17/11/22

Great Northern

Public Realm Strategy

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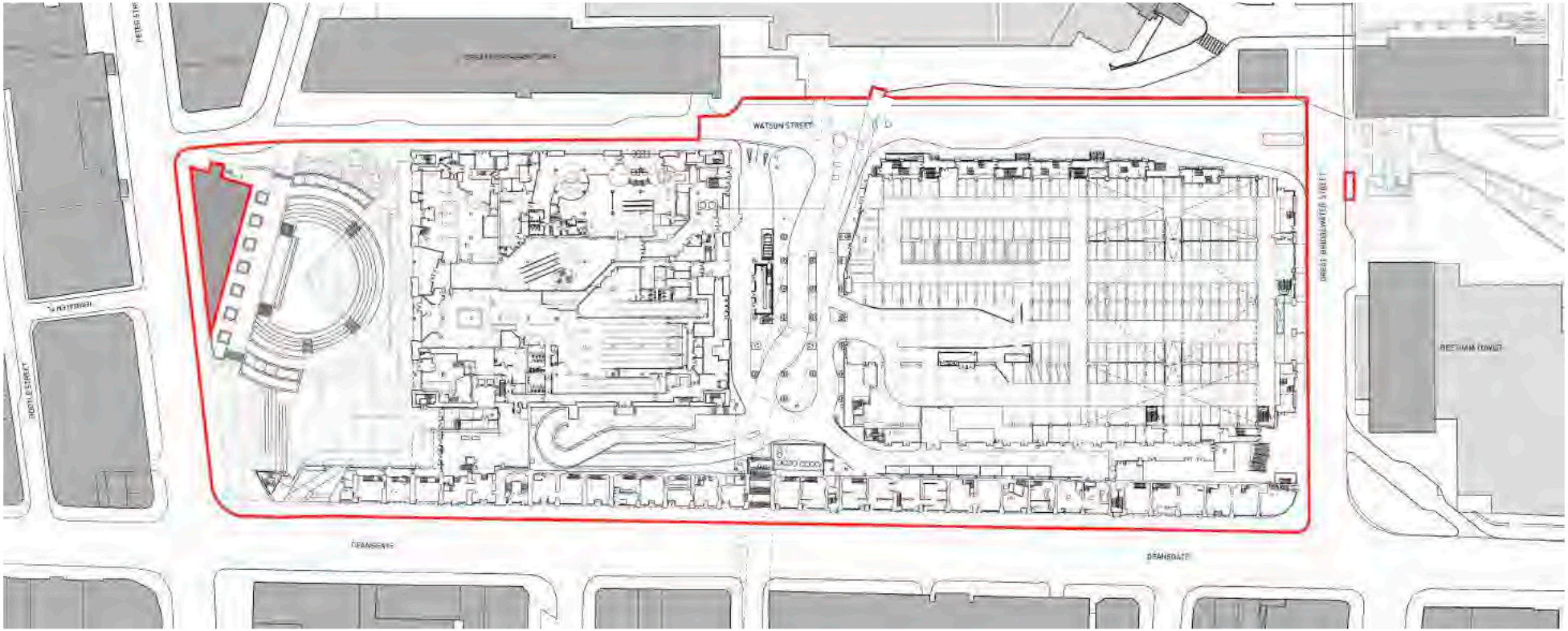
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01
Introduction

Introduction

This Public Realm Strategy Document has been prepared by Planit-IE to support the full planning application public for the phased redevelopment of the Great Northern Warehouse, Deansgate Terrace and Leisure Box.

It provides an overview of the process and approach to the design of the public realm within the site and the areas of residential terraces associated to the new apartments.



Existing site - Redline boundary

02

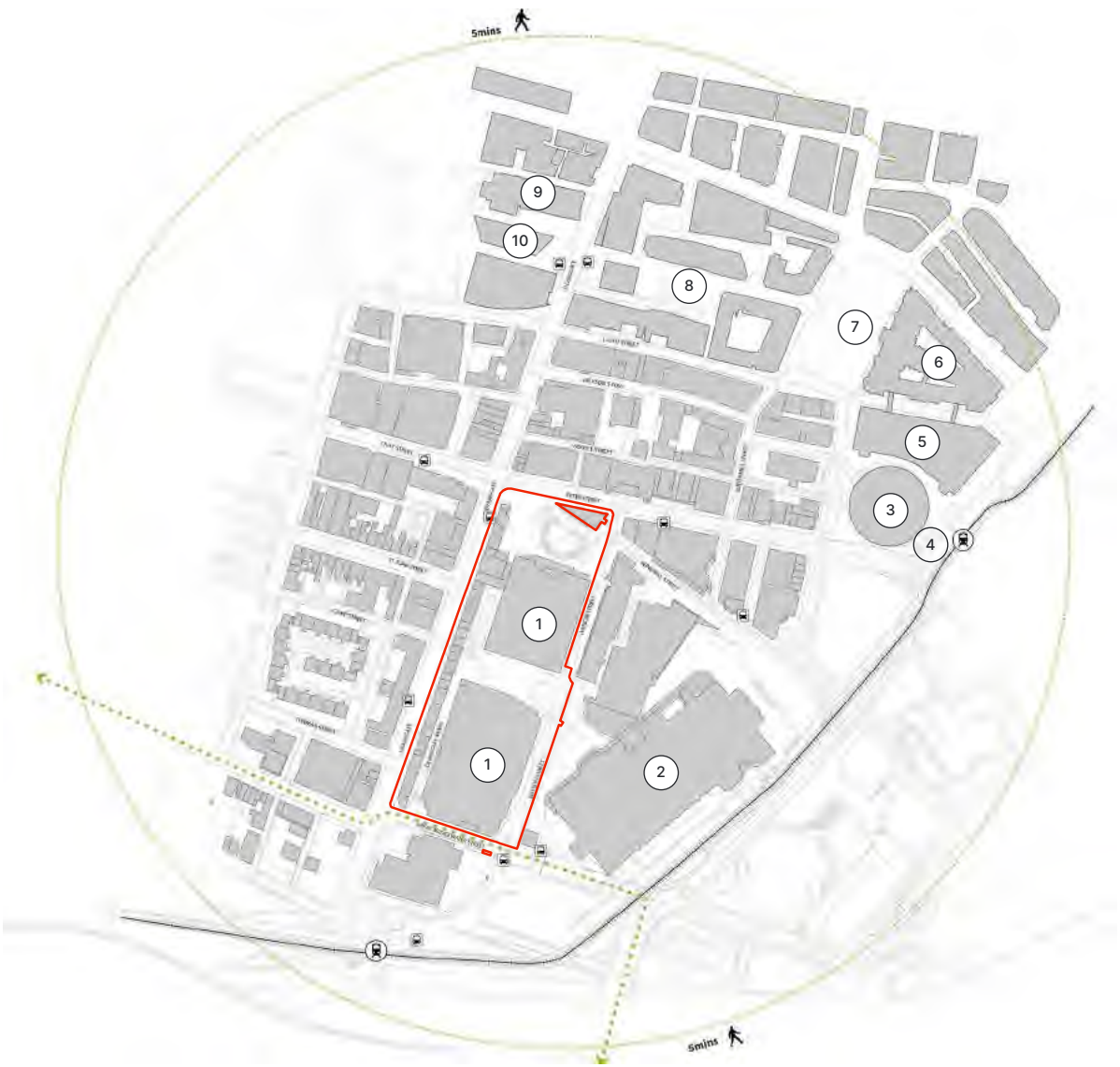
Site context

Wider Site Context

The site is bounded to the north by Peter Street, Watson Street to the east, Great Bridgewater Street to the south and Deansgate to the west and includes the II* listed Great Northern Warehouse, the Grade II listed Deansgate Terraces and the Leisure Box.

The listed buildings within the subject site do not fall within a conservation area, but the northern edge of the site, comprising an open public square and bar building, does fall just within the southern boundary of the Peter Street/ Deansgate Conservation Area.

There is a great heritage to the site and the immediate surrounding area.



Key

1. Great Northern
2. Manchester Central
3. Manchester Library
4. St Peters Square
5. Town Hall Extension
6. Town Hall
7. Albert Square
8. Lincoln Square
9. John Rylands Library
10. The Avenue

Tram Stop

Bus Stop

National Cycle Route

Planning Application Boundary

Existing Site Context

Strategic Framework

The proposals form a key part of the Great Northern, Manchester Central and Castlefield Quay Strategic Regeneration Framework (SRF), which was endorsed in February 2017 by Manchester City Council's Executive Committee.

The SRF was prepared in order to guide the future reconfiguration, re-development and re-positioning of the Great Northern, Manchester Central and Castlefield. Quay sites in Manchester City Centre. These interlinked and strategic sites, at the southern edge of the city centre, sit within a pivotal location between a number of Manchester's key established and emerging economic growth and regeneration areas.

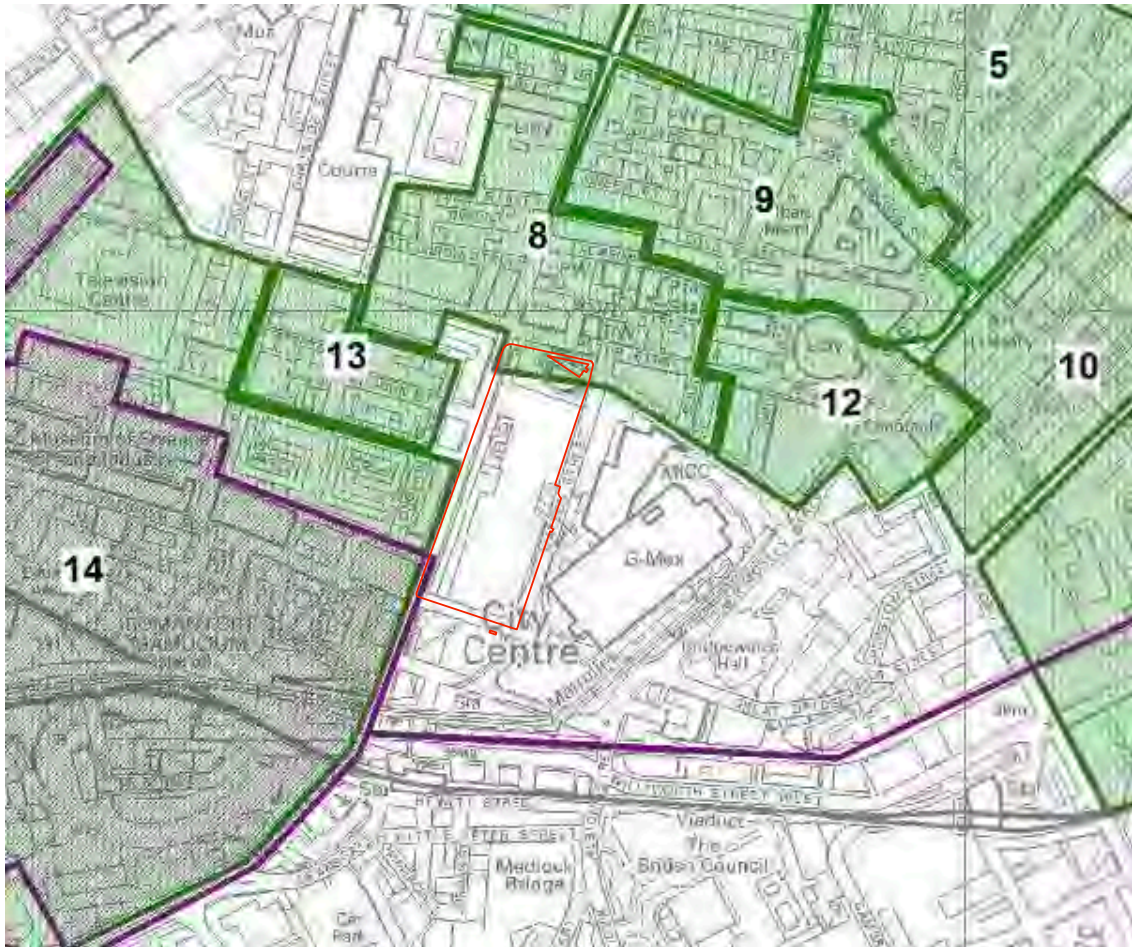
The SRF identifies that the Great Northern is currently underutilised and under-performs. This is particularly marked in terms of the quality and appropriateness of its uses, the quality and vitality of the environment within and around the site and challenges it presents in terms of both physical and functional connections to its surroundings

.

Key

Conservation Areas

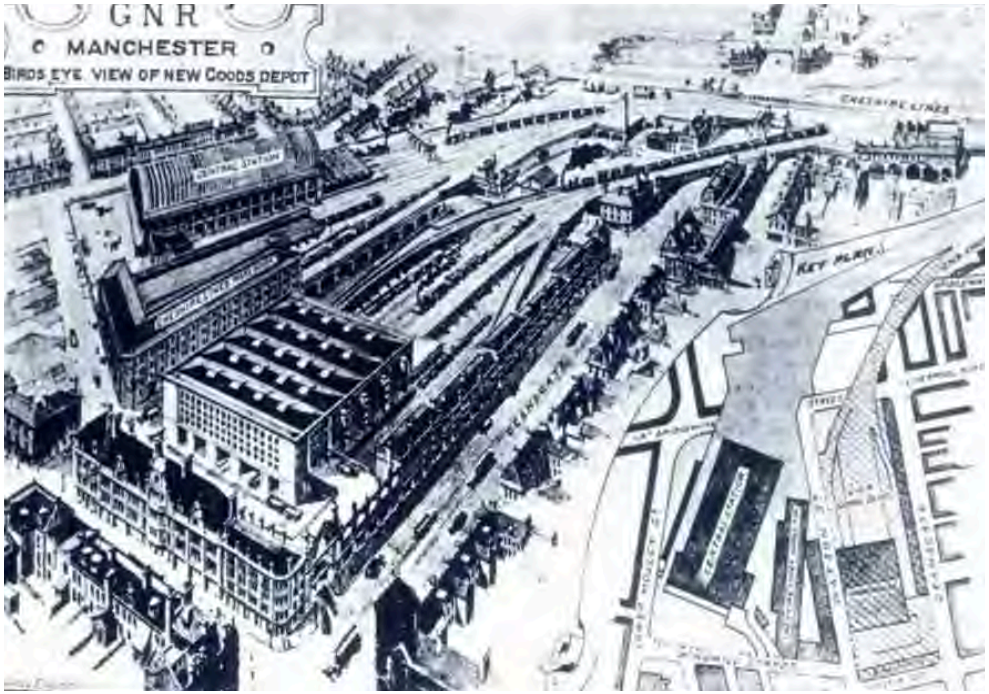
Planning Application Boundary



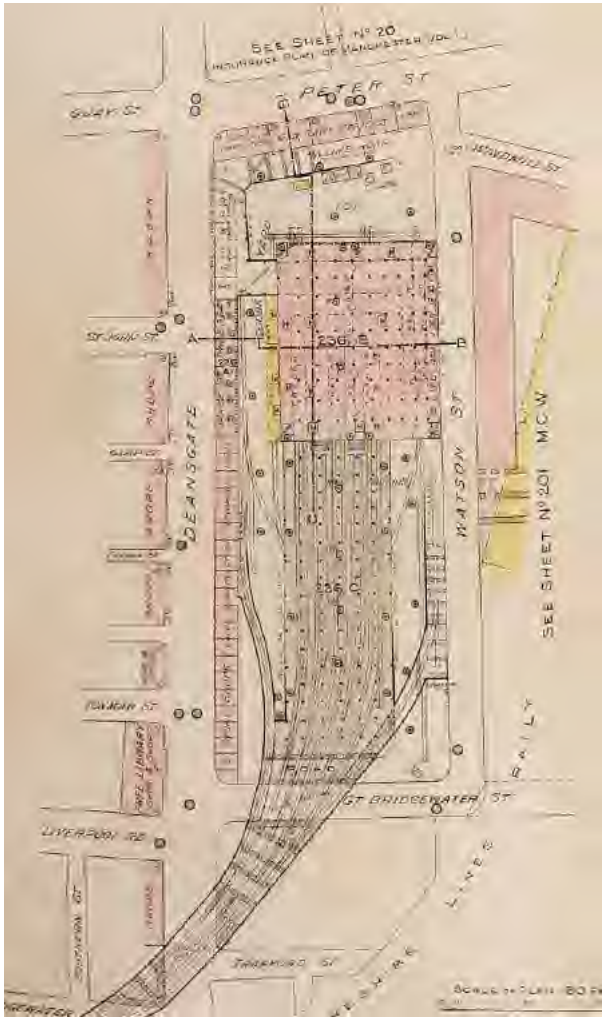
Site History

Completed in 1899, the Great Northern Warehouse was Manchester's largest and last railway warehouse. Spanning 267ft long and 217ft wide the warehouse was constructed above the Manchester Salford Canal Tunnel, uniquely making it a three-way transport interchange of goods.

The Great Northern Warehouse was granted Grade II* status and adjacent Deansgate terraces Grade II status in 1974 and was transformed into a leisure complex in 1999 which currently comprises the AMC Cinema along with a casino, restaurants and gym.



Birds eye view of the Goods Depot

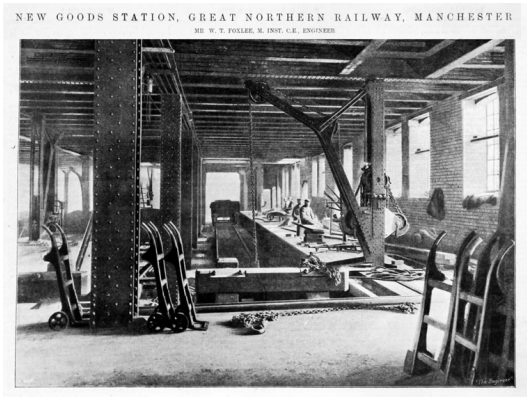


Historic map of the Great Northern Warehouse

Site History

The large steel structure, designed by the engineer WT Foxlee, required 12,000 tonnes of steel which was provided by the same suppliers who built the Blackpool Tower. Trains would arrive direct from Central station and goods would be raised and lowered with the use of hydraulic power.

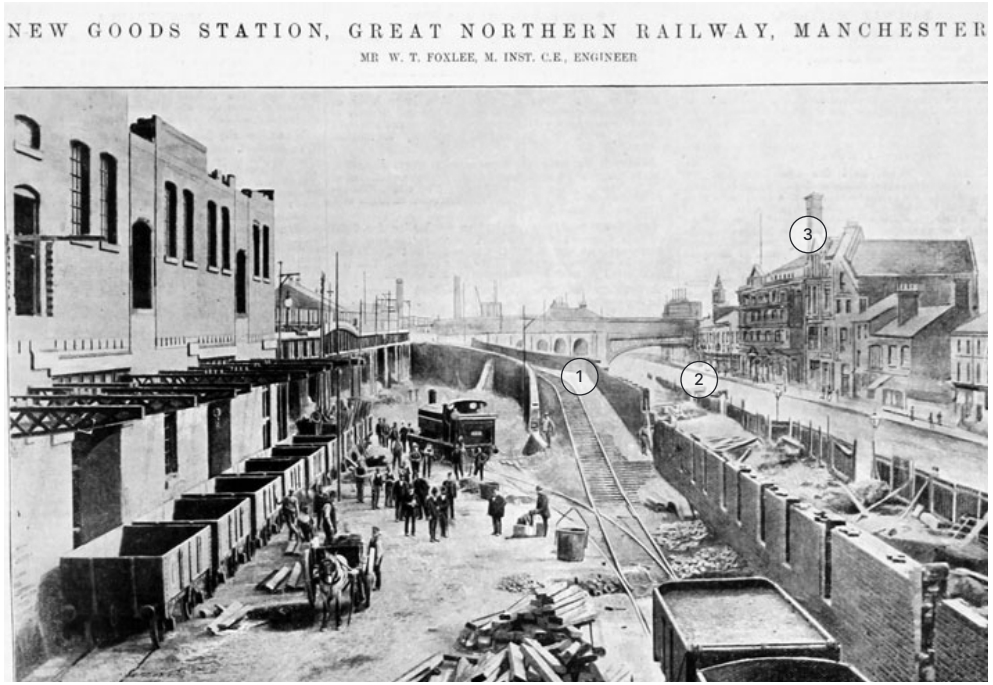


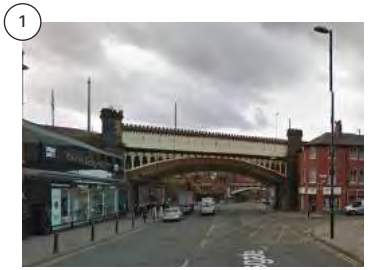


The Great Northern Warehouse, 1898



→
Manchester, 1909
Great Northern Square







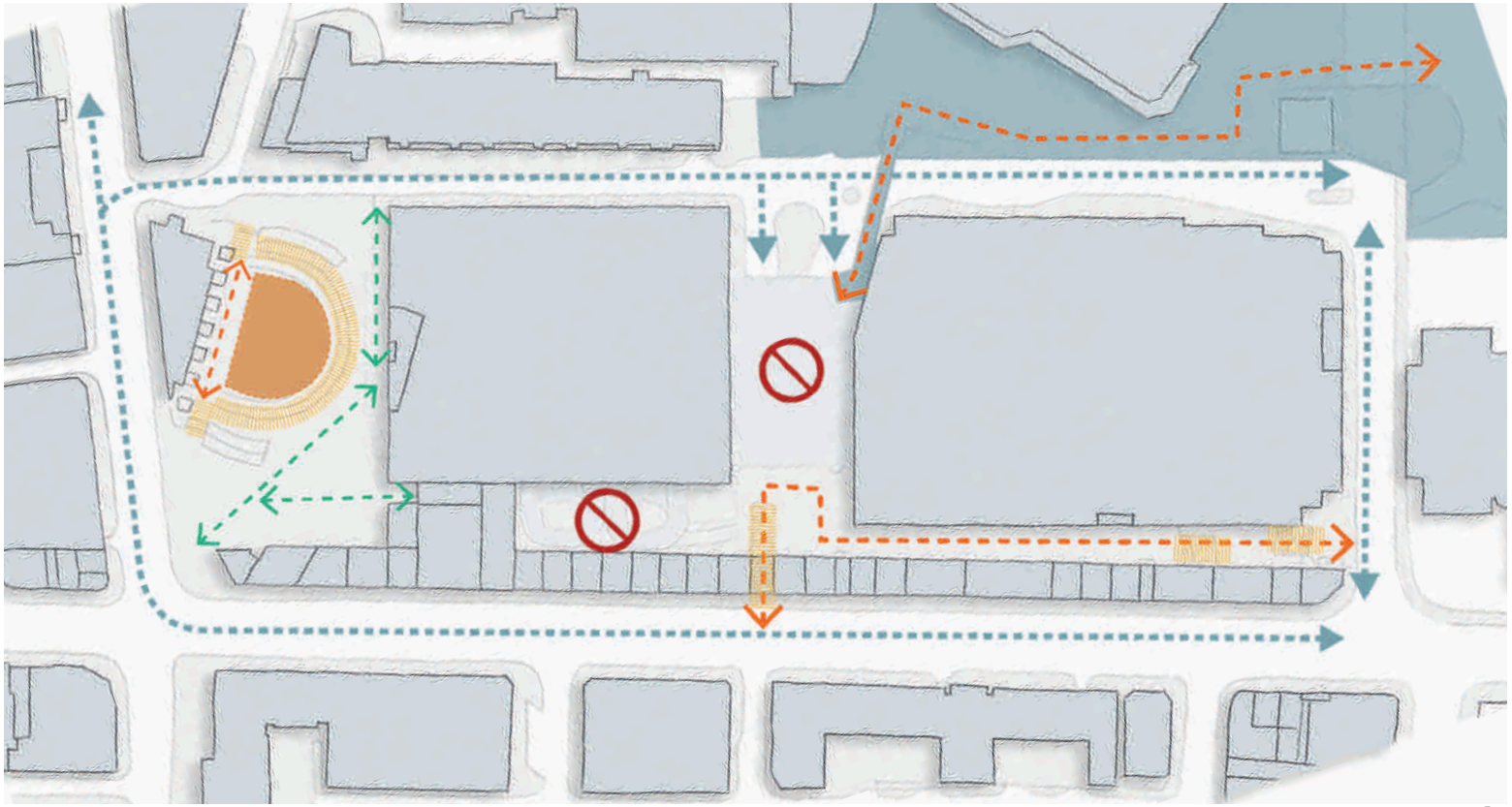


Existing site photos

Existing Site Circulation

The current circulation for pedestrians through the site is poor. Key connections east-west and north-south are cut off from the wider fabric of the city.

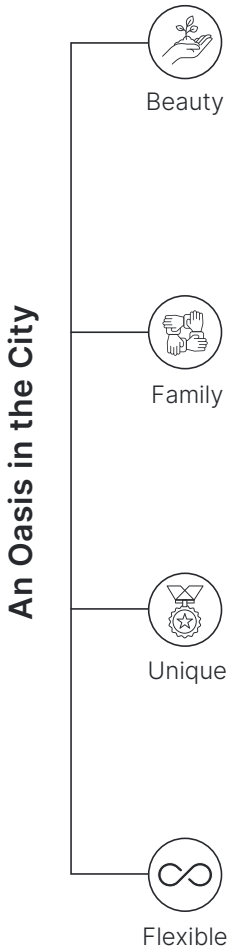
Within the square itself a large proportion of the space is inaccessible due to the amphitheatre steps and Impossible Bar basement egress.



Existing site circulation

03
Design Principles

The Developing Brief



In autumn 2016, Pathways Consultancy conducted research into the users of the Great Northern Square to determine their thoughts and feelings surrounding the space as it is currently. Conclusions from this research were drawn out to create a new design brief for the square.

The Square needs to become an oasis in the city centre. Its redesign should be founded in the following principles:

- The Square should be a catalyst for economic development of the area;
- It should enhance and contribute to biodiversity in an urban landscape;
- It must promote culture; build community cohesion;
- Encourage healthy living; be readable and playable by children;
- Provide connections and integrate infrastructure.

Stakeholder engagement (from 2016 to October 2022)

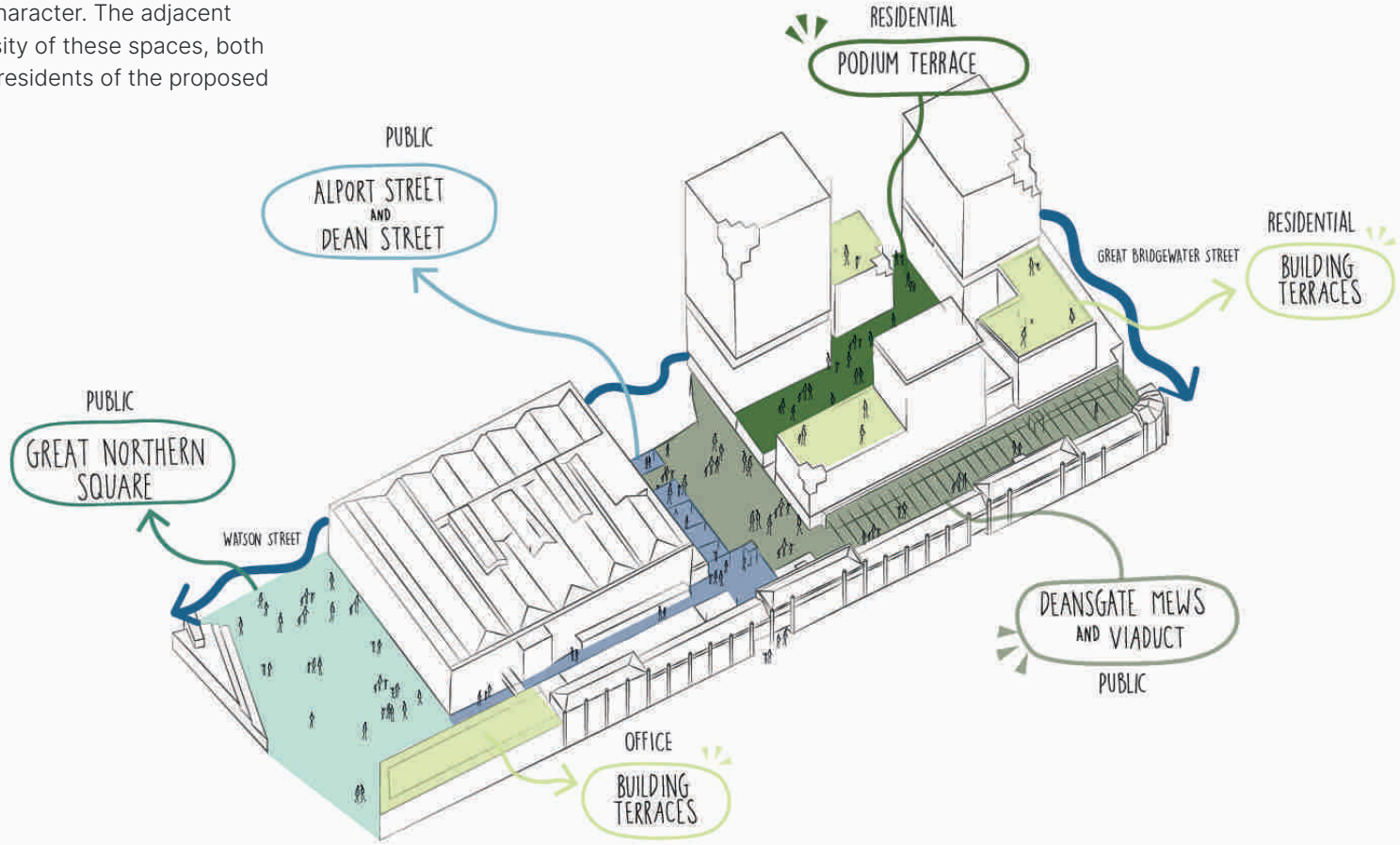
Initial concepts through to detailed plans have been discussed with key stakeholders from 2016 to the present time. These ongoing conversations have further shaped the proposals and aimed to take stakeholders - particularly affected residents.

The key stakeholders were invited to attend one-to-one or group interviews between July and October 2022. These interviews were designed to raise awareness of the proposals and to allow specialists to inform the designs.

- A place with a distinctive personality, showcasing the heritage of the site (and that of Manchester).
- A 'villagey' feel to the site.
- Eco-friendly, sustainable and green: "A green oasis in the city".
- A relaxing, calm space.
- Things for families to do, and spaces for children to play: "Get it right for families and the rest will follow."
- Indoor and outdoor spaces for community events.
- Markets/ farmers' markets and independent commercial ventures.

Character Areas

The site contains numerous external spaces each with their own individual character. The adjacent image illustrates the diversity of these spaces, both for the general public and residents of the proposed towers.



Public Realm Character Areas

The Key Characters

As part of the design process for the external spaces the potential users of the spaces have been considered along with their key needs or requirements. Although not an exhaustive list, this has helped develop the design through the eyes of those who will inhabit the space.



Young Professionals

Sociable and engaged with activities in the city, Young Professionals contribute to the vibrant atmosphere of spaces. Whilst looking for new and quirky areas to meet up with friends they are also sometimes craving a quiet spot as a respite from the hustle of the city.



Families

Families are on the lookout for kid friendly, intriguing spaces where children can enjoy and explore in a safe environment. Spaces should be a welcome opportunity for a rest and to engage with others in close proximity to necessary amenities.



Office Worker

Those working in and around the Great Northern are on the lookout for quick and easily accessible locations to maximise their time outside the office. They may be wanting a quiet rest spot, a quick place to grab a bite or the opportunity to meet with others in a more dynamic environment.

The Key Characters



Day Time User

Visitors to the city during the day are looking for unique experiences to entice them away from online shopping. They may be using the space and a regular route through the city or be looking for a spot to rest, relax and socialise.



Evening Goers

Those who are looking for an evening, or night out. They are interested in cultural, active spaces that create areas to meet, socialise and are a positive and atmospheric area in which to relax.



Wildlife

The opportunity to incorporate green spaces that specifically address the needs of Manchester's wildlife is an important consideration to create both habitats and wildlife corridors.

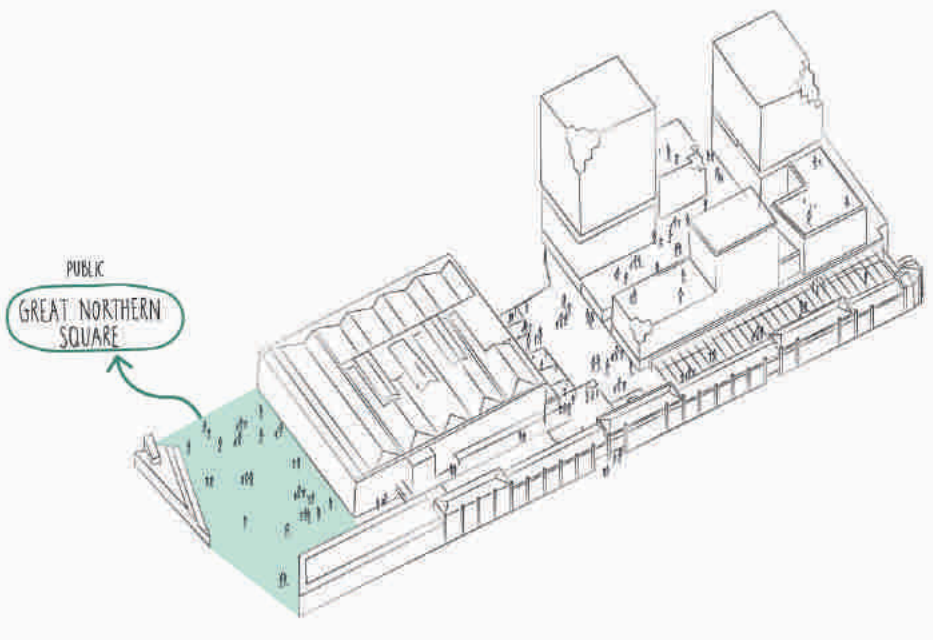
User Profiles

Different users often have varied requirements from a space that will alter dependent upon the times in the day they visit the area. The proposed designs should be welcoming and usable throughout the day into the evening and beyond.

The adjacent diagram considers when different characters may be most likely to use the space.



Great Northern Square





Primary Characters







Look and feel - illustrative images

Design Principles

Destination

A welcome mat to the development, encouraging exploration, slowing down and integrating the space as an essential part of people's city journey. A key public space for residents and visitors of Manchester.

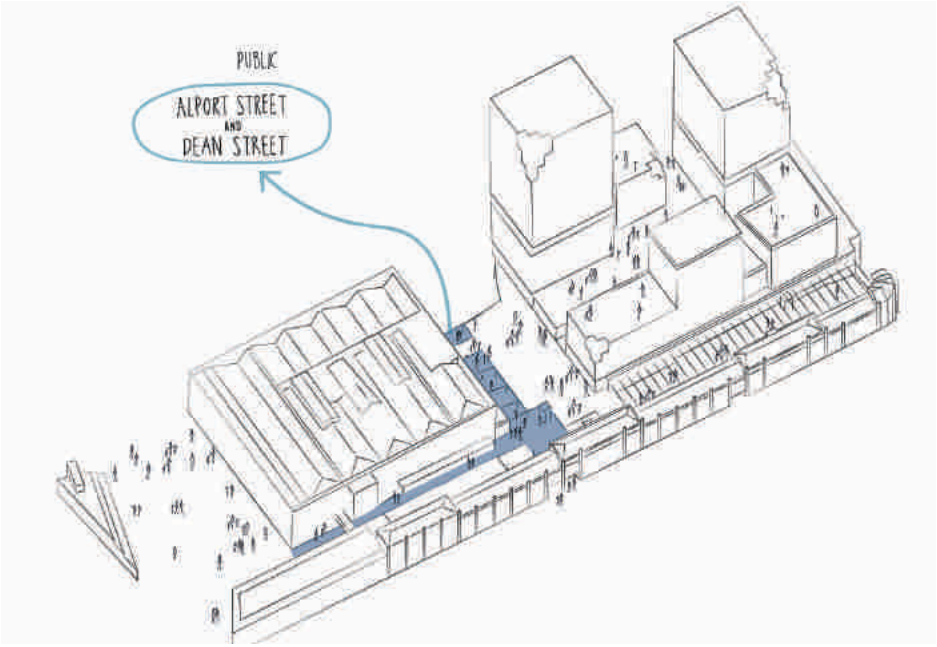
Diversity

A flexible and varied space which can accommodate the different needs of its users, allowing people to interact more easily and more often.

Delight

A space that is beautiful, functional and distinctive to the Great Northern to provide a rich sensory experience at a human scale.

Alport and Dean Street





Primary Characters







Look and feel - illustrative images

Design Principles

Ambient

Characterful and in keeping with the surrounding history of the site. Atmosphere that draws users both during the day and at night.

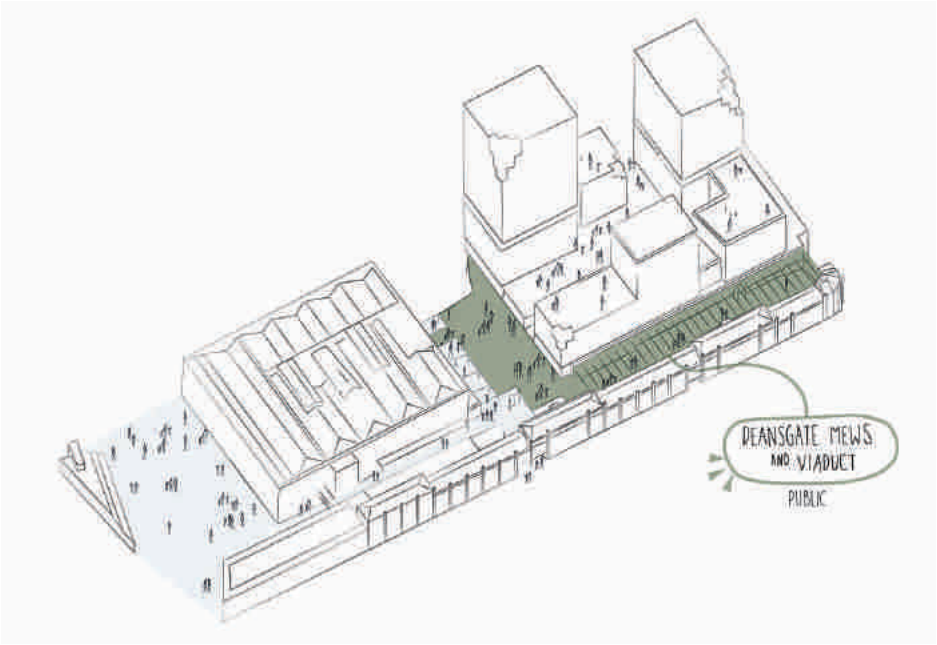
Connected

Considerate to the key desire lines connecting the site and city, enticing users through the development.

Individual

Adaptable and flexible space which give small units the opportunity to express individual personalities.

Deansgate Mews and Viaduct





Primary Characters







Look and feel - illustrative images

Design Principles

Offbeat

A destination away from the main routes of the city. Enticing to visit, forming a feeling of discovery.

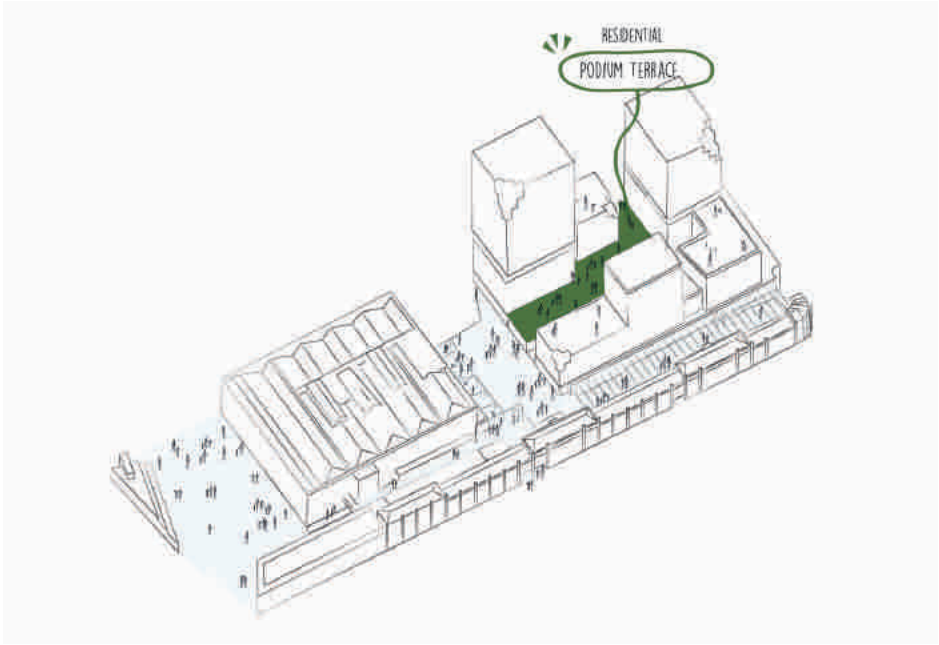
Buzzin'

A bustling, energetic space designed to accommodate activity, groups of people with a vibrant atmosphere.

