



Non-Technical Summary 2&3 Angel Square, NOMA

July 2022

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Important notice: This Environmental Statement has been prepared by Deloitte Real Estate, with technical input from Buro Happold, Cartwright Pickard, Planit-IE, and Gardiner and Theobald “the Consultants”. Chapter 1, Volume 1 of this Environmental Statement sets out the parties responsible for preparing each Chapter and associated figures and appendices.

Although we have read the Consultants’ reports for consistency and provide our observations based on our knowledge and experience, we accept no liability or responsibility for the Consultant’s Reports and will not be responsible for the technical content of Chapters 6-9, Volume 1, nor Volume 2, nor the technical content of this associated Non-Technical Summary.

1 Non-Technical Summary

- 1.1 This Environmental Statement (ES) Non-Technical Summary has been prepared in support of a planning application submitted to Manchester City Council (MCC) for an application for Full Planning Permission for an office-led development at 2 and 3 Angel Square, formerly known as Plots M and N, of the NOMA Strategic Regeneration Framework (SRF) area. The Applicant is NOMA (GP) Ltd.
- 1.2 The Proposed Development has evolved following a review of the 2015 and 2020 schemes by the Applicant and design team. It has been revised to provide a more sustainable development that meets the Applicant's ambitious sustainability targets to create a building that its best-in-class in terms of sustainability and the approach to net zero carbon.
- 1.3 The principle of office use at the above site has been established through the 2015 and 2020 Planning Permissions for the Site and by the adopted NOMA SRF (most recently updated in 2020).
- 1.4 The site covers 0.83 hectares of previously developed land and is bounded by 1 Angel Square (the Cooperative Group headquarters), Miller Street, Angel Gardens, and Angel Street.
- 1.5 The Environmental Impact Assessment (EIA) has been carried out in accordance with the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (as amended) ('the EIA Regulations') and best practice guidance.
- 1.6 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 providing greater technical detail is available in the Environmental Statement (ES). The ES is a separate document which has been submitted as part of the planning application. Please see 'Availability of Environmental Statement' for details on how and where to view the ES.

What is being proposed?

- 1.9 The ES has been submitted in order to assess the Environmental Impact of the Proposed Development.
- 1.10 The Proposed Development of 2 and 3 Angel Square will provide high quality Grade A office accommodation (Use Class Egi) comprising two buildings of 13 and 14 storeys. It will comprise 44,525 sq. m (NIA) in total, including:
- 42,862 sq. m (NIA) of office floorspace including:
 - 176 sq. m (NIA) ancillary gym;

- 1,129 sq. m (NIA) of flexible office (Use Class Egi) and/or restaurant (Use Class Eb) space at Level 12;
- 592 sq. m (NIA) of flexible office and /or Sui Generis Use Class (t) Cinema space; and
- 1,663 sq. m (NIA) of flexible commercial retail floorspace across four units at lower and upper ground floor levels.

1.11 The description of development as stated on the Application Form for Full Planning Permission is:

“Erection of 2 Angel Square, a 14 storey building (excluding roof top plant) to form a mixed use office development (Use Class Egi) with two flexible commercial units at Upper Ground floor Level (Use Classes Ea, b, c, e, f, and / or Use Class Sui Generis (p) and (q)), and with a flexible office (Use Class Egi) and/or restaurant (Use Class Eb) space at Level 12, along with Lower Ground Level car and cycle parking, hard and soft landscaping and other associated works;

Erection of 3 Angel Square, a 13 storey building (excluding roof top plant) to form a mixed use office development (Use Class Egi) with two flexible commercial units provided over Lower and Upper Ground Floor Levels (Use Classes Ea, b, c, e, f, and / or Use Class Sui Generis (p) and (q)), a further flexible commercial unit at Upper Ground Floor Level only allowing for ancillary seminar space and / or Sui Generis Use Class (t) Cinema space, together with an ancillary gym space at Upper Ground Floor, as well as Lower Ground Level car and cycle parking, hard and soft landscaping and other associated works.”

1.12 The Site is located within NOMA, a key regeneration area that is undergoing significant change and renewal. It is identified within Manchester’s Development Plan as being located within the regional centre and city centre fringe, where there is a focus to support economic growth and access to job opportunities. The Site is also allocated for commercial / business uses under Unitary Development Plan (UDP) Saved Policy HC10b. It is also identified within the endorsed NOMA Masterplan and SRF as a location for office-led use.

1.13 The office use with ancillary retail and leisure uses at the lower floors has also already been established through the 2015 and 2020 Planning Permissions for the Site.

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

Where is this happening?

1.15 The Application Site is located on the northern edge of Manchester City Centre and forms Plots M and N (to be known as 2&3 Angel Square) of the 20 acre NOMA Masterplan. It comprises circa 0.83 hectares of previously developed land.

1.16 The Site is bounded by Rochdale Road / Angel Street to the north and Miller Street to the south. To the east of the Site is Angel Mews which provides a north / south pedestrian link and public space between the Site and Angel Gardens. The Co-operative Group Headquarters, 1 Angel Square, is located to the west beyond Angel Square public realm.

What is located on the Site at the moment?

1.17 The Site has been historically underutilised and comprises areas of a hardstanding for surface car parking alongside informal and formal areas of shrubbery and trees. The temporary NOMA Marketing Suite (approved in May 2021 under temporary Planning Permission Ref.

