Deloitte.

Plot 10 First Street

Non-Technical Summary

February 2023

Contents

1.	Introduction	2
2.	Description of the Proposed Development	6
3.	Alternative Options	11
4.	Construction Management and Phasing	12
5.	Air Quality	13
6.	Climate Change	16
7.	Daylight, Sunlight and Overshadowing	22
8.	Human Health	25
9.	Noise and Vibration	27
10.	Socio-economics	31
11.	Townscape and Visual Impact	33
12.	Wind Microclimate	37
13.	Availability of Environmental Statement	38

1. Introduction

1.1. This Environmental Statement (ES) Non-Technical Summary (NTS) has been prepared in support of development proposals coming forward within Plot 10 of the First Street Masterplan. Plot 10 comprises two development plots, known as Plot 10a and Plot 10b. Standalone planning applications are being submitted on each plot:

- Plot 10a comprises an application for full planning permission for a NABERS 5.5* sustainable office building (Use Class E) and associated public realm ('the Proposed 10a Development') on the western portion of the plot, fronting onto First Street ('the 10a Site'). The application is being brought forward by First Street (Developments Ltd) ('the 10a Applicant'). The application was validated by Manchester City Council ('MCC') as the Local Planning Authority ('LPA') on 23 January 2023 (ref: 136043/FO/2023).
- Plot 10b comprises an application for full planning permission for a building comprising Purpose-Built Student Accommodation ('PBSA') (Use Class Sui Generis) and a ground floor food hall (Use Class E and/or Sui Generis), and associated public realm ('the Proposed 10b Development') on the eastern portion of the plot fronting onto River Street ('the 10b Site'). The 10b Site also includes adjacent land to the east which will be used for temporary welfare facilities for the contractor during construction. The application is being brought forward by House of Social 1 Ltd ('the 10b Applicant').

1.2. Each plot can be developed and accessed independently of the other. A planning application for drainage diversions along Hulme Street and River Street was validated by MCC on 17 January 2023 (Planning Ref. 135987/FO/2023) to facilitate the redevelopment of both plots. This small-scale standalone application has not been considered as part of the EIA.

1.3. Collectively, for the purposes of this ES, these two planning applications are referred to as the 'Proposed EIA Development'. The two application boundaries, which are contiguous, are referred to collectively as 'the EIA Site'. Both the Proposed 10a Development and the Proposed 10b Development are described in Chapter 4 of this ES. This ES considers the individual impacts of each development and the combined impact of the EIA Development as a whole.

1.4. This ES NTS sets out the findings of an Environmental Impact Assessment ('EIA') carried out in respect of the development of the EIA Site.

1.5. The EIA has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended) ('the EIA Regulations') and best practice guidance.

1.6. The Non-Technical Summary (NTS) is a standalone document and is required under the EIA Regulations.

Purpose of the Environmental Impact Assessment and Non-Technical Summary

1.7. The purpose of an EIA is explained by the Government in the National Planning Practice Guidance at paragraph 002 (Reference ID: 4-002-20140306), which sets out:

"The aim of Environmental Impact Assessment is to protect the environment by ensuring that a local planning authority when deciding whether to grant planning permission for a project, which is likely to have significant effects on the environment, does so in the full knowledge of the likely significant effects, and takes this into account in the decision making process."

1.8. In simple terms, an EIA is an information gathering exercise in relation to the effect that the Proposed EIA Development may have on the local environment when compared to the existing conditions. These are typically carried out on projects of a large scale.

1.9. Conducting an EIA is a systematic process, which leads to a final report, the ES.

1.10. This NTS is designed to be read on its own. It explains the environmental implications of the Proposed EIA Development to the public, informing them, and allowing them to decide whether they would like more detail on the Proposed Development.

1.11. More information and 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 Section 13, Availability of Environmental Statement for details on how and where to view the ES.

Environmental Impact Assessment Process

1.12. The first step is understanding if the Proposed EIA Development meets the criteria set out within legislation, which means that further consideration should be given to if it comprises an EIA development. The legislation sets out different 'schedules' of projects and how the EIA should be carried out.

1.13. A Proposed EIA Development may then go through a 'Screening' and/or a 'Scoping' process. This is the process whereby an Applicant may submit a request to the Local Planning Authority for a formal opinion as to whether they consider the Proposed EIA Development to be meet the criteria for an EIA and, if so, what technical topics it considers to be relevant to the EIA.

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

Assessment Methodology

Scoping

1.15. An EIA Screening and Scoping Report was prepared by Deloitte with input from the technical consultant team for the project. The EIA Screening and Scoping Report was submitted to Manchester City Council ('MCC') as the Local Planning Authority on 25 November 2022.

1.16. A formal scoping opinion was received on 26 January 2023 (see **Appendix 2.3** of the ES).

Technical Topics not included in the Environmental Impact Assessment

1.17. The Scoping process identified a number of technical topics where significant environmental effects as a result of the Proposed Development would be unlikely and would not be assessed further within the EIA process.

- Agricultural Circumstances
- Archaeology
- Aviation
- Ecology and Nature Conservation
- Ground Conditions
- Heritage
- Electronic Interference
- Transport and Access
- Flood Risk and Drainage

1.18. Further information detailing why each of these technical topics were scoped out of the EIA can be found in **Appendix 2.1** EIA Screening and Scoping Report.

Approach to Technical Studies

1.19. Various technical studies were commenced at an early stage in the development process. The findings of the baseline (existing) environmental studies have played an important role in the design of the Proposed EIA Development by defining the environmental sensitivities, constraints and opportunities associated with the EIA Site.

1.20. Design team reviews, attended by members of the project team, were held throughout the pre-application process. These reviews provided a valuable forum for the exchange of information and ensured that the design team was fully aware of the environmental constraints and opportunities, and of the interactions between disciplines. Meetings were also held with Manchester City Council as the Local Planning Authority, as well as pre-application discussions with technical consultees.

1.21. The technical studies have been undertaken in accordance with current best practice. Specific guidance used is referenced within each of the respective technical chapters, with a reference list at the end of each chapter.

1.22. The technical studies undertaken within the ES have been progressed in a transparent, impartial and unbiased way with equal weight attached, as appropriate, to beneficial and adverse effects. Where possible, this has been based upon quantitative and accepted criteria together with the use of value judgements and expert interpretations.

Who has been involved in the EIA process?

1.23. The EIA process has involved communication and collaboration between the applicant, Deloitte LLP, MCC, the project team (shown in Table 1.1), statutory consultees and the public. Table 1.1 shows the project team and their roles.

Table 1.1 – Project Team

Topic	Assessment carried out by
Town Planning, EIA Coordination	Deloitte LLP
Architect	Jon Matthews Architects (Plot 10a) and Tim Groom Architects (Plot 10b)
Air Quality	Cundall
Climate Change	Cundall
Daylight, Sunlight and Overshadowing	Proximity
Human Health	Enfusion
Noise and Vibration	Cundall
Socio-economics	Ekosgen
Townscape and Visual Impact	Planit-IE
Wind Microclimate	Arch-aero

What were the results of the EIA?

1.24. The following sections summarise the methodology used in determining the likely significant effects of the Proposed EIA Development and summarise the outcomes of the EIA.

1.25. This section is organised into technical subjects. Greater detail can be found in the relevant chapters of the Environmental Statement (6 to 13) and their technical appendices.

1.26. The technical topics are those elements of the environment considered likely to experience significant effects and therefore assessed in the EIA.

1.27. With regard to the assessment for each topic, the subsequent sections discuss:

- Methodology and scope;
- Baseline conditions;
- Likely significant effects of the Proposed EIA Development;
- Mitigation;

- Cumulative effects with other developments; and
- Likely ‘residual’ effects following mitigation.

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

Significance of Effects

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

1.30. 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.

1.31. This serves as a useful guide for specialists to assess effect significance. Where discipline-specific methodology has been applied that differs from these generic criteria, this has been clearly explained within the relevant ES chapters Volume 1 (6 to 13).

2. Description of the Proposed Development

Where is the EIA Site?

2.1. Plot 10 is located in the south of Manchester City Centre and is bounded by First Street North to the north, Cambridge Street to the east, Macintosh Mill and Hulme Street to the south and Plot 9 First Street to the west. It is located within the 2018 First Street Strategic Development Framework and forms the next phases of development within the First Street Masterplan. The EIA Site is split into two plots: Plot 10a to the west, fronting onto First Street; and 10b to the east, fronting onto River Street.