Imperfect

A tactile, eclectic, and fluctuating experience that engages the senses and sparks delight.

Residents Podium





Primary Characters







Look and feel - illustrative images

Design Principles

Liveable

The space should cater for the various needs and amenities expected to be required by the residents to make their life easier and improve work life balance.

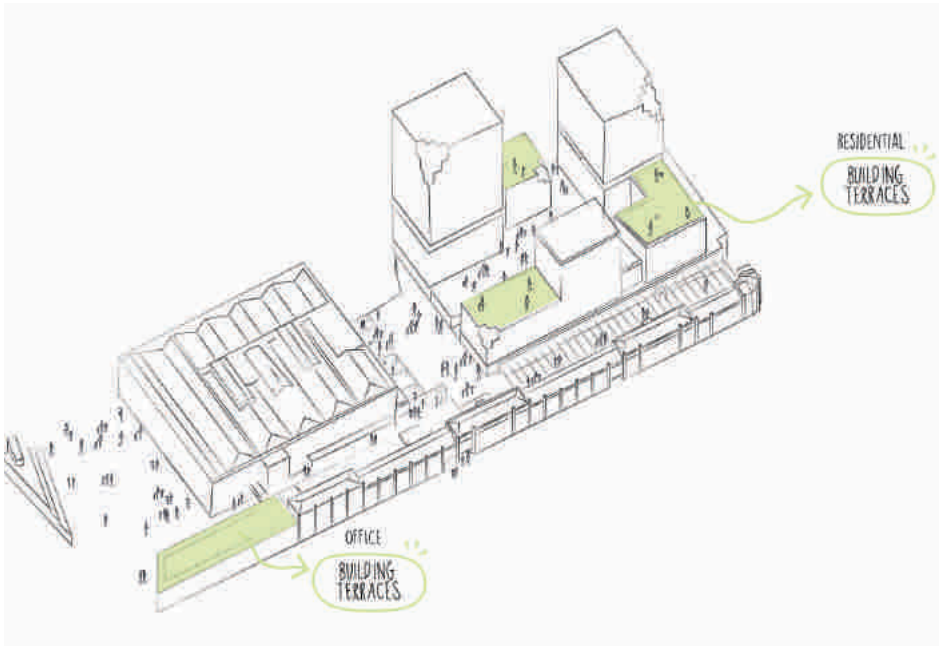
Loveable

Providing a space which improves well-being, creates a sense of ownership and facilitates the development of connections within the surrounding community of new residents.

Comfortable

Residents and their visitors should feel safe and welcomed to the space with a carefully considered interfaces between private residences and external communal areas.

Building Terraces





Primary Characters







Look and feel - illustrative images

Design Principles

Quality

Well managed with tactile, high quality materials to give the space a sense of delight and foster a growing community.

Cosy

A sheltered and snug space that creates more intimate areas to relax or socialise with friends and guests.

Adaptable

A timeless space that can adapt to the changing needs of the surrounding residents and what people expect from city life.

Public Consultation

Formal consultation on the plans was carried out between 5-25 September 2022 to help further develop the brief and designs for the spaces. The public consultation revealed strong support for the plans for the new routes and Great Northern Square. Generally, people were happy that the Site will be easier to get around and open up routes through the city. They also liked the green outdoor space and opportunities for being in nature.

In particular Great Northern Square's increased green space and improved accessibility was well received. However there were some concerns about loss of children's activities and safety at night.

Support for the proposals centred around:

- Creating more green space, where it is lacking in the city centre.
- Improving accessibility of public space by levelling the Square.

Concerns centred around:

- Removing of a safe space for children's play.
- Removing too much seating.
- Maintenance and safety of the space at night.

Over the last few years, the family friendly character of Great Northern Square has been a key asset to the city and is an important aspect that has been considered in the proposed re-design of the square. The proposals will retain the sandpit in a more accessible location in the space and the positive feedback regarding this helped further shape the size of this provision to ensure the space remains flexible and family-friendly. As the amphitheatre is proposed to be filled in, step free access into this space will also now be possible.

The enclosed character is an important element to provide a buffer to the surroundings. This has been retained using trees and raised planting to create a calming and immersive character to the central area and lighting design has been a key focus to address concerns regarding safety at night.



← Community consultation at the exhibition

Site Wide Increases in Public Realm

As well as improving the general connectivity of the area, the proposals would lead to an overall increase in the area of public realm within the site boundary.

This is due to the creation of Dean and Alport street, a widened pavement along Watson Street and an increase in accessible spaces on the first floor.

In addition to this, the ratio of green space created within Great Northern Square has almost doubled from the existing provision on site.

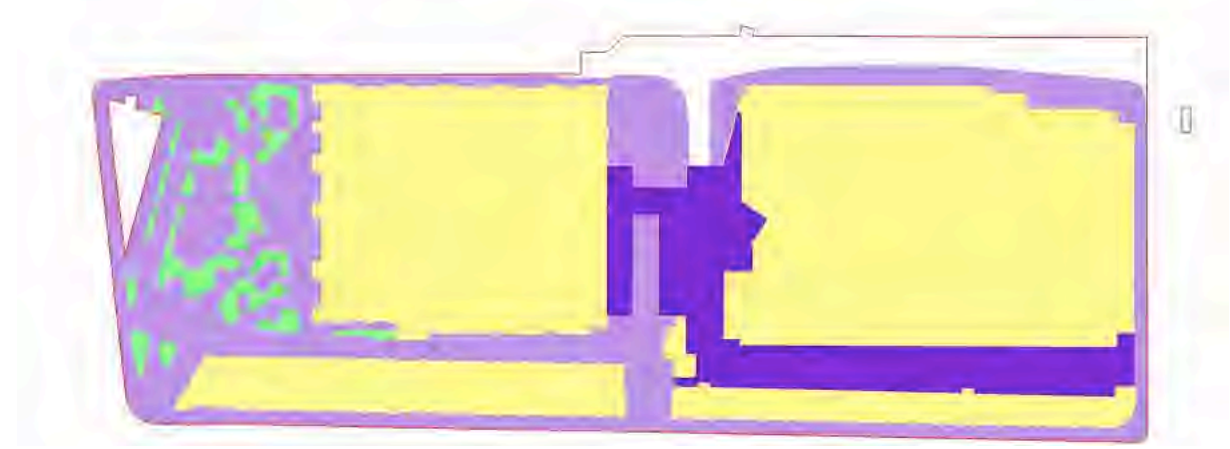
Key figures are as follows:

Existing areas of public realm = 8660m2
Proposed areas of public realm =12076m2

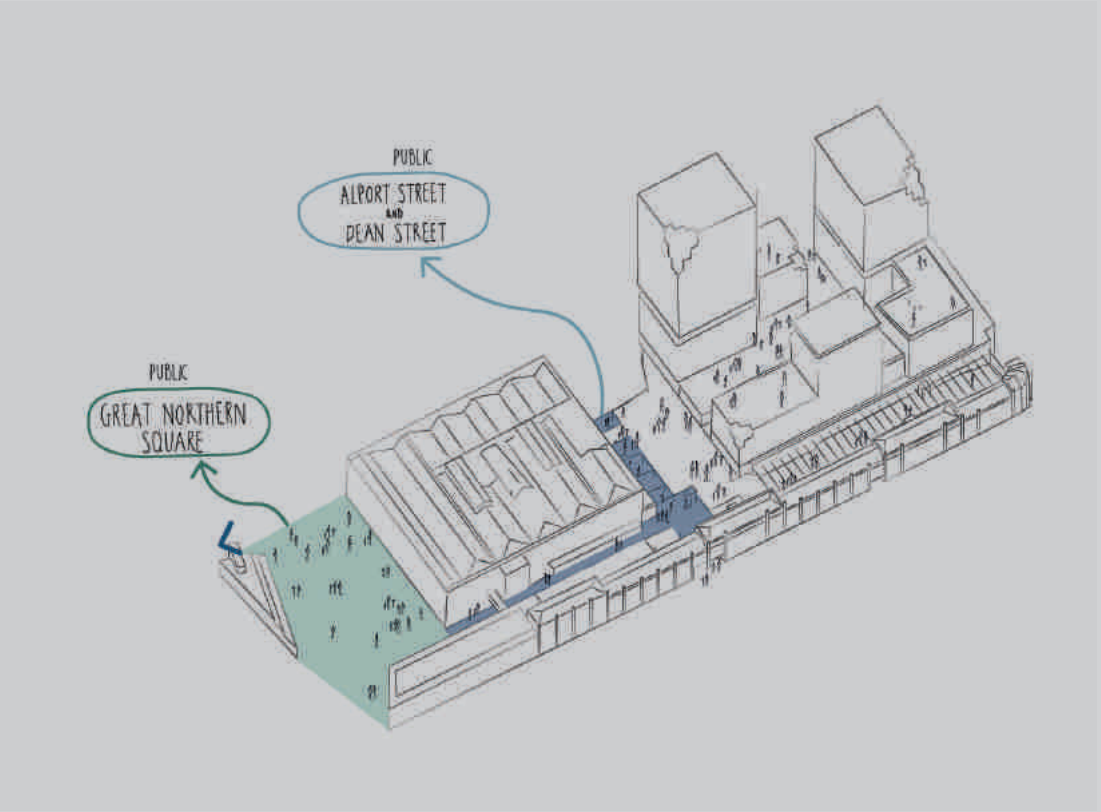
Existing greenspace within the Square = 442m2
Proposed greenspace within the Square = 883m2



Existing areas of public realm



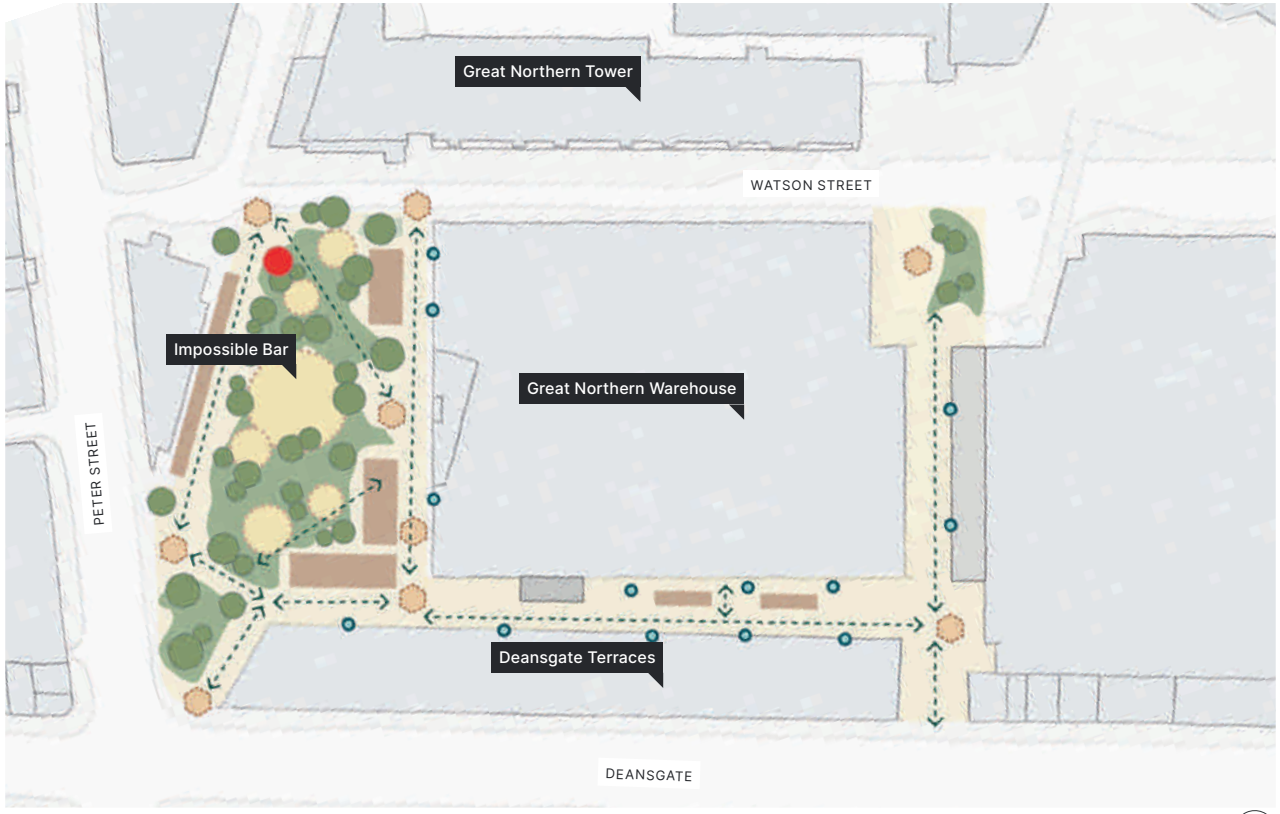
Proposed areas of public realm



04
Public Realm
Ground Floor

Spatial Considerations
Ground Floor

There are numerous constraints that have been considered in developing the public realm design including circulation, scale of spaces and accommodating the diverse range of uses across the site. Key spatial considerations are highlighted below.



Great Northern Square - Spatial considerations Plan

Key

- Key nodes to draw visitors into and through the site
- Buffers to busy roads and noisy surroundings
- Fire exit constraints to Impossible basement
- Dwell spaces immersed within green at various sizes and scales
- Spill out areas from units to feel integrated into the design
- Desire lines and views to entrances and key routes retained
- Flexible space integrated into main circulation and key entrances
- Active frontages to retail or F&B units to be accommodated

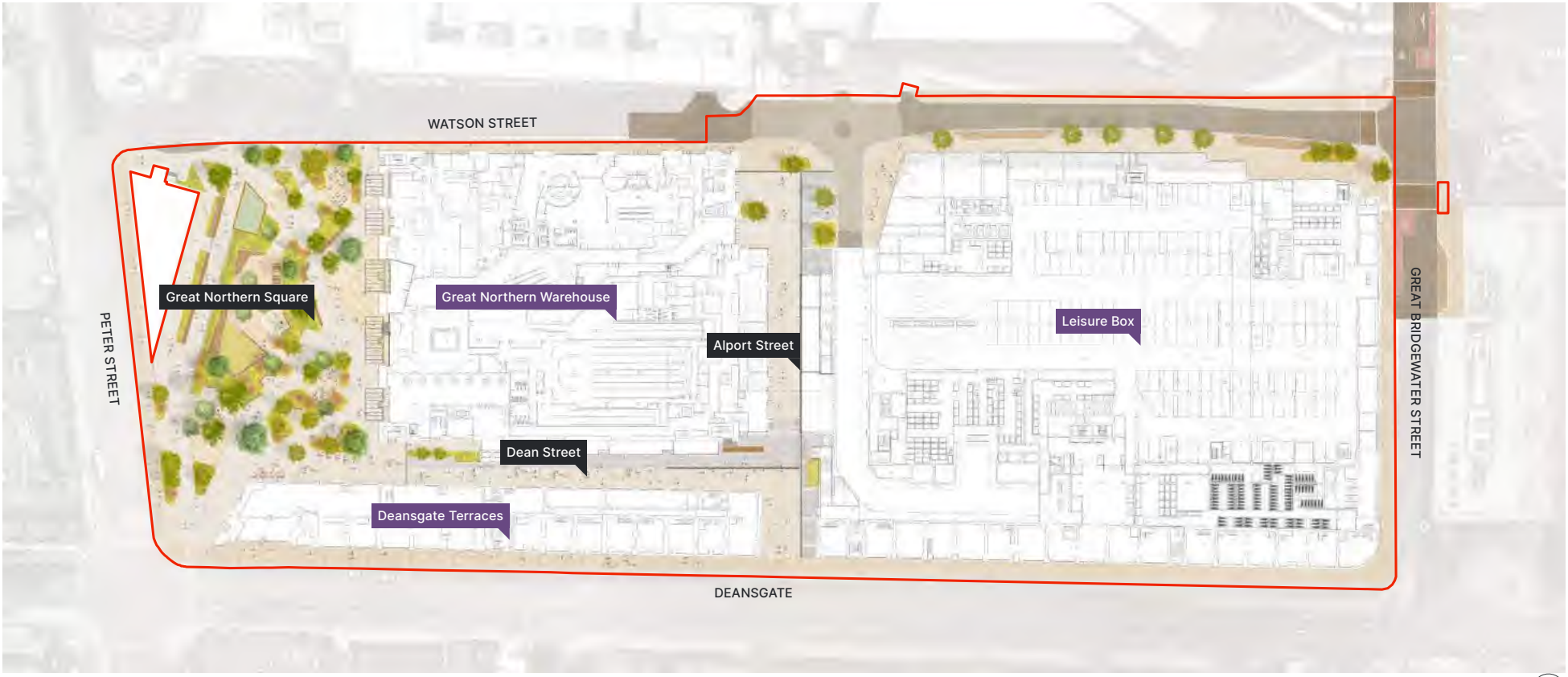
Illustrative Masterplan
Ground Floor

The overall masterplan for the site repairs the setting of the Warehouse and Grade II listed Deansgate Terraces to allow its stature and magnificence to be fully appreciated.

The proposals have been developed in tandem with the emerging brief and public consultation to ensure and iterative approach which considers the users of the site.

Key

Red line boundary



Illustrative Ground Floor Public Realm Plan

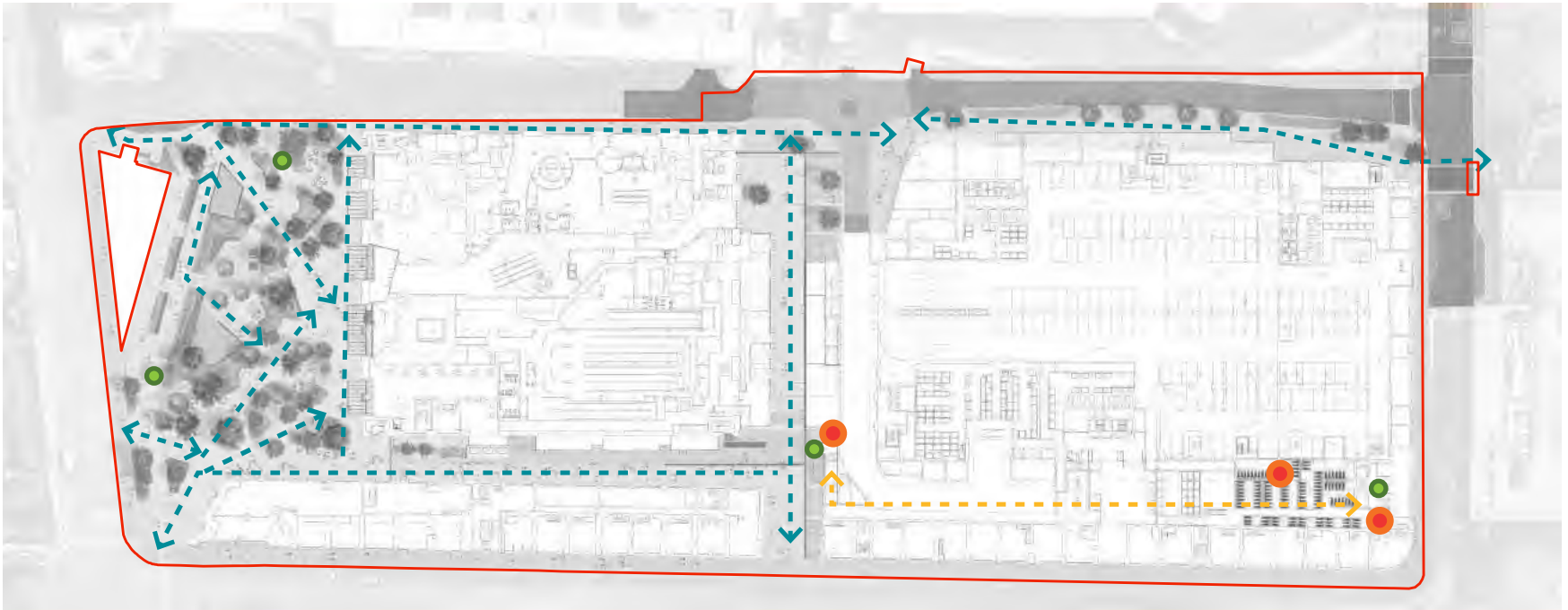
Movement and Levels
Ground Floor

An important aspect of the re-design of the space was to improve accessibility into the site. The current amphitheatre arrangement is not very inclusive and the steep steps into the site from Deansgate deter it's use as a route within the city.

Key desire lines are retained to the ground floor uses of the Warehouse and visibility down Dean Street is kept clear to encourage movement through site.

The new design fills in the amphitheatre to create flush access to the central space. Constraints of The Impossible Bar basement remain which precludes the removal of all steps, but more alternative routes are now provided which better connect the north and south sides of the Square. Where required all steps will have the appropriate tactile paving, contrasting nosing and handrails installed in accordance with Design for Access 2 guidance.

Frequent areas of seating will be provided. These will include a variety of typologies which will be designed to incorporate backrests and armrests and be set at an appropriate level from the ground to be accessible to all. This is an improvement to the current space which largely provides inaccessible seating based around stepping down into the amphitheatre.



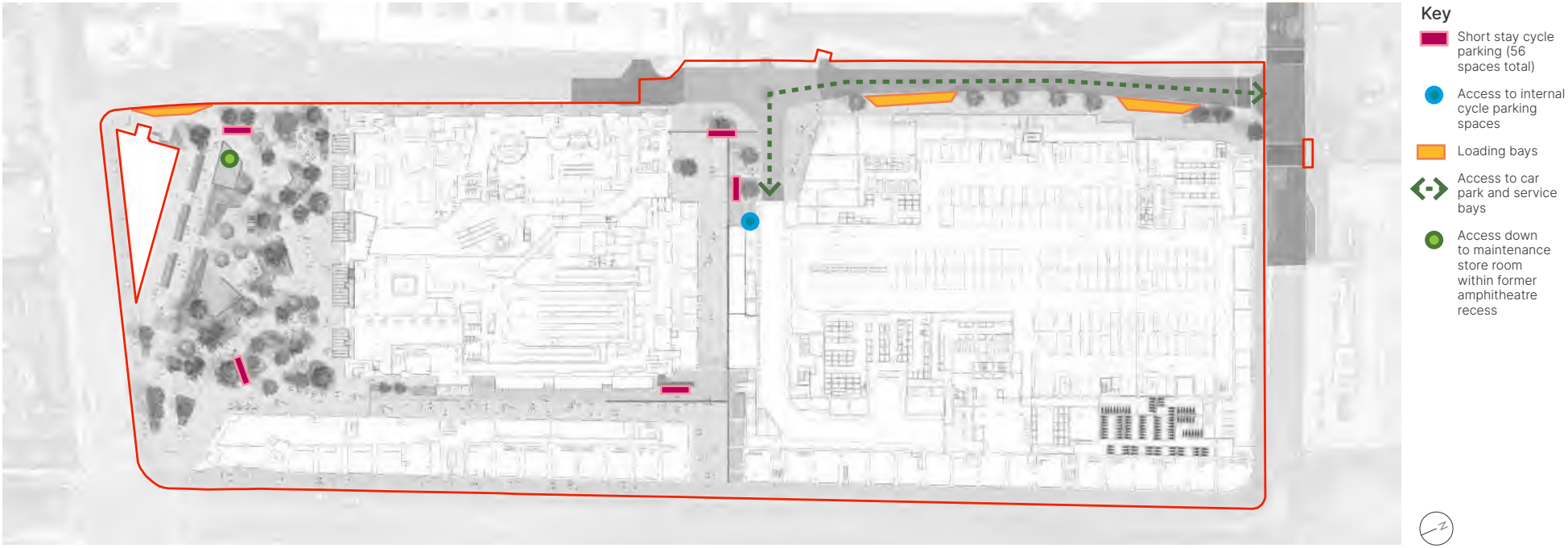
Site circulation plan - Ground floor

Access and Maintenance
Ground Floor

Maintenance access for vehicles will largely be provided from Watson Street which incorporates the required loading bays and is the access route into the main car park. The landscape design allows for any space required by MEWP vehicles to access the facade of the buildings for maintenance.

Within the former amphitheatre recess a room is proposed to create a space for the management team to use throughout the year for storing anything required for maintenance of the space.

56 short stay cycle parking spaces will be provided. These are spread throughout at the four corners of the public realm to maximise convenience for users.



The Secure line
Ground Floor

As a space used by pedestrians it is important an appropriate level of protection is provided to prevent unwanted vehicles accessing the site.

The secure line will provide a mix of bollard and furniture objects at a minimum of 1.2 metres face to face in order to secure the site. Key locations where maintenance or event access is required will have removable or drop bollard to allow a managed entrance into the site.



Site secure line plan
- Ground floor

Opportunities for Art
Ground Floor

Throughout the site there are key opportunities to activate and engage people with the space through the use of art features. These will be a mix of permanent elements, such as the wind mitigation panels or re-use of the bricks from the Warehouse, to temporary and changeable installations on blank walls or within flexible spaces. Within the permanent elements there is the opportunity to celebrate the rich history of the site.

Illustrative imagery - Opportunities for art



Art wall installations



Re-use of historic elements on site



Wind mitigation as a form of interpretation

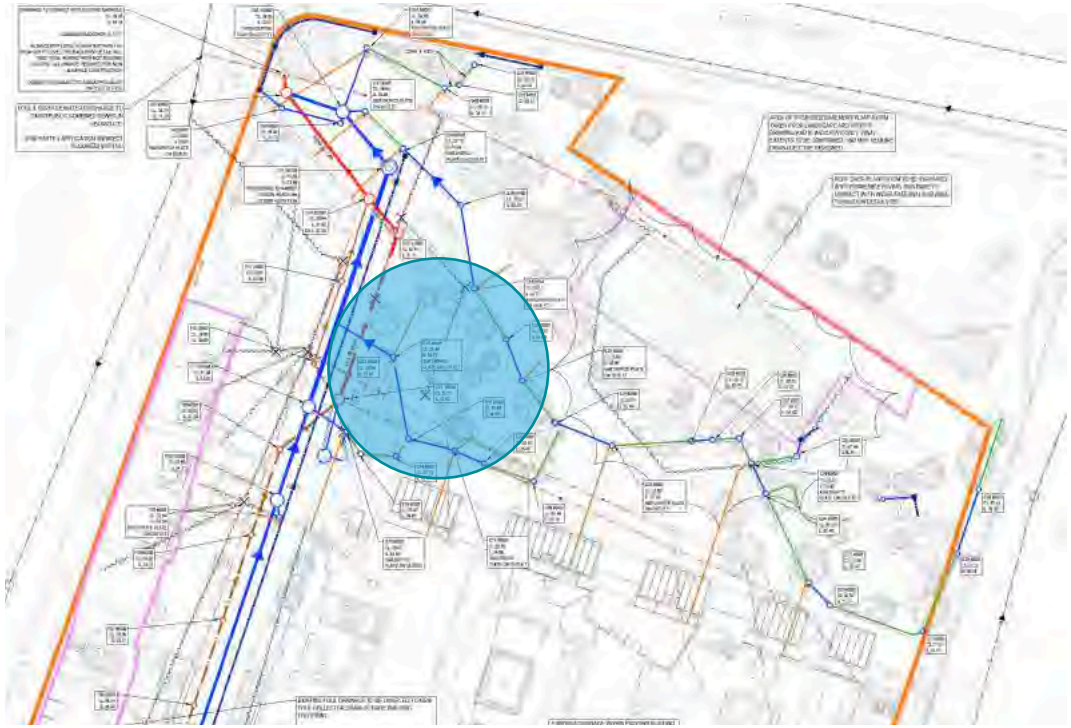


Drainage Strategy
Ground Floor

The proposed drainage strategy for the ground floor will be a mix of traditional surface water channels and sustainable urban drainage. This will be in the form of rain gardens where the levels allow within the square.

The rain gardens will provide a bio diverse mix of species that are tolerant of both wet and dry conditions. This will include a variety of flowering species which will be pollinator friendly.

Drainage strategy extract from FRA assessment.



Area of rain garden focus

Precedent images - Rain gardens

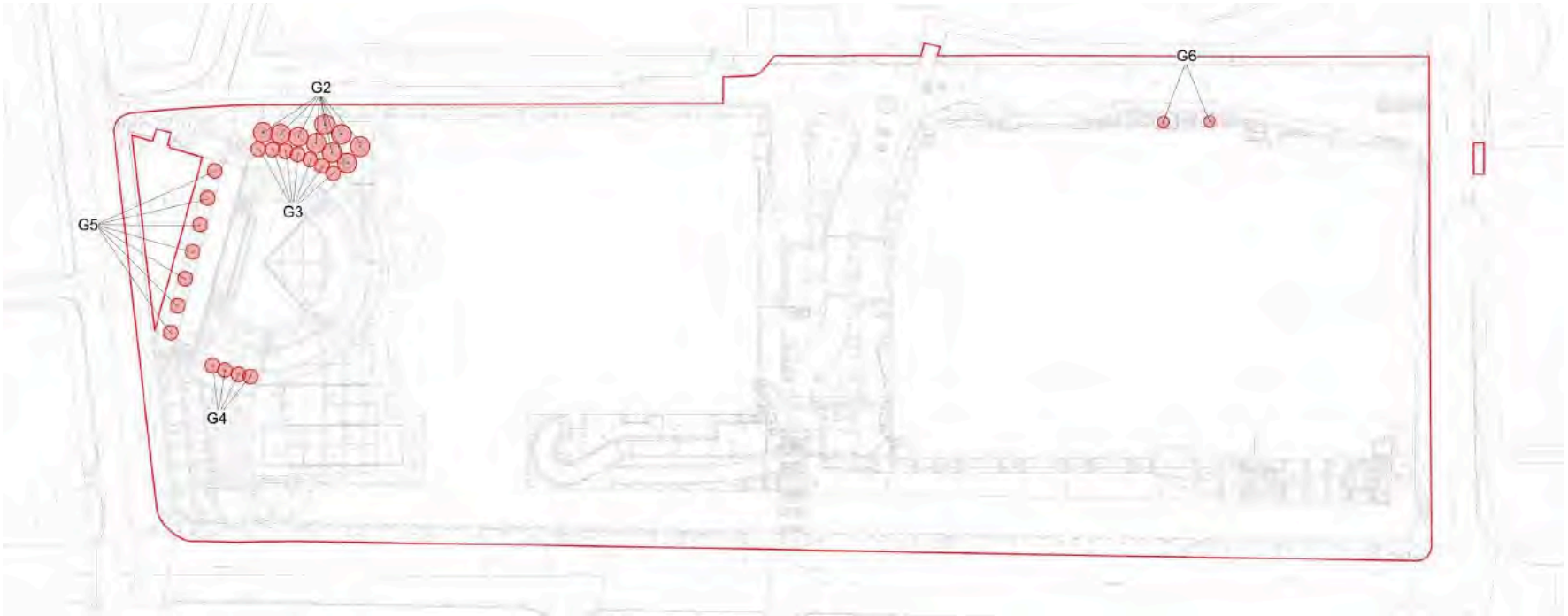




Arboricultural Impact Assessment
Ground floor

The proposed scheme would require the removal of 29 trees across the site. This includes 9 category B trees of moderate value and 20 category C trees of low value.

Across the whole site the new design proposes planting 156 trees across the spaces which exceeds the council's 3 for 1 policy. Further information on the proposed trees can be found later in this document.

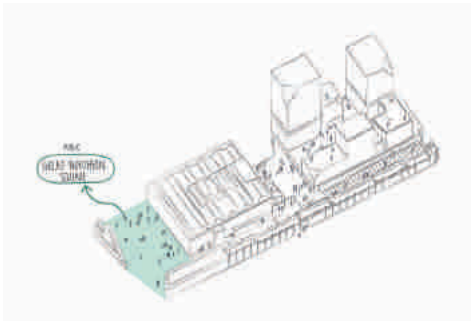


Key

Red line boundary

Tree removal plan

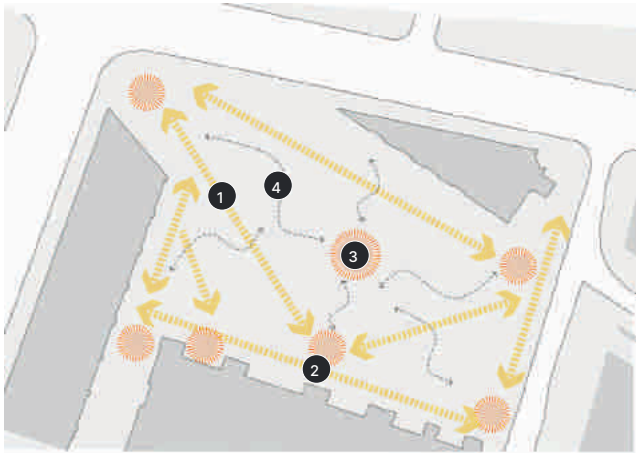
Spatial Zoning
The Square



Key points from the public consultation that has taken place since the last application have been considered to create a more immersive green experience that ties in to the spatial and circulation strategies of the site and maintains a family friendly character.



Great Northern Square - Concept Plan



Great Northern Square- key routes and entrances

1. Defining key routes
2. Highlighting main entrances
3. Connecting to the central space
4. Creating secondary routes



Great Northern Square- spatial breakdown

1. Crafting new flexible space
2. Forming a comfortable sense of enclosure
3. Addressing the Warehouse
4. Defining sub-spaces

Illustrative Masterplan
The Square

Key Aims

Destination Diversity Delight



1. Places to explore



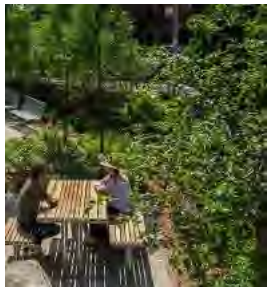
2. Quick access to green space



3. Night-time atmosphere



Great Northern Square - Illustrative Masterplan



4. Sit and relax



5. Sensory experience



6. Connecting to units

Illustrative Axonometric
The Square

The Warehouse forms the centrepiece to the scheme with a completely redesigned Great Northern Square creating a fitting 'front porch' and a key public space within Manchester.

1. Creating more immersive green spaces with informal / exploratory routes.
2. Forming an enclosed family friendly space for activity.
3. Keeping space free for informal events and temporary uses.
4. Accommodating spill out from the surrounding units.



Great Northern Square - Illustrative Axonometric

Central Space
The Square

An important element of the design is to retain the welcoming character that the central space currently provides.

The new design integrates a sand pit in a more accessible location and forms an enclosed space centrally which has the flexibility to incorporate a programme of family friendly activities.

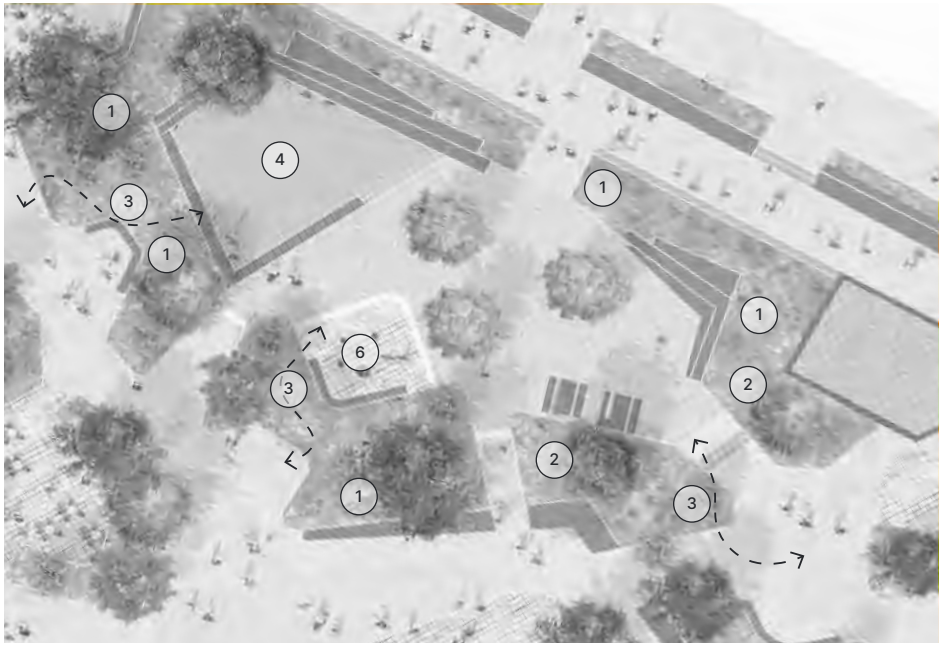
1. Tiered seating edges
2. Sand pit area
3. In ground water feature
4. Trees in planters
5. Informal playful routes into space
6. Flexible areas for seasonal activity
7. Picnic and bench seating



Great Northern Square -Central Space

Playful offer
The Square

Within the past few years a key element that has been successful in the existing space it the family friendly additions such as a sand pit which is a popular attraction. The new proposals retain this element and expand on the offer. Playful routes through the site will be proposed along with water elements and encouraging a tactile connection to natural materials and planting.



Central flexible and family friendly space to the square

Illustrative imagery - a playful landscape



Informal trails, being immersed in green (1)



Natural materials (2)



Fun routes (3)



Sand pit play (4)



Fun routes (3)



Informal water feature (5)

Flexible Space opportunities
The Square

A variety of spaces have been design within the Square to offer the flexible opportunity to enrich the space throughout the year with events and activities.

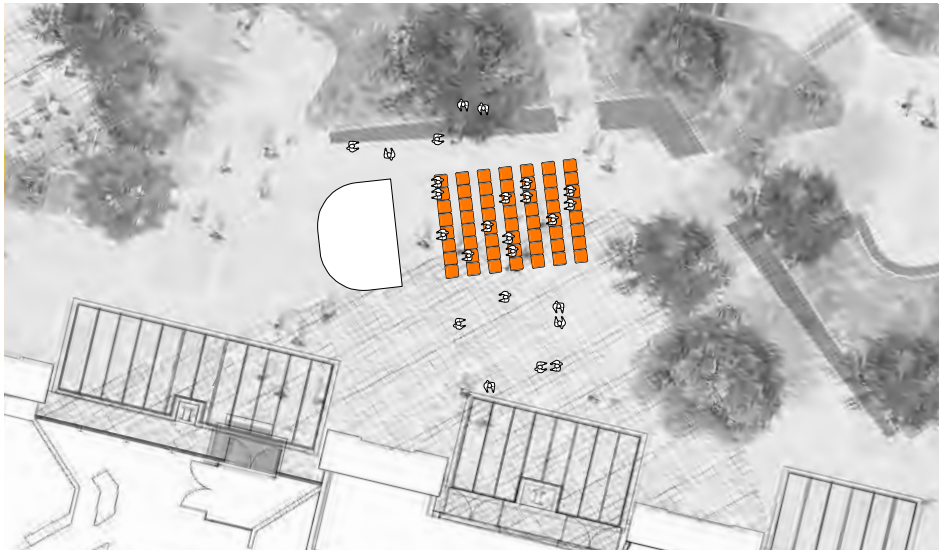
1. Space for food vendors/mini event vans as currently used within the square.
2. Area for family friendly activities in centrally enclosed space
3. Flexible space with opportunities for activities such as markets or small performances.



