to measure its implementation and effect) which sets out measures to encourage sustainable means of transport (public, cycling and walking) via subsidised or free-ticketing, improved links to bus stops, improved infrastructure and layouts to improve accessibility and safety	An Interim Travel Plan is being produced for the Proposed Development
	All gas-fired boilers to meet a minimum standard of <40mgNO _x /kWh	Any boilers to be included in the Proposed Development will be provisioned in accordance with the relevant requirements

^ Table 7.25 - Operational Phase Road Vehicle Exhaust Emissions - Good Practice Design Principles for Operational Phase Air Quality Impacts

- 7.109 It is considered the above methods would further reduce potential impacts associated with the Proposed Development.

Cumulative Effects

Construction Phase Fugitive Dust Emissions

- 7.110 Should permission be granted for other committed developments within 250m of the Site, it is possible that cumulative dust effects may occur during construction. However, fugitive dust emissions associated with the Proposed Development will be minimised through the outlined mitigation measures. A similar level of control would also be expected for any other scheme. Therefore, cumulative effects are predicted to be **not significant**.

Construction Phase Road Vehicle Exhaust Emissions

- 7.111 Cumulative vehicle exhaust emissions may occur during construction as a result of additional traffic movements associated with committed developments in the vicinity of the Site. However, the number of vehicle trips associated with the development is anticipated to be lower than the relevant screening criteria²⁶, below which negligible impacts would be expected. A similar or lower level of vehicle trip generation would be expected for any other committed development. As such, the screening criteria are unlikely to be exceeded when cumulative trips are considered. Residual cumulative effects are therefore predicted to be **not significant**.

Operational Phase Road Vehicle Exhaust Emissions

- 7.112 Cumulative vehicle exhaust emission effects may occur during operation as a result of additional traffic movements associated with committed developments in the vicinity of the Site. However, the traffic data utilised for the assessment included predicted changes in flows as a result of relevant committed developments. As outlined previously, effects were predicted to be **not significant**. As such, cumulative effects are also predicted to be **not significant**.

²⁶ Land-Use Planning & Development Control: Planning for Air Quality, IAQM, 2017.

Residual Effects

- 7.113 Following the effective implementation of the mitigation measures, there are no significant residual effects arising from the Proposed Development during the construction or operational phases. A summary of the air quality effects arising from the Proposed Development are summarised in **Table 7.26** below.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Dust soiling as a result of fugitive dust emissions	Local residents	CEMP	Negligible Not Significant
Increases in PM ₁₀ concentrations as a result of fugitive dust emissions	Local residents	CEMP	Negligible Not Significant
Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	None	Negligible Not Significant
Operational Phase			
Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	Inclusion of measures in accordance with the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality', as outlined in Table 1.24	Negligible Not Significant
Exposure of future residents to exceedences of the AQO and Interim Target	Future residents of the Proposed Development	None	Negligible Not Significant

^ Table 7.26 - Summary of Residual Effects

8. Climate Change

Introduction

- 8.1 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.
- 8.2 Sian is an Environmental Consultant with over 4 years technical experience, MSc in Atmospheric Science and BSc in Geography, she is also an associate member of the Institute of Environmental Science (AIES). Andy is an Associate Director at Hilson Moran, a Chartered Engineer (CEng) with over 14 years technical experience and a full member of the Engineering Council (EC).

Legislative and Policy Context

- 8.3 A summary of the relevant legislation, planning policy and technical guidance used to inform this assessment is provided below. Full details are provided within **Appendix 8.1**.

Legislation

- 8.4 The legislation relevant to this assessment includes:
- Climate Change Act (2008) and 2050 Target Amendment (2019);
 - Climate Change and Sustainability Energy Act (2006);
 - Energy Act (2023);
 - Environment Act (1995, 2021).
 - EIA Directive (2014/52/EU);
 - Town and Country Planning Regulations (EIA) Regulations (2017); and,
 - Infrastructure Planning (EIA) Regulations (2017).

National Planning Policy

- 8.5 The national planning policy relevant to this assessment includes:
- National Planning Policy Framework (2023);
 - The National Adaptation Programme and Third Strategy for Climate Adaptation;
 - The Clean Growth Strategy; and
 - The Carbon Plan: Delivering Low Carbon Future.

Local Planning Policy

- 8.6 The local planning policy relevant to this assessment is provided within:
- MCC: Core Strategy Development Plan;

- MCC: Core Strategy Development Plan: Places for Everyone; and,
- MCC: Climate Change Action Plan 2020-2025.

Guidance

8.7 The technical guidance used to inform this assessment include:

- IEMA guidance on 'Assessing Greenhouse Gas Emissions and Evaluating their Significance' (2022);
- IEMA guidance on 'Climate Change Resilience and Adaptation' (2020);
- Building Regulations Part L 'Conservation of fuel and power' (2021 edition incorporating 2023 amendments – for use in England);
- Royal Institute of Chartered Surveyors (RICS) Whole Life Carbon Assessment for the Built Environment (2017); and,
- British Standard (BS) EN 15978:2011 'Sustainability of construction works' Assessment of environmental performance buildings. Calculation method.
- London Energy Transformation Initiative (LETI) Climate Emergency Design Guide (2020)
- London Energy Transformation Initiative (LETI) Embodied Carbon Target Alignment (2020)
- RIBA 2023 Climate Challenge version 2 (2021)
- UK Net Zero Carbon Buildings Standard, Pilot Version rev 1 (2024)
- Future Homes hub, Embodied and Whole Life Carbon: 2023-2025 Implementation plan for the homebuilding industry
- Greater London Authority: Whole Life-Cycle Carbon Assessments (2022)

Assessment Methodology and Significance Criteria – GHG Assessment

8.8 The assessment methodology presented in this chapter draws upon the IEMA guidance on 'Assessing Greenhouse Gas Emissions and Evaluating their significance'. This document provides guidance on how to assess the impact of climate change, within the context of EIA, emphasising the need for proportionality in the context of nation, sector and local GHG emissions. It sets out advice to the key components necessary to deliver a robust, appropriate and consistent assessment.

8.9 The following six steps outline the framework that has been followed within this assessment of GHG emissions:

- Define the scope and boundaries of the GHG assessment;
- Develop the baseline;
- Determine the emissions calculation methodologies;
- Data collection;

- Calculate and determine the GHG emissions inventory; and,
 - Consider mitigation opportunities and assessment of residual effects.
- 8.10 GHG emissions associated with the construction, operation and decommissioning of the Proposed Development are quantified and assessed within this chapter. GHG is assessed using a whole-life approach (i.e. from cradle to grave), including GHG emissions (direct and indirect) and embodied carbon associated with the Proposed Development, to develop a GHG footprint for the Proposed Development.

Assessment Scope and Boundaries

- 8.11 The scope of this assessment reflects a Whole Life Carbon (WLC) approach throughout the construction, operation and decommission of the Proposed Development. **Appendix 8.2** presents the modular approach of the life-cycle stages that are used to set the boundaries of this GHG assessment presented in Table 1.1.
- 8.12 The assessment scope includes emissions arising from material production, transportation, construction activities, equipment installation (life-cycle phases A1-A5).
- 8.13 Emissions arising from the use, maintenance, repair and operation of the Proposed Development throughout its lifetime (B1-B6). The operational lifetime of the Proposed Development is assumed to be 60-years within this assessment.
- 8.14 The scope also includes emissions generated throughout the end-of-life stages (C1-C4) associated with the deconstruction of the Proposed Development.
- 8.15 Refer to **Table 8.1** below for a summary of the GHG assessment boundaries.

Development Phase		Assessment Boundary
Construction	Embodied Carbon – Product Stage (A1-A3)	Emissions released through the extraction and processing of raw materials, manufacturing of products and the transportation of materials to the manufacturing sites.
	Embodied Carbon – Construction (A4-A5)	Emissions generated from on-site construction activities, including any fuel/gas combusting processes and the development of the new structure and supporting infrastructure. In accordance with the PS RICS WLC assessment for the built environment, emissions arising as part of the demolition processes of the existing asset were included part of the construction module (A5).
	Construction Traffic	Emissions from transporting construction materials and equipment to the site, modelled based on average distances and vehicle emissions.
Operational	Embodied Carbon – Repair, Maintenance & Refurbishment (B1-B5)	Emissions associated with the maintenance and repair of any onsite systems and the embodied carbon associated with the replacement of any materials. Emissions arising from waste generation onsite (e.g., general waste and mixed recycling).
	Operational Energy (B6)	Emissions associated with energy consumption of the proposed development, i.e., electricity,

Development Phase		Assessment Boundary
		and the provision of heating and hot water. The energy strategy for the proposed development will be all electric with the use of heat pumps in the apartments, with gas provisions in the houses.
	Operational Water (B7)	Emissions associated with consumption of water by the Proposed Development, i.e., water supply and treatment.
	Operational Traffic	Emissions associated with traffic generated by the Proposed Development. Modelled based on average distances and vehicle emissions.
End-of-Life	Embodied Carbon – End-of-Life (C1-C4)	Emissions arising from the deconstruction and demolition of the Proposed Development at the end of its operational lifetime. Including the transportation of materials to waste processing facilities, waste processing (reuse, recovering or recycling) and disposal.

^ Table 8.1 GHG Assessment Boundaries

Defining the Baseline

- 8.16 For the purpose of this assessment a baseline has been defined which the impact of a new project can be compared against. The IEMA guidance (2022) requires the baseline of an assessment should either be determined based on available data or alternatively to be represented as zero, where data is not available or where no physical development or activity is taking place. The assessment should determine the baseline GHG emissions based on the current existing projects (i.e. energy consumption of building scheduled for deconstruction for a complete redevelopment) and infrastructure (i.e. current operational and use emissions of a road due to be upgraded) within the Site boundary.

Methods of Assessment

- 8.17 The metric for assessing climate change impacts of GHG emissions in this assessment is Global Warming Potential (GWP), expressed as tonnes of carbon dioxide equivalent (tCO₂e) in total or per annum. This accounts for six key GHGs: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).
- 8.18 The calculation for determining GHG emissions is based upon the multiplication of relevant emission factors with the activity producing GHG emissions, with the units used to report GHG emissions as tonnes of CO₂ equivalent (tCO₂e), for example:

$$\text{Electricity consumed (kWh)} \times \text{electricity emission factor (tCO}_2\text{e per kWh)} = \text{total tCO}_2\text{e}$$

- 8.19 Following "Method 1: Using asset-level benchmarks per square metre of floor area" as outlined in the RICS Whole Life Carbon Assessment for the Built Environment (2023), embodied carbon calculations for both dwelling types—houses and apartment blocks—were conducted using the latest state-of-the-art industry benchmarks. The data collected from these benchmarks were analysed and categorized into the following performance levels:

- Low-carbon design;
- Good design; and,

- Business-as-usual design.
- 8.20 Given the early stage of the design process, it was determined that reporting would be based on **the good design and business-as-usual outputs** from the industry benchmarks.
- 8.21 Due to the lack of available benchmarking data for infrastructure, utilities, and landscape elements, complementary embodied carbon (EC) calculations were carried out using the available design information for the proposed development, supplemented by the latest carbon database available in eToolLCD—the United Kingdom LCI – V20 – Life Cycle Strategies. The quantification of annual emissions for the assessment is carried out to allow comparison of the Proposed Development’s GHG emissions to regional and national annual emissions and targets.

Identification of Receptor Sensitivity

- 8.22 GHG emissions arising from the construction and operation of the Proposed Development are considered the key impacts, with the principal receptor being the ‘global atmosphere’. The consequence of GHG emissions associated with the Proposed Development is that atmospheric GHG emissions are pushed closer towards their environmental limit, triggering subsequent detrimental effects on the global climate system.
- 8.23 In line with the IEMA (2022) guidance, the sensitivity of the receptor (i.e. the global atmosphere) in relation to GHG emissions is always considered to be ‘high’, based on the following conclusions:
- Value of the resource: the atmosphere and its role in regulating the global climate is of high ecological, social and economic value and underpins life on the planet, therefore is of global critical value;
 - Vulnerability: it is recognised by the Paris Agreement (2015) that the GHG concentrations in the atmosphere are already approaching their environmental limit and the effects of climate change are already evident; and
 - Reversibility of the effect: climate change is considered irreversible, with a delayed effect in any actions or technologies employed to reduce concentrations of GHG emissions already in the atmosphere.

Determining Magnitude of Effect

- 8.24 In accordance with IEMA guidance (2022) the nature of the effect (i.e. beneficial, or adverse) is determined by whether the greenhouse gas (GHG) emissions contribute positively or negatively to the achievement of climate-related targets and objectives. An effect is generally considered beneficial if it leads to a reduction in GHG emissions or supports climate change mitigation efforts. Conversely, an effect is considered adverse if it results in an increase in GHG emissions or hinders efforts to mitigate climate change. The following terms have been used to define the level of the effects identified locally and nationally, on a Borough or the UK level, respectively:
- Major effect: where the Proposed Development is likely to cause a considerable change from the baseline conditions and the receptor has limited adaptability, tolerance or recoverability or is of the highest sensitivity;
 - Moderate effect: where the Proposed Development is likely to cause either a considerable change from the baseline conditions at a receptor which has a degree of adaptability, tolerance or recoverability or a less than considerable change at a receptor that has limited adaptability, tolerance or recoverability;
 - Minor effect: where the Proposed Development is likely to cause a small, but noticeable change from the baseline conditions on a receptor which has limited adaptability, tolerance

or recoverability or is of the highest sensitivity; or where the Proposed Development is likely to cause a considerable change from the baseline conditions at a receptor which can adapt, is tolerant of the change or/and can recover from the change; and,

- Negligible: 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.

8.25 The level of effect has been informed by the magnitude of change due to the Proposed Development and the evaluation of the sensitivity of the receptor. The level of effect has been determined using professional judgement and the criteria set out in **Table 8.2**.

		Sensitivity			
		High	Medium	Low	Negligible
Magnitude of Change (Effect)	Large	Major	Moderate to Major	Minor to Moderate	Negligible
	Medium	Moderate - Major	Moderate	Minor	Negligible
	Small	Minor - Moderate	Minor	Negligible to Minor	Negligible
	Negligible	Negligible	Negligible	Negligible	Negligible

^ Table 8.2 Determining Level of Effect in EIA

8.26 As recommended by IEMA guidance (2022), the magnitude of effect has been considered in relation to the context of where the Proposed Development is located. The GHG emissions generated during the construction, operation and decommissioning of the Proposed Development have been considered in the context of CO₂e emissions for MCC and the wider UK carbon budgets.

8.27 The incremental GHG emissions have been assessed in the relation to MCC's annual emissions (2022, latest available dataset) and the UK's seventh carbon budget. This will place the GHG emissions impact into context and demonstrate its magnitude and level of contribution.

- 8.28 To determine the magnitude of effect of GHG emissions, the criteria detailed in **Tables 8.3 and 8.4** has been used.

Magnitude of Change (Effect)	Criteria
Major Adverse	Emissions from Proposed Development above 1% of annual MCC emissions (2141.4 ktCO ₂ e).
Moderate Adverse	Emissions from Proposed Development above 0.1% of annual MCC emissions (2141.4 ktCO ₂ e).
Minor Adverse	Emissions from Proposed Development below 0.1% of annual MCC emissions (2141.4 ktCO ₂ e).
Negligible	Emissions from Proposed Development above 0.01% of annual MCC emissions (2141.4 ktCO ₂ e).

^ Table 8.2 Magnitude of effect against MCC's annual GHG emissions.

Magnitude of Change (Effect)	Criteria
Major Adverse	Emissions from Proposed Development above 1% of the UK's 7th Carbon Budget (535 Mt CO ₂ e).
Moderate Adverse	Emissions from Proposed Development above 0.1% of the UK's 7th Carbon Budget (535 Mt CO ₂ e).
Minor Adverse	Emissions from Proposed Development below 0.1% of the UK's 7th Carbon Budget (535 Mt CO ₂ e).
Negligible	Emissions from Proposed Development above 0.01% of the UK's 7th Carbon Budget (535 Mt CO ₂ e).

^ Table 8.3 Magnitude of effect against UK's carbon budget.

Determining Significance

- 8.29 As recommended by IEMA guidance on 'Assessing Greenhouse Gas Emissions and Evaluating their Significance', the assessment will take a highly precautionary approach where any net increase in GHG emissions is treated as having a likely significant effect.
- 8.30 The guidance sets out in EIA context relative significance descriptors to assist GHG assessments (beneficial, negligible, minor adverse, moderate adverse, major adverse), major or moderate adverse effects and beneficial effects are considered significant. Minor adverse and negligible effects are not considered to be significant.
- 8.31 The levels of significance are not solely based on the Proposed Development's GHG emissions alone, but on the developments contribution towards limiting global warming to 1.5°C and the transition towards net-zero.

Summary of Data

- 8.32 A summary of the data used within this assessment is provided below with supporting benchmarks, drawings and tables included within the in Appendices.

Embodied Carbon

- 8.33 The carbon emissions associated with dwellings and apartment blocks were estimated by analysing and weighting industry benchmarks for residential developments. Since these benchmarks measure total lifecycle embodied carbon—covering emissions from Cradle to End-of-Life (Modules A to C, excluding B6 & B7)—but do not allocate emissions to specific lifecycle modules, this assessment has applied indicative allocations from the London Energy Transformation Initiative (LETI) Climate Emergency Design Guide (2020) for small- and medium-scale housing.
- 8.34 For public infrastructure, utilities, and hard and soft landscaping, the methodology differs. Estimated material quantities, as provided by the Applicant's design team, were processed using eToolLCD to calculate the associated carbon emissions. A breakdown of carbon impacts across lifecycle modules is provided below.

Building typology	Lifecycle module allocation percentage				
	A1-A3 (%)	A4 (%)	A5 (%)	B1-B5 (%)	C1-C4 (%)
Houses	80	5	1	14	1
Apartment blocks	64	5	2	25	1

^ Table 8.4 Embodied Carbon Allocation by Lifecycle Module

Product Stage

- 8.35 The product stage, which includes raw material extraction, transport, and manufacturing, is typically the most carbon-intensive phase in the lifecycle of an asset. According to the LETI Climate Emergency Design Guide, the product stage accounts for the majority of total lifecycle embodied carbon emissions in residential developments—approximately 80% for houses and 64% for apartment blocks. These percentages were allocated accordingly to each building typology.
- 8.36 All ancillary areas and services supporting the houses, including infrastructure, utilities, and landscaping, were analysed using relevant eToolLCD carbon factors.

Construction

- 8.37 The embodied carbon allocated to the construction phase is estimated at 1% for houses and 2% for apartment blocks, based on LETI guidance. This includes emissions from on-site energy consumption and construction waste.
- 8.38 As in the product stage, demolition quantities were provided by the design team to assess the embodied carbon of utilities, infrastructure, and landscaping, using appropriate eToolLCD benchmarks.
- 8.39 In line with the RICS Professional Statement Whole Life Carbon Assessment for the Built Environment (2023), the impacts of demolishing the previous scheme have been included in this module. Therefore the demolition of the existing site structures and hardscape, was calculated using the existing development area and multiplied by the recommended demolition carbon factor suggested by Royal Institute of Chartered Surveyors (RICS) Whole Life Carbon Assessment for the Built Environment (2017) of 3.4 kgCO₂e/m² GIA.

Maintenance, Repair and Refurbishment

- 8.40 Over a 60-year lifespan, emissions associated with maintenance, repair, and operation of the onsite systems (Modules B1-B6) were calculated. The LETI Climate Emergency Design Guide allocates 14% of lifecycle emissions to houses and 25% to apartment buildings. The development accounts for material replacement cycles over its lifetime.
- 8.41 Material lifespans for infrastructure, utilities, and landscaping, along with their replacement assumptions, follow the RICS Whole Life Carbon Assessment (2023, 2nd edition). Future maintenance and repair allowances align with default rates in the eToolLCD database.

Transport

- 8.42 Vehicle movements for construction and operational traffic were provided by the project Transport Consultations (Curtains). Vehicle type, average distances travelled and assumed fuel types were provided by Curtains. Emissions were then calculated using factors obtained from the Department of Business, Energy and Industrial Strategy (BEIS) GHG conversion factors for company reporting²⁷ as presented in **Table 8.6**.

Mode	Type	Unit	2024 BEIS Factor (kg CO ₂ e)
HGV	All HGVs – 100% Laden	km	0.98641
	All HGVs – 0% Laden	km	0.64392
Car	Petrol	km	0.1645
	Diesel	km	0.16984
	Hybrid Petrol	km	0.12607
	Hybrid Diesel	km	0.12607
	PHEV	km	0.10853
	BEV	km	0.0469
	Gas	km	0.28187
Passenger in a car	-	km. passenger	0.16984
Tram	-	km. passenger	0.0286
Train	-	km. passenger	0.03546
Bus	-	km. passenger	0.12999
Taxi	-	km. passenger	0.20805
Motorcycle	-	km	0.11367

^ Table 8.5 Transport Emission Factors 2024 – Construction and Operational Traffic

Operational Energy and Water

- 8.43 The total operational energy was calculated using averaged primary energy figures, which include predicted energy and distribution losses, and the dwellinghouses areas. These were then

²⁷ Department for Business, Energy and Industrial Strategy. (2024) Government conversion factors for company reporting of greenhouse gas emissions. Accessed: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

multiplied by the approved SAP 10 carbon factors to calculate the emissions associated with the energy usage of the Proposed Development

- 8.44 The total operational water usage was calculated on the assumption of 125 litres per day per person, as set out by Building Regulations England and Wales. The BEIS emission factors for water treatment and supply were used to calculate the emissions associated with operational water usage.

End of Life

- 8.45 The end-of-life stage accounts for carbon emissions from the decommissioning, deconstruction, processing, and disposal of materials (Modules C1-C4).
- 8.46 GHG emissions from the demolition of residential units were derived from weighted benchmark analyses and allocated based on LETI standards, which estimate 1% of lifecycle emissions for both houses and apartment blocks.
- 8.47 Embodied carbon for end-of-life infrastructure, utilities, and landscaping was calculated using eToolLCD data.

Assessment Methodology and Significance Criteria – CCR Assessment

- 8.48 The Proposed Development's Climate Change Resilience (CCR) has also been assessed as part of this ES Chapter. The approach to assessing the potential impact of climate change on the Proposed Development has been undertaken in line with IEMA guidance 'Climate Change Resilience and Adaptation', which presents a framework for the consideration of climate change resilience and adaptation within the EIA process.
- 8.49 The IEMA guidance indicates key steps within the assessment of CCR:
- Pre-EIA Stage: Embedding building climate resilience and adaptation into the project design;
 - Scoping climate change adaptation into the EIA;
 - Defining the future (climate) baseline;
 - Identifying and determining sensitivity of receptors (Vulnerability);
 - Reviewing and determining magnitude of the effects;
 - Determination of significance;
 - Developing additional adaptation and mitigation measures; and
 - Post-EIA Stage: Monitoring and Adaptive Management.
- 8.50 The IEMA guidance recommends considering and assessing the 'in-combination' climate impacts as well as the possibility of new significant effects arising throughout the Proposed Development's lifetime. The assessment should assess whether additional effects of future climate impacts will alter the sensitivity or magnitude of the effects, and consequently the significance of effects.
- 8.51 The CCR assessment examines how climate change may pose risk to the Proposed Development in relation to the following areas (scoped-in EIA disciplines):
- Transport;

- Air Quality
- Socio Economic;
- Heritage and Townscape & Visual Impact; and,
- Wind and Microclimate.

8.52 For each topic listed above, the CCR assessment will aim to:

- Identify and determine sensitivity of receptors;
- Review and determine the magnitude of effect;
- Determine the significance of effect; and,
- Identify appropriate mitigation (adaptation) measures.

8.53 The CCR assessment considers whether the effect on receptors by potential impacts of the Proposed Development under the current condition (without climate change) are likely to be different under an alternative future climate baseline. A key aspect of the assessment (for each of the technical topics considered) has been to identify the likely effect of those receptors considered more vulnerable to changes in climate, having taken into account the resilience and adaptive measures proposed for the scheme in order to mitigate the risk presented by climate change.

8.54 Due to uncertainty in both the future climate projections and the effect of future climate conditions of receptors, the assessment is qualitative and based on objective professional judgement, unless where there is published, accepted quantifiable methods available. Adaption and resilience measures are also outlined.

Identification of Receptor Sensitivity

8.55 The CCR aims to identify potential receptors to the effects of future climate change. Potential receptors relevant to the location, nature and scale of the Proposed Development will be identified. These receptor groups may include:

- Buildings and infrastructure (including equipment and building operations);
- Human health receptors (e.g., construction workers and site users);
- Environmental receptors (e.g., habitats and species); and,
- Climatic systems (i.e., the atmosphere).

8.56 The sensitivity of the receptors or receiving environment refers to how strongly it responds to change, as well as its ability to adapt to and recover from that change once impacted. In ascribing the sensitivity of receptors in relation to potential climate change effects, the following factors must also be considered:

- Susceptibility of the receptor (e.g., ability to be affected by a change) (opposite of resilience); and,
- Vulnerability of the receptor (e.g., potential exposure to a change).

8.57 The susceptibility of a receptor can be determined using the following scale:

- High susceptibility: receptor has no ability to withstand/not be substantially altered by the projected changes to the existing/prevaling climatic factors (e.g., lose much of its original function and form).
- Moderate susceptibility: receptor has some limited ability to withstand/no be altered by the projected changes to the existing/prevaling climatic conditions (e.g., retain elements of its original function and form).
- Low susceptibility: receptor has the ability to withstand/not be altered much by the projected changes to the existing/prevaling climatic factors (e.g., retain much of its original function and form).

8.58 The vulnerability of a receptor can be defined using the following scale:

- High vulnerability: receptor is directly dependent on existing/prevaling climatic factors and reliant on these specific existing climate conditions continuing in future (e.g., river flows and groundwater level) or only able to tolerate a very limited variation in climate conditions.
- Moderate vulnerability: receptor is dependent on some climatic factors but able to tolerate a range of conditions (e.g., a species which has a wide geographic range across the entire UK but is not found in southern Spain).
- Low vulnerability: climatic factors have little influence on the receptors (consider whether it is justifiable to assess such receptors further within the context of EIA – i.e., it is likely that such issues should have been excluded through the EIA scoping process).

Determining Magnitude of Effect

8.59 A combination of susceptibility and vulnerability in addition to value/importance of the receptor should be used to reach a reasoned conclusion on sensitivity.

8.60 The magnitude is the degree of change from the determined baseline conditions which drives from the construction, operation and decommissioning of a development. A combination of probability and consequence should be used to reach a reasoned conclusion on the magnitude of effect. Professional judgement should be applied to assign magnitude.

Determining Significance

8.61 Once the sensitivity and magnitude have been determined, these should be combined to reach an overall judgement on the significance of the likely environmental effect. As there is no legislative definition of 'significance', the conclusion of whether an effect is significant/the level of significance is down professional judgement of the sustainability consultant evaluating, in conjunction with the EIA Coordinator. An explanation of the outcomes of the assessment should be clearly set out.

Assumptions and Limitations

GHG Assessment

8.62 The metric for assessing climate change impacts of GHG emissions within this assessment is Global Warming Potential (GWP), expressed as tonnes of carbon dioxide equivalent (tCO₂e) in total or per annum. This accounts for six key GHGs: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulphur hexafluoride (SF₆).

8.63 This assessment is based on information available at this stage of development. Where site specific information was not available, data from similar sites was provided by the Applicant to

incorporate into the assessment. The use of industry benchmarks and preliminary modelling results have supported the development of the assessment. The findings arising from this assessment can provide insight as to the priority for reducing the impact of GHG emissions resulting from the Proposed Development.

- 8.64 The estimate of emissions associated with operational traffic presents a conservative ‘worst-case scenario’ assessment. At the time of this assessment (2024) the majority of cars included rely on petrol and diesel, over the course of the Proposed Development’s lifetime the vehicle fleet will incorporate a higher percentage of electric vehicle (EV) and other low carbon technologies. This will result in a significant drop in emissions associated with operational traffic.
- 8.65 Biogenic carbon has been reported as required by EN 15978:2011 ‘Sustainability of construction works’ Assessment of environmental performance buildings. Calculation method. The biogenic carbon of timber products in the scheme followed the rule of thumb provided in EN 16449, which assumes that half of the dry mass of wood is assumed to be biogenic carbon. Due to the early stage of the project, this same rule was extended to other biogenic materials included in the soft landscape areas.
- 8.66 The assumed construction period is 3.5 years (42 months) and the assumed lifespan of the Proposed Development is 60-years.
- 8.67 The assessment presents total carbon emissions generated throughout the construction, operation and end-of-life phases of development. The annual carbon footprint of each stage has been compared to the local (MCC 2022 annual emissions – latest available dataset) and national (UK’s seventh carbon budget) emissions. The emissions from all stages have been annualised using the operational lifetime (60 years).
- 8.68 It is important to note that the electricity emission (carbon) factors change on an annual basis, with factors lowering year on year as the grid transitions to cleaner methods of generating energy, this has been considered when calculating the operational carbon of the Proposed Development.

Embodied Carbon Assessment

- 8.69 Due to the early phase of the design and following the guidance of RICS Whole Life Carbon Assessment for the Built Environment (2023), industry benchmarks were weighted to determine the embodied carbon calculations across the lifecycle of the residential units at the Proposed Development. The following industry benchmarks were consulted as source of impacts per m² of GIA:
- LETI - Embodied Carbon Target Alignment (2020);
 - RIBA 2023 Climate Challenge version 2 (2021);
 - UK Net Zero Carbon Buildings Standard, Pilot Version rev 1 (2024);
 - Future Homes hub, Embodied and Whole Life Carbon: 2023-2025 Implementation plan for the homebuilding industry; and,
 - Greater London Authority: Whole Life-Cycle Carbon Assessments (2022).
- 8.70 The relevant data of each of the benchmarks were weighted to analyse the performance levels as per **Table 8.7**.

Dwelling Type	Low-carbon design	Good design	Business-as-usual design
Houses	300	537	1200
Apartment Blocks	300	600	1200

Table 8.6 - Housing Benchmarks Weighting

- 8.71 Since the above benchmarks do not cover all ancillary areas and elements supporting the residential units, additional calculations were carried out to supplement the embodied carbon assessment. High-level material quantity estimates for general site elements—such as infrastructure, utilities, and soft and hard landscaping—were provided by the project team and used to calculate their lifecycle embodied carbon impacts based on relevant eToolLCD carbon factors.
- 8.72 In cases where the available information lacked sufficient granularity, reasonable assumptions were made using typical material densities and the overall project scale. Additionally, transportation emissions were modelled based on an assumed average transport distance along the procurement route, using standard emission data from eToolLCD. The Applicant's local supply chain was incorporated into these calculations.
- 8.73 To address data gaps and associated uncertainties, a contingency factor was applied in line with the methodology outlined in the 'RICS Professional Standard: Whole Life Carbon Assessment for the Built Environment, 2nd Edition.' A 15% uncertainty margin was added to all A-C emissions to account for potential inaccuracies in material quantities, transportation distances, and equipment energy consumption.

CCR Assessment

- 8.74 The UK Climate projections have been used with the CCR assessment in line with UKCP18 modelling, which assumes different Representative Concentration Pathways (RCP). This CCR follows the RCP 8.5 which is the highest-impact scenario and therefore takes a worst-case approach. It is important to note that because the assessment is based on projections and modelling, fluctuations are expected and therefore uncertainties are inherently present within the modelling and CCR assessment.
- 8.75 The assessment takes a long-term view approach and therefore, the receptor types considered within the assessment may be more broadly defined, as opposed to other ES Chapters that are more specific in the receptors identified.
- 8.76 The mitigation measures proposed within this CCR assessment are provided as advisory and as non-committing recommendations. It is not stipulated by policy the requirement for a Climate Change Adaptation Plan nor the requirement for monitoring the Proposed Development's resilience over time. Therefore, the advised mitigation measurements are not mandatory but should be considered for best practice and long-term resilience.

Baseline Conditions

- 8.77 For the purpose of this assessment a baseline is defined against which the impact of a new project can be compared against. As described within the IEMA guidance, the baseline for the assessment should either be determined based on available data or alternatively to be zero, where data is not available or where no physical development or activity is taking place. The assessment should

determine the baseline GHG emissions based on the current existing projects (i.e. energy consumption of building scheduled for deconstruction for a complete redevelopment) and infrastructure (i.e. current operational and use emissions of a road due to be upgraded) within the Site boundary.

Existing Baseline

- 8.78 The Site is located within the administrative boundary of Manchester City Council (MCC). It is bounded by Riverpark Road to the south, and the Manchester to Huddersfield railway line to the north. Ten Acres Lane forms the eastern boundary of the Site, with Briscoe Lane forming the Western boundary.
- 8.79 This assessment considers the existing baseline as a cleared site, on the basis that the buildings on site are currently in the process of being demolished, following prior approval by MCC (ref: 141383/DEM/2024).
- 8.80 Based on the existing uses of the Site the current baseline GHG emissions are determined to be zero.

Future Baseline – GHG Assessment

- 8.81 The future baseline assumes that the Proposed Development is not constructed, and therefore the conditions will remain the same as the current baseline.
- 8.82 No change in GHG emissions would be anticipated in this scenario based on the current agricultural uses at the Site that do not contribute to GHG emissions.

Future Baseline – CCR Assessment

- 8.83 In line with the guidance, a baseline has been established and a future climate scenario has been developed using the future climate projections published by the Met Office (UK Climate Projections (UKCP18)). The results include projections for several variables including annual mean temperatures, annual changes in summer and winter precipitation. Data is provided for different time periods, from 1961 until 2100, under different scenarios with different probability levels within each scenario. In alignment with guidance, a high emissions scenario is used (RCP8.5) for the 2080 future baseline year, considered most relevant to the Proposed Development. The projected change to the range of climatic conditions has adopted the 50% probability level, which is a central estimate adopted given the level of uncertainty associated with predicting the modelled scenarios.
- 8.84 The variations in temperature and precipitation for Northwest England area, where the Site is located, can be seen in the table below. The 'UKCP18 Factsheet: Derived Projections' (August 2022) was used to inform the table and CCR assessment, as it provided an accessible and clear summary.

Variable	Project Change in Trend		
	10th Percentile	50th Percentile	90th Percentile
Temperature (°C)			
Mean Annual Temperature	↑	↑	↑

Variable	Project Change in Trend		
	10th Percentile	50th Percentile	90th Percentile
Mean Summer Temperature	↑	↑	↑
Mean Winter Temperature	↑	↑	↑
Precipitation (%)			
Mean Summer Precipitation	↑	↑↓	↑↓
Mean Winter Precipitation	↑↓	↑	↑

^ Table 8.7 Future Climate Projections for Northwest England

Temperature

8.85 Overall UKCP18 derived projects in the UK for 2°C of global mean warming include:

- The largest warming in the UK will be in the Southeast where summer temperatures may increase another 3 to 4°C relative to present day (1981-2000);
- Median warming will be at least 1 to 2°C throughout the year across the whole of the UK;
- Winter cool days will warm by 1 to 1.5°C across the country, whilst temperatures on warmer winter days increase by less than 1°C; and,
- In summer both hot and cool days warm by 1 to 1.5°C across Scotland and 1.5 to 2°C across England.

8.86 For overall UK 4°C of global warming, the changes in pattern include:

- All seasons warm, but summers warmer than winters;
- Summer temperatures rise by another 4 to 5°C in the South of England and 3 to 4°C elsewhere in the country;
- Hot summer days warm by 4.5 to 5°C compared to present day (1981-2000), across much of Southern England, possibly exceeding 5°C in some locations;
- Cooler summer days warm by 4 to 4.5°C across England and up to 5°C in the Southeast. Increases reduce toward to north to under 3°C in the far Northwest of Scotland”
- Cool winter days warm by 2.5 to 3°C across the country; and,
- Warm winter days warm by 2.5 to 3°C in England but by 2 to 2.5°C in Wales and Scotland.

Precipitation

- 8.87 Overall UKCP18 derived projects in the UK for 2°C of global mean warming include:
- Changes are uncertain, but suggest slightly wetter winters and drier summers, with summer drying more in the South; and,
 - Dry days in summer have 30% less precipitation in parts of the Southwest.
- 8.88 For overall UK 4°C of global warming, the changes in pattern include:
- Median winter precipitation increases by up to 20% across most of the country;
 - Median summer precipitation decreases most in the south with median reductions of up to 20 to 30% across much of the England and Wales;
 - Dry summer days decrease in precipitation by up to 50% in summer across much of Southern Wales and England. This drying reducing toward the north to under 20% in Northern Scotland; and,
 - The wettest summer days dry by up to 40% on parts of the south coast. This decreases toward zero in the North.

Identification and Evaluation of Significant Effects

Embedded Mitigation

- 8.89 Embedded mitigation measures will be incorporated throughout the construction and operational phases of development to minimise environmental impacts.

Construction Stage

- 8.90 To reduce emissions during the construction of the Proposed Development a number of measures have been incorporated into the design:
- Selecting materials with low embodied impact, focusing on key elements of the development that typically have higher carbon impacts;
 - Sourcing materials locally to reduce the need for transport;
 - Committing to resourcing construction materials through local supply chains;
 - Where possible utilise cut and fill civil engineering techniques, to minimise emissions generated by transporting materials throughout the construction phase; and,
 - Select materials with long life and require little maintenance.

Operational Stage

8.91 To reduce emissions during the operation of the Proposed Development a number of embedded mitigation and sustainable design measures have been considered. These are presented in the Sustainability and Environmental Standards Statement²⁸ and summarised below.

- **Passive design:** seeks to maximise the use of natural sources of heating, cooling and ventilation to maintain thermal comfort levels within the building. Where feasible external features have been included to provide a degree of shading from the sun. It is intended that the building will have the potential to be naturally ventilated via openable windows and vents.
- **Fabric efficiency:** concerns the thermal properties associated with the building fabric and construction. Building fabric will incorporate low U-Values to reduce heat losses; a high level of air tightness is also proposed to control air filtration and further reducing heating demand; and, building fabric will be constructed to avoid thermal bridging and heat loss.
- **System efficiency:** where fans are employed, the specific fan power for these systems will be efficient and target a power consumption rate of 0.3W/l/s.
- **Metering:** the major energy uses shall be monitored via separate “smart” energy meters with time and temperature zone control.
- **Lighting:** lighting design is intended to be highly efficient and in excess of Building Regulation requirements. It is intended that lighting efficiency shall be in excess of 110 lumens/circuit Watt and predominantly LEDs.
- **Ventilation / cooling systems:** mechanical ventilation heat recovery will be incorporated in the apartments to help maintain thermal comfort levels. There is potential for the apartments to be naturally ventilated via openable windows.
- **Low carbon / renewable technologies:** heat-pumps for domestic hot water are proposed. Electric panel heaters will be used on space heating in the apartments, with mains gas on space heating in the houses. There is also potential to install PV at roof level.

GHG Assessment

8.92 The total emissions (project carbon footprint) associated with the construction, operation and decommissioning of the Proposed Development are presented below and compared against local and UK wide emissions.

Development Phase		Total Emissions	Annual Emissions		
			Baseline Emissions (tCO ₂ e/year)	Proposed Development Emissions (tCO ₂ e/year)	Net Emissions (Total-Baseline (tCO ₂ e/year)
Construction	Embodied carbon - Product stage + Construction (A1-A5)	44,084	0	735	735

²⁸ Ensphere Group Ltd. Sustainability and Environmental Standards Statement: Riverpark Road, Manchester.

	Construction Traffic (A4)	8,035	0	134	134
Operational	Embodied carbon - Repair, maintenance and refurbishment (B1-B5)	14,652	0	244	244
	Operational traffic (B1)	97,397	0	1,623	1,623
	Operational energy (B6)	19,110	0	319	319
	Operational water (B7)	1,723	0	29	29
End of Life	Embodied carbon - End of life (C1-C4)	2,278	0	38	38
Totals		187,279	0	3,121	3,121

^ Table 8.8 GHG Assessment Summary – Construction, Operational and Decommissioning Stages

Construction Stage

8.93 **Table 8.10** presents a summary of the overall emissions associated with the construction of the Proposed Development compared to MCC (local) and UK (national) emissions.

	Embodied Carbon – Product Stage + Construction (A1-A5)	Construction Traffic	Total Construction
Baseline Emissions (tCO2e)	0	0	0
Construction Emissions excluding sequestered carbon (tCO2e)	1,459	-	-
Sequestered Carbon (tCO2e)	735	-	-
Total Construction Emissions (tCO2e)	724	134	858
Net Emissions	724	134	858
MCC - Annual GHG Emissions (tCO2e)	2,141,400		
Proposed Development as % of local emissions CB	0.00034	0.00006	0.00040
UK Carbon Budget (tCO2e)	535,000,000		
Proposed Development as % of UK CB	0.00000	0.00000	0.00000

^ Table 8.9 Summary of Proposed Development Carbon Footprint – Construction Phase

Embodied Carbon – Product Stage and Construction

- 8.94 The assessment of embodied carbon associated with the transport of construction materials and the construction of the Proposed Development (A1- A5) determined total emissions to be 44,084 tCO₂e. With the annual emissions accounting for 0.00034% of local emissions and <0.00000% of the UK's latest carbon budget.
- 8.95 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, embodied carbon emissions throughout the construction phase are considered to have a negligible impact (not significant) on local and UK carbon budgets.

Construction Traffic

- 8.96 The assessment of traffic associated with the construction of the Proposed Development has been undertaken using vehicle movements provided by Curtins. The total construction traffic emissions were determined to be 8,035 tCO₂e. With annual emissions accounting for 0.00006% of local emissions and <0.00000% of the UK's latest carbon budget.
- 8.97 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, emissions generated by construction traffic are considered to have a negligible impact (not significant) on local and UK carbon budgets.

Summary

- 8.98 The total emissions associated with the construction of the Proposed Development were determined to be 52,119 tCO₂e. With annualised emissions accounting for 0.0004% of local emissions and <0.00000% of the UK's carbon budget.
- 8.99 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, the impact of emissions generated throughout the construction phase are considered negligible (not significant) when compared to the local carbon budgets and the UK's carbon budget.

Operational Stage

- 8.100 **Table 8.11** presents a summary of the overall emissions associated with the operation of the Proposed Development compared to MCC (local) and UK (national) emissions.

	Embodied Carbon - Repair, Maintenance and Refurbishment (B1-B5)	Operational Energy (B6)	Operational Water (B7)	Traffic	Total Operational
Baseline Emissions (tCO ₂ e)	0	0	0	0	0
Operational Emissions excluding sequestered carbon (tCO ₂ e)	1,706	-	-	-	-
Sequestered Carbon (tCO ₂ e)	244	-	-	-	-
Total Operational Emissions (tCO ₂ e)	1,462	319	29	1,623	3,432
Net Emissions	1,462	319	29	1,623	3,432

MCC - Annual GHG Emissions (tCO ₂ e)	2,141,400				
Proposed Development as % of local emissions CB	0.00068	0.00015	0.00001	0.00076	0.00160
UK Carbon Budget (tCO ₂ e)	535,000,000				
Proposed Development as % of UK CB	0.00000	0.00000	0.00000	0.00000	0.00001

^ Table 8.10 Summary of Proposed Development Carbon Footprint – Operational Phase

Embodied Carbon – Repair, Maintenance and Refurbishment

- 8.101 The assessment of embodied carbon associated with the operation of the Proposed Development (B1-B5) determined total emissions to be 14,652 tCO₂e. With the annualised emissions accounting for 0.00068% of local emissions and <0.00000% of the UK's carbon budget.
- 8.102 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, embodied carbon emissions throughout the operational phase are considered to have a negligible (not significant) impact on the local and UK's carbon budgets.

Operational Energy

- 8.103 The assessment of energy associated with the operation of the Proposed Development (B6) determined the total emissions to be 19,110 tCO₂e. With the annualised emissions accounting for 0.00015% of local emissions and <0.00000% of the UK's carbon budget.
- 8.104 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, operational energy emissions throughout the operational phase are considered to have a negligible impact (not significant) on the local and UK carbon budgets.

Operational Water

- 8.105 The assessment of emissions associated with the treatment and supply of water to the Proposed Development (B6) determined the total emissions to be 1,723 tCO₂e. With the annualised emissions accounting for 0.00001% of local emissions and <0.00000% of the UK's carbon budget.
- 8.106 Based on the criteria set out in Tables 8.2, 8.3, and 8.4, operational water emissions throughout the operational phase are considered to have a negligible impact (not significant) on the local and UK carbon budgets.

8.107 Operational Traffic

- 8.108 The assessment of GHG emissions associated with traffic generated throughout the operation of the Proposed Development determined total emissions to be 97,397 tCO₂e. With the net emissions accounting for 0.00076% of annual local emissions and <0.00000% of the UK's carbon budget.
- 8.109 The estimate of emissions associated with operational traffic presents a conservative 'worst-case scenario' assessment. At the time of this assessment (2024) the majority of cars included rely on petrol and diesel, over the course of the Proposed Development's lifetime the vehicle fleet will incorporate a higher percentage of electric vehicle (EV) and other low carbon technologies. This will result in a significant drop in emissions associated with operational traffic.

