



Union (T2), St John's Non-Technical Summary

April 2020

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1 Non-Technical Summary

- 1.1 This document summarises the Environmental Statement which accompanies an application for Full Planning Permission, submitted by Union Living Limited for a co-living and co-work development. This document is a summary of the Environmental Impact Assessment ("EIA") process in non-technical language. The Environmental Statement ("the ES") sets out the findings for a full EIA which has been carried out to assess the impacts of the Proposed Development.
- 1.2 The application site (referred to hereafter as 'the Site') is in Manchester City Centre located within the St. John's Masterplan, forming part of Enterprise City. It is bounded by the under construction Manchester Goods Yard and T1 (as approved under PP.: 121511/FO/2018) to the east, under construction Factory (as approved under PP.: 119890/VO/2018) to the south, the Victoria and Albert Hotel located to the north, and the River Irwell to the west.
- 1.3 The Site extends to 0.67ha and currently comprises a construction compound, associated with the delivery of adjacent St John's developments. Therefore, no buildings, structures or trees currently exist on this Site upon which the Proposed Development would take place.
- 1.4 The Site is currently accessed from Water Street.

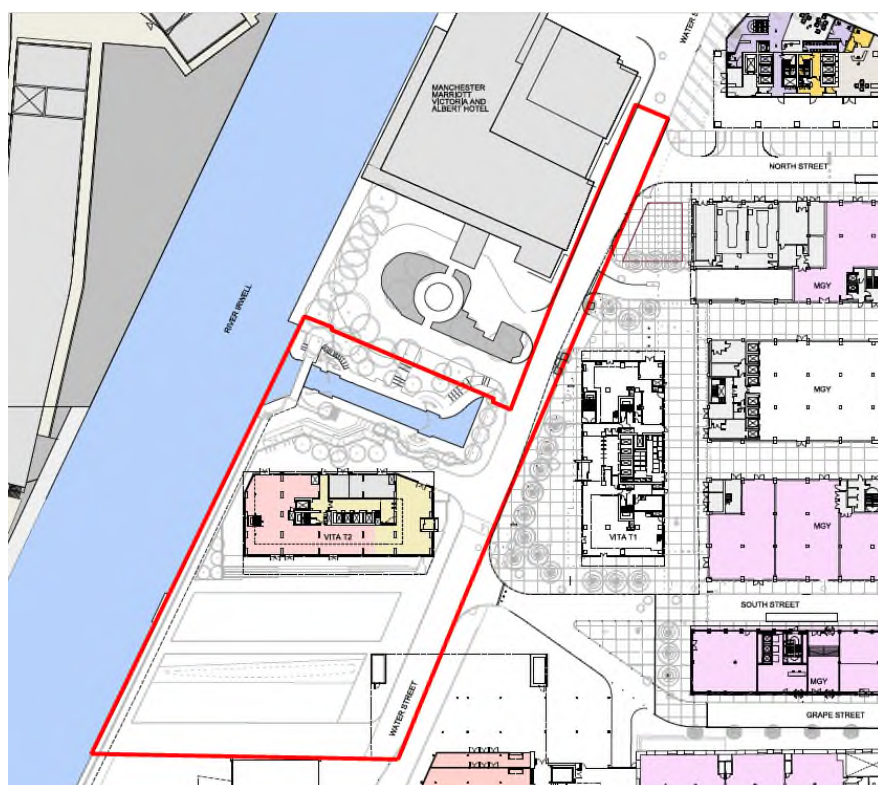


Figure 1.1 Red Line Site Location Plan

Environmental Statement

- 1.5 The Environmental Impact Assessment (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.
- 1.7 This NTS is designed to be read on its own. It explains the environmental implications of the Proposed Development to the public, informing them, and allowing them to decide whether they would like more detail on the Proposed Development.
- 1.8 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 below for availability of Environmental Statement and details on how and where to view the ES.
- 1.9 The ES is available for public viewing during normal office hours at the following address:
- Manchester City Council
Town Hall
Albert Square
Manchester
M60 2LA
- 1.10 Please note that restrictions on public access to the Town Hall may be in place due to the current government guidance in respect of Covid-19.
- 1.11 A copy of the Planning submission including the ES is also available online through MCC's public access system by searching for the site address.
- 1.12 The ES may be purchased in volumes, the costs for which are set out below:
- Volume 1: ES Main Text & Figures - £150
 - Volume 2: ES Appendices - £150
 - Non-Technical Summary (NTS) - £15
 - Full copy (Volumes 1, 2 and NTS) of the ES on CD - £15
- 1.13 For copies of any of the above please contact the Manchester Planning Team at Deloitte Real Estate:
- Union (T2) Project Team – Planning
Deloitte Real Estate
2 Hardman Street
Spinningfields
Manchester
M3 3HF
- Or
- consultation@deloitte.co.uk

Site Description

- 1.14 The Site currently comprises a construction compound, associated with the delivery of adjacent development plots within the St John's masterplan. Therefore, no buildings, structures or trees currently exist and the Proposed Development will take place on a fully enabled Site.

