



Crown Street Phase 3 and Plot D Environmental Statement: Non-Technical Summary

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Introduction

Overview

1. This Environmental Statement (ES) Non-Technical Summary (NTS) has been prepared in respect of two separate planning applications submitted to Manchester City Council ('MCC') both for a residential led, mixed-use development on adjacent sites located within the Great Jackson Street Development Framework Area of Manchester City Centre. The first application relates to Plots C (part) and Plot E (collectively referred to as Crown Street Phase 3) with the second application relating to Plot D as identified in Figure 1.
2. As the two planning applications are adjacent to one another and are being submitted concurrently by Renaker Build Ltd ('the Applicant'), the environmental impacts of both applications are considered holistically by the Environmental Impact Assessment ('EIA') and are jointly referred to as 'the EIA Site' and the 'Proposed Development'.
3. The EIA Site measures approximately 1.5 ha and the two component planning applications comprise:
 - Crown Street Phase 3: bound by Silvercroft Street and Owen Street Car Park to the north, Melbourne Street and Plot F to the south, Owen Street and Deansgate Square to the east, and the under construction Crown Street Phase 2 to the west.
 - Plot D: bounded by Great Jackson Street to the northeast, the A57(M) Mancunian Way to the South, Melbourne Street to the northwest, public footpath to the east and a warehouse beyond.
4. The Environmental Impact Assessment (EIA) has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) ('the EIA Regulations') and best practice guidance.
5. The NTS is a standalone document and is required under the EIA Regulations.
6. 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.
7. More information providing greater technical detail is available in the Environmental Statement (ES). The ES is a separate document which has been submitted as part of the planning applications. Please see 'Availability of Environmental Statement' for details on how and where to view the ES.

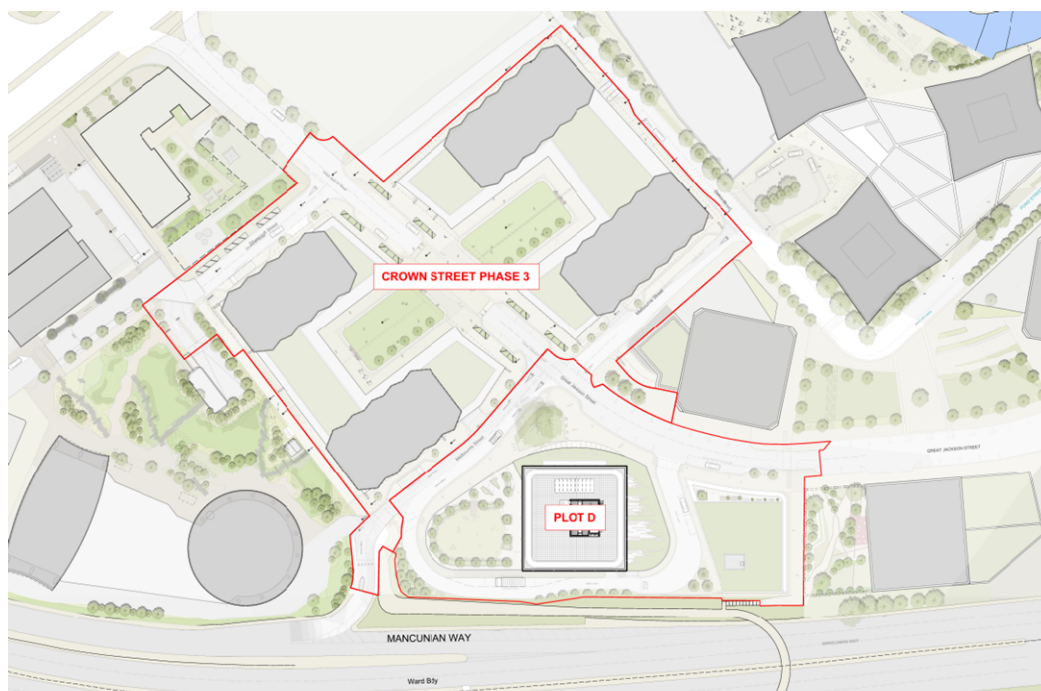


Figure 1: Crown Street Phase 3 and Plot D Planning Application Boundaries. The EIA covers the entirety of both of these sites. (source: SHP)

What is being Proposed?

8. The ES has been submitted in order to assess the Environmental Impact of the Proposed Development. The Site has been identified for residential led development through the Great Jackson Street Framework (2018).
9. The Proposed Development is for the redevelopment of the EIA Site to provide a high-quality scheme comprising residential uses within five tall buildings, a separate office building, new public realm, car and cycle parking within a multi-storey basement. This will include residential amenity space, a public restaurant on the upper floor of the Plot D tower and commercial space primarily for retail, food and beverage uses on the ground floor at Crown Street Phase 3.
10. The Planning Applications seeks permission for the following:

Crown Street Phase 3

“Full planning permission for the demolition of existing structures and the phased construction of four residential buildings ranging from 47 to 51 storeys to provide a mix of and providing 1,746 homes (Use Class C3), flexible commercial, leisure, food and drink uses (all Use Class E) and / or drinking establishment (Sui Generis), basement car parking, cycle parking, landscaping and public realm, servicing and access arrangements, highways alterations and associated works.”

Plot D

“Full planning permission for the demolition of existing structures and the erection of one residential building to a height of 71 storeys and comprising 642 homes (Use Class C3) with food and drink uses (Use Class E) and / or drinking establishment (Sui Generis); and one office building (Use Class E); with basement car parking, cycle parking, landscaping and public realm, servicing and access arrangements, highways alterations and associated works.”

11. The Proposed Development will be phased in order to facilitate delivery process of each part of the scheme and a phasing plan is provided as Figure 2 to this report. The sequence of phased delivery is proposed as follows:
 - Phase 1: Plot D2 Office Building
 - Phase 2: Crown Street Phase 3 Plot E2

- Phase 3: Crown Street Phase 3 Plot E1
 - Phase 4: Crown Street Phase 3 Plot C8
 - Phase 5: Crown Street Phase 3 Plot C7
 - Phase 6: Plot D1 Residential Tower
12. Phase 1, the three-storey office building, has been considered by the EIA disciplines as being capable of coming forward at any stage of the development. This is to allow a degree of flexibility in preparing for and delivering the larger development plots and ensuring the finished building aligns with future occupier timescales.
13. The ES sets out the findings of an EIA carried out in respect of the Proposed Development.

