
DESIGN AND ACCESS STATEMENT

THE FACTORY

PUBLIC REALM

DOCUMENT CONTROL

FILE NAME

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INTRODUCTION AND OVERVIEW



1.1

Public Realm The Factory The Vision

THE FACTORY consists of the building and the two new areas of public realm that surround it - Factory Square and Festival Square – and it is central to MIF's vision that the experience of The Factory extends seamlessly beyond the walls of the building and into this new public realm. These public spaces are key to the visitor experience, providing a fluidity and connection to and from The Factory building; creating first and lasting impressions and providing a generous welcome for all. The public realm must therefore be inclusive, accessible and open to all. It must be an attractive and welcoming gathering space that encourages people to dwell there. It must be a location where the everyday cultural interests of the people of the city are valued and celebrated, and a space where great artists from across the world can do extraordinary things.

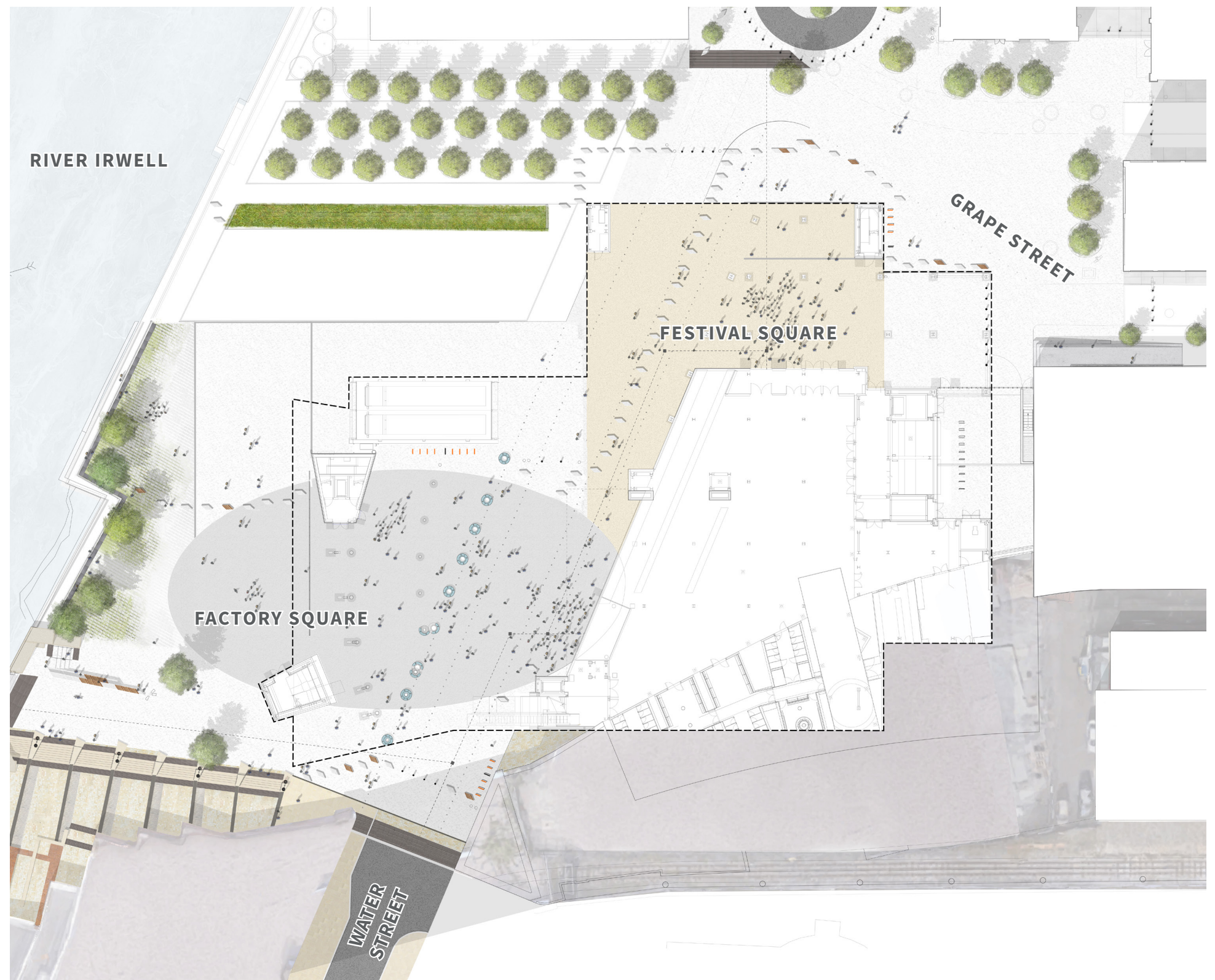
To fulfil this vision the Squares will have multiple uses and functions across the year.

We will build the sense of public ownership by encouraging people to animate the square with the everyday and informal cultures of the city – from urban sports to outdoor exercise and dance classes.

We will commission artists to make extraordinary new work on the Squares: from 3D projection mapping of the building, to public artworks installed on the Squares, or outdoor theatre, dance and live music performed to audiences of up to 1000.

We will host free outdoor festivals and events that showcase music and performance, and organise family and community engagement events that include workshops and interactive artworks. During summer months in particular, Factory Square will be a destination for outdoor programming and will host MIF's current 'Festival Square' that will animate the river front with a public offer, encompassing a range of food and beverage - from pop up street food vendors to ticketed Supper Clubs showcasing Michelin-starred chefs.

The majority of the programming will be free, but we may also host a number of special events and ticketed performances within the Squares.



1.2

Public Realm Consultation Summary

Discussions have taken place over the period of the project with various stakeholders listed below. A pre-planning public drop in session for the public realm works was held on the **4th March 2020**.

Highways

30/05/19 Highways requirements discussed to be captured in Project Brief.

19/09/19 Initial proposals presented. Consultee supportive.

Various in October / November Principle of Prohibition of Driving presented and resultant design changes presented. Consultee supportive.

City Centre Regeneration

10/07/19 and 23/08/19 Outline scheme discussed. Consultee supportive.

16/10/19 and 15/11/19 Principle and detail of Prohibition of Driving along with resultant design changes presented. Consultee supportive.

Local Planning Authority

Dates as per Regeneration above.

Greater Manchester Police (Counter Terror Team)

26/09/19 Concept presented. Consultee supportive.

16/10/19 Scheme design presented. Consultee supportive.

Email update 18/12/19 Principle and concept design for Prohibition of Driving presented. Consultee supportive.

Artists

01/10/19 Scheme design presented. Potential use of space considered. Flexibility of space highlighted as key, with the requirement for predominantly hard landscape and limited number of trees. All features to be either located to the edges or be movable during events. Consultee supportive.

Breakthrough UK

07/11/19 Outline scheme and accessibility features discussed. Concern raised around speed of cyclists associated with designated cycle routes and the risk of collision. Requirement for accessible cycle parking raised. Reservation raised around the use of green gap paving and the potential of wheels getting stuck in gaps. Pulsating lighting feature will need to be carefully designed to not trigger a feeling of dizziness. Preference for a river wall to be see through (perspex).

Cycling strategy was revised with a cycle with care principle proposed with a speed limit across the site. Accessible cycle parking was added, located in close proximity to the entrances. A steel balustrade is proposed to the river edge. Not perspex, due to the maintenance liability, but a permeable design solution. Green gap paving: a sample has arrived to site for review and a site visit to Circle Square on Oxford Road has been suggested prior to the group's next meeting to

review the material further and for more people to have first hand experience of it. Following which a further review is intended.

Allied London / MQL

14/11/19 (and various Design Interface Meetings) - Scheme and principle of Prohibition of Driving presented. Consultee supportive in principle with a note to consider impact to St Johns traffic flow (under way) and agree final arrangements for turning head (ongoing).

06/02/20 Results of transport modelling discussed. Consultee accepted that Prohibition of Driving has minimal effect on traffic flow however further detail around turning head to be developed / agreed.

Transport for Greater Manchester

20/11/19 Principle of Prohibition of Driving presented. Consultee supportive and commissioned to undertake traffic modelling.

Exec Member for Highways

28/11/19 Principle of Prohibition of Driving presented. Consultee supportive.

Local Councillors

19/12/19 Principle of Prohibition of Driving presented. Consultee raised concerns with potential impact to traffic flow. Modelling exercise underway to allay concerns. Initial feedback is negligible impact to traffic owing to closure. Consultee requested public drop-in event held. Event held 4th of March.

Lead Local Flood Authority

11/12/19 Scheme design presented to discuss drainage and flood risk. Consultee supportive.

Science and Industry Museum

10/01/20 Scheme design and principle of Prohibition of Driving presented. Consultee noted understanding of the reasons for Prohibition of Driving and requested opportunity to consider any impact to their operations. Transport assessment to be produced considering change to traffic flows in the vicinity of the Factory.

Marriott Hotel

27/01/20 Design and principle of Prohibition of Driving presented. Consultee broadly supportive but noted concern of potential traffic build-up on Water during pick-up / drop-off hours. Concern acknowledged. Pick-up / drop-off to be managed to minimise risk of uncoordinated vehicle arrival.

Residents

04/03/20 Drop-in session as agreed with Councillor Joan Davies.

04/03/20 The design team held a drop-in session for local residents to share the final public realm design and discuss proposals for control of traffic on Water Street. Approximately 50 people attended the session and overall residents were supportive of the final design and the Factory proposals as a whole.

Key matters raised by attendees included some concern about the potential traffic implications for local roads if Water Street is not fully re-opened, including queuing of taxis, and the safety of pedestrians on Water Street if vehicle movement is restricted. A number of attendees were supportive of the intention to make the public realm more pedestrian and cycle friendly.

The public realm will incorporate measures to create a safe and secure environment, including lighting and CCTV. There will be a comprehensive management strategy in place for dispersal and vehicle movement, in line with the approved scheme.

Further information about the session, including a summary of the comments received and the design team response is provided within the cover letter submitted with the condition discharge application.

Fire Service

Scheme design and principle of Prohibition of Driving issued on **18/12/19** and followed up **13/01/20**. Consultee response supportive.

03/02/20 Consultee supportive of scheme subject to Fire Service being provided access through automatic bollards as required.

06/02/20 Salford Central Fire Station concurred with Manchester Fire Officer (above).

Statutory Undertakers

TBC All parties with equipment in the adopted highway have been notified. No objections raised.

Environment Agency

14/01/20 Confirmed consultation not required as adjacent watercourse is not a 'main river'. Delegated to Lead Local Flood Authority.

Network Rail

22/09/20 that objection will be rescinded on the basis that façade lighting will now be white light only

1.3

Site Context

The Factory is sited at the southwest corner of the St. John's development, within the Castlefield Conservation Area. The Factory site is bounded by:

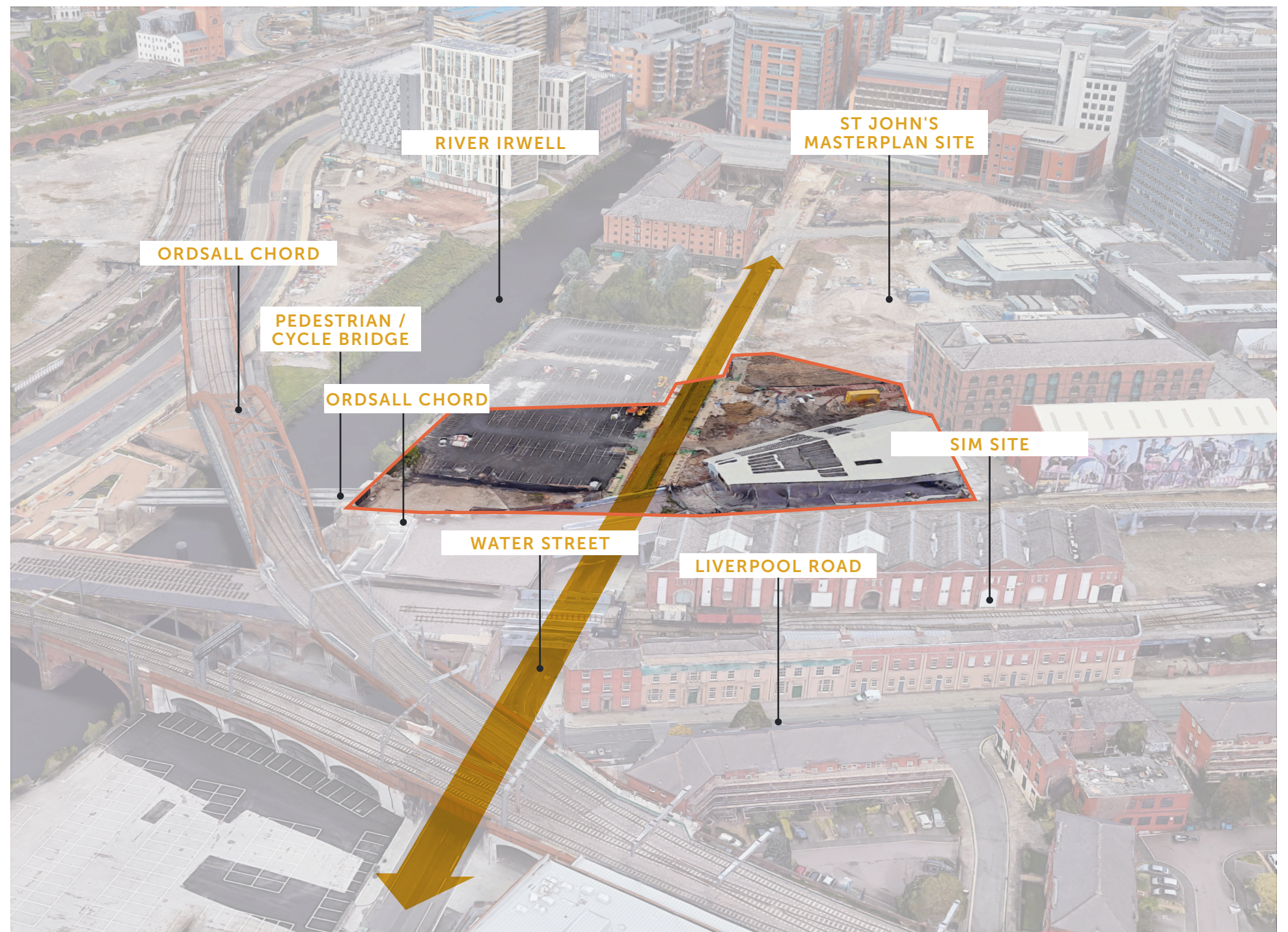
West: the western edge of the site is the River Irwell, where a new public space will be created, "Factory Square". The new pedestrian / cycle bridge across the river opens up easy access from the Salford side of the river.

North: the Northern edge of The Factory sits comfortably within the to be developed St. John's Masterplan and will include a new area of public realm, "Festival Square".

East: the Bonded Warehouse, recently Grade II listed, is an important contributing structure to the Conservation Area. The Factory stands approximately 6 meters away from the eastern facade of the Bonded Warehouse.

South: the southern boundary is the most complex. The boundary is a series of Grade II listed brick arches incorporated into the ground level of The Factory, which abut a length of cast iron arches occupied by the Science and Industry Museum (SIM). These arches are topped in part by disused railway, the Pineapple Line, which fed into the Bonded Warehouse. The Pineapple Line extends over a cast iron bridge, crossing Water Street below. The whole of this arch and bridge complex is Grade II Listed. The cast iron bridge viaduct is considered the more important feature, with the brick arches listed by appendage.

IMAGERY TAKEN BEFORE MAY 2019



1.4

Wider Flow and Access

Access to The Factory from the wider city will be predominantly from the northwest from Quay Street and Deansgate via Water Streets. Additional pedestrian flow will come from the south, Liverpool Road and Deansgate Stations, via Water Street. The new pedestrian and cycle bridge will connect to Salford.

There will be two primary entrances to The Factory: at the north of the Foyer, directly feeding off “Festival Square”, at the end of Grape Street. This will be used by the majority of visitors.

At the west of the Foyer, along Water Street. This entrance will be used by visitors arriving/ departing to the south, and is in the desire line for pedestrians crossing the River Irwell from Salford via the new bridge link.

A third entrance is planned at the south of the foyer, connecting to Science and Industry Museum's lower courtyard. This is subject to future development plans. The foyer space will remain open when events are not taking place, allowing for a consistent flow of people through the space. The continuous public realm across The Factory site and through the foyer, will be activated by performance and street life, and by food and beverage outlets in adjacent buildings.

KEY

- Main Pedestrian or Cycle Access
- - - Secondary Pedestrian or Cycle Access
- Vehicular Access
- Vehicular Access for Servicing and Maintenance



LANDSCAPE DESIGN PROPOSALS AND RATIONAL



2.1

Public Realm Boundaries

The red line illustrates the original planning boundary submitted for The Factory in 2016. Areas implemented as part of The Factory public realm are illustrated by a dotted blue site boundary for lower ground floor and yellow line site boundary for upper viaduct levels. We are seeking to discharge planning conditions for the blue dotted site boundary area only.

All proposals outside these two site boundary lines do not form part of this application and are shown for illustration only.

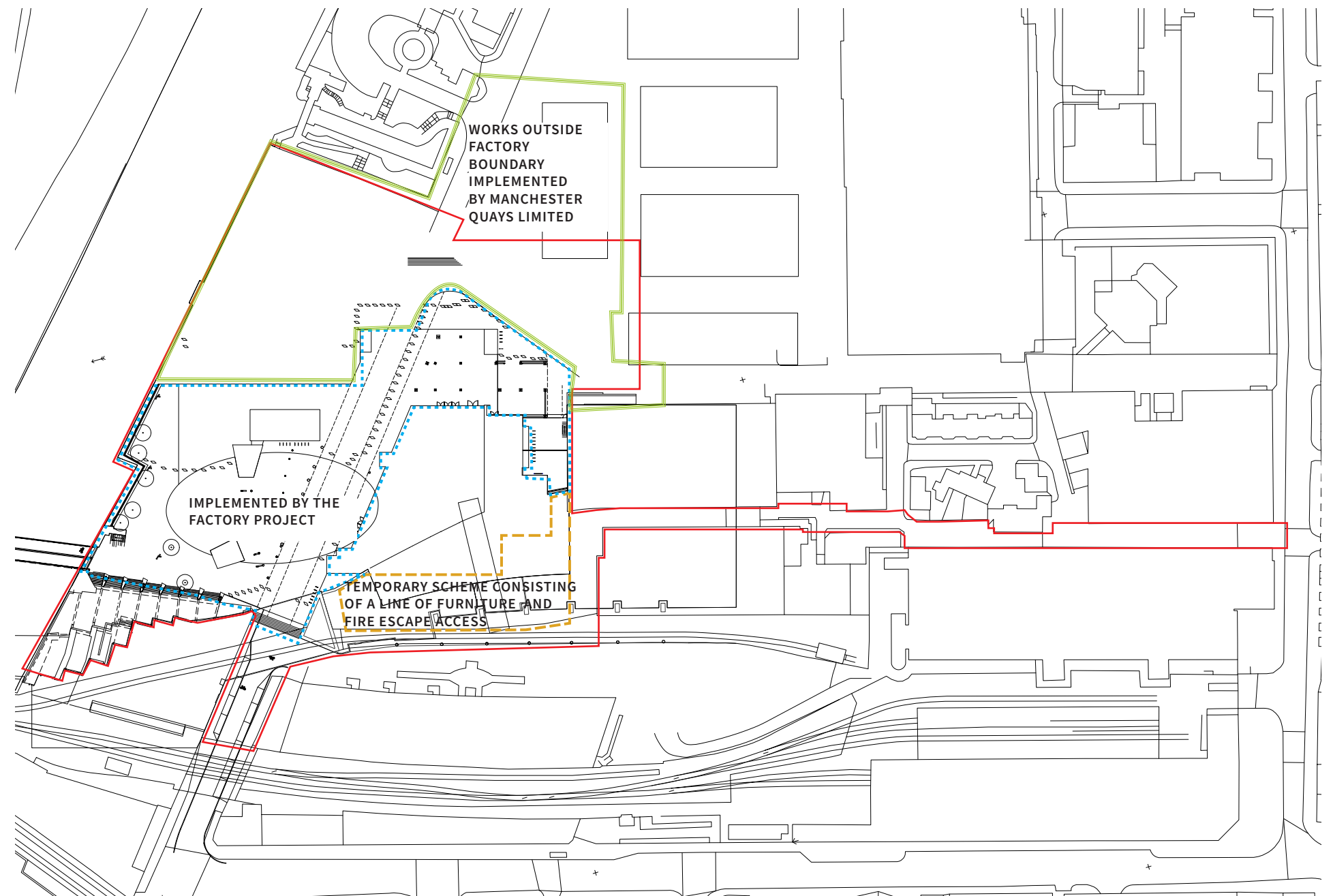
Design of the public realm for these areas will be included in planning applications for:

- **Manchester Goods Yard**
121511/FO/2018 as amended by 123047/NMC/2019,
- **St. John's T1**
114385/FO/2016 as amended by 123041/NMC/2019,
- **St. John's T2**
114723/FO/2016.

A separate Section 278 application will be submitted for the works associated with the area south of Water Street.

KEY

- ⋯ Ground Level Site Boundary
- ⋯ Upper Level Site Boundary
- Original Planning Boundary 2016
- Works outside Factory Boundary implemented by Manchester Quays Limited





2.2

Public Realm Concept

The concept for the public realm is crucial in underpinning the vision to extend the experience of The Factory beyond the walls of the building and into the city. Therefore it feels appropriate that it is inspired by the culture of theatre and elements associated with this. These elements are portrayed graphically, to characterise and unify The Factory's two main areas of public realm: Festival Square and Factory Square, which will be linked with The Factory's foyer to form one contiguous area of public realm.

FACTORY SQUARE

Factory Square will be a fully inclusive space, filled with animation throughout the calendar year through open air events and activities for all, bound to the west a verdant green edge on the banks of the River Irwell.

FESTIVAL SQUARE

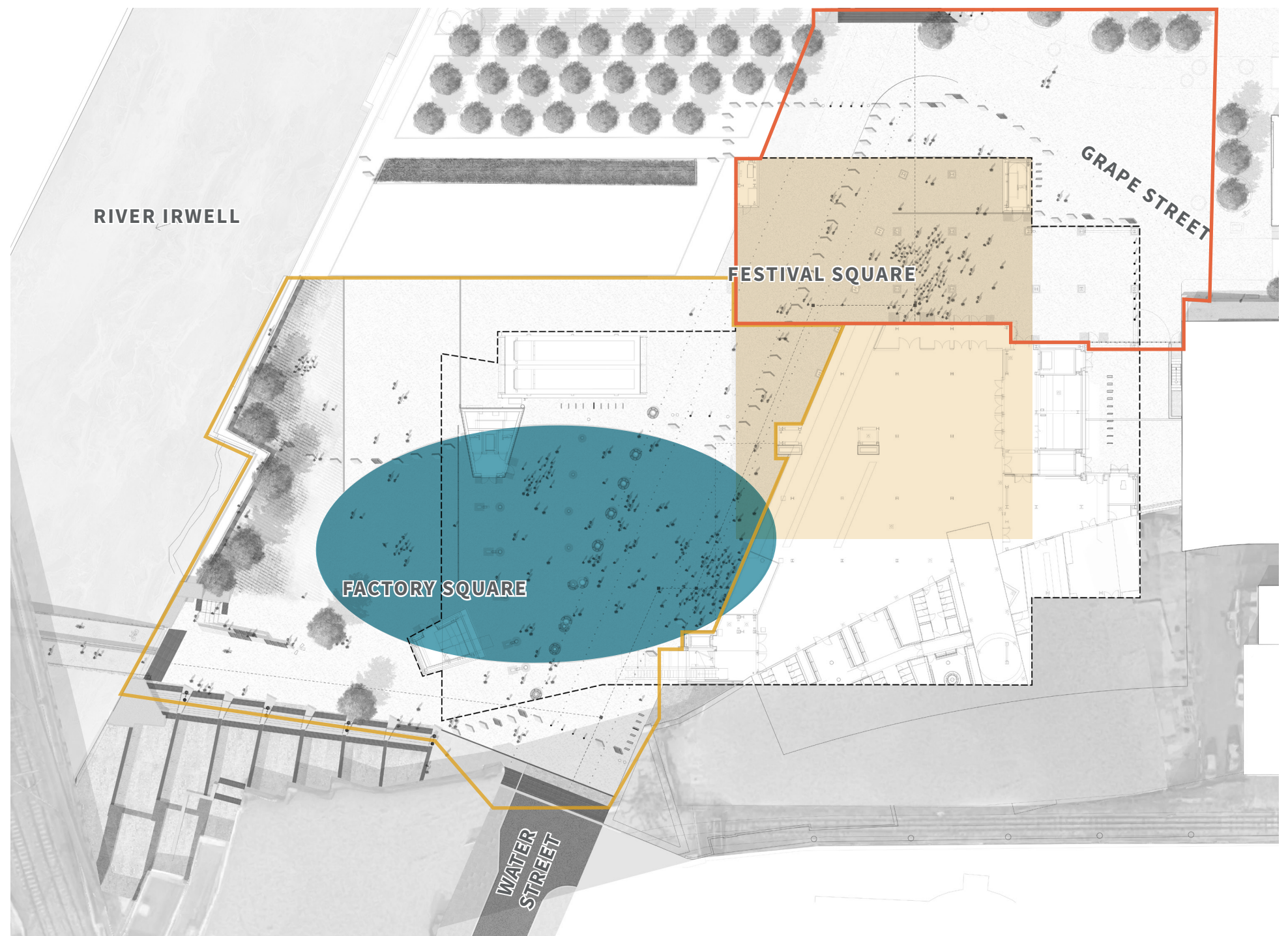
Festival Square is the gateway from the city into The Factory. It forms an important interface with the rest of the St John's Masterplan. The foyer of the building and the spaces immediately outside it will combine to create an attractive and accessible public area, open to all throughout the day and evening. Artists, audiences, residents of St. John's, local workers and other members of the public will be able to gather here to meet, eat, drink and mingle, both on performance evenings and on days when no events are scheduled.

SPOTLIGHT

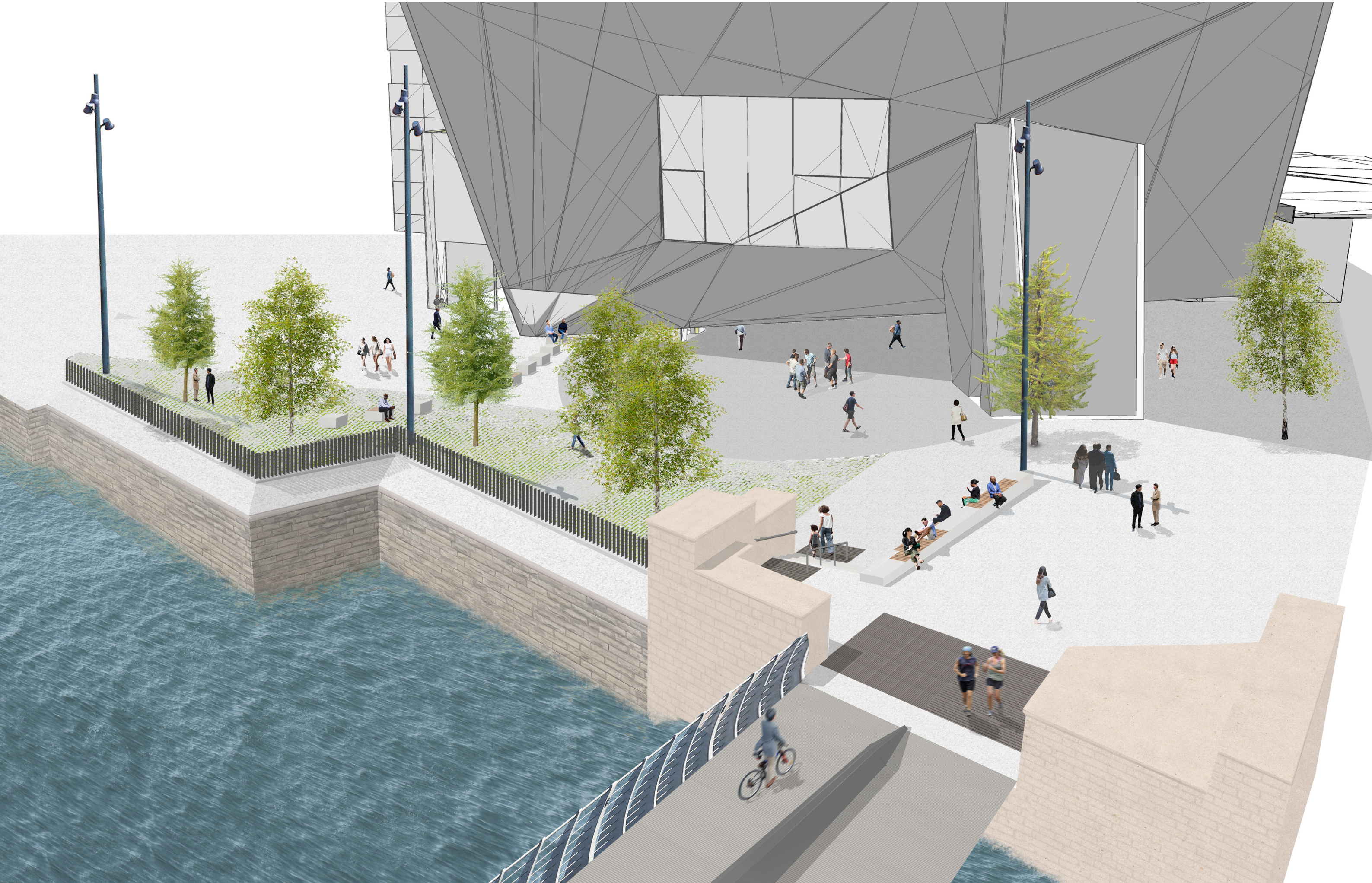
As a space whose purpose is to entertain, it seems fitting that Factory Square is put in the spotlight, literally. The graphical shape of a spotlight is projected into the square creating a spectacle and guiding people to the building.

WELCOME MAT

The main entrance to this iconic building deserves an impressive



FACTORY PUBLIC REALM INDICATIVE VISUALIZATION



HARDWORKS AND SOFTWARES MATERIALS

3

3.1

Public Realm Materiality Hardworks

Due to its requirements for open air events and flexibility, much of the public realm is hard surfaced. The hardworks palette has evolved from the graphical concept of elements of the theatre such as the spotlight and the Welcome Mat outlined in Section 2.2. These elements give the spaces character and identity through use of contrasting materials.

The materials chosen must be robust and durable to enable the spaces to accommodate large volumes of people, withstand heavy goods service vehicles as well as accommodate and sustain the potential needs of events which may occur, including fire resistance and ground fixings.

They should also be sympathetic to the building.

