



**Non-Technical Summary**  
Plot F, Great Jackson Street, Manchester

November 2021

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Important notice: This Environmental Statement has been prepared by Deloitte Real Estate, with technical input from Ensafé, WSP, GIA, Enfusión, Fisher Acoustics, Chris Burnett Associates, Curtins and Ekosgen, “the Consultants”. Chapter 1, Volume 1 of this Environmental Statement sets out the parties responsible for preparing each Chapter and associated figures and appendices.

Although we have read the Consultants’ reports for consistency and provide our observations based on our knowledge and experience, we accept no liability or responsibility for the Consultant’s Reports and will not be responsible for the technical content of Chapters 6-15, Volume 1, nor Volume 2, nor the technical content of this associated Non-Technical Summary.

# 1 Non-Technical Summary

- 1.1 This Environmental Statement (ES) Non-Technical Summary has been prepared in support of a planning application submitted to Manchester City Council (MCC) for a residential led, mixed-use development on land at Crown Street, Manchester. The applicant is 'Renaker Build Ltd'.
- 1.2 Renaker Build Ltd is submitting a full planning application seeking Full Planning Permission for two new residential tall buildings, a multi-storey basement car park, public realm and associated works (the 'Proposed Development').
- 1.3 The Site measures approximately 0.88 ha and is bound by Great Jackson Street to the south and west, Owen Street and Deansgate Square to the north, and Boatmans to the east ('the Site'). This is commonly referred to as 'Plot F' within the Great Jackson Street masterplan.
- 1.4 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.
- 1.5 The Non-Technical Summary (NTS) is a standalone document and is required under the EIA Regulations.
- 1.6 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.
- 1.7 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 application. Please see 'Availability of Environmental Statement' for details on how and where to view the ES.

## What is being proposed?

- 1.8 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).
- 1.9 The Proposed Development is for the redevelopment of the Site to provide a high-quality scheme comprising residential uses within two tall buildings, new public realm, public and private car and cycle parking within a multi-storey basement. This will include residential amenity and at the podium level on the ground, first and second floors.
- 1.10 The description of development is as follows:
- " Full planning permission for the erection of two 51-storey residential buildings (Use Class C3) across two phases, including residential amenity facilities, basement car parking, landscaping and public realm, servicing and access arrangements, highways alterations, and associated works."*
- 1.11 The development comprises the following:
- Phase A – Construction of Tower F2, plus F2 basement car parking, landscaping and access.

- Phase B – Demolition of existing industrial building on-site and the construction of Tower F1, plus F1 basement car parking, landscaping and access.

1.12 The ES sets out the findings of an EIA carried out in respect of the Proposed Development.

### Where is this happening?

1.13 The Application Site (“the Site”) comprises Plot F of the GJS Framework area, and measures approximately 0.88 ha. The Site is bounded by Great Jackson Street to the south, Deansgate Square to the north, by the Boatmans apartments to the east, and by industrial units to the west.

### What is located on the Site at the moment?

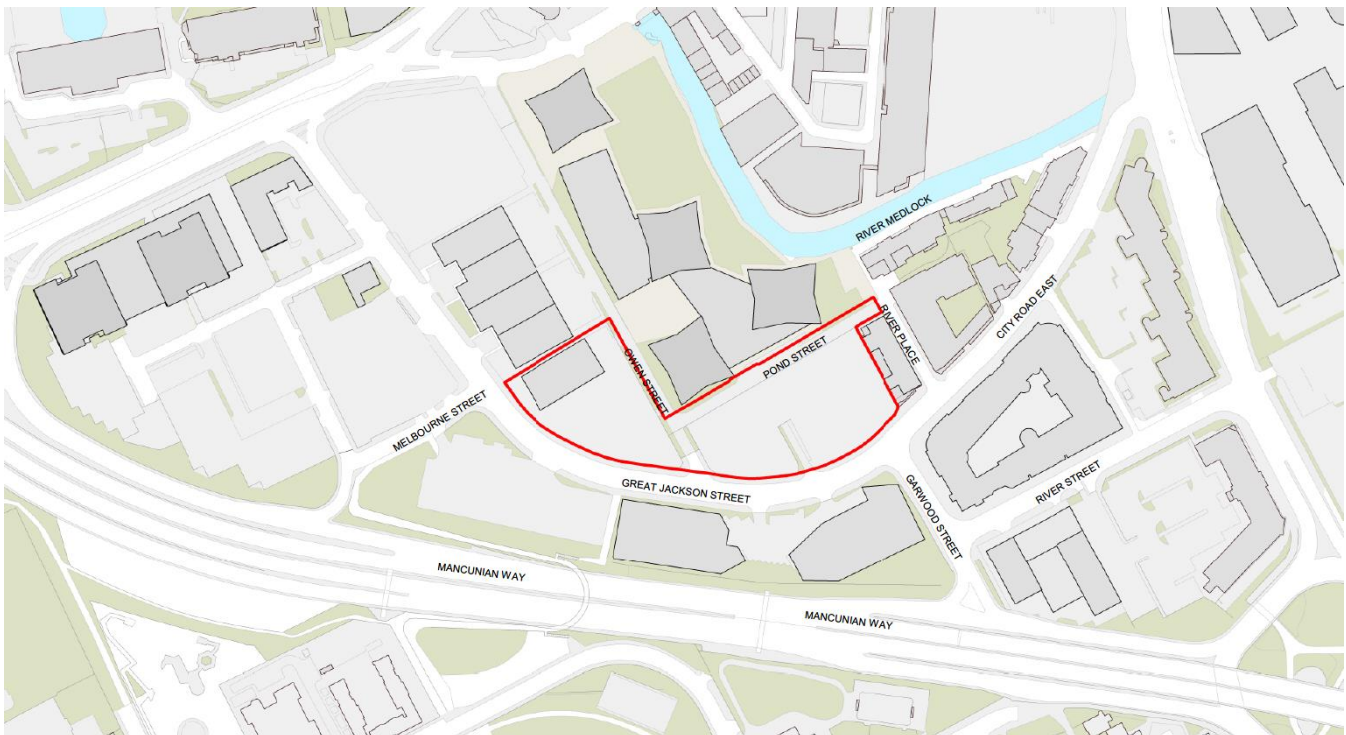
1.14 The Site has been historically underutilised and is currently occupied by a low-rise industrial unit and construction compound, with associated car parking, supporting the construction of Deansgate Square.

1.15 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.

1.16 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.

1.17 Figure 1.1 below shows the Site location plan.

Figure 1.1 Site location Plan (SimpsonHaugh and Partners).