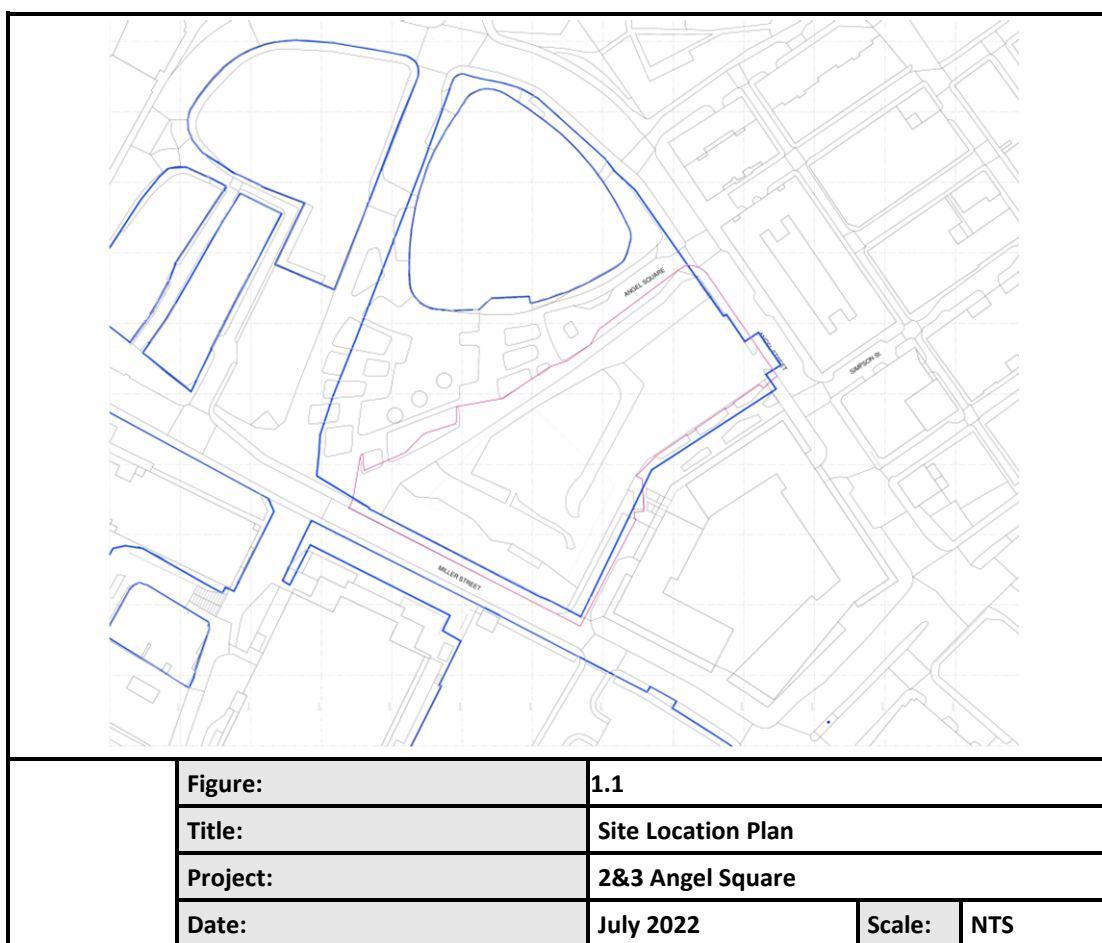
129631/FO/2021) is currently under construction within and to the south of the Site adjacent to Miller Street.

1.18 The Site is not located within a Conservation Area and there are no Listed Buildings on site, however a number of heritage assets have been identified in the vicinity of the Site.

1.19 There are 23 trees within the Site, with the majority comprising lower quality trees and none subject to a Tree Preservation Order. There are no environmental designations with respect to Ecology within the Site. Furthermore, there are no identified sites with ecological designations within the vicinity of the Site.

1.20 Figure 1.1 below shows the Site location plan.

Figure 1.1 Site location Plan (Cartwright Pickard).



Why is this development being brought forward?

1.21 The Site is allocated for business or commercial development under part b of UDP Saved Policy H10. It also forms Plots M and N (to be known as 2 and 3 Angel Square) of the 20-acre NOMA SRF (2020), which sets out a commitment for the Framework area to create a commercially led, mixed use destination underpinned by core development objectives of job creation, placemaking and supporting communities.

- 1.22 Since endorsement of the first NOMA Framework in 2009 the development context for NOMA has evolved and NOMA has had to respond to this. For example, through the endorsement of earlier Framework updates in 2010, 2013 and 2015, NOMA has shifted from being a mixed residential and commercial development, to one that is now commercially led as identified in the 2020 SRF.
- 1.23 In November 2015, planning permission was granted at the Site for the *“Erection of a part 10 / part 11 storey, and a part 12 / part 13 storey building with plant rooms above to form a mixed use development comprising Class B1 office use (maximum of 49,622sq.m) and commercial units maximum of 1,591sq.m (Use Classes A1, A2, A3, B1 and D1) along with associated basement car parking, hard and soft landscaping and associated works, including the creation of a new pedestrian route between Angel Street and Miller Street”* (Ref. 109865/FO/2015/N1) (‘the 2015 Planning Permission’).
- 1.24 The 2015 scheme was fully in accordance with the NOMA Masterplan, but neither phase of the 2015 Planning Permission was implemented prior to expiration.
- 1.25 In February 2020 Planning Permission was granted for a revised scheme for 2 and 3 Angel Square comprising the *“Erection of an 11 storey building and a 12 storey building with plant rooms above to form a mixed use development comprising 39,184 sq. m (NIA) of Class B1a office use and commercial units of 1,286 sqm (NIA) (Use Classes A1, A2, A3, A4, B1a and D1) along with associated lower ground level car parking, hard and soft landscaping and associated works, including the creation of a new pedestrian route between Angel Street and Miller Street”* (Ref. 124973/FO/2019) (‘the 2020 Planning Permission’).
- 1.26 The 2020 Planning permission remains extant until 30 September 2022.
- 1.27 A further revised scheme for both 2 and 3 Angel Square is now proposed to bring forward a more sustainable development; to create ‘next generation’ buildings in terms of sustainability and net zero carbon.
- 1.28 The Proposals seek to bring forward commercially-led development on this strategically important Site, fully in accordance with this policy and the SRF principles.
- 1.29 The Proposed Development will make a significant contribution towards the strategic vision of both NOMA and the Northern Gateway through the delivery of two landmark office buildings, which will help to act as a catalyst for the next phase of development at NOMA, as well as creating a new physical and visual connection between the historic NOMA estate and the Northern Gateway.