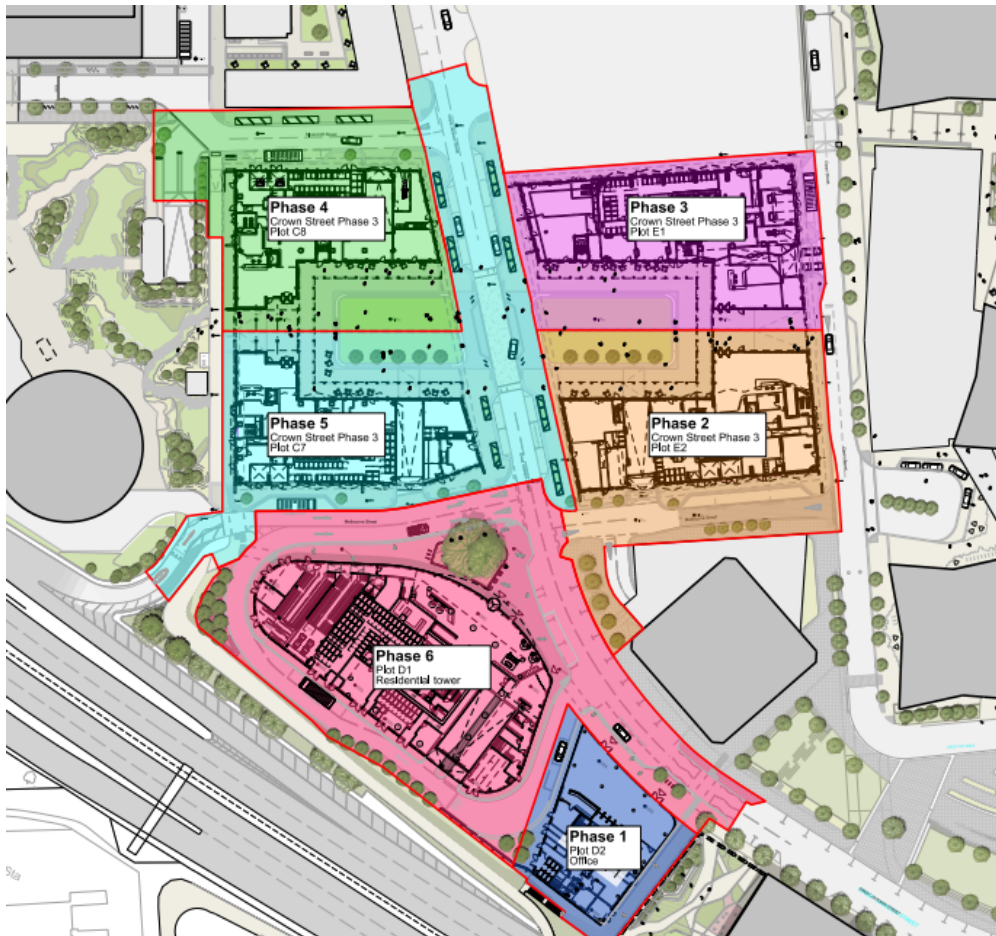


Figure 2: Crown Street Phase 3 and Plot D Phasing Plan (source: SHP)

Where is this happening?

14. Two separate planning applications are being submitted at the same time; one for Crown Street Phase 3 (partial Plot C and plot E of the Great Jackson Framework), and one for Plot D of the Great Jackson Street Framework. As these are being submitted together the environmental impacts of both applications will be considered holistically as part of the Environmental Impact Assessment.
15. The two sites are depicted on Figure 1.

What is located on the Site at the moment?

16. The Site has been historically underutilised. It currently comprises a cleared site to the east of Great Jackson Street and to the west of Great Jackson Street is Renaker's temporary Marketing Suite, Gaddum House (a former charity office, now relocated to Hulme) and temporary cabins associated with development

elsewhere in the GJS Development Framework area. Plot D includes a temporary concrete batching plant for the manufacture and distribution of ready mixed concrete.

17. The Site is not located within a Conservation Area and there are no Listed Buildings on site, however some heritage assets have been identified in the vicinity of the Site.
18. There are no Environmental Designations with respect to Ecology within the Site. Furthermore, there are no identified sites with ecological designations within the vicinity of the Site.
19. An EIA Site Location Plan is provided at Appendix 1.

Why is this development being brought forward?

20. The Site sits within the Great Jackson Street ('GJS') Framework area and is situated on a key gateway into Manchester City Centre. The Development Framework was originally endorsed in 2007 and was updated in both 2015 and 2018.
21. Most recently, the Framework was updated to reflect the potential for further growth in this part of Manchester City Centre. Following public consultation organised by MCC, the Framework was endorsed by the Executive Committee in January 2018 and forms a material consideration in the determination of planning applications within its boundary.
22. The vision for the GJS Framework area has remained consistent since the 2015 endorsed version of the document; to 'create a vibrant, safe, secure and sustainable community'. The GJS Framework envisions that Great Jackson Street will be characterised by high rise residential development.
23. The design evolution of the masterplan principally relates to creation of an enhanced format of high-density development, which will enable the provision of a higher level of public realm and will improve the quality of the residential environment. In this regard, the main components of the revised design from that outlined in the GJS Framework are:
 - Maximising separation distances between buildings.
 - Increasing the quantum and variety of public spaces within the Development Framework area and improving pedestrian connections through a linked sequence of those public spaces.
 - Enhancing sunlight and daylight penetration into the Site.
24. Existing uses within the GJS Framework area include light industrial units in addition to residential uses in developments that have recently completed construction. Several of the key GJS Framework plots have now either completed or are now under construction to deliver new residential-led schemes. Renaker has played a key role in the development of the Great Jackson Street Framework area with approximately 4,000 new homes completed or currently under construction in the Development area. This includes:
 - Deansgate Square: 1,508 apartments across four towers, ranging from 38 – 64 storeys in height. (Planning Ref: 111719/FO/2016/C1). A mix of 1, 2 and 3 bedrooms across four towers of 62, 50, 44 and 37 storeys (plus a four storey amenity building) have been provided. Retail units are also provided on the ground floor to serve the new residents and visitors.
 - Crown Street Phase 1: comprises Elizabeth Tower with 484 apartments in 52 storey tower and Victoria Residence with 180 apartments in a 21-storey tower (Planning Ref: 119806/FO/2018) as well as townhouses and duplex once completed. Residential amenity space is also provided in each building, as well as a communal terrace and ground floor commercial units including a GP surgery.
 - Crown Street Phase 2: Blade and Three60, which is under construction, delivering 855 residential apartments in 51 and 52 storey towers (Planning Ref: 126668/FO/2020). It includes a public underground car park, primary school and a 0.5ha public park and is proposed for completion in 2024.
 - Plot F Great Jackson Street is scheduled to start on site in Q2 2023: 988 apartments across two 51-storey residential buildings.
25. The Proposed Development will continue to bring forward the regeneration of this currently under-utilised land to complement the regeneration objectives in this area of the City Centre and improve accessibility between the Castlefield, First Street, Deansgate, Hulme and the wider City Centre.

26. The Site's urban location, transport links, brownfield nature and ability to sustainably contribute to wider strategic aims are key elements in its selection as a suitable site for development.

Who has been consulted?