KEY

- 1 Welcome Mat - In Situ Concrete - clay red colour
- 2 Spotlight - In Situ Concrete - mid grey colour
- 3 In Situ Concrete - light grey colour
- 4 Yorkstone Flag Paving (existing to Ordsall Chord)
- 5A Yorkstone Sett Paving (existing to Ordsall Chord)
- 5B Yorkstone Sett Paving (proposed)
- 6 Permeable Paving - Green Gap Paving
- 7 In Situ Concrete - grey colour, brushed finish (installed)
- 8 Granite Flag Paving



1 IN SITU CONCRETE - WELCOME MAT*



Option 1 - Artivia Buff (20mm Glensanda Aggregate with Glensanda Sand)



Option 2 - Artivia Buff (20mm Glensanda Aggregate with Glensanda Sand)



Option 3 - Artivia Buff (20mm Glensanda Aggregate with Glensanda Sand)

2 IN SITU CONCRETE - SPOTLIGHT*



Option 1 - Artivia Light Ash (20mm Glensanda Aggregate with Glensanda Sand)



Option 2 - Artivia Natural (20mm Glensanda Aggregate with Glensanda Sand)



Option 3 - Artivia Light Ash (10mm Limestone)

3 IN SITU CONCRETE - LIGHT GREY SURROUND*



Option 1 - Artivia Natural (20mm Glensanda Aggregate with Glensanda Sand)



Option 2 - Artivia Natural (20mm Glensanda Aggregate with Glensanda Sand) with Blue Thermoplastic Stripes



Option 3 - Artivia Natural (10mm Limestone)

IN SITU EXPOSED AGGREGATE CONCRETE

The dominant material used in the public realm is exposed aggregate in situ concrete. In situ concrete is effective in creating a surface which seamlessly takes up level changes.

This is applied in four locations, with two different visual aesthetics created by using varying matrices and aggregates. In general, area 1 will have dark grey tones while area 2 will have a light grey tone.

The concrete can also be finished in different ways, for example a brushed finish is proposed around columns and adjacent to fire escapes, as a warning for visually impaired users without the need for introducing a new material, and as a finish within the service yard.



BMX Park, Manchester

* subject to a commercial review

4 YORKSTONE PAVING - FLAGS



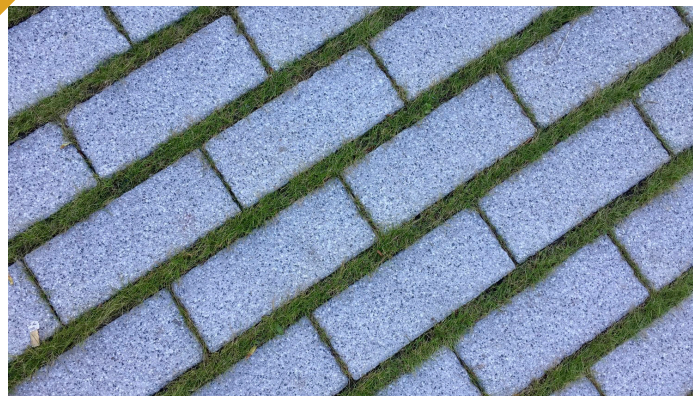
8 GRANITE PAVING - FLAGS



5 YORKSTONE PAVING - SETTS



6 PERMEABLE CONCRETE PAVING -



3

4

**ORDSALL CHORD INTERFACE
YORKSTONE FLAG PAVING**

The Ordsall Chord Scheme was completed in 2018, however the interface with The Factory site and the steps feature requires further coordination and tidying up as described further in section 5 of this document.

The hardworks materials used as part of the scheme are predominantly Yorkstone flags and setts as well as black granite flags and reclaimed cropped cobbles.

There has been some material left over that has been transferred for use on the Factory public realm. This includes small quantities of:

- Yorkstone flags (400mm x 400/200mm x 75mm)
- Yorkstone flags (400mm x 400 - 900mm x 75mm)
- Yorkstone setts (100mm x 100mm x 100mm)
- Granite flags (1000mm x 600mm x 75mm)
- Granite setts (100mm x 100mm x 100mm)

These materials will be laid at interfaces to Ordsall Chord, the Viaduct, Bonded Warehouse in small quantities for a consistence appearance and a neater transition. A feature band along the river wall will provide easy access for maintenance.



1. Ordsall Chord scheme interface.
2. Yorkstone flags in Aldgate Square London
3. Ordsall Chord interface.
4. Ordsall Chord scheme laid with proposed Yorkstone setts.
5. Ordsall Chord scheme laid with proposed Yorkstone flags.
6. Ordsall Chord scheme laid with proposed granite flags

5 WATER FRONT PRECAST CONCRETE PERMEABLE PAVING

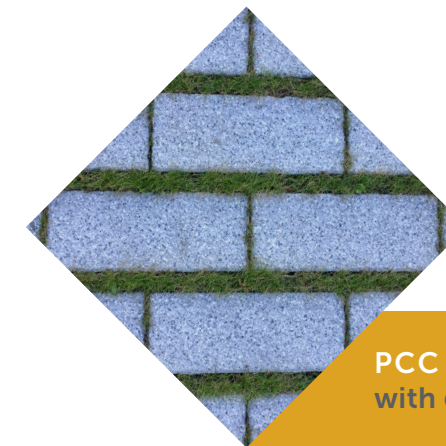
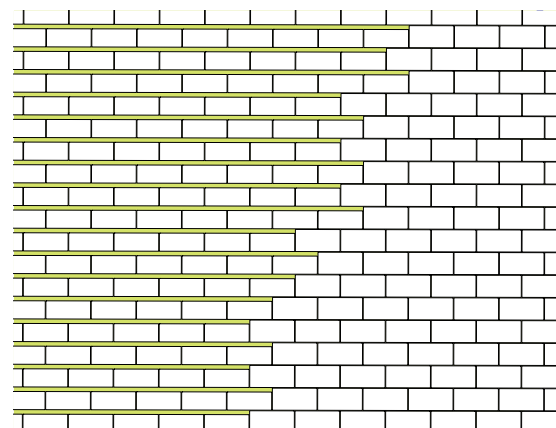
MIF expressed a desire for a green transition from Factory Square to the river side from the outset of the project to give the Square a softer edge which feels appropriate along the river in contrast to the otherwise hard material palette. A pure lawn area was looked at but was not considered fit for purpose due to the high wear and tear associated with the use during MIF events. A fully planted soft edge would provide visual benefits only and could not be accessed, limiting the area for events further and would likely get damaged during events. These were the reasons why the design team explored the use of a precast concrete unit which can be combined with a grass infill to create a soft green appearance. It is proposed that a high proportion will be filled with grass towards the river edge and moving towards the building more will be standard block units for more frequent pedestrian routes and a designated access towards the river. The modules are capable of withstanding heavy traffic should service vehicles need to drive over this area.

An exercise was undertaken to explore how this material interfaces with the adjacent in situ concrete in Factory Square which can be seen on the following pages.

The units, if filled with grass, may be harder to traverse than standard units. Therefore a route through the green edge is included to allow all users access to the water front.



ILLUSTRATIVE PLAN OF GREEN TRANSITION



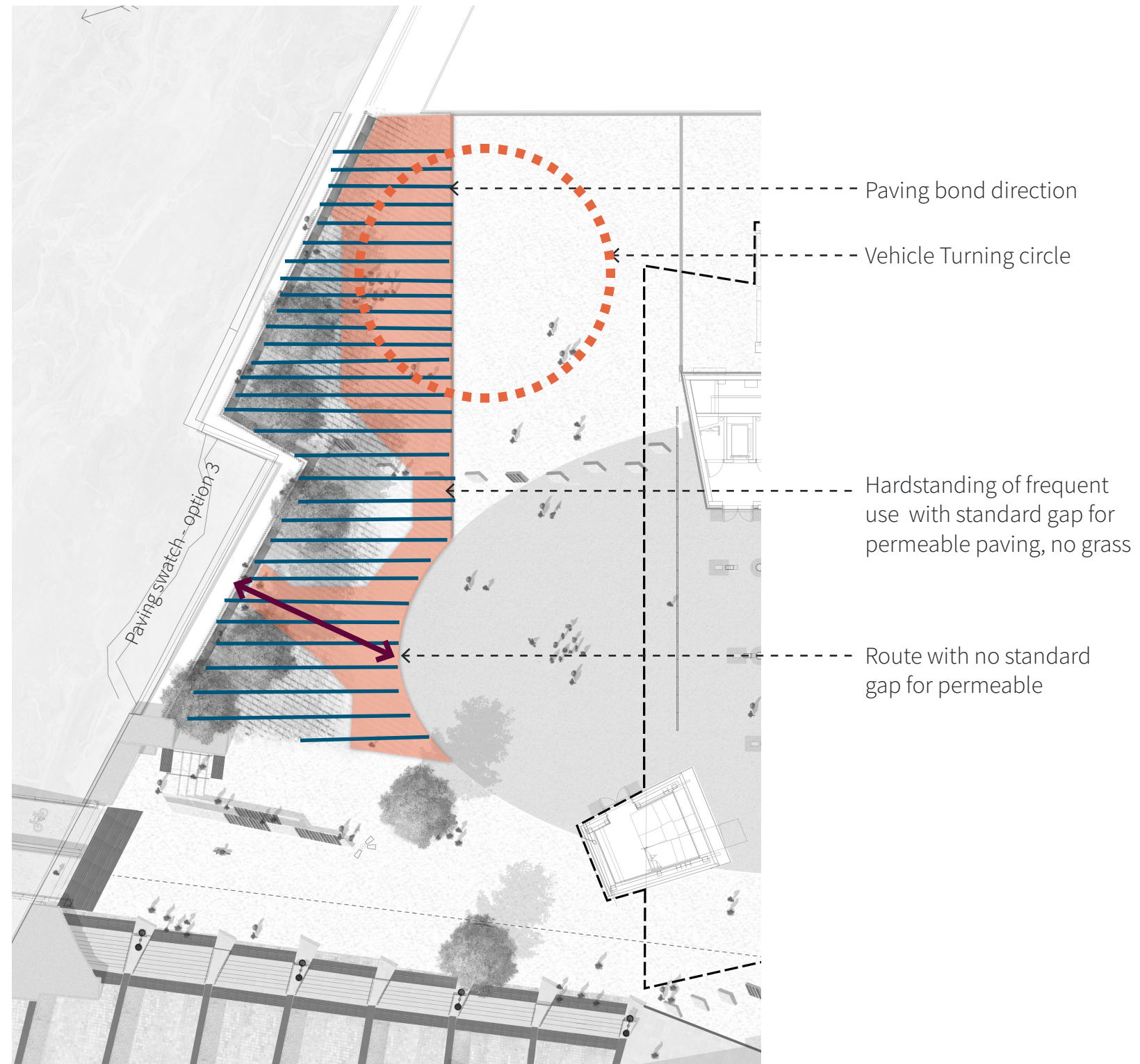
PCC UNITS
with grass infill



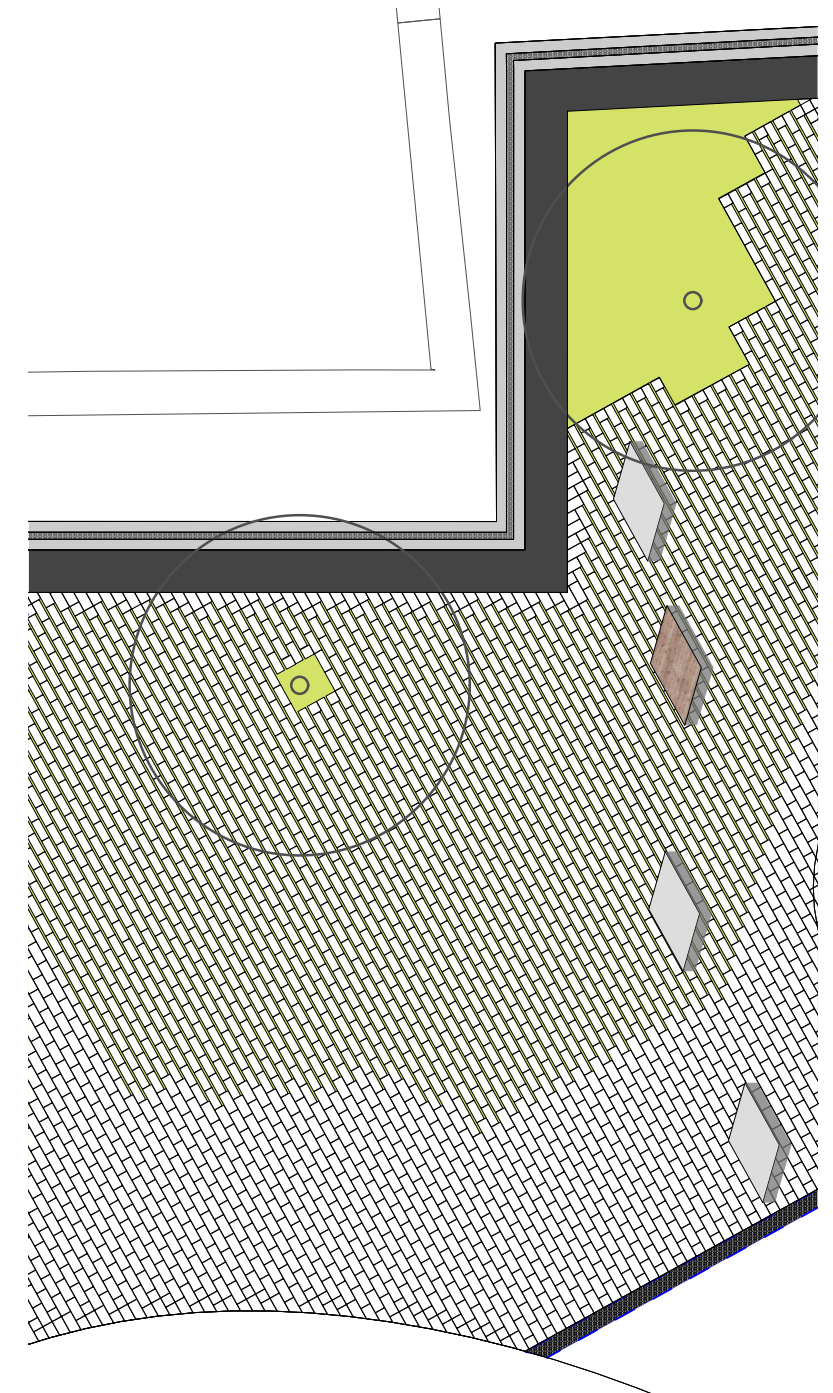
PCC UNITS
paving for Accessibility

Module Combinations

PERMEABLE PAVING LAYOUT



PAVING SWATCH



3.2

Public Realm Materiality Softworks

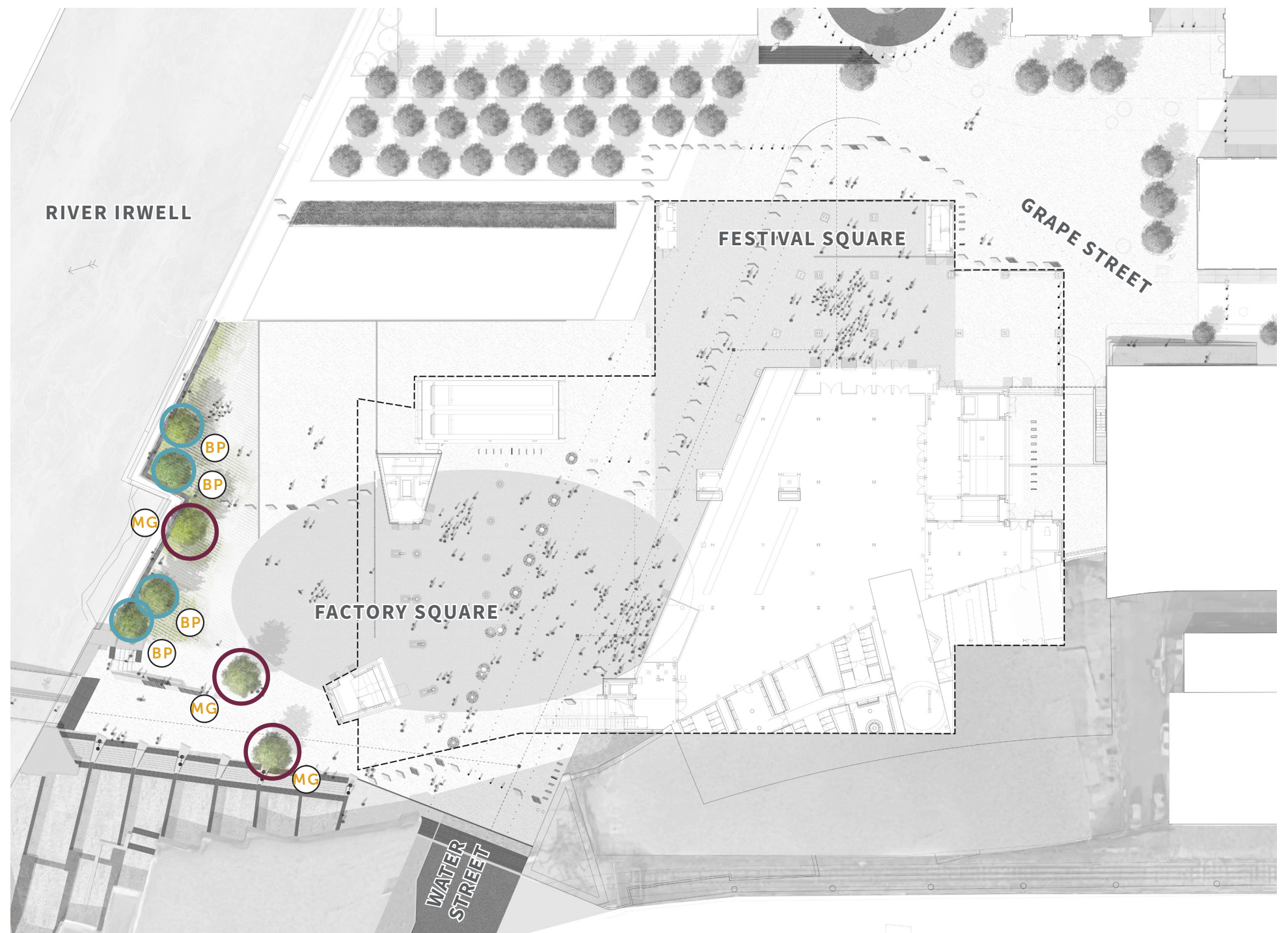
Trees provide a vertical framework and seasonal colour to animate the space throughout the year. The majority of the trees are planted informally along the river's edge.

Overall trees will be provided within the public realm scheme, and this contributes to the biodiversity and greening of the site whilst also providing an appropriate replacement for the four trees lost as a result of the proposals (two of which were moderate quality and two of low quality). There are no further existing trees that will require to be retained.

Tree species have been selected for their suitability to cope within an urban and windy site environment. Sites within these locations are associated with higher stress levels resulting from poorer access to nutrients and water, greater pollution and higher temperatures. The trees located on low points are in addition able to cope with short periods of flooding should a flood event occur, otherwise they are able to cope with periods of drought.

Festival Square to the north of the site is being framed by tree planting from the adjacent development.

A small area of grass planting is proposed along the river between concrete paving to provide a softer edge. We are proposing to accompany the grass planting with some Bluebell bulb planting within the gaps. We are also proposing some incidental perennial planting within some of the gaps further away from main pedestrian flow like *Lysimachia nummularia Aurea* - Creeping Jenny and *Thymus pseudolanuginosus* - Woolly Thyme.



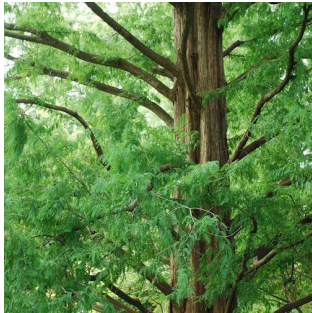
TREES



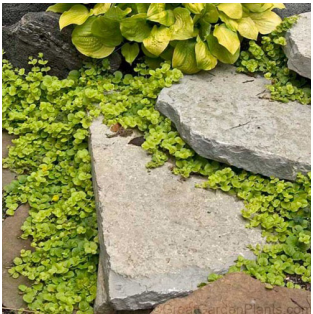
Betula pendula 'Dalecarlica'



Metasequoia glyptostroboides
Dawn Redwood



INCIDENTAL PLANTING WITHIN GREEN GAP PAVING



Lysimachia Nummularia 'Aurea' -
Creeping Jenny

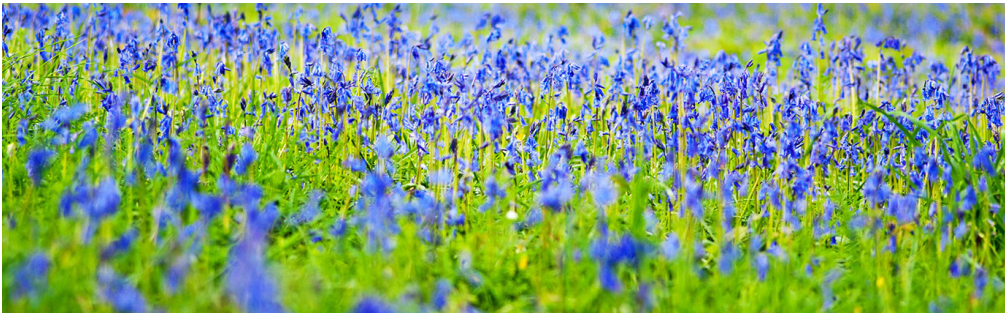


Thymus pseudolanuginosus -
Woolly Thyme

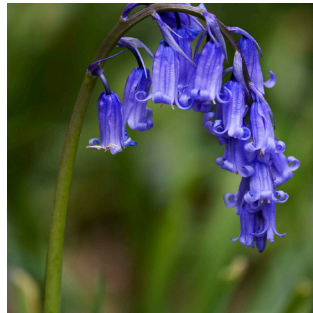


Thymus pseudolanuginosus -
Woolly Thyme

BULBS



Hyacinthoides non-scripta - Blue Bell



PLANTING SCHEDULE

Allow for landscape architect to tag all trees at nursery. All samples to be approved by landscape architect prior to planting.

TREE CODICES						
TREE PLANTING						
Code	Species Latin	Common Name	Number	Size Girth (cm)	Size Height (cm)	Rootball
Bp'D'	<i>Betula pendula</i> 'Dalecarlica'	Swedish Birch	4	35-40	Semi-mature with 2.2m clear stem, underground guyed	RB or Container grown
Mg	<i>Metasequoia</i> <i>glyptostroboides</i>	Dawn Redwood	3	40-45		

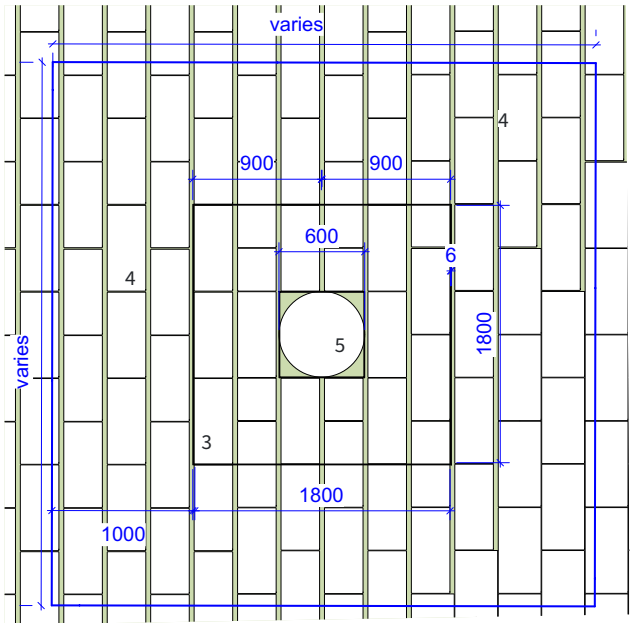
Notes
RB = rootballed
Containerised trees to be grown in perforated air pots, or equal and approved
Form: all transplants to be seed raised

BULB PLANTING					
Percentage	Species Latin	Flowering Period	Number per m2	Bulb Size (cm)	Common Name
100%	<i>Hyacinthoides non-scripta</i> (British origin)	April	25	8	English Bluebell

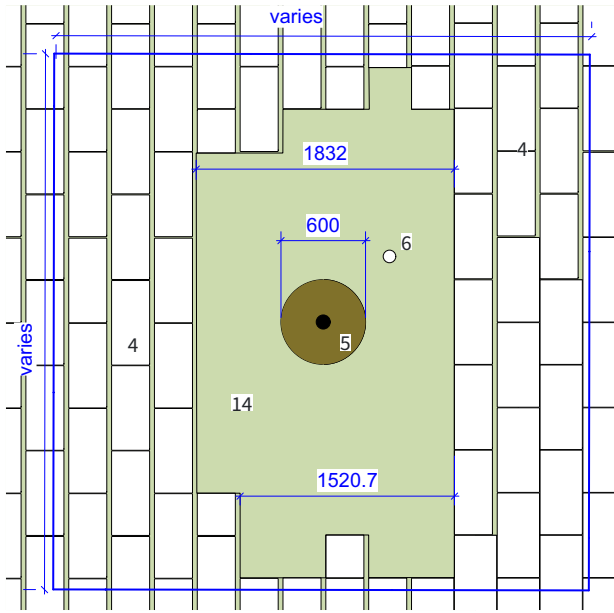
PERENNIAL PLANTING INCIDENTAL PLANTING			
Species Latin	Common Name	Percentage per m2	Pot Size (cm)
<i>Thymus pseudolanuginosus</i>	Woolly Thyme	7	9cm or bare root if available
<i>Lysimachia nummularia</i> 'Aurea'	Creeping Jenny	7	9cm or bare root if available

There are three different tree pits proposed on the site. Two located within the green gap paving and one within in situ concrete.

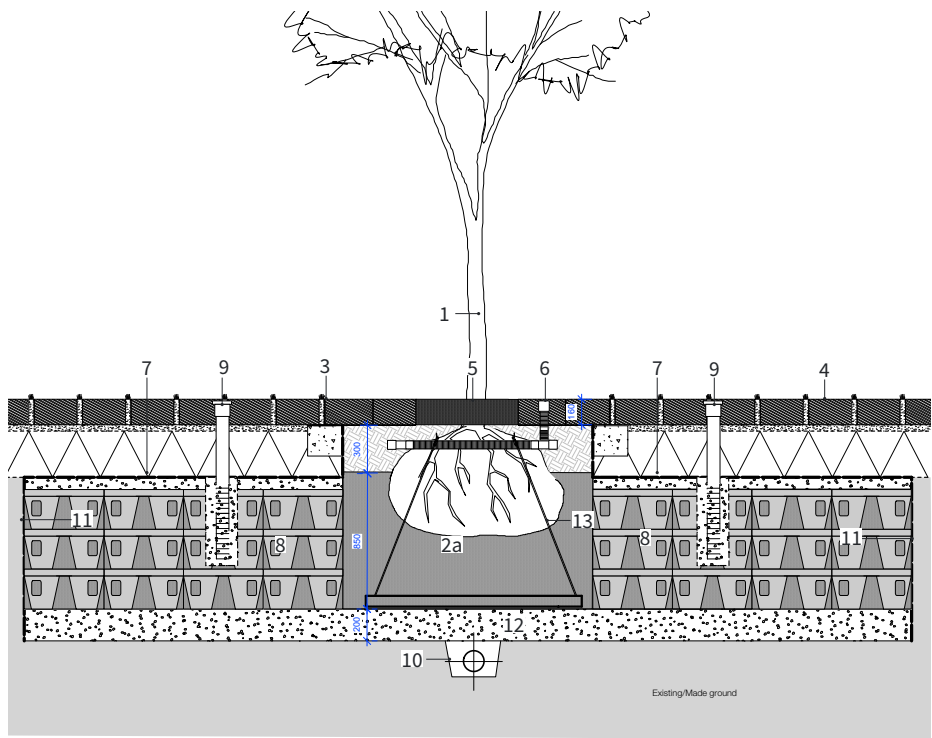
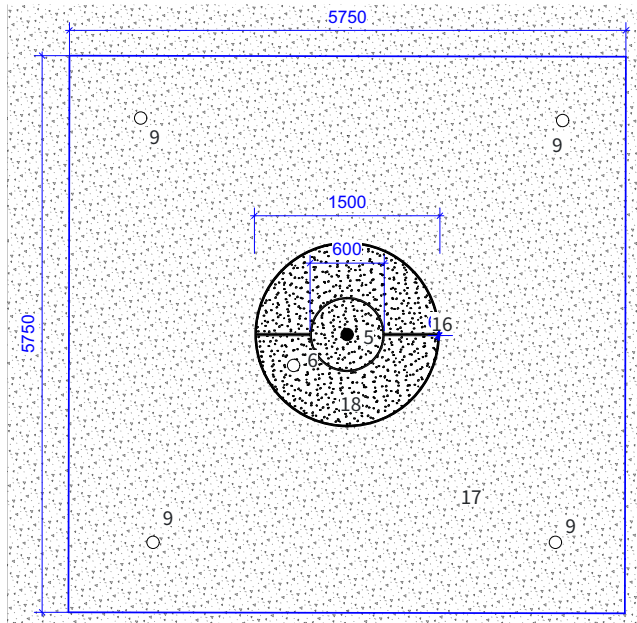
1 TREE PIT 1 WITHIN GREEN GAP



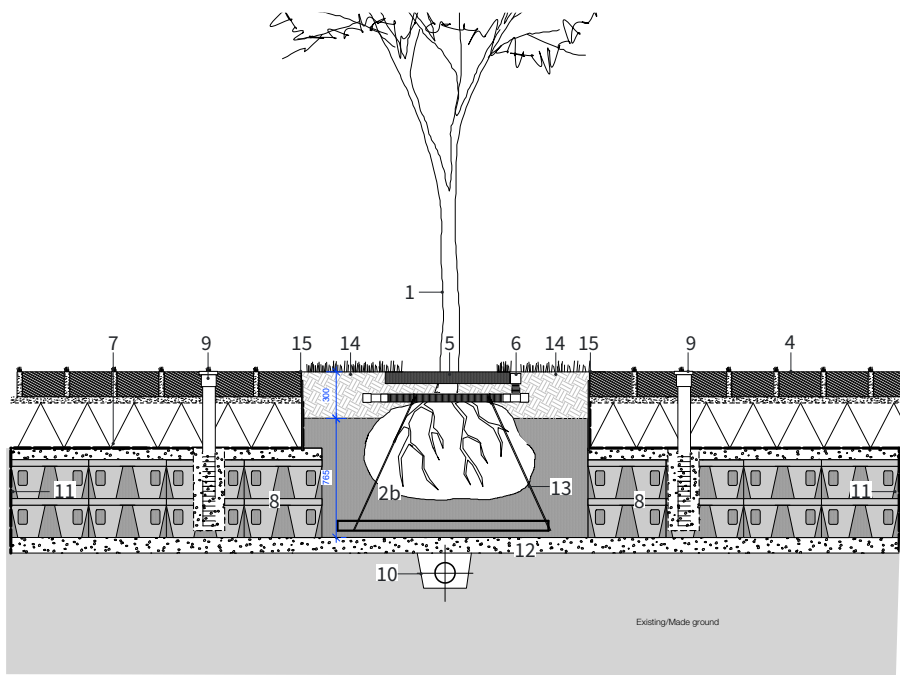
2 TREE PIT 2 WITHIN GREEN GAP PAVING



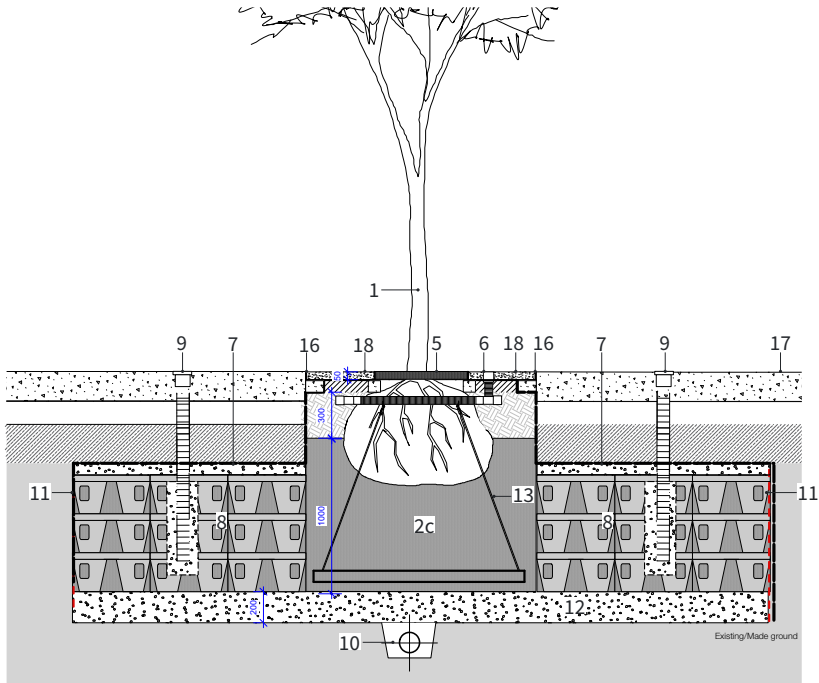
3 TREE PIT 3 WITHIN IN SITU CONCRETE



Below ground tree pit extent varies



Below ground tree pit extent 3800mm



Below ground tree pit extent 4500mm

TREE PITS KEY

1. Semi-Mature Tree Rootball and Wrapped

Refer to planting schedule for details

2a. 1250mm Deep Tree Pit Trench

300mm topsoil to BS3882:2007
850mm subsoil to BS8601:2013
200mm drainage layer

2b. 1160mm Deep Tree Pit Trench

300mm topsoil to BS3882:2007
765mm subsoil to BS8601:2013
200mm drainage layer

2c. 1500mm Deep Tree Pit Trench

300mm topsoil to BS3882:2007
1000mm subsoil to BS8601:2013
200mm drainage layer

3. Tree Grille

Concrete Tree Grille Units
to potentially sit on steel frame subject to further detail

Size: 1.80m x 1.80m

Structural steel frame if required to tree grille - to take vehicular loading (BS EN 124 Class D400), anchored to concrete strip foundation.