Flexible space locations



Illustrative layout - Mini market events



Illustrative layout - Small performances

Dean Street and Alport Street

The creation of Dean Street has been achieved with the conversion of the Warehouse and better stitches into the wider connections to improve circulation through the site.

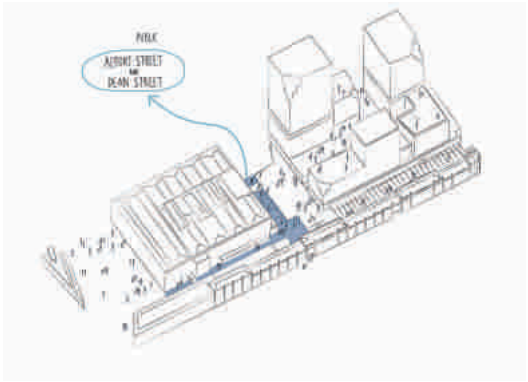
The street allows the western facade of the warehouse to be appreciated for the first time since the 90s development and provides a vibrant North-South link within the site.

The former stepped connection from Deansgate has been removed with the creation of 'Alport Street', a flush route connecting through to Watson Street with new units introduced under the viaduct. The original beams of the viaduct will be revealed and provide an enticing setting to draw users into the site.

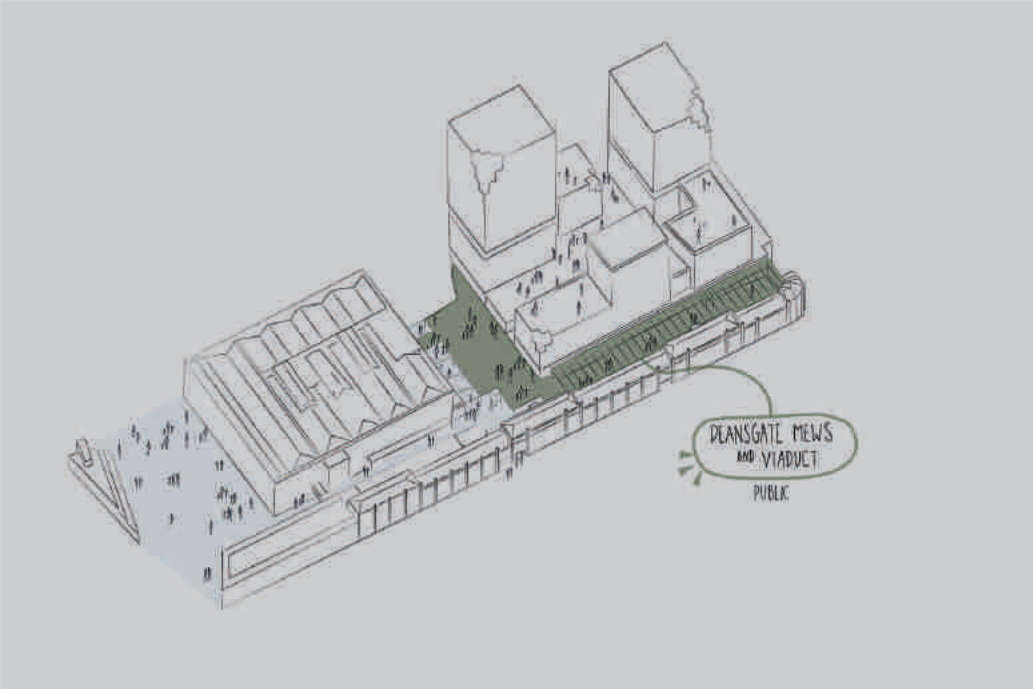
1. Car Park entrance
2. Alport Street
3. Dean Street
4. Steps to Deansgate Mews
5. Lift to Deansgate Mews
6. New flush route into site
7. Areas for spill out from adjacent units
8. Active frontage under Viaduct
9. Entrance to private internal cycle parking
10. Short stay cycle stand locations

Key Aims

Ambient Connected Individual



Dean Street and Alport Street - Illustrative Plan



05
Public Realm
First Floor

Spatial Considerations
First Floor

Deansgate Mews and the Viaduct space need to be an adaptive and an enticing route through the development. The retention of the car park within the Leisure box requires this route to be maintained at the upper level.

An inviting and accessible entrance up will be key alongside creating an area that can be occupied with vendors that celebrate the independent character of the site.

Key

- Key nodes to draw visitors up to explore
- Trees integrated where possible on podium to provide shelter and frame views.
- Planters to define spaces and create a green back drop
- Spill out areas associated to active retail units
- Desire lines and views to entrances and key routes retained
- Key staircases extended and broken down to reduce dominance and encourage exploration.
- Vertical interest along street. Opportunity for lighting or temporary installations to tie in to the character of Dean Street.
- Active frontages to retail or F&B units
- Key views down to Dean Street and Alport Street
- Private/public interface to be considered during staircase design
- Dwell spaces at various scales to break down linearity of space
- Lift locations to upper level



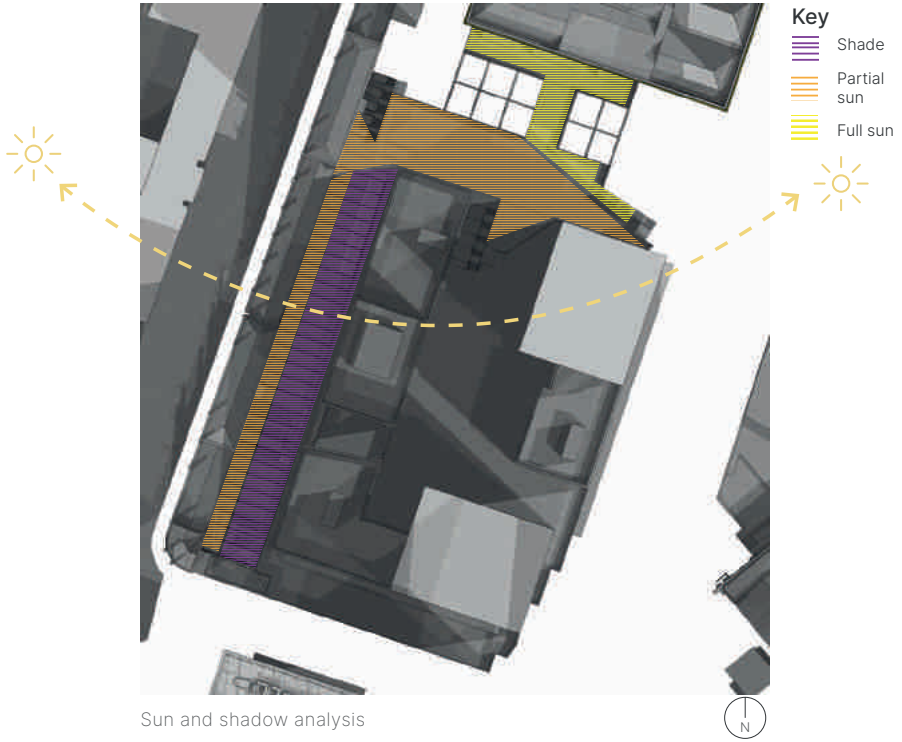
First floor - Spatial considerations

Micro-climate
First Floor

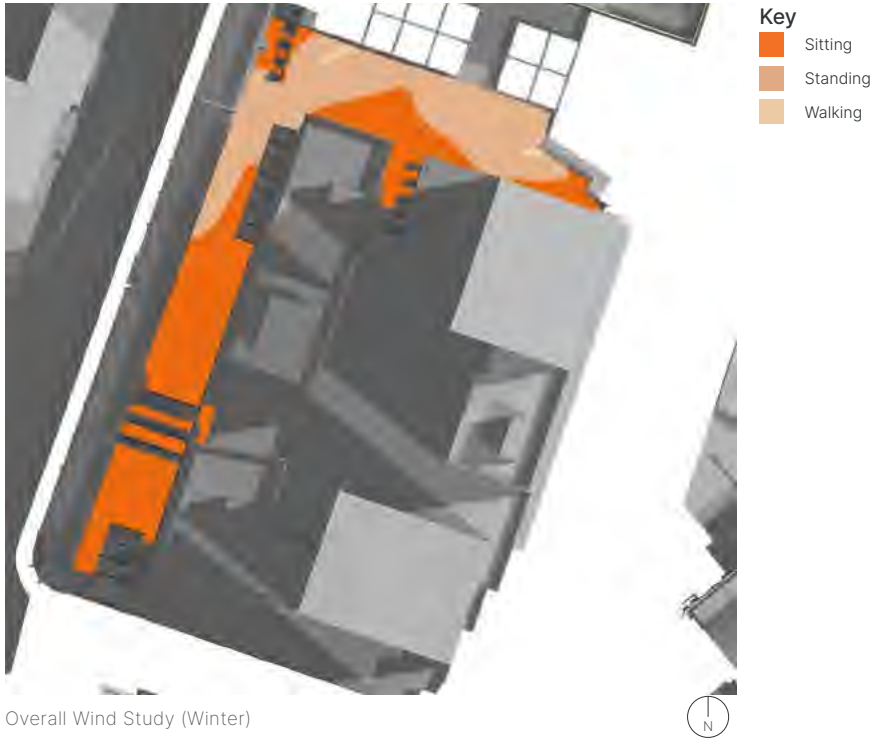
Due to the anticipated use of Deansgate Mews, commercial spill out will likely be the main use along the majority of the corridor. This will create a vibrant and active atmosphere through the space. It is anticipated that future tenants will take ownership of commercial spill out areas and be able to put their own unique stamp on their designated space.

The landscape will provide an adaptable framework for this, whilst accommodating key movement and access through the space.

Key public areas to dwell within have been located to the north of Deansgate Mews, the sunniest spot of the site.



Sun and shadow analysis

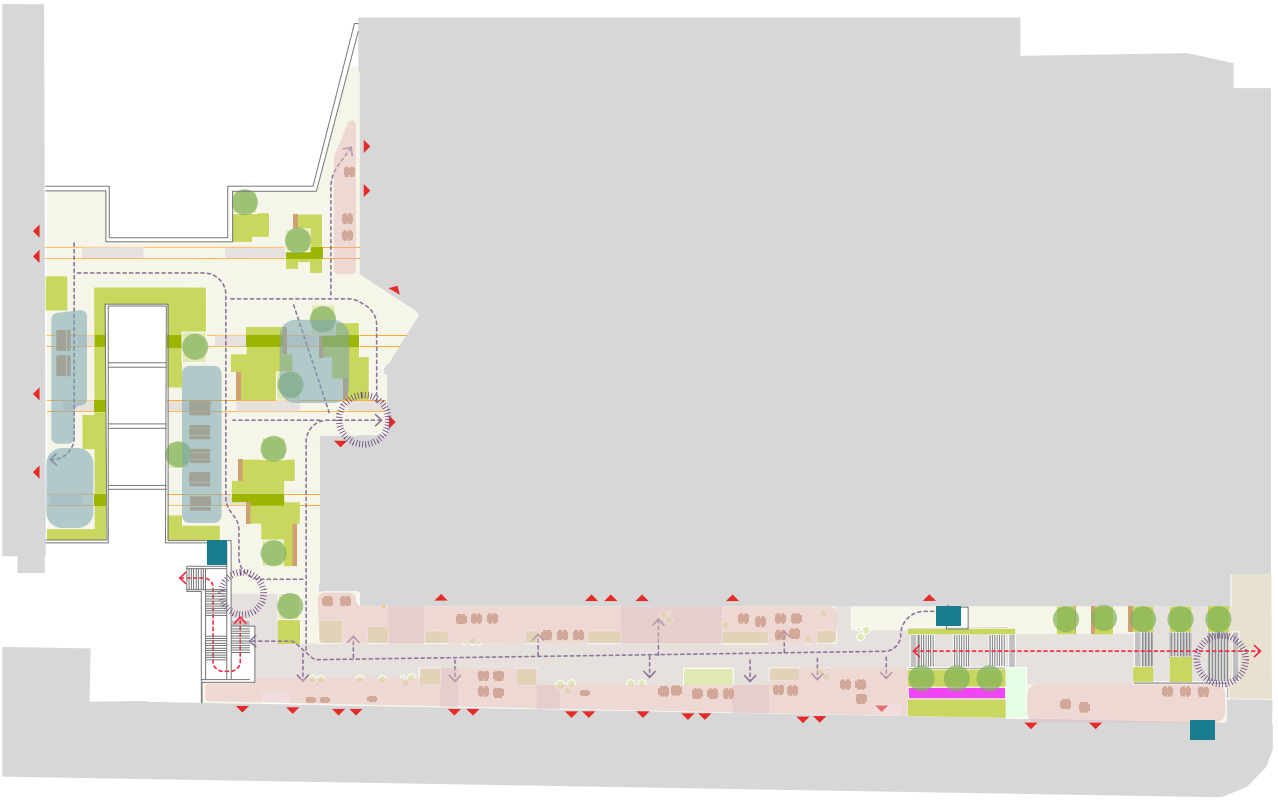


Overall Wind Study (Winter)

Movement + Access
First Floor

Circulation on Deansgate Mews is influenced by the linear layout of the streetscape, creating a natural corridor as a means of a primary movement route from Dean Street to Great Bridgewater St. Due to the retention of the car park below, the requirement for stepped access up to the space is unavoidable, however access to lifts will be improved as part of the development and the steps will feel generous, well-lit and safe throughout the day into night. The new arrangement of steps off Great Bridgewater Street will create a more generous and enticing approach.

There is a need on the street to strike a balance between fixed and moveable elements to maximise adaptability for future tenants. This can be achieved through movable elements such as planters or loose furniture.



First floor - Movement and access plan



Commercial tenant's demarcation achieved with movable elements

Illustrative Masterplan
First Floor

The first floor of the development provides a key north-south link within the site and had been developed to create an enticing and welcoming ascent. The character will feel very independent with lots of small units able to inhabit and spill out onto the space.

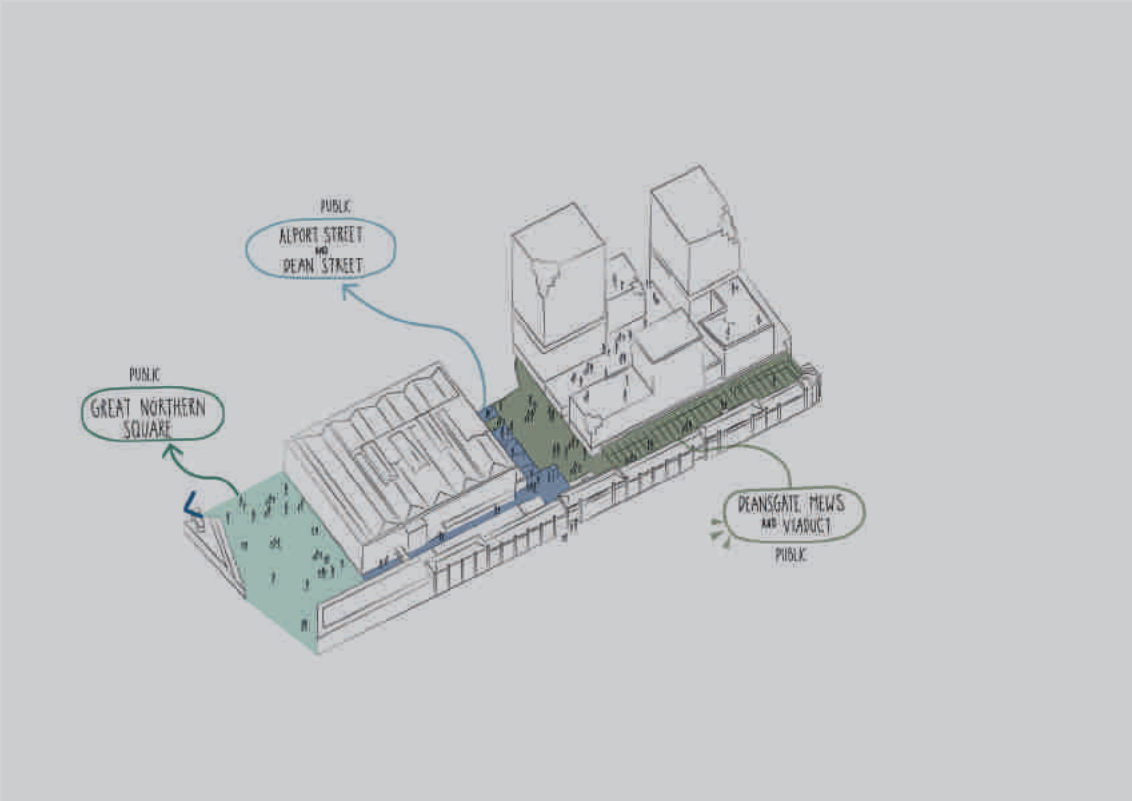


Design language championing the historical use of the site

1. Commercial spill out
2. Historic interpretation (old rail tracks)
3. Picnic and bench seating.
4. Slide between levels
5. Main entrance area to residence podium and roof terrace
6. Stair locations
7. Lift locations



First floor - Illustrative Masterplan

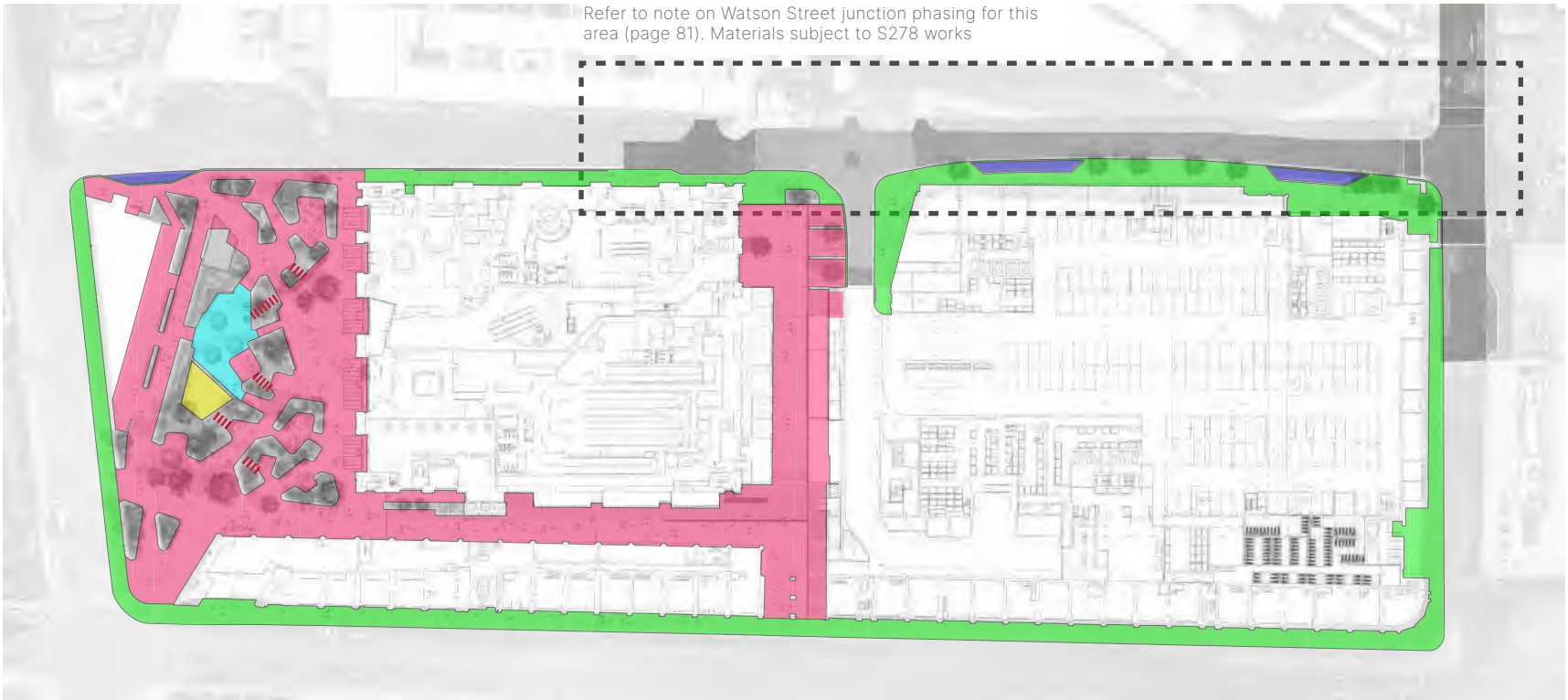


06
Public Ream Materiality

Approach
Materiality

The materiality is crucial to the long-term success of any public realm scheme. Material finishes will be selected from a simple attractive palette that will be integral with the architecture and setting.

There will be a unifying paving carpet around all areas of Great Northern to create a cohesive public realm and celebrate the historic setting of the Great Northern Warehouse.



Public Realm - materiality strategy

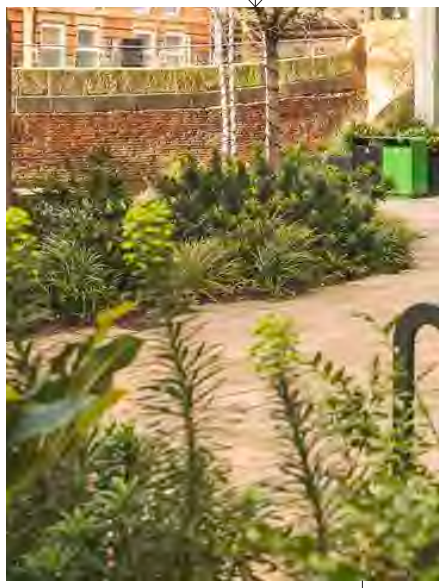
Main routes
Materiality







Breaking down the interface with the green to soften the edges





Natural stone that pulls out the key tones found in the listed building

Playing with module size and texture to highlight areas of circulation and dwell.

Telling a story through the finer detailing





Central flexible space
Materiality

A softer approach than the main routes

Bound aggregate

Resin bound gravel - Permeable, hard wearing, and fully bound





Areas of sand pit - managed daily by on site team



Elements of timber decking for variety and texture



Illustrative image Embassy Gardens, London



Illustrative image - BBC Television Centre, London

Exploratory and Informal Routes
Materiality

Fun and varied, to be discovered









Tying into the industrial character





Not always prescriptive

Furniture Character

Furnishings across the public realm will be a variety of robust finishes detailed to fit in with the overall contemporary industrial aesthetic.

Attention to detail and consideration of the intended uses and footfall are key to creating a robust landscape that will stand the test of time.

The history of the site can be revealed with details/ materials/forms adapted from the old railway tracks to evoke the past. A suite of site furniture and features will form a major part in the site narrative.

Informal gatherings



Chill out spots



Activating space



Formal



Standard benches



Group seating



Informal

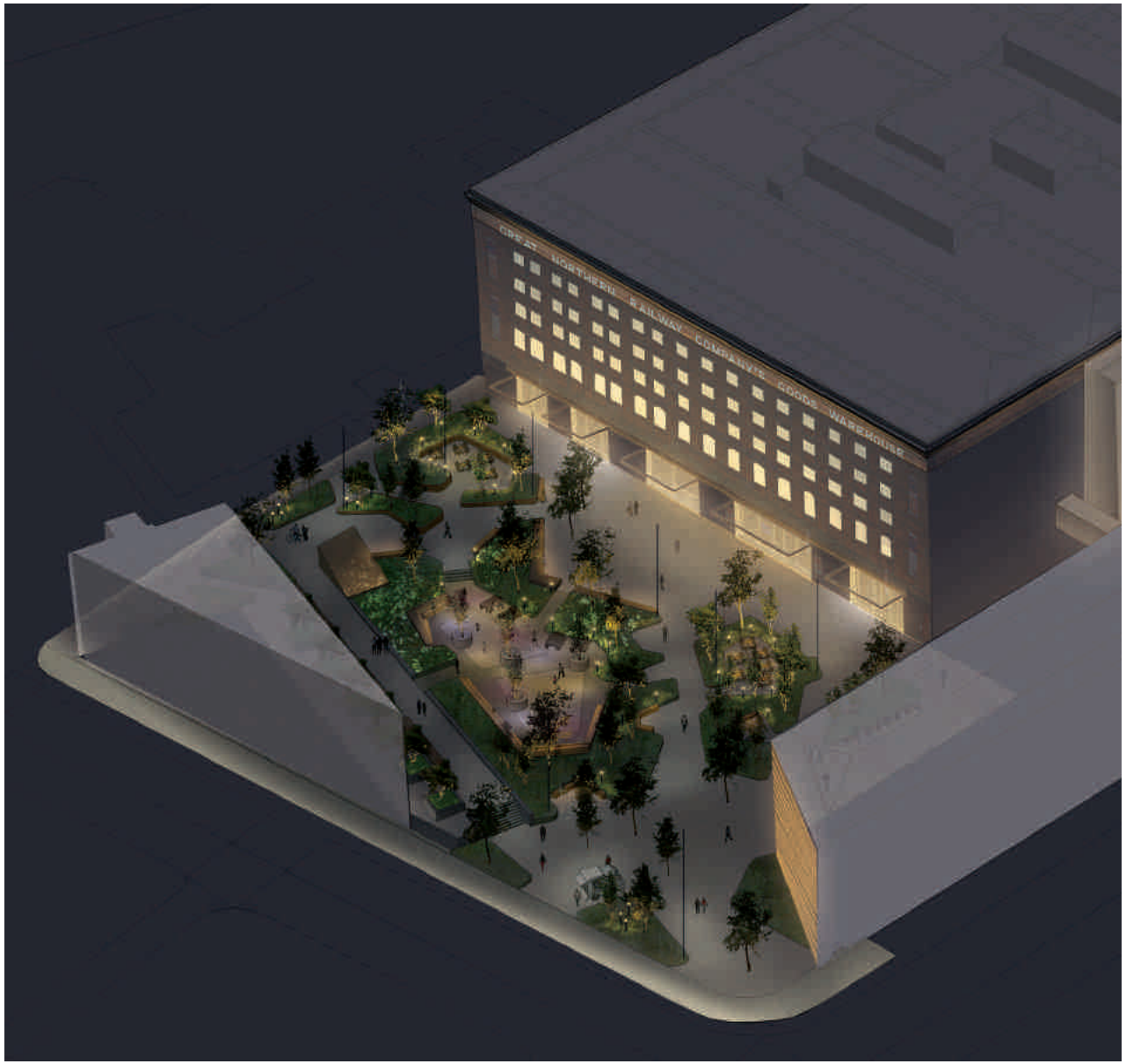
Permanent-

Lighting

The exterior lighting scheme will be in harmony with the proposed landscape design principles and aims to integrate within the surrounding buildings. The landscape, building façades and public realm characteristics will be emphasized, but at the same time, the site as a whole will be lit in such way that it expresses a coherent identity.

The landscape lighting design is to illuminate key routes and gathering nodes using selective use of lighting colour, and appropriate use of lighting intensity by integrating lighting wherever possible as an integral part of the landscape. Where this is not possible, lighting is to be an integral part of the architectural elements of the public realm and integrated into walls, handrails, ramps, steps, etc.

The exterior lighting strategy can be found in Appendix 1 at the end of this document.



Great Northern Square - Illustrative lighting axonometric

Planting Character

The planting beds and softworks are laid out in linear bands to accentuate the former presence of the straight grid-like railway tracks. Several varieties of native grasses and shrubs evoke the uncultivated landscape that developed when the site was left vacant. Trees provide a vertical framework and seasonal colour.



Fresh, immersive and year around



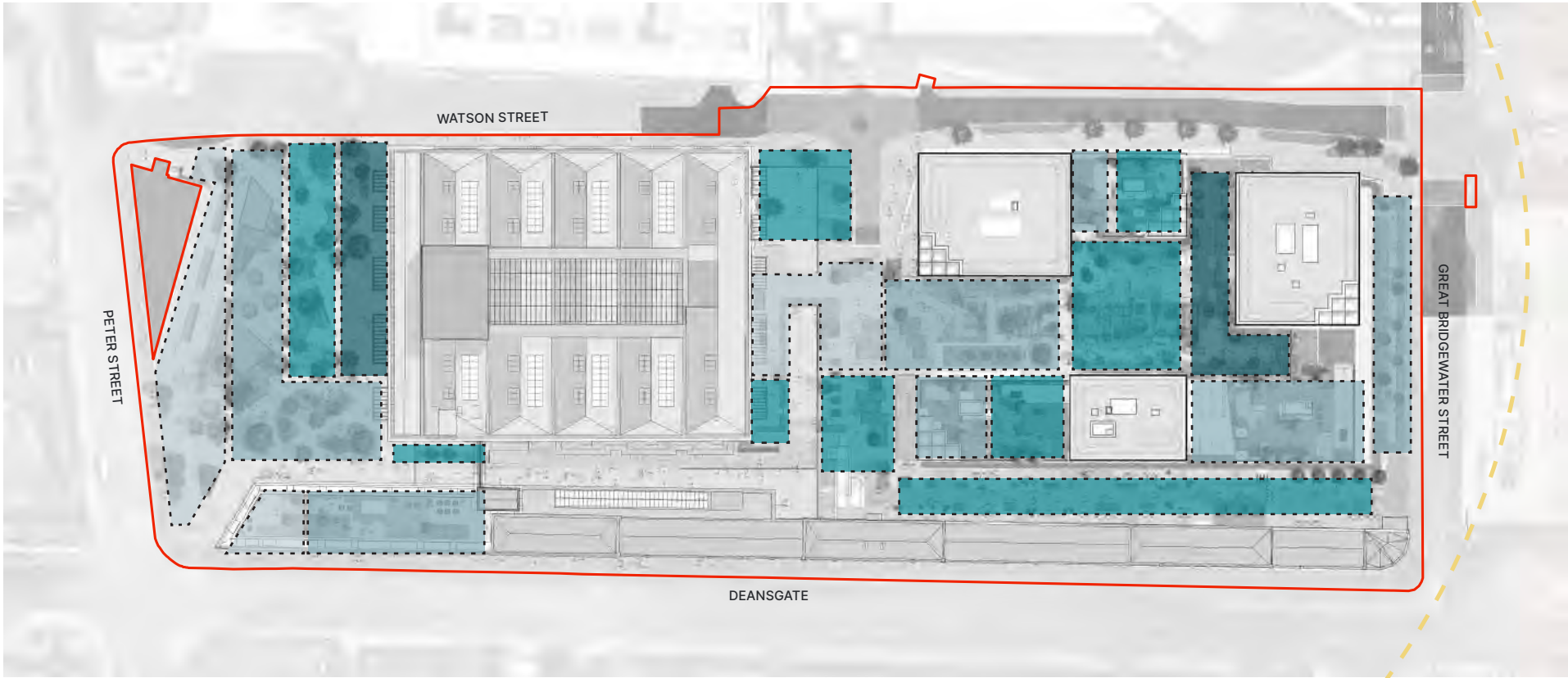
Texture, variety, colour and seasonality



Informality, engagement, sensory

Softworks Strategy

The proposed planting mixes will consider the micro-climate of the site which has a diverse array of spaces both within the sun and shade.



SUN ------> SHADE

Planting Palette
Ground Floor

The deepest areas of shade in the square are adjacent to the Great Northern Warehouse where it is overshadowed for the majority of the year. The planting in these areas will focus on form, diverse texture and structure with shade tolerant planting that gives a luscious, woodland type character.

Softworks - Shade


Asarum europaeum


Tiarella cordifolia


Galium odoratum


Asplenium scolopendrium


Geranium macrorrhizum


Liriope muscari


Geranium himalayense


Liriope muscari 'monroe white'


Hosta sieboldiana Elegans


Heuchera ‘Green Spice’


Astilbe arendsii


Saxifraga × urbium


Asarum caudatum


Cardamine pratensis


Hosta fortunei var. albopicta


Luzula sylvatica

Ferns


Dryopteris filix-mas


Athyrium niponicum var. pictum


Matteuccia struthiopteris

Bulbs


Galanthus


Fritillaria meleagris


Tulipa


Hyacinthoides non-scripta

Planting Palette
Ground Floor

Moving away from the warehouse the micro-climate of the square becomes less shadowed and allows a more varied mix to be introduced. Some species link back into the shady mix to create a cohesive scheme but with a bigger focus on ornamental grasses and colour.

Softworks - Partial Shade


Alchemilla erythropoda


Ajuga reptans


Persicaria affinis 'Superba'


Astrantia 'Buckland'


Euphorbia amygdaloides var. robbiae


dryopteris filix-mas


bergenia cordifolia


Campanula persicifolia


Selinum wallichianum


Asarum caudatum


Cardamine pratensis


Hosta fortunei var. albopicta

Grasses


Hakonechloa macra


Hakonechloa macra 'Alboaurea'


Carex oshimensis 'Evergold'


Melica altissima 'Alba'


Deschampsia cespitosa


calamagrostis brachytricha


Deschampsia flexuosa

Bulbs


Camassia leichtlinii subsp. Suksdorfii


Tulipa


Narcissus 'Thalia'

Planting Palette
Ground Floor

The areas in the square intensified as the sunniest spots provide an opportunity to create another layer of character to the planting with a more diverse range of colourful species able to thrive in these conditions.

Softworks - Light Sun


Campanula glomerata 'Superba'


Salvia × sylvestris 'Mainacht'


Geranium × magnificum 'Rosemoor'


Astrantia major 'Rubra'


Persicaria bistorta 'Superba'


Iris 'Caesar's Brother'


Allium sphaerocephalon


Alchemilla erythropoda


Verbena Bonariensis

Grasses


Deschampsia cespitosa 'Goldtau'


Festuca


Sesleria autumnalis



Bulbs


AlLium


Muscari armeniacum

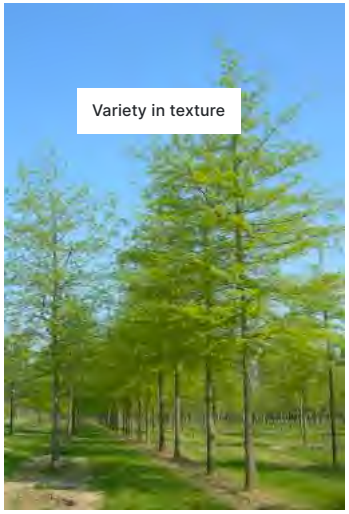
Trees
Ground Floor

The proposed tree strategy introduces 156 no. new high quality semi mature trees across the whole site. These are largely planted in soft landscaping with additional underground support systems to ensure growth, and amenity value. A tree cell system will proposed for the areas trees are planted within paving to ensure their continued growth.

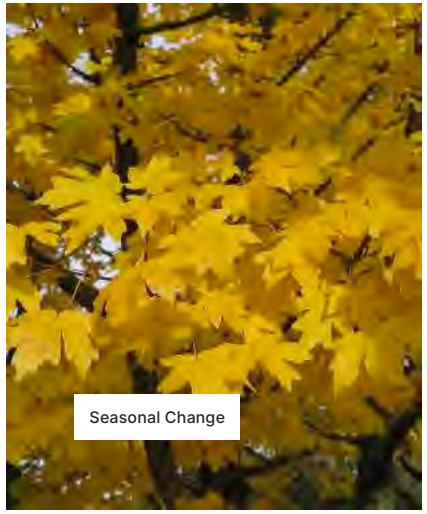
Tree planting on the scheme is driven by a number of objectives. The desire to create a green external spaces which is more relative to human scale, improving the biodiversity on site and framing views to the historic buildings and along key circulation routes.



Gleditsia triacanthos

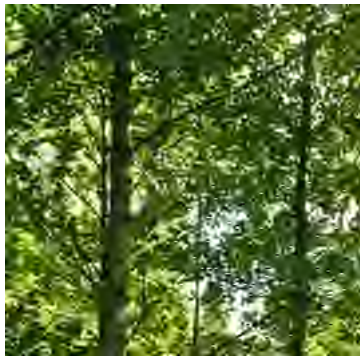


Quercus palustris



Acer campestre





Alnus glutinosa



Amelanchier lamarckii

Trees and Planting
First Floor

Trees

The selection of trees have been chosen for continuity with the residents podium and for their aesthetic qualities such as attractive bark which reflects the industrial and historical character of the build form. A number of constraints limit the use of trees across Deansgate Mews.

Planting

The aim of the planting is to create a high-quality verdant space with seasonal interest with an emphasis on structure. This will be achieved by a selection of grasses which retain form particularly in the winter.



Cornus mas

Key

Evergreen planting



Acer griseum



Prunus serrula



Veronica gentianoides



Luzula nivea



Pachysandra terminalis



Liriope Monroe White



Carex Buchananii Grasses



Geranium macrorrhizum 'Bevan's Variety'



Anemanthele lessoniana



Miscanthus sinensis 'Kleine Fontäne'



Fatsia japonica

Biodiversity

There is a significant net gain of habitats across the site with a 600% increase in ecological value under the BREEAM, CEEQUAL and HQM Ecology Calculation. In addition to the areas of diverse planting on the site elements such as bee posts and insect hotels will be included with the opportunity to promote public engagement through interpretive boards.

Precedent Imagery



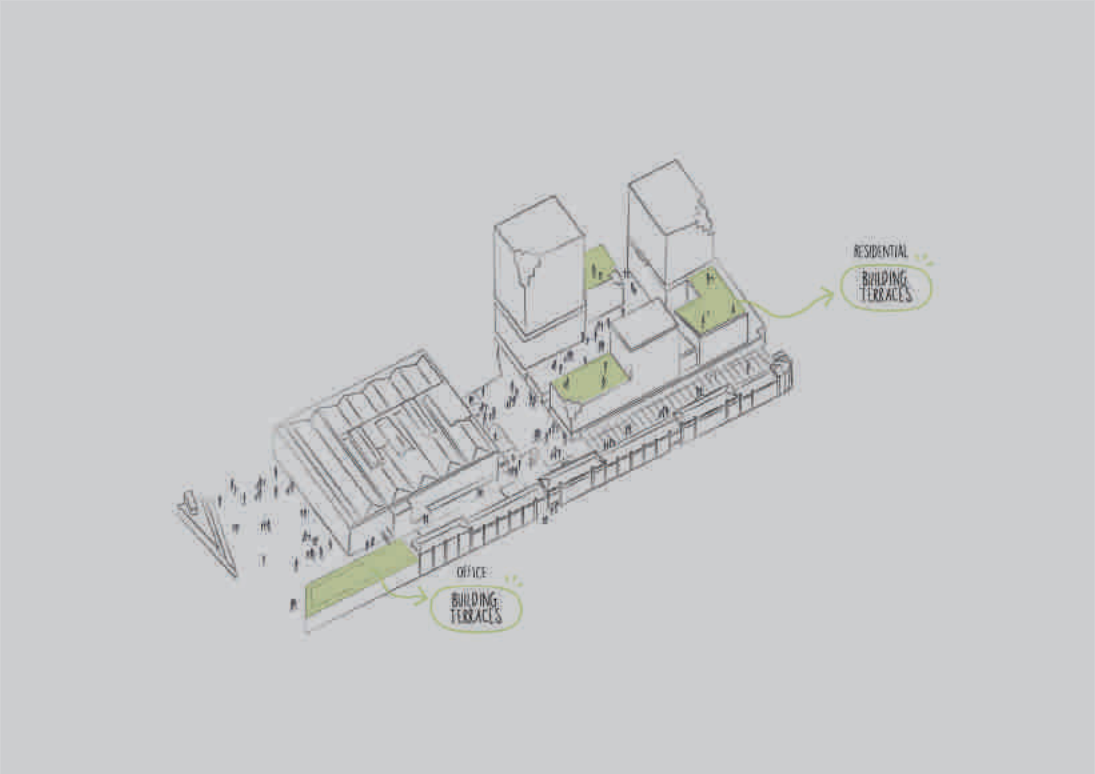
Bee posts



Insect hotels



Interpretive boards

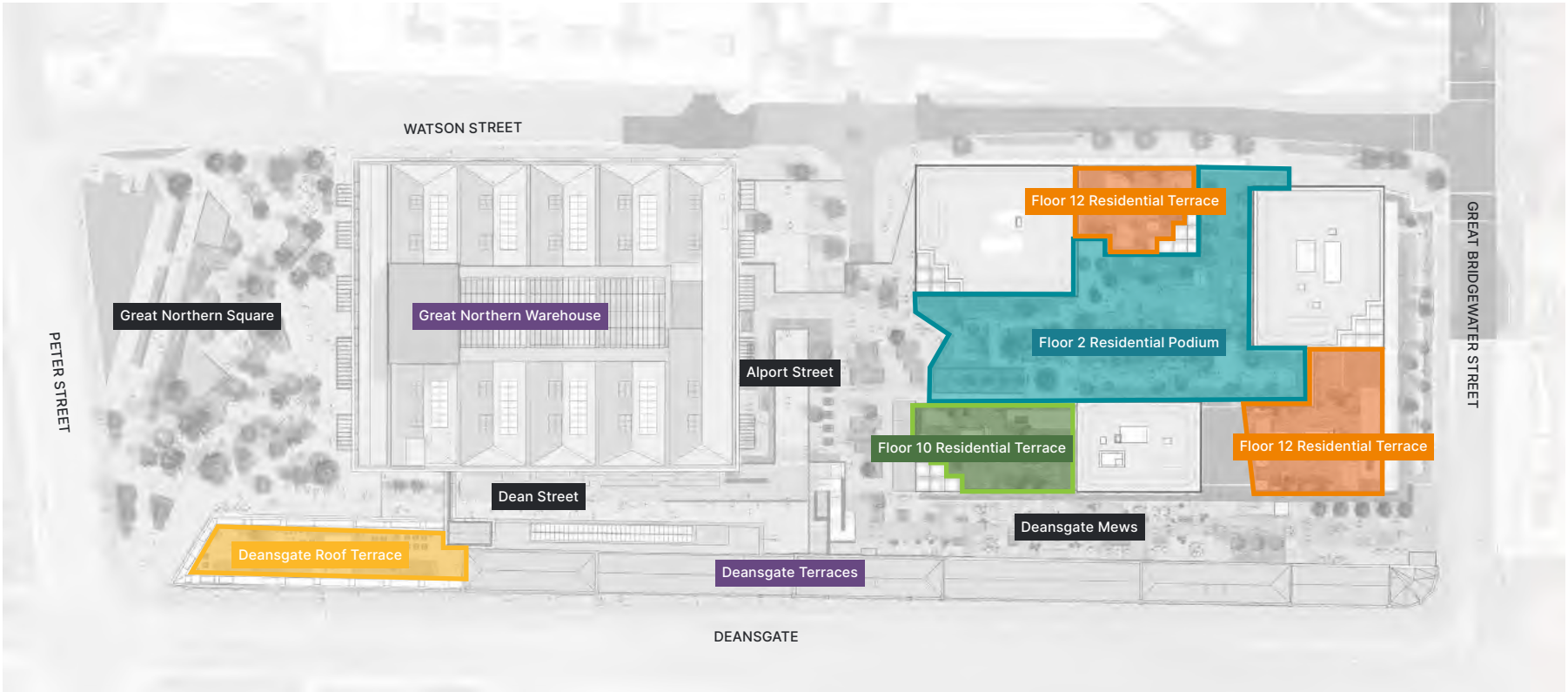


07
Building Terraces

Building Terraces

A range of generously sized spaces for the residents of the towers are provided within the scheme. This includes a podium space on the second floor which is accessible to all residents along with a terraces space for each individual tower. The scale of these terraces offers a unique opportunity to provide a range of community spaces which can provide a diverse offer of activities.