27. Pre-application consultation has taken place to ensure both neighbouring residents and businesses as well as local stakeholders are fully informed of the Proposed Development.
28. The Statement of Consultation explains in detail the programme of consultation that has been undertaken in order to ensure that issues could be considered and addressed as the proposals evolved. The scheme has been
29. developed in consultation with the Local Planning Authority, Statutory Consultees, key stakeholders and adjoining owners and occupiers.
30. A summary of the pre-application consultation is provided below:
- Four pre-application meetings with the Local Planning Authority on 23 September 2022, 9 November 2022 and 17 January 2023.
 - Several individual virtual Councillor briefing meetings with Deansgate and Hulme Ward Councillors on 18, 20 and 24 January 2023.
 - Pre-application public consultation was undertaken virtually via a consultation website, which included information about the GJS Framework, the Sites and the Proposed Development and invited members of the public to make comments. The consultation was publicised via a leaflet drop to 3,140 homes, businesses and landowners in the local area and via local press. The website was visited 5,140 times from 4,594 unique users and the comments received have been considered as part of the design development.
 - The consultation website included details of an open consultation webinar, which was hosted on 7 February 2023. The webinar comprised a presentation of the proposals and provided a forum for members of the public to raise questions for the project team to answer. The webinar was attended by 23 people.
 - Places Matter! Design Panel were consulted on 30 November 2022. A written response to the proposals was provided to the Applicant following this.
 - Manchester Airport were consulted via email in December 2022 to ascertain any impacts due to the buildings heights.
 - Other organisations consulted during the pre-planning stages include MCC Environmental Health, MCC Highways, Manchester Airport.
 - Neighbouring developer landowners were also directly consulted during the pre-application process.
 - A pre-application meeting was also undertaken with Greater Manchester Police (GMP) to present the proposals and receive feedback on security credentials of the scheme.
 - Overall, pre-application engagement has indicated general support for the delivery of new residential developments in the Great Jackson Street area in line with the GJS Framework vision and objectives.
 - Technical queries raised during the consultation period have been addressed within the Statement of Consultation, Planning Statement, DAS, and other submission information. Further statutory consultation will be undertaken on the proposals during the determination period and the Applicant will continue to engage with the Local Planning Authority as part of the on-going planning process.

The Proposed EIA Development

What will the redevelopment process involve?

31. Broadly, the construction process of the Proposed Development will involve:
- Site clearance and enabling works;
 - Earthworks, levelling and ground compaction;

- Laying foundations;
 - Building of the new structures;
 - External works and hard and soft landscaping;
 - Phased completion of public realm and S.278 works;
 - Phased completion of communal external space and links;
 - Completion of internal finishes to communal space; and
 - Internal fit out of the main structures.
32. Machinery used during redevelopment will consist of standard demolition and 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.
33. 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?

34. The Applicant has provided the Key programme dates are provided below. In summary, the worse-case building period from a time perspective is scheduled to be nine years in total, from receiving planning permission in 2023:
- Plot E2: Start works in Q3 2024 and finish in Q1 2028. Total time = 3.5 years build.
 - Plot E1: Start works in Q3 2025 and finish in Q1 2029. Total time = 3.5 years build.
 - Plot C8: Start works in Q3 2026 and finish in Q1 2030. Total time = 3.5 years build.
 - Plot C7: Start works in Q3 2027 and finish in Q1 2031. Total time = 3.5 years build.
 - Plot D Office: Start works in Q1 2026 and finish in Q3 2027 (First Phase Complete). Total time = 18 months.
 - Plot D Tower: Start works in Q3 2027 and finish in Q3 2032. Total time = 5 years build.
35. This is an indicative construction programme and the Applicant highlights that there are multiple risks involved in the development process. This may result in the programme ultimately being extended in the event delays are 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.
36. This programme is based on normal construction working hours in line with MCC Guidance of 8am to 6pm Monday to Friday and 8am to 2pm on Saturdays. No works will occur outside these hours unless agreed in advance with MCC.

What will it look like afterwards?

37. The designs for the residential towers has sought to provide them with their own identity, to give interest and excitement to the skyline.
38. The design has also sought to balance this with a need to be consistent with the existing design context of Great Jackson Street to ensure the buildings form part of the cluster of existing tall buildings.
39. Crown Street Phase 3 contains four towers that will anchor each corner of the new square, benefitting from maximum separation distances. Two of the towers will be 47 storeys high, the other two will be 51 storeys. In plan each tower has a 'saw tooth' arrangement to the façade. This arrangement minimises direct overlooking between apartments and allows each facet of the façade to be articulated individually and will create striking shadows / reflections through the day. The curtain wall system will contain a mix of perforated aluminium panels and clear vision units.
40. Plot D takes inspiration from a lighthouse, with an expressed lantern at the uppermost floors that will provide a beacon of light. It will be 71 storeys. As the new tallest building in Manchester the 'lighthouse' will further enhance the gateway into the city from the south and become a local landmark building, contributing

to wayfinding and legibility. The tower's curtain walling will feature a chequerboard pattern composed of alternating panels of clear vision glazing and solid aluminium panels with a perforated aluminium finish. The top of the building will feature greater expanses of glazing within an expressed grid, define the lantern and offering panoramic views of the city and beyond. A two storey podium block grounds the tower. To the east of the tower is a three-storey office building. The height of the podium and office block correlate to the height of the grounding elements of surrounding tall buildings around the EIA Site.

41. The Proposed Development contains significant new elements of landscaped space and public realm which will support delivery of the wider GJS Framework vision. Public Realm Strategies have been submitted in support of each application, prepared by TPM Landscape Architects.
42. Crown Street Phase 3 includes a classical raised lawn, with a single line of trees, surrounded by a colonnade that includes a covered walkway.
43. Plot D public realm improvements are focussed along Melbourne Street and Great Jackson Street, located to the north western and north eastern elevations of the development. The surface materials will tie in with the wider narrative along Great Jackson Street by incorporating high quality materials and a modern planting design.
44. A raised edge planter is proposed at the corner of Melbourne Street and Great Jackson Street that enables the retention of the existing trees whilst providing an opportunity for seating.

Alternative Options

45. The EIA Regulations require the ES to identify the main alternatives that were considered during the design process.
46. 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.
47. The wider project team has also played an important part in influencing the design of the Proposed Development to ensure that likely significant environmental effects are avoided or mitigated. The resulting scheme is described in 'The Proposed Development'.
48. A number of alternatives have been considered in relation to the Site and Proposed Development. These include no action (the 'Do Nothing' scenario), alternative sites, alternative uses, and alternative layouts and designs.
49. The "do nothing" scenario has been discounted due to the established need for the regeneration of the Site and the benefits it will bring.
50. The Site is considered suitable for high-density development given its highly accessible location within the City Centre and the Great Jackson Street Framework area. The Site is considered suitable for residential use in terms of its urban location, close proximity to established neighbourhoods, transport links and connections with Manchester City Centre. Within the above context, it is not considered appropriate to consider alternative sites.
51. The proposed use of the Site has been influenced by the Great Jackson Street Framework (2018) which the Site is located within, alongside the context of identified need for high quality residential accommodation, viability and deliverability. As such, the consideration of alternative uses was not considered to be appropriate.
52. Alternative layouts and designs have been considered throughout the design process and have been informed by consultation with stakeholders and the public and by the Project Team, as addressed within the Design and Access Statements.
53. Considerations around alternative layouts and designs reflected upon a number of options. However, the Proposed Development is considered to represent the most appropriate design in respect of the various considerations influencing the design.

Environmental Impact Assessment

What is an EIA?

54. The EIA process is the mechanism by which development proposals are appraised in terms of environmental criteria, in addition to socio-economic, engineering and technical considerations.
55. The purpose of the EIA is to establish the nature of development proposals, and the environment in which they are likely to take place, in order to identify likely significant effects on the environment that may arise.
56. Both the short-term and long-term effects of development, including temporary and permanent impacts, are considered. This is done by comparing the existing situation at the start of the work (baseline) with the projected situation during and after the Proposed Development.
57. EIA is required pursuant to the EIA Regulations, because the Proposed Development parameters exceed the relevant screening thresholds outlined in Schedule 2 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. The EIA has been carried out in accordance with the requirements of the EIA Regulations, and in line with best practice guidance.
58. This NTS forms an important part of the EIA process. Please refer to Section 1 ‘Introduction’ for more detail on the NTS.