4. Concrete Grass Gap Slab Paving

5. Gravel Mulch

Aperture in tree grille to base of tree to have aggregate fill, to be built up in graduated layers as follows:

Bottom layer - lightly hand-compacted open graded aggregate 8-20mm gauge

Middle layer - lightly hand-compacted intermediate dense graded stone aggregate 2-8mm gauge

Upper layer - 10mm gravel mulch. Supplier: CED oea. Installed to suppliers' instructions, submit proposals. Colour dark grey, subject to final detail design.

6. Irrigation System - Arbovent 150

100mm diameter heavy cast aluminium inlet and swivel vented lid. 60mm diameter. Cap to sit flush with surrounding surface material.

7. Geotextile

Terram 2000 Membrane.

8. Stratacell Root Cell Modules - 60 series

Dimension: 500 x 500 x 250mm

4 modules deep, backfilled with soil, (or equal and approved). The upper 600mm layer with topsoil, the lower part with subsoil. General installation and load bearing requirements to be in accordance with manufacturer's recommendations. Final layout to allow 14.5m3 soil volume and to be adjusted on site if required. Manufacturer to produce layout for approval.

9. Aeration System - Arbovent

Cap to sit flush with surrounding surface material.
To be Greenleaf Precinct Watering System RRPRECINCT1-version fit for application on tree pit cover, or equivalent 100mm diameter heavy cast aluminium inlet and swivel vented lid - 'RootRain Arborvent 150'. 60mm diameter circuit and vertical pipes.

10. Active Drainage

Using 80mm diameter flexible, perforated plastic pipe within 300x300mm channel. 10-15mm gauge clean stone backfill. Subject to percolation test results.

11. ReRoot 2000 Linear Root Barrier

Installed around the upper 1500mm of the tree pit trench along two sides, to Supplier's specification (Green Blue Urban).

12. Drainage Layer

100mm clean stone.
Base of tree pit trench loosened and shaped.
As shown to aid root penetration and pit drainage.

13. Tree anchoring

Deadman Fixing Kit - Plati-Mat® - RF2RDMP or equal and approved.

14. Lawn

15. Steel Edging - SE1

16. Tree Grille

Removable structural steel frame - to take vehicular loading (BS EN 124 Class D400), anchored to concrete strip foundation.

Size: bespoke L-shape steel profile.

Material: hot dip galvanised steel.

Laid flush with adjacent surface.

Supplier Green Blue Urban or similar and approved.

17. In situ Concrete - C2

18. Resin-bound gravel

50mm depth (suitable for load class D400).
Colour subject to further detail.



BIODIVERSITY

4

4.1

Public Realm Biodiversity

To attract wildlife and increase biodiversity a minimum of two bat boxes and two bird boxes will be installed within the site. These are currently proposed to be installed on top of the roof structure. The final design of the boxes will be developed through public engagement exercise run by MIF, March 2021.

Tree planting has been proposed along the rivers edge to Factory Square that will link into a wider tree planting strategy along the river creating species rich wildlife corridors and habitats for various animals, such as birds that use the river as a food source.

A small area of grass planting is proposed along the river between the concrete paving. This area will allow smaller micro habitats to form suitable for insects and invertebrates.

Incidental perennial planting like *Lysimachia nummularia* Aurea - Creeping Jenny and *Thymus pseudolanuginosus* - Woolly Thyme and seasonal planting of Blue Bell bulbs - *Hyacinthoides non-scripta* will provide nectar feeding opportunities for pollinators and insects.

KEY

- Bat boxes
- Bird boxes



FURNITURE DETAILS

5

5.1

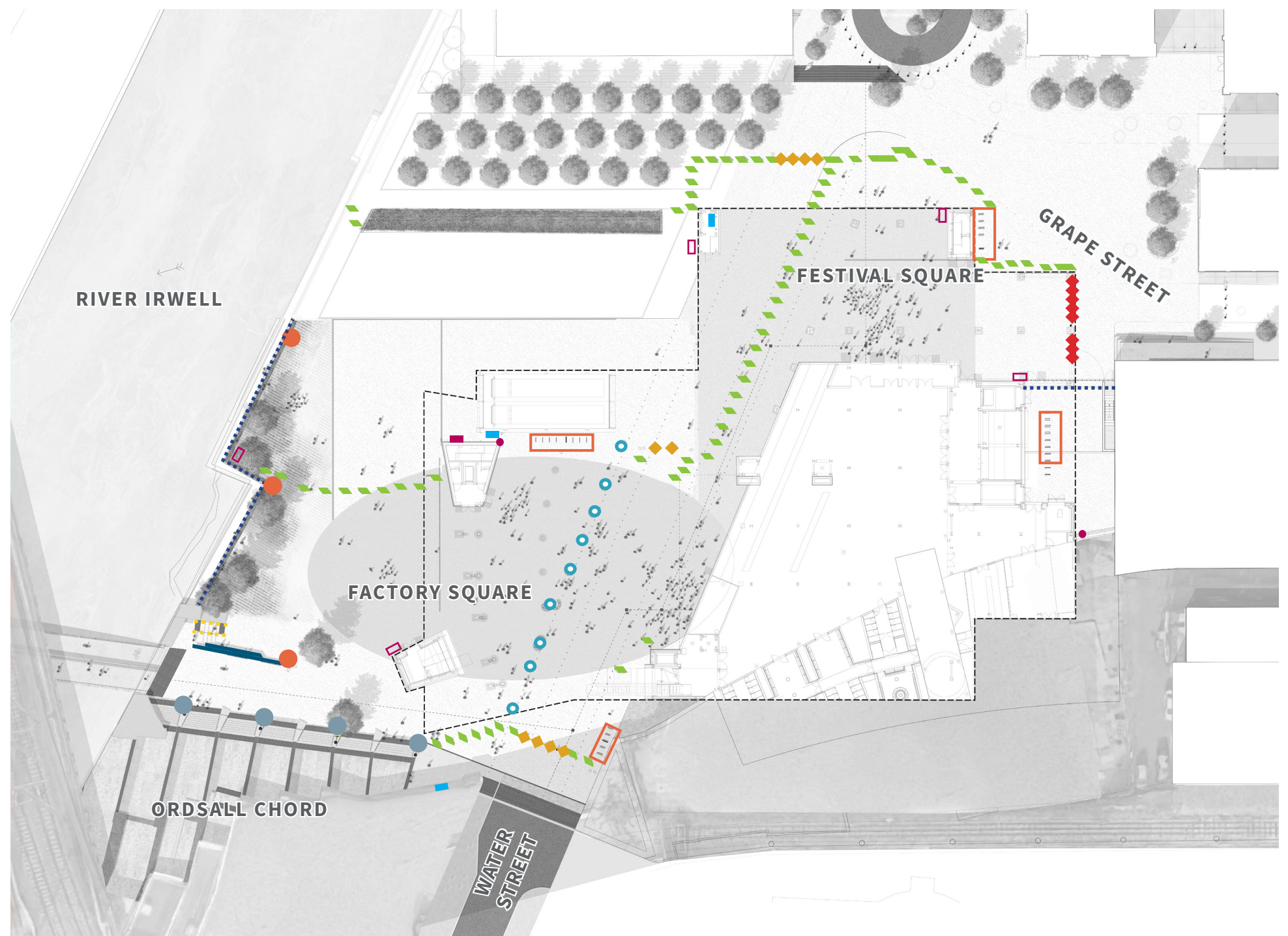
Public Realm Street Furniture

Furnishings across the public realm will be a variety of robust finishes detailed to fit in with the overall contemporary aesthetic. Safety and flexibility during events were the main drivers for the external furniture design and their chosen location. The majority of the furniture is movable.

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

KEY

- Lighting column 18m high with multiple luminaires and mounted litter bin
- Cycle parking
- Seating plinth with timber tops
- ▬▬▬ Moveable seating cubes - concrete
- Concrete seating rings (part of architectural package)
- ▬▬▬▬▬ Handrail with integrated lighting
- ▬▬▬▬▬▬▬ Fencing and balustrade
- Feeder pillar
- Duct locations for implementation of future feeder pillars
- Bib tap
- Bollard Control Box
- Existing lighting column to Ordsall Chord interface



CYCLE PARKING

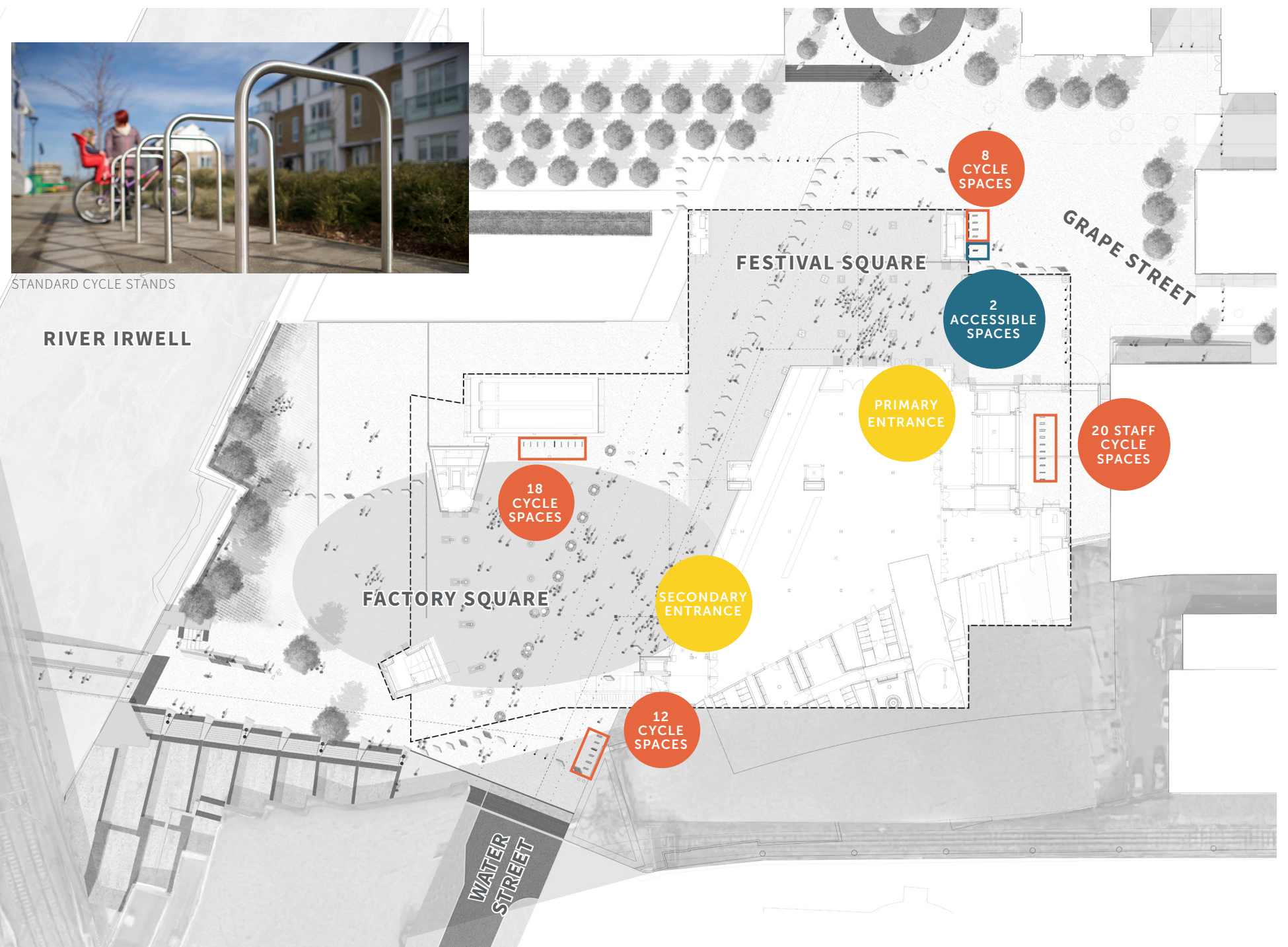


'M' SHAPE CYCLE STANDS

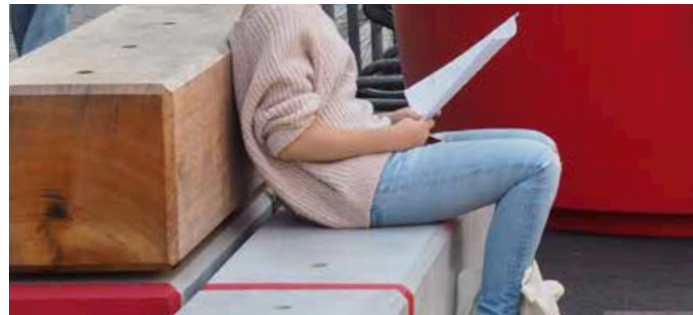
Parking for 40 cycles is provided in the public realm - 18 No. against the south side of the truck lift and 12 No. along Water Street under the viaduct which are approximately 25m from the secondary entrance, and 10 No. located in Festival Square adjacent to Grape Street, 25m from the main entrance. Additionally 20 spaces for staff cycle parking are located in the building service yard. The wider St John's Masterplan will also provide additional cycle parking, which will increase the cycle parking capacity site wide.

In line with guidance from London Cycling Design Standards, 5% - 2 spaces are capable of accommodating larger or accommodated cycles. These are located in Festival Square 20 metres from the main entrance. The spaces for larger stands have 1500mm spacing compared to standard 500mm spacing to allow easy access.

The specification for the regular stands are stainless steel Sheffield stands - in line with Manchester City Council's standards, while the Broxap Camden stand is specified for the larger stand to allow multiple locations for the accessible bikes to attach to. Cycle racks are to be surface fixed.



MOVEABLE SEATING CUBES



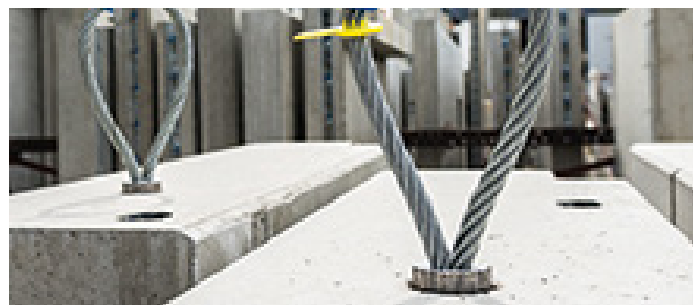
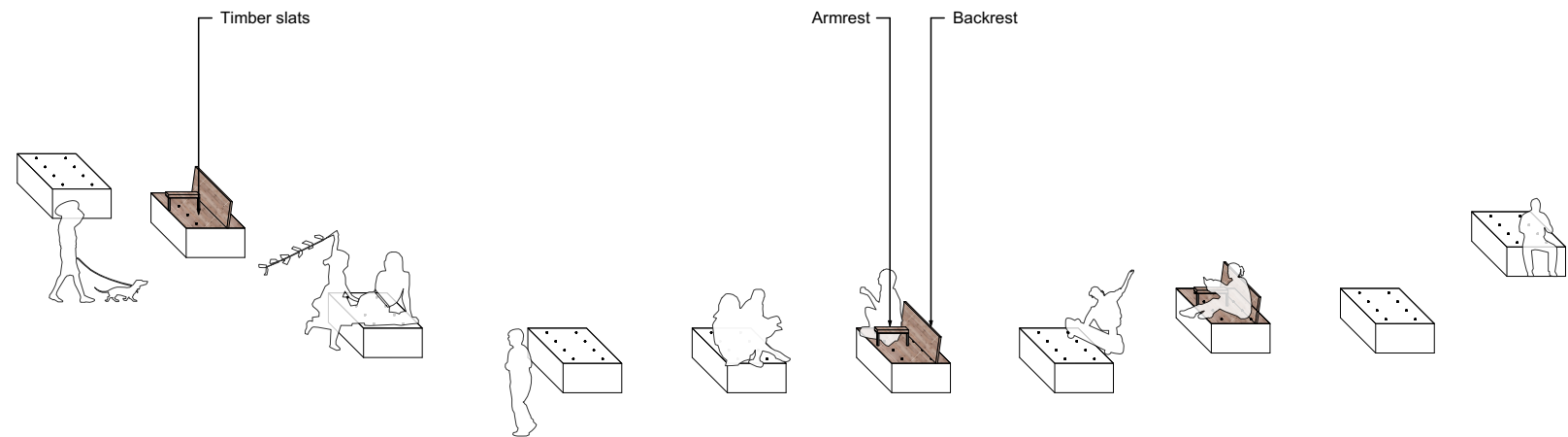
SEATING CUBES

The seating cubes perform a variety of functions within Factory and Festival Square.

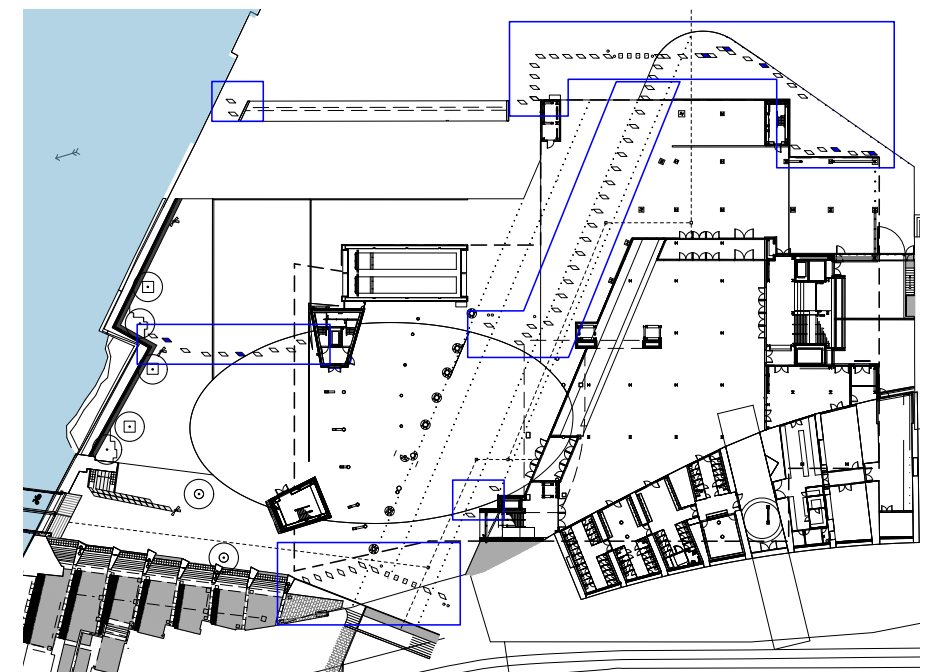
Primarily they act as secure barriers to control vehicular movement. To ensure effectiveness, the spacing between concrete cubes or the building line/river wall doesn't exceed 1.2m. During an event mode, where no vehicles have access to the rear of the truck lift and the space is used as performance area within Factory Square, the cubes can be moved into a different arrangement to the edges of the main clear space if required. Anchor holes will be incorporated within the top part of the cubes to enable repositioning.

Secondary the cubes provide a seating opportunity for visitors during events where they can be arranged to form a stage environment and for staff and the public outside event mode.

We are proposing the cubes are constructed from concrete to provide a robust detail suitable to withstand intense use and to tie in with other materials within the Factory scheme. Some back and armrests as well as timber tops will be included in the final design to encourage dwell. Furthermore, the cubes have been designed to allow prams or wheelchairs to be positioned adjacent to the cubes.



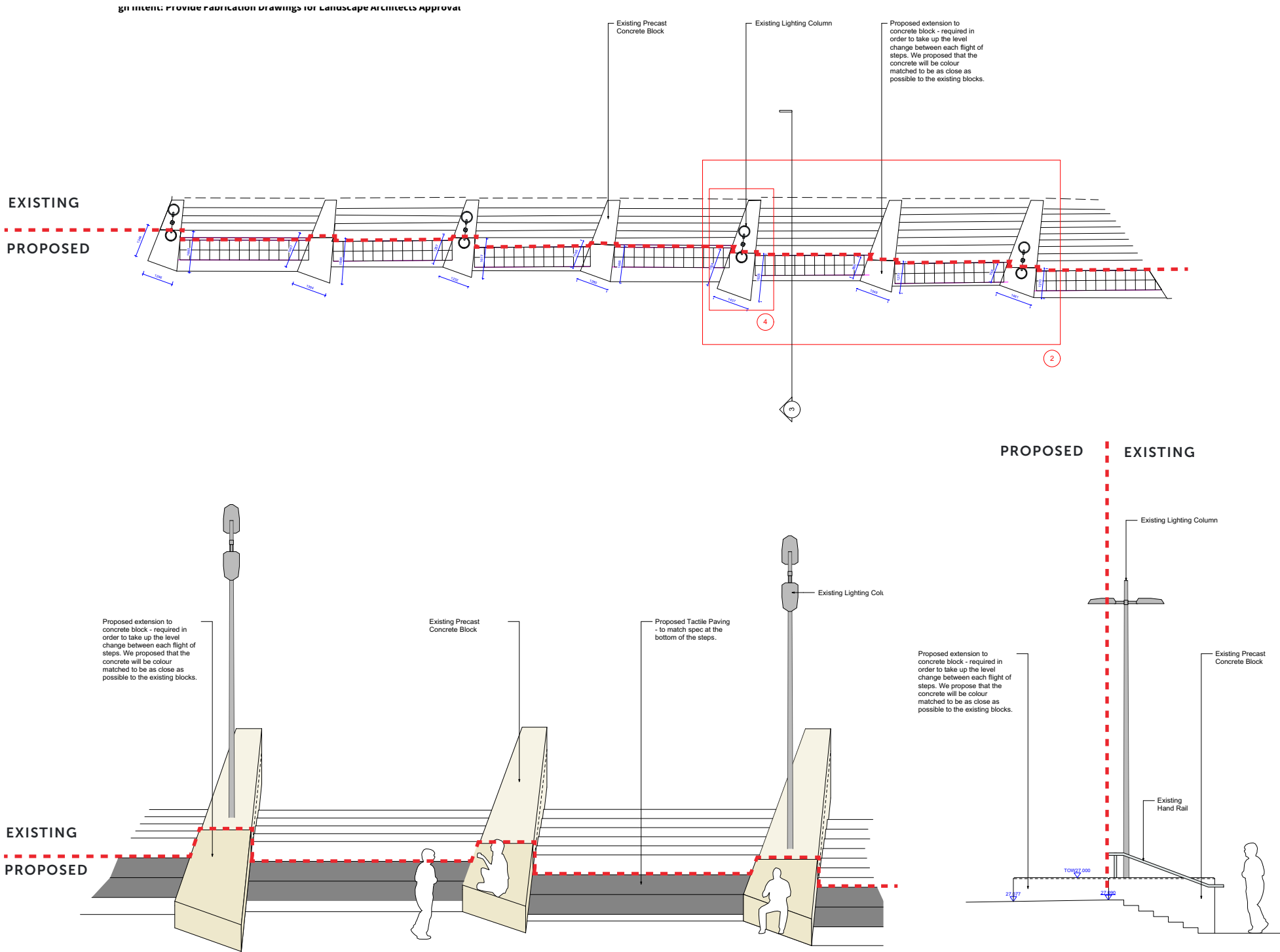
LIFT ANCHOR SYSTEM



INTERFACE TO ORDSALL CHORD

The recently constructed Ordsall Chord scheme which bounds The Factory site includes a series of steps and retaining walls. The scheme has only been partially completed, with parts of the retaining walls and paving missing. This resulted in some issues associated with accessibility compliance. To overcome these and ensure the step construction and the adjacent pedestrian route meet accessibility regulations an extension to the retaining wall structures is proposed that will take up the level change.

The retaining wall structures are proposed as precast concrete blocks that are will not just help address accessibility but are also intended as seating platforms. This is consistent with the other seating provided within the Factory public realm. The concrete block extensions will be buff - colour-matched as closely as possible to the existing ones to give a seamless visual appearance.



SEATING WALL

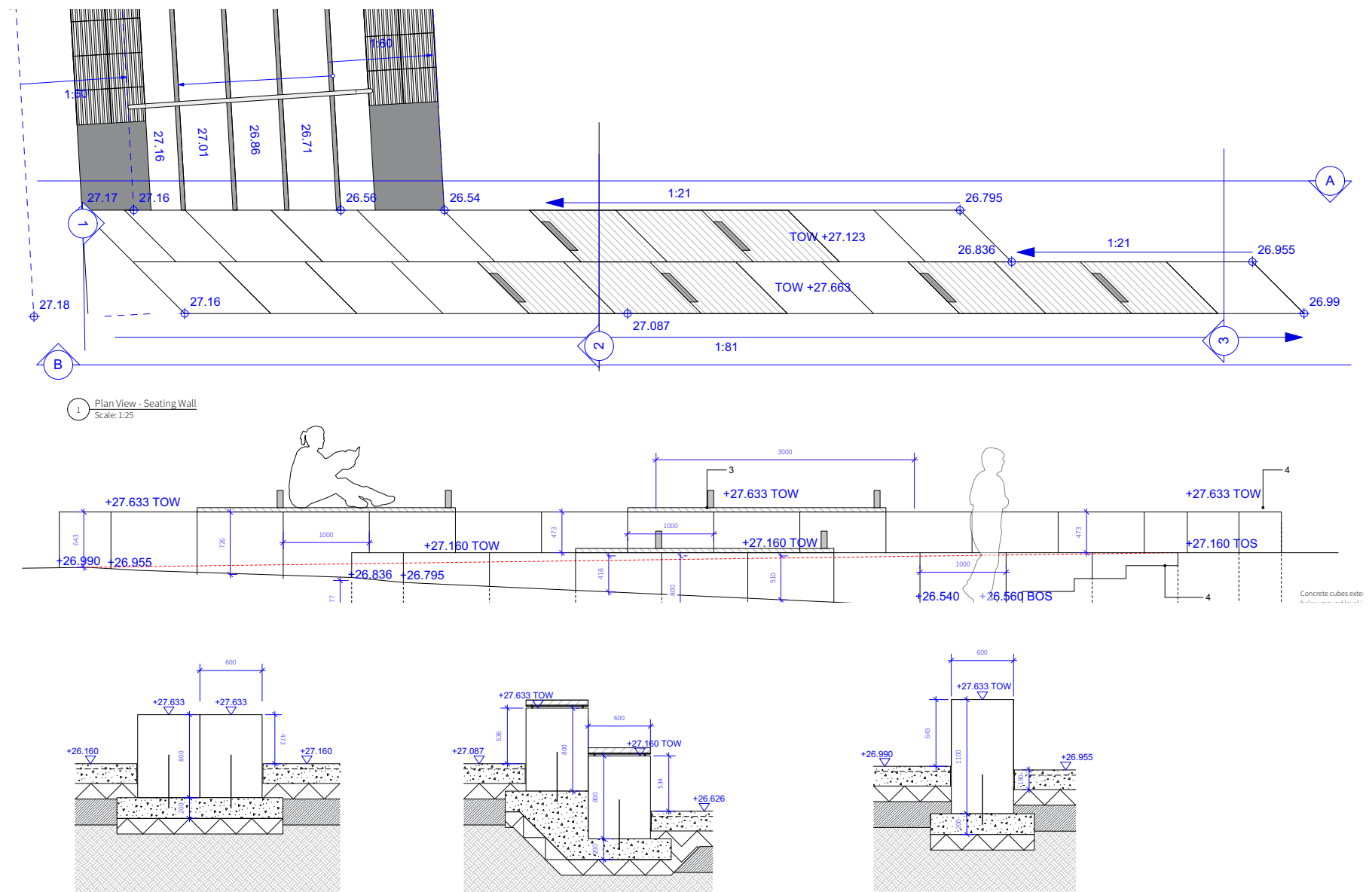
The seating wall's main function is to take up the level change between the cycle / footway and the lower level of Factory Square. At one end of the wall is a set of steps providing direct access into Factory Square while at the other, the cycle / footway slopes down and ties into Factory Square providing level access.

The seating wall gives a strong definition to the southern edge of the square. It is split into two tiers providing stepped seating which faces into the square, offering views into the space for events. The upper tier provides seating facing the Ordsall Chord side and also functions as a backrest for the lower tier.

The seating wall will be installed as precast concrete blocks which are 1000mmL x 600mmW and adopt the rhombus shape applied to the seating cubes. As a general rule, the seats will have a height of 510mm with a level top, however this will decrease due to changes in level.

Design elements of the seating wall reflect those used elsewhere in the public realm. The precast concrete offers a robust solution and reflects the materiality of the seating cubes.

The wall will have timber-topped sections to give a softer more tactile feel compared to the otherwise harder materials palette. These will be combined with armrests to offer more comfortable places to sit for longer periods of time such as during events.



BOLLARDS

Two types of bollards are proposed in the public realm; shallow mount retractable bollards and static bollards.

