



Block C, Plot 11, First Street Environmental Statement: Non-Technical Summary

January 2024



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Introduction

1. This Environmental Statement (ES) Non-Technical Summary (NTS) has been prepared in support of development proposals coming forward at the Block C, Plot 11, First Street South. A Site Location Plan is provided in Figure 1 in the following section.
2. The Proposed Development comprises the erection of a 28 storey (+ ground) PBSA building, with 555 student bedspaces and communal amenity space. Full details of the Proposed Development can be found within Chapter 4 of this NTS.
3. The application is submitted to Manchester City Council ('MCC') by Downing Living (Manchester South) Limited Partnership Incorporated (hereinafter 'Downing') (the 'Applicant').
4. This ES NTS sets out the findings of an Environmental Impact Assessment ('EIA') carried out in respect of the development of the Site.
5. The EIA has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) ('the EIA Regulations') and other relevant policy and guidance.
6. The Non-Technical Summary (NTS) is a standalone document and is required under the EIA Regulations.

Purpose of the Environmental Impact Assessment and Non-Technical Summary

7. The purpose of an EIA is explained by the Government in the National Planning Practice Guidance at paragraph 002 (Reference ID: 4-002-20140306), which sets out:
"The aim of Environmental Impact Assessment is to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, 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."
8. In simple terms, an EIA is an information gathering exercise in relation to the effect that the Proposed Development may have on the local environment when compared to the existing conditions. These are typically carried out on projects of a large scale.
9. Conducting an EIA is a systematic process, which leads to a final report, the ES.
10. This NTS is designed to be read on its own. It explains the environmental implications of the Proposed Development to the public, informing them, and allowing them to decide whether they would like more detail on the Proposed Development.
11. More information and greater technical details are available in the Environmental Statement (ES). The ES is a separate document which has been submitted as part of the planning application. Please see the section on "Availability of Environmental Statement" within this NTS for details on how and where to view the ES.

Environmental Impact Assessment Process

12. The first step is understanding if the Proposed Development meets the criteria set out within legislation, which means that further consideration should be given to if it comprises an EIA development. The legislation sets out different 'schedules' of projects and how the EIA should be carried out.
13. The Proposed Development is considered to fall under the category of 'urban development projects' (EIA Regulations Schedule 2, 10, (b) (ii)), as the development includes more than 150 dwellings.
14. A Proposed Development may then go through a 'Screening' and/or a 'Scoping' process. This is the process whereby an Applicant may submit a request to the Local Planning Authority for a formal opinion

as to whether they consider the Proposed Development to be meet the criteria for an EIA and, if so, what technical topics it considers to be relevant to the EIA.

15. If an EIA is determined to be required, the Applicant will prepare an ES, which sets out the findings from the technical assessments undertaken. The ES is then submitted to the Local Planning Authority as part of an application for Planning Permission.

Assessment Methodology

Scoping

16. An EIA Screening and Scoping Report was prepared by Deloitte with input from the technical consultant team for the project. The EIA Screening and Scoping Report was submitted to Manchester City Council ('MCC') as the Local Planning Authority on 3 November 2023.
17. The Scoping Opinion was received on 03 January 2024, and is included at Appendix 2.3 of the ES.

Technical Topics not included in the Environmental Impact Assessment

18. The Scoping process identified a number of technical topics where significant environmental effects as a result of the Proposed Development would be unlikely and would not be assessed further within the EIA process. These are as follows:
19. Further information detailing why each of these technical topics were scoped out of the EIA can be found in **Appendix 2.1** of the ES (Volume 2).

Approach to Technical Studies

Overview

20. Various technical studies were commenced at an early stage in the development process. The findings of the baseline (existing) 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.
21. Design team reviews, attended by members of the project team, were held throughout the pre-application process. These reviews provided a valuable forum for the exchange of information and ensured that the design team was fully aware of the environmental constraints and opportunities, and of the interactions between disciplines. Meetings were also held with Manchester City Council as the Local Planning Authority, as well as pre-application discussions with technical consultees.
22. The technical studies have been undertaken in accordance with current best practice. Specific guidance used is referenced within each of the respective technical chapters, with a reference list at the end of each chapter.
23. The technical studies undertaken within the 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.

Baseline Conditions

24. Each technical chapter includes a section which describes and evaluates the baseline environmental conditions (i.e., the current situation and anticipated changes over time assuming the Site remains unchanged). Baseline data has been obtained from a variety of sources, including published documents, maps, historical information and Site survey data. Given the complex nature of the Site and surroundings, each technical chapter (Chapters 6-13) includes a clear description of what is assumed as the baseline against which the assessment is being made.
25. Blocks A, B and D of the Plot 11 First Street development, which are situated in close proximity to the Site, were approved on 9 March 2021 under Planning Permission Ref. 125573/FO/2019 (as amended) as standalone development phases. Planning Permission Ref. 125573/FO/2019 (as amended) has been

implemented and Blocks A, B and D are at an advanced stage of construction to be practically completed in advance of works commencing in relation to the Proposed Development. As such, Blocks A, B and D have been treated for the purposes of this Environmental Statement as part of the existing baseline and are assumed to be completed and operational. Please note that whilst some technical chapters may make some qualitative comparisons between the Proposed Development and Block C as approved under Planning Permission Ref. 125573/FO/2019 (as amended), these are contextual comparisons and do not directly inform the environmental assessments for the purpose of the EIA.

26. Other relevant committed developments (i.e. developments that have with implemented planning permissions under construction), within the surrounding area, have also been included within the existing baseline for the purposes of the Environmental Statement. There is no agreed / standard threshold for selecting such committed developments; therefore, a professional judgement has been taken regarding which schemes to treat as part of the existing baseline for the purposes of the Environmental Statement, taking into consideration, among other things, the scale of the Proposed Development whilst also considering the high-density city centre location.
27. Committed developments, which have been treated as forming part of the existing baseline, are highlighted at Appendix 2.2, and can be summarised as follows:
 - Plot 9a, First Street (132600/FO/2021)
 - First Street South (Plots A, B and D only) (125573/FO/2019)
 - Metropolitan University Science and Engineering Building (125799/FO/2019)
 - Barclay House (118033/P3OPA/2017)
 - Havelock (129081/FO/2021)
 - Viadux (115871/FO/2017)
 - Staycity Deansgate (125804/FO/2019)
 - The Blade and Three60 (126668/FO/2020)
 - Plot 10a, First Street (136043/FO/2023)
 - Plot 10b, First Street (136170/FO/2023)
 - Great Jackson Plot F (132199/FO/2021)
 - Vision (111003/FO/2016/C1)
 - Deansgate South (129406/FO/2021)
28. Plot 10a had been included within the existing baseline as a "*committed development*". However, we now understand that whilst all pre-commencement conditions have been discharged, and the consent could therefore be implemented at any moment, the consent has not yet been implemented. In consideration of this position, and on the basis of comments included within MCC's Scoping Opinion, each technical consultant has conducted a review of their assessments, to establish whether any updates would be required if Plot 10a were to be considered as "*cumulative*" schemes. In their capacity as professional advisors, each consultant has confirmed that treating Plot 10a as a cumulative scheme would not materially impact upon the outcome of their assessments. Each Technical Chapter of the ES includes an discipline-specific explanation as to why this is the case.
29. Whilst Plot 10b is under construction (following lawful implementation), MCC requested in its Scoping Opinion that consideration be given as to whether the results of the ES would differ if Plot 10b was also to be treated as a cumulative scheme. Following a review exercise, each consultant has confirmed that treating Plot 10b as a cumulative scheme would not materially impact upon their assessments. This is also confirmed, and explained, within each discipline-specific Technical Chapter.
30. The method used to obtain baseline information, where relevant and possible, has been clearly identified within each technical chapter and agreed in advance with statutory consultees.

Mitigation

31. Any adverse environmental effects have been considered for mitigation at the design stage and, where practicable, specific measures have been put forward.
32. Mitigation measures to be implemented during the operational phase of the Proposed Development will be secured through approved documents, and suitably worded planning conditions and obligations.

Residual Effects

33. The likely significant effects on the environment, assuming the implementation of the mitigation measures proposed, have been estimated within each chapter. These are termed 'residual effects'.
34. A summary of residual effects can be found on Page 33 of this Non-Technical Summary.

Cumulative Effects

35. Each Chapter (and corresponding technical report) considers the cumulative effect of the Proposed Development, alongside the committed developments (referenced above) (**Appendix 2.2**), as relevant.
36. The cumulative developments forming part of the cumulative effects assessment include:
 - Approved but unimplemented projects;
 - Plans or projects for which an application has been made and which are under consideration by the consenting authorities; and,
 - Certain projects which are reasonably foreseeable, i.e., projects for which an application has not yet been submitted, but which are likely to progress before completion of the development and for which sufficient information is available to assess the likelihood of cumulative effects.
37. A search of MCC's planning applications database and knowledge of the area, applying the above criteria, has identified a number of schemes for which cumulative effects are considered likely. A full list, as of 17th October 2023, is contained at Appendix 2.2, and can be summarised as follows:
 - One City Road (128002/FO/2020)
 - Park Place (129273/FO/2021)
 - Travelodge Deansgate Locks (126308/FO/2020)
 - Bridgewater House (134694/FO/2022)
 - One Medlock Street (135419/FO/2022)
 - Great Jackson Street - Crown Street Plot D (The Lighthouse) (137227/FO/2023)
 - Great Jackson Street – Plot C and E (The Green) (137226/FO/2023)
 - Student Castle (121252/FO/2018)
38. Each technical chapter has assessed the potential for likely significant effects on the environment as a result of the above cumulative developments, together with the Proposed Development.
39. Type 1 Cumulative effects (i.e. cumulative effects arising from multiple impacts on the same receptor) are summarised on Page 50 of this Non-Technical Summary, and detailed in full within Chapter 16 of the ES.

Who has been involved in the EIA process?

40. The EIA process has involved communication and collaboration between the applicant, Deloitte LLP, MCC, the project team (shown in **Table 1**), statutory consultees and the public.

Table 1: Project Team

Topic	Assessment carried out by
EIA Coordination and Town Planning	Deloitte LLP
Architecture and Design	Simpson Haugh
Air Quality	RPS
Construction Management	Downing
Climate Change	Ramboll
Human Health	Enfusion
Noise and Vibration	Acoustic Engineering Consultants Ltd.
Socio-Economic Issues	Ekosgen
Sunlight, Daylight, Overshadowing and Solar Glare	GIA
Townscape and Visual Impact	OPEN
Wind Microclimate	Urban Microclimate
Ground Conditions	GRM

What were the results of the EIA?