- 1.15 The Site currently has an extant permission (PP Reference: 114723/FO/2016) for a 36 storey residential tower (described as 'extant T2' throughout this document) which this application will seek to replace subject to approval. Comparison between the two proposals where appropriate, as well as the existing baseline, has been provided in each of the technical chapters and a summary of this approach is provided in Chapter 3 of the ES Volume 1 (EIA Methodology).

Site Context

- 1.16 Uses immediately surrounding the Site include hotel uses, office uses, and retail and leisure spaces currently in operation within the St. John's Masterplan, and construction activity associated with delivery of the St John's masterplan.
- 1.17 To the north, Spinningfields provides a high grade business and commercial district with high profile tenants consisting of several banks and other high profile national and international occupiers, as well as residential properties in Leftbank.
- 1.18 The area surrounding Salford Central to the west of the Site is supported by other commercial uses, including tenants such as HMRC and WHIreland. Some more recent residential development has been brought forward on the opposite side of the River Irwell, including Slate Yard Wharf.
- 1.19 To the east, residential properties are located in Bauhaus on Atherton Street, adjacent to the St. John Street Hotel, with the St. John's Gardens residential area beyond, outside of the St. John's masterplan.
- 1.20 To the south of the Site, beyond the Factory development, there are leisure uses associated with the Science and Industry Museum, warehousing and self-storage and other single storey warehousing units that have been converted into football pitches.

Transport and Linkages

- 1.21 The Site is considered to be highly accessible due to its location within Manchester City Centre, which is within a 30 minute walking distance of the wider Manchester City Centre and Salford City Centre.
- 1.22 The Site is also well located to other sustainable transport modes, such as cycling. There are local cycle routes in the vicinity and these are set to be improved by both the development of St. John's and city-wide cycle schemes that are being rolled out under the 'Made to Move' strategy and associated Bee Lines network.
- 1.23 Several bus routes, including the free city centre buses, run down Deansgate and across the city. These routes provide free and clean travel in the city centre and services to the wider region via the local bus service providers and rail network.
- 1.24 The Metrolink tram services run from Deansgate Castlefield Metrolink Station, from where it is possible to travel across Greater Manchester. The Site is within walking distance of Deansgate Castlefield Metrolink station; all Metrolink services run through this station and it provides connections to both Manchester Airport and the mainline railway stations.
- 1.25 Deansgate and Oxford Road rail stations are located within a 15 minute walk from the Site. Salford Central Station is a 12 minute walk to the east, whilst Victoria Station is an 18 minute walk from the Site to the north. All of these stations offer access to regional and national rail services, as well as connecting to Piccadilly following the completion of the Ordsall Chord, which provides services every 20 minutes to London Euston.
- 1.26 The area does not currently attract a lot of vehicular traffic due to the former ITV estate comprising a construction site; Water Street is retained as an access to both the construction sites and the Victoria and Albert hotel, but is closed to through traffic.

- 1.27 Full details of the Site and its transport connectivity can be found in the Transport Statement prepared by Vectos that is submitted in support of this Application, demonstrating that the development is in a highly accessible location.

Environmental Designations

- 1.28 With reference to flood mapping obtained from the Environmental Agency online, the majority of the Site is located in Flood Zone 2. The canal basin to the north of the proposed building is located within Flood Zone 3.
- 1.29 A Flood Risk Assessment and Drainage Strategy has been prepared by Curtins for all of the St John's Masterplan area and is included in support of the planning application. This reflects the as built and proposed situation in St. John's including the application Site. The Flood Risk and Drainage Strategy has previously been approved under the extant T2 consent.
- 1.30 There are no parts of the Site that are subject to ecological Environmental Designations and there are no such identified sites within the vicinity of the Site.

Conservation and Heritage

- 1.31 The Site is located within the Castlefield Conservation Area.
- 1.32 There is a Grade II Listed Canal Junction, which runs underground to the north of the Site. There will be no underground works in this area, so it is not considered that there will be any disturbance to the junction.
- 1.33 There are a number of Grade I, II* and II Listed buildings in the vicinity of the Site, with the closest asset being c. 30 metres to the north east of the Site, the 'Albert Warehouse, Quay on West side fronting River Irwell, Victoria Warehouse' (Listing ID: 1254727).
- 1.34 Full details of the historical context of the Site and Proposed Development are explored within Chapter 7 of this ES and the supporting technical appendices (Appendix 7.1 - Historic Environment and Heritage Appraisal).

Planning History

- 1.35 The Site has a relevant recent planning history, summarised in the table below:

Table 1-1: Site Planning History

Name and PP Reference	Description	Status	Notes
T2 – PP. Ref.: 114723/FO/2016	Demolition of existing buildings and structures to enable construction of 36 storey residential tower (Class C3) with retail uses at lower floors (Classes A1, A2, A3 and A4), new public realm, landscaping including the first phase of Riverside Park and Walkway, provision of external seating areas, car and cycle parking, access arrangements and other associated works.	Implemented	The Proposed Development detailed in this Report will supersede the 36-storey tower ("T2") approved under this Planning Permission.