The purpose of the retractable bollards is to restrict access to the north and south of Water Street with the exception of service vehicles for events and emergency vehicles. There are two outer bollard lines at the extents of the site and a secondary line aligned with the truck lift which allow truck lift access but restrict access into Factory Square.

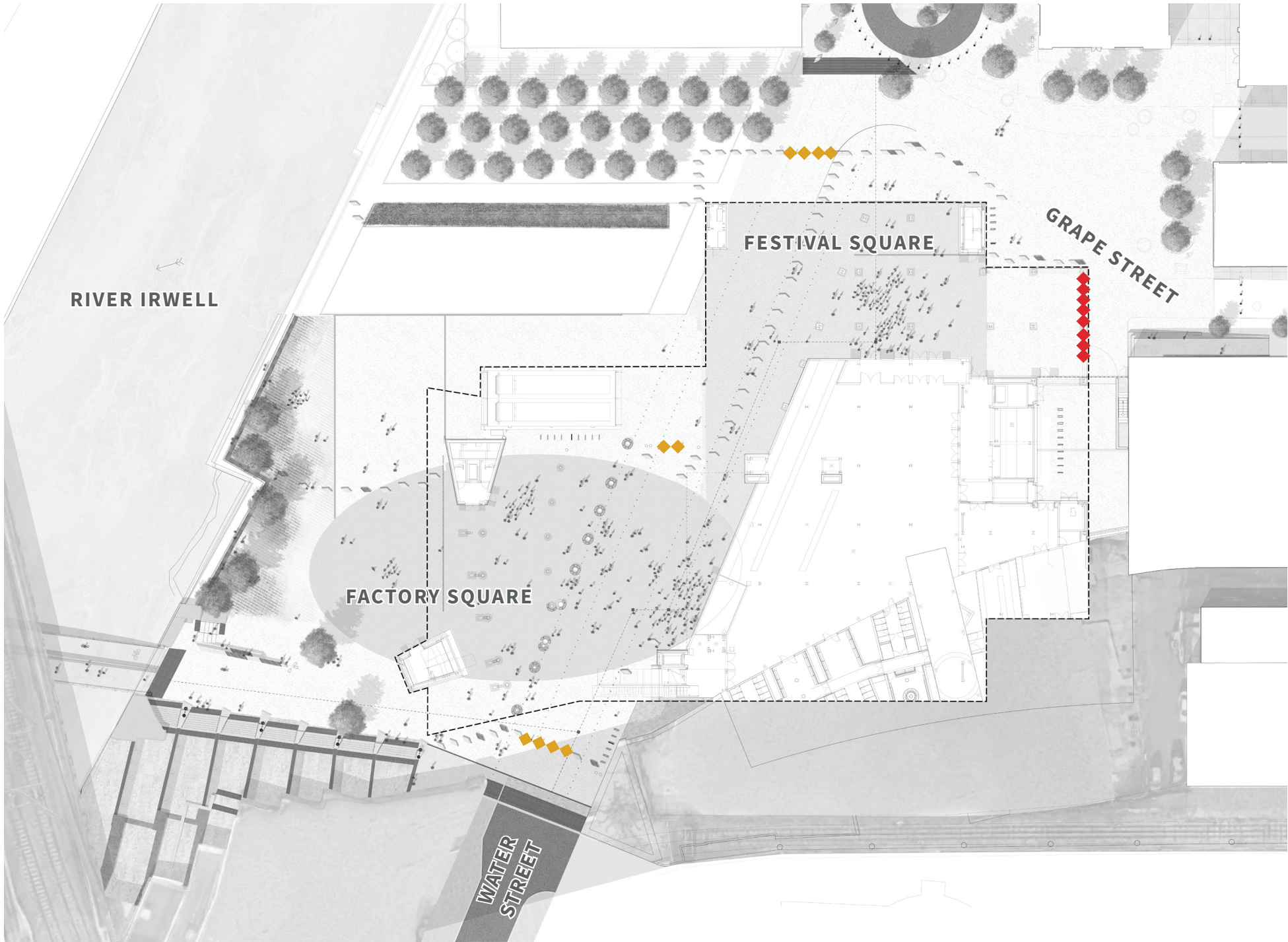
Automated bollards will require further features as part of the design, which could include: approach and safety loops, CCTV, safety signage, access indicator, control box. Details of these will still require to be clarified further and designed by the ME engineer. They will be shallow-mount due to services being buried close to the surface in the same location.

Four static bollards are allocated along the building line adjacent to the service yard access road. The are to prevent vehicle access into Festival Square between the building columns.

Maintenance of the retractable bollards will be fulfilled by St John's Management Company.



- KEY
- retractable bollards
 - static bollards



Access Gate, subject to OMA detail design

Concrete Retaining Wall

Adjacent Bonded Warehouse

9505

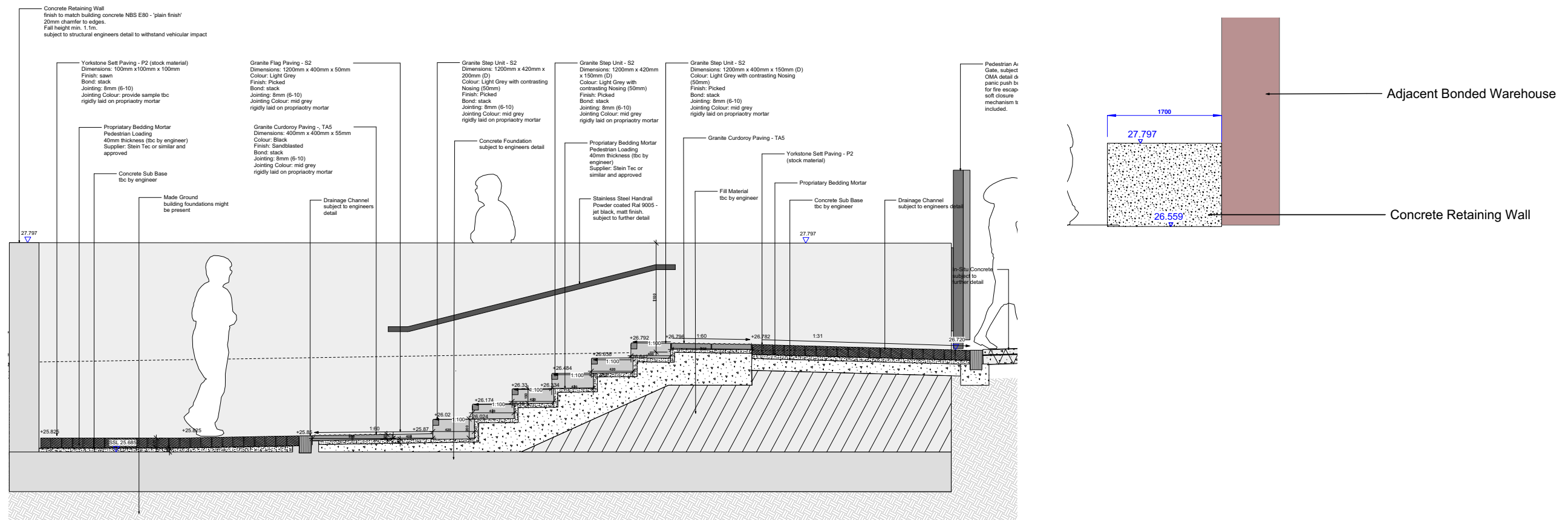
27.797

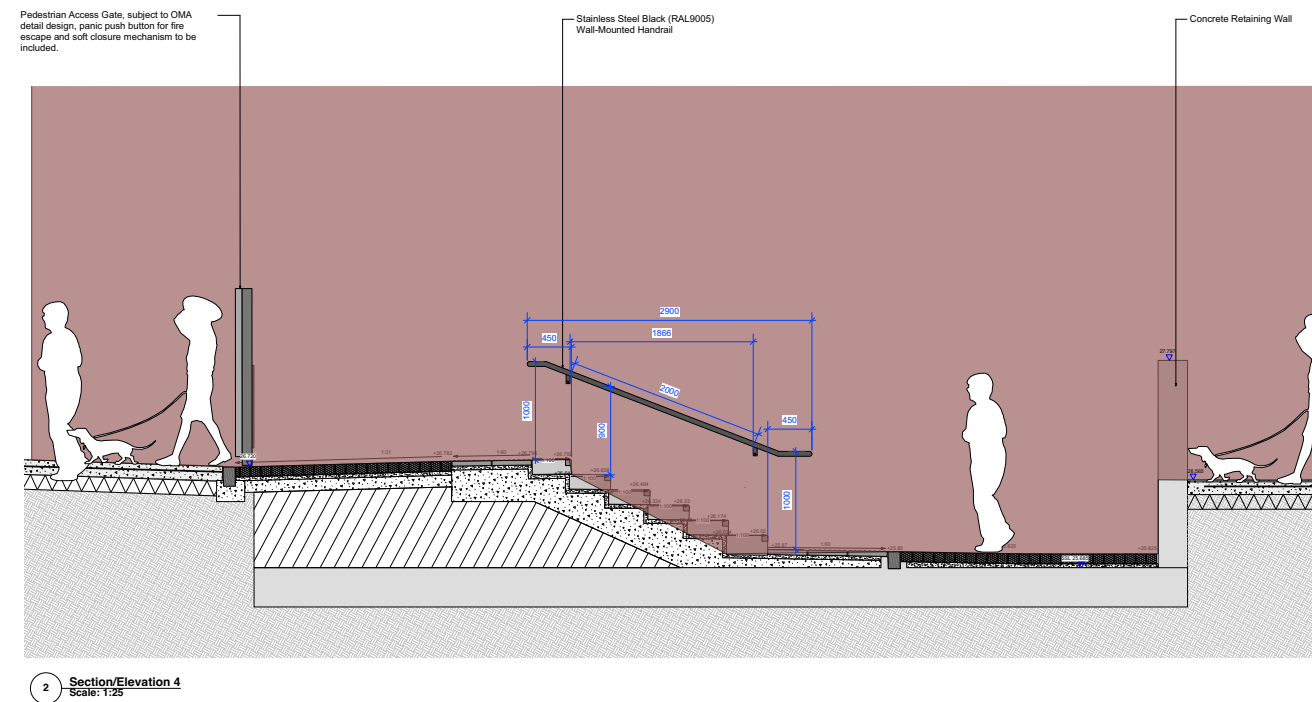
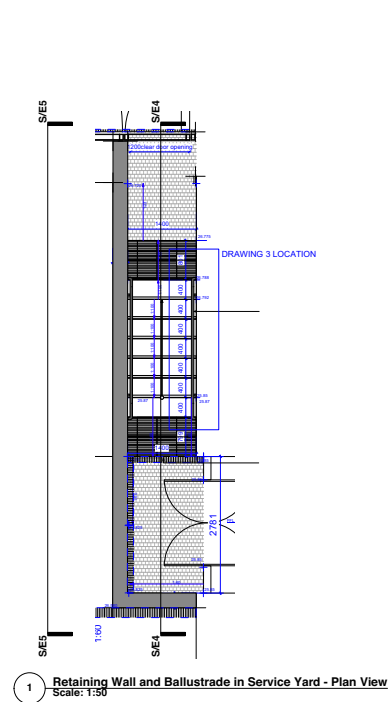
26.720

26.559

27.797

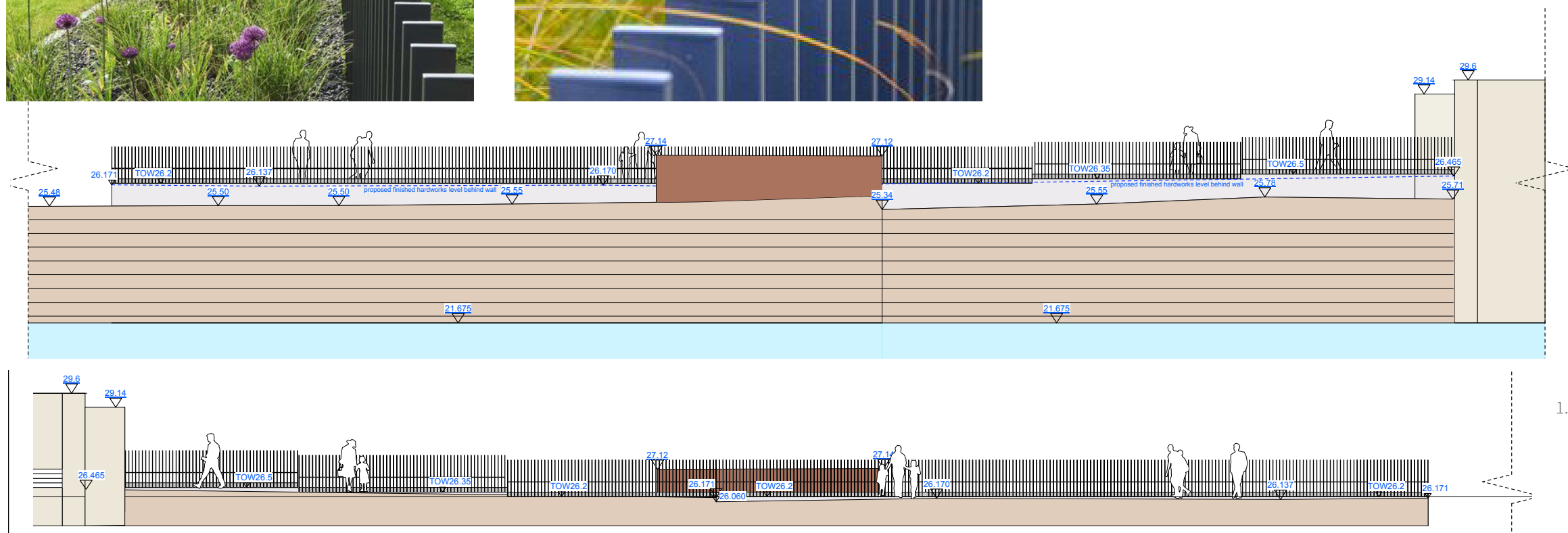
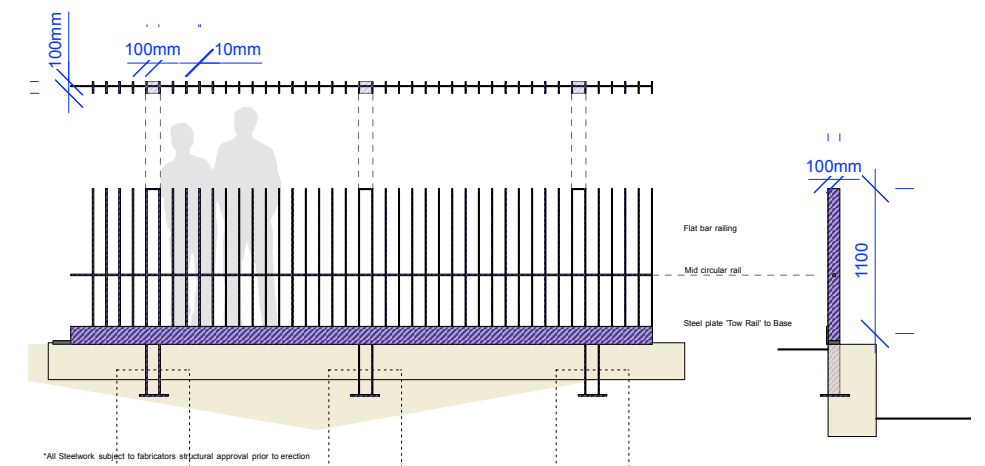
The diagram shows a cross-section of a retaining wall and an adjacent bonded warehouse. The wall is labeled "Concrete Retaining Wall" and the warehouse is labeled "Adjacent Bonded Warehouse". The wall has a height of 9505. The ground level is indicated by a dashed line at elevation 27.797. The base of the wall is at elevation 26.720. The base of the warehouse is at elevation 26.559. A silhouette of a person is shown on the right side of the diagram for scale.





RIVER WALL BALUSTRADE

Along the waterfront, a flat steel bar balustrade is proposed to provide protection from falling from height. The balustrade is going to have an open top design, providing a stronger open connection of the river with the site. Colour subject to further detail.



1. Typical steel bar railing to river edge. Colour tbc

5.2

Public Realm Lighting

LIGHTING

Most lighting to the external spaces is going to be achieved via soffit lighting within the Factory building, with a small number of lighting columns located along the riverfront.

These 18m tall columns will be a simple tapered powder coated steel column with multi headed projectors.

Multi headed projectors to top of the column are of modern and simple appearance to complement the building height but not to draw too much attention to the element so as not "steal the show".

KEY

- Lighting column 18m high with multiple luminaires
- Existing lighting column to Ordsall Chord interface
- Integrated handrail lighting
- Wall mounted floodlights
- In-ground linear luminaire



5.3

Lighting

INTRODUCTION

The following section of the report outlines the external lighting strategy for the Factory public realm and facade lighting.

The lighting scheme in this report is to be viewed as a lighting design strategy rather than a detailed design solution that will be further developed.

Lighting as proposed will not cause excessive glare to neighbouring properties from this site. An adequate and safe level of lighting will be provided for site tasks, amenity and security.

External illumination levels will be based on CIBSE and CIE guidance and in accordance with the ecology requirements to maximise safety for both visitors and staff on the site, whilst maintaining a minimal impact on the site surroundings, environment and neighbouring properties. The illumination levels for various areas and times are detailed in this report.

This scheme also takes into consideration the need to reduce energy consumption, whilst maintaining a high quality of illumination for the site.

DESIGN OBJECTIVES

The design objectives of the lighting scheme may be summarised as:

- Identify and illuminate pedestrian routes within the site to secure the health and safety of both visitors and staff throughout the hours of darkness.
- Sufficient lighting will be provided for a safe environment whilst limiting light pollution and light trespass to neighbours.
- Provide effective lighting control to ensure illuminance levels are suitable for the activities taking place while also maximising light source life, and minimising energy consumption and maintenance.
- Provide feature lighting to selected architectural elements of interest, comprising of landscape and facades. Elements will be selected and lit according to their inherent form, material and their relationship to the scheme as a whole
- Provide a cost effective, sustainable and energy efficient system, in terms of initial capital costs and continuing operational use. Select light source types for their efficacy, colour rendition and longevity to provide an efficient lighting solution.



ILLUMINANCE CRITERIA

The lighting strategy throughout the public realm primarily considers pedestrian and cycle use. The scheme also provides sufficient illumination for vehicle movement in the defined vehicle access routes. All the lighting in the public realm will be fully controllable via a control system located in the main building, this allows the scheme to be adjusted to suit any client requirements.

The Water Street access route below the building which is subject to ‘prohibition of driving’ will be illuminated to a roadway classification to be confirmed by MCC Highways.

The scheme will be designed to the light levels at floor level in the adjacent table. These are based upon CIBSE and CIE guidance.

Low energy consumption is achieved by using efficient luminaires, the minimum number of lighting columns/points and energy efficient controls.

Area	Average Illuminance [lux]	Minimum Illuminance [lux]	Uniformity Uo	Colour Rendering CRI	Glare UGR	Document	Reference	Additional Notes	Emergency lighting Minimum Lux level	Additional notes	Lighting Control
External Lighting											
Public realm	10	4	0.4	80	50	BS 12464-2:2014	Table 5.1		-	-	Photocell
Stairs and Ramp	30	15	0.5	80	-	LG6 2016	3.4.1	BS EN 5489-1:2013. Table 4, 15lux min	-	-	Photocell
Undercroft (Day)	250	150	0.4	80	50	BS 5489-1 2013	Table 3		1	Building exits to Muster point routes	Photocell and scene setting
Undercroft (Building open)	30-50	12-20	0.2	80	50	BS 12464-2:2014	Table 5.1	MCC approved	1	Building exits to Muster point routes	Photocell and scene setting
Undercroft (Building closed)	15	3	0.2	80	50	BS 12464-2:2014	Table 5.1	MCC approved	1	Building exits to Muster point routes	Photocell and scene setting
Water street access route	TBC	-	-	-	-	-	-	-	-	-	Photocell and scene setting
Truck lift external turning area.	50	-	0.4	70	50	BS 12464-2:2014	Table 5.1	None maintained luminaire only used when required.	-	-	Manual switch
Upper viaduct	10	4	0.4	80	50	BS 12464-2:2014	Table 5.1	Truck and pedestrian access	1	Building exits to Muster point routes	Photocell

5.4

Lighting Public Realm
Lighting Strategy

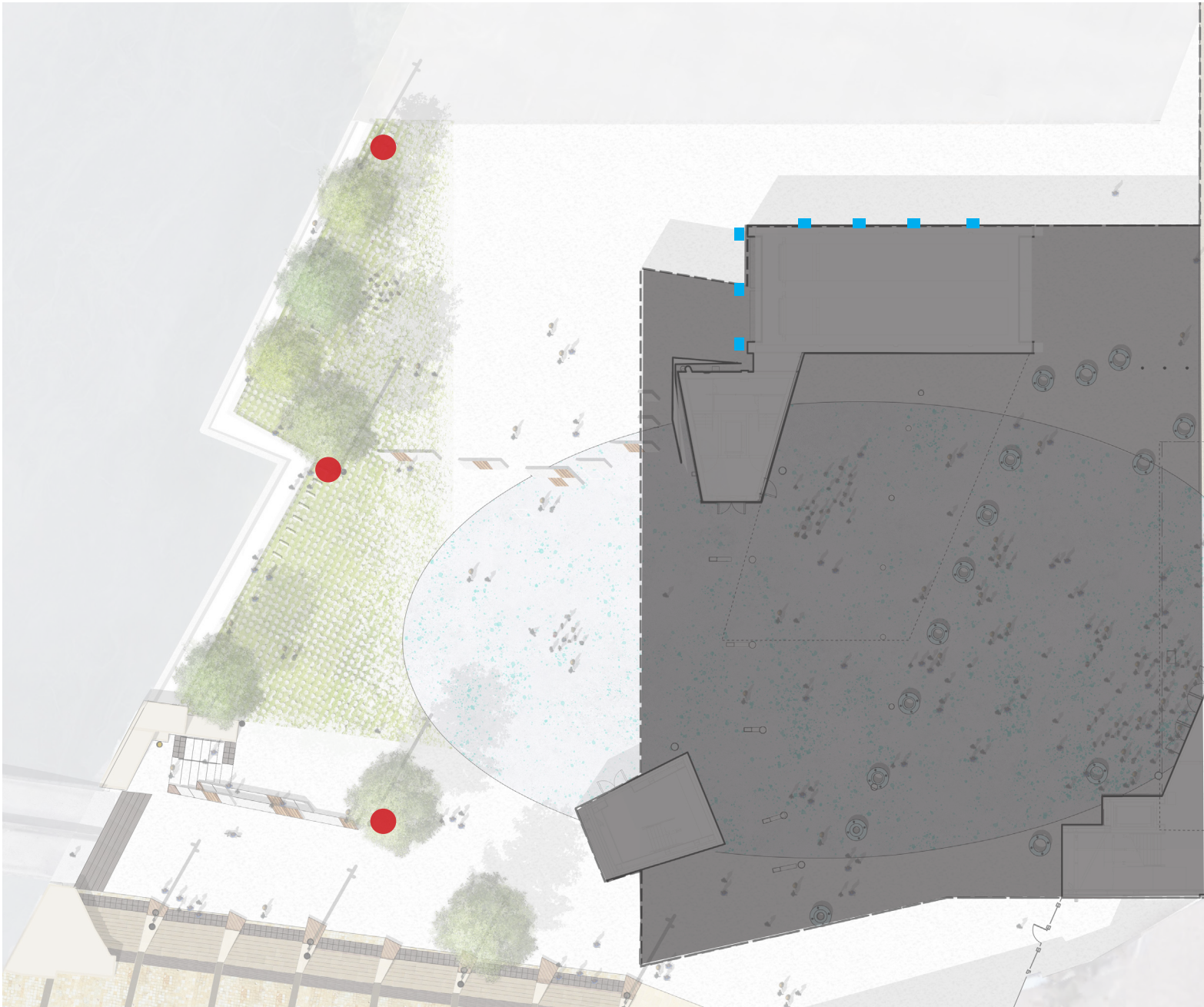
‘FACTORY SQUARE’

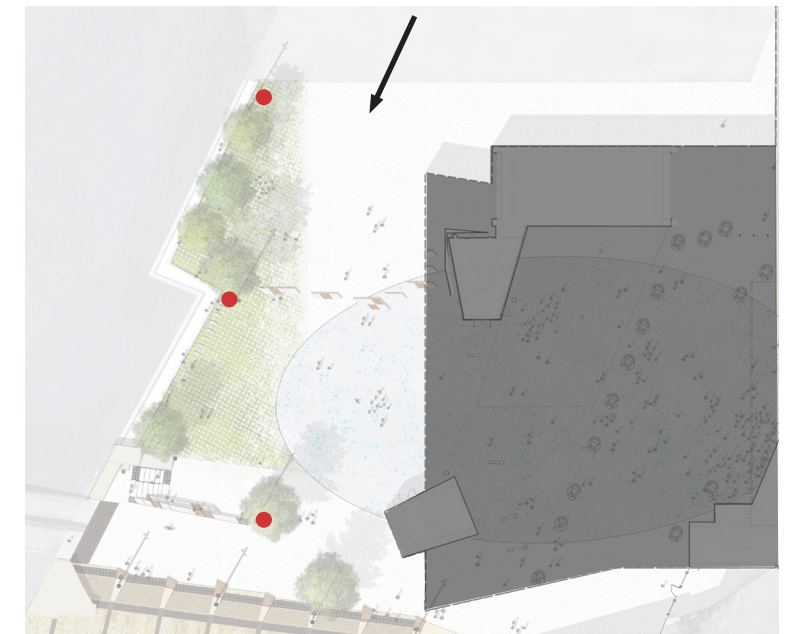
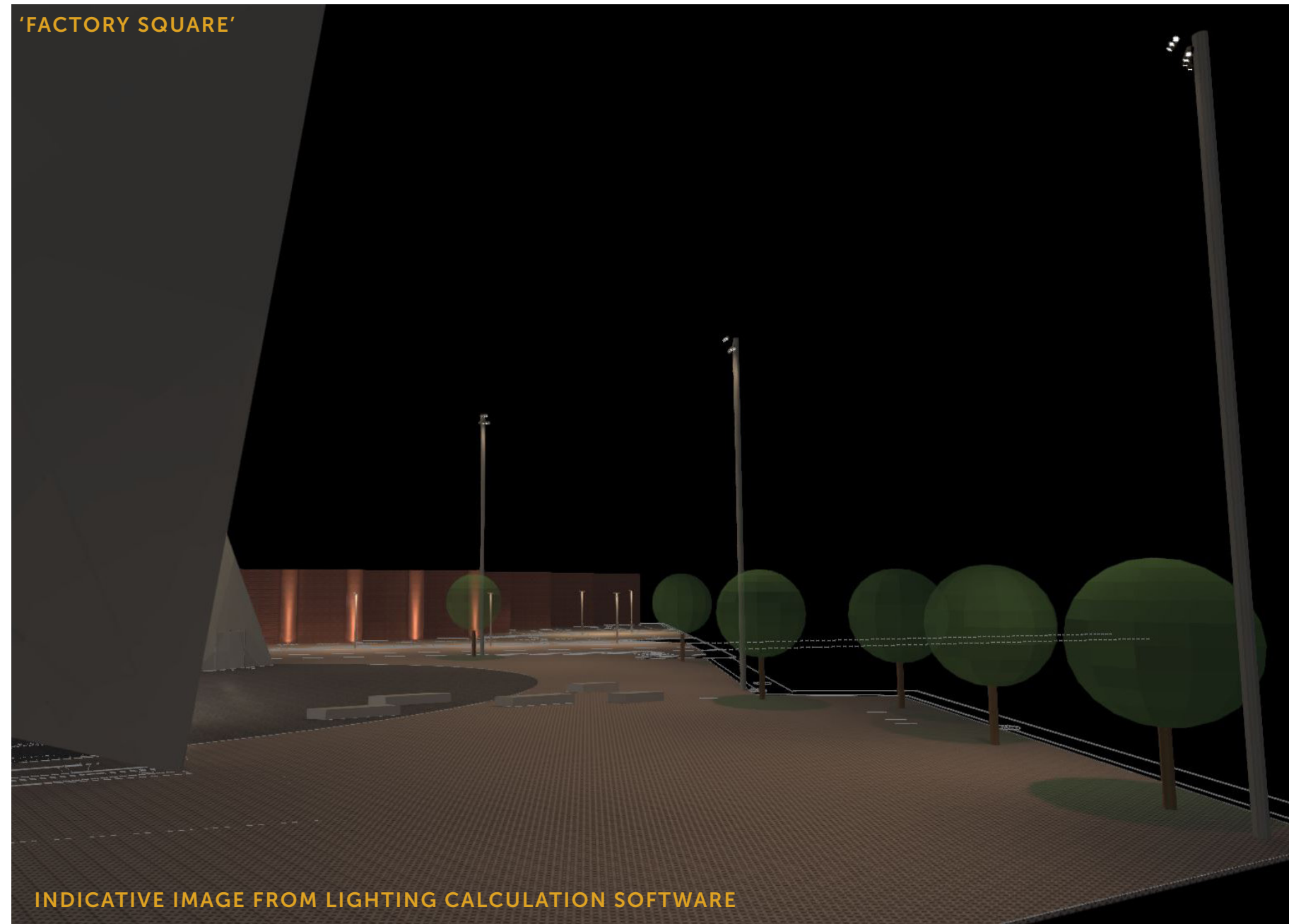
General lighting is to be provided by 18m tapered columns with multiple projector luminaires. The column finish will match that of the adjacent Ordsall Chord Scheme (RAL 7016). The column height was selected to enable illumination close to the theatre building while minimising glare from the projectors. There will be dedicated column mounted luminaires to illuminate cycle parking.

A temporary column is required to illuminate the access route along the side of the truck lift. When the landscape scheme to the north of the site is developed this can be removed.

For vehicle turning an enhanced illuminance is required therefore the West entrance requires flood lights which will only be used when there is vehicle activity.

 	Manufacturer: BEGA (Qty 3) Luminaire Name: 77705K3 + 70757 Description: Floodlight with Shield Lamp Type: LED 24w 1863lm CCT 3000K
 	Manufacturer: BEGA Luminaire Name: 84 506 K3 + 71 111 Description: Floodlight with shield Lamp Type: LED 40w 3681lm CCT 3000K
 	Manufacturer: BEGA (Qty 10) Luminaire Name: 77652K3 + 70775 + 70758 Description: Floodlight with Shield Lamp Type: LED 52.5w 4472lm CCT 3000K





FACTORY SQUARE

New steps are to have handrail lighting, the luminaire type is to be the same as installed in the adjacent Ordsall Chord scheme.