41. The following sections summarise the methodology used in determining the likely significant effects of the Proposed Development and summarise the outcomes of the EIA.
42. This section is organised into the following technical subjects:
 - Construction Management and Phasing
 - Air Quality
 - Climate Change
 - Human Health
 - Noise and Vibration
 - Socio-Economic
 - Sunlight, Daylight, Overshadowing and Solar Glare
 - Townscape and Visual Impact
 - Wind Microclimate
 - Ground Conditions
43. Greater detail can be found in the relevant chapters of the Environmental Statement (6 to 14) and their technical appendices.
44. The technical topics are those elements of the environment considered likely to experience significant effects and therefore assessed in the EIA.
45. With regard to the assessment for each topic, the subsequent technical sections discuss:

- The nature of the technical discipline;
- What has been assessed; and
- What the proposed effect of the Proposed Development is.

46. A summary of proposed mitigation measures and residual effects is also included in Chapter 14-15 of the ES Volume 1.

Significance of Effects

47. The likely effects of the Proposed Development have been classified according to their significance.
48. Significance is determined as a function of both the scale (magnitude) of change from the existing (baseline) environment and the sensitivity of environmental receptors, such as population, fauna, flora, soil, water, air, climatic factors, material assets, including the architectural and archaeological heritage, landscape and the inter-relationship between these factors. Chapter 2 of the ES Volume 1, EIA Methodology, describes this process in greater detail.
49. This serves as a useful guide for specialists to assess effect significance. Where discipline-specific methodology has been applied that differs from these generic criteria, this has been clearly explained within the relevant ES Chapters Volume 1 (6 to 13).

Updates to the ES in January 2024

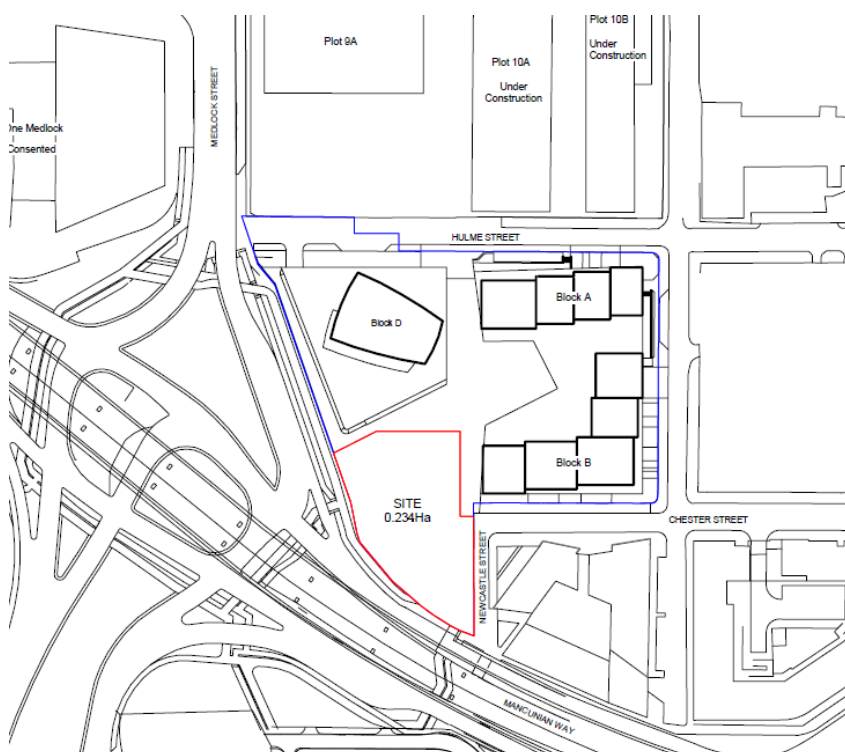
50. In accordance with the requirements of the EIA Regulations and related case law, a comprehensive revision and update to the original ES has been undertaken. Each chapter of this ES has been reviewed and updated in consideration of the following matters:
- Receipt of EIA Scoping Opinion from MCC, including the following requested changes:
 - Updates to paragraph references following update to the National Planning Policy Framework in December 2023.
 - Consideration of Plot 10a and 10b, First Street as cumulative rather than committed.
 - Scoping in of Ground Conditions as a standalone Chapter (Chapter 14).
 - Clear identification of respective scenario for each table and appendix title, within each consultant chapter.
51. For clarity and completeness and to avoid a paper trail, rather than prepare an addendum to the Block C ES, a full update has been undertaken. This ES replaces the previously submitted ES in its entirety. This ensures that adequate information is available and before MCC to assess the potential for likely significant environmental effects as a result of the Proposed Development.

Description of the Proposed Development

Where is the Site?

52. The Site, identified in Figure 1, comprises a parcel of vacant land, which has historically been used as surface level car parking. There is landscaping along the southern and western boundaries of the Site.
53. The Site is located within Manchester City Centre, and the Regional Centre. The Site and its immediate surrounding area have been a regeneration priority for Manchester City Council for over a decade, and the Site forms part of the “*First Street Development Framework (FSDF)*”.
54. The Site is bound to the north and northeast by land that is currently being redeveloped to deliver a co-living scheme of up to 45 storeys (pursuant to Planning Permission Ref. 125573/FO/2019 (as amended)); to the east by Newcastle Street (beyond which is surface level car parking and two PBSA developments operated by Unite (Parkway Gate and New Medlock House)); to the south by Mancunian Way; and to the east by Medlock Street.
55. Planning Permission Ref. 125573/FO/2019, as approved in March 2021 (the 2021 Planning Permission), was for the phased redevelopment of Plot 11, to deliver a co-living development of up to 45 storeys. The Site was anticipated to deliver a co-living building of up to 17 storeys, comprising 322 bedspaces as well as communal facilities as part of Phase C of the 2021 Planning Permission. Construction works in relation to Phases A and B are underway, with Phase A (Block D) expected to be completed in March 2025, and Phase B (Blocks A/B) expected to be completed in August 2024. No works in relation to Phase C have commenced.

Figure 1 – Site Location Plan



What is being proposed?

56. The description of development is as follows:

“Full Planning Permission for a 28-storey building comprising purpose-built student accommodation (Sui Generis) and other associated works including public realm, secure cycle parking, and servicing arrangements.”

57. **Table 2** sets out the application proposals for the Proposed Development:

Table 2 – Development Quantum

Parameter	Proposed Development
Site Area (Hectares)	0.23
Height (storeys)	Ground + 28 storeys
Height AOD (m)	+120.625m AOD
Student Accommodation	<ul style="list-style-type: none"> 300 standard studios 227 standard cluster bedrooms (x1 seven bed cluster, x14 eight bed clusters and x12 eight-bedroom clusters)
Total Floorspace (GIA)	19,029 sq. m.
Car Parking	2 accessible car parking spaces.
Cycle Parking	<ul style="list-style-type: none"> 86 secure cycle parking spaces within the building for use as part of the “free hire” cycle scheme. 30 additional cycle parking spaces within the building for residents to store their own bicycles. 12 visitor spaces (6 Sheffield stands) within the public realm.

58. Further information on the Proposed Development can be found within Section 3 of the ES and the Design and Access Statement prepared by Simpson Haugh.

What is located on the Site at the moment?

59. The Site comprises a parcel of brownfield land, measuring approximately 0.23 hectares.

60. Having previously been used as a surface-level car park, the Site is now vacant, save for the temporary placement of a site compound (used in relation to the construction of Blocks A/B, and D (to the north and northeast)). In its current state, the Site is predominantly comprised of hardstanding with a minimal amount of vegetation.

61. The Site is in a highly accessible location by a variety of modes of transport. It is located within easy walking distance of the city core with all the shops, restaurants, attractions, amenities and facilities that the city centre has to offer. Deansgate transport hub – comprising Deansgate Castlefield Metrolink Station and Deansgate Railway Station – is located 400m north-west of the Site. Oxford Road Station is located 430m north-east of the Site. Regular bus routes run along Medlock Street and Cambridge Street immediately adjacent to the Site.

62. The Site is bound to the north by the wider Plot 11 development, which is being brought forward (pursuant to Planning Permission Ref. 125573/FO/2019 (as amended) for co-living accommodation, as follows:

Phase A: Block D

- 45 storeys
- 707 bedrooms
- Communal facilities, including: a bike store, plant, substation, car park, management suite and bin store, First Floor and “sky lounge” (Floor 44) amenity areas (lounge/ kitchen/dining area) (3,146 sq. m.) and external first floor and external private terrace and garden areas (1,636 sq. m.).

Phase B: Blocks A / B

- Block A - part-10, part-18 and part-22 storeys, Block B: part-18, part-22 and part-26 storeys.
- 1,187 bedrooms (396 in Block A, and 791 in Block B)
- Communal facilities, including a café, health and wellbeing space, bike store, plant, bin store, substation, laundry, management suite, Ground and First Floor shared amenity areas (lounge/kitchen/dining area) (5,562 sq. m) and external private terrace and garden areas (2,470 sq. m.).

63. Immediately to the east of the Site is Unite Student accommodation (New Medlock House and Parkway Gate). Further beyond to the east, there is a cluster of converted mills (Macintosh Mill, Chorlton Mill and Cambridge Mill), and a diverse mix of uses, including PBSA, retail, residential and food and beverage units.
64. To the west of the site is Medlock Street, beyond which is a Premier Inn and Canvas Student Accommodation (a PBSA development comprising 807 beds, previously approved under Ref. 118683/FO/2017). Resolution to grant planning permission (Ref. 135419/FO/2022) was secured at Planning Committee on 1st June 2023 for a new PBSA and office scheme at One Medlock Street / Former Premier Inn Site. The scheme will deliver a 38 storey PBSA scheme (1,014 bedspaces) alongside an office building.
65. The Site is located within the Greater Manchester Air Quality Management Area (AQMA).
66. There are no statutory or non-statutory ecological designations within the Site.
67. The Site is not located within a Conservation Area and does not contain any designated or non-designated heritage assets. There are 33 heritage assets (including the Whitworth Street Conservation Area and the Castlefield Conservation Area) located within a 500 metres buffer zone.
68. According to the Environment Agency’s Flood Map, the Site is located within Flood Zone 1, demonstrating a low risk of flooding. The Site is located within the Critical Drainage Area prescribed by Manchester, Salford and Trafford Councils Strategic Flood Risk Assessment.

Why is this development coming forward?

69. The Site is located within Manchester City Centre, and the Regional Centre. The Site and its immediate surrounding area have been a regeneration priority for Manchester City Council for over a decade, and the site forms part of the “*First Street Development Framework (FSDF)*”.
70. Given this context, the Site’s accessibility, and the fact that the Site currently comprises a parcel of vacant, previously developed land, the Site is ripe for development. There is a clear opportunity to make more efficient use of this underutilised, strategically located Site, to deliver a much-needed use.
71. Fundamentally, the Proposed Development delivers on long standing development plan objectives that are further supported by other material considerations. The Proposed Development will support the regeneration ambitions for FSDF, and assist in creating a truly mixed and balanced high-quality residential neighbourhood at First Street South.