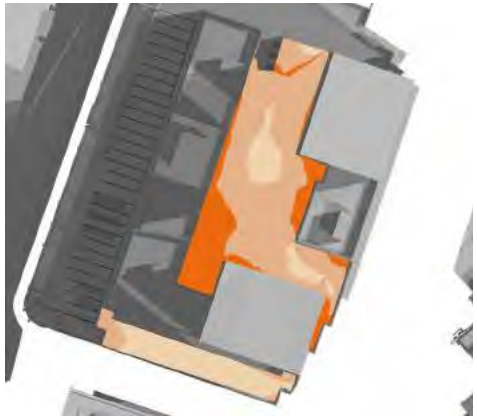
In addition to the residential spaces, a new terrace is proposed which will available for the office users within Deansgate Terraces. This will create spill out space with unique views over Great Northern Square where workers can relax, meet and work.



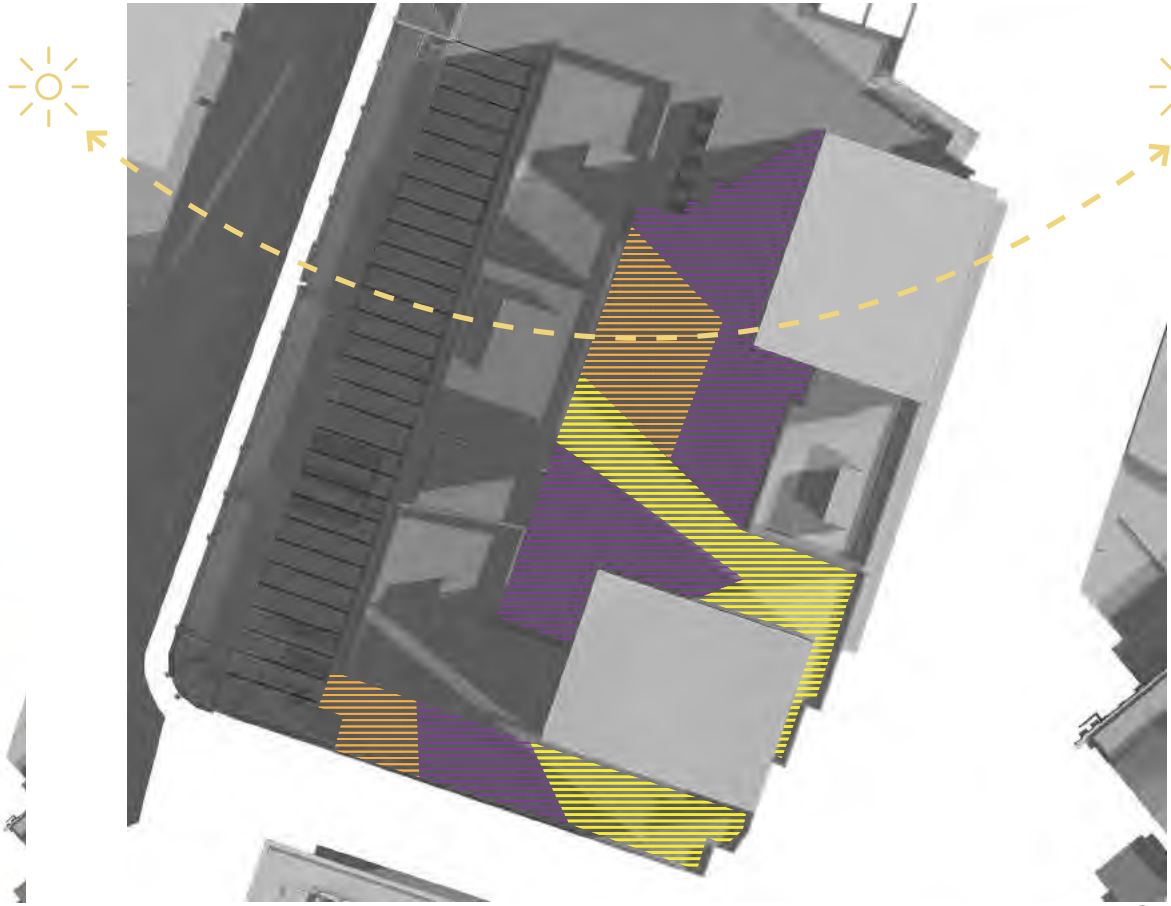
Location Plan - Residential spaces

Micro-climate
Resident's Podium

The scale of the space provided on the second floor for residents creates a diverse range of micro-climatic conditions. Generally, the space is well sheltered between the towers and offers chances for both being within shade and sun. This presents an opportunity to propose a diverse range of planting and areas for people to inhabit.



Overall Wind Study

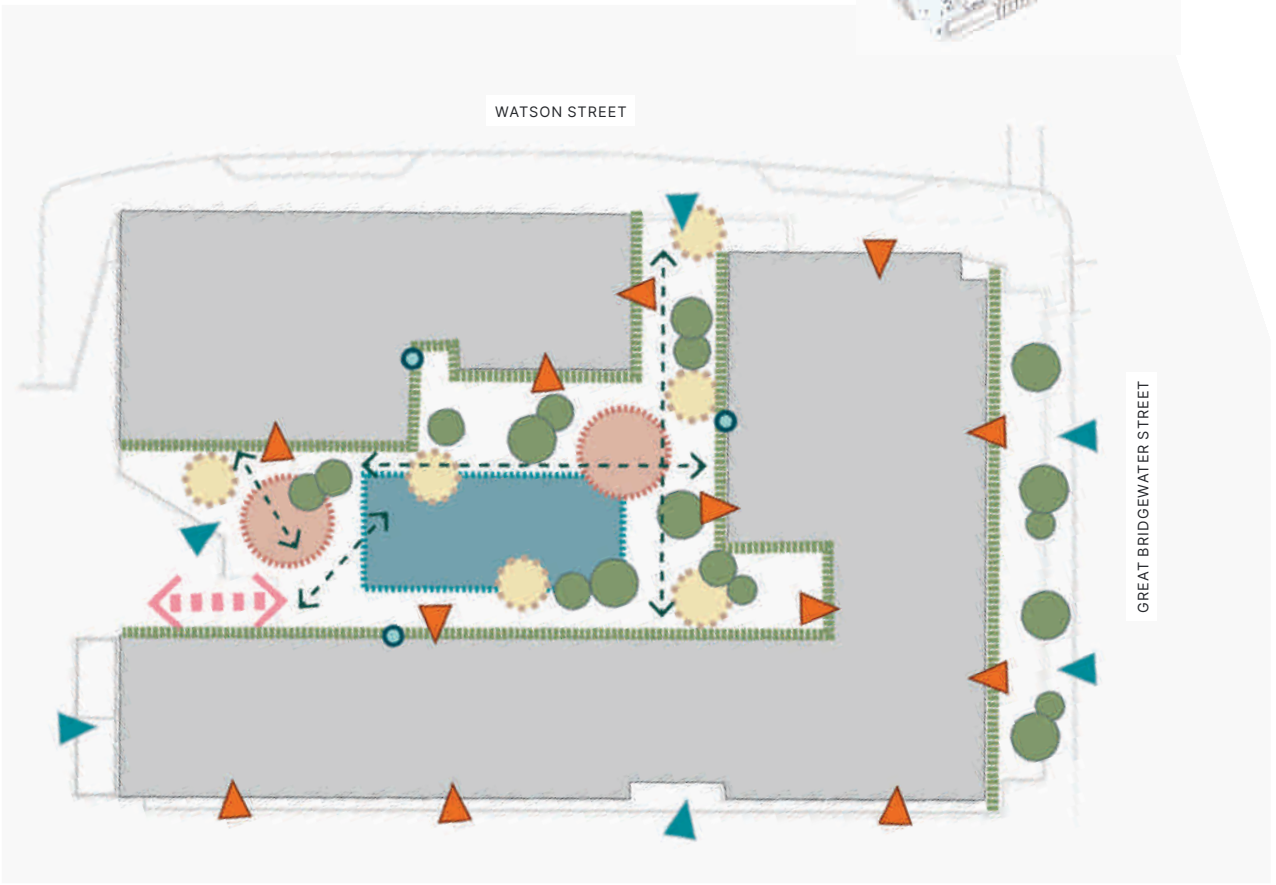


Overall sun and shadow analysis

Spatial Considerations
Resident's Podium

The resident's podium offers a sizeable space in which all of the towers will be able to access. Being located centrally to the surrounding buildings brings with it key considerations within the design including views in, out and accommodating a large range of users. Careful consideration is required to create a space that user's feel comfortable within with an appropriate level of privacy from the surrounding units.





Key

- Private/public interface to be considered during staircase design
- Trees integrated where possible on podium to provide shelter and frame views
- Planting to define privacy to residential units and create a green threshold
- Desire lines and views to entrances and key routes retained
- Access from communal areas
- Small scale spaces to relax
- Larger spaces to accommodate groups
- Consideration of shared community spaces
- Key views outwards
- Consider views from residential units

Resident's Podium - Spatial considerations

Spatial breakdown
Resident's Podium

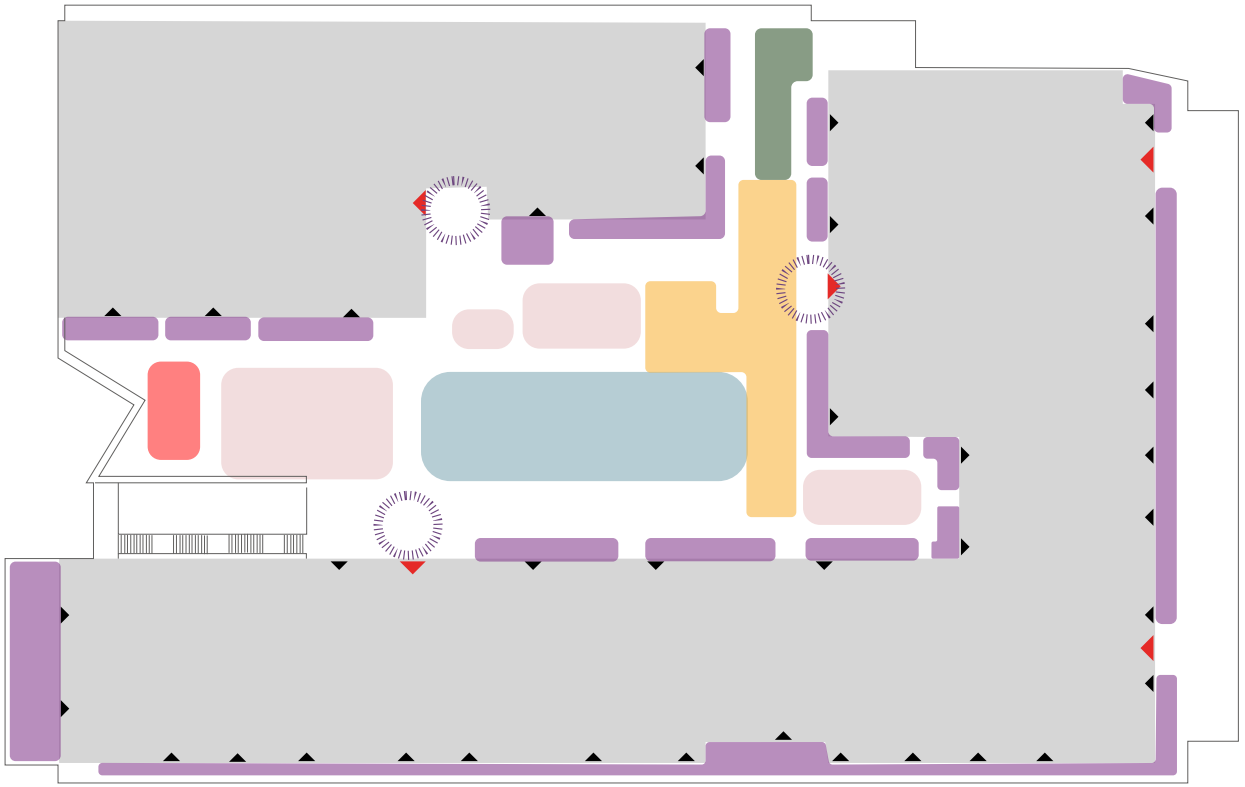
The breakdown of spaces within the Podium allow for a diverse range of uses. Allowance for private terraces to the adjacent units is created along with a threshold to provide adequate privacy.

Larger spaces are proposed to create flexibility for community events alongside areas for active uses, such as outdoor gym equipment, to promote a healthy lifestyle. The podium design also proposes grow space, focussed on the sunnier side of the garden.

An allowance for a dog play space is proposed to ensure consideration to future users with pets is incorporated.

Key

- Dwell space
- Active play zone
- Flexible community space
- Private gardens
- Dog play space
- Grow space
- Threshold to main entrances



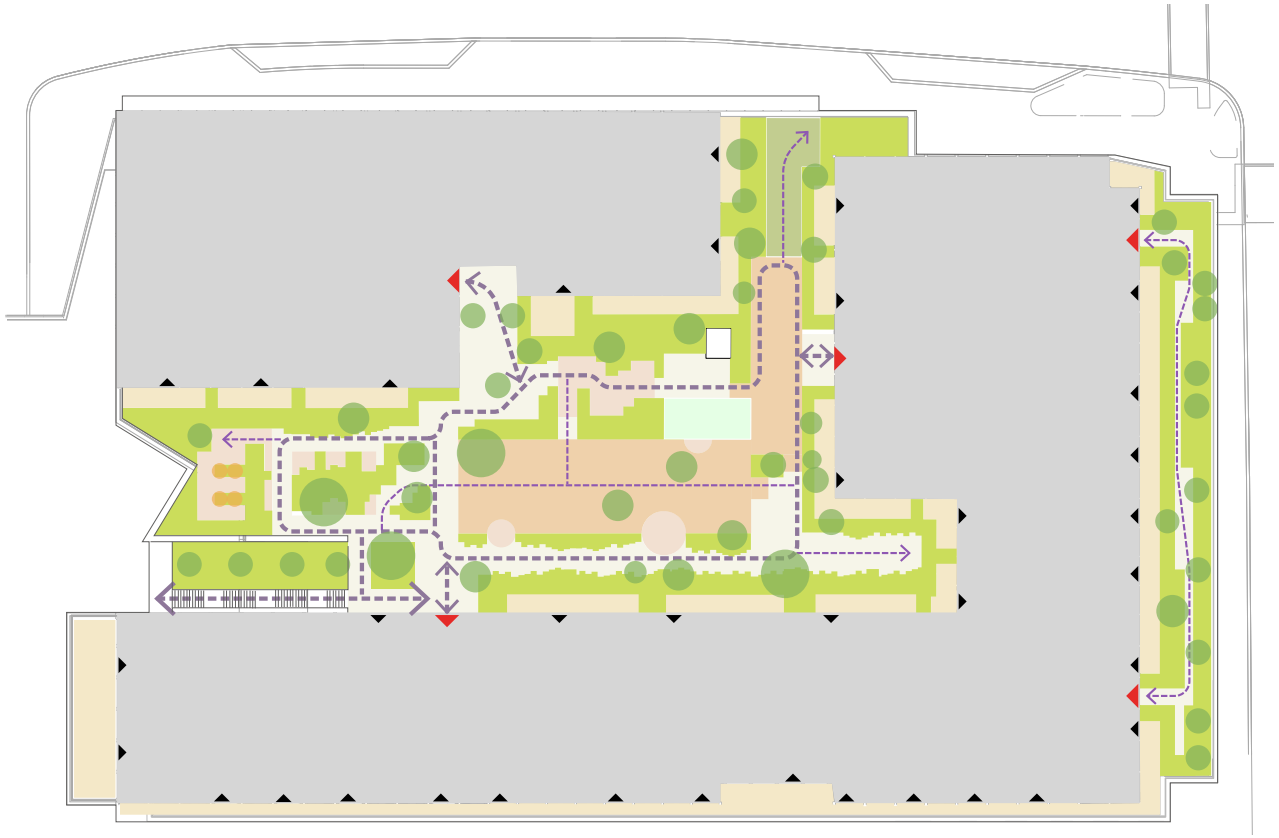
Spatial break down - Resident's Podium

Movement and scale
Resident's Podium

Primary circulation around the space is focussed on the three key access points from each tower block. There is also a staircase from Deansgate Mews which allow resident access only up to the podium level

A sense of exploration will be created through secondary meandering routes which will have an immersive character within planting.

As a whole the podium is a very generous space which will be a key amenity for the residents.



Movement Resident's podium

Key

Flush compliant primary route

Flush compliant secondary route

Illustrative Masterplan
Resident's Podium

Key Aims

Liveable Loveable Comfortable

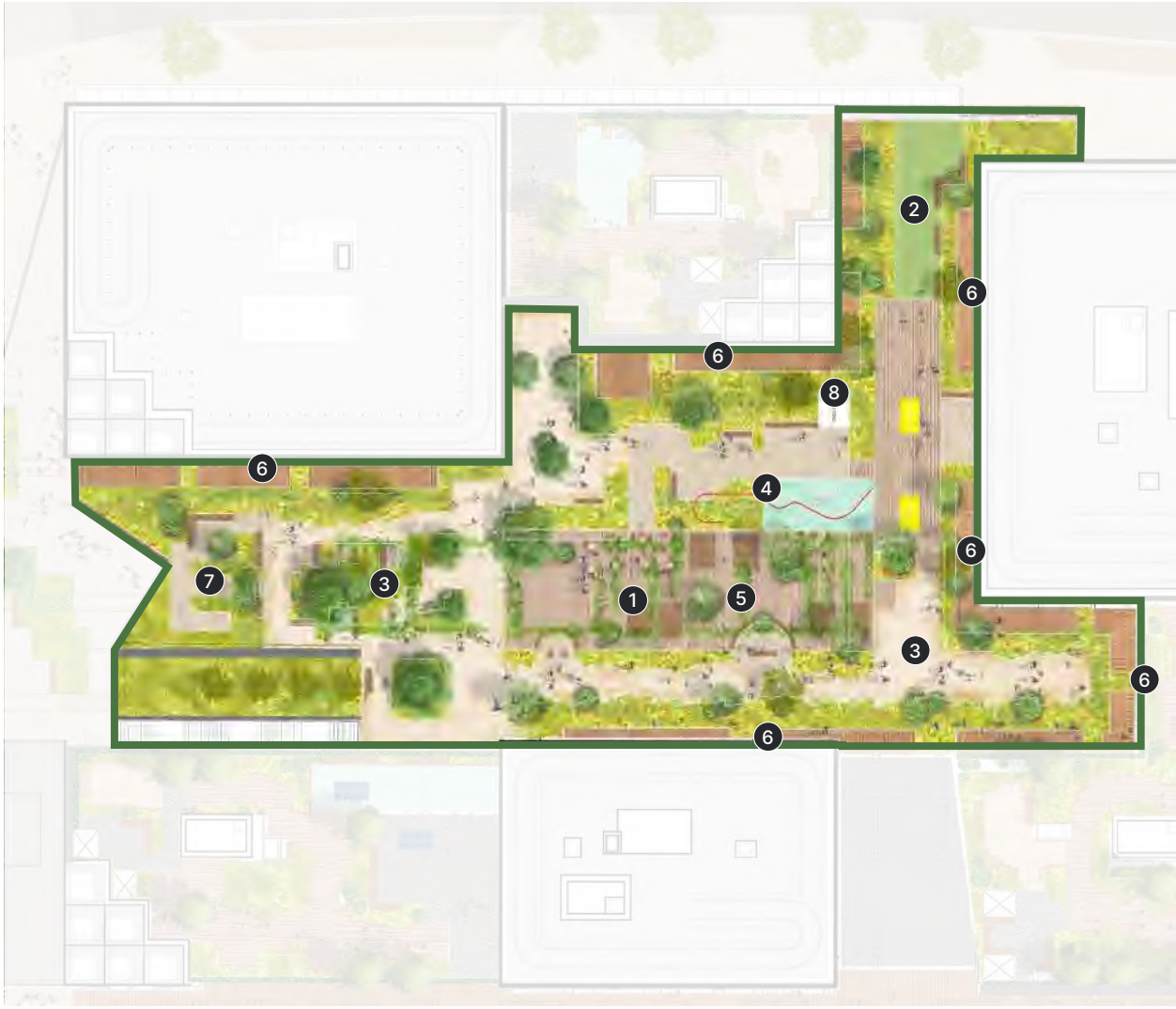
1. Community space
2. Dog area
3. Informal dwell space
4. Active and playful spaces
5. Green canopy structure
6. Private resident terraces
7. Grown space
8. Maintenance store



Pet friendly



Immersive experience



Illustrative Masterplan Resident's podium



Active lifestyle

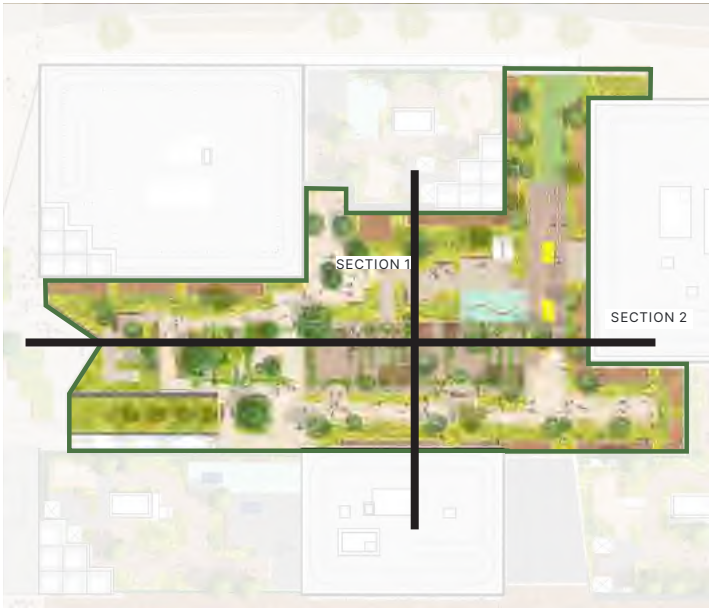


Verdant spaces



Colour and seasonality

Illustrative Sections
Resident's Podium





Section 1



Section 2

Drainage Strategy
Resident's Podium

Surface water attenuation will be provided on the resident's podium in the form of a blue and green roof with flow restricted outlets. This area has a deep profile meaning it can accommodate the attenuation layer as well as soft and hard landscaped build-ups above.

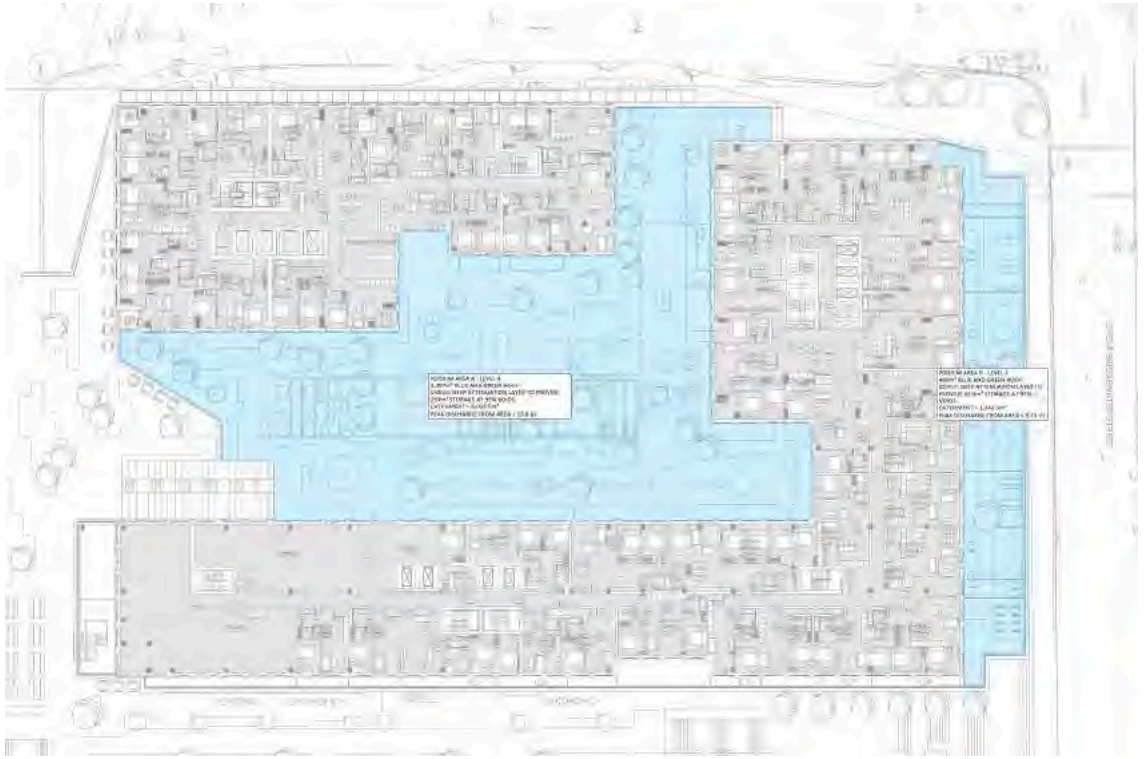
A green roof can help remove airborne contaminants such as heavy metals, volatile organic compounds and other pollutant particles. Furthermore, green roofs have been found to reduce the urban heat island effect experienced in built-up areas due to the mass development of once permeable surfaces into impermeable surfaces.

A typical green/blue roof build-up from top to bottom the layers include; planting blanket, soil, filter membrane, drainage/irrigation layer, attenuation crate, protection layer, waterproofing system and flow restrictor outlet.

The proposed strategy includes the provision of blue roof attenuation and soft landscaping (green roof) areas on the resident's podiums, to enhance run-off water quality.



Typical build up of green/blue roof system



Area of blue roof to resident's podium

Trees
Resident's Podium

Alongside the desire for seasonal interest and supporting biodiversity, the tree selection for the residential gardens is guided by two key drivers:

- Micro-climate conditions - embracing site conditions by specifying trees which can tolerate and thrive in shade or exposed areas.
- Sense of human scale - A selection of multi-stem trees relative to human scale which can provide a sense of privacy and interest for the residents at podium level and create a comfortable sense of screening from above.



Cornus mas



Prunus serrula



Betula utilis var. jacquemontii



Amelanchier x grandiflora 'Robin Hill'



Crataegus prunifolia



Cornus kusa

Hardworks
Resident's Podium



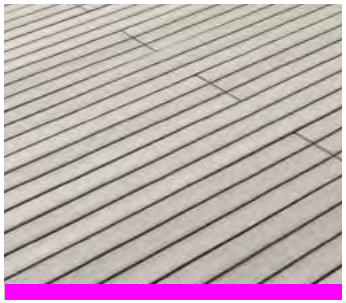
Resin Bound Gravel

To key movement walkways and corridors



Natural Stone

Granite feature areas in a mix of warm grey tones.



Composite decking

To private residential spaces



Composite decking

To the central gathering spaces



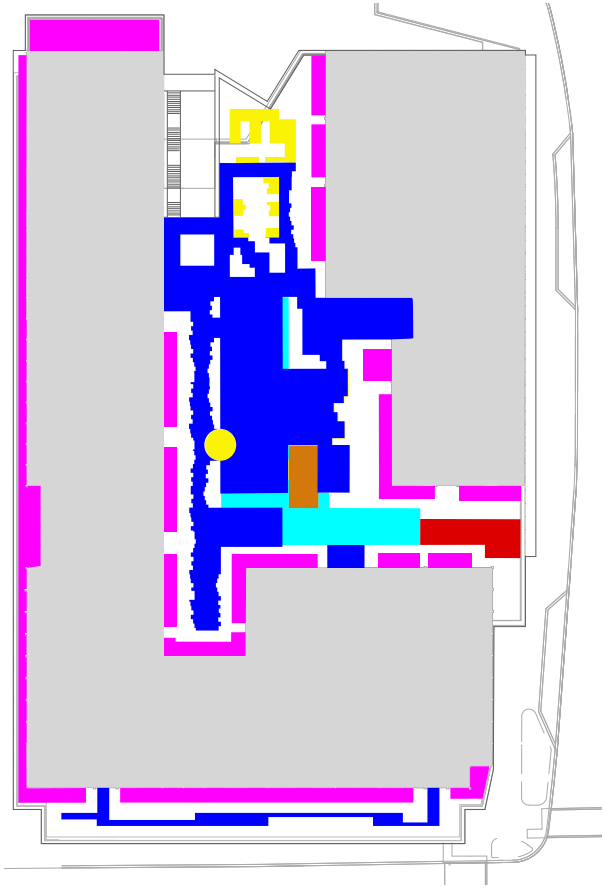
Artificial Turf

For pet friendly zone



Sand filled carpet

For adaptable active uses



The hardworks have been selected to achieve the comfortable and pleasing aesthetic of a community garden with feature areas of natural stone that tie into the wider site aesthetic. Decking is used to create a distinction between movement and dwell spaces whilst the active use areas have a more vibrant and durable materiality.

Planting
Resident's Podium

The aim of the planting is to create a high-quality verdant space with seasonal interest and structure which will create the desired immersive look and feel. This is achieved through mix of planting varying in size and an emphasis on evergreen plants which will provide year-round interest and shelter for wildlife.

The lush and shade tolerant style planting is influenced by site conditions. Pops of colour will be focussed in the sunnier areas of the terraces and space to form adaptable grow areas will be provided.

Key

Evergreen planting



Polystichum aculeatum



Veronica gentianoides



Convallaria majalis



Pachysandra terminalis



Euphorbia amygdaloides robbiae



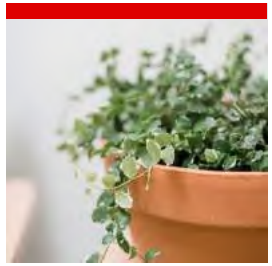
liriope muscari



Geranium 'Johnson's Blue'



Geranium macrorrhizum 'Bevan's Variety'



Ficus pumila



Asplenium trichomanes



Carex oshimensis 'Evergold'



Hosta 'Frances Williams'



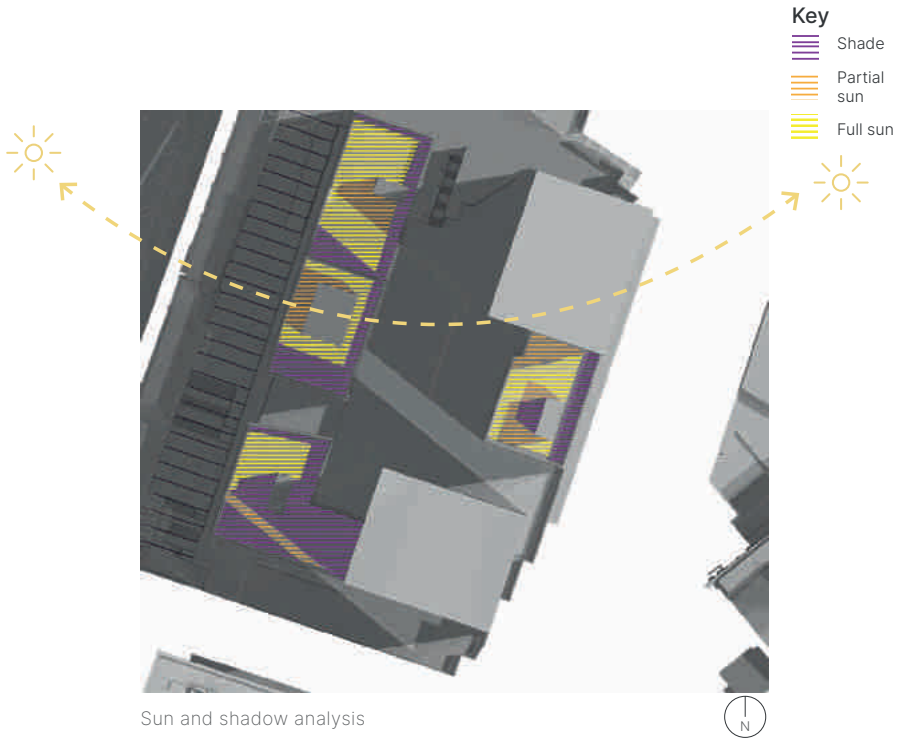
Geranium macrorrhizum 'Bevan's Variety'



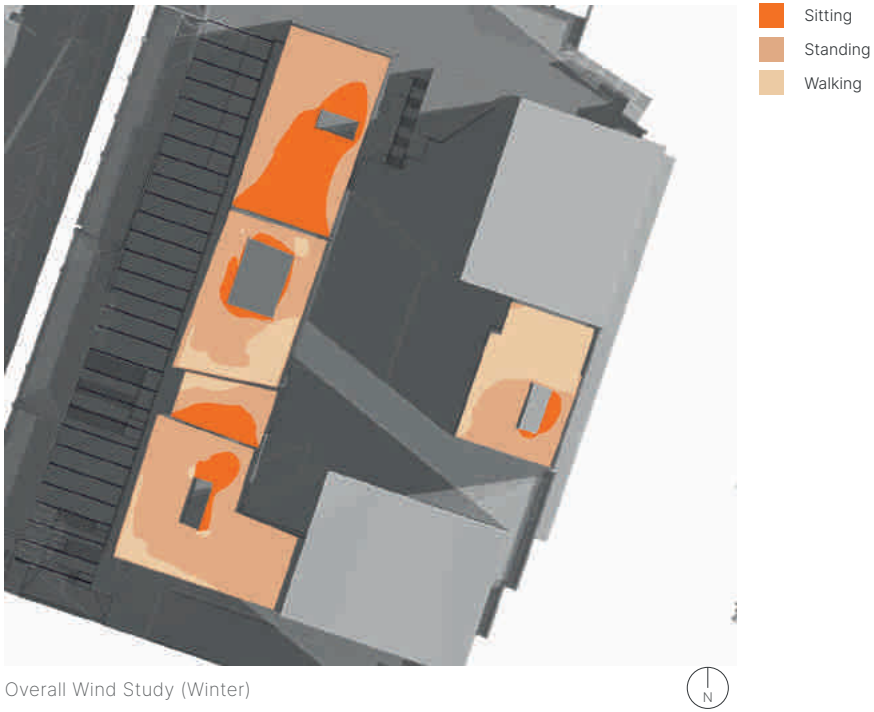
Fatsia japonica

Micro-climate
Building Terraces

Due to the varied prospect of each terrace there is a broad spectrum of conditions to consider in the individual design of each space. The arrangement of these will provide a similar amenity value to each tower but in a different format to maximise positive climatic conditions of that specific space.



Sun and shadow analysis

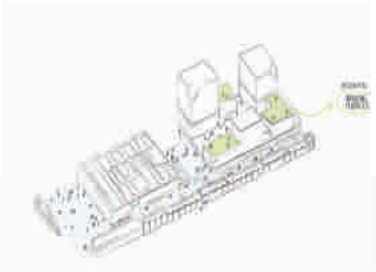


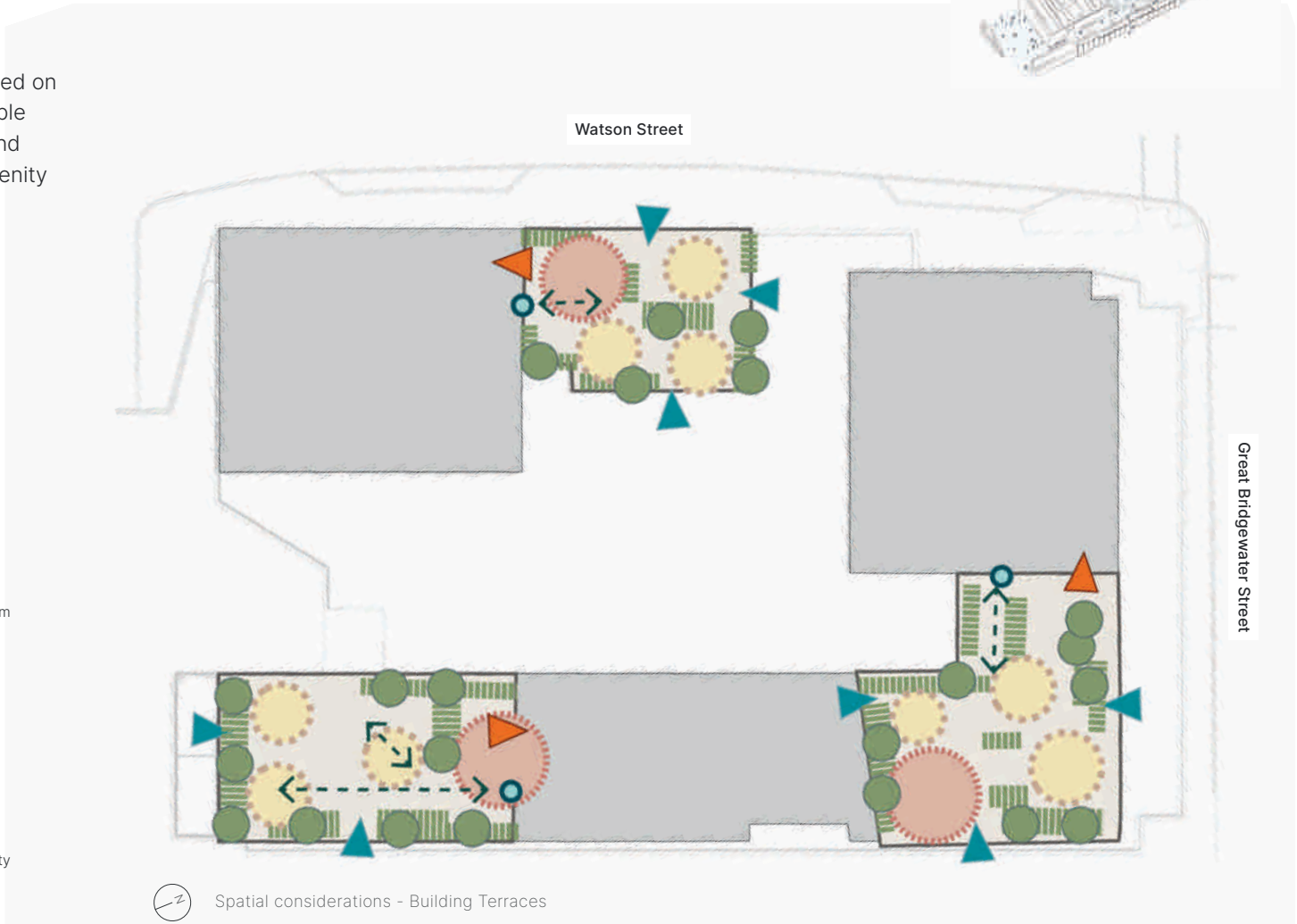
Overall Wind Study (Winter)

Spatial Considerations
Building Terraces

Building Terraces

The upper terraces for the residents are located on the 10th and 12th floors. They will be accessible by those that live within that specific tower and are situated adjacent to indoor residential amenity space.





