

# Snow Hill

The title 'Snow Hill' is rendered in a large, bold, black sans-serif font. The letters are stylized with human silhouettes integrated into them. The 'S' is a simple outline. The 'n' contains a silhouette of a person walking. The 'o' contains a silhouette of a person sitting on the ground. The 'w' contains a silhouette of a person in a wheelchair. The space between 'w' and 'H' contains a silhouette of a person with arms raised. The 'H' contains a silhouette of a person sitting in a chair. The 'i' contains a silhouette of a person standing. The 'l' contains a silhouette of a person standing. The final 'l' contains a silhouette of a person in a dynamic, athletic pose.

Station Square Public Realm Stage 3 Report

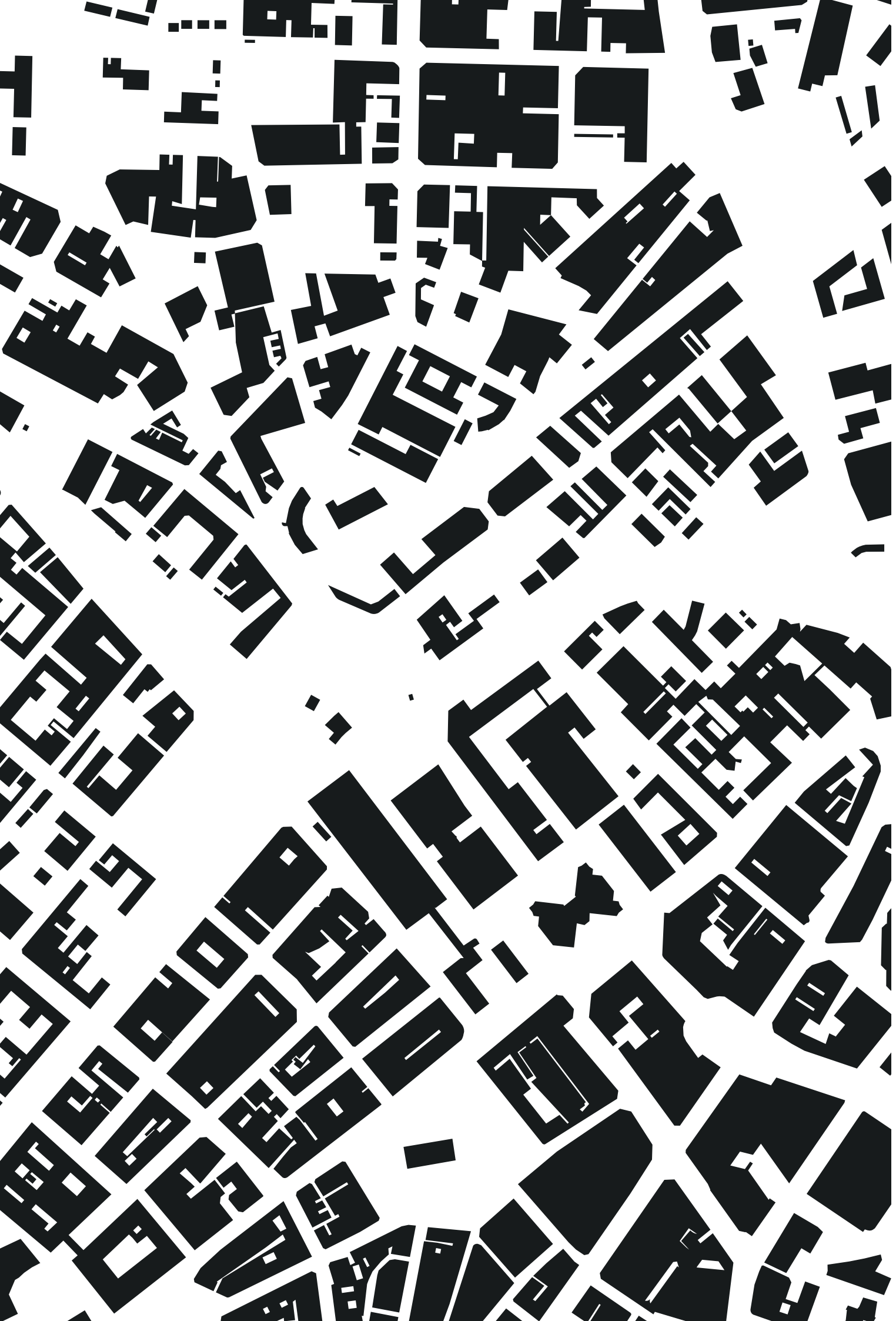




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# Introduction

**Snow Hill Station Square will become a key gateway space for Birmingham.**

This report has been prepared in support of a RIBA Stage 3 proposal for the Snow Hill Station Square Public Realm in Birmingham.

The proposals comprise of traffic calming, accommodation of different modes of transport, space for events and food and beverage offers, tree planting and unique urban furniture features and detailing within this business district setting.

The proposals have been costed and a summary is included within this document.

*'The vision for Snow Hill Square is to create a pedestrian first space.*

*A place where it's enjoyable to walk and cycle. A De-cluttered environment that's well connected and easy to navigate. A place that is safe, accessible and inclusive.*

*It will be a space of activity and vitality where social and networking activities are encouraged.*

*The Square will be a high quality environment with a simple approach that delivers an authentic character.*

*It will be a beautiful space that celebrates it's context while adding value to the Snow Hill area'.*

# Introduction

## Scope & Brief

### Scope & Brief

Broadway Malyan have been appointed alongside WYG (Highways Design, Civil and Structural Engineering, Costing) and Hoare Lea (Lighting Design) to prepare RIBA Stage 3 Public Realm proposals for Snow Hill Station Square and Colmore Row. Based on the completed Stage C Outline Proposals (now referred to as RIBA Stage 2), the proposals were required to accommodate a few major changes that made a review of the Stage 2 proposals necessary. This included three main considerations:

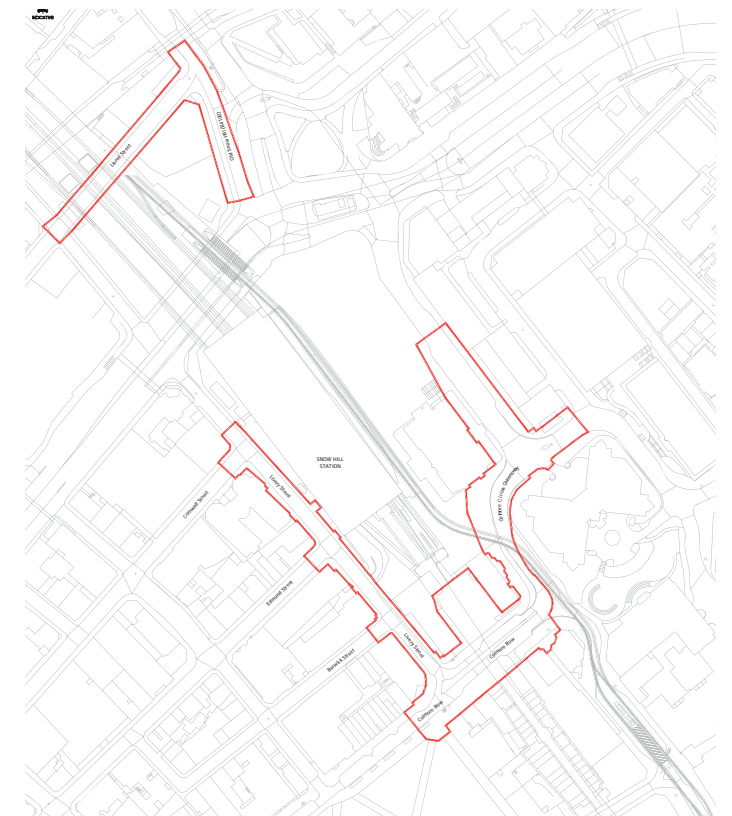
- Highways mitigation works to the junctions of Colmore Circus Queensway/Snow Hill Queensway, Livery Street/ Cornwall Street and Lionel Street/ Old Snow Hill.
- 1 Colmore Row access for a new restaurant in the basement – Amber Real Estate/

Architects K4 have proposed a single floor glass pavilion housing a lift and staircase, and a service area (food and beverage), which is currently awaiting the planning decision.

### Highways Mitigation Projects

In order to maintain the design vision defined in the client brief from the outset, and to achieve the desired improvement of Colmore Row and provide a more pleasant public realm and urban environment in mid and longer term, the following measures were integrated into the scheme:

- Introducing two-way flow on Livery Street between Cornwall Street and the Livery Street carpark entrance
- Swapping the location of the SH4 bus-stop on Livery Street and the taxi rank in front of Snow Hill Station
- Removing the right-turn from Livery Street to Colmore Row
- Rerouting Bus Routes 7, 46 and 101
- Reconfiguring the junction of Colmore Circus Queensway / Snow Hill Queensway



Plan of Snow Hill identifying the Mitigation Sites



## 1 Colmore Row Basement Access

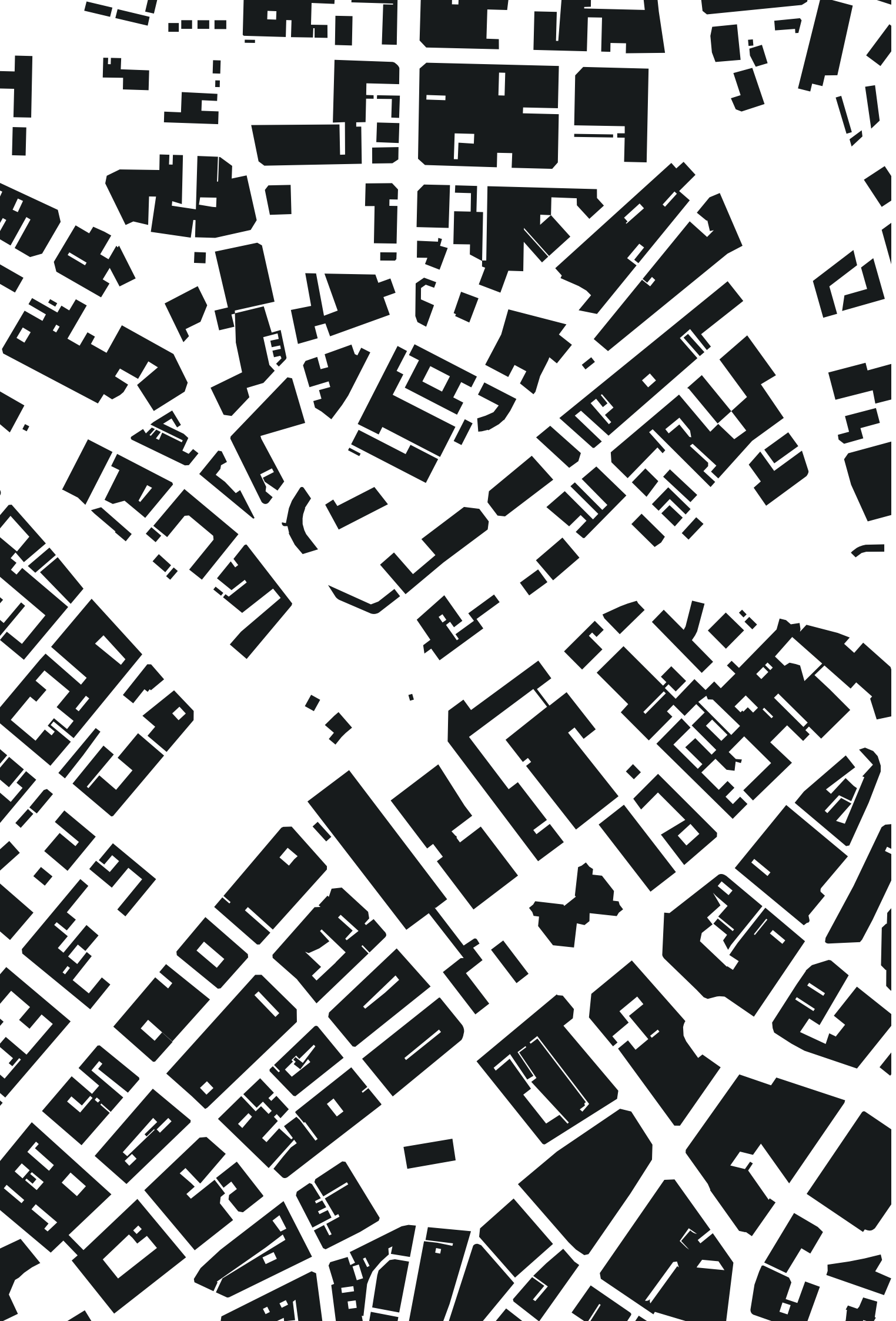
Amber Real Estate and K4 Architects have recently submitted a planning application for their proposals of the glass pavilion located within the centre of the Station Square. The pavilion accommodates access to the basement via lift and stairs, and a kitchen servery facing 1 Colmore Row. A feature lighting wall has been proposed in its centre leading down into the basement.



Amber Real Estate proposals for access to portal No.1 Colmore Basement







# Baseline Analysis

Within this section we record our site appraisal, historic considerations, stakeholder input and identify constraints and opportunities



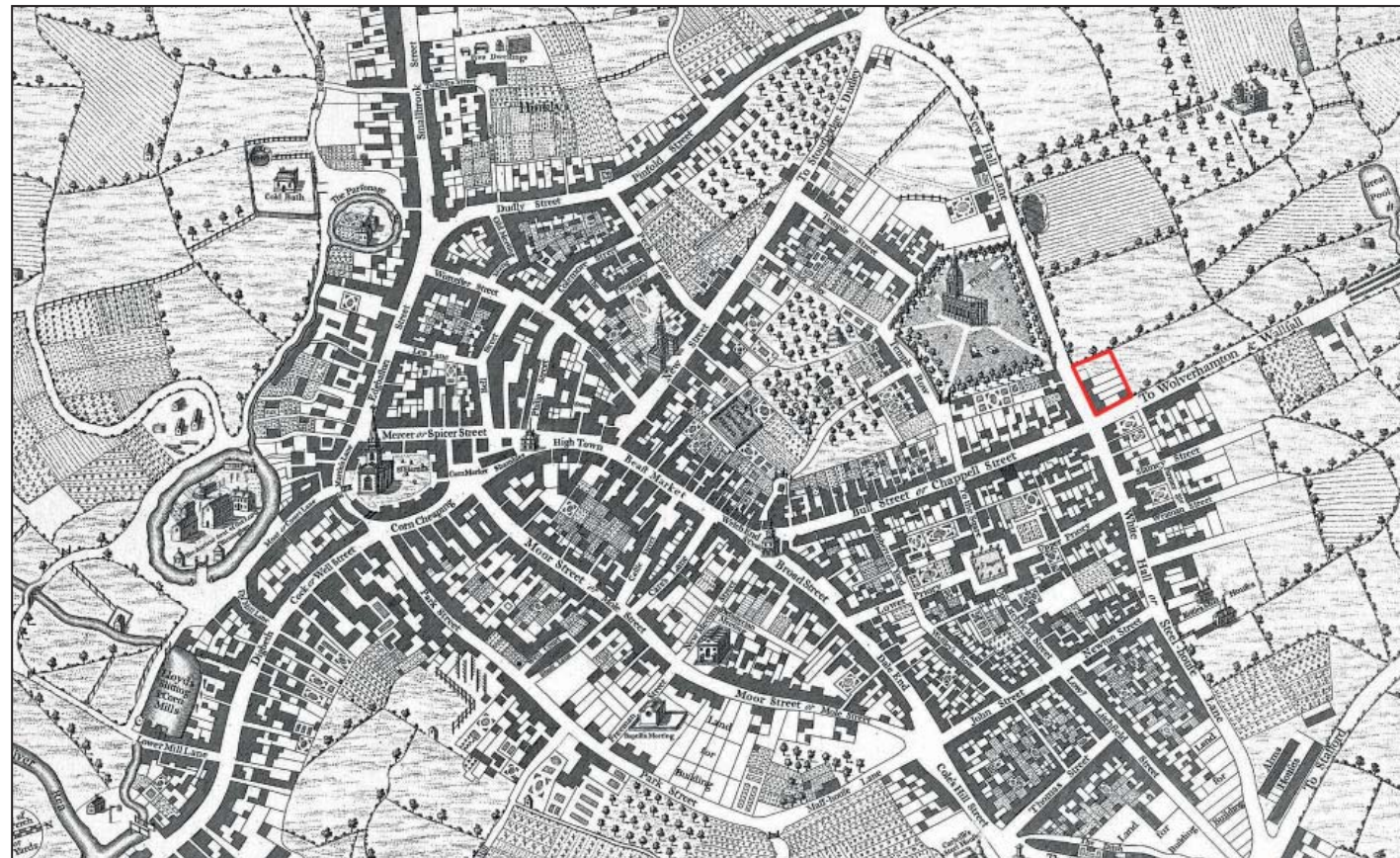
# Baseline Analysis

## Historic Site Appraisal

### *Snor Hill: A twisted route up a hill to avoid obstacles or ensure easy ascent.*

#### What's in a name: Snow Hill

- Snor: Anglo Saxon for uncertain. Snore Hill: A twisted route up a hill to avoid obstacles or ensure easy ascent.
- Derived from orientation of actual location. North West Facing hill side would result in snow remaining longer on this elevation during winter months
- 18th C Marketing stunt to promote the site as associated with London namesake



Plan of Birmingham as surveyed in 1731

- Westley's map of 1731 is oriented with west at the top.
- New Hall Lane is now Colmore Row, the road to Stourbridge and Dudley is New Street. The road to Wolverhampton and Walsall is Constitution Hill.
- Settlement Edge/Countryside interface
- Geologically located along red sandstone ridge
- Hedgerows and hedgerow trees form and enclose the landscape
- Important cross road point connecting Birmingham to the Black Country
- Proximity to St Philip's is evident
- Industrial Development commenced in 1757 with - Mayer Oppenheim opens Oppenheim's Glassworks
- This was Birmingham first glassworks
- Oppenheim's owned the royal patent for red (ruby) glass. This was used as raw material by the cities glass makers.
- At the same time the local area is active as a city quarter with the establishment of worlds first mutual building society, charity school, birmingham library and button and buckle makers.
- 19th Century Medical Vapour Baths located at Colmore Row



Historical plan of Birmingham



# Baseline Analysis

## Historic Site Appraisal

### History, Decay and Rebirth

At its height Snow Hill Station once rivalled New Street Station, Birmingham largest and busiest station, with competitive services to destinations across the UK including London, South Wales, and South West England. The station was rebuilt three times and between 1906 and 1912 the station received a much grander development.