- 8.110 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, the impact of embodied carbon emissions throughout the operational phase are considered negligible impact (not significant) on both local and UK carbon budgets

Summary

- 8.111 The total emissions associated with the operation of the Proposed Development were determined to be 132,882 tCO₂e. With annualised emissions accounting for 0.0016% of local emissions and 0.00001% of the UK's carbon budget.
- 8.112 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, the impacts of emissions generated throughout the operational phase are considered negligible impact (not significant) on both local and UK carbon budgets

End-of-Life Stage

- 8.113 **Table 8.12** presents a summary of the emissions associated with the decommissioning and deconstruction of the Proposed Development compared to MCC (local) and UK (national) emissions.

Stage	Base
Baseline Emissions (tCO ₂ e)	0
EOL Emissions (tCO ₂ e)	38
Sequestered Carbon (tCO ₂ e)	0
Total EOL Emissions (tCO ₂ e)	38
Net Emissions	38
MCC - Annual GHG Emissions (tCO ₂ e)	2,141,400
Proposed Development as % of local CB	0

^ Table 8.11 Summary of Proposed Development Carbon Footprint – End-of-Life

- 8.114 The assessment of embodied carbon arisings associated with the end of life of the Proposed Scheme equate to 2,278 tCO₂e. With the annual emissions accounting for 0.00002% of local emissions and <0.00000% of the UK carbon budget.
- 8.115 Based on the criteria set out in Tables 8.2, 8.3 and 8.4, the impact of embodied carbon emissions associated with the decommissioning of the Proposed Development are negligible (not significant) on local emissions and the UK's carbon budget.

Climate Change Resilience

- 8.116 Receptors and their sensitivity (vulnerability) have been identified in relation to the key topics scoped into the EIA for the Proposed Development. The technical chapters for each of these topics have been used to determine the magnitude and significance in relation to potential climate change impacts, as summarised in **Table 8.12**.
- 8.117 The assessment has been undertaken using available information from technical ES Chapters, IEMA guidance and using professional judgement.

Transport

- 8.118 Changes to weather patterns due to climate change are not expected to have significant direct effects on transport. Indirect effects relating to the mobility of vehicles travelling to the Proposed Development, due to increased likelihood of extreme weather events, such as heatwaves, storms and intense rainfall.
- 8.119 A Transport ES Chapter was provided by Curtains (project Transport Consultants) to accompany the Planning Application, to evaluate potential transport impacts that may arise with the introduction of the Proposed Development during both construction and operational stages.
- 8.120 The Transport Assessment (TA) estimated that during construction there would not be a significant increase in traffic flows on the surrounding highways. Once operational the Proposed Development is estimated to have negligible impacts (not significant) on all surrounding road links, with the exception of Riverpark Road (minor adverse).
- 8.121 The TA determined no site specific mitigation measures were necessary for the construction or operational phases of development. However, best practise measures are set out within the Construction Environmental Management Plan (CEMP) to mitigate impacts resulting from construction vehicles.
- 8.122 Whilst some indirect effects on travel and transport are considered, it is not anticipated that the conclusions made in the TA will change significantly under future climatic conditions.

Air Quality

- 8.123 Air quality is influenced by weather patterns and is therefore sensitive to changes in climatic conditions. Subsequently climate change can have direct impacts on air quality.
- 8.124 The Air Quality ES Chapter produced considered the potential effects of dust and road traffic exhaust emissions generated during the construction and operation of the Proposed Development.
- 8.125 Potential construction phase air quality effects from fugitive dust emissions were assessed as a result of earthworks, construction and trackout. The effects were considered negligible (not significant).
- 8.126 During the operational phase of the Proposed Development there is the potential for air quality effects as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site. These were assessed using dispersion modelling, effects were not predicted to be negligible (not significant) at all sensitive receptor locations.
- 8.127 The potential exposure of future residents to poor air quality was also assessed using dispersion modelling. This indicated that pollutant concentrations were below the relevant criteria at all proposed building facades. As such, mitigation measures to control potential future exposure to poor air quality were not considered necessary.
- 8.128 Air quality is generally expected to improve with time, due to, for example, more stringent emissions standards for motor vehicles and the uptake of cleaner vehicles, and lower emissions from heating plant as progressively lower emission technologies become available.
- 8.129 Whilst some direct effects on air quality as a result of climate change are expected, it is not anticipated that the conclusions made in the Air Quality Assessment will change significantly under future climatic conditions.

Wind and Microclimate

- 8.130 Wind conditions are influenced by weather patterns and are therefore sensitive to changes in climatic conditions. Subsequently climate change can have direct impacts on wind and microclimate.
- 8.131 Changes in temperature, humidity and wind patterns can alter local microclimates impacting building materials and their durability. Warmer temperatures may lead to overheating, leading, increasing the demand for cooling systems, impacting energy efficiency and increasing
- 8.132 Increased intensity and frequency of extreme weather, including high winds and heavy rainfall, could lead to structural damage of proposed and existing buildings
- 8.133 An ES Chapter has been produced to assess the wind microclimate for the Proposed Development. The study has employed computational fluid dynamics (CFD) to predict the strength of wind speeds that will occur following the introduction of the completed development. With the introduction of the Proposed Development, wind conditions within and around the Site meet the criteria for pedestrian safety and are suitable for intended uses in terms of comfort.
- 8.134 Given that no adverse effects were identified, no additional mitigation measures were considered necessary. Thus the residual effects are considered negligible (not significant).
- 8.135 Whilst some direct effects on wind and microclimates as a result of climate change are expected, it is not anticipated that the conclusions made in the Wind Microclimate ES Chapter will change significantly under future climatic conditions.

Socio Economic

- 8.136 Changes to weather patterns due to climate change are not expected to have significant or direct effects on the socio economics of the Proposed Development. Some indirect impacts associated with the use of amenity spaces and public realm have been identified.
- 8.137 Extreme weather events, including heatwaves, intense rainfall and storms, will result in occupiers being unable to utilise amenity space associated with the Proposed Development. Areas of the public realm and amenity space may be flooded limiting their use.
- 8.138 A Socio Economic ES Chapter was produced to assessment the potential impacts on the local and regional socio-economic environment, including employment, housing and population, social infrastructure, health and wellbeing, and community and social cohesion.
- 8.139 During the construction phase some moderate to adverse impacts were identified relating to the disruption of the local areas due to noise and the movement of materials. With the incorporation of mitigation, secured through a CEMP, these effects will be reduced to negligible (not significant).
- 8.140 Once operational the Proposed Development is anticipated to have minor-moderate beneficial impacts on the socio-economic environment of the local area. Benefiting existing local residents and occupiers of the Proposed Development.
- 8.141 Whilst some indirect effects on the socio-economic environment of the local area are considered, it is not anticipated that the conclusions made in the ES Chapter will change significantly under future climatic conditions.

Built Heritage, Townscape and Visual Impact

- 8.142 Changes to weather patterns due to climate change are not expected to have significant or direct effects on the impacts assessed in the Landscape and Visual Impacts Assessment (LVIA).

- 8.143 Indirect effects relating ground instability may influence the landscaping proposals under future climatic conditions. Drought conditions can cause soil to shrink leading to subsidence. This can result in cracks in the walls and foundations of buildings.
- 8.144 A Built Heritage, Townscape and Visual Impact Assessment was undertaken as part of the ES Chapter, to consider the potential effects of the Proposed Development on the character of the surrounding landscape, and the potential visual effects on identified key receptors. The Chapter assessed the effects of the Proposed Development on designated and non-designated built heritage assets (i.e., above ground) and townscape character areas.
- 8.145 The assessment determined that construction works have the potential affect nearby receptors through impacts such as dust, noise, vibration, increased traffic levels and the visual intrusion of cranes, hoardings and other construction equipment. Whilst significant these effects are considered temporary (short-term).
- 8.146 Once operational the Proposed Development will have some moderate-major beneficial (significant) effects. This reflects the positive regenerative impact the Proposed Development will have on the character, appearance and function of the Site and the wider receptor.
- 8.147 Whilst some indirect effects on built heritage, townscape and visual impact are considered, it is not anticipated that the conclusions made in the LVIA will change significantly under future climatic conditions.

Table 8.12 Climate Change Resilience Assessment Summary

Resource	Sensitive Receptor	Potential Effect of Climate Change	Relative Sensitivity / Risk
Air Quality	Existing residents Future occupiers Ecological sites, habitats and species	Hotter temperatures resulting in windows being left open for longer, air conditions / fans being adopted. Extremes of dry weather may lead to increased dust generation and deposition. Causing episodes of severe pollution.	Medium (Minor Adverse)
Wind and Microclimate	Existing residents Future occupiers	Increased intensity and frequency of extreme weather, including high winds and heavy rainfall, could lead structural damage of proposed and existing buildings Changes in microclimates can affect the thermal comfort of buildings. Warmer temperatures may lead to overheating, leading, increasing the demand for cooling systems, impacting energy efficiency and increasing operational costs.	Medium (Minor Adverse)
Transport	Existing residents Ecological sites, habitats and species	Extreme weather events, such as storms and snowfall, could influence the ability to travel and use roads safely. Hotter temperatures, dry weather and drought is likely to lead to increased dust generation by vehicles on roads adjacent to the Site. This increases the risk of dust soiling impacts on existing buildings, as well as human health and ecological receptors. Sustainable transport (i.e. cycling and walking) may not be suitable to be used during due to hot/cold/wet weather and extreme weather events.	Low (Negligible)
Socio Economic	Existing residents Future occupiers	Extreme weather events, including heatwaves, intense rainfall and storms, will result in occupiers being unable to utilise amenity space associated with the Proposed Development.	Low (Negligible)

		Areas of the public realm and amenity space may be flooded limiting their use.	
Built Heritage, Townscape and Visual Impact	Archaeological resources Existing buildings and structures	Prolonged periods of drought and extreme rainfall events will impact ground stability and moisture. This could influence the landscaping proposals. As well as the mobilisation and migration of any contaminants within the ground.	Low (Negligible)

Mitigation Measures

Greenhouse Gas

- 8.148 It is important to consider measures to reduce GHG emissions as a means to mitigate climate change. The emissions estimated for the Proposed Development may be deemed to be relatively low in relation to the MCC and UK carbon budgets, however the sensitivity of the receptor (i.e. the global climate) is considered high, resulting in some adverse impacts (significant). This section sets out steps in which the Proposed Development intends to minimise and/or avoid GHG emissions.
- 8.149 It is possible to reduce emissions by following the GHG Management Hierarchal approach (adapted by IEMA) illustrated in **Figure 1.1**.

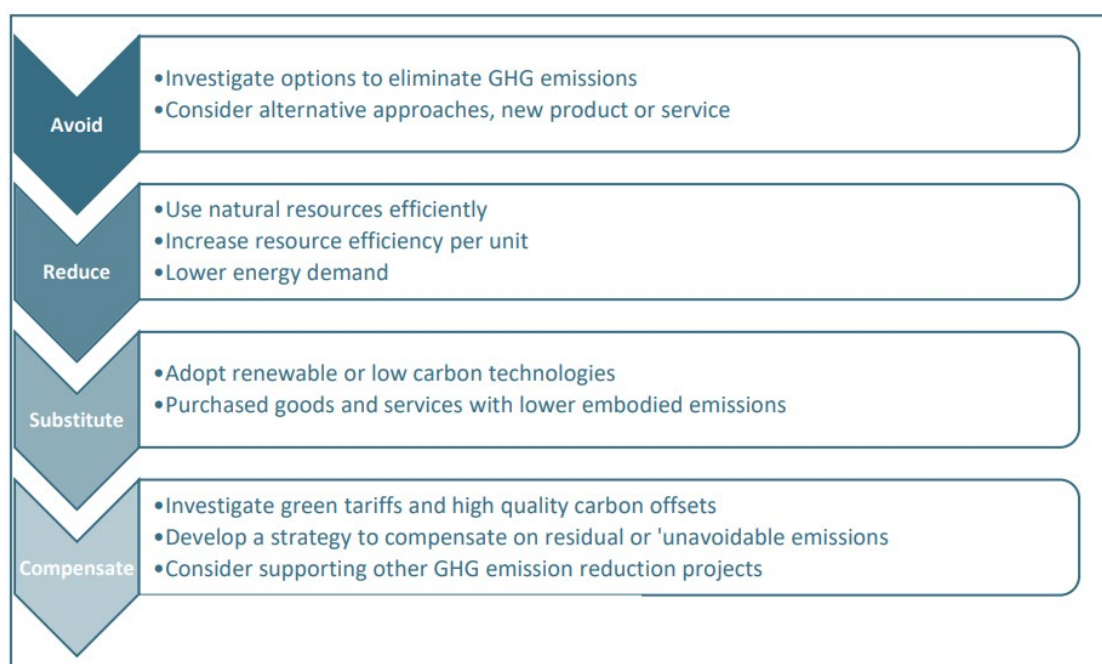


Figure 1.1 IEMA GHG Management Hierarchal Approach.

The mitigation measures below will be taken into account by the Applicant in order to reduce emissions related to the Proposed Development. These have been split across construction and operational phases.

During Construction

- 8.150 In addition to the measures embedded into the design of the Proposed Development several addition mitigation measures will be implemented, these include:
- Waste arising from the construction of the Proposed Development will be managed in accordance with local and national policy and guidance. It shall be managed in accordance with the waste hierarchy;
 - The Proposed Development should adhere to sustainable waste management principles with the objective of reducing and recycling materials either on or off site as far as practicable; and,
 - Direct emission control to reduce GHG emissions during works.

- 8.151 A Construction Environmental Management Plan (CEMP)²⁹, has also been prepared by the Applicant which details the measures to be implemented in relation to waste management as set out above, and provide the framework for planning and implementing remediation, construction and service utility activities in a way that prevents, minimises and controls potential GHG emissions.

During Operation

- 8.152 Mitigation measures to reduce emissions during the operation of the Proposed Development are identified within the Embedded Mitigation section of this Chapter.

During Decommissioning

- 8.153 The Applicant should provide an 'end-of-life plan' for the Site after its operational lifetime to ensure materials are responsibly disposed of and materials are reused and repurposed where possible.

Climate Change Resilience

- 8.154 This CCR sets out a number of mitigation measures that can potentially inform a Climate Change Adaptation Plan. Such measures may be additional and aim to mitigate expected effects of climate change onto the Proposed development in the future in order to reduce the significance of effects highlighted.

- 8.155 The climate change predictions have been considered inherently uncertain. To manage anticipated effects, mitigation measures have been provided in this section. This allows for appropriate adaption in the future to reflect the realities of changing climate.

- 8.156 The IEMA Guidance recommends that a project's ability to adapt to climate change should:

- Consider the whole life of the project (from design stage through to decommissioning);
- Have a 'win-win' outcome that can provide benefits under multiple scenarios, and that can bring economic, social and environmental benefits;
- Favour flexible future options (including building appropriate safety margins), rather than being too prescriptive and specific over options that can be modified in the future;
- Delay details of project elements that are subject to the greatest risk and uncertainty from climate change until later in the programme when more should be known; and
- Follow a hierarchy, whereby avoid, control or manage risk is preferred, enhancement (e.g. to improve the functionality over a project's lifespan), and compensate (e.g. by providing a measure to offset a climate change impact it exacerbates).

- 8.157 The IEMA Guidance states the procedure that should be followed is as follows:

- Conceptualise the issues through the assessment across the EIA, and identify the greatest potential impacts and receptors most at risk;

²⁹ Kellen Homes. Construction Environmental Management Plan and Construction Traffic Management Plan: Former Riverpark Road Trading Estate (November, 2024).

- Manage uncertainty by setting goals/objectives, and action trigger levels, developing a monitoring plan for reviewing updated climate predictions, and define roles, responsibilities and funding streams;
- Implement the plan and monitor/analyse results over the life of the Proposed Development; and
- Review the plan, collate data received, update the plan as necessary, including the need for additional or different mitigation taking into account in-combination impacts.

Cumulative Effects

- 8.158 A GHG emissions assessment has been undertaken to assess the potential for GHG emissions from the construction, operational and end-of-life phases of the Proposed Development. GHG are gases in the atmosphere which have the potential to increase air temperatures and contribute towards climate change. It is important to note that all GHG emissions have the potential to result in a cumulative effect in the atmosphere over long periods of time.
- 8.159 All GHG emissions are described as significant in accordance with the relevant guidance for the assessment of GHGs as part of the Environmental Impact Assessment process. This does not mean that the contribution of GHG emissions from the Proposed Development alone will equate to a likely significant effect; for the majority of development projects, the individual contribution to total GHG emissions (relative to a national and global scale) will be very small.
- 8.160 Therefore, it important to acknowledge that GHG impacts are considered to be exclusively cumulative impacts because no single project makes a significant contribution to global climate change. The assessment of significance is based on whether a project's GHG emissions cumulatively represent a considerable contribution to the global atmosphere.

Residual Effects

- 8.161 The IEMA guidance recommends that mitigation should in the first instance seek to avoid GHG emissions. Where GHG emissions cannot be avoided the development should aim to reduce the residual significance of a project's emissions at all stages. Where GHG emissions are significant but cannot be reduced, other approaches should be considered that compensate the projects remaining emissions.
- 8.162 The summary of effects identified throughout the construction, operation and decommissioning stages of development are presented in **Table 8.14**.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Embodied Carbon – upfront (A1-A5)	Global Climate	Embedded design measures (paragraph 8.89).	Negligible (Not Significant)
Construction Traffic	Global Climate	CEMP	Negligible (Not Significant)
Operational Phase			
Embodied carbon - Repair, maintenance and refurbishment (B1-B5)	Global Climate	-	Negligible (Not Significant)
Operational traffic (B1)	Global Climate	-	Negligible (Not Significant)

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Operational energy (B6)	Global Climate	Passive and active design measures intended to improve energy efficiency (paragraph 8.90).	Negligible (Not Significant)
Operational water (B7)	Global Climate	Passive and active design measures intended to improve resource efficiency (paragraph 8.90).	Negligible (Not Significant)
Decommissioning Phase			
Embodied carbon - End of life (C1-C4)	Global Climate	End of life plan to be produced.	Negligible (Not Significant)

^ Table 8.13 Summary of Residual Impacts

9. Built Heritage, Townscape and Visual Impact Assessment

Introduction

- 9.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to Built Heritage, Townscape and Visual receptors. 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.
- 9.2 This ES Chapter is supported by a detailed Heritage, Townscape and Visual Impact Assessment ('HTVIA') report, which should be read alongside this Chapter, and which provides an extended and discursive assessment of the potential impact of the Proposed Development on identified receptors. The HTVIA is reproduced at **Appendix 9.1**.
- 9.3 This assessment has been undertaken by Stephen Levrant Heritage Architecture ('SLHA'). The authors of this Chapter are Anna Manley (BA (Hons), MA, and Kirsten McKnight (BA (Hons), MA, MSc, IHBC) who, collectively, have c.20 years' experience in the preparation of ES Chapters in the historic built environment.

Legislative and Policy Context

Legislation

- 9.4 The following planning policy and legislation has been considered for the assessment of Heritage, Townscape and Visual Impacts within the EIA.

Planning (Listed Building and Conservation Areas) Act 1990

- 9.5 The Planning (Listed Buildings and Conservation Areas) Act 1990 provides the legislative framework which governs the specific protection for buildings and areas of special architectural or historical interest, over and above that provided by development management policies at a local level.
- 9.6 As the Site is within the setting of a number of listed buildings and structures, Section 66(1) of the Act is applicable. This provision stipulates that the decision-maker should have "*have special regard to the desirability of preserving the building or its setting or any features of special architectural or historic interest which it possesses*" when considering whether to grant planning permission.

National Planning Policy

National Planning Policy Framework ('NPPF') (December 2024)

- 9.7 The revised NPPF was published in December 2024. The NPPF constitutes the Government's view of what sustainable development in England means in practice.

Design

- 9.8 Chapter 12 of the NPPF establishes the Government's framework and approach towards design. The NPPF states at **Paragraph 131** that "*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*".

- 9.9 At **Paragraph 135**, the NPPF establishes a set of principles that Local Authorities should ensure are at the forefront when considering planning policies and development proposals. These principles stipulate that developments should: function well and contribute to the overall quality of the area; be visually attractive through the use of high quality architecture, successful layouts and effective landscaping; be sympathetic to local townscape character and history (including the built environment and landscape setting); reinforce and maintain sense of place through considered arrangement of streets, spaces, typologies and materiality; optimise the potential of sites and create a sustainable mix of developments; and create spaces that are safe, inclusive and accessible to all.
- 9.10 **Paragraph 139** states that developments that are that not well designed should be refused by Local Authorities (including and especially where proposals fail to reflect local design policies and government design guidance). Conversely, the NPPF states in the same paragraph that “*significant weight*” should be given to schemes that reflect local policy requirements and government guidance on design, and those that reflect “*innovative designs which promote high levels of sustainability*”. Read together, **Paragraphs 134 and 139** demonstrate the Government’s encouragement of Local Authorities to support schemes which embody high quality sustainable design. It will be clear from the HTVIA (**Appendix 9.1**) that the Proposed Development seeks to provide a sustainable use and a high-quality scheme which accords with the definition of sustainable development provided within the NPPF.

Heritage

- 9.11 Section 16 of the NPPF sets out the Government’s planning policies on the conservation of the historic environment.
- 9.12 The policies in the NPPF constitute the Government’s view of what sustainable development in England means in practice. In these terms, development proposals which fail to give due weight to the conservation of heritage assets are deemed not to be sustainable development and consequently shall not be supported. This is because one of the key dimensions of sustainability is protecting and enhancing our historic environment.
- 9.13 **Paragraph 207** stipulates that Local Authorities should require applicants to describe the significance of any assets that have the potential to be affected by development proposals, including any contribution their setting makes to an appreciation of their significance. The NPPF determines that this description should be proportionate to the assets’ significance and “*no more than is sufficient to understand the potential impact of the proposal on their significance*”. This assessment fulfils this requirement by providing an appraisal of the significance of listed buildings and Registered Parks and Gardens (‘RPGs’) within the setting of the Site.
- 9.14 The NPPF stresses that ‘great weight’ should be given to the conservation of designated heritage assets (**Paragraph 212**), emphasising the need to avoid substantial harm, in terms of demolition, alteration or the compromise of its setting. The fundamental objective is to ensure that the balance of the impact on the heritage assets is demonstrably beneficial, minimising any negative impact on their significance.
- 9.15 The NPPF establishes a clear hierarchy of significance for heritage assets, derived from their designated status. The fundamental objective is to avoid compromising designated heritage assets, such that any potential ‘harm’ from a development must be balanced against the potential advantages of the public benefits that may outweigh any harm.
- 9.16 **Paragraph 213** determines that “*any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification*”.
- 9.17 Degrees of harm are categorised within the NPPF as ‘substantial’ and ‘less than substantial’. **Paragraph 214** states that “*Where a proposed development will lead to substantial harm to (or total loss of significance of) a designated heritage asset, local planning authorities should refuse consent, unless it can be demonstrated that the substantial harm or total loss is necessary to achieve substantial public benefits that outweigh that harm or loss*”.

- 9.18 **Paragraph 215** relates to 'less than substantial harm', stating that *“this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use”*.
- 9.19 The 'designated heritage asset' status of the identified listed buildings and conservation areas within the setting of any site requires that any potential 'harm' must be weighed and balanced against the potential advantages of the particular development proposal. It is thus necessary to establish whether the effects of the Proposed Development outweigh any perceived harm, in the context of the statutory duties set out above.

Planning Practice Guidance ('PPG') (2014 and as subsequently amended)

- 9.20 The PPG is an online document which is amended as required by the Government. It provides current advice to assist with the interpretation of the NPPF. The most recent amendment to the online guidance was published in July 2019. The section 'Conserving and Enhancing the Historic Environment' of the current iteration of the PPG has been reviewed and referenced in the course of producing this HTVIA.

Local Planning Policy

MCC, Places For Everyone ('PfE') (2024)

- 9.21 PfE is the long-term plan of nine Greater Manchester districts for jobs, new homes and sustainable growth. The plan sets out a strategic policy framework for the nine boroughs and helps these areas to meet their local housing and employment needs by identifying land and infrastructure to support growth.
- 9.22 Objective 4 of the PfE seeks to: *“Enhance our cultural, heritage and educational assets; - Improve sustainable transport and active travel access to these locations; - Improve access for local people to jobs in these locations.”*
- 9.23 Relevant extracts from **Policy JP-1 1** addressing 'Sustainable Places', encourage developments which are/offer:
- *“Distinctive, with a clear identity that:*
 - A) *Responds to the natural environment, landscape features, historic environment and local history and culture;*
 - B) *Enables a clear understanding of how the place has developed; and*
 - C) *Respects and acknowledges the character and identity of the locality in terms of design, siting, size, scale and materials used*
 - *Visually stimulating, creating interesting and imaginative environments which raise the human spirit through the use of green space, public art and quality design*
 - *Socially inclusive:*
 - A) *Responding to the needs of all parts of society*
 - B) *Enabling everyone to participate equally and independently*
 - C) *Providing opportunities for social contact and support; and*
 - D) *Promoting a sense of community*
 - *Legible, being easy to understand and navigate, with the protection and enhancement of key views and new development well-integrated into the place*
 - *Easy to move around for those of all mobility levels, particularly by walking and cycling, with enjoyable routes free from obstacles and disorienting stimuli, and with places to rest*

- *Well-connected to other places, particularly by public transport and digital infrastructure enabling everyone to take advantage of the employment, cultural and leisure opportunities across Greater Manchester and beyond*
- *Comfortable and inviting, with indoor and outdoor environments:*
 - A) *Offering a high level of amenity that minimises exposure to pollution; and*
 - B) *Addressing microclimate issues such as sunlight, indoor air quality, overheating, shade, wind and shelter*
- *Incorporating high quality and well managed green infrastructure and quality public realm, with:*
 - A) *Opportunities for recreation and outdoor play for children, and interaction between the generations;*
 - B) *Public and private spaces clearly distinguished;*
 - C) *Development clearly defining, and promoting activity within, public spaces*
 - D) *High quality landscaping with schemes*
 - E) *Well-served by local shops, services and amenities, including education and health facilities.”*

9.24 **Policy JP-P 2** addressing ‘Heritage’, states:

“Through this Plan we will proactively manage and work with partners to positively conserve, sustain and “enhance its historic environment and heritage assets and their settings. Opportunities will be pursued to aid the promotion, enjoyment, understanding and interpretation of heritage assets, as a means of maximising wider public benefits and reinforcing Greater Manchester's distinct identity and sense of place. Local Plans will set out the key elements which contribute to the district's identity, character and distinctiveness and which should be the priority for safeguarding and enhancing in the future, and demonstrate a clear understanding of the historic environment and the heritage values of sites, buildings or areas and their relationship with their surroundings. This knowledge should be used to inform the positive integration of our heritage by:

1. *Setting out a clear vision that recognises and embeds the role of heritage in place-making;*
2. *Utilising the heritage significance of a site or area in the planning and design process, providing opportunities for interpretation and local engagement;*
3. *Integrating the conservation and enhancement of heritage assets and their settings, with creative contextual architectural responses that contribute to their significance and sense of place;*
4. *Delivering positive benefits that sustain and enhance the historic environment, as well as contributing to the economic viability, accessibility and environmental quality of a place, and to social wellbeing; and*
5. *Exploring opportunities to reduce greenhouse gas emissions that restoration of historic buildings offer.*

Particular consideration will be given to ensure that the significance of key elements of the historic environment which contribute to Greater Manchester's distinctive identity and sense of place are protected from harm. These include historic town centres, places of worship, historic

Places for Everyone transport routes including the canal network, industrial buildings and structures including textile mills, farmsteads and other sites, buildings and areas of identified archaeological, architectural, artistic and historic value.

Development proposals affecting a designated heritage asset (or an archaeological site of national importance) and a conservation area should conserve those elements which contribute to its significance including those identified in any conservation area appraisal as making a positive contribution to the area. Harm to such elements will only be permitted where this is clearly justified and outweighed by the public benefits of the proposal.

Proposals should be informed, as necessary, by the findings and recommendations of the appropriate heritage assessment(s) in the development plan evidence base and/or any updated heritage assessment submitted as part of the planning application process”.

MCC Core Strategy, 2012

- 9.25 Local planning policy maintains the same focus as the NPPF.
- 9.26 The City Council’s design and heritage related policies focus on the fundamental importance of *“preserving or, where possible, enhancing the historic environment”*. The following policies from Manchester’s Core Strategy are of relevance.
- 9.27 **Policy CC9** (Design and Heritage) states that development in Manchester City Centre should preserve or enhance the heritage assets that have been identified, including listed buildings, conservation areas and scheduled monuments. Whilst the Site is not located in the City Centre, it is expected that MCC would anticipate a similar level of consideration and care with regard to heritage assets in non-central areas and particularly given the sensitive heritage context to the south of the Site.
- 9.28 **Policy EN1** (Design Principles and Strategic Character Areas) states that new development will be expected to follow the key principles of urban design (character, continuity and enclosure, quality of public realm, ease of movement, legibility, adaptability, and diversity) and to contribute to the quality of the local and wider area.
- 9.29 **Policy EN3** (Heritage) states that MCC encourage development that complements and takes advantage of the distinct historic and heritage features of its districts and neighbourhoods. Development options must be designed 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.

Unitary Development Plan for the City of Manchester, 1995

- 9.30 The Unitary Development Plan (the ‘UDP’) for Manchester was adopted by the Council in 1995. The Core Strategy, adopted in 2011 and referred to above, replaced significant elements of the UDP, though there are saved policies which are extant, and which are relevant to a consideration of the impact of development proposals on heritage assets.
- 9.31 **Development Control Policies 18.1** and **19.1** are saved from the UDP and address conservation areas and listed buildings respectively. The policies stipulate the careful consideration is given to development proposals which affect the respective heritage assets, providing a series of provisions to consider such as relationships between new and old buildings, and promote their preservation and enhancement.

Guidance

Historic England

- 9.32 In 2015 Historic England released three Good Practice Advice notes supporting the implementation of national policy and the related guidance provided within the PPG. *Good Practice Advice Note 2 - Managing Significance in Decision-Taking in the Historic Environment* (2015) ('GPA2') and *Good Practice Advice Note 3 - The Setting of Heritage Assets* (amended December 2017) ('GPA3') have both been utilised in the preparation of the HTVIA (**Appendix 9.1**) and this ES Chapter in order to gain a full understanding of the relevant issues.
- 9.33 In particular, this assessment takes account of the advice contained within the revised version of GPA3 on understanding what constitutes the setting of a listed building or other heritage asset. Furthermore, the HTVIA and ES Chapter rely on the guidance provided on the identification of assets and their settings which have the potential to be affected by development proposals, as well as the approach to the selection of indicative key views of a proposed development in a context which includes heritage assets and heritage sensitivities.
- 9.34 In terms of assessing the impacts of development proposals, SLHA's HTVIA and ES Chapter take account of the advice in GPA3 which states that *"setting and views are matters of qualitative and expert judgement [...] technical analyses [and] should be seen primarily as material supporting a clearly expressed and non-technical narrative argument that sets out 'what matters and why' in terms of the heritage significance and setting of the assets affected, together with the effects of the development upon them."*
- 9.35 The HTVIA and ES Chapter also accord with the guidance and approach established in Historic England's *Advice Note 12 - Statements of Heritage Significance: Analysing Significance in Heritage Assets* (2019) and *Conservation Principles, Policies and Guidance* (2017).

Assessment Methodology and Significance Criteria

Desktop Research Review

- 9.36 Initial desktop studies were undertaken in April and November 2024 to establish the physical components of the Site and its surroundings and to identify built heritage assets, townscape character and potential visual receptors/viewpoint locations. Receptors were initially identified through a review of OS maps, aerial and street view photography, policy and guidance documents and online resources (including Historic England's National Heritage List E-Map and MCC's Interactive Planning Map). Dates of elements and construction periods have been identified using documentary sources and visual evidence based upon experience gained from similar building types and construction sites.
- 9.37 The documentary research was based upon secondary sources of local history and architecture, including maps, drawings and reports. The Heritage, Townscape and Visual Impact Assessment ('HTVIA') has also drawn on the research findings resulting from desktop research including online articles and resources.

Area Surveying

- 9.38 Surveys of the surrounding areas were conducted in April and November in 2024 by visual inspection to analyse the Site and identify the relevant areas that would be most affected by the proposed works.
- 9.39 The initial scoping exercise was informed by Historic England's Map Search, on-site surveys and professional judgement. A 500m radius is considered to be proportionate and robust for the purposes of the current planning application.

- 9.40 Within the study area of 500m (agreed with MCC as part of the formal scoping process), all designated and non-designated heritage assets ('NDHAs') which have the potential to be affected by the Proposed Development have been identified. The identification of townscape receptors has also been included within the study area. Within an approximate 500m radius of the Site there are a number of built heritage assets.

Built Heritage Appraisal: Methodology

- 9.41 The baseline conditions have been established through an initial desktop survey to identify the relevant heritage assets in proximity to the Site and included a search of Historic England's National Heritage List for England ('NHLE') to identify statutory listed buildings, RPGs, and scheduled monuments, and a review of MCC's website to identify conservation areas. MCC does not have a formal local list which identifies non-designated heritage assets, and none have been identified throughout the scoping and surveying of the baseline. The heritage significance appraisal is presented at Section 5 of the accompanying HTVIA (**Appendix 9.1**).
- 9.42 Desktop surveys were supplemented by site surveys undertaken in April and November 2024 to enable a robust assessment of the heritage significance of identified heritage assets, including any contribution of their settings. The survey also enabled a better understanding of the current relationship between the Site and the surrounding heritage assets and the likely potential effects of the Proposed Development on their settings and significance (value).
- 9.43 This understanding of heritage significance is framed by the policies outlined above. In line with Historic England's guidance, the significance of a designated heritage asset is determined by an analysis of the relevant aspects of the following:
- **Archaeological Interest:** There will be archaeological interest in a heritage asset if it holds, or potentially holds, evidence of past human activity worthy of expert investigation at some point.
 - **Architectural and Artistic Interest:** These are interests in the design and general aesthetics of a place. They can arise from conscious design or fortuitously from the way the heritage asset has evolved. More specifically, architectural interest is an interest in the art or science of the design, construction, craftsmanship and decoration of buildings and structures of all types. Artistic interest is an interest in other human creative skills, like sculpture.
 - **Historic Interest:** An interest in past lives and events (including pre-historic). Heritage assets can illustrate or be associated with them. Heritage assets with historic interest not only provide a material record of our nation's history but can also provide meaning for communities derived from their collective experience of a place and can symbolise wider values such as faith and cultural identity.
- 9.44 There is no one set of criteria provided in Historic England documentation which provides guidance for the different grading of heritage assets in significance assessments. One set of guidance which is widely adopted for assessing heritage impact is the guidance provided by the International Council on Sites and Monuments ('ICOMOS') in Appendix 3A of, 'Guidance on Heritage Impact Assessments for Cultural World Heritage Properties'.
- 9.45 The focus is on providing necessary and proportionate amount of information based on the perceived level of heritage significance (refer to **Table 9.1** below for full definitions of heritage significance as defined in this present report).
- 9.46 Once the heritage significance of the built heritage asset has been assessed, including any contribution of its setting, the likely potential impact of the Proposed Development upon its heritage significance is then assessed. Potential impacts are defined as a change resulting from the Proposed Development that affects the heritage asset, including its setting.

- 9.47 There is no standard methodology for the appraisal of physical (or ‘direct’) or visual (or ‘indirect’) impact on listed buildings, therefore, the method used below is a synthesis of the Historic England’s guidance on ‘Conservation Principles’ (2008) and the policy requirements of the NPPF, which requires that new development should be demonstrably ‘sustainable’, thus securing the protection or enhancement of the historic environment.
- 9.48 The impact of the Proposed Development upon the heritage asset’s heritage significance may be described as beneficial, harmful, or neutral. If the Proposed Development will enhance heritage values or the ability to appreciate them, as expressed in the first stage of the assessment (‘Significance Assessment’), 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 harmful. A neutral impact is identified where it is considered that the proposal will not change or impact an appreciation of the heritage asset’s significance. The scale of the overall impact of the proposed works on the significance of the building fabric is evaluated using the criteria in **Table 9.2** below.
- 9.49 This impact of the Proposed Development on heritage assets has been based on the understanding of their significance and setting, the nature of the Proposed Development itself, as well as the understanding gained from the Visual Impact Assessment (Section 10 of the HTVIA, **Appendix 9.1**). The respective impacts on each heritage asset can be found in Section 8 of the HTVIA).

Heritage Status / Hierarchy	Description
Very High / Exceptional heritage significance International architectural and historic interest and importance.	This heritage grading relates to the fabric and setting of: • Scheduled Ancient Monuments, • Grade-I listed buildings, • Grade-I historic parks/gardens, and battlefields, defined by statute, where the particular site is well represented in the impacted historic environment.
High heritage significance National architectural and historic importance and interest.	This heritage grading relates to the fabric and setting of: • Grade-II* and grade-II listed buildings, • Grade-II* and grade-II historic parks/gardens, • battlefields, as defined by statute, Conservation Areas containing very Important buildings. where the particular site is well represented in the impacted historic environment.
Medium heritage significance Regional architectural and historic importance and interest.	This heritage grading relates to the fabric and setting of: • Grade-II listed buildings (dependant on character), • Grade-II historic parks/gardens and battlefields, • designated Conservation Areas, Unscheduled archaeological sites and landscapes of potential national interest where the fabric and character of the site is well represented in the impacted historic environment.
Low heritage significance	This heritage grading relates to the fabric and setting of: • Locally Listed Buildings (as formally identified by the Council and defined by an adopted Local Planning Policy),

Heritage Status / Hierarchy	Description
Local architectural and historic heritage importance and interest.	Sites identified and recorded as being of heritage interest on the Historic Environment Record, which retain a definable heritage interest as a component of the historic environment. unrecorded buildings, structures, or designed landscape features, which demonstrably retain a degree of heritage value due to their: architectural design, historic, communal, or townscape interest.
Negligible heritage significance Buildings or fabric components which have been extensively altered, eroding or compromising their architectural and historic interest	This heritage grading relates to sites which may be: recorded on the Historic Environment Record in record form or as 'Find Sites' but retain minimal or no original fabric or definable character. buildings, structures, or designed landscape features, which detract from the architectural design, historic, communal, or townscape interest of the principal heritage asset.
Unknown heritage potential Buildings/sites where the potential importance interest requires determination	This heritage grading relates to sites which may be locally identified as meriting recognition but have not been previously recorded or investigated so that their origins and fabric significance have yet to be objectively defined.

Table 9.1 – The hierarchy and definition of heritage significance relevant to the redevelopment of the Site (tailored from ICOMOS & Historic England guidance).

Definition of Magnitude and Nature of Heritage Impact.	Direct Heritage Impacts (physical alteration or change to character)	Indirect Heritage Impact (visual change to the experience or setting of the building and its context).
Major Adverse Impact. <i>Substantial harm of this nature, which results in total loss of significance or fundamentally affects the significance of defined heritage assets, should normally be avoided.</i>	Development resulting in demolition of a significant historic fabric component which results in total loss of significance.	Substantially harmful change to overarching character or setting of the identified designated heritage assets. Where the development severely erodes the heritage values of the identified heritage assets in the view, or the view as a whole, or the ability to appreciate those values and thus results in total loss of significance.
Moderate Adverse Impact. <i>Such less-than-substantial harm will need to be demonstrably mitigated and justified by clear public benefits.</i>	Development resulting in extensive harmful alterations (but not total demolition) of a designated heritage asset.	Less than substantial harm to overarching character or setting of the identified designated heritage assets. Where the development erodes to a clearly discernible extent the heritage values of the heritage

Definition of Magnitude and Nature of Heritage Impact.	Direct Heritage Impacts (physical alteration or change to character)	Indirect Heritage Impact (visual change to the experience or setting of the building and its context).
		assets in the view, or the view as a whole, or the ability to appreciate those values.
Minor Adverse Impact. <i>The negative impact will need to be balanced by appropriate mitigation.</i>	Development resulting in alterations to a designated heritage asset which result in minor compromise of its fabric or erosion of its character.	Minor compromise to overarching character or setting of the identified designated heritage assets. Where the development erodes to a minor extent the heritage values of the assets in the view, or the view as a whole, or the ability to appreciate those values.
Negligible Adverse Impact. <i>This does not mean that there will be no physical or visual change, rather that the resultant difference would not diminish the value of the heritage assets' significant physical fabric, their settings or significance to any appreciable degree.</i>	Development resulting in negligible direct impact on a designated heritage asset which results in the removal of a minor, original fabric component, but avoids diminishing its character and its special architectural or historic interest.	Negligible perceptible change to the character of a designated heritage asset, or the experience and understanding of its special interest. The degree of change 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.
Neutral Impact. <i>This does not necessarily mean that there will be no physical or visual change, rather that the resultant difference will be imperceptible or appropriately balanced.</i>	Development which comprises an imperceptible physical impact resulting in no apparent change or achieved by removing a component of no heritage value which detracts from the special interest of the building fabric.	Imperceptible change to the and character of a designated heritage asset, or the setting of the identified designated heritage assets. A neutral impact occurs when the development does not affect the values of the heritage assets in the view, the townscape as a whole, or the ability to appreciate its significance.
Negligible Beneficial Impact. <i>The resultant difference will be imperceptible but have a positive impact on the understanding or appreciation of the heritage asset.</i>	Development resulting in a negligible beneficial direct impact on a designated heritage asset which results in the removal of a minor non-original fabric component which is detracts from the character and its special architectural or historic interest.	Negligible perceptible change to the character of a designated heritage asset, or the experience and understanding of its special interest. The degree of change would imperceptibly enhance the intrinsic values of the identified heritage assets, or the experience and appreciation of the buildings or the designated area.

Definition of Magnitude and Nature of Heritage Impact.	Direct Heritage Impacts (physical alteration or change to character)	Indirect Heritage Impact (visual change to the experience or setting of the building and its context).
Minor Beneficial Impact. <i>The proposed change would result in a demonstrable improvement to the overall character or setting of a heritage asset.</i>	Development resulting in alterations to a built heritage asset which deliver a minor beneficial physical impact or enhancement of the site's special interest.	Minor enhancement to the overarching character of a designated heritage asset, or the setting of the identified designated heritage assets. Where the development enhances to a minor extent the values of the heritage assets in the view, the view as a whole, or the ability to appreciate its significance.
Moderate Beneficial Impact. <i>The proposed change would result in a considerable improvement to the overall character and appreciation of a heritage asset with clear beneficial enhancement of its heritage interest.</i>	Development resulting in alterations to a built heritage asset resulting in moderate beneficial physical impact, or an enhancement of the site's character.	Evident improvement of the overarching character of a designated heritage asset or its setting, resulting in an enhancement of its cultural heritage values. Moderate enhancement to the setting of the built heritage asset. Where the development will enhance to a clearly discernible extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate its significance.
Major Beneficial Impact. <i>The proposed change would result in substantial improvement to the overall character and appreciation of a heritage asset, revealing and/or enhancing important characteristics of its heritage interest.</i>	Development resulting in restoration or alterations to a designated heritage asset which comprises substantial restoration of its fabric and historic character and an enhancement of its cultural heritage values.	Substantial improvement of the overarching character of a designated heritage asset or its setting, resulting in a significant enhancement of its cultural heritage values. Substantial restoration or enhancement of the setting of the built heritage asset where the development will enhance to a fundamental extent the heritage values of the heritage assets in the view, the view as a whole, or the ability to appreciate its significance.

^Table 9.2 – Criteria for defining the effect and degree of direct and indirect heritage impact.

Townscape and Visual Impact Assessment: Methodology

The Landscape Institute Guidance

- 9.50 The methodology for assessing townscape, landscape and visual effects is broadly based on the principles set out in the third (2013) edition of 'Guidelines for Landscape and Visual Impact Assessment' ('GLVIA3'), produced jointly by the Landscape Institute and the Institute of Environmental Management and Assessment. These principles are designed to assess natural landscapes however they can be applied to the assessment of urban townscapes and this approach is followed in this ES Chapter and the accompanying HTVIA.
- 9.51 GLVIA3 states that assessment work needs to respond to the particular context in which it takes place. It expresses townscape as being:
- "...areas where the built environment is dominant... townscape means the landscape within the built-up area, including the buildings, the relationships between them, the different types of urban open spaces, including green spaces, and the relationship between buildings and open spaces." (Para. 2.7).*
- 9.52 As such, the term 'landscape' in GLVIA3 guidance can be justifiably used to apply to urban areas, and the term 'townscape' shall be used instead of 'landscape' in this assessment.
- 9.53 The two components of TVIA are:
1. Assessment of townscape effects: assessing effects on the townscape as a resource in its own right; and
 2. Assessment of visual effects: assessing effects on specific views and on the general visual amenity experienced by people.
- 9.54 Whilst the assessment has been informed by a series of criteria which is set out in the tables that follow, it is important to note that these criteria are intended as a guide to inform professional judgement.

Townscape Character Appraisal and Impact Assessment

- 9.55 An appraisal has been made of the Site and its surroundings in their existing state in Section 6 of the accompanying HTVIA (**Appendix 9.1**). This analyses the physical features and characteristics of the townscape and considers the current status of the Site. The objective of identifying the existing context is to provide an understanding of the townscape in the area that may be affected by the Proposed Development – with principal focus around its constituent elements, overall character, condition, how it is experienced, the value attached to it and its sensitivity. This process is referred to as 'townscape character appraisal'.
- 9.56 Townscape character is assessed through the identification of a number of geographical areas which have readily identifiable characteristics in common. The physical characteristics of townscape may include: topography; patterns of land use and open space; development patterns and scale, including architectural styles and periods, density, massing, building types and materials; heritage assets including listed buildings, conservation areas and registered parks and gardens; vegetation patterns, including types of green space and their relationship to build form; permeability and linkages; public realm; and transport routes, including roads, railways, footpaths and waterways.