Spatial considerations - Building Terraces

Key Aims

Quality Cosy Adaptable

Illustrative Masterplan
Building Terraces

1. Meeting pods
2. Garden Space
3. Spill out from amenity
4. Active games spaces
5. Pergola areas
6. Fixed seating areas



Flexible Space and seating



Framed Views and circulation through space



Illustrative Masterplan Resident's podium

Illustrative Masterplan
Deansgate Terraces roof garden

A roof garden is proposed on the top of Deansgate Terraces to the north end of the site. This will provide a spill out space for the office occupiers of the Terraces and will create an area to relax, work and socialise. The garden will create the opportunity for unique views across Great Northern Square with as well having a backdrop of the Warehouse itself.

1. Social tables and benches
2. Flexible loose furniture
3. Relaxing seating spaces
4. Active games spaces



Deansgate Terraces Roof Garden

08

Watson Street Future Vision Study

Vision Study Boundary

As part of the early design process a vision study was undertaken to consider the potential future opportunities that could be possible along Watson Street and Great Bridgewater Street. The area currently creates a hostile pedestrian environment and as the future plans for the surrounding areas come forward an opportunity to greatly improves this key pedestrian link into the city is possible. This is a long-term future view that has been used to inform the design for possible works within the redline boundary for the current application.

Key issues in the area were identified as:

- Vehicular dominated wide streets
- Poor quality footpath routes and crossing points
- Poor quality streetscene - Clutter, low quality finishes generally, poor tree cover, lighting, active uses.
- Viaduct discourages night time use
- Lack of sense of place
- Poor relationship between Deansgate/Castlefield, Viadux and Great Northern
- Opportunity to improve on the proposed Viadux 278 proposals



Vision Study Boundary diagram

Site Context

Great Bridgewater Street



- Too much tarmac - Vehicle dominated space
- Poor connections across Deansgate and Great Bridgewater Street
- Spatial relationship between Beetham Tower and Dean Street

Watson Street -Great Bridgewater Street



- Vehicular dominated and no crossing to Great Bridgewater Street
- Narrow footpaths and poor lighting
- Staggered crossing to Watson Street does little to encourage crossing.
- Poor sense of arrival

Great Bridgewater Street



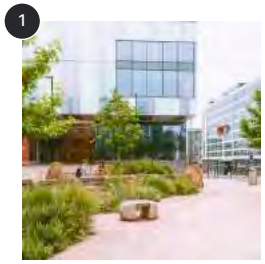
- Parking and highway create an intimidating environment
- Footpaths widths will no encourage activity at ground floor level to Viadux
- Poor quality lighting

Albion Street

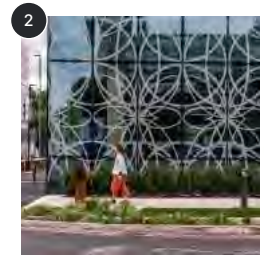


- Vehicular dominated poor sense of arrival and doesn't complement the Tower of Light
- 5 lanes of traffic !
- Pedestrian crossings and barriers discourage use and desire lines

Concept Axonometric

















Watson Street Junction Phasing

A S278 agreement has been reached with Domis and MCC Highways in respect to improvements to the public realm and highways junction in and around Great Bridgewater Street and Watson Street. While the scope of this work has been agreed with MCC, Salboy and Domis, it was felt by all linked parties that improvements to the junction could be made to further improve the pedestrian experience and to more strategically allocate the works, recognising that when works to GNW are undertaken, the works delivered by Domis to the edge of the GNW site would be damaged during construction activities.

On this basis, initial works (phase 1 of the works) to Watson Street and Great Bridgewater Street will be carried out by Domis in connection with their Viadux scheme, as required by their planning permission. These works will upgrade the eastern side of the Great Bridgewater Street junction, remove the traffic island on Watson Street, and widen the eastern side of the pavement for Watson Street (Phase 1 of the works).

The works will be implemented by way of a S.278 mechanism. As part of these works, a new crossing point will be provided by Domis to allow pedestrians to better connect to the eastern edge of Watson Street from the new stair and lift on Great Bridgewater St linking to the Deansgate-Castlefield Metrolink stop and to improve it as a pedestrian thoroughfare.

GN Developments would then propose updating this S.278 agreement to deliver the remaining necessary works when the Leisure Box element (Phase 2) of the Great Northern proposals come forward. At this point, the junction will be eventually upgraded further with a new crossing point over Great Bridgewater Street leading to a widened Watson Street on the western footway. This improvement to the junction will be completed broadly in tandem with the completion of Leisure Box element of the Great Northern proposals.

This approach has been discussed and agreed with Manchester City Council as an acceptable mechanism to ensure the placemaking objectives of this junction are fully realised. This area is highlighted on the plan shown on this page, and the details of the improvements to the full junction will be subject to a planning condition to confirm these details, alongside a S.278 agreement that will be agreed between all relevant parties.



Illustrative Masterplan - Watson Street Junction

Leeds

+44 (0)113 824 6413

Liverpool

+44 (0)151 363 1230

London

+44 (0)207 253 5678

Manchester

+44 (0)161 928 9281

Standish

+44 (0)145 360 7080

Appendix 1
External Lighting Strategy

Great Northern Warehouse, Manchester

PUBLIC REALM LIGHTING STRATEGY

NOVEMBER 2022
STATUS: FOR INFORMATION

Great Northern Warehouse

Public Realm Lighting Strategy

Issue Status: For Information

Project Number: 1090
Date: 17/11/22
Client: GNW Developments Limited

LB_1090_LR_02_PublicRealmLightingStrategy

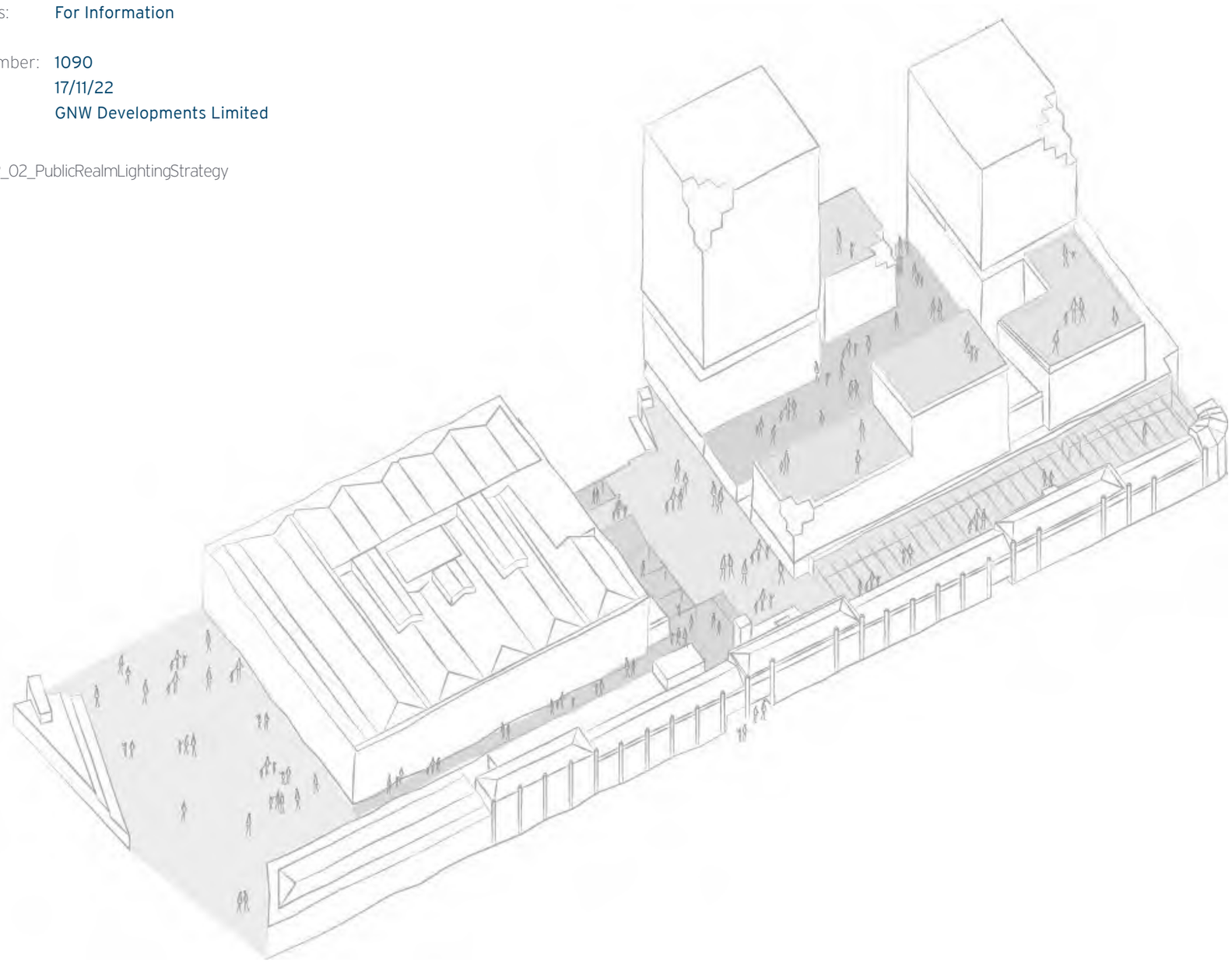


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Goods Exchange to city horse carriages. Horse, steam and hydraulic hoists and pulleys were part of the warehouse's aesthetic. Today the square looks quite different providing spaces for relaxation, social gathering and play.



Railway access from the south. The aesthetic of the rail heritage, of iron rails and wood beams can be translated into the materiality of patinated metals, warm rusty colours, bright highlights and expressive contrast.



Although no longer in use the underground waterway can be introduced through impactful immersive interventions that refer to the various impressions of water.

Manchester's largest railway warehouse, the Great Northern Warehouse was a unique three-way transport interchange of goods between local city carriages, trains coming direct from Central station and Manchester Salford Canal Tunnel.
It used to be the meeting point of the city, the rail and the canal.

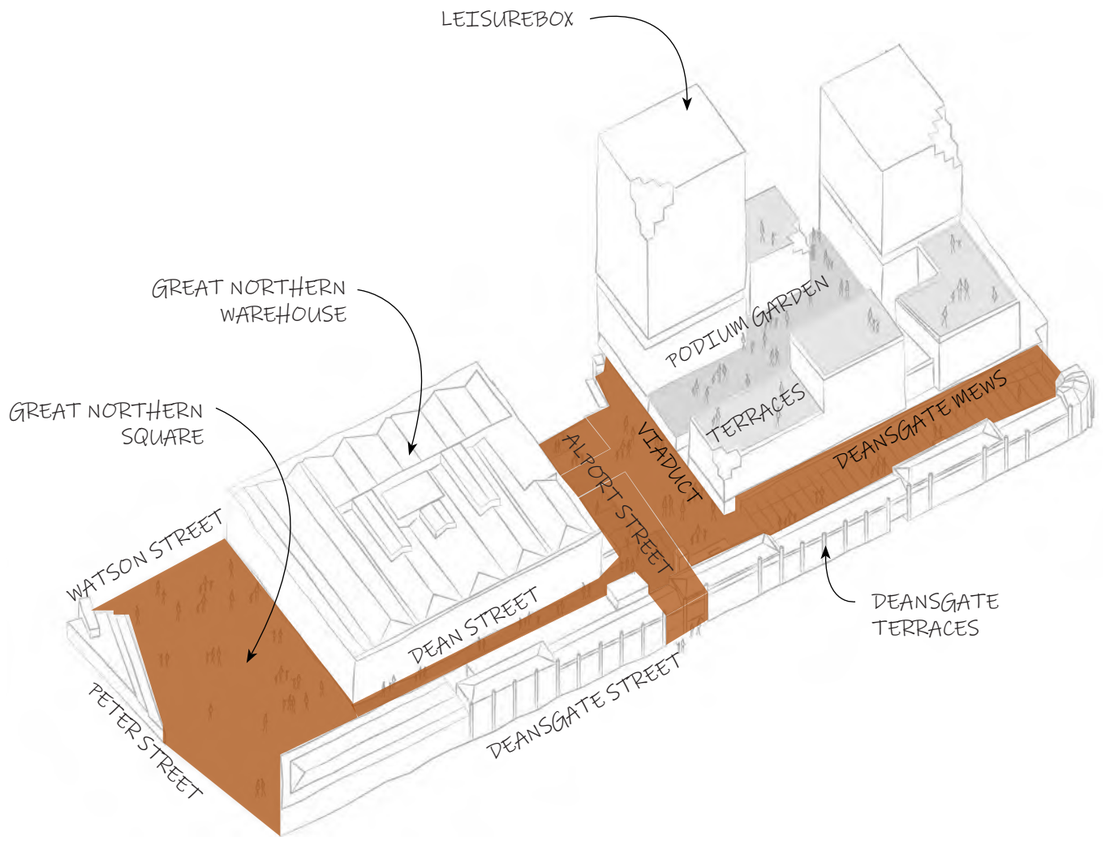
Today the area is a busy intersection linked to the City's key services and facilities to the North and a number of Manchester's key established and emerging economic growth and regeneration areas to the South.

The Great Northern Warehouse development is intended to become a vibrant part of Manchester's city life.

Drawing inspiration from the legacy of the site the proposed lighting strategy offers the opportunity to incorporate key characteristics and elements from the original purpose of the development to create engaging and activating visual references.

These alongside a carefully planed and balanced lighting scheme would contribute to a unique attractive night time image of the development and its integration into the urban fabric of the city at night.

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Scope

This document outlines Light Bureau's public realm lighting strategy for the planned Great Northern warehouse development in the centre of Manchester. The presented site-wide strategy aims to optimise the development's prime central location and future amenities, as well as add further value to the development by drawing visitors and creating a thriving space for businesses and an enjoyable, vibrant location for its new residents.
The project encompasses Great Northern Square, the two new passage ways - Dean and Alport street, Deansgate Mews and the Viaduct open air space.
The design for these areas is described in further detail on the following pages.

A night time lighting strategy for the Warehouse facades and Deansgate Terraces Victorian facade is developed in detail in a separate report: LB_1090_LR_01_Facade Lighting Strategy.

Design Principles

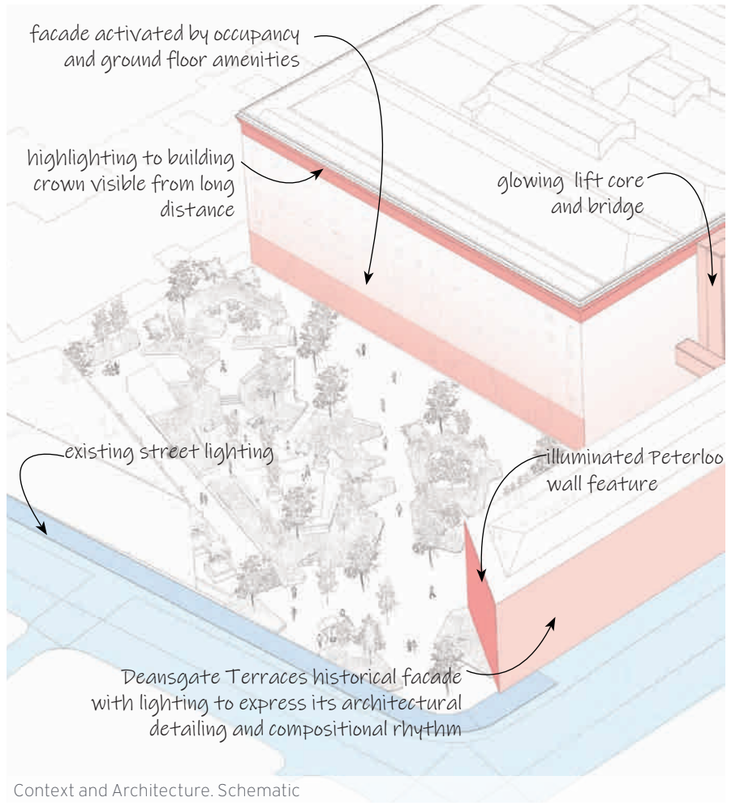
The overall lighting approach is guided by the following fundamental principles:

- Artificial lighting is implemented following clear hierarchy depending on area type and function guiding light levels and luminaire scale, type;
- Lighting equipment is to be implemented in manner that is least visually obtrusive allowing direct views through site and of any notable elements/elevations;
- Strict lighting control strategy is to be implemented to minimize light pollution, trespass, and over-illumination, as well as ensuring privacy for development's residents;
- Well shielded, warm-white colour temperature light sources that do not emit ultra violet (UV) wave-lengths are proposed for all amenity and safety lighting to prevent negative ecological impact;
- Lighting equipment selection to form a visually consistent palette fostering sense of connected community and unifying areas of different types;
- Soft accent is placed upon key trees and natural landmarks emphasizing the green qualities of development;
- Human-scale and integrated low level lighting is to be utilised in seating and relaxing areas to create comfortable environment encouraging visitors to linger and enjoy the offered amenities;
- Lighting of development's key elevations and features to create a local significance landmark and draw long distance views.
- Key characteristics of the site's heritage will be incorporated in the design solutions to support the image and identity of the spaces.

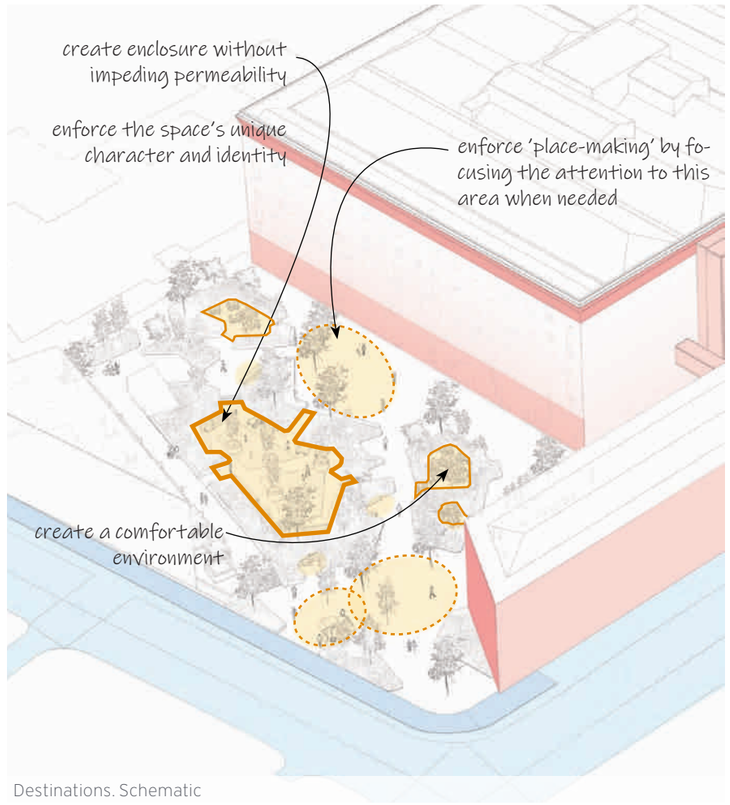
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1. Great Northern Square

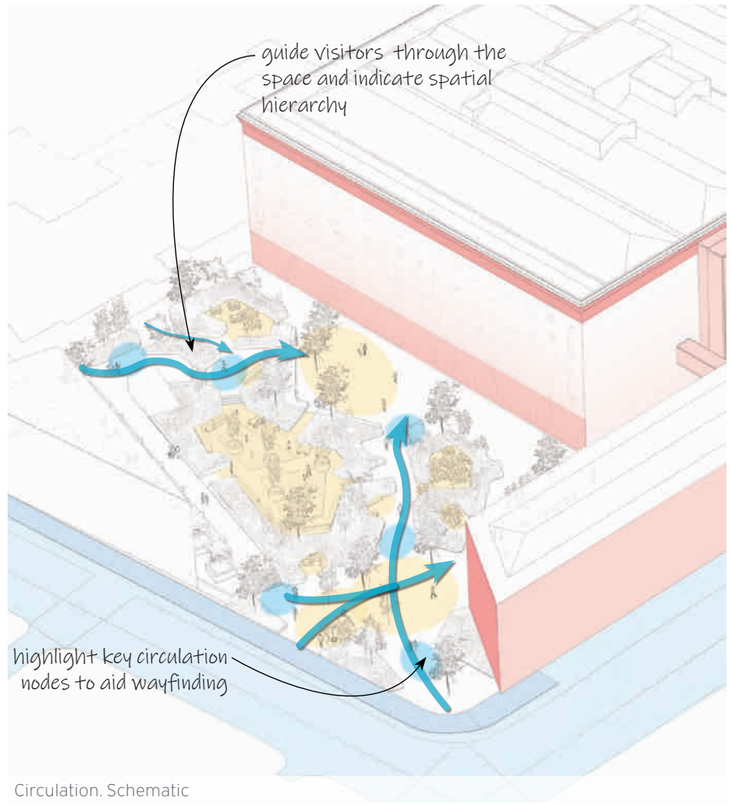
1.1 Analysis



Context and Architecture. Schematic



Destinations. Schematic



Circulation. Schematic

Observations

Great Northern Square is a complex space with a multitude of elements, zones and uses. The following lighting design strategy is based on the analysis of the square context, spaces to dwell - referred to as 'destinations' and circulation routes.

Each of these areas comes with its specific visual characteristics, however we've identified the above key considerations.

The illuminated architectural context creates key landmark elevations that dominate the close and long distance views towards the square.

The landscape design introduces areas for play and relaxation framed with planters and trees. Identifying these spaces and their intended use allows us to enhance and support the experience after dark.

Interlinked by pathways and circulation nodes the scheme calls for a visual lighting hierarchy to aid orientation and to create a balanced look avoiding over illumination and negative impact on visitors and wildlife.

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Gobo lighting used as a feature also contributes to the overall perceived ambience in the space. A pattern chosen well can activate the space and enforce play and exploration.



Illuminated building ground floor activating the square and animating the pedestrian experience.



Creating a boundary through low level bench integrated lighting and tree canopy uplighting.



High level post mounted lighting to circulation paths and nodes.



The contrast between the tall general lighting posts and short bollards would contribute to an unusual and joyful atmosphere.

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Illustrative Axonometry Render

General lighting to the pathways along the building perimeter provided by canopy integrated downlights.

General lighting to circulation pathways and nodes provided by post mounted adjustable spotlights with the applicable optical distribution to illuminate the horizontal surfaces.

General and accent lighting to destinations provided by additional post-mounted spotlights. Potential to include colour-changing or gobo - projection to selected locations could be used for events and festivities.

Low level accent lighting incorporated in the benches and seating areas helps bring the scale down and create an attractive inviting environment.

Feature bollards scattered in selected locations in the planters would help create vertical brightness and a sense of enclosure to the spill-out areas and active space.

Canopy uplighting to selected trees to support the vertical brightness in the seating areas.

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1. Great Northern Warehouse

1.4 Illustrative Lighting Layout and Product Palette



Illustrative Lighting Layout

1



Adjustable LED spotlights mounted to a 12m tall lighting post

3000K CCT, min CRI90
4800lm; 58W, dimmable
Supplied with glare reducing and beam shaping accessories

2



Low glare downlights integrated into canopy design

3000K CCT, min CRI90
800lm; 13W, dimmable

3



Feature LED bollard with shielded top and soft diffuse light distribution

2700K CCT, min CRI90
180lm; 2W, dimmable

4



Discrete adjustable LED spotlights installed in planters

2700K CCT, min CRI90
500lm; 7W, dimmable
Supplied with glare reducing and beam shaping accessories

5



Linear LED luminaire to be integrated in lighting details

2700K CCT, min CRI90
300lm/m; 10W/m, dimmable

6

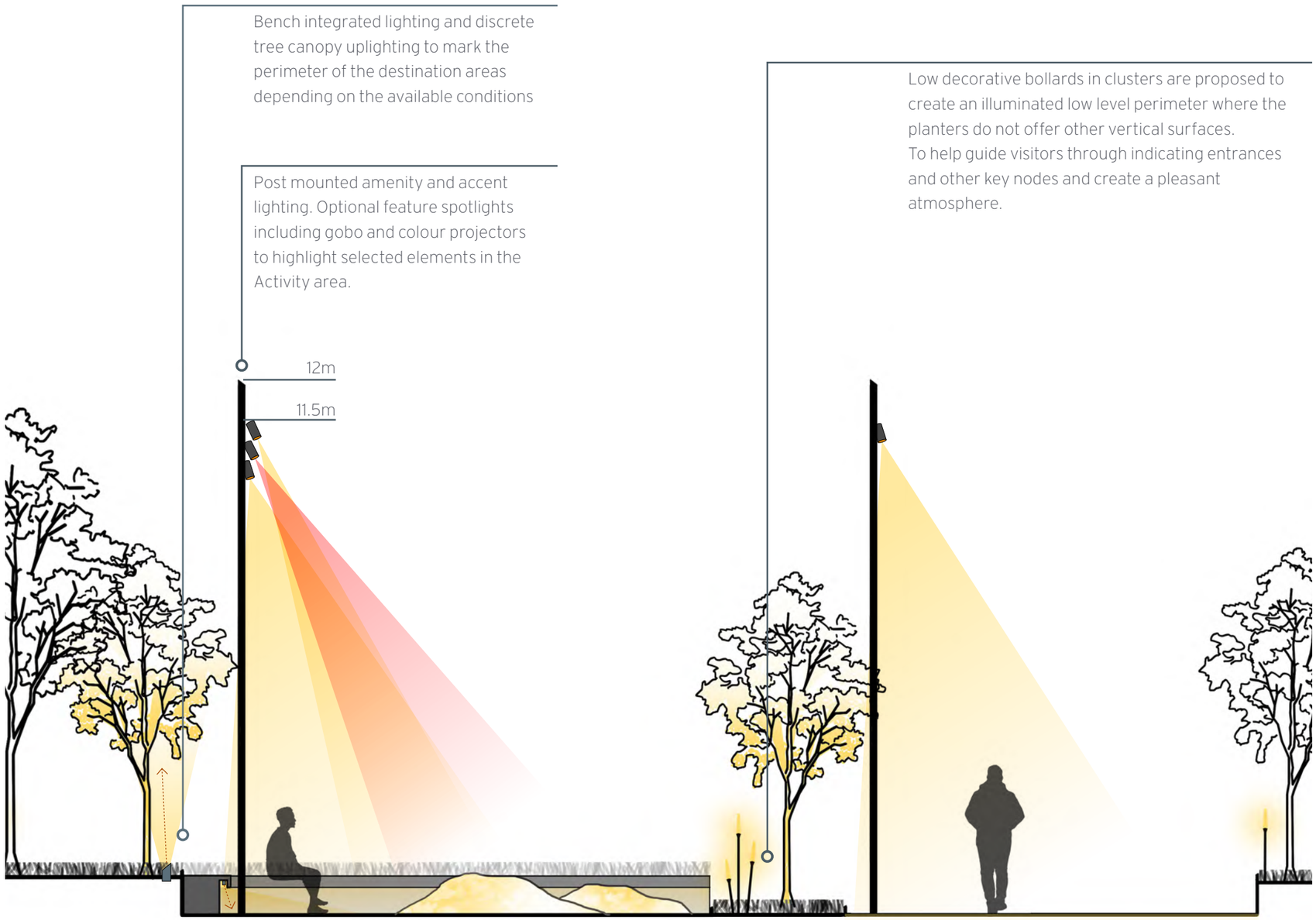


Miniature LED spots for integration into handrails

3000K CCT, min CRI80
160lm; 1.5W, dimmable

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LIGHT BUREAU



Illustrative Section

Key Principles

The proposed strategy for circulation lighting involves taller but fewer lighting posts located in strategic places across the square. These posts would be supplied with good optic downlighters for general amenity lighting to the pathways. They could also incorporate accent lighting spotlights for additional seating groups or landscape features as well as event lighting luminaires.

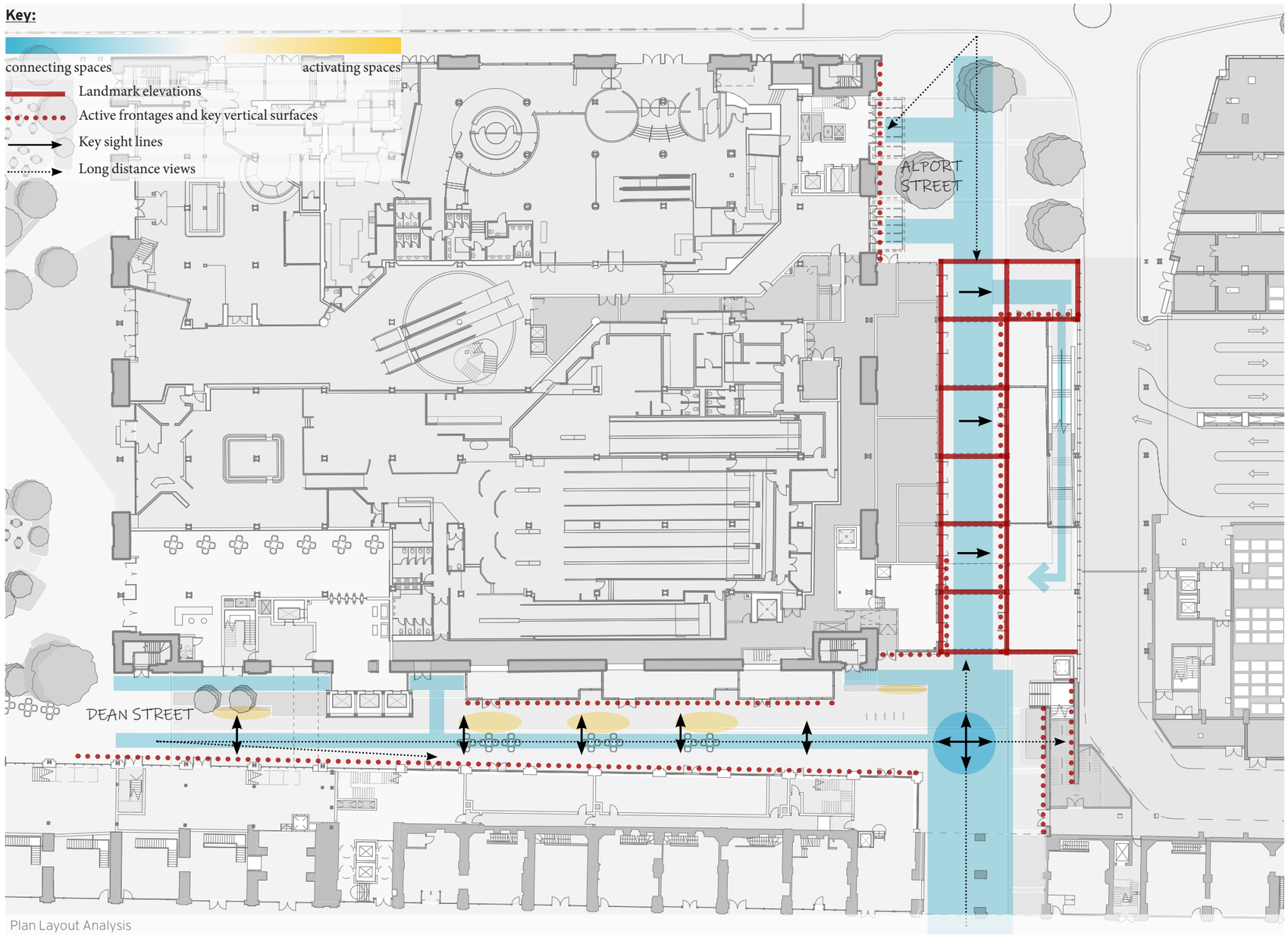
Another advantage of using lighting posts is the ability to incorporate sockets, speakers, Wifi hotspots, charging stations and various other equipment and sensors in a discrete way.

The proposed lighting strategy for the destination areas aims to create a sense of privacy and enclosure without obstructing views through. This is achieved through accent horizontal lighting to key surfaces and through an illuminated perimeter.

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2. Dean and Alport Street

2.1 Analysis and Key Objectives



Plan Layout Analysis

Observations

Alport street is the new connection through the development that allows pedestrians to cross the site. Due to its particular location it becomes an important node with links to all other publicly accessible character areas.

The space is defined by the retained viaduct structures which create a pergola-like cover over the passageway.

The lighting design will aim to address the need for activation of this space and express the feature qualities of the viaduct framework.

Dean street is a transitional space between the Great Northern Square and Alport street with active retail frontages alongside. As such it is important to make sure views through attract visitors in both directions.

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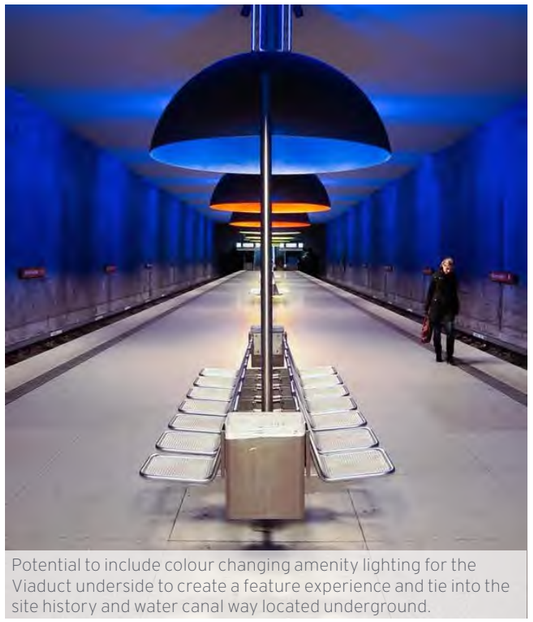
2.2 Inspiration



Activating retail frontages. Occupancy lighting from the retail frontages together with the tree uplighting create the ambience in the spill out areas.



Illuminated connecting bridge reads as a key visual element of the night time image of the building elevations.



Potential to include colour changing amenity lighting for the Viaduct underside to create a feature experience and tie into the site history and water canal way located underground.



Vertical facade lighting guiding the eye in

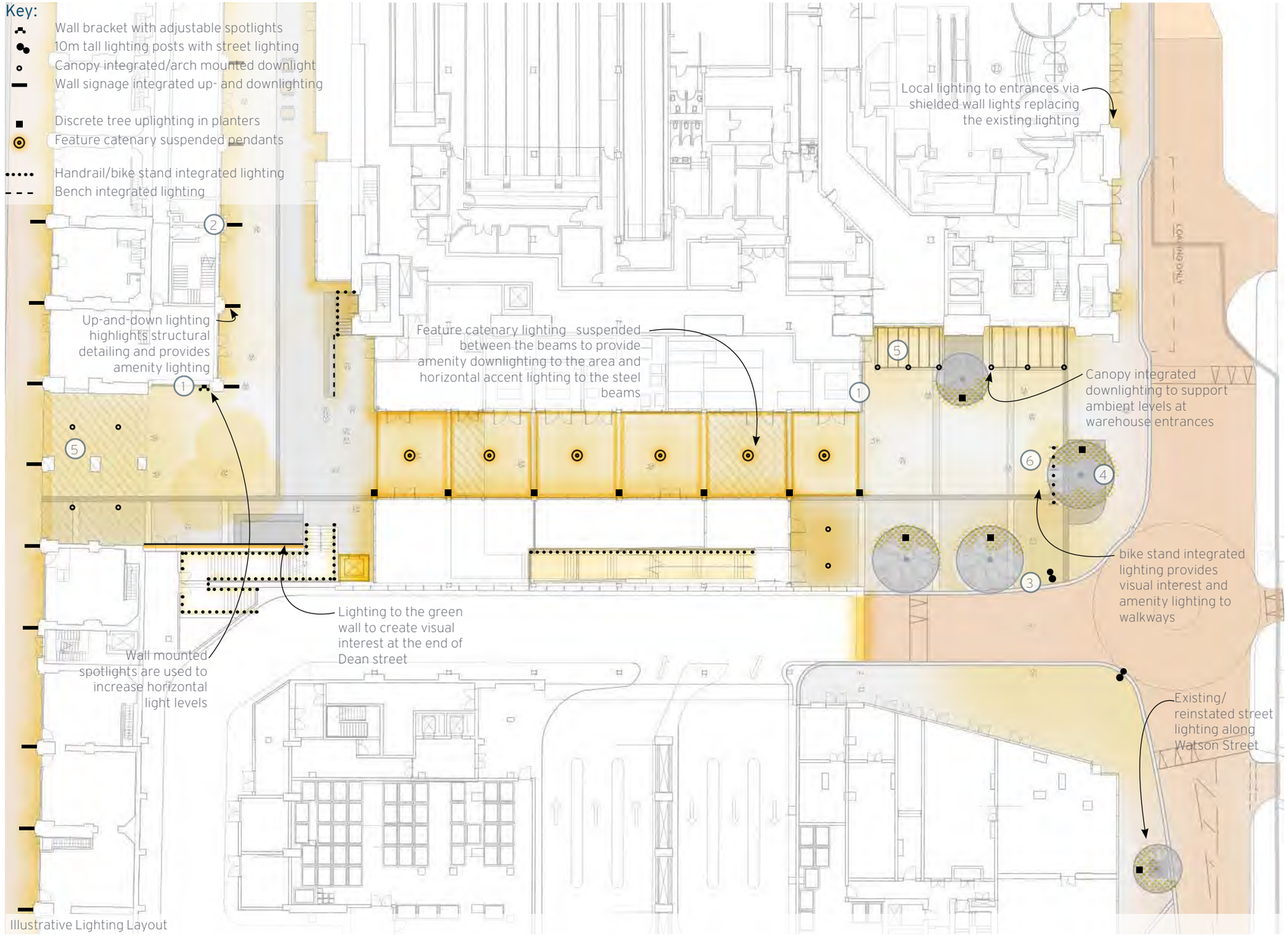


Warm white highlights picked up by the viaduct structure will create contrast and frame the space.

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2. Dean and Alport Street

2.3 Illustrative Lighting Layout and Product Palette

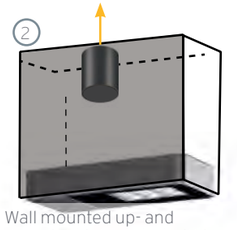


Illustrative Lighting Layout



Adjustable LED spotlights mounted to a wall bracket

3000K CCT, min CRI90
4800lm; 58W, dimmable
Supplied with glare reducing and beam shaping accessories



Wall mounted up- and downlight integrated within signage

Down - 3000K CCT, min CRI90
800lm; 13W, dimmable
Up - 3000K CCT, min CRI85
500lm; 7W, dimmable



10m street lighting column matching the look of the existing street lighting on site

3000K CCT, min CRI80
Optics and output TBC.
dimmable
Supplied with optional light shield



Ground recessed LED uplight.