However, its popularity was only temporary and with the electrification of the main line from London to New Street Station in the 1960's Snow Hill became less popular and led to its eventual decline and closure with the last train departing in March 1972.

Fifteen years after its closure a new Snow Hill Station was opened. This marked the redevelopment of Snow Hill as an active station servicing mainly local lines.

In 1999 the Midland Metro tramway began its operation, and today the metro runs services between Snow Hill Station and New Street with a number of key stops along its route.

### Railway and Great Western Hotel

Its original structure was a simple wooden building, the station buildings were later rebuilt in brick and in 1906 the grand redevelopment saw a large neoclassical building with an ornate facade, designed by Isambard Kingdom Brunel.

The station was widely used by business men and women, holidaymakers, and WW1 troops.

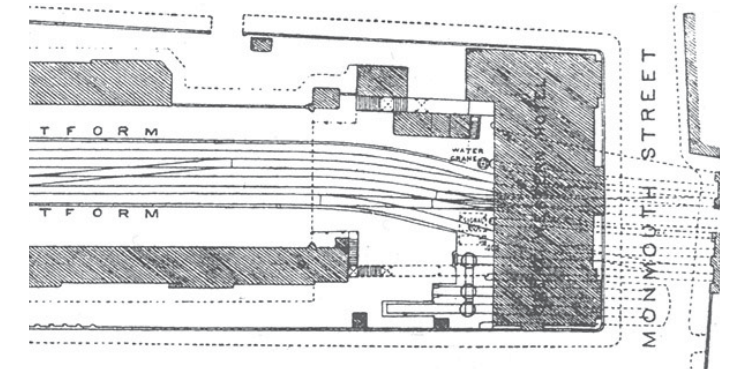
As well as travel trade in the station consisted of fish, milk and fruit.

The Snow Hill tunnel, which passes beneath Corporation Street, High Street and Carrs Lane, was excavated as a deep cutting and later saw the Great Western Arcade built above it, the arcade was damaged by German bombs in WW2, but it was restored in 1984 due to its grade II listing.

The hotel itself, built in 1863, did not prove popular so the company used much of the building for its own office use. The hotel was demolished in 1969.



Snow Hill Station



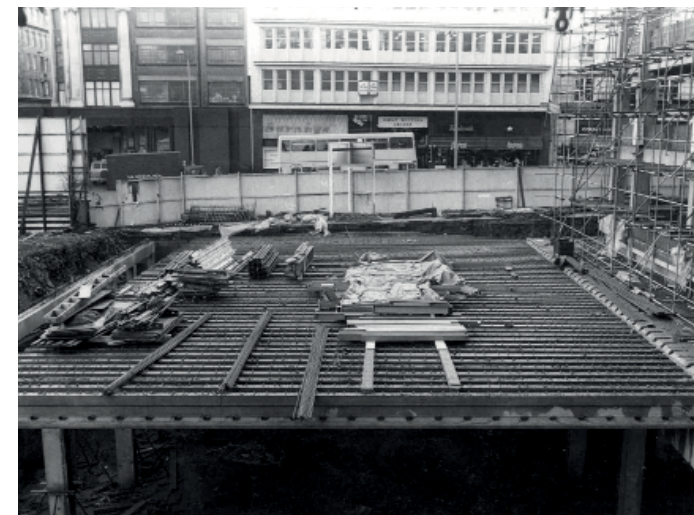
Plan view of the Grand Western Hotel



Great Western Hotel and entrance to Snow Hill Station



Plan view of the Grand Western Hotel along Monmouth Street



Snow Hill Square mid construction



Car park



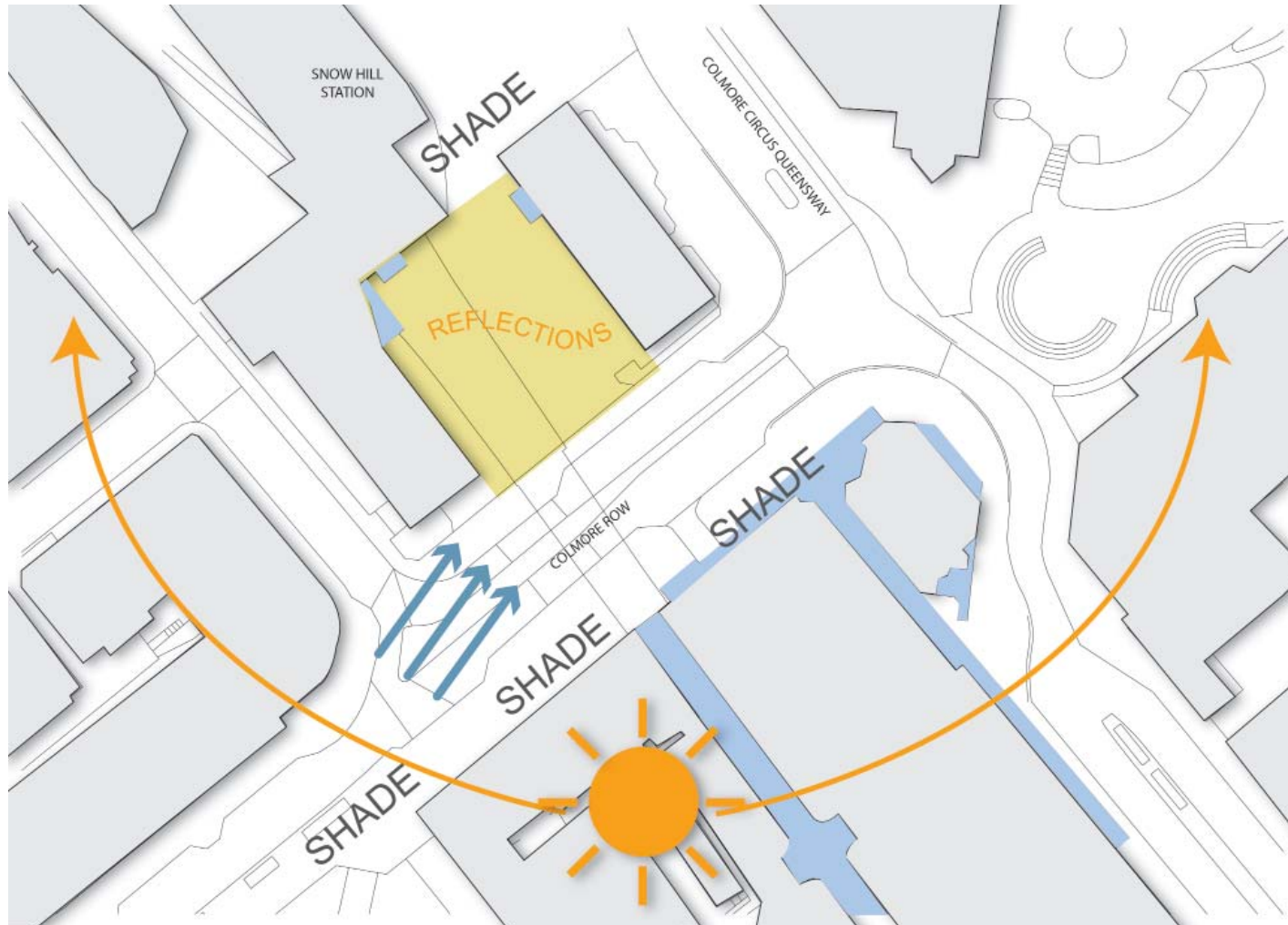
Snow Hill Station in 2003



# Baseline Analysis

## Site Appraisal 01 - Square

### Microclimate



- Some South facing areas - sunny spots
- Reflections from building elevations on sunny days
- Taller building create areas of shade

#### Key

- Overhead shelter
- ← Prevailing winds

### Pedestrian Movement and Access



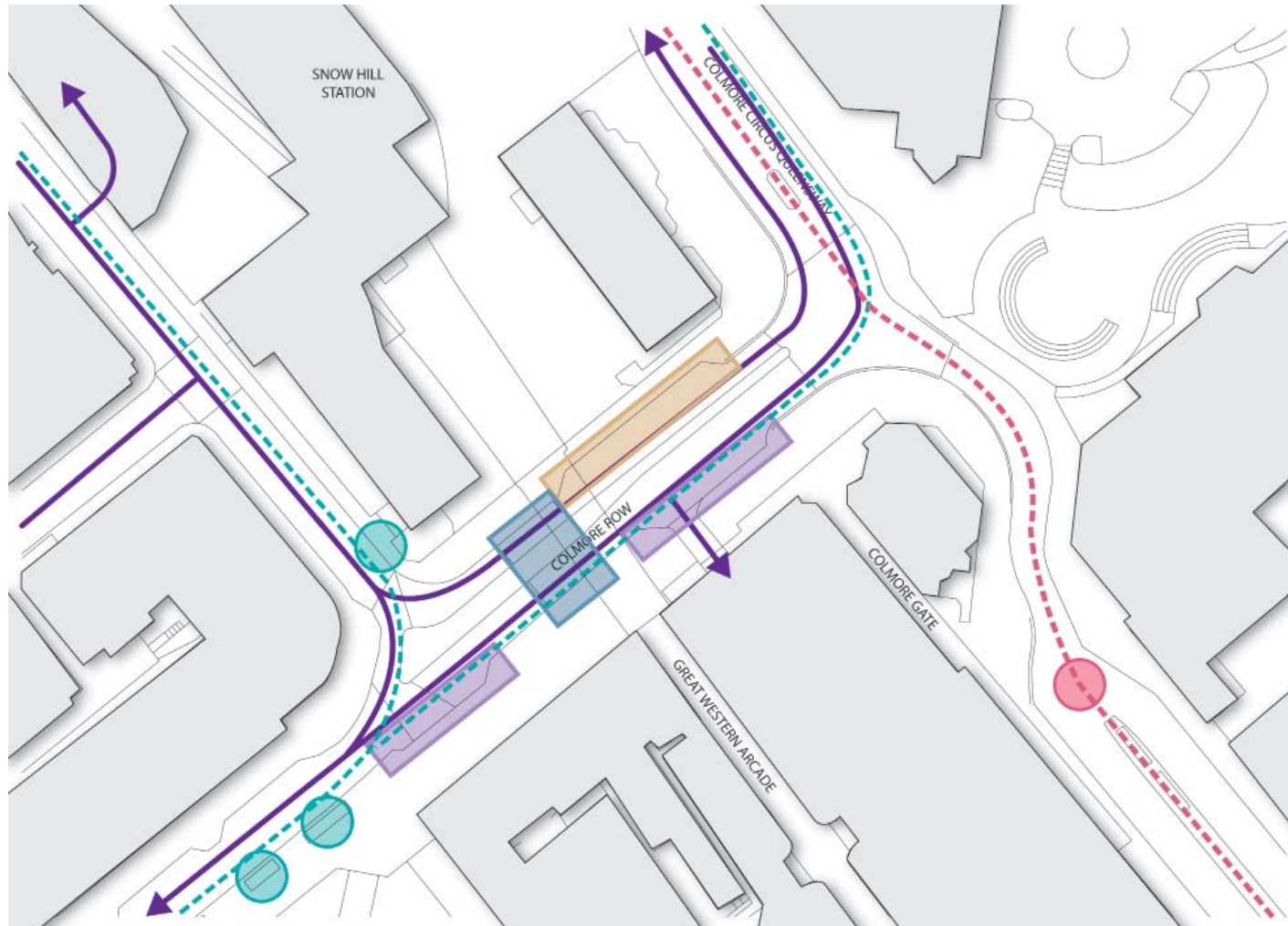
- Significant numbers moving across space between Snow Hill No.1/ Station and Cathedral onto city
- Pedestrian crossing at Colmore Row inefficient and ignored by pedestrians
- Junction of Livery Street and Colmore row a pinch point due to bus stops
- A number of building access points to be maintained

#### Key

- Pedestrian Routes
- ← Retail Access
- ← Office Access
- ← Travel Access
- Pedestrian Crossing



## Vehicular Movement and Access



- Vehicular traffic dominates the study area
- Cars are fast moving and take priority
- Area is used multi modally with buses/cars/taxis/Tram all using the highway
- Taxi rank is used by more than TRO permits
- Loading bays are positioned across the site
- There is a signalised pedestrian crossing

### Key

- Vehicular Routes
- - - Bus Movement
- Bus Stops
- - - Metro Movement
- Metro Stop
- Taxi
- Loading Bays
- Pedestrian Crossing

## Green Infrastructure



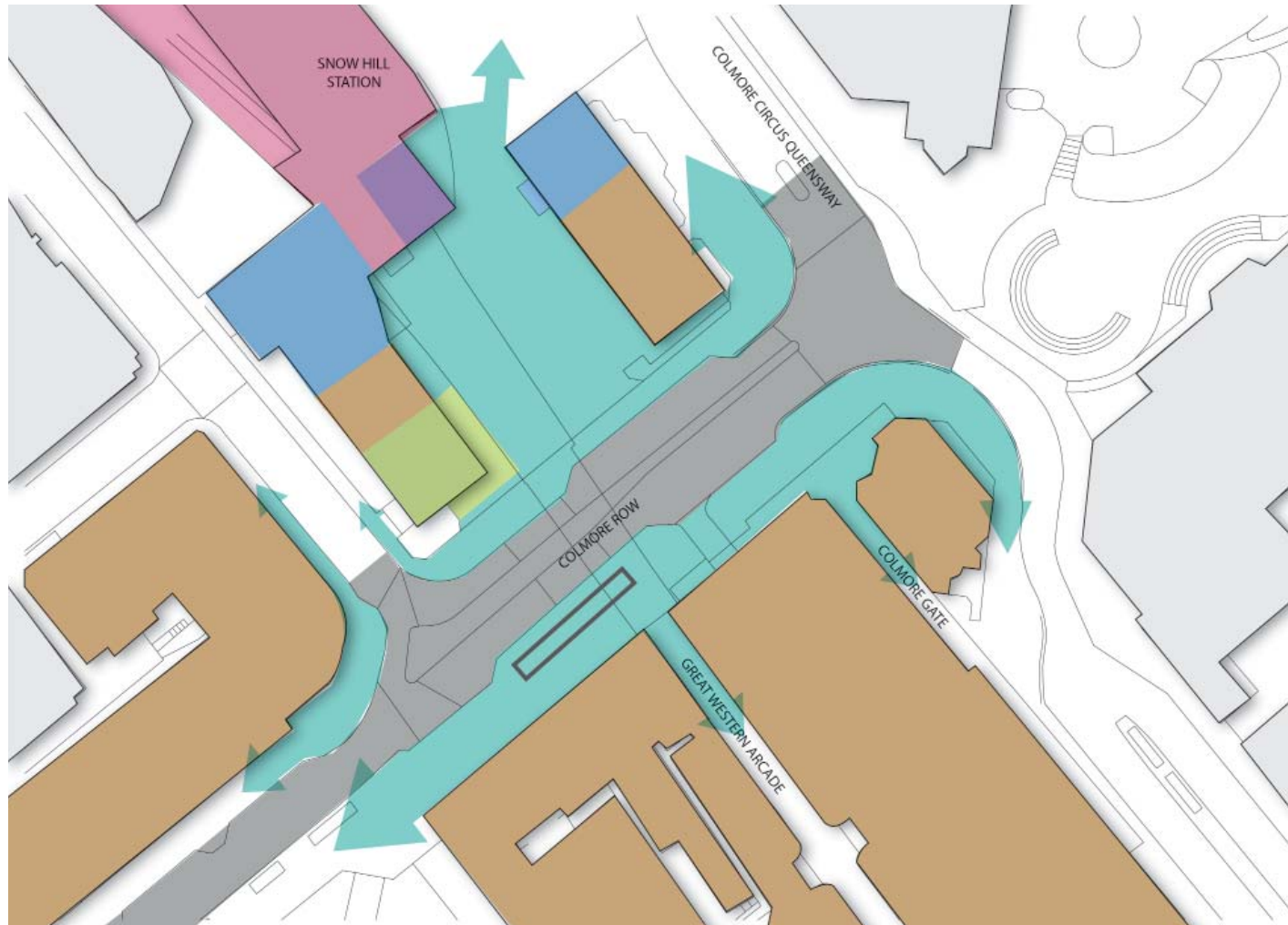
- Some good quality street trees are located within the study area
- These provide shade and shelter
- They soften the street scene and provide human scale to the built form
- All trees are planted in the ground
- Lower quality shrub planting is also located across the immediate site
- A more contemporary planted area is located in Colmore Square