- 9.57 Consideration of these townscape elements were used to identify Townscape Character Areas (TCAs), defined as areas with broadly homogenous characteristics. The TCAs are based upon a combination of desk-based research, studying historic maps, OS maps and aerial images. This desktop analysis was supplemented by site visits undertaken by SLHA in April and November 2024 to finalise an appraisal of the existing townscape character. A study area of 500m for the baseline townscape character appraisal was determined by the immediate visual envelope of the Site and where the Proposed Development was considered to potentially influence local townscape character and local views.
- 9.58 The TCAs have been mapped with boundaries and their key characteristics described within the baseline appraisal (Section 6 of the HTVIA).
- 9.59 GLVIA3 uses the term ‘receptor’ to mean both elements of the physical townscape, and people who will see the development. ‘Viewers’ are taken to be the general public affected by development, considering the differing interests and expectations likely to be found in residents, visitors or people who work in a place. The assessment recognises that people are generally more sensitive to change in the area where they live than elsewhere; and that they are generally more sensitive to change which affects recreational environments such as parks and open spaces rather than streets, whether designated or non-designated.
- 9.60 The TCA assessment includes identifying the value of each area. The consideration of value is initially based on, and takes into account, whether it is covered by a townscape designation at a national, regional or local level. This is also informed by designated heritage assets. An assessment of the value of each townscape character area is informed by the criteria set out in **Table 9.3** below.

Value	Description
High	Sites, features or areas of national importance with settings of high quality such as World Heritage Sites, AONB, National Parks, Grade I and Grade II* Listed Buildings and Registered Parks and Gardens. A high value townscape comprises well-designed/well-proportioned buildings with a strong sense of place. Buildings relate well to streets, spaces and landscape elements. Few detracting elements.
Medium	Sites, features or areas of local or regional importance with intact character such as Grade II* and Grade II listed buildings, Registered Parks and Gardens, Conservation Areas, Scheduled Monuments, local nature sites and long-distance recreational route. Tree Preservation Orders (TPO) and local designations that exhibit wider geographic, cultural or townscape significance. A medium value may equate to locally valued townscape, conservation areas that contribute significantly to its historic character, some listed buildings or locally listed buildings which are well represented in the townscape.
Low	Areas or features of local importance such as Tree Preservation Orders (TPO), Public Rights of Way (PROW) and locally listed buildings. A low value townscape character may include some positive features and buildings worthy of conservation at a local level. Lacking a sense of place and identity with detracting features. Possibly including some areas that are identified for improvement.

Table 9.3 – Value of Townscape Character.

- 9.61 The TCA appraisal also considers each area’s susceptibility to change which is assessed as being high, medium or low (**Table 9.4**). The less likely that the townscape receptor can accommodate the Proposed Development without undue consequences to the baseline condition, the higher its susceptibility to change.

9.62 The value and susceptibility to change is then combined to judge the sensitivity of each TCA. The assessment of sensitivity takes into account the heritage assets and their settings, including listed buildings, conservation areas, world heritage sites, scheduled ancient monuments, registered parks and gardens, non-designated heritage assets, locally listed buildings and townscape landmarks.

9.63 The assessment of the sensitivity of the receptor under consideration may be moderated to take into account a judgement about its quality, relative importance and significance. For example: a World Heritage Site or a listed building may have a good or a poor setting, and a good quality setting is more sensitive to change than a poor-quality setting. Similarly, a listed building or a part of a conservation area may be a prominent aspect of a view, or it may be present in the view but only incidentally. Conservation areas include within them areas of greater and lesser quality; and so on. Thus, there is not necessarily a direct link between the different categories of heritage assets and their relative importance, and the assessment of sensitivity as high, medium or low.

9.64 **Table 9.4** outlines the general criteria to inform judgements on townscape sensitivity:

Susceptibility	Description
High	Townscape with distinctive components and characteristics, often including designated townscapes and/or important designated heritage assets; susceptible to small changes of the type of development proposed.
Medium	Townscape with local value, of relatively common components and characteristics and may include heritage assets such as conservation areas and locally listed buildings; reasonably tolerant of changes of the type of development proposed.
Low	Townscape of limited value and relatively inconsequential components and characteristics, including few or no designated and/or non-designated heritage assets; the nature of which is potentially tolerant of substantial change of the type proposed.

Table 9.4 – Susceptibility of TCA.

9.65 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, its duration and degree of reversibility and the impact these are likely to have on the baseline character of the townscape element. Impact of the Proposed Development upon the townscape character may be described as beneficial, neutral or adverse.

9.66 The magnitude of change in the townscape takes into consideration the following factors:

- The extent/proportion of townscape elements lost or added;
- The 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.

9.67 The criteria used to assess magnitude of townscape effects are described in **Table 9.5**, below.

Category	Criteria
Major adverse townscape impact	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 impact	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 impact	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 impact	The Proposed Development will result in a just discernible change to townscape character/elements/features/characteristics.
No change	The Proposed Development will not result in any change to townscape character/elements/features/characteristics, Resulting in a neutral effect.
Minor beneficial townscape impact	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 beneficial townscape impact	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 beneficial townscape impact	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

[^]**Table 9.5** – Magnitude of Townscape Impact.

Visual Impact Assessment

- 9.68 The visual impact assessment ('VIA', Section 9 of the HTVIA, **Appendix 9.1**) considers how views will change as a result of the Proposed Development and how this will affect people and visual amenity at different places. This assessment is limited to publicly accessible viewpoints and does not comprise a residential amenity assessment, which considers private viewpoints from residential properties (refer to GLVIA3, paragraph 6.17)
- 9.69 It is acknowledged that the Proposed Development may be visible from some locations beyond those that have been selected, however, it is considered that the selected representative viewpoints cover an appropriately broad area of visibility and will provide the most significant views as well as an idea of the likely potential impact of the Proposed Development beyond these locations.

Receptor Sensitivity

- 9.70 The term 'receptor' means both elements of the physical townscape, and people whose views and experience may be impacted by the Proposed Development. In the case of townscape assessment, the latter are taken to be the general public affected by a development, taking into account the differing interests and expectations likely to be found in residents, visitors and those who work in a place. For example, people who walk in a park in their leisure time are likely to have a higher sensitivity than people at their place of work.
- 9.71 Visual receptors relate to people who experience the views. GLVIA3 defines the following visual receptors as being likely to be the most susceptible to change: residents; people engaged in outdoor recreation including users of public rights of way or whose attention is likely to be focused on particular views; and visitors to heritage assets or key attractions, particularly where views of the surroundings are important to the experience.
- 9.72 The sensitivity of the receptor (townscape character area, heritage asset, or person experiencing a view) as existing is assessed as **high, medium or low**.
- 9.73 The sensitivity of a receptor is dependent on:
- the importance of the receptor;
 - the value and quality of the receptor; and
 - the nature and expectation of the viewer.
- 9.74 The importance of the viewpoint is determined by any recognition that the viewpoint may have and by its amenity value (i.e. *"the overall pleasantness of the views people enjoy of their surroundings"*, GLVIA3). In terms of views, recognition includes viewpoints visited by large numbers of people, or view that are identified as being important to preserve by the Local Planning Authority through the statutory development plan. In terms of townscape receptors, recognition includes heritage designations and key townscape features. Locations such as parks and riverside walkways which are used for leisure purposes, as well as residential areas, are considered to be more sensitive in visual terms than everyday streetscapes with no heritage designations.
- 9.75 The amenity value and quality of the view is a reflection of its visual interest, its character and coherence and any attractive or notable pictorial or compositional qualities. The amenity value of a view or quality of a townscape character area is likely to be higher if it overlooks a designated area such as a conservation area.
- 9.76 The assessment of sensitivity takes into account the following heritage assets and their settings, in decreasing order of importance:
- World Heritage Sites, Grade I Listed Buildings, Scheduled Ancient Monuments;
 - Grade II* or Grade II Listed Buildings, conservation areas and Registered Parks and Gardens; and
 - Locally Listed Buildings or NDHAs (none of which have been identified for the purposes of this assessment).
- 9.77 The baseline visual assessment considers the value of each view. This is informed by the criteria in **Table 9.6**:

Value	Description
High	Statutory development plan identified views and/or views of national or regional importance, or particular local importance. The view is likely to be a nationally or regionally important view (e.g. designed views within Grade I or II* Registered Parks or Gardens) and/or contain heritage assets such as World Heritage Sites, Grade I or II* listed buildings, Scheduled Monuments, Registered Parks or Gardens or Historic Battlefields whose heritage significance is well

Value	Description
	represented in the view and which benefit from being seen in combination with each other. The view is associated with a designated heritage asset of a high grade whose settings has not been compromised, or across high quality/valued townscape. The view might be referred to in several guidebooks or on tourist maps and/or referenced in art/literature.
Medium	Supplementary planning documents identified views including conservation area appraisals, and/or views of regional or local importance. The view is likely to be of importance at the county, borough or district level (e.g. designed views within Grade II Registered Parks or Gardens) and/or contain heritage assets such as Grade II listed buildings, Grade II Registered Parks or Gardens or Historic Battlefields, conservation areas, locally listed buildings or other locally identified heritage resources whose heritage significance is well represented in the view and which benefit from being seen in combination with each other. It may also be a view that contains heritage assets such as World Heritage Sites, Grade I or II* listed buildings, Scheduled Monuments, Grade I or II* Registered Parks or Gardens or Historic Battlefields, whose heritage significance is clearly readable, but not best represented, in this particular view. Views of relatively common elements of townscape, likely to be of local visual amenity importance. It may comprise public rights of way through townscapes of moderate value or settings of heritage assets that have already been compromised.
Low	The view is not associated with designated heritage assets or important townscape. It might be across ordinary or poor-quality townscape with detracting or common elements. The view is unlikely to be referred to in guidebooks or on tourist maps and/or referenced in art and literature. It is likely to be of little visual amenity importance. The view may be a locally valued view and contain heritage assets whose heritage significance is clearly readable, but not best represented, in this particular view.

^Table 9.6 – Value of a View.

- 9.78 The assessment also considers each view's susceptibility to change which is assessed as being high, medium or low. The less likely that the townscape or landscape receptor can accommodate the Proposed Development without undue consequences to the baseline condition, the higher its susceptibility to change. The susceptibility to change within a view is judged by taking account of the occupation or activity of the people experiencing the view and the extent to which their attention or interest is focused on the view; this is assessed as being **high, medium** or **low**.
- 9.79 The higher the importance of the visual receptor and the more open the view of the Proposed Development is, the higher its susceptibility to change. The criteria for the susceptibility of change are presented in **Table 9.7**, overleaf:

Sensitivity	Description
High	Specific interest or appreciation of the view, including residents, people engaged in outdoor recreation or using public rights of way, whose attention is focused on the townscape/view; and/or a view of national value (e.g. designated/protected views or important views within conservation areas). A low ability to accommodate the specific proposed change.
Medium	General interest or appreciation of the view, including people engaged in outdoor recreation that does not focus on an appreciation of the townscape; and/or a view of local or limited value of (e.g. suburban residential areas or areas outside of conservation areas). A medium ability to accommodate the specific proposed change.
Low	Interest, appreciation or period of exposure to the view is limited, including people at work or motorists travelling through the area; and/or a view of limited value (e.g. industrial areas or derelict land). A high ability to accommodate the specific proposed change.

Table 9.7 – View's Susceptibility to Change.

- 9.80 The value and susceptibility to change is then combined to judge the sensitivity of each view. The assessment of sensitivity takes into account the heritage assets and their settings, including listed buildings, conservation areas, world heritage sites, scheduled ancient monuments, registered parks and gardens, NDHAs, locally listed buildings and townscape or landscape landmarks.
- 9.81 The magnitude of impact assesses the impact the Proposed Development will have on a view. **Table 9.8** below outlines the criteria against which an assessment of the magnitude of effect in each view has been informed. This incorporates magnitude of effect on the view including the townscape character and any heritage assets. Impact has been determined through a consideration of the size, scale and intensity of the proposed change, the geographical extent of the area influenced, the type of development and the level of integration of new features with existing elements.

Magnitude of Impact	Description
Major adverse	The development severely erodes the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values. Where the Proposed Development is at considerable variance with the scale, landform and pattern of the townscape and/or is considerably detrimental to quality or characteristic features. It includes the introduction of elements that are prominent and uncharacteristic of the townscape. Where the Proposed Development causes major deterioration or visual intrusion to the existing view.
Moderate adverse	The development erodes to a clearly discernible extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values. The Proposed Development is not characteristic of the scale, landform and pattern of the townscape, and/or damages its existing quality or characteristic features. It includes elements

Magnitude of Impact	Description
	that are prominent but may not be substantially uncharacteristic of the existing townscape. The Proposed Development causes noticeable deterioration or visual intrusion to the existing view.
Minor adverse	The development erodes to a minor extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values. The Proposed Development does not complement the scale, landform and pattern of the townscape and/or detracts from its existing quality or characteristic features. The Proposed Development causes minor deterioration or visual intrusion to the existing view.
Imperceptible/Negligible or None	The development does not affect the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values. The Proposed Development results in limited or barely perceptible changes to the existing townscape character. The Proposed Development results in limited or barely perceptible changes to the existing view. A neutral impact occurs when the development does not affect the values of the heritage assets in the view, the townscape as a whole, or the ability to appreciate its significance. <i>This does not necessarily mean that there will be no physical or visual change, rather that the resultant difference will be imperceptible or appropriately balanced.</i>
Minor beneficial	The development enhances to a minor extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values. The Proposed Development complements the scale, landform and pattern of the townscape and maintains the existing character. The Proposed Development results in minor improvements to the existing view.
Moderate beneficial	The development enhances to a clearly discernible extent the heritage values of the heritage assets in the view, or the view as a whole, or the ability to appreciate those values. The Proposed Development is characteristic of the scale, landform and existing pattern of the townscape, and maintains and/or enhances the existing quality or characteristic features. The Proposed Development would create a noticeable and improved change to the existing view.
Major beneficial	The development considerably enhances the heritage assets in the view, or the view as a whole, or the ability to appreciate those values.

Magnitude of Impact	Description
	The Proposed Development responds very well to the scale, landform and existing pattern of the townscape or landscape and will result in considerable enhancements. The Development would create a significant improvement in views.no

^Table 9.8 – Magnitude of Visual Impact.

- 9.82 To determine the overall effect, the magnitude of impact is assessed against the sensitivity score using the criteria in **Table 9.9** below:

	With High Value	With Medium Value	With Low Value
With high magnitude of impact	Major effect	Major effect	Moderate effect
With medium magnitude of impact	Major effect	Moderate effect	Minor effect
With low magnitude of impact	Moderate effect	Minor effect	Negligible effect
Negligible / neutral impact	Negligible effect	Negligible effect	Negligible effect

^Table 9.9 – Overall Effect.

- 9.83 As a general note, and across the heritage, townscape and visual impact assessments, effects of **Moderate** and above are considered to be ‘Significant’ in EIA terms.

Assumptions and Limitations

- 9.84 In considering the effects of the Proposed Development upon built heritage assets, townscape character and representative viewpoints, the assessment is based on the material that accompanies the planning application, including the Accurate Visual Representations (‘AVRs’) by Ambiente, and the design material prepared by AEW, and SLHA’s site surveys undertaken in April and November 2024 which included an inspection of surrounding heritage assets, TCAs and viewpoints.
- 9.85 The visual analysis is based on views from external spaces within the public domain and not from inside buildings or private spaces. GLVIA3 outlines that public views are generally attributed greater value than views from private property due to the number of visual receptors being greater.
- 9.86 The experience of the Site and the scheme can only be demonstrated in the HTVIA (**Appendix 9.1**) through the use of photographs, AVRs, plans and maps. The AVRs do not cover every possible view of the Proposed Development but are a selection of representative viewpoints from publicly accessible places where there are particular townscape or heritage sensitivities.
- 9.87 A number of the AVRs are presented in AVR1 format, i.e. coloured wirelines; they are two-dimensional and cannot fully capture the complexity of the real visual experience. They form an indication of the true three-dimensional visual experience. They do not capture transient significant effects arising from noise or traffic or other sensory effects. A visit to the viewpoint locations is encouraged to better appreciate and understand the potential visual impact.

Baseline Conditions

- 9.88 The Site comprises the former Riverpark Road Trading Estate. The Site is bounded by Riverpark Road to the south, and the Manchester to Huddersfield railway line to the north. Ten Acres Lane forms the eastern boundary of the Site, with Briscoe Lane forming the western boundary. The Site has a dense vegetation boundary to the north and east which is effective in screening views into the Site from these directions. The Site was formerly occupied by several buildings relating to its former use as an industrial estate. These buildings are in the process of being demolished following the Prior Approval for the demolition of existing buildings (ref. 141383/DEM/2024) dated 21 November 2024. A number of the former buildings on the Site comprised the components of an abattoir complex from the early 1960s which was designed by MCC's architect, Leonard Cecil Howitt. Its original function diminished into the late 20th century and the abattoir closed in 2000, although the Site was used for the sale of meat and other ancillary uses until 2024. Other later and ancillary buildings occupied the eastern part of the Site, which is also characterised by a large amount of hardstanding.
- 9.89 The Site is located to the north of Phillips Park, which includes Philips Park Cemetery (located immediately to the south of the Site) and which comprises two Grade II Registered Park and Garden ('RPG') designations covering both the cemetery and the park. A number of buildings and structures within the cemetery are also Grade II listed, including the cemetery chapel and the entrance lodge; cemetery office; and gates and railings at the main entrance on Briscoe Lane. There are no listed buildings or structures within the Site, and it is not located within a Conservation Area.
- 9.90 The townscape to the north-east and south-east is predominately residential in character; there are also residential neighbourhoods to the west. Directly west and north of the Site, the townscape is largely industrial in nature, and of a low townscape value.

Heritage Context

- 9.91 A study area of 500m has been determined to identify heritage assets that have the potential to be affected by the redevelopment of the Site. The heritage assets within this study area are illustrated on the map at Error! Reference source not found. The review of the National Heritage List for England ('NHLE') has highlighted a total of six designated heritage assets within a 500m radius of its boundary. These heritage assets are as follows:
- Philips Park Cemetery (Grade II RPG) (No.1 on **Figure 9.1**);
 - Philips Park (Grade II RPG) (No. 2 on **Figure 9.1**);
 - Cemetery Chapel at Philips Park Cemetery (Grade II) (No. 3 on **Figure 9.1**);
 - Cemetery Office at Philips Park Cemetery (Grade II) (No. 4 on **Figure 9.1**);
 - Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II) (No. 5 on **Figure 9.1**); and
 - Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II) (No. 6 on **Figure 9.1**).
- 9.92 A number of additional heritage assets lie within the wider setting of the Site (i.e. beyond the 500m study area). Given the relative distance, intervening built development, and nature of the Proposed Development, it is unlikely that there will be any significant effects on the significance of these receptors and subsequently they are not considered as part of this assessment.

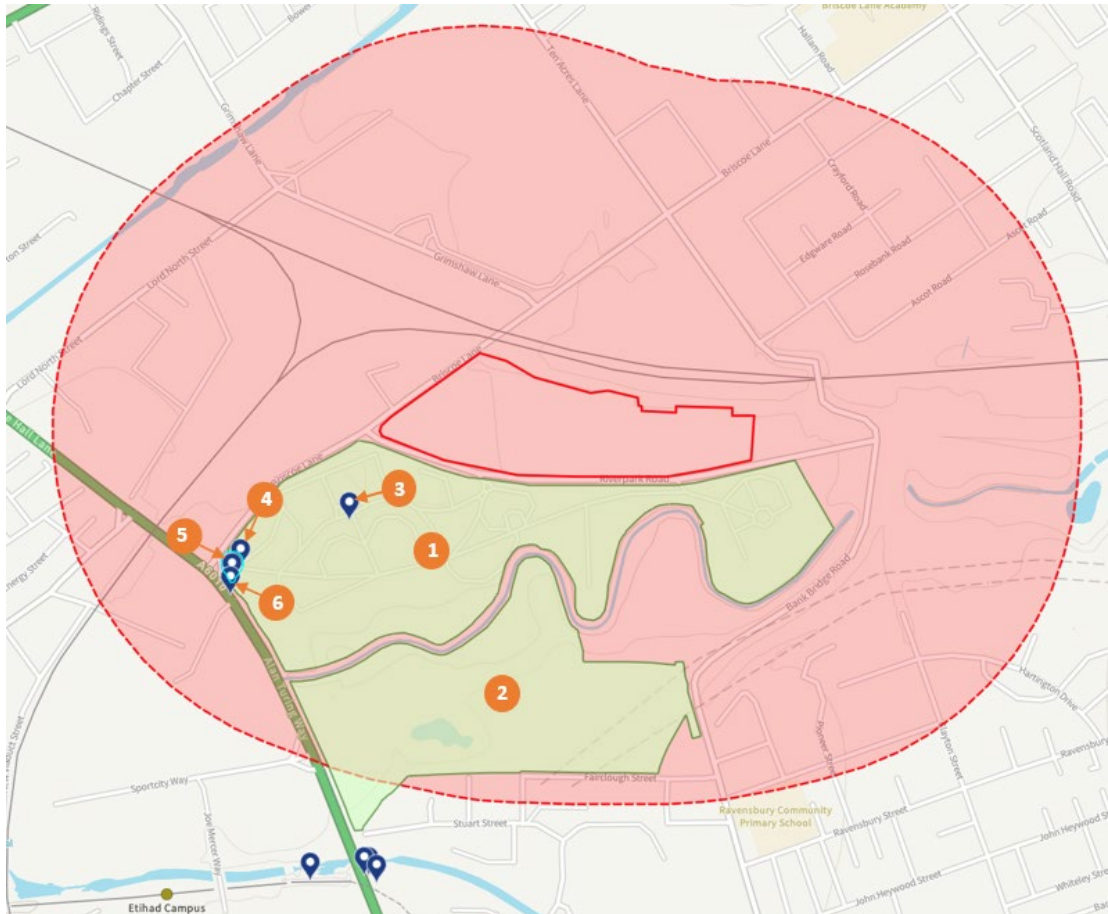


Figure 9.1: Designated heritage assets within 500m (red shaded area) of the Site boundary (outlined in red). The blue markers identify listed buildings. The green shaded area identifies the Grade II Philips Park Cemetery RPG. Number references relate to list above below. Source: Historic England National Heritage List for England ('NHLE').

- 9.93 A detailed appraisal of the form, character, significance and contribution of setting to an appreciation of this for each heritage asset is provided at Table 10 within Section 5 of the HTVIA (**Appendix 9.1**).

Townscape and Visual Context

Townscape Character Area Appraisal

- 9.94 The appraisal of townscape character within the 500m study area has been informed by desk-based analysis, including a review of maps (historical and recent), and on-site analysis, which was conducted in April and November 2024.
- 9.95 The baseline appraisal has identified three broad character areas including the Site and within 500m of its boundary. These Townscape Character Areas (hereafter referred to as 'TCAs') are defined as follows:
- TCA 1: Industrial
 - TCA 2: Designed Green Spaces
 - TCA 3: Residential (Sub Areas A and B)
- 9.96 The broad boundaries defining the TCAs are illustrated on the map at **Figure 9.2** below. TCA 3 has been split across two sub-areas as they are of very similar townscape character and quality. Although clearly defined on the map, the boundaries between the TCAs are often not as clear cut and may, in some instances, be more fluid and less distinct.

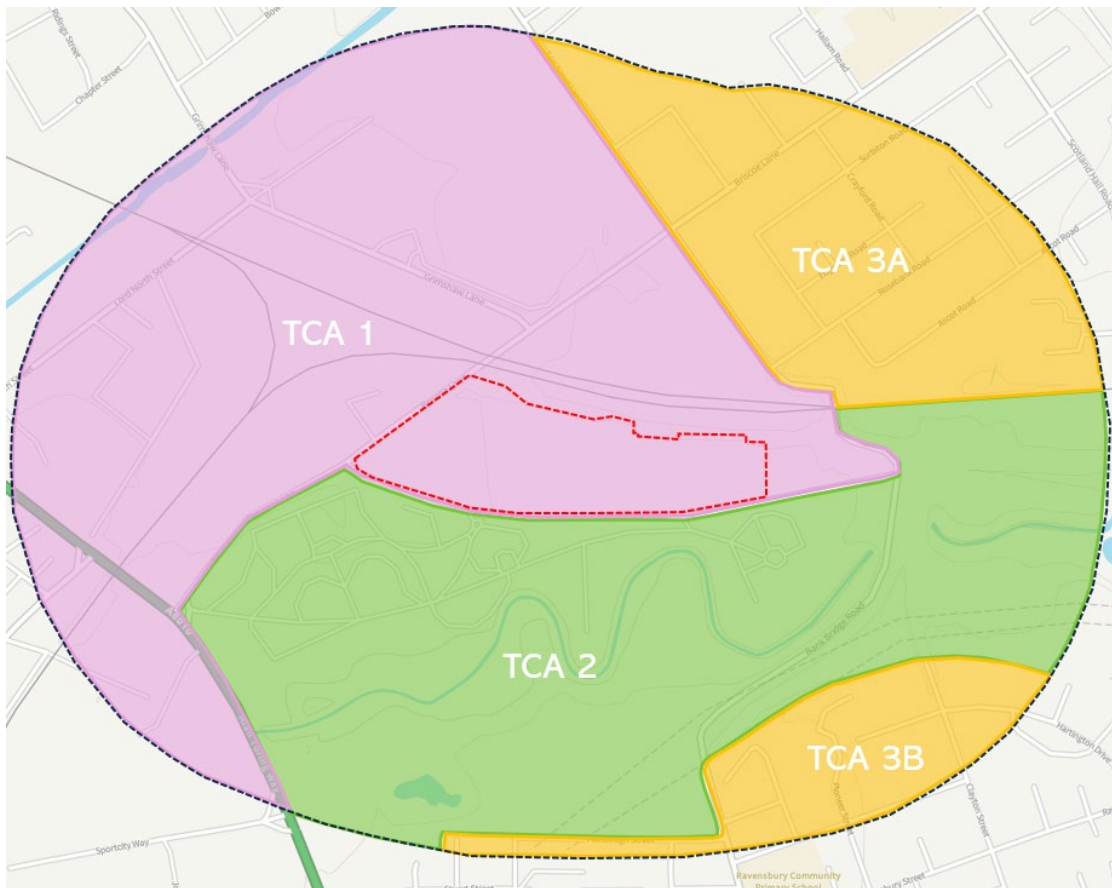


Figure 9.2: Townscape Character Area Plan with indicative red line Site boundary and 500m study area indicatively show in dark blue. Key: TCA 1 – Industrial, TCA 2 – Designed Green Spaces, TCA 3A and 3B – Residential. Base map source: Historic England, NHLE.

- 9.97 A detailed appraisal of the character and appearance of each TCA, as well as their overarching value, susceptibility to change, and sensitivity, is provided in Section 6 of the HTVIA (**Appendix 9.1**).

Visual Baseline

- 9.98 In order to inform the assessment of the Proposed Development on heritage, townscape, and visual receptors, a series of viewpoints have been identified in the local area which intend to illustrate how the Proposed Development will appear in its local context. A total of nine views have been identified for this purpose. The location of the viewpoints presents a geographical spread around across the area surrounding the Site and takes into consideration townscape sensitivities, particularly the presence of heritage assets such as listed buildings and RPGs. The viewpoint locations have been discussed with and agreed by MCC through the scoping process.
- 9.99 The viewpoint locations selected for the purposes of the HTVIA are illustrated on the map at **Figure 9.3** below. The views have been photographed by Ambiente and are presented in the Visual impact Assessment at Section 10 of the HTVIA (**Appendix 9.1**).



Figure 9.3: Viewpoint location plan. Indicative Site boundary in red.

Identification and Evaluation of Significant Effects

Heritage Pre-Mitigation Impact Assessment

9.100 The pre-mitigation impacts of the Proposed Development on heritage assets are identified in **Table 9.10** below:

Heritage Asset	Pre-Mitigation Effect
Construction Phase	
Philips Park Cemetery (Grade II RPG)	Moderate Adverse
Philips Park RPG (Grade II RPG)	Moderate Adverse
Cemetery Chapel at Philips Park Cemetery (Grade II listed building)	Moderate Adverse
Cemetery Office at Philips Park Cemetery (Grade II listed building)	Minor-Moderate Adverse
Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II listed building)	Minor Adverse
Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II listed building)	Minor Adverse

Heritage Asset	Pre-Mitigation Effect
Operational Phase	
Philips Park Cemetery (Grade II RPG)	Minor-Moderate Beneficial
Philips Park RPG (Grade II RPG)	Minor Beneficial
Cemetery Chapel at Philips Park Cemetery (Grade II listed building)	Minor Beneficial
Cemetery Office at Philips Park Cemetery (Grade II listed building)	Negligible-Minor Beneficial
Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II listed building)	Negligible-Minor Beneficial
Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II listed building)	Negligible-Minor Beneficial

^Table 9.10 Heritage Pre-Mitigation Impact Assessment Summary.

Townscape Pre-Mitigation Impact Assessment

- 9.101 The pre-mitigation impacts of the Proposed Development on TCAs are identified in **Table 9.11** below:

Townscape Character Area	Pre-Mitigation Effect
Construction Phase	
TCA 1	Moderate Adverse (direct and indirect)
TCA 2	Moderate Adverse (indirect)
TCA 3A	Negligible-Minor Adverse (indirect)
TCA 3B	Negligible-Minor Adverse (indirect)
Operational Phase	
TCA 1	Moderate-Major Beneficial (direct and indirect)
TCA 2	Minor-Moderate Beneficial (indirect)
TCA 3A	Negligible Beneficial (indirect)
TCA 3B	Negligible Beneficial (indirect)

^Table 9.11 Townscape Pre-Mitigation Impact Assessment Summary.

Visual Pre-Mitigation Impact Assessment

- 9.102 The pre-mitigation impacts of the Proposed Development on the amenity value of views are identified in **Table 9.12** below:

View	Pre-Mitigation Effect
Construction Phase	
View 1	Minor-Moderate Adverse
View 2	Negligible Adverse
View 3	Minor Adverse
View 4	Moderate Adverse
View 5	Minor Adverse
View 6	None
View 7	Negligible Adverse
View 8	None
View 9	None
View 10	None
View 11	None
Operational Phase	
View 1	Minor-Moderate Beneficial
View 2	Neutral
View 3	Neutral
View 4	Minor Adverse
View 5	Neutral
View 6	None
View 7	Neutral
View 8	None
View 9	None
View 10	None
View 11	None

^Table 9.12 Visual Amenity Pre-Mitigation Impact Assessment Summary.

Mitigation Measures

- 9.103 Where feasible at this stage, measures have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset significant environmental effects. Where this has not been possible, further mitigation measures have been proposed.
- 9.104 The mitigations measures proposed, some of which comprise best practice measures which should be implemented in respect of any construction site, or operational development in order to minimise the impact on the environment, are set out within each of the technical chapters.
- 9.105 For the purposes of mitigating adverse effects on heritage, townscape and visual receptors in the construction phase, a suitable CEMP should be produced and implemented to minimise and offset the effects of factors including noise, dust, vibrations, visual impacts from hoardings and construction equipment and scaffolding, and levels of traffic related to the works on site and moving through the local area, and in order to ensure appropriate monitoring during the construction stage.
- 9.106 All mitigation during the Operational phase is embedded in the high quality design of the scheme.
- 9.107 It is noted here that mitigation (whether embedded or additional) does not necessarily materially change the impact identified in the pre-mitigation assessment, and so for most of the receptors considered as part of this assessment, the post-mitigation assessment remains the same as identified in **Tables 9.10-12** above.

Cumulative Effects

- 9.108 No cumulative effects are identified on heritage, townscape or visual receptors.

Residual Effects

- 9.109 The potential impact of the Proposed Development on heritage assets (receptors) in both the Construction and Operational phases is summarised in **Table 9.13** below:

Heritage Asset	Mitigation	Residual Effect	Likely Significant Effect
Construction Phase			
Philips Park Cemetery (Grade II RPG)	Construction Environmental Management Plan ('CEMP')	Moderate Adverse	Yes
Philips Park RPG (Grade II RPG)	CEMP	Minor-Moderate Adverse	No
Cemetery Chapel at Philips Park Cemetery (Grade II listed building)	CEMP	Minor-Moderate Adverse	No
Cemetery Office at Philips Park Cemetery (Grade II listed building)	CEMP	Minor Adverse	No
Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II listed building)	CEMP	Minor Adverse	No

Heritage Asset	Mitigation	Residual Effect	Likely Significant Effect
Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II listed building)	CEMP	Minor Adverse	No
Operational Phase			
Philips Park Cemetery (Grade II RPG)	Embedded design quality	Minor-Moderate Beneficial	No
Philips Park RPG (Grade II RPG)	Embedded design quality	Minor Beneficial	No
Cemetery Chapel at Philips Park Cemetery (Grade II listed building)	Embedded design quality	Minor Beneficial	No
Cemetery Office at Philips Park Cemetery (Grade II listed building)	Embedded design quality	Negligible-Minor Beneficial	No
Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II listed building)	Embedded design quality	Negligible-Minor Beneficial	No
Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II listed building)	Embedded design quality	Negligible-Minor Beneficial	No

^Table 9.13 Heritage Residual Impact Assessment Summary.

- 9.110 A **Likely Significant Effect** is identified with regard to the Philips Park RPG during the Construction phase, notwithstanding the implementation of an appropriate CEMP, due to the adverse effects associated with the activities associated with this phase of the Proposed Development. It is emphasised that this effect is temporary and of short-medium term duration.
- 9.111 No Likely Significant Effects are identified during the Operational phase of the Proposed Development.
- 9.112 The nature of other effects summarised in the table above is expounded upon within Section 7 of the HTVIA (**Appendix 9.1**).

Townscape Impact Assessment

- 9.113 The potential impact of the Proposed Development on TCAs (receptors) in both the Construction and Operational phases is summarised in **Table 9.14** below:

Townscape Character Area	Mitigation	Residual Effect	Likely Significant Effect
Construction Phase			
TCA 1	CEMP	Minor Adverse (direct and indirect)	No

Townscape Character Area	Mitigation	Residual Effect	Likely Significant Effect
TCA 2	CEMP	Minor-Moderate Adverse (indirect)	No
TCA 3A	CEMP	Negligible Adverse (indirect)	No
TCA 3B	CEMP	Negligible Adverse (indirect)	No
Operational Phase			
TCA 1	Embedded design quality	Moderate-Major Beneficial (direct and indirect)	Yes
TCA 2	Embedded design quality	Minor-Moderate Beneficial (indirect)	No
TCA 3A	Embedded design quality	Negligible Beneficial (indirect)	No
TCA 3B	Embedded design quality	Negligible Beneficial (indirect)	No

Table 9.14 Townscape Impact Assessment Summary.

- 9.114 A **Likely Significant Effect** is identified on TCA 1 in the Operational phase of the Proposed Development. The Proposed Development will introduce a new collection of residential buildings into the Site which will be readily perceived from within the RPG and from its local setting. Whilst the scheme will be visible in views across the landscape, it is not considered that this intervisibility will diminish or detract from an appreciation and enjoyment of the historic cemetery. Due consideration has been given to the sensitivity of the RPG and particularly its proximity to the Site along the shared interface of Riverpark Road, with the scale of built form along this edge of the Site limited to two-three storeys for the majority of the frontage, stepping up to the west of the Site with a four storeys to address the corner and the intersection with Briscoe Lane and reaching a maximum of six storeys on the frontage to Briscoe Lane. Gaps in the streetscape between building plots along the frontage to Riverpark Road are intended to break down the appearance of the scheme from the Cemetery and maintain a sense of openness and permeability to the north.
- 9.115 The Proposed Development will re-define the Site's boundary along Riverpark Road and create a streetscape that is consistent and passively activated through the presence of residents. The views at Section 9 of the HTVIA (**Appendix 9.1**) – particularly View 4 – illustrate how the experience of the Proposed Development from within the Cemetery will take in the new buildings along the Riverpark Road frontage of the Site. Although the degree of proximity experienced in this particular view is judged to have a limited adverse impact from a heritage perspective from this particular location, the new buildings are understood as forming part of the streetscape beyond the RPG – a streetscape which formerly comprised the utilitarian and functional elevations of the Manchester Abattoir – and which communicates the regeneration of the Site.

- 9.116 In views further south and from within the body of the RPG, the Proposed Development is seen to sit well below the tree line and will likely only be experienced in glimpsed and fleeting views (see View 3 at Section 9 of the HTVIA), and demonstrably without impacting upon the appreciation of the profile of the spire of the Grade II listed Cemetery Chapel as it appears above the treeline or the collection of listed structures at the south-western entrance to the RPG.
- 9.117 The injection of residents into the Site will likely facilitate greater use of and interaction with the designated landscape and, consequently, increase opportunities for an appreciation of the architectural and historical interest of the RPG.
- 9.118 No Likely Significant Effects are identified during the Construction phase of the Proposed Development. The nature of other effects summarised in the table above is expounded upon within Section 8 of the HTVIA (**Appendix 9.1**).

Visual Impact Assessment

- 9.119 The potential impact of the Proposed Development on visual receptors in both the Construction and Operational phases is summarised in **Table 9.15** below:

View	Mitigation	Residual Effect	Likely Significant Effect
Construction Phase			
View 1	CEMP	Minor-Moderate Adverse	No
View 2	CEMP	Negligible Adverse	No
View 3	CEMP	Minor Adverse	No
View 4	CEMP	Minor-Moderate Adverse	No
View 5	CEMP	Negligible-Minor Adverse	No
View 6	CEMP	None	No
View 7	CEMP	Negligible Adverse	No
View 8	CEMP	None	No
View 9	CEMP	None	No
View 10	CEMP	None	No
View 11	CEMP	None	No
Operational Phase			
View 1	Embedded design quality	Minor-Moderate Beneficial	No
View 2	Embedded design quality	Neutral	No
View 3	Embedded design quality	Neutral	No

View	Mitigation	Residual Effect	Likely Significant Effect
View 4	Embedded design quality	Minor Adverse	No
View 5	Embedded design quality	Neutral	No
View 6	Embedded design quality	None	No
View 7	Embedded design quality	Neutral	No
View 8	Embedded design quality	None	No
View 9	Embedded design quality	None	No
View 10	Embedded design quality	None	No
View 11	Embedded design quality	None	No

^Table 9.15 Visual Impact Assessment Summary.

- 9.120 No Likely Significant Effects are identified during the Construction or Operational phases of the Proposed Development. The nature of the effects summarised in the table above is expounded upon within Section 9 of the HTVIA (**Appendix 9.1**).

10. Human Health

Introduction

- 10.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to human health. 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.
- 10.2 This chapter has been prepared by 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.

Legislative and Policy Context

National Planning Policy

- 10.3 The National Planning Policy Framework ("NPPF") (December 2024) 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."

- 10.4 Chapter 8 of the NPPF seeks to promote 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 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 lives, through both promoting good health and preventing ill-health, especially where this would address identified local health and well-being needs and reduce health inequalities between the most and least deprived communities – 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.”

- 10.5 Paragraph 98 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.
- 10.6 Open space and recreational opportunities are recognised as important infrastructure to support the health and well-being of communities.
- 10.7 Paragraph 110 is within the chapter relating to sustainable transport and states sustainable modes of travel can help to reduce congestion and emissions, and improve air quality and public health.
- 10.8 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)).
- 10.9 Paragraph 198 relates to pollution and states that planning decisions should ensure that new developments are appropriate for its location, taking into account the likely effects of pollution on health, living conditions and the natural environment. In doing so, development should:

“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;

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

Limit the impact of light pollution from artificial light on local amenity, intrinsically dark landscapes and nature conservation.”

National Planning Guidance

National Planning Practice Guidance

- 10.10 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).”

Spatial Planning for Health

- 10.11 In June 2017 Public Health England published ‘Spatial Planning for Health: An Evidence Resource for Planning and Designing Healthier Places’. The project aimed to identify the links between spatial planning and health based on the impacts of the built environment on health. The document reviewed evidence based on five key aspects of the built and natural environment:

- **Neighbourhood design** – Improving neighbourhood walkability and infrastructure designed to promote walking and cycling was found to be associated with numerous positive health outcomes, including increased physical activity levels and improved social engagement among older adults. Furthermore, areas of mixed land use, diverse housing types and high quality transport were found to be associated with increased physical activity levels, reduced risk of pedestrian injury and road traffic collisions, and increased social participation among older adults, among other positive health outcomes.
- **Housing** – Good quality housing and affordable housing was associated with a variety of positive health outcomes, including improved social outcomes among older adults, reduced injury among older adults and children and improved general physical and mental health. Among vulnerable groups (e.g., substance users, homeless, disabled), provision of affordable housing was associated with improved quality of life, mental health and clinical health-related outcomes.
- **Healthier food** – Provision of healthier and affordable food could be effective in improving dietary attitudes and behaviours. Urban growing was also found to be associated with improved attitudes towards healthy eating, increased opportunities for social connectivity and increased opportunities for physical activity.
- **Natural and sustainable environment** – Improvement to air quality, prioritisation of neighbourhood tree planting, and provision of open and green spaces, was associated with increased physical activity, increased environmental cooling, and improved general physical health outcomes. In addition, provision of infrastructure to support walking and cycling and increased access to buildings and facilities was associated with increased physical activity and improved social engagement among older adults.
- **Transport** – Infrastructure for walking and cycling, installation of traffic calming measures, and public realm improvements (e.g., street lighting) was associated with increased mobility, physical activity levels, reduced BMI and reduced risk of injury, among other positive outcomes. Furthermore, the provision of open and green space, high quality public transport and improved air quality was associated with numerous positive health outcomes, including: increased physical activity; improved cardiovascular outcomes; and improved social participation, among others.

Health Impact Assessment in Spatial Planning (October 2020)

- 10.12 The guide was prepared by Public Health England to support the preparation of HIAs 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.
- 10.13 **Table 10.1** summarises a list of considerations that HIAs can seek to review as part of the planning process.

Health Considerations	Wider Determinants of Health and Well-being			
	Access	Traffic and Transport	Socio-economic	Land Use
Reduce health inequalities	• Local public key services and facilities • Good quality affordable housing • Healthy and affordable food	• Accessibility • Access to public transport • Opportunities for active travel (cycling and walking)	• Employment, including skills development and training opportunities • Local business activity • Regeneration	• Sustainable and efficient land use in urban and/or /rural settings • Quality of Urban and natural environments, such as air

Health Considerations	Wider Determinants of Health and Well-being			
	Access	Traffic and Transport	Socio-economic	Land Use
	- Natural environment - Green spaces and public realm - Leisure, sport, recreation, play and physical activities within the environments	- Links between communities - Community severance - Connections to jobs - Connections to services, facilities and leisure	- Tourism and leisure industries - Community/ social cohesions and access to social networks - Community engagement	- and noise pollution - Climate change impacts

^ Table 10.1 – Wider Determinants of Health and Well-being Outcomes

Local Planning Policy

Manchester's Core Strategy Development Plan Document

10.14 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.

10.15 All of the above challenges are in some way linked to the health and well-being of the residents in Manchester.

10.16 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.
- 10.17 Access to sustainable modes of transport is recognised as a positive mechanism to tackle the impacts of climate change, and thereby improving health.
- 10.18 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.
- 10.19 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).
- 10.20 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.

Places for Everyone

- 10.21 Places for Everyone (“Pfe”) is a plan of nine Greater Manchester districts (Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford and Wigan). It was adopted in March 2024 and forms part of the statutory development plan for Salford.

10.22 PfE policy JP-P6 'Health' states:

To help tackle health inequality new development will be required, as far as practicable, to:

A. Maximise its positive contribution to health and wellbeing, whilst avoiding any potential negative impacts of new development;

B. Support healthy lifestyles, including through the use of active design principles making physical activity an easy, practical and attractive choice; and

C. Be supported by a Health Impact Assessment for all developments which require to be screened for an Environmental Impact Assessment, and other proposals which, due to their location, nature or proximity to sensitive receptors, are likely to have a notable impact on health and wellbeing.

Improvements in health facilities will be supported, responding to the changing needs and demands of both existing and new residents, including through:

1. Requiring, where appropriate, the provision of new or improved health facilities as part of new developments proportionate to the additional demand that they would generate;

2. Enabling the continued enhancement and successful operation of our hospitals; and

3. Facilitating greater integration of health and social care, and the provision of integrated wellness hubs, including the co-location of health, community and wellness services.

Local Planning Guidance

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

10.23 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.