What environmental effects does the EIA consider?

59. EIA Scoping has been undertaken to identify the likely significant effects on the environment that may arise from the construction and operational phases of the Proposed Development. This was done with reference to best practice guidance.
60. The results of the scoping exercise have determined the technical subject areas of the EIA, set out in Table 1.1.

Table 1.1: Scope of EIA

EIA Subject Areas
Air Quality
Climate Change – Green House Gases
Daylight, Sunlight and Overshadowing
Noise and Vibration
Human Health
Solar Glare
Townscape and Visual Impact
Traffic and Transport
Wind Microclimate
Socio Economic

61. A formal EIA scoping request was submitted to MCC on 14 March 2023 requesting formal confirmation as to the proposed scope of the EIA required in respect of the Proposed Development. The technical chapters are based on a scope of assessment that has been agreed with the relevant statutory consultees where possible. A copy of the scoping report is included in Appendix 2.1.
62. Table 1.2 illustrates the organisations that have been consulted during the pre-application process.

Table 1.2: List of Consultees Engaged With

Consultees
Greater Manchester Police
Greater Manchester Archaeological Advisory Service
Manchester City Council Environmental Health Officers
Manchester City Council Highways

Consultees
Places Matter! Design Review Panel
Manchester Airport Safeguarding Team

63. Table 1.3 outlines the statutory consultees which were consulted by Manchester City Council during the scoping process:

Table 1.3: List of Statutory Consultees engaged through the EIA Scoping Process

Consultees
Manchester City Council Environmental Health
Manchester City Council Flood Risk Management
Manchester City Council Highways Department
Historic England
Natural England
Environment Agency
United Utilities
Greater Manchester Archaeology Advisory Service
Greater Manchester Ecology Unit
Transport for Greater Manchester

64. The following topics were not included in the assessment, as they were identified as not likely to have significant environmental effects and have therefore been ‘scoped out’ of the EIA:
- Agricultural Circumstances
 - Aviation
 - Archaeology
 - Arboriculture
 - Ecology
 - Water Resources
 - Electronic Interference
 - Ground Conditions
 - Heritage
65. In addition to the effects resulting from the Proposed Development, other developments within the wider area have been considered. This is to account for any accumulation between effects resulting from the Proposed Development and from these surrounding developments.
66. The applicant has agreed the nearby schemes for inclusion with MCC in the cumulative assessment via pre-application discussions and the scoping process. For further details on the identified cumulative developments please refer to Volume 2 (Appendix 2.2) the Environmental Statement.

How will environmental effects be managed?

67. Environmental controls (or mitigation measures) will be introduced to eliminate, reduce or offset likely significant adverse environmental effects resulting from the Proposed Development. Mitigation measures are described in greater detail in the individual technical ES chapters (6 to 15), and summarised in Chapter 16 of the ES.
68. The environmental controls proposed include:

- Preparation of a Construction Management Plan (CMP) which clearly sets out the methods of managing environmental issues for all involved with the Proposed Development, including supply chain management.
- Requirement to comply with the CMP included as part of the contract conditions for each element of the work. All contractors tendering for work will be required to demonstrate that their proposals can comply with the content of the CMP and any conditions or obligations secured through the planning permission;
- In respect of necessary departures from the above, procedures for prior notification to the Council and affected parties would be established;
- Establishing a dedicated point of contact and assigning responsibility to deal with demolition and construction related issues if they arise. This would be a named representative from the construction team; and
- Regular dialogue and engagement with the Council and the local community.

69. It is anticipated that these controls would be secured by appropriate planning conditions or obligations.

Who has been involved in the EIA process?

70. The EIA process has involved communication and collaboration between the applicant, Deloitte, MCC, the project team (shown in Table 1.3), statutory consultees and the public.

71. Table 1.5 shows the project team and their roles.

Table 1.5 EIA Technical Team

Company	Discipline
Enzygo	Air Quality
Curtins	Transport Assessment
Eksogen	Socio-economic Impact
Simpson Haugh & Partners LLP	Architect
Fisher Acoustics	Noise Impact
GIA	Daylight & Sunlight Overshadowing and Solar Glare
WSP	Wind Microclimate
WSP	Climate Change
Chris Burnett	Townscape & Visual Impact
Eskogen	Human Health Assessment
Deloitte	Planning Consultant & EIA Coordinator

What were the results of the EIA?

72. The following sections summarise the methodology used in determining the likely significant effects of the Proposed Development and summarise the outcomes of the EIA.
73. This section is organised into technical subjects. Greater detail can be found in the relevant chapters of the Environmental Statement (6 to 15) and their technical appendices.
74. The technical topics are those elements of the environment considered likely to experience significant effects and therefore assessed in the EIA.
75. With regard to the assessment for each topic, the subsequent sections discuss:

- Methodology and scope;
- Baseline conditions;
- Likely significant effects of the Proposed Development;
- Mitigation;
- Cumulative effects with other developments; and
- Likely ‘residual’ effects following mitigation.

76. A summary of proposed mitigation measures and residual effects is also included in Chapter 17 of the ES Volume 1.

Significance of Effects

77. The likely effects of the Proposed Development have been classified according to their significance.

78. 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.

79. 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 15).

80. Table 1.6 illustrates how most significance ratings were determined.

Table 1.6: Significance of Effect Ratings

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

81. For the purposes of the EIA, effects concluded to be ‘moderate’ or ‘major’ are considered to be significant, while ‘minor’ or ‘negligible’ are considered not significant.

82. The following sections of this NTS summarise the individual assessments conducted for each topic considered within the Environmental Statement).

Construction Management and Phasing

83. 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.
84. Every stage of the project will be pre risk assessed and appropriate controls applied, sub-contractors will be pre vetted and will be subject to extensive pre contract requirements of information transfer and risk assessment.
85. A fundamental aspect of the Principal Contractor's role is the development of a Construction 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.
86. The detailed Construction Management Plan, prepared on the basis of the details in the Construction Management ES Chapter, 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 which will ensure the Health and Safety of all those working on or affected by the project works.
87. Renaker Build Ltd 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 also 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.
88. Health and safety is also incorporated as a fundamental aspect of the overall project review, the Applicant has appointed Renaker Build Ltd as Principal Contractor, Renaker Build Ltd 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.
89. The Main Contractor will at the earliest possible stage of the project enter into dialogue with all relevant parties, including neighbours to ensure there is effective coordination throughout all stages of construction.