Who has been consulted?

- 1.30 At all stages of the design development process, the Applicant and design team have sought to undertake early consultation with key stakeholders, building on the consultation completed in respect of the original scheme in 2015 and the 2020 Planning Permission.
- 1.31 The pre-application consultation strategy was designed to reflect guidance within MCC’s adopted Statement of Community Involvement (2018) and the NPPF.
- 1.32 A public engagement exercise was undertaken for local residents and interested parties to learn more about the proposals and provide feedback to the Applicant and project team. The public consultation went live on Friday 6 May 2022 and ran initially until Thursday 17th June 2022.

- 1.33 During the pre-application consultation, a range of communication methods were used to provide information about the proposals and ensure that people had the opportunity to provide their feedback. These methods included:
- A consultation leaflet sent to approximately 4,279 nearby commercial and residential properties.
 - A dedicated consultation website on the NOMA Engage website which included a short questionnaire for people to leave their feedback.
 - Direct emails were issued to key stakeholder groups and to immediate site neighbours and adjoining landowners and businesses.
 - A press release that was submitted to local media outlets.
- 1.34 A drop-in event also took place on 17th May 2022. Three members of the public attended the event.
- 1.35 On the day that the public consultation went live (Friday 6 May 2022), the project team met with Councillor Douglas to brief them on the proposals. Councillor Douglas expressed support for the Proposed Development, in particular for the delivery of a more sustainable development.
- 1.36 Pre-application consultation also took place with MCC planning officers, the Flood Authority, United Utilities, Environmental Health, Historic England, PlacesMatter! Greater Manchester Police, and GMAAS.
- 1.37 These matters have been considered by the Applicant and design team in finalising the Proposed Development. Detailed responses to the feedback received are provided within the Statement of Consultation prepared by Deloitte and Counter Context.

The Proposed EIA Development

What will the redevelopment process involve?

- 1.38 Broadly, the construction process of the Proposed Development will involve:
- Site clearance and enabling works;
 - Earthworks, levelling and ground compaction;
 - Laying foundations and piling;
 - Building of the new structures;
 - External works and hard and soft landscaping;
 - Public realm works; and
 - Internal fit out of the main structures.
- 1.39 Machinery used during redevelopment will consist of standard construction plant, and will include plant items such as: excavators, mobile cranes, compacting and vibrating mechanical plant, wheel washing and road sweeping equipment.
- 1.40 The Site will be secured and surrounded with hoardings to ensure public safety and mitigate adverse environmental effects during construction.

How long will it take?

- 1.41 At this stage it is not yet known how the delivery of the Proposed Development might be phased; there are several potential scenarios that could arise dependent on the requirements of future occupiers. These scenarios are outlined below:
- Scenario 1: 2 Angel Square delivered first; or,
 - Scenario 2: 3 Angel Square delivered first; or,
 - Scenario 3: Both buildings delivered concurrently.
- 1.42 A Phasing Plan has been prepared by Cartwright Pickard in conjunction with the Applicant and project team (Drawing Ref. 947-CPA-ZZ-00-DR-A-0150). The Phasing Plan identifies the extent of development, including public realm, which would be delivered in Scenario 1 and 2; it has been used to form the completion of the EIA and other technical assessments.
- 1.43 In indicative construction programme for the most likely scenario (Scenario 1) is provided in Table 1.1 below.

Table 1.1 Anticipated Construction Programme for Scenario 1

Site Preparation and groundworks	Jan 2023
Piling	Feb 2023
Substructure	March 2023
Superstructure	October 2023
Façade Construction	April 2024
Internal Fit-Out	May 2024
Completion of the Works & De-mobilisation	Jan 2025

- 1.44 This programme is based on normal construction working hours in line with MCC Guidance of 7.30am to 6pm Monday to Friday and 8am to 2pm on Saturdays. No works will occur outside these hours unless agreed in advance with MCC.
- 1.45 It is not yet possible to define a programme for the completion of both buildings. The Applicant highlights that there are multiple risks involved in the development process. This may result in the programme ultimately being extended in the event delays are caused by sustained periods of poor weather, unexpected ground conditions or other abnormals, volatility in economic and housing markets, political uncertainty, the availability of funding and any on-going effects from COVID-19.

What will it look like afterwards?

- 1.46 The development comprises two distinct blocks with a central public realm between the two buildings and the Angel Mews passageway defining the boundary between 2 and 3 Angel Square and Angel Gardens Residential to the east.
- 1.47 The layout includes:
- 2 Angel Square – a 14 storey office building which includes lower and upper ground floor; and,
 - 3 Angel Square – a 13 storey office building which includes lower and upper ground floor.