- 1.36 The Proposed Development will supersede the extant T2 Planning Permission 114723/FO/2016. Given the changes to the baseline context since the original permission was approved, a fresh standalone EIA has been undertaken in support of the planning application.
- 1.37 Together with planning approvals existing on the Site, there are a number of relevant planning permissions relating to adjacent Sites related to delivery of the wider St John's masterplan:
- St John's Place (Ref:109660/FO/2015/C1): Mixed use proposals comprising hotel and residential, with a variety of ground floor uses.
 - St John's Place (Ref:121721/FO/2018): Proposals for 9 storey office, superseding the above.
 - Central Village and 'T1' (Ref:114385/FO/2016): 36 storey residential tower with retail at ground floor.
 - Factory (Ref:119890/VO/2018): Flexible arts and events space.
 - Old Granada Studios (118040/FO/2017): 10 storey residential and commercial mixed use tower, provision of events and filming studios, and a hotel.

Development Proposals

- 1.38 The description of development as set out on the Application Form is as follows:

"Full Planning Permission for the erection of 36 storey plus basement level mixed use building comprising co-living apartment, amenity space and flexible commercial space (Sui Generis), co-work (Use Class B1), landscaping, access and other associated works."

- 1.39 The Proposed Development is described as Union T2 throughout the ES. The Proposed Development also includes public realm improvements, which have been designed with the wider St. John's Masterplan and Factory public realm in mind.

Environmental Impact Assessment

- 1.40 The Environmental Impact Assessment ("EIA") process is a procedure used to determine the potential environmental effects of a proposed development. The Environmental Statement ("the ES") is the document containing the findings of the EIA.
- 1.41 Full results of the EIA process are presented within Volumes 1 and 2 of the ES.
- 1.42 Volume 1 of the Environmental Statement has been prepared by Deloitte and other technical consultants as named, and includes the disciplines set out in Table 1.2

Table 1-2: EIA Structure

Chapter No.	Chapter Title	Description
Volume 1		
1	Introduction	Introduction to the ES, EIA requirements, details of project team, ES organisation and availability.
2	Site Context and Proposals	Site description and details of the Proposed Development.
3	EIA Methodology	Methods used to prepare each chapter, description of ES structure and content, generic significance criteria, scoping and consultation. Includes EIA Scoping and

Chapter No.	Chapter Title	Description
		Cumulative Developments (Appendix 3.1-3.2).
4	Construction Management	Description of the construction and operational phase of the project and an outline of the construction programme. Includes Framework Construction Management Plan and Local Labour Agreement (Appendix 4.1 – 4.2).
5	Consideration of Alternatives	Outline of the main alternatives considered by the Applicant.
6	Townscape and Visual Impact Assessment	Assessment of potential townscape and visual impacts associated with construction and operation of the development. Includes Maps (Appendix 6.1) and photography including Accurate Visual Representations ('AVR') and computer generated images of the scheme in situ (Appendix 6.2).
7	Historic Built Environment	Assessment of potential built heritage impacts associated with the development, including Listed Buildings and Conservation Areas. Includes Heritage Statement (Appendix 7.1)
8	Noise and Vibration	Assessment of potential impacts on noise and vibration associated with the construction and operation of the development. Includes Noise Assessment (Appendix 8.1)
9	Air Quality	Assessment of potential impacts on air quality associated with the construction and operation of the development. Includes Air Quality Assessment (Appendix 9.1-9.9).
10	Daylight and Sunlight	Assessment of the potential impact on Daylight / Sunlight capabilities of surrounding buildings as a result of the Proposed Development. Includes Sunlight, Daylight and Overshadowing Assessment (Appendix 10.1).
11	Wind Microclimate	Assessment of effects on local air movement as a result of the Proposed Development. Includes Wind Assessment (Appendix 11.1).
12	Type 1 Cumulative Effects	Summary of Type 1 cumulative effects, the combined effects arising from the development on a set of defined sensitive receptors.
13	Summary of Residual Effects	Summary of the effects that remain after mitigation.

Chapter No.	Chapter Title	Description
Vol 2	Technical Appendices	Technical data and reports to support the chapters in Volume 1 as listed above. (N.B. Electronic Versions of the Appendices are provided as individual files)
Vol 3	Non-Technical Summary	Summary of the ES in non-technical language.

- 1.43 Volume 2 contains the Technical Appendices to support the ES. This Statement forms the Non-Technical Summary of the technical reports.