10.24 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

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

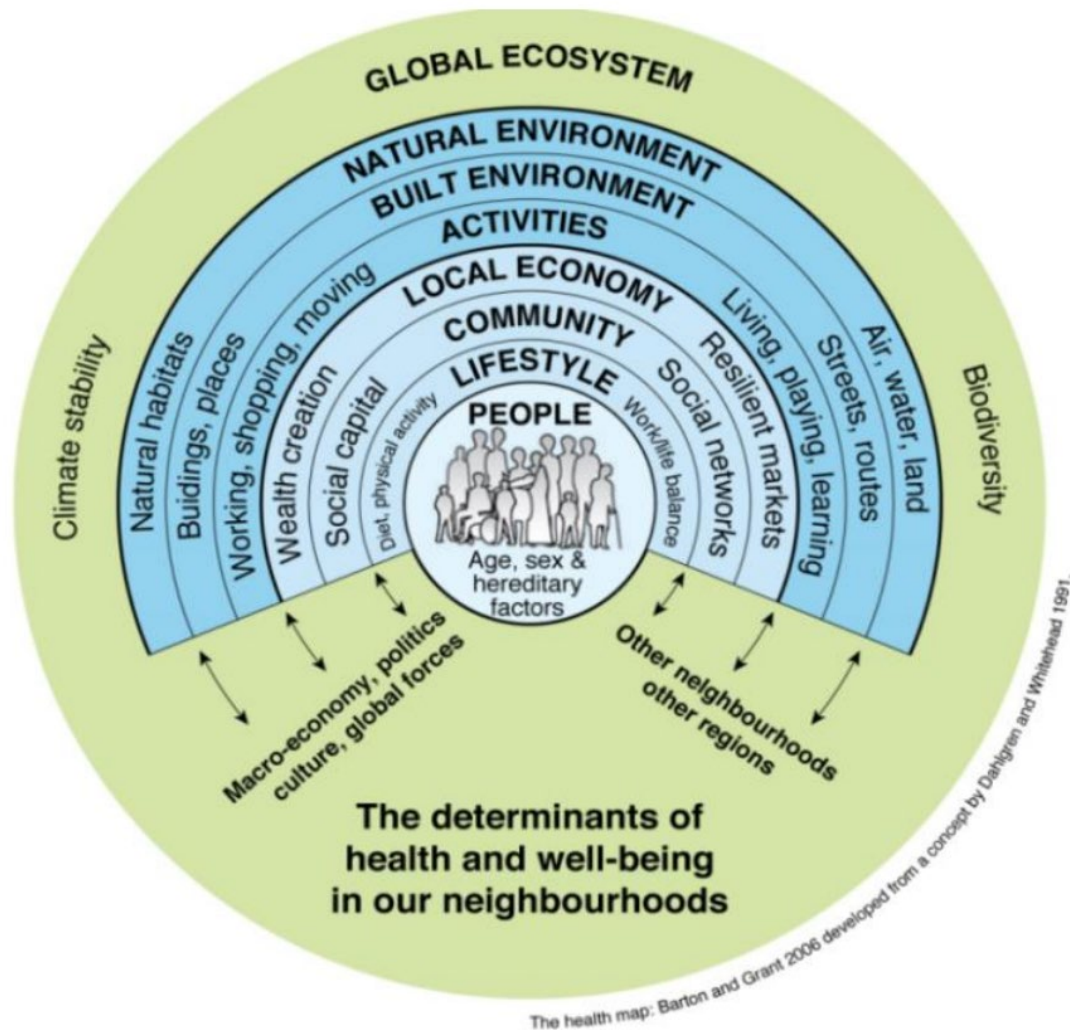
- The first 1,000 days of a child's life
- Work and its positive impact on health
- Making social connections and changes that matter
- An age-friendly Manchester
- Action on preventable early deaths.

Assessment Methodology and Significance Criteria

- 10.26 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.
- 10.27 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

- 10.28 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 10.1**.



^ Figure 10.1 – Determinants for Health

Methodology

- 10.29 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).
- 10.30 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.

- 10.31 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.

Scope of the Assessment

- 10.32 The criteria used in the HUDU planning checklist will be utilised to determine the likely baseline considerations for the 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.

- 10.33 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 vehicles travelling to and from the Site.
 - The suitability of the Site for future residents from an air quality perspective.
- **Climate Change:**
 - Construction phase embodied carbon and transport related emissions.
 - Operational phase embodied carbon and operational emissions (energy, transport and water).
- **Transport:**
 - Construction phase effects associated with severance; driver delay; pedestrian amenity and delay; fear and intimidation; and accidents and safety.

- Operational phase effects associated with severance; driver delay; pedestrian amenity and delay; fear and intimidation; and accidents and safety.
- **Townscape and Visual:**
 - Construction phase effects to townscape character and visual amenity.
 - Operational phase effects to townscape character and visual amenity.
- **Wind:**
 - Construction impacts on the local wind environment, which impact the target wind conditions.
 - Operational impacts on the local wind environment, which impact the target wind conditions.
- **Amenity:**
 - Compliance with internal space standards and provision of sufficient private amenity space for future residents.

Baseline

- 10.34 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. 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 011B), 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 themes set out above will be undertaken.
- 10.35 The receptor groups identified include:
- Construction workers.
 - Existing off-site residents.
 - Existing off-site non-residential uses.
 - Future on site residents and site users.
- 10.36 The accessibility of social and community infrastructure including schools, GPs and dentists will also be considered as part of the baseline assessment.

Impact Assessment

- 10.37 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.

Significance of Effects

- 10.38 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.
- 10.39 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. This is set out in **Tables 10.2-10.5** below.

Category/Level	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.

^ Table 10.2 – Health Sensitivity Methodology Criteria

Category/Level	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.

Category/Level	Indicative criteria
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.

^ Table 10.3 – Health Magnitude Methodology Criteria

Category/Level	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 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.
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

Category/Level	Indicative criteria
	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.

^ Table 10.4 – Significance of Effect Criteria

		Sensitivity			
		High	Medium	Low	Negligible
Magnitude	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

^ Table 10.5 – EIA Significance Matrix

- 10.40 Those effects identified as major will be significant. Moderate effects could be both significant and not significant. The determination of significant or not significant will be case specific based on the conclusions of the technical assessments.

Information Sources

- 10.41 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.
 - Heritage, Townscape and Visual Assessment.
 - Climate Change Assessment.
 - Transport Assessment and Travel Plan.
 - Wind Assessment.
- 10.42 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.

Limitations

- 10.43 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.
- 10.44 The assessment does not consider heritage related effects. These are considered separately under the heritage, townscape and visual ES chapter. All other technical disciplines i.e. noise, ground conditions etc. have been determined to not result in significant effects, as such these disciplines have been scoped out of the EIA and are not considered as part of this chapter.

Baseline Conditions

Existing Site Use

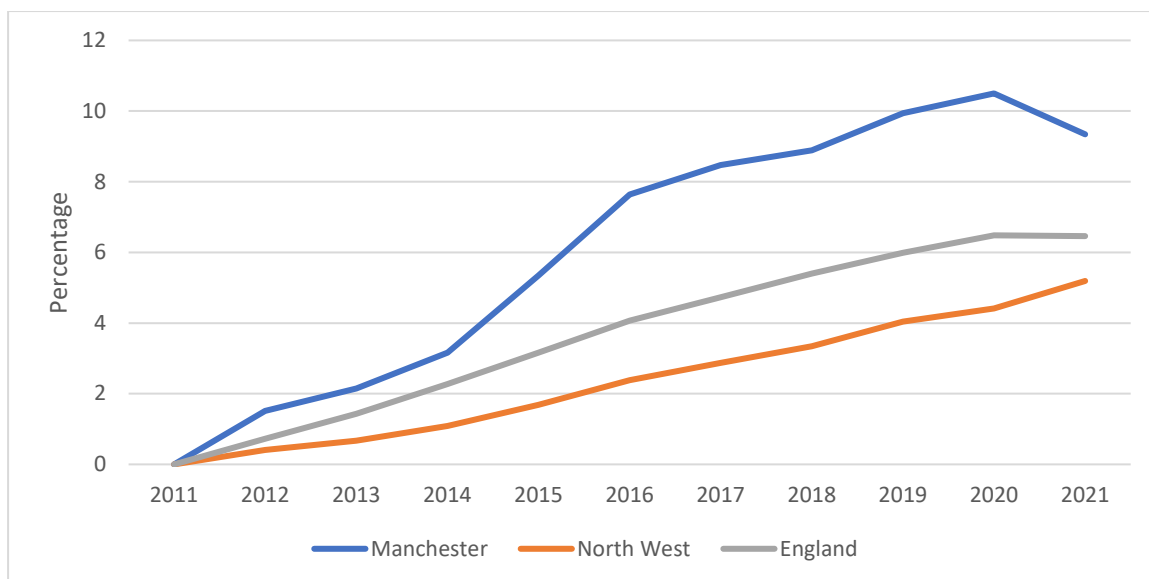
- 10.45 It is approximately 6.5 hectares (16.07 acres) in size and comprises a vacant parcel of brownfield land most recently in use for commercial and industrial purposes.

Existing Residential Receptors

- 10.46 There are no residential receptors on site. The nearest existing residential properties are located c. 80m northeast of the Site.

Population

- 10.47 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 10.2** overleaf.

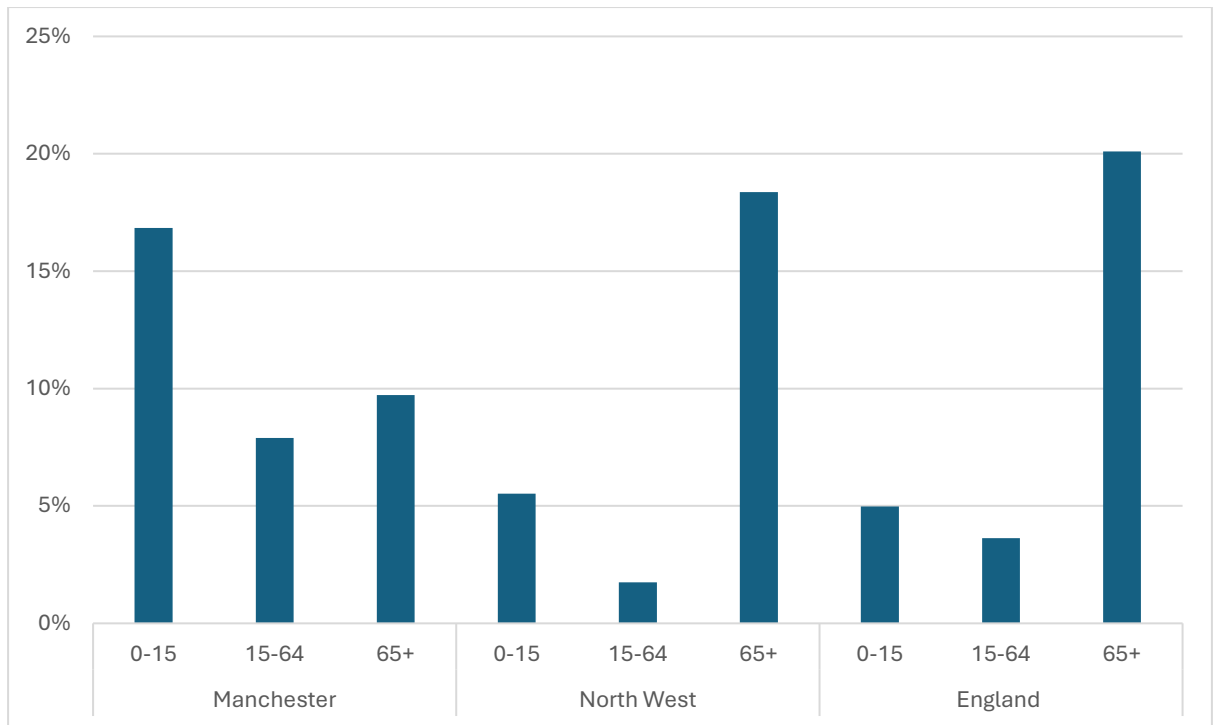


^ Figure 10.2 – Population Change, 2011-2021

- 10.48 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.
- 10.49 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 10.6** and further illustrated in **Figure 10.3**.
- 10.50 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.

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	48,810	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	365,220	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%

^ Table 10.6 – Age Profile, 2011 v 2021



^ Figure 10.3 – Percentage Change in Age Profile between 2011 and 2021

Health Characteristics of the Population

10.51 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 10.7** 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 c. 49% 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 c. 63%.
- 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. c. 39% 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. c. 31% 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.

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 2023*	1,752	510.4	408.1	341.6
4.	Under 75 mortality rate from cardiovascular disease 2023*	369	112.6	93.8	77.4
5.	Under 75 mortality rate from cancer 2023*	516	162.1	134.5	120.8
6.	Suicide rate (Persons, 10+ yrs) 2021 - 23	205	14.2		10.7
Injuries and Ill Health					
7.	Killed and seriously injured (KSI) casualties on England's roads 2023	194	115.6	89.7*	91.9*
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%	78.0%
12.	Estimated dementia diagnosis rate (aged 65 and over) 2023	2,718	72.3	68.9	64.8
Behavioural Risk Factors					
13.	Admission episodes for alcohol-specific conditions - Under 18s 2020/21 – 22/23	70	18.3	31.2	26.0
14.	Admission episodes for alcohol-related conditions (Narrow) 2022/23	2,005	484	475	475
15.	Smoking Prevalence in adults (18+) - current smokers (APS) 2023	-	11.9%	11.8%	11.6%
16.	Percentage of physically active adults 2022/23	-	65.0%	65.7%	67.1%
17.	Overweight (including obesity) prevalence in adults (18+ yrs) 2022/23	-	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 2023/24	502	7.9%	8.4%	7.4%
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) (10-11 yrs) 2023/24	1,880	27.0%	23.3%	22.1%
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 2023/24	265,200	67.0%	73.2%	75.7%

No.	Indicator	Manchester		North West (value)	England (value)
		Count	Value		
26.	Violent crime - hospital admissions for violence (including sexual violence) 2020/21 - 22/23	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 2023	6,412	1,127	481	520
29.	TB incidence (three year average) 2020-22	337	20.4	6.5	7.6

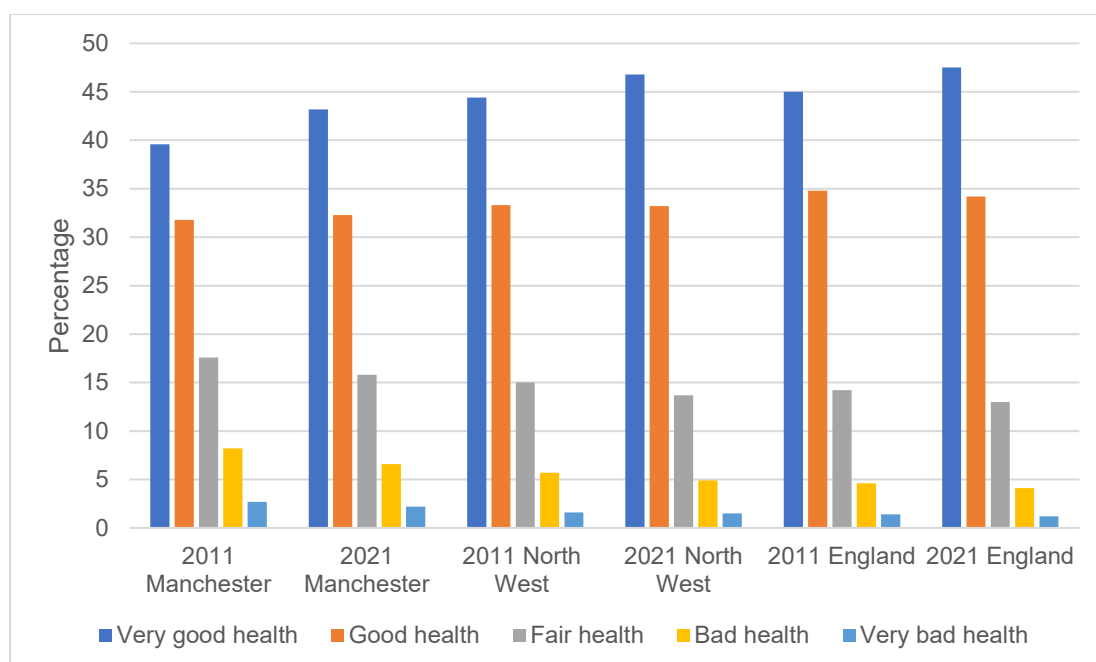
^ Table 10.7 – Manchester’s Health Profile (* Mortality figures based on per 100,000 population)³⁰

10.52 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.

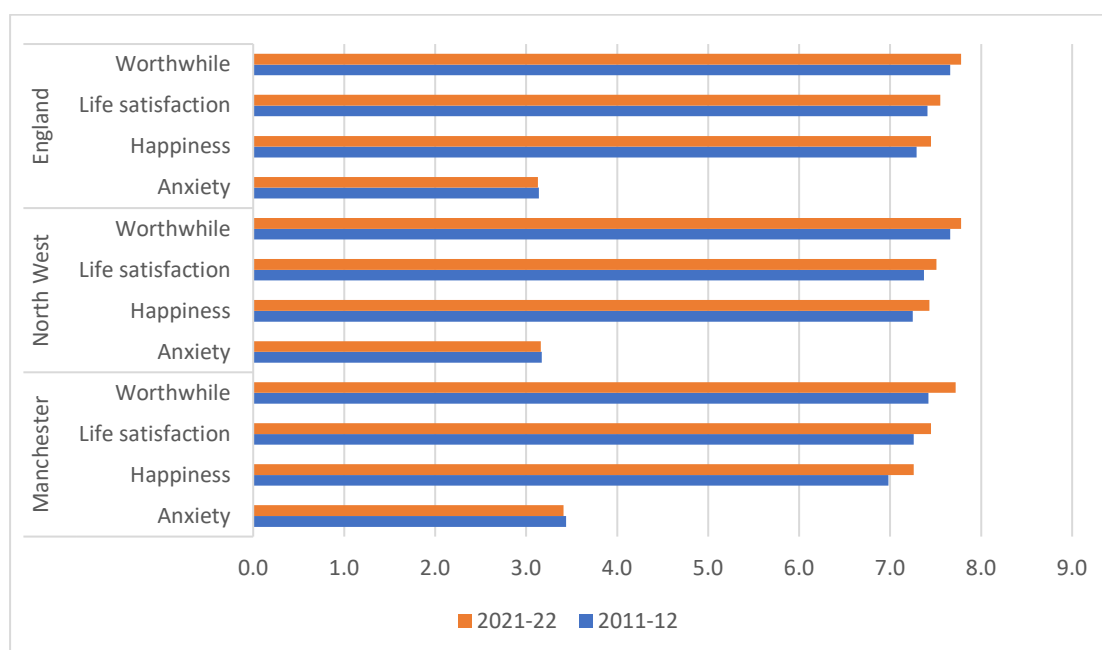
³⁰ <https://fingertips.phe.org.uk/profile/health-profiles> (Accessed 26 November 2024).

- 10.53 Despite the health issues highlighted in **Table 10.7**, 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 10.4 – Self-Reported Health of Usual Residents (2011 v. 2021)

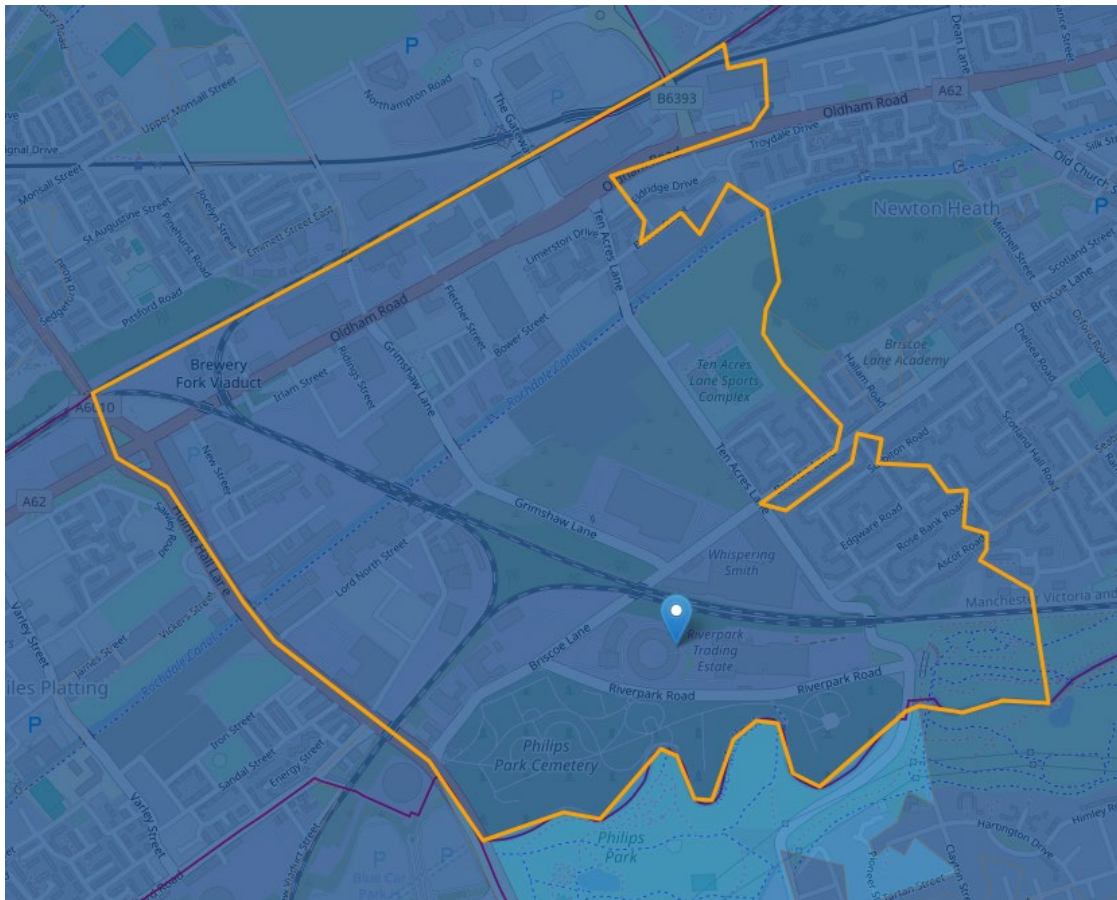
- 10.54 The Census measures personal well-being in the UK. This estimates life satisfaction, a feeling that the things done in life are worthwhile, happiness and anxiety. Each of these measures are scored out of 10, with 10 being the highest score. Manchester has consistently scored worse than the North West and England during the 2011 census, but only at a marginal rate as illustrated in **Figure 10.5**.



^ Figure 10.5 – Personal Well-being (2011 v. 2021)

Deprivation

- 10.55 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.
- 10.56 The Site is located in LSOA Manchester 011B and its extent is shown in **Figure 10.6** below. In 2019, the LSOA was ranked 224 out of 32,844 LSOAs in England, where 1 is the most deprived. This is amongst 10% of the most deprived neighbourhoods in the country. The LSOA observed higher levels of deprivation in the 2015 survey, which identified a rank of 186.
- 10.57 Using the IMD rank of average summary measure, Manchester was ranked 1 in 2015 and 2 in 2019, out of 317 local authorities.



^ Figure 10.6 – IMD 2019 Map

Economic Activity and Unemployment

- 10.58 Based on the most recent ONS data, around 264,600 residents in Manchester are economically active and in employment. Between 2014 and 2024, the number of economically active residents in employment increased from 228,400 to 264,600, a 15.8% increase. However, at present, the proportion of economically active residents in Manchester and in employment (65.9%) is still some way behind that of the North West (72.9%) and England (75.7%).
- 10.59 Approximately 19,100 residents are considered economically active and unemployed in Manchester, representing 6.7% of the population. Again, this is above that of the North West (4.4%) and England (3.8%). Of those residents which are economically inactive, 21,400 want a job.

- 10.60 Manchester's largest occupation for its residents is defined as professional occupations, amounting to 86,500 residents (32.7%). This is comparable to North West and England which sit at 25.1% and 26.8% respectively.

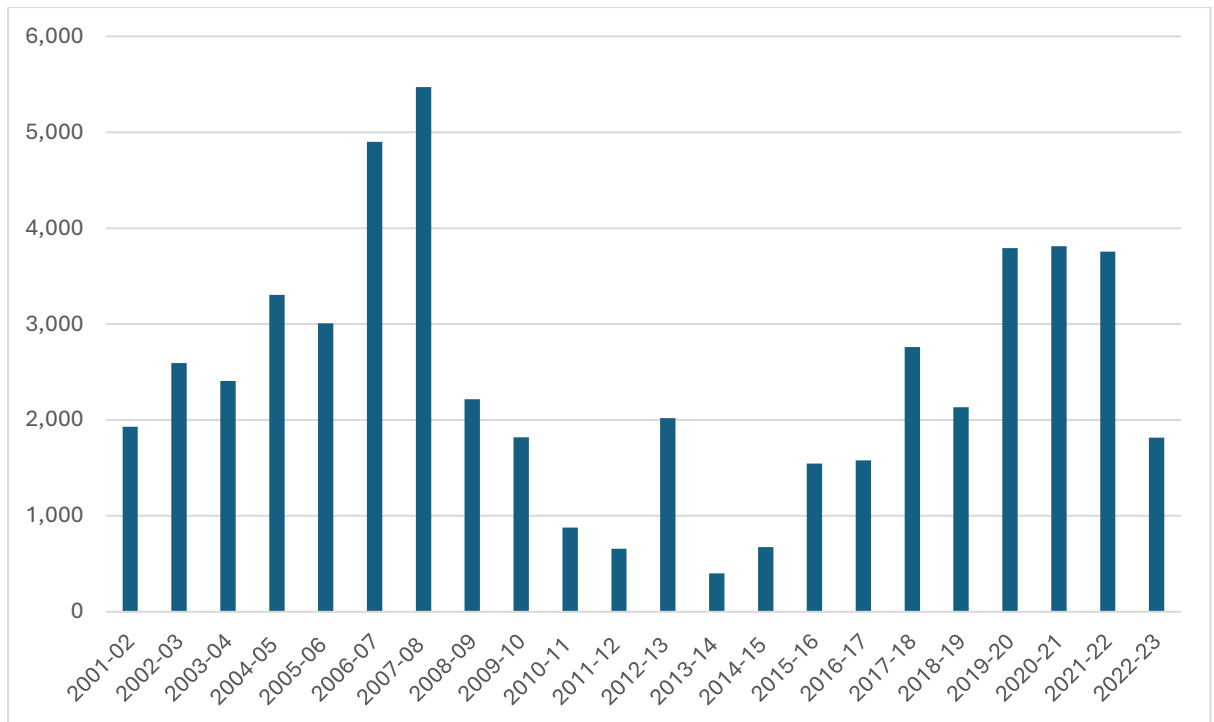
Occupation	Manchester	North West	England
1: Managers, directors and senior officials	6.7%	9.5%	11.3%
2: Professional occupations	32.7%	25.1%	26.8%
3: Associate professional occupations	18.9%	15.5%	15.3%
4: Administrative and secretarial occupations	6.6%	10.1%	9.4%
5: Skilled trades occupations	3.3%	8.2%	8.7%
6: Caring, leisure and other service occupations	7.1%	8.8%	8.2%
7: Sales and customer service occupations	6.9%	7.2%	6.1%
8: Process, plant and machine operatives	4.8%	5.6%	5.4%
9: Elementary occupations	13.0%	9.8%	8.7%

^ Table 10.8 – Employment by Occupation (July 2023 – June 2024)

- 10.61 In October 2024, 27,440 residents are claiming universal credit in Manchester. This amounts to 7.2% of the residents aged 16-64 and is above that of the North West (4.7%) and England (4.4%). Manchester has a higher level of job density, 1.25, when compared with the North West (0.84) and England (0.88).
- 10.62 The Inter-Departmental Business Register has tracked the number of enterprises and local units between 2014 and 2024. During this time, the number of enterprises in Manchester increased from 15,060 to 22,895, a 52% increase over ten years. Whereas the North West (23%) and England (21%) are significantly behind Manchester. Similarly, the number of local units significantly increased from 20,170 to 28,070, a 39% increase. Again, the North West (18%) and England (18%) are significantly behind that of Manchester.

Housing

- 10.63 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 2022/23, Manchester completed 53,478 net additional dwellings within the City. This equates to a rough average of 2,400 new homes per annum.



^ Figure 10.7 – Net Additional Dwellings in Manchester (2001/02 – 2022/23)

- 10.64 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 Infrastructure³¹

Education Provision

- 10.65 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 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.
- 10.66 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

Primary Schools

- 10.67 There are a total of 48 primary schools within a 2-mile radius of the Site. The below table reviews the nearest schools with surplus capacity. Clearly there is capacity within primary schools within the surrounding area.

³¹ Measurements taken from postcode ‘M40 2XP’.

School	Distance from Site	Capacity	No. of Pupils on Roll	Surplus
St Dunstan's RC Primary School	2.7km	341	329	12
Lily Lane Primary School	2.7km	690	625	65
All Saints C of E Primary School	1.4km	240	232	8
Christ The King RC Primary School Manchester	1.6km	480	416	64
Moston Lane Community Primary School	3.2km	480	464	16
St Wilfrid's CofE Junior and Infant School	1.9km	232	223	9
St Augustine's CofE Primary School	1.8km	240	199	41
Total		2,703	2,488	215

^ Table 10.9 – Primary School Capacity

Secondary Schools

- 10.68 There are a total of 20 secondary schools within a 3-mile radius of the Site. The below table reviews the nearest schools with surplus capacity. Clearly there is capacity within secondary schools within the surrounding area.

School	Distance from Site	Capacity	No. of Pupils on Roll	Surplus / Deficit
The East Manchester Academy	1.8km	1100	999	101
Eden Girls' Leadership Academy, Manchester	3.4km	800	637	163
Eden Boys' Leadership Academy, Manchester	3.3km	800	643	157
St Matthew's RC High School	3.6km	1350	1289	61
Co-op Academy Belle Vue	3.4km	1200	473	727
Fairfield High School for Girls	3.8km	989	988	1
Co-op Academy Failsforth	3.9km	1500	1441	59
Total		7739	6470	1269

^ Table 10.10 – Secondary School Capacity

Healthcare Provision

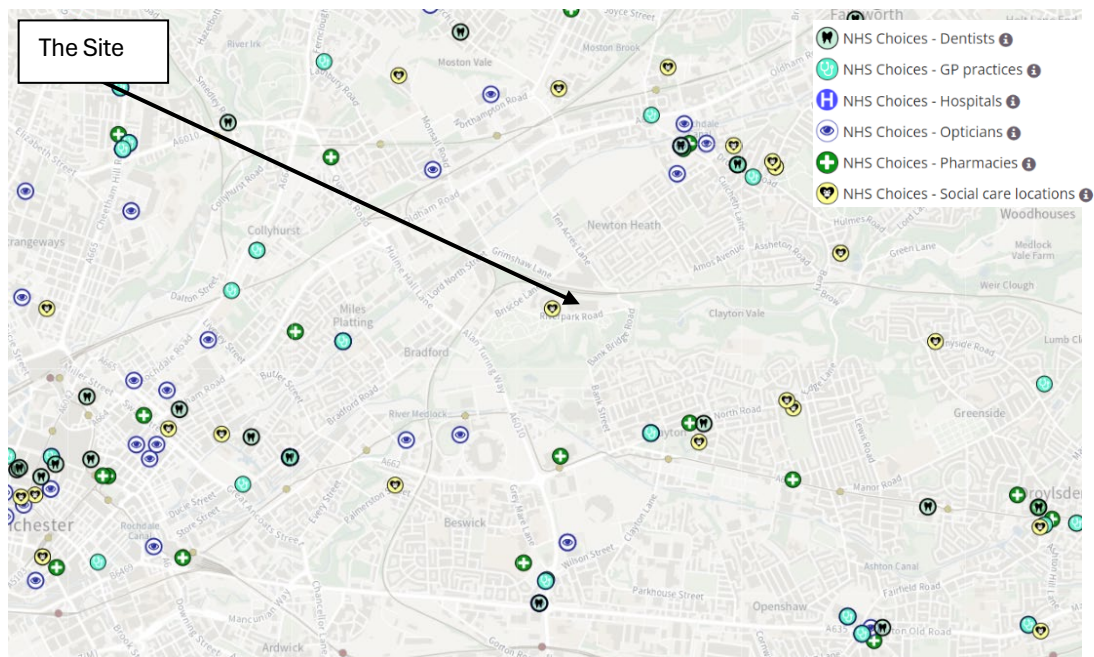
- 10.69 According to the NHS Choices website, there are four GP practices within 1 mile of the Site. All are accepting new patients. Note that whilst Dr Khan, and Drs Hanif & Bannuru are listed separately, they also seem to be operating out of Eastlands medical centre.

GP	Distance from Site	Status
Dr Khan's Practice	1km	Accepting new patients
Eastlands Medical Centre	1km	Accepting new patients
Drs Hanif & Bannuru	1km	Accepting new patients
Droylsden Rd Family Practice	1.7km	Accepting new patients

^ Table 10.11 – GP Capacity

- 10.70 The Lodge dental practice is within 1 mile of the Site and accepting new patients (children and adults).

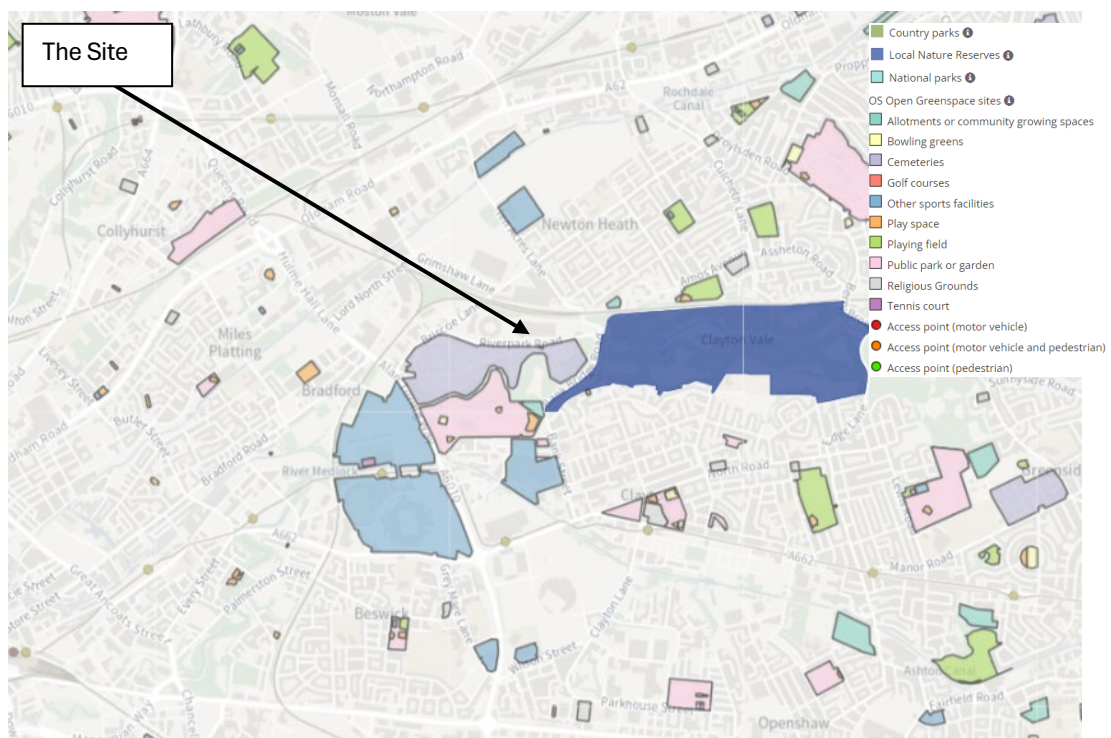
- 10.71 There are a number of pharmacies within the immediate vicinity of the Site, the nearest of which is Newchem located a 1.4km northeast from the Site boundary. The nearest hospital offering A&E services is Manchester Royal located a c. 4.8km walk southwest of the Site, or 12-minute car journey.



^ Figure 10.8 – Healthcare Services

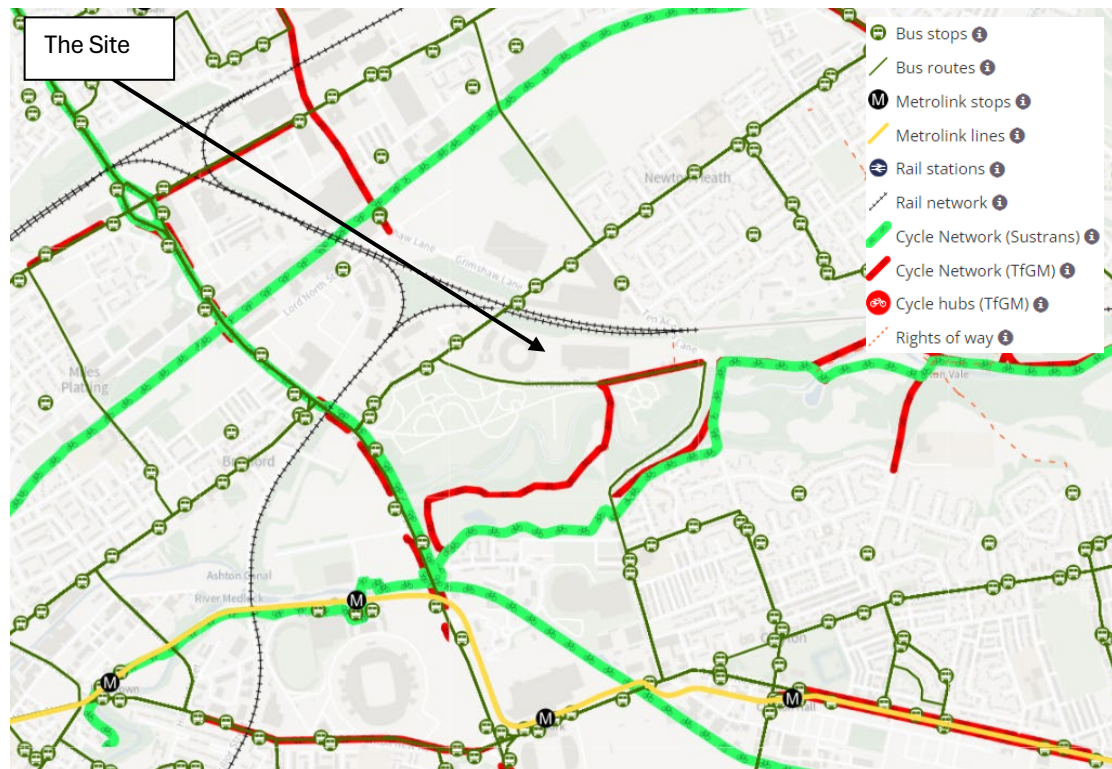
Services and Amenities

- 10.72 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 10.9** illustrates the various greenspaces which are accessible in the local area.



^ Figure 10.9 – Open Space and Green Infrastructure

- 10.73 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 western extent of the Site has a GMAL of 5, whilst the eastern extent has a GMAL of 4. Whilst this is not the highest level of accessibility, there are a range of sustainable transport options available within the local area. The below figure illustrates the various walking, cycling and public transport infrastructure available within the Site’s vicinity.



^ Figure 10.10 – Sustainable Transport Infrastructure

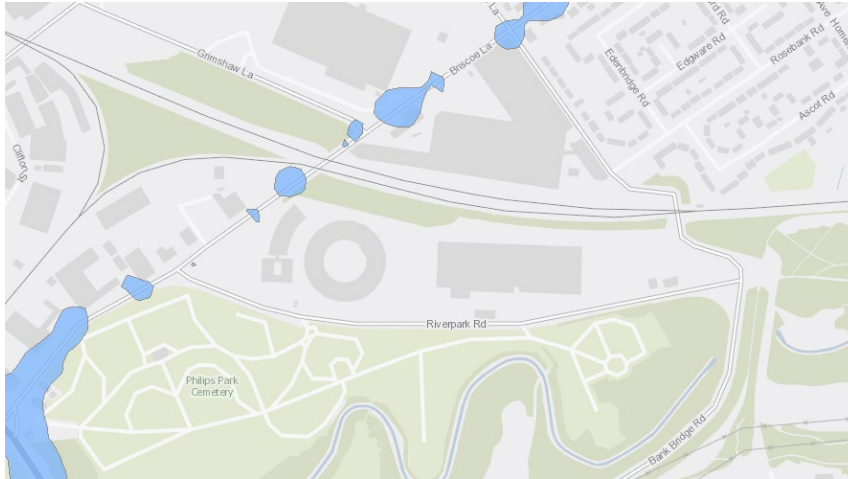
Crime

- 10.74 The Greater Manchester Police record crime within the local area. The site is located within the Clayton area to record crime. There have been two crimes recorded over the past 12 months (October 2023 – September 2024). Based on the mapping data, no crimes were recorded on or adjacent to the Site during this period.

Environmental Considerations

Air Quality

- 10.75 The site is located within the Manchester City Council Air Quality Management Area (“AQMA”); however, parts of the Site’s western boundary are located within the Manchester AQMA.



^ Figure 10.11 – Defra AQMA Map

Noise

- 10.76 A noise assessment has been undertaken by E3P in support of the planning application. The existing noise climate is dominated by road and rail movements.

Ground Conditions

- 10.77 A ground conditions assessment has been undertaken by E3P as part of the planning application. The surveys confirm there are limited contaminant sources on site which are in localised areas with low potential for off-site migration.

Flood Risk

- 10.78 The site is located within Flood Zone 1 and therefore not at risk of flooding from fluvial sources. Parts of the Site are subject to surface water flooding which has been considered as part of the design process.

Townscape and Visual

- 10.79 The baseline appraisal has identified three broad character areas including the Site and within 500m of its boundary. These Townscape Character Areas (“TCAs”) are defined as follows:

- TCA 1: Industrial.
- TCA 2: Designed Green Spaces.
- TCA 3: Residential (Sub Areas A and B).

- 10.80 The visual receptors identified are illustrated below.



^ Figure 10.12 – Visual Receptors

Wind

- 10.81 A wind assessment has been undertaken as part of the ES. Baseline wind conditions within the Site and immediate surrounds meet the Lawson safety criteria. Wind conditions on throughfares within the existing site are predicted to be suitable for short-term sitting / standing or better and thus for comfortable pedestrian access to and passage through the Site. At existing building entrances, wind conditions are predicted to be comfortable for short-term standing / sitting all year round, and thus also suitable for pedestrian ingress/egress.

Identification and Evaluation of Significant Effects

Construction

- 10.82 During the construction phase, the identified receptors include construction workers and off-site residential properties. The potential impacts on human health which are explored in the following assessment comprise:

- Air quality.
- Climate change.
- Townscape and visual.
- Traffic and transport.
- Wind.

Air quality

- 10.83 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.
- 10.84 Potential dust emission magnitude has been assessed for each of the four key areas above in relation to the development 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

- 10.85 Earthworks will primarily involve excavating material, haulage, tipping and stockpiling, as well as Site levelling and landscaping. The area of the Site is between 18,000m² and 110,000m².
- 10.86 The Proposed Development is considered to be a low risk site for human health receptors as a result of earthworks.

Construction

- 10.87 Due to the size of the Proposed Development, the total building volume is likely to be greater than 75,000m³. The magnitude of potential dust emissions from construction is therefore large.
- 10.88 The Proposed Development is considered to be a medium risk site for dust soiling as a result of construction activities. The Proposed Development is considered to be a low risk site for human health receptors as a result of construction activities.

Trackout

- 10.89 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.
- 10.90 Based on the Site area and existing hardstanding, it is anticipated that the unpaved road length is likely to be between 50m and 100m. The Proposed Development is considered to be a low risk site for human health receptors as a result of trackout activities. The Proposed Development is considered to be a low risk site for ecological impacts as a result of trackout activities.

Air Quality Summary

- 10.91 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 but follows the recommended IAQM guidance.

Climate change

- 10.92 The total emissions associated with the construction of the Proposed Development were determined to be 52,119 tCO₂e. With annualised emissions accounting for 0.0004% of local emissions and <0.00000% of the UK's carbon budget.
- 10.93 The impact of emissions generated throughout the construction phase are considered negligible (not significant) when compared to the local carbon budgets and the UK's carbon budget.
- 10.94 A climate change resilience assessment for existing residents / future residents. This has identified effects ranging from negligible (wind and microclimate; transport; socioeconomic; heritage and TVIA) and minor adverse (air quality).

Townscape and visual

- 10.95 During the construction phase, the TVIA effects have been identified as:
- TCA 1: Minor Adverse.
 - TCA 2: Minor-Moderate Adverse.
 - TCA 3A: Minor Adverse.
 - TCA 3B: Negligible Adverse.
 - View 1: Minor-Moderate Adverse.
 - View 2: Negligible Adverse.
 - View 3: Minor Adverse.
 - View 4: Minor-Moderate Adverse.
 - View 5: Negligible-Minor Adverse.
 - View 6: None.
 - View 7: Negligible Adverse.
 - View 8: None..
 - View 9: None.
 - View 10: None.
 - View 11: None.
- 10.96 No significant townscape and visual effects are anticipated which could impact human health receptors.

Traffic and transport

- 10.97 Construction related transport effects have been scoped out of the highways assessment and is not expected to represent a significant increase in traffic.

Wind

- 10.98 During demolition and construction, conditions are expected to transition gradually from those experienced in the existing condition to those for the completed Proposed Development.
- 10.99 It is expected that during demolition and construction, construction workers will be adequately protected with health and safety measures and public access would not be provided (i.e. hoarding would be erected around the Site).
- 10.100 On the basis of the above, it is considered that there would be a negligible (not significant) effect on construction workers and people on foot, seated or traveling by bicycle off-site.