Air Quality

90. Due to the nature and scale of the Proposed Development there is the potential for impacts to occur at nearby sensitive receptors during the construction and operational phases. Impacts could arise following fugitive dust emissions generated by construction phase activities, as well as road vehicle exhaust emissions associated with traffic generated during operation.
91. The EIA Site is located close to major roads and within an area designated by Manchester City Council as experiencing poor Air Quality. Local emission sources also have potential to introduce future site occupiers to an area of existing poor air quality.
92. A suitable Air Quality Assessment was therefore required in order to determine baseline conditions at the EIA Site, assess site suitability for the proposed end-use and assess the potential impacts as a result of the proposed development in accordance with the requirements of the local and national planning policies.
93. Baseline conditions across the EIA Site and the surrounding environment were established following a review of predicted background conditions produced by DEFRA and the results of local air quality monitoring. The review suggests that air pollution concentrations within the assessment extents are elevated, particularly at roadside locations. However the data suggests that conditions are improving.
94. During the construction phase of the Proposed Development there is potential for air quality impacts as a result of fugitive dust generated by construction phase activities and road traffic emissions associated with import and export of materials from the EIA Site.
95. Dust impacts were assessed in accordance with the industry standard guidance. Assuming good practice dust control measures are implemented, the residual air quality impacts from dust generated by construction activities was predicted to be negligible and therefore not significant. The impacts of construction road traffic were assessed and following industry standard criteria were considered temporary and not significant.
96. Dispersion modelling was undertaken in order to predict pollutant exposure across the EIA Site. Air quality at the facades of all proposed buildings was deemed acceptable and met national standards. Mitigation measures to protect future occupiers were not required.
97. In addition, modelling was undertaken to predict air quality impacts at sensitive receptor locations within the vicinity of the EIA Site. Modelling was undertaken with and without the Proposed Development in place to determine the impact of road vehicle exhaust emissions generated during the operation. This indicated that the increase in pollutant concentrations at sensitive receptor locations was at worst 'moderate adverse'. The remaining locations are expected to be subject to negligible or minor increases which are considered to result in negligible effects. It should be noted that the 2024 assessment scenario applied highly conservative assumptions in the data which overestimated the impacts.
98. An additional scenario was undertaken to reflect future improvements to background concentrations resulting from higher vehicle emission standards. During a mid-year scenario of 2027, operational impacts were predicted to be negligible at all forty receptor locations considered. This analysis confirms that 'moderate adverse' identified during the 2024 scenario are likely to diminish following predicted improvements to background concentrations and emissions from new vehicles. Therefore, a sufficient level of confidence can be placed on the predicted emission levels and impacts can be considered not significant.
99. Assuming the implementation of mitigation measures recommended in chapter the significance of construction and operational impacts will be reduced. Therefore, the overall significance of potential residual impacts was determined to be not significant, in accordance with the relevant guidance criteria.

Climate Change

100. This Chapter of the ES has been prepared by WSP and assesses the likely GHG emission related impacts of the proposals upon the site and surrounding area. This Chapter also describes the methods used to assess these impacts, the existing baseline conditions, the proposed mitigation measures required to prevent, reduce or offset any significant negative effects and the likely residual effects after these measures have been adopted.
101. For the Proposed Development, the following emissions have been considered:
 - Whole life embodied carbon emissions: These are embodied carbon emissions from the construction process and materials used, throughout the lifespan of the Proposed Development. This includes emissions during construction, construction transport emissions, emissions from replacement/repair work during the operational phase and end-of-life emissions;
 - Operational carbon emissions: These include carbon emissions from energy consumption during the operational phase of the Proposed Development; and
 - Operational transport emissions: These include emissions from transport during the operational phase of the Proposed Development.
 - The environmental receptor relevant to this assessment is the global climate impacted by the creation and release of GHG emissions.
102. The assessment follows the Environmental Impact Assessment Guide to Assessing Greenhouse Gas Emissions and Evaluating their Significance (IEMA) 2022. The approach to assess GHG emissions associated with the Proposed Development includes calculating the baseline emissions, determining the significance of each GHG emission source scoped into the assessment and setting out strategies for mitigation.
103. Based on this contextualisation and professional judgement, the overall significance of effects of the Proposed Development has been defined in accordance with the RIBA (The Royal Institute of British Architects) 2030 Climate Challenge targets.
104. The whole life embodied carbon emissions estimated to be generated by the domestic and flexible commercial space part of the Proposed Development are likely to be Minor adverse (not significant).
105. The whole life embodied carbon emissions estimated for the non-domestic (office) part of the Proposed Development are likely to be Negligible (not significant).
106. The effect from operational energy emissions for the domestic part of the Proposed Development are likely to be Minor adverse (not significant).
107. The operational energy emissions for the non-domestic typology are likely to be Minor adverse (not significant) for office building and Minor adverse (not significant) for Amenity and retail areas.
108. Based on the magnitude of carbon emissions from transport and it being the highest contributor (76%) to the overall carbon emissions from the Proposed Development, the operational transport carbon emissions are expected to be Major-Moderate adverse (significant).
109. Mitigation will be reviewed in the construction stage through to the operational stage of the Proposed Development. To reduce the whole life embodied emissions, the emphasis will be on minimising the use of energy intensive materials, using local suppliers where possible, reducing traffic and improving vehicle efficiency.
110. During the operational stage of transport, mitigation is focused on active travel and encouraging the use of public transport through measures proposed in the proposed Travel Plan. Also, emphasis is given in increasing the number of EV charging points. Further EV charging infrastructure will be provided throughout the lifetime of the proposed development on demand (depending on the needs of the future occupants) and up to 20% of total parking spaces.
111. The adoption of the embedded/additional mitigation measures will target reductions in GHG emissions, giving a negligible or moderate-minor residual effect for the emission categories assessed.

112. The calculated figures with regards to carbon emissions represents the data available at the time of submission and reflect the design of the buildings are at RIBA stage 2 to 3. Therefore, whilst it's expected that the predicted carbon emissions are conservative and therefore, they will improve through design development, they are estimates and as such can go up as well as down. Significant improvement of these figures will rely on commercially viable technological advancements in the manufacturing of basic construction materials and efficiency of plant/machinery in the coming years. The RIBA 2025 benchmark is expected to be achieved or improved upon but this is subject to aforementioned variables.

Daylight, Sunlight and Overshadowing

113. An assessment has been undertaken to establish the likely significant effects of the proposed development upon the amount of daylight and sunlight received by properties adjacent to the Site.
114. To assess the surrounding existing properties, the BRE Guidelines provide two main methods for assessing daylight: Vertical Sky Component (VSC) and No Sky Line (NSL). The VSC method measures the amount of light available on a vertical wall or window following the introduction of barriers such as buildings. The NSL method is a measure of the distribution of daylight at the 'working plane' within a room (i.e. a horizontal 'desktop' plane of 0.85m in height). The NSL divides those areas of working plane in a room which receive direct sky light through the windows from those areas of the working plane which cannot. Where all of the windows meet the VSC and all of the rooms meet the NSL criteria within a property the effect is considered to be negligible.
115. For the assessment of sunlight, the approach considers the Annual Probable Sunlight Hours (APSH) for a reference point on a window (i.e. if a window point can receive at least 25% APSH, then the room should still receive enough sunlight). Windows are checked to see if they are facing 90° due south, with the emphasis on main living rooms and other rooms such as the kitchen and bedrooms being less important.
116. The method for assessing overshadowing is the 'sun-on-ground indicator' (SHOG). The BRE Guidelines recommend that at least half (50%) of a garden or amenity area should receive at least 2 hours of sunlight on March 21 or the area which receives 2 hours of direct sunlight should not be reduced to less than 0.8 times its former value (i.e. there should be no more than a 20% reduction).
117. An assessment has been undertaken to establish the likely significant effects of the proposed development upon the amount of daylight and sunlight received by properties adjacent to the Site.
118. Eighteen receptors within the surrounding area were identified as having the potential to be impacted on by the proposed development. A total of 16,447 windows serving 8,166 rooms have been assessed for daylight and 2,166 rooms have been assessed for sunlight in sixteen receptors. Three amenity areas have been assessed for overshadowing.
119. In the Baseline Scenario, out of the 16,447 windows assessed for daylight, 6,277 (39%) meet the BRE guidelines for VSC daylight. 5,420 (66%) of the 8,166 rooms assessed meet the BRE criteria for NSL daylight. For sunlight, 1,717 (79%) out of the 2,166 rooms assessed meet the BRE criteria for both Winter and Annual APSH. Three amenity areas were assessed for overshadowing using the SHOG method, one of which meets the BRE target criteria in the baseline whilst the remaining two do not.
120. In the Proposed Scenario, with regard to daylight, out of the 16,447 windows assessed for daylight, 10,703 (65%) meet the BRE guidelines for VSC. 6,820 (84%) of the 8,166 rooms assessed meet the BRE criteria for NSL. The effects identified are negligible to moderate adverse in nature and are therefore considered to be not significant. Given the context of the Site, no further mitigation is considered necessary.
121. For sunlight, 1,738 (80%) of the 2,166 rooms assessed meet the BRE criteria for both Winter and Annual PSH. The effects identified are negligible to moderate adverse in nature and are therefore considered to be not significant. Given the context of the Site, no further mitigation is considered necessary.
122. For overshadowing, Crown Street Phase 2 will continue to receive in sunlight to in excess of 50% of its area on 21 March with the Proposed Development in place. Plot F, Great Jackson Street and Deansgate Square will not receive sunlight in accordance with the BRE criteria. The effects identified are negligible to moderate adverse in nature and are therefore considered to be not significant. Given the context of the Site, no further mitigation is considered necessary.