- 1.48 The lower ground floor layout for 2 Angel Square comprises the office entrance lobby, internal car and cycle parking and changing facilities, plant equipment and ancillary functions. The upper ground floor for 2 Angel Square includes office floorspace and two commercial retail units with supporting external seating on the plinth level.
- 1.49 The lower ground floor layout for 3 Angel Square comprises the office entrance lobby and two commercial retail units facing onto Angel Square with supporting external seating. It also includes internal cycle and car parking and changing facilities, in addition to plant equipment and ancillary functions. The upper ground floor for 3 Angel Square includes an ancillary gym, the upper floors of the two flexible commercial retail units with supporting external seating on the plinth level, and a flexible office and / or Sui Generis Use Class (t) Cinema space.
- 1.50 The external appearance for 2 and 3 Angel Square has been designed to be in keeping with its surroundings whilst providing a distinctive character that will stand out within Manchester City Centre and be seen as an attractive place for occupiers.
- 1.51 The facades of both buildings are made up of the same basic components but differ in their arrangement across all the facades, providing a significant amount of variation in the proportions of the solid and glazed elements. These also differ due to their environmental performance requirements dependent on solar aspect.
- 1.52 The choice of materials proposed has also been carefully considered in terms of the site location and context, quality, and their embodied carbon impact. The proposed material comprises high-quality terracotta tiles.
- 1.53 This material is not only high-quality and low in terms of embodied carbon but has an element of reflectivity which catches light and shadow and will create interesting movement across the façade dependent on how light will hit the buildings.
- 1.54 The two buildings have their own distinctive identity through the façade treatment and particularly through the colour of the proposed terracotta tiles chosen to echo the materiality of the adjacent neighbourhoods.
- 1.55 The façade for 2 Angel Square is proposed to comprise red terracotta tiles from 1st floor upwards, which reflects the red tones of buildings in the northern gateway neighbourhood and wider NOMA area.
- 1.56 In contrast, the façade for 3 Angel Square is proposed to comprise blue terracotta from 1st floor upwards, which reflects the materiality and tones of buildings within the listed NOMA estate to the south.
- 1.57 The landscape proposals have been designed by Planit-IE and will form an integral part of the wider NOMA public realm. The landscape has been designed to feed seamlessly into the local green infrastructure, including the existing and proposed Angel Square public realm, Angel Meadow Park, the nearby Green Quarter, and further beyond to the Irk Valley.
- 1.58 The significant level change between Angel Square and the Mews provides the opportunity to create a dynamic series of steps, pocket gardens and terraces that overlook the new square and create a desirable place for people to gather and meet. A series of green spaces with tree planting and a water feature will be woven through the terraces to provide an attractive setting, which better connects through from Angel Gardens to Angel Square.

- 1.59 Much of the landscaping on Thread Street / Angel Mews has already been delivered as part of the Angel Gardens development
- 1.60 As part of this Proposed Development, landscaping to Thread Street proposes hard landscaping to tie seamlessly into that already delivered at Angel Gardens. At the southern end of Thread Street, there will be a requirement for some localised remodelling and adjustment of the existing public realm to coordinate with the new buildings and landscape. Thread Street will deliver a green corridor through the Site and forms an important part of the wider NOMA landscaping.
- 1.61 The address to Angel Street includes new proposed tree planting, which will provide a green boundary to the Site. Miller Street also comprises a range of tree planting, cycle storage, a smoking shelter, and decorative wind baffles designed sympathetically to provide an attractive street scene along Miller Street. A living wall is also proposed to the east of the elevation to soften the building edge to Miller Street.
- 1.62 The positioning of trees and planting throughout the public realm proposals has played a key role in providing mitigation to minimise wind impact across the Site as described further within the Wind Chapter below.

Alternative Options

- 1.63 The EIA Regulations require the ES to identify the main alternatives that were considered during the design process.
- 1.64 The Proposed Development has been influenced by a range of factors, including location, surrounding land use and input from MCC, Statutory and Non-Statutory Consultees and other stakeholders.
- 1.65 The wider project team has also played an important part in influencing the design of the Proposed Development to ensure that likely significant environmental effects are avoided or mitigated. The resulting scheme is described in 'The Proposed Development'.
- 1.66 A number of alternatives have been considered in relation to the Site and Proposed Development. These include no action (the 'Do Nothing' scenario), alternative sites, alternative uses, and alternative layouts and designs.
- 1.67 The "do nothing" scenario has been discounted due to the established need for the regeneration of the Site and the benefits it will bring.
- 1.68 The Site is subject to subject to the NOMA SRF, which was endorsed by Manchester City Council's Executive Committee (most recently in 2020, having originally been endorsed in 2009 and updated in 2010, 2013 and 2015). The NOMA SRF identifies the Site as a strategic regeneration site for the delivery of new employment-generating uses.
- 1.69 It is also located in the City Centre Fringe, which is confirmed in the adopted Manchester Core Strategy as a focus for economic growth primarily for B1 Office use (now Use Class Egi), in accordance with Policy CC1 (Primary Economic Development Focus: City Centre and Fringe).
- 1.70 The Site is also allocated for commercial / business uses under UDP Saved Policy HC10b.
- 1.71 The Site forms a natural extension to the existing Manchester City Centre settlement, and has the potential to provide economic, regeneration, and employment benefits which will contribute to

wider strategic aims of the region. The Site's urban location, transport links, brownfield nature, and ability to sustainably contribute to wider strategic aims are key elements in its selection as a suitable site for commercial-led, mixed-use development. Within the above context, it is not considered appropriate to consider alternative sites.