Operation

- 10.101 During the operational phase, the principal receptors comprise future residents using the Site, and off-site residential receptors. The off-site commercial uses could be impacted by the development, but again these are less susceptible to the effects of development. The potential impacts on human health which are explored in the following assessment comprise:
- Air quality.
 - Climate change.
 - Townscape and visual.
 - Traffic and transport.
 - Wind.
 - Internal and external amenity standards.

Air quality

- 10.102 The Proposed Development has the potential to increase concentrations of NO₂, PM₁₀ and PM_{2.5} as a result of road traffic exhaust emissions associated with vehicles travelling to and from the Site during the operational phase. An assessment was therefore undertaken using dispersion modelling in order to quantify potential changes in pollutant concentrations at sensitive locations in the vicinity of the Site.

Road Vehicle Exhaust Emissions

- 10.103 Impacts on annual mean NO₂ concentrations as a result of the Proposed Development were predicted to be negligible at all receptors. These are considered to be not significant.
- 10.104 impacts on annual mean PM₁₀ concentrations as a result of the Proposed Development were predicted to be negligible at all receptors. These are considered to be not significant.
- 10.105 impacts on annual mean PM_{2.5} concentrations as a result of the Proposed Development were predicted to be negligible at all receptors. These are considered to be not significant.

Operational Phase Potential Future Exposure

- 10.106 The Proposed Development has the potential to cause the exposure of future residents to elevated pollution levels associated with local road vehicle exhaust emissions.
- 10.107 Annual mean NO₂ concentrations were below the AQO of 40µg/m³ at all proposed residential facades. The maximum level was 33.51µg/m³.

- 10.108 Annual mean PM₁₀ concentrations were below the AQO of 40µg/m³ at all proposed residential facades. The maximum level was 18.46µg/m³.
- 10.109 Annual mean PM_{2.5} concentrations were below the Interim Target of 12µg/m³ at all proposed residential facades. The maximum level was 10.36µg/m³.
- 10.110 Based on the results of the assessment, exposure of future residents to exceedances of the relevant AQOs and Interim Target has not been predicted. As such, the predicted effect is not significant.

Climate change

- 10.111 The total emissions associated with the operation of the Proposed Development were determined to be 132,882 tCO₂e. With annualised emissions accounting for 0.0016% of local emissions and 0.00001% of the UK's carbon budget.
- 10.112 The impacts of emissions generated throughout the operational phase are considered negligible impact (not significant) on both local and UK carbon budgets.
- 10.113 A climate change resilience assessment for existing residents / future residents. This has identified effects ranging from negligible (wind and microclimate; transport; socioeconomic; heritage and TVIA) and minor adverse (air quality).

Townscape and visual

- 10.114 During the operational phase, the TVIA effects have been identified as:

- TCA 1: Moderate-Major Beneficial.
- TCA 2: Minor-Moderate Beneficial.
- TCA 3A: Negligible Beneficial.
- TCA 3B: Negligible Beneficial.
- View 1: Minor-Moderate Beneficial.
- View 2: Neutral.
- View 3: Neutral.
- View 4: Neutral.
- View 5: Neutral.
- View 6: None.
- View 7: Neutral.
- View 8: TBC.
- View 9: None.
- View 10: None.
- View 11: None.

10.115 There is one significant effect which is moderate-major beneficial effect to TCA1. All other operational phase effects are not significant.

Traffic and transport

10.116 The transport assessment has considered the highways related effects associated with the increase in vehicular movements to and from the Site. The assessment identified the following pre-mitigation effects which could impact human health receptors:

- Severance and Pedestrian Delay - Negligible/Minor Adverse effect
- Driver Delay - Negligible/Minor Adverse effect.
- Non-Motorised User Amenity - Minor/Moderate Adverse effect.
- Fear and Intimidation - Negligible/Minor Adverse effect.
- Road Safety - Negligible/Minor Beneficial effect.

10.117 No highways related effects are considered to be significant.

Wind

10.118 The wind assessment has confirmed that wind standards for safety and pedestrian comfort (thoroughfares; entrances; recreational spaces; and surrounding area) meet the relevant standards resulting in negligible effects.

Internal and External Amenity Standards

10.119 The Applicant has confirmed the Proposed Development meets NDSS and sufficient levels of private and public amenity space is provided as part of the development. therefore, there would be no adverse impacts to future residents regarding housing standards.

Mitigation Measures

10.120 Where feasible at this stage measures have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset significant environmental effects. Where this has not been possible, further mitigation measures have been proposed.

10.121 The mitigations measures proposed, some of which comprise best practice measures which should be implemented in respect of any construction site, or operational development in order to minimise the impact on the environment, are set out within each of the technical chapters and summarised below in **Table 10.12**.

Mitigation Measures	Description
Construction	
Air quality	CEMP
Transport	CEMP
Townscape and visual	CEMP
Climate change	CEMP Water efficiency measures

Mitigation Measures	Description
	Sustainable waste management Emission controls
Wind	None proposed
Operation	
Air quality	Inclusion of measures in accordance with the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'
Transport	Travel Plan and highways infrastructure interventions including two signalised crossings on Riverpark Road and a cycle lane.
Townscape and visual	Good design
Climate change	Embedded measures include passive, fabric efficiency, system efficiency, metering, lighting efficiency, ventilation and cooling systems, and low carbon / renewable technology.
Wind	None proposed

^ Table 10.12 – Summary of Proposed Mitigation Measures

Cumulative Effects

Air quality

- 10.122 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 not significant.
- 10.123 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.

Climate change

- 10.124 A GHG emissions assessment has been undertaken to assess the potential for GHG emissions from the construction, operational and end-of-life phases of the Proposed Development. GHG are gases in the atmosphere which have the potential to increase air temperatures and contribute towards climate change. It is important to note that all GHG emissions have the potential to result in a cumulative effect in the atmosphere over long periods of time.
- 10.125 All GHG emissions are described as significant in accordance with the relevant guidance for the assessment of GHGs as part of the Environmental Impact Assessment process. This does not mean that the contribution of GHG emissions from the Proposed Development alone will equate to a likely significant effect; for the majority of development projects, the individual contribution to total GHG emissions (relative to a national and global scale) will be very small.
- 10.126 Therefore, it important to acknowledge that GHG impacts are considered to be exclusively cumulative impacts because no single project makes a significant contribution to global climate change. The assessment of significance is based on whether a project's GHG emissions cumulatively represent a considerable contribution to the global atmosphere.

Townscape and Visual

10.127 No cumulative effects were identified on townscape and visual receptors.

Traffic and transport

10.128 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.

10.129 During the operational phase, the assessment has confirmed there will be no significant effects and future residents will be encouraged to travel to the site via sustainable means set out in the Travel Plan.

Wind

10.130 The wind assessment has considered the potential for cumulative effects during construction and operation. In both phases of development the effects are anticipated to remain negligible.

Residual Effects

10.131 Overall, following mitigation, the assessments have demonstrated there are no significant adverse effects to human health receptors associated with the development. Any mitigation measures identified will be secured through approval of the scheme design, via planning condition or as part of the S106 Agreement. There is one significant beneficial effect to a townscape character area in the operational phase associated with the high quality design delivered by the proposals.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Air quality: Dust soiling as a result of fugitive dust emissions	Local residents	CEMP	Negligible
Air quality: Increases in PM ₁₀ concentrations as a result of fugitive dust emissions	Local residents	CEMP	Negligible
Townscape and visual	Townscape character and visual receptors	CEMP	None to Minor-Moderate Adverse.
Climate change - Embodied Carbon – upfront - Construction Traffic	Global Climate	CEMP	Negligible
Wind: safety and pedestrian comfort	All	None proposed	Negligible
Operational Phase			

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Air quality: Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	Inclusion of measures in accordance with the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'	Negligible
Air quality: Exposure of future residents to exceedances of the AQO and Interim Target	Future residents of the Proposed Development	None	Negligible
Transport related effects	Pedestrians and highways network	Travel plan	Minor beneficial to minor/moderate adverse
Townscape and visual	Townscape character and visual receptors	CEMP	None to Moderate-Major Beneficial.
Climate change - Embodied carbon - Repair, maintenance and refurbishment - Operational traffic - Operational energy - Operational water	Global Climate	Embedded measures include passive, fabric efficiency, system efficiency, metering, lighting efficiency, ventilation and cooling systems, and low carbon / renewable technology	Negligible
Wind: safety and pedestrian comfort	All	None proposed	Negligible

^ Table 10.13 – Residual Effects Table

10.132 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 (through on-site management roles i.e. landscape management). 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** – 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 derelict buildings on a brownfield site.
- **Creating neighbourhood focus, facilities and identity** – The development provides a blend of public 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 Applicant intends to provide a mix of affordable and market dwellings, subject to brownfield grant funding. 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 development is sustainably located, a short distance from Manchester City centre. A wide range of sustainable transport options are available in the immediate area including pedestrian/cycle routes along the canal, metrolink and bus services. All of these opportunities will allow future site users to travel sustainably and encourage active healthier lifestyles.
- **Improving access to employment and education** – The site provides employment opportunities during construction in a highly sustainable location, with walking, cycling and public transport genuinely realistic alternatives to private car use. There are a number of educational facilities within walking and cycling distance of the Site.
- **Reducing congestion on the roads, improving the reliability of public transport and reducing overcrowding** – Addressed previously.
- **Improving the quality of air and water** – As above. 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 development land in need of regeneration. The proposals will remediate any contaminated land and re-use a brownfield 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 the Council and a series of key stakeholders.

Residual Effects

- 10.133 This chapter of the ES provides a summary of the residual effects of the Proposed Development.
- 10.134 Overall, following mitigation, the assessments have demonstrated there are no significant adverse effects to human health receptors associated with the development. Any mitigation measures identified will be secured through approval of the scheme design, via planning condition or as part of the S106 Agreement. There is one significant benefit to a townscape character area in the operational phase associated with the high quality design delivered by the proposals.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Air Quality			
Dust soiling as a result of fugitive dust emissions	Local residents	CEMP	Negligible
Increases in PM ₁₀ concentrations as a result of fugitive dust emissions	Local residents	CEMP	Negligible
Townscape and visual	Townscape character and visual receptors	CEMP	None to Minor-Moderate Adverse.
Climate change: - Embodied Carbon – upfront - Construction Traffic	Global climate	CEMP	Negligible
Wind: safety and pedestrian comfort	All	None proposed	Negligible
Operational Phase			
Air Quality			
Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	Inclusion of measures in accordance with the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'	Negligible
Exposure of future residents to exceedances of the AQO and Interim Target	Future residents of the Proposed Development	None	Negligible
Transport related effects	Pedestrians and highways network	Travel plan	Minor beneficial to minor/moderate adverse
Townscape and visual	Townscape character and visual receptors	CEMP	None to Moderate-Major Beneficial.
Climate change: Embodied carbon - Repair, maintenance	Global climate	Embedded measures include passive, fabric efficiency, system efficiency, metering, lighting efficiency, ventilation and cooling	Negligible

Likely Significant Effect	Receptor	Mitigation	Residual Effect
and refurbishment • Operational traffic • Operational energy • Operational water		systems, and low carbon / renewable technology.	
Wind: safety and pedestrian comfort	All	None proposed	Negligible

^ Table 10.17 – Likely Residual Effects

11. Transport

Introduction

- 11.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to Traffic and Transport. 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.
- 11.2 This assessment has been undertaken by Matthew Thorley, who is an Associate at Curtins with over nine years' experience in development planning, including the preparation of Traffic and Transport Environmental Impact Assessments. Matthew is a Chartered Member of the Institute of Logistics and Transport. He has a BA in Human Geography and MSc in Transport Engineering and Planning.

Legislative and Policy Context

National Planning Policy

National Planning Policy Framework (2024)

- 11.3 The National Planning Policy Framework ('The Framework') sets out the current national transport planning policy and outlines the important role that transport policies have to play in facilitating sustainable development.
- 11.4 Paragraph 11 states that:
- "Plans and decisions should apply a presumption in favour of sustainable development."*
- 11.5 For decision taking this means granting permission unless:
- "...any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies."*
- 11.6 Paragraph 115 of The Framework states that in assessing sites that may be allocated for development in plans, or specific applications in development, it should be ensured that:
- a) sustainable transport modes are prioritised taking account of the vision for the site, the type of development and its location;*
- b) safe and suitable access to the site can be achieved for all users;*
- c) the design of streets, parking areas, other transport elements and the content of associated standards reflects current national guidance, including the National Design Guide and the National Model Design Code; and*
- d) any significant impacts from the development on the transport network (in terms of capacity and congestion), or on highway safety, can be cost effectively mitigated to an acceptable degree through a vision-led approach."*
- 11.7 Paragraph 116 of The Framework states that:
- "Development should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network, following mitigation, would be severe, taking into account all reasonable future scenarios."*

- 11.8 The Framework confirms that if development can be demonstrated to be sustainable, it should only be prevented or refused on highways grounds if there would be an unacceptable impact on highway safety, or the residual cumulative impacts on the road network would be severe as set out in Para 115.
- 11.9 On the above basis, later sections of this report discuss the results of traffic forecasting and modelling that has been undertaken to demonstrate there would be no severe residual cumulative impacts.
- 11.10 With regard to Paragraph 115, subsection b, which relates to safe and suitable access, Section 4 of the supporting Transport Assessment (TA) in **Appendix 11.1** considers the access proposals and demonstrates that the design is appropriate for its intended use.

National Planning Practice Guidance (NPPG)

- 11.11 In addition to the NPPF, National Planning Practice Guidance (NPPG) has been developed by the Department for Communities and Local Government (DCLG; now the MHCLG) in 2014. It brings together planning practice guidance for England and sits alongside the NPPF. Within this document there is a specific section that clarifies the over-arching principles on Travel Plans, Transport Assessments and Transport Statements. The guidance states that:

“Travel Plans, Transport Assessments and Statements can positively contribute to:

- *Encouraging sustainable travel;*
 - *Lessening traffic generation and its detrimental impacts;*
 - *Reducing carbon emissions and climate impacts;*
 - *Creating accessible, connected, inclusive communities;*
 - *Improving health outcomes and quality of life;*
 - *Improving road safety; and*
 - *Reducing the need for new development to increase existing road capacity or provide new roads.”*
- 11.12 The guidance on Transport Assessments and Statements re-iterates the circumstances in which either document would usually be required. It is clear that a development of the size and nature of this development requires a TA. It also clarifies the process for establishing a scope for what the documents should contain. The NPPG has been considered in the production of the accompanying TA and ITP.

Local Planning Policy

Manchester Core Strategy (adopted in 2012, amended in 2024)

- 11.13 The Manchester Core Strategy promotes similar principles to the NPPF. It contains three specific “Transport” policies, comprising:
- Policy T1 – Sustainable Transport;
 - Policy T2 – Accessible Areas of Opportunity and Need; and
 - Policy T3 – Strategic Integration.

- Policy T1 focuses on sustainable transport and access for all.
- Policy T2 of the Manchester Core Strategy states:

“The Council will actively manage the pattern of development to ensure that [outside the City Centre] ... all new development should provide appropriate car parking facilities, taking account of the guidance in appendix B... In all parts of the City proposals should have regard to the need for disabled and cycle parking, in line with appendix B.”

11.14 Appendix B does not specify parking requirements for residential developments.

11.15 Policy T3 is in relation to strategic integration of developments with the sustainable transport network.

Greater Manchester Transport Strategy 2040

11.16 In 2021, TfGM updated the 2040 Vision for Transport to deliver a transport system which enables residents, businesses, and visitors in Greater Manchester to travel to a wide range of different destinations and opportunities, and where sustainable transport can be a viable and attractive alternative to the car.

11.17 Under Policy 3, the Transport Strategy states that TfGM will *“maintain a programme of interventions designed to encourage people to make sustainable journeys. We will support this through journey planning tools and information to encourage travel behaviour change and mode shift, and in order to make the most efficient use of available capacity (particularly during peak periods).”* Such interventions comprise:

- *“Reducing the carbon and environmental cost of journeys;*
- *New ways of working which make the best use of the transport network;*
- *Maximising the benefit of new, integrated transport infrastructure and services;*
- *Delivering public health benefits through enabling more active travel;*
- *Supporting town and city centre economic vitality and sustainability;*
- *Improving access to key services and jobs;*
- *Maximising sustainable travel in new developments; and*
- *Becoming more resilient to disruption.”*

11.18 The above measures and additional initiatives have also been provided in greater detail in the accompanying Interim Travel Plan.

Under Policy 4, TfGM will also “work with developers to ensure that new developments are accessible by sustainable modes, and to reduce transport emissions and impacts on the highway network.” This will be in accordance with the principles of:

- *“Reducing the need to travel;*
- *Reducing the need to travel by car, and the distance travelled;*
- *Maximising accessibility by sustainable modes;*

- *Making the best use of existing infrastructure, particularly through increasing the density of development close to public transport nodes;*
- *Maximising opportunities to provide additional public transport; and*
- *Designing to encourage active travel.”*

Manchester Residential Quality Guidance

- 11.19 In 2017, MCC adopted the Manchester Residential Quality Guidance which sets out the standards of design for residential developments in the city. It is structured around nine components to ensure high-quality developments: make it happen, make it a home, make it future proof, make it practical, make it Manchester, make it bring people together, make it animate street and spaces, make it easy to get around, make it work with the landscape.
- 11.20 The guidance does not require a specific level of car parking as *“there is no ‘one size fits all’ approach to car parking and it should be considered on a case-by-case basis”*.
- 11.21 MCC stipulates in the document that development proposals:
- *“Incorporate sufficient car parking in an appropriate location that does not harm pedestrian movement;*
 - *Provide secure cycle parking for residents and visitors, which is safe and convenient and within the envelope of the building;*
 - *Provide sufficient bin storage to accord with MCC’s standards and is conveniently located with minimal impact on the streetscene; and*
 - *Have considered where temporary stopping could be accommodated”*

Places for Everyone (PfE) Plan (adopted in 2024)

- 11.22 The Places for Everyone Plan was adopted by nine Greater Manchester local authorities – Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Tameside, Trafford, and Wigan – in March 2024. PfE forms part of the Development Plan for Manchester.
- 11.23 The transport-related policies within PfE are as follows:
- Policy JP-C1 – An Integrated Network;
- Policy JP-C3 – Public Transport;
- Policy JP-C4 – The Strategic Road Network;
- Policy JP-C5 – Streets for All;
- Policy JP-C6 – Walking and Cycling;
- Policy JP-C7 – Freight and Logistics; and
- Policy JP-C8 – Transport Requirements of New Development.

11.24 Transport Requirements of New Development states:

“We will require new development to be located and designed to enable and encourage walking, cycling and public transport use, to reduce the negative effects of car dependency, and help deliver high quality, attractive, liveable and sustainable environments.

We will do this by:

Connectivity and Permeability

Prioritising safe and convenient access to the site and buildings for all users in accordance with the user hierarchy in Policy JP-C1 'An Integrated Network', including;

Prioritising new and enhanced walking, cycling and public transport routes and stops, through and around the site. These routes should:

- be direct, safe and convenient;*
- connect to nearby facilities, employment areas, public transport stops; and*
- improve the coverage, quality and integration of the wider walking and cycling infrastructure and public transport provision;*

Ensuring that the layout, design and landscaping of development prioritises the provision of safe, secure and attractive access to local services and facilities for pedestrians, cyclists and people with a disability; and

Ensuring that new development is connected visually and physically; within the site and to the surrounding built environment;

Ensure appropriate connectivity to the existing highway network;

Design

Reducing the need to travel by ensuring that community facilities, services and amenities are provided within the site or within walking distance of new development;

Incorporating highway design at a human scale using street-based prescriptions such as those within Manual for Streets and/or any locally adopted design guidance, to ensure that highways do not dominate the development;

Public Transport

Ensuring (through funding improvements where appropriate) that the nearest public transport stops (both within and adjacent to the development site) are attractive to users in terms of seating, shelters, information and easy step-free access;

Subsidising new or amended public transport services where the development would otherwise have inadequate public transport access;

Parking Infrastructure

Making adequate car parking provision, including for disabled drivers and passengers;

Ensuring that car parking provision is well integrated and unobtrusive, so it supports the street scene; and where appropriate parking provision is flexible and can be adapted over time to reflect demand;

Incorporating enough secure and covered cycle parking to meet long-term demand from occupiers and visitors in a convenient location that helps to maximise its use, and for workplaces, where appropriate providing:

- *Showers, changing facilities and lockers for cyclists and walkers,*
- *Pool or hire bikes for use by occupiers,*
- *Information in advance about facilities to visitors.*

Promoting alternatives to car ownership, such as the use of ULEV car clubs rather than the provision of private car parking spaces;

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

Providing for overnight parking and rest areas, with appropriate facilities, for heavy goods vehicle drivers, where the development is likely to generate demand, and it is appropriate to the location;

11.25 Parking provision, including for EVs and cycles, is detailed in Section 3 of the TA.

Access and Servicing

Providing designated pick-up/drop-off points for taxis and other demand-responsive transport services where appropriate, taking into account the potential increase in demand if car ownership falls;

Making appropriate provision for deliveries and servicing (including requiring Delivery and Servicing Plans for appropriate developments), in a way that:

- *meets road safety requirements,*
- *reduces transport emissions and other environmental impacts,*
- *reduces traffic congestion, the number of vehicle movements and the need for repeat deliveries.*

Construction Management

Ensuring Construction Management Plans are produced for developments, where appropriate, to mitigate construction logistics and environmental impacts including air quality and noise on the surrounding area and encourage sustainable deliveries;

Transport Assessments

Planning applications will be accompanied by a Transport Assessment / Transport Statement and Travel Plan where appropriate, in order to assess impacts and determine the most appropriate mitigation on the SRN and local transport network. Where a Transport Assessment is required, this should start with a vision of what the development/allocation is seeking to achieve and then test a set of scenarios to determine the optimum design and transport infrastructure to realise this vision. Consultation should be undertaken, at pre-application stage, with the relevant local

highway authorities to agree which committed developments / allocations and which potential transport interventions should be considered, with reference to Appendix D, as appropriate;

Planning applications which are required to be accompanied by a Transport Assessment will need to consider air quality impacts on Holcroft Moss, within the Manchester Mosses Special Area of Conservation (SAC). Any proposals that would result in increased traffic flows on the M62 past Holcroft Moss of more than 100 vehicles per day or 20 Heavy Goods Vehicles (HGVs) per day must devise a scheme-specific range of measures to reduce reliance on cars, reduce trip generation and promote ultra-low emission vehicles and provide a contribution towards restoration measures in accordance with the Holcroft Moss Habitat Mitigation Plan.”

Assessment Methodology and Significance Criteria

Overview

- 11.26 Assessment of the traffic and transport impact of the Proposed Development will be undertaken in accordance with the ‘Environmental Assessment of Traffic and Movement’ a guidance document produced by the Institute of Environmental Management and Assessment (IEMA) in 2023 (hereafter referred to as ‘the IEMA Guidelines’).
- 11.27 In accordance with the IEMA Guidance, the Environmental Impact Assessment (EIA) for Traffic and Transport will be undertaken in three stages:
- (i) Identify the study area and the sensitivity of all highway links within this area;
 - (ii) Determine the percentage change in traffic flows above the baseline flows as a result of the Proposed Development for each link, considering the IEMA’s recommended rules:
 - (iii) *“Rule 1: Include highway links where traffic flows will increase by more than 30% (or the number of heavy goods vehicles will increase by more than 30%)*
 - (iv) *Rule 2: Include highway links of high sensitivity where traffic flows have increased by 10% or more”*
 - (v) For all links which meet the above thresholds, undertake further assessments to determine the level of impact on the following assessment categories. If neither of the thresholds are reached, no further EIA assessment is necessary.
 - (vi) *“Severance of communities;*
 - (vii) *Road vehicle driver and passenger delay;*
 - (viii) *Non-motorised user delay;*
 - (ix) *Non-motorised amenity;*
 - (x) *Fear and intimidation on and by road users;*
 - (xi) *Road user and pedestrian safety; and*
 - (xii) *Hazardous/large loads.”*
- 11.28 Historically, the Site was occupied by the former Manchester Abbatoir which is understood to have operated until 2000.
- 11.29 More recently, the Site has been occupied by the Riverpark Trading Estate. The dozens of units at the Trading Estate were occupied by a variety of land uses, including offices, shops, and storage. There was a total floor area of 349,906 sqft / 32,507sqm.

11.30 Following prior approval in November 2024, the demolition of Riverpark Trading Estate has now commenced. It is understood that the Site still has a lawful employment land use and can be used for employment purposes – for example, van rental services – without the need to obtain planning permission, although consent would be required for building works. For robustness, this Report does not quantify the traffic that could be associated with the Trading Estate (but this is provided in the TA).

11.31 Curtins has assessed the operation of these junctions under the following scenarios:

- 2024 Observed flows;
- Base (2024 Observed flows minus the flows associated with the remaining units on-site at the time of the survey);
- Base + Proposed Development

Determining Study Area and Receptor Sensitivity

11.32 The operation of the existing highway network has been assessed at the following locations as agreed with Manchester City Council during pre-application discussions:

- Junction 1 – Riverpark Road / Briscoe Lane (priority-controlled);
- Junction 2 – Ten Acres Lane / Riverpark Road (priority-controlled);
- Junction 3 – Alan Turing Way / Briscoe Lane (signal-controlled);
- Junction 4 – Briscoe Lane / Ten Acres Lane (signal-controlled);
- Junction 5 – Alan Turing Way / Gibbon Street (signal-controlled); and
- Junction 6 – Alan Turing Way / Ashton New Road (signal-controlled).

11.33 The assessment of highway link sensitivity should be informed by the presence, concentration, and provision for user groups and locations which may be sensitive to increase in traffic.

11.34 Paragraph 1.28 of the IEMA Guidance states that the following user groups should be considered:

- *“Non-motorised users*
- *Public right of way users*
- *Motorists and freight vehicles*
- *Public transport*
- *Emergency services”*

11.35 While paragraph 1.30 of the IEMA Guidance details the following sensitive locations:

- *“People at home*
- *People at work*
- *Sensitive and/or vulnerable groups (including young age; older age; income; health status; social disadvantage; and access and geographic factors)*

- *Locations with concentrations of vulnerable users (e.g. hospitals, places of worship, schools)*
- *Retail areas*
- *Recreational areas*
- *Tourist attractions*
- *Collision clusters and routes with road safety concerns*
- *Junctions and highway links at (or over) capacity”*

11.36 The approach to assigning levels of sensitivity to receptors is detailed in **Table 11.1**, informed by the IEMA Guidance.

Sensitivity of receptor	Description	Criteria
High	High level of vulnerable road users	• Many people from sensitive groups (including children, elderly and disabled) likely to be walking and cycling. • Sensitive locations (including hospitals, churches, schools, historical buildings, conservation areas) accessed from or within close proximity to assessed link. • Presence of fatal collision(s) or a cluster of serious road collisions. • Link at or above theoretical capacity in either peak of the observed scenario
Medium	Medium level of vulnerable road users	• Some people from sensitive groups (including children, elderly and disabled) likely to be walking and cycling. • Sensitive locations (including hospitals, churches, schools, historical buildings, conservation areas) accessed from or within close proximity to assessed link. • No fatal collisions. Presence of a cluster of serious and/or slight collisions. • Link at or above practical capacity in either peak, but below theoretical capacity in the observed scenario
Low	Low level of vulnerable road users	• Few people from sensitive groups (including children, elderly and disabled) likely to be walking and cycling. • No sensitive locations (including hospitals, churches, schools, historical buildings, conservation areas) accessed from or within close proximity to assessed link. • No fatal collisions. No notable clusters of collisions. • Link operating within capacity in both peaks of the observed scenarios

^ Table 11.1 – Criteria for Determining Receptor Sensitivity

11.37 There have been no fatal collisions or clusters of serious / slight collisions that are disproportionate to the traffic levels.

11.38 The sensitivity of the links within the study area is summarised as follows. Further details are provided on the junction capacity assessments in the TA.

- High:
 - Alan Turing Way (North), Alan Turing Way (South), and Ashton New Road (West) on Junction 6 are operating at or above theoretical capacity in the observed scenario;
 - Briscoe Lane (East) on Junction 4, which has a primary school, several shops, and a large number of residential dwellings fronting onto the road
- Medium:
 - Gibbon Street (East) and Alan Turing Way (South) on Junction 5 are operating at or above the practical capacity in the observed scenario.
 - The Etihad Campus is accessed from Ashton New Road (West) on Junction 6, while the National Cycling Centre is on Gibbon Street (East) on Junction 5. It is noted that on the majority of days throughout the year there will be no events occurring at these venues, and when events do occur the associated movements will take places across a limited time period.
 - Ten Acres Lane (North) on Junction 4 which is home to Ten Acres Lane Sports Complex, offering a variety of sporting activities for all ages, including children.
- Low: all other links.

11.39 Rule 1 would apply to the Medium and Low sensitivity receptors, while Rule 2 applies to those of High sensitivity.

11.40 It is noted that a mitigation scheme has been approved for Jackson's Brickworks which would improve the performance of Junction 4.

Further Assessment Categories

11.41 As per the Scoping Report, assessment of hazardous / large loads has been scoped out of the EIA.

11.42 Regarding severance, the IEMA guidelines indicate that traffic flows would have to increase by more than 30% in order for a 'slight' change in severance to occur, 60% for a 'moderate' change to occur and 90% for a 'substantial' change to occur. It is also necessary to apply professional judgement in consideration of how road width, traffic flow and composition, traffic speeds, the availability of crossing facilities and the anticipated number of movements influences severance.

11.43 Driver delay can occur as a result of increased traffic flows on the network as a result of development. This generally occurs at junctions where turning traffic flows increase. As part of the TA, junction capacity assessments will be undertaken at all of the key junctions in the vicinity of the Site and the agreed geographical study area.

11.44 Regarding non-motorised user amenity, the assessment would exercise professional judgement in consideration of baseline conditions, the anticipated vehicle and non-motorised user demand, and any embedded or proposed mitigation that influences vehicle and non-motorised user journeys.

- 11.45 The assessment would adopt the threshold for non-motorised amenity of a halving or doubling of the total traffic flow (or HGV component) whilst applying professional judgment in consideration of the anticipated vehicle and non-motorised user demand, and any proposed or embedded mitigation that influences vehicle and non-motorised user journeys.
- 11.46 In the absence of commonly agreed threshold for fear and intimidation, a suggested methodology for calculating fear and intimidation is set out in Tables 3.1, 3.2, 3.3 and the associated text of the IEMA Guidance. This assessment would be adopted along with professional judgement in consideration of baseline conditions, any step change to the above level of fear and intimidation categories, and any embedded or proposed mitigation that influences vehicle and non-motorised user journeys.

Average traffic flow over 18-hour day – all vehicles / hour 2-way (a)	Total 18-hour heavy vehicle flow (b)	Average Vehicle Speed in mph (c)	Degree of Hazard Score
>1,800	>3,000	>40	30
1,200 – 1,800	2,000 – 3,000	30 – 40	20
600 – 1,200	1,000 – 2,000	20 – 30	10
<600	<1,000	<20	0

^ Table 11.2 – Fear and intimidation degree of hazard

- 11.47 A baseline level of fear and intimidation is derived by combining the ‘Degree of Hazard’ scores for the above columns a, b, and c. The resulting calculation will categorise the existing level of fear and intimidation on the link as follows: Extreme - 71+; Great - 41–70; Moderate - 21–40; and Small - 0–20.
- 11.48 This EIA would use collision data and professional judgement to determine the existing road safety and potential impact of the Proposed Development.
- 11.49 To quantify the magnitude of environmental impacts Curtins would utilise a combination of professional opinion and the indicative parameters as presented in **Table 11.3** below, where the percentages quoted represent increases.

Magnitude	Environmental Impact	Definition of Magnitude
Major	Severance of communities, and non-motorised user delay	Over 90% change to baseline traffic flows, in conjunction with professional judgement concluding a fundamental change from baseline conditions.
	Driver delay	Anticipated delay and/or queuing is fundamentally changed from baseline conditions in a way that is also perceptible to drivers/passengers.
	Non-motorised amenity	Over 50% change to baseline traffic flows or HGV%, in conjunction with professional judgement concluding a fundamental change from baseline conditions.
	Fear and intimidation on and by road users	Anticipated step change in level of fear and intimidation is two or more levels, in conjunction with professional judgement concluding a fundamental change from baseline conditions.
	Road user and pedestrian safety	Professional judgement concluding a fundamental change from baseline conditions.

Magnitude	Environmental Impact	Definition of Magnitude
Moderate	Severance of communities and non-motorised user delay	Over 60% change to baseline traffic flows, in conjunction with professional judgement concluding a material change from baseline conditions.
	Road vehicle driver and passenger delay	Anticipated delay and/or queuing post Development is materially changed from baseline conditions in a way that is also perceptible to drivers/ passengers.
	Non-motorised amenity	25 – 50% change to baseline traffic flows or HGV%, in conjunction with professional judgement concluding a material change from baseline conditions.
	Fear and intimidation on and by road users	Professional judgement concluding a material change from baseline conditions.
	Road user and pedestrian safety	Anticipated step change in one or more iRAP Stars Ratings, in conjunction with professional judgement concluding a material change from baseline conditions
Minor	Severance of communities and non-motorised user delay	Over 30% change to baseline traffic flows, in conjunction with professional judgement concluding a discernible change from baseline conditions
	Road vehicle driver and passenger delay	Anticipated delay and/or queuing post Development is discernibly changed from baseline conditions in a way that is also perceptible to drivers/ passengers.
	Non-motorised amenity	10 – 25% change to baseline traffic flows or HGV%, in conjunction with professional judgement concluding a discernible change from baseline conditions.
	Fear and intimidation on and by road users	Anticipated step change in level of fear and intimidation is one or more levels, in conjunction with professional judgement concluding a discernible change from baseline conditions.
	Road user and pedestrian safety	Professional judgement concluding a discernible change from baseline conditions.
Negligible	Severance of communities and non-motorised user delay	0 – 25% change to baseline traffic flows, in conjunction with professional judgement concluding a barely distinguishable change from baseline conditions.
	Road vehicle driver and passenger delay	Anticipated delay and/or queuing post Development is barely distinguishable from baseline conditions in a way that is also not perceptible to drivers/passengers.
	Non-motorised amenity	25 – 50% change to baseline traffic flows or HGV%, in conjunction with professional judgement concluding a material change from baseline conditions.
	Fear and intimidation on and by road users	No anticipated step change in level of fear and intimidation, in conjunction with professional judgement concluding a barely distinguishable change from baseline conditions.
	Road user and pedestrian safety	Professional judgement concluding a barely distinguishable change from baseline conditions.

^ Table 11.3 – Environmental Impacts

Significance of Effects

- 11.50 The significance matrix is provided below. This identifies the receptor level across the top of the matrix and the magnitude of environmental impact down the side and where they meet within the matrix identifies the significance of the effect.

Magnitude of Change	Sensitivity of Receptor				
	Very High	High	Medium	Low	Negligible
Major Positive	Substantial Benefit	High/ Substantial Benefit	Moderate/ High Benefit	Minor/ Moderate Benefit	Minor Benefit
Moderate Positive	High/ Substantial Benefit	Moderate/ High Benefit	Moderate Benefit	Minor Benefit	Negligible/ Minor Benefit
Minor Positive	Moderate Benefit	Minor/ Moderate Benefit	Minor Benefit	Negligible/ Minor Benefit	Negligible/ Minor Benefit
Negligible Positive	Minor Benefit	Minor Benefit	Negligible/ Minor Benefit	Negligible/ Minor Benefit	Neutral/ Negligible
Neutral	Neutral	Neutral	Neutral	Neutral	Neutral
Negligible Negative	Minor Adverse	Minor Adverse	Negligible/ Minor Adverse	Negligible/ Minor Adverse	Neutral/ Negligible
Minor Negative	Moderate/ High Adverse	Minor/ Moderate Adverse	Minor Adverse	Negligible/ Minor Adverse	Negligible/ Minor Adverse
Moderate Negative	High/Substantial Adverse	Moderate/High Adverse	Moderate Adverse	Minor Adverse	Negligible/ Minor Adverse
Major Negative	Substantial Adverse	High/ Substantial Adverse	Moderate/ High Adverse	Minor/ Moderate Adverse	Minor Adverse

^ Table 11.4 – Significance of Effects

- 11.51 Within the assessment the level of magnitude will be defined on the basis of relevant guidance and the application of standard transport planning practice. Considering the table above the following terms will be used to assess the significance of environmental effects:

- Substantial: This will have a significant influence on the environment.
- High: This may have a significant influence on the environment.
- Moderate: This will have a slight influence on the environment.
- Minor: This may have a slight influence on the environment.
- Negligible: This will not have any notable influence on the environment.
- Neutral: This will not have any influence on the environment

- 11.52 Any effect of 'High' or 'Substantial' will be considered as significant.

Assumptions and Limitations

- 11.53 As detailed in the accompanying TA, Curtins' trip generation for both the historic consented and proposed uses is based on applying journey to work modal splits to total people trip rates from the TRICS database. The modal split has been adjusted for the proposed use to account for the proximity to two Metrolink lines (both of which opened after the 2011 Census). Due to the application of the journey to work modal split, the trip generation does not include any HDV movements. It is likely that there would be HDV movements associated with the consented industrial uses, so the HDV% from the observed flows has been applied to the baseline flows.
- 11.54 The traffic figures and junction capacity assessments provided in the TA are based on the AM and PM peak hours (07:45-08:45 and 16:45-17:45, respectively), as derived from the traffic surveys. For the purposes of the EIA, factors derived from Department for Transport datasets TRA0307 and TRA0308 have been applied to convert these flows to Average Annual Daily Traffic (AADT). These datasets cover Great Britain as a whole and are not locally specific. Reflecting that a greater proportion of HGV/HDV traffic occurs outside the network AM and PM peak hours, separate growth factors have been calculated for and applied to total vehicles and HGV/HDV flows.

Baseline Conditions

- 11.55 The site is located in East Manchester, approximately a kilometre north of the Etihad Campus. It is bound by railway lines to the north, Ten Acres Lane to the east, Riverpark Road and Philip's Park Cemetery to the south, and Briscoe Lane to the west.
- 11.56 For robustness, the Environmental Impact Assessment has been undertaken on the basis of the Site having no active use and attracting no trips. This does not, however, fully reflect the baseline position as the Site has a lawful employment use and could generate associated trips, most of which would use the Riverpark Road arm of Junction 1.

Surrounding Highway Network

Riverpark Road

- 11.57 Riverpark Road extends in an east-west alignment for nearly 800m between priority junctions with Ten Acres Lane and Briscoe Lane. It currently provides access to Riverpark Trading Estate and Philip's Park Cemetery.
- 11.58 The road is mostly c. 14.5m to 15.5m wide, comprising a c. 3m southern footway, a c. 9.5m carriageway (4.75m for each lane) and a c. 2.5m northern footway.
- 11.59 Along the road, there are four vehicular accesses into Riverpark Trading Estate and two into Philip's Park Cemetery. The road widens in the vicinity of the western entrance to the cemetery, with a maximum width of c. 19.5m.
- 11.60 The carriageway of Riverpark Road widens significantly at both junctions. At its widest point, Riverpark Road is c. 35m wide at the junction with Briscoe Lane, and c. 80m wide at the junction with Ten Acres Lane. The carriageway does not narrow to less than c. 15m wide until it is c. 60m west from the junction with Ten Acres Lane.
- 11.61 There is an uncontrolled crossing with dropped kerbs, tactile paving, and a refuse island on Riverpark Road at the Riverpark Road / Briscoe Lane junction. There is no crossing across either of the Briscoe Lane arms.
- 11.62 There are no pedestrian crossings at the Riverpark Road / Ten Acres Lane junction. It would take a pedestrian approximately a minute to cross the carriageway at its widest point (at a typical walking speed of 80m per minute), or approximately two minutes to divert to where the carriageway narrows to less than 15m wide (a c. 160m journey).

- 11.63 Ten Acres Lane bends to the east immediately north of the junction, limiting visibility for pedestrians crossing Riverpark Road from the south.
- 11.64 Double yellow line markings are present in the immediate vicinity of the Riverpark Road / Briscoe Lane junction. As part of the Eastland Residents Parking Scheme, there are marked parking bays along the southern side of the road, with the restrictions stated to be “Midday – 11pm; permit holders or 90mins; No return within 4 hours”.
- 11.65 The road is subject to a speed limit of 20mph.

Ten Acres Lane / Bank Bridge Road

- 11.66 Ten Acres Lane / Bank Bridge Road connects the Site to A62 Oldham Road to the north, and A662 Ashton New Road to the south, running through Phillips Park / Clayton Vale and a couple residential areas.
- 11.67 There is a single lane of traffic in each direction. Similar to Riverpark Road, Ten Acres Lane widens significantly at two tight bends (to over 20m wide in the vicinity of the junction with Riverpark Road, and c. 14m wide to the north of the railway line). This is likely to provide access for large HGVs to the trading estate.
- 11.68 On the eastern side of the road at the junction with Riverpark Road there is 14-space free car park and walking / bike trail. There is not, however, currently a suitably safe way for those heading to / from the west to cross Ten Acres Lane.
- 11.69 There are continuous footways along both sides of the road. The road is subject to a speed limit of 20mph.

Briscoe Lane

- 11.70 Briscoe Lane, which is subject to a speed limit of 20mph. connects the Site to A6010 Hulme Hall Lane / Alan Turing Way.
- 11.71 There are several bus stops along the road.
- 11.72 There are signalised pedestrian crossings complete with dropped kerbs and tactile paving across the Briscoe Lane and Alan Turing Way arms of the Briscoe Lane / Hulme Hall Lane / Alan Turing Way junction.

Eastlands Residents Parking Scheme

- 11.73 Manchester City Council introduced the Eastlands residents parking scheme in early 2024, ahead of the opening of the Co-op Live. This replaced several schemes surrounding the Etihad Campus with a larger, unified geographical area and extended restrictions to all days (rather than being limited to matchdays).
- 11.74 Riverpark Road, Briscoe Lane, and Ten Acres Lane fall within the scheme area.
- 11.75 The Eastlands resident parking scheme operates between 12:00 and 23:00 every day to ensure residents and their visitors can park close to their property while still permitting short-stay parking (up to 90-minutes) for visitors to the many shops and businesses in the area. There is no restriction on the duration of parking for permit holders.
- 11.76 Residents can apply for a free permit for each vehicle registered to their home. They can also apply for a separate permit that allows visiting vehicles to park. Businesses and business owners can also apply for free permits to parking within marked areas on street.

Highway Safety

- 11.77 Collision data for the highway network adjacent to the Site has been obtained from the TfGM reported road incidents database for the most recent 60 months. A breakdown of the information is contained in **Table 11.5**:

Junction/Link	Slight	Serious	Fatal	Totals
Briscoe Lane / Ten Acres Lane	2	0	0	2
Ten Acres Lane, north of railway line	1	0	0	1
Bank Bridge Road, south of junction with Riverpark Road	0	1	0	1
Briscoe Lane / Alan Turing Way	7	0	0	7
Briscoe Lane, between Alan Turing Way and Riverpark Road	0	1	0	1
Briscoe Lane / Riverpark Road	1	0	0	1
Briscoe Lane / Grimshaw Lane	2	0	0	2
Total	13	2	0	15

^ Table 11.5 – Collision Data Summary

- 11.78 There has been a total of 15 collisions in the latest five-year period available, 13 of which were 'slight' severity incidents and two of which were 'serious' severity incidents. No fatal incidents have been recorded in the study area and period.
- 11.79 No significant correlations have been identified to suggest that highway condition, layout or design were significant contributory factors in any of the collisions. It is not considered that there is an existing safety issue that is likely to be exacerbated by the Proposed Development.

Traffic Flows

- 11.80 Traffic surveys were undertaken on Thursday 27th June 2024. At this time, some units at Riverpark Trading Estate (the Site) remained in use, but usage of the facility was winding down with various leases having ceased (and some tenants likely to have vacated in advance of the expiration of their lease).

11.81 **Table 11.6** below presents the Observed and Base³² AADT flows for each link in the study area, with the High sensitivity links marked with an asterisk:

Junction	Link	Observed		Base	
		Vehicle	HDV	Vehicle	HDV
Junction 1 – Riverpark Road / Briscoe Lane	Briscoe Lane (East)	16999	498	16928	498
	Riverpark Road	2649	107	2288	89
	Briscoe Lane (West)	18871	551	18579	533
Junction 2 – Ten Acres Lane / Riverpark Road	Car Park Access	332	9	332	9
	Bank Bridge Road	10435	169	10310	160
	Riverpark Road	2543	71	2406	62
	Ten Acres Lane	8422	89	8409	89
Junction 3 – Alan Turing Way / Briscoe Lane	Briscoe Lane	19231	604	18940	587
	Alan Turing Way	31475	1191	31311	1173
	Hulme Hall Lane	28734	1315	28606	1315
Junction 4 – Briscoe Lane / Ten Acres Lane	Briscoe Lane (East)*	13834	382	13780	382
	Ten Acres Lane (South)	6924	89	6912	89
	Briscoe Lane (West)	17416	489	17345	489
	Ten Acres Lane (North)	10096	213	10067	213
Junction 5 – Alan Turing Way / Gibbon Street	Gibbon Street (East)	10040	80	10018	80
	Alan Turing Way (South)	33453	1227	33311	1209
	Gibbon Street (West)	396	27	395	27
	Alan Turing Way (North)	31164	1191	31000	1173
Junction 6 – Alan Turing Way / Ashton New Road	Ashton New Road (East)	24346	1360	24334	1360
	Alan Turing Way (South)*	39374	1404	39303	1386
	Ashton New Road (West)*	24841	907	24828	907
	Alan Turing Way (North)*	33418	1227	33321	1209

^ Table 11.6 – Observed and Base AADT Flows

³² Base = observed flows – flows associated with remaining units

Identification and Evaluation of Significant Effects

Construction Phase

- 11.82 The construction of the Proposed Development will result in a temporary increase of HGVs and cars carrying construction workers and materials on roads surrounding the Site. This has potential impacts in relation to noise, air, dust, and dirt which are considered elsewhere within the wider ES.
- 11.83 This does not include demolition of the Trading Estate which is ongoing.
- 11.84 The volume of construction traffic has not been determined in detail at this stage but based on previous experience it is not expected to represent a significant increase in traffic, and additional flows on any existing links would be below the lowest 10% increase in traffic above the baseline set out in the IEMA assessment threshold rules.
- 11.85 This traffic is likely to occur outside the highway network peak hours.
- 11.86 As the impact is considered to be less than 10%, no further assessment is necessary, and the impact would be negligible, which is not significant in EIA terms.
- 11.87 There may be some overlap between the construction phase and operational phase. This overlap would be temporary in nature and professional judgement indicates that the overall traffic volumes will be less than that of the fully operational scenario.