2700K CCT, min CRI90
500lm; 7W, dimmable
Supplied with glare reducing and beam shaping accessories



Low glare discreet downlights

3000K CCT, min CRI90
800lm; 12W, dimmable



Miniature LED spots for integration into bike racks

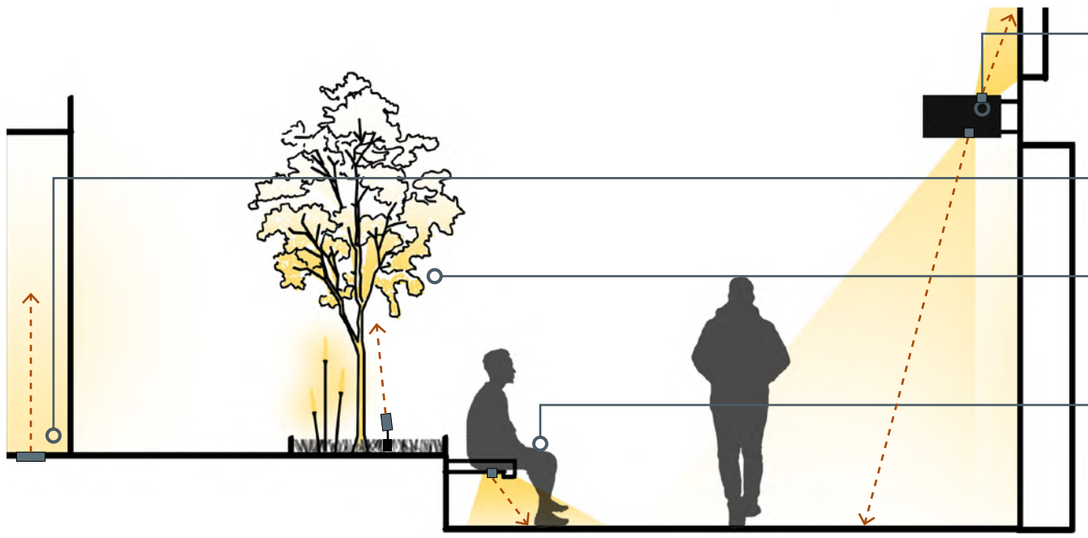
3000K CCT, min CRI80
160lm; 1.5W, dimmable

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LIGHT BUREAU

2. Dean and Alport Street

2.4 Key Elevations and Details



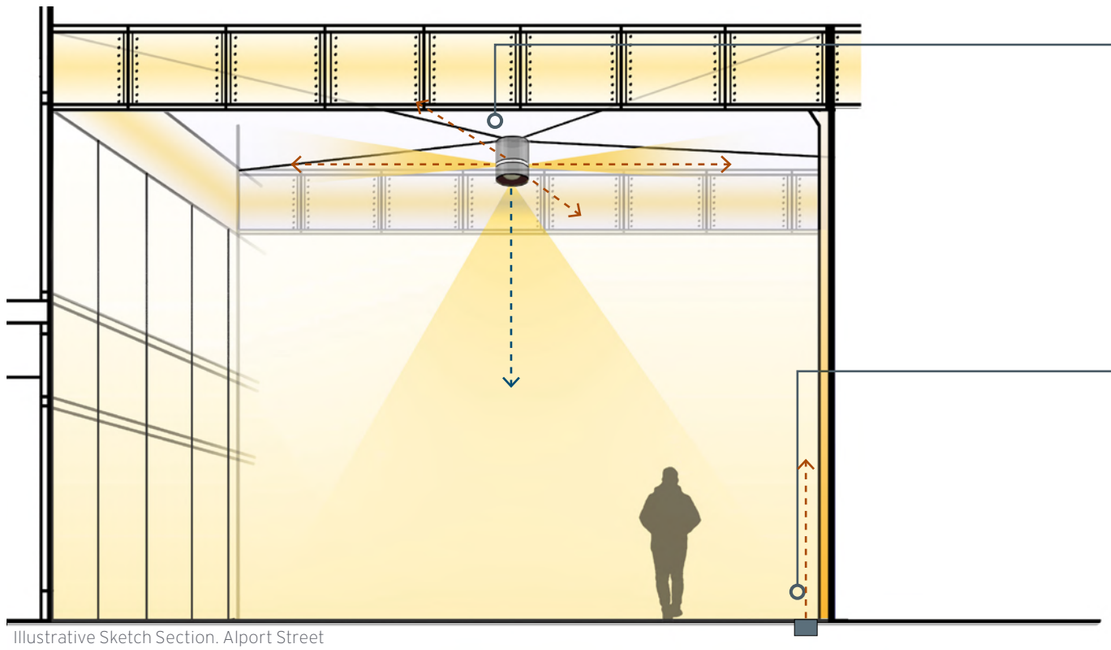
Downlighting to street level and uplighting to the terraces facade via wall mounted luminaires or incorporated into the store front signage.

In-ground reveal uplighting to warehouse entrances

Proposed planter lighting consistent with the square strategy : Tree uplights and feature bollards.

Discreet low level lighting concealed within the bench details.

Illustrative Sketch Section. Dean Street



Feature lanterns to provide ambient and accent lighting to the viaduct underside.

A diffuse soft downlighting component aimed at the floor. Potential to add colour changing lighting or gobo projections to create an unusual experience.

Feature sideways emission in warm white light colour illuminates the inner vertical perimeter of the riveted beams.

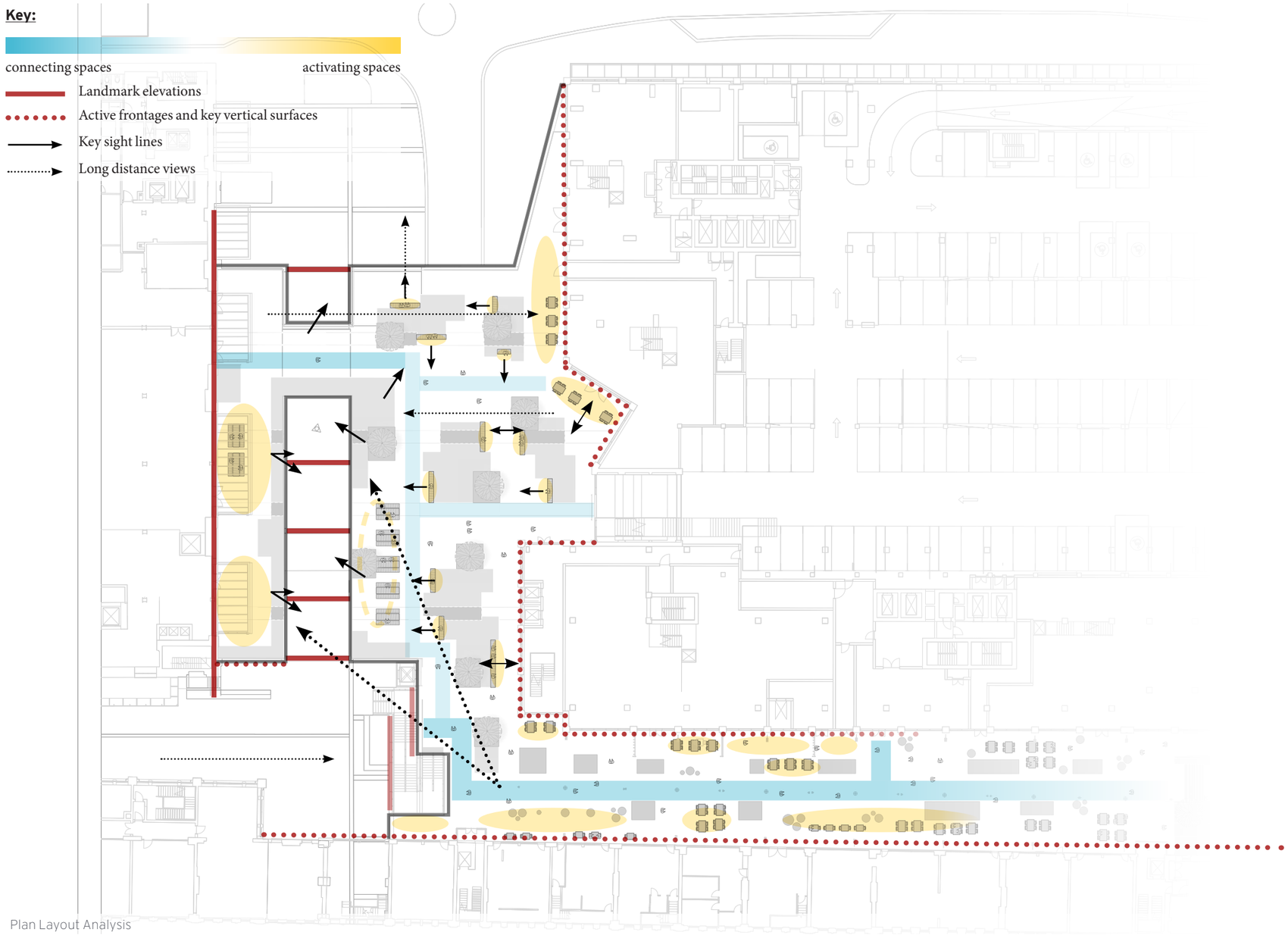
Ground recessed uplights to highlight the viaduct columns is warm white light tone

Illustrative Sketch Section. Alport Street

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3. Viaduct

3.1 Analysis and Key Objectives



Plan Layout Analysis

Observations

The viaduct terraces are large open air spaces that offer unobstructed views towards the sky, the heritage warehouse building and the streets on lower level.

Their connection with the surroundings is their most defining characteristic.

The F&B units benefit from generous spill out areas that contribute to the liveliness of the space. The rest of the exterior furniture consists of low benches and planters accommodating a calm contemplative experience of the open space.

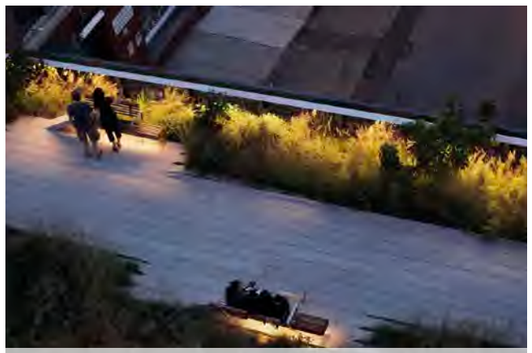
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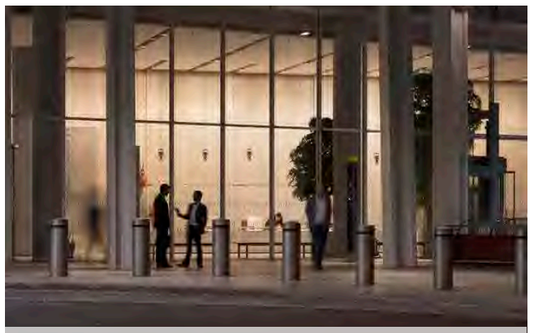
Connecting the levels through illuminated elements



Keeping all lighting at low level to ensure unobstructed views out



Gentle lighting to the perimeter and benches to guide visitors

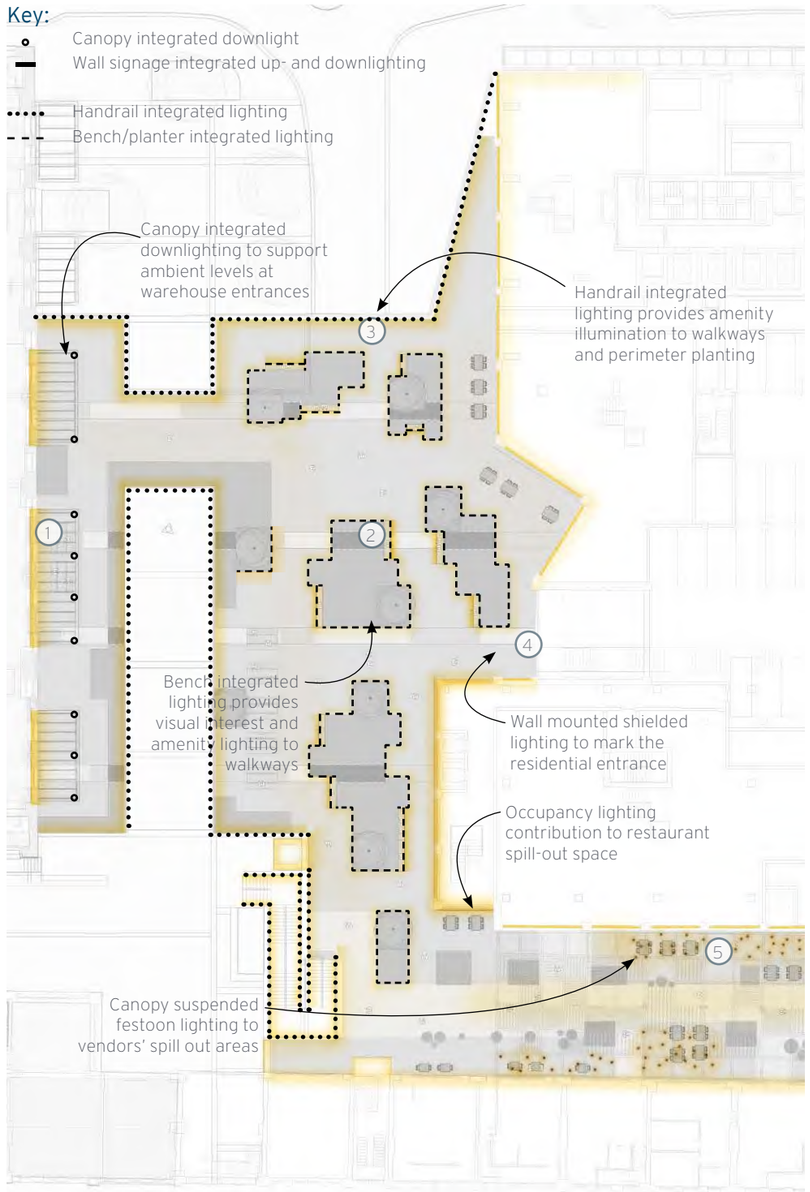


Active food and beverage elevations serve as bright backdrop and contribute to the overall light ambience in the spaces.

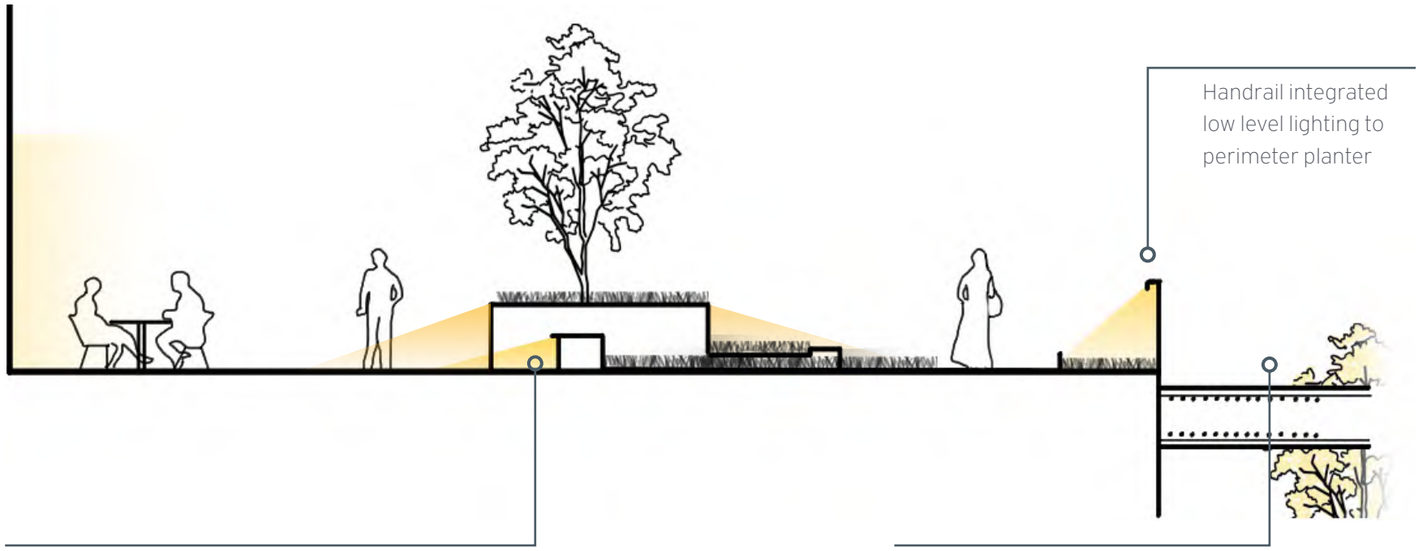
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3. Viaduct

3.3 Illustrative Lighting Layout and Product Palette



Illustrative Lighting Layout



Bench integrated lighting and low planter lighting illuminate the horizontal ground plane. Trees are kept unlit to allow the illuminated warehouse facade to stand out.

Spill light from Alport street can be seen as a feature through the viaduct framework. It would aid orientation and help bind the spaces together

Illustrative Section

1



Low glare downlights integrated into canopy design

2700K CCT, min CRI90
800lm; 13W, dimmable

2



Linear LED luminaire to be integrated in lighting details

2700K CCT, min CRI90
300lm/m; 10W/m, dimmable

3



Miniature LED spots for integration into handrails

2700K CCT, min CRI80
160lm; 1.5W, dimmable

4



Shielded wall light used to mark residential entrances

2700K CCT, min CRI80
250lm; 3W, dimmable

5



Canopy suspended festoon lighting over vendors' spill out areas

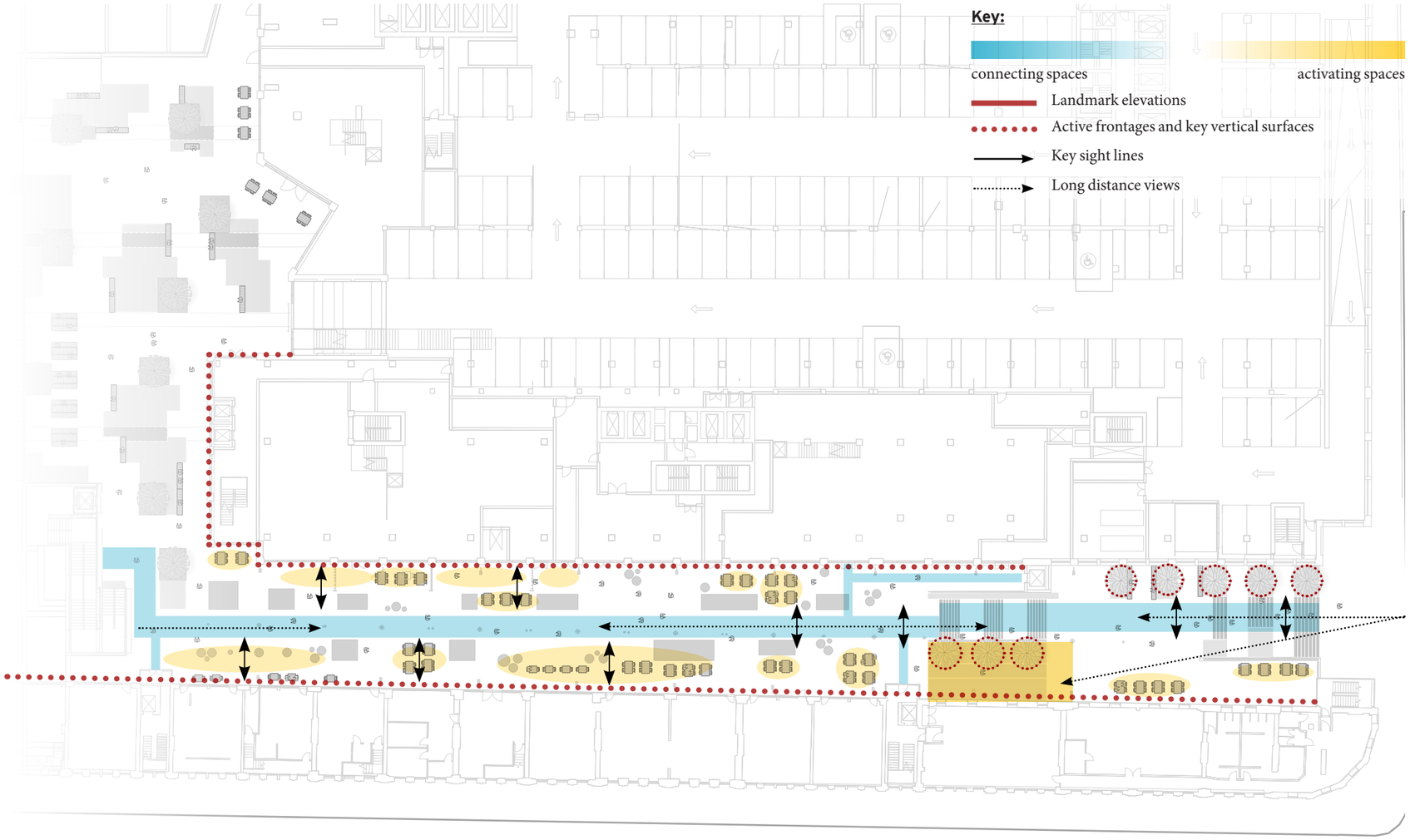
2700K CCT, min CRI80
120lm; 1.5W per globe

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4. Deansgate Mews

4.1 Analysis and Key Objectives



Plan Layout Analysis

Observations

Deansgate Mews are enclosed between the terraces and new built Leisurebox facades on a level higher than street level. Stairs on both ends connect the mews with the rest of the site.

The stairs on the south side create a feature space framed at the top by a new canopy. This strong expression needs to be supported by a statement lighting design that takes into account the large vertical volumes and the important function this space serves as a key entrance to the development.

Sight lines are drawn in by the long unobstructed views through while the active shop fronts along the mews attract the eye on a micro scale.

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4.2 Inspiration



Festoon lighting creating an illuminated canopy that frames the views, provides a good level of soft ambient lighting and contributes to a cosy casual and warm atmosphere.



Festoons wrapped around the trees at the South entrance would provide vertical ambient illumination and will draw visitors in.



Large feature luminous element suspended in the double height space to create a sculptural installation, fill the volume and provide additional interest.



Feature pendants design inspired by the industrial legacy of the development

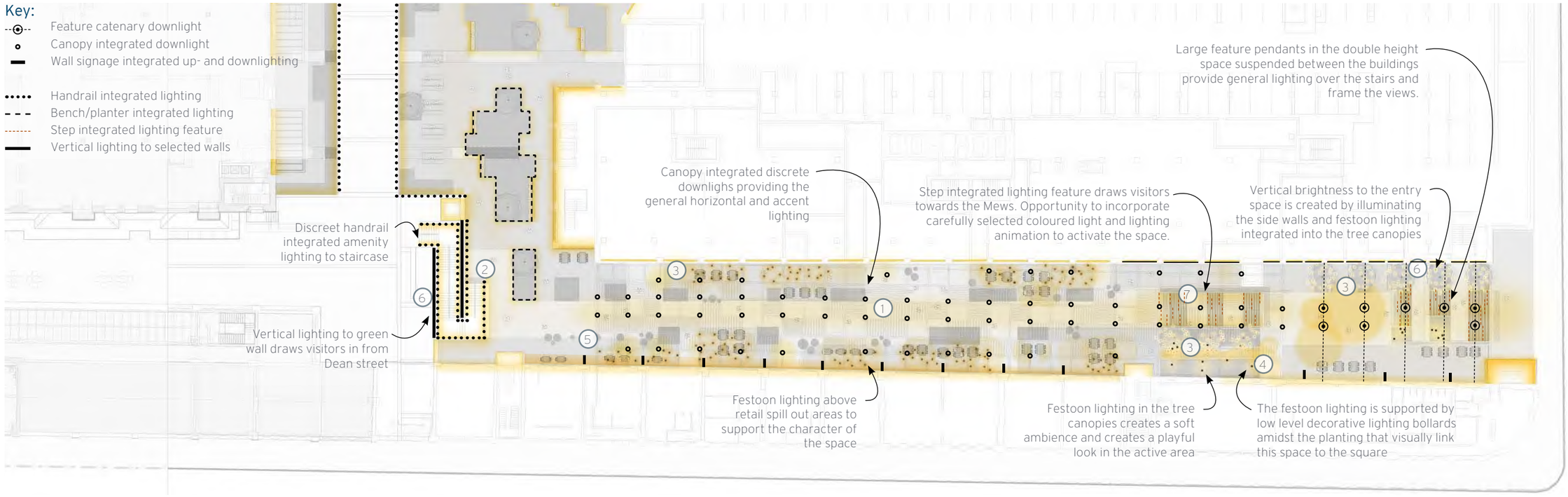


Discretely activating the street entrance through colour and light animation

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4. Deansgate Mews

4.3 Illustrative Lighting Layout and Product Palette



Illustrative Lighting Layout

1



Low glare downlights integrated into canopy design

2700K CCT, min CRI90
800lm; 13W, dimmable

2



Miniature LED spots for integration into handrails

2700K CCT, min CRI80
160lm; 1.5W, dimmable

3



Canopy suspended festoon over vendors' spill out areas

2700K CCT, min CRI80
120lm; 1.5W per globe

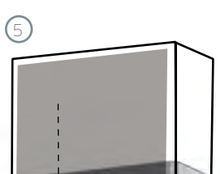
4



Feature LED bollard with shielded top and soft diffuse light distribution

2700K CCT, min CRI90
180lm; 2W, dimmable

5



Wall mounted downlight integrated within signage

3000K CCT, min CRI90
800lm; 13W, dimmable

6



Linear LED graze light with precise optics and glare reducing accessories

3000K CCT, min CRI90

1800lm/m; 32W/m, dimmable

7

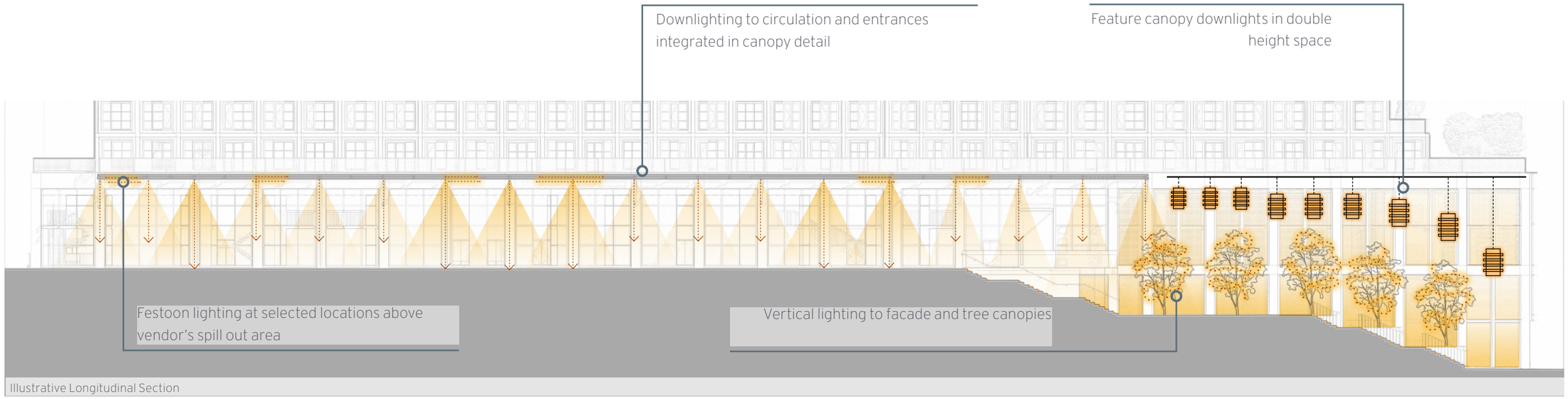


Colour changing linear LED luminaire to be integrated in step detail
RGBW, pixel controllable

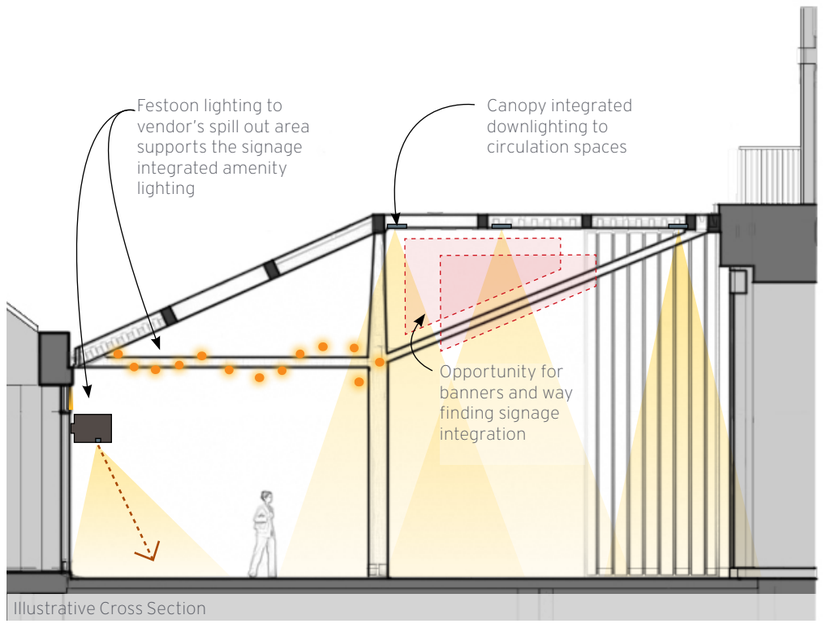
350lm/m; 15W/m, dimmable

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4.4 Key Elevations and Details



Illustrative Longitudinal Section



Illustrative Cross Section

Large scale feature pendants. Suspension mechanism and lantern design can be inspired by the industrial aesthetic of the warehouse.



Illustrative Sketch. Large Feature Pendant

Discrete downlighting recessed into canopy for a concealed look. Precise optics and glare reflectors to make the luminaires comfortable to look at and seamlessly integrated into the architectural details.



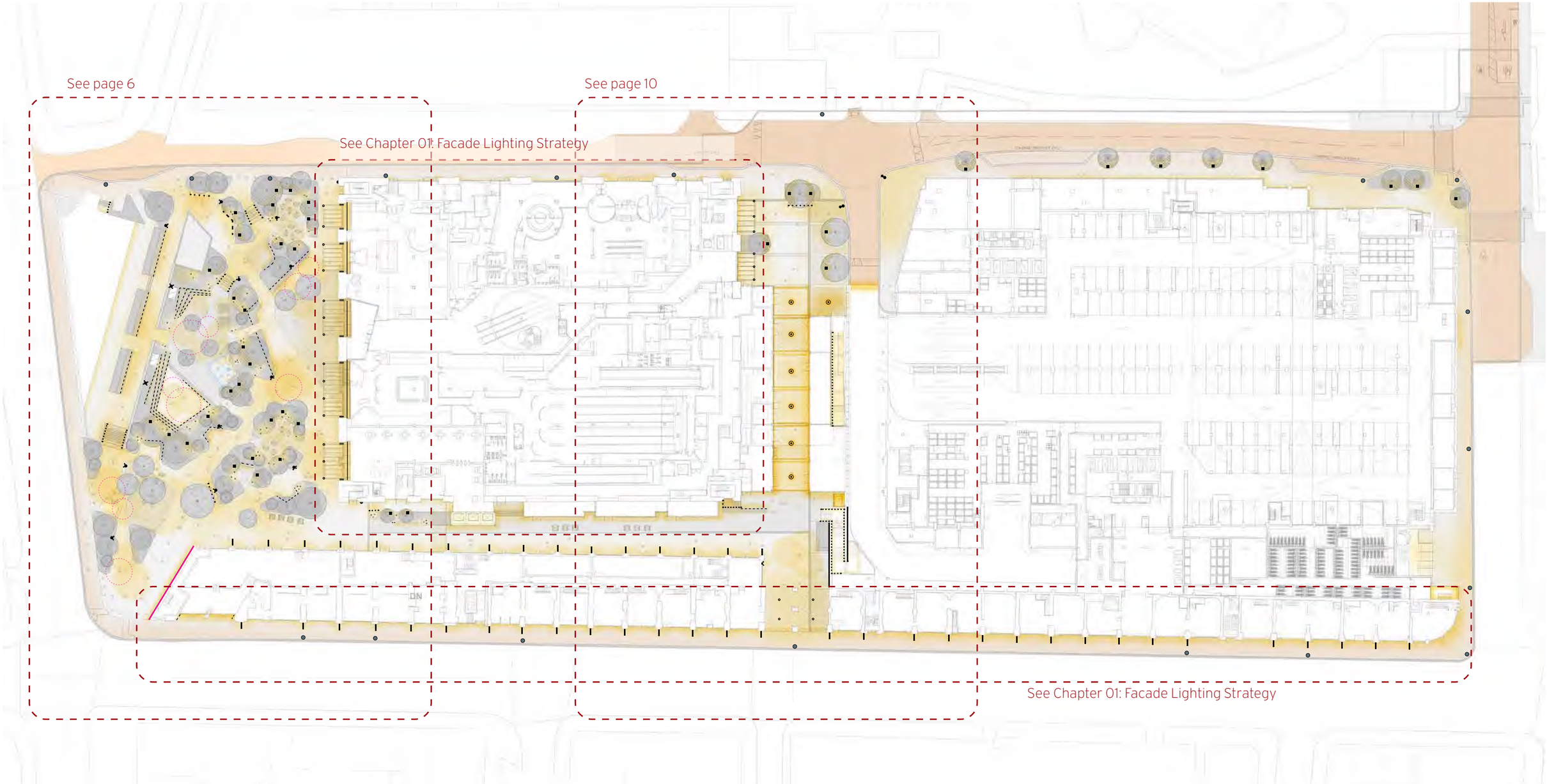
Festoon lighting provides the opportunity for various customisation through the addition of plates, shields and hats to make the design uniquely customised to the place and vendor.

Illustrative Sketch. Festoon Variations

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5. Indicative Lighting Layouts

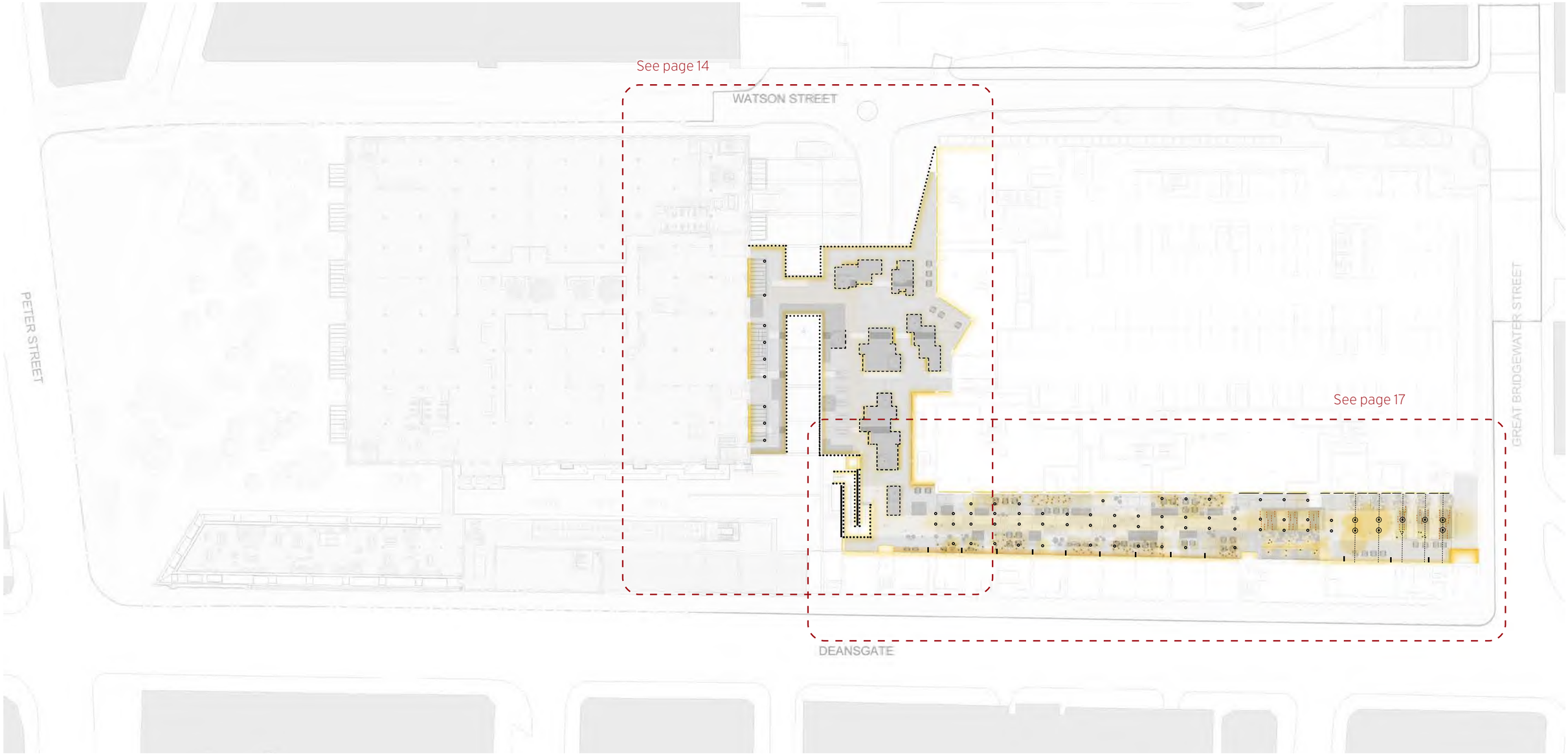
5.1 Ground Floor



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5. Indicative Lighting Layouts

5.2 First Floor



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Environmental Zone and Light Restrictions

Following "GN01:2020 Lighting Professionals Guidance Notes for the Reduction of Obstructive Light" we've considered the area of the development as E4 zone with the following limitations applied.

- Minimal light trespass into windows kept with the right control strategy below 25 lux pre-curfew. Post-curfew (23.00hrs) we recommend to reduce the luminaire output to achieve vertical illuminance of <5 lux.
- Minimal Upward Light Ratio of the overall installation. All columns have shielded sources and accessories in order to reduce direct upward light. Wall mounted luminaires have shielded sources, directing their light flux down.
  The lighting strategy includes some feature tree uplights, low decorative bollards and facade uplighting which will be controlled separately and will be switched off or significantly dimmed down after curfew.
  With developed and coordinated lighting layouts upward light ratio will be monitored and kept within 15% of the total scheme output.
- The specified light fittings will be equipped with dimmable sources that can be adjusted to match the local authorities requirements.

Additionally, all specified luminaires will employ high quality LED light sources and optical systems with an average luminous efficacy above 60lm/W.