Planning Context

- 1.44 Throughout the design process and the EIA process, full regard has been had to Government Advice (in the form of the National Planning Policy Framework (NPPF)) and guidance set out in the relevant local planning policy documents. The Proposed Development has also been prepared by the project partners in consultation with Manchester City Council and a range of technical stakeholders.
- 1.45 A full review of the Proposed Development against planning policy is included in the Planning and Tall Building Statement, which accompanies the planning application and this is summarised within the ES. The review concludes that the Proposed Development is fully in accordance with the adopted Development Plan and other material considerations.

Construction Programme

- 1.46 Planning for construction is necessarily broad at this stage and may be subject to modification during the Developed Design Stage and following targeted site and ground investigations and consultation with specialist earthwork contractor(s) and during detailed construction planning.
- 1.47 Subject to Planning Permission, the construction programme has a start date of Q3 2020 with a 120 week duration completion date of Q3 2022. Construction works will be undertaken in a sequenced manner and include, superstructure, façade, internal fit out and external hard and soft landscaping.
- 1.48 The working hours considered for the construction programme base dates are 7.30am to 6.00 pm Monday to Friday, and 8.30am to 2.00 pm on a Saturday. Workforce may arrive on site 30 minutes prior but no working outside these times, unless changed by prior agreement. Noise to be kept to a minimum in the first hour. Any works not within these hours will be agreed in advance with the relevant parties (City Council).
- 1.49 The general sequence of works will be detailed in a coordinated construction programme prepared by the Principal Contractor. A full construction management plan will be produced by the Contractor.

2 Consideration of Alternative Options

The Do Nothing Alternative

- 2.1 The "do nothing" scenario usually refers to the option of leaving the Site in its current state.
- 2.2 The Site was previously used as car parking. It currently comprises a construction site, associated with the delivery of adjacent developments in the St John's area. The previous T2 application was implemented in early 2020; however the site remains a construction compound as this is only temporary therefore the do nothing scenario would be for the site to return back to a car park.
- 2.3 Lack of high density development on the Site would undermine the strategic vision for St. John's. The Site is considered to be suitable for high density development within the Manchester Core Strategy and the endorsed St. John's Strategic Regeneration Framework. This is confirmed via the extant T2 planning Permission at the Site. It's urban location, close proximity to a wide range of facilities and excellent transport links also support development on the Site.
- 2.4 The 'do nothing' scenario is therefore discounted as redevelopment of the Site is supported on both a strategic, local policy and national policy level and as per the previous permission for the Site.

Consideration of Alternative Locations

- 2.5 The Site is under-utilised in a location within the City Centre with high levels of accessibility. Being within the City Centre, the Site sits among a wide mix of uses that are typical of its location.
- 2.6 The Site has the potential to provide economic and regeneration benefits, which will contribute to the wider strategic aims of the City Region.
- 2.7 It is previously developed land, which had been underused as a surface level car park for a number of years. Its regeneration is supported by planning policy, as set out in detail within the Supporting Planning Statement, which accompanies the application.
- 2.8 The Site's selection as a suitable site for co-living accommodation and co-work space is based on its:
 - city centre location;
 - access to transport links;
 - access to a wide range of facilities;
 - status as brownfield land, suitable for redevelopment;
 - identification as suitable for high density development; and,
 - close proximity to several places of work.
- 2.9 Whilst there would inevitably be other locations in the City Centre where there is development ready land available, these would fall outside of the Applicant's land ownership and ultimately discounts the possibility of alternative locations for the Proposed Development.
- 2.10 The location of this Site within St. John's and proposed use as a co-living and co-working development is also an important consideration. The area is due to become a significant employment generator for the City, particularly in combination with the established employment area of Spinningfields, and requires both a permanent yet flexible residential product that can cater for the needs of existing and future businesses. There are very few other locations across the city that would be appropriate for this type of product, given the unique nature of the

surrounding context.

- 2.11 Therefore alternative sites within the context of the planning application are not considered, as there is an identified need to redevelop this specific site to contribute towards regenerating the local area.

Consideration of Alternative Uses

- 2.12 The wider area is characterised by a mix of uses, consistent with the city centre location. In this respect, the St John's Masterplan area will deliver a wide range of uses, with a large quantum of office space, leisure and event space. Within this context, a range of uses could potentially be acceptable on the Site, but have been discounted due to the overriding reasons for bringing forward co-living accommodation and co-work space in this location.
- 2.13 Considering the long period in which the Site has been in need of redevelopment, there is an overriding requirement to ensure there is certainty of delivery of the Proposed Development. The proposed use meets a demonstrable demand for co-living accommodation and therefore meets this requirement.
- 2.14 Furthermore, its location is well suited to provide easy pedestrian access to a range of existing and committed workplaces, as well as the range of amenities available in the city centre. As such, it is ideally located for the proposed use.
- 2.15 For the reasons above, alternative uses were discounted as the proposed co-living accommodation and co-work space is most appropriate in the context of identified development activity, housing need to support sustainable population growth, viability and deliverability.