Operational Phase

- 11.88 **Table 11.7** below provides the 'Base + Proposed' AADT flows, along with the percentage change from the Base AADT flows:

Junction	Link	Base + Proposed		Percentage Change from Base	
		Vehicles	HDV	Vehicles	HDV
Junction 1 – Riverpark Road / Briscoe Lane	Briscoe Lane (East)	17243	498	1.9%	0.0%
	Riverpark Road	3478	89	52.0%	0.0%
	Briscoe Lane (West)	19455	533	4.7%	0.0%
Junction 2 – Ten Acres Lane / Riverpark Road	Car Park Access	332	9	0.0%	0.0%
	Bank Bridge Road	10435	160	1.2%	0.0%
	Riverpark Road	2669	62	10.9%	0.0%
	Ten Acres Lane	8548	89	1.6%	0.0%
Junction 3 – Alan Turing Way / Briscoe Lane	Briscoe Lane	19816	587	4.6%	0.0%
	Alan Turing Way	31845	1173	1.7%	0.0%
	Hulme Hall Lane	28948	1315	1.2%	0.0%
Junction 4 – Briscoe Lane / Ten Acres Lane	Briscoe Lane (East)*	13960	382	1.3%	0.0%
	Ten Acres Lane (South)	6994	89	1.2%	0.0%

Junction	Link	Base + Proposed		Percentage Change from Base	
		Vehicles	HDV	Vehicles	HDV
	Briscoe Lane (West)	17664	489	1.8%	0.0%
	Ten Acres Lane (North)	10288	213	2.2%	0.0%
Junction 5 – Alan Turing Way / Gibbon Street	Gibbon Street (East)	10018	80	0.0%	0.0%
	Alan Turing Way (South)	33845	1209	1.6%	0.0%
	Gibbon Street (West)	395	27	0.0%	0.0%
	Alan Turing Way (North)	31534	1173	1.7%	0.0%
Junction 6 – Alan Turing Way / Ashton New Road	Ashton New Road (East)	24334	1360	0.0%	0.0%
	Alan Turing Way (South)*	39786	1386	1.2%	0.0%
	Ashton New Road (West)*	24879	907	0.2%	0.0%
	Alan Turing Way (North)*	33855	1209	1.6%	0.0%

^ Table 11.7 – Base – Consented + Proposed AADT and Percentage Impact

- 11.89 As demonstrated above, the Proposed Development could result in general traffic along Riverpark Road increasing from the baseline by 52% at Junction 1 (with Briscoe Lane) and by 11% at Junction 1 (with Ten Acres Lane). The increase would be less than 5% at all other links.
- 11.90 Hence, Paragraph 2.18 of the IEMA Guidance states in part that:
- “Traffic forecasting is not an exact science, and the accuracy of projections is open to debate. It is generally accepted that accuracies greater than 10% are not achievable. It should also be noted that the day-to-day variation of traffic on a road is frequently at least + or -10%. At a basic level, it should therefore be assumed that projected changes in traffic of less than 10% create no discernible environmental impact.”*
- 11.91 As such, Riverpark Road on Junction 1 is the only link where the Proposed Development would have a discernible impact, with the change in traffic being negligible for all other links.
- 11.92 Neither Rules 1 or 2 are met for any links, except Riverpark Road on Junction 1, and it is not necessary to consider these links further.
- 11.93 In all scenarios, the traffic flows on the Riverpark Road arm of Junction 1 are very low³³, resulting in any change to traffic flows appearing large when expressed in terms of percentages. In this case, 84% of development traffic uses this link.

³³ Flows are the third lowest on all links in the Base scenario and fourth lowest in the Base + Proposed scenario (out of 22 links). Traffic is less than a quarter of 16 links in the Base scenario and 13 links in the Base + Proposed scenario

- 11.94 As detailed by the accompanying TA, this link is expected to continue operating well with capacity following construction of the Proposed Development (noting that that assessment includes committed / cumulative development which are more onerous for junction modelling and considered later in this ES).
- 11.95 For robustness, the Environmental Impact Assessment has been undertaken on the basis of the Site having no active use and attracting no trips. This does not, however, fully reflect the baseline position as the Site has a lawful employment use and could generate associated trips, most of which would use the Riverpark Road arm of Junction 1. This can be expected to lower the percentage impact below the 30% threshold.
- 11.96 As a worst-case, the required assessments have been undertaken for the Riverpark Road link on Junction 1. For clarity, Riverpark Road is noted to be a low sensitive receptor.

Severance and Pedestrian Delay

- 11.97 As detailed by Table 11.7, the total traffic flows on the link are expected to rise by 52%, while there would be no change to HGV flows.
- 11.98 As such, the magnitude of impact on severance is Minor (30-60%), which is a Negligible/Minor Adverse effect. This is not significant in EIA terms.

Driver Delay

- 11.99 The performance of Junction 1 has been modelled without and with the Proposed Development using PICADY 9, with the results summarised below:

Movement	AM			PM		
	Queue (PCU)	Delay (s)	RFC	Queue (PCU)	Delay (s)	RFC
Base						
Riverpark Rd-Briscoe Ln (W)	0.3	9.00	0.20	0.1	6.40	0.06
Riverpark Rd-Briscoe Ln (E)	0.1	16.56	0.04	0.0	14.77	0.03
Briscoe Ln (W)-Riverpark Rd & Briscoe Ln (E)	0.3	5.70	0.11	1.7	6.05	0.42
Base + Proposed Development						
Riverpark Rd-Briscoe Ln (W)	0.5	11.28	0.32	0.1	6.94	0.10
Riverpark Rd-Briscoe Ln (E)	0.2	18.61	0.16	0.1	15.77	0.07
Briscoe Ln (W)-Riverpark Rd & Briscoe Ln (E)	0.4	5.89	0.14	2.8	8.28	0.57
Change						
Riverpark Rd-Briscoe Ln (W)	+0.2	+2.28	+0.12	0	+0.54	+0.04
Riverpark Rd-Briscoe Ln (E)	+0.1	+2.05	+0.12	+0.1	+1.00	+0.04
Briscoe Ln (W)-Riverpark Rd & Briscoe Ln (E)	+0.1	+0.19	+0.03	+1.1	+2.23	+0.15

^ Table 11.8 – Summary of Junction Performance

- 11.100 Both without and with the Proposed Development, all arms of the junction would remain well within capacity.
- 11.101 The maximum queue would increase from two to three PCUs following the addition of traffic from the Proposed Development. Similarly delay will increase by a maximum of two seconds on some arms; in the Base + Proposed Development scenario the maximum delay would be 18 seconds.
- 11.102 These changes would be imperceptible to road users, especially given the change will build up over a period of several years whilst construction and occupation of the Proposed Development progresses, and this change is within the daily fluctuations in traffic levels.
- 11.103 As such, the magnitude of impact on driver delay would be Negligible, which is a Negligible/Minor Adverse effect. This is not significant in EIA terms.

Non-Motorised User Amenities

- 11.104 As per Table 11.3, the over 50% increase in traffic flows would equate to a Major impact on non-motorised user amenities.
- 11.105 This would equate to a which is a Minor/Moderate Adverse effect. This is not significant in EIA terms.
- 11.106 However, this considers the removal of existing trips from the existing use and is therefore a worst-case scenario.

Fear and Intimidation

- 11.107 **Table 11.8** below summarises the assessment for fear and intimidation:

	Average Hourly AAWT Flow	Total Heavy AAWT Flow	Speed Limit
Existing Value	113	79	20
Existing Degree of Hazard Score	0	0	0
Proposed Value	172	79	20
Proposed Degree of Hazard Score	0	0	0

[^] Table 11.8 – Existing and Proposed Fear and intimidation

- 11.108 In the lack of data on average vehicle speeds, the speed limit has been used.
- 11.109 Based on this assessment, there would be no change in the degree of hazard for fear and intimidation, which is and would be 0 or 'small'. As such, the magnitude of impact would be Negligible, which is a Negligible/Minor Adverse effect. This is not significant in EIA terms.

Road Safety

- 11.110 As demonstrated in Section 2 of the TA, there have been no collisions recorded along Riverpark Road in the latest five-year period.
- 11.111 The signalised crossings across Riverpark Road and cycle lane would improve safety for vulnerable road users and reduce the risk of collisions. As such, it is considered that the Proposed Development would have a Minor Positive impact on road safety on Riverpark Road, which is a Negligible/Minor Benefit effect. This is not significant in EIA terms.
- 11.112 Therefore, there would be no significant effects with regard to Traffic and Transport in EIA terms for the Proposed Development.

Mitigation Measures

- 11.113 Where feasible at this stage, measures have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset significant environmental effects. Where this has not been possible, further mitigation measures have been proposed.

Construction Phase

- 11.114 As detailed above, there will be no significant effects from the construction phase of the Proposed Development. No specific mitigation measures are therefore proposed except for a Construction Environmental Management Plan (CEMP) which will ensure that any disruption caused during the construction phase of the Development will be minimised.
- 11.115 MCC Highways has requested the CEMP is conditioned with any planning approval, and includes the following:
- The duration/phasing of construction works and associated vehicle trips;
 - Routing of construction traffic and associated swept-path assessment;
 - Details of the location and arrangements for contractor parking;
 - The identification of the vehicular access points into the Site;
 - Traffic Management measures for vehicles, pedestrians and cyclists;
 - Manage and coordinate construction activities with reference to ongoing/imminent construction works in the locality;
 - Identify measures to control dust and mud including on the surrounding public highway including details of how the wheels of contractor's vehicles are to be cleaned during the construction period;
 - The details of an emergency telephone contact number for the site contractor to be displayed in a publicly accessible location; and
 - Highway dilapidation survey including photographs and commentary on the condition of carriageway/footways on construction vehicle routes surrounding the Site.

Operational Phase

- 11.116 As detailed above, there will be no significant effects from the operational phase of the Proposed Development, so no further mitigation measures are necessary.
- 11.117 Notwithstanding this, two signalised crossings will be provided across Riverpark Road, along with a cycle lane. Whilst not required as formal mitigation to address any significant effects, the signalised crossings will make it easier for pedestrians to cross at key points on the road.
- 11.118 Whilst it does not form part of the mitigation in respect of the Environmental Statement, a detailed Full Travel Plan will also be prepared and implemented for the Proposed Development (in line with the Interim Travel Plan), which will include the distribution of travel surveys to be completed by prospective residents and include targeted measures for promoting sustainable travel to/from the Site and reduce the reliance on private car travel.

Cumulative Effects

11.119 The IEMA Guidance states at paragraph 2.29 that “discrete projects within the agreed study area that are existing, approved or likely to come forward (where sufficient certainty and relevant information about the project exists) should not be added to the baseline scenario and should be considered in the cumulative scenario.”

11.120 The impact of any completed schemes will have been captured by the traffic surveys.

11.121 During the initial pre-application scoping meeting, MCC Highways identified the following for further consideration as part of the TA:

- Jackson’s Brickworks (ref. 133700/FO/2022); and
- Manox Development (ref: 125596/FO/2019); and
- Central Park Bus Depot

11.122 Separately to this, Euan Kellie proposed to MCC Planning that the following be considered as part of the cumulative assessment for the Environmental Impact Assessment:

- Former Mather & Platt Foundry (ref. 135454/JO/2022).

11.123 In response, MCC Planning queried whether the Site is close enough to be impact upon by the extension to the North stand at the Etihad Stadium.

11.124 Transport for Greater Manchester plan to create a hub for the electric bus fleet on a 13-acre plot of land purchased from Manchester City Council in 2023. At the time of writing no planning application has been submitted, nor has the exact site location been revealed, so the Central Park Bus Depot has not been included as a committed development.

11.125 MCC’s EIA Scoping Opinion requested planning permissions at NOMA (ref. 134307/FO/2022) and Victoria North (ref. 136814/FO/2023) also be considered. A review of the approved Transport Assessments has revealed that neither would have a discernible impact on the study area.

11.126 Following a review of the approved Transport Assessments for the remaining developments, it was shown that the other cumulative developments would generate sufficient two-way trips in the AM and PM peak hours (except the North Stand which includes trip generation in the PM peak only) to impact upon the study area.

11.127 **Table 11.9** below provides the ‘Base + Proposed + Cumulative’ AADT flows, along with the percentage change from the Base AADT flows:

Junction	Link	Base + Proposed + Cumulative		Percentage Change from Base	
		Vehicles	HDV	Vehicles	HDV
Junction 1 – Riverpark Road / Briscoe Lane	Briscoe Lane (East)	20337	498	20.1%	0.0%
	Riverpark Road	3478	89	52.0%	0.0%
	Briscoe Lane (West)	22550	533	21.4%	0.0%
Junction 2 – Ten Acres Lane / Riverpark Road	Car Park Access	332	9	0.0%	0.0%
	Bank Bridge Road	11905	160	15.5%	0.0%

Junction	Link	Base + Proposed + Cumulative		Percentage Change from Base	
		Vehicles	HDV	Vehicles	HDV
	Riverpark Road	2669	62	10.9%	0.0%
	Ten Acres Lane	10017	89	19.1%	0.0%
Junction 3 – Alan Turing Way / Briscoe Lane	Briscoe Lane	22924	587	21.0%	0.0%
	Alan Turing Way	35555	1173	13.6%	0.0%
	Hulme Hall Lane	29605	1315	3.5%	0.0%
Junction 4 – Briscoe Lane / Ten Acres Lane	Briscoe Lane (East)*	15006	382	8.9%	0.0%
	Ten Acres Lane (South)	8463	89	22.5%	0.0%
	Briscoe Lane (West)	20759	489	19.7%	0.0%
	Ten Acres Lane (North)	14245	213	41.5%	0.0%
Junction 5 – Alan Turing Way / Gibbon Street	Gibbon Street (East)	10365	80	3.5%	0.0%
	Alan Turing Way (South)	37885	1209	13.7%	0.0%
	Gibbon Street (West)	1696	27	329.4%	0.0%
	Alan Turing Way (North)	35540	1173	14.6%	0.0%
Junction 6 – Alan Turing Way / Ashton New Road	Ashton New Road (East)	24813	1360	2.0%	0.0%
	Alan Turing Way (South)*	42866	1386	9.1%	0.0%
	Ashton New Road (West)*	25380	907	2.2%	0.0%
	Alan Turing Way (North)*	37916	1209	13.8%	0.0%

^ Table 11.9 – Cumulative Impact Assessment

- 11.128 As with the main assessment, HDV traffic would not increase from the baseline for any links.
- 11.129 In terms of total traffic, by far the greatest percentage change from the baseline flows in the cumulative assessment is on Gibbon Street (West) where traffic would rise by 329% from 395 vehicles to 1,696. In both the baseline and cumulative assessment flows, this is the second lowest level of flows among all links. The increase in flows is primarily related to the North Stand.
- 11.130 The North Stand would generate c. 183 two-way vehicular trips along Gibbon Street (West) between 17:00 and 18:00, and none in the AM peak hour. As with all other flows, the factor has been applied to convert the AM and PM peak hours flows to AADT. Due to the nature of the North Stand development, it is unlikely, in practice, that many trips would be generated outside of the couple hours before and after football matches / events, so this assessment is a robust worst-case scenario.
- 11.131 Aside from Gibbon Street (West), the change in traffic flows from the baseline would be between +40.4% and -12.5% for the cumulative assessment.

11.132 As started in the Scoping Report, no further consideration will be undertaken of the assessment categories, regardless of whether the IEMA's thresholds are met. The Environmental Statements for each of the cumulative developments will have considered in detail their impact and identified any necessary mitigation.

11.133 Notwithstanding this, the IEMA thresholds would be met for the following links in the cumulative assessment:

- Riverpark Road on Junction 1
- Ten Acres Lane (North) on Junction 4
- Gibbon Street (West) on Junction 5
- Alan Turing Way (North) on Junction 6

11.134 There would be no significant cumulative effects with regard to Traffic and Transport in EIA terms for the Proposed Development.

Residual Effects

11.135 As detailed earlier in this Chapter, there would be no significant effects with respect to Traffic and Transport during the construction or operational phases of the Proposed Development, and no specific mitigation measures are proposed aside from a CEMP and embedded design features. As such, there would be no significant residual effects.

12. Wind Microclimate

Introduction

- 12.1 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.
- 12.2 This chapter of the ES has been prepared by Alex Turpitt MEng CEng MIMechE and Dr Robin Stanfield.
- 12.3 Alex has an MEng (Hons) in Aerospace Engineering and has specialised in wind engineering for 16 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 project worldwide including tall buildings, stadia, masterplan developments and special structures. Alex has also led wind microclimate studies for 100+ EIA projects throughout the UK.
- 12.4 Robin has a BEng (Hons) in Aeronautical Engineering, MSc in Aerospace Dynamics and Engineering Doctorate. Robin specialises in aerodynamics via both wind tunnel testing and CFD. Since 2008, Robin has consulted on hundreds of structures as an Engineer, Project Manager, and Head of Wind Engineering for an international engineering consultancy before becoming a Director of ArcAero in 2019. These include 'The Scalpel' and Manhattan Loft Gardens, both in London, the 2012 Olympic Masterplan, Mercedes-Benz Stadium in Atlanta, the National Museum of Qatar and latterly, the Wuhan CTF Finance Center, an 84-storey supertall tower in China. Robin has also led wind microclimate studies for 100+ EIA projects throughout the UK.

Legislative and Policy Context

Legislation

- 12.5 There is currently no legislation specifically relating to the assessment of environmental wind flows in the built environment.

National Planning Policy

National Planning Policy Framework (NPPF) (2023)

- 12.6 The National Planning Policy Framework (NPPF)³⁴ was revised in December 2023 by the Department of Levelling Up, Housing and Communities (DLUHC).

³⁴ National Planning Policy Framework, Department for Levelling Up, Housing & Communities, 2023

- 12.7 There are no policies or statements that are directly related to microclimate in terms of pedestrian comfort; however, paragraph 130 states that:

“Planning policies and decisions should ensure that developments:

...

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.”

Planning Practice Guidance, 2024

- 12.8 The national Planning Practice Guidance (PPG)³⁵ states, under ‘Consider form’, that:

“Some forms pose specific design challenges, for example how taller buildings meet the ground and how they affect local wind and sunlight patterns should be carefully considered.”

- 12.9 The PPG states, under ‘Consider scale’, that:

“Account should be taken of local climatic conditions, including daylight and sunlight, wind, temperature and frost pockets.”

National Design Guide, 2021

- 12.10 Policy 41 of the National Design Guide³⁶ 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.”

- 12.11 Policy 71 of the National Design Guidance 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

Manchester's Local Development Framework, Core Strategy Development Plan Document

- 12.12 Manchester's Local Development Framework, Core Strategy Development Plan Document, Policy EN 2 relates to Tall Buildings³⁷, Paragraph 12.4 supporting these 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.”

³⁵ Planning Practice Guidance, 2024, DLUHC and Ministry of Housing, Communities & Local Government, 2024

³⁶ National Design Guide, Planning practice guidance for beautiful, enduring and successful places, Ministry of Housing, Communities & Local Government, 2021

³⁷ Manchester's Local Development Framework Core Strategy Development Plan Document, Manchester City Council, 2012

Assessment Methodology and Significance Criteria

Determination of Baseline

- 12.13 The baseline is determined to be the microclimate at the existing Site, within the existing surrounding context. The existing surrounding context is considered to consist of predominantly low to medium-rise buildings. Due to the size of the Site itself, the assessment considers the study area to comprise the Site plus building and spaces within a radius of 600 metres (m) from the centre of the Site, as this is considered to be a sufficient level of detail to capture relevant wind effects. For a development of this scale, this allows for approximately 600 m of the surrounding area to be modelled, including relevant cumulative developments.

Prediction Methodology

- 12.14 Computational fluid dynamics (CFD) modelling has employed a steady-state 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 of this approach are provided within **Appendix 12.1**.
- 12.15 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. This assessment further considers the cumulative impact following the introduction of cumulative developments within the surrounding area. The lists of cumulative development are listed within the section 12.57 up till 12.59.
- 12.16 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.
- 12.17 A 3D digital model of the Site and surrounds has been assessed to determine wind conditions within three configurations:
- 12.17.1 Configuration 1: Existing Site within existing surrounds;
 - 12.17.2 Configuration 2: Proposed Development within existing surrounds; and
 - 12.17.3 Configuration 3: Proposed Development within cumulative surrounds.
- 12.18 Following the quantitative assessment of Configuration 1: Existing Site within existing surrounds, the baseline scenario for the assessment comprises a cleared site, that presumes existing buildings are demolished. A qualitative appraisal of the cleared site is provided between Paragraph 1.39 and Paragraph 1.43.

Site Wind Climate

- 12.19 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.

- 12.20 The wind speed history, 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.

Lawson Comfort Criteria

- 12.21 The industry standard criteria for wind microclimate assessments are commonly referred to in the UK as the Lawson Comfort Criteria³⁸, after one of their main authors. As with most other leading practitioners undertaking wind microclimate assessments, the London Docklands Development Corporation ('LDDC') variant of the Lawson Comfort Criteria has been used in this assessment.
- 12.22 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.
- 12.23 A wind speed of 15m/s occurring once per year is rated as unsuitable, in terms of safety, with the potential to destabilise the less able members of the public including the elderly, cyclists and children.
- 12.24 The LDDC variant of the Lawson Comfort 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.
- 12.25 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 Criteria threshold wind speed values are presented in Error! Reference source not found..

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 standing / 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.
>10	C0	Uncomfortable	Uncomfortable for all uses

[^] Table 12.1 Lawson Comfort Criteria

³⁸ The determination of the wind environment of a building complex before construction. Lawson, T.V., University of Bristol, Department of Aeronautical Engineering, 1990

- 12.26 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 Error! Reference source not found..

Suitability	Lawson Comfort Criteria
For passage in areas where tolerance of less comfortable windy conditions is expected, e.g. in substantially built-up areas of commerce where transit from A to B is often prompt, with pedestrians unlikely to linger.	Walking in all seasons.
For access to and passage through the development and surrounding area.	Strolling in all seasons.
For leisure uses such as a park, children's play area, etc.	Standing or short-term sitting from spring to autumn.
For pedestrian ingress/egress at a building entrance, or short periods of sitting or standing such as at a bus stop, taxi rank, meeting point, etc.	Standing or short-term sitting in all seasons.
For long periods of sitting such as for an outdoor café.	Long-term sitting in summer.

^ Table 12.2 Suitability Assessment

Assessment Criteria

Receptors and Receptor Sensitivity

- 12.27 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. All receptors are considered to be of medium sensitivity to the local wind microclimate conditions and are given an equal weighting.
- 12.28 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. All receptors are equally sensitive to the presence or absence of an acceptable wind microclimate. 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.
- 12.29 Error! Reference source not found. provides a summary of the sensitivity of receptors.

Sensitivity of Receptor	Receptor Type
High	Pedestrians within the Site following completion and any users of the surrounding area.
Medium	Construction workers and other Site operatives during construction of the Proposed Development.
Low	N/A.

^ Table 12.3 – Sensitivity of Receptors

Magnitude of Impact

- 12.30 The magnitude of impact 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.
- 12.31 **Error! Reference source not found.** provides a summary of the magnitude of impacts.

Magnitude of Impact	Description
High	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.
Medium	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.
Low	The comfort criteria are marginally exceeded, to the extent that the exceedance is expected to be perceptible, but tolerable.
Negligible	The comfort criteria are met, and any effect does not alter the suitability of existing wind conditions with respect to planned activities

^ Table 12.4 - Magnitude of Impacts

Level of Effect

- 12.32 The predicted level of effect is based upon the consideration of magnitude of impact and sensitivity of the resource/receptor, as shown in Error! Reference source not found..

Magnitude of Impact	Sensitivity or value		
	High	Medium	Low
High	Major	Major	Moderate
Medium	Major	Moderate	Minor
Low	Moderate	Minor	Minor
Negligible	Negligible	Negligible	Negligible

^ Table 12.5 - Level of Effect matrix

- 12.33 On this basis, therefore, exceedances of the safety criteria are considered to be of high magnitude, while exceedances of the comfort criteria are considered to be of medium or low 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.

12.34 The following are the significance criteria used to assess likely wind conditions as a result of the introduction of the Proposed Development and are applicable to wind conditions both on and off-site:

- **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; and
- **Major Adverse:** Any effect on wind conditions adversely affecting pedestrian safety, namely a deterioration in conditions from being considered safe to being considered unsafe.

Categorising Likely Significant Effects

12.35 Major and moderate effects are considered to be significant. Minor effects, as noted above as being tolerable, are not considered to be significant. These effects are applicable both on-site and off-site.

Assumptions and Limitations

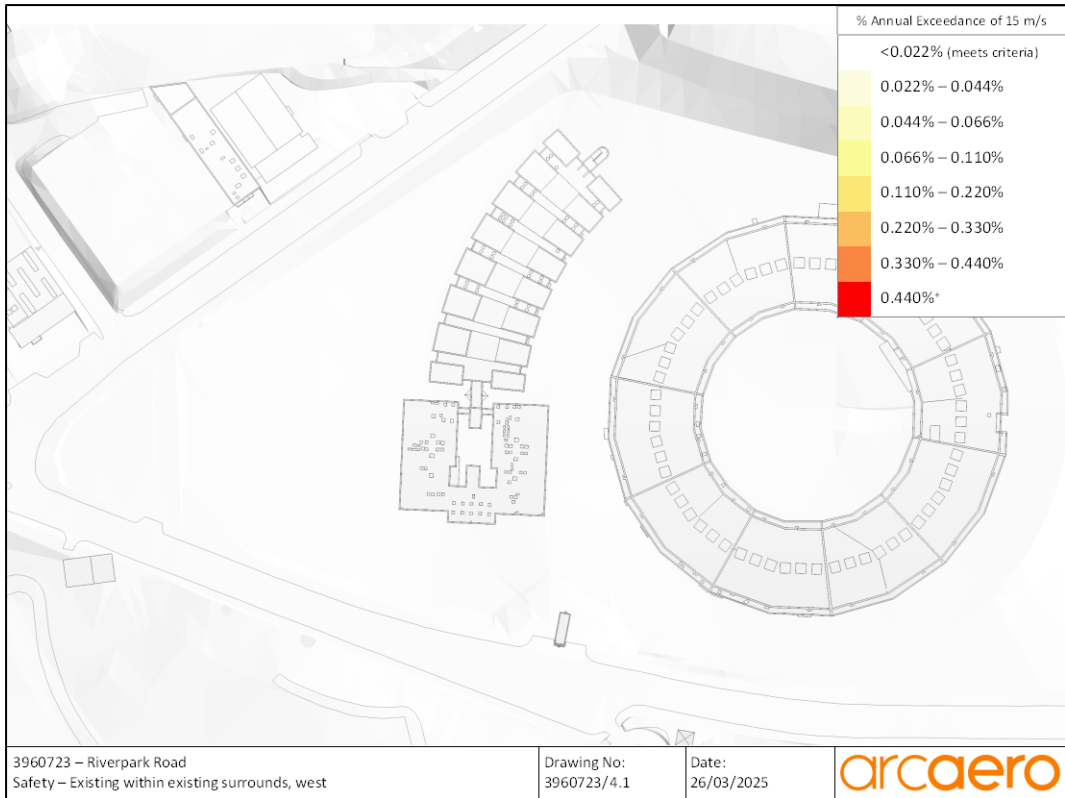
12.36 The assessment has been carried out using CFD methods. The particular method adopted employs turbulence models to approximate the magnitude of velocity fluctuations about the average wind speeds predicted, in order to derive an estimation of the effect of gusts. ArcAero conducts regular validation of proprietary CFD processes against experimental results.

Baseline Conditions

Configuration 1: Existing Site within existing surrounds

12.37 The results for the existing site, prior to the demolition of existing buildings, are presented graphically within **Error! Reference source not found.** and **Error! Reference source not found.** for safety, ^ **Figure 12.2** Existing Site within existing surroundings, Annual Safety, east

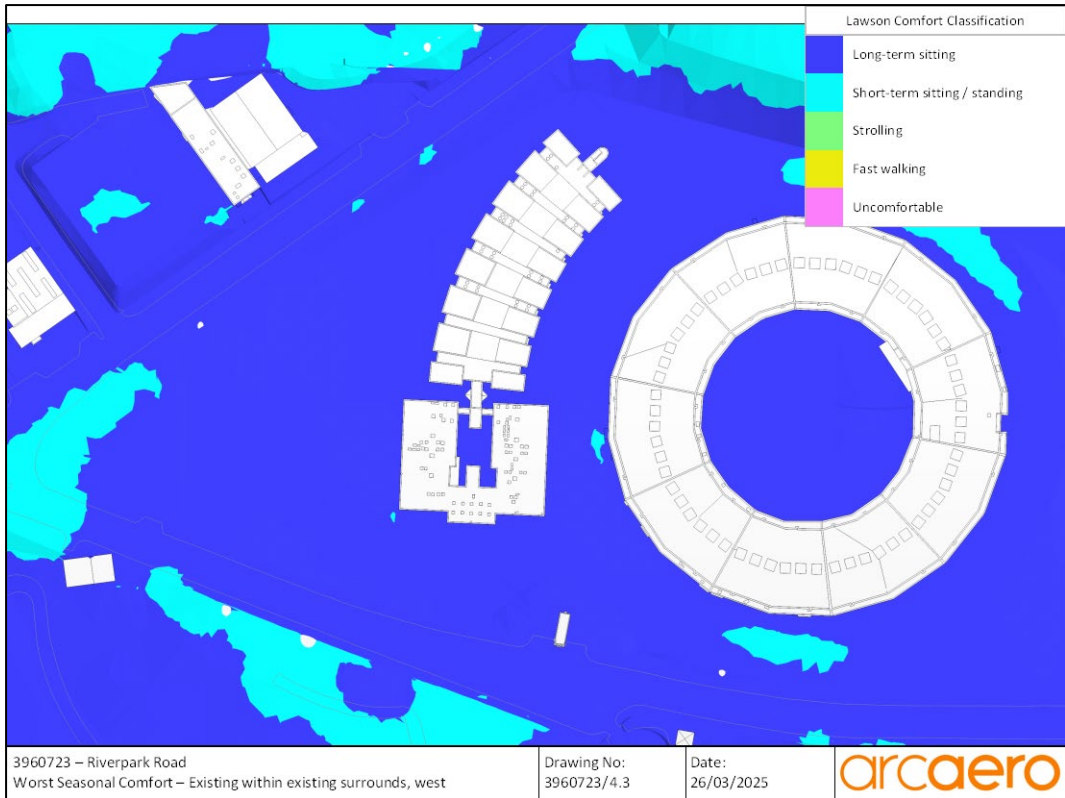
12.38 and **Error! Reference source not found.** for worst-seasonal conditions and ^ **Figure 12.1** and **Error! Reference source not found.** for summer conditions respectively.



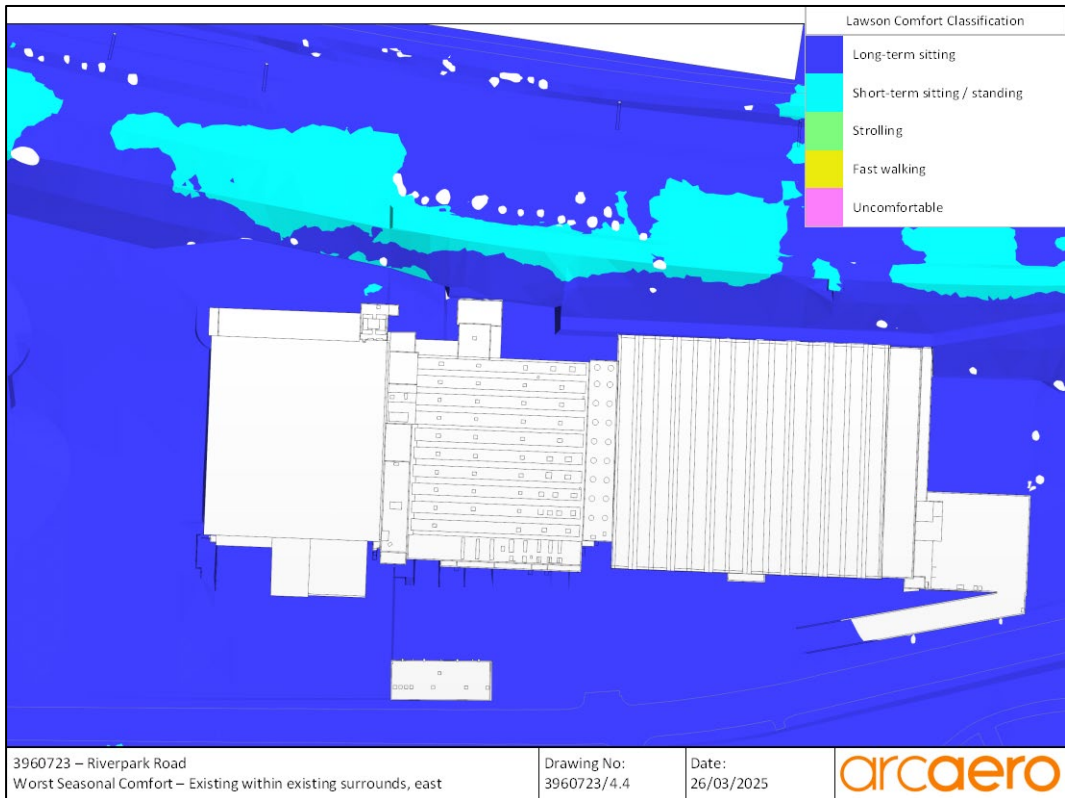
^ Figure 12.1: Existing Site within existing surroundings, Annual Safety, west



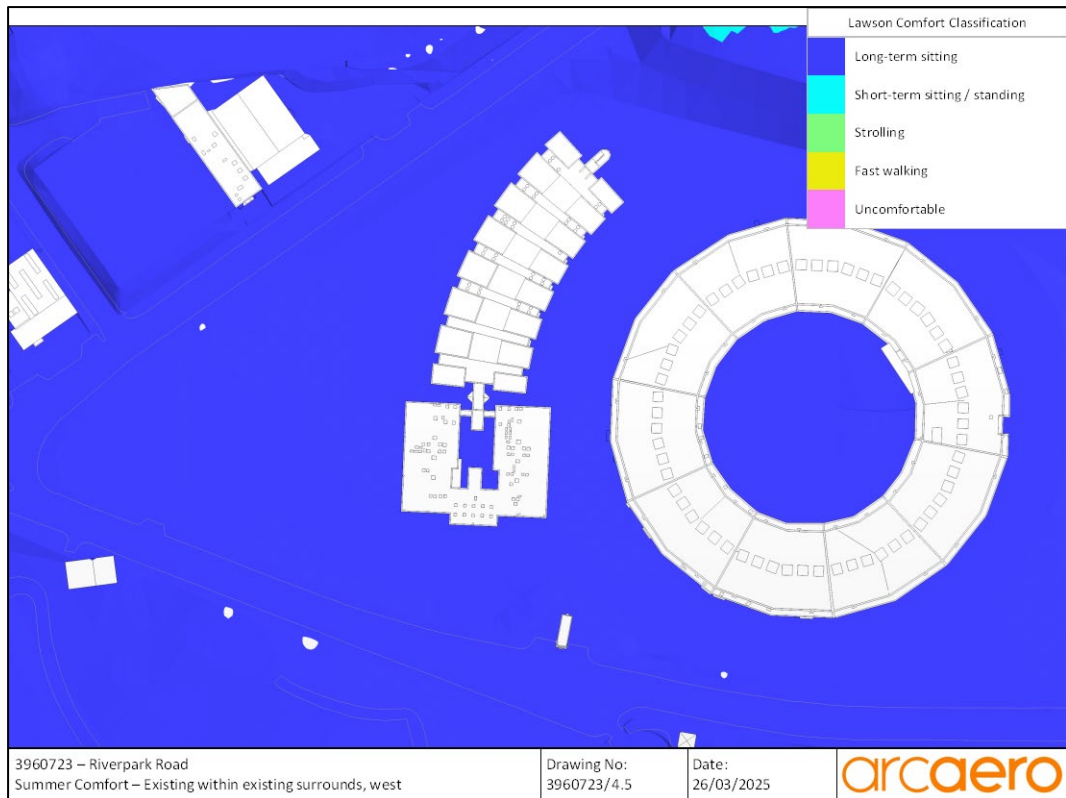
^ Figure 12.2 Existing Site within existing surroundings, Annual Safety, east



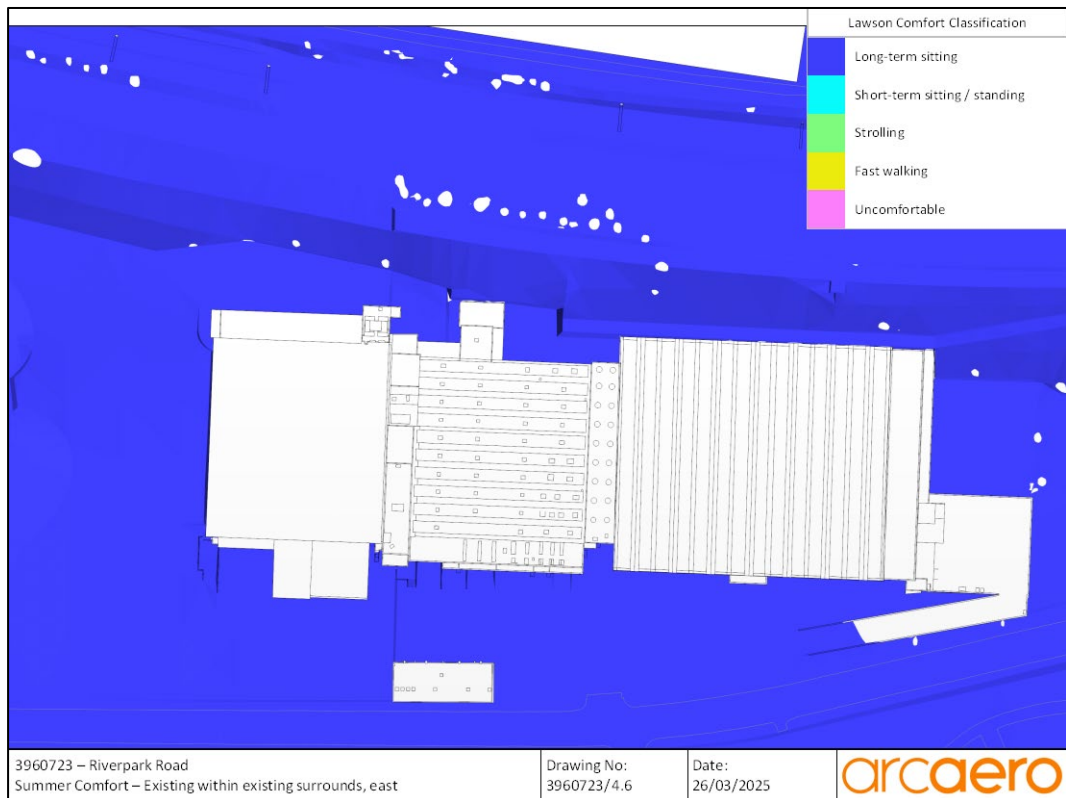
^ Figure 12.3: Existing Site within existing surroundings, Worst Case Season, west



^ Figure 12.4: Existing Site within existing surroundings, Worst Case Season, east



^ Figure 12.1: Existing Site within existing surroundings, Summer Season, west



^ Figure 12.6 Existing Site within existing surroundings, Summer Season, east

12.39 Wind conditions within the existing Site and immediate surrounds meet the Lawson safety criteria.

- 12.40 Wind conditions on thoroughfares within the existing Site are predicted to be suitable for short-term sitting / standing or better and thus for comfortable pedestrian access to and passage through the Site.
- 12.41 At existing building entrances, wind conditions are predicted to be comfortable for short-term standing / sitting all year round, and thus also suitable for pedestrian ingress/egress.
- 12.42 Wind conditions within the surrounding area are suitable for their intended uses throughout the year.
- 12.43 As highlighted in Paragraph 1.15, the baseline scenario for the assessment comprises a cleared site, that presumes existing buildings are demolished. The difference between the existing Site, and a cleared existing Site, is relatively minor for wind microclimate. This is due to the low-rise nature of the both the existing Site buildings, and the surrounding buildings and trees in the surrounding area, which provide significant shelter to the Site from the prevailing wind sector.
- 12.44 Baseline conditions will therefore be similar to existing site conditions, with some differences in places; the resulting microclimate would meet the safety criteria and be suitable throughout the Site and surrounding area.

Identification and Evaluation of Significant Effects

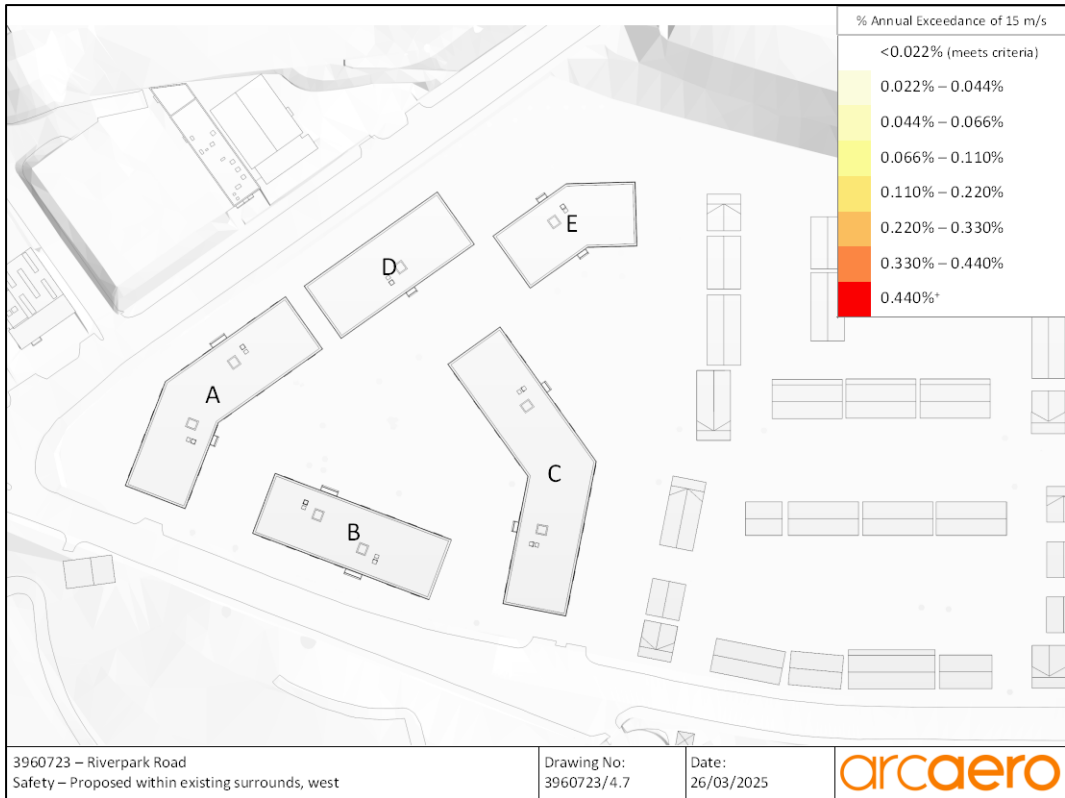
Construction Phase

- 12.45 During construction, conditions are expected to transition gradually from those experienced in the existing condition to those for the completed Proposed Development.
- 12.46 It is expected that during construction, construction workers will be adequately protected with health and safety measures and public access would not be provided (i.e. hoarding would be erected around the Site).
- 12.47 On the basis of the above, it is considered that there would be a **negligible (not significant)** effect on construction workers and people on foot, seated or traveling by bicycle off-site.