### Key

- Existing Trees
- Existing Shrub/Groundcover



## Land Use

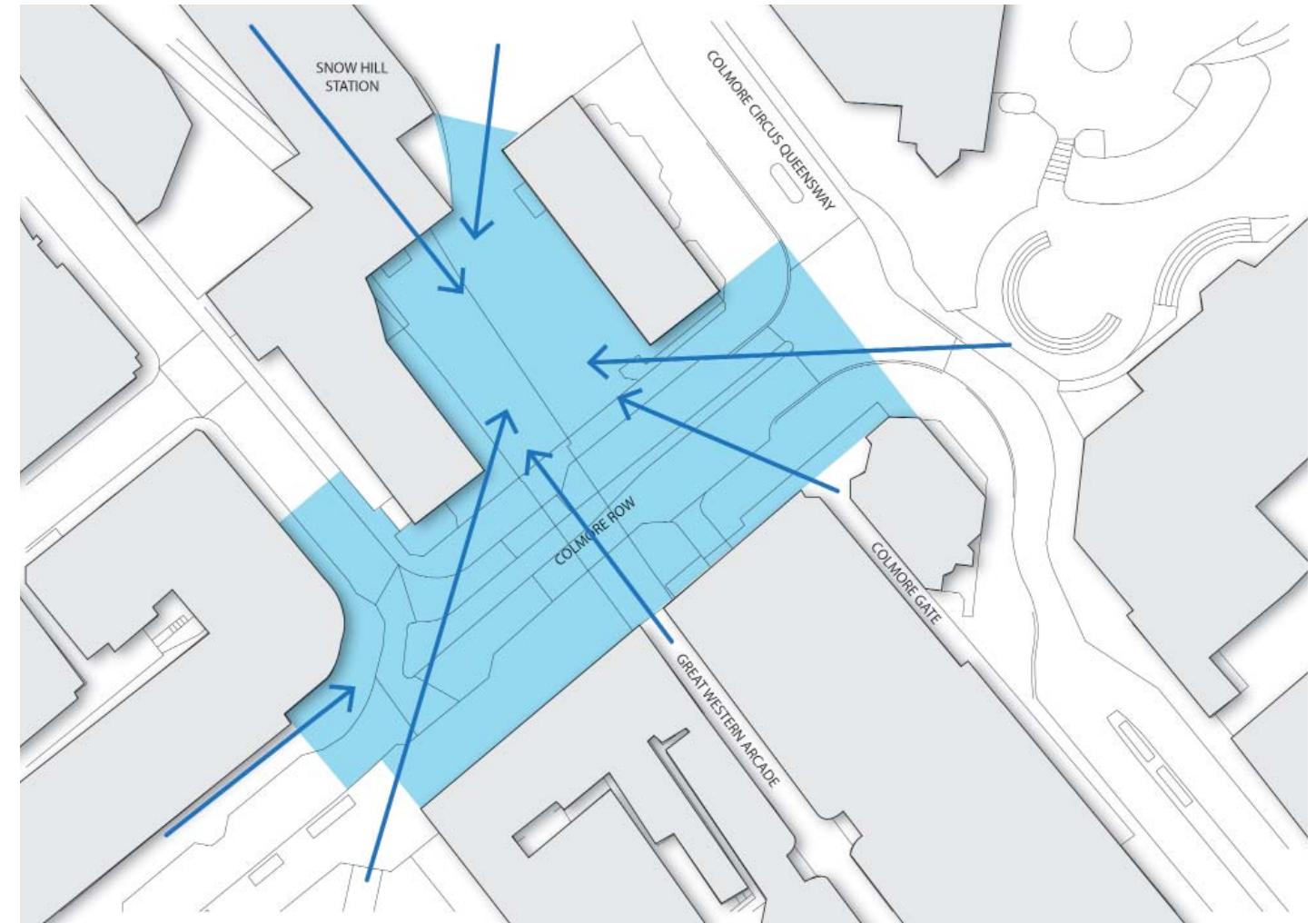


- There are a mix of adjacent uses
- There are active frontage to the square - Costa/ Waitrose
- The station access is a an arrival and departure point within square

### Key

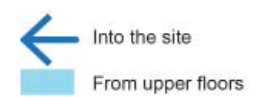


## Views



- There are elevated views into the square from adjacent buildings

### Key

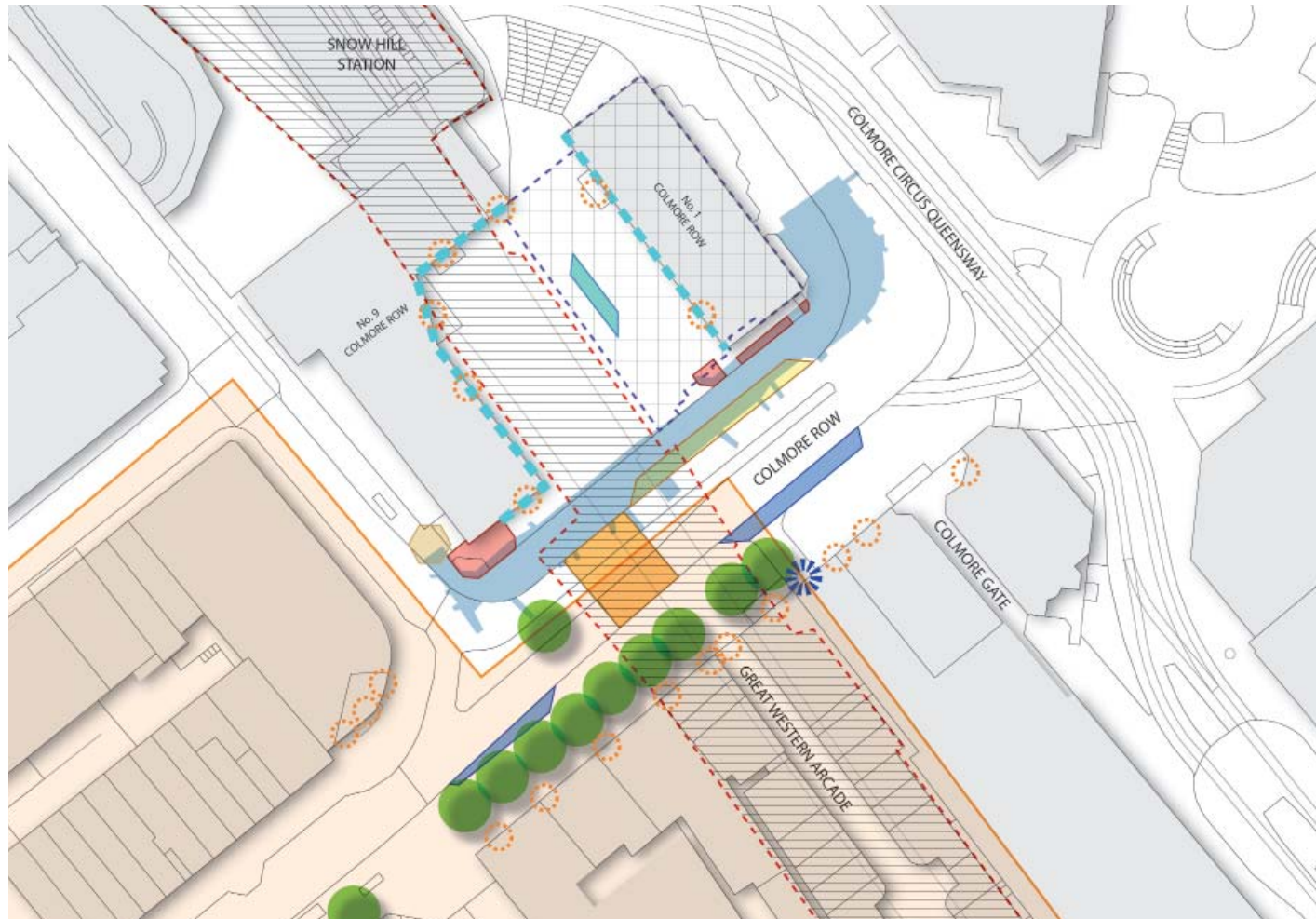




# Baseline Analysis

## Constraints & Opportunities - Square

### Constraints



- Live Tunnel beneath Square
- No.1 Colmore Basement beneath Square and new basement access
- Bus stops to be accommodated
- Taxi Rank to be accommodated
- Loading Bays to be accommodated
- Access to buildings - pedestrians and vehicles to be accommodated
- Utility corridor
- Conservation Area

Key	
	Live Tunnel
	Basement 1 Colmore Row
	Frontage Access
	Vehicle Access
	Existing Raised Planter
	Existing Bus Stop
	Existing Taxi Stop
	Existing Loading Bay
	Existing Trees
	Existing Pedestrian Crossing
	Colmore Row Conservation Area
	Utility Corridor (Unknown)

### Opportunities



- Create Gateways into the Square
- Create areas of Calm and provide opportunity to enjoy hot spots
- Identify locations for tree Planting
- Calm the traffic to prioritise pedestrians
- Maintain access where required
- Create clear and safe crossing points for pedestrians

Key	
	Spaces of Calm
	Opportunities for Planting
	Hot Spots
	Calm Traffic
	Access
	Pedestrian Crossing



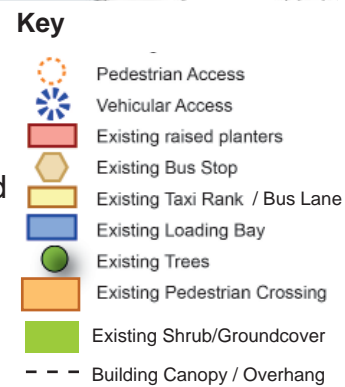
# Baseline Analysis

## Constraints & Opportunities - Snow Hill Queensway

### Constraints



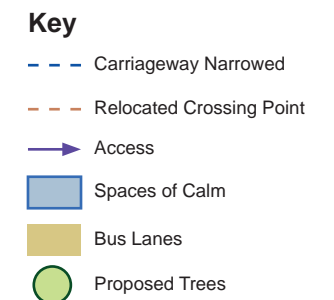
- Vehicle dominated space
- High volume of traffic
- A key bus stop location for a number of bus routes
- Access to buildings - pedestrian and vehicle access to be accommodated



### Opportunities



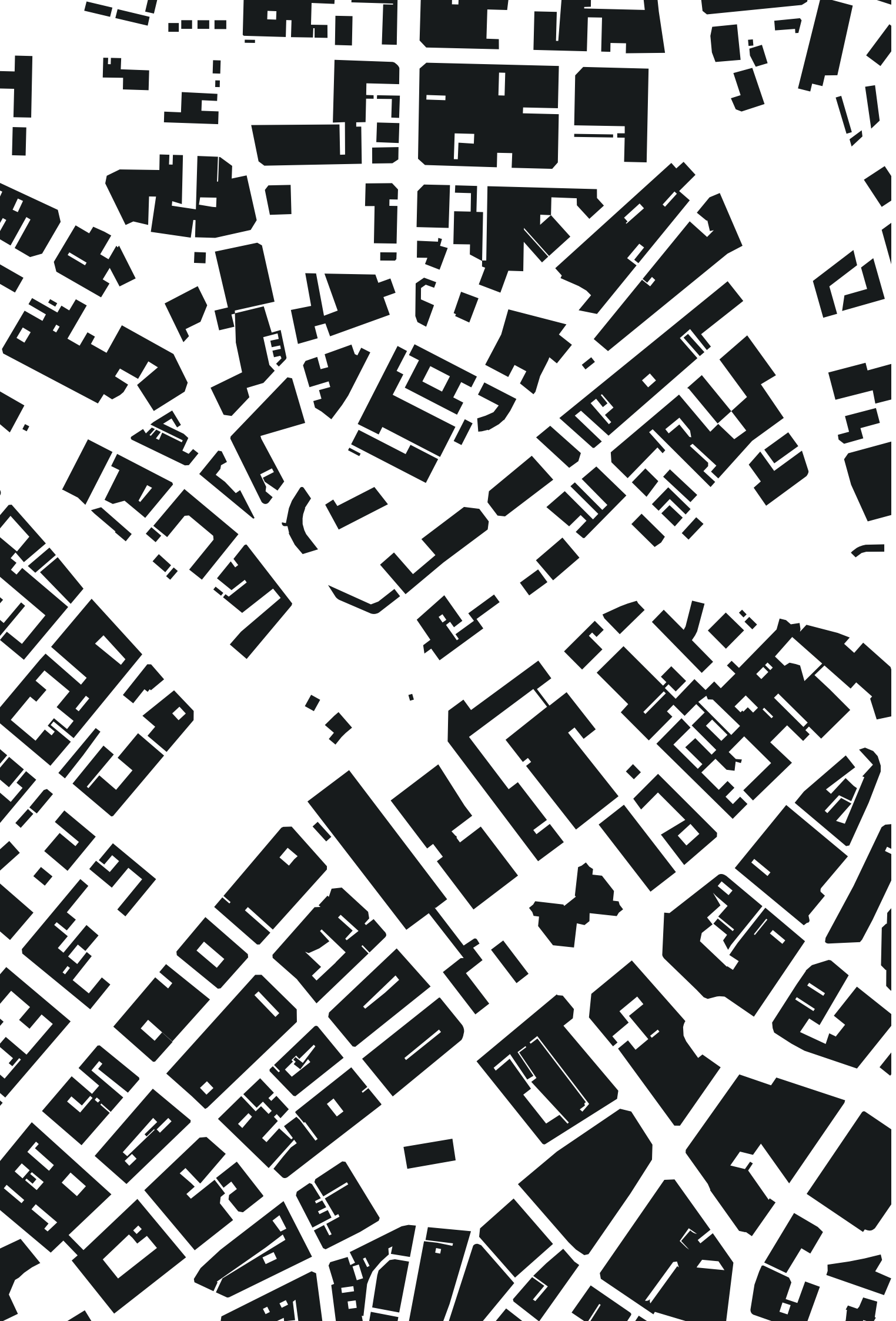
- Create a pedestrian friendly environment
- Reduce large carriageway and increase pedestrian footfalls areas through realigning kerb lines where possible
- Calm the traffic to prioritise pedestrians
- Maintain access where required
- Create clear and safe crossing points for pedestrians
- Create areas of calm and provide opportunity to enjoy hot spots
- Enhance the green infrastructure











# Vision and Objectives

Within this section we develop our vision and establish the key design drivers which will inform the public realm proposals.

# Project Objectives

## Key Drivers

Prioritise pedestrians wherever possible.

Introduce more 'staying/stopping' opportunity within the square and across the sites.

Reduce traffic impact and provide more space and comfort for pedestrians.

Take advantage of the areas assets e.g. Sunny areas, Architectural Features

Enable cyclists to move throughout the area easily and intuitively.