2.2. Figure 2.1 below shows the Site Location Plan.

Figure 2.1 – Plot 10a Site Location Plan

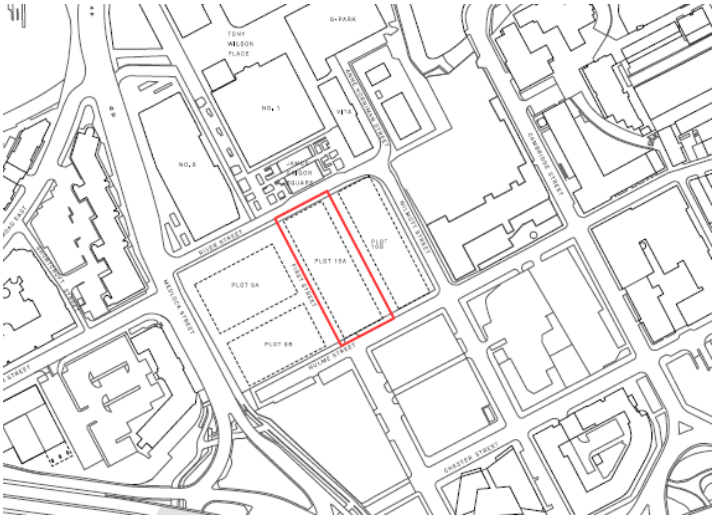
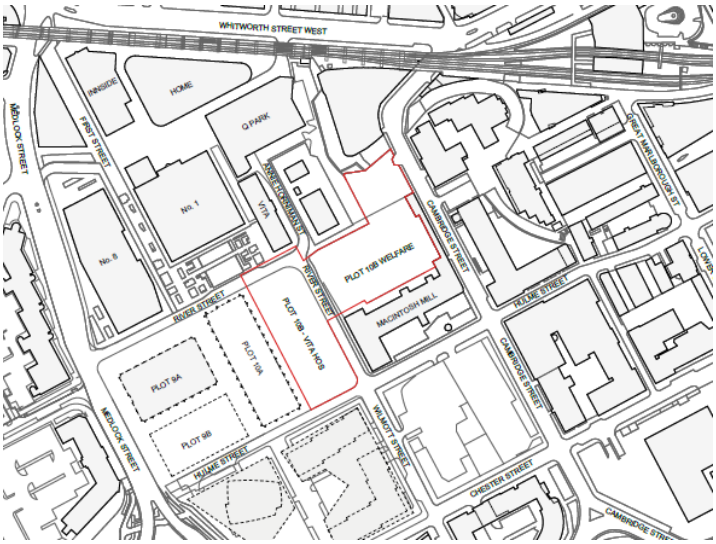


Figure 2.3 – Plot 10b Site Location Plan



What is being proposed?

2.3. The description of development for Plot 10a (Ref: 136043/FO/2023) is:

"Erection of 13-storey office building (Use Class E) with associated public realm, external roof terraces (level 12 and 13) and other associated works including external amenity spaces"

2.4. The description of development for Plot 10b is:

"Full Planning Permission for a 14-storey building comprising purpose-built student accommodation (Sui Generis) and ground floor food hall (Use Class E and/or Sui Generis), and other associated works including external amenity spaces, public realm, secure cycle parking, access and servicing arrangements; and associated Site construction compound for a temporary period"

2.5. Table 2.1 sets out the application proposals for Plot 10a:

Table 2.1 – Plot 10a (office) Development Quantum

Proposed 10a Development	
Proposed Use	*28,252 sqm commercial office space (GIA) (Use Class E)*
Maximum Height (storeys / AOD)	*13 Storeys / 90.3m AOD*
Car Parking	*No Car Parking*
Cycle Parking	*204 secure cycle parking spaces*

2.6. Table 2.2 sets out the application proposals for Plot 10b:

Table 2.2 – Plot 10b (PBSA and food hall) Development Quantum

Proposed 10b Development	
Student Accommodation	*Total: 576 student bedspaces (Use Class Sui Generis), split between:* • *x76 (6-bed clusters)* • *x24 (5-bed clusters)*
Commercial Uses	*Approx 1304sqm (GIA) commercial space (Use Class E + Sui Generis)*
Maximum Height	*14 Storeys (85.3m AOD / 46.1m AGL)*
Car Parking	*No Car Parking*
Cycle Parking	*88 secure cycle parking spaces with 12 visitor spaces within the public realm.*

2.7. Further information on the Proposed EIA Development can be found within Section of the ES and the Design and Access Statements prepared by Jon Matthews Architects and Tim Groom Architects.

What is located on the EIA Site at the moment?

2.1. The EIA Site comprises approximately 1.2 hectares of brownfield land and is currently vacant. The EIA Site's last use was as a temporary event space for organised outdoor events including Manchester Pride festival, which ended in August 2021. In its current state, the EIA Site is predominantly comprised of hardstanding with a minimal amount of vegetation. The EIA Site slopes downwards from the south-west to the north-east towards River Street.

2.2. The EIA Site is located within the Greater Manchester Air Quality Management Area.

2.3. There are no statutory or non-statutory ecological designations within the EIA Site. For further details on ecology, please refer to the Ecological Assessment prepared by Penny Anderson.

2.4. The EIA Site is not located within a Conservation Area and does not contain any designated or non-designated heritage assets. There are nine heritage assets within a 250m radius of the EIA Site. For further details on heritage and the nearby heritage assets, please refer to the Heritage Statement prepared by Deloitte LLP.

2.5. According to the Environment Agency's Flood Map, the north-east part of the EIA Site is located within Flood Zone 2, whilst the remaining areas are located within Flood Zone 1. The EIA Site is located within the Critical Drainage Area prescribed by Manchester, Salford and Trafford Councils Strategic Flood Risk Assessment. For further details on flood risk, please refer to the Flood Risk and Drainage Strategies prepared by Ramboll (Plot 10a) and RoC (Plot 10b).

Why is this development coming forward?

2.6. The SDF sets out a clear vision for the future enhancement and regeneration of this part of the city centre, through the identification of opportunity sites that will catalyse further investment and drive positive change. In particular, the development that will take place within the framework will help to create a commercially-led mixed use neighbourhood in this strategic location.

2.7. The Plot 10b proposals are being brought forward in tandem with a separate planning application for Plot 10a, comprising new Grade A office accommodation and further public realm. Whilst both proposals are subject to stand alone planning applications, which will each be considered on their own merits, the two buildings have been developed, designed and consulted on as joint proposition. Together these developments will largely complete the comprehensive regeneration of the central part of the First Street masterplan with a complementary mix of uses.

2.8. The EIA Site is located in a strategic location within a key part of the City Centre known as the 'Southern Arc'. This area benefits from being in close proximity to the heart of the City Centre but is also well served by public transportation including Manchester's Oxford Road and Piccadilly Stations and the Metrolink. Manchester Oxford Road is a key transport corridor providing direct access to The University of Manchester (UoM) and Manchester Metropolitan University (MMU) main campuses. As such, there is a clear opportunity to draw upon the locational advantages by delivering a new distinctive high quality, PBSA offering within this location.

Who has been consulted?

2.9. Pre-application engagement has been undertaken with the Local Planning Authority, Local Ward Councillors from Deansgate, Historic England, Greater Manchester Police Secure by Design, Greater Manchester Archaeological Advisory Service, Manchester Metropolitan University, MCC Highways, MCC Environmental Health and Macintosh Village Residents Association.

1.25. Public engagement was undertaken through a two-phase consultation process. The first phase of consultation with local residents and businesses took place from 25 August 2022 to 12 September 2022 and provided an opportunity for the community to provide feedback to ensure local priorities and concerns were addressed as plans develop. The second phase of consultation provided another opportunity for public engagement with more detailed proposals for each of the schemes and took place between 26 October 2022 and 11 November.

2.10. Throughout the duration of the public consultation period, members of the public had access to the First Street public consultation website, which provided details of the site history, masterplan context, project

objectives and emerging scheme proposals. The website also provided visitors with the opportunity to provide any comments or raise questions, which have been responded to by the project team during the pre-application period. A press release regarding the consultation was also distributed which was picked up by numerous media outlets.

2.11. 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.

What will the redevelopment process involve?

2.12. Broadly, the construction process Proposed EIA 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.

2.13. 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.

2.14. The EIA Site will be secured and surrounded with hoardings to ensure public safety and mitigate adverse environmental effects during construction.

How long will it take?

2.15. If delivered simultaneously, the total construction programme will span a period of approximately two and a half years within which there will be elements of ground works, foundations, frame construction, façade cladding and internal fit out. The Proposed 10a Development and Proposed 10b Development are anticipated to be delivered in overlapping phases as defined below:

- 10a – 120 weeks
- 10b – 130 weeks

2.16. Both Applicants have construction programmes which see works commencing in 2023, and with a target operational date for Q3 2026 and which has been used for the basis of technical assessments.

2.17. These are indicative construction programmes and the Applicants highlight that there are multiple risks involved in the development process. The Applicants note that this programme may ultimately be extended in the event delays caused by sustained periods of poor weather, unexpected ground conditions or other abnormals, volatility in economic and housing markets, political uncertainty, and the availability of funding.

2.18. This is an indicative construction programme and the Applicant highlights that there are multiple risks involved in the development process. The Applicant notes that this programme may ultimately be extended in the event delays caused by sustained periods of poor weather, unexpected ground conditions or other abnormals, volatility in economic and housing markets, political uncertainty, and the availability of funding.

2.19. The programme is based upon normal working hours in line with Manchester City Council Guidance of 7.30hrs to 1800hrs Monday to Friday and 0800hrs to 1400hrs on Saturdays.

2.20. On Sundays and Bank holidays noisy working will generally not be planned. On some occasions there are certain operations that maybe required to proceed during these periods, for example tower crane erection

and dismantling. These will be infrequent and will be agreed with the Environmental Health Officer (EHO) and local residents will be notified in advance. The frequency of these will vary and respond to demand. Access to the EIA Site will be permitted 30 minutes prior to working day commencing with noise being kept to a minimum for the first half hour of each day.

2.21. We acknowledge the close proximity of the neighbouring properties and as such will endeavour at all times to ensure the working hours are adhered to in order to protect their amenity.

3. Alternative Options

3.1. The EIA Regulations require the ES to identify the main alternatives that were considered during the design process.

3.2. The Proposed EIA 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.

3.3. The wider project team has also played an important part in influencing the design of the Proposed EIA Development to ensure that likely significant environmental effects are avoided or mitigated. The resulting scheme is described in further detail in Section 2, 'The Proposed EIA Development'.

3.4. The EIA Site is currently vacant and is therefore underutilised, despite being strategically located close to the City Centre core. Therefore, the EIA Site is currently not fully utilised in its current form and does not make a positive contribution to the streetscape, nor does it reinforce or complement the surrounding and emerging context.