- 1.72 The Proposed Development will predominately be commercially led with the provision of Grade A office accommodation, which is in line with the requirements of the adopted NOMA SRF, the Manchester Core Strategy, and the Saved Policies of the UDP. The inclusion of retail, leisure and community units at ground floor level (Use Classes Ea, b, c, e, f, and / or Use Class Sui Generis (p) and (q)) will ensure that a mixed-use agenda can be promoted on-site and will serve existing and future occupiers of the Proposed Development and the wider area. The NOMA Framework area as a whole promotes a mixed-use vision across the estate of which the commercial element within these proposals is an important part.
- 1.73 As such, the consideration of alternative uses was not considered to be appropriate.
- 1.74 Alternative layouts and designs have been considered throughout the design process and have been informed by consultation with stakeholders and the public and by the Project Team, as addressed within the Design and Access Statement.
- 1.75 Considerations around alternative layouts and designs reflected upon a number of options. However, the Proposed Development is considered to represent the most appropriate design in respect of the various considerations influencing the design.

Environmental Impact Assessment

What is an EIA?

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

What environmental effects does the EIA consider?

- 1.81 EIA Scoping has been undertaken to identify the likely significant effects on the environment that may arise from the construction and operational phases of the Proposed Development. This was done with reference to best practice guidance.

- 1.82 The results of the scoping exercise have determined the technical subject areas of the EIA, set out in Table 1.2.

Table 1.2: Scope of EIA

EIA Subject Areas
Wind
Daylight, Sunlight and Overshadowing

- 1.83 A copy of the EIA Scoping Report is included at Appendix 2.1 of Volume 2 of the Environmental Statement; at the time of submission an EIA Scoping Opinion had not been received by the LPA. Table 1.3 illustrates the organisations that have been consulted during the pre-application process.

Table 1.3: List of Consultees Engaged With

Consultees
Manchester City Council Planning Authority
Historic England
Greater Manchester Police
Greater Manchester Archaeological Advisory Service
Manchester City Council Environmental Health Officers
Lead Local Flood Authority
United Utilities

- 1.84 The following topics were not included in the assessment, as they were identified as not likely to have significant environmental effects and have therefore been 'scoped out' of the EIA:

- Agricultural Circumstances;
- Air Quality;
- Archaeology;
- Aviation;
- Climate Change;
- Ecology;
- Electronic Interference;
- Ground Conditions;
- Heritage and Visual Impact;
- Human Health;

- Light Spillage and Solar Glare;
- Noise and Vibration;
- Socio-Economic Issues;
- Transport;
- TV Reception; and
- Water Resources, Drainage and Flood Risk.

1.85 In addition to the effects resulting from the Proposed Development, other developments within the wider area have been considered. This is to account for any accumulation between effects resulting from the Proposed Development and from these surrounding developments.

1.86 The Applicant has agreed the nearby schemes for inclusion with MCC in the cumulative assessment via the scoping process. For further details on the identified cumulative developments please refer to Volume 2 (Appendix 2.2) of the Environmental Statement.

How will environmental effects be managed?

1.87 Environmental controls (or mitigation measures) will be introduced to eliminate, reduce or offset likely significant adverse environmental effects resulting from the Proposed Development. Mitigation measures are described in greater detail in the individual technical ES chapters (6 and 7), and summarised in Chapter 8 of the ES.

1.88 The environmental controls proposed include:

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

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

Who has been involved in the EIA process?

1.90 The EIA process has involved communication and collaboration between the Applicant, Deloitte LLP, MCC, the Project Team, statutory consultees, and the public.

1.91 Table 1.4 shows the consultants and their roles.

Table 1.4: EIA Project Team

Role	Organisation
The Applicant	NOMA (GP) Limited
Architects	Cartwright Pickard
Landscape Architects	Planit-IE
Town Planning, EIA Co-ordination	Deloitte LLP
Construction Management and Phasing	Deloitte LLP and Gardiner and Theobald
Daylight, Sunlight and Overshadowing	Buro Happold
Wind Microclimate	Buro Happold

What were the results of the EIA?

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

1.93 This section is organised into technical subjects. Greater detail can be found in the relevant chapters of the Environmental Statement (6 and 7) and their technical appendices.

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

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

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

1.96 A summary of proposed mitigation measures and residual effects is also included in Chapter 8 of the ES Volume 1.

Significance of Effects

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

- 1.98 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.
- 1.99 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 and 7).
- 1.100 Table 1.5 illustrates how most significance ratings were determined.

Table 1.5: Significance of Effect Ratings

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

- 1.101 For the purposes of the EIA, effects concluded to be 'moderate' or 'major' are considered to be significant, while 'minor' or 'negligible' are considered not significant.
- 1.102 The following sections of this NTS summarise the individual assessments conducted for each topic considered within the Environmental Statement.

Construction Management and Phasing

- 1.103 Construction Management and Phasing is considered in Chapter 5 of the ES.
- 1.104 The Construction (Design and Management) Regulations 2015 will apply to this project and all appropriate controls and systems will be in place to comply with the standards of the Regulations and associated guidance.
- 1.105 Every stage of the project will be pre risk assessed and appropriate controls applied, sub-contractors will be pre vetted and will be subject to extensive pre contract requirements of information transfer and risk assessment.
- 1.106 A fundamental aspect of the Principal Contractor's role is the development of a Construction Management Plan, which will take account of all known risks, which have been identified at pre-

construction stage by the Principal Designer/CDM Consultant, the Design Team and also through Site investigations.