## **Why is this development being brought forward?**

- 1.18 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.
- 1.19 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.
- 1.20 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.
- 1.21 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 three main components of the revised design 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.
  - The GJS Framework update sets out an anticipated development matrix for the entire framework area as well as more specific plots.
- 1.22 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.
- 1.23 Of particular note, Deansgate Square, to the north of the Site and beyond Pond Street and Owen Street, comprises four towers that have recently completed construction (Planning Ref: 111719/FO/2016/C1), delivering 1,508 apartments of a mix of 1, 2 and 3 bedrooms across four towers of 62, 50, 44 and 37 storeys (plus a four storey amenity building). Retail units are also provided on the ground floor to serve the new residents and visitors.
- 1.24 Crown Street Phase 1 is also currently under construction and will deliver 664 units with a mix of 1, 2, and 3-bedroom apartments, as well as townhouses and duplex apartments (Planning Permission Ref: 119806/FO/2018), once complete. Residential amenity space is provided in each building, as well as a communal terrace and ground floor commercial units including a GP surgery.
- 1.25 Victoria Residence, which is the first building at Crown Street Phase 1 to be delivered, completed construction in Q4 2020 and delivered 180 residential units in a new 21 storey tower. The 51-

storey Elizabeth Tower, which is nearing completion, will deliver the remaining 484 units approved as part of this application.

- 1.26 Crown Street Phase 2 is currently under construction for two new 52 storey residential towers, seeking to deliver 855 units under planning permission 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. The first tower of Crown Street Phase 2, the Blade, will provide 414 residential apartments. The second tower, three60, is scheduled to commence construction in November 2021 for completion also by the end of 2024.
- 1.27 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.
- 1.28 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?**

- 1.29 The Proposed Development has been developed following consultation with the project partners in consultation with Manchester City Council (MCC), Greater Manchester Police, Historic England, Greater Manchester Archaeological Advisory Service, Manchester Airport Safeguarding Team, Manchester City Council Planning, Environmental Health and Highway Officers, and Places Matter! Design Review Panel.
- 1.30 A summary of the pre-application consultation undertaken is provided below:
- Three pre-application meetings with Manchester City Council (MCC) in February, May and June 2021.
  - Virtual Councillor briefing meeting with Deansgate and Hulme Ward Councillors on 10 June 2021 to provide site-specific proposals, further to engagement relating to the formation of the Framework.
  - Pre-application public consultation was undertaken virtually via a consultation website, which included information about the GJS Framework, the Site and the Proposed Development and invited members of the public to make comments. The website was visited by 1,706 people and the comments received have been considered as part of the design development.
  - The consultation website also provided details of a consultation webinar, which was hosted on 23 June 2021. 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 eight people.
  - A briefing note was issued to Historic England (HE) to offer a meeting to discuss the proposals. HE confirmed that they would not need to be involved in further discussions.
  - Environmental Health and Highways were consulted with directly via the technical consultants to agree the scope of their assessments and key considerations.

- A pre-application meeting was undertaken with Greater Manchester Police (GMP) to present the proposals and receive feedback on security credentials of the scheme. The outcome of this discussion is presented in the Crime Impact Statement submitted with the application.

1.31 Overall, pre-application engagement has demonstrated continued support for the delivery of new residential developments in the Great Jackson Street area in line with the GJS Framework.

1.32 The evolution of the scheme has been influenced by the findings of public consultations. Further information on this process and the feedback gained is available in the Statement of Consultation submitted in support of the planning application.

## The Proposed EIA Development

### What will the redevelopment process involve?

1.33 Broadly, the construction process 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.

1.34 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.

1.35 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?

1.36 The Applicant has provided the following indicative construction sequence and programme for delivering the proposals, assuming that planning permission is granted in December 2021:

- April 2022 – F2 Anticipated Start on Site;
- Dec 2023 – F1 Anticipated Start on Site;
- April 2026 – F2 estimated completion; and
- Dec 2027 – F1 estimated completion / project completion.

1.37 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 abnormalities, volatility in economic and housing markets, political uncertainty, the availability of funding and any on-going effects from COVID-19.

- 1.38 This programme is based on normal construction working hours in line with MCC Guidance of 7.30am 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?**

- 1.39 Building F1 and Building F2 are both proposed to be 51 storeys in height, both with their own dedicated underground car and cycle parking and supporting amenity and back of house facilities.
- 1.40 Both towers have an identical form, but with a distinctive identity from adjacent developments. The design has also sought to balance this with a need to be consistent with the existing design context of the GJS Framework area to ensure the buildings form part of the cluster of existing tall buildings.
- 1.41 The external appearance of the buildings provides an elegant and slender form, with chamfered corners to create further architectural interest to the buildings. Vertical movement is provided by the change in position of the chamfer, which mediates between a minimum floorplan and a maximum floorplan over a number of floors.
- 1.42 The transition between the maximum and minimum floors occurs typically over 5 floors, with a 9-floor transition at the base, and a 11-floor transition at the top of the tower. The resultant form creates an undulating ribbon at each corner, which are fully glazed, providing a contrast to the main elevations.
- 1.43 Consideration has also been given to the composition and colour of the towers with the intention to create an identity for this development which complements but is contrasting to Deansgate Square and other tall buildings coming forward in the area.
- 1.44 A subtle pattern has been used on the building elevations to provide a sense of movement around the towers. The pattern is formed from anodised aluminium perforated sheets, with solid openable doors behind, used to provide purge ventilation to the apartments. The use of the aluminium perforate panels will provide a subtle texture to the facade in contrast with the more reflective glazed elements.
- 1.45 The selected colour for the anodised aluminium for F1 is light blue, whilst the selected colour for the anodised aluminium for F2 is light green, providing a contrast to the darker and more reflective glazing on the corners.
- 1.46 The Proposed Development contains significant new elements of landscaped space and public realm which will support delivery of the wider GJS Framework vision. A Public Realm Strategy has been submitted in support of this application, prepared by TPM Landscape Architects.
- 1.47 The landscaping proposals also include private residents only gardens for each building. Further detail is provided in the landscaping section of the Design and Access Statement.

## **Alternative Options**

- 1.48 The EIA Regulations require the ES to identify the main alternatives that were considered during the design process.
- 1.49 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.
- 1.50 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'.
- 1.51 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.
- 1.52 The "do nothing" scenario has been discounted due to the established need for the regeneration of the Site and the benefits it will bring.
- 1.53 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.
- 1.54 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.
- 1.55 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 Statement.
- 1.56 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?

- 1.57 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.
- 1.58 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.
- 1.59 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.

- 1.60 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.
- 1.61 This non-technical summary forms an important part of the EIA process. Please refer to Section 1 'Introduction' for more detail on the non-technical summary.

### What environmental effects does the EIA consider?

- 1.62 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.
- 1.63 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                       |
| Daylight, Sunlight and Overshadowing |
| Noise and Vibration                  |
| Human Health                         |
| Solar Glare                          |
| Townscape and Visual Impact          |
| Traffic and Transport                |
| Wind Microclimate                    |
| Socio Economic                       |

- 1.64 A copy of the EIA Scoping Report and responses received are included at Appendix 2.1 of Volume 2 of the Environmental Statement. Scoping responses have been received from officers and consultees confirming that the scope of the EIA proposed was appropriate. 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                      |
| Places Matter! Design Review Panel                    |
| Manchester Airport Safeguarding Team                  |
| Castlefield Forum                                     |
| Britannia Basin Community Forum                       |

1.65 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                                |
| Coal Authority                                  |
| Greater Manchester Archaeology Advisory Service |
| Greater Manchester Ecology Unit                 |
| Transport for Greater Manchester                |

1.66 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

1.67 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.