Handrail Lighting

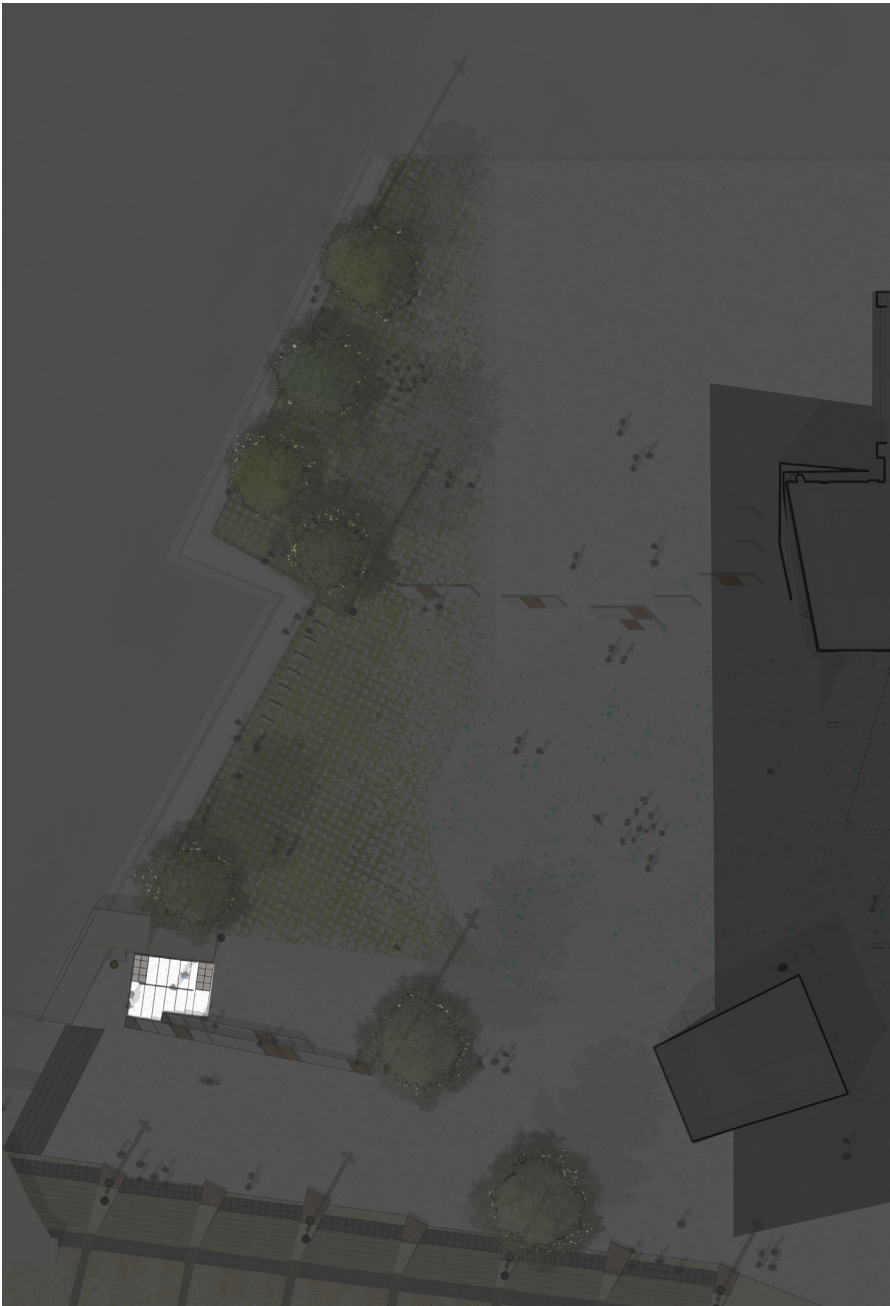


LIGHTING CONTROL

Photocell / time clock



Manufacturer: DW Windsor
Luminaire Name: GARDA LED Handrail
Description: Integral handrail lighting.
Double asymmetric
Lamp Type: LED 10.8w 615lm
CCT 3000K



FESTIVAL SQUARE

Festival Square will be predominately illuminated by luminaires mounted to the soffit on the underside of the warehouse. The area north of the building footprint will be illuminated by spill light from the soffit/undercroft and by ambient light from the adjacent public realm.

There will be dedicated wall mounted luminaires to illuminate cycle parking.

The landscaping and roadway north of the site is to be re-modelled to accommodate vehicle turning and drop off, as part of this redesign the landscape architect is in communication with the land owners to incorporate the same column lighting as Factory Square to create general lighting continuity.

UPPER VIADUCT

A simple wall mounted floodlight scheme will be provided for general illumination and vehicle turning.

LIGHTING CONTROL

Photocell / time clock (Everyday use)

Dimming (events)



Manufacturer: BEGA

Luminaire Name: 84 506 K3 + 71 111

Description: Floodlight with shield

Lamp Type: LED 40w 3681lm

CCT 3000K



5.5

Lighting Undercroft / Canopied Area

UNDERCROFT - WAREHOUSE SOFFIT

General illumination is to be provided by soffit mounted projectors. These wide beam projectors will require a bespoke bracket to allow four fittings to be fixed in a radial arrangement.

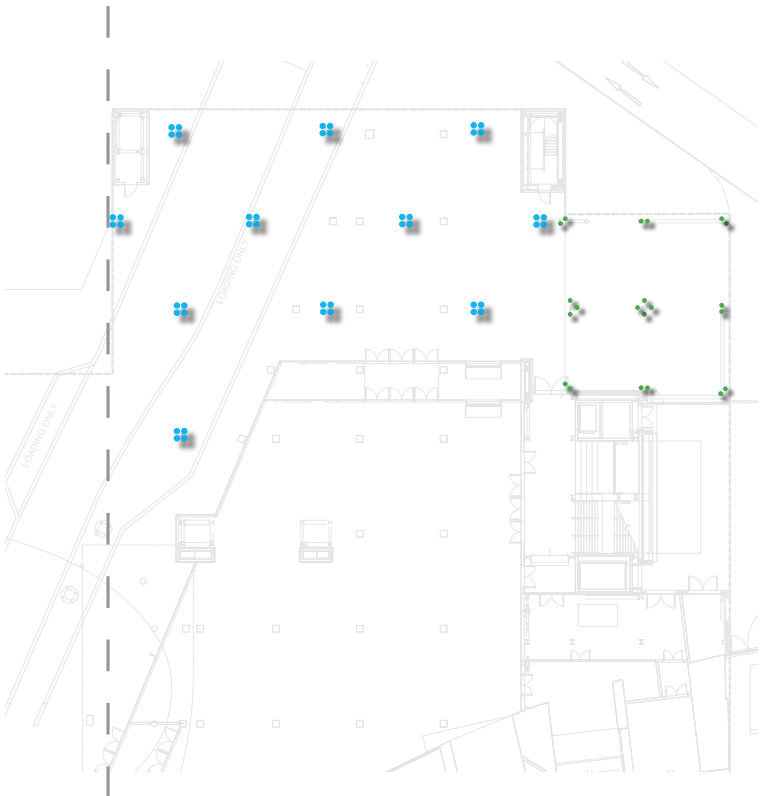
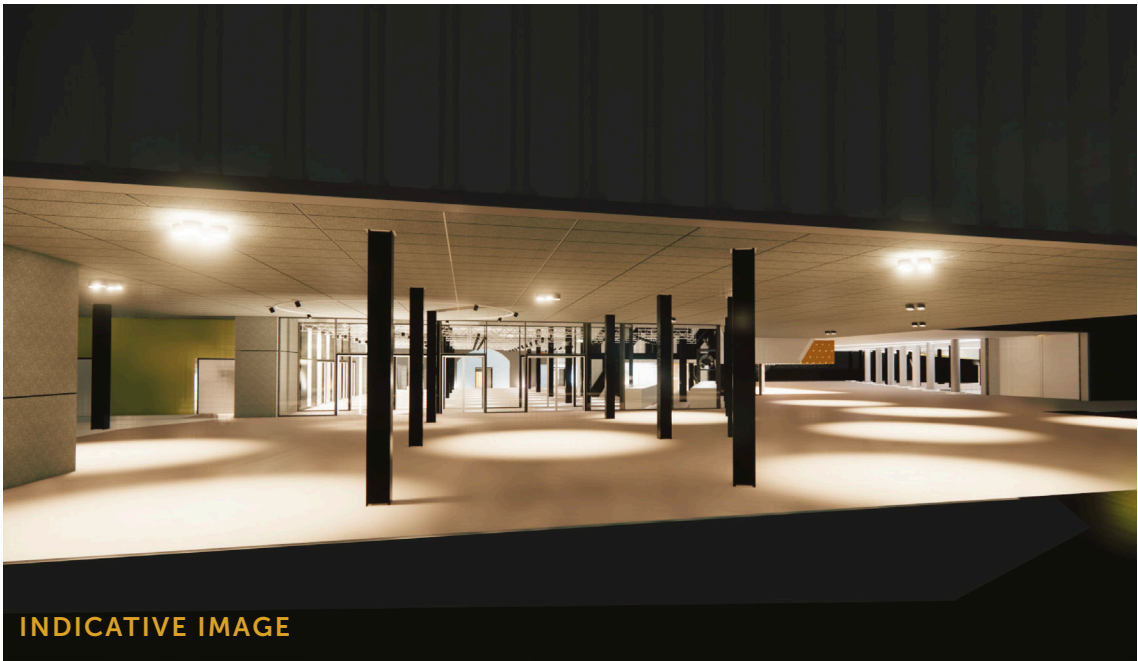
To support the business case of creating a welcoming and well lit space that can be used during the daytime a target illuminance of 250lux has been selected for the under croft. This light level also acts as an adaptation zone between the open external spaces and the main foyer. Without this the perception of the main foyer and under-croft would be a dark uninviting environment.

The light levels will be substantially reduced at night time. A detailed lighting criteria breakdown can be found in the technical appendix.

LIGHTING CONTROL

Photocell. Time clock. Scene setting

	Manufacturer: BEGA Luminaire Name: 84 549 A K3 + 71 073 Description: High output fl oodlight with glare louvre. Lamp Type: LED 77.2w 10,000lm CCT 3000K
	Manufacturer: BEGA Luminaire Name: 84 214 A K3 + 71 118 Description: Floodlight with shield Lamp Type: LED 19w 2440lm CCT 4000K / 3000K

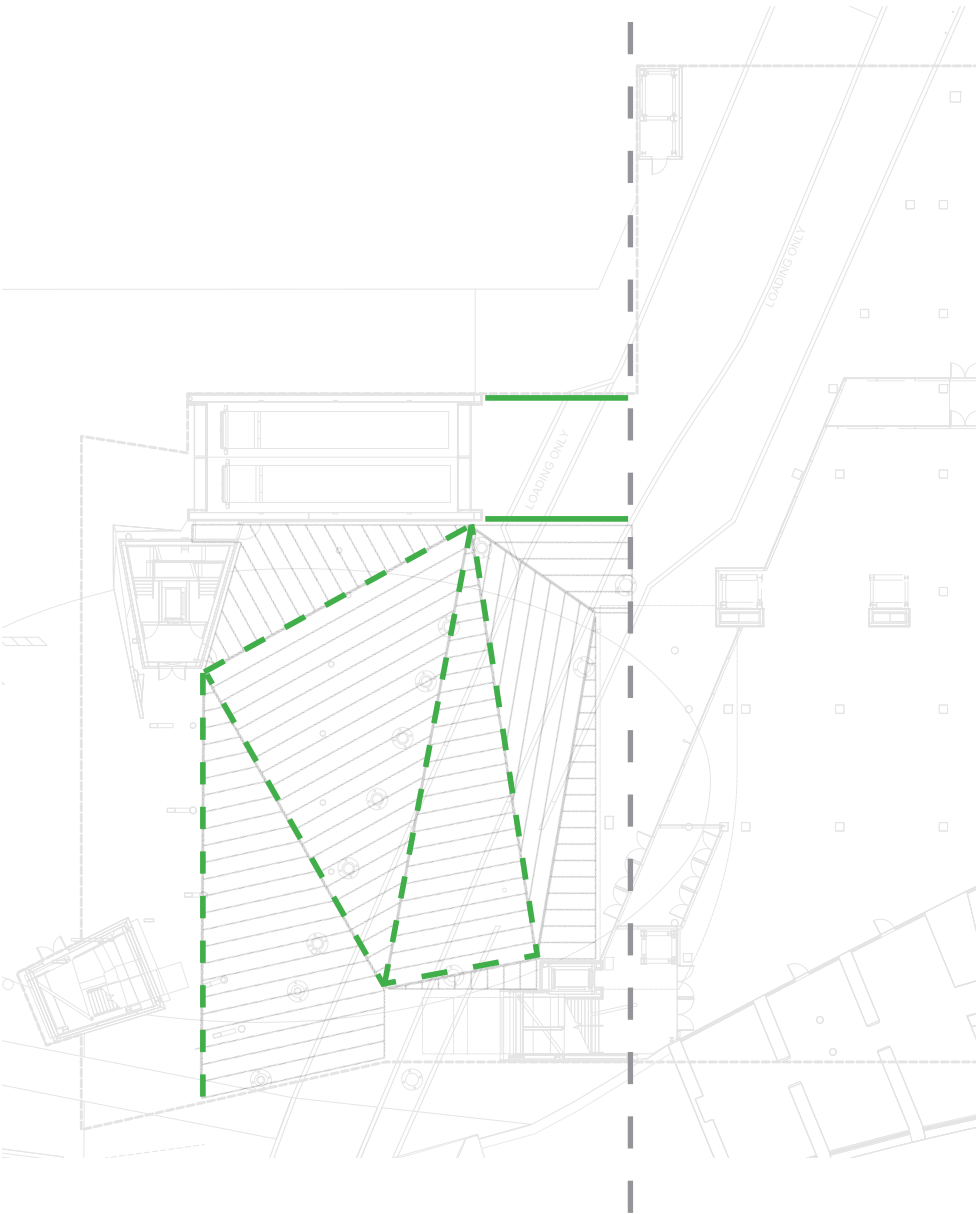
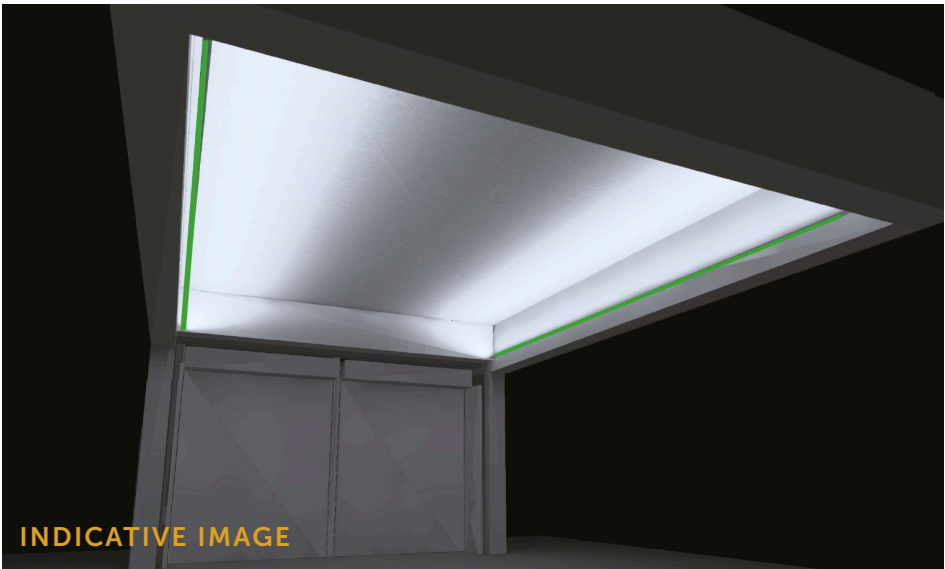


UNDERCROFT - THEATRE

Continuous soffit mounted luminaire providing direct and upward light distribution. The luminaire provides high output illumination during the day and will be dimmed down to provide minimum pedestrian/cycle illumination levels during the hours of darkness. The system offers a through wiring solution.

The East entrance to the truck-lift is to have uplighting to the soffit recess, this provides indirect illumination to ground level. A bird deterrent treatment will be required.

LIGHTING CONTROL	
Truck Lift Uplight - Photocell / time clock.	
Soffit Wash - Photocell / time clock. Scene setting.	
	Manufacturer: Sammode
	Luminaire Name: TURNER 70
	1840 4200 940
	Description: IP67 tubular
	luminaire with through wiring.
	1840mm Lamp Type: LED 37w
	4200lm
	CCT 4000K
	Manufacturer: Meyer
	Luminaire Name: 8 792 355 188
	Description: Wall mounted,
	asymmetric linear wash. 1536mm
	Lamp Type: LED 37.5w 2812lm
	CCT 4000K



ENTRANCES - ORCHESTRA PIT

The orchestra pit facade both external and internal will have a grid of recessed point sources (600mmx600mm) to the underside and vertical surfaces. The light source is proposed as LED and the visible form of the light source is TBC.



LIGHTING CONTROL

Photocell / Time clock. Scene setting.

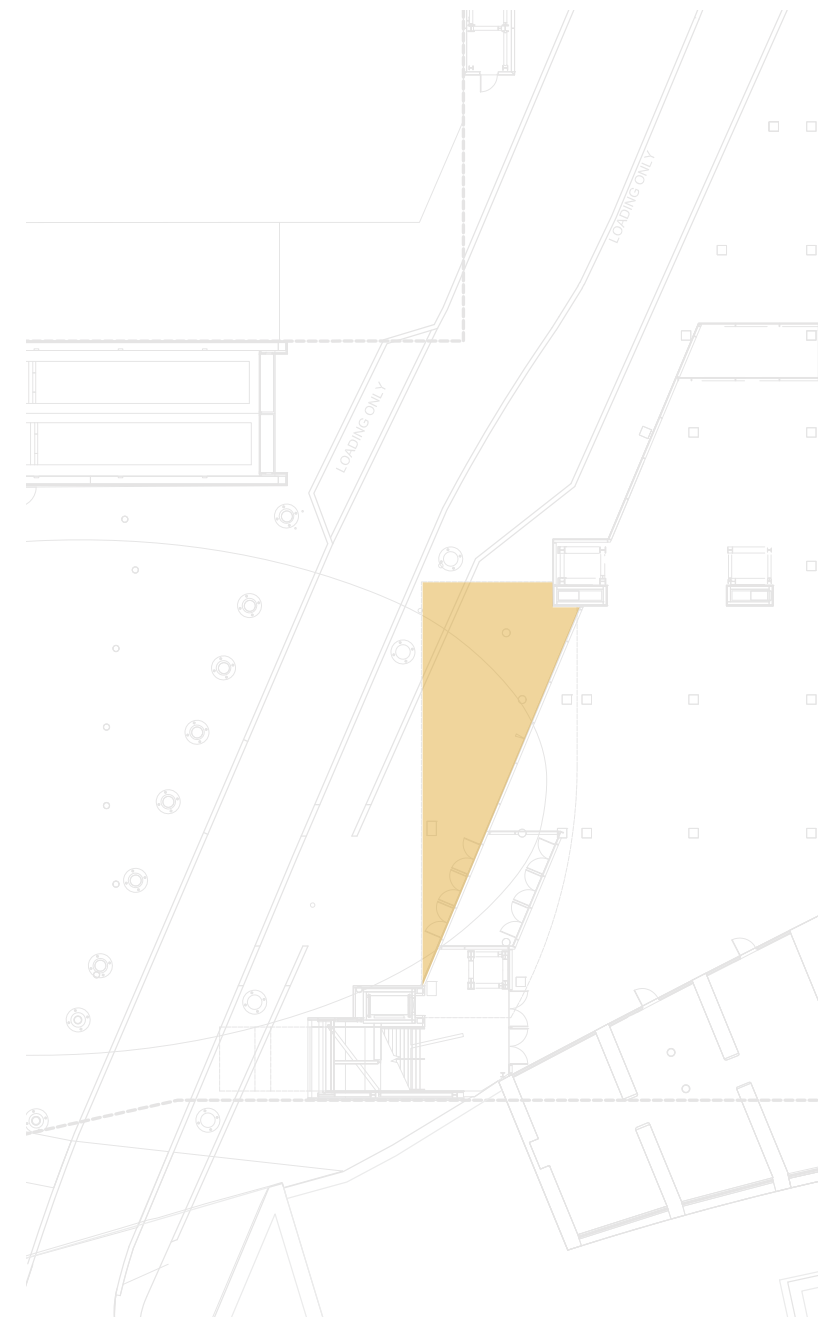
Manufacturer: Universal Fibre Optics

Luminaire Name: **

Description: **

Lamp Type: **

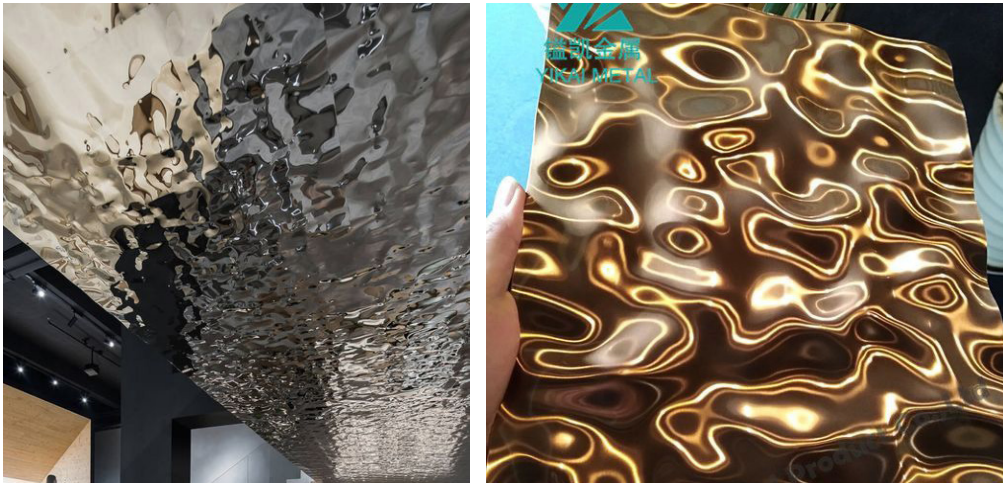
CCT TBC





ENTRANCES - NORTH

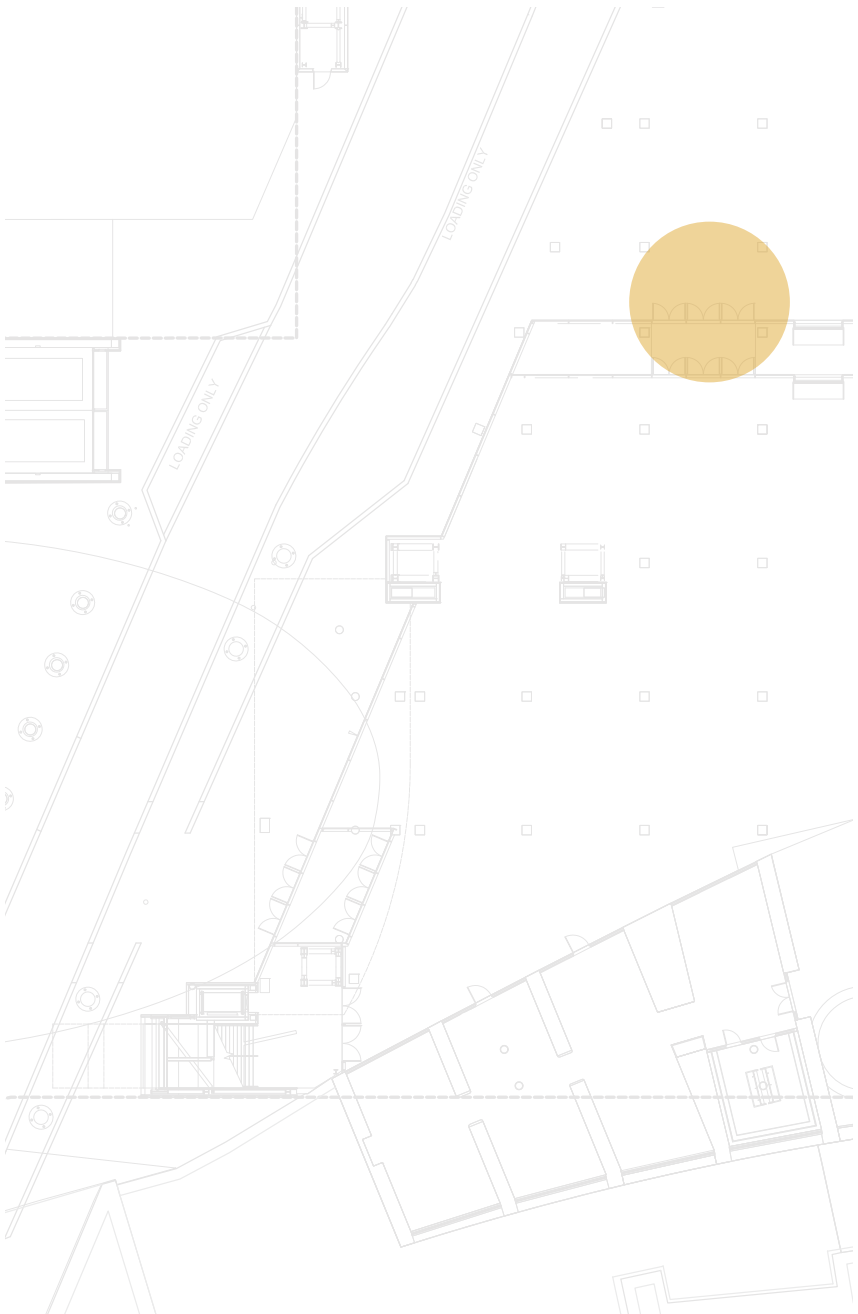
To create a focal point for the north entrance a soffit mounted disc is proposed with a reflective material. To illuminate the image in the reflection a ring of adjustable mini projectors will be mounted to the soffit.



LIGHTING CONTROL

Photocell / Time clock. Scene setting.

	Manufacturer: BEGA Luminaire Name: 84 216K3 + 71 119 Description: Floodlight with Louvre Lamp Type: LED 19w 1906lm CCT 3000K
---	---



5.6

Lighting
Facades

THEATRE

The only element of the theatre facade that is proposed to be illuminated is the lowest segment that faces Factory Square. The facade will be up-lit from a linear in-ground luminaire, the lowest surface will appear brightest and the intensity decreasing the higher you go.

The luminaire type has a glare film, glare louvre and a narrow beam angle to minimise glare to pedestrians.



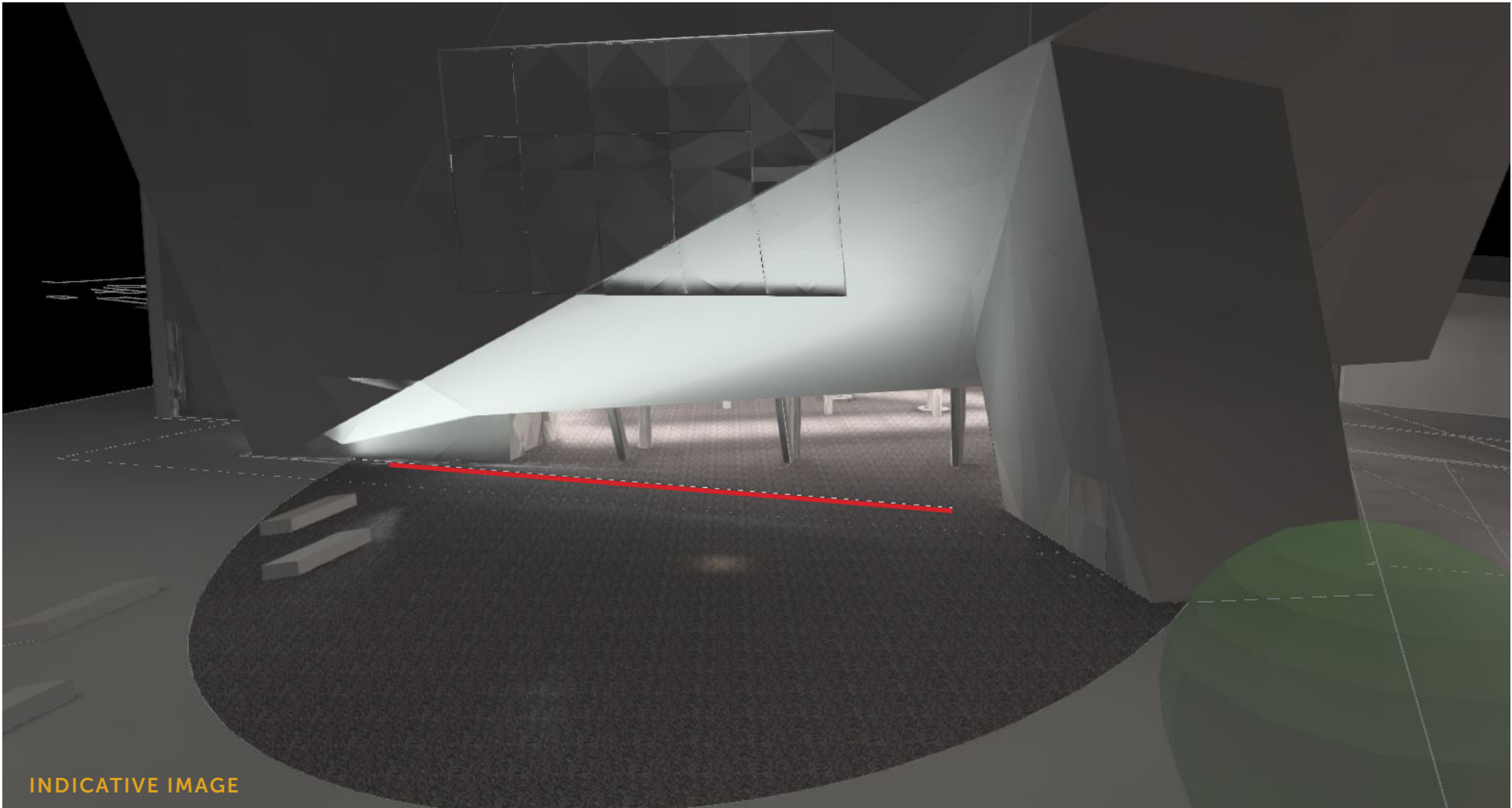
LIGHTING CONTROL

Photocell / time clock (Everyday use).

Dimming (Festival / event mode).