3.5. The EIA Site has the potential to make an important contribution to the regeneration of this area of the City Centre, improving the aesthetic and connections around the it.

3.6. A number of alternatives have been considered in relation to the EIA Site and Proposed EIA Development. These include no action (the 'Do Nothing' scenario), alternative sites, alternative uses, and alternative layouts and designs.

3.7. The "do nothing" scenario has been discounted due to the established need for regeneration of this part of the City Centre, demand for strategically located and high quality office space, as well as suitable land for new PBSA required by Manchester's growing student population.

3.8. The EIA Site is situated within a highly strategic location within the City Centre and is therefore well served by multiple modes of sustainable transportation methods. As aforementioned, the EIA Site has been identified for redevelopment within the First Street and Oxford Road Corridor regeneration frameworks. The proposed uses at Plot 10 are highly compatible within these regeneration areas due to the proximity to universities as well as a number of key services and amenities offered by the City Centre core that appeal to office occupiers and residents alike. Within the above context, it is not considered appropriate to consider alternative sites.

3.9. As mentioned above, the EIA Site is strategically located within the City Centre and close to both universities campuses, making the EIA Site highly suitable for office and student accommodation. Alternative uses were discounted as the proposed office and student accommodation is the most appropriate in the context of location and responds to identified regeneration priorities and need for economic growth.

3.10. 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.

3.11. 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.

4. Construction Management and Phasing

4.1. 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.

4.2. It is important to acknowledge the two proposal sites and their combined impacts. Separate Construction Management Plan's have been formed for both 10a and 10b as they are to be constructed by separate contractors. These two contractors, and ultimately the client teams, are in close discussion and will work together to ensure minimal impacts on locality.

4.3. The following narrative explains this methodology and timescales envisaged at the time of the planning application. More detailed proposals will be developed once contractors are appointed and prior to commencement on-site. This will include preparation of detailed plans to incorporate Construction Management, Construction Phase Health and Safety, Environmental Management as well as Site Waste Management, Logistics and Traffic Management.

4.4. Every stage of the project will be pre-risk assessed and appropriate controls applied, subcontractors will be pre-vetted and will be subject to extensive pre contract requirements of information transfer and risk assessment.

4.5. 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.

4.6. The Construction Management Plan will describe arrangements and procedures for managing these key risk areas in more detail, as well as any future risk, and also the resources, including personnel, which will be applied to the scheme and which will ensure the Health and Safety of all those working on or affected by the project works.

4.7. The Principal Contractor will have an on-going process of monitoring health and safety standards throughout its organisation. This is normally done directly (on -site) by the Site management team through regular inspections, toolbox talks etc., and via the risk assessment process both during the completion of risk assessments and then by monitoring the effectiveness of risk control measures, which have been implemented. Site managers will also undertake regular reviews of safety on -site, including any accidents or incidents and any matters raised will be dealt with accordingly.

4.8. Health and safety is also incorporated as a fundamental aspect of the overall project review. The Applicant will appoint a Principal Contractor that can demonstrate competency in the management and execution of Health and Safety. The Principal Contractor will work closely with the Principal Designer at this early stage of the project and will influence the detailed design to remove construction and residual safety risks.

4.9. At the earliest opportunity (prior to commencement of construction operations), the Principal Contractor will enter into dialogue with all relevant parties, including neighbours to ensure there is effective co-ordination throughout all stages of the build.

5. Air Quality

5.1. Chapter 6 of the ES has been prepared by Cundall and assesses the likely air quality impacts of the proposals upon the EIA Site and surrounding area. Air quality relates to the quantum of major air pollutants that affect public health such as particulate matter (PM10 and PM2.5) and nitrogen dioxide (NOx). Within the UK there are legally binding targets to limit the amount of these harmful pollutants. As such, where relevant, it is important that any potential impact of a Proposed EIA Development on air quality is taken into account.

5.2. The 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 impacts and the likely residual impacts after these methods have been adopted.

Scope of Assessment

5.3. The Proposed Development falls within the jurisdiction of Manchester City Council. An assessment of the potential air quality impacts from the Proposed EIA Development on identified receptors has been carried out. A receptor is something or someone that may be sensitive to change in air quality, for example those living in nearby residential properties.

5.4. The main air pollution sources affecting the Proposed EIA Development and surrounding sensitive receptors are:

- Road traffic on Medlock Street to the west of the EIA Site
- Road traffic on section of the A57(M) Mancunian Way to the south of the EIA Site
- Road traffic on River Street to the north and east of the EIA Site

5.5. Detailed dispersion modelling of NOx, PM_{10} and $PM_{2.5}$ emissions from operational traffic has been carried out to assess human exposure at the Proposed EIA Development and existing receptors close to the modelled road network. Receptors will be selected at worst-case locations such as close to junctions and closest to the road as well as locations on the Proposed EIA Development facade. The modelled receptors are listed in Appendix 6.1 of the ES, as the change in annual average daily traffic (AADT) at the nearest road link is less than 100, it is concluded that there would not be a significant impact on Macintosh Village and therefore are excluded.

5.6. Additionally, the construction dust assessment includes all other sensitive receptors within a 350m boundary, which may be impacted by construction dust emissions, and within 50m of the routes anticipated to be used by demolition and construction vehicles up to 500m from the EIA Site entrance(s). Receptors in the area are likely to include residential dwellings and schools (high sensitivity receptors) as well as offices, shops and community centres (medium sensitivity receptors).

Description of Method

5.7. The proposed EIA scenarios are:

- Baseline (factored to 2019 to enable model verification with 2019 monitoring data)
- Future 2027 baseline (scenario without the development in place (Do Minimum))
- Future 2027 baseline + Proposed Development (including proposals for Plot 10a and Plot 10b) (scenario with the development in place (Do Something)).

5.8. The future baseline scenarios will include committed developments in the area, to enable assessment of the cumulative impact. The Proposed EIA Development assessment scenario listed above will be compared against the future baseline, which will include traffic flows from committed developments in the area.

5.9. The Transport Planners (Vectos) have advised that Manchester City Council assume no growth in the city centre and that historically traffic has been falling. Vectos have therefore indicated that no growth factors need to be applied to the 2027 future flows.

5.10. The future scenarios have been modelled at worst case and best-case assumptions. Worst case assumes no improvement in vehicle emission from current year (2023) and best case uses predicted lower emissions for

2027, which are anticipated as a result of improvement in the vehicle fleet. In both worst- and best-case scenarios backgrounds have been retained at 2023 levels as a result of assuming no improvement in background concentrations by 2027 (by which time both building are anticipated to be fully operational).

5.11. The results of the future baseline + Proposed EIA Development scenario will be used to inform an exposure assessment for the proposed on-site receptors. The Do Nothing and Do Something scenarios will be compared to inform an assessment of change in emissions associated with nearby existing receptors.

5.12. The approach taken in the preparation of this ES Chapter differs slightly from that advocated with the scoping report in that the Do something Scenario has evaluated the combined impacts associated with the development of both Plot 10a and 10b. This is considered to be a robust and worst-case approach, which covers all eventualities, including the development of Plot 10a or 10b in isolation from the other, or the development of both plots together.

Description of Baseline Conditions

5.13. The baseline air quality conditions at the Proposed EIA Development and surroundings were assessed via a desktop review; the potential for any significant environmental effects were assessed using qualitative and quantitative methodology; and mitigation measures required to prevent, reduce, or offset any significant adverse effects were identified.

Environmental Effects

5.14. A qualitative assessment of the construction phase dust impacts has been undertaken following guidance published by the Institute of Air Quality Management. Following the implementation of recommended mitigation measures, no significant effects are expected.

5.15. It is predicted that there will be negligible impact on sensitive human receptors from traffic impacts during the operation of the development, apart from one receptor located at 8 First Street, where impacts are predicted to be 'minor'. No new exceedances of air quality objectives resulting from the operation of the development are predicted at any receptors.

Mitigation Proposed

5.16. The mitigation of construction phase pollutant and dust emissions will be addressed by an appropriate Construction Environmental Management Plan, developed by the main contractor.

5.17. For demolition and construction, mitigation measures will include the limitations on working hours as implemented in MCC's criteria.

5.18. This will limit working hours to:

- Monday – Friday 7.30am – 6pm;
- Saturday: 8.30am – 2pm; and
- Sunday/Bank holidays: No work.

5.19. These restrictions also apply to deliveries/collections to the EIA Site.

5.20. Outline mitigation measures have been set out for the control of air quality and dust impacts during the Proposed EIA Development's construction and operational phases. These include no on-site parking, implementation of a student management transport plan to manage student arrivals and departures at the start and end of term, provision of cycling infrastructure and introduction of a travel plan managed by an appointed coordinator.

Residual Effects

5.21. Post mitigation residual effects are considered to be negligible for the Proposed EIA Development, as summarised below.

	10a	10b	10a + 10b
Construction	n/a	n/a	Negligible

Operational	n/a	n/a	Negligible

6. Climate Change

Greenhouse Gas Emissions

6.1. Environmental Statement Chapter 7 has assessed the environmental impact of Green House Gas ('GHG') Carbon emissions associated with the Proposed EIA Development. A review of current legislation, national and local policy has been undertaken which has allowed a benchmark assessment of the potential emissions from the Proposed EIA Development.

Scope of Assessment

6.2. The impact of the Proposed EIA Development has been assessed using RICS Whole Life Carbon Assessment ('WLC') Methodology to assess the identified scenarios for the Proposed EIA Development. The potential impact of the baseline schemes within the surrounding Manchester area is considered to add little to the understanding of the developments assessments and are therefore scoped out.