Connect the sites area to the rest of the City Centre.

Encourage active frontage uses.

De-clutter, simplify and unify street scene.

Green the sites where possible

Ensure people can find their way around easily.



# Project Vision

## Big Ideas

### A 'Pedestrian First' place

- Place where it's **enjoyable** to **walk** and cycle.
- **More space** provided for pedestrians, cyclists, trees and commercial activity
- Traffic calming
- **Stopping**, sitting and resting provided
- **Well connected** and easy to navigate
- **De-cluttered** environment
- Optimised traffic routes/movement

### A Place of Activity and Vitality

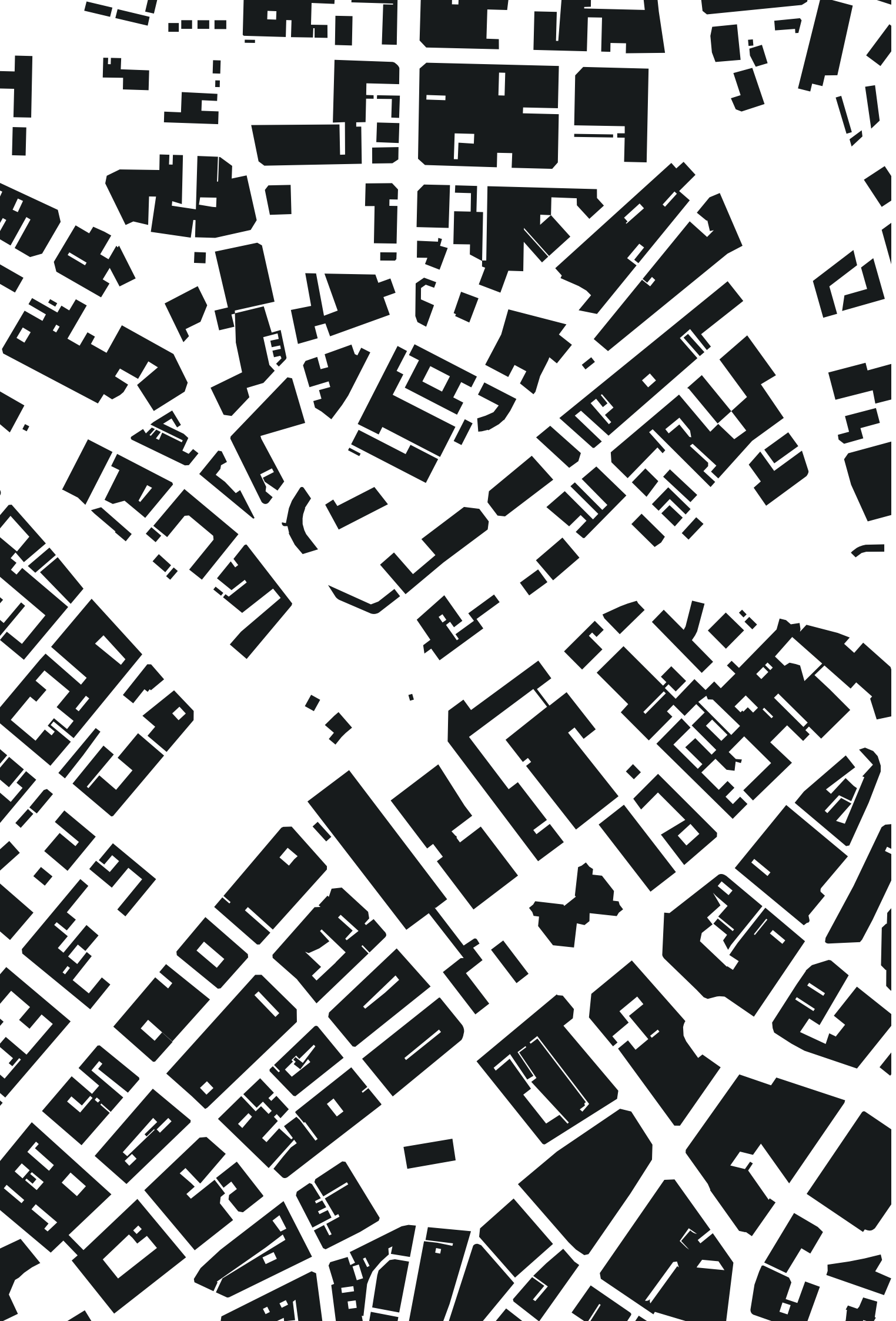
- A lively place where **people love spending time**.
- **Spill-out** space facilitated
- **Event** space provided
- Creation of a **destination** space
- Smart city components integrated
- Consideration of daytime and evening use
- Sociable/Networking activities facilitated

### A High Quality District

- A **simple approach** that delivers an authentic / **distinct character**
- A **beautiful space** that celebrates its context
- **Respectful** of historic setting
- Celebrated architecture
- Quality materials and detailing throughout
- Greening throughout
- International recognition
- **Adding value & attracting investment**, residents and workers







# Consultation

Within this section we identified and consulted with key stakeholders



# Baseline Analysis Consultation

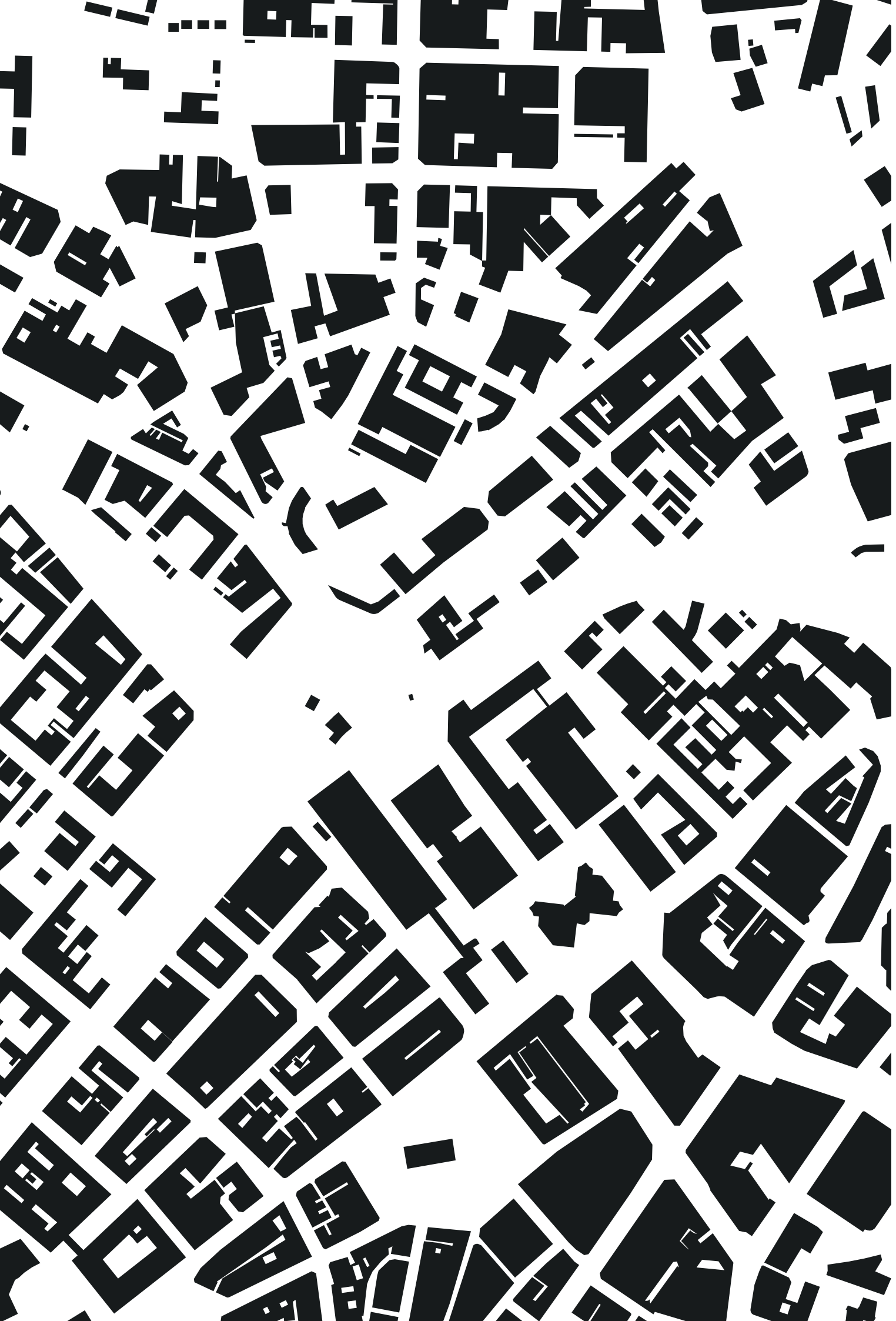
During S3 the following stakeholders were consulted on the emerging scheme:

- BCC Planning
- BCC Regeneration
- BCC Highways
- BCC Network
- BCC Parking
- BCC Birmingham Cycle Revolution
- Transport for West Midlands
- Colmore Business District
- Taxi representatives
- Boparan & K4 Architects (1 Colmore Row)
- JLL (9 Colmore Row)
- Marketing Birmingham - Interconnect
- Diocese
- Midlands Police (Counter Terrorism and Crime Prevention)









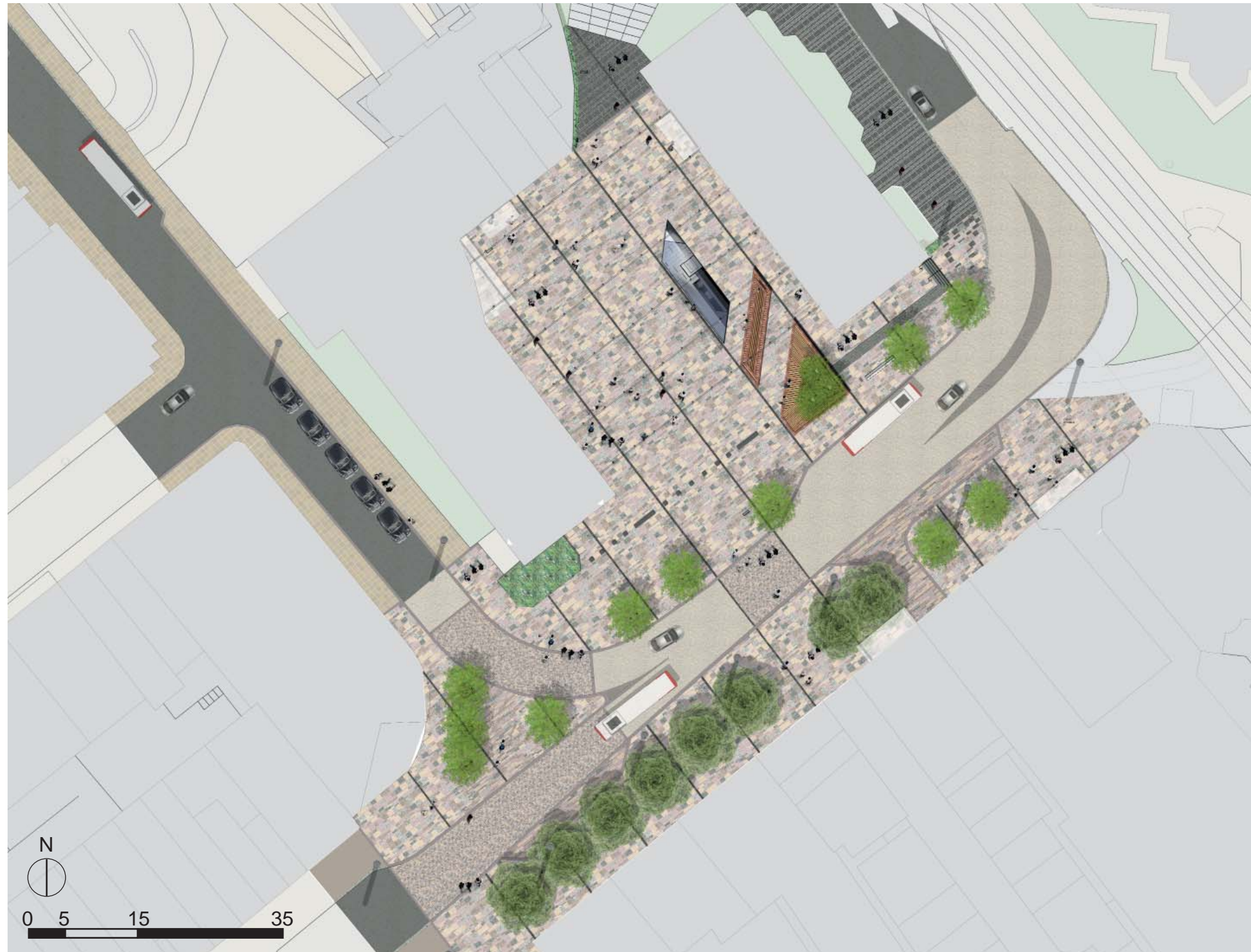
# Public Realm Proposals

Within this section we illustrate our Public Realm proposals and describe the key components of the scheme.



# Public Realm Proposals

## General Arrangement: Snow Hill Square



### Public Realm Proposal

- **High Quality Natural Stone Paving:** Beautifully detailed, appropriate to character and use, hard wearing and robust.
- **Tree Planting:** Defined form provides human scale and enclosure. Existing trees retained.
- **City Bench Feature:** Sits outside Network Rail constraints. Provides seating, resting, orientation. Hot spot aspect.
- **Axial Wayfinding Feature:** Key navigation element.
- **Lighting:** Catenary Lighting. In ground LED spots. Uplighters. Street Lighting.
- **Traffic Calmed Street:** Carriageway narrowed, material character suggests pedestrian friendly space. Signalised super crossing located on desire line.

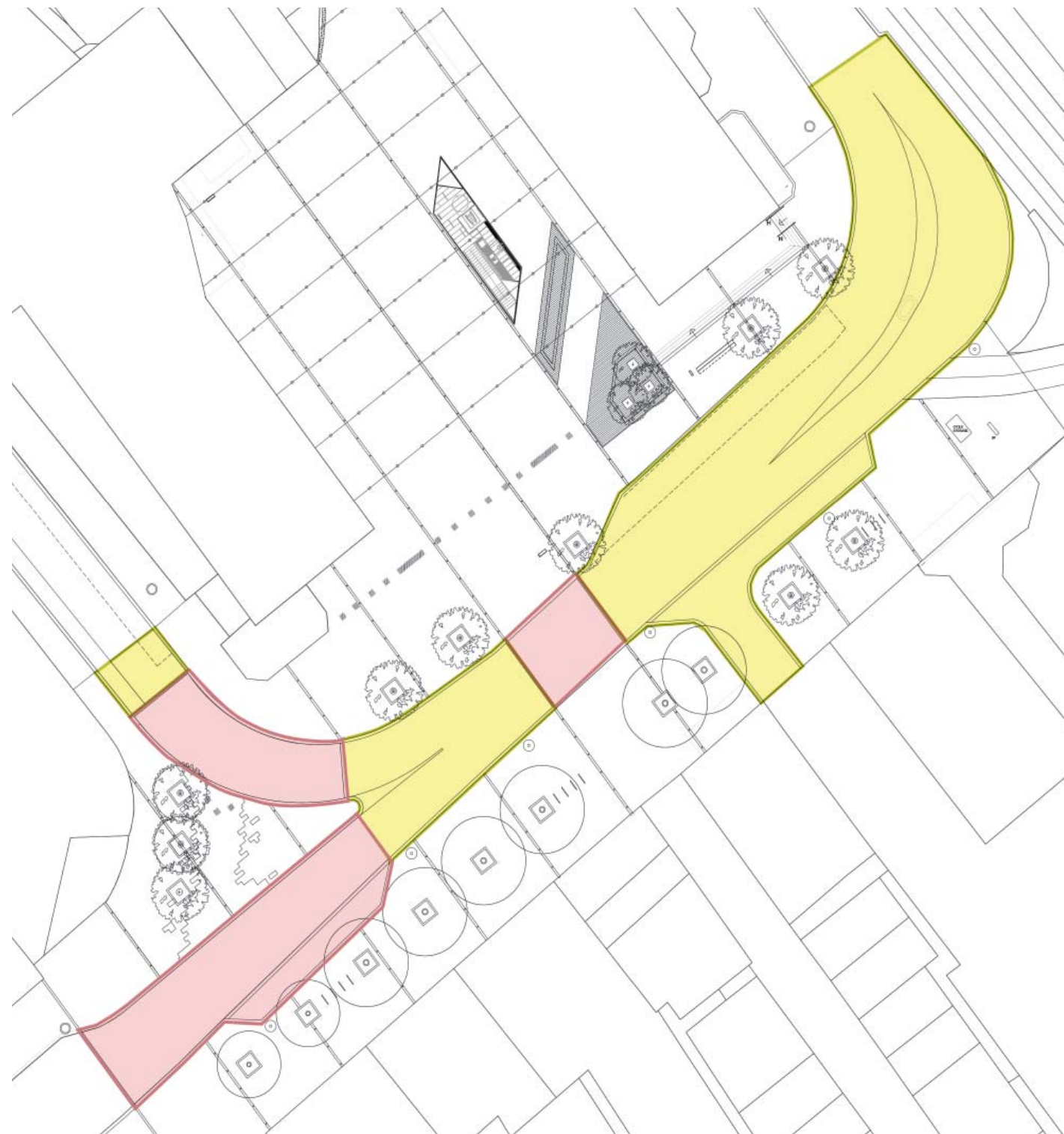
### Highways Design Proposals

- Provision of bus stops to replace current taxi rank adjacent to Colmore Row Station Square.
- Realignment of northern kerb-line of Colmore Row to provide widened footway.
- Removal of central reservation and reduction in carriageway width to single lane in each direction.
- Introduction of restricted parking zone on Colmore Row.
- New uncontrolled crossing on Colmore Row adjacent to Livery Street.
- Preservation of right turn lane for cyclists from Colmore Row into Bull Street and Livery Street. Cycling provision is on-street generally.