- 1.107 The detailed Construction Management Plan, prepared on the basis of the details in the Construction Management ES Chapter, will describe arrangements and procedures for managing these key risk areas in more detail, as well as any future risk, and also the resources, including personnel, which will be applied to the scheme and which will ensure the Health and Safety of all those working on or affected by the project works.
- 1.108 NOMA (GP) Limited will have an on-going process of monitoring health and safety standards throughout its organisation. This is normally done directly (on site) by the Site management team through regular inspections, toolbox talks etc. and also via the risk assessment process both during the completion of risk assessments and then by monitoring the effectiveness of risk control measures, which have been implemented. Site managers will also undertake regular reviews of safety on site, including any accidents or incidents and any matters raised will be dealt with accordingly.
- 1.109 Health and safety is also incorporated as a fundamental aspect of the overall project review, the Applicant is yet to appoint a principal contractor, but has appointed, but the selection process will take full consideration of competency in the management and execution of Health and Safety.
- 1.110 The Main Contractor will at the earliest possible stage of the project enter into dialogue with all relevant parties, including neighbours to ensure there is effective coordination throughout all stages of construction.

Daylight, Sunlight and Overshadowing

Introduction

- 1.111 Daylight, Sunlight and Overshadowing is considered in Chapter 6 of the ES. This assessment of daylight, sunlight and overshadowing was undertaken in June 2022 by Buro Happold using guidance provided in BR209 "Site Layout Planning for Daylight and Sunlight, A Guide to Good Practice" (2022) in line with national planning policy and local policy.
- 1.112 The purpose of the assessment is to indicate the potential effects of the Proposed Development on daylight and sunlight access at surrounding residential buildings and amenity areas and on amenity areas within the Site.

Methodology

- 1.113 The daylight, sunlight and overshadowing assessment for the EIA comprises the following elements:
- Identification of existing sensitive receptors, comprising windows of habitable rooms and open amenity spaces, and new amenity spaces created within the Proposed Development that are likely to be impacted by the Proposed Development with respect to a loss of daylight and sunlight;
 - Assessment of the level of reduction in daylight and sunlight received by existing windows of habitable rooms compared against pre-development baseline conditions;

- Assessment of the extent of overshadowing to existing amenity spaces and future amenity areas created within the Site;
- Levels of reduction in daylight and sunlight received by sensitive receptors was compared against significance criteria to determine the effect of the Proposed Development on its surroundings;
- Sunlight access on amenity spaces within the Site were compared against BR209 recommendations
- Potential mitigation measures to limit the effect of the Proposed Development on its surroundings with respect to a loss of daylight and sunlight were considered
- Residual effects of the Proposed Development on its surroundings following consideration of mitigation measures were determined

1.114 While BR209 has been used as a guide a level of adaption has been considered in the appraisal of the results to consider the city centre, NOMA Masterplan and SRF context and site constraints. Dense urban areas and city centre developments, such as the Proposed Development, may often experience greater site constraints when compared to low-rise suburban areas, and thus a high degree of obstruction is often unavoidable.

Baseline

- 1.115 The existing site condition, as of 2022, is an open area with no existing buildings, other than the temporary marketing suite located to the south of the Site, which offers no obstruction of light to the existing surrounding buildings. This provides a baseline condition which distorts the existing baseline when considered within a city centre environment.
- 1.116 In view of the unusually unobstructed pre-development Site condition, we have adopted the approach of setting alternative targets to the main recommendations of BR209, the justification for which is set out in BR209. In this assessment a reduced target for daylight access, consistent with a city centre location and typical of existing building densities near the Site is adopted and the change from the pre-development to post-development condition is assessed against a baseline where each assessed building faces a mirror image of itself on the Site, representing more typical surroundings found in a city location.

Summary of Likely Effects

- 1.117 A reduction in light levels was identified within residential properties on Angel Street (Linx building) due to a reduction in access to daylight and direct sunlight, resulting in a **moderate adverse, long term** overall effect.
- 1.118 Importantly, the upper storeys and the northern end of the Angel Street elevation include a proportion of negligibly affected windows (24.5% of total), whilst the corner living rooms and upper storey apartments are dual aspect, lessening the impact of loss of light to the Angel Street elevation. Furthermore, 28% of affected windows are bedrooms, having a lesser requirement for daylight than living rooms and no specific requirement for sunlight.
- 1.119 A reduction in light levels was identified within residential properties in lower storeys on the northwest elevation of Angel Gardens due to a reduction in access to daylight and direct sunlight, resulting in a **moderate adverse, long term** overall effect.

- 1.120 Importantly, the majority of northwest facing windows are on the high-rise part of Angel Gardens and are negligibly affected. Corner living rooms are dual aspect, lessening the impact of loss of light to the Angel Mews elevation and 43% of affected windows are bedrooms, having a lesser requirement for daylight than living rooms and no specific requirement for sunlight.
- 1.121 A **moderate to major, long term** effect on sunlight received by amenity spaces to the north of 2 Angel Square, between 2 Angel Square and Angel Gardens and between 2 Angel Square and 3 Angel Square was identified.
- 1.122 These areas are seen as an extension to Angel Square, which will be the focus for seating area, and which does meet BR209 guidance. Area 4 will form a link between the Mews and Angel Square and will be designed to incorporate high quality materials and landscaping to achieve an attractive environment. When considered as a single public realm space incorporating Areas 1 to 5, BR209 guidance is met with 81.4% of the combined area receiving at least 2 hours of direct sunlight on the 21st of March.

Mitigation

- 1.123 Following pre-application meetings with the local authority, the scale of 2 Angel Square was reduced to drop down in scale from Angel Square towards Angel Street, thus mitigating the impact on daylight and sunlight to neighbouring sensitive receptors.
- 1.124 A high proportion of glazing is specified on the Proposed Development to make the buildings more translucent and reflective in appearance, helping to preserve access to light at opposite buildings.