Who has been consulted?

72. Pre-application engagement has been undertaken with MCC officers, the Local Planning Authority (LPA), Local Ward Councillors, Greater Manchester Police (GMP) Secure by Design team, local residents, businesses, and the general public.

73. Public engagement was undertaken through a robust consultation process. Throughout the duration of the public consultation period, members of the public had access to the public consultation website, which provided details of the site history, context and planning history, project objectives and emerging scheme proposals. The website also provided visitors with the opportunity to provide any comments or raise questions, which have been responded to by the project team during the pre-application period. A press release regarding the consultation was also distributed which was picked up by numerous media outlets.
74. A public consultation event took place on 1 November 2023, which also enabled local residents and businesses to comment on emerging proposals.
75. The evolution of the scheme has been influenced by the findings of public consultation exercise. Further information on this process and the feedback gained is available in the Statement of Consultation submitted in support of the current planning application.

What will the redevelopment process involve?

76. Broadly, the construction process Proposed Development will involve:
- Laying foundations;
 - Building of the new structures;
 - External works and hard and soft landscaping;
 - Completion of public realm;
 - Completion of communal external space and links; and
 - Internal fit out of the main structure.
77. Machinery used during redevelopment will consist of standard construction plant, and will include plant items such as: excavators, concrete crushing plant, mobile cranes, compacting and vibrating mechanical plant, wheel washing and road sweeping equipment.
78. The Site will be secured and surrounded with hoardings to ensure public safety and mitigate adverse environmental effects during construction.

How long will it take?

79. The total construction programme is estimated to be two and a half years within which there will be elements of ground works, foundations, frame construction, façade cladding and internal fit out. The Proposed Development is anticipated to be delivered in a single phase.
80. In terms of planned delivery programme and proposed timeline, the current plan is to commence development following the completion of Blocks A, B and D, in March 2025. If timescales associated with the completion of Blocks A, B or D slip, then the works in relation to Block C will be pushed back. Construction works will not overlap.
81. These above, indicative dates, have been used for the basis of technical assessments. Owing to the multiple risks involved in the development process, this programme may ultimately be extended in the event delays caused by sustained periods of poor weather, unexpected ground conditions or other abnormals, volatility in economic and housing markets, political uncertainty, and the availability of funding.
82. The programme is based upon normal working hours in line with Manchester City Council Guidance of 7.30hrs to 1800hrs Monday to Friday and 0800hrs to 1400hrs on Saturdays.
83. On Sundays and Bank holidays noisy working will generally not be planned. On some occasions there are certain operations that maybe required to proceed during these periods, for example tower crane erection and dismantling. These will be infrequent and will be agreed with the Environmental Health Officer (EHO) and local residents will be notified in advance. The frequency of these will vary and respond to demand. Access to the Site will be permitted 30 minutes prior to the working day commencing with noise being kept to a minimum for the first half hour of each day.

84. The Applicant acknowledges the close proximity of the neighbouring properties and as such will endeavour at all times to ensure the working hours are adhered to in order to protect their amenity.

Alternative Options

85. The EIA Regulations require the ES to identify the main alternatives that were considered during the design process.
86. The Proposed Development has been influenced by a range of factors, including location, surrounding land use and input from MCC, Statutory and Non-Statutory Consultees and other stakeholders.
87. This Chapter reviews the principal land use and siting options explored and the reasoning for the selection of the current design for the Proposed Development which forms the subject of assessment within the ES.
88. This Chapter considers the following four options in the context of the existing Development Brief:
- The 'do nothing' alternative where the Proposed Development is not progressed;
 - Alternative Locations for the Proposed Developments;
 - Alternative uses for the Site
 - Alternative Design/layout for the Proposed Development in the context of the design evolution.

The 'Do Nothing' Alternative

89. The "do nothing" scenario, to carry out no development on the Site, has been discounted due to the long-established aspiration to regenerate this highly strategic and sustainable location within First Street.
90. The Site is located within the First Street Development Framework (FSDF) area and has been identified as a pivotal development site that will help to meet the regeneration ambitions sought by MCC within this part of the City Centre. The Site falls within the 'First Street South' character area, which is signposted for high-quality residential uses.
91. Fundamentally, the Proposed Development delivers on long standing development plan objectives that are further supported by other material considerations. The "do nothing" scenario, therefore would represent a missed opportunity to build on these existing strengths to deliver social and economic benefits.

Consideration of Alternative Use

92. There is a clear, evidenced need for PBSA in Manchester. This is identified within the Executive Report "*Consideration of Policy H12: Purpose Built Student Accommodation Within the Changing Market Context*" (November 2019), Executive Report "*Purpose Student Accommodation in Manchester*" (December 2020) and subsequent Economic Scrutiny Committee Report "*Purpose Student Accommodation in Manchester*" (May 2023). These Reports confirm that the demand for PBSA could be between 5440 bedspaces (representing a 1% growth per annum) and 11320 (representing 2% growth per annum) up to 2030. This would therefore equate to the need for 750 new bedspaces per annum up to 2030.
93. First Street's locational characteristics provide a unique opportunity to address PBSA demand through delivering high quality student accommodation within a highly accessible location close to the amenities of the City Centre and within walking distance to Manchester's universities. This area is well served by public transportation including Manchester's Oxford Road and Piccadilly Stations and the Metrolink. Manchester Oxford Road is a key transport corridor providing direct access to university's main campuses.
94. The FSDF is clear that this Site, within First Street South, should help to deliver a high-quality residential neighbourhood. Whilst other, alternative residential uses (including standard residential housing, and co-living (as per the extant consent)) were considered for Block C, the overriding strategic need for PBSA within this specific location is clear. It is on the basis of need, and the ambition to deliver a truly balanced

and mixed community, that the Applicant has concluded that PBSA would be the most appropriate use for the Site.

95. To note, commercial uses (including office) were also considered, but discounted on the basis of MCC's strategic objectives for FSS and given that office needs for the FSDF area are being met by neighbouring plots.
96. As detailed within the Design and Access Statement submitted in support of this application, the proposed development has been designed in a way which allows for easy adaptation to standard residential accommodation, should the balance of needs change in the future. The idea is that the proposed building could be re-purposed for standard residential use, rather than be demolished if the demand for PBSA falls (subject to obtaining planning permission).

Consideration of Alternative Locations

97. The proposed PBSA use is highly compatible within this location in close proximity to the Oxford Road Corridor, the University of Manchester and Manchester Metropolitan University, and within an allocated regeneration area.
98. Located within the City Centre, the Site is within a highly strategic location and is well served by multiple modes of sustainable transportation methods. For instance, Manchester Oxford Road Station is located just 400m to the north; Deansgate Train Station is just 500m to the north west; and Hulme Tram Stop just 230m to the north west. These links provide access to a number of locations throughout Greater Manchester and beyond.
99. Furthermore, it should also be recognised that the Site is the only available land in the Applicant's control within the general locality.

Design Evolution

100. The Design and Access Statement, prepared by Simpson Haugh, which accompanies this application addresses the design evolution of the Proposed Development in detail.
101. The Proposed Development has been largely informed by surrounding built form; feedback received during the pre-application process; and the outcome of a series of technical assessments.
102. Best endeavours have been taken to design a development that makes the most efficient use of a strategically located, brownfield site, whilst minimising any negative impacts on adjacent land uses and the environment. Opportunities to deliver clear and tangible public benefits (including high quality public realm) have also driven the design of the proposed development.
103. Following a number of typologies, heights and massing options being analysed, the Proposed Development has been designed as a tall, curved building, to reflect the form of Block D.
104. It was considered that a slender curved tower form would work well in addressing the roundabout and in achieving the goals of the revised Block C brief in creating a distinctive marker building. Blocks C and D would now act as a pair, fronting Medlock Street, and acting as an arrival point into the city from Hulme and the Princess Parkway / Mancunian Way. Blocks A and B would similarly act as a pair, with broken-up stepped forms, and height dropping towards the more historic settings of Macintosh Mills to the east.
105. Upon choosing a curved tall building to match Block D, the height of the development was largely informed by studies of the surrounding area (in terms of determining what would be contextually appropriate) and perceived impacts upon Hulme residents.
106. The range of 25-30 storeys was explored as this scale would allow for a sufficient step down in heights towards Hulme, whilst also still providing a significant building marker that achieves the aims of establishing Block C as a Gateway site at the Newcastle Street crossing. Key massing views were established early in the process to determine what height would be appropriate. A clear aim was to allow Block C to sit within the silhouette of Block D, and for the whole Plot 11 to read cohesively.
107. Following the selection of the preferred massing typology, a series of technical studies (including wind microclimate and daylight and sunlight analysis) were conducted to ensure that the scheme would be

technically sound. It was established that a curved form would produce better wind results than other massing forms, in terms of ensuring pedestrian safety within the surrounding area. The podium level, and specifically the way in which it protrudes, was largely informed by initial desktop wind studies.

108. For further details please refer to the Design and Access Statement submitted alongside this ES.

Construction Management and Phasing

109. The Construction (Design and Management) Regulations 2015 will apply to this project and all appropriate controls and systems will be in place to comply with the standards of the Regulations and associated guidance.
110. It is important to acknowledge the Proposed Development and the potential impacts that may arise during the construction stage. A separate Construction Management Plan (CMP) has been submitted in support of this planning application.
111. In terms of planned delivery programme and proposed timeline, the current plan is as follows:
- Planning Submission Q4 2023.
 - Site Mobilisation Q1 2024.
 - Completion Q3 2026.
112. The works will be undertaken in a single phase. The works included within this application include:
- Demolition and site clearance – to remove any existing service pipes, cables and other underground constructions which are likely to affect the works.
 - Piling and Substructure works
 - Concrete frame works
 - Façade works
 - Mechanical, electrical and plumbing works
 - Finishing works – including partitioning, plastering, decoration, floor finishes, joinery, fitted furniture etc.
113. A detailed programme of construction activities and sequencing will be provided by the contractors as part of the detailed CMP.
114. The following narrative explains this methodology and timescales envisaged at the time of the planning application. More detailed proposals will be developed prior to commencement on-site. This will include the preparation of a detailed Construction Environmental Management Plan (CEMP) - to incorporate Construction Management, Construction Phase Health and Safety, Environmental Management as well as Site Waste Management, Logistics and Traffic Management.
115. Every stage of the project will be pre-risk assessed and appropriate controls applied, subcontractors will be pre-vetted and will be subject to extensive pre contract requirements of information transfer and risk assessment.
116. The Principal Contractor will be responsible for the development of a detailed Construction Environmental Management Plan, which will take account of all known risks, which have been identified at pre-construction stage by the Principal Designer/CDM Consultant, the Design Team and also through site investigations.
117. The Construction Management Plan will describe arrangements and procedures for managing these key risk areas in more detail, as well as any future risk, and also the resources, including personnel, which will be applied to the scheme and will ensure the Health and Safety of all those working on or affected by the project works.