- 1.68 The applicant has agreed the nearby schemes for inclusion with MCC in the cumulative assessment via the scoping process. For further details on the identified cumulative developments please refer to Volume 2 (Appendix 2.2) the Environmental Statement.
- 1.69 In addition to the cumulative developments, the Site sits within the Great Jackson Street Framework area. The cumulative impact of the development as envisaged in the framework will be qualitatively assessed.

### How will environmental effects be managed?

- 1.70 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.
- 1.71 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.
- 1.72 It is anticipated that these controls would be secured by appropriate planning conditions or obligations.

### Who has been involved in the EIA process?

- 1.73 The EIA process has involved communication and collaboration between the applicant, Deloitte Real Estate, MCC, the project team (shown in Table 1.3), statutory consultees and the public.
- 1.74 Table 1.5 shows the project team and their roles.

Table 1.5: EIA Project Team

| Role                 | Organisation              |
|----------------------|---------------------------|
| The Applicant        | Renaker Build Ltd         |
| Architects           | SimpsonHaugh and Partners |
| Landscape Architects | TPM Landscape Architects  |

| Role                                 | Organisation             |
|--------------------------------------|--------------------------|
| Town Planning, EIA Co-ordination     | Deloitte Real Estate     |
| Air Quality                          | Ensafe                   |
| Climate Change                       | WSP                      |
| Daylight, Sunlight and Overshadowing | GIA                      |
| Solar Glare                          | GIA                      |
| Human Health                         | Enfusion                 |
| Noise and Vibration                  | Fisher Acoustics         |
| Townscape and Visual Impact          | Chris Burnett Associates |
| Traffic and Transport                | Curtins                  |
| Wind Microclimate                    | WSP                      |
| Socio-Economics                      | Ekosgen                  |

## What were the results of the EIA?

- 1.75 The following sections summarise the methodology used in determining the likely significant effects of the Proposed Development and summarise the outcomes of the EIA.
- 1.76 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.
- 1.77 The technical topics are those elements of the environment considered likely to experience significant effects and therefore assessed in the EIA.
- 1.78 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.
- 1.79 A summary of proposed mitigation measures and residual effects is also included in Chapter 17 of the ES Volume 1.

## Significance of Effects

- 1.80 The likely effects of the Proposed Development have been classified according to their significance.
- 1.81 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.
- 1.82 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).
- 1.83 Table 1.6 illustrates how most significance ratings were determined.

Table 1.6: Significance of Effect Ratings

| Magnitude         | Sensitivity                           |                                       |                                       |
|-------------------|---------------------------------------|---------------------------------------|---------------------------------------|
|                   | High                                  | Medium                                | Low                                   |
| <b>Major</b>      | Major Adverse / Beneficial            | Major - Moderate Adverse / Beneficial | Moderate - Minor Adverse / Beneficial |
| <b>Moderate</b>   | Major - Moderate Adverse / Beneficial | Moderate - Minor Adverse / Beneficial | Minor Adverse / Beneficial            |
| <b>Minor</b>      | Moderate - Minor Adverse / Beneficial | Minor Adverse / Beneficial            | Minor - Negligible                    |
| <b>Negligible</b> | Negligible                            | Negligible                            | Negligible                            |

- 1.84 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.
- 1.85 The following sections of this NTS summarise the individual assessments conducted for each topic considered within the Environmental Statement.

## Construction Management and Phasing

- 1.86 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.
- 1.87 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.

- 1.88 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.
- 1.89 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.
- 1.90 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.
- 1.91 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.
- 1.92 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

### Introduction

- 1.93 Ensafe Ltd was commissioned by Renaker Build Limited to undertake an Air Quality Environmental Impact Assessment in support of a planning application for a Proposed Development located at Plot F, Great Jackson Street, Manchester.

### Baseline

- 1.94 The Site is located within an area identified by Manchester City Council as experiencing elevated pollutant concentrations relating to considerable sources of road vehicle exhaust emissions in the vicinity. Subsequently, the Proposed Development may introduce future sensitive receptors to an area experiencing elevated pollutant levels.
- 1.95 Additionally, the Proposed Development also has potential to cause air quality impacts at existing sensitive locations during the construction and operational phases. These may include fugitive dust emissions from construction process, or additional road vehicle exhaust emissions associated with development related traffic generation

## Summary of Likely Effects

- 1.96 Construction for the two development blocks is due to commence in 2022 for Block F1 and 2024 for Block F2. To provide a robust assessment, which assess peak construction phase traffic, 2024 traffic data was used alongside 2019 emissions factors within the dispersion modelling.
- 1.97 Given their transient and short-term presence and minor adverse impact upon the network associated impact significance can therefore be considered not significant with regard to long-term pollutant concentrations.
- 1.98 As such, the overall significance of potential impacts was determined to be not significant in accordance with the EPUK and IAQM guidance. The use of robust assumptions, in the form of worse-case road vehicle emission factors, was considered to provide sufficient results confidence for an assessment of this nature. The effects against both the construction and operational phase are set out below.

## Construction Phase

- 1.99 During the construction phase of the Proposed Development there is potential for air quality impacts at human receptors as a result of fugitive dust emissions from the Site. These were assessed in accordance with the relevant guidance methodologies. Assuming good practice dust control measures are implemented, the residual significance of potential air quality impacts from dust generated by demolition, earthworks, construction and trackout activities was predicted to be negligible and subsequently not significant.
- 1.100 Dispersion modelling was undertaken in order to quantify pollutant concentrations at the Site and assess potential exposure of future users. Annual mean concentrations of NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> were predicted across the ground to first floor levels of Building F1 and F2, and were subsequently verified using local monitoring results obtained from MCC and SCC.
- 1.101 The dispersion modelling results indicated that annual mean NO<sub>2</sub>, PM<sub>10</sub> and PM<sub>2.5</sub> concentrations across proposed sensitive residential use were below the relevant AQOs. The location is therefore considered suitable for the proposed end-use without the implementation of protective mitigation techniques.

## Operational Phase

- 1.102 In addition, dispersion modelling was undertaken in order to predict air quality impacts at sensitive receptor locations within the vicinity of the Site as a result of the additional road vehicle exhaust emission generated by the operation of the Proposed Development. This indicated that the increase in pollutant concentrations at sensitive receptor locations was deemed minor adverse.
- 1.103 As a result, a comprehensive offsetting strategy is to be employed to reduce development generated emissions. The scheme has been designed to deliver up to 20% electric vehicle charging points across both buildings, delivered to meet demand identified as a result of an annual review, which should be conditioned as part of any future travel plan survey monitoring and planning approval. Cabling is provided to enable additional connections to EVCs in future to ensure that the very latest EVC technology can be delivered as and when required by future residents. The Site will also provide a dedicated cycle parking space for each dwelling.