Noise and Vibration

- 123. Noise surveys have been conducted to determine the pre-existing daytime and night time noise levels at and around the Site.
- 124. Noise levels as a result of construction work during the construction period is expected to lead to negligible to moderate adverse impact if no mitigation measures are in place. Therefore, construction impact will be minimised by the mitigation methods described in BS 5228. Low noise and vibration construction methods will be used wherever practicable and appropriate acoustic screening will be implemented where necessary and practicable. If the identified mitigation methods are employed, the impact of the construction work during the construction period is expected to be negligible to minor adverse.
- 125. The impact of construction vibration on existing sensitive receptors is expected to be negligible.
- 126. The principal long-term potential environmental noise source due to the operation of the Proposed Development is building services plant. Building services plant noise emissions from the Proposed Development will be controlled through careful design and specification of building services plant and by provision of acoustic screens and attenuators where required to meet the noise emissions criteria at each noise sensitive receptor at and around the Site. As such, negligible impact is expected.
- 127. The minimum required sound insulation performance of the curtain wall to the dwellings of the Proposed Development has been identified. Compliance with the performance criteria should ensure that the impact of environmental noise levels at the Site on the occupants of the Proposed Development is negligible.
- 128. External noise criteria have been specified for the allowable levels of activity noise egress from the proposed amenity spaces and commercial units. Compliance with the criteria would lead to negligible noise effects at sensitive receptors.
- 129. An assessment of road traffic flows shows that the impact of increases in noise levels due to changes in traffic flows will be negligible.

Human Health

130. 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 four themes for healthy urban living – healthy housing; active travel; healthy environment; and vibrant neighbourhoods.
131. 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.
132. Summary relevant findings were taken from the impact assessment of each factor scoped as significant for this 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 have been assessed 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.
133. 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). Reported street crimes are similar to adjacent Wards and at the higher end of the range for all Wards. There are 8 Health Centres, 9 dental practices, and various nurseries and schools within 1 mile of the Site. 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 employment, education, health, retail, cultural and leisure facilities within walking distance. The local air quality and noise environment is characterised by emissions from traffic.
134. The provision of good quality residential units in such a sustainable location is likely to have moderate positive effects for healthy housing. Employment arising through the construction and operational phases is likely to provide minor beneficial effects. Minor adverse effects were identified for the cumulative effects of the proposed development with other developments nearby due to the increased demand for healthcare facilities – GPs and dentists. For potential townscape and visual effects, mitigation measures have been embedded into the location and design of the proposed development such that impacts on townscape character and viewpoints were found to be negligible or beneficial. The proposed development improves the visual diversity, composition, and townscape character.
135. Air quality and noise is mostly associated with road traffic. There will be some noise from the building services plant but this was found to be not significant. During construction, there is a potential for nuisance noise and dust but this is temporary and will be controlled through a Construction Environmental Management Plan (CEMP). Overall, the location of the site in an area with excellent accessibility to public transport, and with varied access to pedestrian and cycle networks for employment, services, and facilities in the city centre, will encourage active travel with likely positive effects in the local area. Changes to daylight or sunlight, and the wind microclimate can adversely affect health and well-being with regard to a healthy environment but effects were found to be primarily negligible.
136. No significant adverse residual effects were identified and therefore, no further mitigation measures are required.
137. The buildings are proposed with high sustainability design and consistent with a city centre location such that overall effects contribute towards need, and are compatible with, the wider societal infrastructure. Potential environmental impacts associated with townscape, air quality, noise, wind, and climate change have been mitigated such that they are not significant.

Solar Glare

138. 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 (and tram) drivers.
139. The assessment is conducted using a 3D computer model of the area created using photogrammetry and architectural models as a reference. Viewpoints are then 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.
140. 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.
141. 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.
142. Solar Glare is not a comparative assessment and instead assesses any occurrences from the Proposed Development in absolute terms. 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 existing buildings on the Site are low-rise and commercial or industrial uses, thus the likelihood of solar glare occurring from the existing site is low. Solar glare from surrounding buildings is not assessed.
143. As the Proposed Development is a phased application, there is the potential that changes in the intended construction programme may occur. Due to the location of the buildings in relation to the sensitive viewpoints, and the angles of the facades, based on professional judgement, the residual effects are not expected to differ from those of the fully implemented Proposed Development. Therefore, it is unlikely that phased solar reflections would be generated in isolation that do not occur for the complete and operational Proposed Development.
144. 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 15 road locations are considered to be 'Minor Adverse' and are not significant in terms of solar glare:
 - CHE1 – Chester Road junction with Deansgate Interchange;
 - CHE2 – Chester Road pedestrian crossing;
 - CHE3 – Bridgewater Viaduct junction with Deansgate;
 - DG2 – Deansgate junction with Whitworth St West;
 - DG3 – Deansgate junction with Great Bridgewater Street;
 - ES1 – Egerton Street junction with Deansgate Interchange;
 - DGI2 – Deansgate Interchange junction with Chester Road;
 - RS1 – River Street junction with Medlock Street;
 - RS2 – River Street junction with Garwood Street;
 - MW2 & MW3 – Mancunian Way westbound;
 - MS2 – Medlock Street junction ramp onto Mancunian Way;
 - MW5 – Mancunian Way eastbound;
 - DGIS – Deansgate Interchange ramp onto Mancunian Way; and
 - NV5 – New Vine Street junction with Clarendon Street.