Consideration of Alternative Designs

- 2.16 The scheme design has evolved over time during the design process and a number of alternative design options and proposals have been considered by the design team prior to settling on the final layout and design presented within this application.
- 2.17 In addition to the design work undertaken for the Proposed Development, a previous Planning Permission was approved for the Site that approved a 36 storey residential tower for 305 apartments. The design of the previously approved development comprised an almost identical footprint, but was slightly taller than the Proposed Development and offered a different façade approach through inclusion of a metallic aluminum wrap around the external envelope of the building.
- 2.18 The change to the internal layout of the development following the new co-living apartments proposed had a consequential impact on the external appearance of the building as the rhythm of the façade needed to align with the new internal layout in a considered and well-designed manner. On this basis, the 'façade wrap' previously proposed was omitted to achieve a more uniform grid to align best with the living and communal spaces proposed internally.
- 2.19 Once this new grid pattern had been established, options were tested to understand what materiality and colour would ensure the best fit for the development in the surrounding context. Initial options sought to use a similar materiality to the previously approved scheme and proposed a white metallic façade.
- 2.20 Consideration of the façade approach and palette included extensive options appraisal to identify the optimum solution that represented the use proposed and complemented the existing and emerging vernacular of St John's. The relationship of the Proposed Development with the proposed Union T1 building, and how these would sit as a pair of buildings in their historic context and beside the Factory, were particularly important considerations in this process.
- 2.21 Following this design analysis, with the buildings adjacent approved and in situ, it was considered that changing this materiality to a black inner core, with sliver metallic façade grid better complemented the surrounding development context.
- 2.22 In addition to design options tested against the extant Planning Permission on Site, further consultation with key stakeholders allowed for a number of façade treatments to be considered.

The aim of this exercise was to ensure a deliverable and sustainable use of the Site whilst minimising any negative impacts on adjacent land uses and aligning with the design strategy for the Site.

- 2.23 The Design and Access Statement submitted with this Application sets out the options appraisal for the development which details how design of the Proposed Development has been formulated.
- 2.24 The options considered for the development were considered within the context of the Site and the final design is considered to respond most appropriately to the planned, strategic and heritage context. The development of the design has been an iterative process with the architect and wider technical team to ensure all relevant material considerations have been dealt with satisfactorily.

3 Non-Technical Assessment Summary

- 3.1 The Section below describes in a non-technical manner, the anticipated environmental effects of each tested discipline during both the construction and operational phases of development.

Townscape and Visual Impact Assessment

- 3.2 The assessment examines the impact that the Proposed Development will have on the townscape of Manchester City Centre and on the townscape character of the city centre zones immediately surrounding the Proposed Development in particular.
- 3.3 The methodology follows the 'Guidelines for Landscape and Visual Impact Assessment' (GLVIA) Third Edition' (2013) – produced by the Landscape Institute (LI). The objective of the assessment process is to identify and evaluate the likely significant effects arising from the Proposed Development for both Townscape and Visual Receptors. This is facilitated by firstly assessing, and confirming, a Zone of Theoretical Visibility and then selecting a number of Representative Viewpoints for assessment which fall within this zone. The locations of these are shown in **Appendix 6.1**. In both cases, for both townscape and visual effects, the sensitivity of the receptors in each case is assessed against the magnitude or degree of change to the baseline in order to determine the likely significance of effect. A judgement is then made as to whether the effect is of major to negligible significance using the Effect Significance Matrix followed by a judgement as to whether the effect is significant or not significant in EIA regulation terms. For the purposes of this Townscape and Visual Impact Assessment, effects of Moderate Significance and above are considered to be Significant. Those values of Minor and below are therefore deemed to be Not Significant. A professional judgement is then also made as to whether the effect is of an adverse or beneficial nature.
- 3.4 All representative viewpoint photographs were subject to an Accurate Verified View procedure in which an accurately surveyed and verified wireline photomontage of the Proposed Development was inserted into a photograph from each viewpoint. The results of this are shown in **Appendix 6.2 Viewpoint Photographs**.
- 3.5 The impact of the Proposed Development on its own is explored and then in conjunction with consented and committed development in a Cumulative Assessment. The effects of the extant T1 development are notable in this respect.
- 3.6 Although it is not possible to provide one single summary value for the impact the Proposed Development will have on Manchester City Centre, it is possible to summarise the effects in general terms.
- 3.7 In this regard **Table 6.9** in the ES records that, in most cases, the Proposed Development will have largely **negligible to minor but beneficial** effect on townscape and visual receptors. However, in one case where heritage assets form a prominent and influential part of the baseline character, then the effects are predicted to be **minor adverse**.
- 3.8 In terms of cumulative effects, in the context of the multitude of tall buildings that are emerging in close proximity to the Proposed Development, then in all cases the effects are predicted to decline to a **negligible** or no change value.

Historic Built Environment

- 3.9 For the purposes of this assessment, consideration has been given to the relevant part of Manchester City centre that surrounds the Site within a 250m radius. The study area provides a focus for assessment but is not intended to be prescriptive; buildings outside the boundary of the study area are considered where relevant.
- 3.10 The assessment has identified 15 Listed Buildings and 2 Conservation Areas within the 250m

Study Area.