## Mitigation

- 1.104 There are a number of air quality mitigation options available to ensure suitable reductions to air quality impacts as a result of the Proposed Development. Additionally, mitigation measures are required to protect existing receptor location as a result of fugitive dust emissions and road vehicle exhaust emissions generated by the construction and operational phase of the Proposed Development.
- 1.105 Detailed dispersion modelling undertaken at heights equivalent to the proposed elevations of Building F1 and Building F2 (indicated that amenity space across ground (1.5m) and residential units on first floor (10.5m) are not predicted to be exceed relevant annual mean AQO for NO<sub>2</sub> or PM. Subsequently, further measures aimed to reduce annual mean NO<sub>2</sub> across the Proposed Development are not required.
- 1.106 Although associated operational impacts have been deemed of minor adverse significance the Proposed Development will implement a comprehensive mitigation strategy to offset additional road vehicle exhaust emissions.
- 1.107 Given there is still a requirement to secure a reduction in pollution concentrations associated with road vehicle exhaust emissions. The offsetting measures are therefore proposed and will be implemented within the design of the Proposed Development:
- 296 parking spaces with up to 20% Active Electric Vehicle Charging (EVC) points.
  - 988 Private Cycle Parking Spaces.
- 1.108 It is considered that the above measures are proportional to the nature and scale of the Proposed Development and will secure a reduction in development associated road vehicle exhaust emissions.
- 1.109 Furthermore, the significant offsetting investments will future proof the scheme and reduce associated impacts over time with the increased uptake of low emission vehicles.

## Cumulative Effects

### Construction Phase

- 1.110 A review of the MCC Planning Portal indicated that there are several approved large-scale development schemes within 500m of the Site. As such, the likelihood of concurrent dust generating activity was predicted as major.
- 1.111 However, the implementation of the mitigation measures suggested in Table 6.25 (Volume 1, Chapter 6) will ensure that any cumulative effects will ensure that concurrent Construction Phase impacts are negligible on a temporary basis and therefore construction phase impacts are considered not significant. It is also assumed that adjacent site will be adhering to Dust Management Plans to control fugitive dust emission from construction activities.

### Operational Phase

- 1.112 The assessment has considered the effect of the Proposed Development in conjunction the identified committed developments with Appendix 2.1 (Volume 2, Chapter 2). Associated traffic generation from the appropriate and available applications were factored into the modelled traffic data to consider the combined risk of committed developments and the Proposed

Development. The future year 2027 DM and DS scenario traffic flows are as provided by Curtins, the appointed Transport Consultant for the scheme.

- 1.113 Based on the results, residential units on first floor (10.5m) are not predicted to be exceed relevant annual mean AQO for NO<sub>2</sub> or PM<sub>2.5/10</sub>. Subsequently, further measures aimed to reduce annual mean NO<sub>2</sub> across the Proposed Development are not required

## Residual Effects

### Construction Phase

- 1.114 Assuming the relevant mitigation measures outlined in Table 6.25 of the Air Quality Chapter (Volume 1, Chapter 6) are implemented, the residual effect from all dust generation activities is predicted to **negligible** on a temporary basis and therefore **not significant**.

### Operational Phase

- 1.115 Predicted impacts on referenced pollutant species as a result of the operational phase were predicted to be minor adverse at 8 sensitive receptor locations.
- 1.116 When considering the high level of offsetting measures provided, particularly in relation to encouraging walking, cycling and public transport as sustainable transport modes, the residual effects resulting from development generated road vehicle exhaust emissions are predicted to be not significant.
- 1.117 Additionally, assuming a suitable uptake of low emission vehicles and sustainable transport methods supported by government strategies and the MCC AQAP permanent impacts would therefore be considered **as not significant** in light of significant offsetting measures proposed within the design of the Proposed Development.

## Climate Change

### Introduction

- 1.118 WPP was commissioned by Renaker Build Limited to undertake a Climate Change ES chapter in support of a planning application for a Proposed Development located at Plot F, Great Jackson Street, Manchester.
- 1.119 An assessment has been undertaken to determine the potential impacts and mitigation of greenhouse gas (GHG) emissions from the Proposed Development. These emissions arise from both buildings and traffic associated with the construction and operational stages. The assessment has been undertaken in accordance with current legislation, local and national planning policy and relevant guidance documents.

### Scope of Assessment and Methodology

- 1.120 The potential impacts and effects of the Proposed development were assessed under three categories:
- Whole life embodied – Greenhouse gas (GHG) emissions (CO<sub>2</sub>e) associated with product stage (A1: raw material supply, A2: Transport, A3: Manufacturing), construction process stage (A4: Transport, A5: Construction Installation Process), use stage (B4: Replacement, B5:

Refurbishment) and end of life stage (C1: De-construction, Demolition, C2: Transport, C3: Waste processing, C4: Disposal);

- Operational building – Greenhouse gas (GHG) emissions (CO<sub>2</sub>e) associated with the energy used for heating, cooling, lighting and ventilation (operational phase); and
- Operational transport – Greenhouse gas (GHG) emissions (CO<sub>2</sub>e) associated with vehicles trips during the operational phase.

## Mitigation

### Construction

- 1.121 Mitigation will be incorporated in the construction stage through to the operational stage of the Project. During the construction stage, the emphasis will be on minimising the use of energy intensive materials, using local suppliers where possible, reducing traffic and improving vehicle efficiency.

### Operation

- 1.122 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 to a min of 10%. 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.
- 1.123 To mitigate against operational energy emissions, the focus has been on improving the energy efficiency of buildings using a fabric first design approach and providing an all-electric development through the use of heat pumps and electric radiant heaters.

## Residual Effects

- 1.124 The effects from whole life embodied emissions (incl. construction transport), operational building and operational transport emissions assessed are likely to have a residual minor or negligible magnitude of impact and therefore the residual significance of effects will be **Moderate-Minor (adverse) or Minor (adverse)**. This is considered to be 'not-significant' in EIA terms.

## Noise and Vibration

### Introduction

- 1.125 This Environmental Statement Chapter has been prepared by Fisher Acoustics. The potential significant effects of the Proposed Development with respect to Noise and Vibration have been determined and assessed.
- 1.126 The Chapter describes the assessment methodology, the existing baseline conditions at and around the Site; and the recommended mitigation measures to avoid or minimise any significant adverse effects. The potential residual effects following the implementation of the recommended mitigation measures are described.

## Baseline

- 1.127 The long-term noise climate at and around the site is principally determined by road traffic on the Mancunian Way (A57(M)). Baseline noise levels at the site and at the nearby sensitive premises have been determined by reference to noise survey data gathered at and around the site.

## Methodology

- 1.128 The potential noise levels and subsequent noise impact at noise sensitive receptors around the site during the construction phase have been calculated and compared to appropriate threshold values.
- 1.129 The impact of the prevailing levels of road noise on the Proposed Development has been determined. The minimum recommended sound insulation performance of the curtain wall to apartments has been established such that applicable internal noise criteria can be achieved. The noise impact of the opening of purge vents to apartments has been established with reference to the Acoustics, Ventilation and Overheating, Residential Design Guide'.
- 1.130 Environmental noise limits relating to the operation of building services place at the Proposed Development have been determined such that residential amenity can be maintained.
- 1.131 Environmental noise limits relating to potential music noise egress from the proposed amenity spaces have been determined such that residential amenity can be maintained.

## Summary of Likely Effects

- 1.132 Noise levels as a result of construction work during the construction period is expected to lead to moderate to major adverse impact if no mitigation measures are in place. It is therefore recommended that construction noise is mitigated.
- 1.133 The impact of construction vibration on existing sensitive receptors is expected to be negligible.