118. The Principal Contractor will have an on-going process of monitoring health and safety standards throughout its organisation. This is normally done directly (on -site) by the Site management team through regular inspections, toolbox talks etc., and via the risk assessment process both during the completion of risk assessments and then by monitoring the effectiveness of risk control measures, which have been implemented. Site managers will also undertake regular reviews of safety on -site, including any accidents or incidents and any matters raised will be dealt with accordingly.
119. Health and safety are also incorporated as a fundamental aspect of the overall project review. The Applicant will appoint a Principal Contractor that can demonstrate competency in the management and execution of Health and Safety. The Principal Contractor will work closely with the Principal Designer at this early stage of the project and will influence the detailed design to remove construction and residual safety risks.
120. The Principal Contractor will communicate with all relevant parties, including neighbours to ensure there is effective co-ordination throughout all stages of the build.

Air Quality

What is Air Quality?

121. Air Quality describes the pollution levels of the air that we breathe. Poor air quality has negative effect on people, especially those with heart or lung conditions.
122. The Proposed Development is located within the administrative area of Manchester City Council (MCC). The Site is located within the Greater Manchester Air Quality Management Area (AQMA), designated due to elevated concentrations of nitrogen dioxide (NO₂) attributable to road traffic emissions.

What has been Assessed?

123. This Air Quality Assessment considers the air quality impacts during the construction phase and once the Proposed Development is fully operational.
- The construction phase assessment considers dust, covering both the PM₁₀ fraction that is suspended in the air that can be breathed, and the deposited dust that has fallen out of the air onto surfaces and which can potentially cause temporary annoyance effects. Existing receptors include those within 350m of the Site and up to 50m from roads used by construction traffic.
124. The operational phase assessment looks at nitrogen oxide (NO₂), and particulate matter (PM₁₀, and PM_{2.5}) as these are the main pollutants from road traffic. Receptors include future residents of the development.

What is the effect of the Proposed Development on Air Quality?

125. For the construction phase, the most important consideration is dust. Without appropriate mitigation, dust could cause temporary soiling of surfaces, particularly windows, cars, and laundry. The mitigation measures provided within this chapter and appendices should ensure that the risk of adverse dust effects is reduced to a level categorised as *“not significant”*.
126. The development is car free (save for 2no. blue badge bays on Chester Street) and heat and power will be supplied by electric air source heat pumps. On that basis there are minimal emissions to air during the operational phase and the impacts of the emissions have not been considered further.
127. Regarding suitability of air quality at the Proposed Development for introducing new occupants, pollutant concentrations at the façades of the majority of proposed residential receptors are predicted to be within the relevant health-based air quality objectives. There are certain residential receptors facing Mancunian Way to the south and west of the development on floors 1, 2 and where the air quality objectives are not met but with appropriate mitigation measures in the form of airtight windows and mechanical ventilation, future occupants of the site will be exposed to acceptable air quality. Annual-mean NO₂ concentrations are predicted to exceed the relevant health-base air quality objectives at:
- all residential homes on the first floor,
 - all Clusters Bedrooms and the Studio closest to the Cluster Bedrooms on the west side and the three Cluster Bedrooms closest to the Cluster Kitchen on the east side on the second floor; and
 - the two Cluster Bedrooms closest to the Cluster Kitchen on the west side of the third floor.
128. Mitigation measures in the form of airtight windows and mechanical ventilation have been recommended at those homes to protect sensitive (residential) receptors from exposure to poor air quality. With effective implementation of recommended mitigation measures, future occupants of the Proposed Development will be exposed to acceptable air quality and the site is deemed suitable for its proposed future use in this respect.
129. On that basis, the Proposed Development would not, in air quality terms, conflict with national or local policies, or with measures set out in MCC's Air Quality Action Plan.

Climate Change

What is Climate?

130. The UK has made commitments to tackle the root cause of climate change by reducing emissions of greenhouse gases (GHG), as well as to increase the resilience of projects to the changing climate.
131. The Climate Change Act 2008 sets a target to reduce net GHG emissions by 100% from 1990 levels by the year 2050. The effective assessment and management of impacts on climate, as well as the effects of climate change on projects offers the opportunity to:
- Reduce the impact of projects on climate by minimising the magnitude of GHG emissions as far as possible; and
 - Improve the resilience of projects to future climate conditions, such as increased risk and severity of flooding, drought, heatwaves, intense rainfall events and other extreme weather events.

What has been assessed?

132. The Environmental Impact Assessment (EIA) Regulations require an assessment of the likely significant effects of a project on climate and vice versa. A climate assessment in the context of EIA comprises three separate assessments:
- Greenhouse Gas (GHG) Emissions Assessment – considers the potential for significant effects to arise from the Proposed Development in terms of GHG emissions during the construction, operational and end of life stages;
 - Climate Change Resilience (CCR) Assessment – considers the vulnerability of the Proposed Development to extreme weather and projected climate change; and
 - In-Combination Climate Change (ICCI) Assessment – considers how extreme weather and projected climate change could have an additive effect on impacts identified by other technical disciplines as a result of the Proposed Development.

What is the effect of the Proposed Development on Climate Change?

133. The Proposed Development would result in GHG emissions during construction from the raw materials required, transport and construction processes. The estimate of GHG emissions from the construction phase total 8,087 tCO₂e.
134. Once the Proposed Development is operational, GHG emissions would be generated primarily from the use of the Proposed Development and from its maintenance. It is expected that GHG emissions would continue to decrease year on year, primarily due to increasing generation of grid electricity from sources that produce fewer GHG emissions and the development of cleaner fuels. The GHG emissions associated to the operation of the Proposed Development over the 60-year design life, applying a decarbonised grid scenario, total 10,660 tCO₂e. Furthermore, associated to the end of life stage of the Proposed Development total 691 tCO₂e.
135. Additional mitigation measures would be implemented to reduce GHG emissions during construction, operation, and end of life stages of the Proposed Development. This could include the specification of best practice options for concrete and steel and specifying carpets with high recycled content to reduce impacts of replacements. Furthermore, carbon offset payments could be made to ensure the construction is carbon neutral.
136. Therefore, it has been considered that the GHG emissions associated to the Proposed Development would not have a material impact on the ability of the UK government, Greater Manchester, or buildings sector to meet their carbon budgets. Thus, we do not anticipate that this project would give rise to a

significant effect associated to GHG emissions during the construction, operation, and end of life stages of the Proposed Development.

137. The vulnerability of the Proposed Development to extreme weather and projected climate change during its construction and operation has also been assessed. Potential impacts include increased heat stress for residents, overheating of mechanical and electrical equipment and loss of habitats due to increased frequency and intensity of heatwaves and drought conditions. Other potential impacts include overwhelming of drainage assets or increased groundwater levels from increased frequency of heavy rainfall events.
138. However, mitigation measures have been embedded to ensure resilience to these potential impacts within the Proposed Development's design. Therefore, no likely significant residual effects have been identified. For example, a ventilation system has been designed and a selection of robust vegetation species chosen to account for extreme heat and drought conditions, and drainage systems including a cellular attenuation tank, designed with sufficient allowance to withstand climate change and extreme rainfall events.
139. Additionally, no likely significant effects have been identified in regard to the in-combination climate change impacts as a result of the construction and operation of the Proposed Development.

Human Health

What is Human Health?

140. Human health and wellbeing are affected by a complex interaction of multiple factors, such as access to health and social care, healthy food, freedom from pollution to air/land/water, access to open and green space, reducing crime and fear of crime, and availability of housing, employment, and other services. Health is not just absence of disease but rather a combination of a person's physical, mental, and social wellbeing. This interaction of different factors can be organised into themes for healthy urban living – healthy housing; active travel; healthy environment; and vibrant neighbourhoods.

What has been Assessed?

141. A checklist of topics that are relevant to development proposals and health and wellbeing issues was used to help identify the topics that may be significant. The topics that were scoped into the EIA through the scoping process were considered for those aspects of the studies that are relevant to human health.
142. Summary relevant findings were taken from the impact assessment of each factor scoped as significant for the Proposed Development and that contributes to human health and wellbeing – townscape and visual impact, noise and vibration, air quality, sunlight and daylight amenity, wind microclimate, socioeconomic, and climate change. Effects and interactions were then considered using professional judgment according to the themes for health impact assessment – social environment and health-related behaviour; economic environment; bio-physical environment; and institutional and built environment.

What is the Effect of the Proposed Development on Human Health

143. The Site is located within the city centre, in the Deansgate Ward, and where residents generally have very good health. Deansgate is one of the least deprived Wards in the City according to the Index of Multiple deprivation (IMD). There is a variety of open and green spaces nearby, and an excellent choice of sustainable transport options including walking and cycling. Being in the city centre, there are numerous retail, cultural and leisure facilities within walking distance. The increase in the population will have negligible effects on healthcare and other services and facilities. The local air quality and noise environments are characterised by emissions from traffic.
144. During construction, the risks to workers, nearby residents and the public will be minimised through health & safety measures and a Construction Management Plan that will include consideration of transport, air quality, noise, waste, and disturbance. During construction, workers may be exposed to contaminated soil and asbestos fibres, but wearing appropriate PPE and following protocols outlined in a CEMP can mitigate any adverse effects. Asbestos has not been found on the Block C Site but adjacent areas have been affected, and site-specific risk assessments should be conducted. Remediation of previously developed land through clean growth capping will prevent environmental pathways and risks to human receptors.
145. During occupation, there was a potential for exposure to contaminated soil and asbestos fibres, but the Remedial Strategy includes mitigation measures like a clean capping layer in soft landscaping areas, which reduces contact with contaminants. The project design and Remedial Strategy help avoid contamination risks and remediate previously used land.
146. The provision of good quality student accommodation homes in such a sustainable location is likely to have moderate beneficial effects. It will contribute to the identified need and may help release other accommodation with further beneficial effects. During the construction phase, there will be moderate beneficial effects for employment. During the operational phase there will also be moderate beneficial effects for local employment and the local economy. Student spend off-campus can contribute to the vitality and vibrancy of areas, including during evenings and weekends in an area often quiet at such times.