- 3.11 The assessment methodology for the Historic Environment is a synthesis of established guidance, best practice and professional judgement. In accordance with an adapted form of the methodology set out in ICOMOS Guidance for Heritage Impact Assessments (2011), all receptors identified in the baseline which might be affected by the Proposed Development are given a value and the impact on them is assessed in order to give a significance of effect. Historic England guidance is also utilised for the assessment.
- 3.12 The Site is situated within the Castlefield Conservation Area, of which it is considered to be a negative contributor. This is due to the fact that it is largely shorn of historic character due to the historic buildings upon the Site having been removed piecemeal since the 1950s. The Site subsequently yields no heritage value.
- 3.13 The primary focus of the Conservation Area is the Castlefield Basin/ Potato Wharf area and Liverpool Road, as these areas contain a large number of listed buildings, which best characterise the development of the railways and canal network, and associated industry in this part of the city.
- 3.14 Initial discussions with Historic England (2016), alongside the characterisation appraisal of the study area, informed the selection of key views for the visual impact assessment.
- 3.15 Heritage assets are susceptible to numerous forms of development and non-development impacts both during the construction process and as a consequence of the operational life of the Proposed Development. The potential impact or effects in relation to the current Proposed Development have been deemed to relate to impacts on the setting of the identified heritage assets. It is not anticipated that the Proposed Development will result in any physical impacts.
- 3.16 The visual impact assessment has demonstrated that the Proposed Development will have a **minor adverse** impact on the historic built resource as a whole.
- 3.17 In terms of mitigation, heritage considerations have been integral of the design development of the Proposed Development. Enlisting appropriate specialists and consulting with the local authority and Historic England has informed the design and assessment process to ensure potential adverse impact on the identified heritage assets are minimised.
- 3.18 Mitigation for any perceived instances of adverse harm are accrued by the public benefits of the Proposed Development.

Noise and Vibration

- 3.19 As agreed with Manchester City Council, reference has principally been made to previously-conducted noise surveys at and around the Site to establish the pre-existing conditions at nearby noise-sensitive properties.
- 3.20 Noise levels as a result of construction work during the construction period is expected to lead to **negligible to minor adverse** impact. Where appropriate, construction impact will be further minimised by the mitigation methods described in BS 5228. Low noise and vibration construction methods will be used wherever practicable and appropriate acoustic screening will be implemented where necessary and practicable. If the identified mitigation methods are employed, the impact of the construction work during the construction period is expected to be **negligible**.
- 3.21 The impact of construction vibration on existing sensitive receptors is expected to be **negligible**.

- 3.22 The principal long-term potential environmental noise source due to the operation of the Proposed Development is building services plant. Building services plant noise emissions from the Proposed Development will be controlled through careful design and specification of building services plant and by provision of acoustic screens and attenuators where required, to meet the noise emissions criteria at each noise sensitive receptor at and around the Site. As such, **negligible** impact is expected.
- 3.23 The minimum required sound insulation performance of the façade elements to the dwellings of the Proposed Development has been identified. Compliance with the performance criteria should ensure that the impact of environmental noise levels at the Site on the occupants of the Proposed Development is **negligible**.
- 3.24 External noise criteria have been specified for the allowable levels of activity noise egress from the proposed amenity/commercial space. Compliance with the criteria would lead to **negligible** noise effects at sensitive receptors.

Air Quality

- 3.25 A qualitative assessment of construction phase impacts has been carried out. There is a medium risk of dust soiling during earthworks and trackout, but a high risk during construction. In terms of impacts on human health (i.e. PM10 emissions) the construction phase poses a medium risk during earthworks and construction, but a low risk for trackout. Through good site practice and the implementation of suitable mitigation measures, the impact of dust and PM10 releases will be minimised. The residual effect of the construction phase on air quality is therefore not significant.
- 3.26 A quantitative assessment of operational phase impacts has been carried out by modelling road traffic and onsite combustion plant emissions using ADMS Roads and ADMS 5.2 dispersion model - the impact at existing receptors for all pollutants is **negligible**.
- 3.27 The predicted concentrations at new receptor locations are below the relevant AQS objectives for all pollutants, and therefore mitigation is not required.
- 3.28 No exceedances of the 1-hour mean NO₂ objective of 200 µg/m³ are predicted at any of the modelled receptors.
- 3.29 With the Proposed Development operational, all existing and new receptors modelled indicate compliance with the relevant AQS objectives for PM10 and PM2.5.
- 3.30 The residual effect is **not significant**.
- 3.31 Overall, with the recommended mitigation measure in place (construction phase only) the Development complies with legislation, policy and guidance.