# Public Realm Proposals

## Psychological Traffic Calming



Psychological traffic calming techniques have been followed.

For Snow Hill Square we propose;

- Remove central reservation to reduce crossing width - widen public realm
- Low kerbs (65mm)
- Level crossing points
- Pedestrian materials in carriageway
- Super crossing - 10m
- Signalised crossing



Narrowed Carriageway



Level Crossing





ONE colmore row

ONE





GOLMORE

Birmingham  
Snow Hill

Snow Hill car park and station

ONE

little Waitrose



# Public Realm Proposals

## General Arrangement: Colmore Circus & Snow Hill Queensway



### Public Realm Proposal

- Material change suggests pedestrian friendly space
- Layout defines city square form and helps to establish network of city 'nodes'. Stopping and sitting facilities provided
- High quality materials create distinct character
- Highways character mitigated - areas reduced
- Enhanced Planting to humanise scale

### Highways Design Proposals

- Removal of traffic signals at junction.
- Realignment of kerb lines to produce priority junction
- Repositioning of existing controlled pedestrian crossing in Snowhill Queensway.
- Realignment of kerblines in Snowhill Queensway to reduce lane widths at crossing.



# Public Realm Proposals

## Paving Materials - Footway & Paving Crossing

In keeping with local context and the historic environment we have selected a warm materials palette which compliments key buildings and creates a continuation of the existing developments such as Snow Hill Campus, throughout the scheme to create a unified finish.

The squares, including the associated footways, will be;

- A granite blend of five finishes
- Have a repeating pattern
- Rigid construction - especially overrun areas
- Wide pink granite kerbs

Footways along Livery Street will be;

- York stone slabs and the detail will match that on Church Street
- Wide pink granite kerbs

It is proposed that the crossings should be constructed of granite setts bedded on a concrete foundation slab using a specialist Stentech type mortar product.

For associated traffic management considerations please refer to appendix F.

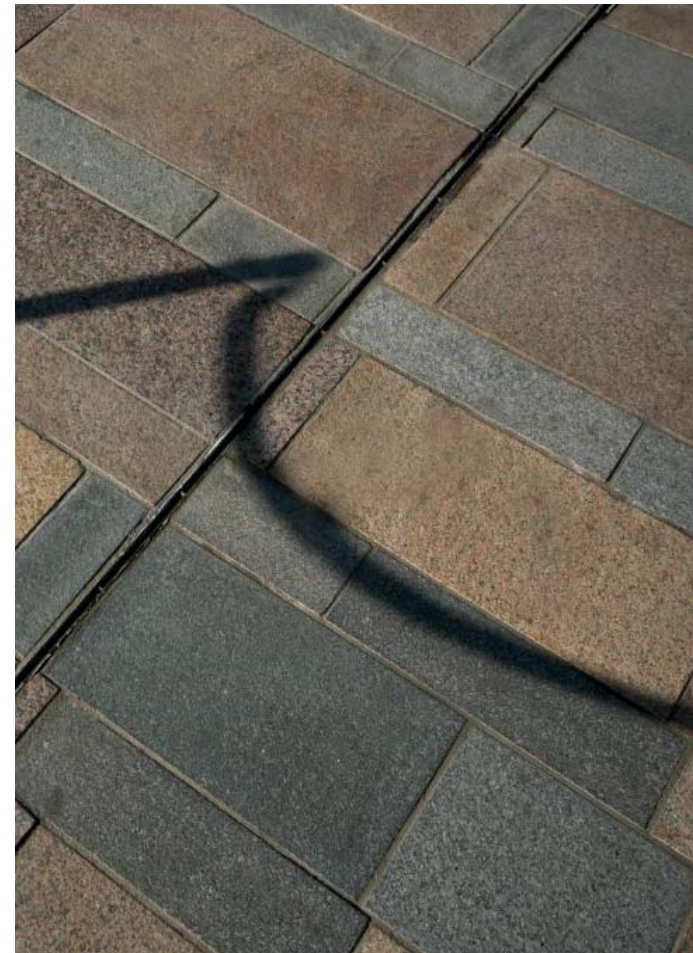
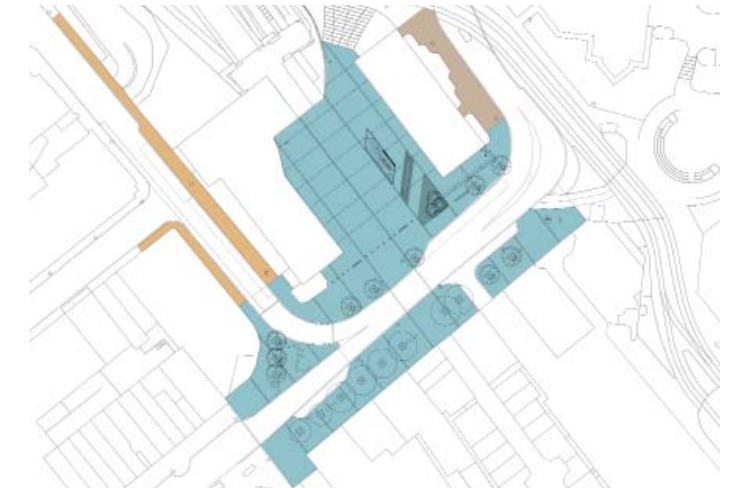


Image: Granite Blend of five shades, Snow Hill Campus



Image: Yorkstone, Church Street

### GRANITE PAVING BLEND - TYPE 1



Key

- Proposed New Paving - Type 1
- Proposed New Paving - Type 2
- Existing Paving Retained



Key

- Proposed New Paving - Type 1
- Existing Paving Retained

NB: This option applies to Colmor Circus & Snow Hill Queensway Opt. 1 only.



# Project Components

## Materials - Carriageway Paving

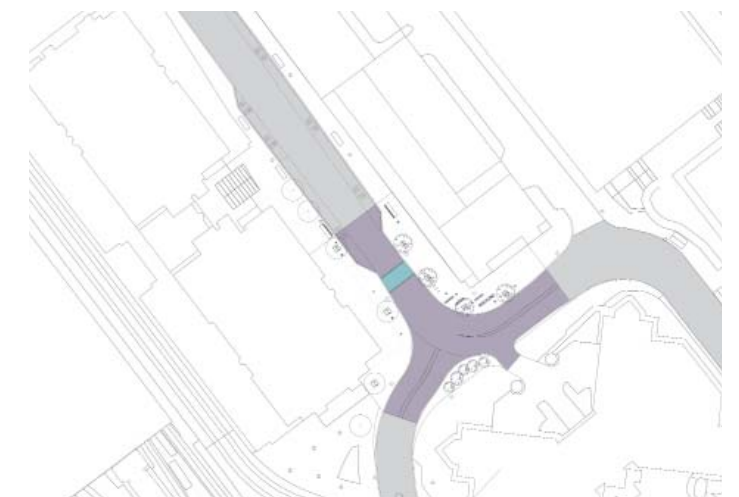


Carriage shall be a buff macadam finish to differentiate the pedestrian first zones



Key

- Proposed New Surfacing - Granite
- Proposed New Surfacing - Tarmac



Key

- Proposed New Surfacing - Granite
- Proposed New Surfacing - Tarmac
- Existing Paving Retained



# Project Components

## Materials - Composite Plan



Colmore Row Crossing

Snow Hill Mix Slabs - Granite Blend  
 Width: 600, 300 & 150mm  
 Length: 600 - 900mm  
 Depth: 75mm  
 Colour: Royal White, Darton, Kobra Grey, Yellow Rock & Eaglet Red  
 Finish: Flamed Top

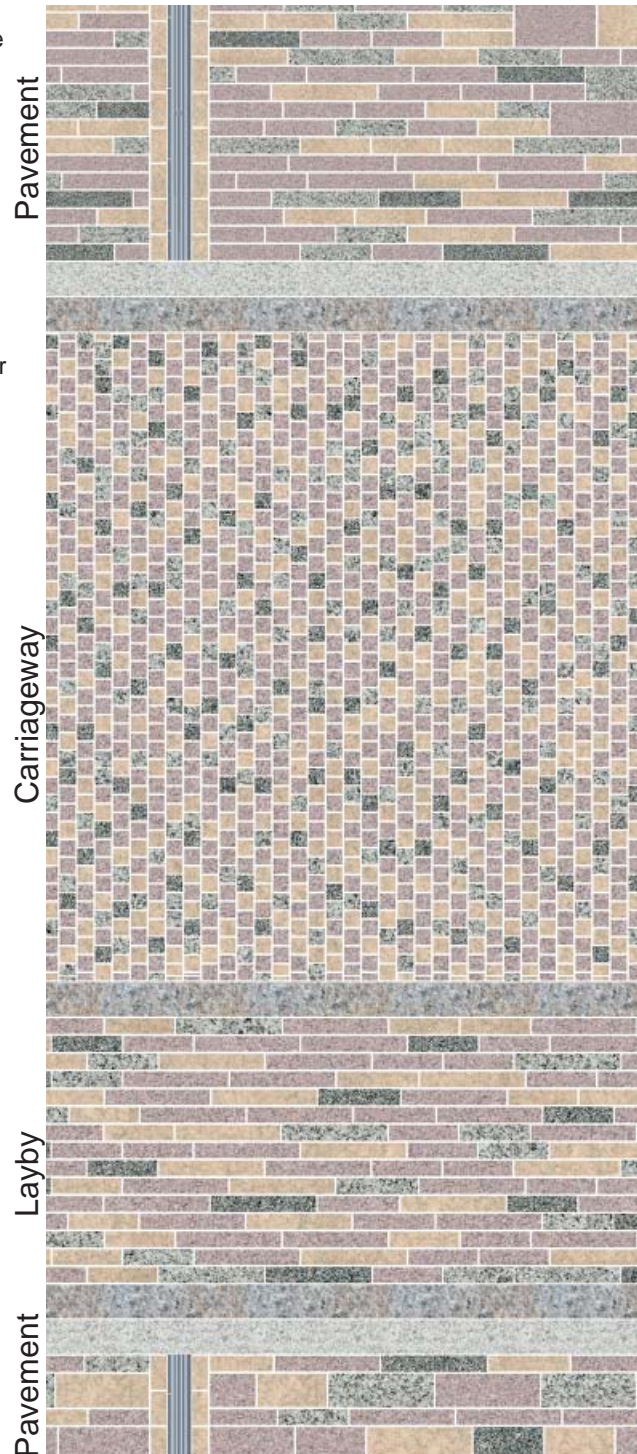
Tactile: Stainless Steel Blister Studs with Anti Slip Pattern

300mm Wide Kerb, Royal White Split Granite

Snow Hill Mix Type 1 - Granite Blend  
 Size: 150 x 150mm  
 Depth: 150mm (tbc)  
 Colour: Royal White, Darton, Kobra Grey, Yellow Rock & Eaglet Red  
 Finish: Flamed Top with Sawn Edge

300mm Wide, 50mm Upstand Kerb, Pink Flamed Granite

Axial Feature Banding



Colmore Row Courtesy Crossing

Snow Hill Mix Slabs - Granite Blend  
 Width 600, 300 & 150mm  
 Length 600 - 900mm  
 Depth 75mm  
 Colour: Royal White, Darton, Kobra Grey, Yellow Rock & Eaglet Red  
 Finish: Flamed Top

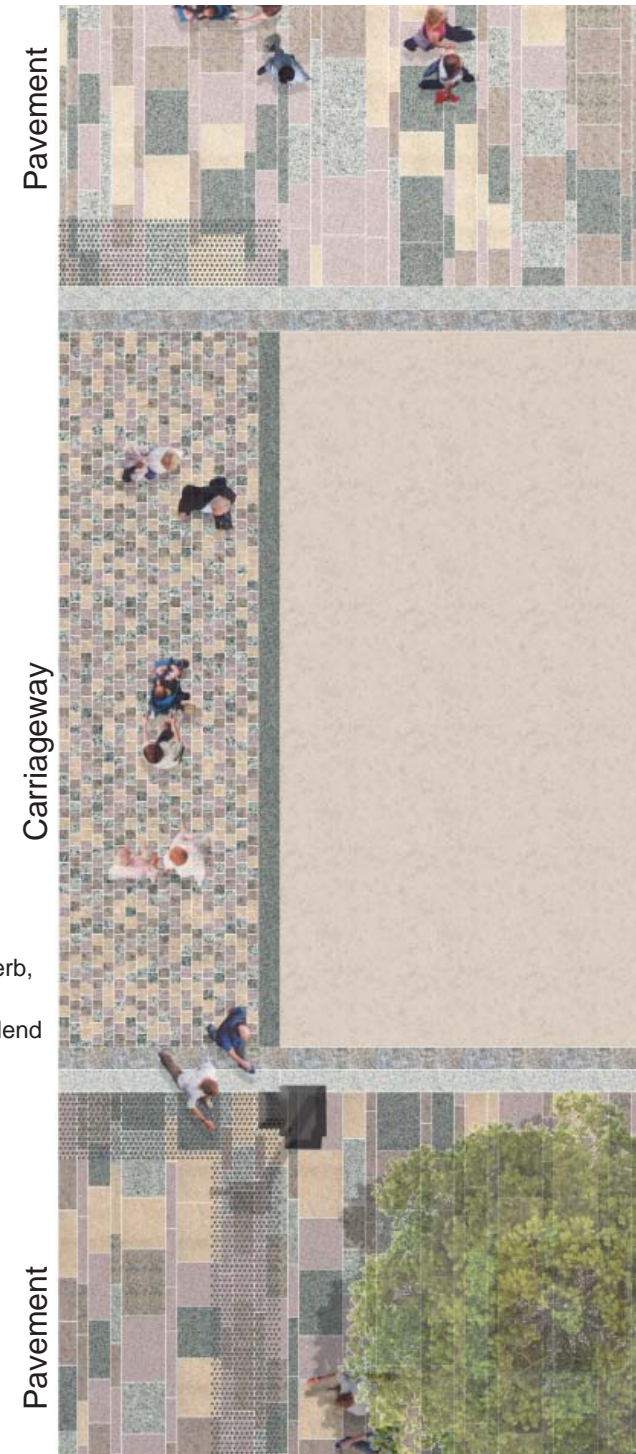
300mm Wide Kerb, Royal White Split Granite

Snow Hill Mix Type 1 - Granite Blend  
 Width: 150mm  
 Length: 600 - 900mm  
 Depth: 150mm (tbc)  
 Colour: Royal White, Darton, Kobra Grey, Yellow Rock & Eaglet Red  
 Finish: Flamed Top with Sawn Edge

300mm Wide, 50mm Upstand Kerb, Pink Flamed Granite

Snow Hill Mix Type 1 - Granite Blend  
 Width: 150mm  
 Length: 600 - 900mm  
 Depth: 75mm  
 Colour: Royal White, Darton, Kobra Grey, Yellow Rock & Eaglet Red  
 Finish: Flamed Top with Sawn Edge

300mm Wide, 50mm Upstand Kerb, Pink Flamed Granite



Snow Hill Queensway Crossing

Snow Hill Mix Slabs - Granite Blend  
 Size: Width 600, 300 & 150mm Length: 600 - 900mm  
 Depth: 75mm  
 Colour: Royal White, Darton, Kobra Grey, Yellow Rock & Eaglet Red  
 Finish: Flamed

300mm Wide Kerb, Royal White Split Granite

Buff Coloured Asphalt

300mm Wide, 50mm Upstand Kerb, Pink Flamed Granite



# Project Components

## Wayfinding - Axial Feature



Key  
Axial Way finding embedded into paving

Concept: Snow Hill - What's in a name?