147. The proposed landscaping with trees, amenity grassland and rain garden will provide some 70% positive net gain in biodiversity. The change from a vacant previously developed site to landscaped and amenity areas with a new quality designed building will have positive effects for existing nearby residents and their visitors. For potential townscape and visual effects, mitigation measures have been embedded into the location and design of the Proposed Development.
148. The risks to human health, for both new and existing residents, from effects on air quality; noise; daylight, sunlight and overshadowing, and solar glare with regard to road drivers; climate change, and the local wind microclimate were investigated and found to be not significant. Localised significant effects are mitigated by the design quality of the Proposed Development and its positive contribution to place making.
149. No significant adverse residual effects were identified and therefore, no further mitigation measures are required.

Noise and Vibration

What is Noise and Vibration?

- 150. Noise is defined as unwanted sound that can be emitted by sources associated with a Proposed Development which impact on existing sensitive receptors, or from existing sources impacting on the Proposed Development.
- 151. Groundborne vibration is particle oscillations propagated through various solids including, rock, clay, soil, building foundations, buildings, etc. This can be perceived by building occupants and, at high magnitudes, can affect ground stability and structural integrity of buildings.
- 152. Typically, groundborne vibration is generated by sources such as overground rail, underground rail, industrial processes, and construction activities such as piling and compaction.

What has been Assessed?

- 153. This chapter of the ES assesses the likely impacts of noise and vibration emitted from the Proposed Development during the construction and operation phases. Based on the provided drawings, it is anticipated that during the operational phase of the Proposed Development the only noise sources which could impact the nearest noise sensitive receptors would be from new external mechanical services plant.

What is the Effect of the Proposed Development on Noise and Vibration?

- 154. Noise level measurements were measured around the development site and at locations representative of the nearest noise sensitive receptors during both the daytime and night-time periods. These noise levels have been used as basis for determining the potential impact of noise emitted from site.
- 155. The construction phase of the Proposed Development has been assessed in accordance with BS 5228-1 and BS 5228-2. The assessment indicates that in relation to noise, a moderate to major impact significance, external Blocks A & B and Block D, could only occur when piling or concreting was being undertaken. However, these activities are transitory and/or short-term in nature.
- 156. Therefore, it is not anticipated that any significant environmental noise effects will arise during the course of the construction of the scheme, provided a Best Practicable Means approach is taken. The term "*Best Practicable Means*" means that all reasonable measures have been taken to reduce noise levels while taking into consideration the local conditions and circumstances, the current state of technical knowledge and the financial implications.
- 157. Based on the proposed CFA/rotary piling method, it is anticipated that vibration levels would be at a level where there is the potential for minor to moderate impact in terms of human perception, during the initial construction stage. However, in terms of damage to buildings the impacts are negligible, and any impacts are temporary.
- 158. Based on the noise levels measured around the site, noise level limits have been proposed that should be achieved from any external mechanical services plant. The noise limits are not to be exceeded at specific locations around the Proposed Development and are relative to the pre-existing noise environment. This ensures that there are no significant operational noise effects.

Socio-Economic

What is Socio-Economics?

159. Socio-Economics refers to the way social and economic factors influence one another across residents, communities and labour markets.

What has been Assessed?

160. The Socio-Economic assessment considers the effects to be generated through both the construction and operational phases of the Proposed Development. The assessment has included:
- Review of the national and local policy context in which the Proposed Development will be delivered.
 - Establishing the baseline position for the local and regional economy and community using a range of nationally recognised research and survey information.
 - Assessing the potential scale and significance of socio-economic effects to be generated through the construction and operational phases of the Proposed Development using standard industry ratios, data, assumptions and professional judgement.
 - Assessing the potential scale and significance of socio-economic effects of the Proposed Development in combination with those of other, committed development proposals within the local area.
 - Determining the need for mitigation measures and the resulting effects after any mitigation measures have taken into account (the residual effects) of the Proposed Development.
 - Assessing the cumulative or in-combination effects of the Proposed Development given a number other development proposals within the local area that have the potential to come forward alongside the Proposed Development.

What is the Effect of the Proposed Development on Socio-Economics?

161. It is estimated that the Proposed Development will generate, on average, 273 FTE (full-time equivalent) construction jobs per year during the construction phase. Alongside other committed developments locally, and their employment generation impacts, this is assessed as being a temporary effect and of minor beneficial significance at the Greater Manchester level. This effect is not significant in EIA terms.
162. During the operational phase the Proposed Development will generate beneficial effects in relation to:
- The supply of student accommodation through the delivery of 555 new, high quality student beds that will contribute to the evidenced demand for student accommodation at Manchester universities. Considered alongside other committed developments locally, this is assessed as being a permanent effect and of major beneficial significance at the District (Manchester) level. This effect is significant in EIA terms.
 - Employment and local economic performance through the creation of a small number of direct, on-site jobs and through the effects of additional student expenditure in local shops and services. Considered alongside other committed developments locally, this is assessed as being a permanent effect and of moderate beneficial significance at the District (Manchester) level. This effect is significant in EIA terms.
163. During the operational phase the Proposed Development will generate negligible (neither positive nor negative) effects in relation to:
- Open space provision and leisure facilities through the delivery of open space / public realm on site and through additional student expenditure helping to support the viability and vitality of existing recreation and leisure facilities locally. Considered alongside other committed developments locally, this is assessed as being a permanent effect and of negligible significance at the Ward (Deansgate) level. This effect is not significant in EIA terms.

- Healthcare facilities through the addition of students locally who may access GP services affiliated with Manchester's universities or remain registered with their home GPs. Considered alongside other committed developments locally (that are likely to yield non-student residents who will require access to local GP services), this is assessed as being a permanent effect and of negligible significance at the local area (within 1km) level. This effect is not significant in EIA terms.

164. Since no adverse effects are identified, there is no requirement for mitigation measures.

Sunlight, Daylight, Overshadowing and Solar Glare

What is Daylight, Sunlight, Overshadowing & Solar Glare?

165. Daylight and sunlight amenity, including sunlight on the ground, is principally based upon the amount of visible sky to a building or area of outdoor amenity space. Where there is an increase in massing on a nearby site, levels of daylight and sunlight amenity, including sunlight on ground may be beneficially or adversely affected.
166. Solar glare assessments are considered necessary when a proposed development has sections of glazed façade or reflective cladding that may reflect sunlight and obstruct the vision of road users and train / tram drivers.

What has been Assessed?

167. The assessments are conducted using a 3D computer model of the area created using photogrammetry and architectural models as a reference.
168. Daylight, sunlight and overshadowing sensitive receptors are established using professional judgement to decide which buildings and open spaces are likely to be affected by the change in massing on a nearby site.
169. The baseline levels of daylight and sunlight, including sunlight on ground, are analysed and then compared to the levels of daylight and sunlight, including sunlight on ground, with the proposed development in place. The significance of these results is then assessed against national and local policies, relevant guidance and using professional judgement.
170. For Solar Glare, viewpoints are chosen surrounding the development in order to give a realistic representation of potential instances of solar reflections. Viewpoints are located at a focal point such as traffic signal, pedestrian crossing or incoming traffic for major road locations within 500 metres of the Site.
171. The assessment results show the time period and months in which potential solar reflections can occur. The assessment shows a worst-case scenario, as a clear sky is necessary for solar reflections to occur, which in the UK is often not the case.
172. Whilst the assessment details the effects at various viewpoints of a junction, the receptor is a driver of a car at the road junctions, as such, the junctions or road locations are assessed as a whole, considering all potential viewpoint of a driver.
173. Solar glare is not a comparative assessment and instead assesses any occurrences from the Proposed Development in absolute terms.
174. Even if solar glare does occur from the existing site buildings, this does not necessarily justify its occurrence from the Proposed Development. However, it should be noted that the Proposed Development will be located on a Site where its existing state is predominantly cleared to enable the implementation of the First Street South permission (125573/FO/2019), and contains temporary site offices to support the construction of First Street South Plots A, B and D.
175. The temporary 4-storey max site offices have predominantly solid elevations with small windows mostly facing towards the north, as such, there is limited opportunity for instances of solar glare from the Site to be experienced. Solar glare from surrounding buildings is not assessed.

What is the Effect of the Proposed Development of Daylight, Sunlight, Overshadowing & Solar Glare?

176. The following nine sensitive receptors have been assessed to establish the effect of the Proposed Development upon their levels of daylight and sunlight amenity:
- 30-42 Rockdove Ave;
 - 44-72 Rockdove Ave;
 - Loxford Court;
 - Block 1 Parkway Gate;
 - Block 3 Parkway Gate;
 - Block 2 Parkway Gate;
 - Block B Plot 11, First Street;
 - Block A Plot 11, First Street; and
 - Block D Plot 11, First Street.
177. Whilst there will be some material changes in daylight and/or sunlight amenity to some of these properties, the significance of those effects are considered to no greater than minor adverse (not significant) in view of the retained levels of amenity being commensurate with the immediate surrounding properties.
178. The following five sensitive receptors have been assessed to establish the effect of the Proposed Development upon their levels of sunlight on the ground:
- Public Park, Plot 11, First Street;
 - Block B Plot 11, First Street, Private;
 - Block A Plot 11, First Street, Private;
 - Block A Plot 11, First Street, Private; and
 - Block D Plot 11, First Street, Private.
179. Only Block A's areas of amenity space will be adversely affected by the construction of the Proposed Development in terms of whether the area will be adequately sunlit throughout the year. When the shadow that falls upon them during the summer months, when they are most likely to be frequented, is assessed, there will, however, be an abundance of sunshine. The overall effect upon the sunlight amenity upon the above spaces is, therefore, considered to no greater than minor adverse (not significant).
180. In terms of solar glare, overall, 17 locations sensitive for road users have been identified and assessed, no train or tram tracks are considered sensitive for this Site. The following nine road locations are considered to be 'Minor Adverse' and are not significant in terms of solar glare:
- Mancunian Way Westbound (MW1, MW2 & MW3);
 - Mancunian Way Slip Road/Medlock Street Junction (Slip3);
 - Medlock Street (MS1);
 - Cambridge Street junction with Mancunian Way on-ramp (CBS);
 - Newcastle Street junction with Loxford Street (NS);
 - Princess Street junction with Stretford Road (PR1); and
 - Princess Street merging traffic (PR2).