Cumulative Effect

- 1.125 Committed developments identified elsewhere in the ES will not pose a combined impact to currently identified residential receptors (Linx and Angel Gardens) due to their separation distance from the Site.

Residual Effects

Summary of Residual Effects

- 1.126 Further supplementary mitigation measures beyond those included in the scheme design, e.g., a reduction in building massing, are not considered to be consistent with the strategic objectives of the NOMA Masterplan and SRF and are not proposed, therefore residual effects are unchanged from the likely effects identified above
- 1.127 Whilst an overall **moderate adverse** effect is indicated as a residual effect on adjacent residential receptors, it should be noted that the buildings being proposed are of a scale that is in keeping with the existing context and affect only the Angel Street elevation of the Linx Building and the northwest facing elevations of the low-rise part of Angel Gardens. The overall change from the baseline condition to the Proposed Development condition is considered to be of **moderate impact**.

Table 1.6 Daylight, Sunlight and Overshadowing Likely Significant Effect, Receptor, Mitigation and Residual Effect

Likely Significant Effect	Receptor(s)	Mitigation Measure	Residual Effect
Construction Phase			
During construction, the scheme will transition from the baseline to the fully operational state; the fully-built scenario represents the worst case, so temporary construction effects have not been considered in this assessment.	N/A	N/A	N/A
Operational Phase			
Noticeable reduction in light levels within residential properties due to reduction in access to daylight and direct sunlight.	Existing residential properties on Angel Street (Linx building): Main living rooms (72% of assessed windows) Not main living rooms (28% of assessed windows) Overall Angel Street elevation	N/A	Major - Moderate adverse, long term, on individual windows - mitigated by living rooms having more than one window and some living rooms being dual aspect. Note that upper storeys below roof overhangs and corner units below balconies experience considerable self-shading in the baseline condition. Moderate – Minor adverse, long term - these windows have a lesser requirement for daylight than living rooms, in the context of BR209 guidance Moderate adverse, long term: Upper storeys and the northern end of the Angel Street elevation include a proportion of negligibly affected windows (24.5% of total).

Likely Significant Effect	Receptor(s)	Mitigation Measure	Residual Effect
Noticeable reduction in light levels within residential properties due to reduction in access to daylight.			• Corner living rooms and upper storey apartments are dual aspect, lessening the impact of loss of light to the Angel Street elevation. • 28% of affected windows are bedrooms, having a lesser requirement for daylight than living rooms and no specific requirement for sunlight.
	Existing residential property (Angel Gardens):	N/A	
	Main living rooms (57% of assessed windows) Not main living rooms (43% of assessed windows) Overall northwest facing elevations		Major adverse, long term - low-rise windows only are affected, all tower windows experience a negligible impact. Moderate adverse, long term - these windows have a lesser requirement for daylight than living rooms, in the context of BR209 guidance. Moderate adverse, long term: • The majority of northwest facing windows are on the high-rise part of Angel Gardens and are negligibly affected. • Corner living rooms are dual aspect, lessening the impact of loss of light to the Angel Mews elevation. • 43% of affected windows are bedrooms, having a lesser requirement for daylight than living rooms and no specific requirement for sunlight.
Reduction in sunlight hours to existing amenity spaces	Existing amenity spaces 1, 6 & 7	N/A	Negligible
	Existing amenity space 5	N/A	Major adverse, long term - These areas are seen as an extension to Angel Square, which will be the focus

Likely Significant Effect	Receptor(s)	Mitigation Measure	Residual Effect
Poor access to sunlight to proposed amenity spaces			for seating area, and which does meet BR209 guidance. When considered as a single public realm space incorporating Areas 1 to 5, BR209 guidance is met with 81.4% of the combined area receiving at least 2 hours of direct sunlight on the 21 st of March.
	Proposed amenity spaces 2 & 4	N/A	Moderate-major adverse, long Term - These areas are seen as an extension to Angel Square, which will be the focus for seating area, and which does meet BR209 guidance. When considered as a single public realm space incorporating Areas 1 to 5, BR209 guidance is met with 81.4% of the combined area receiving at least 2 hours of direct sunlight on the 21 st of March.
	Proposed amenity space 3	N/A	Negligible

Wind Microclimate

Introduction

- 1.128 Wind is considered within Chapter 7 of the ES. This quantitative assessment has been prepared by Buro Happold Engineering and assesses the likely Wind Microclimate effects of the Proposed Development upon the Site and the surrounding area, including in a future scenario where other committed developments are built out. This Chapter also describes the methods used to assess these effects, the existing baseline conditions, the proposed mitigation measures required to prevent, reduce or offset any significant negative effects and the likely residual effects after these measures have been adopted.

Assessment Methodology

- 1.129 The criteria used in this study were based on the LDDC version of the Lawson Criteria (henceforth referred to as 'LDDC Lawson Criteria'). Like most criteria used in assessments of pedestrian wind conditions, it relates to a threshold wind speed and a threshold frequency to the suitability of an activity. A Computational Fluids Dynamic Assessment was carried out to assess the impact the Proposed Development will have on site. The new activities introduced to the Site have been accounted for.
- 1.130 A phased approach was studied that includes the assessment of Plots 2 and 3, individually and together.