TABLE 1 _ ENVIRONMENTAL ZONES		
Environmental Zone	Lighting Environment	Examples
E0_Protected	Dark (SQM 20.5+)	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1_Natural	Intrinsically dark (SQM 20 to 20.5)	National Parks, Areas of Outstanding Natural Beauty, etc
E2_Rural	Low district brightness (SQM ~15 to 20)	Village or relatively dark outer suburban locations
E3_Suburban	Medium district brightness	Small town centres or suburban locations
E4_Urban	High district brightness	Town/city centres with high levels of nigh time activity

Table 2 – Environmental Zones - ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2020

TABLE 2 _ OBTRUSIVE LIGHT LIMITATIONS FOR EXTERIOR LIGHTING INSTALLATIONS						
Environmental Zone	Building Facade Luminance [Max cd/m²] (1)	Sky Glow ULR [Max %] (2)	Light Intrusion (into windows) Ev (lux) (3)		Luminaire Intensity I (candelas) (4)	
			Pre-curfew	Post-curfew	Pre-curfew	Post-curfew
E0_Protected	<0.1	0	0	0	0	0
E1_Natural	<0.1	0	2	0 (1*)	2,500	0
E2_Rural	5	2.5	5	1	7,500	500
E3_Suburban	10	5	10	2	10,000	1,000
E4_Urban	25	15	25	5	25,000	2,500

Based on Tables 3,4,6 and 8 – Obtrusive Light Limitations for Exterior Lighting Installations ILP Guidance Notes for the Reduction of Obtrusive Light GN01:2020

SQM = Sky Quality Measurements referenced by the International Dark-Sky Associaltion (IDA), the criteria for E01 being revised in mid 2019 but not retrospective
ULR = Upward Light Ratio of the Installation is the maximum permitted percentage of luminaire flux that goes directly into the sky.
Ev = Vertical Illuminance in Lux - measured flat on the glazing at the centre of the window.
I = Light Intensity in Candelas (cd)
L = Luminance in Candelas per Square Metre (cd/m2)
Curfew = the time after which stricter requirements (for the control of obtrusive light) will apply; often a condition of use of lighting applied by the local planning authority. If not otherwise stated - 23.00hrs is suggested.
***** = Permitted only from Public Road Lighting Installations
(1) Maximum permitted building facade luminance – Taken as the product of the design average luminance and reflectance divided by n.
(2) Upward Light Ratio – Some lighting schemes will require the deliberate and careful use of upward light, e.g. ground recessed luminaires, ground mounted floodlights, festive lighting, to which these limits cannot apply. However, care should always be taken to minimise any upward waste light by the proper aplication of suitably directional luminaires and light controlling attachments.
(3) Light Intrusion (into Windows) – These values are suggested maxima and need to take account of existing light intrusion at the point of measurement. In the case of road lighting on public highways where building facades are adjacent to the lit highway, these levels may not be obtainable. In such cases where a specific complaint has been received, the Highway Authority should endeavour to reduce the light intrusion into the window down to the post curfew value by fitting a shield, replacing the luminaire, or by varying the lighting level.
(4) Luminaire Intensity – This applies to each luminaire in the potentially obtrusive direction, outside of the area being lit. The figures given are for general guidance only and for some sports lighting applications with limited mounting heights, may be difficult to achieve.

Bats and Birds Consideration

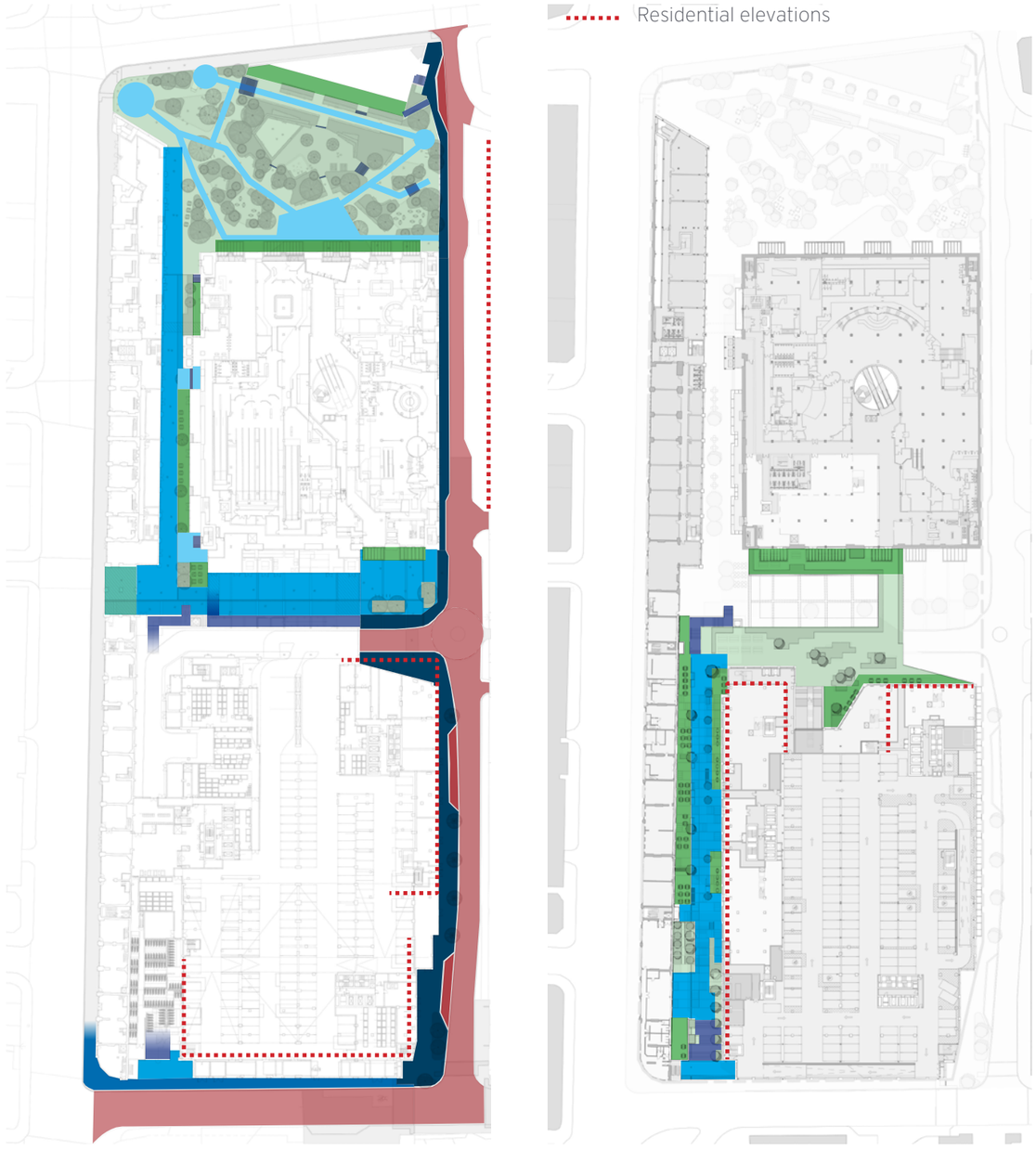
As per the ecological survey of the area although no signs of bat activity or occupation were found during inspection and suitability for roosting bat species is considered negligible, the new development will aim to create opportunities to provide bat roosting provision. This would include bat and bird boxes located in convenient and suitable places - attached to the buildings and/or existing trees.

To minimise potential adverse effects on existing and future wildlife the following principles will be incorporated in the design for the site and Great Northern square in particular:

- All decorative and feature lighting including upward pointing light fixtures will be switched off or significantly dimmed down after curfew;
- The selected luminaires would employ warm colour temperature (3000 Kelvin) light sources that do not emit ultra violet (UV) light. This avoids potential ecological impact by ultra violet light as it is known to attract flying insects and moths;
- Light post mounted lighting would utilize shielded light sources with good optical control aimed away from trees selected to host bat and bird boxes.

After curfew the lighting scheme targets the minimum prescribed values for safety and security.

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Spill-out areas in front of F&B and retail units
Occupancy spill lighting would largely contribute to the illumination of these areas. The particular character and brightness of these areas will be driven by the intent of the particular vendor. After working hours we expect these areas to not be occupied.

Park and landscaped areas
The lighting to these areas is designed to create an atmosphere enhancing the architectural and landscape qualities of the spaces. Lighting is used for visual guidance only.

Pedestrian thoroughfare in city and town centres
As per BS EN 13201-1 and 2 these areas fall into P1 lighting class with Ea=15lux and Emin=3lux maintained.

Pedestrian footways in city and town centres with expected high pedestrian only traffic
Those are areas falling into C2 lighting class with Ea>20lux and Uo>0.4.

Pedestrian footways in city and town centres with expected normal pedestrian only traffic
Those are areas falling into C3 lighting class with Ea>15lux and Uo>0.4.

Open stairs, ramps and footbridges
Ea=20lux and Emin=10lux at night time.

Enclosed arcade
Ea=250lux and Emin=150lux at day time;
Ea=150lux and Emin=75lux at night time.

Outdoor parking in medium traffic areas
Ea=10lux and Uo=0.25

Single carriageway route for low to moderate traffic
Identified as M4 lighting class with Lmin=0.75cd/m2 and Uo=0.4.

Light Level Considerations

While creating a comfortable and attractive night time experience for the occupants and visitors of the development the proposed lighting strategy aims to enforce a safe and balanced environment.
We've observed the prescriptions of *BS 5489-1:2013 Lighting of roads and public amenity areas* and *BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places* to define areas of specific use and purpose with their corresponding lighting classes and lighting prescriptions.
These are listed on the side and coded in colour on the schematic plans.

Resident and pedestrian safety and crime reduction have been considered and design measures taken to ensure that sufficient facial recognition is achieved in publicly accessible areas. Additionally, luminaire types and positions are chosen in manner in which they clearly reveal paths along the site and introduce vertical brightness.

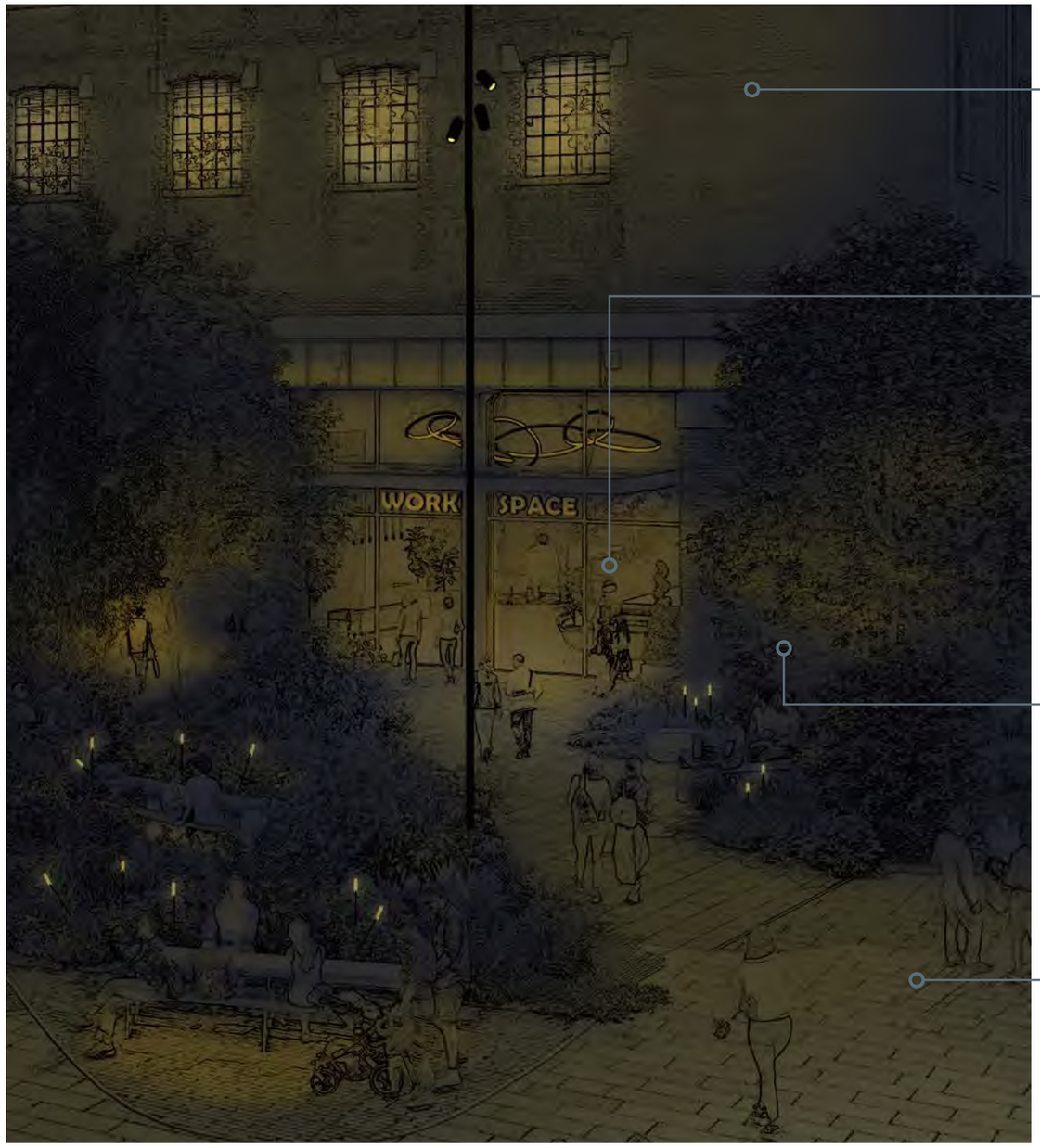
Please note that the existing lighting along Watson street and Great Bridgewater Street will be retained and reinstated referring to the identified lighting class for that area.
Additional luminaires matching the look of the existing street lighting and utilizing suitable optics will be introduced for the carriageway leading towards the development's carpark.
The pavement along Deansgate Street and Peter Street is not part of the scope of this design report.

Where the prescriptions of *BS 5489-1* and *BS EN 12464-2* overlap we've selected the higher class' prescription.

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7. Lighting Control Strategy

7.1 Light Balance and Curfew Based Lighting Operation



Light Layers:

Facade lighting creates a bright back drop and highlights the warehouse facade as an important landmark.

Brightly illuminated interiors of the retail and hospitality units at ground floor along with the proposed entrance lighting activate the ground floor.

Feature and accent lighting frames the boundary of the spill-out and dwell areas.

Clusters of bollards create visual interest and guide visitors through the planted areas.

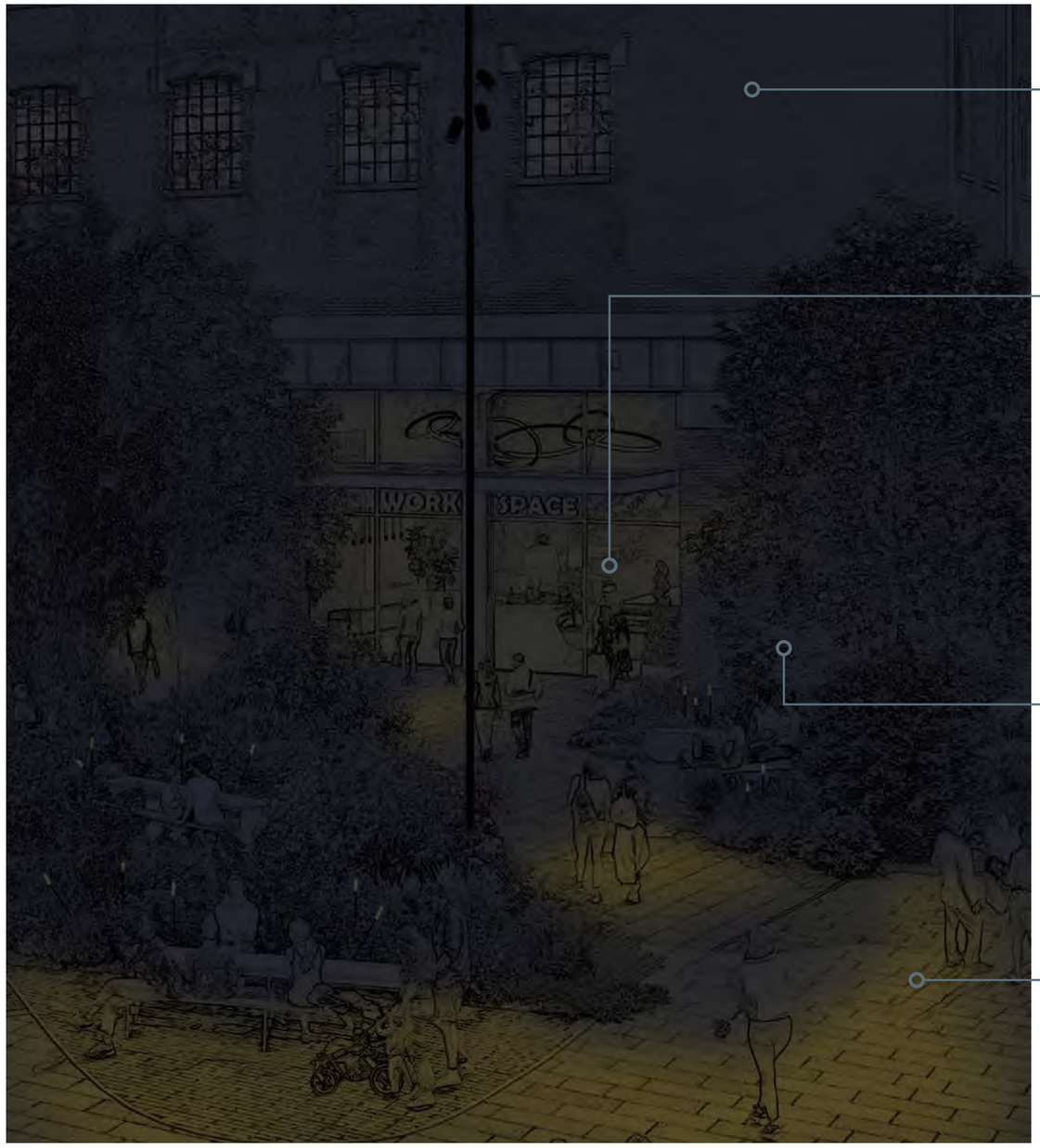
Horizontal amenity lighting aids navigation and orientation and enables the use of the square after dark.

Light Balance

Centralised exterior lighting controls system is proposed for the entire public realm scheme, allowing to establish balanced visual hierarchy between the various areas on site to draw views and encourage visitor interaction.
To achieve this stronger emphasis is placed on the arrival experience with well defined paths and entry points to the square and stair access to the mews.
Central role for the development play the key landmark elevations of the warehouse, Peterloo wall and selected features across site that draw attention to the vertical plane.
In order to avoid over illumination and to allow these features to stand out a careful balance of light intensities should be performed during commissioning creating a hierarchy of key illuminated surfaces and calmer subordinate areas.

The lighting control system should allow for the automated control and dimming of all luminaires either in groups per function and area or individually for general lighting luminaires such as column mounted spotlights and high level downlights which are likely to cover large and diverse areas.
A precise lighting control strategy based on scenes for pre- and post curfew operation will be developed in the later stages of the project in coordination with the existing street lighting scheme and Manchester City Council's requirements.

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Light Layers:

Facade lighting is dimmed down to reduce upward light spill

Retail lighting is reduced after working hours. Retaining low light levels to key surfaces inside is recommended to maintain vertical brightness and enforce the perception of a safety and security.

Feature and accent lighting is switched off after curfew hour to reduce the scheme's impact on wildlife and reduce energy consumption.

Horizontal amenity lighting is retained at reduced output to enable the necessary circulation while ensuring safety and security in accordance with the minimum required light levels as per the applicable British standards and best practices.

Post-Curfew Lighting

In order to reduce the scheme's environmental and ecological impact as well as prevent any negative impact towards wellbeing and privacy of residents living in the development, lighting curfew is proposed affecting all public amenity and feature lighting across site.

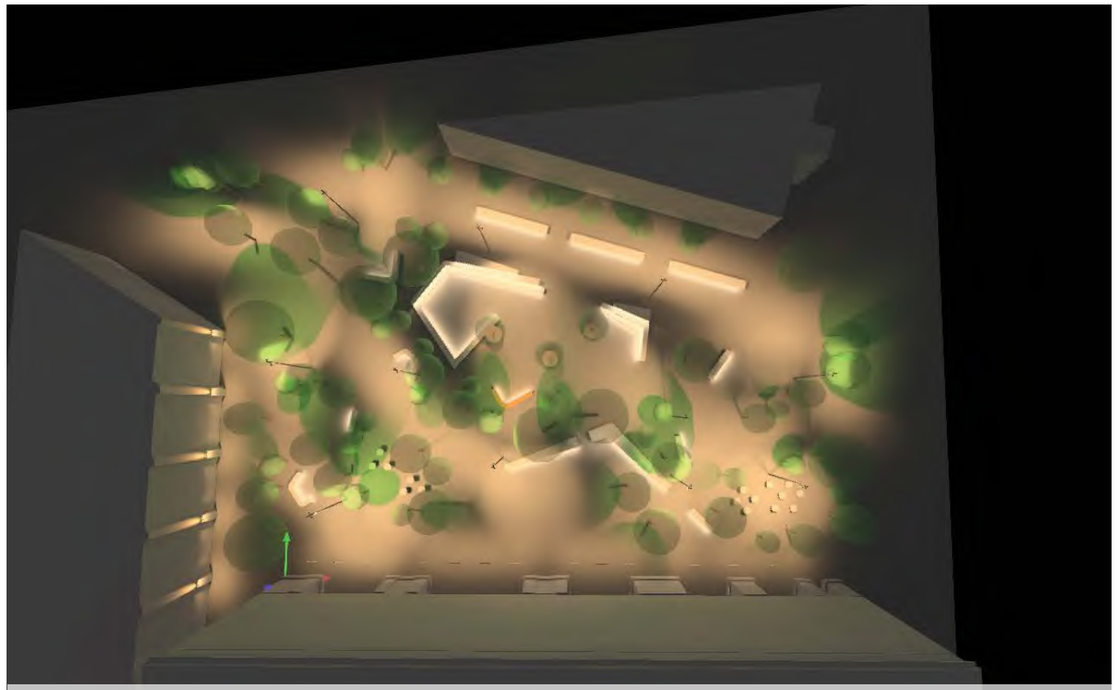
As part of this, all external ambient and feature lighting would be controlled separately from amenity street and pathway lighting, thus allowing to reduce overall site brightness during nighttime while still maintaining high level of safety and ease of navigation.

Presence detection (PIR) control is recommended for local common entrances only to dim light fittings when these spaces are not in use.

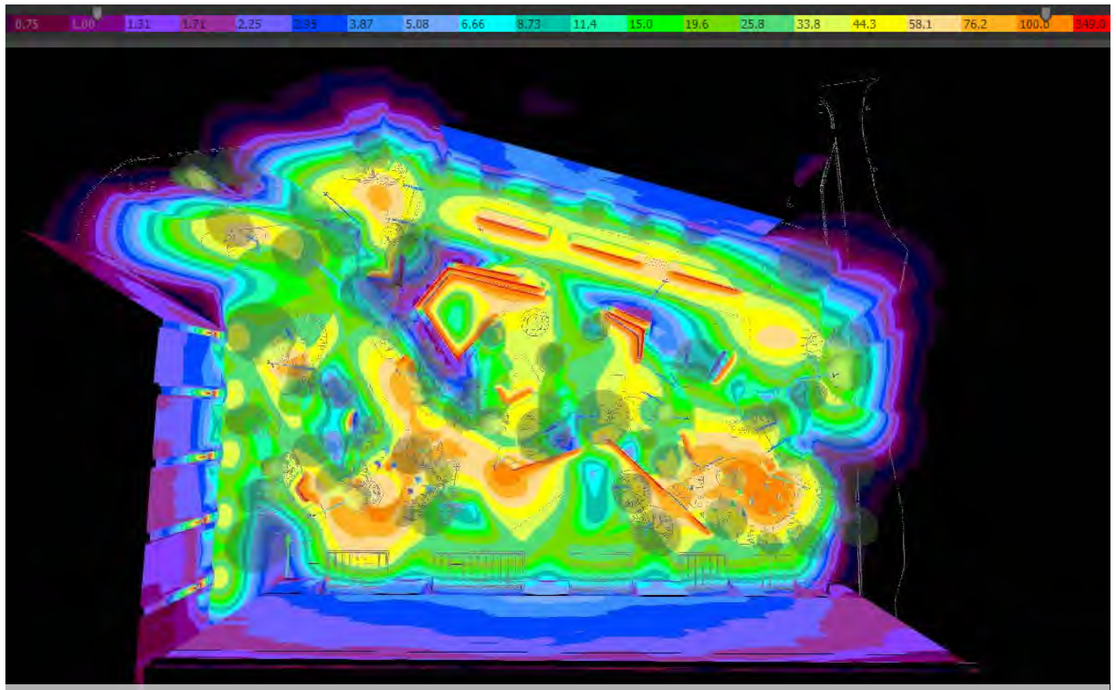
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8. Lighting Calculation Results

8.1 Great Northern Square



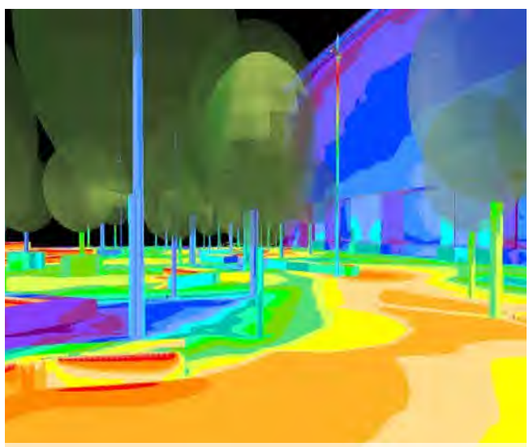
Great Northern Square Lighting Calculation Simulation



Great Northern Square Lighting Calculation Simulation. False Colours Render.



View A



View A. False Colours Render.

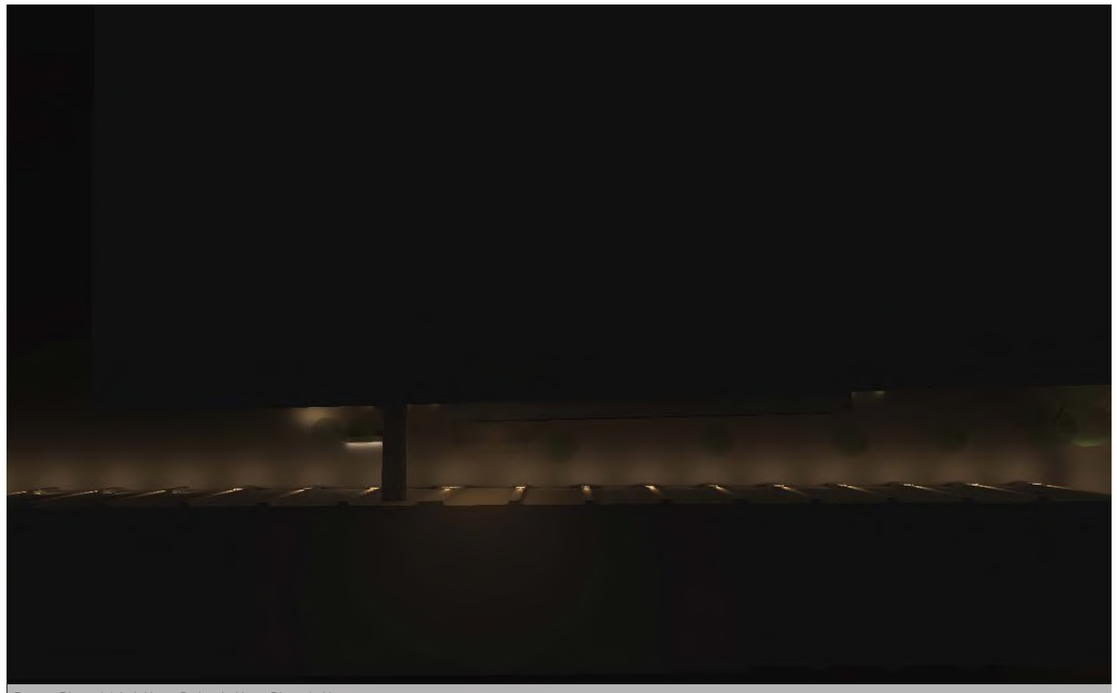
The above preliminary lighting calculation demonstrates pre-curfew horizontal light levels for Great Northern Square with the following characteristics and minimum requirements.

The key objective of the pre-curfew lighting scheme will be to create a pleasant and attractive atmosphere for visitors and enable the use of the different areas, amenities and activities. It will be balanced against the existing street lighting and ambience of the area.
After curfew lighting will be dimmed to satisfy the minimum lighting targets for the applicable lighting classes. These have been identified on page 24 as pedestrian thoroughfare in city and town centres (P1)
Minimum Lighting Targets:
Average maintained illuminance Ea=15lux
Minimum illuminance level Emin=3lux

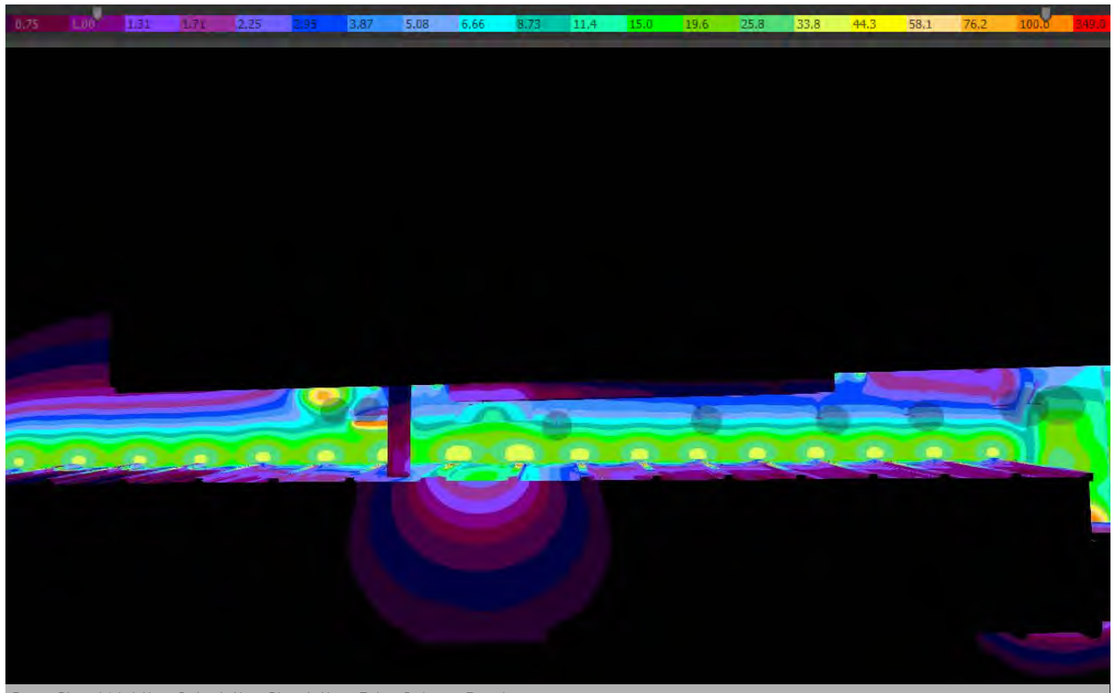
During regular pre-curfew operation average illuminance levels will be higher 30-35lux with selected key nodes and destinations up to 50lux.

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8.2 Dean Street



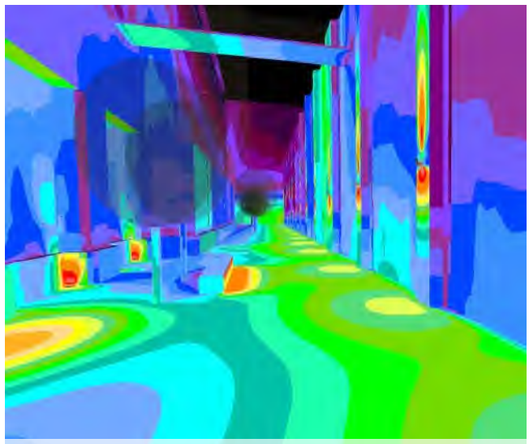
Dean Street Lighting Calculation Simulation



Dean Street Lighting Calculation Simulation. False Colours Render.



View B



View B. False Colours Render.

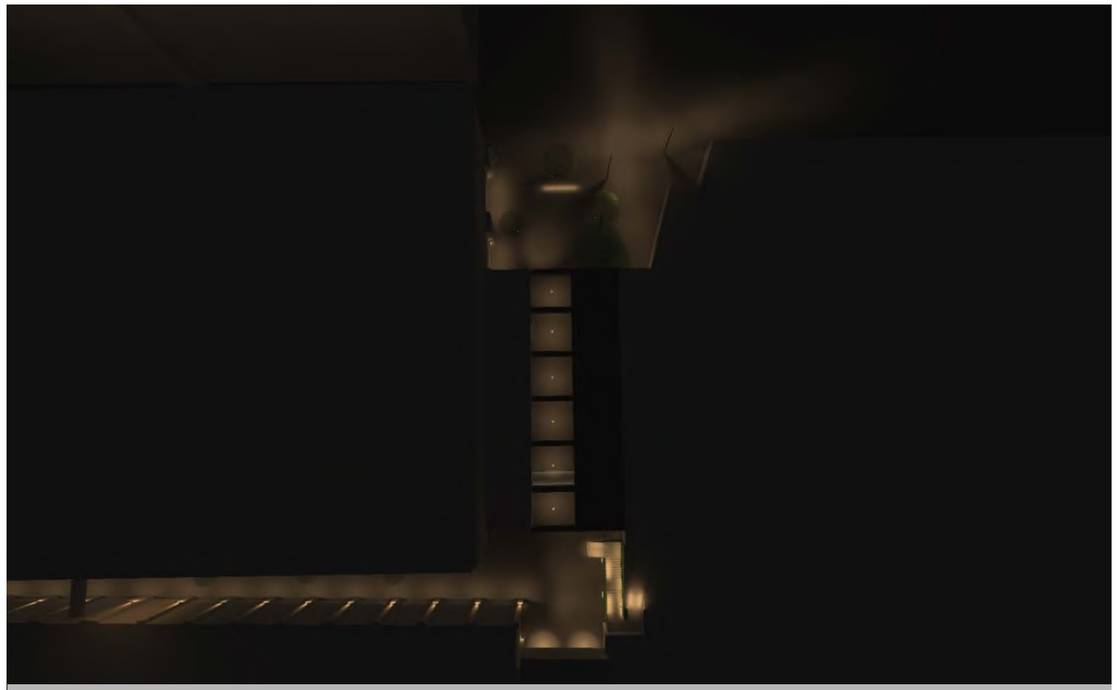
Along Dean Street lighting will help conect Great Northern Square with Alport Street and the Mews on Level 1. Pre-curfew light levels are intended to support the units spill-out without shifting attention away from the square.

After curfew the lighting will be dimmed to satisfy the minimum lighting targets for the applicable lighting class along the path identified as Pedestrian footways in city and town centres with expected high pedestrian only traffic (C2):
Average maintained illuminance Ea>20lux
Uniformity Uo>0.4

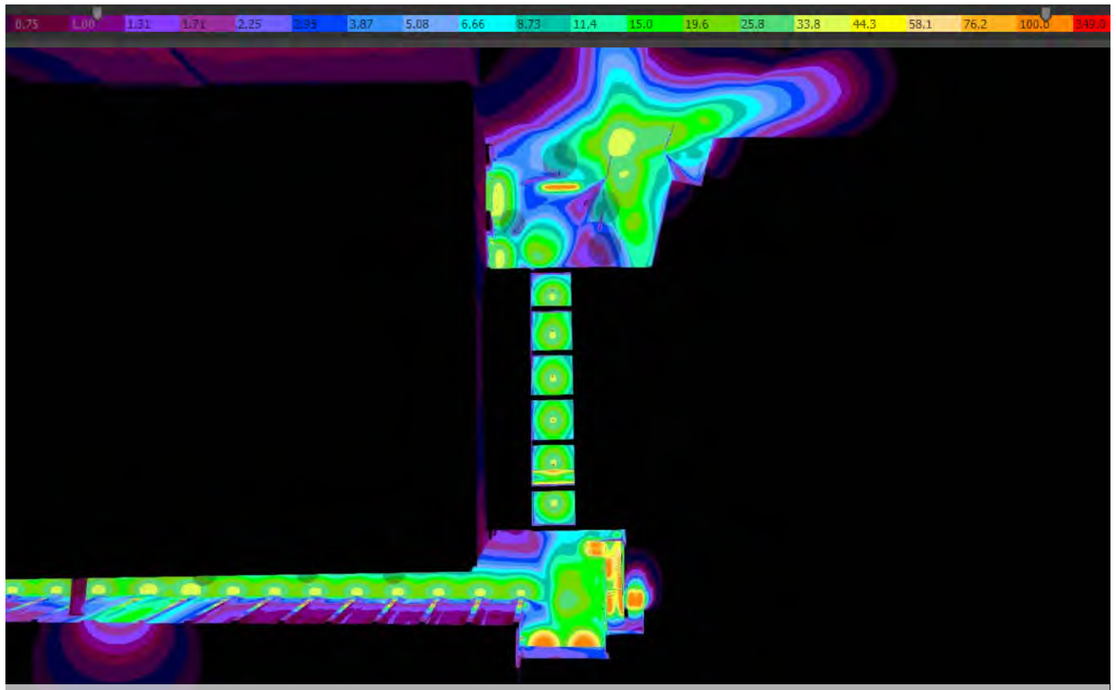
During regular pre curfew operation average illuminance levels will be 20-25lux.

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8.3 Alport Street



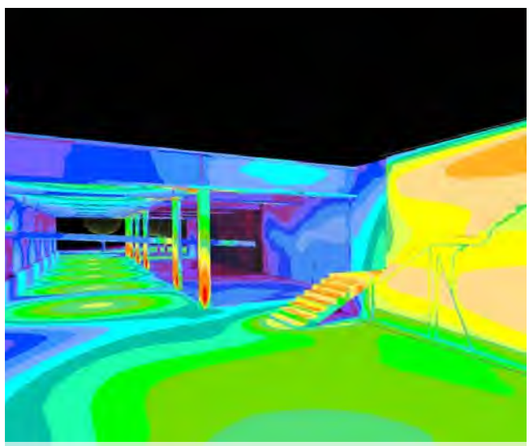
Alport Street Lighting Calculation Simulation



Alport Street Lighting Calculation Simulation. False Colours Render.



View C



View C. False Colours Render.

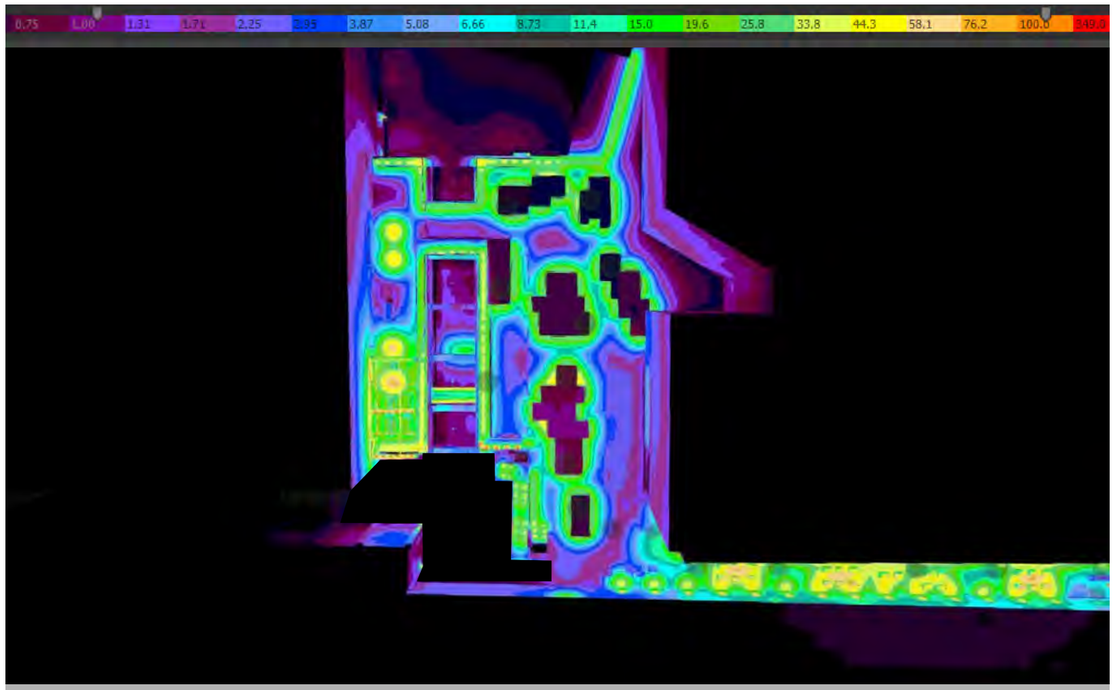
The lighting along Alport street is intended to activate the space and improve the perception of safety and security in the area. Pre-curfew light levels will be adjusted to provide a seamless transition coming from Dean street or the Mews. Higher illuminance to the entry nodes is intended to create an arrival experience for visitors coming from Deansgate and Watson street.
After curfew the lighting will be dimmed to satisfy the minimum lighting targets for pedestrian footways in city and town centres with expected high pedestrian only traffic (C3):
Average maintained illuminance Ea>20lux
Uniformity Uo>0.4

Additional vertical lighting introduced to key elevations and the viaduct structure would aid face recognition.