6.3. The assessment captures the operational GHG emissions from both regulated and unregulated energy use, as well as its embodied carbon emissions, i.e. those associated with raw material extraction, manufacture and transport of building materials, construction and the emissions associated with maintenance, repair and replacement as well as dismantling, demolition and eventual material disposal.

6.4. The boundary line of the study area may not be directly impacted but urban public realm beyond the EIA Site boundary is to be considered.

Description and Method

6.5. The WLC assessment covered all modules A, B and C set out in Building Regulations BS EN 15978 and the RICS Professional Statement: Whole Life Carbon assessment for the built environment (referred to as the RICS PS for the remainder of this document). in the life of a typical project described as life-cycle modules. The reference study period (i.e. the assumed building life expectancy) for the purposes of the assessment is 60 years.

6.6. The assessment covers: Upfront Embodied Carbon (A1-A5); Life cycle Embodied Carbon (B-C, excluding B6, B7); Carbon reduction options.

Description of Baseline Conditions

Construction and existence assessment baseline

6.7. Baseline GHG emissions associated with embodied carbon are considered zero as they have already occurred and are of a historical nature only. Similarly, with no construction activities currently taking place onsite, baseline emissions associated with construction are considered zero.

Construction Phase

6.8. The Construction Phase will be responsible for a large proportion of the development carbon footprint over its lifetime. This is due to the embodied carbon associated with the extraction of raw materials, transport to manufacturing unit, the manufacturing process, the transport to site the work on-site. This is referred to as the life cycle stages A1 to A5.

6.9. GHG emissions from the construction and existence of the Proposed EIA Development include the impacts of manufacture and production of construction materials, construction site works including plant activities, and transport of construction materials to and from the EIA Site and removal of waste from site. These emissions were estimated using a WLC assessment.

6.10. During the construction phase it is unlikely that the EIA Site will be subject to the impacts of Climate Change dramatically. The EIA Site may experience a summer heatwave as well as greater rainfall. This has the potential to limit site operations, but this is not deemed significant.

In-Use and End of Life Phase

6.11. GHG emissions from the in-use and end-of-life period of the Proposed Development include the impacts of deconstruction and disposal of the buildings at end of life, including impacts of site works by demolition contractors. GHG emissions from the decommissioning were informed by the WLC assessment.

Environmental Effects

6.12. GHG emissions associated with the Proposed EIA Development would account for approximately 75,496 tCO2e over its 60-year design life. This is a significant reduction when compared to current industry practice.

6.13. GHG emissions from the construction and existence (28,774 tCO2e) account for 38% of the total WLC emissions, whereas GHG emissions from the 60-year operational phase (46,722 tCO2e) contribute 62%.

6.14. Of the GHG emissions associated with the operation of the Proposed EIA Development, 36% of the emissions are related to the operational energy consumption (36,871 tCO2e).

Mitigation and Residual Effects

6.15. In response to the risks and significant effects identified above, the design teams will be making appropriate mitigation measures as the design progresses. The mitigation measures are considered against the timescale of the project, and appropriate design and operational mitigation measures might be implemented. As the development undergoes changes throughout the design stages, mitigation measures will adapt subsequently. The scope of the Climate Change GHG Chapter looks at the potential GHG emissions.

6.16. Climate projections present adverse outlooks on the climate in the near future without immediate and radical mitigation. An assessment for future climate impacts and risks have been undertaken based on the data available publicly, on two probable future emissions scenarios. Significant risks identified include increasing average or maximum temperatures, intense rainfall events, flooding and snowing.

6.17. The residual effects of the Proposed EIA Development following the implementation of the Proposed EIA Development have been estimated subject to client / design team commitment – however, regular monitoring of design team progress and developments is to be expected to reassess the identified risks.

6.18. The ES Chapter demonstrates how the Proposed EIA Development in design, as far as reasonably practicable (subject to client / design team commitment), minimises GHG emissions throughout the life cycle of the development climate change, maximises the potential for adaptation to climate change in the future, and minimises the risk of loss of operational performance due to the impacts of climate change on interdependent infrastructure.

6.19. The residual impacts of the Proposed EIA Development will be estimated in the table below. The table describes the likely significant effect prior to the implementation of mitigation measures.

Table 6.1 – Residual Effects Plot 10a and 10b Carbon Emissions

Plot 10a & 10b Carbon Emissions	Construction Phase Embodied Carbon (A1-A5)	Life Cycle Embodied Carbon (Module B to C excl. B6, B7)	Whole Life Embodied Carbon (A-C)
Tonnes CO2e	28,774	18,568	47,343
Significance of Effect	Moderate Adverse	Moderate Adverse	Moderate Adverse

Table 6.2 – Residual Effects – Greenhouse Gas Emissions

Likely Significant Effect	Component	Mitigation Measure	Post Mitigation Residual Effect – Significance and Duration (i.e., Temporary/Permanent)
Moderate Adverse	Construction	The construction site would be managed in an environmentally sound manner in terms of resource use and storage. Recycling facilities would be provided on-site for construction and operational waste to mitigate volume of material sent to landfill.	Moderate Adverse – temporary as long as mitigation measures are implemented
Moderate Adverse	Materials	Reducing transportation emissions by prioritising local material procurement. Reduce Material quantities through design development	Moderate adverse – permanent if quantities of materials for building elements are not considered effects
Moderate Adverse	Operation	A fabric first approach has been adopted to reduce the operational energy demand of the Proposed EIA Development. A centralised energy loop would provide heating, hot water and cooling through the use of heat pump technology to all aspects of the Proposed EIA Development. This is highly efficient and would allow the Proposed EIA Development to respond to the decarbonisation of the national grid (though grid decarbonisation has not been assumed in order to present a worst-case assessment). • Solar PV to be accommodated on the available roof space of Building 10a, providing a source of on-site renewable energy; • Variable speed pumps and drives; • High performance heating, cooling =and ventilation systems.	Minor adverse - temporary as long as energy strategy is implemented

Climate Change Risk Assessment

6.20. Environmental Statement Chapter 7 has also assessed the environmental impact of Climate Change associated with the Proposed EIA Development. A review of current legislation, national and local policy has been undertaken which has allowed an assessment of the potential risks posed to the Proposed EIA Development from Climate Change.

Scope of Assessment

6.21. Cundall has carried out both the Plot 10a and Plot 10b Climate Change Risk Assessment (CCRA).

6.22. Scenarios considered in the CCRA are as follows:

- RCP 4.5

1. Scenario 6: Baseline + Plot 10a + Plot 10b,
2. Scenario 8: Completed development (baseline and cumulative).

- RCP 8.5 (2040 & 2080, medium and long term)
  1. Scenario 6: Baseline + Plot 10a + Plot 10b,
  2. Scenario 8: Completed development (baseline and cumulative).

6.23. The boundary line of the study area may not be directly impacted but urban public realm beyond the EIA Site boundary is to be considered.

Description of Baseline Conditions

6.24. An assessment of future climate impacts is based on a set of standard climate projections to understand the range of outcomes that may occur and take proportionate action to address risks. The projections of climate used in this report are based on data available from the UK Climate Projections 2018 (UKCP18) which provide the most up-to-date assessment of how the climate of the UK may change over the 21st century. Its tools have regional and local projections and are designed to help those who wish to better understand the risk impacts and hazards of climate change.

Environmental Effects

6.25. Climate projections present adverse outlooks on the climate in the near future without immediate and radical mitigation. An assessment for future climate impacts and risks have been undertaken based on the data available publicly, on two probable future emissions scenarios. Significant risks identified include increasing average or maximum temperatures, intense rainfall events, flooding and snowing.

Mitigation and Residual Effects

6.26. The mitigation measures against the two receptors (public realm and buildings) are considered against the timescale of the project and mitigation would be most usefully implemented. As the development undergoes changes throughout the design stages, mitigation measures will adapt subsequently.

6.27. The residual effects of the Proposed EIA Development following the implementation of the Proposed EIA Development have been estimated – however, regular monitoring of design team progress and developments is to be expected to re-assess the identified risks.

Table 6.3 – Residual Effects – Climate Change Risk Assessment

Likely Significant Effect	**Receptor(s)**	**Mitigation Measure**	Means of Implementation of Mitigation	Post Mitigation **Residual Effect** – Significance and Duration (i.e., Temporary/Permanent)
Operational Phase				
High adverse effects from increasing average / maximum temperatures (Average risk rating: 7)	Public Realm	Both Plots *Para 7.46,.47:* Proposed EIA Development will include external shading in the form of soft landscaping/planting and canopies/pergolas. *Para 7.52,.52*: consideration of high heat resistant plant species and incorporating bioswales	Landscaping strategy at design stage Ventilation strategy and Planting strategy / Ecology reports at preconstruction stage for relevant planning conditions	**Moderate adverse** effects from increasing average / maximum temperatures (Average risk rating: 5)
High adverse effects from increasing	Building	Plot 10a *Para 7.46*: glazing ratios will be reduced, and solid façade will be	Overheating and ventilation assessments and	**Minor adverse** effects from increasing average / maximum temperatures