## Mitigation

- 1.134 Construction noise must be minimised where necessary 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.
- 1.135 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.
- 1.136 Compliance with the external noise criteria for activity noise egress from the proposed amenity spaces would lead to negligible noise effects at sensitive receptors.

## Cumulative Effects

### Construction

- 1.137 There is expected to be an overlap of construction works at the Site and at other buildings within the Great Jackson Street Strategic Development Framework area. However, the other developments sites are at a greater distance from many of the closest buildings to the Site and are expected to be at a difference stage in their build programmes such that the noisier construction activities including demolition and excavation may have ceased at the time that these activities commence at the Site. It is therefore expected that the cumulative construction noise levels at the nearby noise-sensitive buildings will be principally determined by the construction activities at the proposed Site. With reference to paragraph 10.115, the cumulative effect of construction noise following mitigation is expected to be negligible.

### Operation

- 1.138 Operational noise due to the Proposed Development and the committed developments in the surrounding area would include mechanical services noise, noise egress due to leisure activities and changes in road traffic noise levels due to changes in traffic flows.
- 1.139 The cumulative impact of noise due to changes in road traffic flows is expected to be negligible. This result takes into account the predicted changes in traffic flow relating to the committed developments in the surrounding area. A full Transport Statement is submitted in support of this application.
- 1.140 Operational noise limits due to mechanical services at the Proposed Development have been derived using the methodology and assessment criteria given in BS4142: 2014. Operational noise limits for any mechanical services systems at the buildings of the committed developments in the surrounding area would also be derived using the methodology and assessment criteria given in BS4142: 2014. The Planning Conditions for the committed developments in the surrounding area include a requirement for the building and any externally mounted ancillary equipment to be acoustically insulated in accordance with a scheme submitted to and approved in writing by the City Council in order to secure a reduction in the level of noise emanating from the equipment. The applicable noise limits will tend to be governed by the need to minimise noise levels at the buildings within the Proposed Development, as these are the closest sensitive receptors in the majority of cases. Therefore, given the relative distances of the sensitive receptors applicable to each development, cumulative impact of building services noise will be negligible.

## Residual Effects

- 1.141 Table 1.7 summarises the post-mitigation residual effects

Table 1.7 – Summary of Receptors, Likely Significant Effects, Mitigation Measures, and Residual Effects

| Likely Significant Effect                    | Receptor(s)     | Mitigation Measure                                                                                            | Residual Effect                       |
|----------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <i>Construction Phase</i>                    |                 |                                                                                                               |                                       |
| Major to Moderate adverse construction noise | Local residents | Para. 9.111 & 9.112: Solid screening around Site.<br><br>Communication with City Council and local residents. | Negligible construction noise effects |

| Likely Significant Effect                                                       | Receptor(s)            | Mitigation Measure                                                      | Residual Effect                                       |
|---------------------------------------------------------------------------------|------------------------|-------------------------------------------------------------------------|-------------------------------------------------------|
| Application of 'Best Practicable Means' and noise control guidance from BS5228. |                        |                                                                         |                                                       |
| <i>Operational Phase</i>                                                        |                        |                                                                         |                                                       |
| Negligible building services plant noise effects                                | Residential properties | Para. 9.102: Adherence to environmental noise limits for plant          | Negligible building services plant noise effects      |
| Negligible activity noise effects from amenity space                            | Residential properties | Para. 9.108: Adherence to environmental noise limits for amenity spaces | Negligible activity noise effects from amenity spaces |

## Human Health

### Introduction

- 1.142 Enfusion were appointed by Renaker Build Ltd to prepare a human health chapter in relation to the Proposed Development to support this application.
- 1.143 Human health and well-being 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.
- 1.144 Health is not just absence of disease but rather a combination of a person's physical, mental, and social well-being. This interaction of different factors can be organised into four themes for healthy urban living – Healthy Housing; Active Travel; Healthy Environment; and Vibrant Neighbourhoods.

### Baseline

- 1.145 The site is in the city centre and in the Deansgate Ward, where residents generally have good health. Reported street crime is comparatively high in the city centre and unemployment is low. The site is in a regeneration area that is characterised by structures of various heights and shapes, including other residential towers, with daylight, overshadowing, townscape and visual amenity typical of the height and density of such buildings in a city centre. The area is very well located for active travel and public transport and with air quality and noise typical of a busy city centre area.

### Methodology

- 1.146 Summary relevant findings were taken from the impact assessment of each factor that contributes to human health and well-being – socioeconomics, townscape & visual impact, traffic & transport, air quality, noise & vibration, daylight/sunlight & overshadowing, solar glare, climate change, and the wind microclimate – and assessed using professional judgment according to the four themes for healthy urban living.

## Summary of Likely Effects, Mitigation, & Residual Effects

- 1.147 During the construction phase, there is risk of noise, air pollution, and disturbance that can affect health and well-being. This will be mitigated through construction and transport methods and management such that residual effects will be negligible. When the towers are completed, there is the potential for adverse effects on the townscape and visual amenity of the area.
- 1.148 Such residential buildings may limit the daylight/sunlight for nearby buildings and could overshadow amenity areas. However, these matters have been assessed and found to be not significant. climate change & wind microclimate. There is the possibility for services and facilities such as GP and dental practices to become oversubscribed given the influx of new city centre residents, but this has been investigated and it is understood that there is sufficient capacity.
- 1.149 The provision of high-quality housing will have major positive effects on health and well-being; the increased economic activity with new jobs created locally will also benefit health. Improvements to the public realm, including connectivity to other areas by walking/cycling will encourage more active travel with likely positive effects for health and well-being that could be synergistic and cumulative in the longer-term as other nearby developments are completed.

## Summary

- 1.150 The provision of high-quality housing will have major positive effects for 'Healthy Housing'. The location within the city centre and with a rich choice of excellent access to sustainable transport will have major positive effects for Active Travel. The pollution risks associated with dust, noise, vehicle emissions, daylight/sunlight/overshadowing, solar glare, climate change and the wind microclimate have been sufficiently mitigated.
- 1.151 Amenity space is nearby, as well as access to open and green spaces, indicating a Healthy Environment. The residential densities and location in the city centre with such good facilities and services, access to good employment and amenity/leisure will support and promote Vibrant Neighbourhoods with positive effects

## Solar Glare

### Introduction

- 1.152 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 drivers.

### Baseline

- 1.153 Solar Glare is not a comparative assessment and instead assessed 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.
- 1.154 However, it should be noted that the existing building on the Site is a construction compound thus the likelihood of solar glare occurring from the existing site is low. Solar glare from surrounding buildings is not assessed.

## Methodology

- 1.155 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.
- 1.156 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.

## Summary of Likely Effects

- 1.157 Overall, 19 locations have been identified and assessed. All 19 are considered to be Minor Adverse and not significant due to potential instances of solar reflections occurring within 30° of the driver's line of sight however these would not impair visibility of signals.

## Mitigation

- 1.158 As no significant effects are experienced, there is no further planned mitigation measures for solar glare from the Proposed Development.

## Cumulative Effects

- 1.159 Cumulative schemes are not assessed as the solar glare assessment is a worst-case scenario. Additional developments could obscure the view of the Proposed Development from certain viewpoints and therefore reduce instances of solar reflections.