145. 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:
- MS1 – Melbourne Street junction with Great Jackson Street; and
 - MW1 – Mancunian Way westbound.
146. Owing to the proximity of the site to a number of sensitive road junctions, as well as the highly glazed nature of the Proposed Development, a comprehensive, iterative review process was undertaken to incorporate mitigation strategies within the detailed façade design. The iterative review process has run alongside the development of the façade from the early massing stages and has resulted in the inclusion of:
- Angled facades for the Crown Street Phase 3 towers which reflect light at different times of the day and year from smaller areas of the façade at any one time;
 - Anodised aluminium panels with a non-specular finish to break up reflections; and
 - Purge ventilation panels to break up reflections.
147. Supplementary solar glare intensity studies have been undertaken alongside the EIA assessments, which consider the reflective properties of the glazing. This additional study was undertaken to ensure that the reflections that do occur are of low intensity and below the threshold for glare. The maximum Visible Light Reflectance (VLR) for the glazing, as determined by the supplementary solar glare intensity studies, on the Great Jackson Street elevation of the Crown Street Phase 3 Plot E2 podium is 16% and for the eastern elevation of the Great Jackson Street tower it is 14% for the residential glazing. Therefore, the significant effects identified can be mitigated by specifying glazing in line with the VLR thresholds.
148. Therefore, the reflections occur from a scheme that has been fine-tuned to address potential solar glare risks as much as possible. However, as with any tall building within a low-rise context, the Proposed Development is visible from some distance and sits within the field of view for drivers at a number of nearby junctions. Solar reflections may be unavoidable at all junctions, so the façade design has sought to limit the area of reflections and their intensity to minimise the risk of solar reflections resulting in an instance of solar glare being generated by the buildings’ facades. Therefore, due to the façade design and dynamic nature of traffic movements, the results are not considered to present a safety concern.

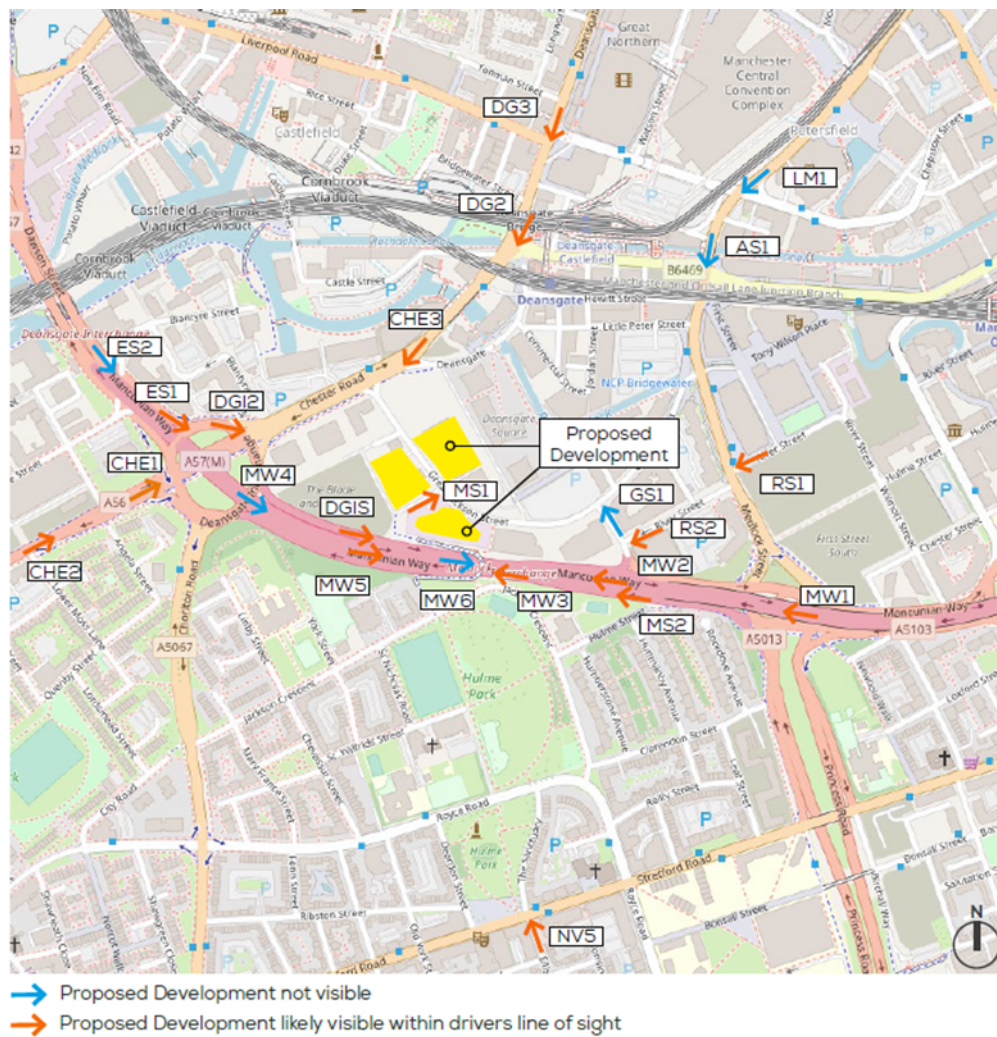


Figure 3: Viewpoints assessed for solar glare assessment (Source: GIA)

Townscape and Visual Impact

150. A Townscape and Visual Impact Assessment has been undertaken that examines the impact that the Proposed Development will have on the townscape character of Manchester city centre focussing on those areas immediately surrounding the Proposed Development in particular. It does so in a systematic, rational and objective way using established methodologies and practices contained in GLVIA 3. The impact of the Proposed Development on its own is explored and then in conjunction with consented and committed development in a Cumulative Assessment.
151. A computer modelling process was employed to provide an accurate series of Type 4 verified (AVR) Level 3 (fully rendered) and Level 2 (white block mass) images which illustrate and inform the nature of the impact the Proposed Development on a series of selected Representative Viewpoints, and on the surrounding townscape character, on a 360 degree basis. The scale and location of the development results in a widespread Zone of Visual Influence to the east west and south but limited visibility to the north due to the presence of existing tall buildings.
152. Although it is not possible to provide one single summary value for the impact the Proposed Development will have on Manchester City Centre it is possible to summarise the effects in general terms.
153. In summary, all impacts are judged to be beneficial with the overwhelming majority not significant with only significant townscape or visual effects being registered in 4 Representative viewpoints.
154. The reason why the effects are all judged to be beneficial in nature is due primarily to the surrounding character of the townscape into which the Proposed Development fits. The 5 component parts of the Proposed Development merge into the Great Jackson street framework in a consistent, almost seamless way with subtle differentiation between the towers that improves the visual diversity, composition and townscape character.
155. In terms of cumulative effects the cumulative schemes that have been assessed have little impact on the operational effects of the Proposed Development. Where there is judged to be a cumulative effect then the effects are diminished in most cases.