average / maximum temperatures (Average risk rating: 7)		introduced to reduce solar gain and energy demand for cooling. *Para 7.48*: Mixed mode ventilation on façade. Plot 10b *Para 7.47:* 100mm operable windows to be positioned at certain angles. *Para 1.49*: ASHPs installed.	HVAC/Energy strategy at preconstruction stage for relevant planning conditions	(Average risk rating: 4)
Moderate adverse effects from intense rainfall events (Average risk rating: 5)	Public Realm	Plot 10a *Para 7.58*: Raingardens and bioswales. All tree planting in soft landscape. Plot 10b *Para 7.57:* public realm levels to be designed to direct overland flows away from the building. *Para 7.60*: Raingardens to be incorporated where feasible.	Flood risk assessment at preconstruction stage for relevant planning conditions Landscaping strategy and Elevation plans at design stage	**Minor adverse** effects from intense rainfall events (Average risk rating: 3)
Moderate adverse effects from intense rainfall events (Average risk rating: 6)	Building	Plot 10a *Para 7.54*: blue roof proposed on terrace areas on two floors. *Para 7.60*: Surface water drainage discharges to public sewer Plot 10b *Para 7.54,.61*: adequate controlled drainage. *Para 7.55:* Roof slabs set to falls to prevent standing water. *Para 7.59*: surface water attenuation to be provided in the form of a below ground tank *Para 7.57*: MEP equipment will be mounted.	Flood risk assessment at preconstruction stage for relevant planning conditions Landscaping strategy and MEP report at design stage	**Minor adverse** effects from intense rainfall events (Average risk rating: 3)
Minor adverse effects from flooding (Average risk rating: 3)	Public Realm	Plot 10a *Para 7.62:* a secondary entrance proposed to be more elevated than the rest of the EIA Site. *Para 7.67*: Water storage/irrigation needs for landscaping needs will be reviewed by the wider team as planting specs are developed. Plot 10b *Para 7.67:* Raingardens and bioswales.	Design and Access Statement, Elevation plans, Landscaping strategy and MEP report at design stage	**Negligible** effects from flooding (Average risk rating: 2)
Minor adverse effects from flooding (Average risk rating: 3)	Building	Plot 10a *Para 7.64*: An opening in the slab above the basement with lifting device will allow any damaged plant to be replaced if need be. Plot 10b *Para 7.65*: MEP equipment will be mounted.	Access and maintenance strategy at design stage	**Minor adverse** effects from flooding (Average risk rating: 3)

Minor adverse effects from snowing (Average risk rating: 3)	Public Realm	Plot 10a *Para 7.71*: The building will have a back-up power supply for essential services via a diesel generator, however this will not include street lighting.	Architectural plans at design stage Energy strategy at preconstruction stage for relevant planning conditions	**Minor adverse** effects from snowing (Average risk rating: 3)
Minor adverse effects from snowing (Average risk rating: 4)	Building	Plot 10a *Para 7.70*: Storage areas to keep equipment locked away safe in extreme weather can be provided. All plant and equipment mounted on the roof will be suitable for an outdoor environment and will have the necessary protection provided as part of the design. Plot10b *Para 7.72*: Emergency lighting, including where necessary external lighting with battery back-up, will be provided to allow people to exit the building and travel to a point of safety.	Architectural plans at design stage	**Minor adverse** effects from snowing (Average risk rating: 4)

7. Daylight, Sunlight and Overshadowing

7.1. The impact of the Proposed EIA Development on the daylight, sunlight and overshadowing of neighbouring receptors has been assessed by Proximity as part of Chapter 8 of the ES. It has the purpose of evaluating the potential impact a Proposed EIA Development may have on these surrounding receptors. The assessment utilises industry best practice known as the Building Research Establishment ('BRE') guide and different types of assessment to assess daylight (light directly received from an unobstructed overcast sky) and sunlight (light received directly from the sun). For external amenity areas, an assessment known asn 'time in sun' is used which considers how many direct sunlight hours the amenity area receives.

Scope of Assessment

7.2. Following a site inspection of Plot 10 and the buildings in the vicinity, the following neighbouring buildings and external amenity spaces have been identified as relevant receptors that merit impact appraisal

- Macintosh Mill, Cambridge Street
- Cambridge Mill, Cambridge Street
- Chorlton Mill, Cambridge Street
- City South apartments, City Road East
- Parts of the Plot 11 First Street Development closest the EIA Site
- Manchester Student Village, Cambridge Street
- External Amenity Space:
    - James Grigor Square (Time in Sun)
    - Sunken gardens of Macintosh Mill fronting Hulme Street

7.3. Due to distance from the EIA Site or orientation, there are no other residential buildings in the wider vicinity of Plot 10 which would experience material impact on daylight and sunlight amenity, nor merit impact appraisal.

Description and Method

7.4. A technical analysis has been undertaken. A technical analysis is the computerised measurement of daylight and sunlight values as they currently exist (the baseline condition) and following the Proposed EIA Development (the proposed condition). The baseline condition includes the full height of buildings in the vicinity that are currently under construction.

7.5. Proximity have also undertaken analysis of the daylight and sunlight levels following the Proposed EIA Development, to also include other development sites that are in the proximity of the properties surrounding Plot 10, this is to establish the cumulative impact on the surrounding windows.

7.6. The computer model has been constructed with the following sources of information:

- Point cloud survey (laser scan) of the windows and elevations of the neighbouring receptors.
- Photogrammetric model (3D Model) of Plot 10 and the surrounding area/context.

7.7. Specialist analysis software has been used to quantify the daylight and sunlight amenity of the relevant windows (receptors) noted above in both the baseline condition and proposed plus cumulative. The following scenarios have been assessed:

- Baseline Condition

7.8. The Plot 10a Site

- Baseline vs Plot 10a Site Proposed Development
- Baseline vs Plot 10a Site Proposed Development + Cumulative

The Plot 10b Site

- Baseline vs Plot 10b Site Proposed Development
- Baseline vs Plot 10b Site Proposed Development + Cumulative

Combined Plot 10a Site & Plot 10b Site

- Baseline vs Plot 10a Site & Plot 10b Site Proposed Developments
- Baseline vs Plot 10a Site & Plot 10b Site Proposed Developments + Cumulative

Description of Baseline Conditions

7.9. In the baseline condition Plot 10 is a vacant site, free of any massing. In this regard, the neighbouring receptors appraised receive more light over the open site than is typical for comparable buildings in the City centre that neighbour other buildings (rather than open sites).

7.10. Notwithstanding the absence of massing on the EIA Site and the expected increase to daylight and sunlight amenity this creates, parts of Macintosh Mill, City South Apartments and Chorlton Mill have limited access to daylight and sunlight, principally due to high rise, high density massing of other buildings in the vicinity of Plot 10.

7.11. Of the other receptors appraised the majority of the neighbouring windows and rooms appraised achieve or exceed the suggested BRE targets for daylight and sunlight in the baseline condition.

7.12. The baseline condition 3D model includes the massing within the approved full planning applications of buildings currently under construction , including Plot 9A (9 storeys in height) and the buildings of Plot 11 (up to 45 storeys in height). These buildings influence daylight and sunlight amenity of the receptors appraised in the baseline condition.

Environmental Effects

7.13. The majority of the receptors appraised experience, overall, negligible and non-significant impacts regardless of whether the proposed 10A or 10B were to be constructed individually or as a combined impact, with both having been constructed.

7.14. Certain localised parts of these neighbouring buildings would experience significant impacts, however these account for a small minority of the neighbouring receptor and overall impacts are considered non-significant.

7.15. Moderate adverse impacts on daylight and sunlight amenity of Macintosh Mill are an anticipated result of 10a, 10B and the combined 10a plus 10B proposed development scenarios.

7.16. In all proposed conditions certain windows, including high sensitivity receptors such as living rooms, will experience major adverse impacts on the daylight and sunlight. However, these major adverse impacts are localised to a small proportion of this building as a whole (circa ten apartments of approximately 100 apartments within the whole of Macintosh Mill).

7.17. On the basis that the significant majority of the whole Macintosh Mill building experiences negligible impacts (the majority windows within Macintosh Mill do not overlook the EIA Site directly), we have concluded that the impact on the building in general is moderate adverse.

7.18. Plot 11 First Street, currently under construction, would experience minor adverse impacts to localised parts of the building. There are not yet occupants in this building to perceive any change in the levels of daylight and sunlight.

7.19. James Grigor Square, an external amenity area located to the immediate north of Plot 10 will, in the combined 10A +10B scenario, experience major adverse impact on sunlight amenity. This is limited to a

combined effect of the Proposed EIA Development. In isolation neither Plot will result in a significant impact on James Grigor Square.

7.20. Analysis has been undertaken to understand – in daylight and sunlight terms – the character of the wider area in which Macintosh Mill sits, a part of Manchester characterised by a relatively tight urban grain and with building types similar to Macintosh Mill. This analysis demonstrates that the residual levels of daylight and sunlight amenity to Macintosh Mill are in keeping with other buildings in the wider area.

7.21. A further analysis has also established that, given the limited levels of daylight and sunlight to Macintosh Mill in the baseline condition, development of the EIA Site to a height equal to that of Macintosh Mill would also result in localised significant and major adverse impacts (albeit to a lesser degree than the Proposed EIA Developments). In this regard, any development of Plot 10 is reasonably anticipated to result in significant impacts on this neighbouring receptor.

Mitigation Proposed

7.22. As part of the design process, the massing of the Proposed 10b Development has been reduced in height by two storeys. Both Proposed EIA Development (Plot 10a and 10b) are also of lesser mass and height than is proposed in the current First Street SRF document.

7.23. No other mitigation measures are proposed.

Residual Effects

7.24. On the basis that the impacts identified are a result of building form / massing, the impacts will remain once the Proposed EIA Developments are constructed are set out below:

	10a	10b	10a + 10b
Construction	n/a	n/a	n/a
Operational	Negligible to Moderate adverse	Negligible to Moderate adverse	Minor to Major adverse

8. Human Health

8.1. Chapter 9 of the Environmental Statement assesses the effects the Proposed EIA Development may have on human health and has been prepared by Enfusion.

Scope of assessment

8.2. 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. 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.