## Residual Effects

- 1.160 The residual effects of solar glare from the Proposed Development are considered remain as per the likely effects as no mitigation is proposed. All 19 locations are considered to be moderate or high sensitivity and the residual effects are permanent but Minor Adverse and are therefore not significant. As such, the effect would not impair visibility of signals.

## Summary

- 1.161 19 locations have been assessed for solar glare effects. All 19 are either moderate or high sensitivity and have been found to experience permanent, **Minor Adverse residual effects** in terms of solar glare. Whilst reflections may occur within a driver's field of view, these would not impair visibility of signals and safety at junctions.

## Daylight, Sunlight and Overshadowing

### Introduction

- 1.162 An assessment has been undertaken by GIA to establish the likely significant effects of the Proposed Development upon the amount of daylight and sunlight received by properties adjacent to the Site.

### Methodology

- 1.163 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 0.85 metres (m) in height).

- 1.164 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.
- 1.165 For the assessment of sunlight, the approach considers the APSH for a reference point on a window (i.e. if a window point can receive at least 25% APSH, of which 5% should be in the winter months, 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.
- 1.166 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).
- 1.167 11 receptors within the surrounding area were identified as having the potential to be impacted on by the proposed development. A total of 10,059 windows serving 4,446 rooms have been assessed for daylight and 1,527 rooms have been assessed for sunlight. Two amenity areas have been assessed for overshadowing.
- 1.168 The assessment of baseline levels to the surrounding properties considers whether a window/room already meets the absolute BRE target in the existing scenario only, whilst the BRE guide states that a window/room should not be reduced by any more than 0.8 times its former value (a 20% reduction) in the proposed scenario. As such, as the VSC target is 27%, if a window in the baseline has 25% VSC, it will be classed as not meeting the BRE targets. In the proposed scenario, if the same window is reduced to 20%, it will be classed as meeting the VSC criteria as it is within 0.8 times its former value. Therefore, some windows/rooms may not meet the target criteria in the baseline but will in the proposed scenario.
- 1.169 Therefore, assessment of impact in daylight and sunlight terms is undertaken proportionately, and representative of VSC reduction criteria of no more than 20% (0.8x). This is to ensure that each relevant window is assessed equally, irrespective if they meet BRE Guidelines in the baseline appraisal or not.

## Baseline

- 1.170 In the Baseline Scenario, out of the 10,059 windows assessed for daylight, 4,178 (42%) meet the BRE targets for VSC daylight. 3,243 (86%) of the 4,446 rooms assessed meet the BRE targets for NSL daylight. For sunlight, 1,221 (80%) out of the 1,527 rooms assessed meet the BRE targets for both Winter and Annual APSH. Two amenity areas were assessed for overshadowing using the SHOG method, one of which meets the BRE targets in the Baseline Scenario.
- 1.171 For the assessment of sunlight, the approach considers the 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.

### Summary of Likely Effects

- 1.172 In the Proposed Scenario, with regard to daylight, out of the 10,059 windows assessed for daylight, 5,645 (56%) meet the BRE guidelines for VSC. 3,374 (76%) of the 4,446 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.
- 1.173 For sunlight, 1,355 (89%) of the 1,527 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.
- 1.174 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. Deansgate Square public realm will not receive sunlight in accordance with the BRE criteria. The effects identified are negligible to minor adverse in nature and are therefore considered to be not significant. Given the context of the Site, no further mitigation is considered necessary.

### Mitigation

- 1.175 The design for the project has evolved through a series of massing studies to mitigate the effects on the surrounding properties and limit the effect on the surrounding daylight and sunlight receptors.

### Residual Effects

#### Summary of Residual Effects

- 1.176 Overall, the impact on daylight impacts to the surrounding properties is considered **negligible to moderate adverse** and the impact on sunlight is considered **negligible to minor adverse**. Overall, this is considered to result in **non-significant residual effects**. Given the context of the Site and nature of effects, no further mitigation is considered necessary.

Table 1.9 Daylight, Sunlight and Overshadowing Likely Significant Effect, Receptor, Mitigation and Residual Effect

| Likely Significant Effect | Receptor                           | Mitigation    | Residual Effect                                                          |
|---------------------------|------------------------------------|---------------|--------------------------------------------------------------------------|
| <b>Construction Phase</b> |                                    |               |                                                                          |
| Daylight                  | Scoped Out                         | -             | -                                                                        |
| Sunlight                  | Scoped Out                         | -             | -                                                                        |
| <b>Operational Phase</b>  |                                    |               |                                                                          |
| Daylight                  | Surrounding Residential Properties | None required | Negligible to <b>Moderate Permanent Adverse</b> (Non-Significant Effect) |
| Sunlight                  | Surrounding Residential Properties | None required | Negligible to <b>Moderate Permanent Adverse</b> (Non-Significant Effect) |
| Overshadowing             | Surrounding Amenity Areas          | None Required | Permanent Negligible to Minor Permanent Adverse (Non-Significant Effect) |

## Townscape and Visual Impact Assessment

### Introduction

- 1.177 Chris Burnett Associates were commissioned by Renaker Build Limited to prepare a Townscape and Visual Impact ES chapter to support a planning application for Plot F.

### Scope of Assessment and Methodology

- 1.178 This Townscape and Visual Impact Assessment examines the impact that the Proposed Development will have on the townscape of Manchester City Centre and on the townscape character of the city centre zones 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.
- 1.179 A computer modelling process was employed to provide an accurate series of accurate, verified images (AVRs) which illustrate, and inform, the nature of the impact the Proposed Development will have on a series of selected and agreed Representative Viewpoints and the townscape character on a 360 degree basis.
- 1.180 In terms of mitigation for the Proposed Development this has been derived by the architects Simpson Haugh as the design of the building has developed in consultation with interested parties.

## Summary of Likely Significant Effects

- 1.181 The construction phase effects, as with the Operational Phase effects are assessed against the Baseline. The townscape character area most affected by the demolition and construction operations are the two Townscape Character Zones in and around the Proposed Development Site namely: Hulme and Corridor Manchester.
- 1.182 The effects of such construction activity on the character of this zone in the immediate vicinity is predicted to be moderate to minor adverse for the duration of the construction period depending on proximity to the Proposed Development Site. This is due to demolition works, stockpiling of demolition and construction materials, the use of construction equipment such as cranes and temporary fencing. The effects, however, should be relatively localised and temporary and will not affect other Townscape character zones in any measurable way.
- 1.183 The source of the effect during the operation phase is concerned with the physical impact that the Proposed Development will have on views, visual and townscape receptors. During the operational phase of development, the zone of theoretical viewpoint (ZTV) confirms that the Proposed Development will have a limited effect in the core city centre zones largely due to the presence of Deansgate Square, Elizabeth Tower and Axis developments.
- 1.184 With regard to other effects that are within the ZTV, the introduction of two 51 storey towers will inevitably have an impact on identified viewpoints and receptors. An assessment of these views is provided in the TVIA to understand the likely significant effect with embedded mitigation within the high-quality design.