181. Six road locations are considered to experience 'Minor to Moderate Adverse' effects overall which are considered significant in terms of solar glare, these locations are:
- Mancunian Way Eastbound (MW4-MW6);
 - Mancunian Way Slip Road/Medlock Street Junction (Slip1);
 - Medlock Street junction with Mancunian Way on ramp (MS2); and
 - Chester Street junction with Cambridge Street (CS1).
182. The final two road locations are considered to experience 'Moderate Adverse' effects overall which are considered significant in terms of solar glare, these locations are:
- Mancunian Way Slip Road/Medlock Street Junction (Slip2); and
 - Chester Street junction with Wilmott Street (CS2).
183. Owing to the proximity of the Site to several sensitive road locations, as well as the highly glazed nature of the Proposed Development mitigation strategies have been incorporated within the detailed façade design. The following strategies have been embedded within the façade design:
- the use of anodised aluminium purge ventilation panels to break up reflections; and
 - faceted facades so that large areas of flat glazing of the same angle are avoided and that each panel is at an alternative angle from the panels next to it thus reflecting sunlight at a different time to the adjacent panel.
184. Given the location of the site and scale of the development, potential for reflections from the Proposed Development are unavoidable. It should be noted that the assessment considers a scenario whereby the sun shines on every day of the year to consider all potential circumstances in which reflections will occur (i.e. 'worst case'). According to the sunlight availability protractor, based on UK weather data, the sunshine probability will be significantly reduced and therefore the likelihood of the instances of reflections are considerably reduced. The probability of the sun shining during the times of the year when potential reflections are expected to occur ranges from 10% in the early mornings/mid-afternoons from the mid-seasons through winter months, up to 40%-50% in the mid-seasons in the afternoon. The assessment does not include the sun itself within any viewpoints which would also cause very intense glare to drivers at all of the affected viewpoints. For all affected viewpoints, the sun would be directly visible at other times of the day if the Proposed Development were not present as seen in the solar glare assessment. In comparison, the reflections from the Proposed Development would appear less intense and would not cause significantly worse effects when compared with a direct view of the sun.
185. To reduce the significant effects identified, a low reflectance glazing is required to reduce the intensity of any reflections that occur. It is recommended that a glazing specification with a maximum Visible Light Reflectance (VLR) of 14% is used for the proposed eastern and western facades. Prior to installation of the glazing, it is recommended that a detailed Solar Glare intensity assessed is undertaken for the proposed glazing specification to confirm the glazing selections satisfactorily addresses the significant effects identified.

Townscape and Visual Impact

What is TVIA?

187. Townscape and visual impact assessment (TVIA) is the assessment of effects that might occur because of the Proposed Development on the townscape, and on people's views and visual amenity.

What has been assessed?

188. The assessment focuses on townscape and visual effects within 1km of the Proposed Development, which formed the TVIA study area.
189. The assessment of townscape character considers the influence of the Proposed Development on the pattern of elements that defines the current character, and how this is likely to change with the introduction of the Proposed Development.
190. The assessment of visual effects considers the influence of the Proposed Development on the views of people living, working, travelling and enjoying recreation in the study area.
191. Cumulative effects have also been considered. This section of the TVIA assesses the contribution of the Proposed Development to the effect along with committed schemes. These committed schemes are developments in the study area which have been granted or submitted for planning consent.

What is the effect of the Proposed Development on TVIA?

192. First Street Blocks A, B and D are now under construction, and for the purposes of the TVIA are assumed to be completed. Block C was also previously approved with a lower building height. The TVIA therefore considers the effect of a taller proposed tower for Block C in the context of the completed Blocks A, B and D.
193. The effects of the Proposed Development on TVIA are limited because of the presence of Blocks A, B and D in the adjacent townscape. These buildings tend to screen views of the Proposed Development from the north, generally due to the greater height of Block D. In views from the south, the completed blocks also provide a backdrop to the Proposed Development, containing its effect. The Proposed Development therefore rarely extends the massing of development on the city centre skyline, outside the cluster of existing First Street buildings.
194. The effect of the construction and completed Proposed Development are assessed as significant on views experienced from several viewpoints in close proximity within the immediately surrounding townscape. Views of the Proposed Development will however, be limited from the north, due to views being screened by tall buildings in this direction. There will be no significant effects on townscape character or designations due to limited intervisibility of the Proposed Development from the Conservation Areas that are defined to the north.
195. Where significant effects on views are predicted to occur, this will be as a result of the sensitivity of people experiencing these views or the magnitude of change arising to viewers when in close proximity to the Proposed Development. People who are likely to experience significant visual effects include residents of Hulme to the south and parts of the city centre to the north-east; pedestrians and people travelling on nearby roads in the city centre and Hulme; and people engaged in recreation within Hulme Park to the south-east.
196. The cumulative effect of the Proposed Development is predicted to be significant only from two viewpoints where it is seen at close range together with other cumulative schemes, such as those at Medlock Street, Park Place, Great Jackson Street (Plot D) and Student Castle. The Proposed Development will not add to the cumulative effect from areas to the north, as it will not be visible. In views from the south the scale of the Proposed Development is similar or less than the height on the skyline as the committed developments, which limits the cumulative effect. The Proposed Development will also be backclothed against the taller Block D beyond and the other cumulative developments are contained

within a relatively defined cluster of development. As such, there is a concentration of the effect that will be established by committed schemes, rather than an extended effect on the skyline. The cumulative effect is only considered to be significant in the closest views where the Proposed Development and committed schemes are on either side of the viewer at close range and large scale.

197. The TVIA has found that townscape and visual effects in general, and the localised significant visual effects, are mitigated by the design quality of the Proposed Development, its appropriate design and location (in an area where townscape regeneration is occurring), its positive contribution to place making and to the quality of the emerging townscape.

Wind Microclimate

What is Wind Microclimate?

198. A microclimate is defined as 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. Wind microclimate assessments consider the wind conditions that would result upon the introduction of a new development into an existing space.

What has been Assessed?

199. Such assessments predict the proportion of time an area will experience wind speeds in excess of threshold values associated with safe and comfortable use by pedestrians and occupants once the Proposed Development is introduced. It can therefore be shown within the various parts of a new proposal and neighbouring properties whether wind conditions are suitable or unsuitable, and whether design adjustment or mitigation measures are required. It is for this purpose that wind microclimate assessments are undertaken.
200. For the current assessment, a Computational Fluid Dynamics (CFD) study was conducted. A digital model of the proposed development and surrounding context is built up and fluid flow simulations are executed to model how the wind will flow within and around the site. Subsequently, predictions are made on how the wind flow patterns will be impacted by the introduction of the proposed development. This assessment has been able to provide a reliable quantification of wind speed probability at all accessible spaces in and around the Proposed Development.
201. The current assessment has considered the introduction of the Proposed Development in the context of baseline / existing surrounds, and with the addition of cumulative surrounding developments.

What is the Effect of the Proposed Development on Wind Microclimate?

202. The proposed development is assessed against the Lawson Criteria, which is established as the industry standard in the UK for assessing wind microclimate conditions in terms of safety and comfortable use for pedestrian activities. In all scenarios, upon the introduction of the Proposed Development in all forms assessed, the Lawson criteria for comfort and safety are met within the Site and surrounding area.
203. As a result the effect and residual effect of the Proposed Development in all forms assessed is negligible, and is not significant. Mitigation is not required.
204. Cumulative effects have been found to be negligible.

Ground Conditions

What are Ground Conditions?

205. Ground conditions refers to the features such as the geology, hydrogeology and hydrology below and surrounding the Site which could impact upon or be impacted by the Proposed Development. The ground conditions are inferred from a desk study produced using documentary research, and from conducting intrusive ground investigations at the Site. This assessment also considers the current/previous land uses that may have impacted the ground conditions at the Site and surrounding areas.

What has been assessed?

206. The information gathered on the ground conditions has been used to assess the likelihood of geotechnical and contamination issues impacting the construction and operational phases of the Proposed Development. The assessment also evaluates the impacts of the construction and operation of the Proposed Development and likely significant effects in relation to the potential contamination to sensitive receptors, identified from the desk study, such as future site users and the groundwater and surface water (controlled waters).
207. The study area encompasses the surrounding area located within a 250m buffer around the Site to assess the ground conditions and current/previous site uses and a 1km buffer around the Site to assess the available environmental data such as on controlled waters.

What is the effect of the Proposed Development on Ground Conditions?

208. During the construction phase, potential contamination arising from construction activities will be managed appropriately through the implementation of good site management and health and safety practices, detailed in a Construction Environmental Management Plan (CEMP). Any material moved on and off the Site will need to comply with a Materials Management Plan (MMP) or similar, which will ensure that all material is chemically suitable for its proposed use to mitigate risks to future site users.
209. Mitigation measures in the form of the use of Continuous Flight Auger piles will preclude the creation of a pathway from the made ground to the underlying aquifers.
210. The potential presence of asbestos will be considered during the production of any site-specific risk assessments for site workers, following industry regulation and guidance. Dust suppression measures during construction will be implemented which will mitigate dust impacting the site workers and surrounding site users.
211. For the operational phase, the ground floor of the proposed building and implementation of a clean capping layer in soft landscaped areas, as advised in the Remedial Strategy, will mitigate risks to site users of the Proposed Development. Any impacts to soils and groundwater will be avoided by adhering to good housekeeping and management practices. New drainage systems and the presence of hardstanding will mitigate contamination impacting the environment. The inclusion of upgraded water pipes will remove the risk of contamination degrading pipes or impacting the water supply during the operational phase. As no significant effects are predicted, no monitoring is recommended for the Proposed Development during its operation.

Residual Impacts

212. The likely significant effects on the environment, assuming the implementation of the mitigation measures proposed, have been estimated within each Chapter. These are summarised below.

Air Quality

Table 3: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Construction				
Impact of suspended particulate matter on human-health and deposited dust (nuisance) on human-health and nuisance	Receptors within 350 m of the Site.	The mitigation measures are set out in Appendix 6.2 .	Implementation of Construction Environmental Management Plan (CEMP)	Not Significant , temporary

Table 4: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Operation				
Impact of concentrations of NO ² , PM ¹⁰ and PM ^{2.5} on existing receptors.	Existing receptors.	None.	None.	Not Significant , permanent.
Impact of concentrations of NO ² , PM ¹⁰ and PM ^{2.5} on human-health of future occupants of the development.	Future occupants of the development.	Provision of air-tight (hermetically sealed) windows and mechanical ventilation at all residential homes on the first floor and at certain homes on the second and third-floor level	Included in design of development.	Not Significant , permanent.