- Snor: Anglo Saxon for uncertain. Snore Hill: A twisted route up a hill to avoid obstacles or ensure easy ascent.
- North West Facing hill side would result in snow remaining longer on this elevation during winter months .

Themes:

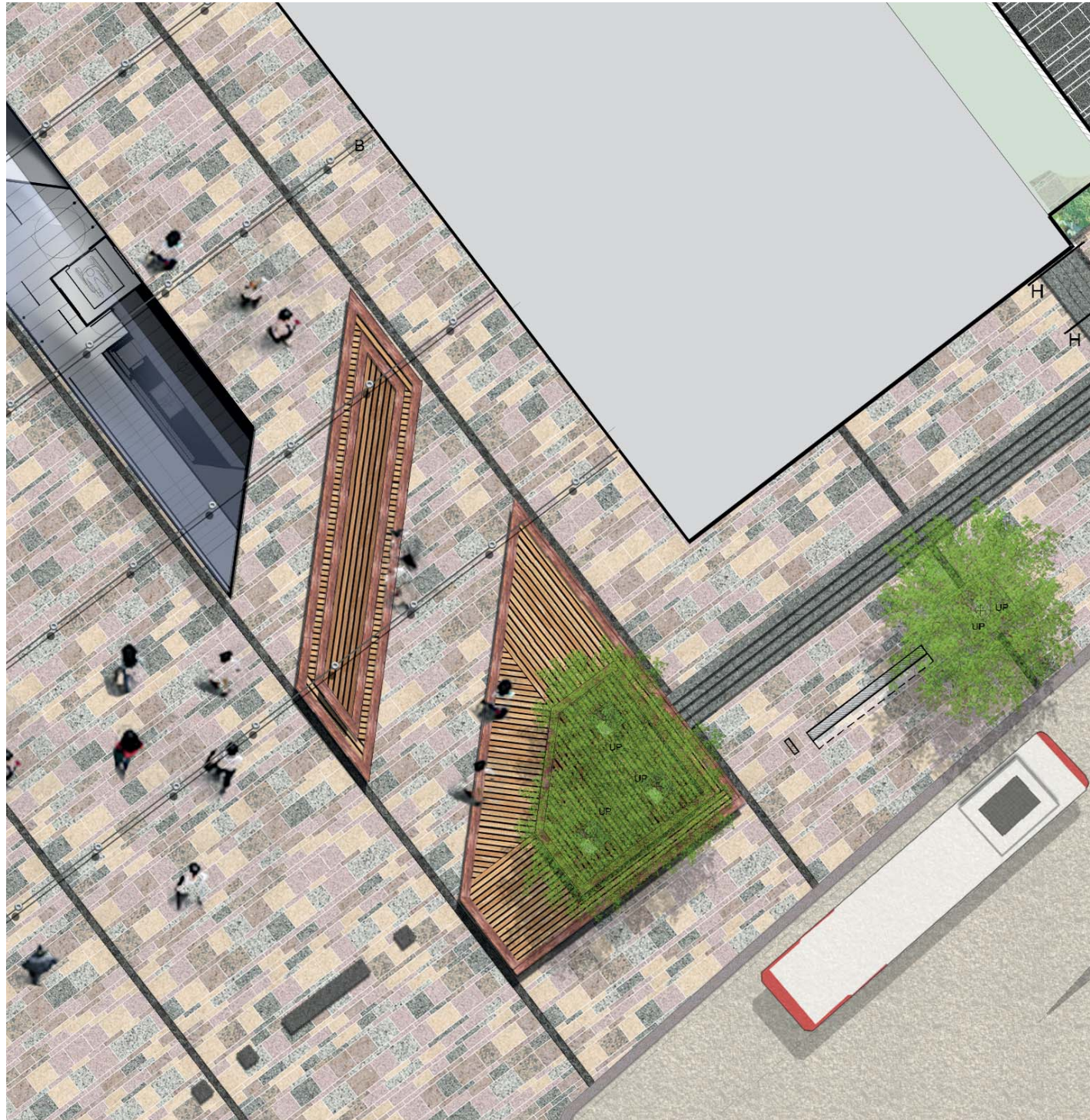
- A name that is rooted in geography, topography and place.
- A future and function that is about location, connection and movement.

A map based concept to tie themes together.



# Project Components

## Materials - City Bench



Plan view of city bench



Precedent image of city bench



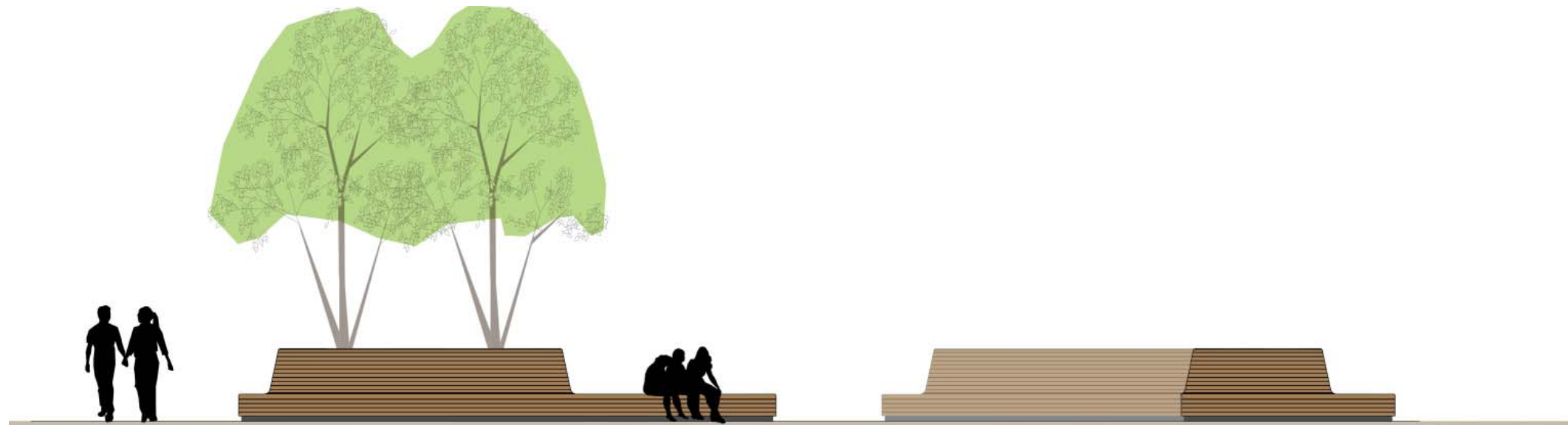
Precedent image of city bench



# Project Components

## Materials - City Bench

### Elevation of Proposed City Bench



Bench 01 - Elevation A - A

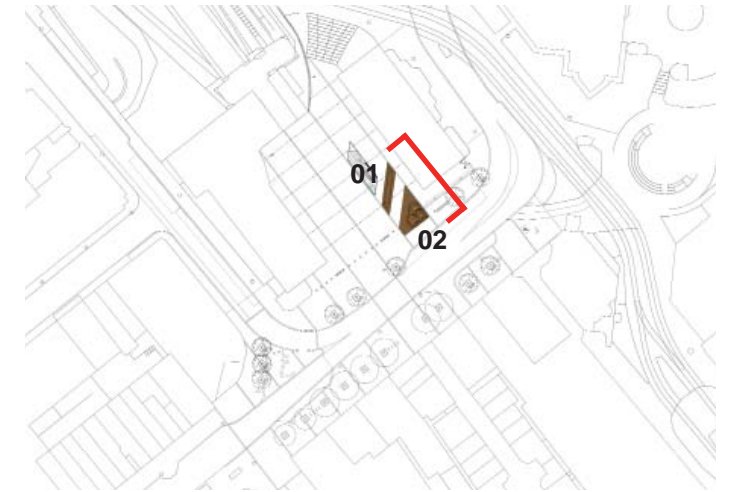
Bench 02 - Elevation B - B

### Cross Section of Proposed City Bench



Bench 01 - Cross Section A - A

Bench 02 - Cross Section B - B



High performing piece of city furniture:

- Sitting
- Laying
- Meeting
- Waiting
- Shade
- Sun
- Green
- Robust
- Beautifully detailed
- Detail to deter anti social behaviour e.g. skate boarding
- Device to be included to avoid collection of litter



# Project Layout Proposals

## Planting Strategy - Tree Selection



***Tilia tomentosa 'Brabant' (Silver Lime)***  
(Street Trees)

Qualities:

- 18m High
- Deciduous
- Crown shape: Broadly Conical
- Moderate Growth Rate
- Good for Streets and Avenues



***Parrotia persica (Persian Ironwood)***  
(Feature Trees)

Qualities:

- Seasonal Interest
- Good Planter Tree
- Deciduous
- Multi Stemmed
- Umbrella Pruned
- 5m High



***Betula utilis jaquemontii (Himalayan Birch)***  
(Feature Trees)

Qualities:

- Seasonal Interest
- Attractive Bark
- Good Architectural Tree
- Deciduous
- Multi Stemmed & UprighT
- Allows transparency through small foliage



Key

- Proposed Street Trees (*Lime*)
- Proposed Feature Trees (*Persian Ironwood*)
- Existing Trees Retained



Key

- Proposed Street Trees (*London Plane*)
- Proposed Feature Trees (*Birch*)
- Existing Trees Retained
- Proposed New Shrub and Ground Cover Planting
- Existing Shrub Planting Retained



# Project Layout Proposals

## Planting Strategy - Shrub Selection & Planting Schedule



Hebe 'Autumn Glory'



Hebe "Sutherlandii"



Lonicera pileata



Photinia 'Red Robin'



Rose 'White Meidiland'



Spiraea japonica 'Firelight'

Planting Schedule					
Trees					
Botanical Name	Common Name	Height (cm)	Girth (cm)	Attribute	Density
Betula utilis jacquemontii	White Barked Himalayan Birch	200 - 250	N/A	Multi-Stems (3x)	N/A
Betula utilis jacquemontii	White Barked Himalayan Birch	400 - 450	14 - 16	Extra Heavy Standard	N/A
Parrotia persica	Persian Ironwood	350 - 400	N/A	Multi-Stems (3x - 4x)	N/A
Platanus x hispanica	London Plane	600 - 700	35 - 40	Semi Mature Clear Stem 200cm	N/A
Tilia tomentosa 'Brabant'	Silver Lime	600 - 650	30 - 35	Semi Mature Clear Stem 200cm	N/A
Shrubs					
Hebe 'Autumn Glory'	Shrubby Veronica 'Autumn Glory'	30 - 40	N/A	Bushy / 7 Breaks	2/m <sup>2</sup>
Hebe pinguifolia 'Sutherlandii'	Shrubby Veronica 'Sutherlandii'	25 - 30	30 - 40D	Bushy / 9 Breaks	1/m <sup>2</sup>
Lonicera pileata	Privet Honeysuckle	N/A	20 - 30D	Bushy / 3 Breaks	3/m <sup>2</sup>
Photinia x fraseri 'Red Robin'	Christmas Berry 'Red Robin'	30 - 40	N/A	Branched / 6 Breaks	2/m <sup>2</sup>
Rosa 'White Meidiland'	White Meidiland Rose	30 - 40	N/A	Bush	3/m <sup>2</sup>
Spiraea japonica 'Firelight'	Japanese Spiraea 'Firelight'	30 - 40		Bushy / 6 Breaks	3/m <sup>2</sup>



# Project Layout Proposals

## Lighting Strategy - Square

### Catenary Lighting

The ambient lighting within the square is by means of a catenary lighting system suspended between 1 and 9 Colemore. A combination of wide beam (Type A) and narrow beam (Type B) downlights provide the ambient lighting with added visual interest by using different beam angles. The catenary is mounted at approximately 5m which is approximately the height of the current wall mounted lighting (which is to be removed). The luminaires also incorporate a blue LED node on top of the fitting to add a top to the luminaires and provide a visual element from both the horizontal plane and also when viewed from the buildings above.

A fitting without the downward lighting element (Type C) incorporates the luminaire body and just the top node for lighting positions above canopies and the glass entrance structure.

### Axial Lighting in Paving

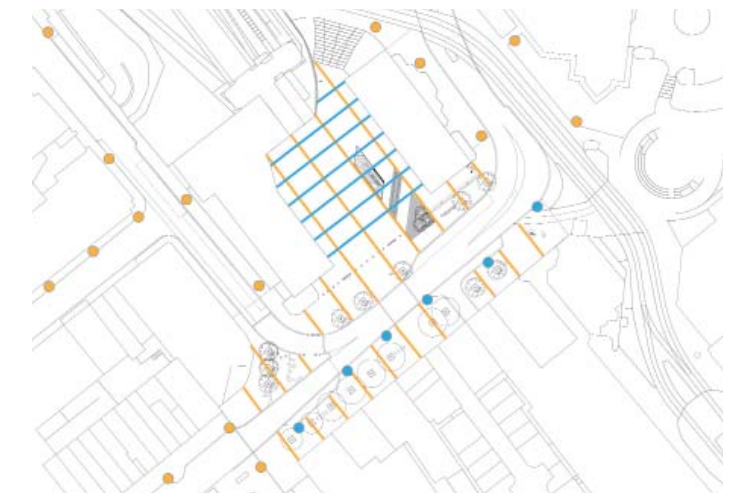
Inground blue LED marker lights (Type D) are aligned with the landscape paving and run across the square and the pavement of Colemore Row (note, they are not incorporated into the carriageway). These markers provide a visual direction across the square to reinforce pedestrian traffic flows.

### Tree Uplighters





Tree uplighters are incorporated to raise the vertical illuminance within the space. Using a sealed fitting with an LED light source ensures easy installation and long life as the fitting does not require opening during installation. Within the planter (Type F1), a plain glass version are used and within pavement areas (Type F2) a version with anti-slip glass is used. The tree uplighters are incorporated into the periphery of the square and also along Colemore Row.

### Other Feature Lighting

Linear lighting around the bench and planter provide human scale feature (Type K) and add visual interest and drama to the space. The glow from under these items will encourage usage and further add animation to the space whilst signifying activity in the square from further afield. By fixing the lighting to the structures, rather than inground, potential problems with mounting in the ground are overcome.