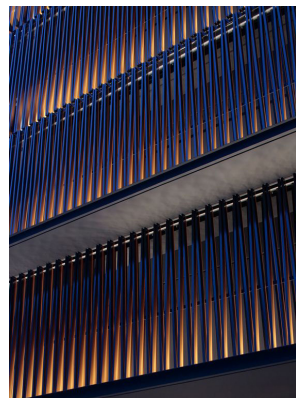


Manufacturer: ACDC Lighting
Luminaire Name: Blade LRI 5000-840 N
ABK CM 0 67 HFX
Description: In-ground linear uplighter with narrow beam optic and glare Shield
Lamp Type: LED
CCT 4000K



WAREHOUSE GABLES ENDS

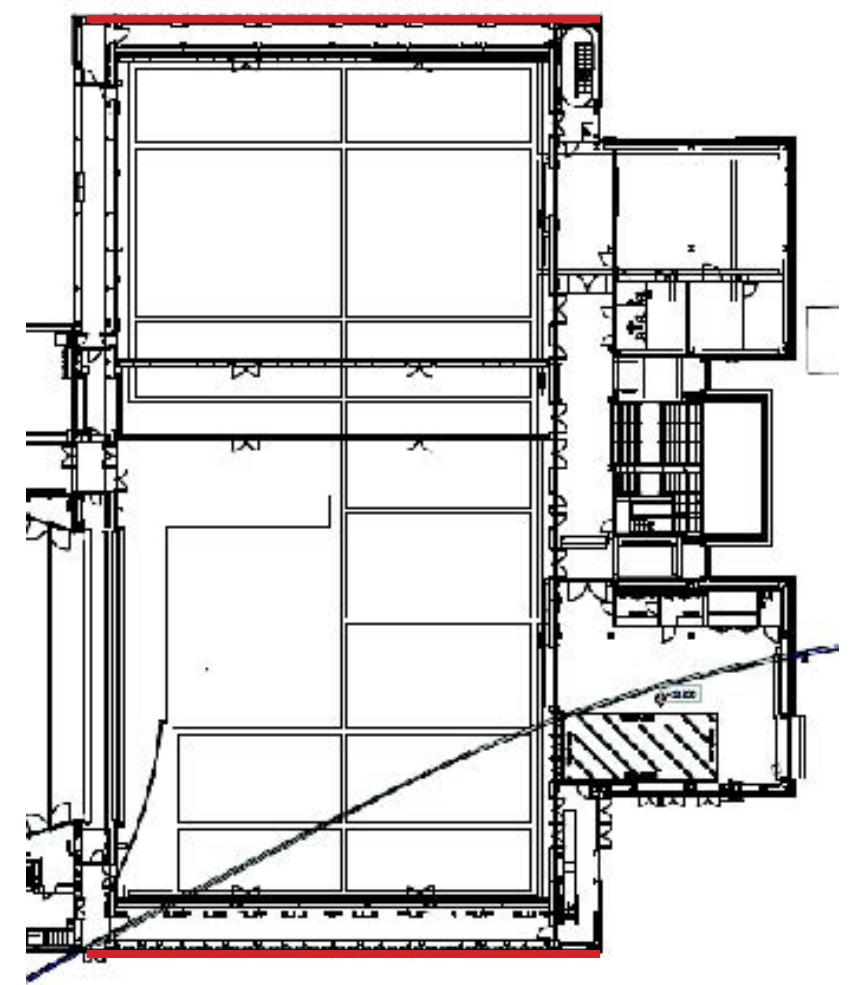
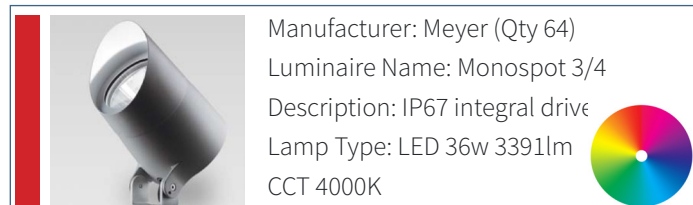
Both ends of the warehouse facade will be up-lit using colour change (RGBW) projectors mounted at low level. The projectors will be located within the façades corrugated detail and have narrow beam optics that will illuminate the 3D form. The luminaires will also come with a cowl accessory to reduce light pollution and light spill onto neighbouring buildings.



LIGHTING CONTROL

Photocell / time clock (Everyday use).

Dimming (Festival / event mode).



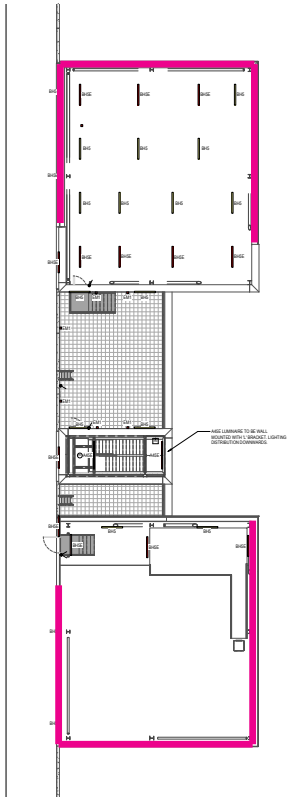
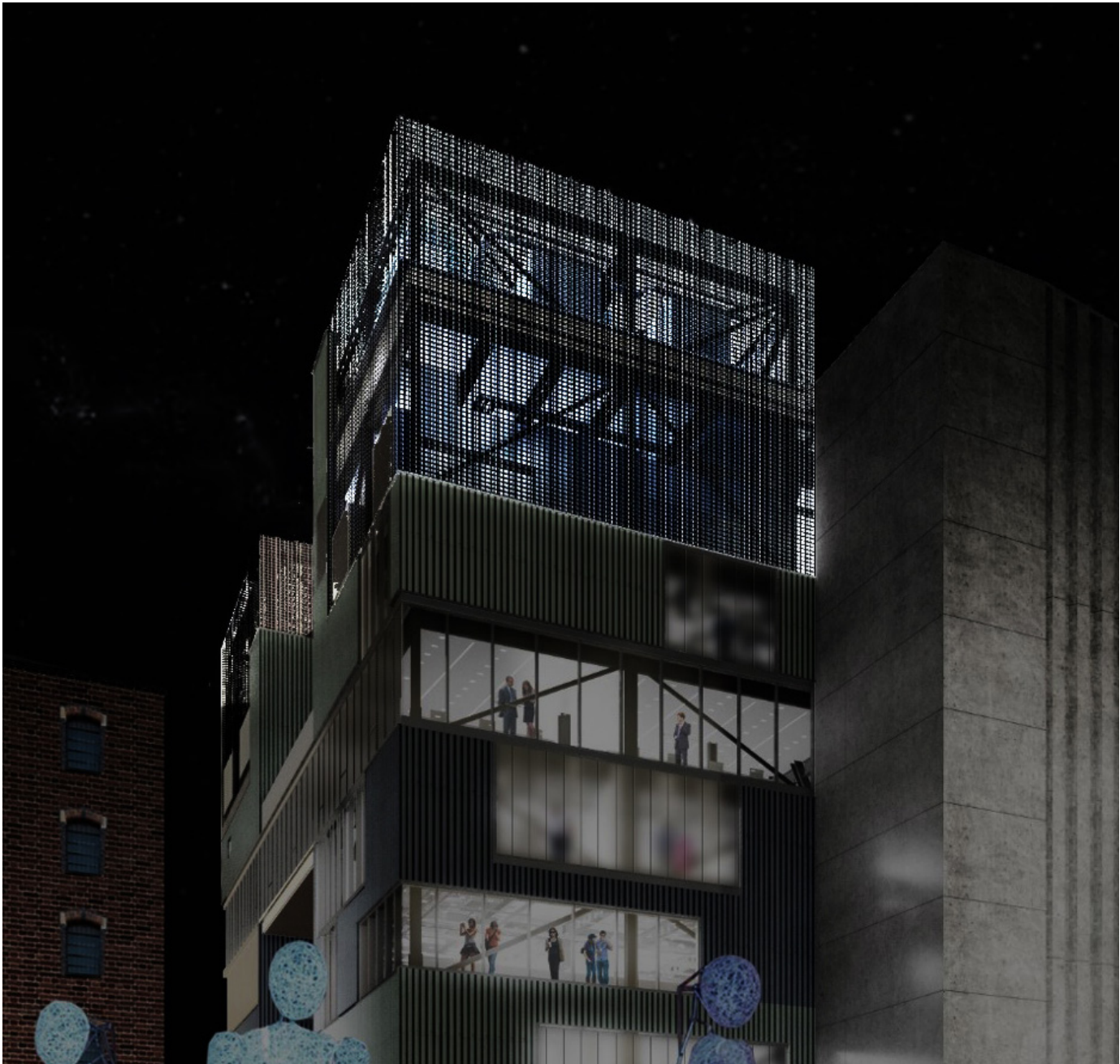
PLANT SPACE

The plant area is the highest point of the building and will be most visible on the Manchester skyline. The proposal is to illuminate the mesh parapet. Mock-ups will be required when the site is near completion to be able to detail this concept further.

Approx. Qty 60units (1200mm)



Manufacturer: ACDC Lighting
Luminaire Name: Blade Si, L12 5000-840
WF BK STD 67 HFX
Description: IP67 integral driver
Lamp Type: LED 72w 5000lm
CCT 4000K



ROOF PLAN

5.7

Lighting Design Parameters

DESIGN PARAMETERS

The following mandatory, legislative and regulatory requirements, British Standards, Codes of Practice and Best Practice professional guidance publications will form the parameters of the lighting installation:

- BS EN 5489-1:2013 Code of Practice for the Design of Road Lighting - Part 1: Lighting of roads and public amenity areas, BSI, 2013
- BS EN 12464-2:2014 - Part 2 Outdoor work places, BSI, 2014
- Guidance Notes for the Reduction of Obtrusive Light GN01:2011, Institution of Lighting Professionals, 2011
- Guide to Limiting Obtrusive Light, SLL, 2013
- Lighting Handbook, SLL 2018
- The Workplace (Health Safety and Welfare) Regulations, HMSO, 2011
- DDA BS 8300-1:2018 - Design of an accessible and inclusive built environment; Part 1: External environment - Code of practise, 2018
- DDA BS 8300-2:2018 - Design of an accessible and inclusive built environment; Part 2: Buildings - Code of practise, 2018

EXTERNAL LIGHTING & BIODIVERSITY

The impact of light to biodiversity within the site, and in particular bats and flying invertebrates should be mitigated through the implementation of sensitive lighting.

The ERAP- ‘ECOLOGICAL SURVEY AND ASSESSMENT March 2018’ reported that no bats or signs of bats were detected anywhere at the site. It is an aspiration of MIF to include Bat and bird boxes on the roof of the site. Location of such boxes will need to be considered during the detailed design stage.

OPERATING HOURS

Public realm lighting will be operated via photocell control. General lighting beneath the undercroft is to have a separate photocell located on the undercroft soffit to represent conditions in this area.

Feature lighting elements to the undercroft and general lighting which includes building entrances and exits will be operated during hours of darkness via photocell control and scene setting.

Feature lighting which includes the buildings facade will be photocell and time clock controlled, luminaires will be programmed to switch off no later than 23:00 curfew. This is the normal situation and is required to meeting ILP Light Pollution guidance and is a BREEAM ‘Pol 04’ requirement. All lighting is controllable and can be adapted to suit later night activity if required.

ILLUMINANCE CRITERIA

Exterior illuminance criteria as set out in BS EN 5489-1:2013 is dependant upon the district brightness where the lighting is to be deployed. The district brightness is determined according to criteria set out in ILP publication Guidance Notes for the Reduction of Obtrusive Light and requires knowledge of the local area.

Institute of Lighting Professional (ILP) recommendations

Refer to Guidance Notes for the Reduction of Obtrusive Light GN01:2011, Institution of Lighting Professionals, 2011 for further information.

This area has been classified E4:

E4 represents high district brightness areas, such as town centres and commercial areas.

Refer to the following table for obtrusive light limitations.

The environmental zone categorisation would be unchanged following introduction of committed residential development. All the lighting has controlled optics and is designed to minimise light trespass from the site.

Table 1: Environmental zone descriptions in ILP guidance		
Category	Lighting environment	Examples
E0	Dark	UNESCO Starlight Reserves, IDA Dark Sky Parks
E1	Intrinsically dark landscapes	National parks, areas of outstanding national beauty, etc
E2	Low district brightness areas	Rural, small village or relatively dark urban locations
E3	Medium district brightness areas	Small town centres or urban locations
E4	High district brightness areas	Town/city centres with high levels of night-time activity

Table 2: ILP numerical guidance on obtrusive light						
Obtrusive light limitations for exterior lighting installations						
Environmental Zone	Sky glow ULR (Max %)	Light trespass into windows E _v (lux)		Source intensity I (kcd)		Building Luminance pre-curfew
		Pre-curfew	Post-curfew	Pre-curfew	Post-curfew	Average L (cd/m²)
E0	0	0	0	0	0	0
E1	0	2	1*	2.5	0	0
E2	2.5	5	1	7.5	0.5	5
E3	5.0	10	2	10	1.0	10
E4	15.0	25	5	25	2.5	25
* ULR	From public road lighting installations only.					
E	Upward light ratio of the installation, i.e. the proportion of light from the total installation that goes directly into the sky.					
I	Vertical illuminance in lux on nearby domestic windows.					
L	Light intensity in kilo-candelas in a potentially obtrusive direction, outside of the area being lit. The ILP guidelines state that these figures are for general guidance only and for some sports lighting applications with limited mounting heights may be difficult to achieve.					
	Luminance in candelas per m². This guideline is intended to apply to buildings that are deliberately floodlit at night. L is a measure of how bright the building appears.					

LIGHT POLLUTION

Light pollution, or obtrusive light, can create serious physiological and ecological problems. It takes various forms:

Sky glow: the brightening of the night sky above our towns and cities.

Glare: the uncomfortable brightness of a light source in contrast to the background.

Light Trespass: the spilling of light beyond the boundary of the property on which the light source is located.

Light Ingress: the passage of light into buildings from an external source(s). Obtrusive light is a nuisance to both humans and wildlife; it is a waste of energy and contributes to greenhouse gas emissions. The problems of unnecessary, obtrusive light can and should be reduced or eliminated at the design stage.

During the design phase of a lighting installation, consideration of the following measures to reduce the occurrence of obtrusive light is taken.

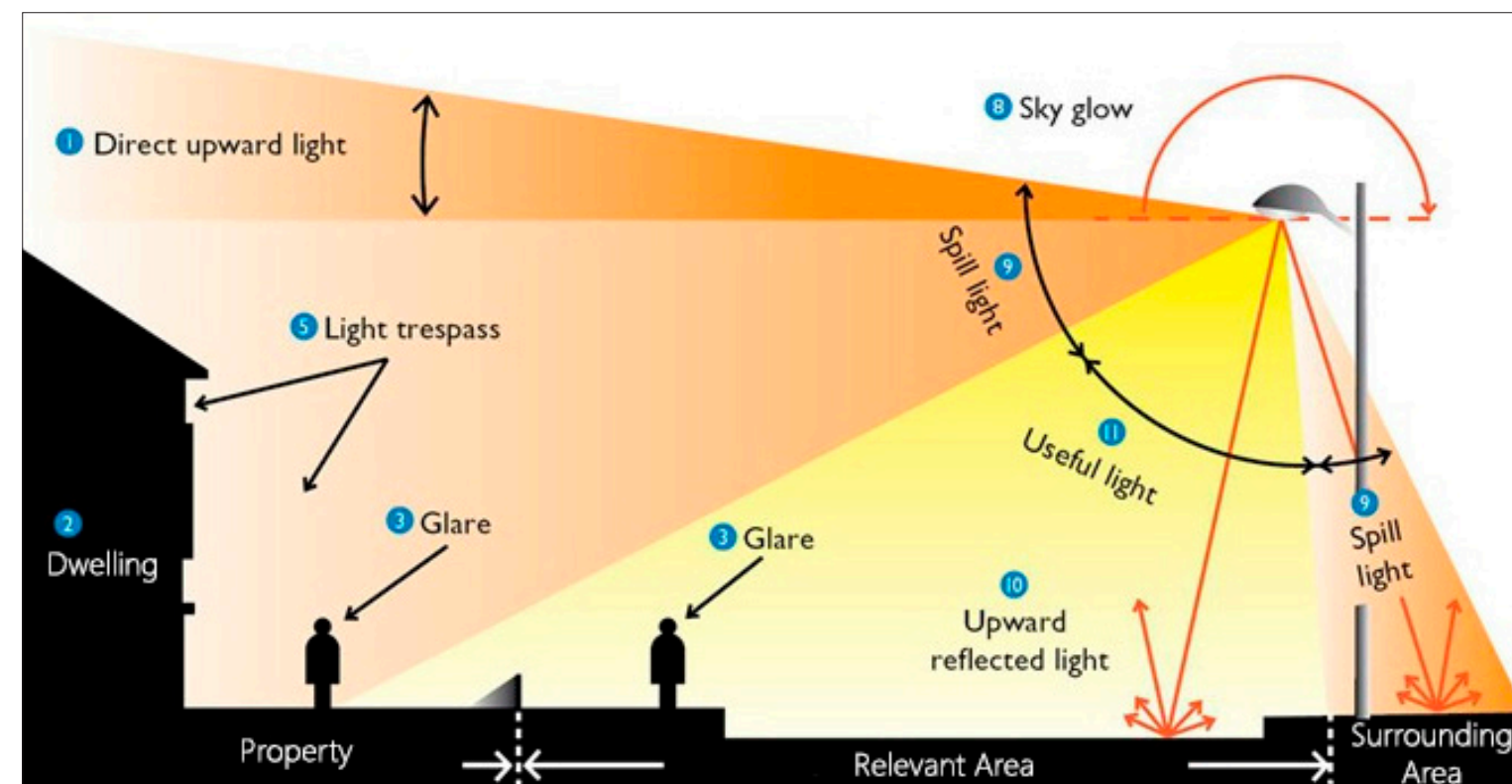
Over-lighting. This is avoided by conducting thorough calculations and carefully selecting the most appropriate lighting equipment and lamp types. Lighting Control to ensure luminaires are only switched on when necessary, a lighting control performance specification is produced.

Luminaire Technology. When specifying luminaires, careful consideration is given to minimising upward light and the use of optical units with precise light intensity distribution: thus ensuring that spill and glare are minimised.

The lighting scheme is designed to have minimal impact on the surrounding environment. Lighting is only installed where a visual task requires it for safety, comfort and wellbeing. Light levels are kept to the minimum levels needed to meet the requirements. Luminaires with a controlled light

distribution will be specified in order to ensure that light falls only where it is required. A combination of lighting controls and precise optics will help minimise any impact on the surrounding environment.

Luminaire positioning and direction except in specific locations, where it is desired that elements of the design are up-lit for aesthetic reasons, all general lighting luminaires are positioned to avoid uplighting where possible. Where practical, directional luminaires are utilised to enable the precise projection of light. Proper commissioning will ensure directional luminaires perform as intended.



EXTERNAL STEPS AND HANDRAILS



6.1

Details Handrails and Steps

Within Factory Site there are three areas where stepped access is required:

A

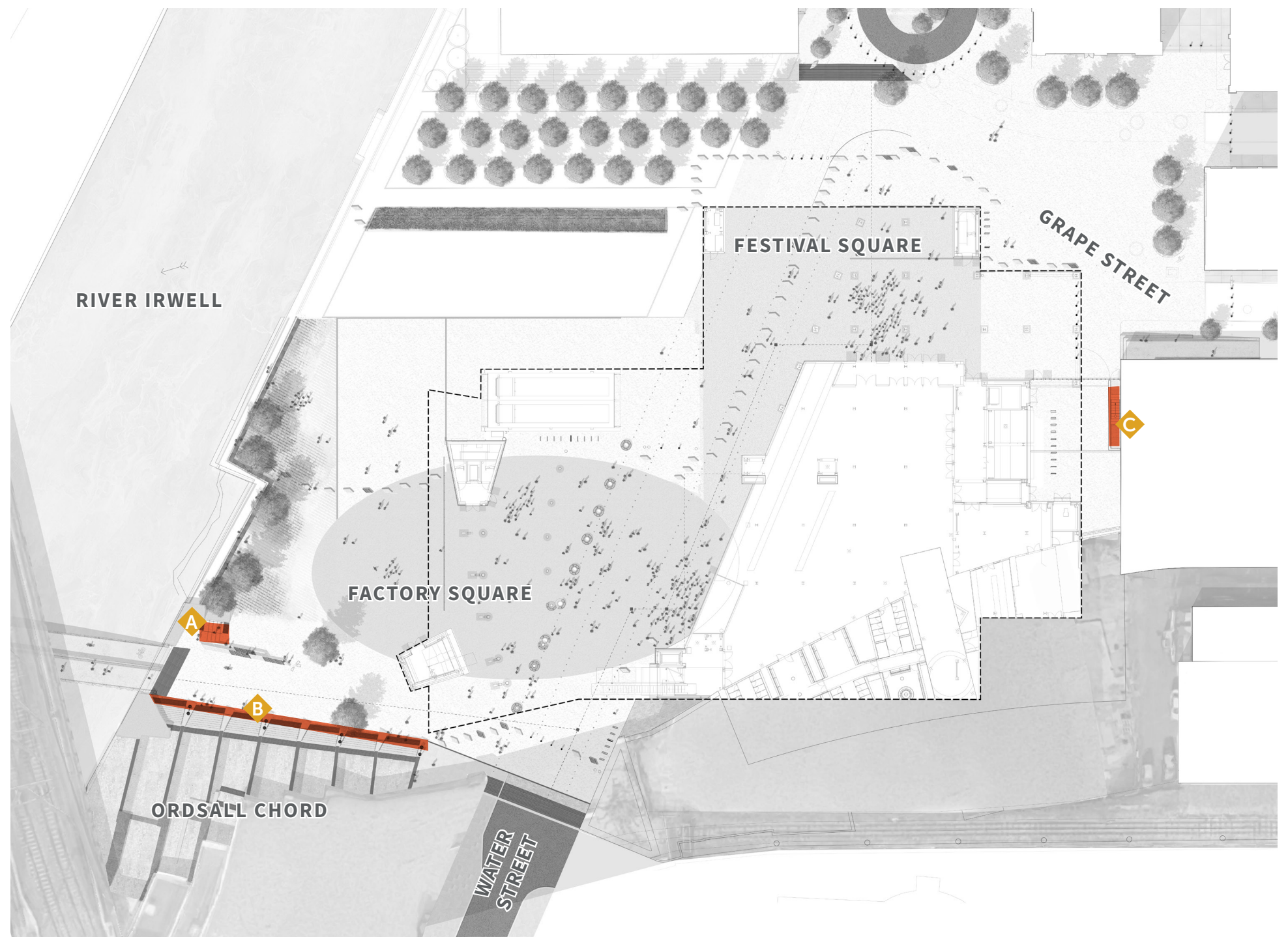
An accessible stepped access north of the newly installed pedestrian / cycle bridge.

B

As part of the recently completed Ordsall Chord public realm scheme a series of grand steps have been installed south of Factory Square. The Factory public realm project will finalise the interface to these steps as these have not been fully installed.

C

A fire escape route from Bonded Warehouse into the service yard to the east might require a stepped access to overcome the level difference from the finished floor level and the external level at Grape Street.



A RIVER SIDE STEPS

The river side steps provide access from the new pedestrian/ cycle bridge down into Factory Square.

The steps will be constructed from concrete to match that of the adjacent surfaces while the step nosing will be black to provide visual contrast.

The steps have 800mm of black tactile corduroy paving to the top and bottom of the steps. The left hand side of the steps is partially obstructed by the lower tier of seating steps if walking down, therefore this side of the steps has a brushed concrete finish in place of tactile paving to alert visually impaired users.



- KEY
- Contrast Step Nosing
 - Corduroy Hazard Paving
 - Warning Surface to Top / Bottom of Steps
 - Edge Protection
 - Handrail
 - Possible Seating Elements (Armrests / Backrests / Timber Tops)



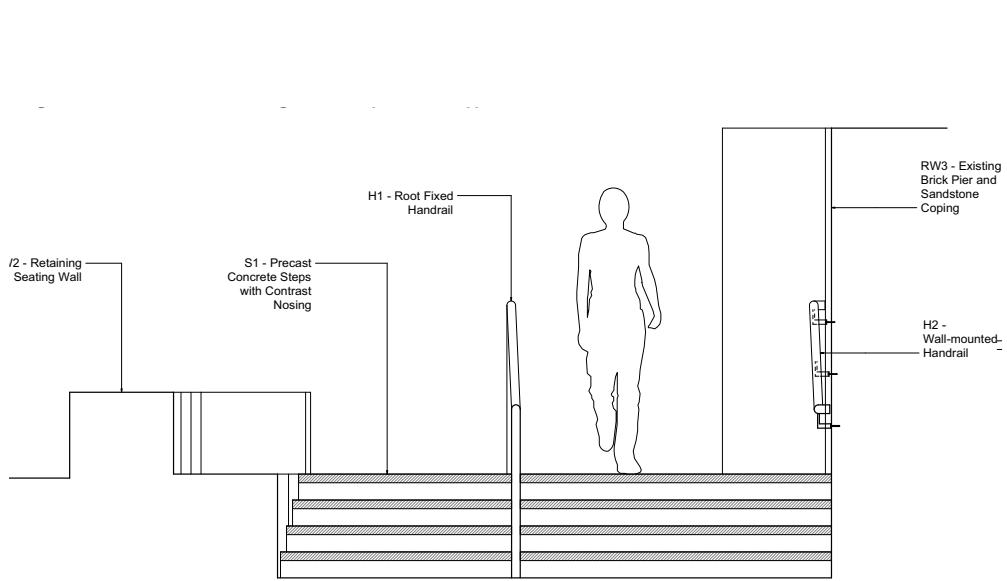
1. contrast strip to step nosing.
2. high seating steps also function as edge protection.

STEPS AND HANDRAILS

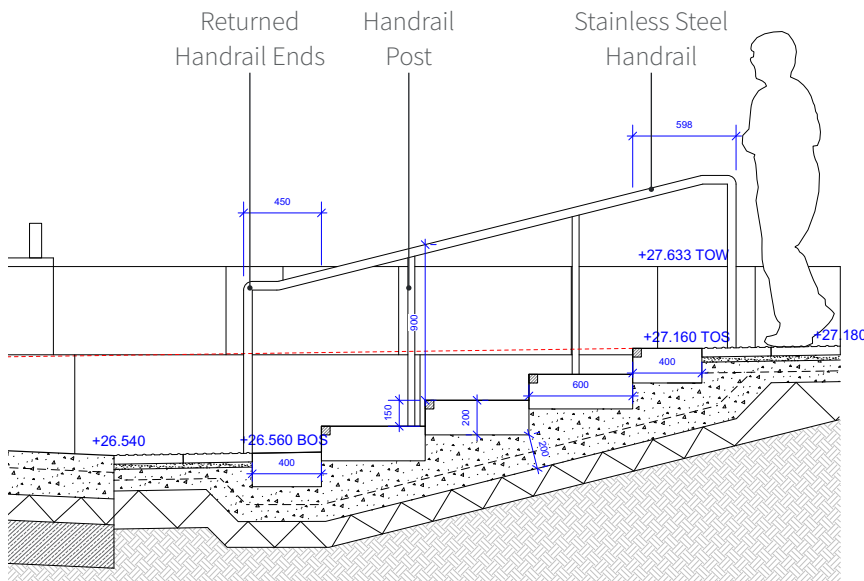
The handrails adopt design elements from the internal handrails in the building to provide a holistic design approach. Stainless steel is proposed as a robust material choice.

Lighting will be incorporated into the underside of the handrails to provide visual aid at height. Refer to Section 5.3 (P61) for more detail.

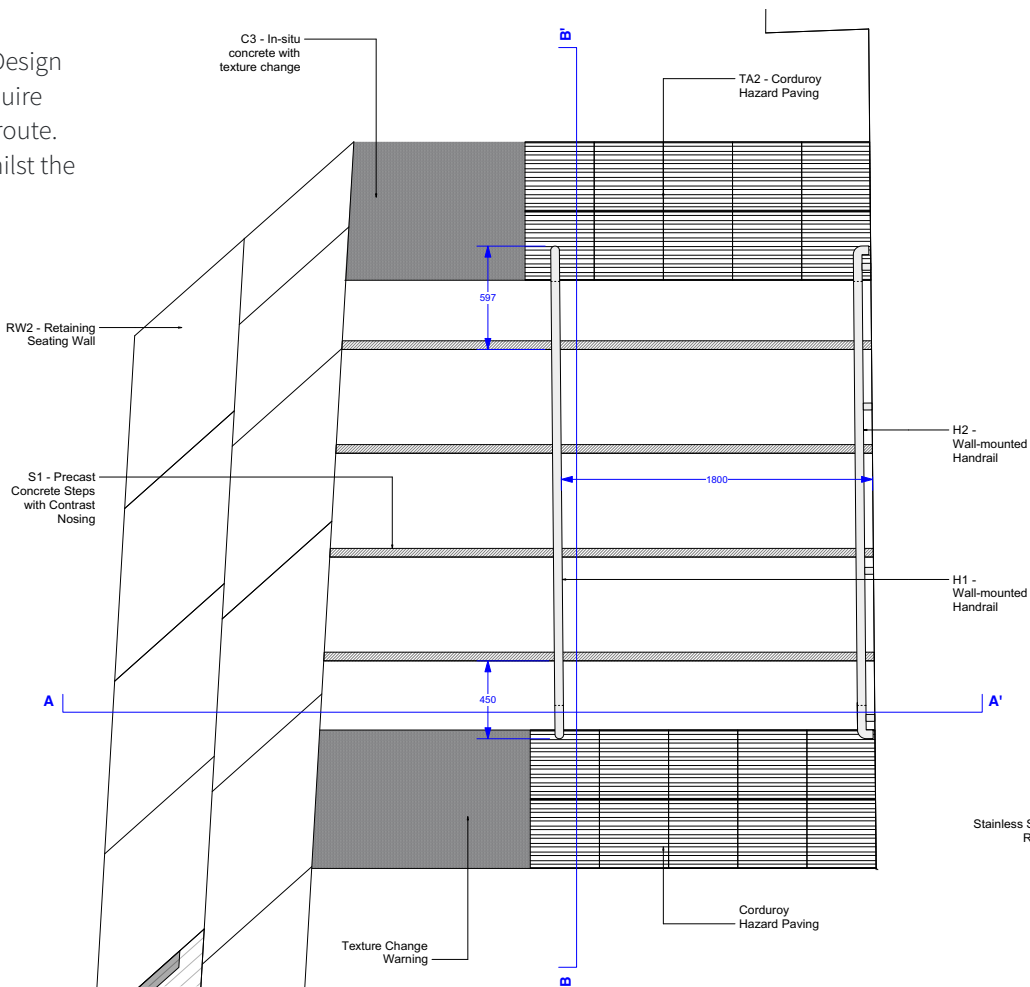
The handrails follow Building Regulations Part M and Design for Access 2 guidance. Due to their width, the steps require two handrails, maintaining an 1800mm unobstructed route. The central handrail will be root fixed into the steps whilst the handrail on the right hand side will be wall mounted.