## Summary of Residual Effects

- 1.185 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.
- 1.186 In this regard, Table 12.10 in Volume 1 of the ES (Chapter 12) records that the Proposed Development will have **minor to negligible** effect in most cases. Accordingly, all effects are therefore recorded as being not significant in EIA terms. **All effects are recorded as beneficial.**
- 1.187 The principal reason behind this is the proximity of the Proposed Development to neighbouring tall buildings such as Deansgate Square, Elizabeth Tower and River Street and the positive contribution the Proposed Development will make to this cluster. The Proposed Development therefore complements and fits in with this emerging pattern of townscape character in a consistent way.

## Traffic and Transport

### Introduction

- 1.188 Curtins has been appointed to review the potential effects of the Plot F Great Jackson Street development on transport. From a traffic and transport perspective, the primary potential for traffic and transportation impacts associated with the Proposed Development relate to the number of new trips on the transport network in the vicinity of the site.
- 1.189 Curtins has liaised extensively with the Highways Officers at Manchester City Council (MCC) to discuss the development proposals and the scope of the necessary assessment work.

- 1.190 The new trips include additional heavy goods vehicles (HGVs), light goods vehicles (LGVs) and cars on the highway network as well as additional person trips on the public transport network. The former requires consideration of possible effects upon the capacity and operation of the local road networks (links and junctions).

### **Assessment Methodology**

- 1.191 The environmental impacts of traffic generated by the Proposed Development have 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:
- Highway links where traffic flows will increase by more than 30% (or the number of HGVs will increase by more than 30%); and
  - Any other specifically sensitive areas where traffic flows have increased by 10% or more.
- 1.192 These thresholds have been used to identify the links and junctions 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 is required.

### **Baseline**

- 1.193 The baseline conditions that the Proposed Development have been assessed against consist of a range of different receptors. These include pedestrians, cyclists, public transport users and drivers of private and commercial motorised vehicles.
- 1.194 In order to gain an understanding of the baseline traffic conditions, it has been agreed with MCC that traffic data from Crown Street Phase 2 TA (MCC planning reference: 126668/FO/2020) will be utilised for the agreed study area. Additionally, road traffic collision data for the most recent five-year period available have been obtained and reviewed.
- 1.195 The Site forms part of the Great Jackson Street SRF, which encompasses a Site area of 7.78 hectares to the south of Manchester City Centre.
- 1.196 The Site is situated within an accessible area, with a number of complementary land uses within walking and cycling distance. In particular, cycle routes along the Bridgewater Canal to the west of the site. The nearest bus stops are located on Medlock Street and Whitworth Street West; these are within a 400m and 550m walk respectively from the centre of the site. In addition to bus services, Deansgate Metrolink stop is situated a c.550m walk to the north of the Site. Deansgate Rail Station is also located to the north of the site, c500m from the centre of the Site.
- 1.197 The Site is therefore well located to take advantage of the excellent existing public transport facilities, including bus, Metrolink and rail, in addition to walking and cycling opportunities, which will provide viable alternatives to travel by car.

### **Summary of Likely Effects, Mitigation and Residual Effects**

- 1.198 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 development when it is completed and occupied by

various uses. It is also predicted to be less than the thresholds set out by the IEMA guidelines for the majority of links.

- 1.199 The completed development and operational impacts have therefore been the focus of the assessment with regard to the likely impacts listed above, as a worst case assessment.
- 1.200 The results of the above exercise demonstrate that, upon full completion and operation of the development, only the Melbourne Street link would experience an increase in traffic of 30% or more.
- 1.201 The “Severance”, “Driver Delay” and “Pedestrian Amenity” impacts are the only category where the development traffic is predicted to have an impact above ‘neutral’ and this is largely due to relatively lower background traffic levels on these roads when compared against the logical increase of traffic when the Proposed Development is brought forward.
- 1.202 Notwithstanding, mitigation of the effects is not considered necessary as they are **negligible**. Nonetheless, the Proposed Development will deliver benefits to the local area through improved public realm, and pedestrian and cycle facilities.
- 1.203 A Travel Plan will also be implemented, which seeks to minimise the level of traffic associated with single occupancy trips and to promote sustainable modes of travel. Measures detailed in the Travel Plan will also seek to encourage the use of more sustainable modes of travel such as journeys on foot, by bike, or by public transport,
- 1.204 Following the delivery of these mitigation measures, the likely traffic impacts which are already considered to be within acceptable levels (**negligible impacts**) would be further minimised, and therefore the development would **not adversely** affect other road users.

## Wind Microclimate

### Introduction

- 1.205 This Chapter of the ES assesses the likely significant effects of the Proposed Development with respect to Wind Microclimate. This Chapter also describes the methods used to assess the effects; the baseline conditions currently existing at the Site and surrounding area; the mitigation measures required to prevent, reduce or offset any significant negative effects; and the likely residual effects after these measures have been adopted.
- 1.206 The authors of this Chapter are Stefano Cammelli (Technical Director – Wind Engineering at WSP) and Elvin Hii (Senior Engineer – Wind Engineering at WSP). Stefano is a wind engineering specialist with 18 years’ experience in the provision of wind engineering consultancy services. He has an active professional involvement in the global wind engineering community through participation in committees, working groups and peer reviews and he is also a regular presenter at international conferences, with more than 50 publications in technical and industry journals.

### Assessment Methodology

- 1.207 An assessment of the baseline conditions has been carried out as part of the wind microclimate assessment. For the purpose of the wind microclimate assessment, the existing baseline conditions have been assumed to be the area within the Site boundary and the existing properties surrounding the Site which might be affected by the Proposed Development.

- 1.208 A quantified assessment of the impacts of the Proposed Development during enabling and construction has not been included in this ES Chapter. Cranes will be used on-site during construction; however, it can be noted that these are typically slender and relatively “open” structures. They would therefore not be expected to introduce any material microclimate effects to the Site or surrounding area that would require assessment in this ES.
- 1.209 The wind microclimate chapter therefore focuses on an assessment of the Proposed Development once completed in the context of nearby committed developments. The assessment consists of three main parts: calculation of the urban environment's aerodynamic effect on the wind; which is then combined with historical wind data; and, finally, compared against criteria to quantify the discomfort and/or level of distress caused by the wind.
- 1.210 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. CFD, as a tool for pedestrian wind modelling, is well validated against wind tunnel tests and real-world data and is often considered advantageous due to its advanced visualisation and domain wide measurement capabilities.

## **Baseline**

- 1.211 The Baseline has been modelled to represent the conditions in and around the Site within the existing context, prior to the introduction of the Proposed Development. The results are discussed below and further detail of the quantification of the results is provided in Section 3 of the Wind Microclimate Technical Report (Appendix 14.1).
- 1.212 In the Baseline scenario, no exceedances of the pedestrian safety criteria occur. In the Baseline scenario, wind comfort ratings across the majority of the receptors are suitable for the intended pedestrian uses. Exceedances of the pedestrian comfort criteria occur at receptors 16 (entrance – The Rhine), 20 (entrance – City South), 31 (Deansgate Square) and 38 (Deansgate Square North Tower).