Daylight and Sunlight

- 3.32 The impact of the Proposed Development on the levels of daylight and sunlight to the surrounding windows to residential accommodation, hotel accommodation and The Science and Industry Museum (SIM) has been assessed during operation. There is no adverse effect on the SIM buildings as a result of the Proposed Development.
- 3.33 The potential effects of overshadowing have been considered in respect of the adjacent outside amenity space; in this case, there are no adjacent outside amenity space to test. The extent of the windows analysed is based on professional experience and are those that are unable to pass the initial 250 test set by the BRE Report 209.
- 3.34 Whilst not an instrument of planning policy the Building Research Establishment (BRE) Report 209 "Site Layout Planning for Daylight and Sunlight – a guide to good practice" is generally accepted as the industry standard and is used by most local planning authorities in considering the impact on sunlight, daylight and overshadowing that a development may cause. The BRE Report 209 is based on a sub-urban setting (equivalent to the light available over two storey houses across a suburban street), no guidance is given as to suggested daylight and sunlight levels in city centres.

- 3.35 The BRE report 209 states that the numerical guidelines given for a sub-urban environment should be interpreted flexibly and that a higher degree of obstruction may be tolerated in certain circumstances. The urban setting, the unusually good levels of daylight and sunlight coming over the currently vacant development site and the height of neighbouring properties should all be born in mind.
- 3.36 In assessing the impact on daylight and sunlight the current levels (baseline condition) at the Site have been established using a 3D computer model and specialist daylight and sunlight computer software. A second analysis is then run with which included a 3D model of the Proposed Development (operational phase). This specialist software compares the results analyses against the guidance BRE Report 209. Generally, a reduction of levels of daylight or sunlight up to 20% is not considered to be noticeable to occupants; and would meet with the BRE guidance.
- 3.37 The baseline condition demonstrates that many of the adjacent properties are able to meet with the BRE guidance for the windows analysed; surprising given the city centre locality.
- 3.38 The overall effect of the Proposed Development on daylight and sunlight to the surrounding properties is shown in table 1.X. The residential properties have been given a higher level of sensitivity, which has increased the severity of impact. In consideration of the scale of the Proposed Development it is considered that the overall impact on daylight and sunlight is less than would be expected in a typical city centre high rise development. The properties which are most affected in terms of loss of daylight are the Marriott Hotel on Water Street. The figures do not account for the number of rooms which may serve bedrooms, which are considered by the BRE Guide as 'less important' in the context of daylight amenity.
- 3.39 It is important to remember that the overall impact of the Proposed Development is in relation to the adjacent windows facing the Proposed Development rather than the adjacent property as a whole.

Table 3-1 Overall Operational Impacts

Property	Sensitivity	Overall Impact
Marriott Hotel Water Street	Low	Minor- Negligible
Salford Central New Bailey Block A7	High	Minor-Negligible
Salford Central New Bailey Block A6	High	Negligible
Salford Central New Bailey Block A5	High	Negligible
Premier Inn Irwell Street	Low	Negligible
SIM Great Western Warehouse	Low	Negligible
10-18 Leftbank	High	Negligible

Wind Microclimate

- 3.40 The Proposed Development introduces a significant structure with regards to potential wind effects. Consequently, wind tunnel testing of a physical scale model has been combined with long-term wind statistics from Manchester Airport (corrected to apply at the Site) to provide a detailed assessment of pedestrian level wind conditions in and around the Site, in accordance with the industry standard Lawson criteria for pedestrian comfort and safety.
- 3.41 Based on the climate statistics, light to moderate winds from the south and south-south-east are most common at the Site, whilst stronger winds more frequently blow from the south-south-west. Winds from the west-south-west and west also occur frequently, and extreme winds are most likely to blow from this direction. North-easterly winds are also common during spring.
- 3.42 Baseline wind conditions rate (marginally) as unsafe for the general public and are slightly windy, in terms of pedestrian comfort, for leisurely strolling at the junction of Water Street and the access road to Manchester Goods Yard, due primarily to accelerated winds emanating from the consented St John's T1 development. Otherwise, conditions in and around the Site rate as safe for all users and are comfortable for at least pedestrian passage. Main entrances to surrounding buildings enjoy suitable conditions for pedestrian ingress / egress. Amenity spaces in and around the Site generally have suitable or at least tolerable conditions for associated activities, though purposely developed landscaping would be required to create acceptable conditions in the south / southwest of the consented St John's T1 development.
- 3.43 Upon completion, the Proposed Development will represent a significant structure and, in the context of existing surrounding buildings, is relatively exposed at mid-to-upper levels to prevailing southerly winds. The Proposed Development is more exposed, but better orientated, to the most frequent extreme winds from the west-south-west and west. The landscaping and localised building features have therefore been developed to help alleviate resulting accelerated pedestrian level winds.
- 3.44 With these measures implemented, pedestrian level wind conditions rate as unsafe for the general public around the northeast corner of the Site (across the access road and onto Water Street) and at the southwest corner of the St John's T1 site. These effects range from localised major adverse to moderate adverse. Conditions are however improved at the junction of Water Street and the access road to Manchester Goods Yard, representing a moderate beneficial effect. Otherwise, conditions in and around the Site remain rated as safe for all users and the wider effect on pedestrian safety negligible.
- 3.45 However, these effects consider the consented St John's T1 which will not proceed and, even in the highly unlikely event that it did, would require further development of the associated landscaping proposals if it did.
- 3.46 The currently proposed Union T1 includes significantly more landscaping in the open space between the developments and would be expected to help reduce the wind effects along Water Street. This would represent a more likely scenario on initial occupation of the Proposed Development and further development of the landscaping as part of the site-wide strategy for the St John's regeneration area has potential to further alleviate the accelerated winds such that effects on pedestrian safety could be negligible, or at least no worse than localised moderate adverse. Furthermore, as both sites are within the Applicant's control, and they are working in partnership with the master-developer Allied London there is considered scope to further alleviate these effects through holistic wind mitigation across the site.
- 3.47 In terms of pedestrian comfort, the residual effects on thoroughfares, entrances and amenity spaces both within the Site and in the surrounding area are expected to be mainly negligible and no worse than localised minor adverse, with some minor beneficial effects such as at the junction of Water Street and the access road to Manchester Goods Yard.