#### Key

-  In-Ground Feature Lighting
-  Catenary Style Lighting
-  Proposed New Lighting Columns
-  Existing Lighting Columns Retained



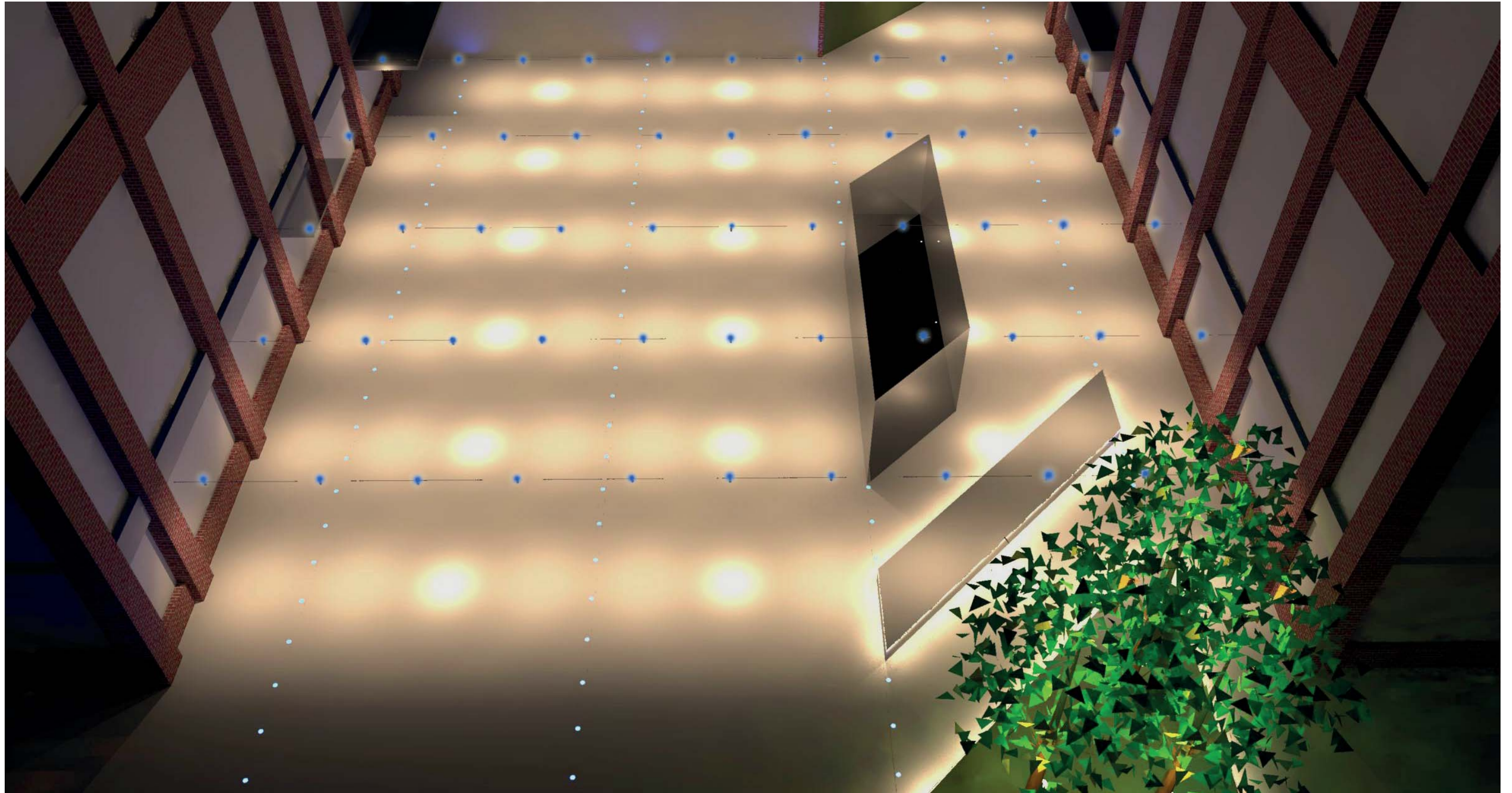
#### Key

-  Proposed New Lighting Columns
-  Existing Lighting Columns Retained



# Project Layout Proposals

## Lighting Strategy - Night Illustration





# Project Layout Proposals

## Lighting Strategy - Square

### Ambient Lighting

The ambient lighting is proposed to be provided by exterior downlights suspended from a catenary cable system attached to the existing buildings.

The catenary system allows the square to be void of columns and provides lighting across the entire space.

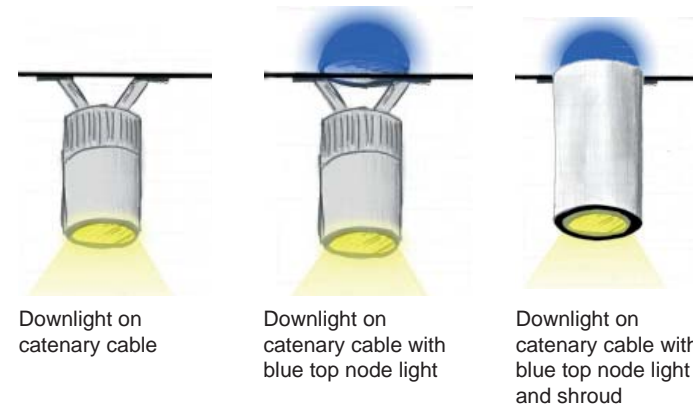
A combination of optics are proposed for the catenary luminaires. A wide beam provides a level of background lighting and a narrow beam provides more intense pools of light to add visual interest and excitement to the square.

Mounting height has been assumed to be a nominal 5m to light source.

In addition to the downlight portion of the luminaires, a 'node' is proposed to be incorporated to the top of the fitting and the two light sources and the catenary suspension clamp is then encased in a shroud to give a unified appearance.

The downlight has a warm white colour temperature and the node is a static colour (blue).

The development of the luminaire components is shown in the adjacent sketches.



### Product Proposal

Three types of fitting are proposed

- A – Wide beam downlight with blue top
- B – Narrow beam downlight with blue top
- C – No downlight – blue top only

The type C fitting is to avoid lighting being directly projected over canopies and the pavilion whilst maintaining a consistent appearance over the catenary system



Precedent Image of Catenary Illumination

### Bench/Planter Lighting

The benches and planter are proposed to be illuminated to contribute to the aesthetics of the space.

The upright surface of the bench and planter are to be illuminated from a hidden detail at the top of the vertical surface. The light is to wash down the vertical surface and also create a pool of light around bench/planter.

### Product Proposals

D – Linear LED, warm white LED, integrated into planter/bench



Precedent Visual of Bench Illumination

### Marker Lights

Inground floor marker lights are proposed to create an artistic light pattern on the floor and assist wayfinding across the square including towards the entrance of the station.

### Product Proposals

F – Inground LED dots, blue LED, diffuse appearance



Precedent Image of Inground Illumination



### Tree Uplights

Uplighting to the planted trees completes the night time visual impression by providing vertical illuminance and brightness to raise the perception of the general lighting within the square.

### Product Proposals

F1 –Inground LED tree uplights

F2 –Inground LED tree uplights with anti-slip glass



Precedent Image of Illumination to Trees



Visual of Inground, catenary, bench and tree Illumination within the square



# Project Layout Proposals

## Lighting Strategy - Colmore Row & Mitigation Sites

### Colmore Row

The ambient lighting along Colmore Row uses the Schreder Teceo which is the preferred luminaire choice for road lighting within the PFI. The luminaire is excellent flexibility due to a vast array of power options and also optic variations contained within an architecturally styled luminaire. One of the variations is a very asymmetric fitting (Type G) which allows the columns to be placed on the south side of Colmore Row and project light across the highway towards the square. This keeps the edge of the square free of clutter and alleviates issues with mounting above the tunnels adjacent to the square.

Some existing column positions are reused where possible (and this could allow existing columns to be reused subject to confirmation of suitability and sufficient remaining life of the items).

The lighting within the conservation area adjacent to the Snow Hill Square section of Colmore Row is not proposed to be modified as part of this project.

#### **Product Proposal:**

G –Teceo Streetlight, 104 LED, 700mA, 229W, Neutral White, 28621 lumens, Asymmetric optic (5121), 10m Tapered/Conical Column with Elayabacket, 1100mm projection, blue LED accent detail



### Colmore Circus Queensway/Snow Hill Queensway

The lighting in this area has recently been replaced (within the last couple of months) due to the works to facilitate the new tram route. This area has been lit using the Schreder Teceo and as such the use of the fitting on Colmore Row and Snow Hill Queensway provides continuity.

The lighting column positions within this are also utilised for the support of the catenary for the trams.

To provide an update and continuous lighting design, the Schreder Teceo (Type H and Type J) has been used to complete this section of Colmore Circus Queensway.

The existing column positions can be reused to provide a compliant light result due to the

#### **Product Proposal:**

H –Twin Teceo Streetlight, 104 LED, 500mA, 163W, Neutral White, 22131 lumens, Road optic (5098), 10m Tubular Column

J –Single Teceo Streetlight, 104 LED, 500mA, 163W, Neutral White, 22131 lumens, Road optic (5098), 10m Tubular Column



number of options available within the Teceo luminaire. Reusing existing column positions (and possibly existing columns subject to confirmation of suitability and sufficient remaining life of the items).

Due to the overall size of Colmore Circus Queensway and Colmore Row and the traffic usage within these areas, a high performance solution is required to provide a safe space for the users. The performance of the Teceo allows minimum column positions and luminaire numbers to reduce street clutter and aid visual amenity.



### Livery Street and junctions to Barwick Street, Edmund Street and Cornwall Street

At this time, the existing lighting has not been proposed to be replaced as these areas will need to be considered as part of the overall masterplan for lighting as part of Snow Hill Tranche 2. When the overall strategy is created, the potential for lighting replacement or embellishment can be considered.

#### **Old Snow Hill/Lionel Street**

At this time, the existing lighting has not been proposed to be replaced as these areas will need to be considered as part of the overall masterplan for lighting as part of Snow Hill Tranche 2. When the overall strategy is created, the potential for lighting replacement or embellishment can be considered.



# Maintenance

## Maintenance

Appropriate landscape management and maintenance is vital to the success of the landscape design.

The following key factors will need to be addressed in order to sustain a high quality public and private realm:

- Horticultural Health
- Hard Surfacing
- Repair and Replacement
- Safety and Security
- Cleanliness

## Horticultural Health

The health and general condition of planted areas including trees, shrubs, and perennial plants is clearly indicative of the level of care and attention a place receives. Planting, including any replacements to dead or dying material, will be maintained in accordance with a Landscape Maintenance Specification.

Trees will undergo inspections which will provide informative pruning to ensure appropriate habit and form, monitor health of trees and removal of dead, dying or diseased branches as required.

Once established the removal of stakes / guying systems will be required where relevant.

Shrub beds will receive ongoing maintenance to ensure weed free conditions through combined

techniques of herbicides, cultivation and mulching. Pruning will be required to promote bushy, healthy growth and ensure individual plants establish dense cover as rapidly as possible. Trimming back of growth overhanging roads and footways, and replacement of beds/ species which have become over mature.

Until fully established new trees and shrubs will require adequate watering.

## Hard Surfaces

Seasonal maintenance of fallen leaves, snow and de-icing is required, and maintenance to keep paving weed free by combined means of chemical and hands.

## Repairs and Replacement

The need for repair and replacement of finishes will be mitigated by the use of appropriate and durable materials. Nevertheless, in the long term a degree of maintenance and replacement is unavoidable.

## Safety and Security

A safe environment is one that is accessible to all. As well as adopting 'Secured by Design' principles in the design of the landscaped areas, long term management and maintenance of the landscape proposals will be required.

Well maintained places are less likely to suffer from crime as they are more likely to be used, thus increased presence will deter antisocial behaviour. Surveillance will be encouraged with landscaping enabling clear visibility along routes

with trees being clear stemmed to 2m - therefore not blocking views.

## Cleanliness

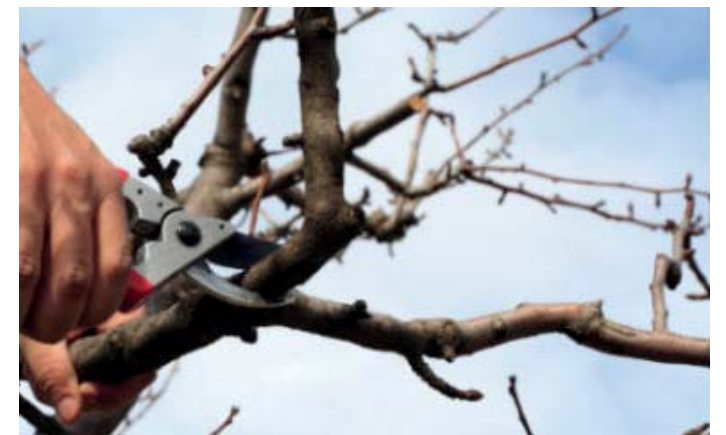
Cleanliness is the principal indication of the quality of management of the landscape design. It will be important to maintain the cleanliness of the landscape with regular collection and removal of leaves and debris and litter. Bins will be provided within the public realm.



## Specification within the Square

Vehicle access provided for maintenance to catenary lighting via scissor lift.

NB: Due to loading constraints above the tunnel emergency access is maintained from the associated streets and therefore no requirement to enter the square is required.