## **Summary of Likely Effects, Mitigation and Residual Effects**

- 1.213 The results of the assessment, including the wind mitigation features incorporated in the design, indicate that the Proposed Development is likely to modify the local wind environment and create both improvements as well as some localised areas where accelerated winds could prevail. Wind conditions within and in the vicinity of the Proposed Development are free from breaches of the safety criterion and wind comfort ratings are suitable for the intended pedestrian uses.
- 1.214 The completed Proposed Development (Phase A and B) with cumulative surrounds, with the inclusion of mitigation, results in residual effects primarily ranging between Moderate Adverse (Off-Site Receptors) and Moderate Beneficial and are Not Significant.
- 1.215 In this assessment, it has also been observed that wind conditions at one of the entrances to the ‘Transition’ development exceed the wind speed threshold for standing in most seasons, therefore precluding comfortable ingress/egress.
- 1.216 However, a review of the wind microclimate study conducted as part of the planning application of the ‘Transition’ development (Ref. 116850/FO/2017) revealed that - in the absence of the landscaping strategy / wind mitigation measures pertaining to this specific development - wind

conditions at this particular location were not meeting the comfort rating required for an entrance.

- 1.217 As the landscaping strategy / wind mitigation measures pertaining to the approved 'Transition' development were not (conservatively) explicitly modelled in the CFD simulations conducted in support of this Chapter, it can be concluded that this exceedance of the comfort criteria is not caused by the Proposed Development.
- 1.218 Following the completion of the CFD-based wind microclimate assessment presented within this Chapter, a design change was made to the podium for Tower F1. The original massing featured a rectangular block parallel to the west face of the building.
- 1.219 The updated design extends the original rectangular block and introduces an offset angle. It should be noted that the overall height of the podium remains unchanged. The impact of the design change on the wind microclimate conditions in the immediate vicinity of Tower F1 is expected to be relatively localised and negligible. We would therefore expect the conclusions of this Chapter to remain valid.

## Socio-Economic

### Introduction

- 1.220 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 of baseline position in the local Assessment Area and Manchester compared to the Greater Manchester and National Averages, taking account of demographic, economic and key social characteristics of the area drawing on published data sources.
  - Assessing the scale, importance and significance of impacts to be generated through the construction and operational phase.
  - Determining the need for mitigation measures and the residual effects of the Proposed Development.
  - Assessing the cumulative effects of the Proposed Development given a number of development proposals within the local area.

### Baseline

- 1.221 The baseline assessment considers the baseline position within a local assessment area relative to the Manchester and Greater Manchester position, using published socio-economic data and intelligence. The local assessment area for socio-economic baseline has been defined as the Deansgate and Piccadilly ward (which cover the city centre) and the Hulme ward.
- 1.222 Key features of the baseline conditions include:

- The population of the assessment area, as of 2019, is 58,807, having grown by 36% since 2011. The majority (92%) of those living in the assessment area are of working age (aged 16 to 64), while 5.7% are under 16.
- As of March 2020, there were 24,227 households in the assessment area.
- Unemployment is lower in the assessment area (3.0% of the working age population) compared to the Manchester wide (8.3%) and national rate (7.2%) as of June 2021.
- As of 2019, there were 207,000 people employed in the assessment area, 51% of the Manchester total.
- 8 GP's within 1 mile and 28 dental practices within 2 miles.
- Within 1.2 miles of the Proposed Development there are 10 nurseries. There are 9 primary schools (with 285 available school places) within 1.2 miles and 11 secondary schools (with available capacity of 2,201).

## Methodology

- 1.223 The assessment evaluates the potential effects of the Proposed Development on identified socio-economic indicators and the significance from a socio-economic perspective, considering the baseline conditions. This provides an understanding of the overarching impacts of development in the stated location. Considerations of the magnitude, duration and significance of the impacts is considered in the assessment.
- 1.224 The socio-economic assessment has assessed the likely effects of the Proposed Development in terms of the following issues construction related employment and workforce expenditure; housing; population; local expenditure; educational provision; healthcare; crime; open space and recreational facilities; and local authority income.

## Summary of Likely Effects, Mitigation and Residual Effects

- 1.225 During the construction phase, the Proposed Development will support a direct construction workforce of 2,100 full time equivalent job years across the construction period as well as local workforce expenditure. The likely effects of the construction phase in terms of jobs and economic output and local expenditure from construction workers is considered to be of minor beneficial significance and temporary.
- 1.226 During the operational phase, the Proposed Development is expected to:
- Deliver 988 residential units, contributing toward Manchester's housing targets
  - Support a population uplift of circa 2,000 residents, 90% of which will be of working age
  - Support household spending locally on goods and services
  - Support additional council tax income
  - Create additional demand for local services including nurseries, school places and healthcare facilities

- 1.227 The likely effects of the operational phase in terms of is considered to be of **minor beneficial significance** in terms of housing, population, local expenditure, local authority income. In regard to educational provision, healthcare, crime and open space and recreational facilities, the effects of the Proposed Development are considered to be **negligible**.
- 1.228 There are no anticipated adverse effects during the construction and operational phase in terms of the socio-economic assessment requiring mitigation measures. Therefore, the likely effects are the same as the residual effects detailed in the table below.

### Cumulative Effects

- 1.229 There are 15 developments considered within the cumulative assessment, five of which are currently under construction, which, together with the Proposed Development, will deliver 7,280 new homes by 2030/31 when completed and occupied. The cumulative effects in terms of the socio-economic indicators considered in this assessment are detailed in the summary table below.

### Summary

- 1.230 The table below provides a summary of the results and their significance, considering both the residual effects of the Proposed Development and cumulative effects.

| Receptor(s)                            | Residual Effect  | Cumulative Effect      |
|----------------------------------------|------------------|------------------------|
| <i>Construction Phase</i>              |                  |                        |
| Employment and GVA                     | Minor beneficial | Moderate beneficial    |
| Local Expenditure                      | Minor beneficial | Moderate beneficial    |
| <i>Operational Phase</i>               |                  |                        |
| Housing                                | Minor beneficial | Major beneficial       |
| Population                             | Minor beneficial | Moderate beneficial    |
| Local Expenditure                      | Minor beneficial | Moderate beneficial    |
| Local Authority Income                 | Minor beneficial | Moderate beneficial    |
| Educational Provision                  | Negligible       | Minor-moderate adverse |
| Healthcare                             | Negligible       | Minor adverse          |
| Crime                                  | Negligible       | Minor adverse          |
| Open Space and Recreational Facilities | Negligible       | Minor beneficial       |

## Availability of Environmental Statement

- 1.231 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

- 1.232 The ES may be purchased in volumes, the costs for which are set out below:

- Non-Technical Summary (NTS) - £15
- Volume 1: ES Main Text & Figures - £150
- Volume 2: ES Appendices - £150
- Volume 3: Heritage, Townscape and Visual Impact Assessment - £150
- Volume 4: Transport Assessment - £150
- Full copy (Volumes 1, 2, 3 and 4 with NTS) of the ES on CD - £15

- 1.233 For copies of any of the above please contact the Environmental Advisory Team at Deloitte Real Estate:

Plot F – Planning and EIA  
Deloitte Real Estate  
Hanover Building  
Manchester  
M4 4AH

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## Real Estate

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