Climate Change

Table 5: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Climate Change Resilience				
Heavy rainfall leading to stockpile erosion and siltation of drainage assets	Building	None required	Not applicable	Not Significant, temporary
Heavy rainfall leading to inability to undertake construction activity and programme delays	Building	None required	Not applicable	Not Significant, temporary
Heavy rainfall spreading contaminated soil during ground excavations	Environmental and human health	None required	Not applicable	Not Significant, temporary
Heavy rainfall leading to groundwater flooding, affecting Site personnel undertaking below ground excavations	Human health	None required	Not applicable	Not Significant, temporary
Heatwaves and high temperatures affecting Site personnel welfare	Human health	None required	Not applicable	Not Significant, temporary
Heatwaves and high temperatures leading to increased dust generation	Human health	None required	Not applicable	Not Significant, temporary
Heatwaves and high temperatures leading to inability to undertake construction activity and programme delays	Building	None required	Not applicable	Not Significant, temporary
Strong winds leading to damage of stockpiles	Building	None required	Not applicable	Not Significant, temporary
Strong winds leading to Site personnel and nearby pedestrian harm	Human health	None required	Not applicable	Not Significant, temporary
Strong winds affecting on-Site crane operations	Building	None required	Not applicable	Not Significant, temporary
Strong winds leading to damage to Site hoardings	Building	None required	Not applicable	Not Significant, temporary
In-combination Climate Change Impact				
Air quality - Extended period of drought could increase exposure of sensitive receptors to dust generated from construction activities	Air quality - sensitive receptors	None required	Not applicable	Not Significant, temporary

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Air quality - Extended period of drought could reduce availability of water for dust suppression which would reduce the effectiveness of embedded mitigation measures	Air quality - sensitive receptors	None required	Not applicable	Not Significant , temporary
Ecology - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant , temporary
Daylight, Sunlight, Overshadowing and Solar Glare - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant , temporary
Drainage - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant , temporary
Ground Conditions - Heavy rainfall leading to increase in mobilisation and release of contaminants into nearby surface water	Ground Conditions - Surface water receptors	None required	Not applicable	Not Significant , temporary
Ground Conditions - Increased frequency and intensity of drought events leading to dust creation and mobilisation/release of contaminated soil, affecting nearby pedestrians	Ground Conditions - human health receptors	None required	Not applicable	Not Significant , temporary
Human Health - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant , temporary
Noise and Vibration - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant , temporary
Wind Microclimate - Potential interactions of climate change	None identified	None required	Not applicable	Not significant and temporary
Greenhouse Gas Emissions				
GHG emissions	Global Climate	Carbon offset payments to ensure the construction is carbon neutral	Payment by developer to reputable offsetting provider	Minor Adverse (Not Significant) , permanent

Table 6: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Climate Change Resilience				
Increased frequency of intense rainfall leading to overwhelming of drainage assets and potential flooding	Building and human health	None required	Not applicable	Not Significant, temporary
Wetter winters and increased frequency of intense rainfall leading to elevated groundwater levels and potential flooding	Building	None required	Not applicable	Not Significant, temporary
Increased frequency of intense rainfall leading to river level rise and subsequent flooding	Building and human health	None required	Not applicable	Not Significant, temporary
Drought conditions affecting landscape design and planting	Environmental receptors	None required	Not applicable	Not Significant, temporary
Increased mean temperatures and heatwaves leading to failure of mechanical and electrical equipment	Building	None required	Not applicable	Not Significant, temporary
Increased mean temperatures and heatwaves leading to overheating in residential element	Human health receptors	None required	Not applicable	Not Significant, temporary
Drought conditions affecting potable water availability	Building and human health	None required	Not applicable	Not Significant, temporary
Windstorm events and extreme winds leading to damage to the development and / or unsafe conditions for users	Building and human health	None required	Not applicable	Not Significant, temporary
In-Combination Climate Change Impact				
Air Quality - Increased frequency and intensity of heatwaves could increase the need to ventilate homes through opening windows to avoid overheating, reducing effectiveness of air quality mitigation.	Air Quality - human health receptors	None required	Not required	Negligible

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Ecology - Increased temperatures, heatwaves and drought conditions could cause vegetation dieback and reduce the effectiveness of mitigation planting, intended to create new habitat.	Ecology - sensitive receptors	None required	Not applicable	Not Significant, temporary
Daylight, Sunlight, Overshadowing and Solar Glare - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant, temporary
Drainage - Increased frequency of intense rainfall leading to surface water flooding of proposed development and surrounding areas	None identified	None required	Not applicable	Not Significant, temporary
Ground Conditions - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant, temporary
Human Health - Potential interactions of climate change	None identified	None required	Not applicable	Not Significant, temporary
Noise and Vibration - Increased temperatures and heatwaves could lead to increased frequency of internal noise exceeding thresholds as a result of opening windows in high temperatures.	Noise and Vibration - sensitive receptors	None required	Not applicable	Not Significant, temporary
Wind Microclimate - Increased temperatures and heatwaves could cause vegetation dieback and reduce the effectiveness of mitigation planting, intended to mitigate the effects of wind on sensitive receptors.	Wind Microclimate	None required	Not applicable	Not Significant, temporary
Greenhouse Gas Emissions				
GHG emissions	Global Climate	The Proposed Development's GHG emissions impacts have been partially mitigated at this stage. They	Embedded in design of the Proposed Development and to be implemented by	Minor Adverse (Not Significant)

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
		also meet the existing and emerging policy requirements and would fully contribute to decarbonisation in line with MCC's and UK's policy goals for schemes of this type.	Proposed Development Facilities Management Team.	

Human Health

Table 7: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Construction				
Employment & Economy	Workers	N/A	N/A	Moderate Beneficial, temporary
Air Quality - dust	Human receptor locations within 350m	CEMP details practices & procedures	CEMP	Not Significant, temporary
Climate Change Resilience	Workers, nearby residents & visitors	None required	N/A	Not Significant, temporary
Climate Change (GHG)	Global	None required	N/A	Not Significant, temporary
Noise & Vibration	Workers; existing residential	Noise & Vibration Management Plan (NVMP)	NVMP as part of overall CEMP	Minor - Moderate at times, temporary
Wind Microclimate	People on foot, seated, or on bicycle	Not required	N/A	Negligible
Ground Conditions: dust	Workers	CEMP details practices & procedures	CEMP	Negligible
Ground Conditions: contaminated soils	Site users	Capping with clean growth medium	Remedial Strategy	Major Beneficial

Table 8: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Employment & Economy	Local workers & economy	N/A	N/A	Major Beneficial, permanent
Housing	Students	N/A	N/A	Major Beneficial, permanent
Healthcare Provision	Residents	N/A	N/A	Negligible
Open space; recreation & amenity	Residents & visitors	N/A	N/A	Negligible
Air Quality - emissions NO ₂ , PM ₁₀ & PM _{2.5}	Human receptor locations – existing	None	None	Not Significant, permanent
Air Quality - emissions NO ₂ , PM ₁₀ & PM _{2.5}	Human receptor locations – future occupants of new development	Provision of airtight (hermetically sealed) windows & mechanical ventilation at all residential homes on the first floor & at certain homes on the second & third-floor level	Included in design	Not Significant, permanent
Climate Change Resilience	Residents & visitors; nearby residents	None required	N/A	Not Significant, permanent
Climate Change – GHG emissions	Global climate - human health	None required	N/A	Minor Adverse (Not Significant), permanent
Noise from building services plant	Existing & New Residents	Appropriate location, selection, screening and/or attenuation of building services plant	Included in design	Negligible
Sunlight, daylight & overshadowing	Surrounding residential	None required	N/A	Minor Adverse (Not Significant), permanent
Solar Glare	Road users at nearby junctions	Embedded in design	N/A	Minor Adverse (Not Significant), permanent

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Solar Glare	Road users at 6 locations	Proposed glazing specifications should be low reflectance	Planning Condition	Minor Adverse (Not Significant)
Townscape & Visual	Residents & visitors; local neighbourhood	Incorporated into design	n/a	Significant
Wind Microclimate	Persons on foot, seated or on bicycle	Not required	N/A	Negligible
Ground Conditions: contaminated soils	Residents & visitors	Capping with clean growth medium	Remedial Strategy	Major Beneficial

Noise and Vibration

Table 9: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Construction				
Minor and Moderate adverse noise disturbance effects on residents	Local residents	Best Practicable Means mitigation. Quiet plant/methods. Noise and Vibration Management Plan (NVMP)	Noise & Vibration Management Plan	Minor - Moderate Adverse noise disturbance effects on residents at times, temporary.

Table 10: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Operation				
Minor adverse noise annoyance effects from building services plant	Existing Residential properties.	Appropriate location, selection, screening and/or attenuation of building services plant.	N/A	Negligible, permanent.

Socio-Economic

Table 11: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Construction				
Change in employment during the construction stage	Individuals seeking construction employment	N/A	N/A	Minor Beneficial (Not Significant), D, T, ST

Table 12: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Operation				
Change in direct operational employment and change in economic performance (GVA and spend)	Individuals seeking employment and the local economy	N/A	N/A	Minor Beneficial (Not Significant), D, LT, P
Change in supply of student bedspaces and contribution towards local strategic objectives	Students seeking accommodation	N/A	N/A	Major Beneficial (Significant), D, LT, P
Change in demand for primary healthcare facilities	Primary healthcare facilities	N/A	N/A	Negligible (Not Significant), D, LT
Change in the supply of and demand for open space, amenity space and leisure facilities	Open/amenity space and leisure facility provision and their users	N/A	N/A	Permanent, Negligible (Not Significant), D, LT

Sunlight, Daylight, Overshadowing and Solar Glare

Table 13: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Construction				
N/A				

Table 14: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Adverse reduction in daylight amenity	30-42 Rockdove Ave	None	n/a	Negligible (Permanent)
	44-72 Rockdove Ave			Negligible (Permanent)
	Loxford Court			Negligible (Permanent)
	Block 1 Parkway Gate			Minor Adverse (Permanent)
	Block 3 Parkway Gate			Minor Adverse (Permanent)
	Block 2 Parkway Gate			Minor Adverse (Permanent)
	Block B Plot 11, First Street			Minor Adverse (Permanent)
	Block A Plot 11, First Street			Minor Adverse (Permanent)
	Block D Plot 11, First Street.			Minor Adverse (Permanent)
Adverse reduction in sunlight amenity	Block 1 Parkway Gate	None	n/a	Minor Adverse (Permanent)
	Block B Plot 11, First Street			Minor Adverse (Permanent)
	Block A Plot 11, First Street			Minor Adverse (Permanent)
	Block D Plot 11, First Street.			Minor Adverse (Permanent)
Adverse increase in shadow	Public Park Plot 11, First Street	None	n/a	Negligible (Permanent)
	Block B Plot 11, First Street, Private			Negligible (Permanent)
	Block A Plot 11, First Street Private			Minor Adverse (Permanent)
	Block A Plot 11, First Street, Private			Minor Adverse (Permanent)
	Block D Plot 11, First Street, Private			Negligible (Permanent)

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Negligible & Minor Adverse (Not Significant) effects on Solar Glare	Road users at nearby road junctions	Embedded in the design, no further mitigation needed.	N/A	Minor Adverse (Not Significant) , permanent
Minor-Moderate and Moderate Adverse and Significant effects on Solar Glare	Road users at: <ul style="list-style-type: none"> • Slip1 • Slip2 • MS2 • MW4-6 • CS1 • CS2 	Proposed glazing specifications should be low reflectance, the recommended VLR is 14%. Further detailed assessed is recommended prior to installation of glazing.	Planning Condition	Minor Adverse (Not Significant) , permanent. To be confirmed via further detailed testing with further mitigation incorporated if required to ensure residual effects are not significant.