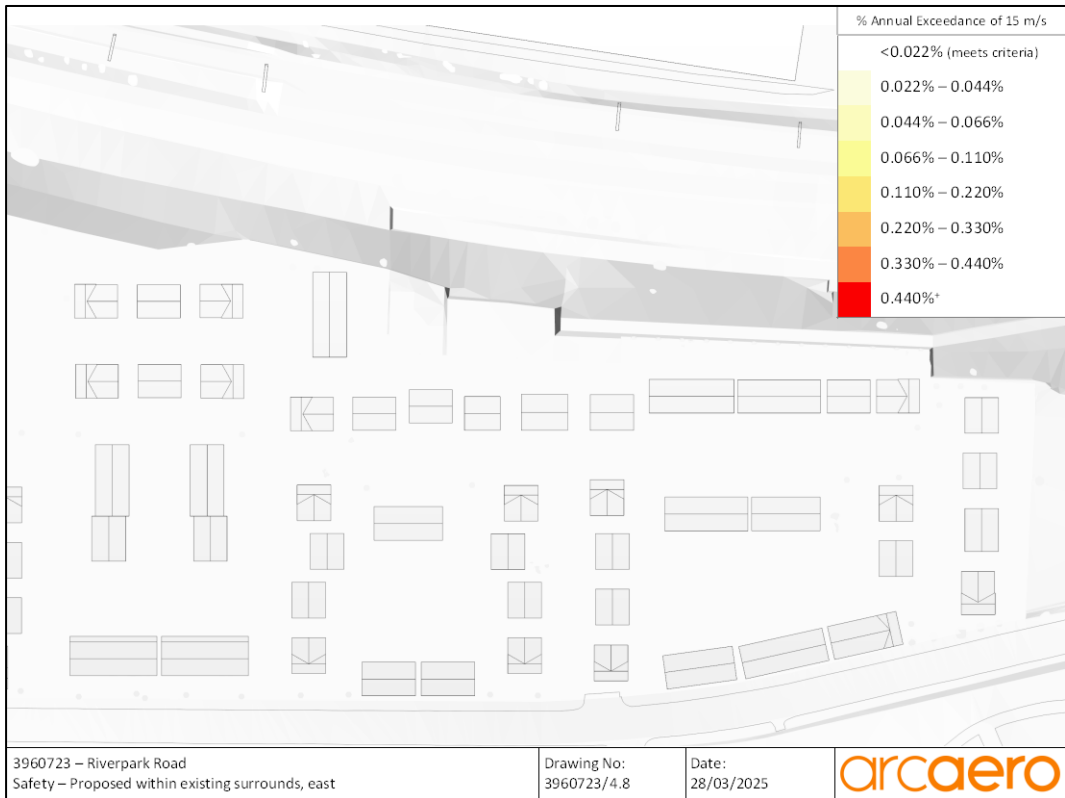
Operational Phase

Configuration 2: Proposed Development within existing surrounds

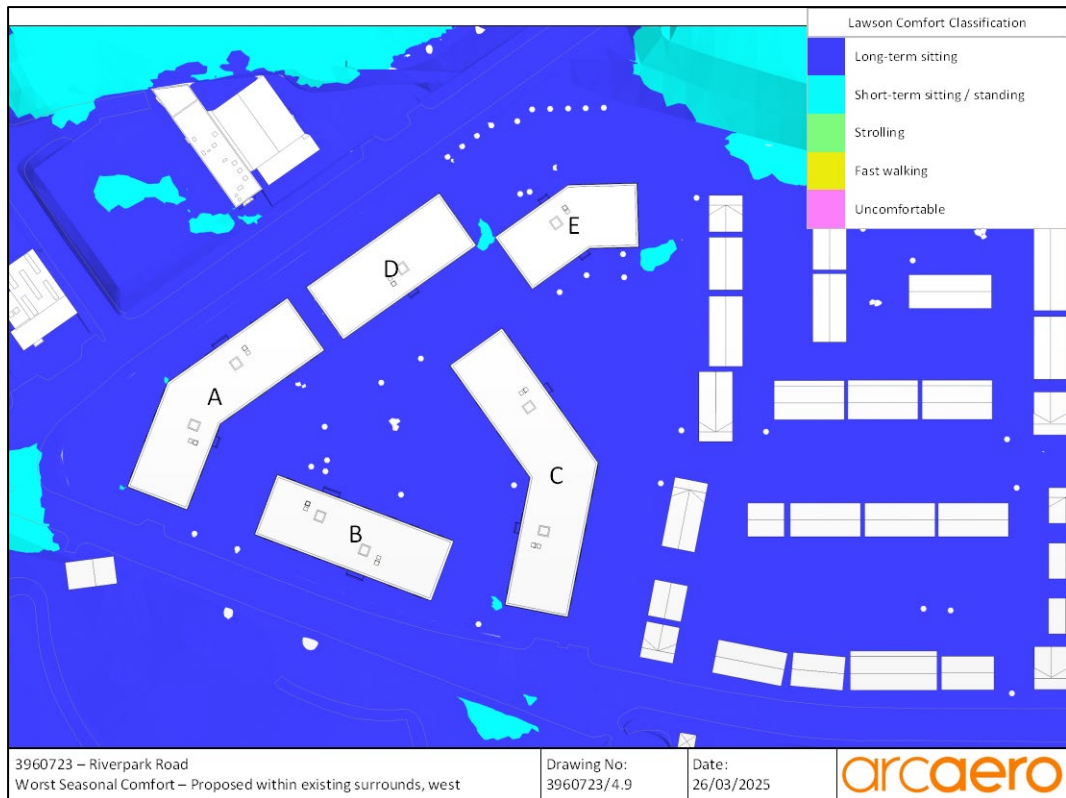
- 12.48 Configuration 2: Proposed Development within existing surrounds is the scenario relevant to this section, which assumes that the Proposed Development is fully completed within the Site.
- 12.49 The results for the Proposed Development within existing surrounds scenario are presented graphically within Error! Reference source not found. and Error! Reference source not found. for safety, ^ **Figure 12.8: Proposed Development within existing surroundings, annual safety, east**
- 12.50 and Error! Reference source not found. for worst-seasonal conditions, ^ **Figure 12.3 and Error! Reference source not found. for summer conditions respectively.**



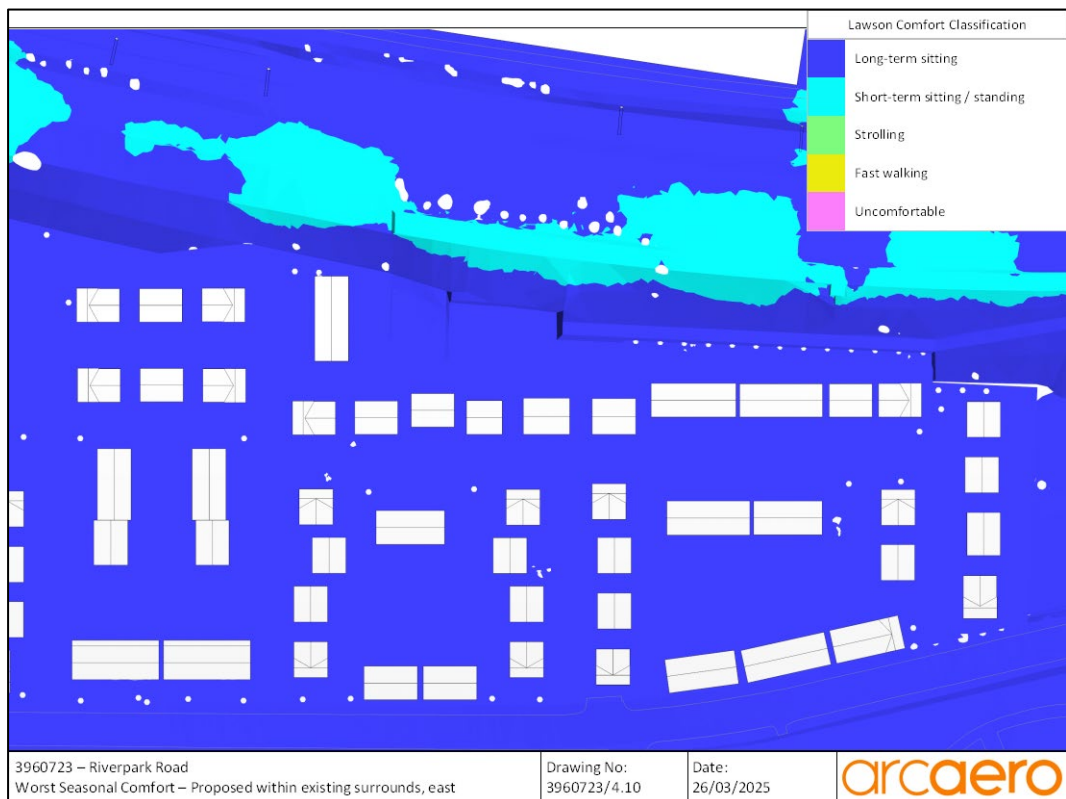
^ Figure 12.7: Proposed Development within existing surroundings, annual safety, west



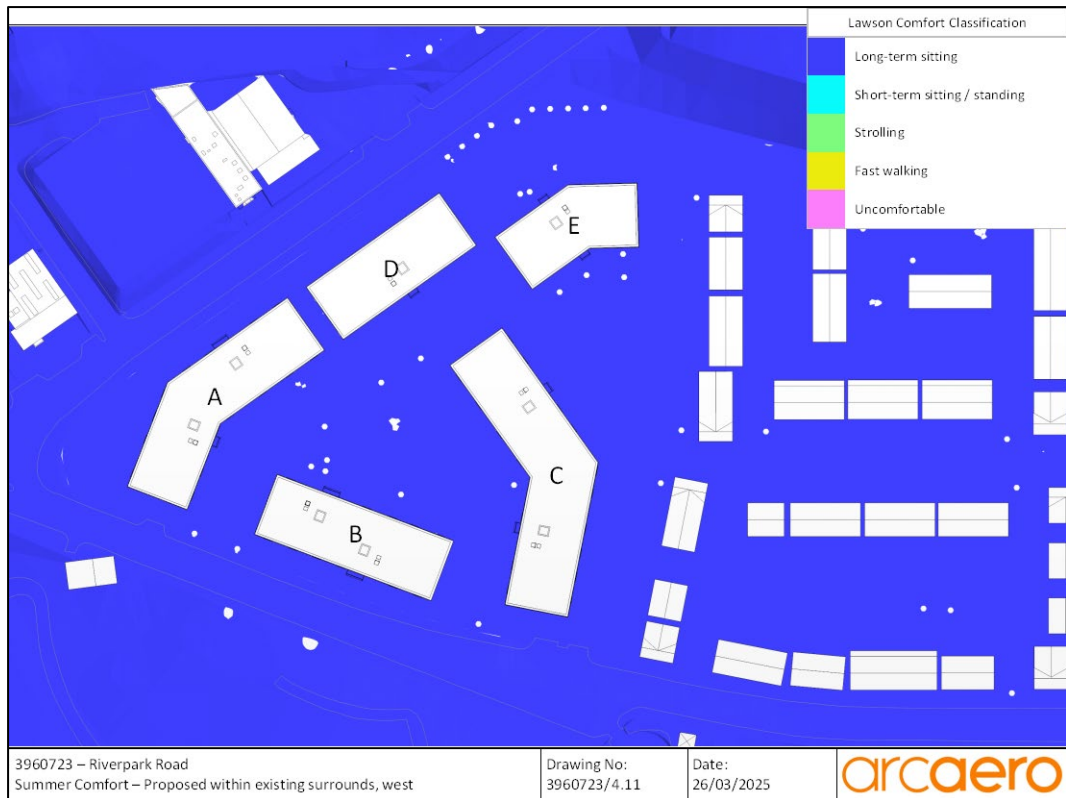
^ Figure 12.8: Proposed Development within existing surroundings, annual safety, east



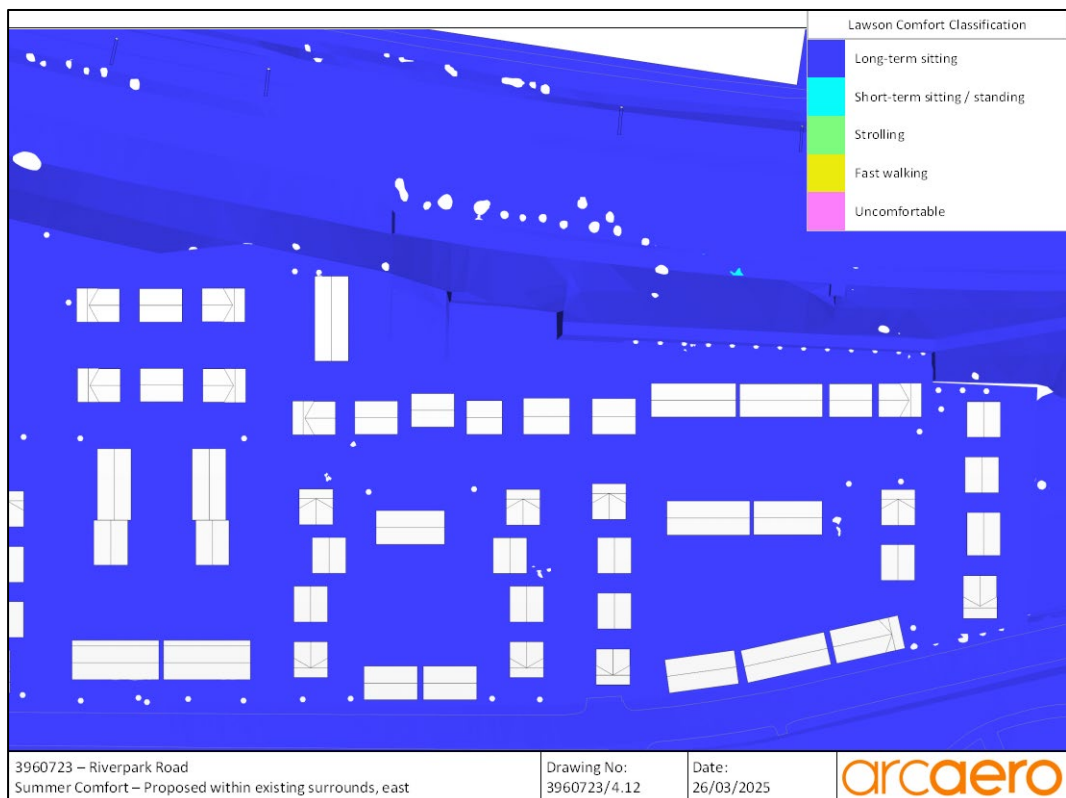
^ Figure 1.2: Proposed Development within existing surroundings, worst season, west



^ Figure 12.30: Proposed Development within existing surroundings, worst season, east



^ Figure 12.11: Proposed Development within existing surroundings, summer season, west



^ Figure 12.12: Proposed Development within existing surroundings, summer season, east

Safety

- 12.51 Wind conditions throughout the Site and surrounding areas satisfy the safety criteria for wind following the introduction of the Proposed Development. This is considered to be a **negligible (not significant)** effect.

Pedestrian Comfort

Thoroughfares

- 12.52 Wind conditions on thoroughfares within the Site are predicted to be suitable for short-term standing / sitting or better and thus for comfortable pedestrian access to and passage through the Site. This is considered to be a **negligible (not significant)** effect.

Entrances

- 12.53 Wind conditions at the entrances throughout the Site are predicted to be suitable for long-term sitting throughout the year and are therefore suitable for their intended uses. This is considered to be a **negligible (not significant)** effect.

Recreational Spaces

- 12.54 Wind conditions for the recreational spaces throughout the Site are predicted to be suitable for long-term sitting from spring to autumn and therefore suitable for general recreational activities. This is considered to be a **negligible (not significant)** effect.

Surrounding Area

- 12.55 Wind conditions within the surrounding areas are materially similar to the conditions with the existing site in place, and thus remain comfortable for intended uses. This is considered to be a **negligible (not significant)** effect.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Negligible effects	All	None	Negligible effects
Operational Phase			
Negligible effects	All	None	Negligible effects

^ Table 12.6 Summary of Significant Effects

Mitigation Measures

- 12.56 Following the introduction of the Proposed Development, there would be no adverse environmental effects in relation to wind microclimate; therefore, no additional mitigation measures are required.

Cumulative Effects

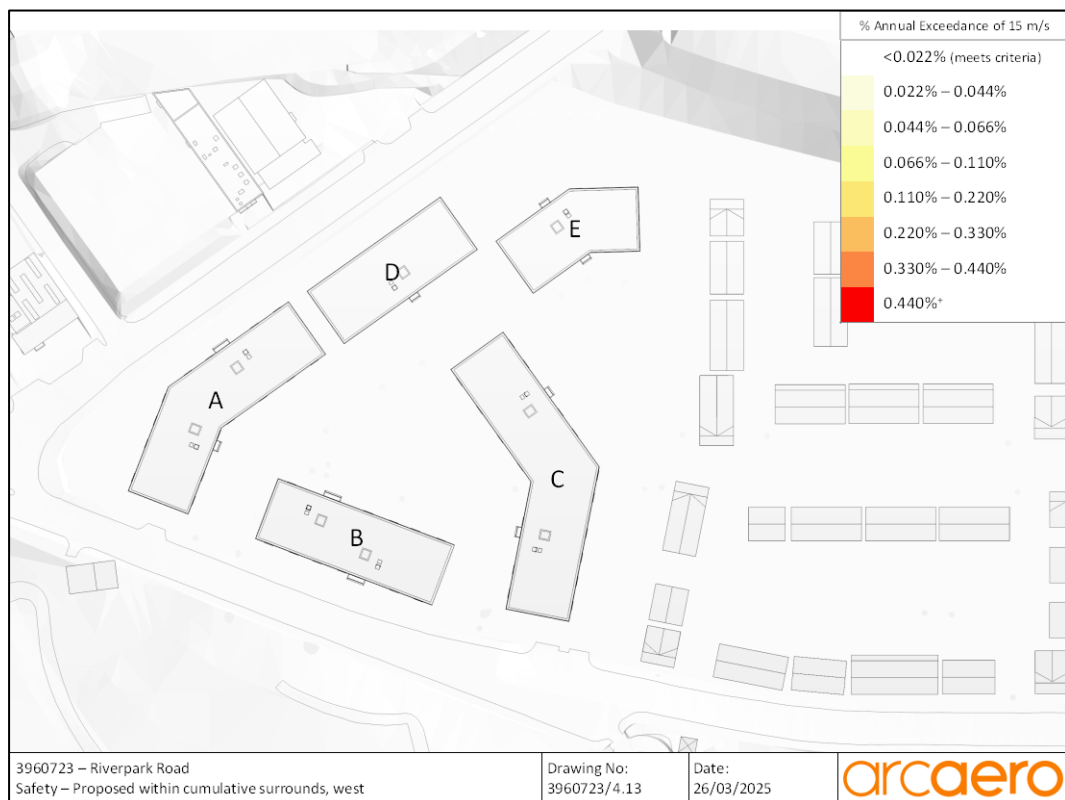
- 12.57 Cumulative effects are the combined effects of several development schemes (in conjunction with the Proposed Development) which may, on an individual basis be negligible but, cumulatively, have a significant effect.
- 12.58 The development at the former Mather & Platt Foundry site (135454/JO/2022) is the only cumulative development within the 600 m study area, and thus the only one considered within Configuration 3: Proposed Development within cumulative surrounds.

12.59 There are cumulative developments identified by the Manchester City Council to be considered for 'Cumulative Effects', but not included within this study due to these developments falling outside of the 600 m study area. These are:

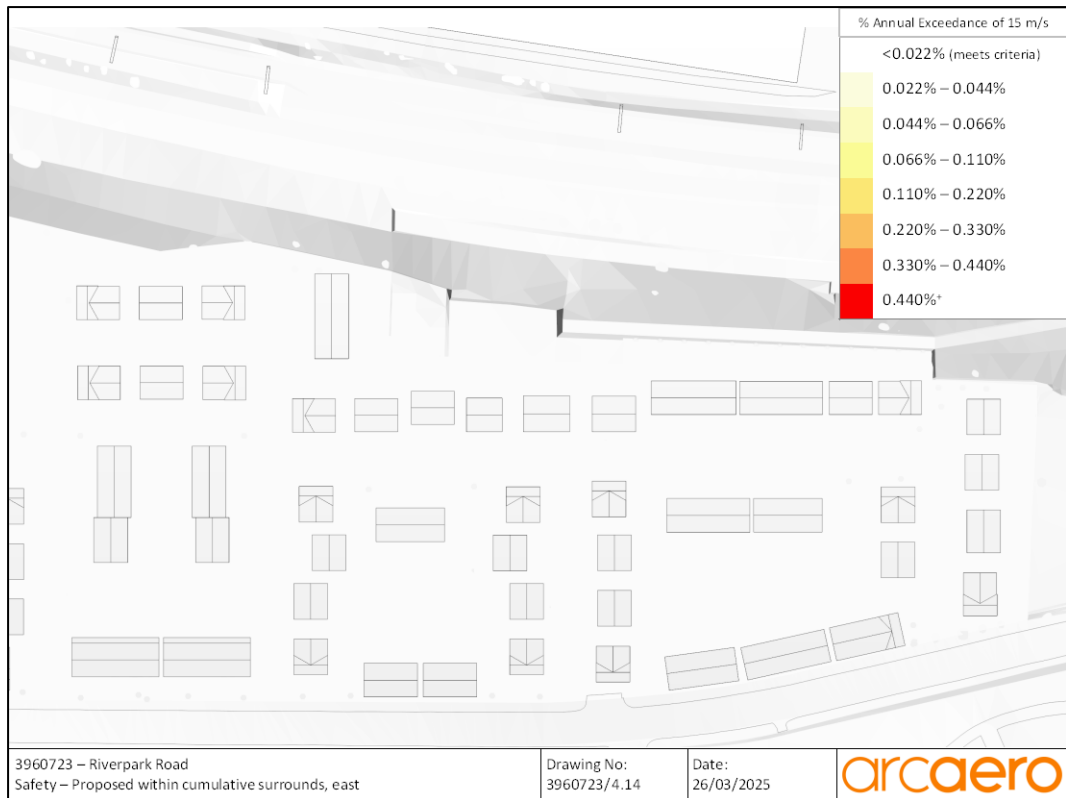
- Jackson's Brickworks (133700/FO/2022);
- 2 Angel Square, NOMA (134307/FO/2022);
- Etihad Stadium (North Stand) (136763/FO/2023);
- Dantzic Street (136814/FO/2023)

Configuration 3: Proposed Development within cumulative surrounds

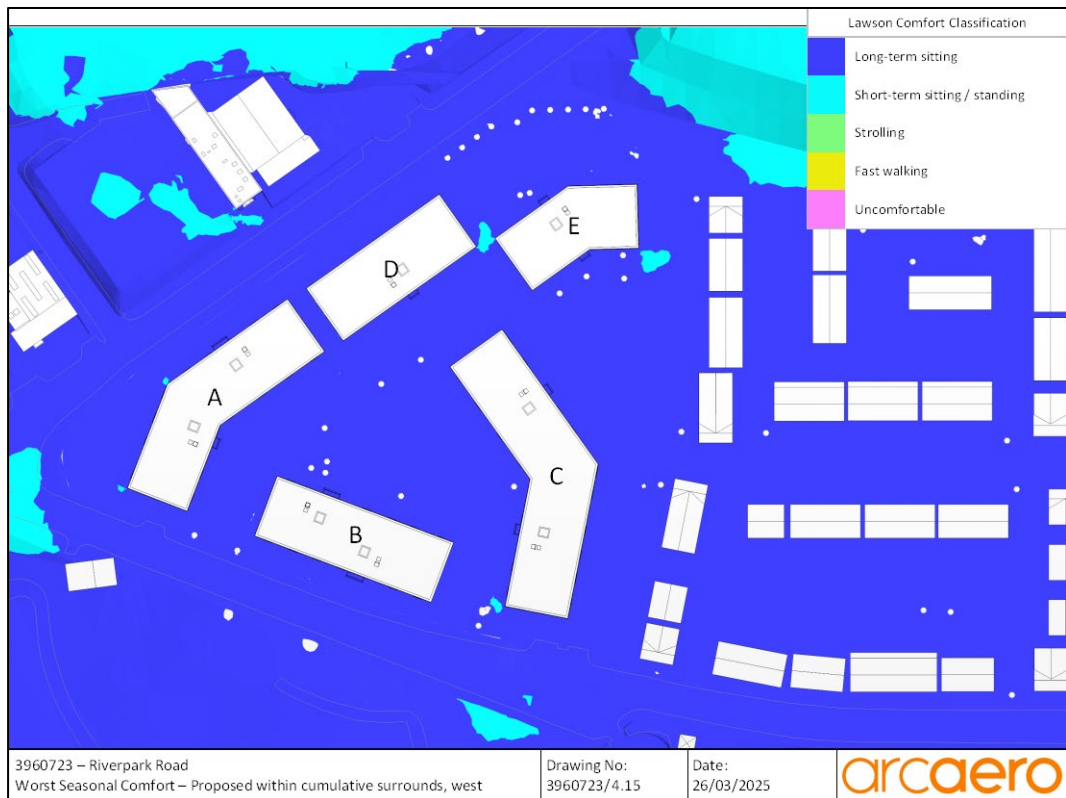
12.60 The results for the Proposed Development within the cumulative surrounds scenario are presented graphically within Error! Reference source not found. and ^ for safety, ^ **Figure 12.5** and Error! Reference source not found. for worst-seasonal conditions, Error! Reference source not found. for summer conditions respectively.



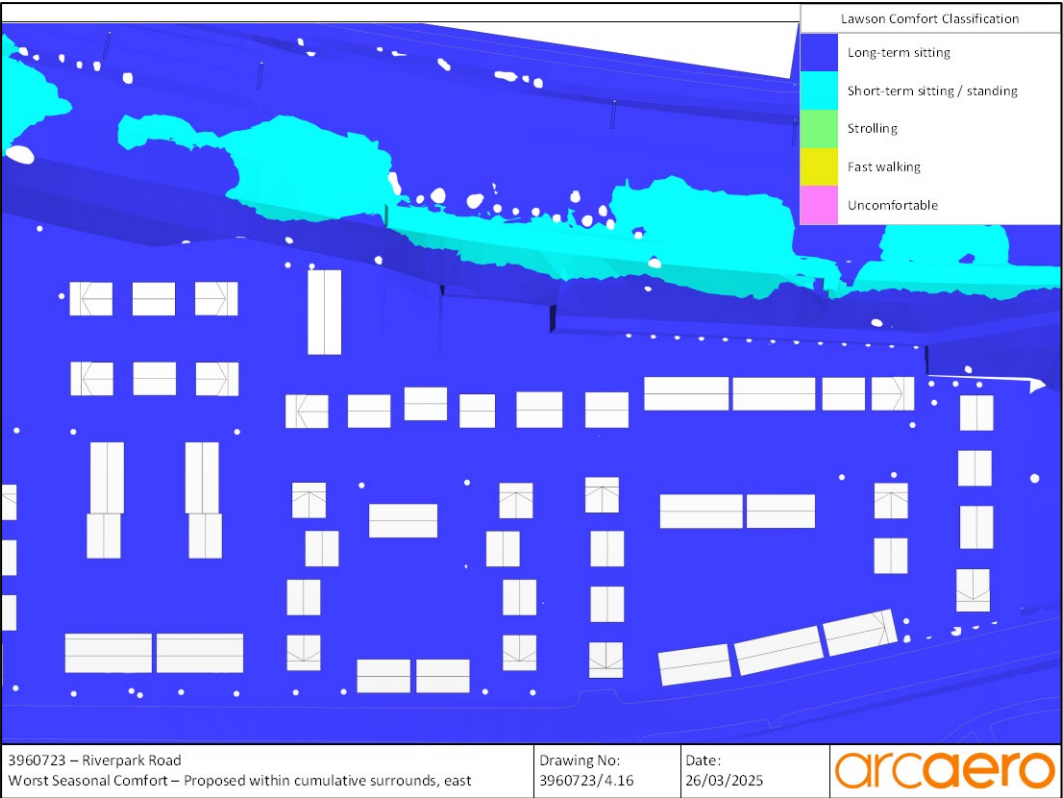
^ Figure 12.13: Proposed Development within cumulative surroundings, annual safety, west



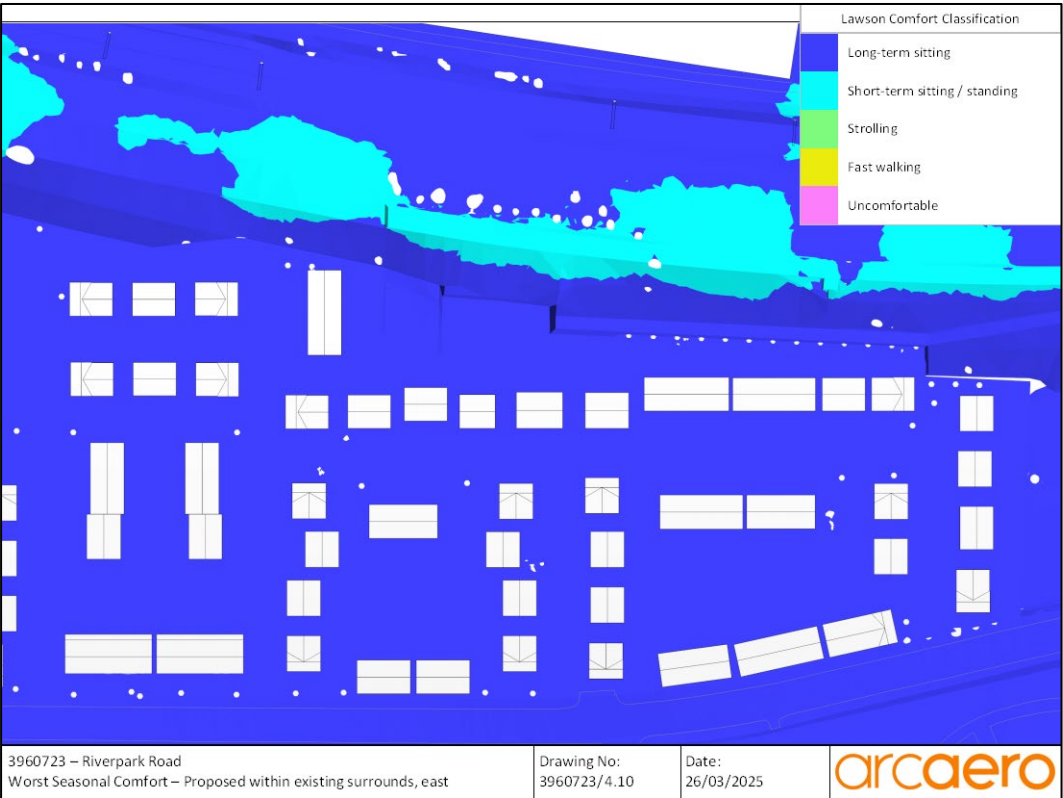
^ Figure 12.4: Proposed Development within cumulative surroundings, annual safety, east



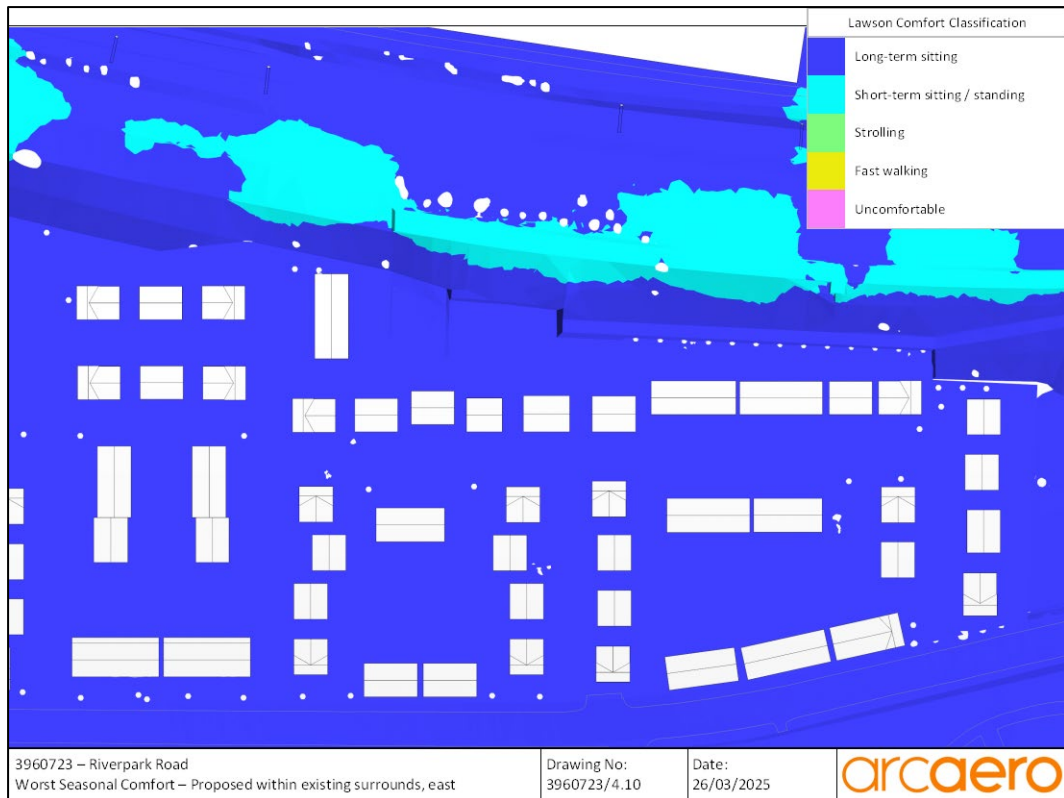
^ Figure 12.5: Proposed Development within cumulative surroundings, worst season, west



^ Figure 12.16: Proposed Development within cumulative surroundings, worst season, east



^ Figure 12.17: Proposed Development within cumulative surroundings, summer season, west



^ Figure 12.18: Proposed Development within cumulative surroundings, summer season, east

Safety

- 12.61 With the introduction of the cumulative developments in the surrounding context, wind conditions within the Site and immediate surrounds are expected to meet the Lawson safety criteria. Therefore, it is considered that the cumulative effect of the Proposed Development and other cumulative developments would be **negligible (not significant)**.

Pedestrian Comfort

- 12.62 With the introduction of the cumulative developments in the surrounding context, wind conditions would remain materially similar to those described with the completed Proposed Development in place within the existing surrounds (i.e. Configuration 2: Proposed Development within existing surrounds). Within the immediate surrounds, wind conditions would predominantly be suitable for short-term standing / sitting. Therefore, the cumulative effect of the Proposed Development and other cumulative developments would be **negligible (not significant)**.

Residual Effects

- 12.63 During the operational phase, wind conditions would remain safe throughout the Site; this, therefore, represents a **negligible (not significant)** residual effect of the Proposed Development.
- 12.64 Elsewhere, conditions remain suitable for use. This would be considered a **negligible (not significant)** residual effect of the Proposed Development.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Negligible effects	All	None	Negligible effects
Operational Phase			
Negligible effects	All	None	Negligible effects

^ Table 12.17 – Likely Residual Effects

13. Socioeconomics

- 13.1 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to socioeconomics. For the purposes of this assessment the study areas are the Miles Platting and Newton Heath ward (inner study area), Manchester (wider study area) and England.
- 13.2 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. It has been written by Brookdale Consulting.

Policy Context

National Planning Policy

Planning and Infrastructure Bill

- 13.3 The Planning and Infrastructure Bill, introduced to Parliament on 11 March 2025, wants to see significant measures introduced to speed up planning decisions to boost housebuilding. The Bill comes alongside wider planning reforms including the new National Planning Policy Framework and is at the heart of the Government's Plan for Change mission to deliver 1.5 million homes for the country.

National Planning Policy Framework

- 13.4 The revised National Planning Policy Framework, published in December 2024, sets out the Government's planning policies for England and how these are expected to be applied.
- 13.5 The foreword to the NPPF states 'the purpose of planning is to help achieve sustainable development'. The NPPF sets out a series of planning policies to achieve sustainable development.

Local Planning Policy

- 13.6 Currently the future use and development of land and buildings in Manchester is guided by the Manchester Core Strategy (Adopted March 2012 and updated March 2024), the saved policies of the Unitary Development Plan for the City of Manchester (1995) and Places for Everyone (Adopted 2024).

Manchester City Council Core Strategy (2012)

- 13.7 Spatial Objective 2 – Economy: The Core Strategy aims to support a significant improvement of the City's economic performance and spread the benefits of that growth across the City in order to reduce economic, environmental and social disparities while helping to create inclusive and sustainable communities.
- 13.8 Policy EC3 – The Regional Centre states:
"Housing will also be an appropriate use within the Regional Centre, although this should complement the development of mixed use employment areas. Subject to site and location details, the Regional Centre will generally be a location where higher density residential development is appropriate."
- 13.9 Policy EC5 – East Manchester states:
"The district centres of Newton Heath, Eastlands, Gorton and Openshaw offer opportunities for small scale mixed use local employment opportunities. Larger scale proposals will be considered if good transport links exist to the City Centre/Regional Centre."

- 13.10 Policy EC2 – Existing Employment Space states:
“The Council will seek to retain and enhance existing employment space and sites. Alternative uses will only be supported on sites allocated accordingly, or if it can be demonstrated that: The existing use is un-viable in terms of business operations, building ages and format.”
- 13.11 Spatial Objective 3 – Housing: The Core Strategy aims to provide a significant increase in high-quality housing provision at sustainable locations throughout the City. This objective’s emphasis on high-quality housing includes creating sustainable lifetime neighbourhoods with high-quality environments, good local facilities, and with easy access to employment opportunities.
- 13.12 Policy H1 – Overall Housing Provision states:
“Approximately 60,000 new dwellings will be provided for in Manchester between March 2009 and March 2027...”
- 13.13 The policy goes on to state that *“The distribution of available housing sites is in accordance with the research conducted by AGMA which gives priority to residential schemes in the Regional Centre and the Inner Areas”*.
- 13.14 It defines high-density developments as those with over 75 units per hectare, stating that they are appropriate in parts of the Regional Centre and notes that *“outside the Inner Areas the emphasis will be on increasing the availability of family housing therefore lower densities may be appropriate.”*
- 13.15 Policy H4 – East Manchester states:
“East Manchester, over the lifetime of the Core Strategy, will accommodate around 30% of new residential development. Priority will be given to family housing and other high value, high quality development where this can be sustained.”
- 13.16 The Core Strategy highlights the need for 3-4 bedroom family housing and detached housing.
- 13.17 Policy H8 – Affordable Housing: This policy states that all residential development on sites of 0.3 hectares and above or where the units proposed numbers 15 or higher will be subject to the requirement for affordable housing or an equivalent financial contribution.
- 13.18 This policy states new development will contribute to a 20% target for new housing provision to be affordable. The proportion of affordable housing units will reflect the type and size of the overall development. It adds that where appropriate, provision will be made within Section 106 agreements to amend the proportion of affordable housing considering economic conditions and subject to a financial viability assessment.
- 13.19 The policy discusses circumstances where an exemption from providing affordable housing, or a lower proportion of affordable housing, a variation in the proportions of socially rented and intermediate housing, or a lower commuted sum may be permitted where either a financial viability assessment is conducted, demonstrating it is viable to only deliver a proportion of the affordable housing target or material considerations indicate that intermediate or socially rented housing would be inappropriate.

Places for Everyone (2024)

- 13.20 Policy JP-S1: Sustainable Development states:
“To help tackle climate change, development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.”

13.21 Policy JP-H1: Scale, Distribution and Phasing of New Housing Development states:

“A minimum of 175,185 net additional dwellings will be delivered over the period 2022-2039, or an annual average of around 10,305.”

“The new homes will be of good quality and design, adaptable, supported by the necessary infrastructure and amenities and their distribution will support the Plan's overall strategy which enables people to reduce the need to travel when taking advantage of our key assets.”

13.22 Policy JP-H2: Affordability of New Housing states:

“Substantial improvements will be sought in the ability of people to access housing at a price they can afford, including through significantly increasing the supply of new housing.”

13.23 Policy JP-H3: Type, Size and Design of New Housing

“Residential developments should provide an appropriate mix of dwelling types and sizes reflecting local plan policies, and having regard to masterplans, guidance and relevant local evidence.”

13.24 Policy JP-H4: Density of New Housing

“New housing development should be delivered at a density appropriate to the location, reflecting the relative accessibility of the site by walking, cycling and public transport and the need to achieve efficient use of land and high-quality design.”

“In order to achieve an appropriate mix of housing across the plan area, developments should include the provision of houses and/or apartments.”

13.25 Policy JP-P1: Sustainable Places notes that all development should be consistent with the following attributes:

- Distinctive, with a clear identity
- Visually stimulating
- Socially inclusive
- Resilient, capable of dealing with major environmental events
- Adaptable
- Durable
- Resource-efficient
- Safe
- Supported by critical infrastructure
- Functional and convenient
- Incorporating inclusive design
- Legible, being easy to understand and navigate
- Easy to move around for those of all mobility levels
- Well-connected to other places

- Comfortable and inviting
- Incorporating high quality and well managed green infrastructure and quality public realm
- Well-served by local shops, services and amenities, including education and health facilities

13.26 Policy JP-P6: Health states:

“To help tackle health inequality new development will be required, as far as practicable, to:

- *Maximise its positive contribution to health and wellbeing, whilst avoiding any potential negative impacts of new development.*
- *Support healthy lifestyles, including through the use of active design principles making physical activity an easy, practical and attractive choice.*
- *Be supported by a Health Impact Assessment for all developments which require to be screened for an Environmental Impact Assessment, and other proposals which, due to their location, nature or proximity to sensitive receptors, are likely to have a notable impact on health and wellbeing.”*

Saved policies from the Manchester Unitary Development Plan (UDP) (1995)

13.27 Policy DC7: New Housing Development: This policy states that the council will *“negotiate with developers to ensure that new housing is accessible at ground floor level to disabled people, including those who use wheelchairs, wherever this is practicable...”*

Local Policy

The Manchester Strategy – Our Manchester (2016)

- The Manchester Strategy sets a long-term vision for Manchester’s future. ³⁹ The overarching vision is for Manchester to be in the top flight of world-class cities in 2025. The Strategy states Manchester will be a city:
- “with a competitive, dynamic and sustainable economy that draws on our distinctive strengths in science, advanced manufacturing, culture, creative and digital business to cultivate and encourage new ideas
- with highly skilled, enterprising and industrious people
- that is connected, internationally and within the UK
- that plays its full part in limiting the impacts of climate change
- where residents from all backgrounds feel safe, can aspire, succeed and live well
- that is clean, attractive, culturally rich, outward-looking and welcoming.”

³⁹ Manchester City Council (2016) *Our Manchester*

13.28 The Strategy had 64 priorities set out under five themes. These five themes are:

- “A thriving and sustainable city
- A highly skilled city
- A progressive and equitable city
- A liveable and low-carbon city
- A connected city.”

13.29 Progress against the strategy is shown each year in a State of the City Report.

13.30 Manchester City Council (MCC) is currently developing the Our Manchester Strategy 2025-35.

13.31 The Manchester Housing Strategy (2022-2032)⁴⁰ was adopted by MCC in July 2022 and sets a target of delivering 36,000 new homes by 2032. This is in response to the main housing challenge within the city of undersupply and the requirement to meet the housing needs of the growing population.

Assessment Methodology and Significance Criteria

Assessment Methodology

13.32 As described above, the study areas are the Miles Platting and Newton Heath ward (inner study area), Manchester (wider study area) and England.

13.33 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 several 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.

⁴⁰ Manchester City Council (2022) *Manchester Housing Strategy 2022-32*

13.34 The second stage is to assess the socioeconomic effects during both the construction and operational phases of the Proposed Development. The socioeconomic assessment utilises a range of different data sources including the Census 2021, ONS mid-year population estimates 2022, the Business Register and Employment Survey 2023, the Annual Business Survey 2022, Annual Survey of Hours and Earning 2024 and CLG guidance on construction labour ratios. The assessment is structured under the following headings:

- Demolition and Construction:
- Construction Sector Employment
- Completed Development:
- Additional Working Households
- Household Expenditure
- Council Tax Revenue and Public Sector Jobs

Construction Sector Employment

13.35 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.

13.36 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.

13.37 Construction employment is calculated based on figures from the 2022 Annual Business Survey, which indicates that £1m of turnover in the construction sector supports 6.4 direct construction jobs for a year. The indirect construction job years are calculated using an employment multiplier for the Construction sector which is 2.23.⁴¹ Gross Value Added (GVA) is the Government's preferred measure of economic activity. ONS data on GVA per workforce job has been used for the North West for the construction sector.

Additional Working Households

13.38 The impact of the proposed residential development on demographics in the area is considered, in particular, population and household size and structure. This includes an estimate of the population yield associated with the Proposed 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.

13.39 The additional number of residents is calculated using an average household size of 2.36 based on estimated occupancy levels by type of dwelling provided in the Accommodation Schedule supplied by Kellen Homes.⁴² The number of working age people within the households is estimated based on the Miles Platting and Newton Heath average from the ONS 2022 Mid-year Population Estimates (64.3%).

⁴¹ Employment multiplier for Construction taken from National Housing Federation (2019) *Local Economic Impacts Calculator*

⁴² Kellen Homes Riverpark Road Detailed Site Layout, 13 February 2025

- 13.40 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 and Department for Education data.
- 13.41 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 Manchester City Council (MCC).