8.3. 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. Given the nature of the topic, this Chapter of the ES will assess the completed scenario only as this is considered to represent the 'worst case' scenario.

Description of method

8.4. A summary of relevant findings were taken from the impact assessment of each factor scoped as significant for this Proposed EIA Development and that contributes to human health and well-being – 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 healthy urban living – social environment and health-related behaviour; economic environment; bio-physical environment; and institutional and built environment.

Description of baseline conditions

8.5. The EIA Site is located within the city centre, in the Deansgate Ward, and where residents generally have very good health. Deansgate is one of the least deprived Wards in the City according to the Index of Multiple deprivation (IMD). There are 8 GPs within a 1-mile radius and the current ratio of patients per GP is higher than that recommended in healthcare planning. There are 10 dental practices within a 1-mile radius and the current capacity of NHS dentists cannot meet demand.

8.6. Manchester has a growing population and a much younger age profile than England. An increasing number of residents are aged 25-39 due to the city's rising popularity as a place to live, study and work. In recent years a growing number of students have remained in the city after graduating to take advantage of attractive new accommodation and career opportunities. Manchester has one of the largest student populations in Europe, with over 90,000 students at Greater Manchester's five universities. The lack of quality, affordable accommodation was one of the key issues identified in the 2019 report on purpose built student accommodation (PBSA).

8.7. There a number of open/amenity spaces in proximity to the EIA Site. Being a city centre site there are numerous leisure sites within close proximity to the EIA Site, including cinemas, cafes, bars/pubs and restaurants. There are various gyms and leisure/sports. The EIA Site is located within the central heart of the First Street masterplan area which is now well established and partially complete. The EIA Site is currently vacant, and it does not currently contribute positively to achieving the vision for First Street. Reported street crime for Deansgate is similar to adjacent wards and is at the higher end of the range for the city.

8.8. The EIA Site is currently an open parcel of land and has predominantly been clear of buildings for over 10 years. This is unusual for a city centre context in terms of daylight and sunlight to the neighbouring receptors It was identified that the existing EIA Site and neighbouring surrounds, wind conditions are substantially suitable for strolling and for standing at building fronts. Air quality and noise characterised by road traffic.

Environmental effects

8.9. The provision of an additional 700 bedspaces for students in the city centre near to the universities will have major positive effects. This will contribute to the freeing up of former student lets and increasing the supply of homes for other Manchester residents. Also, taking into account the role of accommodation in retaining graduates in the city, overall, there are likely to be major moderate beneficial effects from the Proposed EIA Development for 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 EIA Development with other developments nearby due to the increased demand for healthcare facilities – GPs and dentists.

8.10. For potential townscape and visual effects, mitigation measures have been embedded into the location and design of the Proposed EIA Development such that impacts on townscape character and viewpoints were found to be negligible or beneficial. Air quality is mostly associated with road traffic. There are no car park facilities for the Proposed EIA Development and therefore, no predicted increase in traffic and associated air quality and noise. 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 EIA 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 major positive effects in the local area.

8.11. Changes to daylight or sunlight, and the wind microclimate can adversely affect health and well-being with regard to a healthy environment. Effects were found to be negligible for five of the seven receptors investigated for daylight/sunlight; some adverse effects were found for the other two receptors but this is not unusual for a city centre development and reflect the change as the EIA Site has been open and disused for 10 years. Potential effects on the wind microclimate were found to be negligible.

Mitigation proposed

8.12. No significant adverse residual effects were identified and therefore, no further mitigation measures are required.

Residual effects

8.13. 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. Suggestions have been made to mitigate the likely cumulative adverse effects on healthcare facilities. There will be major beneficial effects for student housing and delivery of the good-quality office development on the EIA Site will contribute to the enhancement of the vibrancy of the local neighbourhood within the wider city centre. These are summarised below:

	10a	10b	10a + 10b
Construction	n/a	n/a	Moderate Adverse to Minor Beneficial (temporary)
Operational	n/a	n/a	Minor Adverse to Major Beneficial.

9. Noise and Vibration

9.1. A noise and vibration assessment has been undertaken by Cundall, based on environmental surveys, predictions and calculations for the Proposed EIA Development and forms Chapter 10 of the Environmental Statement. It considers noise that may be generated from construction work, traffic, plant noise and music and vibration relates to construction works.

Scope of Assessment

9.1. The Proposed EIA Development sits within the jurisdiction of Manchester City Council. The main noise sources affecting the Proposed EIA Development and surrounding sensitive receptors are:

- Road traffic on Medlock Street to the west of the EIA Site
- Road traffic on section of the A57(M) Mancunian Way to the south of the EIA Site
- Road traffic on River Street to the north and east of the EIA Site
- Railway noise on section of the Manchester and Ordsall Lane Junction Branch Rail Line to the north of the EIA Site

9.2. The noise and vibration sensitive receptors in proximity to the EIA Site which have been taken into consideration in the assessment are listed below:

A. Vita Students First Street

B. Macintosh Mills

C. Unite Students - New Medlock St

D. Unite Students - Parkway Gate

E. 8 First Street

F. 1 Tony Wilson Pl

G. Plot 10a (To be considered receptor in assessment with Plot 10b phased first)

H. Plot 10a (To be considered receptor in assessment with Plot 10b phased first)

I. Plot 9a First Street

J. First Street South

9.3. The approximate location of identified sensitive receptors listed above which will be assessed in the ES is presented in Figure 9.1 below and Appendix 9.1 of the ES. Receptors shaded in blue are existing receptors, and those shaded in pink are future receptors. EIA Site

Figure 9.1 - Noise and Vibration sensitive receptors plan

Description of Method

9.4. Potential noise related environmental impacts which may arise during the Construction Phase are considered to be as follows:

- Noise impacts associated with construction related fixed and mobile plant;
- Vibration impacts associated with construction related fixed and mobile plant (e.g. piling); and
- Noise impacts associated with increase in traffic on approach to EIA Site due to construction related vehicles.

9.5. Potential noise related environmental impacts which may arise during the Operational Phase are considered to be as follows:

- Noise impact associated with the "industrial/commercial" noise emissions from the Proposed EIA Development. This will be the operation of building services plant.
- Noise impacts associated with entertainment noise should it be included as part of the ground floor food hall within Plot 10b. This could affect both surrounding receivers and structurally adjoined receivers at higher floor levels.
- Noise impacts on future occupants of the Proposed EIA Development due to existing sound sources, primarily from road traffic.

Baseline Conditions

9.6. It was noted on-site that significant construction on sites to the western and southern boundaries of the EIA Site were present, meaning these may be an unreliably dominant noise source. Subsequently it was noted that on the dates 27 – 29 August at Position MP1, levels were noticeably lower than for other dates, which corresponded to the bank holiday weekend days. In particular, LAFmax levels were generally very high across both positions, and due to the position in relation to road noise sources it was concluded that these were being driven by construction noise.

9.7. Given the generally higher background noise levels in 2022, the lowest LA90,15min background levels measured in 2018 have been used to provide a robust set of limiting plant noise levels. Table 10.10 below presents an overall summary of the adopted background levels for each noise-sensitive receptors during the daytime and night-time:

Environmental Effects

9.8. The impact of noise during demolition and construction of the Proposed EIA Development has been predicted and assessed in accordance with BS 5228 guidance. Impacts from demolition and construction activities are predicted at the closest noise sensitive receptors to the works, with temporary negligible to moderate adverse effects anticipated to arise. This takes into account the implementation of Best Practicable Means (BPM) and a Construction Management Plan (CMP).

9.9. The impact of noise from demolition and construction traffic has been predicted and assessed in accordance with criteria presented in the Design Manual for Roads and Bridges (DMRB). The effect of demolition and construction traffic noise is anticipated to be minor at the highest sensitive receptor (i.e. residential properties).

9.10. The impact of vibration during demolition and construction of the Proposed EIA Development has been predicted and assessed in line with BS 5228 guidance. At a distance of approximately 20 m from the worst-case vibration source (i.e. the approximate distance between the worst-case vibration source and the nearest and most sensitive receptors), the effect of vibration is anticipated to be minor adverse at worst case, though likely negligible in practice.

9.11. During the operation of the Proposed EIA Development, plant noise is anticipated to have a minor effect on the nearest noise-sensitive (i.e. residential) receptors. Any noise from the proposed food hall located in the student accommodation tower is predicted to have a minor effect on the nearest noise-sensitive receptors and structurally adjoined student accommodation.

9.12. Environmental noise levels have been modelled at the façade of the Proposed EIA Development. Based on the assumption that internal noise levels provided in BS 8233 and MCC criteria will be achieved, the anticipated effect is predicted to be minor.

9.13. The Proposed EI Development and committed developments within 100m of the EIA Site may give rise to increased cumulative effects during the demolition and construction phase; this is based on a worst-case assumption that the demolition and construction of the Proposed EIA Development and committed developments take place at the same time. The potential significant effects would, however, be temporary in nature.

9.14. For operational effects, it is assumed that all other developments will need to comply with the MCC planning policies, resulting in a negligible effect on any nearby noise sensitive receptor.

Mitigation

9.15. For demolition and construction, mitigation measures will include the limitations on working hours as implemented in MCC's criteria.

9.16. This will limit working hours to:

- Monday – Friday 7.30am – 6pm;
- Saturday: 8.30am – 2pm; and
- Sunday/Bank holidays: No work.

9.17. These restrictions also apply to deliveries/collections to the EIA Site.

9.18. Additionally, it is anticipated that the main contractor delivering the Proposed EIA Development will be required to submit a detailed Construction Environmental Management Plan (CEMP), prior to commencement pursuant to a planning condition or obligation. They will therefore be committed to following Best Practicable Means (BPM) to minimise the noise and vibration impact on nearby noise sensitive properties.