Traffic and Transport

157. Curtins has been appointed to review the potential effects of traffic generated by the Proposed Development. This Chapter describes the methods used to assess these impacts, the existing baseline conditions, the proposed mitigation measures if required to prevent, reduce or offset any significant negative impacts and the likely residual impacts after these methods have been adopted.
158. This Chapter is accompanied a Transport Assessment (TA) and a Framework Travel Plan (FTP). The study area, scenarios for assessment and traffic data sources for this Chapter of the ES are based on the TA.
159. The TA (Appendix 13.1) considers two scenarios: Scenario 1 - Baseline (2022 Surveys plus all relevant Committed and Cumulative Development traffic flows) and Scenario 7 - Baseline + all Phases of the Proposed Development.
160. The environmental impacts of traffic generated by the Proposed Development has been assessed in line with the criteria set out in the Institute of Environmental Management and Assessment (IEMA) Guidelines (1993), which provide two broad rules to define the need for an environmental impact assessment:
 - Rule 1 - Highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); and
 - Rule 2 - Any other specifically sensitive areas where traffic flows have increased by 10% or more.
161. The study area is focused on the following junctions/links:
 - Junction 1 - A56/Great Jackson Street priority junction;
 - Junction 2 - A56/A5067/A57(M) Deansgate Interchange signalised roundabout;
 - Junction 3 - City Road East/Medlock Street priority junction; and
 - Junction 4 - Melbourne Street/Great Jackson Street priority junction.
162. The above thresholds have been used to identify the links and junctions within the study area where an assessment of the potential impacts of the Proposed Development on driver delay, public transport users, pedestrian delay and amenity, fear and intimidation, severance, and collisions and road safety will be required.
163. The potential impacts of the Proposed Development have been assessed for a range of different receptors. These include pedestrians, cyclists, public transport users and drivers of vehicles.
164. In order to gain an understanding of the baseline traffic conditions, traffic survey data for the study area has been obtained. Additionally, road traffic collision data for the most recent five-year period available has been obtained and reviewed.
165. The Site is located in a highly accessible area and can take advantage of the excellent existing public transport facilities, including both bus and Metrolink, in addition to walking and cycling opportunities, which will therefore provide viable alternatives to travel by car.
166. Whilst the Proposed Development is being built, there will be a number of construction vehicles arriving at the Site each day. The amount of traffic this will create has been predicted to be less than the amount of traffic created by the Proposed Development when it is completed and occupied (operational). It is also predicted to be less than the thresholds set out by the IEMA Guidelines.
167. The operational impacts of the Proposed Development have therefore been the focus of the assessment with regard to the likely traffic and transport impacts.
168. The results of the assessments demonstrate that, upon full completion and operation of the development, only the Great Jackson Street and Melbourne Street links would experience an increase in traffic of 30% or more. All other links therefore do not require further assessment. All links within the study are also considered to be of Low sensitivity.

- 169. The potential impacts on the Great Jackson Street and Melbourne Street links would result in a magnitude of impact of Neutral to Minor Adverse at a local level which is not significant overall.
- 170. It is noted that the Proposed Development will deliver benefits to the local area through improved public realm, and pedestrian and cycle facilities, such as a new signalised pedestrian/cycle crossings on Great Jackson Street (Pelican) and Melbourne Street (Toucan).
- 171. The Proposed Development will also be supported by the FTP (Appendix 13.2) which aims to minimise the number of car trips generated by the development and encourage residents, staff and visitors to use sustainable modes of transport.
- 172. Following the implementation of these measures, the impacts of the operational phase would remain Neutral to Minor Adverse, which is not significant.

Wind Microclimate

173. Computational Fluid Dynamics (CFD) simulations were used to quantify the local wind speeds within and in the vicinity of the Site of the Proposed Development at various street locations (e.g., pedestrian access routes, building entrances, outdoor seating areas) for a comprehensive range of wind directions. Local wind speeds were then combined with winds statistics obtained from the meteorological station at Manchester Airport, corrected for the Site (accounting for upwind terrain and reference height at the Site), to determine the probability of local wind speeds exceeding comfort and safety thresholds for a range of common pedestrian activities.
174. In the Baseline scenario, no exceedances of the pedestrian safety criteria were observed. Wind comfort ratings across most of the receptors are suitable for the intended pedestrian uses. Only one exceedance of the pedestrian comfort criteria occurs in this scenario.
175. Wind mitigation measures were developed during the design process and included in the assessment together with the proposed landscaping plan at street level. Details about the mitigation measures can be found in Volume 2, Appendix 14.1.
176. Wind comfort ratings at street level within and in the vicinity of the Proposed Development are suitable for the intended pedestrian uses.
177. Wind comfort ratings across some portions of the terraces part of the Proposed Development fall short of meeting the required level of wind comfort. It is understood that sitting areas across the various terraces will be positioned within areas that are at least suitable for 'standing / short period of sitting' in summer and that windier areas will be allocated to more active leisure activities. At the entrance to 'Phase 3' on the 'Level 2' terrace, local shelter in the form of side screens is expected to be required to improve the wind comfort conditions at this location.

Socio-Economics

178. The scope of the Socio-Economic assessment has been informed through the EIA scoping process, giving consideration to the socio-economic impacts that are considered likely to occur during the construction and operational phases of the Proposed Development. These impacts include the creation of jobs during construction and operational phases, the expenditure impacts of an increased population, in addition to the impacts of this increased population on local healthcare services, other community infrastructure and amenities and the reduction in crime and fear of crime as a result of the Proposed Development.
179. There is no overarching guidance or technical criteria that sets out the preferred methodology in terms of socio-economic effects. This assessment has drawn on range of nationally recognised research and survey information has been used to establish a baseline profile of the local and regional economy and community, with the potential impacts of the Proposed Development assessed using standard industry benchmarks, data, assumptions and professional judgement.
180. The assessment summarises a selection of baseline conditions for the relevant study area which for the majority of socio-economic receptors includes the Manchester local authority area. This has included the presentation of recent available data - benchmarked against regional and national comparators where possible - relating to local labour market conditions (unemployment rate and claimant rate), the local employment structure and productivity levels, existing student accommodation provision and student population levels, the provision of local healthcare facilities and local open space, leisure and amenity facilities.
181. The effects summarised below relate to the delivery of Scenario 7 (Baseline + Phase 1 + Phase 2 + Phase 3 + Phase 4 + Phase 5 + Phase 6) only.
182. The Proposed Development will deliver 2,401 new purpose-built households within a high-density development, directly supporting the delivery of housing development targets established within the draft Manchester Places for Everyone Plan and the Manchester Core Strategy.
183. Within the construction phase, the Proposed Development would generate, on average, 460 full-time equivalent (FTE) jobs within the construction sector each year over the course of the 8.25 years construction period. Within the context of the size of Manchester's existing construction workforce this would have a temporary, moderately beneficial effect which is considered to be significant in EIA terms.
184. During the operational phase, the Proposed Development would generate minor adverse impacts in respect to the additional demand for healthcare facilities, however this is not considered to be significant in EIA terms.
185. Provision of open space associated with the Proposed Development, alongside the already-existing nearby will have a minor beneficial impact with regards to satisfying additional demand for the use of leisure facilities and open/amenity space, however this is not considered to be significant in EIA terms.
186. The Proposed Development is assessed as generating a permanent and negligible effect in relation to the remaining socio-economic impacts, including change in employment and contributions to the local economy, and a reduction in crime as a result of secured by design standards being applied to construction. These effects are not considered to be significant in EIA terms.
187. Since no significant adverse effects have been identified no mitigation measures are recommended. Therefore, the residual environmental effects are the same as the pre-mitigation scenario.

Availability of Environmental Statement

188. 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
189. The ES may be purchased in volumes, the costs for which are set out below:
- Non-Technical Summary - £15
Volume 1: ES Main Text & Figures - £150
Volume 2: ES Appendices - £150
190. For copies of any of the above please contact the Crown Street Phase 3 and Plot D GJS Project Team at Deloitte:
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