Household Expenditure

- 13.42 The effects of the potential increase in spending by residents in the area and the indirect impact that this has on employment opportunities is estimated. 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.
- 13.43 Household expenditure is calculated using the latest estimates of average household weekly expenditure (£567.70) from the 2023 Living Costs and Food Survey from the ONS. It is assumed that 60% of household expenditure is retained in Manchester given its importance as a retail, cultural and administrative centre.
- 13.44 The number of jobs supported by local spending is calculated using the average of £166,774 of expenditure required to support one job derived from the Annual Business Survey 2022. A local economic multiplier of 1.1 is used to calculate indirect jobs supported in the supply chain across Manchester from the UK Additionality Guide.
- 13.45 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

- 13.46 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 ward is calculated based on the 2023 ratio of public jobs (education, health, social work, administration and defence) for residents in Miles Platting and Newton Heath derived from the Business Register and Employment Survey 2023.

Characterisation of Impact

- 13.47 The overall impact methodology is primarily based on a quantitative assessment of the economic impacts in terms of jobs and GVA, in line with HM Treasury Green Book guidance.
- 13.48 The level of significance is assessed as shown in **Table 13.1** below.

Magnitude of the Effect		
<i>Spatial Extent of Effect</i>	<i>Duration of Effect</i>	<i>Scale of Effect</i>
• Inner Study Area (Miles Platting and Newton Heath ward) • Wider Study Area (Manchester) • England	• Long-term/permanent (more than 10 years) • Medium-term (existing for 5 to 10 years) • Short-term (existing for 1 to 5 years)	• As there are no specific standards or guidelines, the impacts have been assessed relative to baseline conditions, or a 'No Development' scenario

Magnitude of the Effect		
	Temporary effect (existing for less than 1 year)	
Sensitivity of the 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.		

^ Table 13.1 – Impact Methodology

13.49 The Sensitivity of the Receptor is measuring the capacity of the variable in questions (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:

- 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 at capacity;
- Medium Sensitivity - evidence base suggests the variable has capacity to accommodate some change; and
- Low Sensitivity - evidence base suggests the variable has no capacity issues and can easily accommodate change.

13.50 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:

- 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; and
- Negligible – a temporary and/or small-scale effect and the wider England level.

Significance Criteria

13.51 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 previously. Mitigation measures will be identified as required along with any residual effects.

13.52 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.

13.53 The magnitude of change is considered alongside the sensitivity of the receptor and the significance of the impact is thus identified. **Table 13.2** sets out the resulting impact 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

^ Table 13.2 – Matrix for Significance of Impact

13.54 The major, moderate and minor ratings can be with Beneficial or Adverse. Any identified impacts rated as Major are regarded as Significant to the EIA and are shaded grey in **Table 1.2**.

Assumptions and Limitations

Assumptions/Limitations

13.55 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 2018 mid-year estimates.

Consultation

13.56 As the socioeconomic assessment draws upon existing sources of information, largely government statistics, no consultation was deemed necessary.

Baseline Conditions

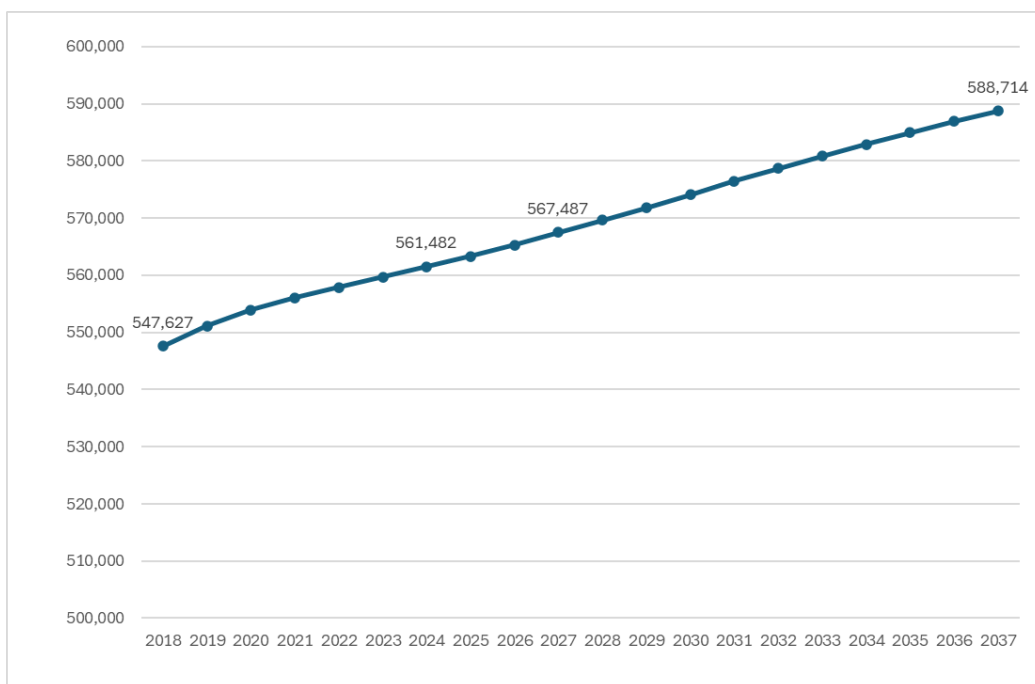
Population

- 13.57 According to the ONS, based on 2022 data, Manchester has a total population of 568,996. Within this, the Miles Platting and Newton Heath ward accounts for 3.5% of the population at 19,711. A breakdown of the population by broad age category is given in **Table 13.3**.

Age Range	Miles Platting & Newton Heath Ward	Manchester	England
0 to 15 years	4,770	114,635	10,575,320
16 to 64 years	12,678	400,859	35,901,211
65 and over	2,263	53,502	10,629,967
Total number	19,711	568,996	57,106,398
0 to 15 years	24.2%	20.1%	18.5%
16 to 64 years	64.3%	70.5%	62.9%
65 and over	11.5%	9.4%	18.6%
Total %	100%	100%	100%

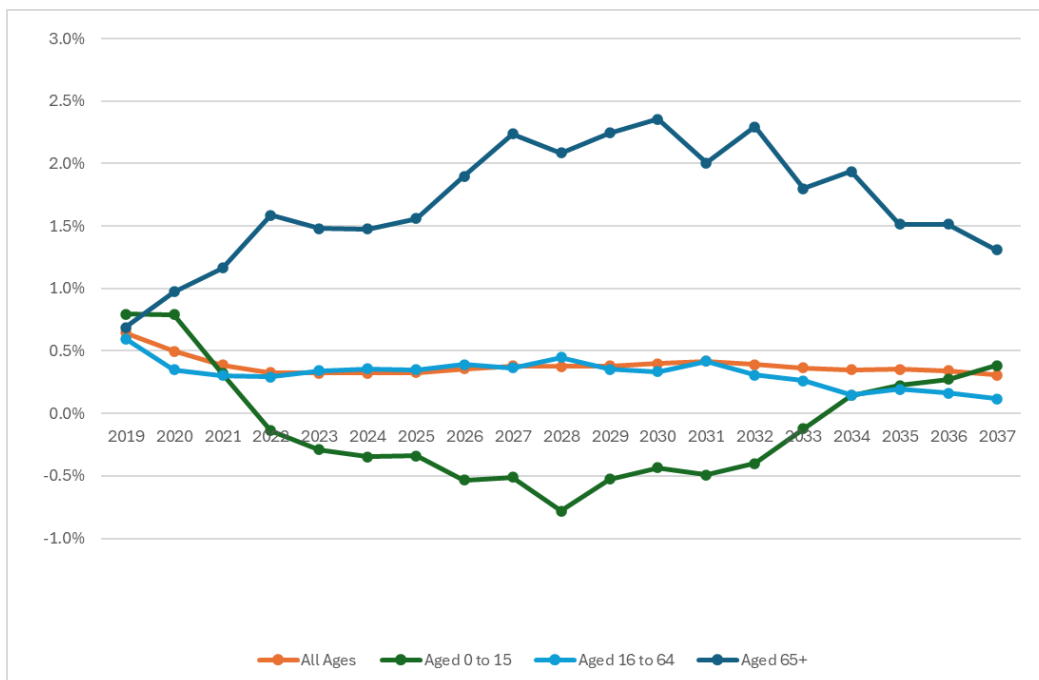
^ Table 13.3 – Population of Ward compared to Manchester and England, 2022 (Source: ONS 2022 mid-year population estimates)

- 13.58 Population projections, often referred to as sub-national population projections (SNPP), are published every two or three years at local authority level, with the most recent release based on the 2018 data (published 24 March 2020). **Figure 13.1** shows the population projections for Manchester for the period 2018 to 2037. The overall population is expected to grow from 547,627 to 567,487 by 2027, which represents an 3.6% increase over the decade and is expected to grow 7.5% over the twenty year period to 588,714 by 2037.



^ Figure 13.1 – Population projections for Manchester local authority area 2018-2037 (number) (Source: ONS Population projections 2018 base [from Nomis on 6 March 2025])

- 13.59 The projections by age range are shown in **Figure 13.2**. The over 65 group is predicted to have the sharpest growth year-on-year with the under-16 category expected to see a decline from 2022 to 2033. Overall growth is projected to slow from an annual growth rate of 0.6% in 2018 to 0.4% by 2017 and 0.3% by 2037.



^ Figure 13.2 – Population projections for Manchester local authority area by age group 2018-2037 (% change YOY) (Source: ONS Population projections 2018 base [from Nomis on 6 March 2025])

- 13.60 Due to the methodology employed to calculate migration the ONS mid-year estimates attribute a lower growth rate than would be expected. The MCC Forecasting Model (MCCFM) was developed to strengthen and supplement the ONS mid-year estimates, by drawing upon local intelligence including expected residential development. The MCCFM offers an alternative forecast that assumes migration growth patterns based on previous years.
- 13.61 The State of the City Report 2023 highlights the ongoing issue relating to the legacy of a substantial undercount in 20- to 39-year-olds in Manchester in the 2021 Census which has been carried forward into the 2022 mid-year estimates. MCC believes the estimates should be increased by at least 20,000 residents. The MCCFM estimates the mid-2022 population to be 599,900.
- 13.62 ONS population projections have not been updated since 2018 and as such, it is felt that they do not take into consideration the significant growth in housing stock and increased international migration in Manchester.⁴³
- 13.63 MCCFM forecasts the rate of population growth as likely to increase over the next five years due to new apartment-led residential developments adding greater capacity and opportunity for further population growth. As mentioned, population growth is also being driven by international migration. As such, MCCFM predicts that the city's population will be just under 660,000 by 2027, nearly 100k more than the ONS projection of 567,487.

Employment

- 13.64 ONS data show that economic activity in the Miles Platting and Newton Heath ward is 59.0%, which is higher than the average for all Manchester of 56.6%.⁴⁴ Full-time employment rates are 68.2%, equal to the rate across Manchester. 26.7% of Miles Platting and Newton Heath residents have Level 4 qualifications (degree) or above, below the rate across Manchester of 37.6%.
- 13.65 Wages data are only available for the whole of Manchester. By place of residence, at £565 per week (gross weekly earnings full and part time)⁴⁵ they lag behind the North West at £592 and England at £619. However, by place of work, Manchester is above both the North West and England at £679 versus £594 (North West) and £620 (England). This highlights that Manchester is still seen as a competitive wage location.
- 13.66 According to the Business Register and Employment Survey (BRES), in 2023 the total number of people working in Manchester was 457,625.⁴⁶ This includes employees and working proprietors. Given the working age population in Manchester in 2022 was just over 400k, this indicates that there is significant inward migration into the city for work. This commuting pattern clearly puts pressure on the local transport infrastructure.

Unemployment

- 13.67 Latest data from MCC indicate that the percentage of residents claiming unemployment benefit in August 2024 was 6.96% for Manchester and 8.91% for Miles Platting and Newton Heath ward.⁴⁷

Occupations

- 13.68 According to the ONS the percentage of people working in professional environments in the Miles Platting and Newton Heath ward is reasonably high. The top three categories of employment (managers/senior officials, professional and associate professional/technical) account for 31.3% of the working population, albeit significantly lower than 46% for the rest of Manchester.

⁴³ Manchester City Council (2023) *State of the City Report 2023*

⁴⁴ Nomis Ward Profile using 2021 Census data

⁴⁵ Drawn from the Annual Survey of Hours and Earnings 2024, ONS

⁴⁶ Drawn from the Business Register and Employment Survey 2023, ONS

⁴⁷ Manchester City Council Intelligence Hub [accessed 6 March 2025]

- 13.69 BRES figures for 2023 show 19.2% of jobs in Manchester are in the public sector, with the proportion in England lower at 17.1%. The proportion of public sector jobs in the Miles Platting and Newton Heath ward is lower still at 13.7%.
- 13.70 **Table 13.4** shows the structure of employment broken down by sector. The Manufacturing sector accounts for the largest proportion of employment in the ward at 18.8% and this sector is significantly over-represented compared to Manchester with only 2.8%. Health accounts for 12.5% of employment in the ward, slightly above the Manchester average of 11.6% and Business administration is in line with the Manchester level at 10.0% in the ward and 10.9% at the local authority level. Other sectors in which the ward has a greater share than Manchester include Construction and Wholesale.

Sector	Miles Platting & Newton Heath Ward	Manchester	England
Agriculture, forestry and fishing	0.0	0.0	1.2
Mining, quarrying and utilities	0.4	0.3	1.1
Manufacturing	18.8	2.8	7.3
Construction	7.5	2.0	4.8
Motor trades	1.2	0.5	1.7
Wholesale	8.8	2.8	3.8
Retail	5.6	7.4	8.2
Transport and storage	3.8	6.1	5.1
Accommodation and food services	5.0	8.3	7.8
Information and communication	3.8	6.6	4.7
Financial and insurance	0.1	5.5	3.4
Property	0.9	3.1	2.1
Professional, scientific and technical	8.8	14.0	9.7
Business administration & support services	10.0	10.9	8.8
Public administration and defence	2.8	5.3	4.2
Education	4.4	9.2	8.3
Health	12.5	11.6	13.3
Arts, entertainment, recreation and other serv.	1.9	3.7	4.6

^ Table 13.4 – Structure of employment by sector 2023 (%) (Source: ONS, BRES, 2023)

Housing

- 13.71 Manchester's State of the City Report 2023 estimates that 2,988 new homes were due to be completed across the city in 2023/24. The Report highlights that The Manchester Housing Strategy (2022-2032) was adopted by MCC in July 2022 and sets a target of delivering 36,000 new homes by 2032. This is in response to the main housing challenge within the city of undersupply and the requirement to meet the housing needs of the growing population. It is estimated that in the 5 years to 2023 there was a sustained new supply of around 17,000 new homes, but demand is still exceeding supply and average rents for a 2-bed property rose 13% in the city centre and 15% in the rest of the city in 2023.
- 13.72 The State of the City Report 2023 states that development activity is expected to remain high with over 12,000 new homes under construction at the time of the report and over 15,000 with planning approval yet to start construction. Over 18,000 of these homes are expected to be completed in the next 5 years which would take MCC to around 60% of the Housing Strategy target by 2027.

Social and Community Infrastructure

Nurseries

- 13.73 There are 2 private nurseries located within one mile of the Proposed Development and a wide range of other childcare provision throughout the city, including childminders and playgroups.

Primary and Secondary Schools

- 13.74 There are 28 schools located within 1.5 miles of the development: 25 primary, 2 secondary schools and one 6th form college. There is a mix of denominational and non-denominational, state and independent provision locally.
- 13.75 **Table 13.5** details the schools and lists the latest school capacity and the places available in 2024/25 as a guide to ongoing capacity of establishments in the area. There are 11,497 pupils on the school roles in the area. Of the places available in the 2024/25 school year there are currently around 4% unfilled places (equating to 469 places).

School	Type	Distance from development (miles)	Capacity 2024/25	Unfilled places 2024/25
Ravensbury Community School	Primary – State funded	0.41	472	6
Briscoe Lane Academy	Primary – Academy school	0.55	635	
St Willibrord's RC Primary School	Primary – Voluntary aided	0.73	256	6
Park View Community Primary Academy	Primary – Academy school	0.76	459	-
Christ the King RC Primary School	Primary – Voluntary aided	0.83	480	64
CofE School of the Resurrection	Primary – Voluntary aided	0.85	210	0
All Saints CofE Primary School	Primary – Voluntary aided	0.89	240	8
St Augustine's CofE Primary School	Primary – Voluntary aided	0.90	240	41

School	Type	Distance from development (miles)	Capacity 2024/25	Unfilled places 2024/25
St Brigid's RC Primary School	Primary – Voluntary aided	0.92	207	0
The East Manchester Academy	Secondary – Academy school	0.93	1,100	101
Connell Co-op College	College – 6 th Form	0.94	800	33
St Wilfrid's CofE Primary School (Newton Heath)	Primary – Voluntary aided	0.96	232	9
St Edmund's RC Primary School	Primary – Voluntary aided	0.96	240	0
Ashbury Meadow Primary School	Primary – State funded	1.05	494	6
Seymour Road Academy	Primary – Academy school	1.09	420	0
St Anne's RC Primary School (Ancoats)	Primary – Voluntary aided	1.17	218	0
St Barnabas' CofE Primary Academy	Primary – Academy school	1.22	236	13
Saviour CofE Primary School	Primary – Voluntary aided	1.27	210	50
Co-op Academy Broadhurst	Primary – State funded	1.28	210	0
Manchester Communication Academy	Secondary – Academy school	1.28	1,200	0
Manchester Communication Primary Academy	Primary – Academy school	1.28	420	0
St Patrick's RC Primary School	Primary – Voluntary aided	1.30	240	
St Malachy's RC Primary School	Primary – Voluntary aided	1.30	242	9
Lily Lane Primary School	Primary – State funded	1.34	690	65
St Dunstan's RC Primary School	Primary – Voluntary aided	1.35	341	12
Abbott Community Primary School	Primary – State funded	1.36	240	11
Higher Openshaw Community School	Primary – State funded	1.37	345	0
Co-op Academy New Islington	Primary – Free school	1.43	420	35
Total			11,497	469

^ Table 13.5 – Schools within 1.5 miles of development (Source: Manchester City Council and GOV.UK)

Health Provision

- 13.76 There are 9 General Practitioner (GP) surgeries located within 1.5 miles of the Proposed Development as shown in **Table 13.6**. These surgeries have a combined number of registered patients of over 45.5k. 8 of the surgeries are currently accepting new patient registrations which suggests plenty of capacity.

Distance from development	Number of surgeries	Total number of registered patients	% of surgeries accepting new patients
Within 1 mile	5	24,757	80%
1.1 to 1.5 miles	4	20,896	100%
Total number	9	45,653	89%

^ Table 13.6 – GP surgeries within 1.5 miles of development (Source: NHS England)

- 13.77 There are at least 6 dental surgeries located within 1.5 miles of the Proposed Development. NHS England data show that all 6 are confirmed as currently accepting new NHS patients. In addition, there are a large number of dental surgeries located within the city centre. NHS Manchester has 55 dentists per 100,000 population compacted with 42 for the whole of England.⁴⁸

Current Economic Impact

- 13.78 The existing site is vacant and existing former industrial buildings on the Site are in the process of being demolished (following prior approval for demolition (ref. 141383/DEM/2024)).

Identification and Evaluation of Significant Effects

- 13.79 This section details the potential impacts of the Proposed Development and their significance (taking into account embedded mitigation where appropriate).

Construction

- 13.80 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 £108m excluding VAT. This is based on 500 residential units.
- 13.81 It is estimated in **Table 13.7** (overleaf) that the scale of the Proposed Development could support 1,446 person years of construction related employment, comprising 648 on-site construction job years and a further 797 indirect job years in supporting industries such as specialist suppliers and manufacturing. It is estimated that the project could be completed over a 36-month period which implies that there will be 216 construction FTE jobs supported on-site during the build period and a further 482 off-site indirect FTE jobs. The GVA associated with these jobs will be £33.7m per year.

⁴⁸ NHS, *NHS Dental Statistics for England, 2023-24*, 22 August 2024

Title	Metric	Source
Construction expenditure (a)	£108m	Client
Number of jobs per £1m of expenditure (b)	6.0	Annual Business Survey 2022, ONS
Number of direct construction job years (c) = (a)*(b)	648.2	
Employment multiplier for construction (d)	2.23	National Housing Federation
Number of indirect construction job years (e) = (c)*(d)	797.3	
Total number of direct and indirect job years (f) = (c)+(e)	1,445.6	

^ Table 13.7 – Calculation of Construction Jobs (Source: Brookdale Consulting)

- 13.82 This generates two effects that have thus 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 temporarily disruptive to the local business districts. The main receptor in this case is the ability of the local businesses to accommodate change.
- 13.83 As a result of a rating of high magnitude of effect and medium sensitivity of receptor, this has been given an overall **Minor 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.
- 13.84 Secondly, there will be a short-term employment gain for the construction industry. Although as shown in **Table 1.4** the construction sector is over-represented within Mile Platting and Newton Heath, given the overall size of the ward there is 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 local gain and the use of local materials encouraged where possible. The Applicant will be required to submit a Local Labour Agreement to outline their intention to employ local people and businesses where appropriate.
- 13.85 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

Additional Working Households

- 13.86 The additional housing proposed for the application site is estimated to accommodate 1,181 additional residents (see **Table 13.8** overleaf). As previously shown in **Table 13.3**, the proportion of working age residents in the Miles Platting and Newton Heath ward is 64.3%. This suggests an additional 760 working age residents could be expected.

	Value
Number of dwellings	500
Average number of persons per household*	2.36
Number of additional people	1,181
Working age %	64.3%
Estimated additional working age people	760

^ Table 13.8 – Estimate of Additional Residents from the development (Source: ONS 2022 mid-year population estimates)

* Calculated by Brookdale Consulting based on Accommodation Schedule for development

- 13.87 The State of the City Report 2013 demonstrates a shortage of housing units per annum within Manchester. The Manchester Housing Strategy (2022-2032) sets a target of delivering 36,000 new homes by 2032. The population is expected to continue to grow over the same period. The 1,635 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.
- 13.88 The number of school age residents within the Proposed Development is estimated at around 286 (children between 0 to 15 years). This equates to around 2.5% 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.
- 13.89 In terms of health services, if all of the 1,181 estimated new residents were to seek to register with one of the GPs identified in **Table 13.6**, they would represent just 2.6% of the total current patients. It seems highly likely that the existing services would absorb these extra residents within their current capacity. Similarly, there are a large number of dental surgeries located within the city centre and it is likely that the demand from the proposed new residents could be met.
- 13.90 Given this context, 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 high magnitude of effect and medium sensitivity of receptor, giving a **Moderately Beneficial** overall rating which is **Not Significant** in EIA terms. As such, no mitigation measures are required in relation to this impact.

Household Expenditure

- 13.91 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.
- 13.92 It is estimated that these households will spend £15m per year. Assuming 60% of their household spend is within the Manchester area, this will bring an additional £9m of expenditure to the local economy as shown in **Table 13.9** (overleaf).

	Proportion spent locally	Average weekly spend per household	Additional spend annually
Average weekly household expenditure		£567.70	£14,994,200
Proportion spent in Manchester	60%	£340.62	£8,996,520

^ Table 13.9 – Household Expenditure from the Development (Source: Living Costs and Food Survey and Brookdale Consulting)

- 13.93 The average retail expenditure required to support one job is £166,774. Therefore, the anticipated additional spending because of the new households could directly support 54 FTE jobs withing local shops in Manchester. The GVA associated with these jobs will be £2.05m per year.
- 13.94 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 high magnitude of effect and low sensitivity of receptor, therefore this impact is rated **Minor Beneficial**, which is **Not Significant** in EIA terms.

Council Tax Revenue and Public Sector Jobs

- 13.95 The new homes will generate additional annual Council tax revenue for the local authority. **Table 13.10** illustrates the Council tax for 2025/26 and provides an estimate of the additional revenue that the 500 dwellings will generate. The properties will generate in excess of £1.1m per annum for the Council.

Band C Council Tax Rate	£1,940
Band D Council Tax Rate	£2,183
Band E Council Tax Rate	£2,668
Annual Council Tax Total for Development	£1,073,321

^ Table 13.10 – Council Tax Revenue from Development

Source: MCC

- 13.96 Public sector employment in the ward is 13.7%. The additional 760 working age residents that will occupy these dwellings are therefore likely to support 105 public sector jobs across public administration, education and health in the borough. The main receptor in this case is public sector employment. As a medium magnitude of effect and low sensitivity of receptor, this rated as a **Minor Beneficial** effect, which is **Not Significant** in EIA terms.

Mitigation Measures

- 13.97 Where feasible at this stage measures have been incorporated into the design of the Proposed Development in order to avoid, reduce or offset significant environmental effects. Where this has not been possible, further mitigation measures have been proposed.
- 13.98 The mitigations measures proposed, some of which comprise best practice measures which should be implemented in respect of any construction site, or operational development in order to minimise the impact on the environment, are set out below.

Construction

- 13.99 The Construction impact assessment presented identifies the potential for 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 city location. While short-term, this could be moderately disruptive to the local business district.
- 13.100 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 and limiting noisy activities during unsocial times. Best practice measures will be included within a Construction Environment Management Plan (CEMP) and secured by condition.
- 13.101 The Applicant will be required to submit a Local Labour Agreement which will aim to retain some of the employment benefits in the local area.

Completed Development

- 13.102 The impacts of the development during the operational phase are assessed as either Minor or Moderate Beneficial. Therefore, no additional mitigation of negative impacts is required.

Cumulative Effects

- 13.103 Cumulative effects come in two forms. The first relate to the impacts of the Proposed Development in conjunction with other developments in the area. These developments should be existing, consented or reasonably foreseeable in terms of delivery and should be located within a realistic geographical scope where environmental effects could combine to create a more significant effect on a particular sensitive receptor. These are hereafter referred to as cumulative effects.
- 13.104 The second type of cumulative effect is that of the combination of the various types of impacts from the Proposed Development. These are hereafter referred to as synergistic effects.
- 13.105 **Table 13.11** provides a list of the developments which are to be included within the cumulative sites assessment (see **Table 5.5** for further details). Three sites have been “scoped out” of the assessment for the socioeconomic section due to their lack of relevance to the impact assessment.

Site ref.	Application No.	Approx. Distance and Direction	Proposal	Scoped In / Out	Justification
1	129197/FO/2021 and 133700/FO/2022	1km northeast of site	Jackson's Brickworks	In	Comparable development
2	135454/JO/2022	1km north of site	Former Mather & Platt Foundry	Out	Industrial and Office development not deemed relevant for socioeconomic assessment
3	136763/FO/2023	1.5km south of site	Etihad Stadium (North Stand) -	Out	Hospitality and Leisure development not deemed relevant for socioeconomic assessment
4	134307/FO/2022	3.6km west of site	2 Angel Square, NOMA	Out	Commercial and Office development not deemed relevant for socioeconomic assessment

Site ref.	Application No.	Approx. Distance and Direction	Proposal	Scoped In / Out	Justification
5	136814/FO/2023	3.3km west of site	Dantzic Street, Dalton Street, Victoria North	In	Comparable development

^ Table 13.11 – Cumulative Sites (Source: MCC)

Approach

- 13.106 The first stage of the cumulative sites assessment is to establish which sites are to be included in the assessment, as per **Table 13.11**. Of the 2 sites to be included, both have been approved and these sites have been assessed to establish the potential cumulative effects from the combination of the developments to assess the potential wide impact.
- 13.107 There are no further synergistic effects included in the assessment.

Construction Cumulative Impacts

- 13.108 It has already been stated that, given the relatively small local construction industry, construction jobs for the Proposed Development will leak outside the immediate area. With 2 other developments already approved this increases competition for the local construction sector and makes it more likely that any additional approvals will have to be completed by external contractors. The indirect benefits of having the construction, such as the workers spend in the area, will however still remain and are increased by the total volume of new construction activity across the programme of approved developments.
- 13.109 This indicator would move from a **Minor Beneficial** to a **Moderate Beneficial** impact rating for the wider area, which would remain as **Not Significant** in EIA terms.
- 13.110 The Construction impact assessment highlighted the potential for 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 city location. While short-term, this could be moderately disruptive to the local business district.
- 13.111 With implementation of best practice demolition and construction practices, it is assumed that the residual impact of the Proposed Development would move from **Minor 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.

Completed Development

- 13.112 The cumulative impact assessment of the completed developments is based on an overall assessment of the impact of the additional working households created. It is not possible to include a cumulative impact assessment for the other potential impacts of the completed developments due to a lack of detailed information required to calculate any cumulative effects including jobs supported by new commercial premises and additional expenditure and revenue generated by the new households.
- 13.113 The State of the City report shows that, despite the approved pipeline of development there is still a shortage of residential units in the city. Given the large scale of anticipated demand, it is therefore unlikely that there will be any displacement between the new residential developments and indeed further approvals will be required to meet the city's growth expectations. This suggests that all of the approved developments are complementary to the city's growth ambitions and indeed required to meet the baseline population growth forecast and avoid loss of potential new activity.

13.114 Therefore, the impact significance is assumed to move from **Moderate Beneficial** to the immediate study area to **Major Beneficial** for the wider city, which is **Significant in EIA terms**.

13.115 The construction of the full development pipeline is expected to benefit the local construction industry. However, the total scale of development over a relatively short timescale suggests that the local industry will struggle to meet the full capacity and some additional external contractors will be required. In order to maximise the local benefit to the construction industry, local contractors should be made aware of the full approved development pipeline in order to choose projects which will be best value, or best meet their specific skills profiles. The Council could support this process through good communications with the local construction industry body, while the developers should be expected to share project details in a timely manner.

Mitigation Measures

13.116 The cumulative development pipeline, including all approved projects to date and this Proposed Development, are assumed to be complementary to the city's growth strategy, meeting the established demand forecast for residential and commercial space. As such, the pipeline is unlikely to generate any cumulative negative effects beyond those already stated for this Proposed Development. As such, no further mitigation measures are required.

13.117 Given the volume of new build required, however, it is recommended that local benefits be optimised through good communications between the Council and the local construction industry, ideally coordinating build programmes and seeking opportunities to find efficiencies and share logistics where possible.

Residual Effects

13.118 With implementation of best practice construction practices, it is assumed that the impact would move from **Minor Adverse** in the short-term to a short-term **Negligible** residual impact in the inner study area, which is **Not Significant**. **Table 13.14** summarises this assessment.

13.119 As the impacts of the completed development are assessed as either **Minor or Moderate Beneficial** no additional mitigation measures are required so the residual impacts remain the same and are rated as **Not Significant**.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Disruption to local area due to noise and movement of materials etc.	Minor Adverse short-term impacts on immediate area, which is Not Significant	Best practice mitigation measures implemented by way of CEMP	Negligible short-term impact on immediate area, which is Not Significant
Employment gain for the construction industry	Minor Beneficial short-term impact on the wider area, which is Not Significant	None required	Minor Beneficial short-term impact on the wider area, which is Not Significant
Operational Phase			
Additional working households	Moderate Beneficial long-term impact on immediate area, which is Not Significant	None required	Moderate Beneficial long-term impact on immediate area, which is Not Significant

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Additional household expenditure	Minor Beneficial long-term impact on the immediate area, which is Not Significant	None required	Minor Beneficial long-term impact on the immediate area, which is Not Significant
Additional Council Tax revenue and public sector jobs supported	Minor Beneficial long-term impact on wider area, which is Not Significant	None required	Minor Beneficial long-term impact on wider area, which is Not Significant

^ Table 1.12 – Residual Effects Summary

Conclusions

- 13.120 The findings of the impact assessment are summarised below.
- 13.121 Construction of 500 new dwellings will support **482 direct and indirect jobs during the 3-year build period with GVA of £33.8m per year**. This is assessed as a **Minor Beneficial** short-term impact on the wider area, which is **Not Significant**
- 13.122 The additional housing is expected to accommodate 1,181 new residents, 760 of working age. **It is anticipated some of these new residents will support new business creation in the area.** This is assessed as a **Moderate Beneficial** long-term impact on the immediate area, which is **Not Significant**
- 13.123 These **new households are estimated to spend £8.9m per year locally, enough to support 54 local jobs and GVA of £2.1m per year**. This is assessed as a **Minor Beneficial** long-term impact on the immediate area, which is **Not Significant**.
- 13.124 Households will **generate £1.1m in Council tax revenue** for the local authority per year. As a result of this and other taxes, the additional households are estimated to **support around 105 public sector jobs** locally. This is assessed as a **Minor Beneficial** long-term impact on the wider area, which is **Not Significant**.
- 13.125 As all the impacts of the Proposed Development are assessed as either Minor or Moderate Beneficial no additional mitigation measures are required so the residual impacts remain the same and are rated as **Not Significant** in EIA terms.

14. Summary of Residual Effects

14.1 This chapter of the ES provides a summary of the residual effects of the Proposed Development.

Air Quality

Construction Phase Fugitive Dust Emissions

14.2 Following the effective implementation of the mitigation measures, the residual effects are predicted to be '**not significant**' during the construction phase.

Operational Phase

14.3 Following the effective implementation of the mitigation measures, the residual effects are predicted to be not significant during the operational phase.

14.4 The overall impact of the operational scheme is assessed as being '**not significant**'.

14.5 The residual effects of the Proposed Development with mitigation in place are summarised in **Table 14.1** below.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Dust soiling as a result of fugitive dust emissions	Local residents	CEMP	Negligible Not Significant
Increases in PM ₁₀ concentrations as a result of fugitive dust emissions	Local residents	CEMP	Negligible Not Significant
Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	None	Negligible Not Significant
Operational Phase			
Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	Inclusion of measures in accordance with the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality', as outlined in Chapter 1, Table 1.24	Negligible Not Significant
Exposure of future residents to exceedences of the AQO and Interim Target	Future residents of the Proposed Development	None	Negligible Not Significant

^ Table 14.1 - Summary of residual effects – Air Quality

Climate Change

- 14.6 The IEMA guidance recommends that mitigation should in the first instance seek to avoid GHG emissions. Where GHG emissions cannot be avoided the development should aim to reduce the residual significance of a project's emissions at all stages. Where GHG emissions are significant but cannot be reduced, other approaches should be considered that compensate the projects remaining emissions.
- 14.7 The summary of effects identified throughout the construction, operation and decommissioning stages of development are presented in **Table 14.2** below.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Embodied Carbon – upfront (A1-A5)	Global Climate	Embedded design measures (paragraph 8.89).	Negligible (Not Significant)
Construction Traffic	Global Climate	CEMP	Negligible (Not Significant)
Operational Phase			
Embodied carbon - Repair, maintenance and refurbishment (B1-B5)	Global Climate	-	Negligible (Not Significant)
Operational traffic (B1)	Global Climate	-	Negligible (Not Significant)
Operational energy (B6)	Global Climate	Passive and active design measures intended to improve energy efficiency (paragraph 8.90).	Negligible (Not Significant)
Operational water (B7)	Global Climate	Passive and active design measures intended to improve resource efficiency (paragraph 8.90).	Negligible (Not Significant)
Decommissioning Phase			
Embodied carbon - End of life (C1-C4)	Global Climate	End of life plan to be produced.	Negligible (Not Significant)

^ Table 14.2 - Summary of residual effects – Climate Change

Built Heritage, Townscape and Visual Impact Assessment

Heritage Impact Assessment

- 14.8 The potential impact of the Proposed Development on heritage assets (receptors) in both the Construction and Operational phases is summarised in **Table 14.3** below:

Heritage Asset	Mitigation	Residual Effect	Likely Significant Effect
Construction Phase			
Philips Park Cemetery (Grade II RPG)	Construction Environmental Management Plan ('CEMP')	Moderate Adverse	Yes
Philips Park RPG (Grade II RPG)	CEMP	Minor-Moderate Adverse	No
Cemetery Chapel at Philips Park Cemetery (Grade II listed building)	CEMP	Minor-Moderate Adverse	No
Cemetery Office at Philips Park Cemetery (Grade II listed building)	CEMP	Minor Adverse	No
Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II listed building)	CEMP	Minor Adverse	No
Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II listed building)	CEMP	Minor Adverse	No
Operational Phase			
Philips Park Cemetery (Grade II RPG)	Embedded design quality	Minor-Moderate Beneficial	No
Philips Park RPG (Grade II RPG)	Embedded design quality	Minor Beneficial	No
Cemetery Chapel at Philips Park Cemetery (Grade II listed building)	Embedded design quality	Minor Beneficial	No
Cemetery Office at Philips Park Cemetery (Grade II listed building)	Embedded design quality	Negligible-Minor Beneficial	No

Heritage Asset	Mitigation	Residual Effect	Likely Significant Effect
Gates and Railings to Main Entrance of Philips Park Cemetery (Grade II listed building)	Embedded design quality	Negligible-Minor Beneficial	No
Entrance Lodge to Main Entrance of Philips Park Cemetery (Grade II listed building)	Embedded design quality	Negligible-Minor Beneficial	No

Table 14.3 Summary of Residual Effects – Heritage Impact Assessment

- 14.9 The nature of the effects summarised in the table above is expounded upon within Section 7 of the HTVIA (located at **Appendix 9.1**).

Townscape Impact Assessment

- 14.10 The potential impact of the Proposed Development on TCAs (receptors) in both the Construction and Operational phases is summarised in **Table 14.4** below:

Townscape Character Area	Mitigation	Residual Effect	Likely Significant Effect
Construction Phase			
TCA 1	CEMP	Minor Adverse (direct and indirect)	No
TCA 2	CEMP	Minor-Moderate Adverse (indirect)	No
TCA 3A	CEMP	Negligible Adverse (indirect)	No
TCA 3B	CEMP	Negligible Adverse (indirect)	No
Operational Phase			
TCA 1	Embedded design quality	Moderate-Major Beneficial (direct and indirect)	Yes
TCA 2	Embedded design quality	Minor-Moderate Beneficial (indirect)	No
TCA 3A	Embedded design quality	Negligible Beneficial (indirect)	No
TCA 3B	Embedded design quality	Negligible Beneficial (indirect)	No

Table 14.4 Summary of Residual Effects – Townscape Impact Assessment

- 14.11 The nature of the effects summarised in the table above is expounded upon within Section 8 of the HTVIA (see **Appendix 9.1**).

Visual Impact Assessment

- 14.12 The potential impact of the Proposed Development on visual receptors in both the Construction and Operational phases is summarised in **Table 14.5** below:

View	Mitigation	Residual Effect	Likely Significant Effect
Construction Phase			
View 1	CEMP	Minor-Moderate Adverse	No
View 2	CEMP	Negligible Adverse	No

View	Mitigation	Residual Effect	Likely Significant Effect
View 3	CEMP	Minor Adverse	No
View 4	CEMP	Minor-Moderate Adverse	No
View 5	CEMP	Negligible-Minor Adverse	No
View 6	CEMP	None	No
View 7	CEMP	Negligible Adverse	No
View 8	CEMP	None	No
View 9	CEMP	None	No
View 10	CEMP	None	No
View 11	CEMP	None	No
Operational Phase			
View 1	Embedded design quality	Minor-Moderate Beneficial	No
View 2	Embedded design quality	Neutral	No
View 3	Embedded design quality	Neutral	No
View 4	Embedded design quality	Neutral	No
View 5	Embedded design quality	Neutral	No
View 6	Embedded design quality	None	No
View 7	Embedded design quality	Neutral	No
View 8	Embedded design quality	None	No
View 9	Embedded design quality	None	No
View 10	Embedded design quality	None	No
View 11	Embedded design quality	None	No

^Table 14.5 Summary of Residual Effects – Visual Impact Assessment

- 14.13 The nature of the effects summarised in the table above is expounded upon within Section 9 of the HTVIA (see **Appendix 9.1**).

Human Health

- 14.14 Overall, following mitigation, the assessments have demonstrated there are no significant adverse effects to human health receptors associated with the development. Any mitigation measures identified will be secured through approval of the scheme design, via planning condition or as part of the S106 Agreement. There is one significant benefit to a townscape character area in the operational phase associated with the high quality design delivered by the proposals.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Air Quality			
Dust soiling as a result of fugitive dust emissions	Local residents	CEMP	Negligible
Increases in PM ₁₀ concentrations as a result of fugitive dust emissions	Local residents	CEMP	Negligible
Townscape and visual	Townscape character and visual receptors	CEMP	None to Minor-Moderate Adverse.
Climate change: • Embodied Carbon – upfront Construction Traffic	Global climate	CEMP	Negligible
Wind: safety and pedestrian comfort	All	None proposed	Negligible
Operational Phase			
Air Quality			
Increases in NO ₂ , PM ₁₀ and PM _{2.5} concentrations associated with vehicle exhaust emissions	Local residents	Inclusion of measures in accordance with the IAQM 'Land-Use Planning & Development Control: Planning for Air Quality'	Negligible
Exposure of future residents to exceedances of the AQO and Interim Target	Future residents of the Proposed Development	None	Negligible
Transport related effects	Pedestrians and highways network	Travel plan	Minor beneficial to minor/moderate adverse
Townscape and visual	Townscape character and visual receptors	CEMP	None to Moderate-Major Beneficial.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Climate change: - Embodied carbon - Repair, maintenance and refurbishment - Operational traffic - Operational energy - Operational water	Global climate	Embedded measures include passive, fabric efficiency, system efficiency, metering, lighting efficiency, ventilation and cooling systems, and low carbon / renewable technology.	Negligible
Wind: safety and pedestrian comfort	All	None proposed	Negligible

^ Table 14.6 – Summary of Residual Impacts – Human Health

Transport

Construction Phase

- 14.15 It is expected that any increase in traffic flows would not meet the IEMA assessment threshold rules, so the impact would be negligible, which is not significant in EIA terms.
- 14.16 As such, no mitigation measures are necessary for the construction phase. Notwithstanding this, a CEMP will be prepared and submitted to MCC in due course.
- 14.17 Therefore, the residual impact of the construction phase would remain negligible, which is not significant in EIA terms.

Operational Phase

- 14.18 The IEMA assessment threshold rules would not be met for any links in the operational phase, except Riverpark Road on Junction 1.
- 14.19 The change in traffic flows from the baseline would be indiscernible (so negligible) for all links aside from Riverpark Road on Junction 1. Further assessment of the Riverpark Road link on Junction 1 has demonstrated that, like the other links, there would be no significant effects in the operational phase.
- 14.20 As such, no mitigation measures are necessary for the operational phase. Notwithstanding this, two signalised crossings across Riverpark Road will be provided, connecting the Site to Phillips Park.
- 14.21 Therefore, the residual impact of the operational phase would remain negligible and minor adverse, which is not significant in EIA terms.

Wind Microclimate

Construction Phase

- 14.22 During demolition and construction there would be a negligible (not significant) residual effect on demolition and construction workers and people on foot, seated or travelling by bicycle off-site.

Operational Phase

- 14.23 During the operational phase, wind conditions would remain safe throughout the Site; this, therefore, represents a negligible (not significant) residual effect of the Proposed Development.
- 14.24 The residual effects of the Proposed Development with mitigation in place are summarised in **Table 14.7** below.

Table 12.1 - Summary of Residual Effects

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Negligible effects	All	None	Negligible effects
Operational Phase			
Negligible effects	All	None	Negligible effects

^ Table 14.7 Summary of Residual Impacts – Wind Microclimate

Socio Economics

- 14.25 With implementation of best practice construction practices, it is assumed that the impact would move from **Minor Adverse** in the short-term to a short-term **Negligible** residual impact in the inner study area, which is **Not Significant**. Table 14.8 summarises this assessment.
- 14.26 As the impacts of the completed development are assessed as either **Minor or Moderate Beneficial** no additional mitigation measures are required so the residual impacts remain the same and are rated as **Not Significant**.

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Disruption to local area due to noise and movement of materials etc.	Minor Adverse short-term impacts on immediate area, which is Not Significant	Best practice mitigation measures implemented by way of CEMP	Negligible short-term impact on immediate area, which is Not Significant
Employment gain for the construction industry	Minor Beneficial short-term impact on the wider area, which is Not Significant	None required	Minor Beneficial short-term impact on the wider area, which is Not Significant
Operational Phase			
Additional working households	Moderate Beneficial long-term impact on immediate area,	None required	Moderate Beneficial long-term impact on immediate area,

Likely Significant Effect	Receptor	Mitigation	Residual Effect
	which is Not Significant		which is Not Significant
Additional household expenditure	Minor Beneficial long-term impact on the immediate area, which is Not Significant	None required	Minor Beneficial long-term impact on the immediate area, which is Not Significant
Additional Council Tax revenue and public sector jobs supported	Minor Beneficial long-term impact on wider area, which is Not Significant	None required	Minor Beneficial long-term impact on wider area, which is Not Significant

^ Table 14.8 Summary of Residual Impacts – Socio Economic Impacts

15. Interaction of Effects

- 15.1 Paragraph 4 of the EIA Regulations provides details on the EIA Process and provides details of the factors which should be taken into consideration having regard to an assessment of the direct and indirect significant effect of the Proposed Development. It also states, at sub-paragraph (2)(e) of Paragraph 4, that the “*interaction between the factors referred to in sub-paragraphs (a) to (d)*” – that being the list of factors to be considered – should be identified, described and assessed.
- 15.2 **Type 1 cumulative effects**, that is the impact of the effects arising from the Proposed Development in conjunction with the effects arising from other proposed or committed developments, are considered within the technical chapter (**Chapters 7-13**) of this ES. This section of the ES therefore concentrates only upon the combined effects arising from the Proposed Development upon a set of defined sensitive receptors.
- 15.3 **Type 2 intra-project cumulative effects**, as considered within this Chapter, arise between the different environmental topics being assessed for the EIA. The effects arise as a result of one topic assessment’s proposals leading to an effect on another aspect of the environment. 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.

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