Townscape and Visual Impact

Table 15: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Significant visual effect on residents of closest area of Hulme to immediate south of the Site, consisting of Clarendon Street (as represented by Viewpoints 9 and 14), Rockdove Avenue (as represented by Viewpoint 13), the area around Newcastle Street (as represented by Viewpoint 3), and within Hulme Park (as represented by Viewpoint 6). Effect likely to be significant due to the scale and proximity of construction of Proposed Development tall building in views	Residents and people engaged in recreation within Hulme	The primary mitigation measure will be the timely completion of construction works and the short-term, temporary duration of the effect. Other mitigation may help to slightly reduce adverse visual effects of the construction phase, including tidy Site management, appropriate hoardings, scaffolding covers and well located, modern light fittings as part of a CEMP to	CEMP	Significant and temporary visual effect on residents of closest area of Hulme to immediate south of the Site during construction phase.

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
from smaller scale residential streets and public spaces in closest area of Hulme.		minimise lighting intrusion.		
Significant visual effect on motorists travelling on roads within close proximity to the Site, including on Medlock Street (as represented by Viewpoint 5) and within Hulme (as represented by Viewpoint 2). Similar effects are likely to be experienced by motorists travelling along a short section of the Mancunian Way. Effects are likely to be significant due to the scale and proximity of construction of Proposed Development tall building, from adjacent roads and a short, elevated section of the Mancunian Way passing the Site, with views into the construction Site.	Pedestrians and road users			Significant and temporary visual effect on pedestrians and road users within the immediate surroundings of the Site during construction phase.
Significant visual effect on people within closest area immediately around the Proposed Development including to the east around Chester Street (as represented by Viewpoint 12) and to the west on	Residents / pedestrians in area surrounding the Site			Significant and temporary visual effect on people within the closest streets to the east and west of the Site, including Chester Street and Medlock Street.

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Medlock Street (as represented by Viewpoint 5). Effect likely to be significant due to the scale and proximity of construction of Proposed Development tall building in views from closest streets and public spaces.				

Table 16: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Significant visual effect on residents of closest area of Hulme to immediate south of the Site, consisting of Clarendon Street (as represented by Viewpoints 9 and 14), Rockdove Avenue (as represented by Viewpoint 13), area around Newcastle Street (as represented by Viewpoint 3), and within Hulme Park (as represented by Viewpoint 6). Effects are likely to be significant due to the scale and proximity of Proposed Development tall building in views from smaller scale residential streets and public spaces in closest area of Hulme, however Proposed Development will be viewed as part of the backdrop of tall buildings forming the	Residents and people engaged in recreation within Hulme	Primary mitigation measures are embedded into the design quality and appropriate location of the Proposed Development. The appearance strategy is grounded in emerging city scale of other baseline committed developments in surrounding area, including existing First Street South buildings; the material palette of glass unitised curtain walling is in keeping with existing First Street South buildings; and the associated landscape design proposals will	CEMP	Significant and permanent visual effect on residents of closest area of Hulme to immediate south of the Site during operational phase.

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
emerging south-west city centre skyline.		improve public realm. Although significant, effects are generally assessed to be beneficial or neutral in nature due to replacement of a derelict vacant site with new buildings and public realm, that have a positive relationship to both local and city scale and context.		
Significant visual effect on motorists travelling on roads within close proximity to the Site, including on Medlock Street (as represented by Viewpoint 5) and within Hulme (as represented by Viewpoint 2). Similar effects are likely to be experienced by motorists travelling along a short section of the Mancunian Way. Effects are likely to be significant due to the scale and proximity of Proposed Development tall building, however Proposed Development will be viewed as part of the backdrop of tall buildings forming the emerging south-west city centre skyline.	Pedestrians and road users			Significant and permanent visual effect on pedestrians and road users within the immediate surroundings of the Site during operational phase.
Significant visual effect on people within closest area immediately around the Proposed Development including to the east around Chester Street (as represented by Viewpoint 12) and to the west on Medlock Street (as represented by Viewpoint 5). Effect likely to be significant due to the scale and proximity of Proposed Development tall building, however Proposed Development will be viewed as part of the backdrop of tall buildings forming the emerging south-west city centre skyline.	Residents / pedestrians in area surrounding the Site			Significant and permanent visual effect on people within the closest streets to the east and west of the Site, including Chester Street and Medlock Street, during operational phase.

Wind Microclimate

Table 17: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Construction				
Lawson criteria met within the Site and surrounding area.	Persons on foot, seated or travelling by bicycle	N/A	N/A	Negligible, temporary.

Table 18: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post-Mitigation Residual Effect – Significance and Duration (i.e., Temporary / Permanent)
Operation				
Lawson criteria met within the Site and surrounding area.	Persons on foot, seated or travelling by bicycle	N/A	N/A	Negligible, permanent

Ground Conditions

Table 19: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the construction phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Spills/leaks, sediments and surface water runoff	Controlled waters and human receptors	CEMP details practices & procedures	CEMP	Negligible (Not significant) Temporary
Contaminated soils exported and imported to site	Controlled waters and human receptors	MMP	MMP	Negligible (Not significant) Temporary
Contaminated made ground	Site users	Capped with clean growth medium	Remedial Strategy	Major Beneficial (Not Significant) Permanent
Contaminated dust, possible ACMs	Site workers, nearby human receptors	Suitable PPE adopted, dust suppression	Site-specific risk assessment	Negligible (Not significant) Temporary
Contaminated made ground	Controlled waters	None required	N/A	Negligible (Not significant) Temporary

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Depleted oxygen in deep excavations/ confined spaces	Site workers	Site-specific risk assessment to detail practices & procedures	Site-specific risk assessment	Negligible (Not significant) Temporary
Construction method & materials	Controlled waters and human receptors	Appropriate methods and materials	Consult with contractors and suppliers	Negligible (Not significant) Permanent

Table 20: Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects during the operational phase

Likely Significant Effect	Receptor(s)	Mitigation Measure	Means of Implementation of Mitigation	Post Mitigation Residual Effect – Significance and Duration (Temporary/Permanent)
Hazardous chemical/ fuel substance	Human receptors	Follow good housekeeping practice	Building / site management	Negligible (Not significant) Temporary
Contaminated made ground	Site users	Capped with clean growth medium	Remedial Strategy	Major Beneficial (Not Significant) Permanent

Type 1 Cumulative Effects

213. This section gives consideration to ‘Type 1’ cumulative effects. Type 1 cumulative effects are also known as ‘inter-project’ effects, which are the combined effects arising from the Proposed Development upon a set of defined sensitive receptors.

Identification of Likely Significant Type 1 Cumulative Effects

Construction Phase

214. **Table 19** outlines the potential for interactions of individual effects during the construction phase of development.

Table 19: Type 1 Cumulative Effects (Construction)

Sensitive Receptor Group	Construction Phase Residual Effects	Likely Significant Cumulative Effects
Local residents	Temporary Minor and Moderate Adverse noise disturbance effects on residents at times.	No in combination effects.
Economic Growth and Employment	Moderate Beneficial impact on local employment during the construction phase (temporary).	No in combination effects.
GHG Emissions	Permanent Minor Adverse (Not Significant) increase in GHG emissions.	No in combination effects.
Residents and people engaged in recreation within Hulme (specifically at Clarendon Street (as represented by Viewpoints 9 and 14), Rockdove Avenue (as represented by Viewpoint 13), the area around Newcastle Street (as represented by Viewpoint 3), and within Hulme Park (as represented by Viewpoint 6)).	Significant visual effect (temporary)	No in combination effects.
Pedestrians and road users (including on Medlock Street (as represented by Viewpoint 5) and within Hulme (as represented by Viewpoint 2)).	Significant visual effect (temporary)	No in combination effects.
Residents / pedestrians in area surrounding the Site (including to the east around Chester Street (as represented by Viewpoint 12) and to the west on Medlock Street (as represented by Viewpoint 5)).	Significant visual effect (temporary)	No in combination effects.

215. **Table 19** shows that there are unlikely to be in-combination construction phase Type 1 cumulative effects.

Operational Phase

216. **Table 20** presents the results of the review of the potential for interactions of individual effects during the construction phase of development. The potential effect interactions are then discussed further.

Table 20: Type 1 Cumulative Effects (Operation)

Sensitive Receptor Group	Construction Phase Residual Effects	Likely Significant Cumulative Effects
Economic Growth and Employment	Major Beneficial impact from direct operational employment and change in economic performance (GVA and spend) (permanent).	No in combination effects.
Housing Need	Moderate Beneficial impact resulting from change in supply of student bedspaces (permanent).	No in combination effects.
GHG Emissions	Permanent Minor Adverse (Not Significant) increase in GHG emissions.	No in combination effects.
Selected residents at Block 1 Parkway Gate, Block 3 Parkway Gate, Block 2 Parkway Gate, Block A Plot 11, First Street, Block D Plot 11, First Street, and Block B Plot 11, First Street.	Minor Adverse (Not Significant) reduction in daylight and sunlight amenity, and overshadowing.	No in combination effects.
Road users at nearby road junctions.	Minor Adverse (Not Significant) effects on solar glare.	No in combination effects.
Road users at: Slip1, Slip2, MS2, MW4-6, CS1 and CS2	Minor-Moderate and Moderate Adverse (Significant) effects on Solar Glare.	No in combination effects.
Residents and people engaged in recreation within Hulme (specifically at Clarendon Street (as represented by Viewpoints 9 and 14), Rockdove Avenue (as represented by Viewpoint 13), the area around Newcastle Street (as represented by Viewpoint 3), and within Hulme Park (as represented by Viewpoint 6)).	Significant visual effect (permanent)	No in combination effects.
Pedestrians and road users (including on Medlock Street (as represented by Viewpoint 5) and within Hulme (as represented by Viewpoint 2).	Significant visual effect (permanent)	No in combination effects.
Residents / pedestrians in area surrounding the Site (including to the east around Chester Street (as represented by Viewpoint 12) and to the west on Medlock Street (as represented by Viewpoint 5)).	Significant visual effect (permanent)	No in combination effects.

217. Table 20 shows that there are unlikely to be in-combination operation phase Type 1 cumulative effects.

Availability of Environmental Statement

218. The ES is available for public viewing online via MCC's Public Access website, and during normal office hours at the following address:
- Planning Department
Manchester City Council
Town Hall
Manchester
M2 5DB
219. The ES may be purchased in volumes, the costs for which are set out below:
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