Baseline

- 1.131 A quantitative study has been undertaken to predict and analyse wind conditions for the detailed planning application. The baseline model was produced to determine the reference conditions on the Site. A CFD study was carried out to support the wind assessment; it provides an indication of the wind effects on-site.
- 1.132 To understand the baseline wind conditions, the assessment used good quality long-term weather data from MET data for Manchester Airport. This is the most appropriate data for use within this assessment and has been used for other applications in Manchester city centre. The highest wind speeds occur during the winter.
- 1.133 Knowledge of the existing use of various parts of the Site and neighbouring buildings and open spaces was based on a site visit undertaken to assess the likely pedestrian activity.
- 1.134 In the baseline condition, the Site is largely open to the east and south, resulting in possible exposure to winds from these directions. Comfort maps were created which combines the calculated wind speeds from the CFD simulations and the wind frequency data for the last 10 years. The map provides an overall picture of the wind conditions relating to certain pedestrian activities, indicating when acceptable conditions are achieved for the proposed activities.
- 1.135 Analysis of wind speeds on site suggests that pedestrian level conditions in the exposed areas are suitable for “Pedestrian standing” for much of the year. During the worst season it may feel uncomfortable with “pedestrian walking” conditions to the south and southwest of the site and “Pedestrian walk through” around the east corner of the CIS tower and west corner of Angel Gardens. This is likely caused by the large wind façade downwash and wake created by the CIS Tower. The CIS Tower is quite exposed to prevailing southerly winds.
- 1.136 Current site activities are assumed to be “Pedestrian walking” and “Pedestrian walk through”. Conditions are expected to be suitable for these activities; however, it is likely that pedestrians will feel exposed during any high wind conditions and will feel “uncomfortable” particularly in winter.
- 1.137 Towards the north of the site, closest to One Angel Square it is suitable for “Pedestrian sitting” during the summer. During winter, the same area is suitable for “Pedestrian Standing”.
- 1.138 In relation to the baseline safety assessment, the north and east corner of One Angel Square is exposed, and the results indicate that conditions are likely to be above the safety criteria (more than 2 hours per year of wind speeds above 15m/s). The areas of safety exceedance are several meters in size.
- 1.139 A future baseline was not considered as although climate change is currently expected to have significant effects at a national level, wind conditions are not likely to change sufficiently to require specific analysis.
- 1.140 For the Proposed Development, the design team provided information regarding the intended usage of different parts of the Site. This included streets and paths proposed for pedestrian walkways and areas where outdoor amenity space will be located.

Summary of Likely Effects, Mitigation and Residual Effects

- 1.141 Wind conditions on site are tolerable for diverse activities in most areas, and no safety concerns/failures were found within the Proposed Development or the nearby perimeter with mitigation.
- 1.142 The baseline conditions show areas of wind acceleration on Miller Street and Rochdale Road. These areas of wind acceleration are influenced by the One Angel Square, CIS and Plot L (Angel Gardens) buildings.
- 1.143 All of these existing conditions are outside the redline boundary of the Proposed Development. The Proposed Development has a **minor beneficial** effect in reducing wind speeds at these areas, however the conditions along Miller Street and Rochdale Road remain as shown in the existing baseline for comfort. The Proposed Development helps to remove the safety areas found in the baseline conditions; this is a **major beneficial** effect.

Mitigation

- 1.144 The landscape strategy has been developed in consultation with the design team and the wind modelling results at every stage of the project. This has allowed the deployment of soft and hard landscaping to specific locations within the Site. The landscaping scheme has responded to the need to minimise façade downwash and wind acceleration at ground level.
- 1.145 Mitigation in the form of wind screens have been incorporated along Miller Street and to the North of the 2 Angel Square within the public realm.

Cumulative Effects

- 1.146 The cumulative effects were found to be **negligible**.

Summary of Residual Effects

- 1.147 The residual effects predicted are **negligible** for most parts of the Masterplan, with some **major beneficial** effects around the CIS Tower and the One Angel Square and associated public realm.
- 1.148 The addition of landscape on Miller Street and towards the northeast of the development has proved to work in reducing wind speeds. However, adverse wind conditions are likely to remain **minor adverse to negligible** at the top of Angel Street and on the corner with Rochdale Road. Other areas within the development are likely to be suitable for the planned activities once landscape and mitigation measures have been implemented.
- 1.149 The residual effects predicted are **negligible** for most parts of the Proposed Development, with some **major beneficial** effects around the CIS Tower, One Angel Square and associated public realm.

Table 1.7 Wind Likely Significant Effect, Receptor, Mitigation and Residual Effect

Likely Significant Effect	Receptor	Mitigation	Residual Effect
Construction Phase			
Wind	Pedestrians surrounding the site during the demolition and construction phase	None required	Negligible
Operational Phase			
Wind	Pedestrians walking along Miller Street	None required	Moderate beneficial to Negligible
	Pedestrians walking along Angel Street	None required	Negligible
	Pedestrians walking at the corner of Angel Street and Rochdale Road	Wind screens, perennial trees	Minor adverse to negligible
	Pedestrians walking along Angel Street– with 2 Angel Square delivered first and in isolation	Trees and wind screens north of the building	Moderate beneficial to Negligible
	Pedestrians walking at the southwest corner of 3 Angel Square delivered first and in isolation	Trees and wind screens.	Moderate beneficial to Negligible
	Recreational use of areas within the masterplan area	None required	Major beneficial to Negligible

Availability of Environmental Statement

1.150 The ES is available for public viewing online via MCC's Public Access website, and during normal office hours at the following address:

Planning Department
Manchester City Council
Town Hall
Manchester
M2 5DB

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

- Non-Technical Summary (NTS) - £15
- Volume 1: ES Main Text & Figures - £150
- Volume 2: ES Appendices - £150
- Full copy (Volumes 1, and 2 with NTS) of the ES on CD - £15

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

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Deloitte Real Estate
Hanover Building
Manchester
M4 4AH



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