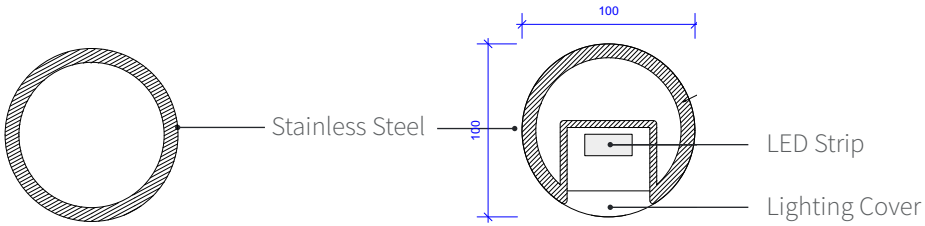
STEPS AND HANDRAILS ELEVATION A-A'



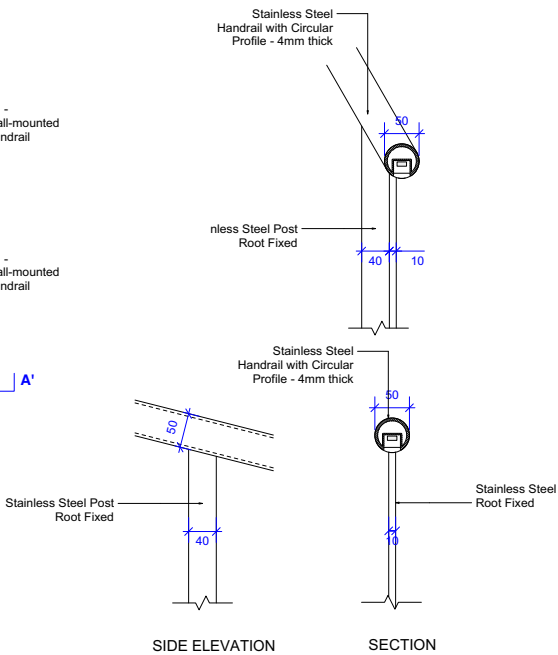
ROOT-FIXED HANDRAIL ELEVATION B-B'



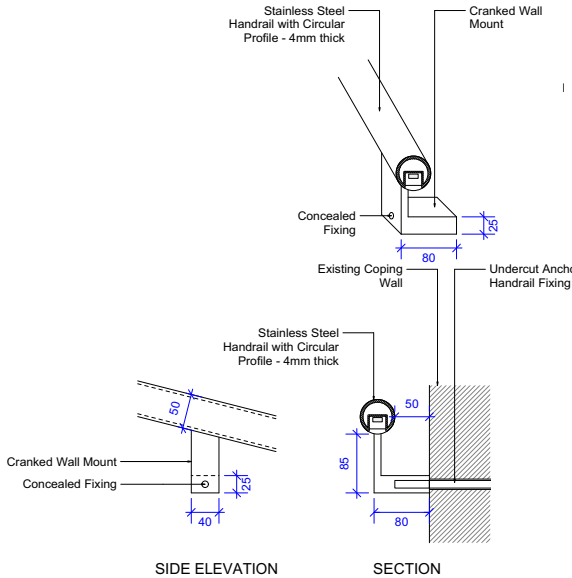
STEPS AND HANDRAILS PLAN VIEW



HANDRAIL WITH LIGHTING PROFILE



HANDRAIL POST ELEVATION, SECTION AND AXONOMETRIC VIEW



WALL-MOUNTED HANDRAIL ELEVATION, SECTION AND AXONOMETRIC VIEW

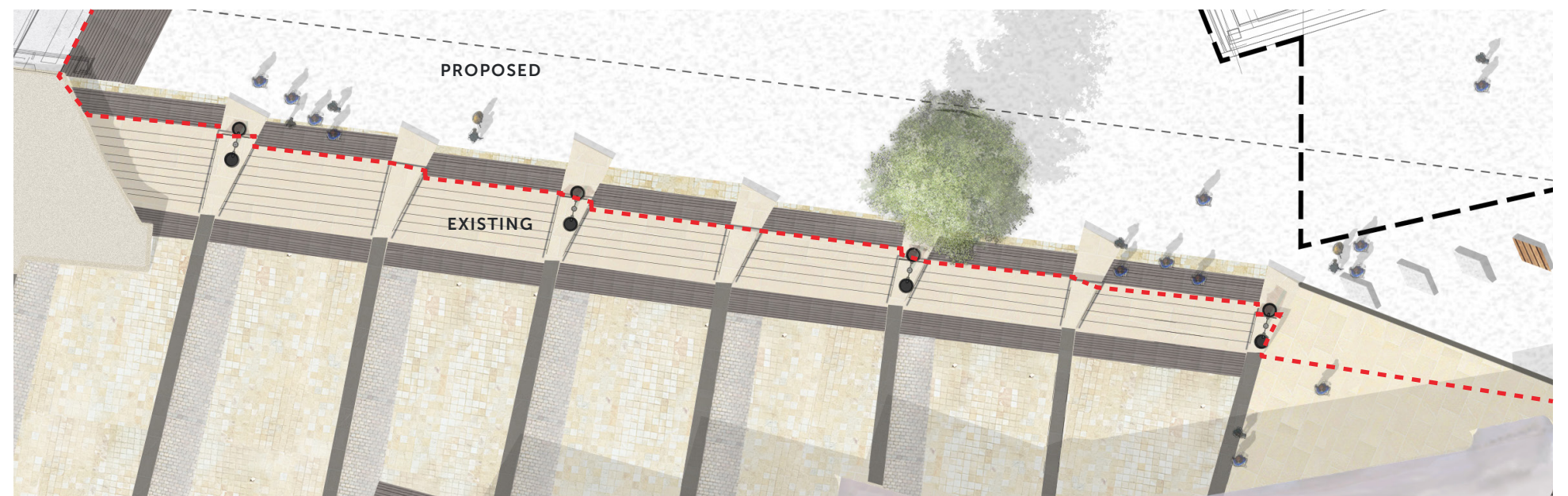
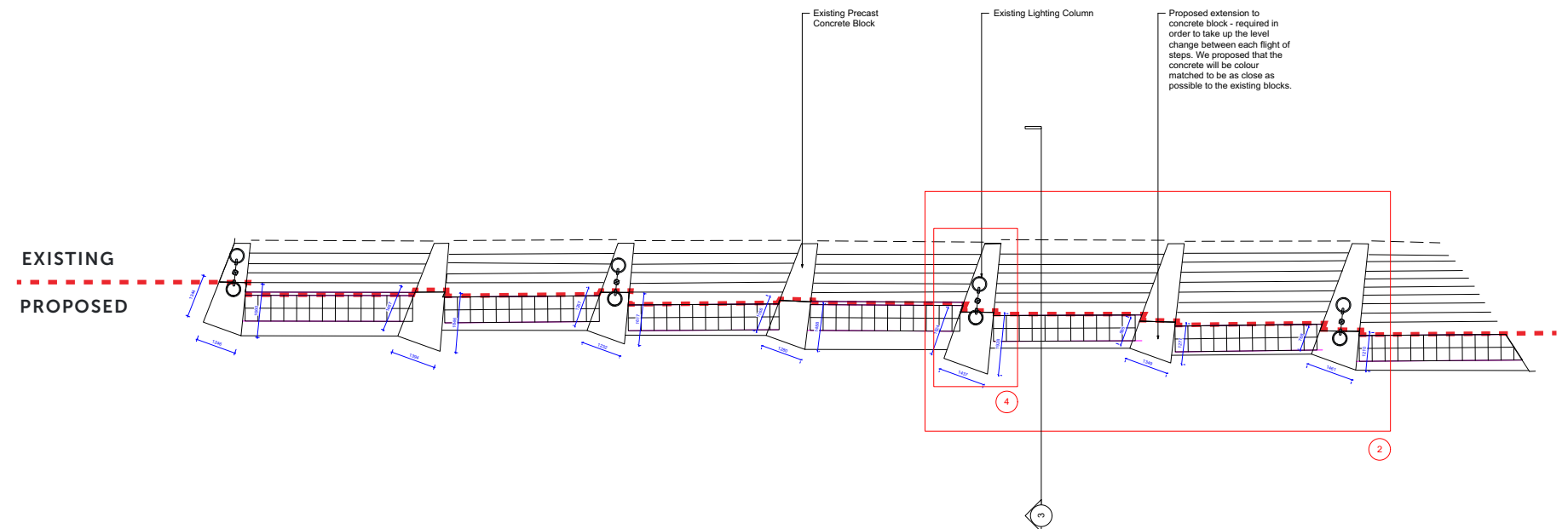
ORDSALL CHORD INTERFACE

The Ordsall Chord scheme has been partially completed, however the interface with The Factory site needs to be coordinated and completed by The Factory project. Handrails have already been installed for the steps, as has tactile paving to the bottom of the steps.

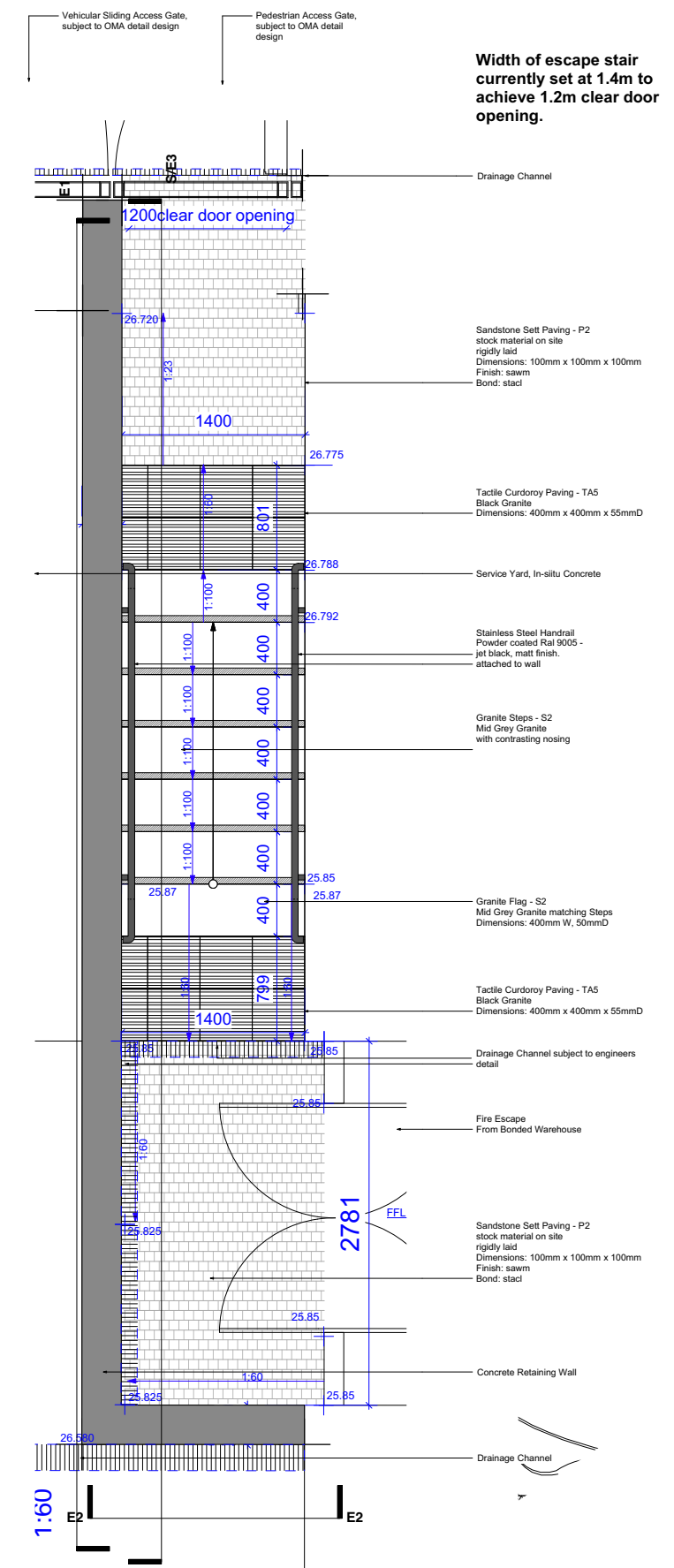
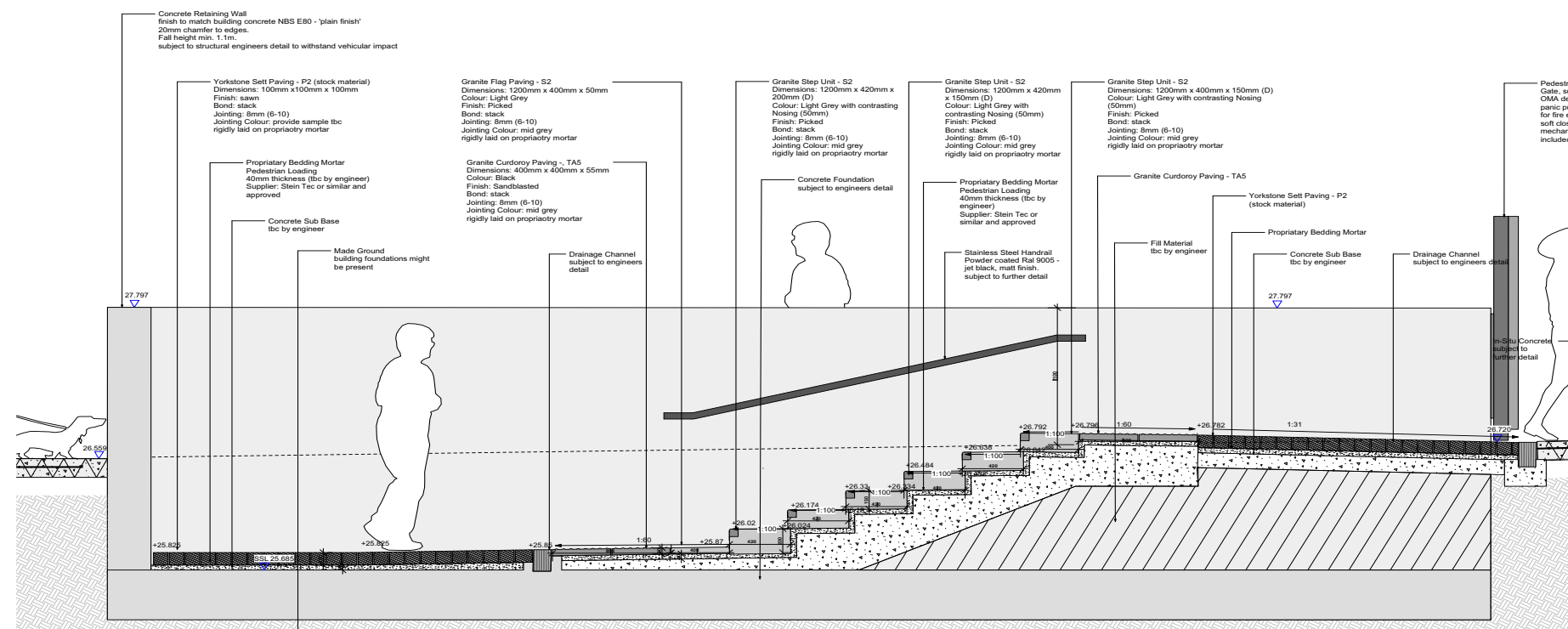
At present, the level change between the top of each flight of steps is steeper than British Standard 8300: 2018 Design of Buildings of an Accessible and Inclusive Built Environment guidance and Design for Access 2, Manchester City Council 2003 allows. Therefore extensions to the existing concrete retaining features are proposed ensure compliant gradients whilst providing an opportunity for seating. The proposed extensions will help create a smooth transition between The Factory site and the Ordsall Chord scheme by adopting visual aesthetics of each. The extensions will be concrete - colour matched with the existing blocks. The angled faces also acknowledge the design form of other elements in the public realm.

Tactile paving has not been installed to the tops of the steps, these will be specified to match that at the bottom of the steps.

gn intent: Provide Fabrication Drawings for Landscape Architects Approval



Stainless steel is proposed for the handrails as a robust material choice. Which will be powder coated in black to be in keeping with the character of the Bonded Warehouse. The handrails and steps follow Building Regulations Part M and Design for Access 2 guidance.



TRAFFIC CALMING MEASURES AND MANAGEMENT OF CROSSING



7.1

Public Realm Location of traffic calming measures and management of crossings

TfGM have assessed the implications of the PoD with their City Centre traffic model. This model includes the transport interventions for the City Centre and represents the most up to date forecast of future highway operation as follows:

Deansgate closed from Bridge St to Blackfriars; New Bailey closed; Changes to Chapel St East; Gyratory around Bridge St / Blackfriars; New Bailey St bus gate; Albert Square closure; Regent Road works complete.

This model has tested the highway operation with the latest St Johns development traffic included and tested this both with Water Street open and with it closed due to the PoD. It is notable that the volume of traffic forecast for St Johns has reduced since the original masterplan due to a reduced level of parking on the core site.

That model has forecast the changes in traffic flows with the PoD and this demonstrates that there are only modest changes in traffic flow with the closure of Water Street.

The traffic flow forecasts are provided in the accompanying transport statement - VN60596 transport statement and are summarised below. The public realm works and prohibition of driving order - Figure 1 for the situation with Water Street Open and in Figure 2 with the PoD implemented. Figure 3 shows the difference in traffic flow as a result of the PoD.

The flow forecasts show that on Water Street itself there is reduction in flow of around 100 vehicles. That then leads to a small reduction in two way traffic flow on Liverpool Road in the PM peak of 68 vehicles with little change in the AM peak. On Quay Street there is an increase in two way traffic flow of 84 vehicles in the AM peak and 100 vehicles in the PM peak. These increases are split directionally so that in the busier PM peak there are an extra 48 vehicles heading east into the city and 53 vehicles heading west which is contrary to the main flow. To put this in context this represents less than one vehicle per minute, an increase of 6% in traffic on Quay Street in the AM peak and 9% in the PM peak.

On other roads there are only modest changes in traffic flow with the PoD. On Lower Byrom Street there is a reduction on the central section of that road, south of Gt John Street, of up to 17 vehicles in the AM peak. In the PM peak there is practically no change on this section but on the northern section, it is forecasted in the PM peak there is an increase of 11 vehicles heading north onto Quay Street and 7 vehicles heading south.

To assess the implications of this traffic on the signals at Quay Street/ Gartside Street and Water Street the LINSIG modelling software was used. This showed that the changes in traffic flows are not sufficient to result in a change in signal operation and that the junction operates in a similar manner to the way they currently operate. They would work within capacity but the queue lengths are between 14-20 vehicles on the main Quay Street approaches. This queuing means that the links operate reasonably well but they can be sensitive to blocking back should there be an incident in the peak hours which is what occurs in current conditions.

The timing of events will be outside of the traditional peak periods. Taxis and general traffic looking to drop-off and pick up event goers are expected to cause localised congestion on Water Street for short periods of time (up to 20 minutes). This activity is mitigated by the fact that event goers have to park in nearby car parks away from the site. As described in the Travel Plan, Factory will provide event goers with travel information in advance directing them to make the most sustainable and appropriate means of travel.

FLOW AND ACCESS ACCESS AND SERVICING

8

8.1

Flow and Access

PEDESTRIAN FLOW AND ACCESS

Pedestrians walking to The Factory from the city centre, from local car parks, Salford Central Rail Station or from bus services to the north will tend to arrive from the north along Water Street or pass through St John's along Studio Way. Those arriving from Liverpool Road / Water St South would tend to be those walking in from Deansgate Castlefield Rail / Metrolink station or from the coach parking to the south. The new footway / cycle bridge across the River Irwell provides a route for pedestrians walking in from Middlewood Locks and Salford. This is in accordance with the planning approval for The Factory and the Event Management Strategy submitted in support of that application.

After a large event, marshalls will be deployed to direct visitors away from using Grape Street to head to the city and direct them along Water Street.

The main entrance is located on the north side of the building facing onto Festival Square, serving users arriving from the north and east, while a secondary entrance on the west of the building, facing into Factory Square, will accommodate users arriving from the south and west. Pedestrian flow in the public realm is intended to be as fluid and unrestricted as possible. Both Factory Square and Festival Square are open and lie on a single continuous plane – even across vehicle-accessed areas - to give pedestrians a feeling of priority over vehicles and to enable free movement through the site. The squares are proposed as 'Share with Care' zones, where pedestrian priority is emphasised.

The public realm is designed in consideration and anticipation of the future development to the north of the site; a potential long distance informal riverside footpath is accommodated, as well as a clear axis from Grape Street to the River Irwell.

Water Street, for the section under Factory will be closed to general traffic under a prohibition of driving order. The only vehicles permitted into the controlled zone will be The Factory

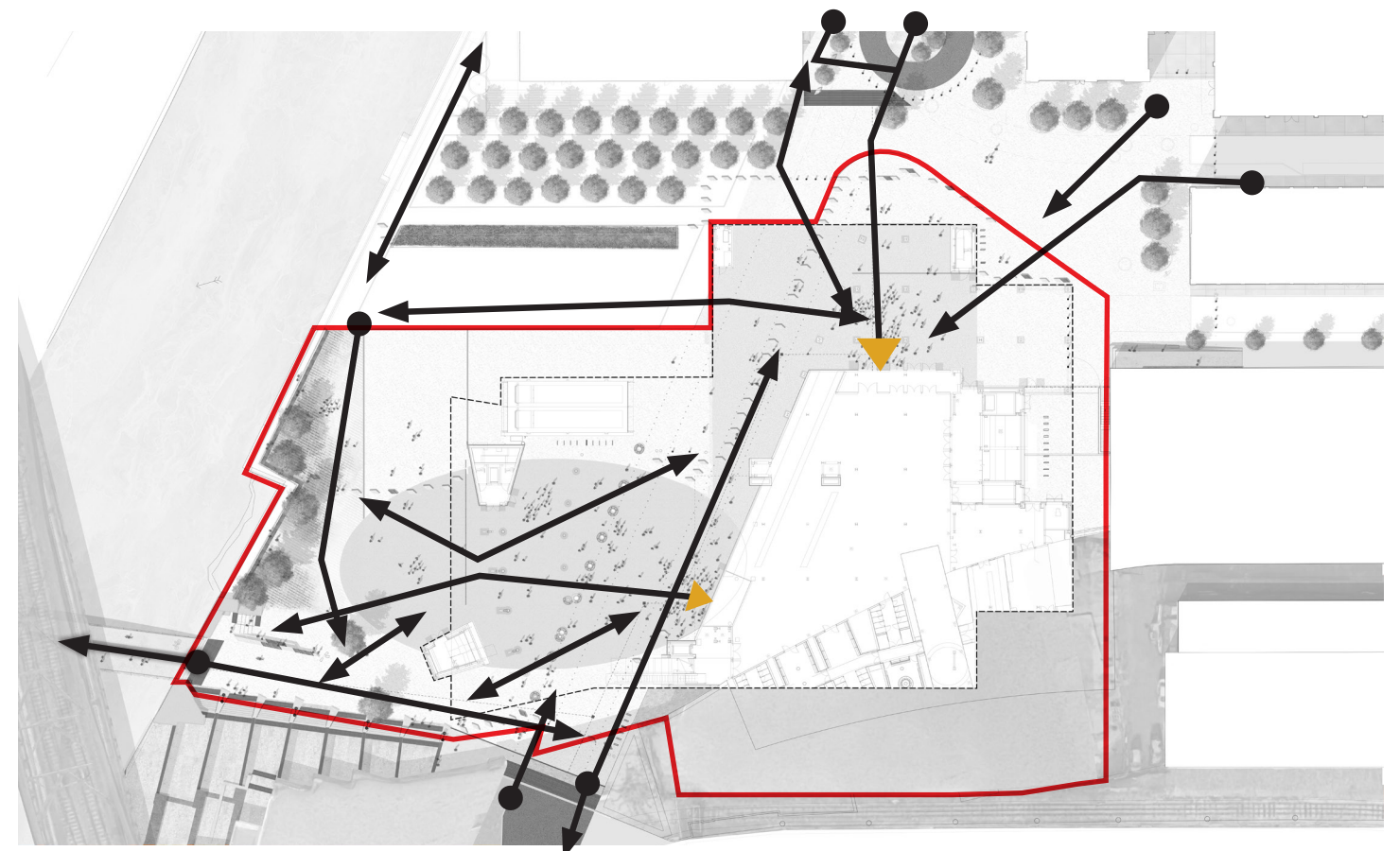
service vehicles, emergency and maintenance vehicles. Pedestrians and cyclists are unaffected by the order.

The access controls would be managed by 24/7 MQL site management team using automatic bollards, CCTV, ANPR and an intercom.

These vehicles would be timed to avoid periods of high pedestrian activity, would be instructed to drive at walking pace and any reversing manoeuvres would be overseen by a banksman to ensure the area is clear of pedestrians.

KEY

- Arrival Points to the Factory
- ➔ Key Pedestrian Route
- ▼ Main Building Entrance
- ▼ Secondary Building Entrance



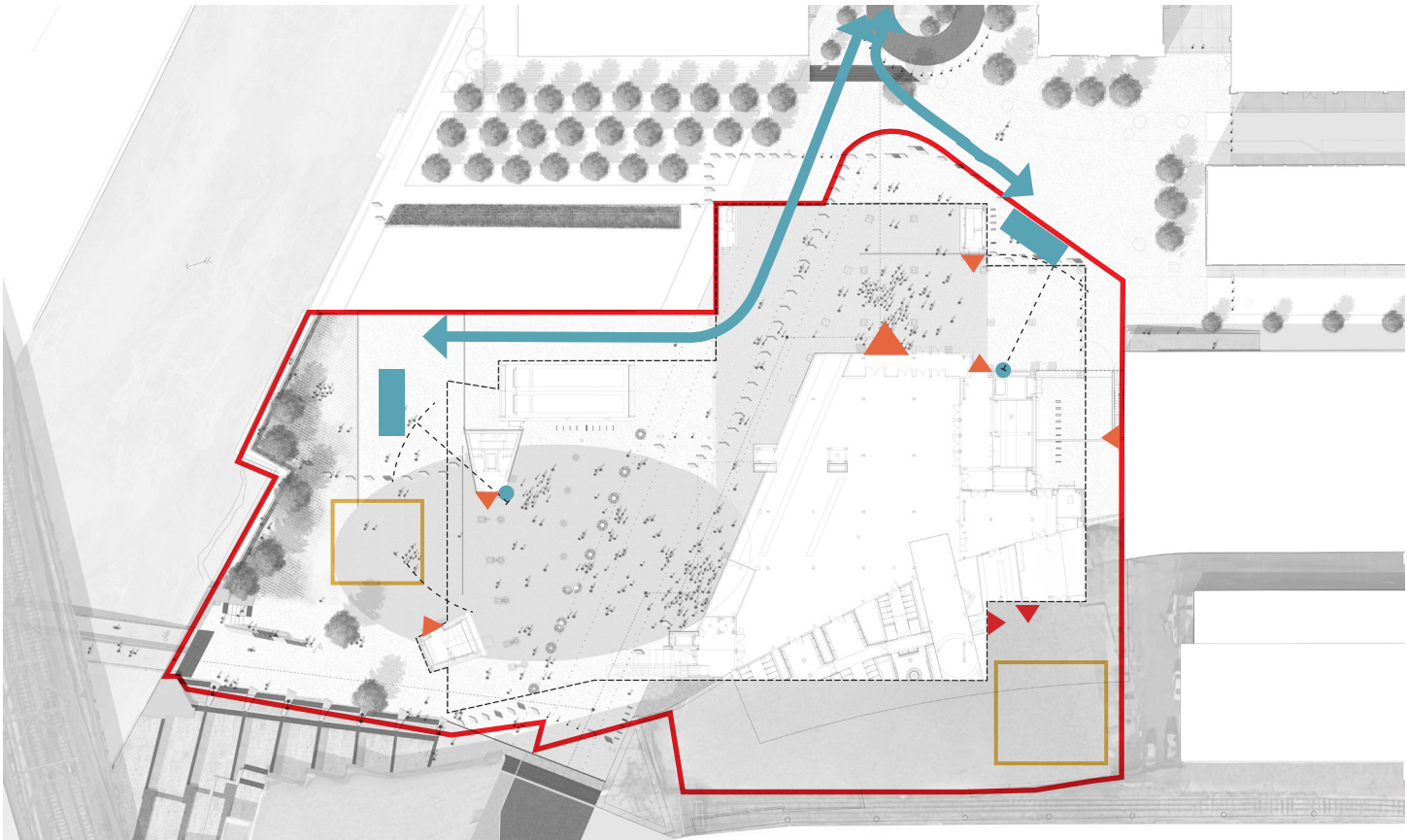
EMERGENCY ESCAPE POINTS, ROUTES AND MUSTER POINTS

There are six emergency escape points from the building, two being the main building entrances. Emergency Escape Points open out into open spaces which can accommodate large numbers of people.

Fire Tender access is provided in two locations - one in Factory Square and one in Festival Square. Fire tender setting down points are 10m x 4m and are located no more than 18m from a dry riser location.

Fire Muster Points are located at Factory Square along the river for the main building and on the upper viaduct for the tower.

- KEY
- Primary Escape Route
 - Secondary Escape Route
 - Viaduct Level Escape Route
 - Dry Riser Position
 - Fire Tender Setting Down Point
 - Fire Tender Access
 - Fire Muster Points



CYCLIST FLOW AND ACCESS SHARE WITH CARE

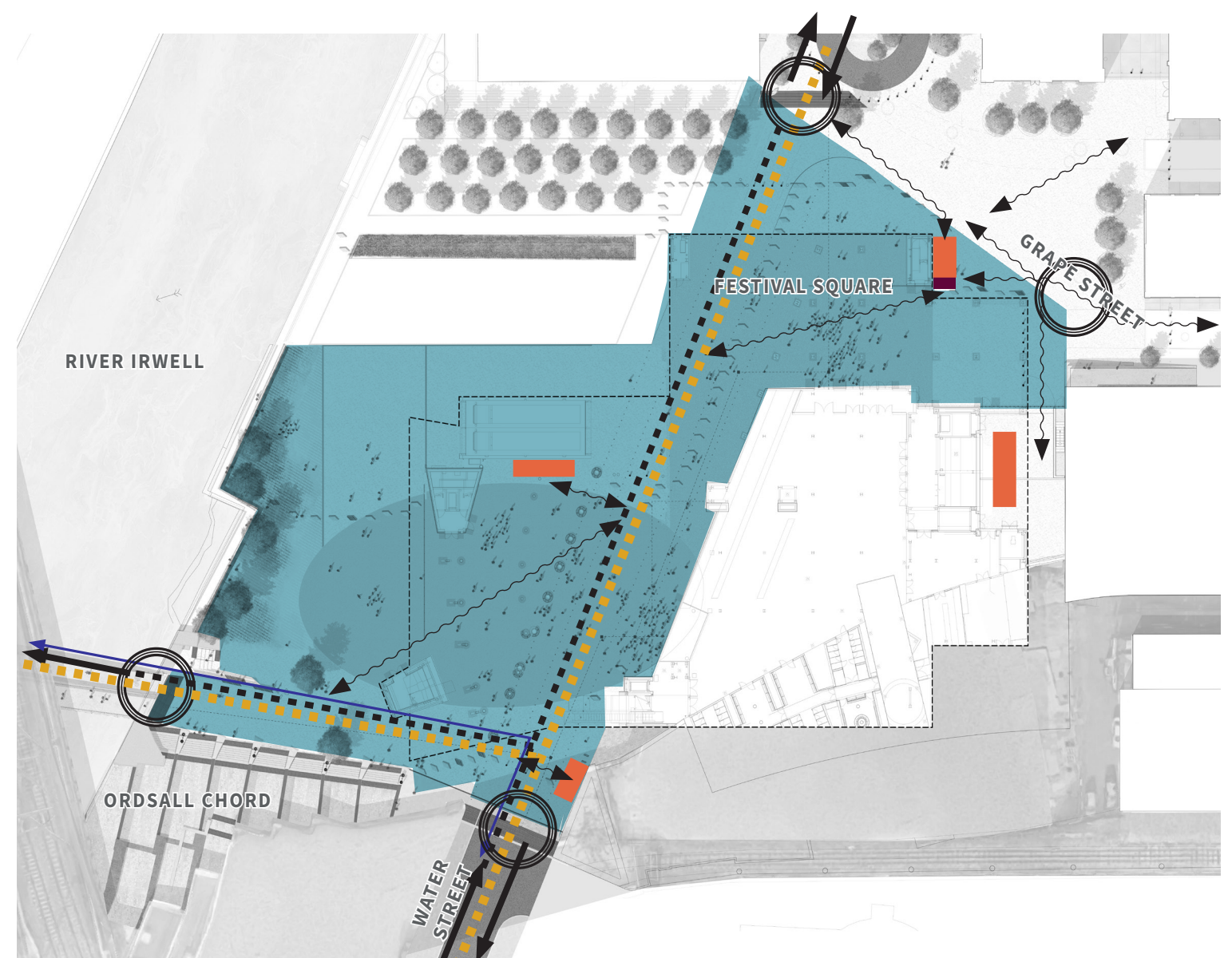
The public realm will be identified as a 'share with care' zone whereby cyclists and pedestrians have equal rights to sharing the space but with raised awareness for each other. Wayfinding and signage will be key to informing cyclists and walkers on how to navigate themselves through the site and the wider context. Similarly, how visitors use the public realm in a balanced and considerate manner will be expressed with the appropriate signage.