9.19. It is considered that proper implementation of the mitigation measures will reduce the significance of effect predicted within the construction noise assessment section of this chapter.

Construction Vibration

9.20. Though predicted to be negligible, the means by which potential adverse vibration effects can be mitigated include:

- Implementation of vibration monitoring at nearby sensitive receptors;
- Use of continuous flight auger (CFA) injected piles rather than driven piles;
- During the initial CFA piling process, controlled trials test could be undertaken to establish a safe method of working based on observations of vibration intensity, the onset of local distress to the soil face and of changes in line and level;
- Removal of obstructions to piling (e.g. old basement floors, old foundations etc.). Where an unexpected obstruction is encountered, it might be preferable for piling to be halted at that position until the obstruction can be dealt with, rather than attempting prolonged hard driving;
- Where reasonably practicable, plant and/or methods of work causing significant levels of vibration at sensitive premises should be replaced by other less intrusive plant and/or methods of working;
- To minimize any potential adverse impacts as a result of vibration from stationary plant, equipment immediately adjacent to sensitive receptors could be relocated or isolated using resilient mountings; and
- The characteristics of vibration emissions from each item of plant, and their collective effect, should be assessed during the selection process for the acquisition of plant. Where practicable, plant should be selected which will have the least impact in terms of vibration.

Operational Industrial/Commercial Noise

9.21. Methods for ensuring that the plant noise limits are met should be investigated at a later stage when details of plant and equipment are known.

Operational Entertainment Noise

9.22. Methods for seeing that the music noise limits are met should be investigated at a later stage when details of plant and equipment are known, but could include:

- All amplified music should be brought under control of an automatic volume control system to see that the noise limits are not exceeded.

9.23. To see that any noise limiting equipment operates effectively, it is advised that the installation of such equipment should be overseen by an appropriately experienced noise consultant.

- Inclusion of lobbied doorsets to all exit / entrance doorways to be used by patrons.
- Appropriate setting of operational hours, particularly with access to the external terrace areas

Noise Impacts on future occupants of the Proposed 10b Development

9.24. Calculations have found that student rooms within the proposed PBSA building require a high glazing specification, facade. Generally, façade build ups that are structurally and thermally suitable for residential accommodation will achieve this level of sound reduction by default.

9.25. The ventilation strategy is not known at the time of writing; however, this will also have to be designed to ensure any noise break in through ventilation elements also satisfies internal noise limits.

9.26. The following general recommendations are made to ensure glazing elements mitigate noise to the appropriate targeted levels;

- All windows should be well sealed when closed. It is imperative that the frame does not compromise the performance of the glazing. It is therefore recommended that the frames be of uPVC, hardwood or aluminium constructions and be well sealed into the apertures.
- Softwood windows could also be used, providing guarantees are given by the manufacturer that acoustic properties will be maintained for the life of the windows.
- No gaps should be visible around the frame from the exterior.

Residual Effects

9.27. Noise and Vibration residual effects for the construction phase of the Proposed EIA Development are temporary and range from negligible to moderate adverse following mitigation measures.

9.28. Noise and Vibration residual effects for the operational phase of the Proposed EIA Development range from negligible to minor adverse following mitigation measures.

9.29. These are summarised below:

	10a	10b	10a + 10b
Construction	Negligible to Minor adverse impacts (temporary)	Negligible to Moderate adverse impacts (temporary)	Negligible to Moderate adverse impacts (temporary)
Operational	Negligible to minor adverse	Negligible to minor adverse.	Negligible to minor adverse.

10. Socio-economics

Scope of Assessment

10.1. Chapter 11 of the Environmental Statement assesses the effects the Proposed EIA Development may have socio-economic receptors and has been prepared by Ekosgen. 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 EIA Development. These impacts include the creation of jobs during construction and operational phases, the delivery of additional purpose built student accommodation, the expenditure impacts of an increased student population in addition to the impacts of this increased population on local healthcare services and other community infrastructure and amenities.

Methodology

10.2. 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 EIA Development assessed using standard industry benchmarks, data, assumptions and professional judgement.

Baseline Conditions

10.3. 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.

Environmental Effects

10.4. Within the construction phase, the Proposed EIA Development would generate, on average, 455 full-time equivalent (FTE) jobs within the construction sector each year over the course of the construction period. Within the context of the size of Manchester's existing construction workforce this would have a temporary, Minor Beneficial effect which is not considered to be significant.

10.5. During the operational phase, the Proposed EIA Development would generate significant beneficial effects in relation to the delivery of 576 high quality student accommodation bedspaces that will assist in contributing to existing supply and quality pressures in the city. This effect is assessed as permanent and Major Beneficial.

10.6. The Proposed EIA Development is assessed as generating a permanent and Minor Adverse effect in relation to its additional demand for healthcare facilities, however, this is not significant in EIA terms. It is also assessed as generating a Negligible effect in relation to the remaining socio-economic impacts, including: change in operational employment, uplift in local household expenditure and additional demand for the use of leisure facilities and open/amenity space. These effects are not considered to be significant in EIA terms.

Mitigation and Residual Effects

10.7. 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:

	10a	10b	10a + 10b
Construction	Negligible	Minor Beneficial	Minor Beneficial
Operational	Negligible to Minor Beneficial	Minor Adverse to Major Beneficial	Minor Adverse to Major Beneficial

11. Townscape and Visual Impact

11.1. Chapter 12 of the ES has been prepared by Planit-IE and assesses the likely townscape and visual impacts of the proposals upon the EIA Site and surrounding area.

Scope of assessment

11.2. The scope of the assessment was defined through consultation with the Local Planning Authority.

11.3. The study area for the assessment is approximately 500m from the centre of the EIA Site, in order to encompass the full extents of the EIA Site and the wider First Street area as defined within the First Street Strategic Development Framework (SDF). Consideration was also given to the immediately adjacent townscape character areas which the Proposed EIA Development may significantly influence. The study area also takes encompasses the visual envelope for the Proposed EIA Development. The study area has been defined through a process of desktop and on-site survey and assessment, combined with professional judgement, in accordance with the Guidelines for Landscape and Visual Impact. The study area for the cumulative assessment has considered sites within a 1km radius of the EIA Site, in order to provide a robust assessment of all potential cumulative townscape and visual effects.

Description of method

11.4. This assessment has been carried out with reference to the Guidelines for Landscape & Visual Impact Assessment, 3rd Edition, 2013 (referred to hereafter as “the Guidelines”).

11.5. A three-stage assessment process has been adopted. Firstly, the nature of receptors (sensitivity) will be assessed by combining judgements on the susceptibility of the townscape receptor to the specific type of development proposed and the value attributed to that receptor combined with professional judgement. In assessing the sensitivity of visual receptors, key factors to be considered are the type of view and the number of viewers. Sensitivity of townscape and visual receptors will be assessed on a scale of high, medium and low.

11.6. Secondly, the magnitude of change is considered on a scale of large, medium, small or negligible. The magnitude of a townscape or visual effect is assessed in terms of its size or scale, the geographical extent of the area influenced by that effect, its duration and degree of reversibility and the impact these are likely to have on the baseline character of the townscape element or view. The magnitude of change in the view relates to the degree of contrast or integration likely to result from the Proposed EIA Development and is influenced by the relative time over which a view is experienced and whether it is a full, partial or glimpsed view.

11.7. From this, the overall significance of the identified effects on receptors will be assessed. Significant effects will be determined through combining judgements about the sensitivity of the receptor and the magnitude of the effects, combined with professional judgment.

11.8. The photography and preparation of any Visually Verified Montages (VVMs) will be prepared in accordance with the Landscape Institutes Technical Guidance Note. The location and number of these has been agreed with the Local Planning Authority.

11.9. For the purposed of this Townscape and Visual Impact Assessment, ‘moderately significant’ effects and ‘significant’ effects are considered to be significant in EIA terms (EIA Regulations 2017).

Baseline Conditions

11.10. The following text describes the baseline relating to landscape and views for both Plot 10a and 10b.

Site Context

11.11. The EIA Site is located within the central heart of the First Street masterplan area, which is now well established and partially complete. The EIA Site is not currently in use and there are no permanent structures or features on the EIA Site due to historic clearance.

Townscape Character

11.12. The First Street masterplan area forms a clearly defined sub-character area, characterised by high quality development set within a cohesive network of streets and spaces. The character of First Street is already well established in accordance with the vision set out within the SDF.

11.13. The First Street area sits within the wider townscape character area of the Oxford Road Corridor, an area extending from Oxford Road into the city centre and encompassing a range of education, business and cultural institutions. Corridor Manchester's Strategic Vision for 2025 sets out an ambition for the area to be, "Manchester's cosmopolitan hub and world-class innovation district, where talented people from the city and across the world learn, create, work, socialise, live and do business, contributing to the economic and social dynamism of one of Europe's leading cities."

Urban Grain

11.14. The EIA Site currently forms a void in the urban grain in a key location within First Street and the wider city centre.

Land Use

11.15. There is currently no defined land use within the EIA Site.

Building Heights

11.16. There is currently no built form or established building height within the EIA Site.

Movement and Linkages

11.17. There are currently no routes through the EIA Site. The EIA Site is bound by River Street to the north and east, Hulme Street to the south, and Newcastle Street to the west.

11.18. The key north-south axis through First Street is located to the western edge of Plot 10a, and forms a key movement route through the development and a focus on high quality treatment.

Public Realm and Public Open Space

11.19. There is currently no public realm or public open space within the EIA Site. James Grigor Square is located to the north of Plot 10, and forms a key gathering space within the First Street masterplan area.