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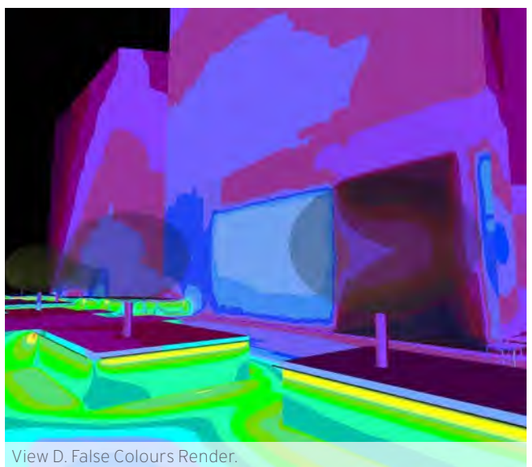
Viaduct Lighting Calculation Simulation



Viaduct Lighting Calculation Simulation. False Colours Render.



View D

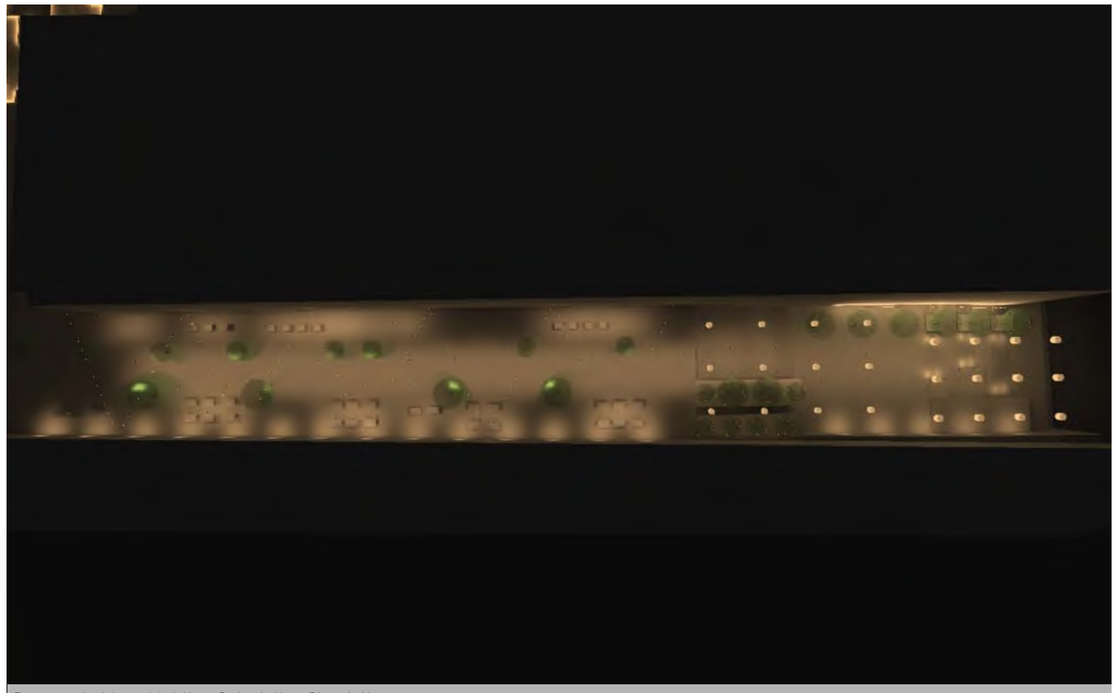


View D. False Colours Render.

The viaduct open spaces would benefit from excellent views towards the Great Northern Warehouse illuminated facade and the surrounding F&B elevations which will create the impression of a bight perimeter.
Active use of the terrace after dark would be concentrated around the restaurant elevations.
To keep the views free from obstructions low level lighting is used for visual guidance only.
Circulation will be supported by higher light levels following the pathways along the terrace balustrade and tall planters.

To support a comfortable transition between the Mews and the Viaduct terrace lighting in the threshold area will be gradually dimmed down.

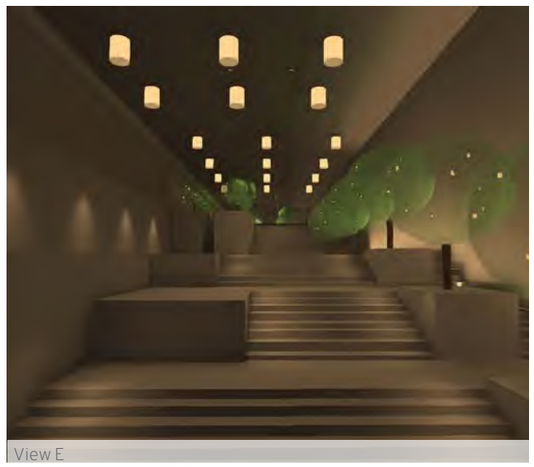
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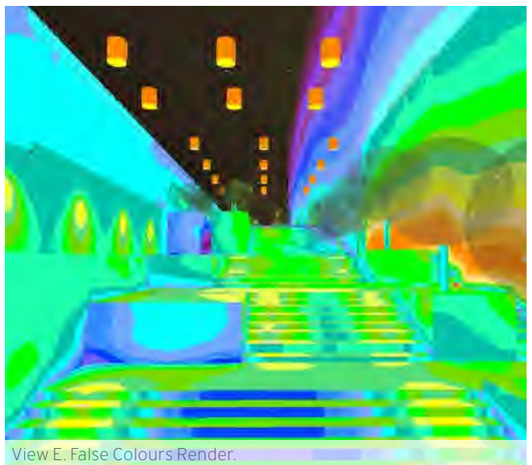
Deansgate Mews Lighting Calculation Simulation



Deansgate Mews Lighting Calculation Simulation. False Colours Render.



View E

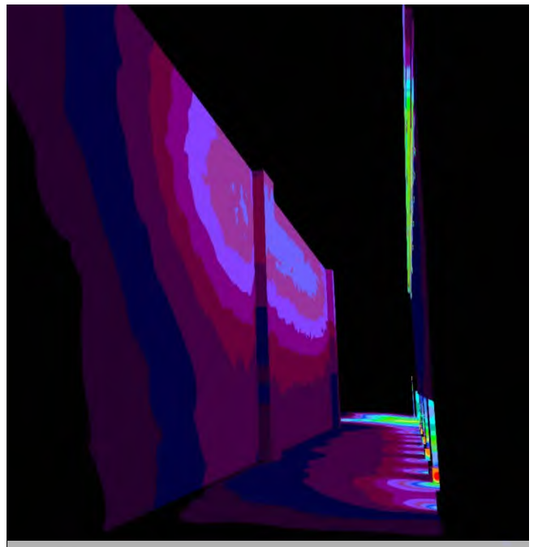


View E. False Colours Render.

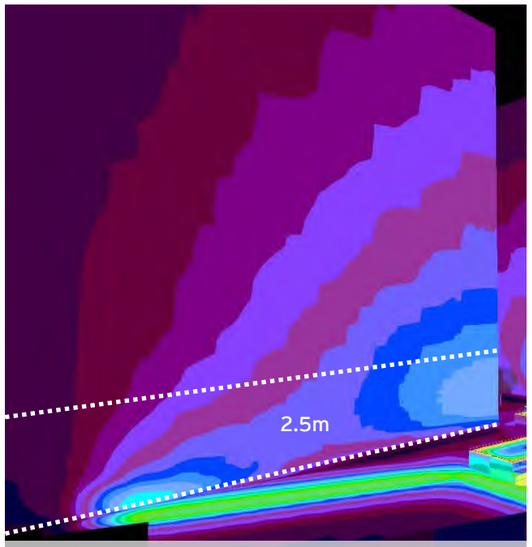
Deansgate Mews will be a vibrant busy area and the main entrance to the development from the south.
Illuminance during working hours of the shops, restaurants and cafes will be maintained at higher levels to create an active environment. Where the Mews connect with Great Bridgewater street and the Viaduct light levels will be adjusted accordingly to create a comfortable threshold transition.
After curfew the minimum lighting targets for the identified C2 lighting class will be meet the applicable requirements for:
Average maintained illuminance Ea>20lux
Uniformityl Uo>0.4

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8.6 Vertical Light Spill onto Residential Elevations



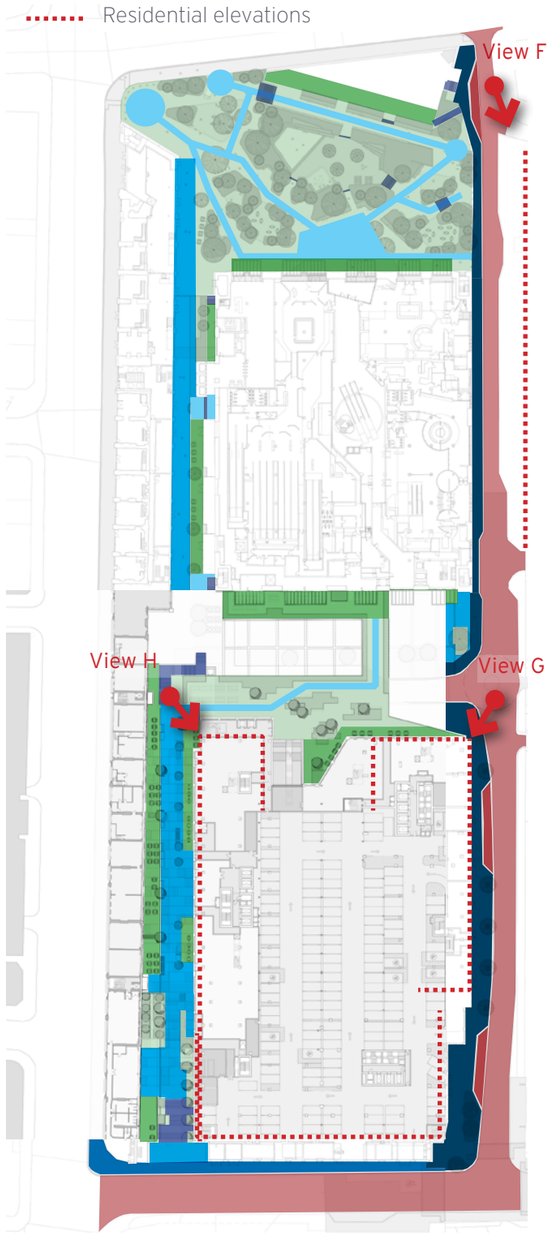
View F. Pre-curfew. 3 lux maximum light intrusion to nearby residential windows.



View G. Pre-curfew. All light intrusion above line is <5lux. Residential windows are located above the marked 2.5m zone.

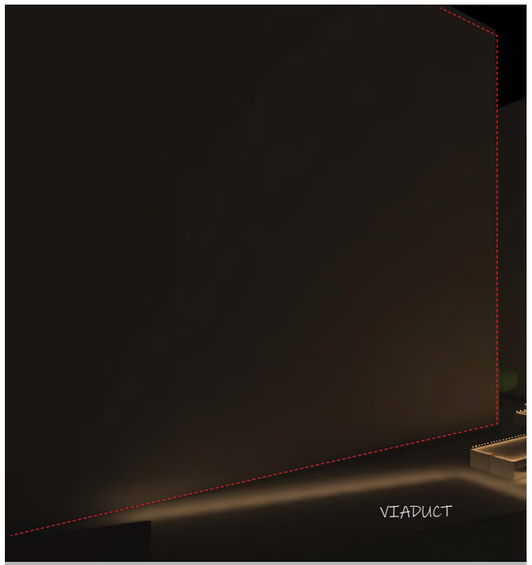


View H. Pre-curfew. All light intrusion above line is <5lux. Residential windows are located above the marked 2.5m zone.





View F on Ground Level. Simulation



View G on Level 1. Simulation



View H on Level 1. Simulation

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Great Northern Warehouse, Manchester

PRIVATE GARDENS AND TERRACES LIGHTING STRATEGY

NOVEMBER 2022
STATUS: FOR INFORMATION

Great Northern Warehouse

Private Gardens and Terraces Lighting Strategy

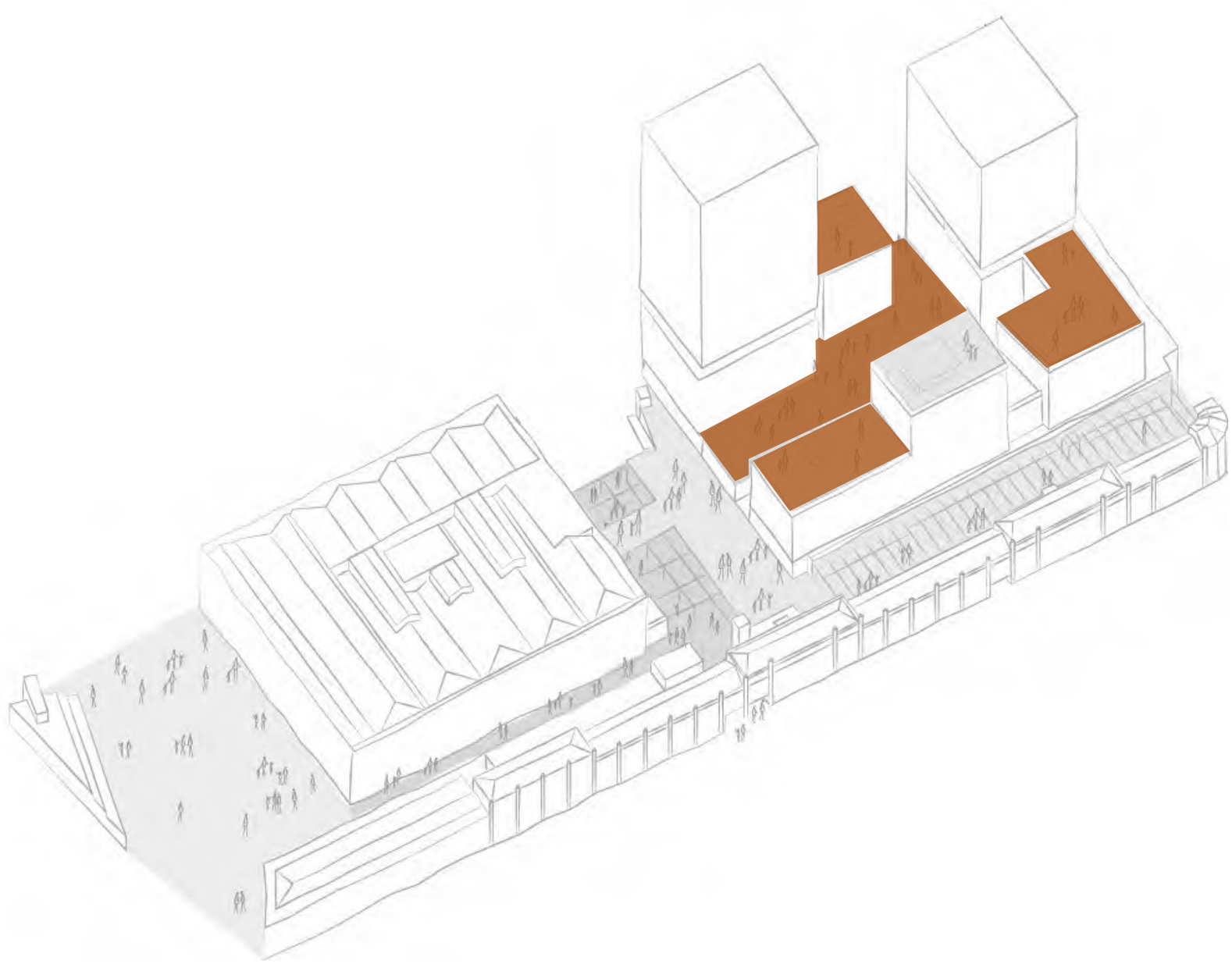


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   - 1.2 Inspiration
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   - 2.2 Inspiration
   - 2.3 Illustrative Lighting Layout and Product Palette
3. Lighting Layers and Control Strategy 9

Issue Status: For Information

Project Number: 1090
Date: 28/10/2022
Client: GNW Developments Limited

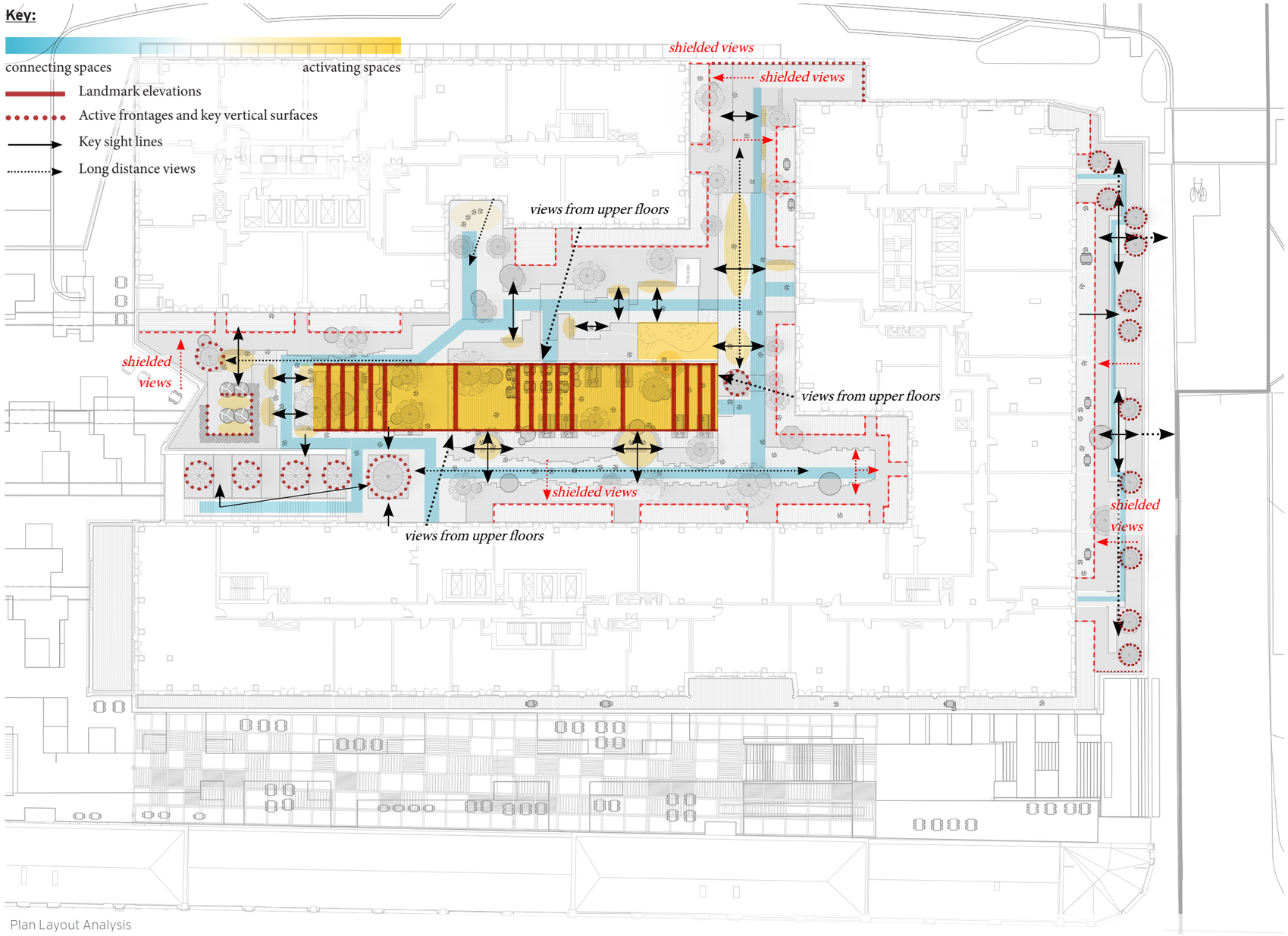
LB_1090_LR_04_PrivateGardensandTerracesLighting_RevA

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1. Podium Gardens and Terrace

1.1 Analysis and Key Considerations



Plan Layout Analysis

Observations

Visibility, privacy and comfort are key considerations for the design of the podium garden lighting. To reduce the risk of light trespass the following principles will be followed through:

- low level shielded lighting to circulation paths;

- avoiding the use of uplighting;

- careful balance of illuminated vertical surface to create pockets of interest and focus attention away from the private patios;

- concentrating amenity lighting in the active spaces.

The freestanding pergola structure in the centre of the gardens provides a great opportunity to highlight the character of the space and create a feature focal point.

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1. Podium Gardens and Terrace

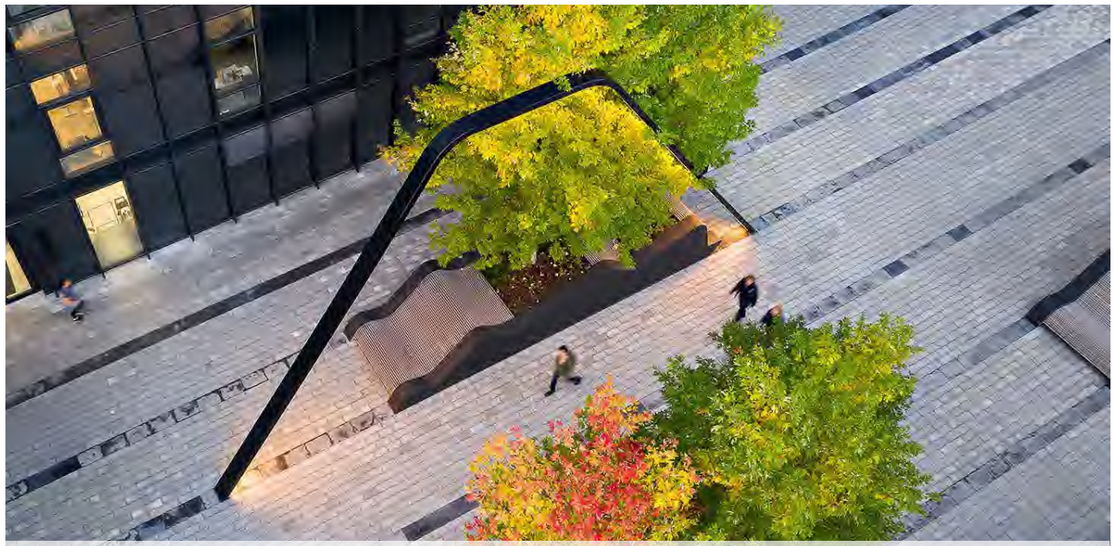
1.2 Inspiration



Shielded low level lighting to the circulation paths would help guide the occupants along creating a picturesque experience while reducing upward spill into residential elevations. Locating the luminaires near the planters and selecting an optical distribution to suit would help highlight panting and landscape features.



Higher ambient levels would be targeted in the community space under the freestanding structure. A visual hierarchy can be created to highlight particular zones of interest.

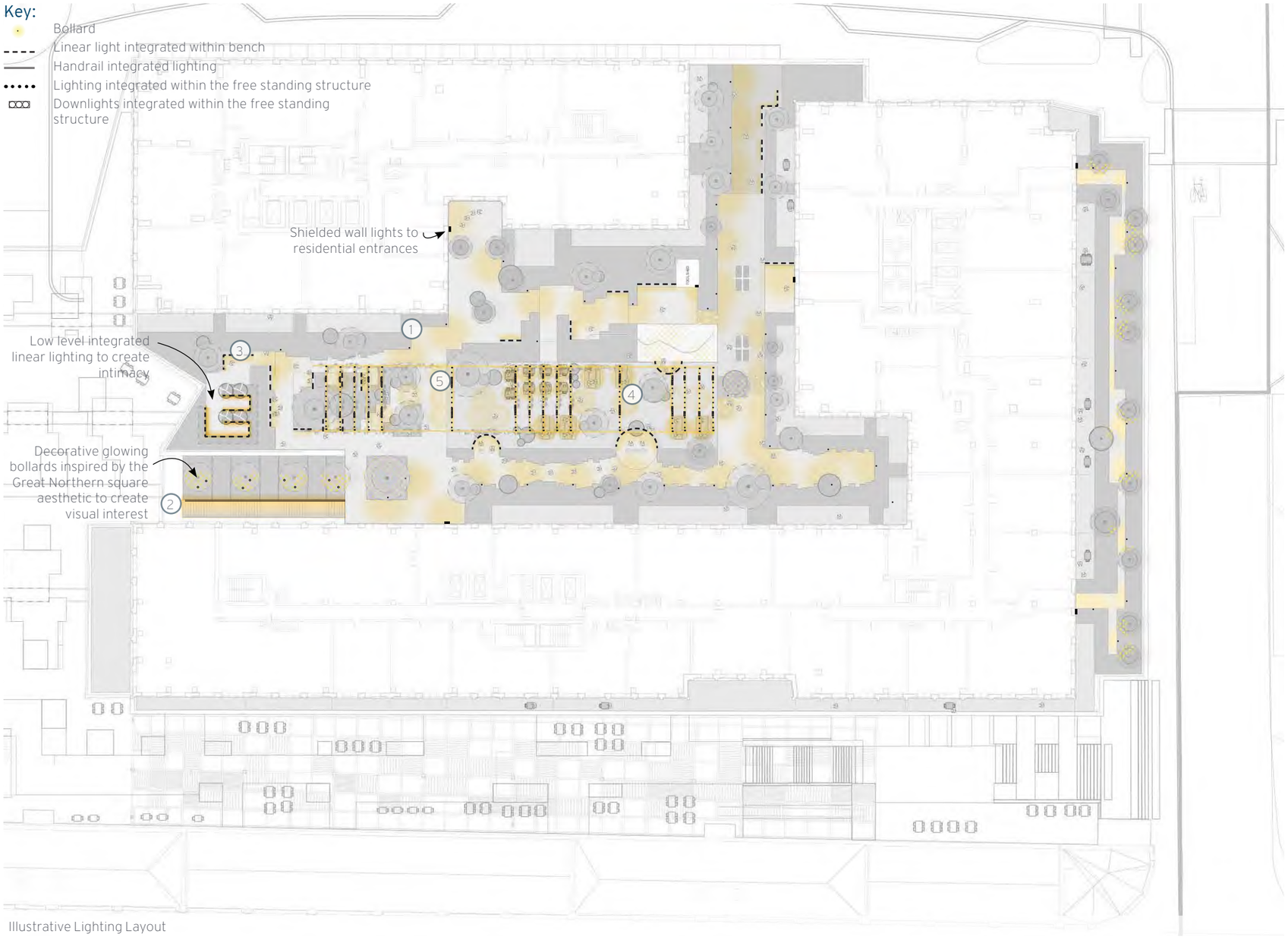


Integrating lighting into the pergola would help conceal the light sources reducing uward glow and would further reinforce the sculptural properties of the structure.

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1. Podium Gardens and Terrace

1.3 Illustrative Lighting Layout and Product Palette



Illustrative Lighting Layout

1



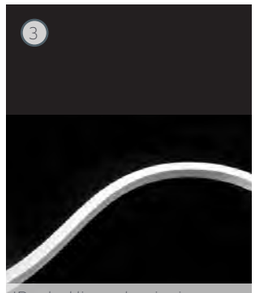
Shielded low level bollard helping the navigation of the private garden.

2



The staircase is lit through integrated handrail lighting

3



IP rated linear luminaire integrated within the benches for a soft glow on the pavement.

4



IP rated linear luminaire integrated within the pergola structure to create a soft and warm glow.

5



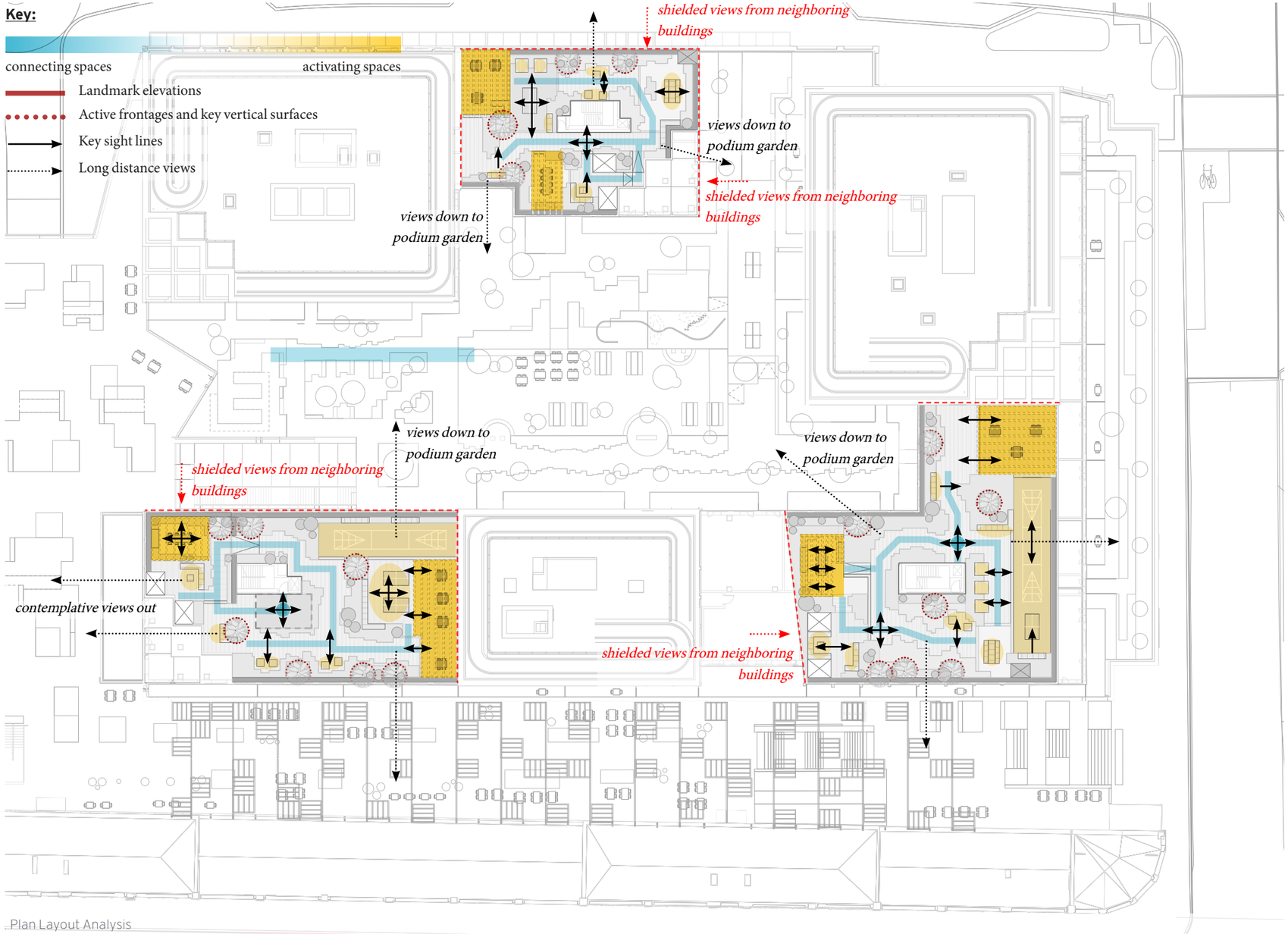
Downlight integrated within the pergola structure for general lighting.

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2. Residents' Terraces

2.1 Analysis and Key Considerations



Plan Layout Analysis

Observations

Lighting to the private terraces will be closely developed with the detailed design of the spaces to allow for a good level of light integration targeting a sophisticated luxurious look and feel.

Partially enclosed, open air and circulation spaces will be treated accordingly following considerations for the permanency of expected use and flexibility, marking visual boundaries versus preserving unobstructed vistas of the city and use of decorative elements to supplement the general lighting.

Special attention should be dedicated to help balance exposure and shielding from neighbouring buildings by shifting the visual focus of illuminated surfaces to ensure the occupant's comfort.

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2. Residents' Terraces

2.2 Inspiration



Lighting to open air transitional and informal seating spaces would be kept at low level to allow views out and frame the perimeter of the spaces creating enclosure. Additional moveable decorative lighting can be used to provide soft warm accents to tables.



Fixed chill out spaces would benefit from soft ambient high level lighting which could be integrated within the architecture to remain discretely concealed while providing amenity illumination to the area. Complemented by low level details and carefully selected uplighting to key landscape elements this strategy would create a cosy but functional and flexible light scenario.



The circulation pathways would benefit from spill light from the surrounding amenities. In order to frame the views and aid privacy selected vertical elements could be illuminated which would also aid orientation and wayfinding.



Highlighting selected feature elements and adding thematic decorative lighting would help express the character and heritage of the site.

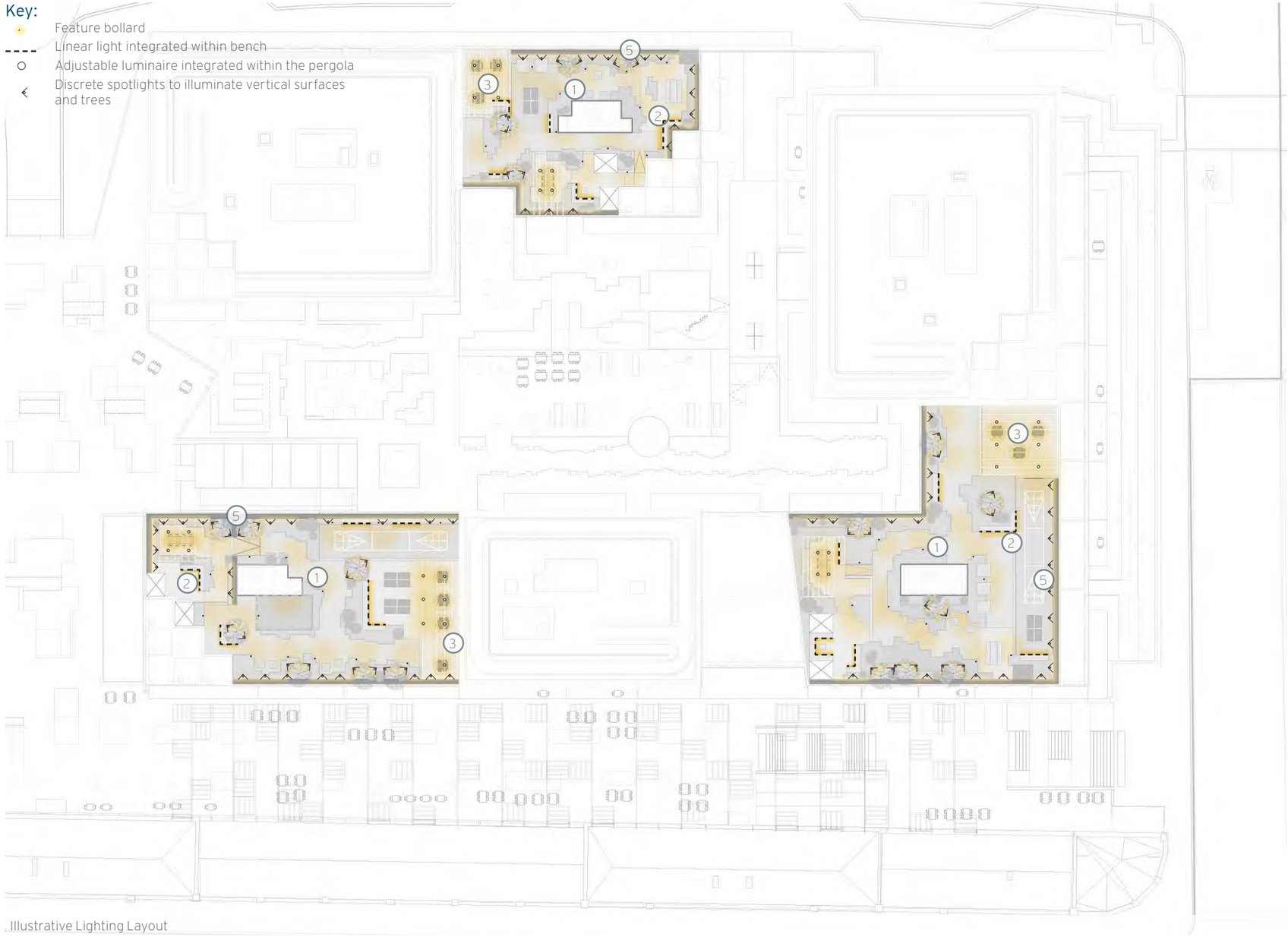
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2. Residents' Terraces

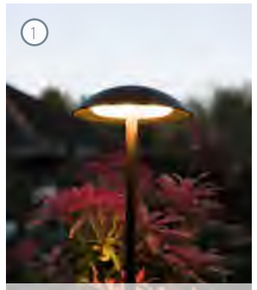
2.3 Illustrative Lighting Layout and Product Palette

Key:

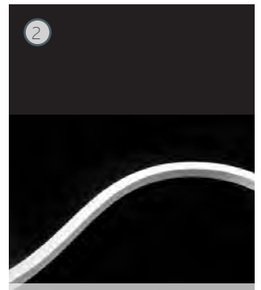
- Feature bollard
- Linear light integrated within bench
- Adjustable luminaire integrated within the pergola
- Discrete spotlights to illuminate vertical surfaces and trees



Illustrative Lighting Layout



Shielded low level bollard with a decorative shape lighting the pavement for a easy navigation of the space



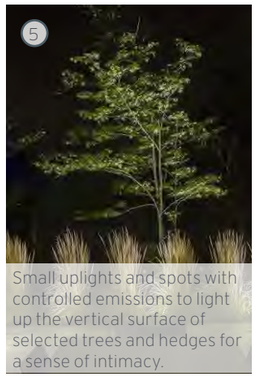
IP rated linear luminaire integrated within the benches for a soft glow on the pavement.



Discrete adjustable spotlights integrated within the pergola structure for general lighting



Additional decorative lighting making the space friendly and welcome



Small uplights and spots with controlled emissions to light up the vertical surface of selected trees and hedges for a sense of intimacy.

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3. Lighting Layers and Control Strategy

Private Garden

There are three main component in the lighting strategy for the private garden. Low level lighting offered by bollards illuminating the pavements, lighting integrated within benches creating a relaxed and cosy environment and high level lighting from the free-standing structure contributing to a dynamic activated space for community activities and meet ups .

The lighting design intends to adjust the intensities of these elements separately, to create a balanced day by day scene as well as special lighting scenarios for events or special occasions.

A digital control system would operate the lighting fixtures through pre-recorded scene settings depending on use.

Presence detection and a curfew based operation with an astronomical time-clock trigger is suggested to reduce the environmental and energy impact of the installation.
After curfew all upward and feature lighting would be switched off or significantly dimmed down.
Necessary local lighting to paths and entrances should remain on at a dimmed level after curfew until presence is detected to ensure the safety and perceived security for the residents.

Special attention will be dedicated to views down from the residential terraces and windows making sure that transitions between dimming levels are gradual to avoid any discomfort during the night.

Residents' Terraces

The Residents' Terraces design is luxurious with a variety of areas and spaces and the lighting design strategy is developed to reflect its variety.

The bollards dedicated to the circulation paths and the lighting integrated within the benches offer a low level lighting effect that makes the space feel warm and pleasant.

Adjustable downlights attached to the pergolas are dedicated to the tables and seating areas underneath, adding accents and pools of light for added contrast and a more dramatic effect. The space can be enriched with the added playfulness of portable decorative lanterns.

The different spaces are defined through lighting with soft framing vertical illumination along their perimeter. Selected trees and hedges are highlighted using discrete uplights installed in the planters.

As in the private garden each of the residents' terraces would be equipped with a digital lighting control system that allows:

- separate adjustment of the different groups of luminaires (per location and function);

- setting up lighting scenes for day-to day and special occasion operation. An astronomical time-clock would trigger day-to-day operation throughout different seasons;

- presence detection to switch off decorative and accent lighting when the terraces are not in use while keeping amenity lighting dimmed down for safety and security.

An additional control plate for staff on the reception could be included for extra manual control.

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Inspiring Light

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