National Cycle Route 6 and Bee Network (a network of safe cycling routes across Manchester) pass through the site and will be signposted for easy navigation. Locations and branding of signage is to be developed as part of the signage wayfinding strategy.

Parking for 40 cycles is provided in the public realm - 30 along Water Street with close proximity to both entrances and 10 located against a mega-column in Festival Square, 25m from the main entrance. Additionally, 20 spaces for staff cycle parking are located in the building service yard. The wider St John's Masterplan will also provide additional cycle parking.

KEY

-  Arrival Points to the Factory
-  Cycle Routes to and from Factory
-  Assumed Primary Cycle Route
-  Assumed Secondary Cycle Route
-  National Cycle Route 6
-  Share with Care
-  Beel Networks
-  Cycle Parking
-  Accessible Cycle Parking



8.2

Inclusive Design

For a detailed statement on Inclusive Access, please refer to “The Factory Manchester, Planning Access Statement” prepared by David Bonnett Associates. David Bonnett Associates (DBA) was appointed by Manchester City Council as Access Consultant to the Factory design team.

Consultation was undertaken with Breakthrough UK accessibility group, a summary of this can be found in [Section 1.2](#).

Requirements are considered for all users including; users with mobility visual and cognitive impairments, deaf users, older users and small children.

AD Part M, BS8300: Volume 1 2018. and Design for Access 2 have been used as a best practice guidance document.

Several design principles are used to accommodate visually impaired users which are outlined below.

LEVEL SURFACES

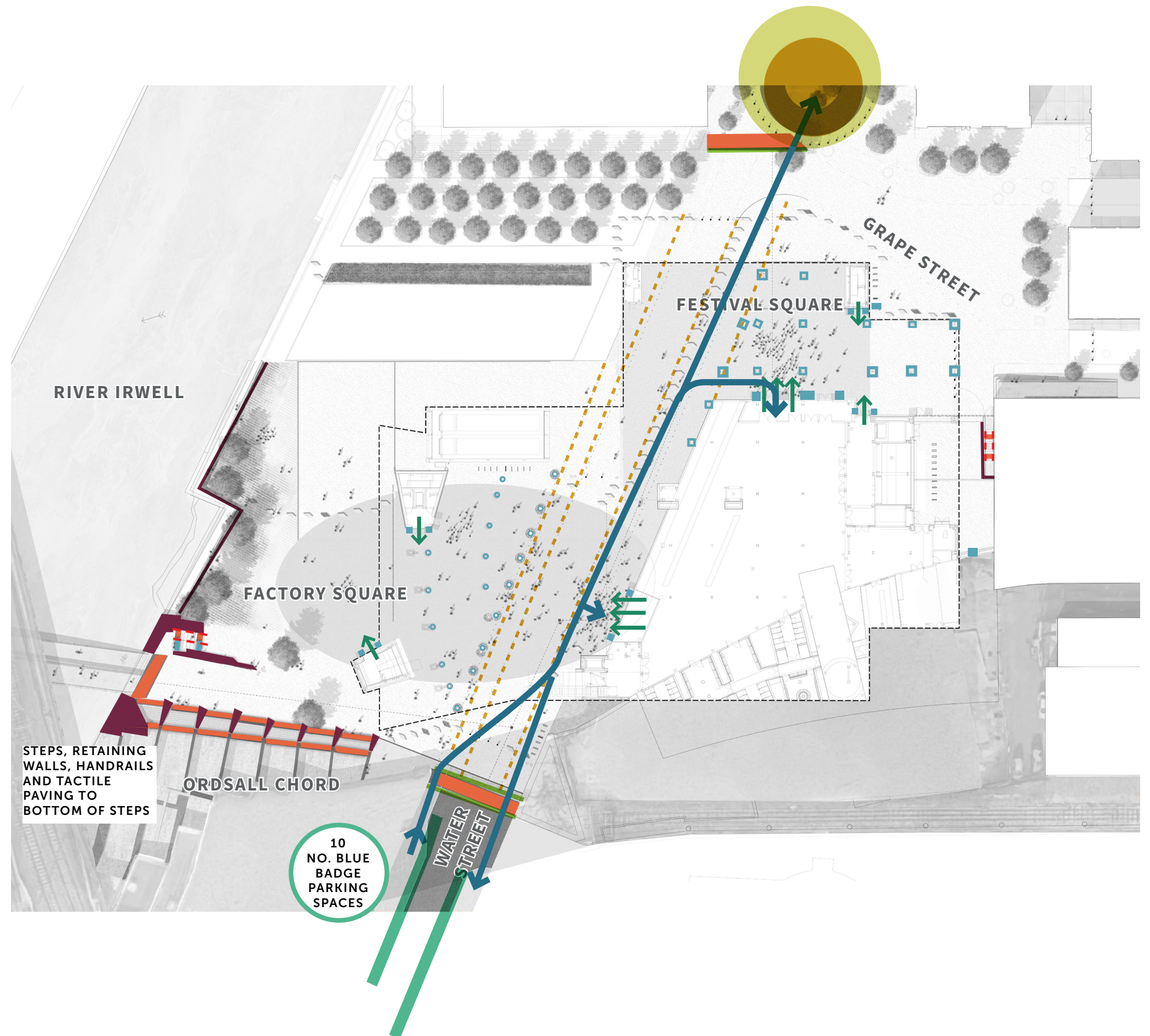
The public realm has been designed as one unified plane - avoiding the use of kerbs steps and edges where possible creating a fully inclusive safe pedestrian zone. Entrances to buildings do not exceed 1:30 and entrance are clearly legible.

COLOUR CONTRAST STEP NOSINGS

Step nosings will have a contrasting colour so that they stand out and minimise the risk of tripping or falling. Steps will also follow Part M compliance with the incorporation of handrails and tactile paving.

KEY

- Blue Badge Parking
- Drop Off
- Accessible Route from Blue Badge Parking and Drop Off
- Raised Table
- Flush Kerbs
- Demarcation Studs
- Handrail
- Corduroy Hazard Paving
- Visual / Tactile Contrast around Columns and Fire Escapes
- Edge Protection
- Fire Escapes - Ground Floor



TEXTURE CONTRAST

There are several building columns located within the public realm. It is proposed that a variation in texture or finish will be applied around columns to provide warning to visually impaired users. Columns will be surrounded with a brushed finish to contrast the general finish applied to the rest of the surface.

TACTILE PAVING TO CYCLE/FOOTWAYS

A 2400mm band of tactile hazard paving will be provided to the start and end of foot/cycleways to raise users awareness and to slow down cyclists. The principle of share with care will be applied across Factory site. Adequate signage will be provided.

FURNITURE ELEMENTS

A proportion of seating elements will be installed with timber arm and back rests. The use of timber for these offers a tactile material which is not cold to the touch. Seating elements will also contrast in colour sufficiently from their surroundings.

LIGHTING

The public realm will be sufficiently lit to enable all users to navigate the space, this is outlined in more detail in Section 5.2. No lighting projections are proposed within the public realm design but might form part of an artist commission.

CONTRAST TO STEPS



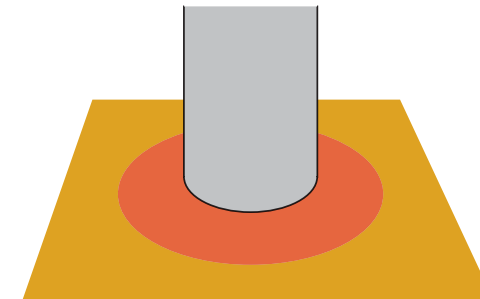
CORDUROY HAZARD PAVING

OWNERSHIP DELINEATION



DEMARCATIION STUDS

VISUAL / TACTILE CONTRAST TO COLUMNS



EXAMPLE IMAGE: BRUSHED IN SITU CONCRETE TEXTURE CHANGE

VISUAL / TACTILE CONTRAST TO FIRE ESCAPES



EXAMPLE IMAGE: IN SITU CONCRETE TEXTURE CHANGE (SLIP-RESISTANT)

8.3

Servicing Strategies

ACCESSIBLE PARKING

Ten accessible blue badge parking spaces are proposed to the south of Water Street. The blue badge parking provision has been increased from 5 to 10 spaces located to the south. The closest blue badge parking space is approximately 45m from the secondary building entrance and approximately 95m from the main building entrance.

DROP OFF

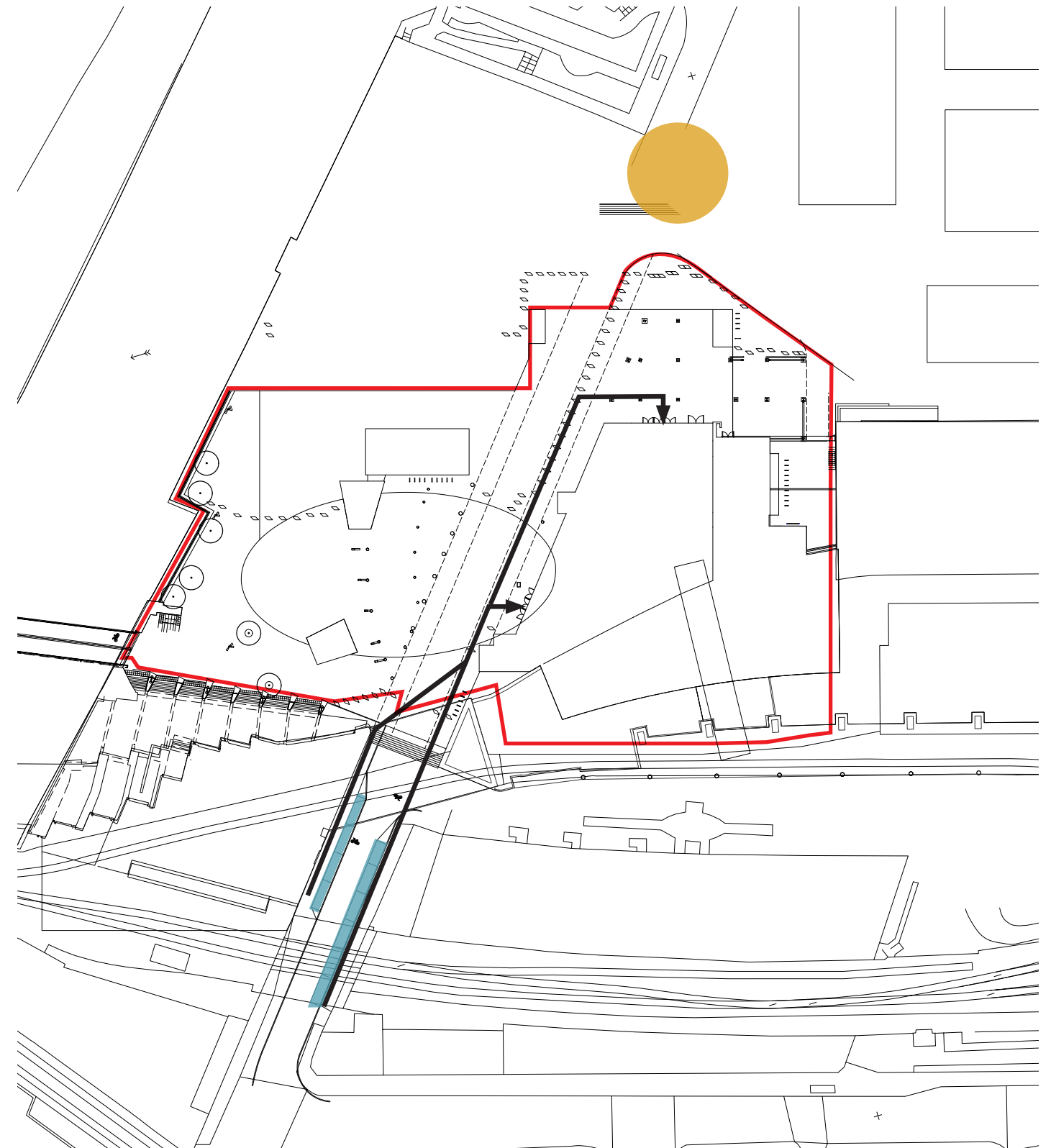
There are no formal taxi ranks on Water Street but there is scope for taxis to drop off and pick up on Water Street north of Factory. Here there is space for large cars to U-turn, however there will be a no-waiting traffic order to prevent vehicles waiting.

There are four existing taxis ranks in the area:

- o Deansgate: Opposite St John Street
- o Hardman Street
- o Byrom Street: Adjacent to the Opera House
- o Liverpool Road: Adjacent to MSI

KEY

-  Drop Off Area
-  10 no. Blue Badge Parking Spaces
-  Route to Main Entrances



SERVICE YARD AND TRUCK LIFT ACCESS

During internal events major equipment is delivered to the truck lift, which is accessed from the north of the site. Ingress and egress is from the west side of the truck lift. Vehicle movements are infrequent and would be timed to avoid periods of high pedestrian activity leaving the Square free of vehicles for most of the day so the space functions as part of the public realm. Any reversing manoeuvre would be controlled by a banksman.

The service yard, used for everyday deliveries and waste storage and collection, will be accessed from the north via Water Street before turning onto Grape Street. Service vehicles must then reverse out of the service yard and exit back along Grape Street.

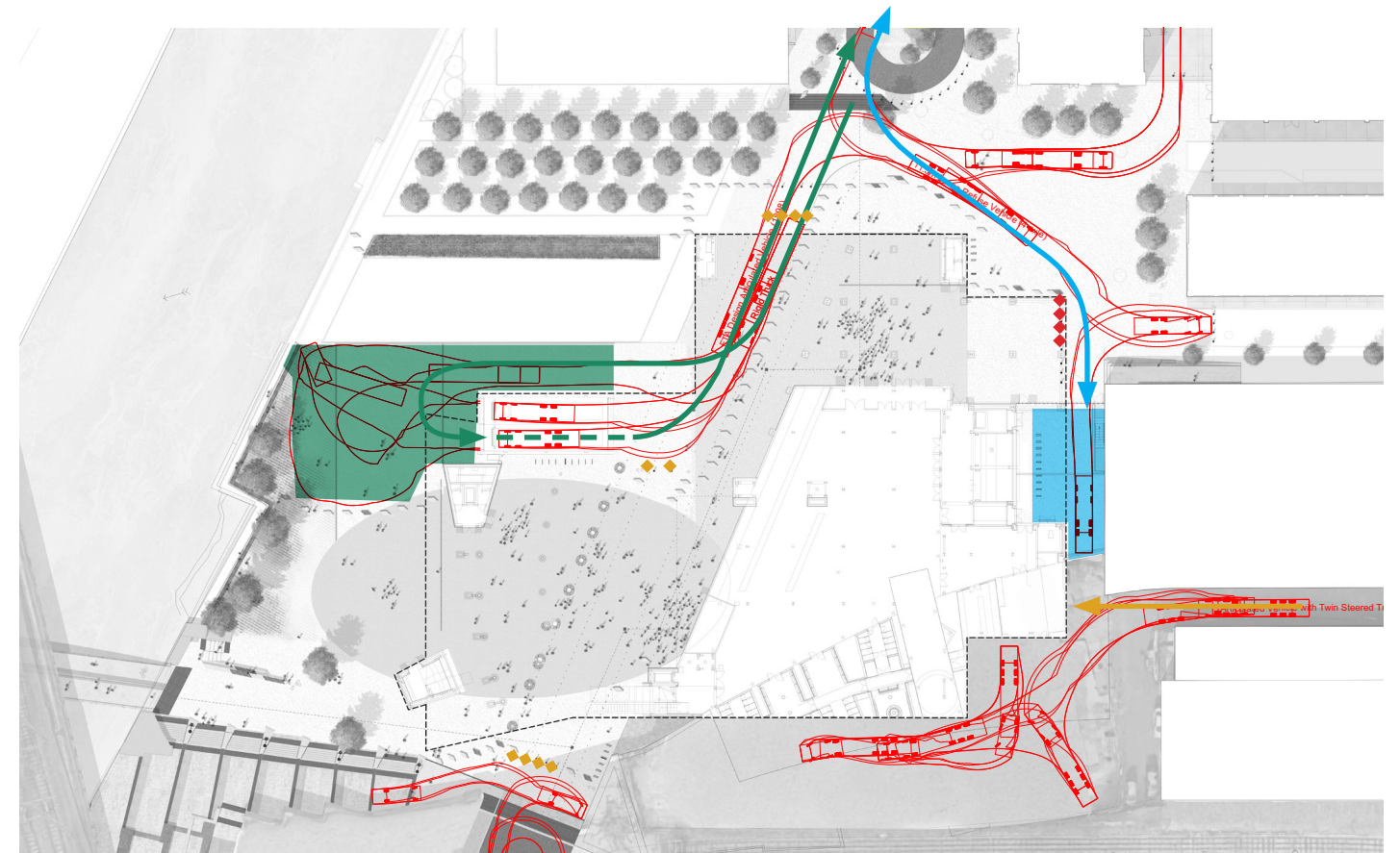
Access for the truck lift and service yard are controlled to the north on Water Street using telescopic bollards managed 24/7 by MQL site management team supported by CCTV, intercom and ANPR facilities.

There is a control point to the south of Factory on Water Street which prevents general traffic accessing the pedestrianised area. This also has telescopic bollards under management control.

As well as The Factory Service vehicles the access into the controlled area is permitted for emergency vehicles, statutory utility and building maintenance vehicles.

KEY

-  Truck Lift Access Route
-  Service Yard Access Route
-  Viaduct Level Access Route
-  Truck Lift Turning Area
-  Service Yard
-  Bollards
-  Service Vehicle Tracking

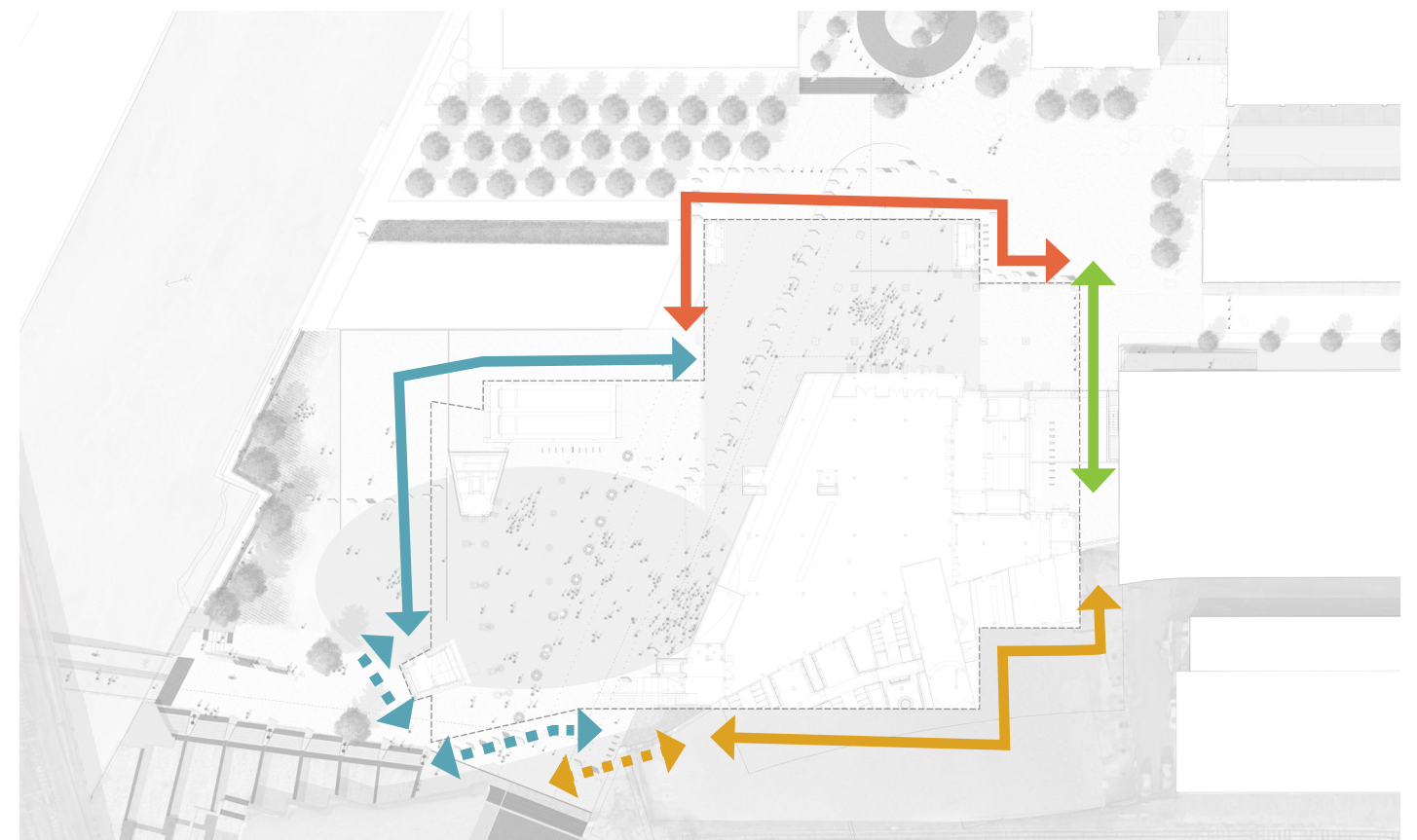


BUILDING MAINTENANCE STRATEGY

Maintenance access strategy for the building facade and roof structure is going to be via MEWP from concourse and viaduct level.

KEY

-  MEWP Access from Ground Floor Level Zone A - 15m reach @ 30m height
-  MEWP Access from Ground Floor Level Zone A - 15m reach @ 30m height specific permission required
-  MEWP Access from Ground Floor Level Zone B - 7.5m reach @ 37m height
-  MEWP Access from Ground Floor Level Zone C - 5m reach @ 37m height
-  MEWP Access from Viaduct Level Zone D - 7.5m reach @ 37m height
-  MEWP Access from Viaduct Level Zone D specific permission required
-  - 7.5m reach @ 37m height



OUTSIDE BROADCAST

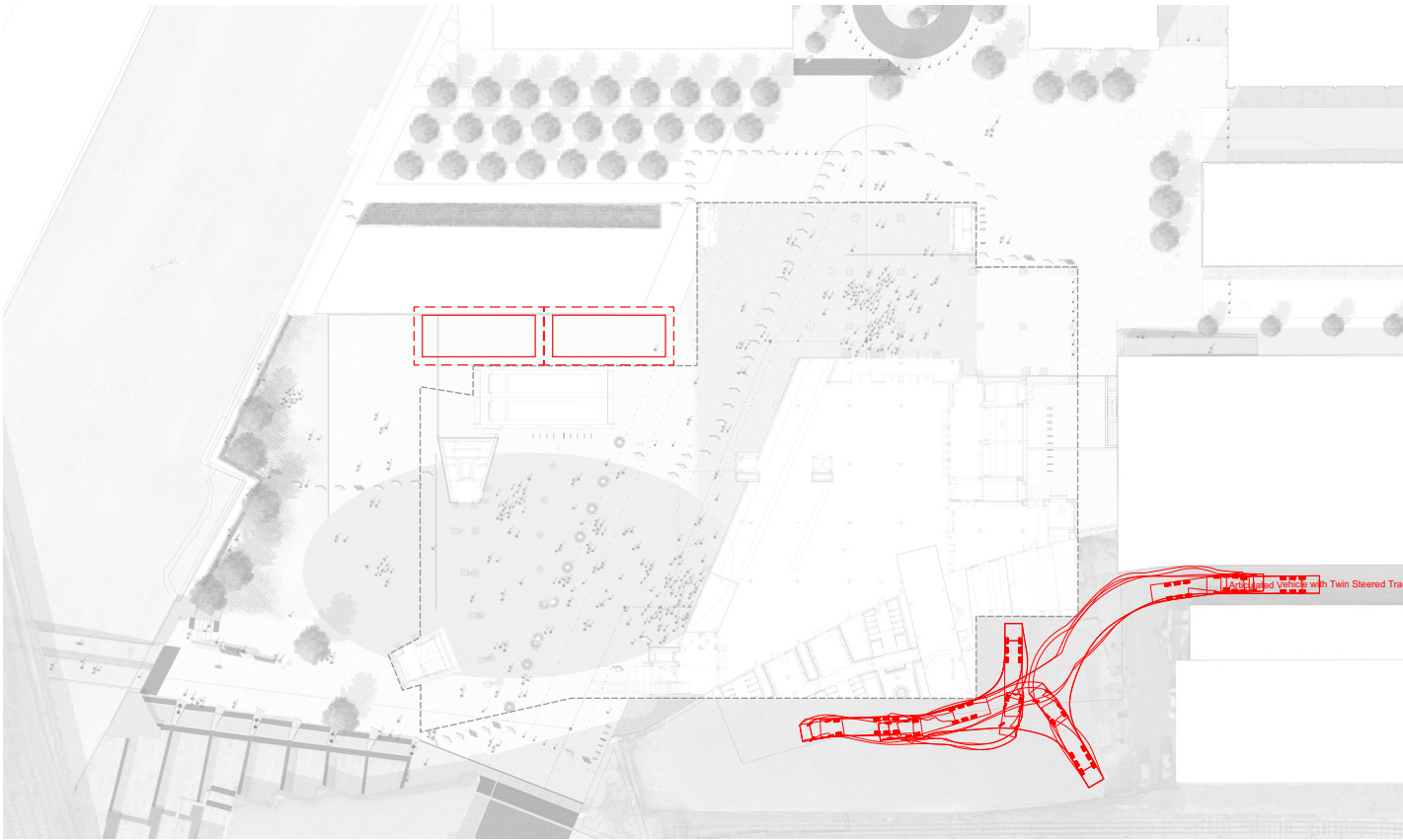
The viaduct level access is used for Outside Broadcast and for items too large for the truck lift and is accessed from Lower Byrom Street.

There are also two Outside Broadcast setting down spaces allocated north of the truck lift which can be utilised if required.

KEY

OB Vehicle Parking Locations

OB Vehicle Tracking



PUBLIC TRANSPORT

The Factory's location in the City Centre means that it benefits from good accessibility by public transport, taxis and by coach.

As a major metropolitan centre, multiple modes of public transportation will be available for The Factory visitors, with an assumed 30% of attendees arriving by either Train Tram or Bus.

Rail and Metrolink Stations are located within 800m from The Factory and serve much of the conurbation until late at night and connect onto Piccadilly and Victoria Rail Stations.

There is one bus service serving Salford on Liverpool Road with frequent bus services on Bridge Street as well as the Leigh Guided Busway routes which are a 550m walk from The Factory.

Free Bus is free and accessible and links the major destinations in Manchester. The number 1 route comes close to The Factory stopping on Gartside Street and Irwell Street in the Weekday peak and on Liverpool Road at weekends

KEY

Public Realm Boundary

Planning Boundary

National Railway Line

Metrolink

Bus Route

Metro Shuttle Route

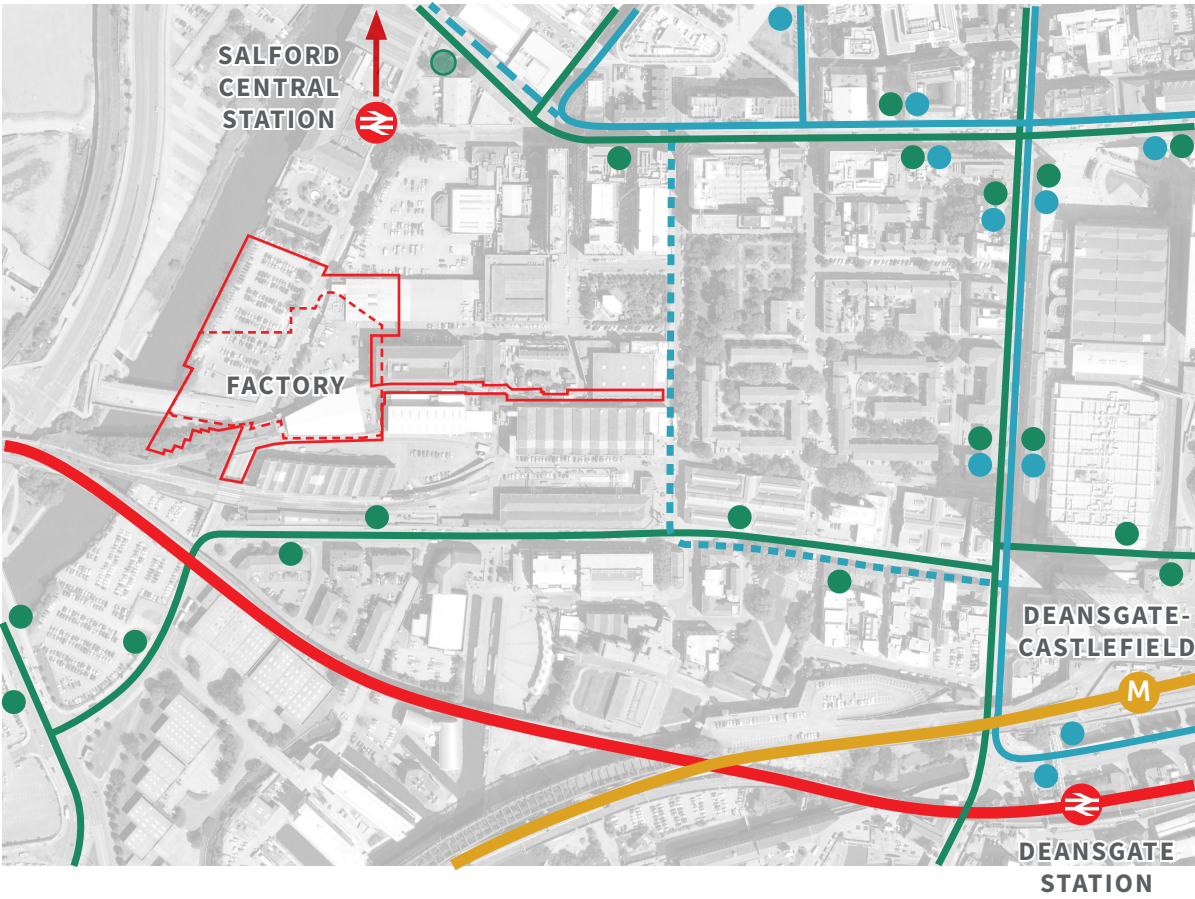
Weekend Free Bus Service

Weekday Peak Hour Free Bus Service

Bus Stop

Metro Shuttle Stop

New Bus Stop





MANCHESTER

2 Back Grafton Street
Altrincham,
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