EIA Site Character

11.20. The EIA Site is currently vacant and forms a clearly defined future development parcel. It does not currently contribute positively to achieving the vision for First Street. The EIA Site currently lacks permeability, and does not facilitate north-south or east-west connections. The EIA Site does not contain any public access and currently detracts from the character and quality of James Grigor Square to the north.

EIA Site Visibility and Key Views

11.21. The EIA Site is visually well contained due to dense surrounding built form due to the city centre location, and relatively flat topography.

11.22. A total of 11 key views have been identified through a combination of desk top and on-site survey, and consultation with the Local Planning Authority.

Environmental Effects

Construction Phase

11.23. A detailed assessment of the significant construction phase effects for townscape and views is set out in ES Appendices 12.1 and 12.2. The potential construction phase effects identified are for both Plot 10a and 10b. Reasonable assumptions have been made in order to provide a basis for the assessment and represents a 'worst case' in accordance with the Guidelines.

11.24. Sources of townscape and visual construction effects include:

- Site setup and site compound (visual effects).

- Site/boundary fencing (visual effects).
- Cranes and construction machinery/equipment.
- Site clearance, removal and disposal of any existing material (landscape and visual effects).
- Ground Works including site remediation, levelling & preparation (townscape effects, and visual effects).
- Site access taken (movement and linkages – townscape effects).
- Contractor parking, plant and equipment (visual effects).

11.25. The level of impact during construction phase ranges from moderate adverse to negligible, both when delivered individually (Plot 10a or Plot 10b) and combined.

Operational Phase

11.26. The components of the townscape which may potentially be affected by the Proposed EIA Development are known as the townscape receptors. These include the characteristics and character of the townscape, and the character and quality (or special qualities) of designated areas. The potential operational phase effects identified are for are for both Plot 10a and 10b.

11.27. Likely townscape effects have been identified with reference to interactions between the Proposed EIA Development and townscape receptors. Likely visual effects have been identified with reference to interactions between the Proposed EIA Development and visual receptors. The likely significant effects (highlighted below) are assessed in more detail in Appendices 12.1 and 12.2.

11.28. The level of impact during operational phase ranges from negligible to moderate beneficial for Plot 10a; negligible to moderate beneficial for Plot 10b, and negligible to moderate beneficial when both Plot 10a and 10b are in situ.

Mitigation Measures

11.29. Mitigation includes modifications to the location or design of the Proposed EIA Development or measures specifically included in the design of the Proposed EIA Development to mitigate a known issue, and are therefore 'embedded' into the proposals and is effectively 'designing out' potentially significant effects.

11.30. The design proposals have been formulated through a lengthy iterative process involving environmental assessment and consultation. This process has allowed site constraints and opportunities to directly influence the evolution of the Proposed EIA Development. As a result, mitigation measures are embedded within the Proposals and will be further developed as part of the detailed design of the landscape and surrounding built form.

11.31. A summary of mitigation measures which have been 'designed in' to the proposals in order to reduce or where possible, avoid townscape and visual impacts is provided below, and is described further within the Design and Access Statement that accompanies this application. The embedded mitigation measure is described in brief below.

Construction Phase

11.32. Precise methodology that will be adopted in order to mitigate against potential construction phase impacts will be formulated as part of the ongoing design development. However, it is anticipated that measures to control construction impacts will be incorporated into a Construction Environmental Management Plan (CEMP), and should include measures such as carefully considered site compounds and high-quality site hoarding.

11.33. In addition, the implementation of good site management, maintenance and housekeeping would ensure that temporary deterioration to landscape resources, character and visual amenity will be kept to a practicable minimum. Despite these better practice measures, there would still remain inevitable effects during construction works. However, in overall terms the residual effects upon townscape resources, townscape character and the visual envelope are not anticipated to be significant and the majority of which short term, temporary and local.

Operational Phase

11.34. Mitigation measures 'designed in' to the proposals are outlined below:

- The Proposed EIA Development has been designed to fit within the scale, massing and height parameters for Plot 10, as set out within the Strategic Development Framework. The proposed usage create the opportunity for activity at street level.
- The concept for the public realm around Plot 10a is to create a series of contemporary and distinctive spaces that draw upon the EIA Site's unique location within the city. When taken in the context of the proposed and emerging buildings together with the sustainable transport links, the external spaces will become both a destination and a stepping-stone to connect future commercial phases, leisure uses and existing residential areas within the locality.
- The approach to the public realm design has been to create a series of character areas which respond to the surrounding context and proposed uses.
- The frontage onto First Street provide continuity in terms of materials and quality to the existing works implemented to the north of First Street.
- Service access will be provided between Plot 10a and Plot 10b, which will minimise the potentially detrimental visual and townscape impacts of service vehicles.
- A clearly defined hierarchy of vehicular, services and pedestrian routes will be defined through the design approach and materials palette in order to maximise legibility and prioritising pedestrian movement.
- Along Hulme Street, a simple approach incorporating tree will add colour, scale and texture to the street.
- The building responds to the existing built character and quality within First Street to help create a cohesive character.
- The Proposed EIA Development works with existing topography and aims to effectively integrate the scheme without significant level changes.

Residual effects

11.35. There are no secondary or tertiary mitigation measures proposed in relation to townscape and views in addition to primary 'embedded' mitigation measures. Therefore, any identified townscape or visual effects are likely to remain as residual effects. These are as follows:

	10a	10b	10a + 10b
Construction	Moderate adverse to negligible	Moderate adverse to negligible	Moderate adverse to negligible
Operational	Moderate beneficial to negligible	Moderate beneficial to negligible	Moderate beneficial to negligible

12. Wind Microclimate

12.1. Chapter 13 of the ES has been prepared by Architectural Aerodynamics and assesses the likely townscape and visual impacts of the proposals upon the EIA Site and surrounding area. The purpose of the Wind Microclimate study is to consider the impact of the Proposed Development upon local wind patterns within and around the Site, with the emphasis being on the impact of wind on the comfort and safety of pedestrians.

Scope of assessment

12.2. A microclimate is defined as the distinctive climate of a small-scale area. The weather variables in a microclimate, such as wind, may be different to the conditions prevailing over the area as a whole. Wind microclimate assessments consider the wind conditions that would result upon the introduction of a new development into an existing space.

12.3. Such assessments predict the proportion of time an area will experience wind speeds in excess of threshold values associated with safe and comfortable use by pedestrians and occupants once the Proposed EIA Development is introduced. It can therefore be shown within the various parts of a new proposal and neighbouring properties whether wind conditions are suitable or unsuitable, and whether design adjustment or mitigation measures are required. It is for this purpose that wind microclimate assessments are undertaken.

Description of method

12.4. For the current assessment, a Computational Fluid Dynamics (CFD) study was conducted. This assessment has been able to provide a reliable quantification of wind speed probability at a variety of accessible spaces in and around the Proposed EIA Development. The results of the CFD are then considered against the Lawson criteria. The Lawson criteria is a well-established industry standard which sets out indicative comfort and safety standards.

12.5. The current assessment has considered a number of scenarios, namely the introduction of the Proposed 10a Development independently, the introduction of the Proposed 10b Development independently, and the introduction of the Proposed EIA Development, comprising 10a and 10b together. Each of these scenarios has been considered twice, once in the context of baseline / existing surrounds, and once with the addition of cumulative surrounding developments comprising those that have the benefit of planning permission but have not yet started construction.

Environmental Effects

12.6. In all scenarios, upon the introduction of the Proposed EIA Development in all forms assessed, the Lawson criteria for safety are met within the EIA Site and surrounding area, while conditions are suitable for existing and planned uses when assessed against the Lawson comfort criteria.

12.7. As a result the effect and residual effect of the Proposed EIA Development in all forms (including the Proposed 10a and Proposed 10b Developments individually) are assessed is negligible, and is not significant. Mitigation is not required.

Mitigation and Residual effects

12.8. 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 and are as follows:

	10a	10b	10a + 10b
Construction	Negligible	Negligible	Negligible
Operational	Negligible	Negligible	Negligible

13. Availability of Environmental Statement

13.1. 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

13.2. 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

13.3. For copies of any of the above please contact the First Street Plot 10 Team at Deloitte:

Plot 10, First Street Team – Planning and EIA

Deloitte LLP, WeWork

The Hanover Building

Corporation Street

Manchester

M4 4AH

Deloitte.

This report has been prepared for First Street (Developments) Ltd and House of Social 1 Ltd and on the understanding that it will be made publicly available.

All copyright and other proprietary rights in the report remain the property of Deloitte LLP and "the Consultants" and any rights not expressly granted in these terms or in the Contract are reserved.

No party other than First Street Developments Ltd and House of Social 1 Ltd is entitled to rely on the report for any purpose whatsoever and thus Deloitte LLP and the Consultants accept no liability to any other party who is shown or gains access to this document.

The information contained within this report is provided to assist First Street Developments Ltd and House of Social 1 Ltd with these Planning Applications. The report makes use of a range of third party data sources. Whilst every reasonable care has been taken in compiling this report, Deloitte LLP and the Consultants cannot guarantee its accuracy.

Deloitte LLP is a limited liability partnership registered in England and Wales with registered number OC303675 and its registered office at 2 New Street Square, London EC4A 3BZ, United Kingdom.

Deloitte LLP is the United Kingdom affiliate of Deloitte NWE LLP, a member firm of Deloitte Touche Tohmatsu Limited, a UK private company limited by guarantee ("DTTL"). DTTL and each of its member firms are legally separate and independent entities. DTTL and Deloitte NWE LLP do not provide services to clients. Please see www.deloitte.com/about to learn more about our global network of member firms.

© 2023 Deloitte LLP. All rights reserved