- 3.48 With the introduction of the proposed Union T1 and consented future surrounding developments, the Proposed Development is significantly sheltered from key wind directions and current landscaping proposals are sufficient to ensure that pedestrian level conditions in and around the Site rate as safe for all users. In terms of pedestrian comfort, conditions within the Site are expected to be mainly suitable for proposed uses, with only the open space on the south side of the Proposed Development marginally windy but tolerable for associated recreational uses. No significant adverse effects on surrounding conditions are expected.
- 3.49 No significant additional construction effects over and above those for the completed Development are expected

Cumulative Effects

Construction Phase

- 3.50 Based on the methodology detailed in Volume 1 of the Environmental Statement, Table 3-2 presents the results of the review of the potential for interactions of individual effects during the construction phase of development.

Figure 3-2 - Type 1 Cumulative Effects - Construction Phase

Sensitive Receptor Group	Construction Phase Residual Effects	Likely Significant Cumulative Effects
Designated and non-designated heritage assets and key views.	Negligible to Minor Adverse effect Heritage Assets (significance preserved).	No likely significant Type 1 cumulative effects.
Nearby residential receptors.	Minor adverse (temporary) impact as a result of air quality, noise and vibration.	No likely significant Type 1 cumulative effects.
Ecology and Biodiversity	Negligible to Minor Adverse as a result of Air Quality and noise	No likely significant Type 1 cumulative effects.

- 3.51 Individual residual effects with the potential to give rise to a Type 1 cumulative effect are predominantly expected to relate to the interaction between temporary adverse air quality and noise and vibration (nuisance) impacts.
- 3.52 The combined effects are not considered likely to pose a significant risk to health or wellbeing for existing residents in the wider area due to the use of best practice construction measures.

Operational Phase

- 3.53 Based on the methodology detailed above, Table 3-3 presents the results of the review of the potential for interactions of individual effects during the operational phase of development. The potential effect interactions are then discussed further.

Sensitive Receptor Group	Relevant Operational Phase Residual Effects	Likely Significant Cumulative Effects
New residents	Negligible effects relating to noise and vibration due to construction activities expected nearby. Negligible effects relating to other uses nearby, such as offices. Negligible to potentially very localised moderate adverse impacts relating to wind microclimate without further mitigation.	No likely significant Type 1 cumulative effects. No likely significant Type 1 cumulative effects. No likely significant Type 1 cumulative effects
Neighbouring residential and hotel properties	Negligible effects relating to noise and moderate adverse effects from Daylight and Sunlight and negligible to potentially very localised moderate adverse impacts related to wind without mitigation.	No likely significant Type 1 cumulative effects.
Townscape views and nearby heritage assets.	Minor adverse to minor beneficial effects on appearance and understanding of the site and its wider surroundings.	No likely significant Type 1 cumulative effects.
Factory arts and culture hub	Negligible effects as a result of noise.	No likely significant Type 1 cumulative effects.
Ecology	Negligible to minor beneficial effects relating to the opening of the river walkway, introduction of trees, and clearing of the canal inlet.	No likely significant Type 1 cumulative effects.

3.54 Individual residual effects with the potential to give rise to a Type 1 cumulative effect are predominantly expected to relate to the interaction between temporary adverse wind, daylight, and noise and vibration (nuisance) impacts.

3.55 The combined noise and vibration effects are not considered likely to pose a significant risk to health or wellbeing due to the use of best practice construction measures.

Mitigation Measures

3.56 Where relevant, the individual residual effects which contribute to the potential cumulation have been considered within the ES and mitigated where necessary and feasible.

3.57 No mitigation is considered to be required for the identified Type 1 cumulative effects, and therefore none are proposed.



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