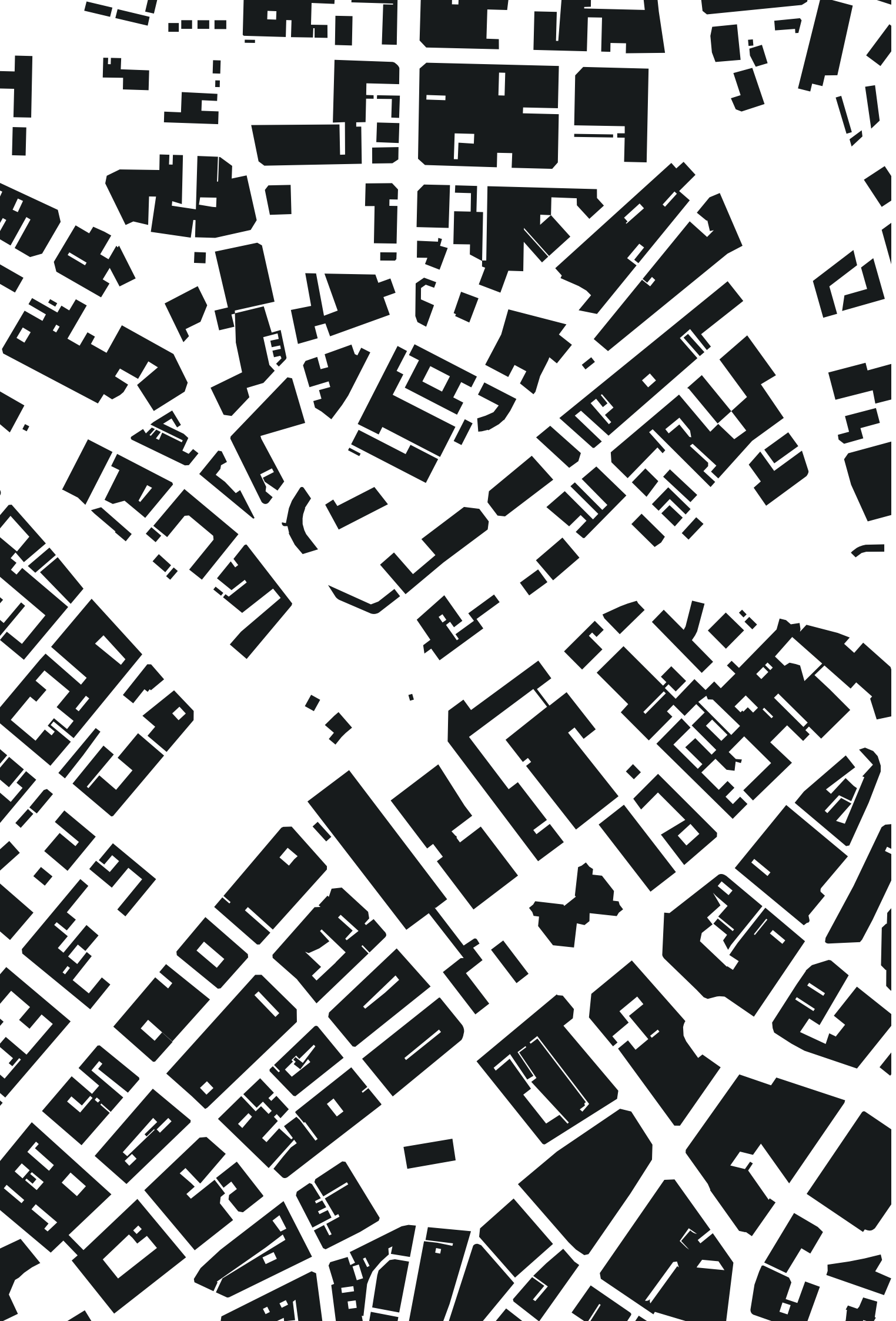












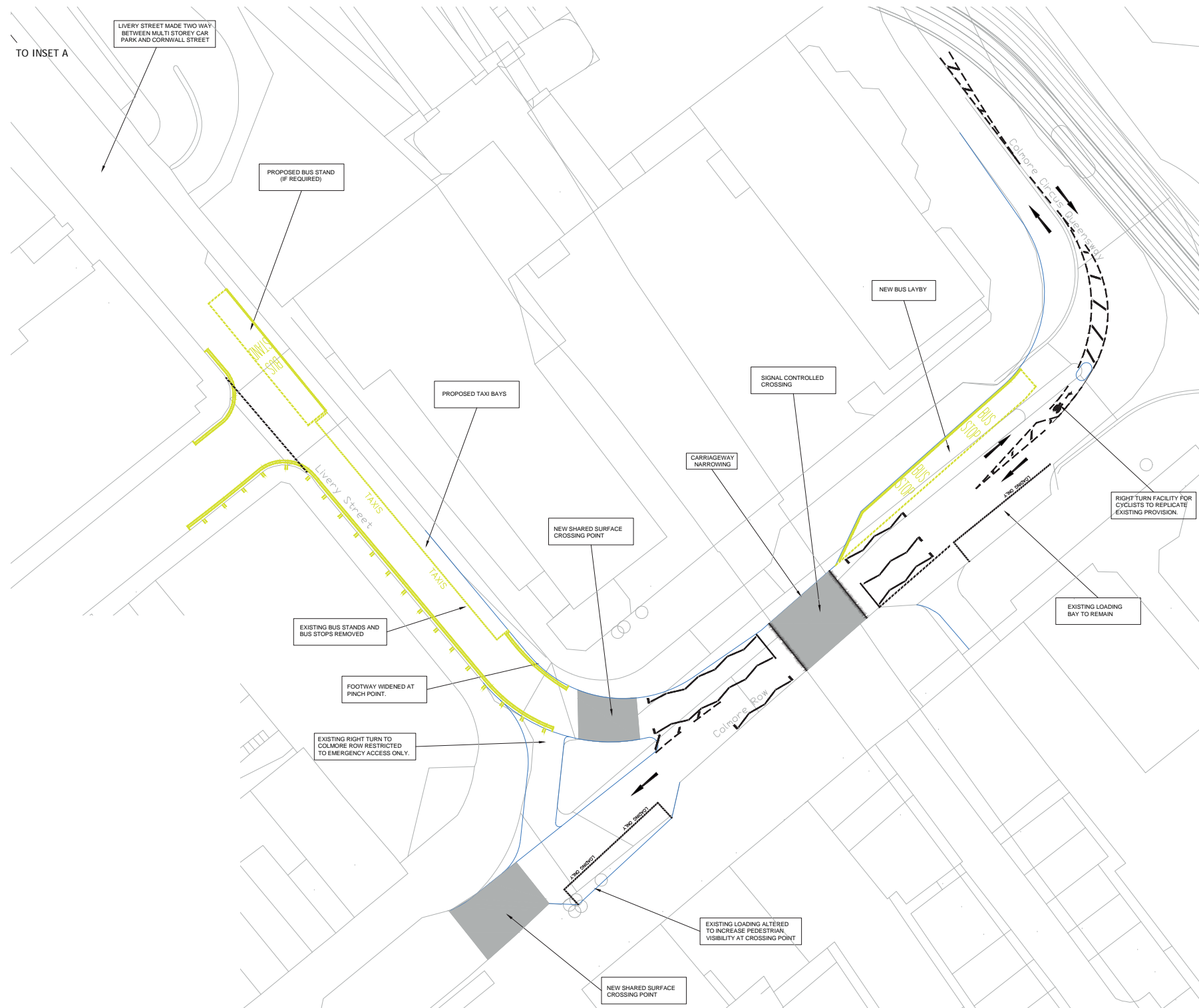
# Highways Proposals

In this section we establish highway improvements to Colmore Row and the associated mitigation sites required as a result of the proposed works.



# Highways Proposals

## General Arrangement - Colmore Row & Livery Street



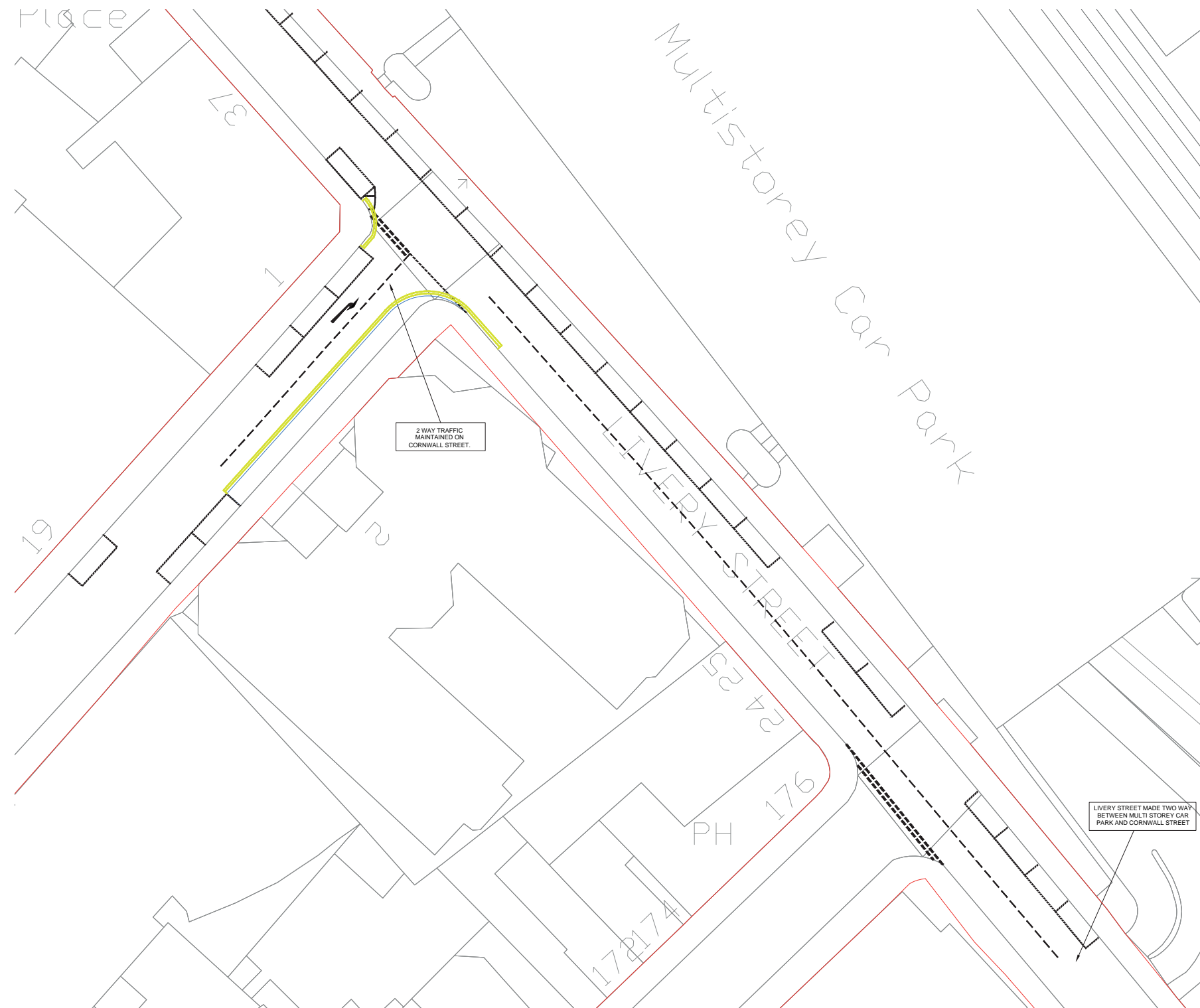
### Current Design Requirements for Snowhill

- Provision of bus stops to replace current taxi rank adjacent to the square on Colmore Row.
- Reduction in carriageway width to maximise footway widths.
- Realignment of northern kerb-line of Colmore Row to provide widened footway.
- Removal of central reservation and reduction in carriageway width to single lane in each direction.
- Introduction of restricted parking zone on Colmore Row
- Enlargement of existing controlled crossing on Colmore Row
- New uncontrolled crossing on Colmore Row adjacent to Livery Street
- Preservation of right turn lane for cyclists from Colmore Row into Bull Street.



# Highways Proposals

## General Arrangement - Livery Street North



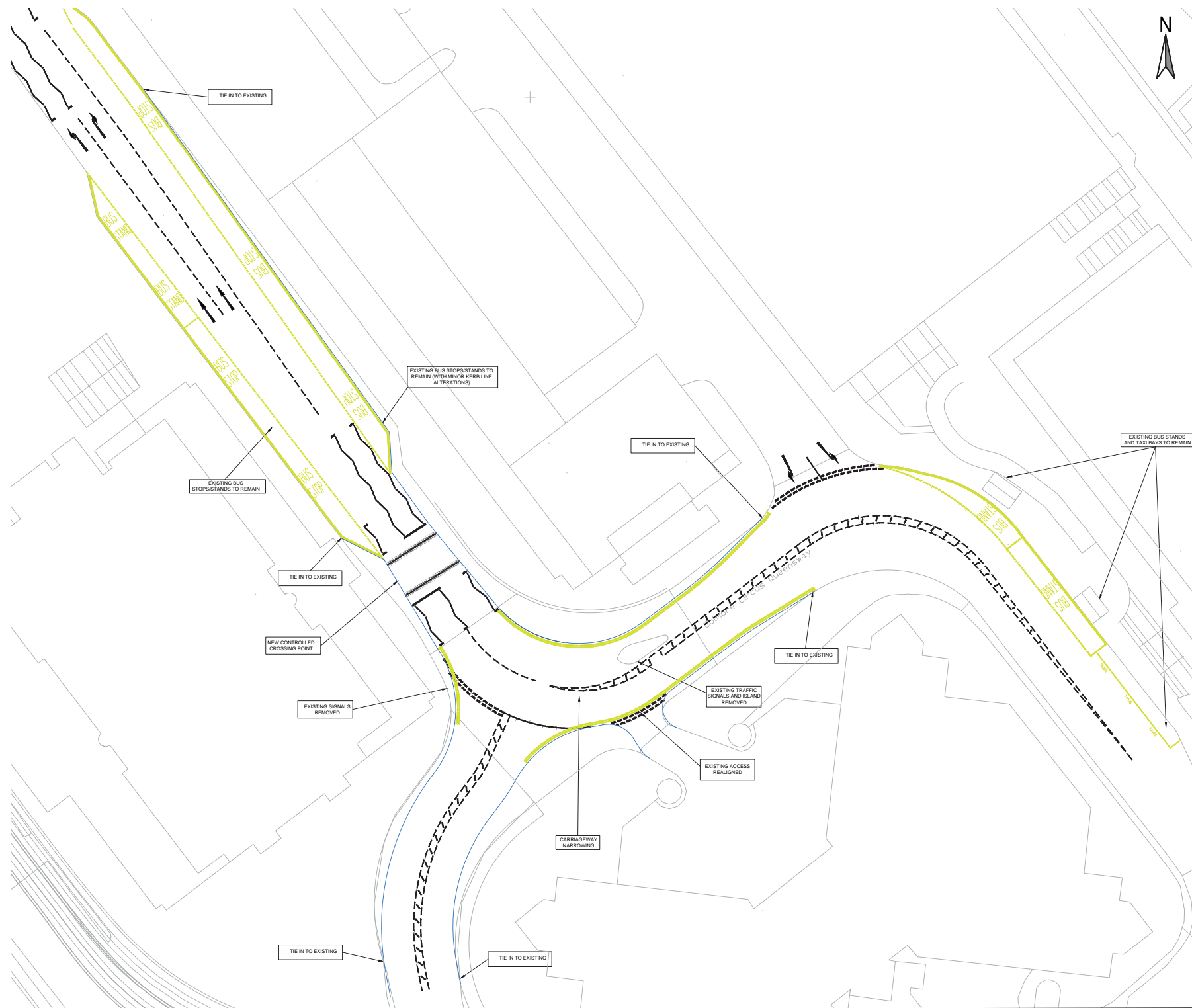
### Current Design Requirements for Snowhill

- Provision of a taxi-rank to the east side of Livery Street between entrance/exit to Snowhill car park and the junction with Colmore Row, to replace the current bus stops.
- Change of the current one way traffic to two way traffic between the junctions with Cornwall Street and Barwick Street, to enable exit from Snowhill car park and Livery Street via either Barwick Street or Cornwall Street.
- Continuation of the provision of on-street parking to the east side of Livery Street.
- Cycle provision is on street
- Preservation of existing kerb-lines to Livery Street.
- Removal of existing right turn from Livery Street into Colmore Row. Livery Street traffic turns onto Colmore Row eastbound only.



# Highways Proposals

## General Arrangement - Colmore Circus & Snow Hill Queensway

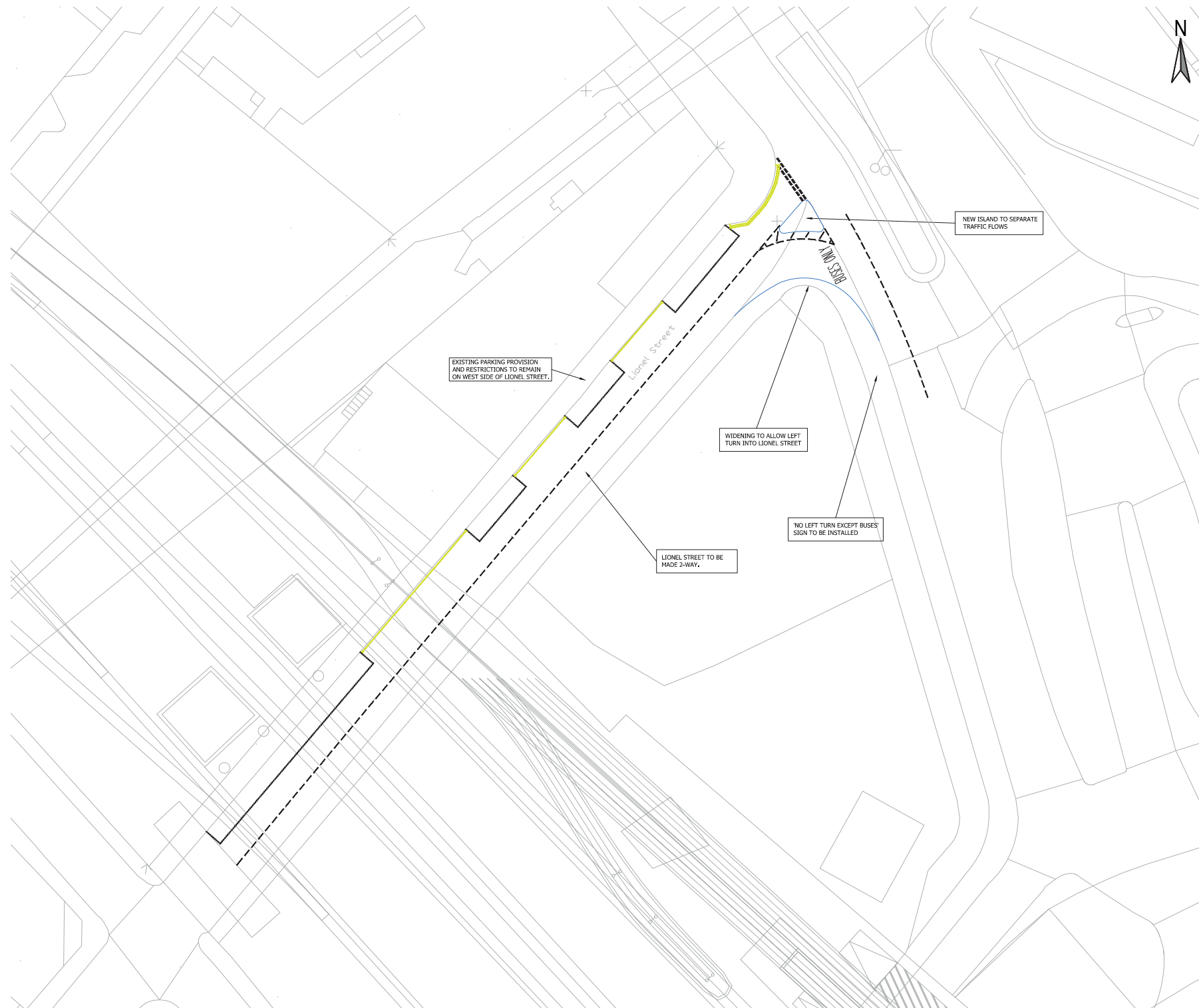


### Current Design Requirements

- Amendment of Colmore Circus Queensway/ Snowhill Queensway/Colmore Row junction from signalised junction to an unsignalised junction, with priority given to traffic movements around Colmore Circus and into Snowhill Queensway and vice versa.
- Ensure that the “Sprinter” bus can manoeuvre from Snowhill Queensway to Colmore Queensway in both directions and towards Colmore Row.
- Realignment of kerb lines to produce priority junction
- Repositioning of existing controlled pedestrian crossing in Snowhill Queensway.
- Realignment of kerb-lines in Snowhill Queensway to reduce lane widths at crossing.

# Highways Proposals

## Highways General Arrangement Lionel Street



### Current Design Requirements for Snowhill

- Public realm proposals are remedial only
- Change of one way traffic (west to east) on Lionel street to allow the provision of bus and cycle movements (east to west) on the south side of Lionel Street, from Old Snow Hill. Kerb line to tie in to existing on south side.
- Removal of on-street parking to south side of Lionel Street.
- Preservation of on street parking on the north side of Lionel Street.
- Change from one way to two way traffic and thereby provision for cycling would be on-street in both directions.
- Provision of new left turn for buses only from Old Snow Hill into Lionel Street.



